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VOL. 260-261

MARCH-APRIL 1919

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MARCH,

1919.

WASHINGTON
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1919

ERRATA.

1,296,292, page 108, in heading, after residence of patentee insert *assignor to Gould Coupler Company, a Corporation of New York.*

1,296,513, page 158, first claim, line 5, for the word "wheels" read *wheel.*

1,296,372, page 274, in heading, assignment, name of the assignee, for "The Spencer Turbine Cleaner Company" read *The Spencer Turbine Company.*

1,297,013, page 314, second claim, line 3, strike out the word "flat."

Vol. 260.

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Patents Nos. 1,295,831 to 1,296,602.

Sept. 11, 1919

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

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Vol. 260—No. 1. TUESDAY, MARCH 4, 1919. Price—$5 per year.

[PUBLISHED MARCH 20, 1919.]

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Patents	772	No. 1,295,831 to No. 1,296,602,		inclusive.
Designs	34	No. 57,699 to No. 57,732,		inclusive.
Trade-Marks	14	No. 124,634 to No. 124,647,		inclusive.
Reissues	4	No. 14,008 to No. 14,011,		inclusive.
Total	824			

WATCH THE STOCK PEDDLERS.

Get the names and addresses of all persons and companies offering you speculative or doubtful stocks and securities, particularly if in exchange for your Liberty Bonds or War Savings Stamps, with copies of their "literature." Mail them promptly for investigation to the

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Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 28, 1919.

Gasper R. Ratto, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Emilie Delle Fave, of 404 North State street, Syracuse, N. Y., for registration of a trade-mark and trade-mark registered September 9, 1890, No. 18,428, to Gasper R. Ratto, of Chicago, Ill., and a notice of such declaration sent by registered mail to said Gasper R. Ratto at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Gasper R. Ratto, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1919.

Jesse B. Pitt, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Peninsular Chemical Company, corner of Brooklyn avenue and Lafayette Boulevard west, Detroit, Mich., for registration of a trade-mark and trade-mark registered May 20, 1902, No. 28,148, to Jesse B. Pitt, of Kansas City, Mo., and a notice of such declaration sent by registered mail to said Jesse B. Pitt at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jesse B. Pitt, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Adverse Decisions in Interference.

PATENT No. 1,105,346.

On February 21, 1919, a decision was rendered that Morton L. Johnson was not the first inventor of the subject-matter covered by claims 1 and 2 of his Patent No. 1,105,346, subject, "Telephony," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,129,968.

On July 18, 1918, a decision was rendered that Joseph H. Englert was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,129,968, subject, "Corrugated fasteners," and the appeal to the Court of Appeals of the District of Columbia not having been perfected such decision has become final.

PATENT No. 1,248,782.

On February 21, 1919, a decision was rendered that Clarence A. Anderson was not the first inventor of the subject-matter covered by claims 6 and 7 of his Patent No. 1,248,782, subject, "Calling mechanism for party-line exchanges," and no appeal having been taken within the time allowed such decision has become final.

Applicant's Address.

The requirement of Rule 33, that the post-office address of the applicant must be stated in the petition, means that the applicant must give the post-office address at which he customarily receives his mail.

The rule was made in order that the Office in necessary cases might correspond directly with the applicant and not through his attorney. The address of the attorney with instructions to send communications to the applicant in his care will not be accepted as a compliance with this rule.

12942

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 28, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of application awaiting action
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Jan. 9	Jan. 29	170
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Oct. 11	Nov. 1	288
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Dec. 6	Nov. 7	194
294	4. Conveyors; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Sept. 16	Jan. 3	309
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter.	Oct. 10	Oct. 24	177
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Oct. 25	Dec. 18	206
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Dec. 26	Jan. 6	201
121	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 16	Jan. 16	110
221	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps; Marine Propulsion.	July 31	Nov. 14	482
105	10. Carriages and Wagons; Motor Vehicles	Dec. 12	Jan. 16	412
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Dec. 26	Feb. 13	148
222	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Aug. 20	Aug. 28	1021
220	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 2	Jan. 10	877
223	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 20	Dec. 31	184
269	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Nov. 27	Dec. 19	373
113	16. Electric Signaling-A; Radiant Energy; Telegraphy; Telephony	Oct. 10	Nov. 4	335
207	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 3	Jan. 4	89
220	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Oct. 30	Aug. 21	888
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Dec. 7	Dec. 19	233
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 28	Jan. 22	193
213	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Aug. 19	Nov. 5	349
244	22. Aeronautics; Firearms; Ordnance	Dec. 10	Jan. 20	220
317	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Nov. 25	Jan. 7	157
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Dec. 27	297
215	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 22	Jan. 20	143
105	26. Electricity, Generation; Motive Power	Sept. 4	Oct. 28	852
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Nov. 22	Nov. 20	430
235	28. Internal-Combustion Engines	Sept. 16	Sept. 26	648
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Oct. 29	Dec. 1	464
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 26	Feb. 18	211
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 12	Nov. 18	227
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration	Aug. 1	Nov. 15	707
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads.	Nov. 13	Oct. 25	239
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners; Track-Sanders; Vehicle-Fenders.	Sept. 12	Dec. 5	242
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Jan. 29	Dec. 16	234
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Jan. 23	Jan. 23	269
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Aug. 8	Sept. 14	665
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Jan. 9	Dec. 23	146
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Water Distribution.	Oct. 7	Nov. 12	307
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 6	Dec. 13	365
126	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 3	Dec. 21	195
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electric Signaling	Sept. 10	Oct. 9	463
362	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Nov. 20	Dec. 2	117
353	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Dec. 31	Jan. 15	169
379	45. Clutches; Lubrication; Motors; Railway Brakes	Nov. 4	Nov. 9	271

Oldest new case, July 31; oldest amended, Aug. 21.
Total number of applications awaiting action 15,088

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 20	Feb. 14	871
	Designs	Jan. 16	Jan. 31	230
	Labels and Prints	Feb. 1	Feb. 11	96

PATENTS

GRANTED MARCH 4, 1919.

1,295,831. **PISTOL-HOLSTER.** Charles Alderson, Ouray, Colo. Filed Nov. 20, 1916. Serial No. 134,157. 1 Claim. (Cl. 224—2.)



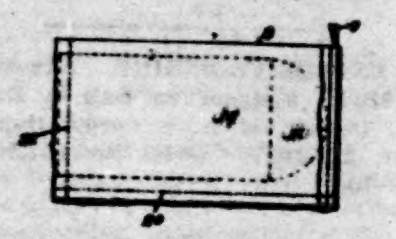
A holster formed of a single piece of material bent longitudinally upon itself to form an inner wall and an outer wall, the inner wall having approximately parallel edges for the greater portion of its length, the outer wall having its upper end approximately conterminous with the upper edge of the inner wall, said outer wall terminating short of the lower end of the inner wall, the middle of the outer wall having a width approximately the same as the inner wall, the edge of the outer wall above said middle portion being upwardly and inwardly curved, the upper rear corner of the outer wall being attached to the inner wall, the edge of the outer wall below the middle portion being extended rearward and downward, then forwardly, and then extended directly downward, this portion of the edge of the outer wall being attached to the inner wall and the outer wall being formed with a flap attached to the inner wall at right angles to the length of the holster to form the bottom of a muzzle pocket, the median portion of the outer wall being deflected toward the inner wall and then outward, and a strip of resilient metal attached to the outer face of the inner wall extending around the back of the holster and then extending forward over the outer wall along the median portion thereof and being operatively connected thereto.

1,295,832. **WATERPROOF CONTAINER OR ENVELOP.** Preston H. Allen and Henry H. Allen, St. Louis, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a Corporation of Missouri. Filed May 7, 1918. Serial No. 233,128. 2 Claims. (Cl. 229—76.)



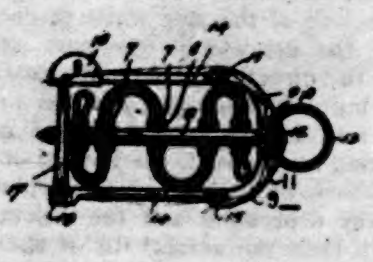
1. A container or envelop constructed of water-proof material and stitched along its sides to close the sides of the container, a folded flap projecting beyond the mouth of the container, said folded flap being held in a folded condition by means of a fastener passing through the folds thereof near the folding line, a flap carried by the folded flap and adapted to lie between the folded flap and container and over the edge of the latter when the folded flap has been closed, a fastener secured to the body of the container, and means for connecting said fasteners.

1,295,833. **MAILING DEVICE.** Preston H. Allen, St. Louis, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a Corporation of Missouri. Filed May 7, 1918. Serial No. 233,129. 3 Claims. (Cl. 229—72.)



1. A mailing device comprising a paper envelop adapted to be sealed so as to serve as a container for first class mail matter, and a fabric bag having one end provided with temporary closing means and the other left unfinished, the fabric bag being placed over the envelop and having its unfinished end united to the end thereof by stitching and then being drawn off the envelop whereby it is adapted to serve as a container, the uniting stitching and unfinished end of the bag being within the fabric bag of the finished article and concealed.

1,295,834. **LOCKING DEVICE FOR BAGS.** John M. Almeida, Shoshone, Idaho. Filed May 22, 1918. Serial No. 235,991. 4 Claims. (Cl. 150—20.)

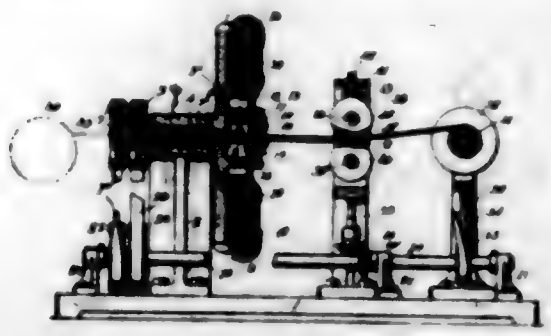


4. The combination with a bag having apertures in its upper end portion, said bag being adapted to be crimped to form a plurality of U-shaped sections, thus alining the apertures in the bag; a rod adapted to extend through the alining apertures, said rod having an opening in its forward end; a bracket formed substantially U-shaped in cross section; a pivot extending through the central portion of the bracket and the rear end of the rod for the purpose of effecting a pivotal connection; arms having pivotal connection with the forward end of the bracket and arranged parallel to the rod; a lock carried by one of said arms; and a pivoted locking rod extending through the opening in said first-named rod and engaging said lock.

1,295,835. **WIRE-COILING MACHINE.** Fritz L. Andren, Chicago, Ill. Filed Nov. 19, 1914. Serial No. 872,927. 7 Claims. (Cl. 153—64.)

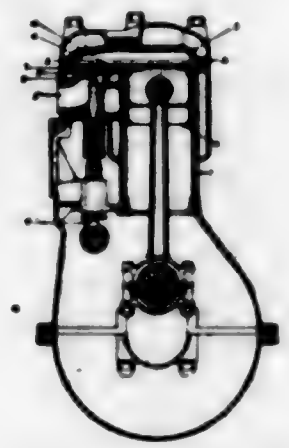
1. In a wire coiling machine; a framework, a coiling head revolubly mounted on the framework, a spirally corrugated mandrel axially mounted within the coiling head, winding devices arranged spirally about said mandrel, and means for rotating the winding devices and mandrel relatively to each other.

5. In a wire coiling machine, the combination with a spirally corrugated mandrel and means for rotating the



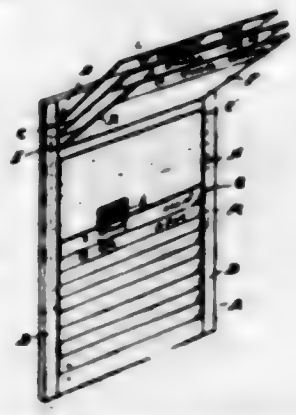
same in one direction, of a coiling head, and means for rotating the same in the other direction.

1,295,836. EXPLOSIVE-ENGINE. FREDERICK O. BALL, Detroit, Mich., assignor to Ball & Ball Carburetor Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 27, 1917. Serial No. 157,805. 2 Claims. (Cl. 123—75.)



2. In an explosive engine, the combination of a cylinder having a port extending therefrom, said port having a depression in one of the side walls thereof; a valve seat arranged in the depression, the port extending beyond said seat in the direction of flow of gases from the cylinder and having a rounded end adapted to direct the flow of gases to said depression and toward said seat; and a valve operating on the seat, the bottom of the valve when open being above the bottom of the depression but below the top of the depression and the depression being of a greater depth than the normal lift of the valve.

1,295,837. CARD-INDEX. JAMES BARKER, Detroit, Mich. Filed Dec. 24, 1917. Serial No. 208,570. 6 Claims. (Cl. 129—16.7.)



1. In a card index, the combination with a card-holder having a main body portion and a transparent member secured to one edge thereof, of a card having a return-bent flange forming an interlock with the said edge of the main body portion.

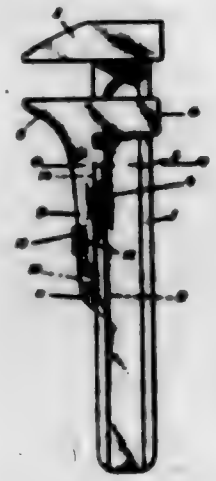
2. In a card index, the combination with a card-holder having a main body portion and a transparent member secured to one edge thereof, of a card having a return-bent flange forming an interlock with the said edge of the main body portion, said card having index data carried by its corresponding edge and its return-bent flange.

3. In a card index, the combination with a card-holder having a main body portion and a transparent member secured to one edge thereof, of a card having a return-bent flange forming an interlock with the said edge of the main body portion, said card having index data carried by its corresponding edge and its return-bent flange, and means for holding the cards in overlapped relation so that one of said index portions is always visible.

4. In a card index, the combination with a card-holder having a main body portion and a transparent member secured to one edge thereof, of a card having a return-bent flange forming an interlock with the said edge of the main body portion, and a signaling device also retained by said transparent member.

6. In a card index, the combination with a card-holder having a main body portion and a transparent member secured to one edge thereof, of a card having its corresponding edge positioned in said transparent member, and a signaling device having a return-bent flange interlocked with the said edge of the main body portion of the card-holder.

1,295,838. WRENCH. ARTHUR C. BARRETT, Stockton, Cal. Filed Mar. 11, 1918. Serial No. 221,683. 1 Claim. (Cl. 81—184.)



A wrench comprising a shank, a fixed jaw and a slidable jaw, said shank being provided with a longitudinal groove on each side, a guide member on the slidable jaw slidable in the grooves, the shank being further provided with a longitudinal slot in its inner edge, ratchets formed in the bottom of the slot, a downwardly extending bracket on the slidable jaw, a spring pressed finger member pivoted at one end in the bracket and positioned between the bracket and the slot and having a projecting lug impinging against the lower end of the bracket, a dog pivoted to the finger member normally projecting into the slot and engaging the ratchets at an acute angle therewith to hold the slidable jaw against movement away from the fixed jaw, means in the bracket for engaging the finger member to lift the dog from the ratchets, the dog being provided with recesses on each side frictionally engaging with the end of the finger member whereby the compressive strain on the slidable jaw and the finger member and dog thereof is distributed evenly throughout and is not concentrated at the pivotal point of the dog and finger members.

1,295,839. FOLDABLE FURNITURE. HARRY D. BARTLETT, Chicago, Ill. Filed Mar. 18, 1916. Serial No. 85,054. 5 Claims. (Cl. 155—8.)

1. A seat, comprising a unitary border member, in combination with a body member, said border member consisting of a bent rod having its front part disposed across

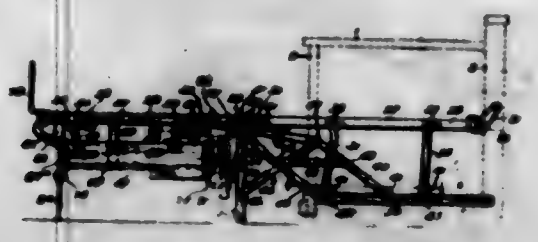
the front of the seat and having its side parts disposed rearwardly on opposite sides of the seat, and provided with loops at the rear edge of the seat, said side parts being formed each with an upward extension including a rearward loop and with the extremity of the rod extending diagonally forward and downward and secured to the side part between the front and back edges of the seat, and a back turnably connected to the first mentioned loops and normally engaged by the rearward loops to limit its backward swing.



4. In a chair, a seat having pivot means adjacent to its rear edge, a supporting member of unitary character comprising a bar bent to include a horizontal foot extending crosswise from one side of the chair to the other, said bar being turned up at the ends of said foot, the upturned parts extending upward and each including a looped part formed to receive said pivot means and said bar extending diagonally downward and inward from the looped parts and having its ends attached to the middle parts of the opposite upturned parts respectively, and a complementary supporting member turnably connected medially to the first mentioned supporting member and having a foot at one end and its opposite end being adapted to detachably engage the front part of said seat.

5. A chair, comprising a seat in combination with a back, supporting means each turnably connected coaxially to the back part of said seat, lugs projecting upward on the back part of said seat adapted to limit the rearward swing of the back in unfolding the chair, said supporting means being foldable against the seat member and projecting beyond the rear edge of the seat, said lugs each being substantially rigid against inward springing and including a diagonal brace part, whereby the lugs are better adapted to effectually hold the chairs in place when folded and stored in a suitable container.

1,295,840. SOFA-BED. HARRY D. BARTLETT, Delavan, Wis., assignor to Julius Kramer, Chicago, Ill. Filed May 31, 1917. Serial No. 171,883. 16 Claims. (Cl. 5—51.)



1. In a sofa-bed, the combination with the frame thereof, and opposite parallel tracks located at the ends of the frame, of a folding-bed structure, supporting-links for the same, and opposite supporting-bars to which the lower ends of said links are pivoted, said bars being slidably applicable endwise to said parallel tracks, and means for automatically securing said bars immovably upon the tracks when applied thereto.

1,295,841. COMBINED CARPENTER'S SQUARE AND MITER-GAGE. CLARENCE F. BENJAMIN, Milford, Conn. Filed June 19, 1918. Serial No. 240,752. 6 Claims. (Cl. 33—120.)

1. A combined square and miter gage, comprising a pair of blades, means pivotally connecting them at one end, one of the blades having a circular series of recesses in one of its faces about the pivot means, the other blade having a plurality of teeth on one of its faces for interengaging with said recesses, said teeth being pressed from the blade and thereby forming a like number of recesses in its opposite face, a clamping member mounted on said pivot means and provided with a plurality of teeth for engaging in said recesses and for riding out thereof when the clamping member is rotated, said member having an operating handle, and means for limiting the swing of the latter.



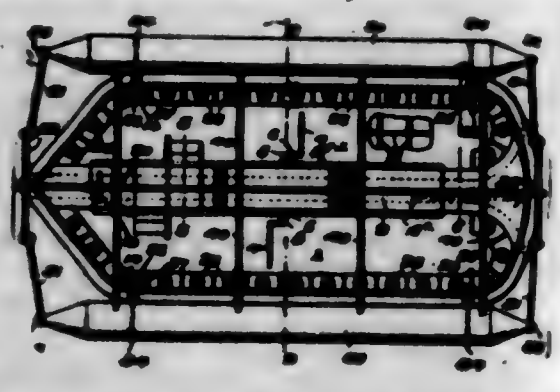
2. A combined square and miter gage, comprising a pair of blades, means pivotally connecting them at one end, one of the blades having a circular series of recesses in one of its faces about the pivot means, the other blade having a plurality of teeth on one face for interengaging with said recesses, said teeth being pressed from the blade and thereby forming a like number of recesses in its opposite face, and a clamping member mounted on said pivot means and provided with a plurality of teeth for engaging in said recesses and for riding out thereof when the clamping member is rotated.

1,295,842. MEASURING APPARATUS. CHRISTIAN BERGER, New York, N. Y. Filed Oct. 16, 1918. Serial No. 258,329. 8 Claims. (Cl. 33—1.)



6. A weighing apparatus comprising a rotatable chart viewable from different sides and printed with two superposed systems of inscriptions of opposite colors, in combination with screens of corresponding colors at the two sides respectively.

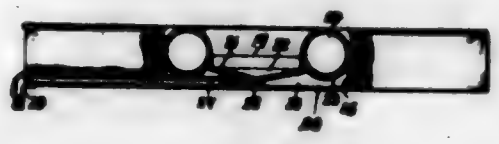
1,295,843. NON-SINKABLE LIFE-BOAT. JULIUS D. BERNSTEIN, New York, N. Y. Filed Aug. 7, 1918. Serial No. 248,792. 5 Claims. (Cl. 9—11.)



1. A boat having an outer hull and an inner hull and provided with bracing and spacing bars located between said hulls and with two pairs of upright additional brace

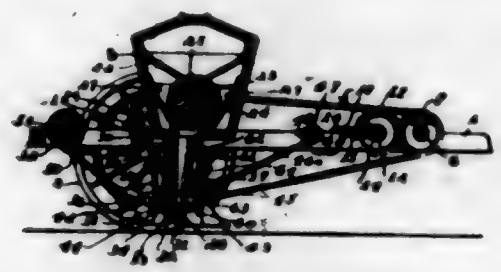
bars attached to the inner side of said inner hull respectively near the bow and stern of the boat, coöperating with the before mentioned bars to strengthen said inner hull and in addition providing bearings substantially as set forth.

1,295,844. MATTRESS BASIN-DRAIN. ALFRED M. BIDWELL, Jersey City, N. J. Filed Nov. 23, 1916. Serial No. 132,952. 2 Claims. (Cl. 5—13.)



1. A mattress provided with a recess extending to the side thereof, a basin in said recess and adapted to be supported above the bed spring or other mattress support, a removable mattress section in said recess and extending to the side of the mattress, and a drain also adapted to be supported above the bed spring or other mattress support and extending from said basin beneath the removable mattress section.

1,295,845. BEET-PLANTER. ALBERT BOZEK, Gebo, Wyo. Filed Nov. 21, 1918. Serial No. 263,576. 5 Claims. (Cl. 111—59.)



1. A planter including a main frame, a seed hopper thereon, a guide tube extending downwardly from the seed hopper, means for dropping the seeds from the hopper into the guide tube, an open frame receiving the tube, a forwardly extending link loosely connecting the open frame to the main frame, a furrow opening shovel on the open frame, a cable extending rearwardly from the open frame, means coöperating with the cable to raise and lower the open frame, and means for locking the frame in a lowered position.

1,295,846. MACHINE FOR INSERTING FASTENINGS. JAMES A. BROGAN, Lawrence, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 19, 1916. Serial No. 115,891. 25 Claims. (Cl. 1—19.)

1. In a machine of the character described, the combination of heel contour edge gaging means for determining the relation of a row of fastenings with respect to the contour edge of a heel, heel breast edge gaging means for determining the relation of a row of fastenings with respect to the breast edge of a heel, and means operable at will for selectively placing either of said gaging means in gaging position.

2. In a machine of the character described, the combination of heel contour edge gaging means for determining the relation of a row of fastenings with respect to the contour edge of the heel, means for shifting the contour edge gaging means to another position for determining the relation of a second row of fastenings parallel to the contour edge of the heel, heel breast edge gaging means for determining the relation of a row of fastenings across the heel parallel to the breast edge of the heel, and means for selectively rendering either of said gaging means operative and the other inoperative.

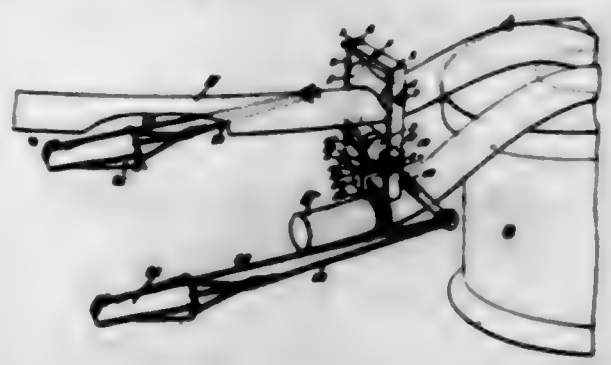


7. In a machine of the character described, the combination of an arm, heel contour edge gaging means and heel breast edge gaging means carried by said arm, and along which the heel contour and heel breast are respectively movable to permit a row of fastenings to be inserted in the heel parallel to the contour and breast edges and means for shifting the arm with either of said gages in gaging position to permit a plurality of rows of fastenings to be inserted parallel to either the contour or breast edge of the heel.

13. A gage for guiding a boot or shoe for the insertion of fastenings, comprising, in combination, a swinging carrier having oppositely extending portions constituting two gaging surfaces against either of which the work may be held to determine the position of the fastenings to be driven, means for pivotally supporting the carrier at a point offset laterally from the gaging portions for movement to place one of said gages in and the other out of gaging position, and stops for limiting the swinging movement of the carrier.

22. In a gage of the character described, a T-shaped member having gaging surfaces adjacent to the ends of the shorter arm of said member, and means for supporting said member for bodily adjustment of said shorter arm to bring either of said gaging surfaces into operative position.

1,295,847. HAWSER-CONVEYER. JOHN A. BROWNE, Savannah, Ga. Filed Aug. 19, 1918. Serial No. 250,571. 12 Claims. (Cl. 114—235.)



11. A hawser conveyer including a structure adapted to engage and travel along a hawser, and a drag connected to said structure.

1,295,848. MEANS FOR REDUCING WEAR IN THE WORKING BARRELS OF PUMPS. ROBERT B. CARMICHAEL, Damon, Tex., assignor of one-half to George Hamman, Houston, Tex. Filed Jan. 11, 1918. Serial No. 211,451. 11 Claims. (Cl. 103—39.)

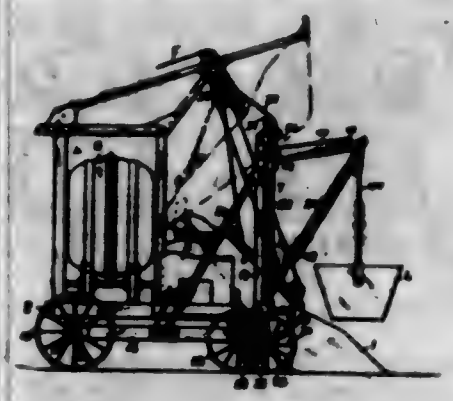
1. In a pump, a working barrel, a pump rod and plunger reciprocable therein, means mounted on said

pump rod to bear closely against the working barrel at both ends of said plunger, said means comprising a radially extending rigid attaching base, an outwardly flaring resilient flange thereon, a sharp outer edge on said



flange adapted to scrape the inner surface of said working barrel.

1,295,849. MATERIAL-TRANSFERRING APPARATUS. EDWARD G. CARR, Milwaukee, Wis., assignor to The Lakewood Engineering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 12, 1918. Serial No. 249,561. 4 Claims. (Cl. 214—17.)

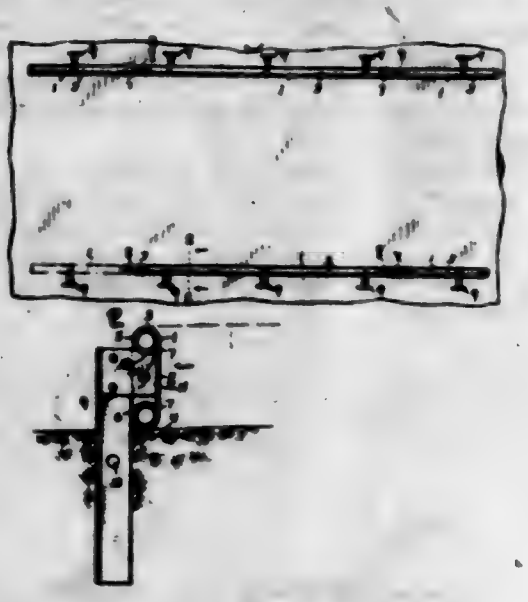


1. The combination with a frame adapted to be moved from place to place, of a hopper supported thereby, means for lifting the hopper, an independently supported derrick frame connected with the hopper supporting frame, and means connected with the hopper and extending to the derrick frame and adapted to lift a receptacle, when the hopper fails, to load or charge the hopper.

1,295,850. ROAD-FORM. EDWARD G. CARR, Milwaukee, Wis., assignor to The Lakewood Engineering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 12, 1918. Serial No. 249,562. 6 Claims. (Cl. 25—118.)

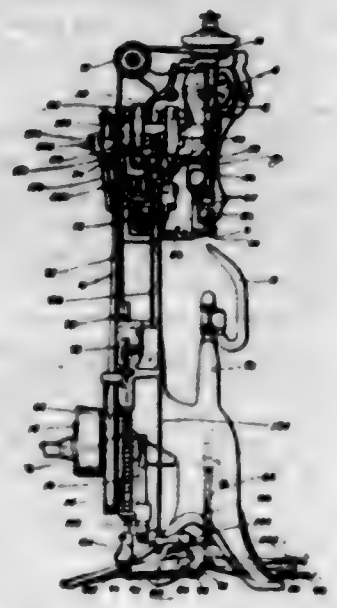
8. A road form provided with a retaining wall having at its upper edge a line point top surface in combination with a support adapted to retain the line point top surface of the form in the same plane whether the retaining wall is vertical or inclined.

6. A support for a road form made from a T-bar and sharpened on the cross bar of the T, the support being



provided with a hole adapted to receive a bar or pipe to afford bearing surface in soft ground.

1,295,851. FASTENING-INSERTING MACHINE. LOUIS A. CADORAIN, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of Illinois. Filed June 7, 1916. Serial No. 102,291. 46 Claims. (Cl. 1—26.)



1. A machine for inserting fastenings comprising a continuously rotating wire carrying spindle, lateral shafts continuously driven from said spindle, wire feeding means operated from one of said shafts, means for initiating the operation of said wire feeding means, and means operated by the other of said shafts for suspending the operation of said wire feeding means.

2. A machine for inserting fastenings comprising a continuously rotating wire carrying spindle, lateral shafts continuously driven from said spindle, wire feeding means operated from one of said shafts, automatic means for initiating the operation of said wire feeding means, and means operated by the other of said shafts for suspending the operation of said wire feeding means.

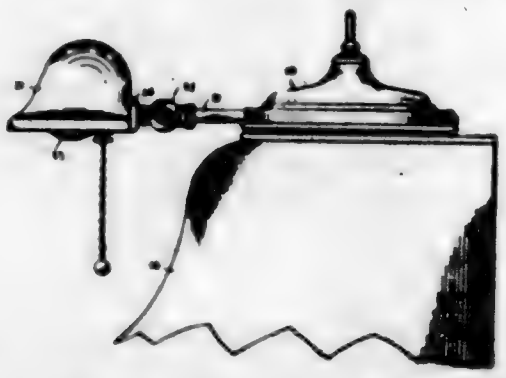
20. In a machine for inserting fastenings, wire severing means, continuously rotating shafts from one of which said means are operated, a clutch upon said last named shaft constructed and arranged to connect said shaft to said wire severing means, and means operated

from the other of said shafts for disconnecting the clutch from its shaft.

23. In a machine for inserting fastenings, wire severing means, a continuously rotating shaft, a cam on said shaft for operating said wire severing means, and a normally inoperative clutch constructed and arranged to connect said cam to said shaft for operating said wire severing means.

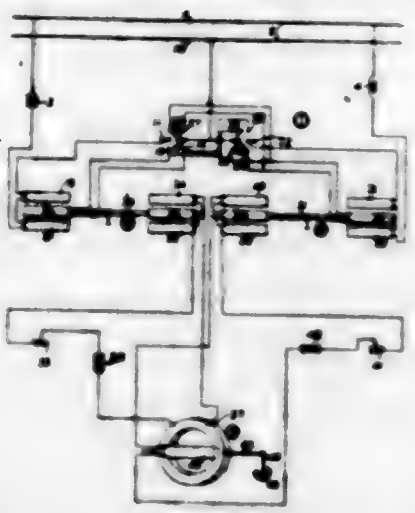
32. A machine for inserting fastenings comprising a shaft, means for rotating said shaft, wire feeding means, operating mechanism therefor normally connected operatively to the shaft, wire severing means, and operating mechanism therefor normally in inoperative relation to the shaft.

1,295,852. HOOD AND ELECTRIC-LIGHT SUPPORT. GEORGE W. CARRIDY, New York, N. Y. Filed Mar. 15, 1918. Serial No. 222,724. 3 Claims. (Cl. 240—78.)



3. In a device of the character described, the combination with a base, and a hood having a slot in the edge thereof, of a grooved supporting member lying along the inner surface of one side of said hood near the edge thereof provided at one end with devices adapted to hold a lamp socket and at the other end with a rectangular projection adapted to pass into the slot in said hood and a flange adapted to extend laterally beneath the lower edge of said hood and support the same; and means adapted to extend through said slot and secure said grooved supporting member to said base; the said groove serving as a channel to contain a wire passing from said base through said slot to said lamp socket.

1,295,853. ELECTRICAL MEASURING INSTRUMENT. LEWIS W. CHUBB, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 10, 1916. Serial No. 114,175. 10 Claims. (Cl. 175—183.)



1. In a measuring device for an electric circuit, the combination with two differential balances, a reactor connected in circuit with the windings on one end of one of the balances and a condenser connected in circuit with the windings on the corresponding end of the other balance, of a dynamometer, the windings on the other ends of the balances being connected in circuit with the respective windings of the dynamometer.

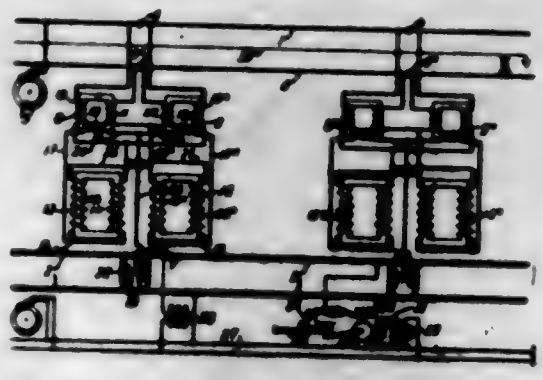
2. The method of determining the product of the differential and integral values of an alternating-current wave which consists in supplying a dynamometer with two direct currents one of which is proportional to the integral and the other to the differential value of the voltage of the alternating-current wave.

4. In an alternating-current circuit, the combination with two coöperating windings, of means for supplying one of the windings with current proportional to the integral and the other winding with current proportional to the differential value of the voltage of the circuit.

8. The method of determining the reciprocal of the product of the differential and integral-distortion factors of an alternating-current wave which consists in supplying a dynamometer with two currents proportional to the integral and the differential values of the voltage wave, then supplying the dynamometer with currents proportional to the square root of the mean square value of the voltage wave and dividing the former indication of the dynamometer by the latter.

10. The method of determining the reciprocal of the product of the differential and integral-distortion factors of an alternating-current wave which consists in supplying a dynamometer with currents proportional to the square-root of the mean-square of the integral and differential values of the voltage wave, then supplying the dynamometer with current proportional to the square-root of the mean-square values of the voltage wave and dividing the latter by the former indication of the dynamometer.

1,295,854. DISTRIBUTING SYSTEM FOR ELECTRIC RAILWAYS. ALMON W. COPLEY, Wilkinsburg, and CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 14, 1915. Serial No. 66,732. 12 Claims. (Cl. 171—97.)

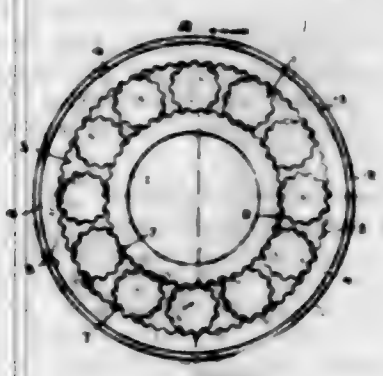


1. An electric railway system comprising a trolley conductor, a return feeder, a track circuit held at a potential mid-way between the potential of said trolley conductor and the potential of said return feeder, and inductively related windings for interlinking the trolley circuit track circuit and return feeder in such manner that the algebraic sum of the ampere turns of said inductively related windings is, at all times, equal to zero.

1,295,855. ROLLER-BEARING. SCOTT R. COFFING, Princeton, Ill. Filed Dec. 12, 1917. Serial No. 206,778. 5 Claims. (Cl. 64—30.)

1. A roller bearing comprising an inner sleeve formed with transverse corrugations and provided intermediate its ends with a circumferential groove, a sectional outer sleeve formed interiorly with transverse corrugations and provided intermediate its ends with a circumferential groove in alinement with the first mentioned groove, longitudinally corrugated rollers positioned between and in mesh with said inner and outer sleeves and each formed intermediate of its ends with a circumferential groove, a retaining ring disposed within the circumferential groove of the inner sleeve and projecting into the corresponding groove of each roller, and a retaining ring positioned in

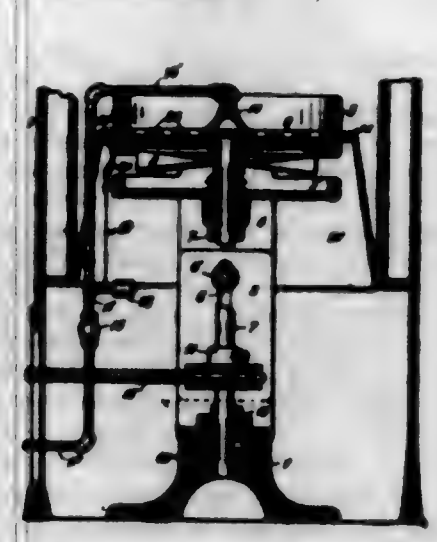
the circumferential groove of the outer sleeve and projecting into the circumferential groove of each roller.



2. A roller bearing comprising an inner sleeve formed with transverse corrugations and provided intermediate its ends with a circumferential groove, a sectional outer sleeve formed interiorly with transverse corrugations and provided intermediate its ends with a circumferential groove in alinement with the first mentioned groove, longitudinally corrugated rollers positioned between and in mesh with said inner and outer sleeves and each formed intermediate of its ends with a circumferential groove, a spring retaining ring disposed within the circumferential groove of the inner sleeve and projecting into the corresponding groove of each roller, a spring retaining ring positioned in the circumferential groove of the outer sleeve and projecting into the circumferential groove of each roller, and means for securing the sections of the outer sleeve in position to prevent transverse movement of the parts.

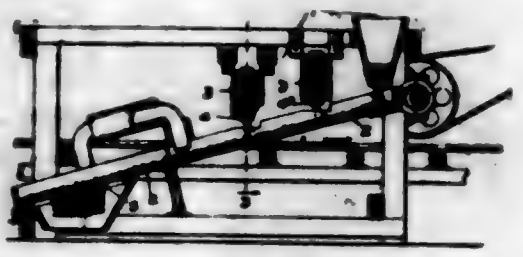
5. A roller bearing comprising an inner sleeve formed exteriorly with transverse corrugations, an outer sleeve consisting of two abutting parts formed interiorly with transverse corrugations, the outer circumferential edge of each outer sleeve part being formed with a rabbet, means to prevent relative transverse movement of said rollers with respect to said inner and outer sleeves, and a sleeve band positioned around said outer sleeve and formed at its opposite circumferential edges with inwardly extending beads for engagement within said rabbets of the outer sleeve parts.

1,295,856. ROTARY OIL-BURNER. ADELARD COUTURE, Arctic, R. I. Filed Nov. 7, 1918. Serial No. 261,506. 12 Claims. (Cl. 158—28.)



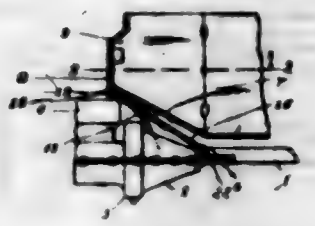
3. In an oil burner, oil burning means, an oil supply for said means, rotatable means to supply air to the oil burning means, means to rotate the air supplying means, and heat-responsive means whereby upon cessation of rotation of the air supplying means the oil supply will be automatically shut off.

1,296,257. PROCESS OF TREATING ZINC ORES. AUGUSTUS P. CRAFT, Galena, Ill. Filed June 23, 1917. Serial No. 176,483. 1 Claim. (Cl. 83—71.)



The process of dressing roasted zinc ores which consists in separating the larger particles of iron therefrom by magnetic separation, then immediately subjecting the ore as it passes from said treatment to an agitating and screening action on a screen of not less than fifty mesh to the inch to separate and collect the fine ores therefrom and then subjecting such collected body of particles of ore to a wet separation process to remove the lime, iron pyrites and other impurities.

1,295,858. HEAT-SHIELD FOR AUTOMOBILES. JOSEPH A. CYPERT, Kansas City, Mo. Filed June 3, 1918. Serial No. 237,894. 11 Claims. (Cl. 180—77.)



1. In a heat shield for automobiles, a deflecting plate provided with a flange resting between the dash and the floor of an automobile, said deflecting plate extending rearwardly and downwardly and fitting around the transmission case, a curved hood formed in said shield with a concaved side facing the engine and a convex side adjacent the floor, a flat plate resting against said flange and extending rearwardly and downwardly, the rear end of said flat plate resting on the chassis frame, and a hole in said flat plate for the operating levers.

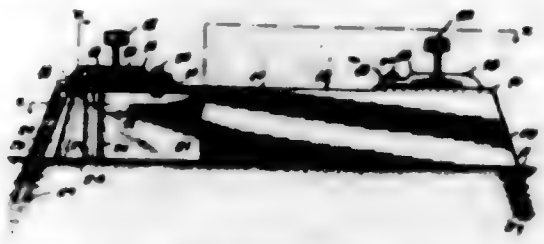
4. In shields for automobiles, a deflecting plate arranged for connection to the dash of an automobile, a flat plate projecting rearwardly from said deflecting plate, the rear end of said flat plate arranged to rest upon the chassis frame, notches in the rear end of said flat plate to fit around the chassis frame, and a hole in said flat plate to receive the operating levers.

6. In a heat shield for automobiles, a deflecting plate arranged for connection to the dash of an automobile, a flat plate projecting rearwardly from said deflecting plate, the rear end of said flat plate arranged to rest upon the chassis frame, a notch in the dash connecting end of said plate to receive the usual wires connecting the horn and the steering wheel switch, and a hole in said flat plate to receive the operating levers.

9. In a heat shield for automobiles, a flat plate with one end thereof attachable by suitable connections to the dash of an automobile, the opposite end of said flat plate arranged to rest upon the chassis frame, a hole in said flat plate to receive the operating levers, said hole slotted and opening to one side of said plate, a cover plate covering said hole from the place occupied by the levers to the adjacent outer edge thereof, a lug on one end of said cover plate, a stop plate for the engagement of said lug, said stop plate rigid with said flat plate, and a clamp button on said stop plate to clamp said cover plate.

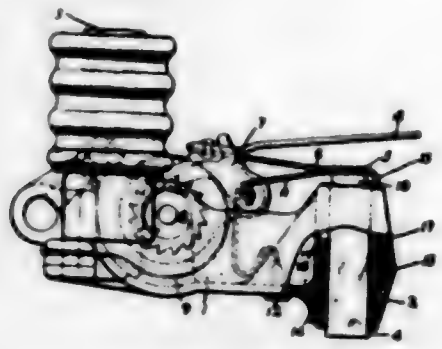
11. In a heat shield for automobiles, a shield reaching rearwardly and downwardly from the dash, and a curved hood in said shield adjacent the dash.

1,295,860. RAIL-TIE. STANISLAW DAMBROWSKI, Central Falls, R. I. Filed Sept. 28, 1918. Serial No. 256,111. 3 Claims. (Cl. 238—5.)



2. A device of the class described comprising a hollow tie having ways within its interior adjacent its opposite ends, anchoring slabs removably positioned within said ways having a projecting portion provided with sharpened edges.

1,295,860. BRUSH-HOLDER. JOHN S. DEAN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 4, 1916. Serial No. 70,236. 4 Claims. (Cl. 200—24.)



1. In a brush holder, the combination with a body member provided with a brush box, and a brush adapted to move therein, of a pressure-exerting member and a contact tip in engagement with said brush, an electric conductor connected, at one end, to said body member and, at the other end, between said pressure-exerting member and said contact tip, and means embodied in said pressure-exerting member for preventing contact of said conductor with the walls of said brush box.

3. In a brush holder, the combination with a body member provided with a brush box having a slot in one wall thereof and a brush adapted to move in said box, of a pressure-exerting device for said brush and an electric conductor connected thereto, the said pressure-exerting device being adapted to enter the slot in the brush box, and a projection on said pressure-exerting device for engaging a wall of the brush-box before the said conductor engages the bottom of the slot.

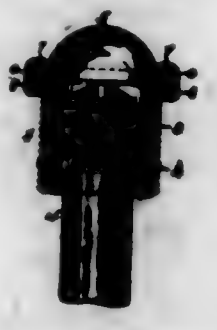
1,295,861. STAY-BOLT STRUCTURE. ETHAN I. DONNE, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,896. 3 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve having cam slots, of a removable cap or closure adapted to be seated in said sleeve and having lugs to enter said cam slots.

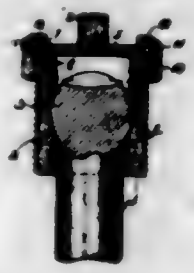
3. In a staybolt structure, the combination with a bearing sleeve having a cap seat therein and having cam slots in its wall, of a removable cap to enter said sleeve and rest on said seat, said cap having lugs to enter said cam slots and the sleeve having interior recesses for the passage of said lugs, and means permitting the application of a wrench to said cap for turning said cap to lock or unlock the same.

1,295,862. STAY-BOLT STRUCTURE. ETHAN I. DONNE, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,898. 1 Claim. (Cl. 85—1.5.)



In a staybolt structure, the combination with an externally threaded bearing sleeve, and a partly spherical cap having a flange to rest on said bearing sleeve, of a clamping ring threaded on said sleeve and having jaws spaced apart, each of said jaws having a lip to engage the flange of the cap, whereby the cap may be removed laterally from the bearing sleeve and pass from between said jaws when the clamping ring is loosened.

1,295,863. STAY-BOLT STRUCTURE. ETHAN I. DONNE, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,899. 2 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve, of a removable closure seated on said sleeve and providing a closure therefor, and a clamping nut threaded on said sleeve and having a plurality of jaws overhanging the edge portion of said closure, whereby when said nut is screwed in one direction, the closure may be removed laterally without removing the nut.

2. In a staybolt structure, the combination with a bearing sleeve, of a removable plate seated on said sleeve and providing a closure therefor, a knob on said plate, and a clamping nut threaded on said sleeve and having jaws spaced apart to engage said closure and permit the passage of the closure when being applied or removed from the bearing sleeve.

1,295,864. STAY-BOLT STRUCTURE. ETHAN I. DONNE, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,900. 4 Claims. (Cl. 85—1.5.)

1. In a staybolt structure, the combination with a bearing sleeve having a cap seat therein, of a removable cap disposed within said bearing sleeve, and a locking member connected with said cap and adapted to engage the sleeve to lock the cap in place and permit its quick removal.

2. In a staybolt structure, the combination with a bearing sleeve having a cap seat therein, of a cap to rest



on said seat within the bearing sleeve, said cap having a threaded shank, and a locking member threaded on said shank and adapted to engage the sleeve.

1,295,865. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,902. 1 Claim. (Cl. 85—1.5.)



In a staybolt structure, the combination with a bearing member having an annular flange at its outer end, of an externally threaded cap seated on said sleeve and having a part to receive a wrench, and a locking member threaded on the cap and provided with jaws to engage the annular flange on the bearing sleeve, said jaws being constructed and adapted to permit the cap and locking member to be removed laterally from the end of the bearing sleeve.

1,295,866. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,910. 3 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve, and a collar threaded thereon, of a cap for closing said sleeve having pivotal connection with said collar, and a latch member projecting from said cap and adapted to engage behind said collar.

2. In a staybolt structure, the combination with a bearing sleeve and a collar threaded on said sleeve, of a cap for closing said sleeve, said cap having pivoted connection with said collar, and a latch pivoted to said cap and adapted to engage behind said collar.

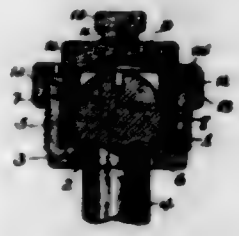
1,295,867. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,919. 3 Claims. (Cl. 85—1.5.)

1. In a staybolt structure, the combination with a bearing sleeve provided with a part having segmental cam shoulders, of a cap or closure to seat on said bearing sleeve and having a circumferential enlargement provided with a V-shaped peripheral portion, and a locking ring having an internal V-shaped groove receiving the V-shaped portion of the circumferential enlargement carried by the cap, said locking ring also having internal segmental cam shoulders to engage behind the cam shoulders on the bearing sleeve.



2. In a staybolt structure, the combination with a bearing sleeve having a threaded exterior portion and a ring threaded on said bearing sleeve and provided with segmental cam shoulders, of a cap to seat on the bearing sleeve and having a circumferential V-shaped portion, and a locking ring having an interior V-shaped groove receiving the circumferential V-shaped portion of the cap, said locking ring also having internal segmental cam shoulders to engage behind the cam shoulders on said first mentioned ring.

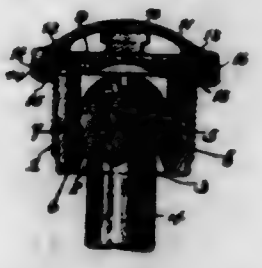
1,295,868. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,810. 4 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bushing, of a sleeve mounted freely in said bushing and affording a bearing for the head of the staybolt, and a locking ring interposed between said bushing and sleeve and cooperate with both.

2. In a staybolt structure, the combination with a bushing, of a sleeve mounted freely therein and affording a bearing for the head of the staybolt, and a locking ring to engage said bushing and sleeve and to have interlocking relation with one of said parts.

1,295,869. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,811. 3 Claims. (Cl. 85—1.5.)

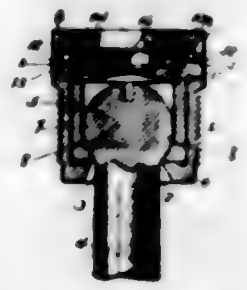


1. In a staybolt structure, the combination with a bushing, of a bearing sleeve mounted therein, and a cap having interlocking engagement with the bushing and engaging said bearing sleeve.

2. In a staybolt structure, the combination with a bushing, of a sleeve mounted therein and forming a bear-

ing for the rounded head of a staybolt, a cap covering said sleeve and engaging the same, segmental shoulders on the bushing, and segmental shoulders in the cap cooperable with segmental shoulders on the bushing.

1,295,870. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,312. 2 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bushing provided with an annular extension having internal segmental shoulders near its free end and also having slots in its wall, of a bearing sleeve for the head of a staybolt mounted freely in said bushing, said bearing sleeve having external segmental shoulders to coöperate with the segmental shoulders in the extension of the bushing and also having stop lugs or fingers entering the slots in the extension of the bushing.

2. In a staybolt structure, the combination with a bushing provided with an annular extension having open slots and internal segmental shoulders, of a bearing sleeve for the head of a staybolt mounted to turn in said bushing and having segmental shoulders to coöperate with the segmental shoulders of said extension, said sleeve also provided with stop lugs entering the slots in said extension, said bearing sleeve adapted for the application of a wrench, and a plug threaded in said sleeve and closing the latter over the head of the staybolt.

1,295,871. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,315. 2 Claims. (Cl. 85—1.5.)

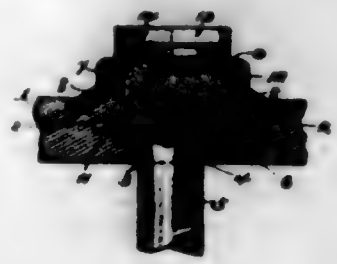


1. The combination of a boiler sheet having an integral boss affording a bearing for the head of a staybolt and provided near its free end with segmental shoulders, and a cap for removably closing the outer end of said boss and provided with segmental shoulders to engage the segmental shoulders of the boss.

2. The combination of a boiler sheet having an integral boss affording a bearing for the head of a staybolt and provided externally with segmental shoulders, and a cap having a bearing on said boss and closing the outer end of the latter, said cap having a peripheral flange encircling the shoulder portion of the boss and provided with inwardly projecting segmental shoulders to engage behind the segmental shoulders of the boss.

1,295,872. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,316. 2 Claims. (Cl. 85—1.5.)

1. The combination with a boiler sheet having a socket and an opening therein, of a bearing sleeve removably mounted in the socket of the boiler sheet, a ring or sleeve fixed to the outer face of the boiler sheet, and interlocking shoulders on said bearing sleeve and fixed ring or sleeve.



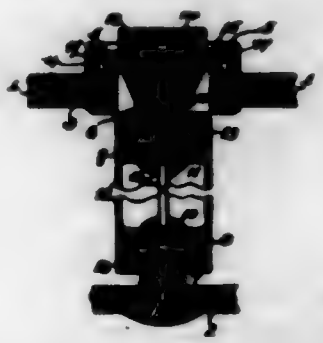
2. The combination with a boiler sheet having a socket and an opening therein, of a bearing sleeve for the head of a staybolt mounted in the socket in the boiler sheet and removable therefrom, said bearing sleeve having external segmental shoulders, a plug closing said bearing sleeve, and a ring or sleeve rigidly secured to the boiler sheet and having internal segmental shoulders for coöperation with the segmental shoulders on the bearing sleeve to lock the latter normally in place.

1,295,873. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,317. 1 Claim. (Cl. 85—1.5.)



The combination of a sleeve having its interior wall conical and straight longitudinally of the sleeve, said sleeve having an annular extension provided with inwardly projecting segmental shoulders, a staybolt, a head provided on said bolt and having a conical interior face conforming to the conical interior of said sleeve, said head adapted for the reception of a wrench, a removable cap entering the sleeve extension over the end of the bolt and engaging said head, and outwardly projecting segmental lugs or shoulders on said cap adapted to engage behind the inwardly projecting segmental shoulders on said sleeve extension.

1,295,874. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,320. 2 Claims. (Cl. 85—1.5.)

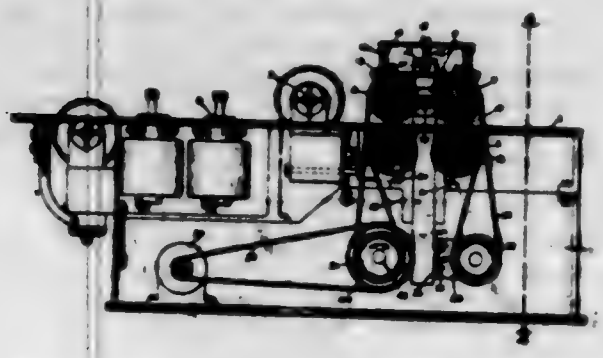


1. The combination with outer and inner boiler sheets, of a flexible staybolt comprising headed studs and a tubular member in which said studs are mounted, one of said studs adapted for connection with the inner boiler sheet, a cap member connected with the other headed stud and provided with segmental shoulders, and an annular member attached to the outer boiler sheet and provided with

segmental shoulders for coöperation with the segmental shoulders on said cap member.

2. In a staybolt structure, the combination of a flexible staybolt comprising two headed studs spaced apart, a tubular body portion receiving the heads of said studs and provided with bearings therefor, a bar or link connecting said headed studs, one of said headed studs adapted for connection with an inner boiler sheet, a ring or sleeve attachable to an outer boiler sheet and provided with segmental shoulders, and a cap member connected with one of said headed studs and entering said ring or sleeve and having a bearing thereon, said cap member provided with segmental shoulders for coöperation with the segmental shoulders in the ring or sleeve to normally lock said cap member in place.

1,295,875. FEEDING MECHANISM FOR MOLDING-MACHINES. ROBERT D. EAGLESFIELD, Indianapolis, Ind. Filed Aug. 26, 1918. Serial No. 251,504. 4 Claims. (Cl. 144—246.)



1. In a feeding mechanism for molding machines, the combination with feed rollers arranged in pairs, one above the other, and means to adjust the upper pair of rollers vertically, of a single driving chain for operating both pairs of rollers, and a tensioning gear movable vertically with said upper pair of rollers for retaining said driving chain at a uniform tension without directing pressure thereagainst.

1,295,876. ALARM-WATCH. CHRISTIAN EDMUNDSON, Tientsin, China. Filed Nov. 21, 1917. Serial No. 203,174. 5 Claims. (Cl. 58—19.)

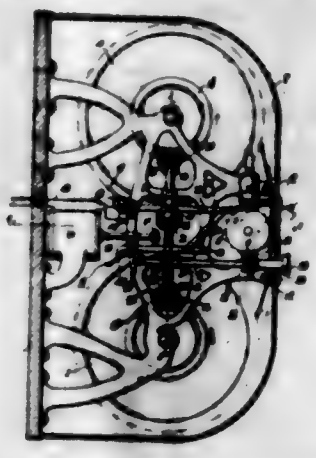


2. In a device of the character described, the combination of a watch, including hands, wires carried by said watch, contact posts connected to said wires in the path of movement of one of the hands, sockets connected to the remaining ends of said wires, signal means carried adjacent said watch and means removably fitting within selected sockets for closing a circuit at a predetermined hour, when one hand engages certain of the contact posts.

3. In a device of the class described, the combination of a watch, a retaining strap extending across the back of the watch, means for retaining said strap in engagement with said watch, said strap having a longitudinal passage extending therethrough, signaling means carried upon said strap adjacent said watch, and means for operating said signaling means including means extending through said passage for operatively connecting the signaling means together and yet allowing the strap to have even outer wearing surfaces.

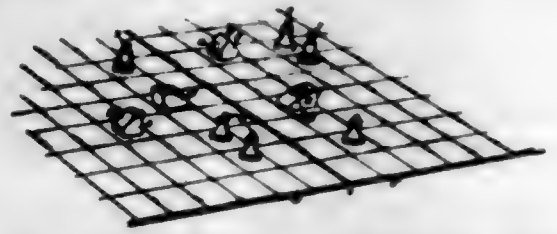
1,295,877. STATION-INDICATOR. GEORGE H. EBERHT, Evansville, Ind. Filed June 8, 1918. Serial No. 238,943. 3 Claims. (Cl. 40—58.)

3. In a station indicator, the combination with upper and lower spools having toothed heads, a web connecting said spools and having longitudinal perforations, a pin roller with which the perforations engage, the roller having oppositely disposed notches, a pivoted trip lever having a tooth for engaging said notches, and a dog on the inner arm of said lever for engaging the teeth on the upper spool; of a lower pivoted lever having a dog engaging the teeth on the lower spool, a link connecting the two levers to cause them to move in unison, a power



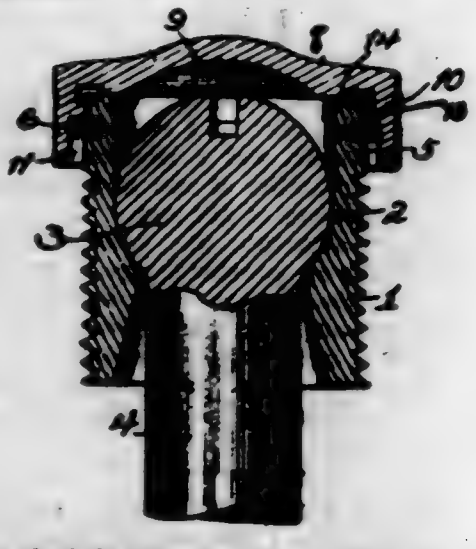
shaft selectively connected with said spools for driving either at will, a gear splined on said shaft and having a grooved hub, a yoke carried by said trip lever and engaging the groove of the hub, an electric motor having a pinion on its shaft with which said gear is engaged by the movement of the trip lever, and a switch to the motor controlled also by the movement of the trip lever.

1,295,878. GAME. HENRY FLEGG, New York, N. Y. Filed Apr. 9, 1917. Serial No. 160,769. 3 Claims. (Cl. 46—64.)



1. In a game, a checker-board and two sets of identical figures, each set comprising a plurality of pieces of infantry, cavalry and artillery, each of said artillery pieces having a tip and surfaces associated with said tip to present the same at different levels, substantially as and for the purpose set forth.

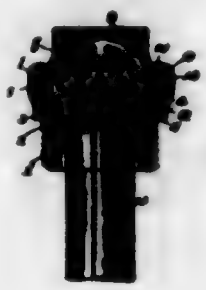
1,295,879. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODGE, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,297. 4 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination of a bearing sleeve member and a cap member, one of said members having segmental shoulders, and a split ring carried by the other member and having cam shoulders to engage said segmental shoulders.

3. In a staybolt structure, the combination of a bearing sleeve member having a circular external groove, a split locking ring mounted in said groove and having lateral cam shoulders, and a cap member provided with a flange portion to encircle said bearing sleeve member and provided with internal segmental shoulders to engage said cam shoulders.

1,295,880. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,800. 2 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve having a cap seat, of a cap having a plurality of lateral shoulders, and a ring threaded on said sleeve and having a plurality of jaws to engage over the lateral shoulders of the cap, whereby the cap may be quickly unlocked and removed without removing said ring from the bearing sleeve.

2. In a staybolt structure, the combination with a bearing sleeve having an annular flange at its outer end, of a cap to seat on the bearing sleeve, said cap having a plurality of lateral shoulders to overlie the annular flange of the sleeve, and a ring threaded on the sleeve in rear of said annular flange and provided with a plurality of jaws having lips to overlie the lateral shoulders on the cap.

1,295,881. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,801. 2 Claims. (Cl. 85—1.5.)

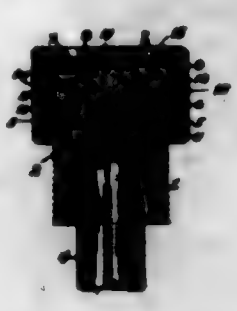


1. In a staybolt structure, the combination with a bearing sleeve having a cap seat, of a cap having a plurality of lateral cam shoulders, and a ring threaded on said sleeve and having a plurality of cam jaws to engage over the lateral cam shoulders of the cap.

2. In a staybolt structure, the combination with a bearing sleeve having an annular flange at its outer end, of a cap to seat on the bearing sleeve, said cap having a plurality of lateral cam shoulders to overlie the annular flange of the sleeve, and a ring threaded on the sleeve in rear of said annular flange and provided with a plurality of jaws having cam lips to overlie the lateral cam shoulders on the cap.

1,295,882. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,802. 3 Claims. (Cl. 85—1.5.)

1. In a staybolt structure, the combination with a bearing sleeve provided with segmental shoulders, and a cap or closure to seat against said bearing sleeve and provided with lateral stop lugs, of an annular locking member provided with segmental shoulders to engage behind the segmental shoulders of the bearing sleeve, said annular locking member having stop shoulders therein to cooperate with the stop lugs on the cap or closure, and a threaded member entering the locking sleeve or member for pressing the cap or closure against its seat.



2. In a staybolt structure, the combination with a bearing sleeve and a cap or closure to seat theresgainst, of a locking member coöperable with the bearing sleeve and inclosing the cap or closure, and a nut threaded in the locking member to engage the cap or closure and force it against its seat.

1,295,883. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,804. 3 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing member for a staybolt, said bearing member having an annular extension provided interiorly with two sets of segmental shoulders disposed in different planes, of a cap or closure adapted to seat against the bearing member and having lugs to engage behind one of said sets of segmental shoulders, and a head having a part to enter said annular extension and having lugs to engage behind the other set of segmental shoulders in said annular extension.

2. In a staybolt structure, the combination with a bearing member for a staybolt and having an annular flange or extension provided interiorly with two sets of annular shoulders disposed in different planes, of a head having a part entering said annular extension and provided with lugs to engage behind one set of segmental shoulders, a cap or closure seated on the bearing member and entering said head, said cap or closure having lugs to engage behind the other set of segmental shoulders, and cams between said cap or closure and the head.

1,295,884. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,807. 3 Claims. (Cl. 85—1.5.)

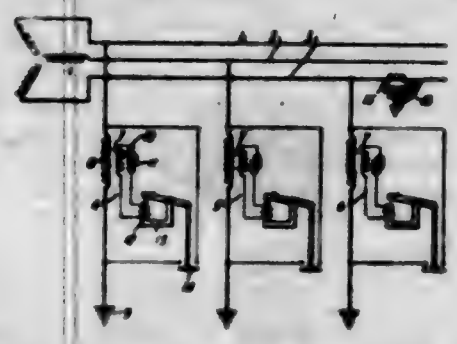
1. The combination with a sleeve adaptable for connection with a boiler sheet, of a cap or closure to receive the head of a staybolt, a removable ring within the inner end of said cap and constituting a bearing for the head of the staybolt, and interlocking means between said cap and sleeve.

2. The combination with a sleeve adaptable for connection with a boiler sheet and having a shoulder therein, said sleeve also provided with segmental cam shoulders, of a closure for the head of a stayholt, entering said sleeve and having a shoulder to seat against the shoul-



der in the sleeve, said closure also provided with segmental cam shoulders to coöperate with the cam shoulders of the sleeve, and a removable bearing ring inserted into the inner end of said closure and constituting a bearing for the head of the staybolt.

1,296,885. RELAY SYSTEM. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 4, 1915. Serial No. 12,089. 13 Claims. (Cl. 175—294.)



1. A system of distribution comprising a source of energy, a distributing circuit, a transformer having its primary winding connected between a conductor of the distributing circuit and the ground, a condenser and an electromagnet connected in a local circuit with the secondary winding of the transformer, said electromagnet being adapted to operate when the voltage of the distributing circuit changes suddenly, and means actuated by the electromagnet for decreasing the voltage of the circuit.

8. A system of distribution comprising a distributing circuit, a transformer having its primary winding connected between one conductor of the circuit and the ground and its secondary winding connected in a local circuit, said local circuit being so constituted that current traverses the same only when the voltage of the main circuit changes suddenly, and means for decreasing the voltage on the circuit when current traverses the local circuit.

12. The combination with an electric circuit, of means responsive to a relatively sudden change only in voltage of the circuit for operatively connecting the circuit to the ground through a relatively low-resistance connection.

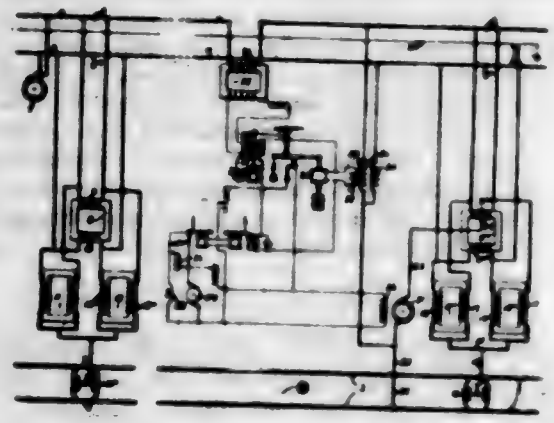
1,296,886. DISTRIBUTING SYSTEM FOR ELECTRIC RAILWAYS. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 5, 1916. Serial No. 101,732. 8 Claims. (Cl. 171—97.)

4. An electric railway system comprising a trolley conductor, a return feeder therefor, a track circuit, a plurality of spaced series transformers for inductively interlinking the trolley conductor and the feeder, and a transformer connected in circuit on each side of said se-



ries transformers for interconnecting said trolley conductor, said return feeder and said track circuit with one another.

1,296,887. SYSTEM OF DISTRIBUTION. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 7, 1916. Serial No. 129,975. 6 Claims. (Cl. 171—97.)



1. An electrical railway circuit comprising a trolley conductor, a return feeder therefor, a track circuit, spaced transformers having their inducing and induced windings connected in series relationship between the trolley conductor and the feeder, whereby said railway circuit is sectionalized, means for connecting an intermediate point of said transformer windings to the track circuit, and means associated with said transformers for automatically compensating for the reactive-drops obtaining in them under different load conditions, whereby the voltages impressed upon the system by said inducing and induced windings will be maintained at a constant ratio, said means being so connected to the transformer that they are substantially free from disturbance by short-circuit conditions which occur in the system.

2. An electrical railway circuit comprising a trolley conductor, a return feeder therefor, a track circuit, spaced transformers having their inducing and induced windings connected in series relationship between the trolley conductor and the feeder whereby said railway circuit is sectionalized, means for interconnecting an intermediate point of said transformer windings to the track circuit, and means influenced by the load currents flowing in the system for automatically maintaining a constant ratio between the voltages impressed upon the system by the said inducing and induced windings, said means being connected to said transformers through balance coils.

3. An electrical railway circuit comprising a trolley conductor, a return feeder therefor, a track circuit, spaced transformers having their windings connected in series between the trolley conductor and the feeder whereby said railway circuit is sectionalized, the inducing and induced windings of said transformers bearing a one-to-one voltage ratio to each other, and the inducing windings thereof being connected between the track circuit and the feeder and the induced windings being connected between the track circuit and the trolley conductor, and means for maintaining a fixed relation between the values

of the voltages impressed upon the system by the said inducing and induced transformer windings, under all load conditions, said means being so connected to the transformers that they are substantially free from disturbance by short-circuit conditions which occur in the system.

4. An electric railway circuit comprising a trolley conductor, a return feeder therefor, a track circuit, spaced transformers having their inducing and induced windings connected in series relationship between the trolley conductor and the feeder, means for interconnecting an intermediate point of said transformer windings to the track circuit, a synchronous condenser connected to the system, and balance coils connected between said condenser and the transformer system, the field excitation of said condenser being automatically controlled in accordance with the load conditions obtaining in the system whereby the inductive reactive-drops in said transformers may be compensated for.

6. An electric railway system comprising a trolley conductor, a return feeder therefor, a track circuit, a plurality of spaced series transformers for inductively interlinking the trolley conductor and the feeder, a transformer connected on each side of said series transformers for interconnecting said trolley conductor, said return feeder and said track circuit with one another, a synchronous condenser, balance coils connected in circuit therewith for connecting the synchronous condenser to both the inducing and induced windings of the transformers connected on both sides of said series transformers, and means for automatically varying the field excitation of said synchronous condenser in order to compensate for the inductive reactive-drop obtaining in the transformer windings connected thereto, under all load conditions.

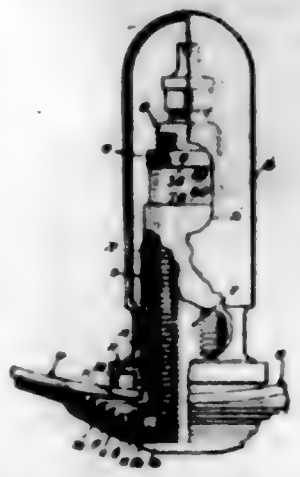
1,295,868. FRUIT-PICKER. SELDON W. GERRISH, Greenville Junction, Me. Filed Mar. 22, 1918. Serial No. 223,956. 1 Claim. (Cl. 56—30.)



A fruit picker comprising a pole, shears extending laterally from the upper end of the pole, a bar freely suspended from the pole in a manner permitting pivotal movement of the bar relative to the pole, a receiving sack including a stiff mouth ring rigidly secured to and extending laterally from the bar in the direction of the shears, the bottom portion of the sack being open and means for closing the bottom portion of the sack operable from the mouth portion thereof.

1,295,889. PRESSURE-GAGE FOR TIRES. BENJAMIN G. GILSCOCH, Los Angeles, Cal. Filed May 23, 1917. Serial No. 170,408. 5 Claims. (Cl. 152—12.)

1. In combination with a rim and an inflatable tire thereon, a member engaging the tire wall and movable therewith with relation to the rim, means for indicating the amount of said relative movement, and resilient means to resist movement of said member and of the portion of the tire wall surrounding the place where said member engages the wall, embodying a resilient member confined between the tire wall and the rim and substantially conical in formation with its larger end at the rim.



4. In combination with a rim and an inflatable tire thereon, a valve-stem attached to the tire wall and extending and movable radially through the rim, a sleeve surrounding and mounted on the valve stem to move therewith, a sleeve mounted on the rim and through which the valve-stem sleeve extends and slides, and a spring surrounding the valve-stem sleeve and confined between the rim and the end of the sleeve at the tire wall.

5. In combination with a rim and an inflatable tire thereon, a valve-stem attached to the tire wall and extending and movable radially through the rim, a sleeve surrounding and mounted on the valve stem to move therewith, a sleeve mounted on the rim and through which the valve-stem extends and slides, and a cone shaped spring surrounding the valve stem sleeve and confined between the rim and the end of the sleeve at the tire wall, the larger end of the spring being at the rim, whereby said valve-stem and its sleeve and also the portion of the tire wall surrounding the valve stem are resiliently supported against inflation movement.

1,295,890. LAST. ELMER B. GRUSH, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed June 5, 1916, Serial No. 101,777. Renewed Jan. 12, 1918. Serial No. 211,674. 5 Claims. (Cl. 12—133.)

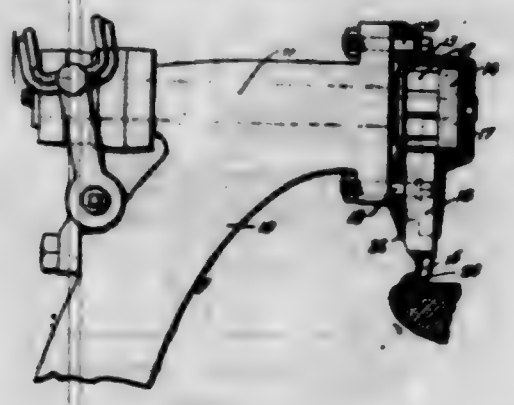


1. A last constructed and arranged to withstand the operations of machine shoe making and having a channel extending from the toe rearwardly to communicate with the atmosphere whereby the air pressure in the toe is equalized with that of the outside air.

1,295,891. CHANNEL-CLOSING MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 12, 1917. Serial No. 201,491. 4 Claims. (Cl. 12—20.)

1. A channel closing machine having, in combination, a tool provided with a working end adapted to project be-

neath the margin of the upper and bear upon the lip of the insole, and means for reciprocating the tool to pound the lip into the channel and close the channel.



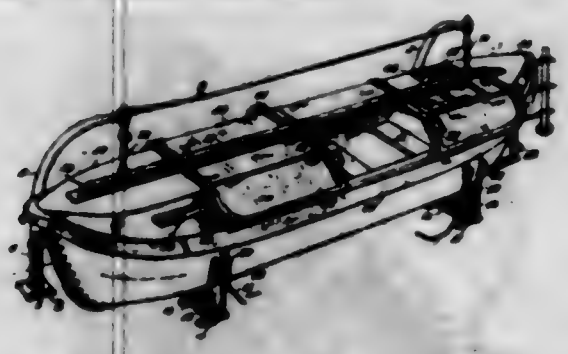
8. A channel closing machine having, in combination, a rotary shaft, a closing tool having a vertically disposed shank and a wedge-shaped end which is adapted to extend transversely across the lip of the sole and project beneath the edge of the upper to separate the upper from the adjacent lip, and connections between the rotary shaft and the shank of the tool to impart a short vibratory movement to the tool in a vertical direction and pound the lip without displacing the tool from its position beneath the margin of the upper.

1,295,902. SHOE-HEEL. TOWNSEND HAWS, Orlando, Fla. Filed Aug. 28, 1918. Serial No. 251,900. 5 Claims. (Cl. 36—32.)



1. A shoe heel having a lower tread plate, a pair of upper abutting bearing plates, a cushion between said tread plate and the lower bearing plate, means for securing the upper bearing plate to a shoe, and a single central connecting member joining the several plates and the cushion, upon which the tread plate, cushion, and lower bearing plate are rotatable.

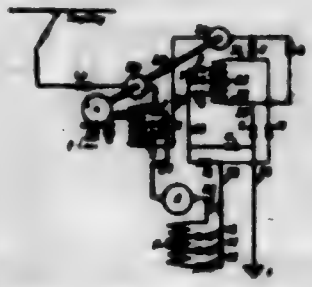
1,295,908. LIFE-BOAT. HARRY V. HARTS, deceased, Cleveland, Ohio, by William G. Metzger, administrator, Painesville, Ohio. Filed Oct. 28, 1915. Serial No. 56,489. 3 Claims. (Cl. 9—3.)



1. A life boat comprising a hull having permanent covers for closing the end portions thereof, a ridge pole extending longitudinally of the hull and supported by and attached to the permanent covers, guide members carried by the ridge pole and by the side edges of the hull, said guide members being substantially parallel, and covers having portions that are movable along said guide members for closing the central portion of the hull.

2. A life boat comprising a hull having permanent covers closing the end portions thereof, a guide member extending longitudinally of and substantially central with respect to the hull and supported at its ends upon the aforesaid permanent covers, guides carried by the side edges of the hull, said guide member and guides being substantially parallel, and covers that are slidable between the guide member and guides over the permanent covers, and coöperating retaining members carried respectively by the slidable and permanent covers for retaining said covers in close proximity to each other.

1,295,894. SYSTEM OF CONTROL. RUDOLF E. HELLMUND, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 1, 1917. Serial No. 151,047. 12 Claims. (Cl. 172—179.)



1. In a control system, the combination with a main dynamo-electric machine having an armature and a field winding, of a plurality of auxiliary dynamo-electric machine armatures respectively connected in series relation with, and in parallel relation to, said main armature and each provided with a field winding that is energized in accordance with different currents, said field winding being subdivided and the parts of each field winding, under predetermined conditions, being energized by different circuits.

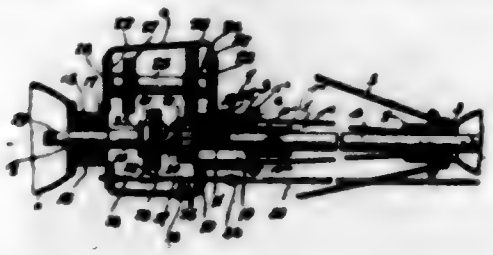
2. In a control system, the combination with a main dynamo-electric machine having an armature and a field winding, of a plurality of auxiliary dynamo-electric machine armatures respectively connected in series relation with, and in parallel relation to, said main armature and each provided with a field winding partially energized in accordance with main-circuit conditions and partially energized in accordance with respectively predetermined auxiliary-armature conditions.

12. In a control system, the combination with a main dynamo-electric machine having an armature and a field winding, of a plurality of auxiliary dynamo-electric machine armatures respectively connected in series relation with, and in parallel relation to, said main armature and each provided with a plural-part field winding, means for reversing the field windings of the main machine and of the parallel-related auxiliary machine preliminary to regenerative operation, whereby the main-machine voltage is rapidly built up to thereupon send currents through a part of the field winding of the parallel-related auxiliary machine in an aiding direction and through a part of the field winding of the series-related auxiliary machine in an opposing direction, and means for varying the magnitude of said field winding parts and of the main field winding to compensate for a decrease of the main-machine speed.

1,295,895. ATTACHMENT FOR MOTOR-VEHICLES. FRED P. HESS and WALTER W. SCOTT, Chehalis, Wash., assignors of one-third to O. J. Albers, Chehalis, Wash. Filed Mar. 5, 1915. Serial No. 12,895. 1 Claim. (Cl. 74—56.)

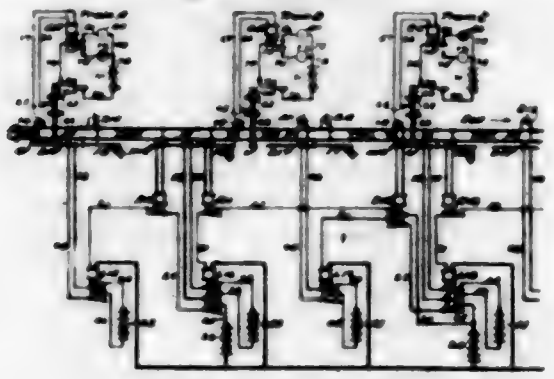
A motor vehicle including a differential, a housing therefor, a driven shaft, a housing for said shaft having its rear end spaced from the differential housing, a casing interposed between said housings and secured to the differential housing, a cylindrical portion secured to the casing and to the drive shaft housing, a shaft consisting of front and rear sections journaled in the casing and connected to said driven shaft and differential, a bearing sleeve carried by said cylindrical portion, a reduced cylindrical portion formed upon said sleeve and surrounding

the connection between the driven shaft and the shaft connected thereto, a bearing in said sleeve surrounding



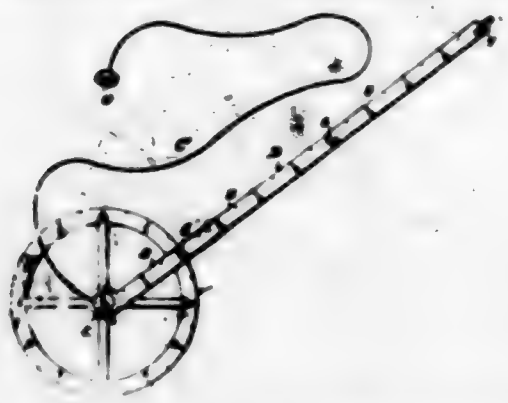
said connected shafts, an auxiliary speed changing gear in said casing, and means for controlling the speed changing gear.

1,295,896. CAB SIGNAL SYSTEM. ROBERT J. HEWETT, Westfield, N. J. Filed Apr. 17, 1917. Serial No. 162,625. 8 Claims. (Cl. 246—49.)



6. In a railway signal system, a normally inactive signal carried by a vehicle, a normally inactive circuit for controlling said signal, said circuit being normally open at at least three points, a mechanical circuit controller controlling one point, a neutral relay controlling another of said points, and a polarized relay controlling the third point, and means carried by said vehicle cooperating with means along the trackway for closing said circuit at said three points under determined traffic conditions.

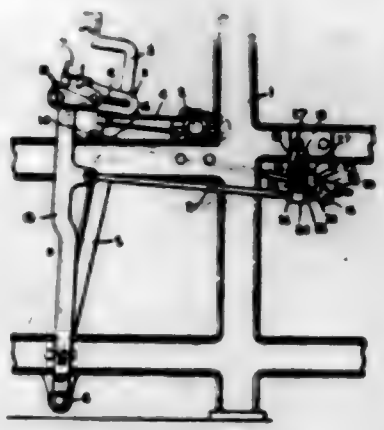
1,295,897. TARGET-SIGHTING DEVICE. AUSTIN LAWRENCE HOOGMS, Charleston, S. C. Filed Aug. 13, 1917. Serial No. 185,889. 3 Claims. (Cl. 33—64.)



1. A target finding device comprising a graduated dial and having a central peep opening, an arm pivoted at the center of the dial and having division marks and adapted to move in a plane parallel with the dial, and means attached to the device for facilitating the holding of the same at a fixed distance from the eyes.

2. A target finding device comprising a graduated dial and having a central peep opening, an arm pivoted at the center of the dial and having division marks and adapted to move in a plane parallel with the dial, a string attached to the dial, and means on the string adapted to be held in the mouth of the user for insuring the holding of the device at a fixed distance from the eyes.

1,295,898. PILE-FABRIC LOOM. HERBERT J. HORN, Sanford, Me. Filed Aug. 31, 1917. Serial No. 189,052. 1 Claim. (Cl. 139—64.)



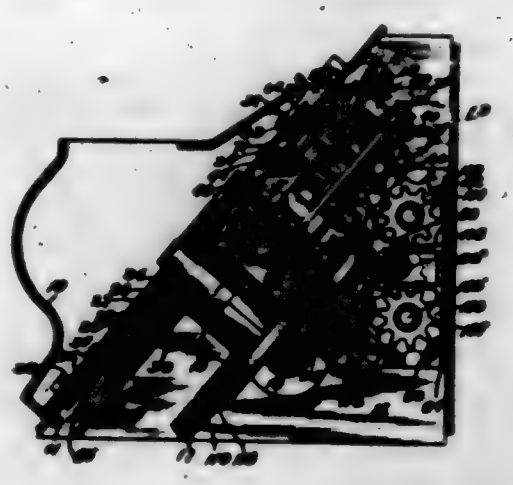
In a pile fabric loom, the combination with a loom frame, of a vibrating lay, and means to vibrate it, a swinging frame situated at the end of the lay, a shuttle-box sustained on said frame, a rock-shaft journaled on the loom frame, a relatively long arm fast on said rock-shaft and connected to the lay, a pair of relatively short arms also fast on said rock-shaft, and a link connecting each of said relatively short arms directly to said swinging frame.

1,295,899. ATTACHMENT FOR SHAVING-BRUSHES. ENOCH LEWIS HUTCHINSON, Honolulu, Hawaii. Filed Aug. 29, 1917, Serial No. 188,775. Renewed Dec. 14, 1918. Serial No. 266,812. 3 Claims. (Cl. 15—26.)



3. In combination with a shaving brush, a bar extending transversely of the free ends of the bristles at the extremities thereof and having at each end an extension, one of the extensions having a clamp for engaging the handle.

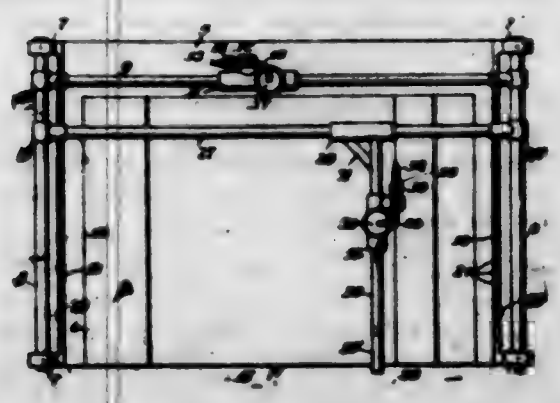
1,295,900. FARE REGISTER AND COLLECTOR. JAY M. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Johnson Fare Box Company, Chicago, Ill., a Corporation of New York. Filed Feb. 20, 1917. Serial No. 149,927. 61 Claims. (Cl. 235—32.)



1. In a coin counting machine of the class described, a carrying wheel adapted to carry coins and checks of different denominations, a plurality of registers, a common drive shaft therefor, means on the drive shaft adapted to be shifted into driving engagement between the shaft and a register, a cam associated with the carrying wheel

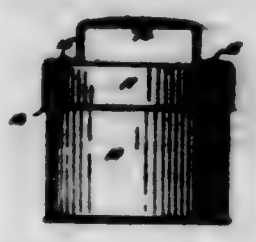
controlling the shifting movement of said means, and mechanism shifted by a coin on the wheel to entrain the drive for said register main driving shaft.

1,295,901. RULING-BOARD. NELS M. JOHNSON and THOMAS S. QUIN, Chicago, Ill. Filed Mar. 25, 1918. Serial No. 224,442. 10 Claims. (Cl. 33—35.)



1. In a ruling board the combination of a bed, a movable support extending across said bed, means on the bed to carry said support in spaced relation to the bed, ruling means mounted to slide on the support lengthwise thereof, and means for holding the ruling means in relation to the edges of said bed.

1,295,902. CAN OPENER AND SEALER. CLYDE R. JORDAN, Trego, Mont. Filed Oct. 17, 1916. Serial No. 126,148. 1 Claim. (Cl. 220—67.)



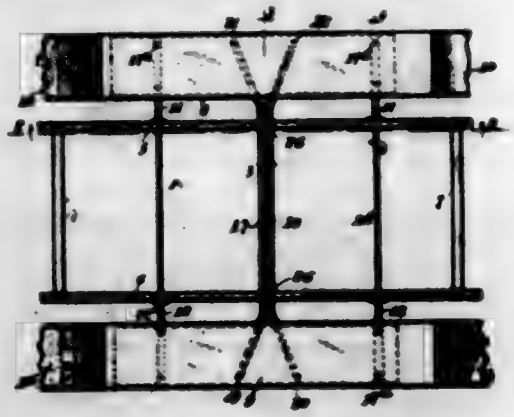
In an article of the kind described, a cap shaped member adapted to serve as a closure for an open can, a handle projecting upwardly from the top of said closure formed with a hand gripping portion, and with a depending leg at each end, rivets extending through the lower ends of said legs and the cap for securing the handle in position on the cap, said rivets projecting below the cap and having pointed ends for puncturing the top of the can to provide means for the outflow of the fluid contents thereof and the inflow of air thereinto.

1,295,903. RESILIENT TIRE. JOSÉ SANCHEZ JUAREZ, Mexico, Mexico. Filed Jan. 6, 1915. Serial No. 780. 1 Claim. (Cl. 152—8.)



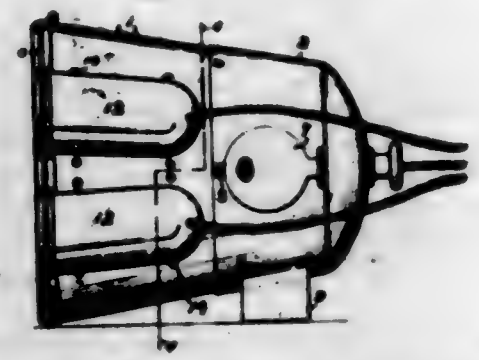
A resilient tire comprising a circular body portion having inwardly directed side flanges, said circular body portion having openings formed therein, guides projecting from said openings, plungers slidable in the guides and having heads formed upon their outer ends, springs engaging the plungers for yieldingly forcing them in predetermined position, the inner ends of said plungers being disposed within said circular body portion, fastening means engaging the inner ends of said plungers, and the said flanges having openings therein affording access to the fastening means.

1,295,904. MEANS FOR BRACING THE CHASSIS-FRAMES, RUNNING-BOARDS, AND FENDERS OF AUTOMOBILES. HARVEY E. KAILER, Aurora, Ill. Filed Dec. 11, 1917. Serial No. 206,582. 5 Claims. (Cl. 21—55.)



1. A brace support for the chassis of automobiles, comprising a bar the sides of which diverge and adjacent the ends thereof forming a broad support for the running boards, means for suspending said bar from the chassis frame and connecting the running boards therewith, and means for flexibly curving said bars in an upward direction and bending their end portions in the opposite directions.

1,295,905. HEADLIGHT. CHARLES D. KLINE, Cleveland, Ohio. Filed Sept. 10, 1918. Serial No. 253,442. 2 Claims. (Cl. 240—41.)



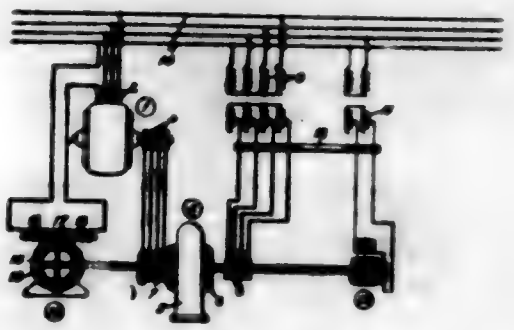
1. A head light, comprising a body formed of separable front and rear sections, the rear section containing a light and having a side opening, and a front section provided with light chambers extending partly within and partly without the wall thereof and a door common to and closing the body and chambers.

1,295,906. SPEED CONTROL FOR INDUCTION-MOTORS. BENJAMIN G. LAMME, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Jan. 5, 1915, Serial No. 583. Divided and this application filed Oct. 21, 1916. Serial No. 126,905. 5 Claims. (Cl. 172—274.)

2. The combination with an induction motor, of a speed-controlling frequency changer electrically connected thereto, driving means for said frequency changer, and means for exerting a braking action upon said driving means substantially proportionate to the load on said motor.

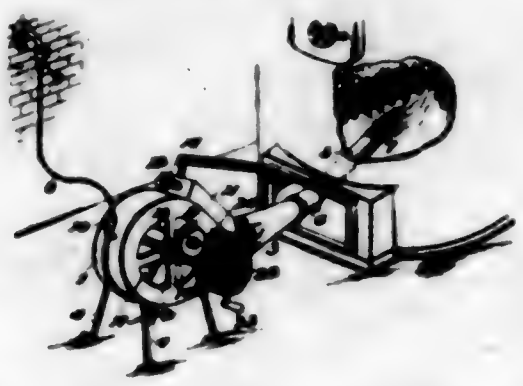
4. The combination with an alternating-current supply system, of a main induction motor connected to operate therefrom, a frequency changer and adjustable transformers connected between the secondary member of the induction motor and said supply system for speed control of said motor, a driving motor for said frequency changer, means for varying the speed of said motor in accord-

ance with the voltage setting of said transformer, whereby the voltage and frequency of the energy interchanged between said secondary member and said supply system



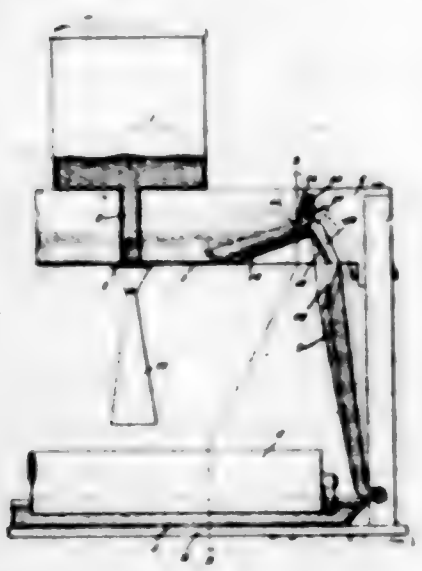
are simultaneously altered in the speed adjustment of said main motor, a brake coupled to said driving motor, and means for adjusting the braking action thereof in substantial accordance with the load of said main motor.

1,295,907. FIRE-STARTER. EDWARD P. LE COMPTE, Park City, Utah. Filed Feb. 12, 1918. Serial No. 216,710. 2 Claims. (Cl. 158—10.)



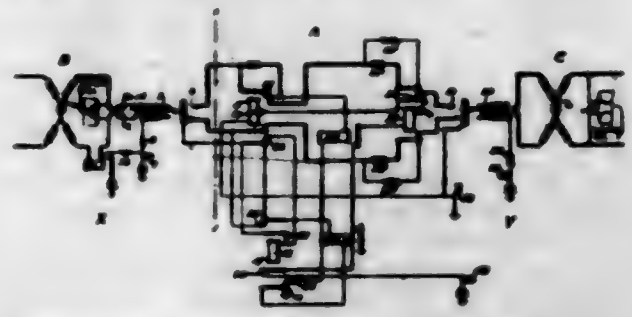
1. A fire starter, comprising a rotary blower including a casing having a trunk, a tubular nozzle attached to the trunk and provided near its free end with outlet apertures formed in the side wall thereof, a liquid hydrogen supply device leading into the trunk, and an electric resistance coil wound about the apertured end of the nozzle and disposed adjacent said apertures, the coil serving to heat the free end of the nozzle and the carbureted air discharging through the apertures to ignite the same.

1,295,908. HOG-OILER. HERBERT L. LITTLE, Jeffersonville, Ohio. Filed Jan. 25, 1918. Serial No. 213,755. 2 Claims. (Cl. 119—157.)



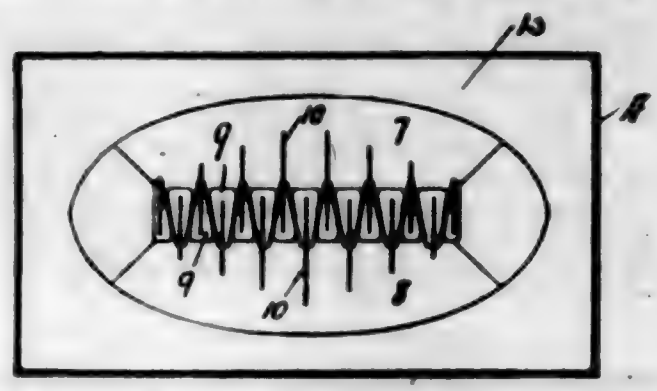
1. The combination with a distributing tank, and a supplying tank opening therein to and having an outlet adapted to be sealed by the liquid contents of the distributing tank, of an apron depending from the upper edge of one wall of the distributing tank, a rubbing bar pivotally mounted at its lower end and provided at its upper end, with spaced arms straddling the apron and overhanging a portion of the distributing tank, a cross pin connecting the upper ends of the arms, a spoon tiltably mounted within the tank and having an upwardly extending tongue projecting between the arms and back of the pin, there being an opening in the tongue for directing the contents of the spoon, when tilted onto the apron, the pivoted bar being provided with an inclined portion for guiding the delivered liquid from the apron to one surface of the bar.

1,295,909. TELEPHONE-EXCHANGE SYSTEM. ERIC R. LUNDEUS, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 11, 1918. Serial No. 233,915. 11 Claims. (Cl. 179—43.)



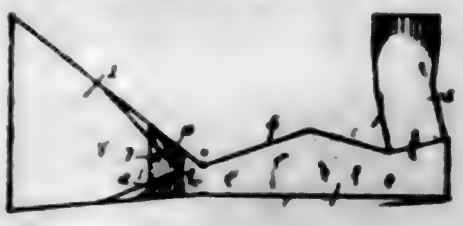
3. A telephone exchange system comprising a trunk circuit having normally open talking conductors extending from a first to a second switchboard, means associated with the trunk circuit for signaling from the first to the second switchboard, a link circuit at the second switchboard, a relay, means in the trunk circuit responsive to the connection of the link circuit therewith for connecting the relay in bridge of the talking conductors, and means responsive after the establishment of the bridge to close the normally open talking conductors.

1,295,910. PHONOGRAPH SOUND-CHAMBER OR HORN. FRED C. LYON, Fayetta, Ohio. Filed Mar. 6, 1918. Serial No. 220,747. 12 Claims. (Cl. 181—27.)



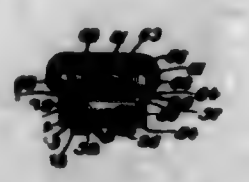
3. In combination with a phonograph horn, a series of tongues fixed at one end and having their opposite ends free and arranged transversely and interiorly of the horn and covering substantially the effective area of the throat thereof.

1,295,911. PHONOGRAPH SOUND-CHAMBER OR HORN. FRED C. LYON, Fayette, Ohio. Filed June 11, 1918. Serial No. 239,250. 15 Claims. (Cl. 181—27.)



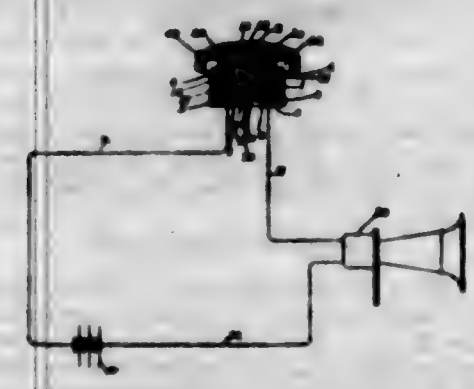
2. A phonograph horn having a pair of spaced bunking elements arranged at its opposite sides to form inwardly facing chambers.

1,295,912. CIRCUIT-CONTROLLER. RAY H. MANSON, Rochester, N. Y., assignor to Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Original application filed May 18, 1914, Serial No. 839,217. Divided and this application filed Dec. 18, 1917. Serial No. 207,011. 8 Claims. (Cl. 200—27.)



1. In a push button circuit controller, the combination of a pair of electrical contacts normally separated but adapted to be brought in contact with each other, inclosing means for said contacts including cylindrical walls and a base upon which said contacts are mounted, means to rigidly connect one of said contacts to said base, a metallic spring and means to connect one end of the spring to the base, the other end of the spring being free and carrying the second contact, said spring being curved intermediate its ends and connected by one limb to the base and carrying the contact on the other limb, an annular inwardly turned flange on the top of the inclosing means, a depressible, tiltable push button having a flange on its lower end within said inclosing means, said flanges having peripheral engagement with each other and means carried by said button engaging and free limb of the spring whereby the spring holds the button in uppermost position and whereby the button causes the engagement of the contacts when either depressed or tilted.

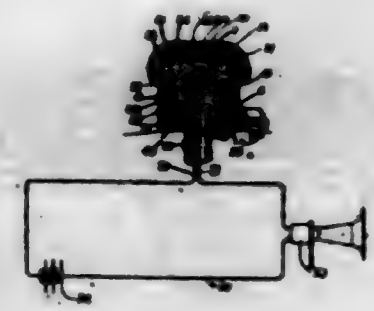
1,295,913. PUSH-BUTTON SWITCH. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed May 18, 1914, Serial No. 839,215. Renewed Nov. 4, 1918. Serial No. 261,148. 4 Claims. (Cl. 200—27.)



3. In a circuit controller, the combination of a base, a pair of normally open electrical contacts mounted on said base, a push button slidably connected to said base, means to slidably and rockably connect the button to the base including an annular catch on each of the button and the base, said button being tiltable about said catch members when depressed, and a member depending from the center of the under-side of the button adapted to connect said contacts when the button is either depressed or rocked about said catch members.

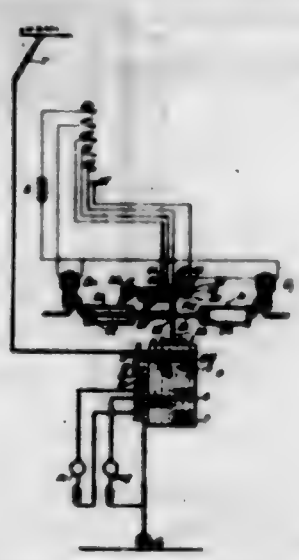
1,295,914. CIRCUIT-CONTROLLER. RAY H. MANSON, Rochester, N. Y., assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed May 18, 1914, Serial No. 839,217. Renewed Jan. 17, 1919. Serial No. 271,755. 14 Claims. (Cl. 200—27.)

12. An electric switch comprising a casing, circuit connections in said casing, a centrally disposed switch member for controlling said circuit connections and a pressure operated member exterior of said casing and having



a tilting movement for operating said controlling member.

1,295,915. CONTROL APPARATUS AND SYSTEM. PAUL L. MARRS, Altoona, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 3, 1915. Serial No. 25,497. 13 Claims. (Cl. 172—179.)



1. The combination with a contact member, fluid-operated means for moving said contact member, a plurality of electrically-controlled magnet-valves for governing the operation of said fluid means, and a controller for selectively governing the operation of said magnet-valves, of a plurality of independent contact fingers adapted for sliding engagement with said member and displaced from each other in the line of movement of said member.

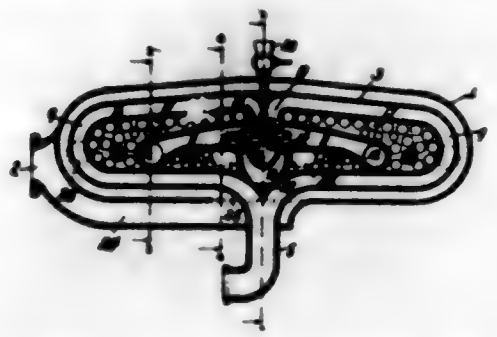
2. The combination with a plurality of contact members, a fluid-operated device for giving said members a rectilinear movement, two magnet-valves for controlling the operation of said device, and means for governing the operation of said valves to effect a step by step movement of said contact members, of a plurality of stationary contact fingers adapted to engage said members and disposed in a row in the line of movement of said members.

13. The combination with a contact drum, two contact members, a pneumatic device for simultaneously giving said contact drum a movement of rotation and said contact members a movement of translation, and two magnet-valves for controlling said pneumatic device, of a controller and means comprising said controller and said contact members for governing the operation of said magnet-valves.

1,295,916. KEROSENE-VAPORIZER. FRED A. MAYERS, Petersburg, Mich. Filed July 5, 1917. Serial No. 178,852. 9 Claims. (Cl. 123—122.)

1. A vaporizer of the class described, comprising a casing forming an exhaust passage, and means within said casing dividing it into separate exhaust chambers one having an inlet and the other an outlet opening, said

means forming a circuitous fuel passage and having passages opening communication between said chambers, a



portion of which passages extend through said fuel passage.

1,295,917. APPARATUS FOR CARRYING OUT GASEOUS REACTIONS UNDER HIGH PRESSURE. CHARLES MEDOYNS, Budapest, Hungary. Filed Sept. 20, 1918. Serial No. 791,947. 2 Claims. (Cl. 23—28.)



1. Apparatus for carrying out gaseous reactions under high pressure, comprising a tube-shaped reaction vessel capable of withstanding high pressure, means for leading gas to and from the reaction vessel, the inlet and outlet openings for the gas being arranged in such manner that at least in one instance one opening of the one kind is placed between two openings of the other kind, so that the gas current is distributed in the vessel into more than one current, each of which goes only a part of the full length of said vessel.

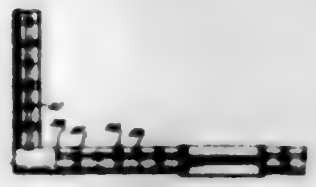
2. Apparatus for carrying out gaseous reactions under high pressure with the aid of catalysts, comprising a tube-shaped reaction vessel capable of withstanding high pressure, said vessel being supplied with a contact mass, means for leading gas to and from the reaction vessel, the inlet and outlet openings for the gas being arranged in such manner that at least in one instance one opening of the one kind is placed between two openings of the other kind, so that the gas current is distributed in the vessel into more than one current, each of which goes only a part of the full length of the contact mass contained in said vessel.

1,295,918. INSULATOR-SUPPORT. OLIVER P. MEGAHAN, Westerville, Ohio. Filed Oct. 19, 1918. Serial No. 258,916. 2 Claims. (Cl. 72—60.)



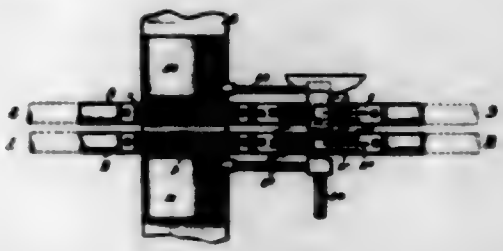
2. An insulator support including a body of concrete having its upper edge of insulating material molded integral therewith, substantially as described.

1,295,919. BUILDING-BLOCKS AND MECHANICAL BOND THEREFOR. WILLIAM C. MUHLHAUSEN, Brooklyn, N. Y. Filed June 1, 1917. Serial No. 172,156. 2 Claims. (Cl. 72—88.)



2. In combination, a plurality of blocks, there being dovetailed key-ways in the faces of said blocks, there being a groove in one side of each block extending transversely of the key-way in said side, and a rib in the other side of said block registering with the groove of an adjacent block, and spring metal keys each engaging the key-ways of adjacent faces of blocks to anchor such faces to one another, each key extending through the key-ways of a plurality of alined adjacent blocks.

1,295,920. MOTOR TYPE OF ELECTRIC GEAR-SHIFT. HOWARD J. MURRAY, Brooklyn, N. Y. Filed Mar. 19, 1918. Serial No. 223,297. 39 Claims. (Cl. 74—58.)



1. In a device of the class described, the combination of a mechanism control member, a reversible direct-current shunt wound motor operatively connected to the member to shift the same over a definite distance from a neutral into a mechanism-operating position, a single source of electric energy conducting means for connecting the motor field electrically with the source, a manually actuated switch in said conducting means for controlling the currents to the motor, a control switch having a circuit closing position for electrically connecting the source with the armature of the motor thereby to cause the motor to shift the member from its neutral into its operating position.

1,295,921. PARALLEL-FLOW REACTANCE-COIL. JOHN F. PETERS, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1914. Serial No. 861,041. 11 Claims. (Cl. 175—360.)



1. A current-limiting reactance coil comprising a plurality of superposed coil sections which are positively and mutually inductively related and oppositely wound, each section being composed of a plurality of flat parallel spirals and the corresponding leads of the sections being connected in multiple to constitute terminals for the coil.

2. A current-limiting reactance coil comprising two superposed coil-sections which are mutually inductively related, each section being composed of a plurality of

parallel conductors wound to form a series of flat parallel spirals, the lower leads of the lower section being connected to the upper leads of the upper section and the upper leads of the lower section being connected to the lower leads of the upper section to constitute coil terminals.

8. A current-limiting reactance coil comprising two superposed and parallel-connected coil sections which are positively and mutually inductively related and reversely wound, each coil section being composed of conductors wound to form a series of spirals.

9. A current-limiting device comprising two inductive coil-sections severally formed of a built-up column of superposed spirals, said coil-sections being mutually inductively related and reversely wound, and means for connecting said coil-sections in parallel relationship and for so directing the currents flowing therethrough that the total inductance of said device exceeds the inductance of the separate coil-sections.

11. A current-limiting reactance coil comprising a plurality of separate coil-sections, and a connecting device for directing the current flow through said separate sections, said device comprising a central rod, a plurality of electric conductors circumferentially and longitudinally disposed therewpon, and clamps embracing the conductors, each clamp comprising segments each of which has one lug disposed at one end and a second lug disposed a short distance from the other end to provide an extension, bolts coöperatively engaging the lugs to hold the segments in fixed relationship, and an insulating sleeve embracing one of said bolts to insulate the segments from each other.

1,295,922. SPRAYING-NOZZLE. HAROLD L. PETTIT, Watertown, N. Y., assignor of one-half to Nellie M. Pettit, Watertown, N. Y. Filed Mar. 14, 1918. Serial No. 222,994. 2 Claims. (Cl. 137—96.)

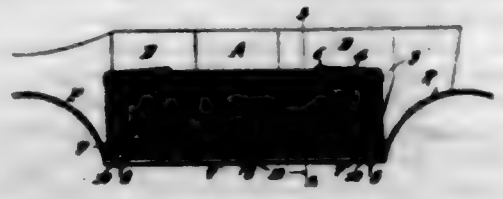


1. A hollow body having a cylindrical bore normally open to the atmosphere at one end, and having a similar reduced concentric bore and a shoulder at the intersection of said bores, a valve stem passing through said body, a disk valve carried by one end of said stem and disposed within and held flush with the open end of the larger bore, and a cylindrical enlargement on said stem within said larger bore, said enlargement being resiliently held against said shoulder for holding said valve flush with the open end of the larger bore.

2. A spraying nozzle including a casing having in one end a normally open cylindrical valve chamber separated from a smaller concentric chamber by an annular shoulder, a valve-stem partially disposed in said casing, a cylindrical valve mounted on one end of said stem disposed concentrically within the open end of said chamber, said valve having a smaller diameter than the mouth of said chamber, a spraying member carried by said stem spaced from said valve and having substantially the same diameter as said chamber, said member engaging the shoulder and having circumferential grooves for the passage of the water, a spring for holding said member against said shoulder and said valve flush with the end of said casing, and means for increasing and decreasing the tension of said spring.

1,295,923. CARRIER ATTACHMENT FOR AUTO RUNNING-BOARDS. GEORGE H. PHILLIPS, Muskegon, Mich. Filed Aug. 27, 1918. Serial No. 251,000. 3 Claims. (Cl. 224—29.)

1. In a carrier for the running boards of automobiles, the combination with a main panel, two end panels, hinges connecting these panels with the extremities of the main panel, and for each end panel a brace hinged at one end to the free end of the end panel and having



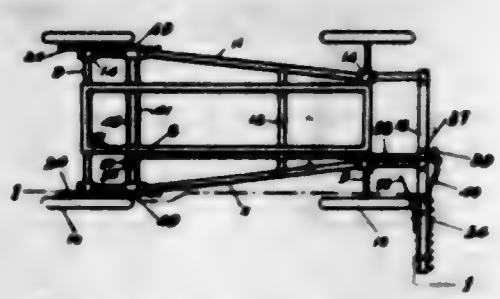
a hook at its other end; of means for hingedly mounting the lower edge of the main panel on the outer edge of the running board of the machine.

1,295,924. MANDREL. HAROLD E. PORTER, Bayside, N. Y. Filed July 11, 1918. Serial No. 244,434. 5 Claims. (Cl. 82—44.)



5 An expanding mandrel comprising a body portion, a plurality of cams on said body portion, gripping means carried by said body portion and operable by said cams, a cylindrical extension on said body portion of a radius equal to the minimum radius of said body portion, a securing flange on said body portion, a sleeve rotatably mounted on said body portion and in which said gripping means are radially movable, and a hand wheel secured to said sleeve and surrounding said flange.

1,295,925. MOWING ATTACHMENT FOR AUTOMOBILES. MATTHEW C. RICE, Kansas City, Mo. Filed Feb. 26, 1917. Serial No. 150,982. 2 Claims. (Cl. 56—33.)

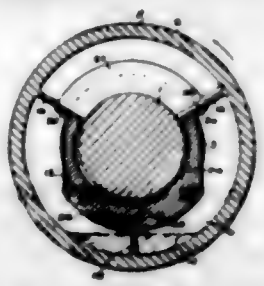


1. A pair of long frame members, said frame members secured together by a cross member, clamps near the front and rear of each of said members and secured thereto to detachably connect said frame members to the front and rear axles of an automobile, gears mounted on the brake drums of the automobile, a cross frame provided with bosses to slide on said frame members, a shaft mounted in said sliding cross frame, a pinion mounted on each end of said shaft to engage with the respective gear on the brake drum, set screws to slide said sliding frame and engage and disengage said pinions with said gears, a bevel gear mounted on said shaft, a longitudinally disposed shaft journaled in said cross member, a front cross member secured to the front of said frame, said second shaft slidably journaled in said front cross member, a gear on said second shaft meshing with said gear on said first shaft, an eccentric on the opposite end of said second shaft, a mower bar attached to said front cross

member provided with a sliding knife, and a connecting rod connecting said eccentric and said sliding knife.

2. A pair of frame members, clamps near the front and rear of each of said members and secured thereto to detachably connect said frame members to the front and rear axles of an automobile, gears connected to the rear wheels of the automobile, a cross frame provided with bosses connecting said frame members, a front cross member connecting the front ends of said frame members, a shaft journaled in said cross frame and said front cross frame member, a shaft mounted in said cross frame member provided with bosses, pinions secured to said shaft connecting said gears mounted on said rear wheels with said last mentioned shaft, intermeshing gears connecting said last mentioned shaft with said first mentioned shaft, a mower bar attached to said front cross member, sliding knives in said mower bar and mechanism connecting said first mentioned shaft with said mower bar to operate said knives.

1,295,926. AUTOMATIC LUBRICATOR. WALTER E. ROE, Mishawaka, Ind., assignor to Dodge Manufacturing Company, Mishawaka, Ind., a Corporation of Indiana. Original application filed Jan. 18, 1915, Serial No. 2,891. Divided and this application filed Sept. 16, 1918. Serial No. 254,274. 10 Claims. (Cl. 64—24.)



1. A moving member having a bearing surface, a shaft therein, an oil lifter forming a part of and actuated by said member, and an oil collector adapted to deliver lubricant from the lifter to the bearing surface.

1,295,927. MILKING-STOOL. DWIGHT T. ROGERS, Machias, N. Y. Filed June 2, 1917. Serial No. 172,885. 5 Claims. (Cl. 31—13.)



1. A milking stool comprising a base, a seat revolubly mounted on the base, a pail supporting member pivotally connected with the seat, and means for positively holding said member in different angular adjustments with respect to the seat.

2. A milking stool comprising a base, a seat revolubly mounted on the base, a radial arm carried by the seat, a pail supporting ring pivotally connected to the arm, and means carried by the ring and arm for selectively holding the ring in different angular adjustments with respect to the seat.

3. A milking stool comprising a base, a seat revolubly mounted on the base, a radial arm carried by the seat and provided with an inclined slot, a pail holding ring having its terminals disposed in embracing relation to the arm, a pivot stud carried by said terminal portions and extending through said slot, and a pin carried by the arm adapted to seat in stepped notches formed in the terminals of the ring to hold the latter in different angular adjustments with respect to the seat.

4. A milking stool comprising a base, a seat revolubly mounted on the base, a radial arm carried by the seat, a pail holding ring having its terminals disposed in embracing relation to the arm and pivotally connected thereto, and a brace plate connecting the terminal portions of the ring and engageable with the arm to limit the pivotal movement of the ring in one direction.

5. A milking stool comprising a base, a seat mounted on the base, a radial arm carried by the seat, a pail supporting ring pivotally connected to the arm, and means carried by one of the last two mentioned members having stepped notches formed therein for engagement with a pin carried by the other of said members, for the purpose of selectively holding the ring in different angular adjustments with respect to the seat.

1,295,928. MACHINE FOR CAPSULING OR SEALING BOTTLES OR OTHER VESSELS. ANDERS ANDERSSON ROSENGREN, Malmö, Sweden. Filed Sept. 4, 1918. Serial No. 252,630. 11 Claims. (Cl. 113—3.)



1. In a machine of the character described, the combination with a pair of telescoping cutting punches, of means for feeding material from which blanks may be cut in different planes across the cutting edges of said punches, means for moving the outer punch against the material adjacent thereto to cut a blank therefrom, means carried by said outer punch with which the inner punch coöperates in punching out blanks, and means for moving the inner punch to a greater extent than the outer punch whereby said inner punch cuts a blank from the material adjacent thereto and moves said blank against the first mentioned blank.

1,295,929. WHIP-TOP. GEORGE ROWLAND, Louisville, Ky. Filed Apr. 24, 1918. Serial No. 230,461. 3 Claims. (Cl. 46—32.)

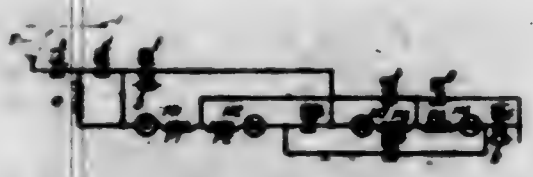


1. A top of the class described composed of a body portion the sides and top surface of which are provided with corrugations, the corrugations on the top extending inwardly beyond the corrugations in the sides.

1,295,930. CONTROL SYSTEM. SAMUEL B. SCHERCK, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 3, 1915. Serial No. 25,450. 11 Claims. (Cl. 172—179.)

1. The method of controlling a plurality of electric motors, which consists in connecting said motors in a

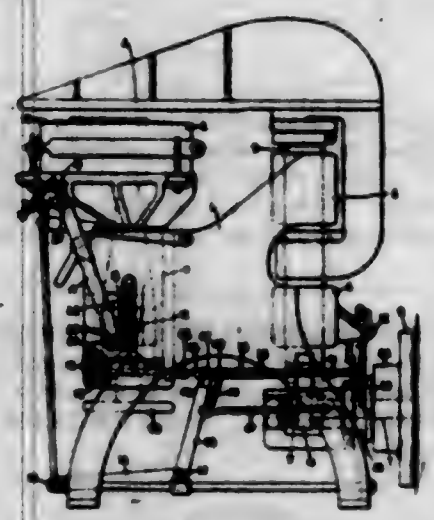
series-parallel group, then individually short-circuiting one motor of each series-connected set, then connecting said short-circuited motors in a single local circuit, and finally connecting all of said motors in full-parallel relation.



3. The method of controlling four electric motors normally connected in series-circuit relation, which consists in connecting said motors in a series-parallel group, in interconnecting the mid-points of equal potential of the several branch circuits thereof, then short-circuiting one motor of each branch circuit, and finally connecting all of the motors in full-parallel relation.

11. In a system of control, the combination with four motors, of means for connecting the motors in series-parallel and in parallel relation, and means for establishing an equalising connection between the series-connecting motors in the branch circuits of the series-parallel arrangement and for short circuiting one motor in each branch circuit during the transition from series-parallel to parallel relation.

1,295,931. **PRESS FOR CUTTING OR PUNCHING SHEET MATERIAL.** AUGUST R. SCHOSKEY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Dec. 12, 1917. Serial No. 206,726. 8 Claims. (Cl. 164—19.)



1. In a power press, the combination with a main frame having a recess, of a table for supporting a cutting block, said table having rigid therewith a depending plunger which fits said recess, means cooperating with said plunger for adjusting said table vertically in said frame, and braces extending from the corners of the table to the lower end of the plunger, said braces being vertically adjustable with the table.

6. In a press, the combination with a table, of a vertically-movable presser situated over the table, a driving shaft for reciprocating the presser, a driving pulley loose on the shaft, a clutch for connecting said pulley to said shaft, a shoe for holding the clutch inoperative, a spring tending to hold the shoe in operative position, a treadle, connection between said treadle and shoe whereby on depression of the treadle the shoe is moved into inoperative position to allow the clutch to become engaged, and means to cause automatically a disruption of said connections when the treadle is fully depressed whereby the shoe is automatically returned to operative position.

1,295,982. **TRAMMEL-POINT.** HANS OTTO SCHULER, Chicago, Ill. Filed Aug. 22, 1917. Serial No. 187,717. 3 Claims. (Cl. 33—183.)

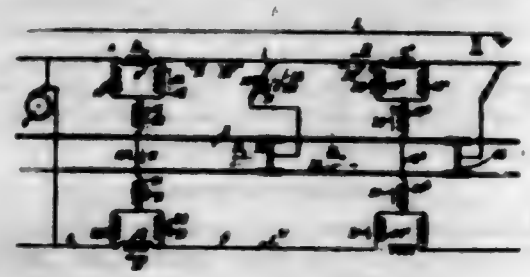


1. A beam-compass including a bar or beam and means for engaging drawing instruments therewith, said means including a clamp comprising two jaws engaging opposite faces of the bar or beam, a handle element integral with each jaw and adapted to be simultaneously forced toward the bar or beam to disengage the jaws therefrom, a split tubular spring having slots through which the bar or beam and the handle elements respectively pass, said slots disposed opposite the opening in the tube, the edges of the latter bearing upon the jaws for forcing them into engagement with the bar, the handle elements being fulcrumed in the slots through which they pass and adapted when pressed toward the side faces of the bar or beam to force the jaws to expand the open side of the tube, the latter coacting with the outer faces of the jaws to present expansible sleeves adapted to receive and engage drawing instruments.

2. A beam-compass including a bar or beam, and a clamping member adapted for carrying drawing instruments, the said clamping member including a pair of jaws for engaging opposite side faces of the bar or beam, a handle element integral with each jaw and spaced from the bar or beam, and a spring engaged with said jaws for holding them normally engaged with the bar or beam and engaged also with said handle elements to provided fulcrums on which the same and said jaws turn.

3. A beam-compass including a bar or beam, and a clamping member adapted for carrying drawing instruments, the said clamping member including a pair of jaws for engaging opposite side faces of the bar or beam, a handle element integral with each jaw and spaced from the bar or beam, and a spring engaged with said jaws for holding them normally engaged with the bar or beam and engaged also with said handle elements to provided fulcrums on which the same and said jaws turn, said springs coacting with said jaws to engage drawing instruments with the latter while acting to maintain said jaws engaged with the bar or beam.

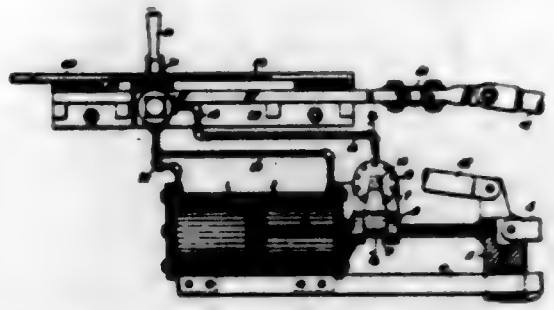
1,295,933. **DISTRIBUTING SYSTEM FOR ELECTIC RAILWAYS.** CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 8, 1917. Serial No. 153,512. 4 Claims. (Cl. 171—97.)



1. A transformer comprising a common core member, a plurality of coil-groups including a middle coil-group thereon, said coil-groups severally comprising an inducing and an induced winding, magnetic shunts interposed be-

tween the coil-groups, a tap extending between the inducing and induced windings of the middle coil-group, and connectors for connecting all of the inducing windings together and for connecting all of the induced windings together.

1,295,934. VALVE REVERSING GEAR. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed Apr. 29, 1916. Serial No. 94,372. 11 Claims. (Cl. 121—98.)



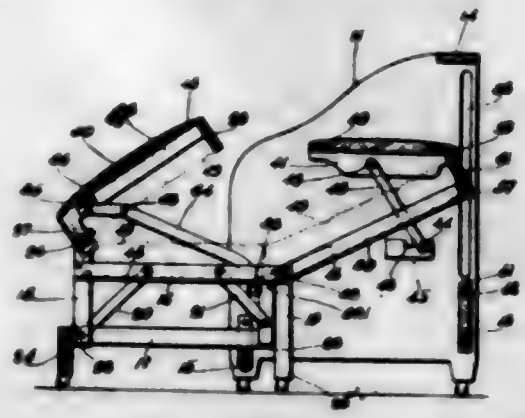
1. In a valve reversing mechanism, the combination of a fluid pressure motor, a reversing rod operated thereby, valve mechanism for controlling the supply and exhaust of motive fluid to and from the motor, a bar connected to the valve mechanism and slidable longitudinally and laterally, a manually operable longitudinally slidable member having camming connections with the sliding bar so that as said member is moved longitudinally the bar is moved laterally to actuate the valve to admit motive fluid to the motor, and means connecting the reversing rod and the slidable bar for causing said bar to move with the reversing rod whereby the valve mechanism is actuated to exhaust motive fluid from the motor when the reversing rod has moved to the required extent.

2. In valve reversing mechanism, the combination of a fluid pressure motor, a reversing rod operated thereby, a fluid pressure locking means for said rod, a valve mechanism for controlling the supply and exhaust of motive fluid to and from said motor and said locking means, a manually movable member, camming connections between the same and said valve mechanism arranged so that when said member is moved the valve is actuated to exhaust motive fluid from the locking means and admit fluid to one side of the motor, and a second movable member arranged to travel with the reversing rod and coöperating with the camming connections to cause the valve mechanism to be moved to exhaust motive fluid from the motor and admit motive fluid to the locking device when the reversing rod has traveled to the desired extent.

3. In valve reversing mechanism, the combination of a fluid pressure motor, a reversing rod operated thereby, a fluid pressure locking means for locking said rod in its different positions, a valve mechanism for controlling the supply and exhaust of motive fluid to and from opposite sides of the motor and to and from the locking means, a manually operable slidable member, camming connections between the same and said valve mechanism arranged so that when said member is moved the valve is actuated to exhaust motive fluid from the locking means and admit fluid to one side of the motor, and a second slidable member movable with the reversing rod and coöperating with the camming connections to cause the valve mechanism to be moved to exhaust motive fluid from the motor and admit motive fluid to the locking means when the reversing rod has traveled the desired distance.

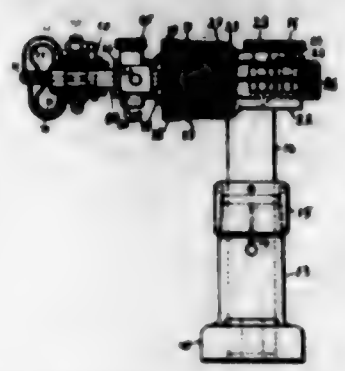
1,295,935. DIVAN-BED. HERBERT F. BOWLS, Everett, Mass. Filed Apr. 25, 1917. Serial No. 164,879. 2 Claims. (Cl. 5—48.)

1. A sofa bed comprising a sofa frame, a movable bed frame having a section adapted to form a seat for the sofa, and another section pivoted to the rear side of the bed frame and having its rear portion connected to the sofa frame and guided to move up and down relatively thereto, a back for the sofa comprising a frame, and means connecting said back frame to the sofa frame and to the



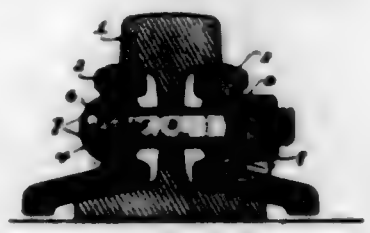
rear part of said rear bed section, respectively, for causing the sofa back to be reversed when the bed is extended and collapsed, respectively.

1,295,936. MEASURING INSTRUMENT. EDWARD SPELLMAN, Louisville, Ky. Filed Oct. 12, 1918. Serial No. 257,835. 19 Claims. (Cl. 33—169.)



13. In device as characterized, a support, a measuring element carried thereby, electric contacts carried by said element, an electric circuit, said contacts adapted to be closed by contact with an article to be measured, and an indicating device adapted to be actuated by the closing of the circuit.

1,295,937. RAILROAD-TRACK CONSTRUCTION. BENJAMIN E. D. STAFFORD and ETHAN I. DODGE, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Oct. 28, 1915. Serial No. 58,369. 2 Claims. (Cl. 85—9.)

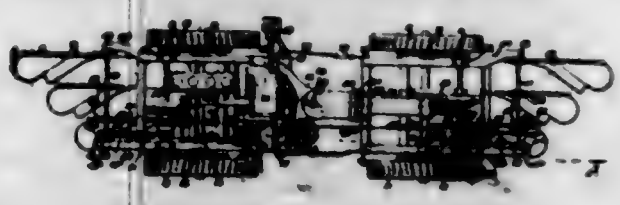


1. A track bolt having a head at one end, the entire inner or bearing face of the head being curved and adapted for use with a curved seat, so as to provide for rocking movement of the bolt head in its seat, and wings on the shank adjacent the curved bearing face, but not on the latter.

2. The combination of a bolt headed at one end and threaded at the other end, the rear face of the head of the bolt being curved and the shank of the bolt provided with side wings adjacent the curved bearing face, but not on the latter, a nut for the threaded end of the bolt, the inner face of the nut being curved, and splice plates through which the bolt passes the splice plates being pro-

vided with curved seats to receive the curved bearing faces of the head and nut so as to provide for rocking movement of the bolt and nut and one of said splice plates having slots for the reception of the side wings on the bolt shank.

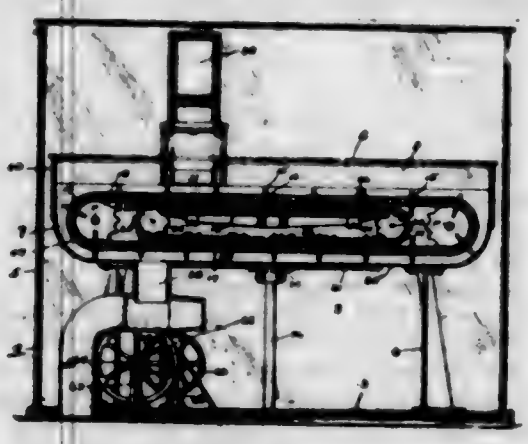
1,295,938. REVERSIBLE TRACTOR-PLOW. RALPH TINKEM, Little York, Ill. Filed July 25, 1917. Serial No. 182,690. 4 Claims. (Cl. 97—50.)



1. In a tractor plow, two frames disposed one in front of the other and pivoted together on a vertical axis, traction wheels on the frames, means for driving simultaneously the traction wheels on the two frames, two sets of agricultural implements, one set movably mounted on each frame, and means operable by the driving means at the will of the operator for raising one set of agricultural implements and for lowering the other set when the tractor plow is moved in one direction.

2. In a tractor plow, two frames disposed one in front of the other and pivoted together on a vertical axis, traction wheels on the frames, two sets of agricultural implements one set movably mounted on each frame, and means connected with the traction wheels for raising one set of agricultural implements and for lowering the other set when the tractor plow is moved in one direction.

1,295,939. MACHINE FOR ROASTING PEANUTS AND THE LIKE. CHARLES A. TRIPP, Indianapolis, Ind., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind., a Corporation. Filed Oct. 19, 1917. Serial No. 197,513. 24 Claims. (Cl. 34—12.)



1. A machine for roasting peanuts or the like, including a horizontal stationary hot plate, a compartment conveyer along the upper surface of said hot plate, a feed chute with which the compartments of the conveyer successively register and means to intermittently open and close the lower end of the chute to control the discharge of the contents of the chute into the compartments.

1,295,940. VALVE-GRINDING MACHINE. PHILLIP A. UBALL, Stockton, Cal. Filed Oct. 9, 1917. Serial No. 195,847. 3 Claims. (Cl. 51—4.)

1. A valve grinding machine comprising in combination with a plurality of grinding rods arranged for engagement with the valves, a means common to all the rods for rotating them in one direction and intermittently reversing such rotation for a fraction of a revolution, and means for intermittently lifting the valves during the latter operation, such means including an arm suspended lengthwise of the valve stem and under the same, set screws on the arm in alinement with each stem, a cam mounted in driving relation with the means for rotating the grinding rods, and a cam-actuated rod connected with the suspended arm whereby the arm and the valve stems thereabove will be raised at predetermined points in the rotation of the grinding rods.

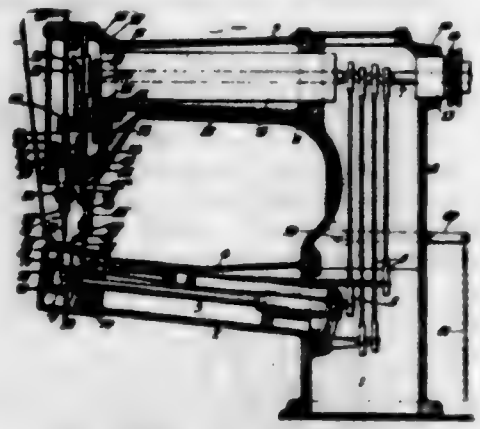


1,295,941. AUTOMOBILE NUMBER-PLATE. GEORGE E. WACK, Waterloo, Iowa, assignor to Sanifount Company, Wilmington, Del., a Corporation of Delaware. Filed Sept. 20, 1917. Serial No. 192,828. 1 Claim. (Cl. 74—8.)



A main plate, an auxiliary plate, said main plate having slots therein, said auxiliary plate having longitudinally slotted integral lugs passed through the slots in the main plate, and wedge-shaped split-keys passed through the slots in said lugs to bear compressively upon the main plate, the ends of the keys being adapted to be spread apart and bent reversely about said lugs.

1,295,942. SEWING-MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Corporation, Dover, Del., a Corporation of Delaware. Filed Mar. 1, 1916. Serial No. 81,803. 70 Claims. (Cl. 112—7.)



1. In a sewing machine of the class described, the combination of a work supporting horn, means for maintaining the opposed edges of the work supported on said horn spaced apart, means for supplying a strip of material to the work to have the edges simultaneously stitched to the spaced edges of the work supported on said horn, feeding mechanism, a pair of stitching mechanisms spaced apart a greater distance than the spaced edges of the work and comprising needles, a pair of loopers co-

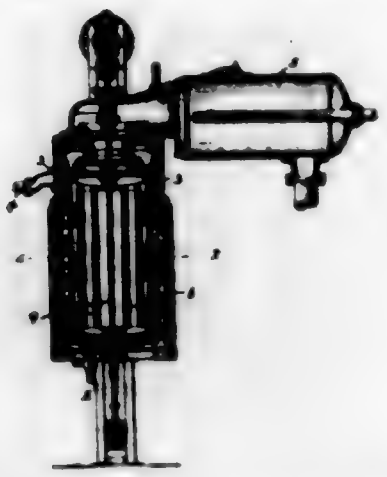
operating with the needles, and shiftable thread carrying fingers also coöperating with the needles.

27. Stitching mechanism for a sewing machine, comprising a needle, a slidingly supported thread carrying finger extending lengthwise of the needle, a gear for oscillating said thread carrying finger, means for actuating said gear, and means for raising and lowering said thread carrying finger and its gear.

40. In a sewing machine of the class described, the combination of needle mechanism comprising a needle bar adapted to carry a needle, a thread carrying finger slidably supported on said needle bar, means supported for rising and falling movement for oscillating said thread carrying finger, and means for raising and lowering the thread carrying finger and its oscillating means simultaneously.

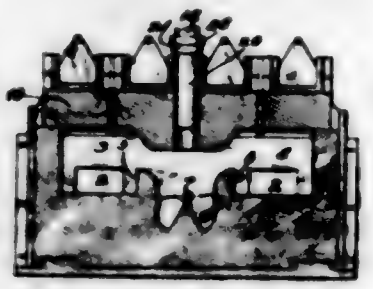
43. In a sewing machine having a single head, the combination of stitching mechanism comprising two sets of needles carried by said single head, a pair of loopers, one coöperating with each set of needles, and four continuously operating thread carrying fingers, a pair thereof coöperating with each set of needles.

1,295,943. METHOD OF MANUFACTURING FOOD PRODUCTS FROM FRUITS AND VEGETABLES AND THE PRODUCTS. PAUL R. WELCH, Westfield, N. Y., assignor to the Welch Grape Juice Company, Westfield, N. Y., a Corporation of New York. Filed Aug. 31, 1917. Serial No. 189,214. 21 Claims. (Cl. 99—11.)



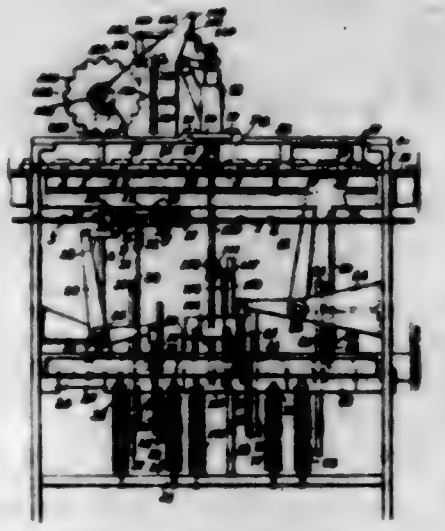
15. The method of producing fruit and vegetable products comprising the separation of the juice from the pulp, then concentrating the juice, then combining the pulp and concentrated juice, and then heating the combined pulp and concentrated juice.

1,295,944. OIL OR GAS FURNACE. OLIVER P. WILHELM and JOSEPH F. POSDAL, Michigan City, Ind., assignors of one-fourth to Santford W. Wilhelm, Michigan City, Ind., and one-fourth to Ben Loewenthal, Chicago, Ill. Filed June 28, 1917. Serial No. 177,471. 10 Claims. (Cl. 158—1.)



1. In a furnace of the class described, a fire chamber centrally disposed therein, a deflector therein, heating chambers arranged on opposite sides of and around the fire chamber, and a burner co-acting with the deflector and fire chamber to apply the heat to one chamber independently of the other.

1,295,945. MACHINE FOR OPERATING ON HEELS. ERASTUS B. WINKLEY, Lynn, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 27, 1911, Serial No. 657,150. Renewed Mar. 20, 1917. Serial No. 156,214. 33 Claims. (Cl. 198—1.)



1. A machine for transferring heels in process, having, in combination a conveyer for partially prepared heels, a carrier for treated heels, means for exchanging treated heels for the partially prepared heels, means for actuating the conveyer, and means for moving the carrier only in a path parallel to the travel of the conveyer.

8. A machine for transferring heels in process, having, in combination, a link conveyer, means for feeding the conveyer to bring the links successively to a curtain station, a tray adapted to be loaded with heels, a picker, and means for actuating the picker to kick up the heels, one at a time, from the tray and deposit them on successive links of the conveyer, substantially as described.

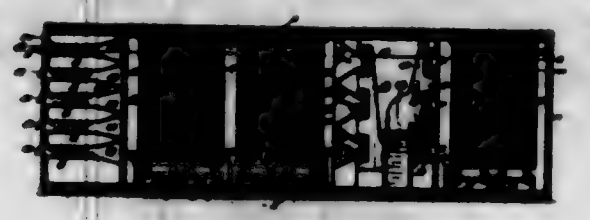
29. A machine of the character described having, in combination, a heel transferring device, means for feeding heels from two separate sources of supply to and from said device, and means for actuating said transferring device to exchange an unlimited number of heels from one of said supplies for an equal number of heels from the other supply.

33. A machine of the character described having, in combination, a heel transferring device, a conveyer constructed and arranged to be supplied with heels independently of said device and to feed heels one at a time to and from said device, a carrier for supporting heels, and means for relatively actuating the device and carrier to transfer heels arranged in longitudinal and lateral rows on the carrier from the carrier to the conveyer and to transfer the heels from the conveyer to the carrier and arrange the heels on the carrier in longitudinal and lateral rows.

1,295,946. DRIER. MARCY WITTENMYER, Portland, and RALPH WALDO KING, The Dalles, Oreg., assignors to Pacific Evaporator Company, Portland, Oreg., a Corporation of Oregon. Filed June 20, 1916. Serial No. 104,819. 10 Claims. (Cl. 34—46.)

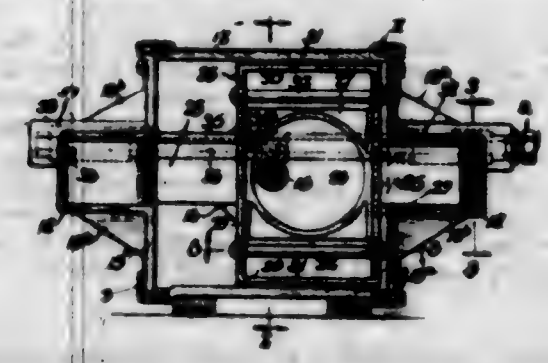
1. In a drier, the combination of a primary drying chamber; a secondary drying chamber separated from the primary drying chamber; inclosed ways for transferring material from the primary chamber to the secondary chamber; and means for heating air and passing the same through the secondary chamber and conveying and delivering the same to the primary chamber, said ways for transferring material being independent of the means for passing air.

2. In a drier the combination of a primary drying tunnel; a secondary drying tunnel separated from the primary drying tunnel; a plurality of ways in the secondary drying tunnel; means for heating air and passing the same through the secondary tunnel and conveying



and delivering the same to the primary tunnel; and inclosed ways on which the material may be conveyed from the primary tunnel to the way in the secondary tunnel remote from the incoming air and then to the way adjacent to the incoming air in said secondary tunnel.

1,295,947. COMPRESSOR. FRED W. WOLF, Chicago, Ill. Filed Dec. 4, 1916. Serial No. 134,792. 12 Claims. (Cl. 230—27.)



1. A compressor, comprising a casing consisting of a shell and of heads provided with oppositely disposed cylinders, pistons reciprocable in said cylinders, a drive shaft mounted in said shell, means intermediate said drive shaft and said pistons for reciprocating them in unison, valve mechanism associated with each cylinder adapted to discharge in to the said shell, and means intermediate said shaft and said valve mechanism for operating said valve mechanism.

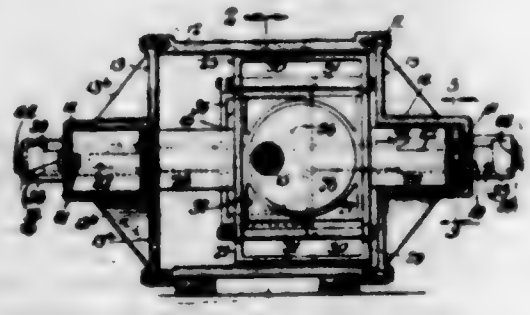
2. A compressor, comprising a casing consisting of a shell and of heads provided with oppositely disposed cylinders, pistons reciprocable in said cylinders, a drive shaft mounted in said shell, means intermediate said drive shaft and said pistons for reciprocating them in unison, valve mechanism associated with each cylinder adapted to discharge into said shell and comprising a tubular valve casing and a cylindrical valve member movable therein, and means intermediate said shaft and said valve mechanism for operating said valve mechanism.

5. A compressor, comprising a casing consisting of a shell and of heads provided with alined, oppositely disposed cylinders, a drive shaft mounted in said shell with its axis at right angles to the axis of said cylinders, a yoke adapted to be reciprocated in said shell by said drive shaft, pistons connected to said yoke, valve mechanism associated with each cylinder adapted to discharge into said shell, and means intermediate said shaft and said valve mechanism for operating said valve mechanism.

9. A compressor, comprising a casing consisting of a shell and of heads provided with oppositely disposed cylinders, a drive shaft mounted in said shell, a yoke reciprocable in said shell, said yoke consisting of two U-shaped bars each of which has a piston reciprocable in said cylinders, means connecting the said U-shaped bars together, a block reciprocable in said yoke, an eccentric fixed to said shaft in the plane of said yoke and operatively engaged in said block, a gear on said drive shaft, a rotative tubular valve member associated with each cylinder and adapted to discharge into said shell, said valve members having a common connecting shaft, and a gear on said common connecting shaft meshing with the gear on said drive shaft.

12. A compressor, comprising a casing consisting of a shell and of heads provided with oppositely disposed cylinders, a transverse drive shaft journaled in said shell, a reciprocating yoke in said shell, said yoke consisting of two U-shaped bars each of which has an integral piston head reciprocable in an associated cylinder, each of said bars comprising an upright member having a vertical groove in its inner face and of horizontal members engaging each other at their ends, a vertically reciprocating block having ribs engaged in the grooves of said upright members, an eccentric disk fixed to said shaft and rotatable in said block and spacing means connecting the upright members of said U-shaped bars together.

1,295,948. COMPRESSOR. FRED W. WOLF, Chicago, Ill. Filed Dec. 4, 1916. Serial No. 134,793. 8 Claims. (Cl. 230—27.)



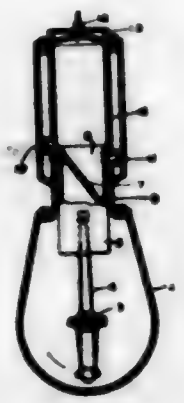
1. In a compressor, the combination of a crank case, oppositely disposed heads secured to said crank case, said heads having cylinder bores and valve chest bores therein, a driving shaft in said crank case, reciprocating pistons and piston valves in said cylinder bores and valve chest bores respectively, and means intermediate said driving shaft and said pistons and piston valves for reciprocating said pistons and piston valves, said piston valves controlling the admission of the fluid being compressed, into and from said cylinder bores.

5. In a compressor, the combination of a crank case, oppositely disposed heads secured to said crank case, said heads each having a cylinder bore and a parallel valve chest bore, there being a passageway connecting the outer ends of the cylinder bore with the associated valve chest bore, a driving shaft in said crank case, a piston reciprocable in each cylinder and a piston valve reciprocable in each valve chest bore, and means intermediate the driving shaft and the pistons and piston valves for reciprocating said pistons and piston valves, said piston valves controlling the passage of the fluid to be compressed, through said passageway connecting the cylinder and valve chest bores, into and from the cylinder bores.

8. In a compressor, the combination of a crank case, oppositely disposed heads secured to said crank case, said heads each having a cylinder bore and a parallel valve chest bore which is of a length greater than that of said cylinder bore, there being a passageway connecting the outer end of each cylinder bore with the associated valve chest bore at a point spaced from its ends, means providing inlets into the valve chest bores for the fluid to be compressed, means providing an outlet from the crank case for the compressed fluid, a driving shaft in said crank case, a piston reciprocable in each cylinder bore and a piston valve reciprocable in each valve chest bore, each piston valve having a passageway at its outer end adapted to be brought into register with said passageway connecting the associated piston bore and valve chest bore together, to permit of the inlet of the fluid to be compressed, into said cylinder bore and each piston valve having a second passageway adapted to be brought into register with said passageway connecting the asso-

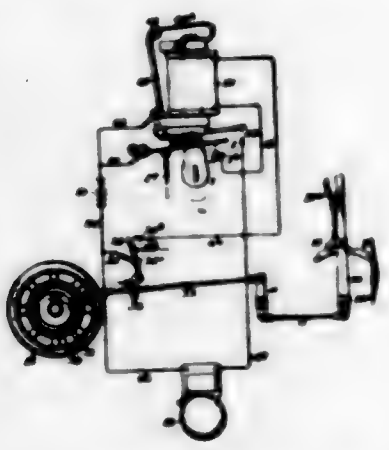
ciated piston bore and valve chest bore together, said last named passageway in said piston valve connecting the cylinder bore with the interior of the crank case.

1,295,949. GAS-ENGINE. FREDERIC WOMMER, Minneapolis, Minn., assignor of one-half to Joseph J. Barclay, Minneapolis, Minn. Filed June 1, 1917. Serial No. 172,140. 1 Claim. (Cl. 123—77.)



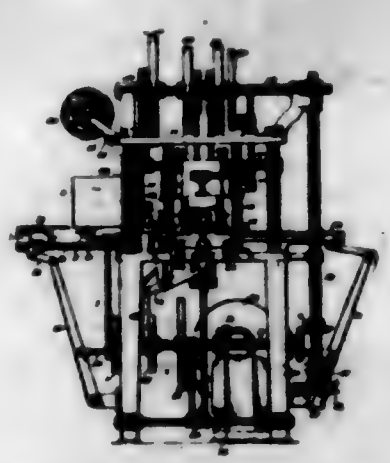
In an internal combustion engine, a cylinder, a piston of uniform diameter and of uniform length throughout its peripheral wall working in said cylinder and formed with an exhaust port in the side wall thereof, said piston having a deeply sloping internal wall which forms the piston head and provides a piston combustion chamber in open communication with the combustion chamber of the cylinder, said piston chamber decreasing in cross-sectional area toward and communicating with said piston exhaust port, an inlet port in the cylinder wall adapted to be overrun by the piston near the end of the working stroke, and an exhaust port in the cylinder wall adapted to register with the piston exhaust port at approximately the medial point of the piston travel.

1,295,950. AUTOMOBILE WARNING DEVICE. BRUNO ZAHM, Edgewood borough, Pa. Original application filed Sept. 5, 1916, Serial No. 118,325. Divided and this application filed Aug. 3, 1917. Serial No. 184,227. 1 Claim. (Cl. 177—314.)



In combination, a vehicle having a brake, a relay on said vehicle, a warning signal controlled by said relay and operated when the armature of the relay is in attracted position, a contact controlled by said brake device and closed only when the brake is released, a second contact, a circuit for said relay including said two contacts in series and a source of current, means associated with said relay for keeping said armature in the attracted position after it has been moved there by the closing of said relay circuit even though the circuit be subsequently opened by re-application of the brake, and manually operable means for simultaneously opening said second contact and forcing said armature out of attracted position.

1,295,951. PACKAGING-MACHINE. HARRY YARRINGTON ARMSTRONG, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 4, 1914. Serial No. 875,528. 17 Claims. (Cl. 93—8.)



1. In a machine of the character described, the combination with mechanism for partially folding a carton blank to prepare the carton for filling, of a magazine for carton blanks, means for holding a supply of lining material for the cartons, mechanism for feeding a carton blank and a carton lining to said folding mechanism, means codperating with said folding mechanism to fill the carton, and means operative thereafter to complete the folding operations on the carton to close it.

1,295,952. IGNITION-CAP FOR FUSES. LOUIS V. ARONSON, Newark, N. J. Filed July 8, 1918. Serial No. 243,799. 2 Claims. (Cl. 102—9.)

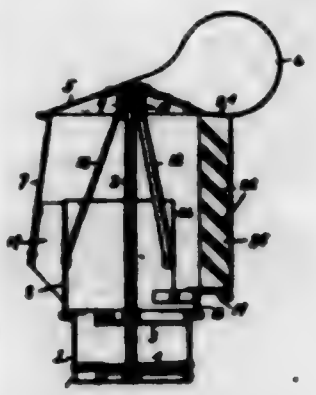


1. An ignition head or cap for fuses and the like, comprising a hollow member open at one end and adapted to receive the fuse, and having its opposite end of corrugated form, and closed at said end by a body of ignitible and combustible material extending over said end and filling the corrugations therein.

1,295,953. ROTATABLE VENTILATOR-HOOD. ANTHONY M. BARMAN, Detroit, Mich. Filed Aug. 15, 1918. Serial No. 249,946. 4 Claims. (Cl. 98—3.)

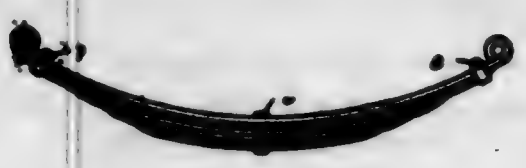
1. A rotatable ventilator hood comprising an upwardly tapering shell having a side opening and a vane attached to the top of the shell and extending centrally of the opening, a cylindrical deflector extending up within

the shell and of less diameter than the shell, and vanes between that portion of the shell which is opposite the side opening therein and the deflector and constituting



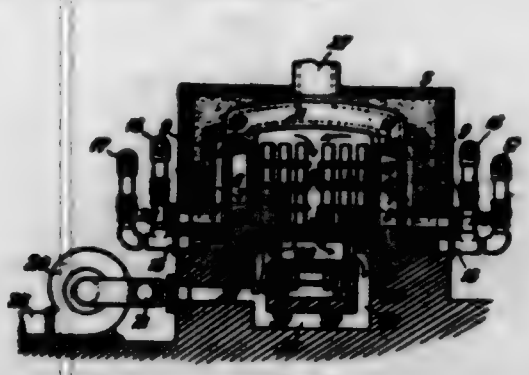
upwardly tapering air passages, said deflector terminating in line with said side opening in the shell, and means to rotatably support said hood.

1,295,954. COMPOUND ANTIRECOIL-SPRING. OLIVER N. BEAM, Los Angeles, Cal. Filed July 1, 1918. Serial No. 242,806. 1 Claim. (Cl. 267—27.)



The combination with a normal convexed leaf spring of a resisting spring leaf against the convex side of and in contact with the normal leaf spring throughout its active length, the tension of the resisting leaf spring being in opposition to the tension of the normal leaf spring, means connecting the center of the resisting spring leaf to the center of the normal leaf spring, and clips connecting the ends of the resisting spring leaf to the ends of the normal leaf spring.

1,295,955. CONTINUOUS TUNNEL-KILN. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Feb. 1, 1917. Serial No. 145,959. Renewed July 16, 1918. Serial No. 245,218. 8 Claims. (Cl. 25—142.)

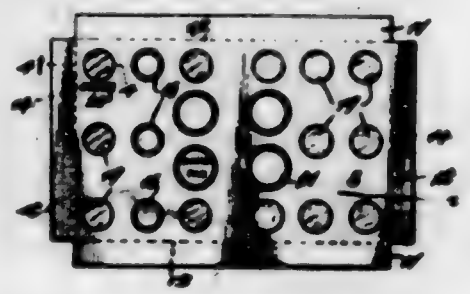


1. A tunnel oven of the type described, comprising a main chamber, a plurality of structurally independent heating chambers arranged longitudinally in line on each side of the main chamber, each heating chamber having a vertical height corresponding to the maximum horizontal plane occupied by the goods under treatment in passing through the chamber, and such chamber located at such a distance from the side walls and top of the main chamber as to provide an air passage between the respective chambers, and said heating chambers having such an interior capacity as to permit free combustion of the gaseous fuel introduced into the bottom of the chamber, together with means for introducing gas and air under pressure into said heating chambers.

6. A tunnel oven of the type described, comprising a main chamber, a plurality of structurally independent heating chambers arranged longitudinally in line on each side of the main chamber, each heating chamber having a vertical height corresponding to the maximum horizontal plane occupied by the goods under treatment in passing through the chamber, and such chamber located at a distance from the side walls and top of the main chamber, said heating chamber having such an interior capacity as to permit free combustion of the gaseous fuel introduced into the bottom of the chamber, means for introducing heated air into the main chamber between the sides of the main chamber and the inner sides of the heating chambers, and means for causing the air introduced to flow over the heating chambers and in a downward direction through the goods under treatment in the main chamber and out of the main chamber.

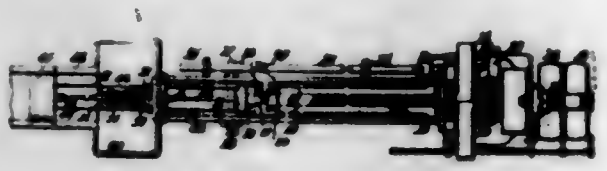
8. In a tunnel oven of the type described, the combination of a main chamber, a series of independent heating chambers arranged longitudinally in line on each side of the main chamber, each of said heating chambers having their tops substantially in the same horizontal plane as that occupied by the goods under treatment in passing through the chamber, an air passage between said chambers and the walls of the top of the main chamber, means for heating said heating chambers, together with means for creating an air circulation in an upward direction through such passage over the rear of said heating chambers and then in a downward direction over said heating chambers and through the goods under treatment in the main chamber.

1,295,956. PAINT SET. HYMAN BENSON, Brooklyn, N. Y. Filed Sept. 25, 1918. Serial No. 255,706. 1 Claim. (Cl. 41—5.)



In a paint-set, a box comprising a card-board bottom member having depressions therein containing paint in dry form, turned up side and end-members integral therewith, staples securing the turned up side and end-members together, and a cover for said box.

1,295,957. BROACHING-MACHINE. HARRY E. BLANCHARD, Hudson, Mass., assignor to Lapointe Machine Tool Company, Hudson, Mass., a Corporation of Maine. Filed Nov. 21, 1917. Serial No. 203,079. 11 Claims. (Cl. 90—22.)

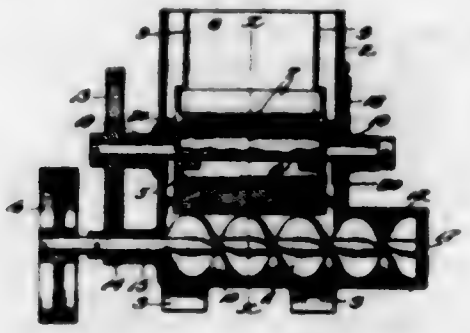


1. In a broaching machine, the combination of a stationary broach holder, a plurality of broaches carried by said holder provided with internal cutting surfaces, and means beyond one end of the broach holder for pulling the work through the holder and broaches toward said means.

1,295,958. PROCESS OF MAKING BORIC ACID AND SODIUM BORATE. HENRY BLUMENBERG, Jr., Los Angeles, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed Dec. 4, 1917. Serial No. 205,450. 3 Claims. (Cl. 23—1.)

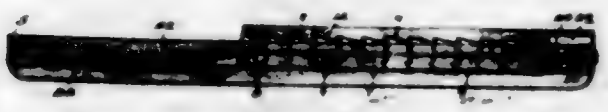
1. A process of treating waste gases containing borates in suspension, comprising treating said gases with an acid, thereby forming boric acid, and separating the boric acid from the mass.

1,295,959. FEEDING APPARATUS FOR WEIGHING-MACHINES. HARRY D. BOWMAN, East Orange, N. J. Filed Aug. 25, 1915. Serial No. 47,366. 2 Claims. (Cl. 193—18.)



1. An apparatus for feeding finely-divided material to automatic weighing machines, comprising a hopper having an open bottom, a rotary cylinder extending horizontally beneath the bottom of the hopper and constituting a closure therefor, said cylinder being provided with peripheral cavities, a screw conveyer extending horizontally beneath and closely adjacent to said cylinder, with an open space extending unobstructedly between them throughout the length of their adjacent exposed peripheries, and means for simultaneously rotating said cylinder and screw conveyer at such relative speeds that the material is delivered by the cylinder to the conveyer at a rate not less than that at which it is discharged by the latter, whereby the conveyer is kept filled with the material while operating thereon.

1,295,960. ORE-CONCENTRATOR. JAMES A. BRENT, San Francisco, Cal. Filed Mar. 1, 1916. Serial No. 81,428. Renewed July 22, 1918. Serial No. 246,231. 11 Claims. (Cl. 83—88.)



1. In a concentrator, a transversely bendable sheet-metal riffle extending lengthwise thereof comprising a land having a flange at each edge, the land having a groove formed longitudinally approximately at the juncture with one flange and an overhang formed approximately at the juncture of the opposite edge of the land with the other flange and means for variably bending the riffle longitudinally of the table.

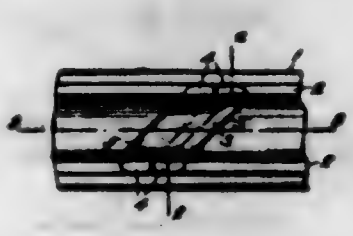
4. In a concentrator, the combination with a plurality of parallel strips, of flexible transversely bendable sheet metal riffles extending lengthwise thereof, each comprising a land and two flanges, one flange of each riffle permanently secured to one side of a strip and the other flange adjustably secured to the opposite edge of the strip, at elevations varying longitudinally of the strip, and means for drawing the strips together to frictionally hold the adjustable flanges in place where set.

6. In a concentrator, the combination with strips, of riffles made of sheet-metal each comprising a land and two flanges, one of which is permanently secured to one edge of a strip, the other adjustably connected at varying elevations with the opposite edge of each strip, and common means for securing said strips and flanges rigidly in place.

9. A concentrator table having a plurality of riffles extending throughout the length of a central belt of the table, with relatively smooth spaces on either side, one of which forms a channel for the metallics, and the other a discharge for the gangue, and settlers placed diagonally across the feed end of one of said smooth spaces.

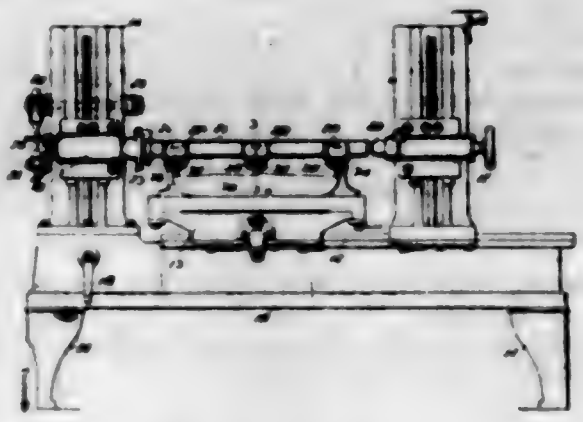
10. In a concentrator, the combination with a table, of flexible hollow riffles thereon, the ends of which terminate in vertically-disposed wings which extend beyond the end of the table.

1,295,961. TIRE-PATCH. GLENN D. BRILLHART, Cuyahoga Falls, Ohio. Filed Oct. 3, 1918. Serial No. 256,707. 3 Claims. (Cl. 152—24.)



3. A tire patch comprising a body having the side edges extending at an approximately forty five degree angle to the ends, flexible strips inserted in the side edges and projecting therefrom, and wings formed on the ends of the body.

1,295,962. LAPPING-MACHINE. HAROLD BROWN, Moline, Ill., assignor to Reynolds Engineering Company, Moline Ill., a Corporation of Illinois. Filed May 24, 1918. Serial No. 236,269. 7 Claims. (Cl. 51—4.)



1. In a machine of the class described, the combination with an arbor and means for oscillating it, of a device connected therewith for engaging a curved bearing member and rocking it in frictional engagement with its seat.

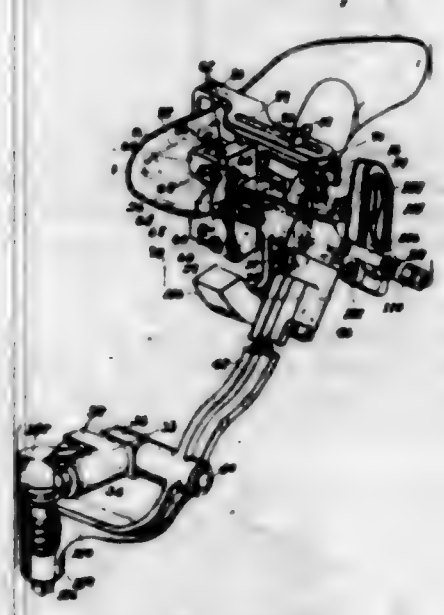
2. In a machine of the class described, the combination with an arbor and means for oscillating it, of a device connected therewith for yieldingly engaging a curved bearing member and rocking it in frictional engagement with its seat.

3. In a machine of the class described, the combination with an arbor and means for oscillating it, of a device carried thereby for bearing against the edges of a semi-cylindrical bushing when said bushing is resting on its seat whereby said bushing will be ground against the seat during the oscillation of the arbor.

4. In a machine of the class described, the combination with an arbor, of a device having a semi-cylindrical outer face and oppositely-disposed lateral flanges for engaging respectively the inner face and the edges of a semi-cylindrical bushing when said bushing is resting on its seat, means for connecting said device with the arbor, and means for oscillating the arbor to grind the bushing against its seat.

5. In a machine of the class described, the combination with an arbor having two opposite parallel side walls, of a bushing-engaging member movably seated against said side walls and having laterally-extending flanges for engaging the edges of a bushing when said bushing is on its seat, and means for oscillating the arbor to grind the bushing against said seat.

1,295,963. WORK-SUPPORT FOR SHOE-MACHINES. LOUIS M. BROWN, Beverly, and ALBERT A. MACLEOD, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed June 23, 1915. Serial No. 35,816. 38 Claims. (Cl. 12—125.)



1. In a machine for trimming an insole attached to a last, the combination of supporting means for the last constructed to permit the last to be moved to bring different portions of the edge of the insole into position to be trimmed, and a device constructed to engage the bottom face of the insole in a location remote from the edge to be trimmed to hold the insole from slipping on the last, said device being movable with the last during the trimming operation and movable also relatively to the last to permit the last to be removed from its supporting means.

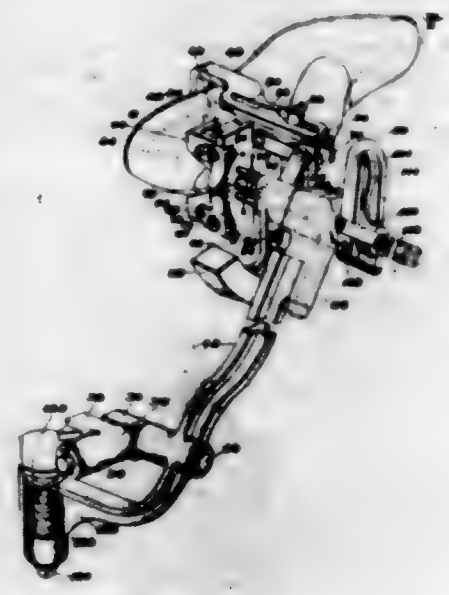
8. A device of the class described comprising, in combination, a last support movable to effect bodily displacement of the last, and means for clamping shoe stock upon the bottom of the last arranged to be moved to operative clamping position through said movement of the last support.

11. A device of the class described comprising, in combination, a longitudinally movable spindle arranged for engagement in the last pin socket of a last, a clamp member for engaging shoe stock upon the bottom of a last on said spindle, and means connecting said spindle and clamp member to effect movement of said member to operative clamping position through movement of the spindle.

14. A device of the class described comprising in combination, a bracket, a spindle mounted for endwise movement in said bracket and having means for supporting a last, a slide mounted on the bracket, means carried by the slide for engaging and clamping shoe stock on the bottom of the last, and means connecting said slide and last supporting means for simultaneous movement in substantially opposite directions.

22. A device of the class described comprising, in combination, a rotatable last support, means for rotating said support to bring it normally to a predetermined position of rotation about its axis, and means for locking the support in said position.

1,295,964. TRIMMING-MACHINE. LOUIS M. BROWN, deceased, Beverly, by May E. Brown, administratrix, Beverly, Mass., and Albert A. Macleod, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Original application filed June 23, 1915, Serial No. 35,816. Divided and this application filed Nov. 6, 1917. Serial No. 200,617. 15 Claims. (Cl. 12—87.)



1. In a machine of the class described, a cutter, a device located adjacent to the cutter to extend between the bottom of a last and an insole thereon to support the insole over a substantial area near the point of operation of the cutter, and means extending across the edge of the insole in contact therewith over a substantial peripheral area along the edge at the point of cut to support it sufficiently close to the point of operation of the cutter to hold it against any tendency to bend away from the cutter.

1,295,965. WORK-SUPPORT FOR SHOE-MACHINES. LOUIS M. BROWN, Beverly, and ALBERT A. MACLEOD, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 15, 1915. Serial No. 40,016. 20 Claims. (Cl. 12—125.)



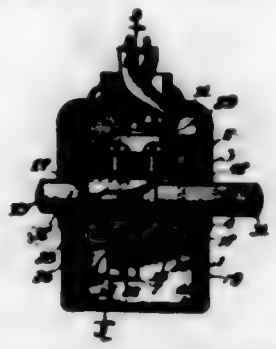
1. In a machine for trimming an insole attached to a last, supporting means for the last movable to carry the last bodily to different positions in the machine and constructed to permit the last to be turned to bring different portions of the edge of the insole into position to be trimmed, and a device for engaging the bottom face of the insole to hold the insole in position upon the last, said device being mounted to turn with the last in fixed relation thereto during the trimming operation, the device being movable also about an axis extending longitudinally of the last to an idle position at one side of the last.

9. In a shoe machine, a last support including a spindle for engagement in the last pin socket of a last, said support being movable to displace the last in the line of said spindle, a device for engaging and holding shoe stock upon the last bottom, said device being movable from an idle position to a position opposite to the end of said spindle, and means for effecting said movement of the device through the movement of the last support.

12. In a shoe machine, a last support movable to effect displacement of the last in a direction transverse to the plane of the heel seat, a device pivoted to swing into or out of position to engage and hold shoe stock upon the bottom of the last, said device having a cam slot formed in one portion thereof, and a pin carried by the last support and movable in said slot for operating the device by movement of the support.

20. A machine for operating upon shoes, having, in combination, a shoe support, and means for bringing the soles of shoes of all sizes mounted on the support invariably into the same plane comprising a plate carried by the shoe support, and means operated through the movement of the shoe support toward and from the said plane for moving said plate widthwise of the shoe into and out of operative position.

1,293,966. SWITCH-MOVEMENT. SAMUEL BUCHSBAUM, Chicago, Ill., assignor to Gordon Electric and Manufacturing Co., Waterville, Conn. Filed July 21, 1917. Serial No. 181,067. 2 Claims. (Cl. 175—287.)

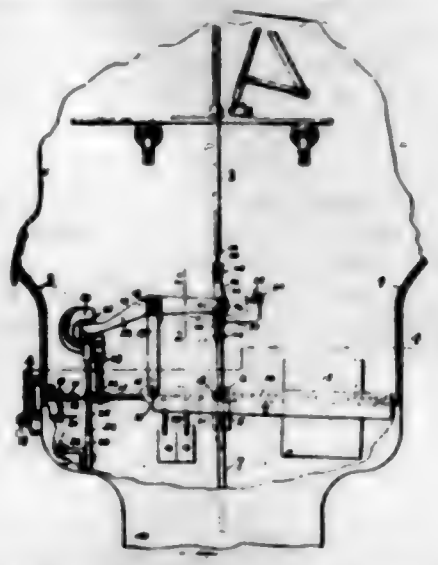


1. In a switch movement of the character described the combination with a base piece, a rocking link pivotally carried by said base piece, a second link oscillatingly and shiftably carried by said base piece at one extremity of said second link and having its other extremity movable along said rocking link, a switch controlling element forming an integral part of said second aforesaid link, manually controlled means for moving said rocking link from one limiting position toward its other limiting position, said rocking link having sidewise extending projections at one end and inwardly bent projections at the other to limit the movement of said second link, and resilient means associated with said second link tending to move said link toward either of its extreme positions.

2. In a switch movement of the character described the combination with a base piece, a rocking link pivotally carried by said base piece, a second link oscillatingly and shiftably carried by said base piece at one extremity of said second link and having its other extremity movable along said rocking link, a switch controlling element forming an integral part of said second aforesaid link, said switch element and said second link consisting of a substantially T shaped structure the extremities of whose arms are bent inwardly to form said switch element, manually controlled means for moving said rocking link from one limiting position toward its other limiting position, said rocking link having sidewise extending projections at one end and inwardly bent projections at the other to limit the movement of said second link, and resilient means associated with said second link tending to move said link toward either of its extreme positions.

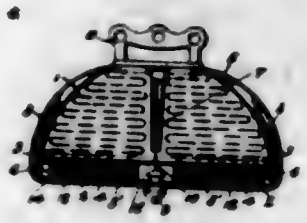
1,295,967. TARE-BEAM MOUNTING. FREMONT H. BUCKINGHAM, Detroit, Mich., assignor to Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 2, 1917. Serial No. 159,080. 14 Claims. (Cl. 265—49.)

1. In a tare mechanism for scales, the combination of a vertically movable load-supporting rod, a yoke connected thereto, a lever having knife edges at its ends and intermediate its ends, a pivotally movable abutment having a bearing for the knife edges at one end of the lever, the knife edges of the other end of the lever engaging said yoke, a pivotally mounted tare-beam and a poise slidable thereon, said tare-beam having arms provided with knife edges positioned below the knife edges intermediate the



ends of said lever, and a compression member extending between the said knife edges at the ends of the arms of the tare-beam and the knife edges intermediate the ends of the lever.

1,295,968. PARACHUTE. EVERARD RICHARD CALTHROP, London, England, assignor to E. R. Calthrop's Aerial Patents Limited, London, England. Filed July 31, 1918. Serial No. 247,509. 8 Claims. (Cl. 244—21.)



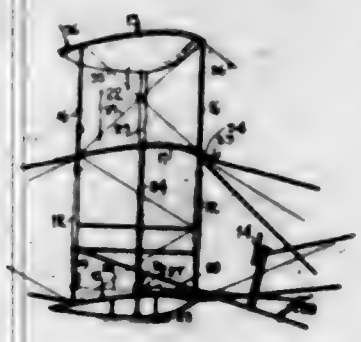
1. In a parachute launching device, the combination with a parachute body and its accessory parts and a case or container having a retaining portion, in which case or container the said body and parts are normally nested or housed and from which the parachute is launched by the application of the load, of spring or yielding means connected with the parachute body adapted to automatically expand the mouth of the parachute body as the latter issues from said case or container, said spring means coöperating with said retaining portion of the casing or container and by its expansion normally retaining the parachute body in said casing or container.

1,295,969. ROTARY BORING-DRILL. ROBERT E. CARMICHAEL, Damon, Tex. Filed Nov. 18, 1918. Serial No. 262,983. 11 Claims. (Cl. 255—24.)



10. In a rotary drill, a drill stem, a rotary casing, an expanding drill bit, means on said casing to support said bit, and means to discharge flushing water through both the drill stem and the casing.

1,295,970. AEROPLANE. MELVIN BENT CUMBLER, Harrisburg, Pa. Filed Nov. 20, 1917. Serial No. 202,965. 8 Claims. (Cl. 244—21.)



1. In a flying machine, a main fixed plane, an auxiliary plane movable toward or from the main fixed plane, means urging the auxiliary plane away from the fixed plane, means for supporting and guiding the auxiliary plane in its movement, means for holding the auxiliary plane in contiguity with the fixed plane, a normally deflated gas bag carried by the auxiliary plane, a gas tank containing gas under pressure, and manually controlled means for releasing the auxiliary plane to permit it to shift to an operative position and for simultaneously opening communication between the gas tank and the gas bag.

1,295,971. VENDING-MACHINE. HENRY JEFFERSON DAVIS, Waynesboro, Ga. Filed Mar. 18, 1918. Serial No. 223,137. 18 Claims. (Cl. 194—73.)



1. In a machine for the purpose described, the combination of a support for a series of bottles, a delivery device adapted to withdraw bottles successively from said support, coin controlled means for intermittingly actuating the delivery device, a coin reservoir, means for withdrawing a coin from said reservoir whenever the delivery device delivers a bottle, a holder for coins withdrawn from said reservoir, and means for delivering a coin from said holder adapted to be actuated by returning a bottle to the machine.

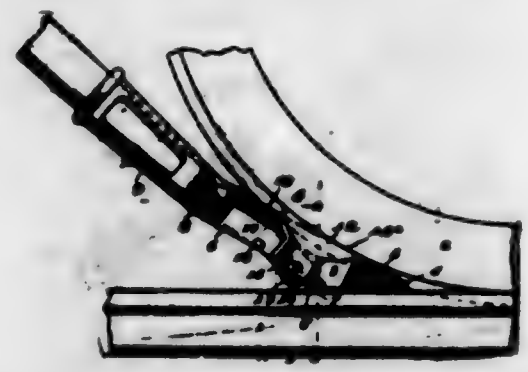
1,295,972. SAFETY-RAZOR. FREDERICK S. DEITRICK, Cambridge, and EMILE C. FRANZMANN, Somerville, Mass.; said Franzmann assignor to said Deitrick. Filed May 31, 1917. Serial No. 171,967. 12 Claims. (Cl. 30—12.)

1. A safety razor comprising a double-edged guard member, and means for holding a blade in position on the guard member, the holding means having two blade engaging surfaces adapted to be used independently to hold



a blade in operative position with respect to one edge of said guard.

1,295,973. CAR-MOVER. WALTER A. DORSEY, Columbus, Ohio, assignor to The Bonney-Floyd Company, Columbus, Ohio, a Corporation of Ohio. Filed July 10, 1914. Serial No. 850,181. 2 Claims. (Cl. 254—38.)



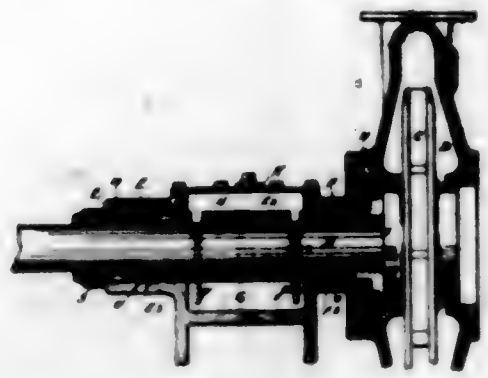
1. In a car mover, the combination with the pinch bar and the operating lever pivoted to the pinch bar, of a wheel-pushing element resting and rolling bodily upon the operating lever independently of the pinch bar, and a retaining device loosely connecting said element permanently to the operating lever independently of the pinch bar and at points below the line of rolling, said wheel pushing element being normally bodily movable vertically and forward and backward independently of the lever and pinch bar.

2. In a car mover, the combination with the pinch bar having an elongated upper, wheel-engaging, surface at its front end along which the wheel rolls as the pinch bar rises, and the operating lever pivoted to the pinch bar, of a wheel-pushing element resting entirely on the upper side of the operating lever and permanently connected thereto loosely as set forth to permit it to bodily move vertically and forward and backward independently of the lever, and having an elongated curved bearing surface along which it rolls in a direction similar to that along which the wheel rolls on the top surface of the pinch bar.

1,295,974. NON-LEAKING BEARING FOR REVOLVING SHAFTS. ANDREW P. DROX and GEORGE W. WILSON, Fresno, Cal. Filed Aug. 6, 1918. Serial No. 248,657. 7 Claims. (Cl. 64—25.)

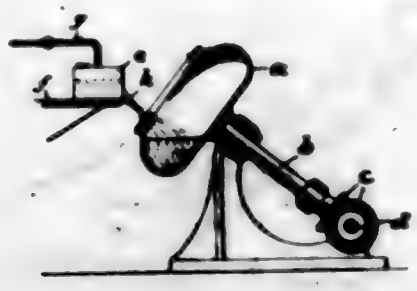
1. In a non-leaking bearing for a revolving shaft, the combination of a bearing support, the end portions of which are cylindrical and arranged to have a common center line with the shaft, a bushing attached to, and within the bearing support, the bushing having faced ends, thrust washers adjacent to the faced ends of the bushing

and surrounding the shaft, a thrust bearing attached to the shaft so that it can slide lengthwise on said shaft, but is



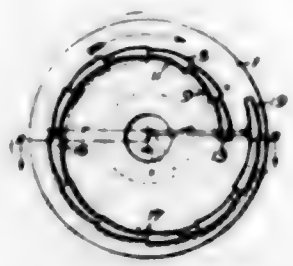
locked to rotate with it, and means for pressing said thrust bearings against the thrust washer, substantially as described.

1,295,975. PROCESS OF MANUFACTURING PELLETS OF EXPLOSIVE MATERIAL. ERNEST DU PONT, Wilmington, Del., assignor to Ball Grain Explosives Company, Wilmington, Del., a Corporation of Delaware. Filed May 1, 1917, Serial No. 165,671. Renewed Jan. 10, 1918. Serial No. 212,159. 13 Claims. (Cl. 52—4.)



1. The process of making explosive material, which consists in moistening ungiazed explosive black powder, grinding the same to obtain a mixture of grain and dust, and then molding the same.

1,295,976. CUTTER. WILLIAM C. FARNUM, Winchendon, Mass. Filed May 24, 1917. Serial No. 170,660. 13 Claims. (Cl. 29—103.)



1. A cutter comprising a member having a spiral cutter thereon for forming a concave profile of a tooth in a blank, and a spiral cutter on said member for forming a convex profile of said tooth.

10. A cutter comprising series of spirally disposed teeth, one of said series having outer edges for cutting the concave profile of a tooth and the other of said series having inner edges for cutting the convex profile of the tooth, said series having inactive edges opposed to said cutting edges.

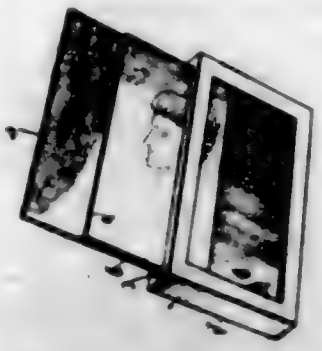
13. A cutter comprising series of circumferentially disposed cutting teeth for forming the concave and convex profiles of a tooth, the teeth of each series having progressively increasing radii, and the final teeth of both series having equal radii for finishing said profiles with the same curvature.

1,295,977. CIGAR-HOLDER. ALEXANDER GERETY, New York, N. Y. Filed Aug. 30, 1918. Serial No. 252,045. 6 Claims. (Cl. 131—10.)



1. A cigar holder comprising a tubular body adapted to receive a mouth-piece and formed at one end with confronting ears, spring-pressed fingers pivotally engaged between the ears and tilted normally away from each other, and means threaded upon the body adapted to engage said fingers and to hold them tilted toward each other, substantially as and for the purpose specified.

1,295,978. METHOD OF PRODUCING ILLUSTRATIONS AND REPRODUCING SAME. ALBERT F. GIDDINGS, Chicago, Ill. Filed Sept. 15, 1915. Serial No. 50,758. 2 Claims. (Cl. 41—46.)



1. A method of producing illustrations consisting of first coating a film or plate upon both sides with a dark translucent material, and then scratching a drawing upon one side thereof with a suitable instrument and then scratching on the reverse or opposite side of the plate or film by a similar instrument to increase or decrease the intensity or width of the lines so produced upon the positive photographic print struck from said film.

1,295,979. VALVE FOR INTERNAL-COMBUSTION ENGINES AND METHOD OF MAKING THE SAME. JOHN H. GOULD, Detroit, Mich., and MAX E. KONIGSLOW, Cleveland, Ohio, assignors to Pfanstiehl Company, Inc., North Chicago, Ill., a Corporation of New York. Filed Aug. 4, 1916. Serial No. 113,191. 11 Claims. (Cl. 137—32.)



1. An exhaust valve for internal combustion engines comprising a head centrally supported upon a separate-

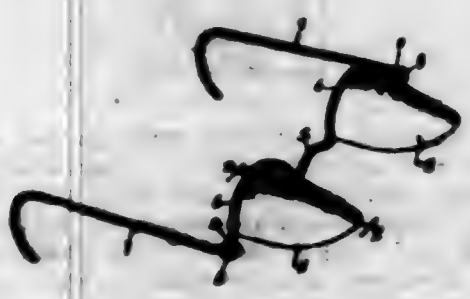
piece stem, said head consisting of a metal stamping having a bend therein.

8. An exhaust valve for internal combustion engines comprising a head centrally supported upon and permanently connected with a separate-piece stem, said head consisting of a metal stamping and being of substantially uniform thickness throughout.

8. An exhaust valve for internal combustion engines comprising a head and a separate-piece stem, said head consisting of a hollow metal stamping and said stem being tubular and welded in a central hole in said head.

9. The herein described method of making exhaust valves for internal combustion engines which comprises forming a hollow valve head having a bend therein by stamping the said valve head from a sheet of metal and welding said head onto a stem.

1,295,980. EYE-SHADE AND EYE-PROTECTOR. LILIAN A. GRIFFIN, Chicago, Ill. Filed Apr. 23, 1917. Serial No. 163,914. 1 Claim. (Cl. 2—149.)



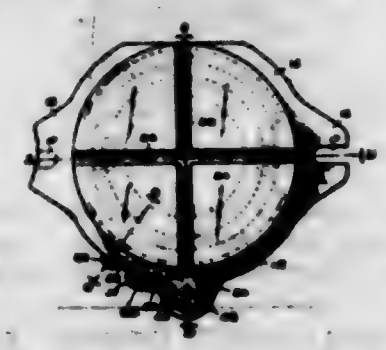
An eye-shade comprising a frame consisting of a central bridge and integral arched bows extending in opposite directions from the ends thereof, and forwardly and downwardly projecting semi-transparent visors of semi-circular cross-section the upper edges only whereof are secured to the said bows and which impinge against the eyebrows of the wearer and the outer and lower edges of said visors being in an approximate horizontal plane with the pupil of the wearer's eyes whereby the wearer upon lowering his head is enabled to see through said visors and which in normal position shade the eye sockets from the glare of light above the horizon.

1,295,981. COMBINED CENTRIFUGAL AND AIR-LIFT PUMP. CARL HALLAUER, Los Angeles, Cal. Filed Dec. 26, 1917. Serial No. 208,787. 2 Claims. (Cl. 253—132.)



1. In a combined centrifugal and air lift pump, a casing forming a suction impeller housing, a discharge impeller housing, a tubular connection between the suction impeller housing and the discharge impeller housing, an intake pipe leading to the suction impeller housing, a discharge pipe leading from the discharge impeller housing, and shaft bearings, a drive shaft mounted in the shaft bearings, a suction impeller mounted upon the shaft in the suction impeller housing, a discharge impeller mounted upon the shaft in the discharge impeller housing; the suction impeller discharging into the discharge impeller; means for admitting air to the discharge impeller, and a relief pipe for the discharge impeller.

1,295,982. DEVICE FOR POSITIONING TOOLS TO BE DRESSED. ARCHIBALD N. HANTON, Indianapolis, Ind., assignor, by mesne assignments, to William Bartlett. Filed Jan. 25, 1918. Serial No. 213,714. Renewed Jan. 25, 1919. Serial No. 273,172. 5 Claims. (Cl. 51—7.)



1. A device of the character described comprising a revoluble tool supporting table, indicator-means for locating the point of starting the table, a base-plate for said table to revolve upon, and stop-means rotatably adjustable about its axis to enable said stop-means to stop the table at the starting point in either direction of its travel about its axis.

1,295,983. AIR-MOISTENER. ROBERT W. HARDIE, White Plains, N. Y. Filed Feb. 23, 1918. Serial No. 218,902. 3 Claims. (Cl. 237—78.)



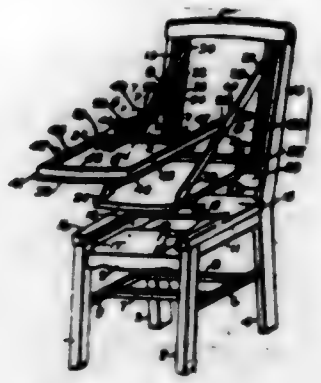
2. An air moistener comprising an open-topped water receptacle; a heating chamber extending continuously around the side walls of said water receptacle, the receptacle and heating chamber being separated only by said side walls; and a conduit extending along the central portion of the bottom of said water receptacle and communicating with opposite ends of said heating chamber, said chamber being provided with inlet and outlet apertures at its opposite ends.

3. An air moistener comprising an open-topped water receptacle; a heating chamber extending continuously around the side walls of said water receptacle, the receptacle and heating chamber being separated only by said side walls; a conduit extending along the central portion of the bottom of said water receptacle and communicating with opposite ends of said heating chamber said chamber being provided with inlet and outlet apertures substantially in line with said conduit; and a removable top comprising a plate provided with a plurality of rows of apertures, a downwardly extending flange provided on its lower margin with slots, and a grid having a sliding connection with said plate and provided with a plurality of bars adapted to register with the rows of apertures in said plate.

1,295,984. BABY-CHAIR. LAWRENCE HAUSSINGER, Alhambra, Cal. Filed Apr. 22, 1918. Serial No. 230,020. 4 Claims. (Cl. 155—36.)

2. A tray for a high chair comprising means having a flat surface forming a bottom, a strip extending up-

wardly across the front of the bottom, strips extending upwardly along the sides of the bottom; said three strips



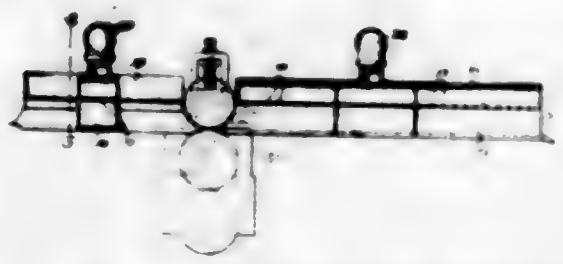
being rigidly connected to the bottom; arms extending backwardly from the side strips, and a removable strip extending upwardly across the rear side of the bottom.

1,295,985. SHOE-BUCKLE HOLDER. LOREN HAYES and LOUIS D. MCKENZIE, Los Angeles, Cal. Filed Nov. 25, 1918. Serial No. 264,024. 2 Claims. (Cl. 2—187.)



2. The combination with a buckle frame having a panel opening, of a crossbar extending across the opening and backwardly from the frame, a panel inserted through the crossbar and covering the opening and fitting the back side of the frame, a retainer adapted to be secured to a shoe and having a transverse slot, a tongue extending one way above the slot, and a second tongue extending the other way below the slot, there being vertically aligned crossbar seats in the tongues.

1,295,986. METHOD OF AND MEANS FOR PREVENTING OXIDATION OF ROLLED MATERIAL. BENJAMIN P. HAZELTINE, Wheeling, W. Va., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 5, 1916. Serial No. 123,875. 4 Claims. (Cl. 266—4.)



1. The method of finishing rolled metal products which consists in rolling the products in the usual manner and passing the rolled product from between the finishing rolls directly into an atmosphere of steam to prevent oxidation thereof while cooling, and enveloping the product in such atmosphere while cooling it to below the point at which oxidation occurs, substantially as described.

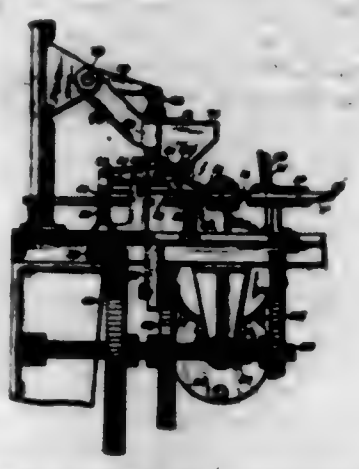
1,295,987. FLOAT-VALVE MECHANISM. HOWARD T. HEATH, Elgin, Ill. Filed Aug. 22, 1917. Serial No. 187,694. 2 Claims. (Cl. 137—104.)

2. In a valve mechanism of the class described, the combination of a liquid inlet pipe provided with a series of peripheral discharge openings located in successive order lengthwise of the pipe and adapted to discharge liquid into a liquid container, a liquid container into which said pipe extends, a float valve located in said liquid container and encircling and in slidable engagement with said pipe and adapted to open and close said peripheral openings successively, and a bell-shaped hood



encircling said pipe above said openings and above the float valve and having a bottom opening adapted to admit the upper portion of the float valve when the latter is in raised passage-closing position, the bottom extremity of said hood being in position to be closed and sealed by liquid contained in said container when said liquid reaches a desired predetermined level.

1,295,988. WRAPPING-MACHINE. AUGUSTUS HACK, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Nov. 9, 1915. Serial No. 60,596. 13 Claims. (Cl. 93—2.)

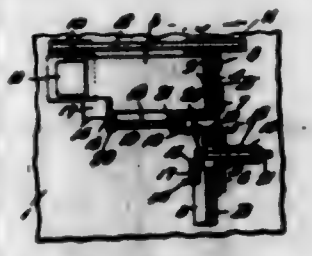


2. In a wrapping machine, the combination of means for partially folding a wrapper around a substantially unyielding article leaving an unfolded wrapper flap extending therefrom, and means for tensioning said flap to tighten the wrapper about the article while the entire article remains stationary and prior to the folding of said flap upon the article.

1,295,989. BELLOWS-OPERATING MECHANISM FOR PLAYER-PIANOS. JOHN A. HOUS, New York, N. Y. Filed Feb. 1, 1917. Serial No. 145,974. 1 Claim. (Cl. 230—2.)

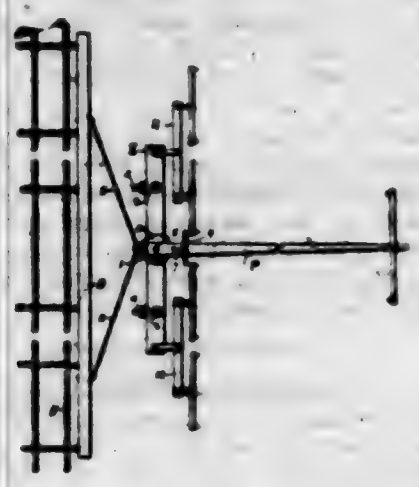
In combination, a pair of bellows, each including a vertically disposed fixed leaf and a movable leaf hinged to each fixed leaf, the fixed leaves lying in the same plane, a bearing disposed between the fixed leaves, a pair of bearings mounted on the face of one fixed leaf, a crank shaft having a pair of oppositely extending offset portions, one relatively long end journal, a relatively

short end journal and an intermediate journal, the long journal being located in the pair of bearings of the said fixed leaf, a bearing on the other fixed leaf to receive the



short journal, pitmen connected to said offsets and to their respective movable leaves, and a pulley mounted on the long journal of the shaft.

1,295,990. RIDING ATTACHMENT FOR HARROWS. EDWARD B. HYDE, Crofton, Nebr. Filed Sept. 21, 1918. Serial No. 255,045. 3 Claims. (Cl. 55—91.)



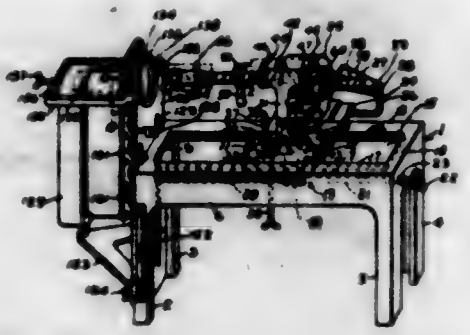
1. A riding attachment for a harrow comprising an evener bar adapted to be coupled with the draw bar of the harrow, ground engaging wheels carried by the outer ends of the evener bar and in swivel connection with the evener bar, a forwardly directed pole carried by the evener bar substantially midway thereof, a seat structure carried by the inner end portion of the pole, and hitching members engaged with the outer ends of the evener bar.

1,295,991. AIR-PUMP FOR AUTOMOBILES. GEORGE W. KELLOGG, Rochester, N. Y., assignor to Kellogg Manufacturing Co., Rochester, N. Y., a Corporation of New York. Filed Apr. 2, 1917. Serial No. 159,197. 7 Claims. (Cl. 230—27.)



1. In a pump, the combination of a crank case, a cylinder secured thereto, a piston in said cylinder, a barrel revolubly mounted in said crank case, a crank pin on one end of said barrel, means connecting said crank pin and said piston, an extension shaft adapted to be connected to the crank shaft of a motor, and means in the end of said barrel adjacent said crank pin to which said extension shaft is connected.

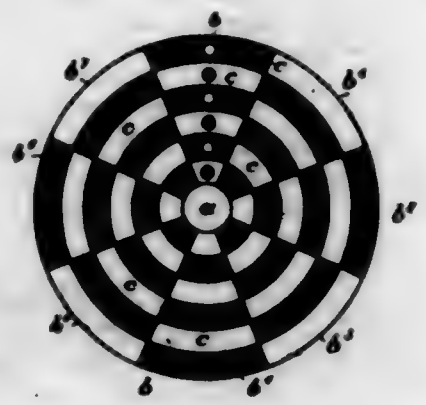
1,295,992. CYLINDER-INLAYING MACHINE. JACOB H. KLASSEN, Los Angeles, Cal. Filed June 6, 1918. Serial No. 238,615. 5 Claims. (Cl. 29—33.)



1. A cylinder inlaying machine comprising a stand, means for mounting a cylinder rigidly upon the stand with the bore horizontal, a spindle post adjustably mounted upon the stand, a spindle head upon the spindle post, a spindle casing adjustably mounted in the spindle head, a spindle in the spindle casing, means for driving the spindle, and interchangeable chucks adapted to be mounted upon the spindle casing and operated by the spindle; said chucks being adapted for routing a groove from the inner face of the cylinder, dove-tailing the groove, hammering a bar into the dove-tail groove, and removing the rough portion of the hammered bar.

5. In a cylinder inlaying machine, a hollow spindle head, a sleeve rotatably mounted in the head and held against endwise movement, a fulcrum extending inwardly from the inner face of the sleeve at its longitudinal center, a spindle casing extending loosely through the sleeve and resting on the fulcrum, set-screws fixed through the ends of the sleeve on each side of the fulcrum to engage the spindle casing and tilt the spindle casing in the sleeve, and means for rotating the sleeve to change the angularity of the spindle casing.

1,295,993. GAME. FRIEDRICH KLEINAL, Pola, Austria. Filed Sept. 9, 1915. Serial No. 49,813. 7 Claims. (Cl. 46—64.)

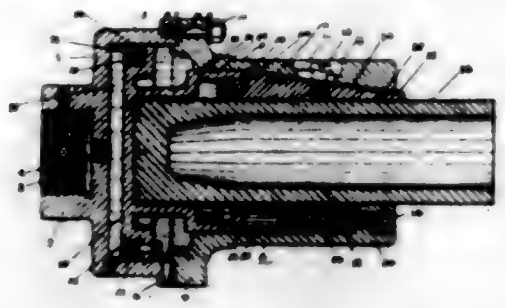


6. A game-board having a central playing space surrounded by concentric fields divided circularly into alternate playing spaces and forming radial fields containing alternately designated playing spaces, at least one set of radial spaces being specially designated, in combination with two unequal sets of men for playing in said spaces.

1,295,994. CHUCK. ALPHONSE JOSEPH LAVOIE, Montreal, Quebec, Canada. Filed June 8, 1918. Serial No. 239,050. 6 Claims. (Cl. 279—4.)

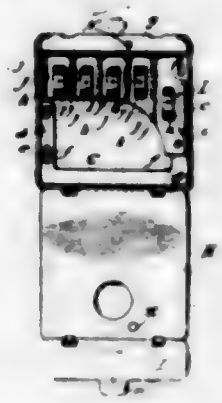
1. In a chuck, a housing in two parts bolted together and having a common axis, the inner part forming an expansion chamber and having a fluid opening in the head thereof, and the outer part having a plurality of longitudinal recesses with inclined beds, a piston operating in said expansion chamber and having an integral, cylindrical and inner central wall projecting outwardly there-

from and forming a socket for the work, said projection being enlarged at the outer end and forming an annular



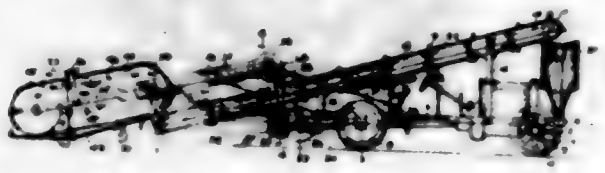
flange spring-held inwardly, and jaws in said recesses having correspondingly inclined backs and transverse grooves at the inner end receiving said annular flange.

1,295,995. TERMINAL BOX. MARTIN LUTHER, Chicago, Ill. Filed May 16, 1917. Serial No. 168,945. 6 Claims. (Cl. 247—5.)



2. The combination with an electrical outlet-box of the kind specified, of a suitable closure device applied to the open side thereof and having a chamber therein in which electrical conductors are connected, a movable cover for the outer side of said closure device hinged to one side of the same, and means hinged to said cover for closing the side of said closure device opposite that to which said cover is hinged.

1,295,996. DITCH BUILDER AND CLEANER. JAMESIE E. MCCLAIN, Tempe, Ariz. Filed Aug. 19, 1918. Serial No. 250,560. 3 Claims. (Cl. 37—25.)



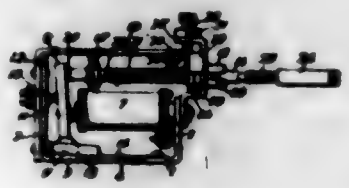
1. A ditch builder and cleaner comprising an automobile running gear and power plant, a frame mounted upon the running gear and extending beyond the rear axle, a conveyer mounted upon the main frame and extending from beyond the main frame upwardly and forwardly to a position above the front of the main frame, vertical posts pivotally connected at their lower ends to the main frame, arms extending from the upper ends of the posts, struts extending from the other ends of the arms and adapted to be supported by the conveyer frame, a windlass mounted upon the main frame, cables connecting the windlass to the upper ends of the posts, bottom and side cutters mounted to discharge on to the conveyer, an endless apron mounted above the bottom cutter between the side cutters, and means for connecting the apron and cutters to the arms; so that by operating the windlass the cutters and apron may be raised and lowered.

1,295,997. CARDBOARD POWDER-BOX. WILLIAM G. MENNEN, Newark, N. J. Filed Nov. 22, 1918. Serial No. 263,704. 4 Claims. (Cl. 229—7.)



1. A carton of the kind comprising a body formed of inner and outer cardboard shell portions telescoped and united with the inner portion projecting above the outer portion, a slip cover for the top projecting portion of the inner portion, one end of the body being closed by an end wall, a disk in the other end of the body containing a filling aperture, and a closure disk which is cemented over said disk with filling aperture when the box is filled, characterized by the innermost shell having a special finishing sheet which is applied to its outer surface and extended over on the disk with filling aperture to hold the same in place and to seal the joint.

1,295,998. TELEGRAPH-PRINTER. BENJAMIN F. MERRITT, East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 11, 1918. Serial No. 233,914. 6 Claims. (Cl. 178—23.)

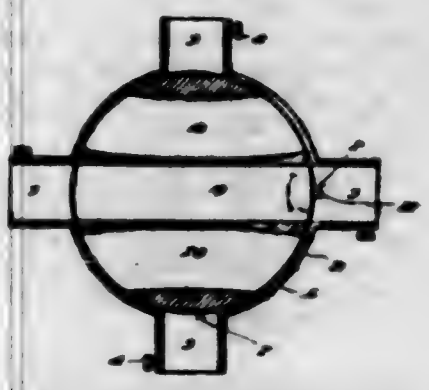


1. In a telegraph printer, a printing unit comprising a frame, a spring plate having one end free and the other end rigidly attached to said frame, a printing ram slidably mounted in guides along the free portion of said spring plate, and adjusting means mounted on said frame and adapted to coöperate with the free end of said spring plate to move said free end and change the direction of the axis of the printing ram.

1,295,999. VALVE. OSCAR J. MENNA, Pelican Rapids, Minn. Filed Jan. 6, 1917. Serial No. 140,952. 1 Claim. (Cl. 251—108.)

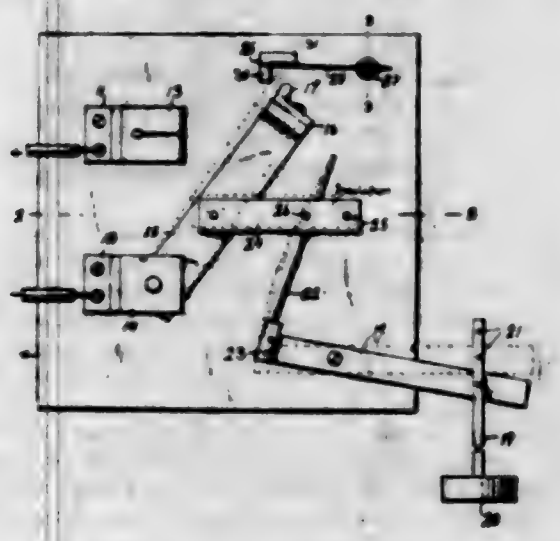
In a device of the character described, an annular casing having a plurality of oppositely disposed ports formed in the side walls thereof and a concentrically disposed bearing opening formed in its bottom, apertured ears formed integrally with the upper portion of the casing adjacent said oppositely disposed ports and the open top of said casing, an annular cover having apertured ears formed thereon corresponding to said first mentioned apertured ears over the open top of the casing and connected thereto by fastening devices passing through the alined apertured ears, a rotatable valve having a plurality of ways extending therethrough, one of said ways passing diametrically through the valve, while the remaining ways are curved to establish communication, at times, between the relatively right angularly arranged

ports in the casing, one portion of the side wall of said casing having a slot formed therein, a pin carried by the



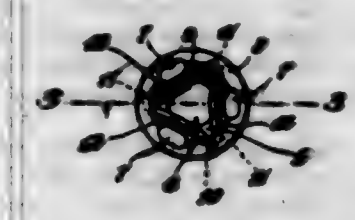
valve received in said slot for limiting rotary movement of the valve, and a handle connected to said valve for facilitating rotation of the same.

1,296,000. **FLOAT-OPERATED SWITCH.** JAMES G. MICHAEL, Windber, Pa. Filed May 15, 1918. Serial No. 234,607. 6 Claims. (Cl. 175—308.)



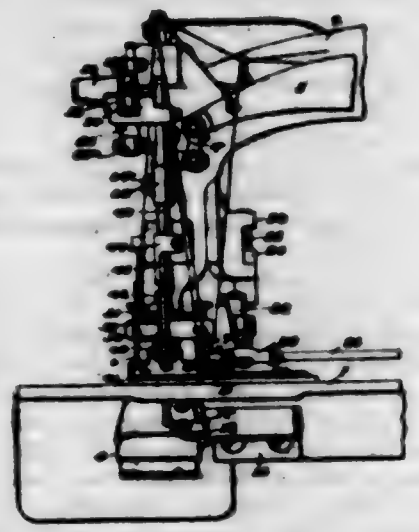
2. In a float-operated electrical switch, a pivoted switch blade, a contact with which the blade coacts, a lever, a float operatively connected thereto, a resilient arm extending from the lever, a connection between said arm and the lever, a spring disposed beyond the free extremity of the arm and yielding in the plane of the arm, and a detent carried upon the extremity of the spring member and normally engaging the extremity of the blade.

1,296,001. **SNAP-FASTENER.** SILVESTRO MILANO, New York, N. Y. Filed June 24, 1916. Serial No. 105,542. 1 Claim. (Cl. 24—218.)



In a snap fastener, a socket piece provided at its edge with a turned over flange and with a plurality of thread openings positioned substantially intermediate said flange and the axis of the socket piece, and a gripping member of resilient wire bent to generally triangular shape with its sides arranged in position to engage a head, the extremities of the sides at two corners of the triangle being normally in close relation to the outer wall of the flange and the extremities of the sides at the other corner of the triangle being normally spaced away from the outer wall of the flange, said spring being normally retained loosely in position by the flange of the socket member whereby the spring is free to shift its position relatively to the thread openings.

1,296,002. **SEWING-MACHINE.** JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1914. Serial No. 872,469. 10 Claims. (Cl. 112—8.)



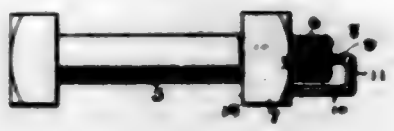
1. The combination of a work support, stitching mechanism, feeding mechanism, a feeding member for engaging the material on the work support in advance of the stitching mechanism, means for actuating said feeding member including a support for said member, means for positively raising and lowering said support, means actuated by the needle bar of the stitching mechanism for moving said feeding member back and forth, a presser foot, means for raising the presser foot and means for raising the support for the feeding member with the presser foot.

4. The combination of a work support, stitching mechanism, feeding mechanism, a gathering member for engaging the material on the work support in advance of the stitching mechanism, means for actuating said gathering member including a support for said gathering member, a lever pivotally connected with the upper end of said support, a bracket for supporting said lever, means for positively oscillating the lever for moving the support up and down, a sleeve slidably mounted on said support, devices for attaching said sleeve to the needle bar, said sleeve being so disposed relative to the connection of the lever to the support as to oscillate the support as the needle bar moves up and down, a presser foot, means for raising the presser foot and means for raising the support for the feeding member with the presser foot.

6. The combination of a work support, stitching mechanism, feeding mechanism, a gathering member for engaging the material on the work support in advance of the stitching mechanism, means for actuating said gathering member including a support for said gathering member, means for pivotally connecting the gathering member to said support, a spring for depressing the gathering member, a stop for limiting the downward movement of said gathering member, and means for moving said support back and forth and up and down.

10. The combination with a work support, a stitch-forming mechanism and a feeding mechanism including a presser foot, of a feed member independent of the foot for engaging the material on the work support in advance of the stitch-forming mechanism, means for imparting a positive four motion movement to said feeding member, said means including an adjustable connection for varying the up and down movement of said feeding member, and means under control of the operator for raising the foot and for positively raising the feeding member therewith.

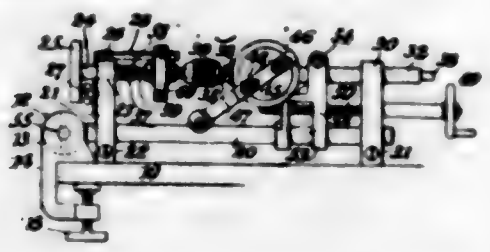
1,296,003. NUT-LOCK. WILL L. NEWTON, Columbus, Ohio, assignor of four-tenths to Hugh C. Tyler, Columbus, Ohio. Filed May 12, 1917. Serial No. 168,197. 2 Claims. (Cl. 151—28.)



1. A nut lock comprising, a bolt having exterior screw threads and provided with an axial cylindrical opening in its forward end portion, said axial opening having screw threads pitched opposite to the screw threads on the exterior of the bolt; a nut arranged on the bolt and provided in its outer face with radial V-shaped grooves; and a U-shaped locking element having one arm thereof in threaded engagement with the interior screw threads of said axial opening and having its outer arm engaging the V-shaped grooves of said nut.

2. A locking nut comprising, a bolt having exterior screw threads and provided with an axial cylindrical opening in its forward end portion, said cylindrical opening being provided with screw threads; a nut arranged on the bolt and provided with radial V-shaped grooves in its outer face thereof; and a U-shaped locking element having one arm thereof in threaded engagement with the interior screw threads of said axial opening and having its outer arm provided with a slight longitudinal curve and a beveled terminal portion adapted for engagement with the radial grooves in said nut.

1,296,004. CONVERTIBLE DRILL AND GRINDER. HENRY W. NIELSEN, Brooklyn, N. Y. Filed Feb. 20, 1918. Serial No. 218,335. 1 Claim. (Cl. 29—26.)

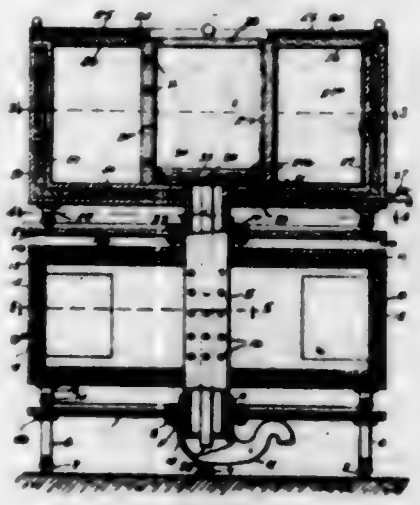


A tool comprising a supporting bar, a clutch member formed integral therewith and having radial ribs and a central aperture, a clamp having a companion clutch member carrying corresponding radial ribs, a bracket adjustable on said bar, a work table and an angular stop piece both adjustably supported by the bracket, said table having a shank provided with a socket adapted, when said table is reversed in its bracket, to support a grinding device, a guide bracket clamped to the supporting bar at the top thereof, a feed bracket slidable on said supporting bar, a chuck bar clamped in the feed bracket and slidable in the guide bracket and having a reduced end adapted to receive a breast plate, a chuck swiveled on said chuck bar, means for driving the chuck and means for feeding the same.

1,296,005. COMBINED KITCHEN-CABINET AND REFRIGERATOR. THOMAS J. POLK, Beaumont, Tex. Filed Apr. 7, 1916. Serial No. 89,639. Renewed July 15, 1918. Serial No. 245,074. 3 Claims. (Cl. 62—59.)

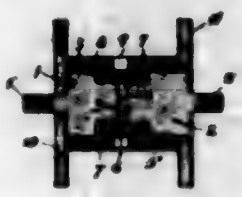
1. A combined kitchen cabinet and refrigerator comprising a base, means for rotatably supporting the base, a hollow vertical standard removably secured centrally to the base, a cabinet rotatably mounted upon the base and about the standard, means for establishing a communication between the interior of the cabinet and standard, a refrigerator rotatably mounted about the upper portion of the standard and independently rotatably of the cabinet, means establishing a communication between the standard and cabinet.

2. A device of the class described comprising a rotable base, a vertical standard removably secured by one end to the central portion of the base and extending vertically therefrom, a cabinet rotatably mounted on the upper side of the base and about the standard, an auxiliary support secured adjacent the upper end of the standard, a refrigerator rotatably mounted upon the upper end of the standard and upon the auxiliary support, said refrigerator being independently rotatable of the cabinet, an ice compartment, means for establishing a communication between the standard and the cabinet to facilitate the keeping of the contents of the cabinet in a cooled condition at all times, and means arranged in the ice compartment and extending through and below the lower end of the standard to drain the water therefrom.



3. A combined kitchen cabinet and refrigerator comprising a base, a standard removably secured by one end to the base, a cabinet rotatably mounted on the base and about the standard, a refrigerator rotatably mounted upon the upper end of the standard and independently rotatable of the cabinet, means for preventing lateral shifting movement of the cabinet and refrigerator upon the standard, said means rotatably supporting the cabinet and refrigerator to permit the same to be rotated, and means arranged in the standard for establishing a communication between the standard and cabinet, as and for the purpose specified.

1,296,006. SPARK-ENERGIZER. ABRAHAM PRESS, Washington, D. C. Filed June 11, 1917. Serial No. 174,006. 6 Claims. (Cl. 123—148.)



1. A system for increasing the ignition effectiveness of fouled plugs comprising a spark plug, an electrical circuit for said plug and means associated therewith to give to said plug circuit the non-vaporizing characteristic of a quenched gap.

2. Means to discharge explosive mixtures in engine cylinders comprising a spark plug, a quenched gap, electrical connections placing said gap in series with said spark plug, said quenched gap having extended surfaces with a sparking region spaced sufficiently far apart to give to said gap the non-vaporizing characteristic of a quenched gap.

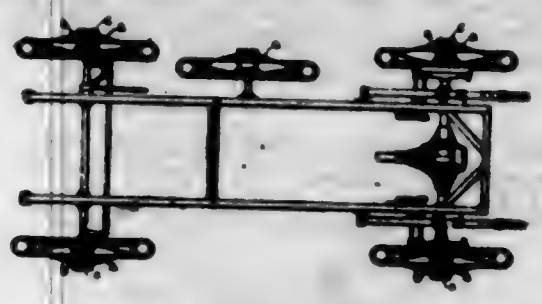
3. A system for increasing the ignition effectiveness of fouled plugs comprising a spark plug, an electrical circuit for said plug, and a wireless telegraphic quenched gap in series with said spark plug to give to said plug circuit the non-vaporizing characteristic of a quenched gap.

4. In combination with an ignition circuit having a spark plug therein, a quenched gap in series with said ig-

nition circuit comprising electrodes with extended surfaces having a surface area equal to at least four times the square of the separation distance.

5. In combination with a spark plug, a quenched gap device, electrical connections to place said device in series with said plug, said quenched gap device having electrodes with extended surfaces and having a surface area equal at least to four times the square of the separation distance.

1,296,007. DETACHABLE WHEEL. JOHN VERNON PUGH, Coventry, England, assignor, by mesne assignments, to Wire Wheel Corporation of America, a Corporation of New York. Filed Sept. 7, 1912. Serial No. 719,207. 11 Claims. (Cl. 21—31.)



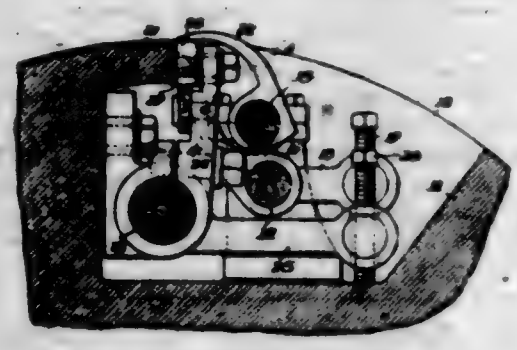
1. In combination in a detachable wheel, two hub parts sleeved and engaged to revolve together, but subject to slight eccentric displacement, an internal circumferential surface to one part, an external circumferential surface to the other part, a nut having anti-friction roller means engaging one surface, and transmitting radial force from one surface to the other, while retaining the parts in connection, whereby due to eccentricity it rotates relative to said parts during revolution of the wheel, and screw threads on the other surface engaged by said nut so handed that during forward movement tightening results from the relative rotation.

2. In combination in a detachable wheel, two hub parts sleeved and engaged to revolve together, but subject to slight eccentric displacement, an internal circumferential surface to the outer part, an external circumferential surface to the inner part; a nut having anti-friction roller means for engaging one surface, and transmitting radial force therefrom to the surface of the inner part, while retaining the parts in connection, whereby due to eccentricity said nut rotates relative to said parts during revolution of the wheel, and screw threads on the surface of said inner part which are right hand for a wheel for the left side of a vehicle and left hand for one for the right side so that during forward movement tightening results from the relative rotation.

5. In combination an inner hub part of a detachable wheel, an outer part sleeved on said inner part, means insuring simultaneous revolution of said parts but permitting eccentricity of their axes, a circumferential surface to each of said parts, said surfaces being of opposite radial disposition and at least one being screw threaded, an annular nut part positioned between said surfaces and engaging said threads, whereby it transmits radial forces while retaining one part upon the other, and is subjected to oppositely directed turning moments imposed by said parts due to revolution of the wheel, and anti-friction means transmitting the radial force from said nut part to one hub part and thereby causing the moment of the threaded part to perdominate the other moment so that due to eccentricity said nut is tightened up during forward movement.

1,296,008. GRIPPER-PAD ADJUSTMENT. FRANK E. RICH, Chicago, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1917. Serial No. 176,966. 3 Claims. (Cl. 101—412.)

3. The combination with a printing press cylinder, the gripper, the gripper pad, and the gripper pad support, of means to adjustably position the pad on the support radially of the cylinder, said means comprising a plate rotatably mounted on the support beneath the pad and having a plurality of flat faces at unequal radial distances from its axis, the gripper pad slidably mounted on the



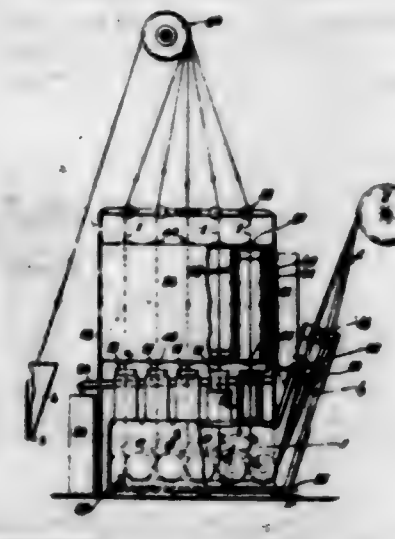
support toward and from the plate, and means to clamp the pad upon the support while resting upon one of the faces of the plate.

1,296,009. ARTIFICIAL-TOOTH ATTACHMENT AND METHOD OF MAKING AND UTILIZING THE SAME. JOSEPH I. RICHARDS, San Francisco, Cal. Filed Oct. 29, 1918. Serial No. 260,103. 5 Claims. (Cl. 32—9.)



1. As a new article of manufacture an artificial-tooth-facing comprising a porcelain member having in its lingual surface a socket; a gold foil lining in said socket; a metallic gauze shell fitted closely to said gold-foil lining; and a body of flux wax to temporarily hold said lining and shell in place.

1,296,010. COATING APPARATUS. FRANK ALEXANDER ROBINSON, Auburn, N. Y., assignor to Stanford Harmon, Chicago, Ill. Filed Apr. 22, 1916. Serial No. 92,824. 9 Claims. (Cl. 91—46.)



1. The combination of a tank for coating a plurality of wires, comprising a body portion of a great length as compared to its width, an upwardly directed inlet portion, a plurality of outlet portions and means for guiding strands of wire into said inlet portion and respectively through said outlet portions.

5. The combination of a plurality of tanks each tank comprising a relatively long body portion, an upwardly extending inlet portion and upwardly extending outlet portions and means for positioning said tanks side by side one to another.

8. The combination of a plurality of tanks, adapted to contain a coating fluid, each tank comprising vertically extending outlet portions and a common heater for the wires disposed vertically above said outlet portions and having inlet openings corresponding respectively to said

outlet portions and heating units disposed substantially equi-distant from the coated wires passing therethrough and having heating wires extending substantially parallel to the coated wires.

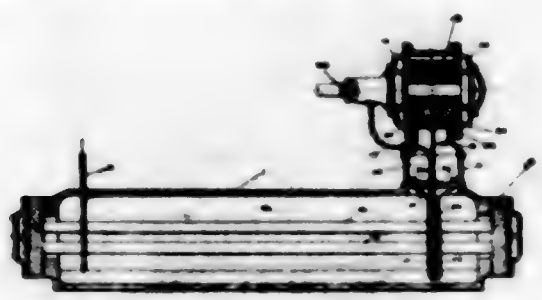
9. The combination of a tank for coating a plurality of wires, said tank having a plurality of upwardly extending outlets, means for guiding an individual wire disposed in each of said outlets, a heating chamber communicating in common with said plurality of outlets, means for individually guiding said wires through said heating chamber, and a plurality of spaced heating means disposed in substantially equally effective relation to the respective paths of travel of the wires in said heating chamber.

1,296,011. PENCIL. WILLIAM ROLL, Sandusky, Ohio. Filed July 22, 1918. Serial No. 245,968. 3 Claims. (Cl. 120—21.)



1. In a pencil, a marking element extending longitudinally of the pencil, a casing embracing the marking element and having a forwardly tapering forward end portion and divided longitudinally into sections having inwardly projecting portions which are spaced circumferentially of and exert pressure against the marking element, a strip of flexible material, which strip is arranged rearwardly of said tapering portion and extends circumferentially of the casing and forms a covering for and is attached to the casing-sections and hinges said sections together, and a sleeve embracing the forward end portion of said covering and having a forwardly tapering rigid forward portion which embraces said portion of the casing and participates in locking the casing-sections in their pressure-exerting relation to the marking element, and the aforesaid inwardly projecting portions of the casing-sections extending longitudinally and to the forward end of said tapering portion of the casing.

1,296,012. REFRIGERATION APPARATUS. EDWIN R. SAGE, Jersey City, N. J., assignor to Richard S. Brons, East Orange, N. J. Filed Jan. 21, 1916. Serial No. 73,307. 9 Claims. (Cl. 62—115.)

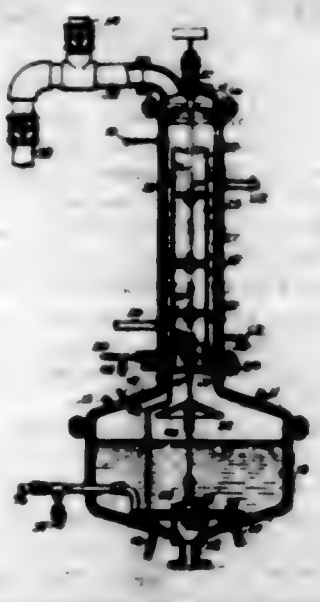


1. In a refrigerating apparatus, the combination of a base, a condensing chamber within said base, a separating chamber, a passage connecting said separating chamber and said condensing chamber, a compressor, the casing of said separating chamber forming a support for the compressor and a passage connecting said compressor and said separator.

8. In a refrigerating apparatus, the combination on the high-pressure side of a rotary compressor having its discharge port below a horizontal line through the shaft, a base for said compressor, a separating chamber located within said base, means for operating the compressor, a condensing chamber located within said base and in direct connection with said separator, a lubricant reservoir in said base, a liquid refrigerant reservoir within said base, means for conveying the lubricant from the separator to a point below the surface of the lubricant within said reservoir, means for taking the lubricant from a point below the surface of the lubricant and conveying it to its point of application, means for taking the liquid refrigerant from a point below the surface of the liquid refrigerant within the liquid refrigerant reservoir and conveying it to any desired point of use, an automatic expansion valve on said last-mentioned means, condensing tubes within said condensing chamber, an inlet to said condensing tubes, an outlet from said condensing tubes, water jackets in the cylinder heads of the rotary compressor and means for conveying the water from said outlet to said water jackets and means for conveying the water from said water jackets.

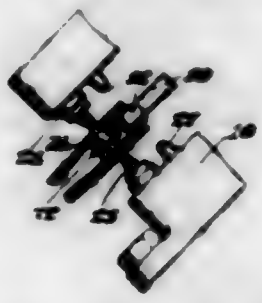
9. In a refrigerating apparatus, a condenser, a compressor, a lubricant reservoir, means separate from the condenser located below the compressor and arranged to gather the lubricant and permit it to pass by gravity to the lubricant reservoir.

1,296,013. APPARATUS FOR TREATING OILS. HANS SCHLOSSSTEIN, Chicago, Ill. Filed Jan. 21, 1918. Serial No. 212,902. 10 Claims. (Cl. 87—12.)



9. Apparatus for deodorizing and hardening oils, comprising a receptacle with means to effect the circulation of oil in a closed circuit through the apparatus, and separate means to force a deodorizing agent or a hardening agent through the oil in both sides of the circuit to separately deodorize and harden the oil.

1,296,014. FASTENER-SETTING MACHINE. WALTER SHAW, Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 8, 1916. Serial No. 108,174. 24 Claims. (Cl. 218—15.)



1. A duplex fastener setting machine having, in combination, means for delivering a pair of fasteners in setting position with their barrels facing away from each other, and means for upsetting said barrels.

7. A duplex fastener setting machine having, in combination, punches for punching holes in the two sides of a folded upper, means for inserting eyelets from inside the upper through said holes, and upsetting dies for clinching both eyelets and feeding the work.

9. A duplex fastener setting machine having, in combination, a raceway for eyelets, a punch for perforating the work, means for aliining the perforation formed by the punch with an eyelet in the raceway, and a setting die movable through the perforation to engage the eyelet in the raceway.

12. A duplex fastener setting machine having, in combination, a movable anvil member, a punch coöperating therewith to perforate the work, means for moving the anvil member, and a raceway movable to locate its endmost eyelet in the position formerly occupied by the anvil member, said raceway being constructed and arranged to support the eyelet during the setting operation.

1,296,015. CONTROL SYSTEM. KARL A. SIMMON, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 9, 1917. Serial No. 153,540. 11 Claims. (Cl. 172—179.)

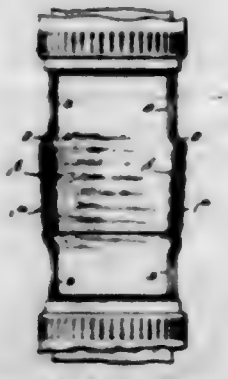


1. In a system of control, the combination with two motors having armatures and field windings, of an inductive coil divided into sections, and means for shunting said field windings by different sections of said coil in order to effect field control of the motors.

2. In a system of control, the combination with a plurality of motors having armatures and field windings, of an inductive coil initially connected across said field windings and a switch for connecting said coil in shunt to said field windings in order to effect field control of the motors.

11. In a system of control, the combination with a plurality of motors having armatures and field windings, and an inductive coil connected to said field windings, said coil having a single core member, of a switch for simultaneously connecting different portions of said coil in shunt to each of said field windings in order to effect field control of the motors.

1,296,016. JOINT FOR METAL CASINGS. ANDREW SMITH, San Mateo, Cal. Original application filed July 29, 1913, Serial No. 781,630. Divided and this application filed Mar. 25, 1915. Serial No. 17,010. 3 Claims. (Cl. 285—158.)

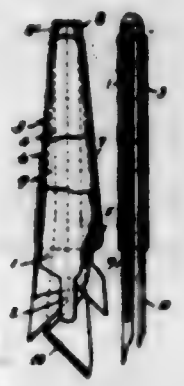


1. A sheet metal casing for culverts, conduits, wells and drainage purposes, comprising a tubular member provided with threaded end portions, one end being tapered and the other end being correspondingly flared so that the tapered end of one section may be screwed into the flared end of an adjacent section with an increasing wedging effect, and said ends being reinforced throughout the tapered and flared portions, the reinforcement being extended also back of the threaded portions to provide a plain unthreaded reinforced portion, said plain reinforced portion being of a width sufficient to be grasped and manipulated by the gripping members of a well-drilling machine.

2. A sheet metal casing for conduits, culverts, wells and drainage purposes, comprising a tubular member provided with spirally corrugated end portions, one end being tapered and the other end being reinforced, the corrugations extending into the reinforcement, so that the tapered end of one section may be screwed into the reinforced end of an adjacent section, the diameter of the casing at the base of the tapered portion being enlarged so that the outer end of the tapered portion may have the same internal diameter as that of the main part of the casing.

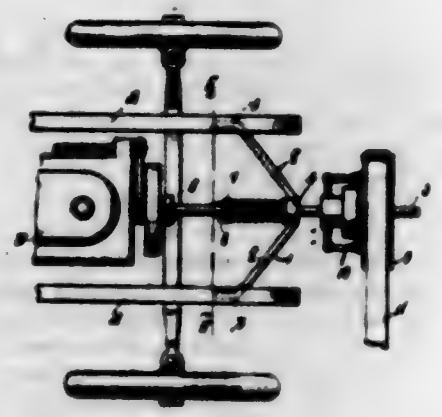
3. A sheet metal casing for conduits, culverts, wells and drainage purposes, comprising a tubular member provided with threaded end portions, one end being tapered and the other end being reinforced, so that the tapered end of one section may be screwed into the reinforced end of an adjacent section, the diameter of the casing at the base of the tapered portion being enlarged so that the outer end of the tapered portion may have the same internal diameter as that of the main part of the casing.

1,296,017. TIE-PRESS. HARRY C. SMITH, Santa Barbara, Cal. Filed May 2, 1918. Serial No. 232,118. 3 Claims. (Cl. 223—19.)



1. A necktie press comprising a tapered mold in the form of a flat sheath open at both ends adapted to receive a necktie, and a tapered core adapted to be inserted into the necktie under the front layer of fabric to press the necktie firmly into the mold.

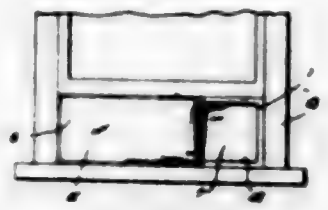
1,296,018. ENGINE ATTACHMENT. JOSEPH SWARTHOUT, Lodi, N. Y. Filed June 29, 1917. Serial No. 177,773. 1 Claim. (Cl. 180—53.)



The combination with an automobile motor mounted upon an automobile frame, the latter including frame bars disposed in a plane horizontal to the motor shaft, of a bracket comprising oppositely extending arms having their terminals fixed to the said frame bars, the center of the bracket carrying a bearing in longitudinal alinement with the said motor shaft, an auxiliary shaft mounted in the bearing and having a notch formed at one end to engage the motor shaft, a collar carried by the auxiliary shaft approximately between the said bearing

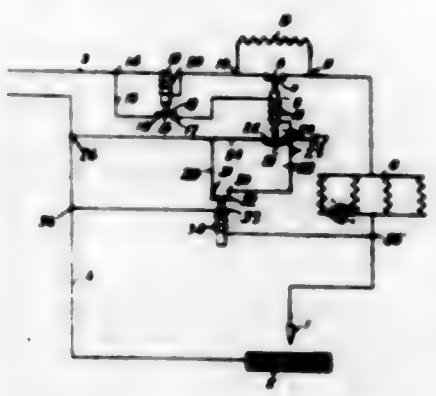
and the said notched end, and an expansion spring interposed between the said collar and the bearing to normally urge the notch into engagement with the said motor shaft, and a driving element mounted on the said auxiliary shaft, the said bearing being disposed in transverse alinement with the ends of the said frame bars whereby the said driving element is disposed beyond the ends of the same.

1,296,019. VENTILATOR. PETER W. TELIN, New York Mills, Minn. Filed Apr. 3, 1917. Serial No. 159,453. 3 Claims. (Cl. 156—38.)



1. A ventilator comprising a pair of open rectangular frames slidably connected together, fabric coverings for said frames, each of said frames having a continuous L-shaped channel opening into one side thereof to receive the edges of said covering, the walls of said channel being forced into binding engagement with the edges of the covering to retain the same therein.

1,296,020. ELECTRIC-ARC-WELDING SYSTEM. FRANK THORNTON, Jr., Pittsburgh, and EMERSON S. ZUCK, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 1, 1915. Serial No. 18,504. 7 Claims. (Cl. 219—8.)

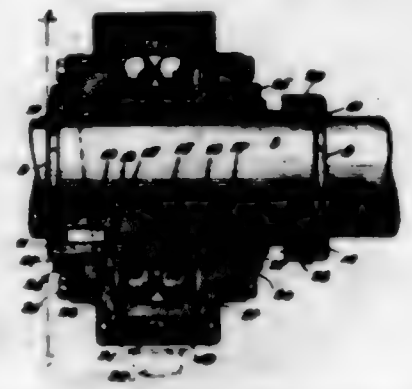


1. An arc welding system comprising welding electrodes, a welding circuit including the said electrodes, means for partially deënergizing the said circuit when the said electrodes are brought into contact, and other means for automatically reënergizing the said circuit after the said electrodes are separated.

4. An arc welding system comprising welding electrodes, a circuit adapted to supply energy to the said electrodes, a resistance element, means for normally shunting the current in the said circuit around the said resistance element and for inserting the said resistance element in series in the said circuit when the said electrodes are maintained in contact for a substantial period, and additional electro-responsive means for restoring the circuit to its normal condition when the said electrodes are separated.

7. An arc welding system comprising welding electrodes, a main circuit adapted to supply energy to the said electrodes, a resistance element, a magnetically operated switch adapted, when energized, to shunt the current in the said circuit around the said resistance element, and also adapted, when deënergized to put the said resistance element in series with the said main circuit, an auxiliary circuit for energizing the said magnetically-operated switch, an overload relay adapted to open the said auxiliary circuit when the said welding electrodes are maintained in contact for a substantial period, means for maintaining the said auxiliary circuit open as long as the said electrodes are in contact, and electro-responsive means for closing the said auxiliary circuit when the said electrodes are separated.

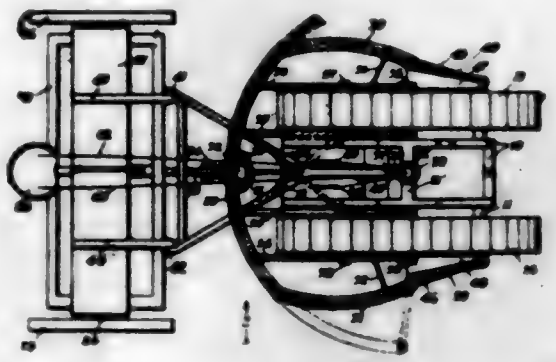
1,296,021. BALL-BEARING. HARRY E. TIDMARSH, Bangor, Me., assignor of one-half to Union Iron Works, a Corporation of Maine. Filed May 3, 1918. Serial No. 232,199. 3 Claims. (Cl. 64—36.)



2. A ball bearing comprising the combination of a shaft having two circumferential grooves therein, rings in the two grooves projecting beyond the surface of the shaft, two sleeves on the shaft having threaded engagement with each other and each provided with a circumferential recess within which the portion of one of the rings projecting beyond the surface of the shaft is received, means for preventing rotation of the sleeves upon the shaft, a circumferential flange on one of the sleeves, a ball race on the sleeve abutting against the flange, a nut threaded on the sleeve and engaging the ball race, means for preventing rotation of the nut upon the sleeve, an outer ball race, balls between the races, and means for supporting the outer ball race; substantially as described.

3. In a ball bearing, the combination of a shaft having two circumferential grooves, rings located in the grooves and projecting beyond the surface of the shaft, a pair of threaded sleeves on the shaft between the two rings having threaded engagement with each other and each provided with a circumferential recess at its end within which the portion of a ring projecting beyond the surface of the shaft is received, means for preventing rotation of the sleeves upon the shaft, a flange on one of the sleeves, a ball race on said sleeve, a nut threaded on said sleeve for holding the race between it and the flange, an outer ball race, balls between the races, and annular members secured to the outer ball race, lying on opposite sides of the balls and coacting with parts rotating with the shaft; substantially as described.

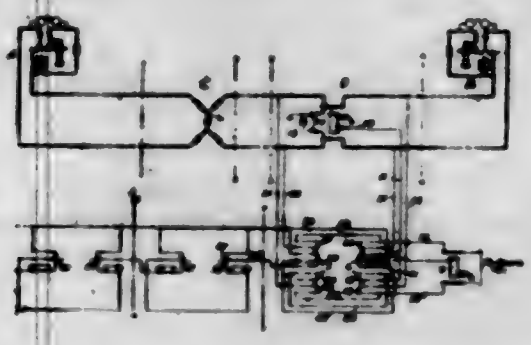
1,296,022. TRACTOR. ERNEST F. TOWNSEND, San Francisco, Cal., assignor to Lucretia A. Townsend, San Francisco, Cal. Filed Nov. 9, 1918. Serial No 261,875. 6 Claims. (Cl. 180—14.)



1. A drawbar attachment for use in connection with a tractor and a trailer comprising an arcuate connecting

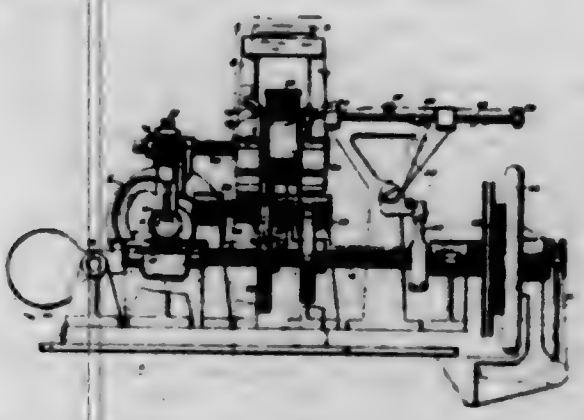
rail adapted to be attached to the rear end of a tractor, a drawbar head slidably attached to said arcuate connecting rail, said drawbar head being adapted to connect to a trailer drawbar, and a link member adapted to pivotally connect to a trailer at one end and to a tractor at the other.

1,296,023. **TELEPHONE-EXCHANGE SYSTEM.** HORACE W. ULRICH, East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 12, 1917. Serial No. 180,122. 6 Claims. (Cl. 179—51.)



1. A telephone exchange system comprising two telephone lines, a connecting circuit joining the telephone lines together, an operator controlled switch, a relay energized upon the actuation of the switch to interrupt the connecting circuit, and an operator's telephone set connected with one end of the connecting circuit by the actuation of the switch.

1,296,024. **NEEDLE-LOOM.** EDWIN E. WAITE, Framingham, Mass., assignor of one-half to Standard Woven Fabric Company, Framingham, Mass., a Corporation of Massachusetts. Filed July 6, 1915. Serial No. 38,209. 8 Claims. (Cl. 139—20.)



3. In a needle loom, the combination with a warp holding and operating mechanism, of weft inserting means operative to lay a double length of weft in each shed, leaving a loop in the end of said length at the selvage edge of the fabric, a hook mounted for to and fro movement to enter each loop as it is formed, means for operating said hook to cause it to pull each loop as it is formed through the preceding loop and thus form a series of chain stitches along one selvage edge of the fabric, and means for giving said hook a movement additional to said to and fro movement to prevent interference between said hook and stitches as the hook advances.

5. In a needle loom, the combination with warp holding and operating mechanism including means for shedding the warp, of a reciprocating needle mounted for movement through the shed of the warp, means for operating said needle, a hook mounted at the side of the shed opposite to that from which said needle is inserted and arranged to have a reciprocating movement from a point close to the path of said needle substantially to the apex of the shed, means for giving said hook its operative movement, said hook being mounted to swing toward and from the shed, a spring tending to swing said hook away from the shed and means for limiting said swinging movement of the hook.

7. In a needle loom, the combination with warp holding and operating mechanism including means for shedding the warp, of a weft inserting needle mounted for reciprocating movement through the shed of the warp, a hook mounted at the side of the shed opposite to that from which the needle is inserted and arranged to have a reciprocating movement from a point close to the path of said needle substantially to the apex of the shed, a latch carried by said hook and movable to open or close the hook, operating means for said needle and hook including a cam arranged to drive one of said members in a timed relationship to the movements of the other member so that one of said members will pause while the movement of the other member effects an operative engagement between said hook and the weft carried by said needle, and means for holding said latch in its open position while the initial engagement between said hook and the weft is made.

8. In a needle loom, the combination with warp holding and operating mechanism including means for shedding the warp, of a reciprocating weft inserting needle mounted for movement through the shed of the warp, an eccentric mechanism arranged to operate said needle, a hook mounted at the side of the shed opposite to that from which said needle is inserted and arranged to have a reciprocating movement from a point close to the path of said needle substantially to the apex of the shed, and a cam mechanism arranged to operate said hook and constructed to cause the hook to pause after advancing to a point adjacent to the path of said needle while the movement of the needle effects an engagement with said hook of the weft carried by the needle.

1,296,025. **NEEDLE-LOOM.** EDWIN E. WAITE, Framingham, Mass., assignor of one-half to Standard Woven Fabric Company, Framingham, Mass., a Corporation of Massachusetts. Filed Oct. 25, 1915. Serial No. 57,744. 4 Claims. (Cl. 139—20.)



1. In a needle loom, the combination with warp holding and operating mechanism constructed and arranged to shed the warp, of a weft inserting needle mounted for reciprocating movement through the shed of the warp and operative to lay a double length of weft in each shed leaving a loop in the end of each of said lengths at the side of the shed opposite to that at which the needle enters the shed, a latch needle mounted at the side of the shed at which said loop is positioned, operating mechanism for said latch needle constructed and arranged to move it back and forth from a point adjacent to the apex of the shed through each loop of weft as it is positioned by said weft needle, and means for positioning a selvage thread for the engagement therewith of said latch needle comprising a part operated to engage the thread and move it into position to be grasped by said latch needle and then to be moved out of engagement with said thread, said thread positioning means being arranged to coöperate with said latch needle to manipulate said selvage thread to form therewith a series of chain stitches through the loops at the ends of said double lengths of weft.

2. In a needle loom, the combination with warp holding and operating mechanism constructed and arranged to shed the warp, of weft inserting means comprising a reciprocating needle operative to lay a double length of weft in each shed leaving a loop in the end of said length at the side of the shed opposite to that from which the needle enters the shed, a latch needle mounted at the side of the shed at which said loop is made for movement

transversely to the direction of motion of said weft inserting needle, operating mechanism for said latch needle arranged to move it through each loop of the weft as it is positioned by said weft needle, and a rocking thread positioner coöperating with said latch needle to manipulate a separate selvage thread and form therewith a series of stitches through the series of loops at the ends of said double lengths of weft.

3. In a needle loom, the combination with warp holding and operating mechanism constructed and arranged to shed the warp, of weft inserting means comprising a needle constructed to carry a weft thread and mounted to reciprocate through the shed, operating mechanism for said needle operative to cause the needle to lay a double length of weft in each shed leaving a loop in the end of each of said lengths at the side of the shed opposite to that at which the needle enters the shed, a plate positioned at right angles to the direction of movement of said needle at the side of the shed at which said loops are formed and provided with an aperture through which said needle moves, and a stitch forming mechanism positioned at the side of said plate opposite to the shed and operative to manipulate a selvage thread to form therewith a series of chain stitches through the loops at the ends of said double lengths of weft, said stitch forming mechanism including a latch needle and means for reciprocating it through each loop of the weft as said loop is positioned by said weft inserting needle.

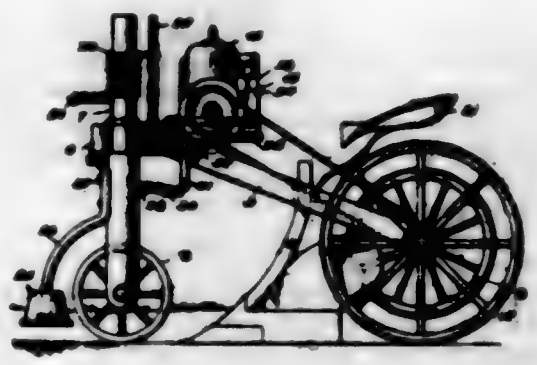
4. In a needle loom, the combination with warp holding and operating mechanism constructed and arranged to shed the warp, of weft inserting means comprising a needle constructed to carry a weft thread and mounted to reciprocate through the shed, operating mechanism for said needle operative to cause the needle to lay a double length of weft in each shed leaving a loop in the end of each of said lengths at the side of the shed opposite to that at which the needle enters the shed, a plate positioned at right angles to the direction of movement of said needle at the side of the shed at which said loops are formed and provided with an aperture through which said needle moves, a hook-shaped selvage needle mounted close to said plate at the side thereof opposite to said shed, supporting and operating means for said selvage needle arranged to move it through each loop of the weft as it is positioned by said weft inserting needle, said selvage needle being constructed to manipulate a selvage thread and having a latch mounted to open or close the opening in its hook, a rocking thread positioner mounted in front of said selvage needle, and operating mechanism for said positioner constructed and arranged to cause it to so position said selvage thread as to enable said selvage needle to grasp said thread upon its forward stroke and form a loop therein, said positioner being operative to release said thread while said selvage needle draws said loop through a loop in the weft and through another loop previously formed in said selvage thread.

1,296,026. GEAR-SHIFTING LOCK. JOHN L. WELLER and FRANKLIN EARL WINCHESTER, Richmond, Ind. Filed Oct. 25, 1918. Serial No. 259,638. 4 Claims. (Cl. 70—126.)



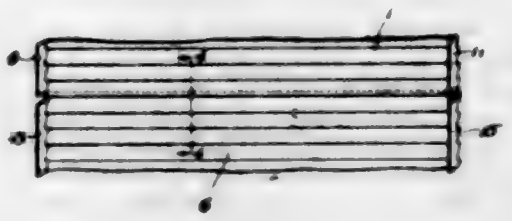
2. In combination with a transmission having a pair of shifting rods operative longitudinally therein parallel with each other, a single mechanism providing an interlock, locating lock, and transmission lock for said rods, said mechanism comprising a pair of oppositely disposed locking members operative horizontally and adapted to enter notches formed in the proximate sides of said rods, a spring having its ends seated between said locking members and normally forcing the locking members apart, a vertically operative locking-pin adapted to be inserted between the inner ends of said locking members when said locking members are located in said notches of the rods, a locking barrel located on the upper end of the locking-pin, means for normally forcing said barrel upward with the locking-pin out of the path of said locking members, means for locking said barrel at its downward limit of movement with the locking-pin between said locking members, and means for inclosing all of said parts with material which is integral with the transmission, all substantially as shown and described.

1,296,027. AUTOMATIC STEERING AND CONTROL MECHANISM FOR TRACTORS. RALPH WHIPPLE, Detroit, Mich. Filed Dec. 3, 1918. Serial No. 265,146. 3 Claims. (Cl. 97—61.)



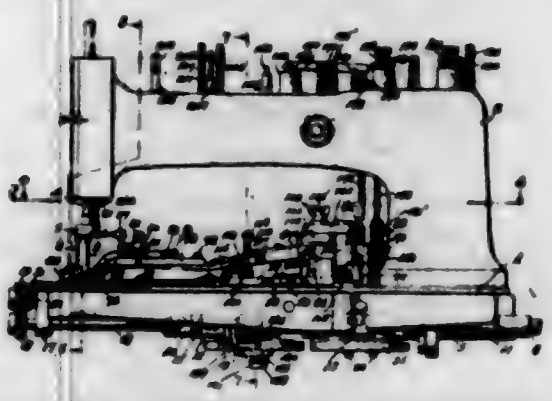
1. In combination with a tractor provided with a source of power and control means therefor, steering mechanism, a pilot device connected with said steering mechanism and adapted to travel in a furrow and to be held from turning by contact with the wall thereof, means for holding said pilot device against the furrow wall, and connections between the steering mechanism and the power control adapted to be actuated by the steering mechanism when the same is turned by said holding means as the pilot device turns from contact with the furrow wall.

1,296,028. METALLIC BUILDING STRUCTURE. LUCIUS H. WHITTREDGE, Lynn, Mass. Filed July 7, 1917. Serial No. 179,229. 6 Claims. (Cl. 189—36.)



1. In a metallic building structure, a wall section comprising a sheet of material crimped longitudinally to form recurrent longitudinal portions approximately perpendicular to the plane of the sheet and bent transversely at the ends to form transverse portions substantially perpendicular to the plane of the sheet, said longitudinal portions extending continuously and substantially unmodified to the transverse portions, whereby the wall section is stiffened throughout its entire length and width against bending by the longitudinal and transverse portions perpendicular to the plane of the sheet.

1,296,028. SEWING-MACHINE. FRANK E. WILSON, Cleveland, Ohio, assignor to The Wilson Dress-Hook Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 24, 1914. Serial No. 878,886. 18 Claims. (Cl. 112—32.)



1. In a sewing machine a frame, a needle carrying member, a needle carried thereby, a work clamp having an opening for receiving a fastener and forming guiding means for guiding the fastener onto the material, means for shifting the work and the fastener in the formation of the stitches, and means for operating the several parts.

9. In a sewing machine, a frame, a needle bar, a pair of needles carried thereby, a pair of stitch-forming devices coöperating with said needles, means for operating the same, work and fastener clamping mechanism, means for shifting the same, and thread severing mechanism comprising means engaging the thread between the stitch formers and the needles for severing the thread, and means for holding the thread against the action of the severing devices.

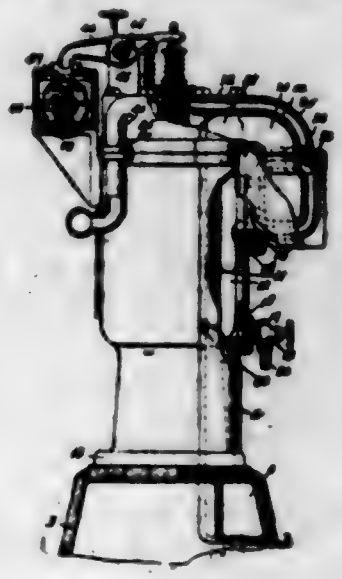
14. In a sewing machine, a frame, a pair of needles, means for supporting and actuating the same, a pair of stitch-forming devices coöperating with said needles in the formation of the stitches, a combined work and fastener clamping and supporting mechanism, means for actuating said mechanism to cause the needles and stitch-forming devices to form stitches in one group of openings of a fastener, means for bringing about a relative movement between the needles and said work and fastener supporting and clamping mechanism to cause the needles to engage in another group of openings, and means for severing the threads after each stitching operation.

1,296,030. AIR-SUPPLY FOR INTERNAL-COMBUSTION MOTORS. ALEXANDER WINTON, Lakewood, Ohio, assignor to The Winton Gas Engine & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Sept. 26, 1914, Serial No. 863,704. Divided and this application filed June 17, 1916, Serial No. 104,314. Renewed July 19, 1918. Serial No. 245,791. 5 Claims. (Cl. 123—195.)

1. In an explosive engine, a cylinder, a head for said cylinder having air inlet and exhaust valve mechanism, an air inlet housing in conjunction with said head and having a channel leading to the inlet valve mechanism, an air inlet member carried by the cylinder and in communication with said channel, and means for supplying air to said air inlet member.

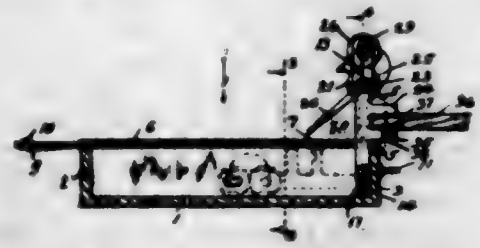
4. In an explosive engine, a crank case having an air supply channel therein, a cylinder mounted upon said crank case, an air inlet member carried by said cylinder and in communication with said air supply channel in the crank case, a head for said cylinder having an exhaust opening and an air inlet opening, an air inlet housing communicating with the air inlet opening and in communication with the air inlet member, and means for supplying air to the air supply channel in the crank case.

5. In an explosive engine, a crank case, a cylinder mounted thereon and having an air inlet member rigidly secured to the side thereof co-extensive therewith and having an open upper end substantially in horizontal plane with respect to the top of the cylinder, a cylinder head secured to said cylinder and having an exhaust opening and an inlet opening, and an air inlet housing



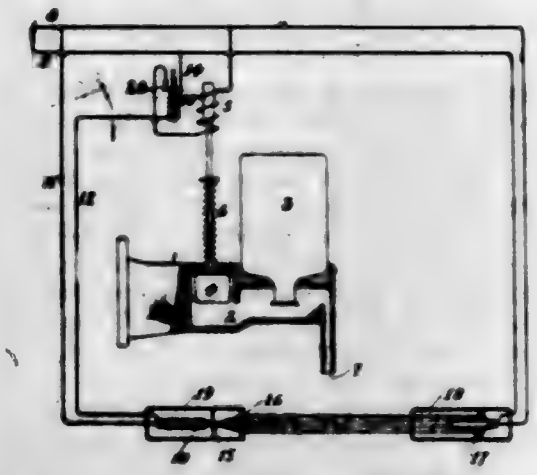
extending from the air inlet opening and terminating in an elbow communicating with the air inlet member secured to the side of the cylinder.

1,296,031. NECKTIE-PRESSER. JACK R. ADLER, Elsinore, Cal. Filed May 25, 1918. Serial No. 236,644. 1 Claim. (Cl. 68—9.)



A portable necktie presser, comprising a box, posts pivotally connected to the box to swing from horizontal positions in the box upwardly to vertical positions, a brace rigidly connecting the posts, spring pressed rollers mounted upon the posts, a crank for operating the rollers, fingers extending laterally from the posts to engage the top and bottom of the table top, and means for clamping the fingers to the table top.

1,296,032. AUTOMATIC DISPENSER. FRANK W. ADSIT, St. Paul, Minn. Filed Dec. 4, 1916. Serial No. 135,266. 9 Claims. (Cl. 221—102.)



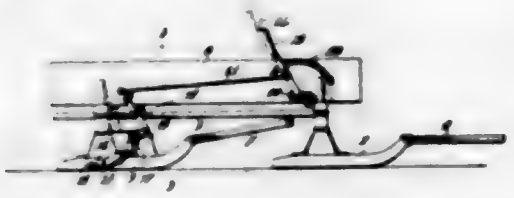
1. In automatic dispensers the combination of a source of light, means whose electrical resistance varies in accordance with the amount of light it receives, automatic means for dispensing commodities, and an electrical cir-

cuit including said electrical resistance varying means for operating said automatic dispensing means.

3. In automatic dispensers the combination of automatic dispensing means, an electrical circuit adapted to control said automatic dispensing means, means included in said electrical circuit having its electrical resistance variable with the amount of light falling thereon, and a source of light normally projecting light rays on said electrical resistance varying means, so positioned that when a hand or container is extended toward said automatic dispensing means, the amount of light received on said varying electrical resistance means will be modified.

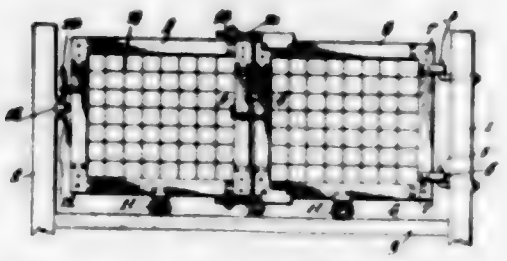
5. In a liquid dispenser the combination of a liquid chamber, an aperture leading from said liquid chamber, liquid dispensing means for causing the flow of liquid from said chamber through said aperture, electrical means for operating said liquid dispensing means, controlled by a circuit having therein a resistance variable with the amount of light received thereon, and means for projecting light on said variable resistance.

1,296,033. SLED-BRAKE. RAY W. D. AINSWORTH, Bigtrails, Wyo. Filed Dec. 5, 1917. Serial No. 205,562. 1 Claim. (Cl. 21—46.)



In combination with a sled runner provided with a bolster, a brake member pivotally supported on said runner, an inverted substantially U-shaped bearing bracket carried by said runner, a rearwardly extending brace secured to the upper end of said bearing bracket and also to said bolster and bracing said bearing bracket against swinging movement, a shaft journaled upon said bearing bracket, operating levers secured to said shaft, and a link connected to said brace member and adjustably connected to said operating lever for facilitating the swinging of said brake member to an operative position.

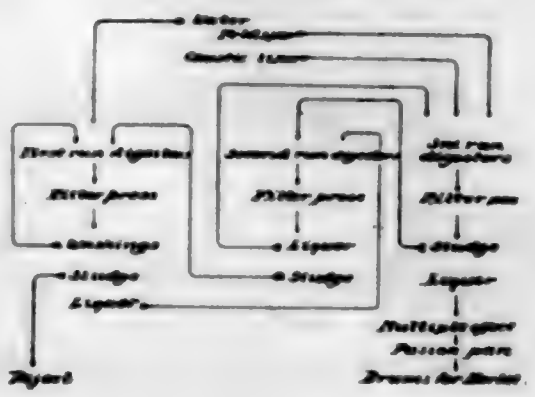
1,296,034. GATE. JAMES ANDERSON, Victoria, British Columbia, Canada. Filed Oct. 23, 1918. Serial No. 259,337. 3 Claims. (Cl. 89—75.)



1. A gate comprising swingingly mounted gate sections having their meeting ends hingedly connected together by double hinges, said double hinges including attaching plates having a connecting plate normally extending through the gap between the spaced ends of the gate section, and a yoke pivotally mounted on one of the gate sections and adapted to engage the other gate section to prevent swinging movement of one gate section independently of the other while the said yoke member is in operative position.

1,296,035. METHOD OF EXTRACTING POTASH AND THE LIKE. ARTHUR BURTON ANDREWS, Auburn, Me., assignor of one-half to himself and one-half to Herbert F. Kelley, Auburn, Me. Filed Mar. 6, 1918. Serial No. 220,824. 6 Claims. (Cl. 23—22.)

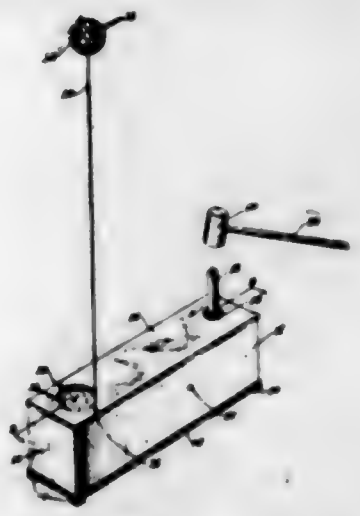
1. The process of extracting alkali from silicates consisting in a progressive fractional digestion with an alkaline earth metal hydrate by separating the liquor and sludge of each fractional digestion and adding the liquor of the most digested sludge to a less digested sludge.



4. The process of extracting alkali from silicates by digestion with an alkaline earth metal hydrate consisting in establishing a series of simultaneous fractional digestions and in maintaining said fractional digestions by adding the augmented liquor of one digestion to the sludge from which the next stronger batch of liquor was augmented.

6. The process of making caustic potash from feldspar by digestion with lime consisting in digestively treating each successive charge of feldspar and lime with the liquor of a digestive treatment of the sludge of the preceding charge.

1,296,036. TOY. LEOPOLD BACH and ELIAS KUBLUM, New York, N. Y. Filed Oct. 14, 1918. Serial No. 257,922. 3 Claims. (Cl. 46—59.)

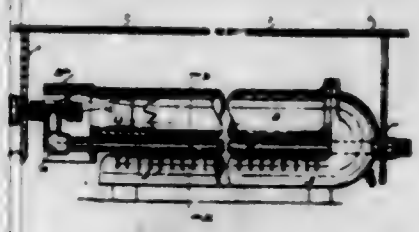


1. In a toy of the class described, the combination with a hollow rectangular casing, a lever pivoted therein, a plunger engaged with said lever adapted to be depressed by a blow, a flexible net extended below an opening in the top of said casing, and a ball passing through said opening normally resting in said net, said ball being adapted to be forcibly projected upon contact with the normally lower end of said lever upon the depression of said plunger.

1,296,037. OIL-BURNER. ARTHUR A. BAILEY, Seattle, Wash., assignor, by mesne assignments, to James A. Cavanagh, King county, Wash. Filed Apr. 17, 1918. Serial No. 229,008. 3 Claims. (Cl. 158—65.)

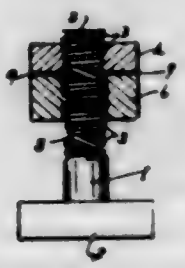
1. In a device of the class described, the combination of a base casting, a plurality of connected burner passages within the said base casting, transverse slots in the said base casting and communicating with the burner passages, whereby the fuel is discharged from the burner passages, a mixing and superheating pipe connected to the said base casting and communicating with the said

burner passages, whereby the charge of fuel is properly mixed with air before entering the burner passages, a fuel supply pipe positioned intermediate the base casting



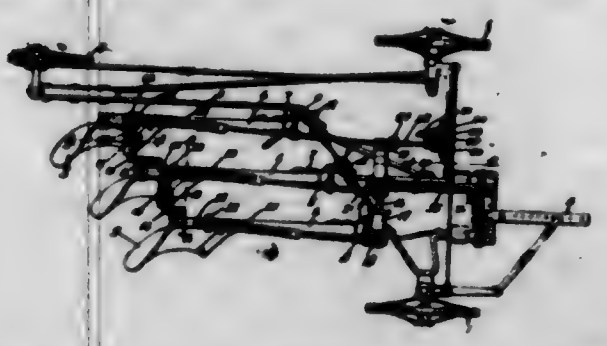
and mixing pipe, said pipe having an opening at its end in alinement with the axis of the mixing pipe, whereby the fuel is sprayed into the mixing pipe, and means for adjusting the supply of air which enters the mixing pipe.

1,296,038. LOCK-NUT. ROBERT WILLIAM BAKER, Blanchard, Wash. Filed Mar. 29, 1917. Serial No. 158,474. 1 Claim. (Cl. 151—17.)



In a device of the class described the combination of a bolt provided with a fine thread and a coarse oppositely disposed deeply cut thread, a coarsely threaded nut which engages the coarse threads on the bolt, the outer face of the coarsely threaded nut having a series of lateral notches, and a lock nut which is of much softer material than the other nut, and which engages the finely cut threads on the bolt, the inner face of the lock nut having a barb which engages the lateral notches in the coarsely threaded nut, whereby when the faces of the two nuts are screwed up to engage each other, the barb deforms itself against the walls of the lateral notches and prevents retrograde movement of the nuts with respect to each other.

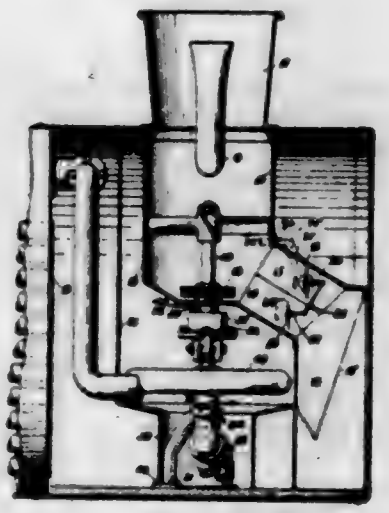
1,296,039. PLOW-LIFTING DEVICE FOR GANG-PLOWS. JOHN A. BJORGEN, Lake Park, Minn., assignor of one-twentieth to August Holmgren, three-twentieths to John H. Moan, three-twentieths to Charles H. Kelson, one-twentieth to Carl T. Strand, and two-twentieths to Alfred F. Youngberg, Lake Park, Minn. Original application filed June 28, 1915, Serial No. 36,697. Divided and this application filed Dec. 15, 1916. Serial No. 137,234. 3 Claims. (Cl. 97—36.)



1. In a gang plow, a plurality of plows, a common plow lifting device having independent connection to the several plows, at least one of the said plow lifting connections being detachable from the said plow lifting device, and a plow supporting device operative on said detachable plow lifting connection before it is detached, but while the plows are raised, and, when operative, serving to hold the detached plow lifting connection in position to support its coöperating plow in a raised inoperative position.

2. In a gang plow, the combination with a frame, of a plurality of plows having beams pivotally attached to said frame, lever actuated plow lifting devices comprising a rock shaft having radial projections and lifting rods independently connecting the projections thereof to the rear portions of the several plow beams, the lifting rod of the land side plow beam being detachable from said rock shaft, and a plow lifting and supporting device, engageable with the lifting rod of the land side plow, to hold the land side plow in a raised inoperative position.

1,296,040. LOCOMOTIVE DRAFT APPARATUS. JOHN BONTIA, Trenton, N. J. Filed Feb. 23, 1918. Serial No. 218,889. 3 Claims. (Cl. 162—6.)



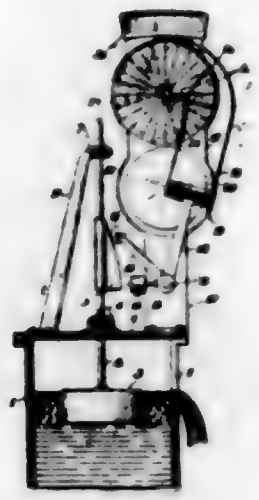
1. In combination with a steam locomotive including the boiler, smoke-box and stack thereof, an extension for said stack with a closed bottom depending in said smoke-box, a draft passageway forming a communication between said smoke-box and said depending stack extension, a cylinder exhaust steam pipe entering said smoke-box below said depending stack extension, branch connections extending from said exhaust pipe through said stack extension and discharging into said stack near its top end on opposite sides thereof, a rotatable shaft, a fan device carried thereby within the stack extension near the opening thereinto of said draft passageway, a rotor carried thereby within the exhaust pipe and adapted to be operated by the blasts of steam passing therethrough, valve devices for closing the draft passageway, and apparatus dependent upon the fluctuation of the steam pressure in the boiler above a pre-determined degree for controlling the operation of said valve devices.

1,296,041. FLUID-METER. MONO M. BORDEN, Collingswood, N. J., assignor to Simplex Valve & Meter Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 7, 1917. Serial No. 179,188. 4 Claims. (Cl. 73—167.)

1. In a meter, the combination with a fluid conduit, of a device movable by variations of head of fluid in said conduit, mechanism comprising a cam, fulcrumed mechanism having a member engaged by said cam, one of said mechanisms being carried and reciprocable by said device, a constantly revolving device, and a device movable over said constantly revolving device by the movement of said fulcrumed mechanism.

2. In a meter, the combination with a fluid conduit, of a device operable by variations of head of fluid in said conduit, mechanism comprising a cam, mechanism comprising a lever having an arm engaging said cam, one of

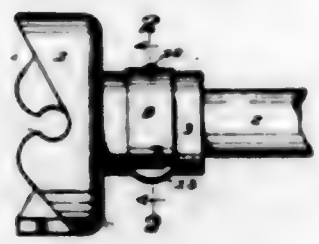
said mechanisms being carried and reciprocated by said device, and mechanism carried by said lever for showing the flow in said conduit.



3. In a meter, mechanism comprising oscillatory means including a registering device, mechanism comprising a cam adapted to oscillate said means, and means for supporting and reciprocating one of said mechanisms.

4. In a meter, mechanism comprising oscillatory means including an indicating device, mechanism comprising a cam adapted to oscillate said means, and means for carrying and reciprocating one of said mechanisms.

1,296,042. PIN-SECURING DEVICE. SIMON BRALOVE, Washington, D. C. Filed June 10, 1918. Serial No. 239,166. 2 Claims. (Cl. 74—8.)



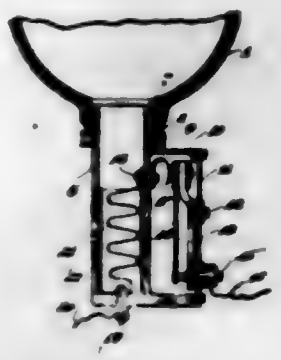
1. A pin and a resilient retaining member secured between its ends to one end of the pin and free to rotate relatively thereto, said member being substantially circular in form with free ends and rounded portions adjacent the free ends, said pin being substantially the length of the diameter of the retaining member.

1,296,043. FUEL-HEATER. JOHN BRETZ, Jr., Detroit, Mich. Filed Nov. 20, 1917. Serial No. 202,923. 4 Claims. (Cl. 219—38.)

1. The combination with a carbureter, of a member connected thereto and adapted to receive fuel therefrom, a casing carried by one side of said member, an electric heating device in said member adapted to be connected to a source of electrical energy, and a thermostatic control element within said casing in circuit with said heating device and the source of electrical energy and adapted to automatically control the operation of said heating device.

2. A heater unit comprising a body formed with a fuel chamber and a thermostat chamber, means for connecting the body to a carbureter affording communication between the carbureter and fuel chamber, a heating coil in the fuel chamber and a thermostat in the thermostat chamber within the circuit of the heating coil.

3. An electrical heater for carbureters comprising a body formed with a fuel chamber and a thermostat chamber, means forming an open connection between the interior of a carbureter and the fuel chamber, a heating coil in the fuel chamber, an electrical circuit for the coil, a detachable cover for the thermostat chamber, and a thermostat on said cover within the electrical circuit.



4. An electrical heater for carbureters comprising a body formed with a fuel chamber and a thermostat chamber, means for forming an open connection between the interior of a carbureter and the fuel chamber, a heating coil in the fuel chamber, a terminal member connected with the coil and extending into the theremostat chamber, a detachable cover for the thermostat chamber, and a theremostat device carried by the cover and adapted to be held in electrical connection with the coil terminal member when the cover is secured in place.

1,296,044. WOODEN-BOTTOMED SHOE. THOMAS J. BURKE, Brockton, Mass. Filed Apr. 25, 1918. Serial No. 230,644. 4 Claims. (Cl. 36—18.)



1. A shoe comprising a rigid wooden bottom including an outsole portion and an insole portion, said portions having complemental abutting faces conformed accurately each to the other, and provided with means for causing registration when the portions are assembled, and clamping means forming opposite sides of a continuous groove surrounding said abutting faces, said groove being wider at the heel end than at the forepart end of the bottom, an upper having an inturned margin inserted in said groove, the wider portion of the groove receiving the stiffened heel portion of said margin, and fastenings securing said margin to the clamping face on the insole portion, the said bottom portions being united to cause said clamping faces to confine the inturned margin and the said fastenings.

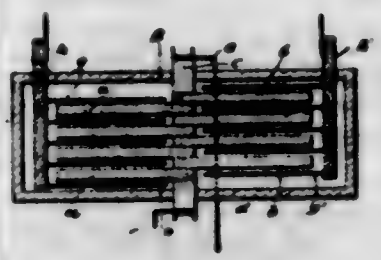
3. A shoe comprising a rigid wooden bottom including an outsole portion and an insole portion, said portions having complemental abutting faces conforming accurately each to the other, the insole portion having a marginal clamping face including a portion offset from its abutting face and extending from one margin of its shank portion around the fore and toe portions, to the opposite margin of the shank portion, the outsole portion having a clamping face including a portion offset from its abutting face and extending from one margin of its shank portion around the heel portion to the opposite margin of the shank portion, said clamping faces forming opposite sides of a continuous groove surrounding said abutting faces, and wider at the heel end than at the forepart end of the bottom, an upper having an inturned margin inserted in said groove, and fastenings securing said margin to the clamping face on the insole portion, the said bottom portions being united to cause said clamping faces to confine the inturned margin and the said fastenings.

1,296,045. DISPENSING-CONTAINER. ROBERT H. CAMPBELL, Chicago, Ill. Filed Nov. 20, 1916. Serial No. 132,465. 2 Claims. (Cl. 221—25.)



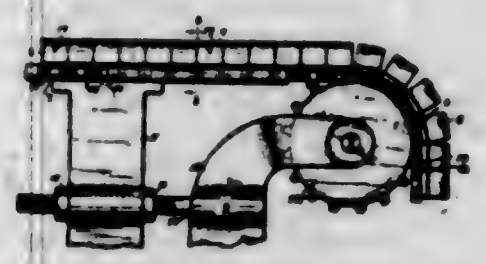
1. A distributing container, comprising a receptacle, and a spout therefor, said spout being flexible under pressure without appreciable distortion in cross section, substantially non-resilient, and sufficiently rigid to retain its shape unsupported, substantially as described.

1,296,046. ELECTROLYTIC CELL. GEORGES CHARBONNEAUX, Le Magnon, par Aigrefeuille D'Aunis, France. Filed Mar. 8, 1917. Serial No. 153,504. 2 Claims. (Cl. 204—1.)



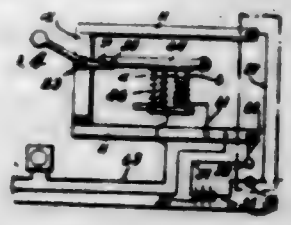
1. In an electrolytic cell of the character described, electrodes consisting of alternating right and left hand plates whose ends overlap, terminal members adapted to pass through the walls of the cell and associated with the overlapping ends of said plates and means for clamping said terminals and overlapping ends together.

1,296,047. CONVEYER FOR BOOK-STITCHING MACHINES. MARTIN CHRISTENSEN, Racine, Wis., assignor to Christensen Machine Company, Racine, Wis., a Corporation of Wisconsin. Filed Apr. 6, 1917. Serial No. 160,172. 4 Claims. (Cl. 198—8.)



1. In a signature conveyer, the combination of a plurality of signature supporting elements having signature supporting surfaces of inverted V-shaped cross-sections and lengthwise extending shouldered portions below said supporting surfaces, and means for securing said elements together in abutting relation to form a smooth continuous supporting surface for the groups of signatures and for preventing sagging of the conveyer when moving in a straight path comprising links hingedly connecting the ends of adjoining elements together and abutting against said shouldered portions.

1,296,048. ELECTRIC CLOCK. ULYSSES L. COLLINS, Encanto, Cal. Filed Jan. 8, 1916. Serial No. 70,938. 1 Claim. (Cl. 58—41.)



In an electric clock, a clock frame including a pair of connecting plates, a pair of brackets supporting said plates, one of said brackets being insulated from the plate to which it is connected, a pair of electro-magnet coils, one end of one of said coils being grounded on the magnet core, the end of the other coil being connected to the insulated bracket, a battery and connections therefor from said battery to the brackets.

1,296,049. FLAGPOLE-SUPPORTING DEVICE. JAMES H. CONNELLY, East Boston, Mass. Filed Jan. 2, 1918. Serial No. 209,527. 5 Claims. (Cl. 248—37.)



2. The combination with a flagpole, of a strap, means adapted to clamp said strap to said pole at a distance from the foot thereof, trunnions projecting laterally of said strap, stays disposed adjacent opposite sides of said pole, said stays each having one of their ends fixed with the other end thereof pivotally engaging said trunnions, and a pair of braces adapted to pivotally engage said trunnions and support said strap.

1,296,050. LENS-CHUCK. JOSEPH H. COSSMAN, Perth Amboy, N. J., assignor to The Optical Appliance Corporation, New York, N. Y., a Corporation of New York. Filed Nov. 16, 1914. Serial No. 872,308. 5 Claims. (Cl. 51—3.)



1. A lens holder comprising a chuck body, clamping jaws each having an inwardly inclined relatively sharp tooth projection to engage the edge surface of the lens blank, means for adjusting the clamping jaws, a removable bed having a curved surface adapted to coöperate with one surface of the lens blank, and a socket center adapted to receive a pivotal pressure rod.

2. A lens holder comprising a chuck body, clamping jaws each having an inwardly inclined relatively sharp tooth projection to engage the edge surface of the lens

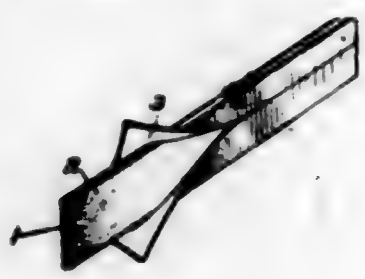
blank, means for adjusting the clamping jaws, a removable bed having a curved surface adapted to coöperate with one surface of the lens blank, a pad of yielding sheet material on said bed, and a socket center adapted to receive a pivotal pressure rod.

3. A lens holder comprising a chuck body, clamping members thereon, and an adjustable bed having a curvature to coöperate with one surface of the lens to be ground, said chuck body having a socket adapted to receive a pivotal pressure rod.

4. A lens holder comprising a chuck body having a plurality of radial slots, clamping jaws mounted in said slots, means for setting the jaws, a bed having a curved surface to coöperate with one surface of the lens to be ground and having a projection screwed into the body whereby the bed is adjustable, and a socket center adapted to receive a pivotal pressure rod.

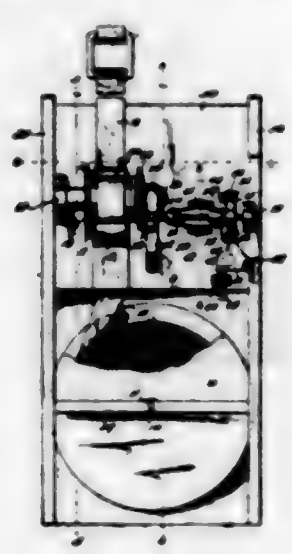
5. A lens holder comprising a chuck body, clamping jaws adjustably mounted therein and each having inwardly inclined relatively sharp toothed projections to engage the edges of the lens, and a bed adjustably mounted upon the body whereby the bed may adjust a lens blank to coöperate with the jaws.

1,296,051. FITTING-BAND FOR HATS, &c. HARRY D. CURTIS, Red Bank, N. J. Filed Aug. 26, 1918. Serial No. 251,507. 1 Claim. (Cl. 2—32.)



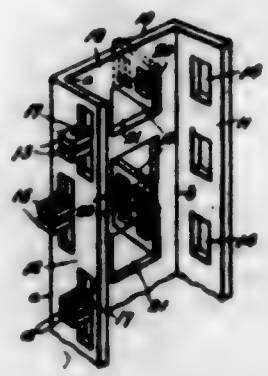
A fitting band for hats, etc., comprising an inner member of soft flexible felt paper coated all around with a water-proof adhesive substance, and an outer member entirely covering the inner member on both sides and both edges and attached to said inner member through the medium of said water-proof adhesive, this outer member consisting of a soft paper cushioning material.

1,296,052. FIRE-ESCAPE. EDWARD H. DIETZ, Aumsville, Oreg. Filed Apr. 14, 1917. Serial No. 162,088. 1 Claim. (Cl. 254—157.)



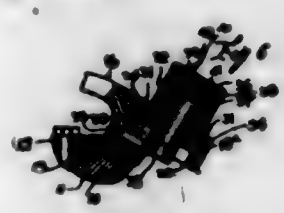
A fire escape of the class described comprising a casing having a transverse partition dividing it into two compartments, a tube in the upper compartment extending through said partition, a reel revolubly mounted in the lower compartment, rollers located above said tube and carrying intermeshing gears, a drum having a gear meshing with one of the roller gears, a guide roller contacting with said drum, a suspension element connected at one end with said reel and wound thereon with its other end passed upwardly through said tube between said rollers around said drum, under said guide rollers and out of the casing, means for connecting said element to a support, and retarding means for said element operated by said drum.

1,296,053. CONCRETE POST. EDWARD F. DILLEY, Henning, Ill. Filed June 3, 1918. Serial No. 237,094. 5 Claims. (Cl. 72—82.)



4. A concrete post having a channel shaped metal core extending longitudinally thereof, one side of said core lying exteriorly of the post and against the side thereof, tongues cut from the body of the core and bent alternately in opposite directions and on opposite sides of said body and embedded in the concrete, and other tongues cut from the side of the core without the post and bent outwardly in closely adjacent pairs with vertically alined perforations therethrough.

1,296,054. CUTTER-SHARPENER. CHARLES F. DRAPER, Lancaster, Pa. Filed Mar. 9, 1918. Serial No. 221,523. 5 Claims. (Cl. 51—7.)



1. A knife sharpening device of the character described comprising a body, the body being provided with a hollow head at one end having an inwardly extending annular flange, a barrel insertible through the head and having on its under end an outwardly extending flange, balls disposed between the flanges and permitting the rotation of the barrel relative to the head, a disk having screw-threaded engagement with the barrel, means for locking the disk in engagement with the barrel, and an annular abrading member operatively connected to the disk and disposed concentrically to the barrel.

1,296,055. SUPERHEATER FOR MARINE, FIRE, OR SMOKE TUBE BOILERS. JULIUS ECCIUS, Wilhelmshöhe, near Cassel, Germany, assignor to Schmidt'sche Heissdampf Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed Aug. 4, 1916. Serial No. 113,090. 2 Claims. (Cl. 122—462.)



1. In a marine boiler having smoke tubes arranged in a plurality of horizontal rows the individual tubes of

each row being vertically in line with corresponding tubes of adjacent rows, a plurality of superheater units each comprising a series of U shaped loops one loop to one smoke tube, the loops belonging to a given unit lying successively in smoke tubes which are alternately in one or the other of two adjacent horizontal rows and in immediately succeeding vertical rows, the individual loops being joined in series by bent connecting sections which lie in diagonal planes and the ends of each super-heater unit lying in a common plane parallel to and between the aforesaid adjacent horizontal rows.

2. In a marine boiler having smoke tubes arranged in a plurality of horizontal rows the individual tubes of each row being vertically in line with corresponding tubes of adjacent rows, a plurality of superheater units each comprising a series of U shaped loops one loop to one smoke tube the loops belonging to a given unit lying successively in smoke tubes which are alternately in one or the other of two adjacent horizontal rows and in immediately succeeding vertical rows, the individual loops being joined in series by bent connecting sections which lie in diagonal planes and the ends of each super-heater unit lying in a common plane parallel to and between the aforesaid adjacent horizontal rows, the alternate smoke tubes of the aforesaid adjacent rows left vacant by the loops of the first mentioned unit being occupied by loops belonging to another similar superheater unit.

1,296,056. CIGAR-LIGHTER. DONALD V. EICHIN, Olney, Ill. Filed Oct. 28, 1916. Serial No. 127,296. 8 Claims. (Cl. 175—296.)



1. In an electric cigar lighter, the combination of a standard, a lamp having a lamp wick and having spaced electrodes disposed to provide a gap in immediate proximity to the lamp wick, lamp cover means operatively connected with a fulcrum arm, a fulcrum arm pivoted to the standard, a push rod member arranged to operate the fulcrum arm, means operatively connected with the fulcrum arm for completing an electric circuit, a primary circuit, a vibrating coil, and a second circuit, whereby the make and break of the primary circuit induces a high potential in the secondary circuit to produce a vibrating jump spark to ignite the lamp wick upon operation of the push rod member, substantially as described.

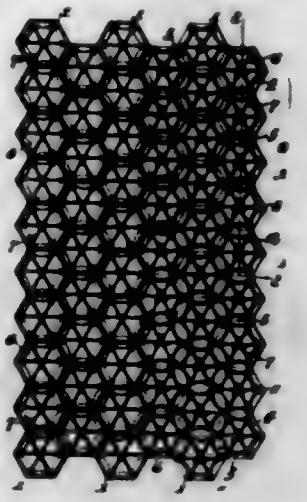
3. In an electric cigar lighter, the combination of a standard, a lamp having a lamp wick, spaced electrodes in proximity to the wick, a removable cover, a pivoted fulcrum arm operatively connected with the cover, a housing mounted on the standard opposite to the lamp, contact members in said housing, an electric circuit terminating in said contact members, means for operating the fulcrum arm to momentarily engage the contact members to complete the circuit, means for breaking the circuit thereafter and preventing its completion on return of the fulcrum arm, a second circuit, a vibrating coil having its primary and secondary windings connected respectively with said first and second circuits, said second circuit terminating in the aforesaid spaced electrodes arranged to ignite the lamp wick, whereby upon operation of the fulcrum arm the lamp cover will be removed, the first circuit momentarily made and then broken, and a high potential current induced in the second circuit to produce a vibrating jump spark to ignite the lamp wick, and means for automatically returning the fulcrum arm to its normal position, substantially as and for the purposes set forth.

1,296,057. FISH-TACKLE. WILLIAM ELLSWORTH, Parkwood, Oreg. Filed Dec. 5, 1918. Serial No. 265,453. 1 Claim. (Cl. 43—31.)



In a fish tackle, the combination of a line having a fish hook thereon, with a rubber tube of desired length and diameter, the line extending through the tube and a certain portion of the line being coiled within the tube, a binding means upon and near each end of the tube, and knots in the line within the tube adjacent to said binding means and in position to engage the inner surface of the tube where thus bound, substantially as described.

1,296,058. RADIATOR. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Jan. 9, 1918. Serial No. 210,995. 2 Claims. (Cl. 257—128.)



1. A radiator core having a tube which is enlarged at its ends and contracted between its ends, and radiating means arranged within said tube and comprising a plurality of V-shaped sections each of which is bent out of a strip of sheet metal to form two flanges which are connected at their inner longitudinal edges to form a corner engaging the corresponding corners of adjacent radiating sections, and which has the outer longitudinal edge of each of its flanges provided with projecting edge portions which engage with the inner sides of the enlarged ends of the tube and an intermediate receding edge portion which engages with the inner side of the contracted part of said tube.

1,296,059. BILL OR LETTER-SHEET. WILLIAM B. FENN, Columbus, Ohio, assignor to The Wedoit Company, Columbus, Ohio, a Corporation of Ohio. Filed Apr. 8, 1914. Serial No. 830,521. 5 Claims. (Cl. 283—1.)

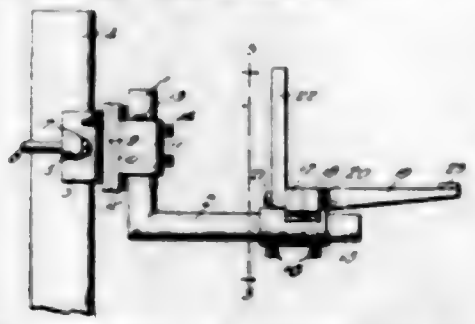


1. A means of concealed communication by mail consisting of a sheet divided into sections and marked by lines for folding, the distinctive sections to receive the names and addresses of the sender and sendee respectively, the corner portion of one of said sections being marked with lines for incision and the folding of such portion upon the body of the section to permit postmarking beyond it upon another section.

2. A means of concealed communication by mail consisting of a sheet divided by transverse lines into three sections, the end sections to receive upon the obverse faces thereof the names and addresses of the sender and sendee, respectively, located in substantially the same relative positions, one of said end sections being marked for incision and folding.

5. A means of communication by mail consisting of a sheet having sections defined by lines for folding, the distinctive sections to receive the names and addresses of the sender and sendee respectively, the corner portion of one of said sections being marked with lines for incision and the folding of such portion of the section upon the body thereof to permit postmarking beyond it upon the adjacent section.

1,296,060. LAMP-BRACKET. ROBERT FRANCIS FERGUSON, Dearborn, Mich. Filed May 20, 1918. Serial No. 235,676. 1 Claim. (Cl. 248—20.)



A bracket comprising an L-shaped bar of circular cross section, a collar engaging each member of the bar and adjustable thereon, a sectional clamp connected with one of the collars for engaging a fixed support, and a plate for supporting a lamp detachably connected with the other collar, each collar having means for securing the same in adjusted position.

1,296,061. ELECTRICAL CONNECTOR. CHARLES W. FINLEY, Battle Creek, Mich. Filed Apr. 13, 1918. Serial No. 228,297. 11 Claims. (Cl. 173—263.)

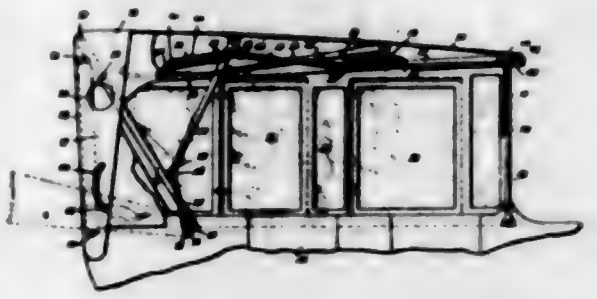
1. In a connector, the combination of a base, a conductor plate disposed on said base and having its ends turned inwardly providing clamping members, and binding screws disposed through said clamping members and connector plate and threaded into said base plate, the bights of the inturned clamping members facing inwardly permitting the engagement of a loop over the binding screws.



5. In a connector, the combination of a base having upturned flanges at its longitudinal edges, a conductor plate disposed on said base between said flanges and provided with inturned clamping members at its ends, the arms connecting the clamping members to the plate being oppositely offset, and binding screws disposed through said clamping members and connector plate and threaded into said base plate.

8. In a connector, the combination of a base, a conductor plate disposed on said base and provided with inturned clamping members at its ends, and binding screws disposed through said clamping members, the inner edges of said clamping members being flanged up about the heads of the screws.

1,296,062. VEHICLE-TOP. MAX SOLOMON FINLEY, Indianapolis, Ind. Filed Sept. 29, 1917. Serial No. 194,004. 11 Claims. (Cl. 21—62.)



1. In a structure of the character set forth, the combination with a vehicle, of a swinging case mounted on the rear portion of the vehicle, an extensible top for the vehicle, comprising a cover, and a collapsible frame, the cover and frame being foldable into the case and depressible therewith, said frame including a bow pivotally mounted on the vehicle and also having a pivotal mounting in the upper portion of the case.

2. In a structure of the character set forth, the combination with a vehicle, of an extensible and rearwardly foldable depressible top therefor, including a rear bow pivotally mounted on the vehicle, and swinging rearwardly to a depressed position, a relatively rigid case for the top having the upper portion of the bow housed therein and pivoted thereto, said case having curved guideways, and guiding elements on the vehicle engaged in the guideways.

3. In a structure of the character set forth, the combination with a vehicle, of a rearwardly collapsible and forwardly extensible top therefor, a swinging case for receiving the top when collapsed, and roller curtains mounted within the case and swinging therewith.

5. In a structure of the character set forth, the combination with a vehicle, of a swinging support at the back of the vehicle, extensible curtains carried by the support, an extensible and collapsible top for the vehicle movable toward and from the support, and means for detachably connecting the curtains to the top when both are collapsed to effect their simultaneous extension and to permit the extension of the top without extending the curtain.

11. In a structure of the character set forth, the combination with a collapsible and automatically extensible top, of means for constantly urging the top to its extended condition, a latch for holding the top against such movement, means for actuating the latch, including a controller in the front of the vehicle, side curtains, automatic latches for connecting the side curtains to the top when the latter is in its collapsed condition, means for holding the latches in inactive position, and operating mechanism for said means, including a controller located at the front of the vehicle.

1,296,063. EXTRACTIVE PRODUCT FROM THE HYPOPHYSIS GLAND. FRANZ FLASCHER and BAPTIST REUTER, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Sept. 25, 1912. Serial No. 722,245. 2 Claims. (Cl. 167—7.)

1. A substance possessing pressor and oxytocic activity extracted from the infundibular lobe of the pituitary gland such as can be obtained by the herein described process which comprises extracting the lobe with slightly acidulated water and precipitating the substance from said extract with phosphotungstic acid.

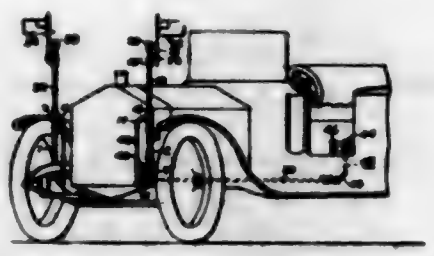
2. A substance as claimed in claim 1 in a solid, stable, pure and concentrated form, readily soluble in water with alkaline reaction, difficultly soluble in alcohol, ether, acetone, ethyl acetate and benzene, readily soluble in acids and alkalis, forming salts with acids, precipitated by the usual alkaloid reagents, giving a red coloration when treated with diazotized sulfanilic acid in a solution alkaline with sodium carbonate, giving the biuret-reaction, and not yielding, when treated with chlorid of iron, the green coloration characteristic of adrenalin, and being of a yellowish-white color when in a solid condition.

1,296,064. SALTS OF THE EXTRACTIVE PRODUCT FROM THE HYPOPHYSIS GLAND. FRANZ FLASCHER and BAPTIST REUTER, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Dec. 23, 1912, Serial No. 738,266. Renewed Nov. 19, 1915. Serial No. 62,435. 4 Claims. (Cl. 167—7.)

1. As new compositions of matter, crystalline salts of a basic substance, such as can be obtained from the infundibular lobe of the pituitary gland by the herein described process which comprises extracting the lobe with slightly acidulated water and precipitating the basic substance from said extract with phosphotungstic acid, said salts having hemostatic, astringent, blood-pressure raising and labor-pains promoting properties, being soluble in water with slightly acid reaction, difficultly soluble in alcohol, ether, acetone and ethyl acetate, readily soluble in acids and alkalis, being precipitated by the usual alkaloid reagents, giving a red coloration when treated with diazotized sulfanilic acid in a solution alkaline with soda, and giving the biuret-reaction.

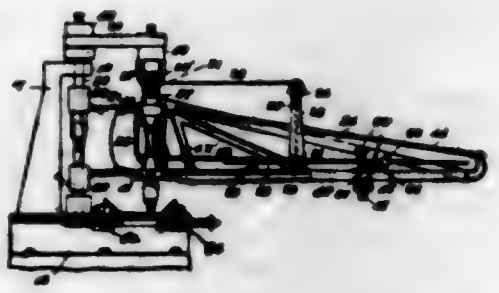
2. The substance consisting of a crystalline sulfate of a basic substance, such as can be obtained from the infundibular lobe of the pituitary gland by the herein described process which comprises extracting the lobe with slightly acidulated water and precipitating the basic substance from said extract with phosphotungstic acid, said salt being a faint yellowish-white, stable, crystalline powder, decomposing at 160–161° C., readily soluble in water with slightly acid reaction, difficultly soluble in alcohol, ether, acetone, ethylacetate, also soluble in acids and alkalis, being precipitated by the usual alkaloid reagents, giving a red coloration when treated with diazotized sulfanilic acid in a solution alkaline with soda, showing the biuret-reaction, and possessing the properties of the hemostatic, astringent, blood-pressure raising and labor-pains promoting principle of the infundibular portion of the hypophysis gland.

1,296,065. DIRECTION-INDICATOR FOR AUTOVEHICLES. CHARLES W. FORBES, Pasadena, Cal. Filed Apr. 9, 1918. Serial No. 227,585. 1 Claim. (Cl. 116—31.)



In a direction indicator, a post adapted to be mounted outwardly and forwardly of the front corner of a radiator, a clamp for securing the lower end of the post, a bracket for securing the upper end of the post, a bearing plate secured to the upper end of the post, a second bearing plate pivotally connected to the first bearing plate, a crank arm extending from the second bearing plate inwardly and downwardly, a socket extending upwardly from the second bearing plate, an indicator arm fixed in the socket, an indicator secured to the indicator arm, and means for operating the crank arm to swing the indicator arm from a vertical position outwardly and backwardly.

1,296,066. MILLING-MACHINE. RAY FRASER and BURTON J. ROBERTSON, Minneapolis, Minn., assignors to Lyle Corrugated Culvert Company, Minneapolis, Minn., a Corporation of Minnesota. Filed July 20, 1917. Serial No. 181,706. 20 Claims. (Cl. 90—12.1.)



1. In a machine for forming in desired material a reproduction of a prepared form, the provision of a pantograph having a reproducing arm and a tracing arm, a reproducer mounted on the reproducing arm of the pantograph, a work holder mounted under the reproducer, the reproducer being arranged to move toward or away from the work holder, toggle lever mechanism for moving the reproducer toward or away from the work holder, and devices connected with the lever mechanism and extending to the tracing arm of the pantograph for operating the lever mechanism.

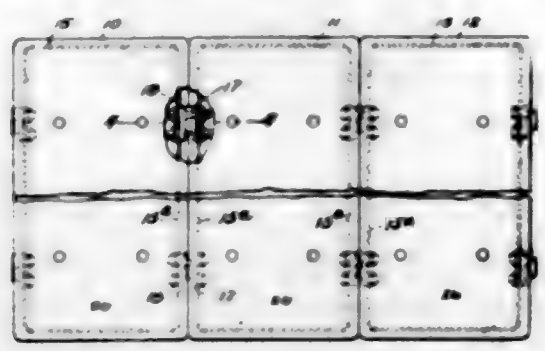
1,296,067. TOOTH-BRUSH. ALFRED C. FULLER, Hartford, Conn. Filed Aug. 15, 1917. Serial No. 186,412. 1 Claim. (Cl. 15—29.)



A toilet appliance comprising a handle and a head of curved form providing a depression curved lengthwise of the brush head with obliquely arranged recesses in the concave side of said head, at opposite ends of the depression, and a brush of curved form as to its outer surface and comprising a core having ends projecting nor-

mally in a diagonal direction to correspond with said recesses, and a latch pivoted to the handle with one end overlying a recess to secure the brush in place.

1,296,068. BOX-SPRING. SIMON GAINER, Chicago, Ill. Filed May 2, 1918. Serial No. 232,164. 7 Claims. (Cl. 155—25.)



1. A box spring comprising a plurality of spring sections, and detachably connected means at the meeting edges of said spring sections adjacent the tops thereof, for detachably connecting the spring sections together, said means being connectible and disconnectible when the adjacent spring sections are moved lengthwise of each other.

4. A sectional box spring comprising a plurality of substantially similar box spring sections, each comprising a frame, a plurality of connected coiled springs secured thereto, a band surrounding the tops of the springs and secured thereto, and complemental, detachable attaching members fixedly secured to adjacent portions of the bands for detachably connecting the bands, said detaching members being connectible and disconnectible when the adjacent spring sections are moved lengthwise of each other.

6. A sectional box spring comprising a plurality of substantially similar box spring sections, each having a coiled spring structure surrounded by a rectangular band which is secured to the spring structure, a mattress section secured upon each box spring section and a covering extending along the sides of each section, complemental, detachable attaching members fixedly secured to the adjacent sides of said bands, and means for preventing movement of any section in a direction parallel with the meeting edge of an adjacent section.

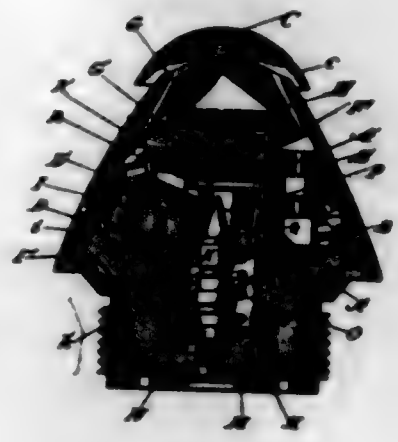
1,296,069. TIRE-CHAIN. FREDERICK A. GARRING, Minneapolis, Minn., assignor to Peerless Chain Company, Winona, Minn., a Corporation of Minnesota. Filed Sept. 28, 1918. Serial No. 255,998. 4 Claims. (Cl. 152—14.)



1. A non-skid tire chain made up of interlocking links, said links being formed with double approximately triangular loops and with approximately parallel side members, said side members being welded to the extended angles of said triangular loops.

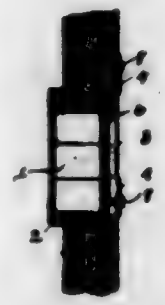
1,296,070. FUSE MECHANISM FOR PROJECTILES. EMIL GATHMANN, Baltimore, Md. Filed Sept. 7, 1917. Serial No. 190,219. 8 Claims. (Cl. 102—36.)

1. A fuse embodying a forwardly movable firing member, a rearwardly movable inertia member, a resilient rebound member for resisting the rearward movement of the inertia member independently of the firing member, means for coupling the firing member and inertia members together for simultaneous forward movement under the influence of the rebound member whereby the fuse will be



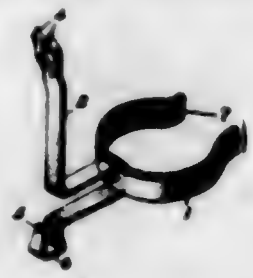
armed during acceleration of the projectile and fired after maximum acceleration has been attained.

1,296,071. GAGE-SUPPORT. PHILO M. GELATT, La Crosse, Wis. Filed Sept. 16, 1918. Serial No. 254,315. 2 Claims. (Cl. 248—20.)



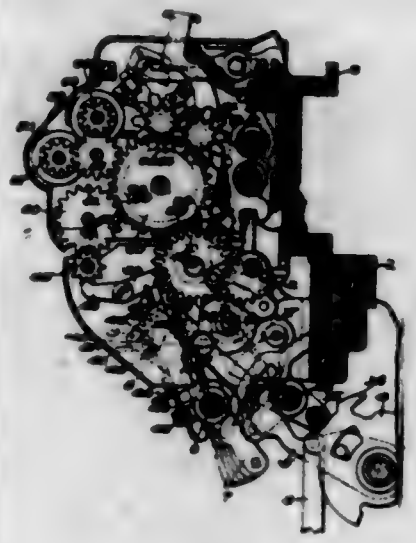
2. The combination of the casing of a gage and cover therefor forming a shoulder around the periphery thereof near the outer end of the casing, and a supporting member apertured to receive the casing, with a support for the casing comprising a plate adapted to be secured against the base of the instrument and provided with a bendable lug extending through the aperture of the supporting means, said lug being adapted to be bent around the corner of the said supporting means, and secured thereto near the outer extremity thereof.

1,296,072. STAFF HOLDER AND ATTACHING DEVICE. ALEXANDER P. GILLESPIE, Wilkinsburg, Pa. Filed May 2, 1917. Serial No. 166,027. 1 Claim. (Cl. 248—37.)



A staff holder and attaching device comprising a yoke constructed of a substantially flat strip of spring metal and open at one side to receive a support, and a holder constructed of a substantially flat strip of spring metal secured to said yoke, the upper end of said holder being slit and bent laterally to form fork-shaped clips adapted to yieldingly engage a flag-staff; and the lower end U-shaped to receive and hold a staff, the base portion of said lower end being horizontally disposed and adapted to support the end of a flag-staff.

1,296,073. ALGEBRAIC-TOTAL CALCULATING-MACHINE. HYMAN ELI GOLDBERG, (now by judicial change of name Hyman Golber,) Chicago, Ill., assignor to Goldberg Calculating Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 20, 1918. Serial No. 785,670. 11 Claims. (Cl. 235—59.)



8. In a calculating machine, the combination of: a plurality of carrying wheels; actuating means adapted to engage said carrying wheels *seriatim*; and means for giving said actuating means an added increment of movement coincident with the passage of the carrying wheel of next lower order to the engaged carrying wheel through its carrying point.

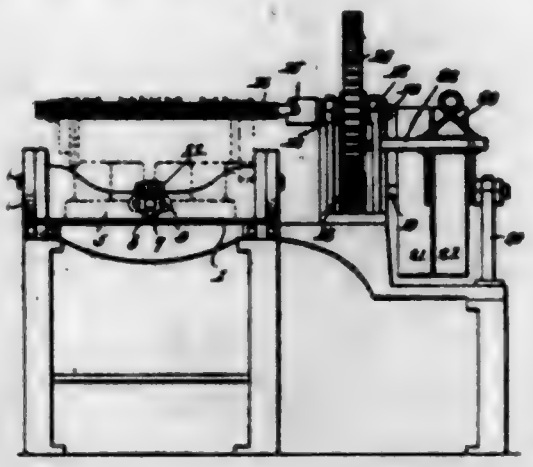
6. In a calculating machine, the combination of: a moving carriage; a totaliser mounted thereon, said totaliser embodying a plurality of carrying wheels, tens carrying mechanism forming a closed carrying cycle, number bearing means having two sets of numbers, and designating means for said sets; a master wheel adapted to engage said carrying wheels *seriatim*; and means for giving said master wheel an added increment of movement coincident with the passage of the carrying wheel of next lower order to the engaged carrying wheel through its carrying point.

7. In a calculating machine, the combination of: a moving carriage; a totaliser mounted thereon, said totaliser embodying a plurality of carrying wheels, tens carrying mechanism forming a closed carrying cycle, two sets of numbers, and designating means for said sets, said designating means shifting from one set of figures to another coincident with the passage of the totaliser through zero; a master wheel adapted to engage said carrying wheels *seriatim*; and means for giving said master wheel an added increment of movement coincident with the passage of the carrying wheel of next lower order to the engaged carrying wheel through its carrying point.

10. In a calculating machine, the combination of: a set of numeral keys; a master wheel; differential mechanism connecting said keys and master wheel; a plurality of totalisers each having a plurality of carrying wheels adapted to be engaged by said master wheel *seriatim*; and means controlled by said totaliser for giving said master wheel an added increment of motion coincident with the passage of the highest wheel of the then engaged totaliser through zero.

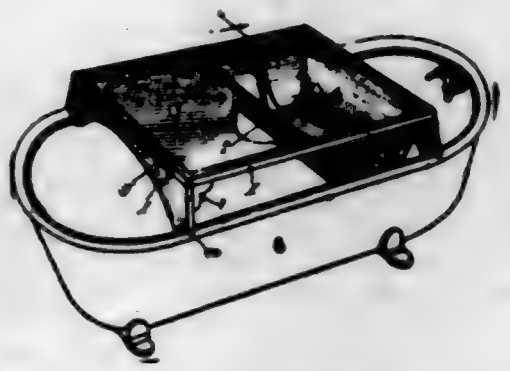
11. In a calculating machine, the combination of: a set of numeral keys; a master wheel; differential mechanism connecting said keys and master wheel; a plurality of totalisers each having a plurality of carrying wheels adapted to be engaged by said master wheel *seriatim*; and means controlled by said totaliser and brought into action coincident with the passage of the totaliser through zero for giving said master wheel an added increment of motion.

1,296,074. MOTOR-STAND. FRANK B. GOODALE, Iola, Kans. Filed Aug. 14, 1918. Serial No. 249,878. 4 Claims. (Cl. 29—89.)



1. A motor stand including a table, a cross head mounted to swing thereon, a shaft extending through and revoluble within the cross head, means for binding the cross head upon the shaft to hold the shaft against movement, and an attaching head at one end of the shaft.

1,296,075. APPLIANCE FOR BATHING INFANTS. LAURENCE R. GRANNIS, Chicago, Ill., assignor of one-half to Beverly F. Hall, Chicago, Ill. Filed Oct. 1, 1918. Serial No. 256,886. 3 Claims. (Cl. 45—11.)



1. An appliance for bathing infants comprising a dressing table portion and a bathtub frame portion secured thereto and equipped with an infant's tub, said dressing table and bathtub being arranged to extend side by side transversely across a standard bathtub, and means on the lower side of said portions and coöperating with the top of such standard tub to support and maintain said appliance in position thereon.

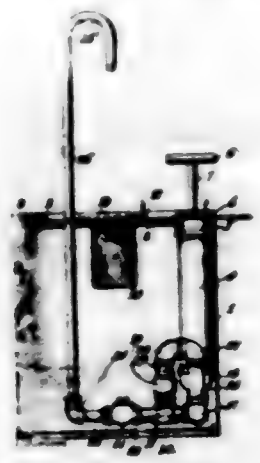
1,296,076. ELECTRIC SPARK-PLUG. CHARLES KNOX HARDING, Chicago, Ill. Filed June 3, 1918. Serial No. 238,068. 7 Claims. (Cl. 123—169.)

1. An electric spark plug having an improved structure for supporting and insulating the electrodes characterised by being non-fragile, resistant to sudden changes of temperature and having high dielectric resistance when hot, consisting of a ceramic structure comprising zirconium and thorium compounds.

1,296,077. OIL-PUMP. ARTHUR L. HAWKESWORTH, Butte, Mont. Filed July 10, 1918. Serial No. 244,217. 4 Claims. (Cl. 103—75.)

1. In a pump of the character described, a suitable cylinder, a reciprocating piston therefor, an inverted U-shaped suction member connected to the intake end of the cylinder, the intake leg of the suction member being provided with a valve positioned between the free end

of said leg and the crown of the suction member, the said crown being disposed above the lowest point reached



by the piston, a discharge valve at the bottom of the cylinder, and a discharge pipe leading from said valve.

1,296,078. DRILL. ARTHUR L. HAWKESWORTH, Butte, Mont. Filed Nov. 20, 1918. Serial No. 263,894. 3 Claims. (Cl. 255—63.)



1. In combination with a drill bar or shank terminating at one end in a dove-tail groove having side or bounding walls tapering in the general direction from the drilling end of the shank, the bottom of the groove and the transverse edges of its bounding walls being parallel and disposed on a diagonal or at an incline to the shank axis, a bit provided with a tongue conforming to said groove and insertible thereinto, as set forth.

1,296,079. VACUUM LIFTING APPARATUS. HALBERT K. HITCHCOCK, Pittsburgh, Pa., and WILLIAM J. GOLIGHTLY, Kokomo, Ind., assignors to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed July 18, 1917. Serial No. 181,282. 10 Claims. (Cl. 57—9.)



1. In combination in vacuum lifting apparatus, a supporting frame, a lifting frame pivoted thereto and provided with vacuum lifting means, a motor carried by one of said frames, and a vibrator carried by one of said frames and driven by the motor.

5. In combination in vacuum lifting apparatus, a supporting frame, a lifting frame pivoted thereto and provided with vacuum lifting means, an electric motor for tilting the supporting frame, and means for automatically cutting off the supply of current to the motor when the lifting frame reaches a substantially vertical position.

10. In combination in vacuum lifting apparatus, a supporting frame, a lifting frame pivoted thereto and provided with vacuum lifting means, a motor and connections for tilting the lifting frame, a vibrator driven by the motor and a releasable clutch between the motor and vibrator.

1,296,080. SAFETY-RAZOR. HAROLD EDWARD BERKWIN HOLT, Farnborough, England. Filed Dec. 19, 1917. Serial No. 207,983. 4 Claims. (Cl. 30—12.)



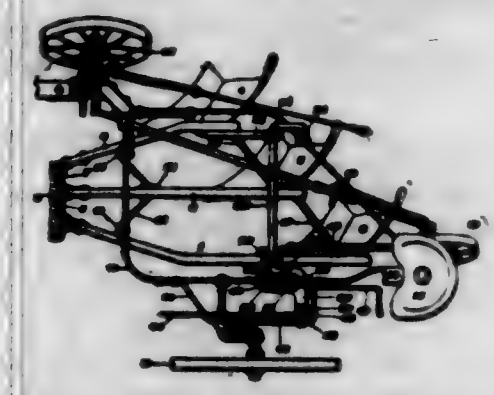
1. In a safety razor, a tubular handle, a guard on the handle, a blade having an aperture therethrough and normally seated on said guard, a backing plate having a stem and being normally seated on said blade and having its stem extending through said aperture into the handle, a pair of jaws normally held in engagement with said stem by means of said handle, and means coöperative with said handle and jaws and stem for pressing said backing plate on said blade, said means being operable to effect the disengagement of said jaws from said stem.

2. In a safety razor, a tubular handle, a guard on the handle, a blade having an aperture therethrough and normally seated on said guard, a backing plate having a stem and being normally seated on said blade and having its stem extending through said aperture into the handle, a pair of jaws normally held in engagement with said stem by means of said handle, an actuating element engaged with said jaws and extending outward from one end of the handle, and a spring coöperative with said actuating element and handle and jaws to press said backing plate on said blade, said actuating element being operable to effect the disengagement of said jaws from said stem.

3. A safety razor comprising a tubular handle, a blade, a backing plate normally seated on the blade and having a short headed stem thereon, a spring-pressed spindle in the handle, and a pair of opposed spring gripping jaws secured to said spindle and operable by the latter to project from the handle against the action of the spring and thus be positioned to engage or release the said short headed stem.

4. In a safety razor, a tubular handle provided with a cam, a blade, a backing element normally seated on the blade, a spring-pressed device engaged with said backing element and pressing the latter on said blade, and means extending from said spring-pressed device into contact with said cam and being operable by a relative rotary movement of said device and said cam so as to effect an increase of pressure of said backing element on said blade.

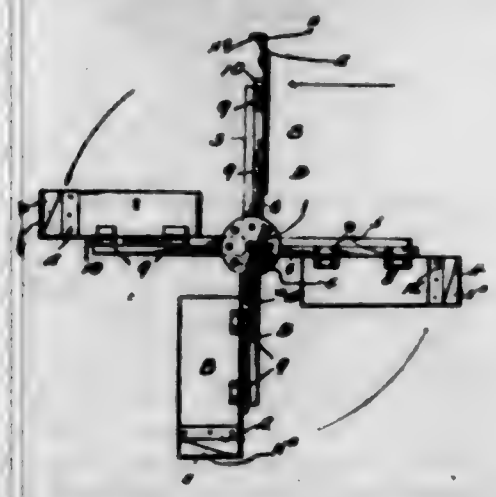
1,296,081. WHEELED PLOW. OTTO W. HOWARD, Moline, Ill., assignor to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed May 4, 1915. Serial No. 25,865. 5 Claims. (Cl. 97—36.)



1. In a wheeled plow, the combination of a frame, a ball supported on the frame, a plow pivotally supported on the ball, means connected to said ball and operable to swing it to raise the plow, said means including a member rigidly connected to said ball, a lever pivoted intermediate its ends on said member and operable to rock said member and swing the ball to raise the plow, means to lock said plow in a raised position, means to break said lock to lower the plow, and a step on the frame with which the forward end of said lever is adapted to contact to hold the plow down.

2. In a wheeled plow, the combination of a frame, a ball supported on the frame, a plow pivotally supported on the ball, means connected to said ball and operable to swing it to raise the plow, said means including a member rigidly connected to said ball, and two levers pivoted intermediate their ends on said member, one of said levers operable to rock said member and swing the ball to raise the plow, the second lever having its lower end adapted to engage with a step on the frame to hold the plow in a raised position.

1,296,082. WATER-WHEEL. OTTO C. HUBER, Yankton, S. D. Filed Jan. 2, 1918. Serial No. 209,964. 1 Claim. (Cl. 170—110.)



A water wheel having a series of radial spokes, a pair of blades on each spoke having radial hinge joints, and a fin at the outer extremity of each blade, said fins having inclined portions with their remote ends projected in the direction of rotation of the wheel.

1,296,083. BITUMINOUS COMPOSITION. ROBERT ILLEMANN, Port Dundas, Glasgow, Scotland. Filed Oct. 10, 1917. Serial No. 195,719. 2 Claims. (Cl. 106—31.)

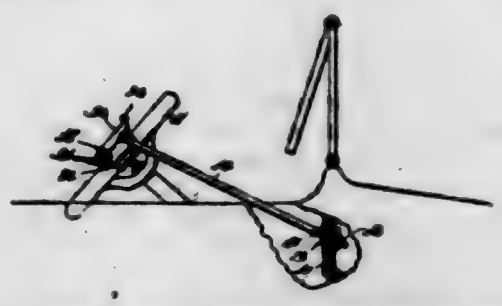
1. A moist and plastic composition capable of being rendered fluid without the aid of heat and merely by the addition of water thereto, made of bitumen (pitch), brought to a fluid condition by heat, an argilliferous substance brought to a fluid condition by water the two fluids being mixed while heated and being thoroughly stirred until emulsified, the heat being such that the moisture is not driven off or evaporated from the mixture.

1,296,084. PORTABLE HOUSE. ROBERT I. JOHNS, Brooklyn, N. Y. Original application filed Jan. 2, 1917, Serial No. 140,051. Divided and this application filed Aug. 1, 1917. Serial No. 183,872. 3 Claims. (Cl. 189—1.)



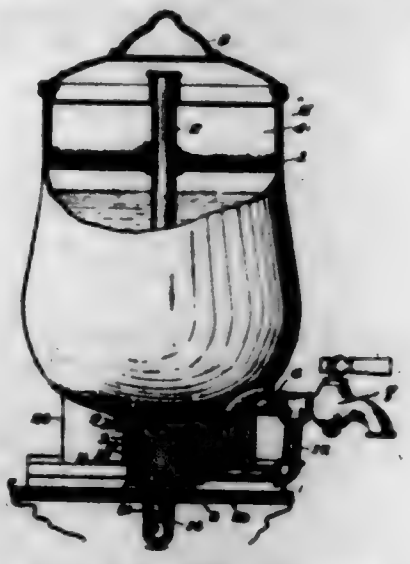
1. A portable house comprising a plurality of interchangeable sections, each composed of outer and inner wall plates, spacing studs or beams, detachable means for clamping the parts of the sections together and independent means for connecting the sections together.

1,296,085. LOCK. FRANK A. JOHNSON, Danville, Ill. Filed Apr. 20, 1916. Serial No. 231,517. 9 Claims. (Cl. 70—129.)



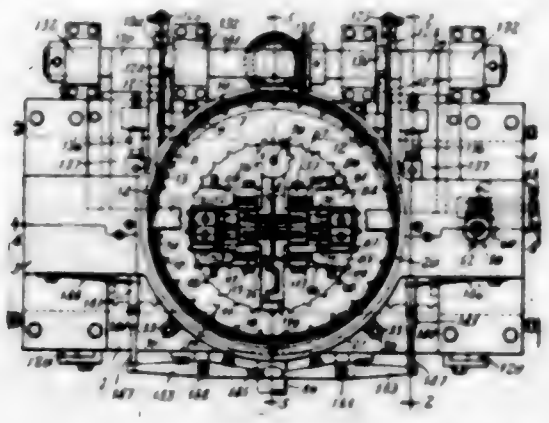
1. In a lock, a body, means operable to secure said body to and release it from a movable object, means to connect said body to and release it from an external object so as to prevent movement of said movable object with relation to said external object, a device including a handle by which it is operable to render the first and second said means incapable of being operated, and interfering means to render the said handle incapable of being operated.

1,296,086. PERCOLATOR. OLIVER L. JOHNSON, San Francisco, Cal. Filed May 9, 1917. Serial No. 167,425. 1 Claim. (Cl. 53—3.)



In combination with the exhaust manifold of an automobile engine, a socket in said manifold, a percolator, a receptacle adapted to fit in said socket and means for conducting water from the body of said percolator to said receptacle to be heated and generated into steam, and a percolator tube leading from said receptacle to the coffee receptacle in the top of said percolator.

1,296,087. MACHINE FOR FORMING NAILS, BRADS, AND THE LIKE. WILLIAM H. JOHNSON, Whitman, Mass. Filed Feb. 5, 1918. Serial No. 215,446. 15 Claims. (Cl. 10—30.)



1. A machine for forming nails, brads and the like having, in combination, a revolving member adapted to hold a strip, two sets of cutters, means for revolving said member to successively present said strip to said cutters, and means to engage the end of said strip to support the same in said member during the revolving thereof, said strip supporting means having a depression formed therein constructed and arranged to produce a limited longitudinal movement of the strip during the revolving of said member to displace a strip of predetermined length from said revolving member.

4. A machine for forming nails, brads and the like having, in combination, a revolving cylindrical member provided with a plurality of longitudinally disposed slots, each adapted to contain and guide a strip, means for supporting said strips in said slots, two sets of cutters disposed respectively at opposite sides of said revolving member, means for simultaneously moving said cutters in opposite directions, and means constructed and arranged to intermittently revolve said cylindrical member to present the strips therein to each of said sets of cutters.

13. In a nail forming machine, a strip holder including a pair of concentrically disposed shells, a series of detachable separating sections interposed between said shells to form slots adapted to hold strips, means for revolving said shells, and means for supporting said strips in said slots during the revolving of said shells.

1,296,088. FINGER ATTACHMENT FOR SIGNALING DEVICES. BUDD J. JONES, Columbus, Ohio, assignor to The Jones-Fisher Company, Columbus, Ohio, a Corporation of Ohio. Filed Apr. 12, 1916. Serial No. 90,761. 3 Claims. (Cl. 200—27.)



1. A finger attachment signaling device adapted for use in connection with the steering wheel of an automobile comprising a flexible thimble structure adapted to be slipped over and cap the forward portion of a finger, a pressure operated switch located within said thimble structure so that pressure against the finger will close said switch, and wire connections leading from said switch.

1,296,089. FLYING-MACHINE. JOHN F. KAHL, Brooklyn, N. Y. Filed June 12, 1917. Serial No. 174,182. 8 Claims. (Cl. 244—2.)

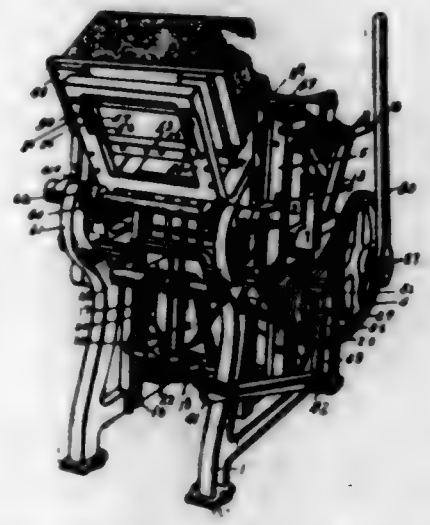
1. An aeroplane having a framework of timbers and braces forming a body portion and a plane, and a skin completely incasing the entire framework and comprising a supporting base tightly drawn upon the framework and thin sheet metal covering resting upon the said base.



3. In an aeroplane, the combination with a truss body portion, truss plane structures at the respective sides of one end of such body portion, such plane trusses curving downwardly at their outer edges, a hull located between such planes, a hull located at the rearward end of the body truss, a skin completely incasing the said truss structure throughout, a vertical rudder and a horizontal rudder at the rearward end of the body, vertical rudders at the upper sides of the planes, means connecting the forward and rearward vertical rudders to cause these to act in unison, and a propeller.

8. In an aeroplane, the combination with a truss body portion, truss plane structures at the respective sides of one end of such body portion, such plane trusses curving downwardly at their outer edges, a hull located between such planes, a hull located at the rearward end of the body truss, and a skin completely incasing the said structure throughout.

1,296,090. MACHINE FOR MAKING BLOCKS. GEORGE W. KRAMER, Peoria, Ill. Filed Feb. 28, 1918. Serial No. 80,056. 3 Claims. (Cl. 25—41.)



1. In combination in a machine of the character described, a main frame, a mold box supporting frame adapted to receive a mold, a plurality of cores movably mounted in said frame, means for projecting and retracting said cores into the mold and means for moving the block within the mold to strip the block therefrom, said stripping means being operated after the retraction of the cores from the mold, said core operating means including a lever having a gear segment secured thereto, a power shaft having a pinion thereon, adapted to mesh with said gear segment when the cores are in their projected position and to disengage said gear segment when the cores are in their retracted position, and means for moving the cores into their projected position.

2. In combination in a machine of the character described, a main frame, a mold box supporting frame adapted to receive a mold, a plurality of cores adapted to be projected and retracted from the mold, means for moving said cores including a shaft, a lever having connections with said cores, said lever having a gear segment, a pinion on the shaft adapted to mesh with the segment when the cores are in their projected position and to withdraw the cores when the shaft is operated, the pinion being adapted to be out of mesh with the segment when the cores are in their retracted position, and means for moving the cores into their projected posi-

tion, means for moving the block within the mold to strip the same, including a plurality of plungers, a shaft and a flexible connection between the shaft and the plungers, said shaft being adapted to be operated from the same source of power and said flexible connection having sufficient slack so that the cores will be completely withdrawn before the stripping means is moved.

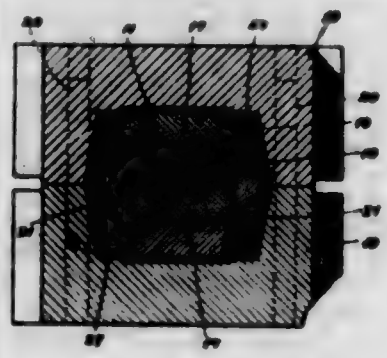
3. In combination in a machine of the character described, a main frame, a mold box supporting frame adapted to receive a mold, a plurality of cores adapted to be projected within and retracted from the mold, certain of the cores having stripping plates covering a considerable portion of the sides of the mold, means for projecting and retracting said cores and means for stripping the block from the mold.

1,296,091. VEGETABLE-CUTTER. JOSEPH S. KRIEBEL, East Greenville, Pa. Filed May 8, 1918. Serial No. 232,238. 8 Claims. (Cl. 146—7.)



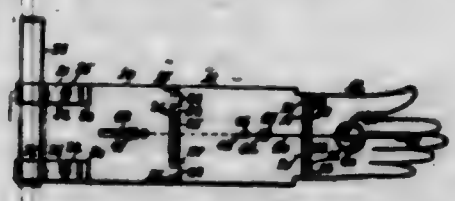
1. A vegetable cutter including with a vegetable holding box mounted to have reciprocatory movement, a double edged knife, and means to shift said knife as the box is moved to present one of the cutting edges thereof in a cutting relation.

1,296,092. BATTERY-JAR MOLD. EDWIN J. KROHOMS, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Nov. 21, 1918. Serial No. 263,499. 7 Claims. (Cl. 18—35.)



1. A vulcanizing mold for plural-compartment rubber jars comprising a series of mandrels having suitable surfaces for receiving the side-forming, bottom-forming and partition-forming sheets of stock, and an outer mold including a member movable edgewise of the partition space or spaces between the mandrels.

1,296,093. SIGNALING DEVICE FOR MOTOR-VEHICLES. PETER C. LAWSON, Boston, and LAURITS J. LAWSON, Woburn, Mass. Filed Apr. 30, 1918. Serial No. 231,709. 8 Claims. (Cl. 116—31.)



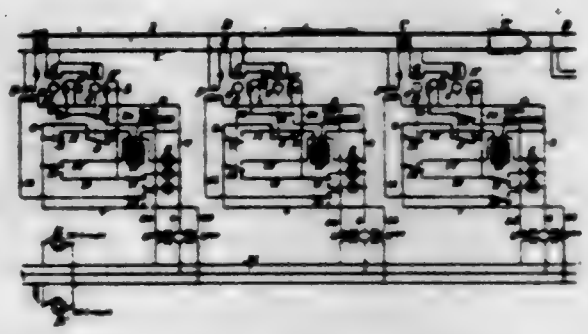
3. A signaling device of the character described, comprising a member provided with means for securing it in fixed relation to a vehicle, a second member pivoted to said first-mentioned member to form an extension thereof in one position and to be turned into another position substantially parallel with said first-mentioned member, a flexible connection for turning the pivoted member into its substantially parallel position, and a spring to turn it from said substantially parallel position into its position wherein it forms an extension of the first-mentioned member.

1,296,094. VEHICLE DIRECTION-INDICATOR AND SIGNAL. ALEXANDER LECKEY, Camden, N. J., and GEORGE W. DAYMON, Philadelphia, Pa. Filed Mar. 7, 1917. Serial No. 153,147. 2 Claims. (Cl. 116—31.)



2. In a device of the character stated in combination, a casing and face plate provided with a sight opening carried by said casing, a rotatable shaft journaled in said casing and face plate, a pointer secured to one end of the shaft and adapted to be rotated in front of said face plate, a spectacle disk having a number of openings therein secured to the shaft within the casing whereby said openings may be moved to the sight opening in the face plate, said pointer and said spectacle disk being rigidly joined and moving together, transparent members of different colors disposed across the openings in the spectacle disk and a source of light within the casing disposed so as to project rays of light therefrom through the sight opening in the face plate.

1,296,095. RAILWAY SIGNALING. LLOYD V. LEWIS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed July 25, 1917. Serial No. 182,651. 8 Claims. (Cl. 246—34.)

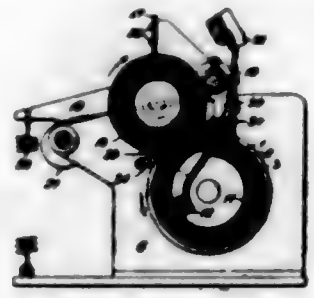


8. A railway signaling system comprising a plurality of track sections, two relays for each section each comprising a track winding and a local winding, each track winding receiving energy from the rails of the corresponding section, means for supplying the local winding of one relay for each section with alternating current of one frequency, and the local winding of the other relay for each section with alternating current of another frequency, means for supplying alternating current of either of said frequencies to the rails of each section, and signals for the sections controlled by said relays.

1,296,096. GUM-STRAINING MACHINE. EDWARD H. LORENZ and WILLIAM LAW, Hartford, Conn., assignors of six-ninths to Beech-Nut Packing Company, Canajoharie, N. Y., a Corporation of New York, and two-ninths to William A. Lorenz and one-ninth to Karl E. Peiler, Hartford, Conn. Filed Sept. 8, 1916. Serial No. 119,050. 10 Claims. (Cl. 100—47.)

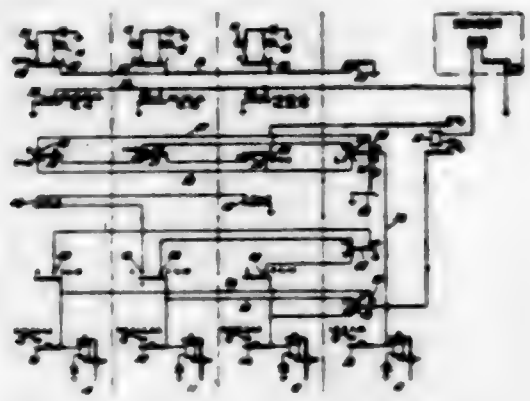
1. In a machine for straining molten gum having a rotatory perforated screen-covered hollow cylinder, mech-

anism for rotating the cylinder, means for heating said cylinder and keeping the gum molten, a roller with an elastic surface bearing upon said cylinder for picking the solid impurities from the gum and forcing the purified



gum through the screen and perforations of the cylinder, mechanism for rotating the roller, and an adjustable gage extending toward the opening between the cylinder and roller for regulating the flow of gum therethrough.

1,296,097. ELECTRIC SIGNALING SYSTEM. ALBAN E. LUNDELL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 22, 1915. Serial No. 68,208. 7 Claims. (Cl. 177—338.)

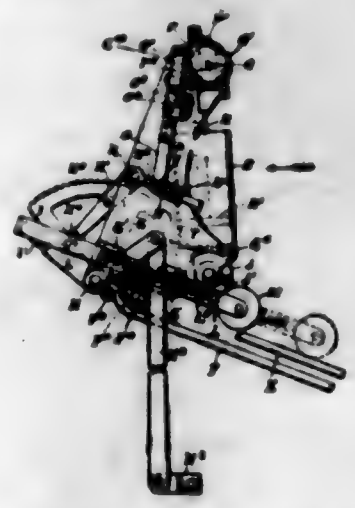


1. In combination, a plurality of electromagnetic mechanisms, a device for controlling the operation of said mechanisms normally disconnected therefrom, means for successively connecting said mechanisms with said device, a controlling circuit for one of said mechanisms, contacts in said circuit controlled by a mechanism, and contacts in said circuit controlled by another mechanism arranged to be connected to said device subsequent to the connection of said one of said mechanisms.

1,296,098. INKING MECHANISM FOR PRINTING-PRESSES. JOHN MCCLURE, Glenside, Pa. Filed Mar. 15, 1918. Serial No. 754,539. 22 Claims. (Cl. 101—341.)

1. An inking appliance for a printing press comprising a readily removable container closed at one end except for one or more restricted discharge orifices and formed at its closed end with an external shallow rounded groove into which said orifices discharge, a piston movable in said container to thereby expel ink from the container through said orifices, a rigid rotatable roll against which the ink expelled is discharged, and means for holding said container and roll in such relative positions that the roll enters said groove but is separated from the wall of the latter by a film-like space extending circumferentially about said roll at each side of said orifices for a distance of which the width of said orifices is but a small fraction.

3. An inking appliance for a printing press comprising a container closed at one end except for a plurality of restricted discharge orifices and provided at its closed end with an external rib through which said orifices extend, a frame in which said container is mounted and formed with a shoulder against which said rib engages to thereby fix the relative positions of the container and frame and a roll journaled in said frame in position to receive ink discharged through the different discharge orifices and mechanism for expelling ink through said orifices against said roll.



7. An inking appliance for a printing press comprising in combination a frame, a receptacle removably mounted in said frame and formed with a discharge orifice, and means for expelling ink from said receptacle comprising a plunger mounted in and axially movable in said frame and gearing mounted on said frame for slowly advancing said plunger in normal operation including parts readily separable to permit a more rapid axial adjustment of said plunger in said frame on the insertion or removal of said receptacle.

14. An inking appliance for a printing press to supply ink to the ink bed thereof, comprising a frame adapted to be attached to a part of the printing press, a roll journaled in said frame, means for mounting an ink receptacle in said frame, a transfer roll connected to said frame but movable with respect thereto back and forth between one position in which it contacts with the first mentioned roll and is out of contact with said ink bed, and a second position in which it contacts with the latter and is out of contact with the first mentioned roll, and mechanism adapted to be connected to and actuated by a movable part of the printing press and comprising means for moving said transfer roll from one of said positions to the other, and for rotating the first mentioned roll, and means for expelling ink from said receptacle against said roll, said last mentioned means including a yieldable element serving as a safety device to prevent injury to the appliance when the ink is all expelled from said container.

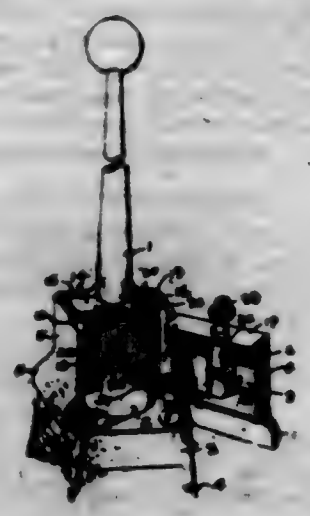
1,296,099. GEAR-SHIFT LOCK. ARTHUR E. MCDONALD, San Francisco, Cal. Filed Feb. 12, 1918. Serial No. 216,850. 4 Claims. (Cl. 70—28.)

1. In combination with a fixed part and a movable part, a lock including a casing movable on said movable part and engaging said fixed part; a lug on said movable part; a latch pivoted in said casing and held normally out of engagement with said lug; and means for engaging said latch and lug and locking them in engagement.

2. In combination with a fixed part and a movable part, a lock including a casing movable on said movable part and engaging said fixed part; a lug on said movable part; a latch pivoted in said casing and held normally out of engagement with said lug; means for engaging said latch and lug and locking them in engagement; and springs interposed between said casing and said lug normally holding said casing in the inoperative position.

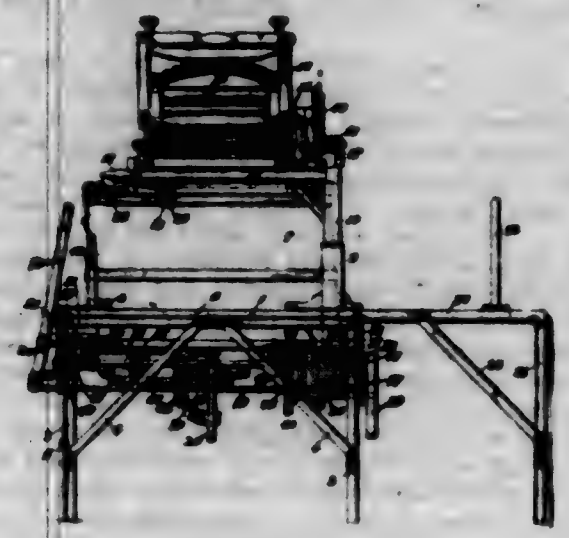
3. In combination with a fixed part and a movable part a lock including a casing movable on said movable part and engaging said fixed part; a lug on said movable part; a latch pivoted in said casing and held normally

ort of engagement with said lug; and means for engaging said latch and lug and locking them in engagement; springs interposed between said casing and said lug and normally holding said casing in the inoperative position; and means for limiting the action of said springs.



4. In combination with a pivotal gear shift lever and its fixed fulcrum part; a lock including a casing longitudinally slidable on said lever; a lug fixed on said lever; a latch pivoted in said casing and engaging said lug; means for locking said latch; and springs interposed between said casing and said lug.

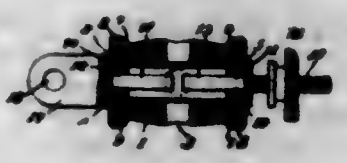
1,296,100. DRIVING MECHANISM. CHARLES J. MARTH, St. Louis, Mo., assignor to Wayne Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 12, 1915. Serial No. 46,490. 8 Claims. (Cl. 74—60.)



1. Mechanism of the character described, comprising a portable support, a work support mounted on said portable support, a guide supported by said work support, an axially movable shaft mounted vertically in said guide, a horizontal drive shaft supported by said portable support, a driven shaft disposed horizontally in said portable support, mechanism for driving said driven shaft at reduced speed from said drive shaft, and mechanism operated by said driven shaft for imparting a vertical reciprocatory motion to said vertical shaft when said work support is in position on said portable support.

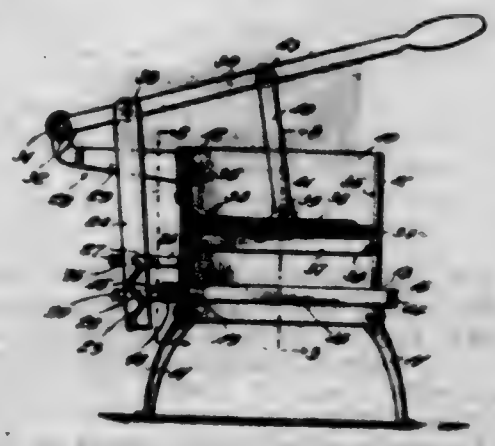
1,296,101. SPARK-PLUG INTENSIFIER. FRED G. MARSH, Detroit, Mich. Filed Feb. 8, 1918. Serial No. 216,061. 4 Claims. (Cl. 175—183.)

1. An electric-igniter intensifier comprising a cylindrical insulating body member having annular peripheral shoulders at opposite ends thereof and provided with an axial bore therethrough and a radial slight opening intersecting said bore intermediate said ends, a transparent member abridging said opening within said bore, a cap for each end of said body member having a bendable flange for engagement with the shoulder thereof and pro-



vided with a hub portion extending into the bore of said body member, and sparking electrodes respectively anchored in said caps and extending into said bore in spaced axial alinement adjacent said opening.

1,296,102. MACHINE FOR CUTTING OR SLICING FOOD PRODUCTS. JOHN B. MILLER, Detroit, Mich. Filed May 31, 1918. Serial No. 237,581. 5 Claims. (Cl. 146—7.)



1. Apparatus of the character described, comprising a casing, an approximately horizontal reciprocatory cutting device arranged within the lower portion of the casing, a vertically movable plunger adapted to operate within the upper portion of the casing, a vertically swinging lever pivotally connected with the casing, a link pivoted to the lever between its ends and pivoted to the plunger, a pitman pivotally connected with the lever between its ends and provided near its lower end with a cam slot, and a pin connected with the reciprocatory cutting device and operating within the cam slot.

2. In apparatus of the character described, a casing, a reciprocatory cutting device operating within the casing, said device including transverse bars and spaced blades connecting the bars, a second reciprocatory cutting device including transverse bars adapted to be arranged upon the first named transverse bars and to be secured thereto and spaced blades secured to the second named transverse bars and adapted for arrangement between the first named blades, and means for effecting a reciprocatory movement of the combined cutting devices.

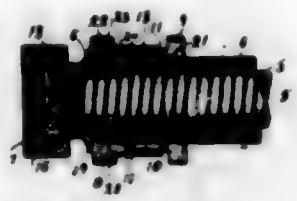
3. In apparatus of the character described, a casing, a reciprocatory cutting device operating within the casing, said device including transverse bars and spaced parallel blades connected therewith and projecting above the bars, a second reciprocatory cutting device including transverse bars adapted to be arranged upon the first named transverse bars and having openings formed therein, said second cutting device further comprising spaced parallel blades secured to the second named transverse bars and projecting downwardly below the same and adapted for arrangement between the first named blades, pins secured to the first named transverse bars and adapted to enter the openings in the second named bars, a plunger mounted within the casing, and means to move the plunger and the reciprocatory cutting devices.

4. In apparatus of the character described, a casing, a reciprocatory cutting device arranged within the casing, a plunger operating within the casing to force material toward the reciprocatory cutting device, a pivoted lever

having connection with the plunger to move it, a pitman connected with the lever to be moved thereby and provided with a cam slot, and a pin connected with the reciprocatory cutting device and operating within the cam slot.

5. In apparatus of the character described, a casing, a reciprocatory cutting device arranged within the casing, a plunger operating within the casing to force material toward the reciprocatory cutting device, a lever having pivotal connection with the casing, a link pivoted to the lever between the ends of the lever and having pivotal connection with the plunger, a pitman pivotally connected with the lever between the ends of the lever and provided with a cam slot, a guide for the pitman secured to the casing, and a pin connected with the reciprocatory cutting device and operating within the cam slot.

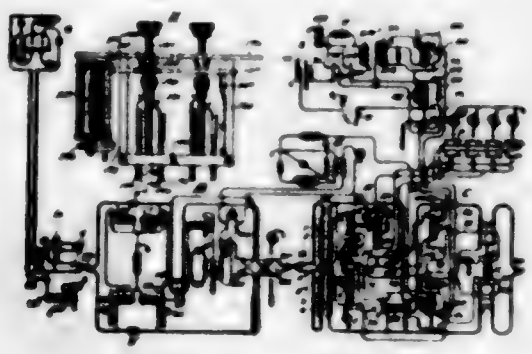
1,296,108. TUBE-COUPLING. KARL O. MUEHLBERG, Manitowoc, Wis. Filed May 11, 1917. Serial No. 168,003. 5 Claims. (Cl. 285—71.)



1. A tube coupling, comprising an outer tubular member having a bore with a plurality of tapered portions, one of said portions being of less diameter than the other, a split annular clamping member adapted to be positioned within the outer member and engage the tapered portion of larger diameter, said tapered portion of smaller diameter adapted to be engaged by the end of the tube upon which the coupling is mounted, and an inner tubular member adapted to enter and have a threaded engagement with the outer member and engage and force the split member to a clamping contracted position.

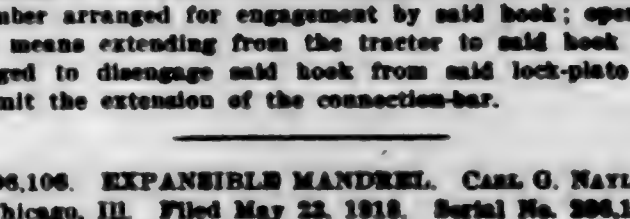
2. A tube coupling, comprising an outer tubular member having a bore with two spaced tapered portions of different diameters, a split annular clamping member adapted to be positioned within the outer member and engage the tapered portion of larger diameter, said tapered portion of smaller diameter adapted to be engaged by the end of the tube upon which the coupling is mounted, and an inner tubular member adapted to enter and have a threaded engagement with the outer member and engage and force the split member to a clamping contracted position and into the portion of the bore of the outer member between the tapered portions.

1,296,104. SEMI-AUTOMATIC TELEPHONE SYSTEM. HARRY W. MUNNELL, Indianapolis, Ind., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 25, 1915. Serial No. 52,542. 23 Claims. (Cl. 179—27.)



1. A telephone system comprising subscribers' lines divided into groups, an automatic switch having access to the lines in one of said groups of lines, a step-by-step motor magnet for said automatic switch, link circuits, an operator's calling device associated with said link circuits, keys for said calling device equal in number to the number of subscribers' lines in one of said groups of lines, means for operatively connecting said calling device with said automatic switch through the medium of one of said link circuits, and impulse generating means included in said calling device and controlled by one of said keys for transmitting impulses to the said step-by-step motor magnet of said automatic switch to extend a connection to a called one of said lines.

1,296,105. CONNECTION-BAR. FRANK MAYRATH, Kealey Springs, Saskatchewan, Canada. Filed Dec. 7, 1916. Serial No. 135,582. 2 Claims. (Cl. 21—187.)



1. In a connection-bar extending from a separator to a conveying tractor, the combination of a pair of adjacent longitudinally slidable members, the lower of said members having pivotal connection for said tractor and the upper of said members having rigid connection with said separator; a U-shaped guide-strap attached to each member and movable therewith and constantly embracing the other member; a pair of pivotally mounted belt-supporting bars on said upper member; means for limiting the telescoping movement of said members; automatic locking means for said members; and operating means extending from the tractor arranged to unlock said locking means.

2. In a connection-bar extending from a separator to a conveying tractor, the combination of a pair of adjacent longitudinally slidable members, the lower of said members having pivotal connection with said tractor and the upper of said members having rigid connection with said separator; a pair of pivotally mounted belt-supporting bars on said upper member; means for limiting the telescoping movement of said members; a U-shaped guide-strap attached to each member and movable therewith and constantly embracing the other member; automatic locking means for said members including a resiliently retained hook pivotally mounted on the lower slidable member, a lock-plate on the forward end of the upper member arranged for engagement by said hook; operating means extending from the tractor to said hook arranged to disengage said hook from said lock-plate to permit the extension of the connection-bar.

1,296,106. EXPANSIBLE MANDREL. CARL G. NAYLOR, Chicago, Ill. Filed May 22, 1918. Serial No. 236,114. 7 Claims. (Cl. 113—35.)



1. An expansible mandrel comprising a driving shaft member; a driven, longitudinally split sleeve member thereon and means within the separated edges of the sleeve for enlarging the cleavage to expand the sleeve, operable by the rotation of the shaft.

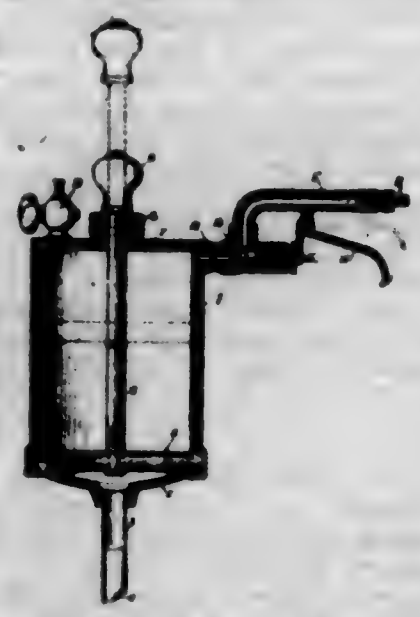
2. An expansible mandrel comprising a driving shaft member; a driven, longitudinally split sleeve member thereon, and means within the separated edges of the sleeve for enlarging the cleavage to expand the sleeve, automatically operable by the rotary displacement of the driving and driven members.

3. An expansible mandrel comprising a driving shaft member; a driven, longitudinally split sleeve member thereon, means between the separated edges of the sleeve for enlarging the cleavage to expand the sleeve, operable by the relative rotary displacement of the sleeve, and means to positively limit the extent of expansion of said sleeve.

4. A composite mandrel comprising a series of transversely separated mandrel sections, each section provided with an expansible sleeve; a shaft upon which said sleeves are mounted; means automatically operable by the relative rotary displacement of said shaft and sleeves to expand the sleeves.

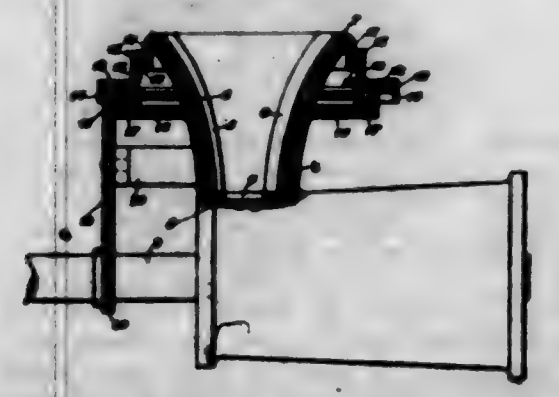
5. A composite mandrel comprising a series of transversely separated independently expansible mandrel sections, each section provided with an expansible sleeve; a shaft upon which said sleeves are mounted; means automatically operable by the relative rotary displacement of said shaft and sleeve to expand the sleeve and means to positively limit the expansion of one or more sleeves.

1,296,107. CALKING AND GLAZING DEVICE. OSLEY R. OAKLEY, Decatur, Ill. Filed June 18, 1917. Serial No. 175,405. 4 Claims. (Cl. 18—2.5.)



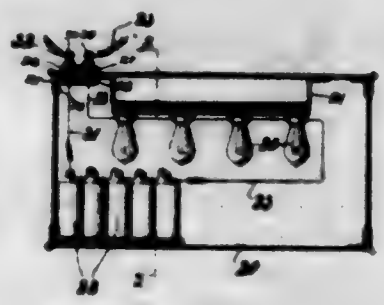
1. A portable and manually operated calking and glazing device including in combination a cylindrical body having a removable cap and nozzle provided on one end, a plunger mounted to move in said body, said plunger having a rod extending through the other end of the cylindrical body, a handle member mounted on the last mentioned end of the cylindrical body, and having a valve controlled passage therethrough leading into said cylindrical body so as to admit fluid pressure in the rear of said plunger.

1,296,108. MEAT-GRINDER. RICHARD OEHLER, St. Louis, Mo. Filed Aug. 12, 1918. Serial No. 249,453. 5 Claims. (Cl. 17—20.)



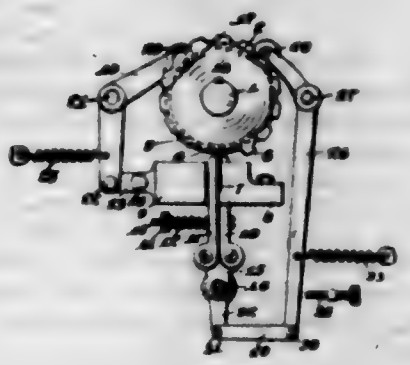
1. A meat grinder, comprising a grinding chamber, a hopper supported by the chamber and having an opening communicating with the interior of the chamber, a bowl revolubly supported within the hopper, a shaft supported by the chamber, and gearing for revolving said hopper from said shaft.

1,296,109. SIGNAL-LAMP CASING. JAMES OHRT, Paxton, Ill. Filed Mar. 2, 1917. Serial No. 151,874. 1 Claim. (Cl. 240—11.)



In a device such as described, a casing, a bracket secured to the upper side of the casing spaced therefrom, one end of the bracket extending to the side wall of the casing in engagement with the upper wall, said bracket and upper wall having alining openings therein, insulated blocks having recesses therein engaging opposite sides of the casing and bracket, sleeves of insulating material passing through the openings in the casing and bracket, with their ends in the recesses in the blocks, lamps carried by the bracket, batteries within the casing, a conductor connecting the lamps and batteries, and conductors leading from the batteries and lamps through the sleeves, as and for the purposes set forth.

1,296,110. SAW-CUTTING MACHINE. PERRY OKEY, Columbus, Ohio. Filed Mar. 5, 1918. Serial No. 220,423. 6 Claims. (Cl. 76—35.)



1. A machine of the character described comprising a rotary cutter provided with a plurality of teeth and an open space, means for holding a metal blade in the path of movement of said teeth, and means for advancing said blade a predetermined distance during the time of travel of said open space over said blade.

5. In a saw cutting machine, a rotary cutter provided with a plurality of teeth gradually increasing in depth from a small incomplete tooth to a full sized complete V shaped tooth in cross section, said teeth being cut straight across their tops until their normal V shaped depth is reached, said cutter also having an open space replacing a plurality of teeth between the shortest and deepest tooth.

1,296,111. GAME. HANS OLSON, Hibbing, Minn. Filed Oct. 5, 1918. Serial No. 256,958. 3 Claims. (Cl. 46—62.)

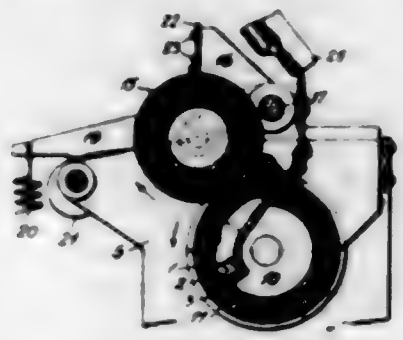
1. A game comprising an elongated strip of rigid material, a segmental shaped space marked upon one end of the strip forming a goal, the straight side of which is formed by the end of the strip, a plurality of spaces

marked upon the strip and numbered consecutively from the goal toward the other end of the strip, a free disk or



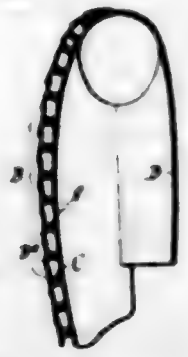
coin to be played with by placing it within the goal with one edge extending over the end of the strip and a tool for striking the disk or coin being played with.

1,296,112. GUM-STRAINER. KARL E. PEILER, Hartford, Conn., assignor of one-ninth to himself, two-ninths to William A. Lorenz, Hartford, Conn., and six-ninths to Beech-Nut Packing Company, Canajoharie, N. Y., a Corporation of New York. Filed Sept. 8, 1916. Serial No. 119,034. 12 Claims. (Cl. 100—47.)



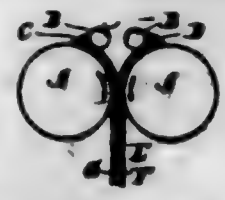
1. A machine for straining molten gum having a hollow cylinder with a perforated peripheral wall, a screen covering the peripheral surface of the cylinder, mechanism for rotating the screen-covered cylinder, a scraper fixed in and bearing against the inner wall of the cylinder for removing the molten gum therefrom, a roller with an elastic surface bearing against the screen-covered surface of the cylinder for picking the solid impurities from the gum and forcing the purified gum through the screen and perforations of the cylinder, mechanism for rotating said roller, and means for cleaning the impurities picked from the gum from the surface of said roller.

1,296,113. ARMOR. JACQUES M. PERLMAN, New York, N. Y. Filed Aug. 22, 1918. Serial No. 250,965. 1 Claim. (Cl. 89—36.)



A shield or breast plate comprising a single integral projectile-resisting inner plate A and an outer plate B shaped to cover a man's breast and springs arranged to hold said plates at a distance from each other so that the outer plate may yield and gradually retard the speed of the projectile striking it, said outer plate B being in independent sections capable of yielding separately without substantial resistance from the adjacent sections; whereby a projectile striking the outer plate will be retarded thereby and passing through the outer plate will be practically stopped by the inner plate.

1,296,114. COLORED COMPOSITION SHEET. Ray P. Pumay, Montclair, N. J., assignor to The Barrett Company, a Corporation of West Virginia. Filed June 22, 1918. Serial No. 35,582. 11 Claims. (Cl. 154—51.)



1. As a new article of manufacture the combination of a plurality of pre-formed sheets of bituminous composition united face to face, at least one of which is artificially colored.

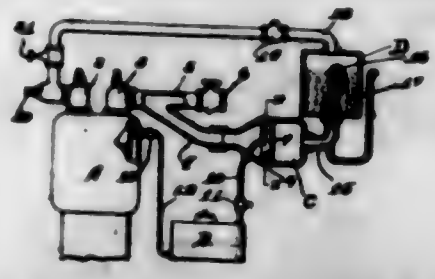
7. As a new article of manufacture the combination of a plurality of sheets of bituminous composition united face to face to form a composite sheet of varying thickness in cross section, at least one of said sheets being artificially colored, of less width than the composite sheet and constituting a longitudinal colored band extending along the face and lying in width across the thicker portion of the composite sheet.

9. As a new article of manufacture the combination of a plurality of preformed sheets of bituminous composition, non-liquefiable by heat, united face to face, at least one of which is artificially colored.

10. As a new article of manufacture the combination of a plurality of preformed sheets united face to face, one of said sheets being made substantially of paper fibers and asphalt and another of said sheets being made of an artificially colored waterproofing composition.

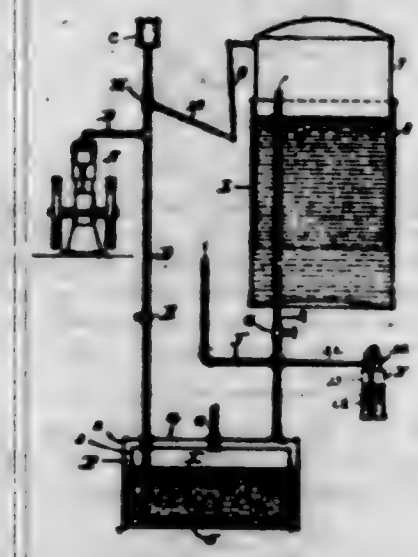
11. As a new article of manufacture for roofing and the like, the combination of a plurality of pre-formed sheets adhering face to face, of which one is an uncolored fibrous bituminous sheet and another is of artificially colored waterproofing composition, non-liquefiable by heat, some portions of this colored sheet being of one color and other portions of another color.

1,296,115. PROCESS OF AND APPARATUS FOR GENERATING GAS. FRANK PYRTUM, Minneapolis, Minn., assignor of one-fourth to George R. Hovenden and one-fourth to Andrew Edward Erickson, Minneapolis, Minn. Filed June 11, 1917. Serial No. 174,097. 1 Claim. (Cl. 123—119.)



Apparatus for generating gas, comprising, in combination, an internal combustion engine having valved fuel ingress and valved exhaust openings, a reservoir for holding heavy fuel oil connected by a passage with the combustion chamber of said engine to force the oil out of said reservoir, a gas generating chamber connected with said reservoir and with the exhaust outlet of said engine whereby oil and exhaust gases are formed into a vapor, said gas generating chamber being also connected by a duct with the valved ingress passage of said engine, and a valved air inlet arranged to admit and mix air with the vapor conducted by said duct into the engine.

1,296,116. APPARATUS FOR GENERATING GAS. FRANK PFEIFER, Minneapolis, Minn., assignor to Frank Pfeifer, L. A. Hurd, and Albert Anderson, trustees, doing business under the name of Exhaust Heat, Light & Power Company. Filed June 16, 1917. Serial No. 175,222. 1 Claim. (Cl. 123—119.)



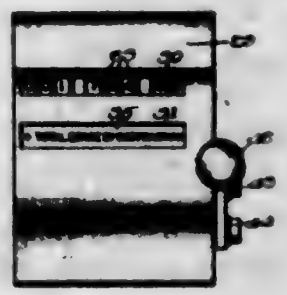
Apparatus of the class set forth, comprising, in combination with an internal combustion engine having a duct leading therefrom for exhaust gases, a muffler into which said duct empties, a valve controlling the admission of gas into said muffler, a carbureter having spaced walls forming an inner liquid holding chamber and an outer gas holding chamber, said chambers being connected above the level of liquid in said inner chamber, said inner chamber being also connected with a branch of said duct to commingle the products of combustion from said engine with hydrocarbon fuel independent of said valve, a gasometer having a passage for gas connected with the inner chamber of said carbureter and a movable pressure-element for controlling the pressure of gas therein, a service supply duct from the outer chamber of said carbureter and means connecting the valve in said exhaust duct and the movable element of said gasometer for automatically controlling the supply of exhaust gases from the engine to the inner chamber of said carbureter to equalize the pressure of gas in said service supply duct.

1,296,117. FOLDER DEVICE. FRANK M. PIERCE and WILLIAM H. PIERCE, Chicago, Ill., assignors to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Original application filed Aug. 7, 1911, Serial No. 642,695. Divided and this application filed Jan. 2, 1918. Serial No. 208. 22 Claims. (Cl. 93—2.)



1. In a wrapping machine of the class described, the combination of a tension device comprising spring impelled contacting members, and a folding device pivotally connected near one of said members.

1,296,118. ALGEBRAIC TOTALIZER. ARTHUR F. POOLE, Chicago, Ill., assignor, by mesne assignments, to The Wahl Company, Wilmington, Del., a Corporation. Filed Feb. 27, 1913. Serial No. 751,082. 15 Claims. (Cl. 235—59.)



1. In a calculating machine the combination of: a totaliser adapted to exhibit either of two numbers, a designating device shiftable to designate either number, and manual means to shift said designating device and simultaneously add a predetermined amount to the number designated.

2. In a calculating machine the combination of: a totaliser adapted to exhibit either of two numbers, a master mechanism adapted to insert numbers in said totalisers digit by digit in either direction, a designating device shiftable to designate either number, and manual means operating independently of said master mechanism to shift said designating device and simultaneously add a predetermined amount to the number designated.

13. In a totaliser, a casing having two sight openings, a number adapted to be read through one of said openings, a second number adapted to be read through the second of said openings, two alphabetical legends, and means having two alternate positions and adapted when in one position to exhibit a number at one sight opening, and an alphabetical legend covering the other sight opening, and when in its alternate position to exhibit a number at said second opening, and an alphabetical legend covering said first sight opening.

14. In a computing machine, a casing, computing mechanism therein adapted to compute positive and negative numbers, said casing being formed with two sight openings to exhibit these numbers, and means permitting one of said numbers to be read while hiding the other, and bearing an exposed legend constituting an instruction as to the operation of the machine.

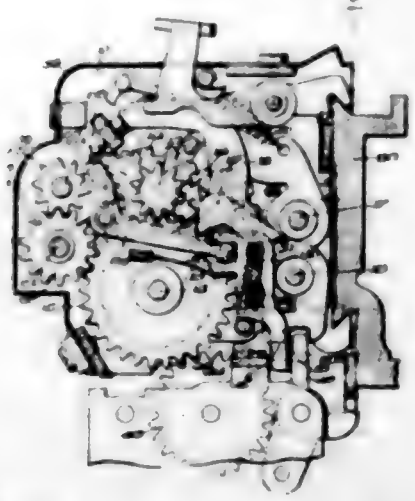
15. In a machine of the character described, the combination with a totaliser adapted to exhibit positive and negative totals, and actuating and clearing mechanism therefor, of a casing having a sight opening through which totals may be displayed, and a shutter for said sight opening bearing a legend extending over and adapted to be seen at approximately the same position as the totals through said sight opening, when the numbers are hidden by the shutter, to constitute an instruction with reference to the machine.

1,296,119. CALCULATING-MACHINE. ARTHUR F. POOLE, Chicago, Ill., assignor, by mesne assignments, to The Wahl Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 25, 1913. Serial No. 802,862. 6 Claims. (Cl. 235—59.)

1. In a recording calculating machine the combination of, a totaliser including a set of gears, actuating mechanism therefor including a universal member adapted to be moved each time said actuating mechanism operates said totaliser, and a sliding plate controlled by said totalizer gears, adapted to prevent the movement of said universal member.

2. In a recording calculating machine the combination of, a totaliser including a set of gears, actuating mechanism therefor including a universal member adapted to be moved each time said actuating mechanism operates said totaliser, a lock controlled by said totalizer gears and

adapted to prevent the movement of said universal member and a spring acting on said lock.



3. In a totaliser the combination of, a set of numeral wheels, a comb adapted to engage said numeral wheels, a lock whose position is controlled by said numeral wheels and a spring engaging said lock.

4. In a recording calculating machine the combination of, a totaliser including a set of gears, actuating mechanism therefor including a universal member adapted to be moved each time said actuating mechanism operates said totaliser, an element rigid with the frame of the machine, and a lock controlled by said totaliser gears, and adapted to contact with said universal member and said rigid element.

5. In a recording calculating machine the combination of, a totaliser including a set of gears, means for printing a characteristic mark, a dog actuated coincidentally with the actuation of said characteristic printing means, an element rigid with the frame of the machine and a lock controlled by said totaliser gears and adapted to contact simultaneously with said dog and said rigid element.

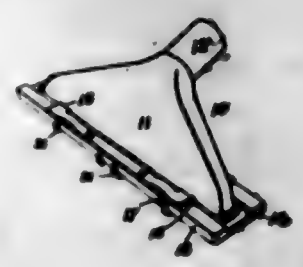
1,296,120. CORN-HUSKING IMPLEMENT. GEORGE W. RAY, Niagara Falls, N. Y. Filed Nov. 12, 1918. Serial No. 262,166. 2 Claims. (Cl. 130—4.)



1. A corn husker having a handle in the form of a wire loop provided with an extension beyond one end thereof provided with a husking hook, a pad disposed against one side of the handle, a strap having one end thereof associated with the pad, said pad having openings adjacent one another to receive portions of the wire loop, and also having slits through which the said strap is extended at one end, and said strap having openings adjacent its opposite free end for the reception of the said extension of the handle carrying the husking hook.

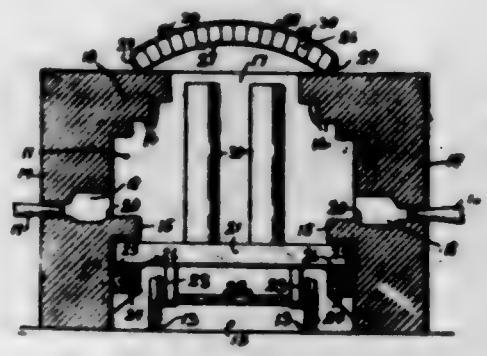
1,296,121. SUCTION-CLEANER. WILLIAM W. ROSENFIELD, New York, N. Y. Filed Feb. 4, 1913. Serial No. 746,110. 6 Claims. (Cl. 15—60.)

1. A suction cleaning nozzle having its running face formed by a plate having an intake slot communicating with a suction passage and provided on its under side with a plurality of spaced ribs extending transversely to the intake slot and each having a lower friction surface, the passages between the ribs being of substantially greater width than the ribs.



6. A detachable nozzle plate having an intake slot to communicate with the suction passage and provided on its under side with a plurality of spaced diagonally disposed ribs each having a lower friction surface and ending short of the edge of the slot, the passages between the ribs being of substantially greater width than the ribs.

1,296,122. MOLD-HEATING FURNACE. JACOB M. ROTH, Pittsburgh, Pa. Filed May 14, 1917. Serial No. 168,465. 7 Claims. (Cl. 263—43.)



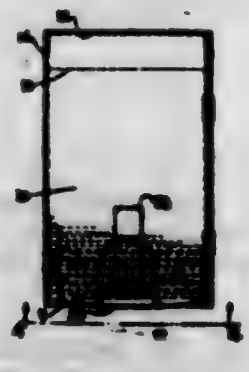
1. A furnace of the character described having oppositely disposed side walls and having inwardly extending burner passages, each of said walls below the burner passages being formed with a baffle wall extending inward from the inner face of the corresponding side walls and defining below the baffle walls a buggy chamber, a buggy shiftable longitudinally through the buggy chamber and having a body formed of refractory material, the body having a width greater than the distance between the adjacent ends of the baffle walls and extending transverse between the inner ends of the baffle walls and in contiguity therewith, troughs mounted upon the side walls of the buggy chamber and extending inward therefrom below and parallel to the baffle walls and filled with granular refractory material, and downwardly extending metallic sealing flanges attached to the under face of the buggy body and inward of the lateral edges of the buggy body and extending downward into said troughs.

4. A furnace for heating objects having a heating chamber for containing the body to be heated, the chamber having oppositely disposed heat radiating walls extending vertically upward and then upward and inward toward the top of the chamber, whereby to increase the intensity of the heat in the upper portion of the chamber and bring the radiating surfaces of the walls nearer to the surface of the object being heated, said side walls being formed with combustion chambers, means for directing a heating blast into said combustion chambers at right angles to the plane of the inner walls and against said inner walls, the inner walls of the combustion chambers being provided with openings leading into the interior of the furnace and disposed in staggered relation to the blast.

7. A furnace for heating objects having a heating chamber for containing a body to be heated and having oppositely disposed heat radiating walls, side walls extending vertically for a predetermined height and then extending inward and upward in a series of stepped heat radiating surfaces, whereby to increase the intensity of the heat in

the upper portion of the heat radiating chamber and bring the radiating surfaces of the wall nearer to the object, each of said walls being formed with a combustion chamber extending the full height of the heating chamber and the length of said heating chamber, the outer walls of the combustion chambers being formed with inwardly flaring recesses, blast pipes entering the outer ends of said recesses and connected to a source of gas and a source of air, and cold air blast pipes passing through the furnace walls and discharging adjacent the lower end of the heating chamber.

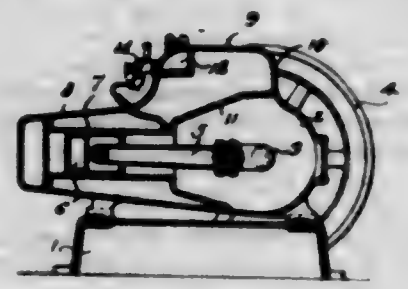
1,296,122. MATCH-BOX. LUDWIG SAKA, Chicago, Ill. Filed Feb. 16, 1917. Serial No. 148,901. 6 Claims. (Cl. 206—38.)



2. A box having a converging end with a restricted discharge opening and formed with one of the walls thereof having a portion bent on an arc and extending toward and normally resiliently engaging the central portion of an opposite wall, and side walls retaining said bent portion.

5. A box comprising a converging end portion formed with a restricted discharge opening and with the bottom wall thereof having an inclined portion bent about an arc and extending toward and resiliently engaging the top wall, side walls having triangular over-lapping portions for retaining said inclined bottom portion, an opening in said top wall adjacent the discharge end, an extension on said inclined portion having a form coinciding with and adapted to cover said opening in the top wall.

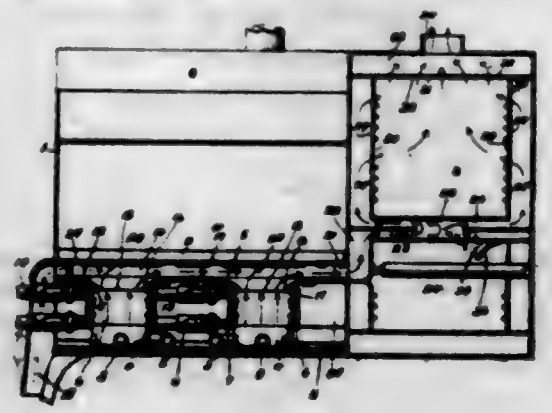
1,296,124. OIL-RESERVOIR FOR INTERNAL-COMBUSTION ENGINES. WESLEY W. SCHUTTLER, Springfield, Ohio, assignor to The Foos Gas Engine Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 24, 1917. Serial No. 198,247. 4 Claims. (Cl. 123—173.)



1. In an internal combustion engine, the combination, with a cylinder and its water jacket, of a water reservoir communicating with said jacket, and an integrally formed oil reservoir located in said water reservoir.

1,296,125. STOVE. JAMES G. SCOTT, Washington, D. C. Filed Mar. 29, 1917. Serial No. 158,288. 4 Claims. (Cl. 126—39.)

1. A stove of the character described having an upper and a lower compartment, a burner disposed in the lower compartment, a water back located above the burner and surrounding the flame of the burner, a partition for dividing the stove into the said upper and lower compartments, the said water back extending to a point adjacent the said partition, the said partition being provided with an opening through which heat from the burner may pass into the upper compartment, the said partition in connection with the said water back providing a passage between the partition and the water back through which carbon monoxid gas may pass into the said lower compartment, an oven in communication with the said upper compartment, said upper compartment being provided with a draft flue in communication with the atmosphere to admit atmospheric air into the said upper compartment above the said partition to create a draft horizontally of said upper compartment and in the direction of and into the said oven, the said lower compartment being provided with a suitable draft opening to supply draft to the burner and a carbon monoxid flue in communication with the lower compartment to lead the noxious gas therefrom, substantially as described.



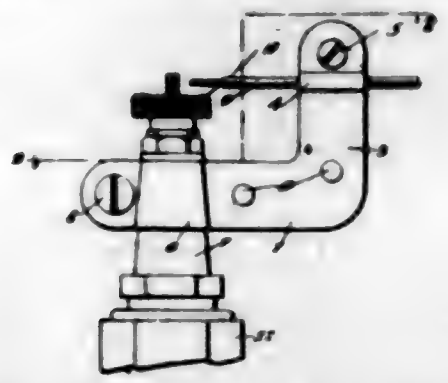
2. A stove of the character described including a casing divided into an upper and a lower compartment, a burner in the lower compartment, a water back above the burner to encompass the flame of the burner, a partition for partitioning the stove into the said upper and lower compartments, said partition being provided with an opening above the burner to allow heat from the burner to pass into the upper compartment, the said water back terminating at a point adjacent the said partition to provide an opening between the said partition and the said water back for the passage of carbon monoxid gas from the water back into the said lower compartment, an oven in communication with the said upper compartment to receive heat therefrom and an auxiliary draft port for said upper compartment in communication with the atmosphere for admitting auxiliary air into the said upper compartment and above the said partition to create a draft horizontally of said upper compartment and in the direction of and into the said oven, said lower compartment being provided with a suitable draft port for the burner, substantially as described.

3. A stove of the character described, including a casing divided into an upper and a lower compartment, a burner in the lower compartment, a water back above the burner to encompass the flame of the burner, a partition for partitioning the stove into the said upper and lower compartments, said partitions being provided with an opening above the burner to allow heat from the burner to pass into the upper compartment, the said water back terminating at a point adjacent the said partition to provide an opening between the said partition and the said water back for the passage of carbon monoxid gas from the water back into the said lower compartment, an oven in communication with the said upper compartment to receive heat therefrom and an auxiliary draft port for said upper compartment in communication with the atmosphere for admitting auxiliary air into the said upper compartment and above the said partition to create a draft horizontally of said upper compartment and in the direction of and into the said oven, substantially as described.

4. A stove of the character described comprising burners disposed under the cooking surface of the stove, said burners being disposed in relation to the cooking surface of the stove to provide a horizontal compartment between the burners and the cooking surface of the stove,

said horizontal compartment being provided with a draft opening in communication with the atmosphere and above said burners to create a draft horizontally of said horizontal compartment, and an oven in communication with said horizontal compartment to receive heat therefrom.

1,296,126. SPARK-PLUG ATTACHMENT. GUY M. SHERRILL, Eastland, Tex. Filed June 15, 1918. Serial No. 240,269. 1 Claim. (Cl. 175—183.)



The combination with a spark plug including an insulating casing, and a terminal, of a bracket adapted to encircle the casing and having an upturned extending end, a line wire clamped in the upturned end and held in spaced relation to the terminal, and means for clamping the upturned end about the wire.

1,296,127. MANDREL. LEON L. SIBLEY, Monroe Bridge, Mass. Filed July 3, 1918. Serial No. 243,219. 6 Claims. (Cl. 242—72.)



1. In combination with a shaft having an intermediate portion angular in cross section, a mandrel surrounding the intermediate portion of the shaft and split longitudinally into separable sections, each of said sections being provided adjacent its ends with an inwardly directed lug having an opening substantially conforming to the cross sectional configuration of the intermediate portion of the shaft and through which said shaft is directed, the openings in the lug being of a diameter greater than the diameter of the intermediate portion of the shaft, and expanding members carried by the shaft and coacting with the opposite ends of the mandrel.

1,296,128. BUCK EXTENSION. JOHN R. SIEBRANDT, Kansas City, Mo. Filed Apr. 12, 1917. Serial No. 161,556. 12 Claims. (Cl. 128—84.)

1. In a buck extension, a frame, a connecting member mounted to slide along said frame, means to lock said connecting member to said frame, arms extending from said connecting member, a winding drum journaled to said arms, a pinion rigid with said winding drum, a segmental gear pivoted to said arms and meshing in said gear, a graduated arm extending from said segmental gear, and a movable weight on said arm.

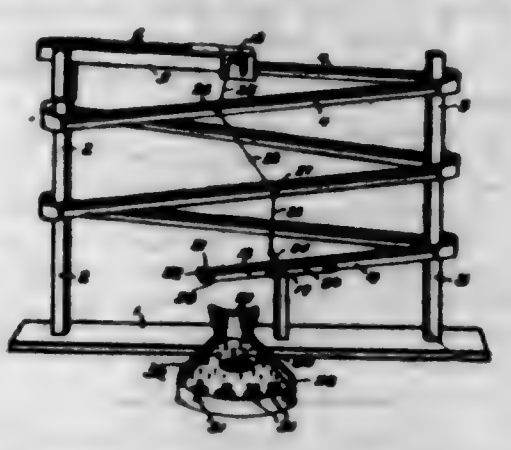
4. In buck extensions, a frame, a connecting member mounted to slide freely to and fro on said frame, means to lock said connecting member on said frame, a post mounted in said connecting member, said post arranged to be freely revolved in said connecting member, said post arranged to slide freely to and fro in said connecting member, means to lock said connecting member rigidly to said frame, means to lock said post rigidly to said connecting member and a pulley revolubly connected to said post.

12. In buck extensions, a frame, a transverse arm connected through suitable connections to said frame, a post mounted on said transverse arm, said post adjustable



throughout an orbit surrounding said arm, said post adjustable throughout an orbit surrounding said frame, and a pulley revolubly connected to said post.

1,296,129. COMBINED TOY AND GAME APPARATUS. HERBERT SIMON, Philadelphia, Pa. Filed Apr. 8, 1918. Serial No. 227,444. 4 Claims. (Cl. 46—81.)



1. An apparatus of the character described including a track; a magazine for holding balls and being positioned to permit the balls to roll upon said track, said track including a pivoted portion; checking means for said balls; and means operatively connecting said checking means and the pivoted portion of the track whereby when a ball engages said pivoted portion it overbalances the same and moves the checking means through the medium of said connecting means to release another ball from the magazine, substantially as described.

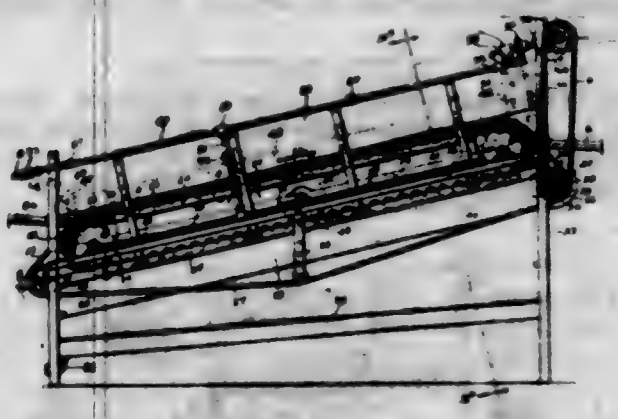
1,296,130. FRUIT-CLEANER. FRED STUBLER, Riverside, Cal. Filed May 13, 1918. Serial No. 234,052. 26 Claims. (Cl. 146—14.)

1. A fruit cleaner comprising a frame, rotary cleaning and fruit-supporting brushes mounted on said frame, means to rotate said brushes, means to move the brushes along the frame, longitudinally extending rotary brushes above the fruit-supporting brushes forming passages for the fruit, and means to rotate the longitudinal brushes.

2. A fruit cleaner comprising a frame, rotary cleaning and fruit-supporting brushes mounted on said frame, means to rotate said brushes, means to move the brushes along the frame, longitudinally extending rotary and stationary brushes alternately arranged above the fruit-supporting brushes to form passages for the fruit, and means to rotate the longitudinal rotary brushes.

3. A fruit cleaner comprising a frame, rotary cleaning and fruit-supporting brushes mounted on said frame, means to rotate said brushes, means to move the brushes

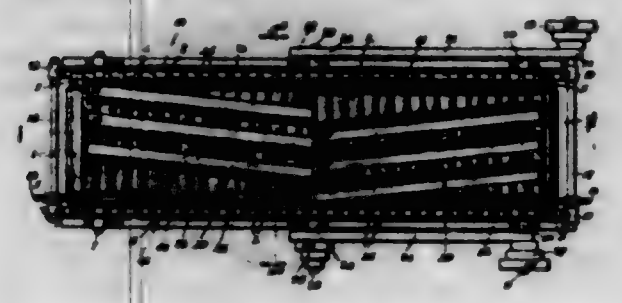
along the frame, said brushes having irregular fruit-engaging surfaces, longitudinally extending rotary brushes above the fruit-supporting brushes forming passages therebetween for the fruit, and means to rotate the longitudinal brushes.



4. A fruit cleaner comprising a frame, rotary cleaning and fruit-supporting brushes mounted on said frame, said brushes having irregular fruit-engaging surfaces, means to rotate said brushes, means to move the brushes along the frame, longitudinally extending rotary and stationary brushes alternately arranged above the fruit-supporting brushes to form passages for the fruit, and means to rotate the longitudinal rotary brushes.

5. A fruit cleaner comprising a frame, rotary cleaning and fruit-supporting brushes mounted on the frame, means to move the brushes bodily along the frame to convey the fruit, means to rotate the brushes in a direction corresponding to that of the bodily movement thereof, longitudinally extending rotary brushes above the fruit-supporting brushes forming passages for the fruit, and means to rotate the longitudinal brushes.

1,296,181. FRUIT-CLEANING MACHINE. FRED STRALEM, Riverside, Cal. Filed May 13, 1918. Serial No. 234,053. 20 Claims. (Cl. 146—14.)



1. A fruit cleaning machine comprising a frame, fruit-supporting and conveying means including rotary brushes, and brushes extending longitudinally side by side in parallel lines from one end of the machine toward one side thereof above the conveying means and forming a passage therebetween for the fruit, said last named brushes being set aslant to the longitudinal axis of the machine so as to guide the fruit toward one side of the machine.

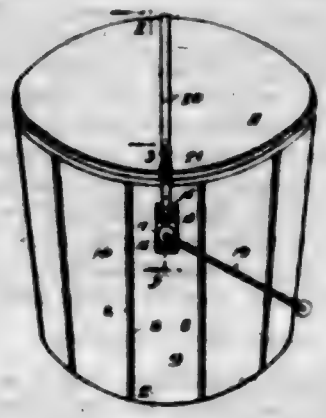
3. A fruit cleaning machine comprising a frame, rotary fruit-supporting members mounted on the frame, means to rotate the fruit-supporting members, means to move the fruit-supporting members along the frame, and brushes extending longitudinally above the fruit-supporting members and forming a passage therebetween for the fruit, said brushes being set aslant to the longitudinal axis of the machine so as to guide the fruit toward one side of the machine.

9. A fruit cleaning machine comprising a frame, rotary cleaning and fruit-supporting brushes mounted on the frame, means to rotate the brushes, means to move the brushes along the frame, and longitudinally extending brushes above the fruit-supporting brushes set aslant to the longitudinal axis of the machine so as to guide the fruit toward one side of the machine.

18. A fruit cleaning machine comprising a frame, fruit-supporting and conveying means on the frame, and brushes extending longitudinally above the conveying means and forming a passage therebetween for fruit, said brushes being transversely aslant to the vertical and set aslant to the longitudinal axis of the machine to guide the fruit toward one side of the machine.

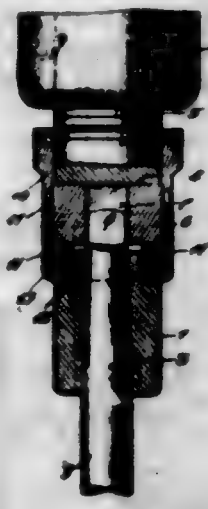
27. A fruit cleaning machine comprising a frame, rotary cleaning and fruit-supporting brushes mounted on the frame, means to rotate the brushes, means to move the brushes along the frame, and brushes extending longitudinally above the first named brushes and forming a passage therebetween for fruit and arranged in two series, said brushes being transversely aslant to the vertical and the brushes of one series being set aslant to guide the fruit toward one side of the machine and the brushes of the other series being set aslant to guide the fruit toward the opposite side of the machine.

1,296,182. PAIL. EDWIN B. STRANGE, New York, N. Y. Filed Apr. 27, 1915. Serial No. 24,180. 7 Claims. (Cl. 220—4.)



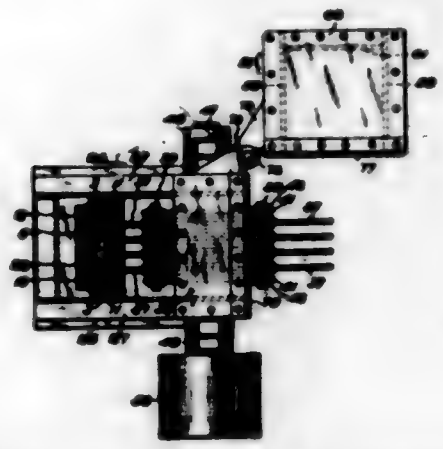
1. A pressed fibrous pulp structure having substantially vertical reinforcing ribs pressed integral with the sides thereof, some of which are substantially parallel and others diverging.

1,296,183. TOOL-HOLDER. THOMAS E. STUART, Council Bluffs, Iowa. Filed Dec. 17, 1917. Serial No. 207,537. 6 Claims. (Cl. 279—102.)



1. A tool support having a tapered bore at the end and a transverse slot across the bore a distance from the end, a member movable in the slot toward and from the bore and having a socket adapted to engage the tang of a tool for holding it against rotation, the sides of the socket being adapted to engage the shoulders of the tang to positively eject a tool from engagement with the socket and the bore when the member is moved toward the end of the support, and a spring tending to press the member in a direction away from the end of the support.

1,296,134. MILL. THOMAS J. STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, Harrison Square, Mass., a Corporation of Maine. Filed Aug. 6, 1917. Serial No. 184,570. 7 Claims. (Cl. 83—11.)



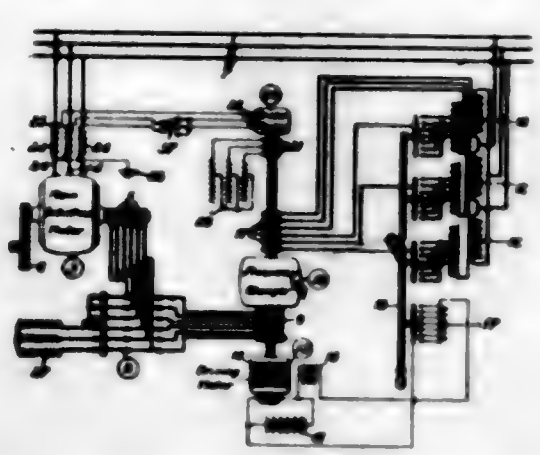
1. A crushing mill, comprising, in combination, a casing having opposed hollow parts, a crushing surface mounted in said casing, a horisontal shaft mounted in one of said parts adjacent the juncture of said parts and extending substantially parallel to said crushing surface, hammers carried by said shaft and coöperating with said crushing surface to reduce materials introduced between them, said hammers being partly inclosed by each of said parts, hinge means connecting said parts on a substantially vertical axis, that one of said parts may swing laterally to open position and give ready access to the swing hammers and crushing surface, and means detachably to secure said parts in closed relation.

1,296,135. SIGNAL-TORPEDO. WILLIAM P. SWEENEY, Minneapolis, Minn. Filed Jan. 21, 1918. Serial No. 213,051. 2 Claims. (Cl. 246—487.)



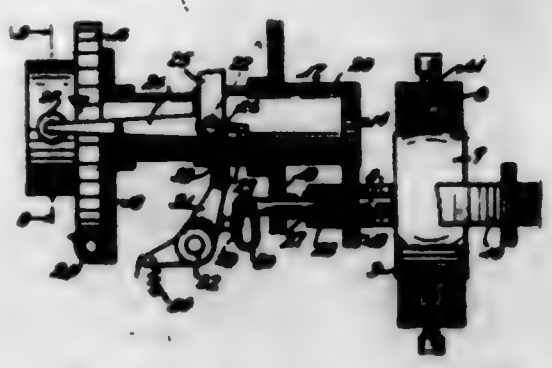
1. In a signal torpedo the combination of signaling means having a substantially flat back, and a strip of leather carried by said back for the purposes specified.

1,296,136. SPEED-CONTROL SYSTEM FOR INDUCTION-MOTORS. WILFRED SYKES, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 24, 1916. Serial No. 127,386. 4 Claims. (Cl. 172—274.)



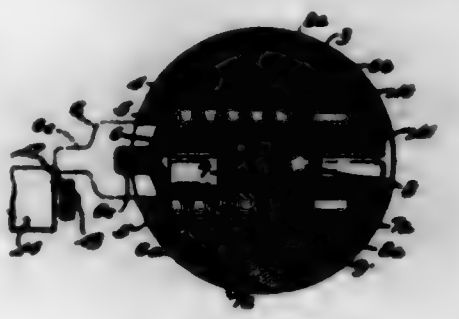
1. The combination with a main induction motor provided with a wound secondary member, of a source of alternating current connected to the primary member thereof a frequency-changer connected between the secondary member of said induction motor and said source, driving means for said frequency changer, a braking device mechanically coupled to said frequency changer and comprising an auxiliary induction machine operating at more than 100% slip, and means for varying the braking action of said auxiliary induction machine in substantial accordance with the load on the main induction motor.

1,296,137. GYROSCOPE. LYNDON B. TAYLOR, Newport, R. I., assignor to the Government of the United States. Filed Apr. 17, 1917. Serial No. 162,783. 11 Claims. (Cl. 74—78.)



1. In a gyroscope and gyroscope spinning mechanism, the combination of a gimbal, a gimbal lock, and means carried by a rotating part of said gyroscope and gyroscope spinning mechanism and operated by centrifugal force for actuating the gimbal lock to free the gimbal; substantially as described.

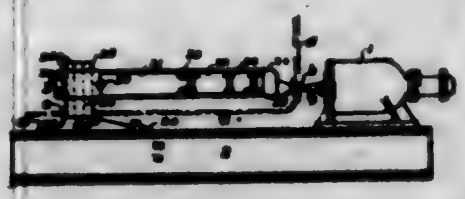
1,296,138. CENTRIFUGAL GOVERNOR. LYNDON B. TAYLOR, Newport, R. I., assignor to The Government of the United States. Filed Apr. 17, 1917. Serial No. 162,784. 6 Claims. (Cl. 264—17.)



1. In a device of the kind described, the combination of a rotatory member, a housing within the rotatory member and extending transverse to the axis of rotation of the rotatory member, a weight device slidably mounted in the housing, and means for yieldingly holding the weight device with its center of gravity spaced from the axis of rotation of the rotatory member when the latter is idle, the weight device including a slide-piece having threads and a weight member carried by the slide-piece and having threads coacting with the threads of the slide-piece, whereby the weight member may be spirally adjusted on the slide-piece to vary said predetermined distance when the rotatory member is idle; substantially as described.

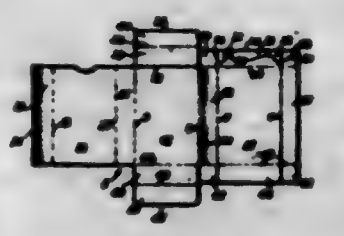
6. The combination of a rotary shaft having a transverse opening therein, a weight located in the opening and movable under the influence of centrifugal force, a spring restraining the outward movement of the weight, the weight consisting of a plurality of parts which are adjustable relatively when the member is at rest to vary the distance between the center of gravity of the weight and the axis of rotation of said member, means for locking the parts of the weight in any selected position of relative adjustment, and mechanism actuated by the movement of the weight; substantially as described.

1,296,139. BOILER-RIVETING MACHINE. WILLIAM BRUCE THOMPSON, Thorabank, Dundee, Scotland. Filed Jan. 30, 1918. Serial No. 214,444. 4 Claims. (Cl. 78—42.)



1. A boiler riveting machine comprising a riveting head, a holder up device, a pillar forming part of said device, a holder up arm divided longitudinally and mounted on said pillar, and a base carrying said riveting head and said holder up device.

1,296,140. COLLAPSIBLE CONTAINER. EDWARD O. TINSLEY, Brooklyn, N. Y., assignor to Robert Gair Company, Brooklyn, N. Y., a Corporation of New York. Filed June 17, 1918. Serial No. 240,280. 8 Claims. (Cl. 229—17.)



1. A collapsible container comprising, when in containing position, an outer front portion and an inner front portion, a back portion, outer side portions and inner side portions, a top closure, and a bottom closure, the top closure providing when open a spout for the container and being formed by an extension of the inner front portion and inner side portions of the container; said container being formed from a blank consisting of a central portion and two wings, one of the wings being of greater length than the other and the central portion being of greater length than the longer wing, the shorter wing being scored for folding longitudinally near the edges, the central portion being scored longitudinally at the edges and transversely near the ends, and the longer wing being scored longitudinally near the edges and transversely near the lower end and transversely and diagonally near the upper end.

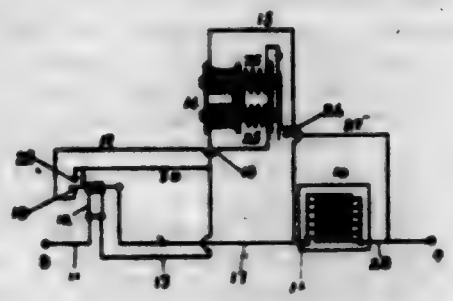
1,296,141. PROCESS OF OBTAINING POTASSIUM COMPOUNDS. GEORGE F. VON KOLNITZ, Stockertown, Pa. Filed July 1, 1918. Serial No. 242,787. 4 Claims. (Cl. 23—22.)

1. The process of obtaining potassium chlorid, comprising subjecting natural potassiferous material heated to about 350° C. to the action of hydrochloric acid gas to decompose said material and form potassium chlorid and recovering the chlorid so formed.

1,296,142. TELEGRAPH-SOUNDER CIRCUITS. SYLVESTER VOORHEES, Enderlin, N. D. Filed Mar. 11, 1918. Serial No. 221,841. 6 Claims. (Cl. 178—66.)

1. In a telegraph sounder circuit the combination of a sounder having a low resistance winding and a high resistance main line winding, an armature controllable by said windings, a contract controlled by said armature, a main line relay having a contact, a storage battery, circuit connecting means for including said storage battery in series with a main line circuit, and circuit connections including said two contacts for connecting said storage battery across said low resistance coil.

4. A telegraph sounder circuit comprising a sounder, having two or more coils, a storage battery, a main line circuit having a battery connection for charging said storage battery normally, circuit changing means for switch-



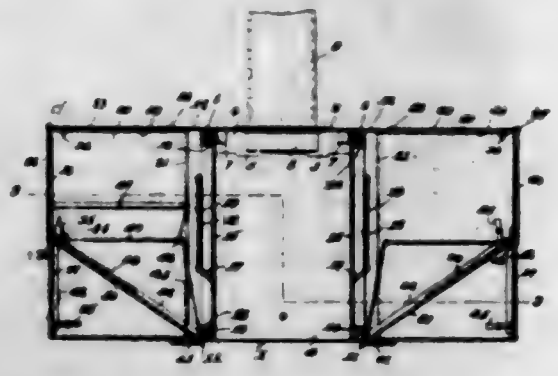
ing said battery from a charging circuit, including the main line circuit, to a discharging circuit including a coil of said sounder, and means for short-circuiting one of said sounder coils to prevent line current leakage through the convolutions thereof.

1,296,143. AUTOMOBILE-WHEEL RIM. SAUL WALKER, Hamilton, Ontario, Canada. Filed Oct. 2, 1917. Serial No. 194,495. 1 Claim. (Cl. 152—21.)



A rim divided into two portions, a permanent portion and a removable portion both parallel to each other and with the face of the rim, the permanent portion being secured around the felly and having plates formed thereon countersunk into the rim extending laterally opposite to the side of the felly and each provided with an upturned end forming a side lug, the plate being recessed through the lug and toward its opposite end to provide a pocket, and the removable portion overlapping the permanent portion and provided with tongue members adapted to fit into the pockets of the plate of the permanently secured portion, and side lugs adapted to register with the lugs of the plates of the permanent portion and a plate ring extending around the rim and provided with lugs registering with the lugs of the plates of the permanent portion and the removable portion and bolts extending through the registering side lugs outside the felly to hold the parts together.

1,296,144. FOLDING STOVE. JAMES WATSON, Marinette, Wis. Filed Mar. 19, 1918. Serial No. 223,401. 5 Claims. (Cl. 126—9.)



1. In a device of the class described, side ovens provided adjacent their upper edges and upon their ends with troughs; backs constituting parts of the ovens, and em-

bodying flanges interlocked with the troughs; a central furnace embodying a top having depending flanges received removably in the troughs at the upper edges of the ovens; doors having inwardly extended flanges received, when the doors are closed, in the troughs at the ends of the ovens; means for connecting the doors with the furnace for vertical swinging movement; and projections on the top of the furnace, the projections engaging the backs.

3. In a device of the class described, a furnace; an oven at one side of the furnace and comprising a case detachably interengaged with the furnace; ends hinged to the case; an inclined bottom between the ends and having its inner edge hinged to the case; a depending side wall hinged to the outer edge of the bottom and extended between the ends to form a prop for the bottom and to form a closure for the space below the bottom; a support disposed above the bottom, one end of the support being hinged to the bottom; a brace hinged to the other end of the support and coöperating with the case; a top hinged to the case and coöperating with the ends; and a depending side wall hinged at its upper edge to the top and forming a movable closure for the space above the bottom.

5. In a device of the class described, a furnace; an oven at one side of the furnace and comprising a case detachably interengaged with the furnace and including a back; ends hinged to the case; an inclined bottom between the ends and having its inner edge hinged to the case; a depending side wall hinged to the outer edge of the bottom and extended between the ends to form a prop for the bottom and to form a closure for the space below the bottom; a support disposed above the bottom; a top hinged to the case and coöperating with the ends; a depending side wall hinged at its upper edge to the top and forming a movable closure for the space above the bottom; an inclined web projecting outwardly from the back; and a deflector carried by the web and spaced from the back, the deflector extending upwardly above the support.

1,296,145. THRILL-POLE. REINHOLD WEISS, New York, N. Y. Filed May 21, 1918. Serial No. 235,888. 25 Claims. (Cl. 46—70.)



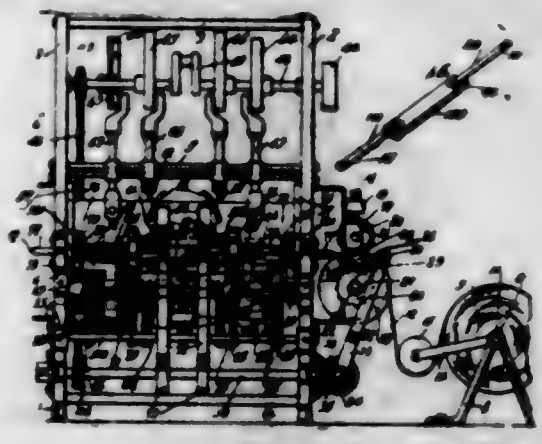
1. The combination with a supporting frame, of a pole pivoted to swing on said frame, means for normally holding the pole in raised position, and means for gradually breaking the fall of the pole when it is swung down on its pivots.

4. The combination with a supporting frame, of a pole pivoted to swing on said frame, an arcuate member on the frame having a series of spaced abutments, and a flexibly mounted pawl on the lower end of the pole to engage said abutments for gradually breaking the fall of the pole as it is swung down on its pivots.

17. The combination with a pole, of a knockdown frame for pivotally supporting said pole, said frame comprising parallel main frame pieces having upright members for supporting the pivots of the pole and oppositely extending horizontal members, an arcuate member detachably connected to said horizontal members and rising above the same in an arc parallel to the arc of movement of the lower end of the pole, a series of spaced abutments on said arcuate member, and a pawl flexibly mounted on the lower end of the pole to engage said abutments for the purpose specified.

23. The combination with a pole, of a knockdown frame for pivotally supporting the pole, said frame having horizontal members arranged at opposite sides of the pole and central upright members rising from said horizontal members for supporting the pivots of the pole, detachable end pieces having mortise and tenon joints with the ends of the horizontal members and forming continuations thereof, end sleepers having notches to receive said end pieces, and guy ropes running from the end of said sleepers to the upper end portions of said upright members for the purpose specified.

1,296,146. DEVICE FOR NAILING TINS ON BINDERS. MILO B. WELLS, Arcata, Cal. Filed Jan. 19, 1918. Serial No. 212,722. 17 Claims. (Cl. 1—1.)



3. In a device of the class described a frame; stick-feeding means; means for feeding a ribbon longitudinally of the sticks and transversely of the direction in which the sticks are moved by the feeding means; movable means on the frame for severing the ribbon to form strips; means for nailing the strips to an end of the sticks; means for punching the ends of the strips beyond the ends of the sticks; and means for momentarily arresting the movement of the sticks under the action of the stick-feeding means while the severing means, the nailing means, and the punching means are operating.

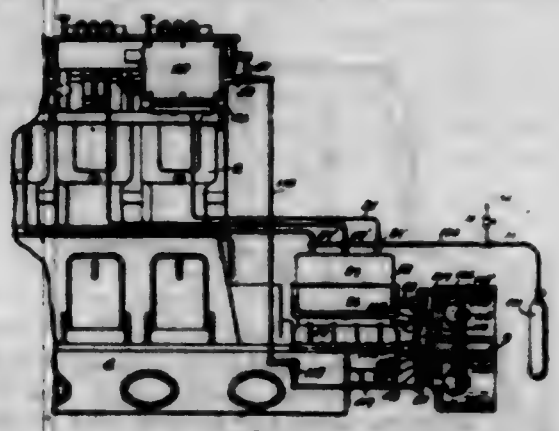
7. In a device of the class described, a frame; a fixed shear member on the frame; a shear member movable on the frame and coöperating with the fixed shear member; an anvil yieldably supported on the frame; coöperating punching elements carried by the movable shear member and the anvil; a guide extended transversely of the frame; a movable shear member being overlapped at all times on the guide; means for feeding sticks with respect to the shear members and the punching elements; means for feeding ribbons with respect to the shear members and the punching elements, transversely of the direction in which the sticks are advanced by the stick-feeding means, and longitudinally of the guide thereby to form strips; means for fastening the strips to the sticks; and supplemental means for holding the ribbon in coöperating relation to the guide.

13. In a device of the class described, a frame; a fixed shear member on the frame; a strip-forming shear member movable on the frame and coöperating with the fixed shear member, an anvil yieldably supported on the frame; coöperating punching elements carried by the movable shear member and the anvil; opposed platforms carried by the frame; a stick support yieldably upheld between the platforms and provided with a transverse seat; a stick conveyer traversing the platforms and passing through the seat; and spring means located in the seat and coöperating with the conveyer, to raise the con-

rayer with respect to the support; and means for fastening the strips to the sticks.

17. In a device of the class described, a frame; fixed platforms carried by the frame; a movable stick support carried by the frame and located between the platforms; ribbon shearing and punching means; means for feeding a ribbon with respect to the shearing and punching means, upon the support to form strips; a stick stop mounted to move vertically between the support and one platform; a shaft journaled on the frame; a cam on the shaft and coacting with the stick-stop to move the same in one direction; yieldable means for moving the stick-stop in an opposite direction; and means for securing the strips to the sticks.

1,296,147. INTERNAL-COMBUSTION MOTOR. ALEXANDER WINTON, Lakewood, Ohio, assignor to The Winton Gas Engine & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 11, 1915. Serial No. 1,587. 2 Claims. (Cl. 123—59.)



1. In an internal combustion motor a plurality of cylinders, fuel feeding mechanism including an independent fuel feeding device for each cylinder, an individual air pump for each cylinder, a pipe leading from each air pump to its corresponding fuel feeding device, an air starting device, an air container connected to all of the pipes leading from the air pumps, and means for driving the air pumps in step with the motor.

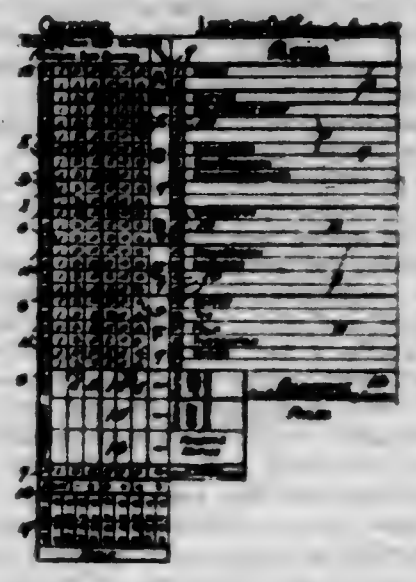
2. In an internal combustion motor a plurality of cylinders, fuel feeding mechanism including an independent fuel feeding device for each cylinder, an individual air pump for each cylinder, a pipe leading from each air pump to its corresponding fuel feeding device, an air container connected to all of the pipes leading from the air pumps, a check valve between the container and each pump line to prevent the escape of air from the container, and means for driving the air pumps in step with the motor.

1,296,148. SAFETY-INDICATOR FOR SELF-PROPELLED VEHICLES. GEORGE S. WITHAM, Jr., Au Sable Forks, N. Y. Filed Oct. 1, 1915. Serial No. 53,500. 10 Claims. (Cl. 123—196.)



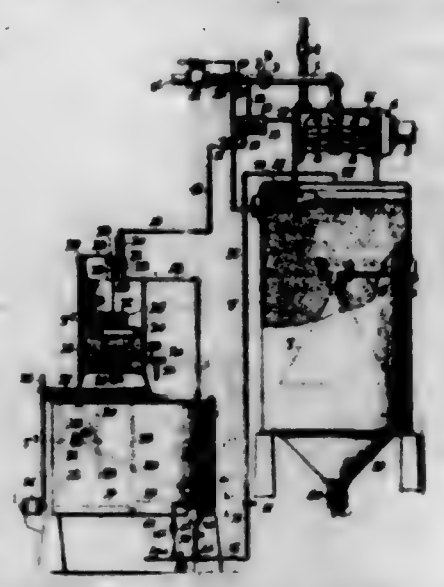
2. A safety indicating system for circulatory systems of internal combustion engines, comprising a unitary casing having a circular sight-feed chamber therein, and a lateral extension forming a tubular chamber, the front faces of said chambers being provided with apertures, transparent closures for said apertures, a thermometer mounted in said tubular chamber, pipes connected to said casing by means of which liquid may be supplied to and conducted from said casing, and means for placing said pipes in communication with any one of the circulatory systems.

1,296,149. FOOD-ORDER CARD. DIONYSIUS WOSOWSOW, New York, N. Y. Filed Jan. 8, 1918. Serial No. 210,822. 7 Claims. (Cl. 283—60.)



1. The combination with a menu card having a series of symbols adjacent the articles of food thereon, each of said articles of food having a different symbol, of an order card having a series of similar symbols corresponding to those on the menu card, and a series of seat numbers opposite each of said symbols on the order card for the purpose specified.

1,296,150. FLUID-PROPORTIONING APPARATUS. RAYMOND D. B. WRIGHT, Philadelphia, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Firm composed of Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones. Filed Mar. 11, 1918. Serial No. 221,874. 25 Claims. (Cl. 210—19.)



1. Apparatus for proportioning one fluid with respect to another comprising means producing a flow of control fluid proportional to said other fluid, a receptacle for said one fluid, a discharge conduit for delivering said one fluid from said receptacle, said conduit having an intake movable with respect to the surface of said one fluid in said receptacle, and means for varying the height of said intake comprising a second receptacle, a float therein, a

third receptacle carried by said float and receiving said control fluid, said control fluid overflowing from said third receptacle into said second receptacle, and a float in said third receptacle controlling said intake.

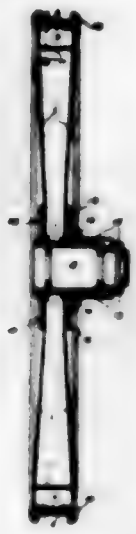
2. Apparatus for proportioning one fluid with respect to another comprising means producing a flow of control fluid proportional to said other fluid, a receptacle for said one fluid, a discharge conduit for delivering said one fluid from said receptacle, said conduit having an intake movable with respect to the surface of said one fluid in said receptacle, and means for varying the height of said intake comprising a second receptacle, a float therein, a third receptacle carried by said float and receiving said control fluid, said control fluid overflowing from said third receptacle into said second receptacle, and a float in said third receptacle controlling said intake, said third receptacle and said intake having passages so proportioned with respect to each other that the quantities of fluid passing through them bear the same proportion to each other as the volumes of fluid per unit of depth in said first and second receptacles.

3. Apparatus for proportioning one fluid with respect to another comprising means determining the flow of said one fluid, and means controlling said means comprising a receptacle, a float therein, a second receptacle carried by said float, means for delivering into said second receptacle fluid proportional to said other fluid, said fluid overflowing from said second receptacle into said first named receptacle, and a float in said second receptacle controlling said first named means.

4. Apparatus for proportioning one fluid with respect to another comprising means determining the flow of said one fluid, and means controlling said means comprising a receptacle, a float therein, a second receptacle carried by said float, means for delivering into said second receptacle fluid proportional to said other fluid, said second receptacle having a passage through which said fluid flows into said first receptacle, and a float in said second receptacle controlling said first named means.

5. Apparatus for controlling fluid delivery comprising a receptacle, a float therein, a second receptacle carried by said float, means delivering fluid into said second receptacle overflowing into said first named receptacle, a float in said second receptacle, and means controlling fluid delivery controlled by said second float.

1,296,151. VEHICLE-WHEEL. ELMER L. ACKER, Chicago, Ill. Filed Jan. 2, 1918. Serial No. 210,029. 6 Claims. (Cl. 21—69.)

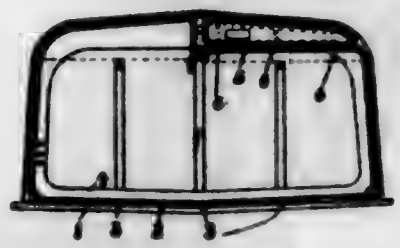


1. A vehicle-wheel comprising, in combination with a rim and a hub, a pair of center-forming resilient disks rigidly secured to the rim, and strained to extend in converging relation toward the hub, and a third resilient disk rigidly secured to the rim and strained into dished condition toward the outer hub-end, said disks being rigidly secured in their said relations on the hub.

2. A vehicle-wheel comprising, in combination, an outer rim, an inner rim and a hub, a pair of center-forming, resilient disks having peripheral flanges at which they are secured between said rims, said disks being strained to extend in converging relation between the rims and hub, and means on the hub for securing the strained disks in said relation.

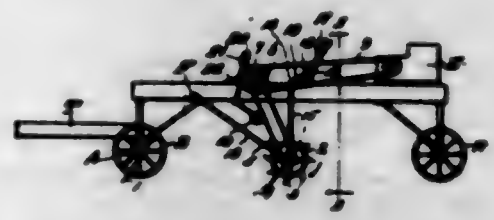
3. A vehicle-wheel comprising, in combination, an outer rim, an inner rim and a hub, a pair of center-forming resilient disks having peripheral flanges at which they are secured between said rims, said disks being strained to extend in converging relation toward the hub, and a third peripherally flanged resilient disk secured at its flange between said rims and strained into dished condition toward the outer hub-end, said disks being rigidly secured in their said relations on the hub.

1,296,152. CASTING OF REINFORCED-CONCRETE VESSELS. HARALD ALFSEN, Porsgrund, Norway, assignor to John Moller Larsen, Chicago, Ill. Filed Feb. 5, 1918. Serial No. 215,550. 2 Claims. (Cl. 25—154.)



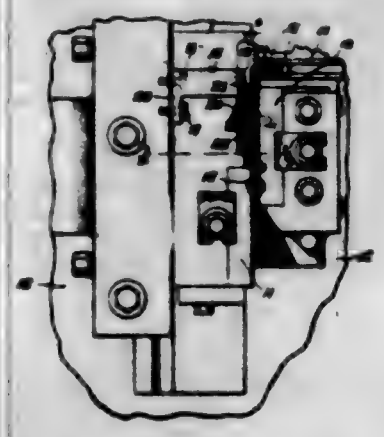
1. A framing for the casting of a concrete ship having a top deck and transverse strengthening ribs formed in one piece with the sides and bottom, said framing comprising, a base on which the deck is cast, a plurality of spacing blocks corresponding to the thickness of the deck mounted on the base, shaped open frames mounted on the spacing blocks and arranged in pairs constituting molds for forming transverse ribs on the underside of the deck, and longitudinal sheathing strips mounted on the frames and constituting the form for the side and bottom of the ship.

1,296,153. WEED-DESTROYER. MARTIN J. ANDERSON, Warren, Minn. Filed July 24, 1918. Serial No. 246,538. 1 Claim. (Cl. 97—72.)



In a machine of the class described, the combination with a framework mounted on wheels, a driving mechanism thereon, and a counter-shaft driven by said mechanism and having a sprocket wheel on one extremity; of a toothed drum extending transversely beneath the framework and having a sprocket wheel on one end of its shaft, a belt connecting said sprocket wheels and leading obliquely from the drum sprocket upward to the sprocket on the counter shaft, braces pivotally connecting the frame with bearings in which the drum-shaft is mounted and leading from said bearings obliquely forward and upward to points on the frame forward of said counter shaft, a hand-lever pivoted to the frame and having a handle at its upper end and a cranked lower portion, and a belt tightening pulley carried by said lower portion in position to be swung against one stretch of said sprocket chain, this pulley moving through an arc having a shorter radius than the drum shaft when adjusted vertically.

1,296,154. MECHANISM FOR REMOVING BURS. ISAAC W. ATCHISON, Cicero, and FREDERICK M. STEARNS, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 24, 1917. Serial No. 203,774. 5 Claims. (Cl. 80—8.)



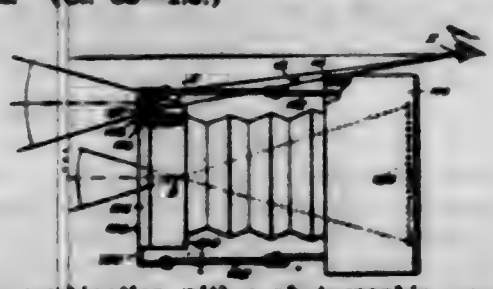
1. In a device of the character described, in combination, a stationary die, a movable die operated to propel screws between said dies and roll threads thereon, and an adjustable abrading means located above said movable die said means serving to remove burs and fins from the heads of said screws.

1,296,155. BOAT-HULL. LÉON BAZAINE, Issy-les-Moulineaux, France, assignor to Société Anonyme Des Etablissements Nieuport, Issy-les-Moulineaux, France. Filed June 3, 1914. Serial No. 842,709. 7 Claims. (Cl. 114—66.5.)



1. A boat hull having a series of offsets, the said offsets being arranged in parallel pairs on the opposite sides of said hull and extending longitudinally from the bow aft to an intermediate point of the hull, the remaining aft portion having a bottom comprising a flat surface; a different pair of offsets being adapted to contact the surface of the water at different speeds of the said hull.

1,296,156. FINDER. JOSEPH ERCKER, Washington, D. C., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Original application filed Feb. 17, 1906, Serial No. 246,169. Divided and this application filed Aug. 3, 1918. Serial No. 248,185. 2 Claims. (Cl. 88—1.5.)



1. The combination with a photographic camera of the collapsible or folding type comprising: a forward part adapted to support, more or less directly, the photographic lens; a rear part adapted to receive and support, more or less directly, the sensitized plate or film; and means for holding said two camera parts in a separated relative position of use for making exposures; of a simple or compound divergent lens fixed to the said forward part of the camera; and a coöperating rear sight or mark for said divergent lens, on the said rear part of the camera; all elements being proportioned, arranged, and held so that the group of finder rays that proceeds from the camera field through the finder lens, to the observer's eye, shall pass grazingly over the said rear part of the camera.

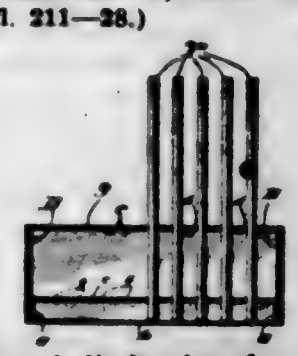
2. The combination with a photographic camera of the collapsible or folding type comprising: a forward part adapted to support, more or less directly, the photographic lens; a rear part adapted to receive and support, more or less directly, the sensitized plate or film; and means for holding said two camera parts in a separated relative position of use for making exposures; of a simple or compound divergent lens fixed to the said forward part of the camera; and a coöperating rear sight or mark for said divergent lens, on the said rear part of the camera; all elements being proportioned, arranged, and held so that the group of finder rays that proceeds from the camera field through the finder lens, to the observer's eye, shall pass grazingly over the said rear part of the camera, said finder lens being, moreover, eccentric to such degree that it will be non-projecting when the said two camera parts are compactly assembled in their relative positions of non-use.

1,296,157. SHOE-CLASP. ANDREW BIGGS, Lorain, Ohio. Filed Sept. 23, 1918. Serial No. 255,292. 5 Claims. (Cl. 24—212.)



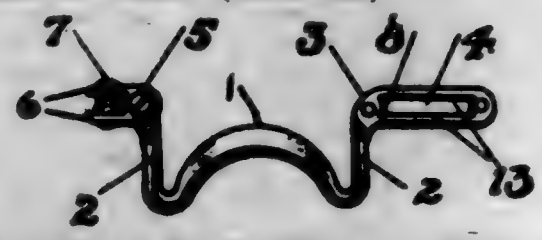
1. A shoe clasp comprising a latch bar, means adapted for attaching one end of the bar adjacent the edge of a shoe flap, a post adjacent the other end of the bar adapted for insertion through the opposite flap of a shoe, and a cam plate pivoted upon the bar adapted for locking engagement with the said post.

1,296,158. DISPLAY-BOX. ANSON E. BONHAM, Philadelphia, Pa. Filed Jan. 10, 1918. Serial No. 211,140. 4 Claims. (Cl. 211—28.)



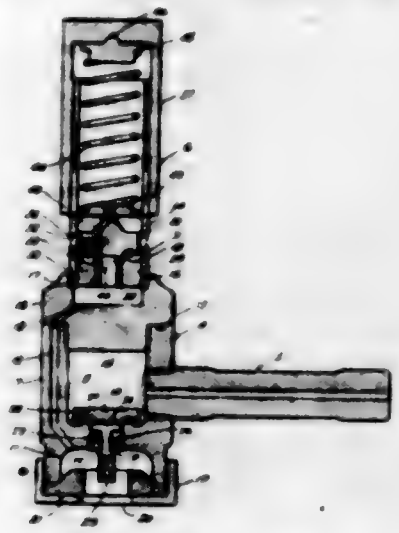
1. A shipping and display box for pencils having a wall having incomplete perforations, and an auxiliary supporting member within the box forming a wall of a compartment for storing the pencils and having perforations in register with the aforesaid incomplete perforations, whereby pencils removed from the storage compartment may be forced through said incomplete perforations to complete them and extended through the perforations in said auxiliary supporting member to support said pencils in display position.

1,296,159. OPHTHALMIC MOUNTING. WILLIAM H. BOUTELLE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Oct. 26, 1917. Serial No. 198,611. 10 Claims. (Cl. 88—42.)



1. A one-piece member including a nose bridge, an arm extending from each end thereof, having a slot therein forming parallel side portions adapted to form loops when the arms are bent upon themselves.

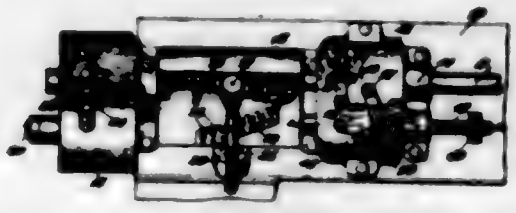
1,296,160. AUDIBLE PRESSURE-INDICATOR. CHARLES V. BUTTERFIELD, Los Angeles, Cal., assignor of one-fourth to Edward Wiese, one-fourth to Edward Lyons, and one-fourth to Dosier T. Bentley. Filed Feb. 18, 1918. Serial No. 217,790. 7 Claims. (Cl. 116—1.)



1. In a device of the class described, the combination of a body provided with a chamber having an air inlet, and being provided with an outlet chamber having a discharge outlet, a lifting valve controlling communication between said chambers; and a gage comprising a valve seat member having a double seat, the outer one of which is a vertical knife seat, the air port of said seat member being in communication with said outlet chamber, a disk valve coöperating with said seat, and adjustable resilient means tending to hold said valve disk on its seat.

4. In a device of the class described, the combination of a body provided with a chamber having an air inlet, and being provided with an outlet chamber having a discharge outlet, a lifting valve controlling communication between said chambers; and a gage comprising a valve seat member having an air port at the center thereof and two concentric seats, the outer one of which is a vertical knife edge seat, a valve disk having a knife edge cooperating with said knife edge seat and so arranged that the disk first uncovers the inner seat, a compression spring tending to hold said valve to its seat, and means to adjustably vary the pressure of said spring.

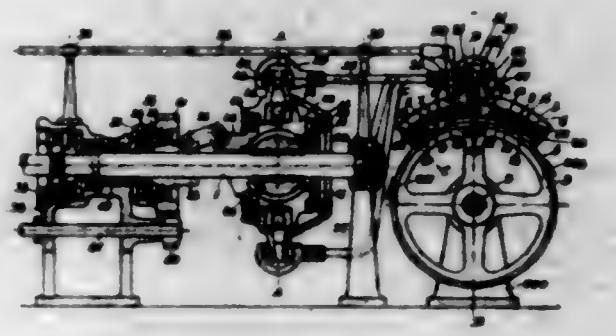
1,296,161. QUICK-CHANGE MECHANISM. LIONEL A. CARTER, St. Louis, Mo. Filed Apr. 30, 1917. Serial No. 165,341. 2 Claims. (Cl. 74—68.)



1. A quick change mechanism comprising a driven shaft, and two parallel shafts arranged alongside of each other, one of which parallel shafts extends to the one hand and the other parallel shaft extends to the other hand of their lapping portions, means for rotating one of said shafts at either of two speeds one of which is four times the other, said means being arranged on the projecting end of said shaft, variable speed gearing connecting the lapping portions of said shafts, and means arranged on the other projecting shaft end for driving said driven shaft at either of two speeds for each speed of said other projecting shaft one of which is more than twice that of the other.

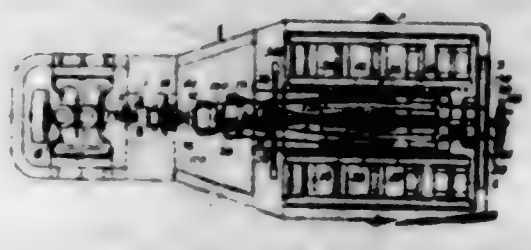
2. A quick change mechanism comprising a driven shaft, and two parallel shafts arranged alongside of each other, one of which parallel shafts extends to the one hand and the other parallel shaft extends to the other hand of their lapping portions, means for rotating one of said shafts at either of two speeds, said means being arranged on the projecting end of said shaft, variable speed gearing connecting the lapping portions of said shafts, and means arranged on the other projecting shaft end for driving said driven shaft at either of two speeds for each speed of said other projecting shaft, whereby for each speed of the variable speed gearing two additional speeds of the driven shaft may be obtained.

1,296,162. VARIABLE-SPEED GEARING. GUNNAR ELIAS CARLEL, Stockholm, Sweden, assignor to Artur Leffler, Djursholm, Sweden. Filed Sept. 25, 1916. Serial No. 121,984. 5 Claims. (Cl. 74—53.)



1. A variable speed gearing, comprising a ratchet gear, an oscillating driving disk actuating said ratchet gear, a rotating driving shaft, a driving member actuating said driving disk and adapted to be adjusted in different inclination to said driving shaft, a thrust bearing movable axially on said driving shaft, a portion of said thrust bearing rotating with said driving shaft, a connection between said rotating portion and said driving member, a portion of said thrust bearing being adjustable in relation to the shaft, a threaded member integral with said adjustable portion, a stationary threaded frame engaging said threaded member, and means for turning said threaded member in said frame.

1,296,163. COMBINED DRIVING AND STEERING DEVICE FOR MOTOR-VEHICLES. GUNNAR ELIAS CARLEL, Stockholm, Sweden, assignor to Artur Lorens Olof Abraham Leffler, Djursholm, Sweden. Filed Nov. 12, 1917. Serial No. 201,621. 4 Claims. (Cl. 180—17.)

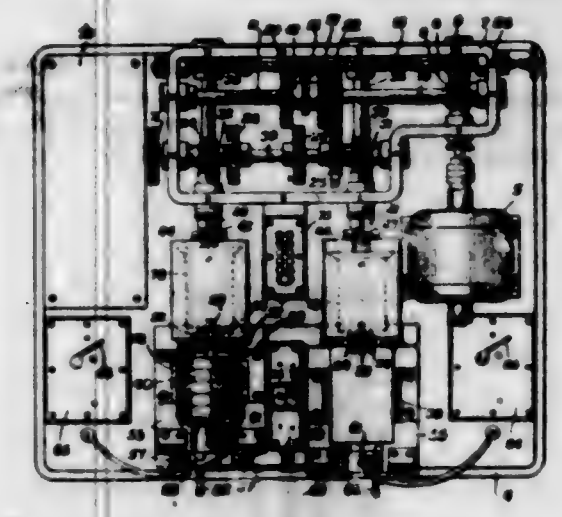


1. In a combined driving and steering device for power driven vehicles, the combination with the driving wheels of the vehicle, a separate clutch mechanism for each wheel, and a single driving shaft, of separate operating means for each mechanism driven by the shaft, independent controlling means for each operating means movable longitudinally of the shaft, and means to independently actuate the controlling means.

1,296,164. GENERATOR-TESTING APPARATUS. FLOYD WATSON CONSON, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 30, 1916. Serial No. 122,007. 7 Claims. (Cl. 74—56.)

1. In a device for testing magneto generators, the combination with a rotatable spindle, of adjustable means

for varying the speed of said spindle, a magneto armature revolving means, a clutch mechanism for connecting said means to said revoluble spindle, and a yieldable interconnecting means between said armature revolving means and said clutch mechanism to gradually accelerate said armature revolving means.

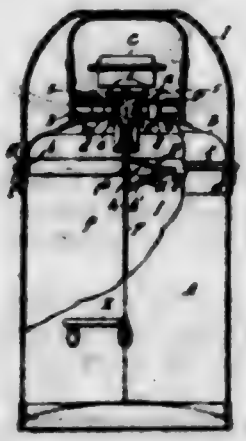


1,296,165. SCREW OR LIKE ARTICLE. JACOB A. CONSUMA, New York, N. Y. Filed Dec. 27, 1916. Serial No. 139,096. 4 Claims. (Cl. 85—41.)



1. A part provided with a socket, a screw provided with a head located within said socket, said screw head being provided with a slot whose walls diverge downwardly, and a body of readily molded material in contact with the screw head and the wall of said socket and extending into and filling said slot from wall to wall, to form a permanent lock for said material and the screw.

1,296,166. MILKING-MACHINE. CHARLES B. DALZELL, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed Mar. 24, 1917. Serial No. 157,087. 12 Claims. (Cl. 31—73.)



1. A milking machine pail having a partition forming separate compartments in the pail, and a pouring deflector extending inwardly from the upper portion of the wall of said pail at one side only of said partition.

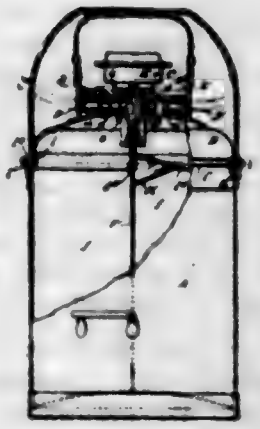
4. A milking machine pail having a partition forming separate compartments in the pail, and a pouring deflector extending laterally from said partition at one side only thereof and joining the upper portion of the wall of said pail, said deflector inclining upwardly and inwardly at its juncture with said partition and sloping upwardly away from said partition at its juncture with the outer wall of the pail.

7. A milking machine pail having a partition forming separate compartments in the pail and extending above the rim of the pail, whereby when the pail is placed upside down on a support said partition will hold one edge of the pail off of the supporting surface.

11. A milking machine pail having a partition forming separate compartments in the pail, a pouring deflector extending laterally from said partition at one side only of said partition, and a carrying bail attached to the pail in a plane substantially at right angles to a radial line extending through the middle of said deflector.

12. In a milking machine, the combination of a pail having a partition dividing the pail into separate compartments, an arched cover closing the upper end of the pail, said partition extending above the rim of the pail into said cover, and a pulsator mounted on said cover.

1,296,167. MILKING-MACHINE. CHARLES B. DALZELL, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Original application filed Mar. 24, 1917, Serial No. 157,087. Divided and this application filed July 22, 1918. Serial No. 246,024. 7 Claims. (Cl. 31—99.)



1. In a milking machine, the combination of a pail, an arched cover closing the upper end of the pail, and a pulsator, said cover extending above the rim of the pail and providing a relatively deep substantially unobstructed inclosed space above said rim, and said cover being provided with an air outlet elevated a substantial distance above said rim.

2. In a milking machine, the combination of a pail, an arched cover closing the upper end of the pail, and a pulsator having a cylinder mounted on said cover, said cover having an air tight joint with the pail and providing a relatively deep substantially unobstructed inclosed space above said joint, and said pulsator cylinder being elevated a substantial distance above said joint.

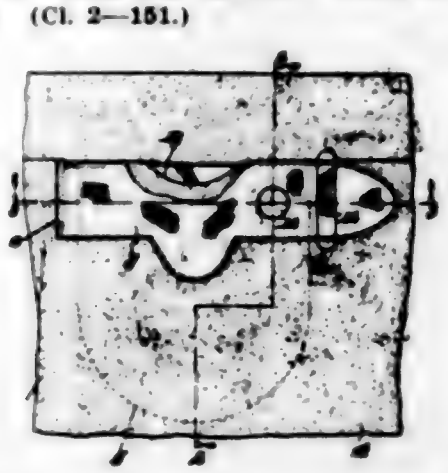
4. In a milking machine, the combination of a pail of substantially the same diameter at top and bottom, an arched cover closing the upper end of the pail, and a pulsator mounted on said cover, said cover extending above the rim of the pail and providing a relatively deep substantially unobstructed inclosed space above said rim.

5. In a milking machine, the combination of a pail, a pulsator, a milk connection leading to said pulsator, and a valve for said connection, the seat for said valve opening directly into the pail whereby any leakage at said valve will flow directly into the pail.

7. In a milking machine, the combination of a pail, a cover therefor, a pulsator mounted on the cover, a milk connection leading substantially horizontally to the pulsator close to said cover and having a valve seat hole ex-

tending vertically through said connection and opening at its lower end into the pail, and a valve for said connection seated in and closing said hole.

1,296,168. SAFETY-POCKET. WILLIAM E. DIEHL, Chicago, Ill. Filed Dec. 28, 1917. Serial No. 209,236. 2 Claims. (Cl. 2—151.)



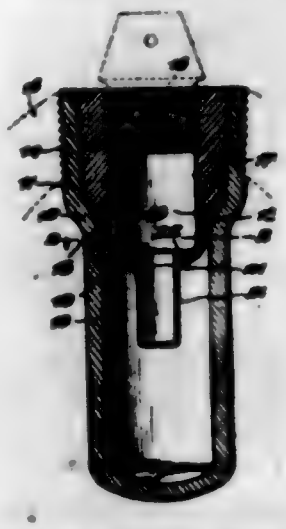
1. The combination with a garment pocket, of means arranged adjacent said pocket for locking to the garment an article arranged in said pocket and having an exteriorly projecting portion extending over and downwardly from the upper edge of said pocket, said means comprising a strap provided at the outer side of the pocket adjacent the mouth thereof under which said exteriorly projecting portion of the article is adapted to pass, one end of said strap being fixed to the garment; means for releasably locking the other end of said strap to the garment, said locking means comprising a locking member secured to the inner wall of the pocket and projecting forwardly therefrom across the mouth of the pocket, the front wall of said pocket having an opening for the passage of said locking member; and means on said last mentioned end of said strap releasably engaging with said locking member, whereby the mouth of said pocket and the free end of said strap are simultaneously locked, substantially as described.

1,296,169. ADAPTER AND BOOSTER CASING FOR SHELLS. NELSON W. DINGWALL and CLIFFORD M. BUDD, New York, N. Y. Filed July 26, 1918. Serial No. 246,896. 7 Claims. (Cl. 102—86.)



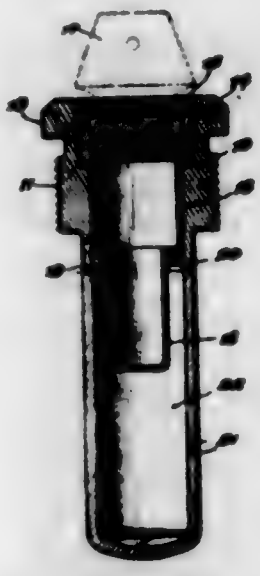
1. In combination an adapter provided with means for attachment to a shell and having an extension constituting a booster casing, the interior diameter of which is the same as that of the bore of the adapter, the inner face of the wall of the adapter being provided with a thread that extends continuously from the outer end of the adapter to beyond the open end of the booster casing, a fuse socket holder engaging said thread, and a fuse body having a threaded nipple screwed into the outer end of the bore of the adapter.

1,296,170. ADAPTER AND BOOSTER CASING FOR SHELLS. NELSON W. DINGWALL and CLIFFORD M. BUDD, New York, N. Y. Filed July 26, 1918. Serial No. 246,897. 12 Claims. (Cl. 102—86.)



1. In combination, a booster casing, and an adapter head having a tapering opening, said booster casing and head being formed by drawing a single sheet of metal to the proper shape.

1,296,171. ADAPTER AND BOOSTER CASING FOR SHELLS. NELSON W. DINGWALL and CLIFFORD M. BUDD, New York, N. Y. Filed July 26, 1918. Serial No. 246,898. 2 Claims. (Cl. 102—86.)

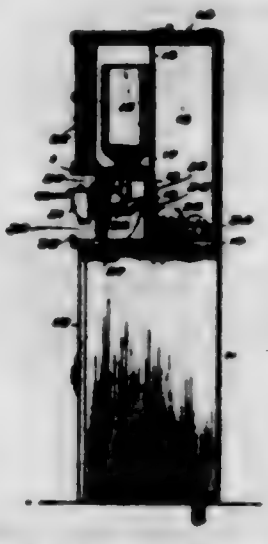


1. In combination, an adapter head having a through opening, an internal flange, and a depending skirt; a fuse socket secured directly to said flange; and a booster casing secured to said skirt by means of a seamless welded joint.

1,296,172. DISPENSING APPARATUS. CHARLES JOHN DARWES, New York, N. Y. Filed Jan. 30, 1917. Serial No. 145,416. 1 Claim. (Cl. 235—36.)

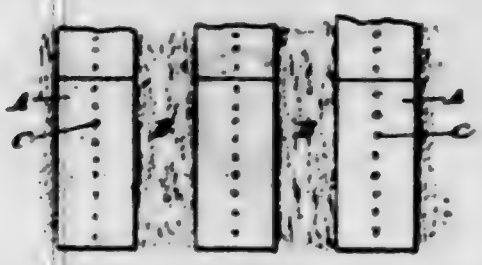
An improved dispensing apparatus comprising a cabinet or casing having a horizontal shelf or partition dividing the cabinet into upper and lower compartments, said upper compartment having a vertical partition dividing it into front and rear compartments, said rear compartment adapted as an ice chamber and having a door-controlled opening, and said front compartment having a bot-

tom spaced from the forward portion of the first-named shelf or partition, and provided with openings; funnels fitted to said openings and each having a valve-controlled delivery tube; inverted syrup jars having necks fitting into the funnels; a pipe extending horizontally along the front of said vertical partition between said apertured bottom and said horizontal shelf and having distributing tubes; containers in the ice-chamber of the cabinet having means for supplying said horizontal tube with carbonated liquid; a vertical slab spaced from said vertical



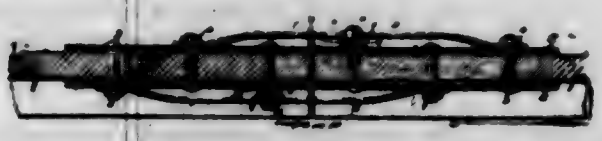
partition and extending between the horizontal shelf and said apertured bottom of said front chamber and spaced from said vertical partition, and through which slab the distributing tubes of said funnels and said horizontal pipe pass; a dispensing faucet for each jar or bottle fitted to said distributing syrup and liquid tubes and disposed in the space in front of said slab between the front portion of said apertured bottom and the corresponding portion of said shelf; said cabinet having a transparent front for the bottle-receiving chamber thereof.

1,296,173. PROCESS FOR ENHANCING THE GROWTH OF SUGAR-CANE. CHARLES FRANKLIN ECKART, Olaa, Hawaii. Filed July 23, 1917. Serial No. 182,206. 7 Claims. (Cl. 47—38.)



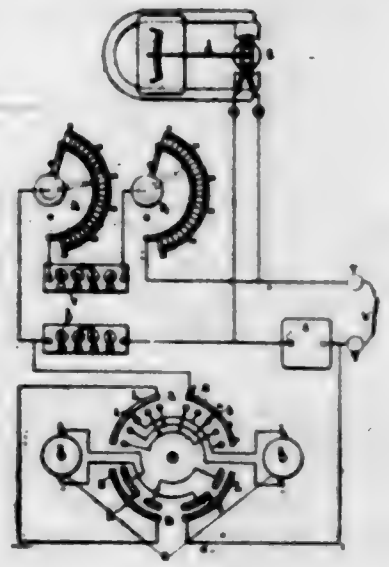
1. A process for enhancing the growth of rows of sugar cane which consists in applying fertilizer to the rows of cane, superimposing covers on the rows, which covers are pervious to the cane and impervious to the weeds, slitting the covers longitudinally and folding the resulting portions to overlie the spaces between the rows.

1,296,174. NUT-LOCK. EDWIN MERITT ELTON, Atwater, Ohio. Filed Mar. 11, 1918. Serial No. 221,734. 2 Claims. (Cl. 151—64.)



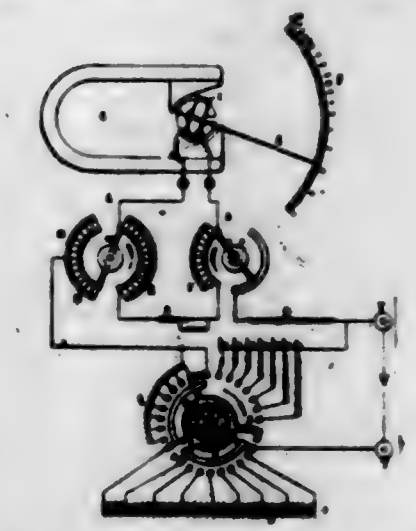
1. The combination with a rail joint, of locks for locking the ends of the joint, said locks being arranged upon opposite sides of the joint and each lock locking three nuts, each lock comprising a plate having intermediate its ends means for engaging the central nut to prevent rotation thereof and having at each end means for engaging the lateral nuts to prevent turning thereof, said plate being arched longitudinally and arranged with its convex surface outward, said plate having at the central locking means an opening for the bolt, and a washer rotatable in the opening for engaging the bolt to space the central nut from the rail.

1,296,175. RELATING TO THE TESTING OF INSULATION. SYDNEY EVERSHED, Chiswick, London, England. Original application filed Mar. 21, 1914, Serial No. 826,372. Divided and this application filed Dec. 30, 1915. Serial No. 69,466. 6 Claims. (Cl. 175—182.)



1. Apparatus for the investigation of any part of the characteristic curve of insulation, comprising in combination a Wheatstone bridge with variable ratio arms and having its fourth arm adapted to receive the test element, a rheostat in the third adjustable arm of the bridge adjustable to balance the resistance of the test element under the lowest initial value of the series of testing pressures, a plurality of decrement rheostats forming part of the circuit of the adjustable arm of the bridge all initially set at the zero of their respective scales and each in turn being adjusted to balance in combination with the previously adjusted resistances the resistance of the test element at one value of the series of testing pressures, and a source of electromotive force adapted to give the required series of testing pressures.

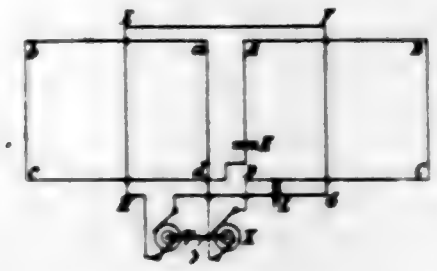
1,296,176. RELATING TO THE TESTING OF INSULATION. SYDNEY EVERSHED, Chiswick, London, England. Original application filed Mar. 21, 1914, Serial No. 826,372. Divided and this application filed Dec. 30, 1915. Serial No. 69,467. 6 Claims. (Cl. 175—183.)



2. Apparatus for determining any significant part of the characteristic curve of insulation comprising in combination an ohmmeter, a variable shunt to the current coil of the ohmmeter, a resistance in series with the pressure coil of the ohmmeter, variable make-up resistances to maintain the resistance of the shunted ohmmeter com-

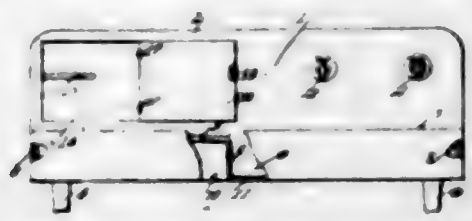
stant, a resistance of relatively large value in series with the current coil of the ohmmeter, a source of electromotive force adapted to give the required series of testing pressures, and a switch for selecting the value of the electromotive force.

1,296,177. AERIAL FOR WIRELESS SIGNALING. CHARLES SAMUEL FRANKLIN, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Nov. 27, 1915. Serial No. 63,714. 7 Claims. (Cl. 250—11.)



1. The combination with a directive double looped aerial of a directive single looped aerial erected substantially in the plane thereof and symmetrically therewith.

1,296,178. KITCHEN-SINK. MAY W. FRANKHEIM, Wheeling, W. Va. Filed Mar. 13, 1917. Serial No. 154,553. 1 Claim. (Cl. 4—36.)



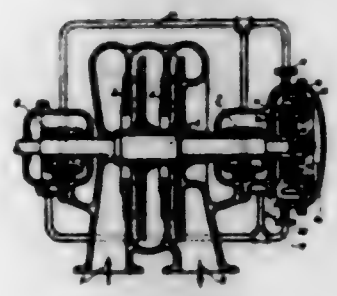
In a device of the class described, a back; a sink projecting forwardly from the back; a drain board projecting forwardly from the back and discharging into one end of the sink; a cabinet projecting rearwardly from the back; and a horizontally swinging door for the cabinet, the drain board being located at a slight vertical distance below the cabinet and directly in front of the cabinet and the door, whereby the drain board will prevent articles in the cabinet from falling into the sink, and the free vertical edge of the door being substantially in vertical alinement with the inner end of the drain board when the door is swung rearwardly into an open position against the back, whereby the drain board will prevent articles in the sink from being struck by the door, when the door is swung to an open position.

1,296,179. TOY. PHILLIP GOEHRING, Seattle, Wash. Filed Apr. 23, 1918. Serial No. 230,206. 1 Claim. (Cl. 46—40.)



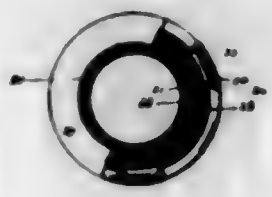
In a toy the combination of a body member representing a soldier, upper leg members pivotally connected to the said body member, lower leg members pivoted to the lower end of the said upper leg members, arms pivotally connected to the said body member, an endless cord passing through holes in the outer ends of the said arms, and hand grips secured to the extremities of the said cord, whereby the cord may be held taut while the figure of the soldier is swung about it as a center.

1,296,180. DEVICE FOR BALANCING SHAFTS. BENJAMIN GRAEMIGER, Zurich, Switzerland, assignor to the Firm of Aktiengesellschaft der Maschinenfabriken Escher Wyss & Co., Zurich, Switzerland. Filed July 9, 1918. Serial No. 244,105. 4 Claims. (Cl. 103—43.)



1. In a device for the axial balancing of the shaft of turbo-lowers or compressors, turbo-pumps, turbines or other similar machines, in combination: an auxiliary centrifugal pump, the impeller of which is fitted on the shaft to be balanced, a pressure chamber formed by the auxiliary pump casing with this impeller which acts as a balancing disk, two ring clearances connected with said pressure chamber, one of these clearances remaining constant and the other varying when the shaft is axially displaced, substantially as set forth.

1,296,181. LUBRICANT-RETAINER. WILLIAM S. GRIGG, Port Huron, Mich. Filed May 29, 1918. Serial No. 237,233. 1 Claim. (Cl. 288—1.)

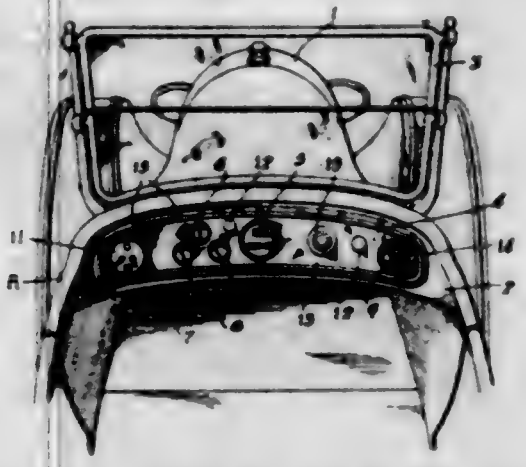


A lubricant retainer comprising a holder having spaced connected walls having concentric openings of greater diameter than the shaft on which the retainer is to be mounted, a packing ring within said holder having a central opening of smaller diameter than the openings in said holder, means for engaging the periphery of the packing ring, comprising a plurality of curved resilient strips, having at their ends outward extensions, a plurality of bolts extended through the extensions of the adjacent strips, and nuts adjustably mounted on said bolts, whereby the packing ring may move with relation to said means, and said means may be adjusted at different points on the periphery of the packing ring for imparting inward pressure thereto.

1,296,182. GLASS-COVERED DASHBOARD FOR AUTOMOBILES. WILLIAM P. HAMMOND, Passaic, N. J. Filed Nov. 1, 1917. Serial No. 199,735. 6 Claims. (Cl. 180—90.)

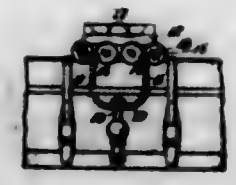
1. The combination with an instrument board for vehicles, of a series of instruments mounted upon the board and having flat faces which are substantially flush with the face of the board, and a continuous sheet of trans-

parent material applied to the face of the instrument board and extending over the faces of all of the said in-



struments so as to protect the same, the faces of the instruments being visible through the transparent sheet.

1,296,183. TAILPIECE FOR STRINGED INSTRUMENTS. HERMAN S. HELLER and JOHN JORGENSON, San Francisco, Cal.; said Jorgenson assignor to said Heller. Filed May 23, 1917. Serial No. 170,372. 6 Claims. (Cl. 84—146.)



1. A tail-piece for stringed instruments comprising an anchor plate, separately adjustable bolts adapted to engage and tension the strings of said instrument, and a fastening yoke hinged to the plate to allow the plate to swing only directly toward and away from the body of said instrument and by which the plate is secured to said body.

1,296,184. DOOR-CHECK. FINIS J. HENDERSON, Moreland, Ark. Filed July 31, 1918. Serial No. 247,661. 2 Claims. (Cl. 16—82.)



1. A door check comprising a plate having attaching means, an L-shaped latch pivotally mounted on said plate at the junction of the arms, one of said arms of said latch overlying said plate, a spring mounted to hold said arm normally in contact with said plate, a surface engaging member pivotally mounted on said plate and having a lateral extension for releasable engagement by said latch to hold said swinging member in inoperative position.

1,296,185. COLLAR. ARTHUR F. HENSLEY, Muncie, Ind. Filed Feb. 9, 1918. Serial No. 216,280. 1 Claim. (Cl. 2—67.)



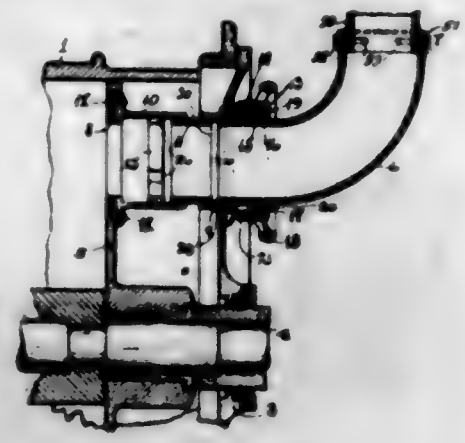
As a new article of manufacture a collar formed of a strip of material, said collar comprising an inner flap and an outer flap, a one-piece friction strip formed upon the inner face of said inner flap and also secured to the inner face of said outer flap and extending across the junction of said inner and outer flaps, said friction strip provided with depending portions arranged to extend over the ends and central portions of said inner flap, and said inner flap provided with buttonholes extending therethrough and also extending through said depending portion, and said friction strip adapted to constitute a tie gripping portion for holding a tie near the upper edge of said collar.

1,296,186. TOOTH-BRUSH. WILLIAM J. HINES, New Britain, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 8, 1916. Serial No. 135,745. 6 Claims. (Cl. 15—39.)



1. A cleaning implement comprising a handle having a pivot, a cleaning device having a shank, and a member secured to the shank, said shank and member having a slot between them to receive said pivot and one of them being resilient to permit removal of the shank from the pivot.

1,296,187. FEED CONNECTION FOR HOP-STRAINERS AND THE LIKE. ADOLPH G. HUPPEL, New York, N. Y. Filed Mar. 24, 1917. Serial No. 157,231. 4 Claims. (Cl. 100—50.)



1. In apparatus of the character described, the combination of a rotatably mounted receptacle provided with an opening at one end for receiving the material to be treated, a swinging sleeve adapted to be removably attached to said drum to furnish the material and means for closing such opening upon removal of said sleeve.

2. In apparatus of the character described, the combination of a rotatably mounted receptacle provided with an opening at one end for receiving the material to be treated, a pivotally mounted sleeve for carrying the material, said

sleeve being of a size to fit such opening in said receptacle; means for detachably connecting said sleeve to said receptacle; and other means for closing such opening upon removal of said sleeve.

3. In apparatus of the character described, the combination of a rotatably mounted receptacle provided with an opening at one end for receiving the material to be treated, a pivotally mounted sleeve for carrying the material, said sleeve being of a size to fit such opening on said receptacle; a union for detachably connecting said sleeve to said receptacle; and a plug adapted to be received in such opening upon removal of said sleeve to close the same.

4. In apparatus of the character described, the combination of a rotatably mounted receptacle adapted to contain the material to be treated and provided at one end with a pressure head and a removable cover, such cover and head having alined openings therein, a pivotally mounted sleeve adapted to be removably attached to such cover and having connection with the interior of said receptacle through the opening in such pressure head, means for maintaining said sleeve in position, and other means for closing the opening in such pressure head upon removal of said sleeve.

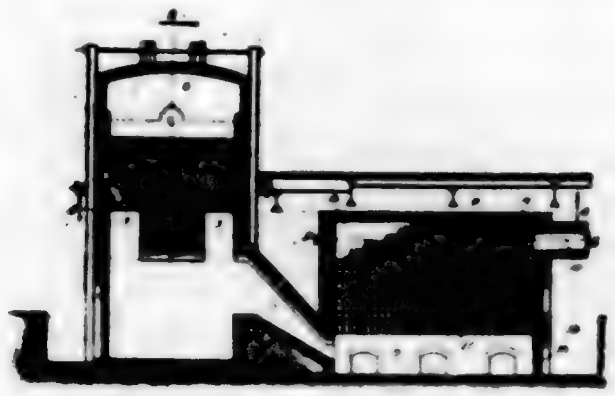
1,296,188. PROCESS FOR MAKING ANODES OF SOLID MANGANESE PEROXID. MAX HUTH, Berlin-Charlottenburg, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed Nov. 3, 1914, Serial No. 870,083. Renewed July 24, 1918. Serial No. 246,610. 7 Claims. (Cl. 204—4.)

1. A process for enhardening and increasing the density and conductivity of anodes made from peroxid of manganese or from a compound of manganese convertible by heat into peroxid of manganese which consists in subsequently treating the anode by a precipitation of peroxid of manganese.

3. A process for enhardening and increasing the density and conductivity of anodes made from peroxid of manganese or from a compound of manganese, convertible by heat into peroxid of manganese, which consists in forming the main body of the anode by a first layer of peroxid of manganese and repeatedly heating and treating such layer with nitrate of manganese.

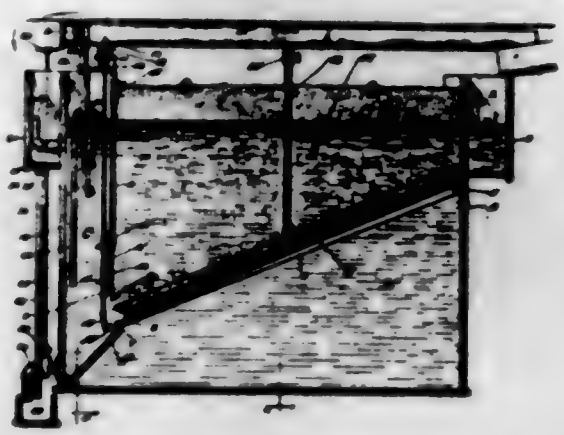
6. A process for enhardening and increasing the density and conductivity of anodes made from peroxid of manganese or from a compound of manganese convertible by heat into peroxid of manganese, which consists in forming the main body of the anode by a first layer of peroxid of manganese, repeatedly treating such layer with nitrate of manganese and in applying heat thereto, said nitrate of manganese being repeatedly introduced after cooling.

1,296,189. OPEN-HEARTH FURNACE. MARINUS HVID, Chicago, Ill. Filed Oct. 21, 1918. Serial No. 259,013. 5 Claims. (Cl. 263—45.)



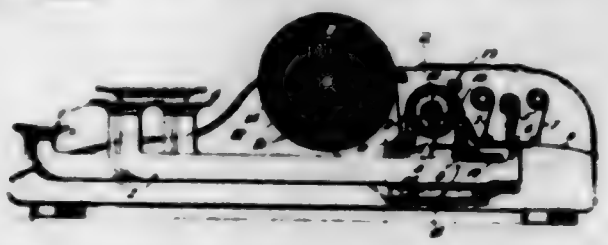
2. In an open-hearth furnace having a slag-pocket below the hearth, a checker-chamber communicating with the stack and a dust-chamber underneath the checkers, a waste-gas flue leading directly in downward inclination from the lower part of the slag-pocket into the dust-chamber, the checker-work approximately filling the checker-chamber and forming a shallow section over the gas-admission side of the dust-chamber.

1,296,190. APPARATUS FOR THE CONCENTRATION OF ORES. JAMES M. HYDE, Palo Alto, Cal. Filed Dec. 22, 1915. Serial No. 68,213. 9 Claims. (Cl. 261—100.)



2. In an apparatus of the class described for treating ore pulp, a vessel adapted to contain the pulp, an air box support in said vessel, means for setting said support in positions of varying inclination, an air box having a porous top removably resting upon said support, and flexible air supply means connected to said air box.

1,296,191. SHORTHAND-MACHINE. WARD S. IRELAND, St. Louis, Mo., assignor to National Shorthand Machine Company, St. Louis, Mo., a Corporation of Delaware. Filed May 19, 1917. Serial No. 169,620. 4 Claims. (Cl. 197—133.)



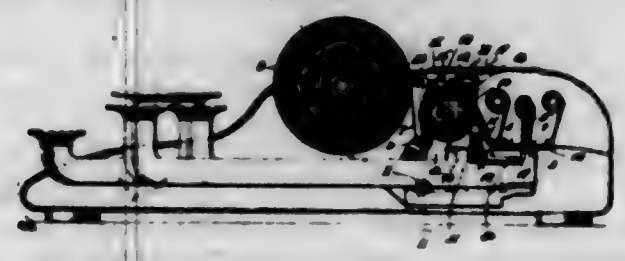
1. In a shorthand machine adapted to receive a roll of paper, a paper straightener comprising a paper feeding device for unwinding the paper and feeding it from the roll, an uncurling member onto which the paper is pulled by said paper feeding device, said parts being so arranged that the paper is turned abruptly at said uncurling member, retarding means coöperable with the roll of paper to offer a gradually increasing resistance to the paper feeding device, the tension of the paper at said uncurling member being increased as the roll decreases in diameter, and printing keys whereby the paper feeding device is actuated intermittently to feed the paper step by step, the tensioned paper being jerked firmly and quickly onto the uncurling member in response to the key operations.

4. In a typewriting machine, a paper support including a core adapted to receive a roll of paper, said core being provided with journals at its ends, and a paper straightener comprising an intermittent paper feeding device whereby the paper is unwound from the roll and fed step by step, an uncurling member onto which the paper is pulled by said intermittent paper feeding device, said parts being so arranged that the paper is turned abruptly at said uncurling member, and friction members yieldingly fitted to said journals so as to detachably secure the core and roll of paper to the machine, said friction members also coöperating with the roll of paper to offer a gradually increasing resistance to the paper feeding device, the tension of the paper at said uncurling member being increased as the roll decreases in diameter.

1,296,192. SHORTHAND-MACHINE. WARD S. IRELAND, St. Louis, Mo., assignor to National Shorthand Machine Company, St. Louis, Mo., a Corporation of Delaware. Filed May 19, 1917. Serial No. 169,621. 10 Claims. (Cl. 197—9.)

1. In a typewriting machine, the combination of a key actuated universal bar, and feeding device including a friction clutch through which motion is transmitted from

said universal bar, said friction clutch comprising a drive member loosely interlocked with and operated by the universal bar, a rotary driven member adjacent to said drive member, a wedge-shaped space being formed between said drive member and driven member, and a transmission member seated in said wedge-shaped space, said transmission member being wedged between and firmly gripped by said drive member and driven member when the drive member turns in one direction, and the drive member being free to turn in the opposite direction without transmitting movement to said driven member.



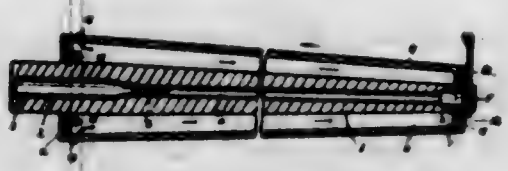
8. A shorthand machine having key actuated paper feeding rolls, bearings in which one of said rolls is rotatably mounted, pivotal supports for said bearings, and means for adjusting said bearings about their pivots to force the last mentioned roll toward the other roll, said means including eccentrics fitted to said bearings, and a spring coöperating with one of said bearings to yieldingly retain it in engagement with its eccentric, the other bearing being engaged with diametrically opposite faces of its eccentric.

8. A shorthand machine having a paper feeding device, a paper guide extending downwardly from said paper feeding device, a rearwardly extending paper guide forming a continuation of the first mentioned paper guide, and opposing printing elements arranged to engage the paper after it reaches said rearwardly extending paper guide.

9. A shorthand machine having printing elements including an inking ribbon and printing hammers below said ribbon, a paper feeding device for feeding a strip of paper between said ribbon and printing hammers, and a guide plate for the paper arranged below said ribbon, said guide plate having an opening through which the printing hammers can be projected to engage the paper and said guide plate being arranged opposite to and separated from the ribbon so as to coöperate therewith in forming a guide for the paper.

10. A shorthand machine having a paper feeding device including two rotary feed rolls coöperating with each other to feed the paper, a fixed bearing for one end of one of said rolls, a yieldable bearing for the other end of the last mentioned roll, and a spring associated with said yieldable bearing to force the last mentioned roll toward the other roll, thereby maintaining both rolls in firm engagement with the paper.

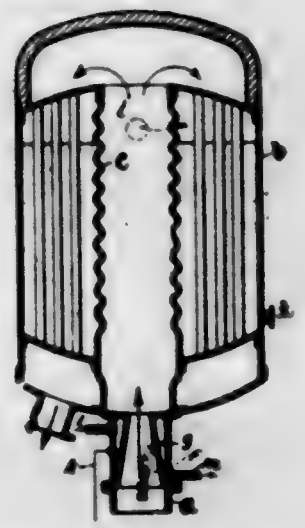
1,296,193. COOLER FOR FIREARMS. MILLARD L. JOHNSTON, Utica, N. Y. Filed Jan. 8, 1916. Serial No. 70,892. 5 Claims. (Cl. 89—1.)



1. In a cooler for firearms, a casing, a barrel, and ports in said barrel alining with ports in said casing, whereby to permit a draft of air both before and after the charge to chill the barrel of the firearm.

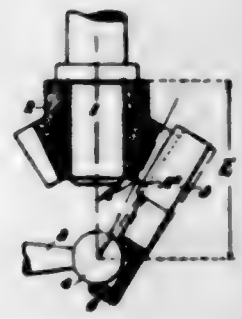
5. In a cooler for firearms, a barrel having a channel for the projection of a bullet, a larger channel communicating with said first named channel, a casing surrounding said barrel, channels formed on an incline in said barrel, other channels formed in said casing on an incline to aline with the channels in said barrel, and still other channels formed in said casing to communicate with the air, whereby the passage of the bullet along the channel in the barrel will cause a suction of air along the barrel, both before and after the passage of said bullet, to cool said firearm.

1,296,194. ELECTRIC-ARC FURNACE. JENS LASSEN LA COUR, Christiania, Norway, assignor to Norsk Hydroelektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed Nov. 22, 1915. Serial No. 62,782. 8 Claims. (Cl. 204—31.)



1. The combination with a high pressure electric arc furnace having a flame tube whose upper end is contracted and cooled; of a buffer mounted on said contracted end and receiving the gases from said furnace, and means heated by the gases issuing from said buffer for balancing the pressure in the same.

1,296,195. DEVICE FOR TESTING THE TEETH OF BEVEL GEAR-WHEELS. JEAN LASSERRE, Arbon, Switzerland, assignor to Adolph Saurer, Arbon, Switzerland. Filed Jan. 5, 1917. Serial No. 140,797. 7 Claims. (Cl. 33—1.)

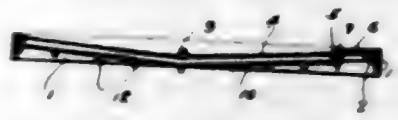


5. In a device for testing the teeth of bevel gear wheels, two members, one of them a bevel wheel support and the other a testing edge support, one of said members displaceable with respect to the other, and a testing edge coöperating with said support to support one end of said edge in any testing position with the line of the edge intersecting the axis of the wheel.

1,296,196. GUN-CLEANING COMPOUND AND METHOD OF PREPARING SAME. ROBERT LAUGHLIN, Buffalo, N. Y., assignor to Commercial Electrolytic Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 21, 1918. Serial No. 255,087. 8 Claims. (Cl. 23—11.)

7. A tablet, comprising an alkali and a lubricating binder, both in granulated and powdered form and intimately intermixed in a compacted tabular mass.

1,296,197. MOISTURE-RADIATOR FOR INCUBATORS. ROBERT C. LEWIS, Little Rock, Ark. Filed Nov. 20, 1918. Serial No. 263,411. 2 Claims. (Cl. 119—43.)



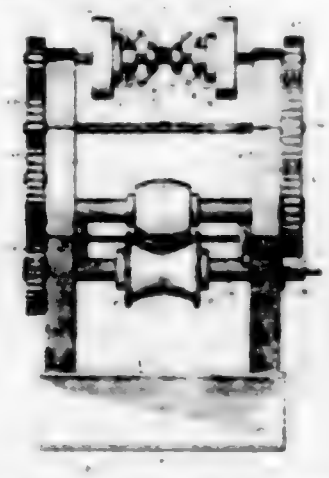
1. In an incubater, the combination with an egg tray comprising a frame of rectangular contour, strips secured around the interior of the frame, and a cross strip within said frame near one end; of a sheet of wire screening secured upon said cross strip and the other strips, a door hinged to said cross strip and resting at its outer edge upon the adjacent end strip, and a sheet of fabric secured to the lower edges of all strips excepting the last-named strip.

1,296,198. MACHINE FOR SETTING WHEELS. FRANK LOUDEK, Cedar Rapids, Iowa. Continuation in part of application Serial No. 184,923, filed Aug. 7, 1917. This application filed Aug. 13, 1918. Serial No. 249,659. 26 Claims. (Cl. 157—1.)



1. In a wheel-compressing machine, the combination with an adjustable center rest, of an adjustable annulus concentrically of the center rest, a ring frame about the adjustable annulus and concentric therewith, and a plurality of setting members carried by the ring frame.

1,296,199. FENDER-BENDING MACHINE. FRED A. LUNDAHL, Moline, Ill. Filed Sept. 6, 1917. Serial No. 190,023. 1 Claim. (Cl. 153—54.)



A device of the class described, comprising a frame; a pair of rolls coöperatively mounted therein and adapted to impart to a sheet of metal a desired amount of curvature transversely thereof; a pair of blocks slidably movable at opposite sides of said frame so as to move inwardly and upwardly or the reverse; a shaft supported in said blocks; a forming member supported by said shaft and having one of its edges slidably held on one of said rolls; a shaft rockingly mounted in said frame; a pair of eccentrics on said shaft operatively connected with said blocks to impart a sliding movement thereto; means for suitably actuating said rock-shaft; means for rotating said rolls in opposite directions; means for reversing the rotation thereof; and means for directing a sheet of metal to said rolls at a right angle thereto.

1,296,200. METHOD OF MANUFACTURING ROLLS. OLIVER B. MCMILLIN, Pittsburgh, Pa., assignor to Pittsburgh Rolls Corporation, a Corporation of Virginia. Filed Mar. 6, 1918. Serial No. 220,810. 9 Claims. (Cl. 22—213.)

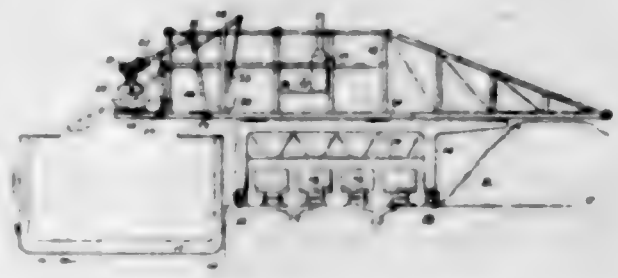
1. The method of making chilled rolls, consisting in forming a mixture of iron containing silicon, sulfur, phosphorus, manganese, and carbon in predetermined proportions, the manganese being low; melting the mixture in an open hearth furnace while maintaining control and avoiding undesirable variations in proportions of said elements; and casting the molten metal while in such controlled condition in a chill mold, substantially as set forth.

4. The method of making chilled rolls, consisting in forming a mixture of iron containing silicon, sulfur, phosphorus, manganese and carbon in predetermined proportions, the manganese being low; melting the mixture in an open hearth furnace while maintaining control and avoiding undesirable variations in proportions of the sulfur and carbon; and casting the molten metal while in such controlled condition in a chill mold, whereby to form a chilled roll in which the carbon content is in combined form co-extensive with the depth of the chill, substantially as set forth.

6. A chilled roll formed of a mixture of iron having predetermined and controlled proportions of silicon, sulfur, phosphorus, manganese and carbon with the carbon of the outer chilled face portion of the roll in combined form.

9. A chilled roll formed of a mixture of iron having contained proportioned elements as follows: silicon .60%, sulfur .061%, phosphorus .42%, manganese .26%, total carbon 2.94% and with the carbon of the outer chilled face portion of the roll in combined form and of the inner body portion in graphitic form.

1,296,201. HOISTING AND CONVEYING APPARATUS. JOHN MCMYLER, Cleveland, Ohio, assignor, by mesne assignments, to The McMyler Interstate Company, Bedford, Ohio, a Corporation of Ohio. Filed May 12, 1910, Serial No. 560,772. Renewed July 26, 1918. Serial No. 246,937. 6 Claims. (Cl. 212—9.)



1. In a conveying apparatus, a movable gauntree, a frame movably supported on said gauntree, a track extending lengthwise of the frame, a car movable along said track, means for depositing material in said car when located on a certain portion of the track comprising a boom, a pair of swinging boom supporting arms pivotally connected to the boom at points spaced lengthwise thereof and pivotally connected to the frame at points spaced lengthwise thereof.

2. In a conveying apparatus, a frame, a hoisting device adapted to be swung outwardly from said frame or inwardly, mechanism for swinging said hoisting device comprising a boom from the end of which said hoisting device is supported, a pair of swinging arms pivotally connected to the boom at points spaced lengthwise thereof, and pivotally connected to the frame at spaced points, a

pivoted counterbalancing weight connected to said mechanism, said weight being raised when the boom is moved outwardly and lowered when the boom is moved inwardly and swinging beyond its lowermost position when the bucket is in position to be emptied.

3. In a conveying and hoisting apparatus, a movable gauntree, a frame movably supported on said gauntree, a conveying member for conveying material lengthwise of the frame, means for delivering material to said conveying member comprising a material hoisting member, and means for giving said hoisting member a combined vertical and lateral movement comprising a boom supporting said hoisting member, and a pair of swinging arms pivotally connected to the boom and pivotally connected to the frame.

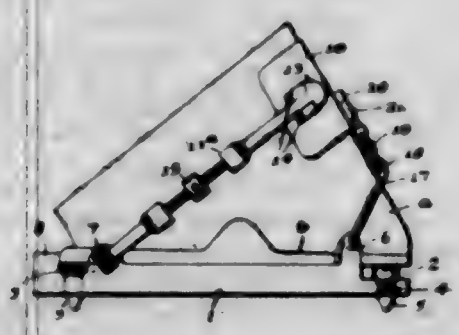
6. In a hoisting and conveying apparatus, a frame, a material receiving and delivering member, a boom supporting the same, arms pivotally connected to the boom and pivotally connected to the frame at points spaced lengthwise of the boom and frame respectively whereby when said arms are swung the boom and said member supported by it will be moved outwardly and downwardly to receiving position and upwardly and inwardly to delivering position, and a counterweight connected to one of the moving parts and serving to assist the movement of the boom and arms both at the start of the outward movement and at the start of the inward movement.

1,296,202. GARDEN IMPLEMENT. SPRINGS MILLER, Conway, Ark. Filed Mar. 9, 1917. Serial No. 153,636. 1 Claim. (Cl. 55—39.)



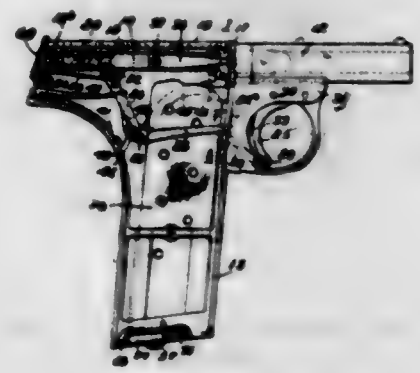
A garden implement comprising a head having tooth receiving openings formed therein, teeth fitting in the said openings, a handle detachably connected to said head, a carrier bar detachably connected to said head independently of said handle, and provided with a socket, a stem having a reduced end received in said socket, fastening means carried by said bar and engageable with said reduced end, and an earth working blade carried by the opposite end of the stem.

1,296,203. HORSE-OVERSHOE. GEORGE WILLIAM MOORE, Jersey City, N. J. Filed Nov. 22, 1918. Serial No. 263,655. 18 Claims. (Cl. 168—1.)



18. A horse overshoe comprising an integral sole-plate with means for holding it in place beneath a nailed shoe, said plate having a recess in its upper side at the extreme toe region adapted to receive the worn toe calk of the nailed shoe, and openings through the bottom of said recess, removable calks inserted downward through said openings with heads adapted to be accommodated beneath the worn toe calk of the shoe.

1,296,204. AUTOMATIC FIREARM. GIOVANNI MOSCARDI, Somerville, Mass. Filed Aug. 9, 1918. Serial No. 249,072. 7 Claims. (Cl. 42—3.)



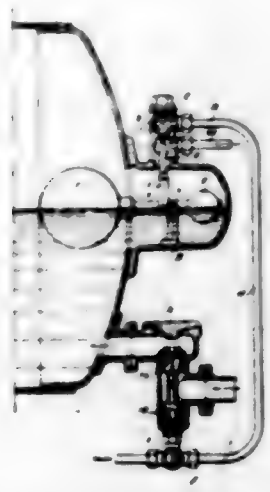
1. An automatic fire-arm comprising a magazine-containing receiver, a barrel rigidly connected therewith, said receiver being provided with a guide and with a fixed spring abutment at its rear end, a slide movable in the receiver and including a head and a stem projecting rearwardly from the head and provided with a longitudinal bore and with a longitudinal slot receiving said abutment, a firing-pin movable in said bore and provided with a sear-engaging lug projecting through said slot, a spring interposed between said pin and abutment, a sear adapted to normally engage said lug, a spring-pressed trigger, trigger-operated sear-displacing means, and a slide-projecting device adapted to be set for action by the retraction of the slide.

1,296,205. OIL-COCK OPENING AND CLEANING TOOL. EDWARD W. MONNEUSE, West New Brighton, N. Y. Filed July 2, 1917. Serial No. 178,206. 5 Claims. (Cl. 137—70.)



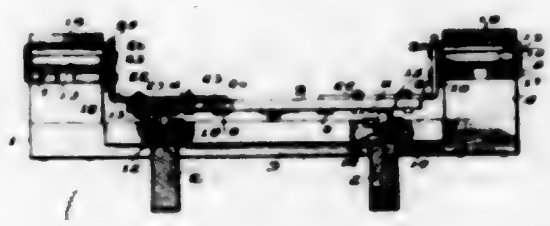
2. A tool of the class described comprising a stem, a U-shaped member mounted on said stem for opening an oil-cock, a cleaning member projecting from said U-shaped member, and a handle for said stem.

1,296,206. AUTOMATIC FEED-REGULATOR FOR STEAM-BOILERS. RICCIOTTI MORALI, Genoa, Italy, assignor to Società Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Filed July 8, 1918. Serial No. 243,940. 3 Claims. (Cl. 137—101.)



3. A feed water regulator comprising a feed water control valve, a piston for operating said valve, a regulator control valve, means for permitting feed water to close the regular control valve, and a float operatively connected to the regulator control valve.

1,296,207. WAGON HAY-RACK. JACOB S. MYERS, Hagerstown, Md. Filed Jan. 11, 1918. Serial No. 211,861. 2 Claims. (Cl. 21—74.)

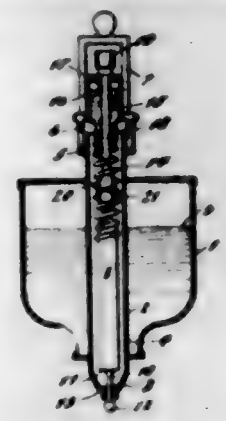


1. A wagon rack comprising a wagon rack bed having elevated side rails forming a track, rollers arranged at intervals upon the rack bed below the level of the track, a carriage disposed for movement endwise of the rack bed below the level of the rails, track rails upon the carriage resting and traveling upon said rollers, bearing brackets at the sides of the carriage projecting upwardly and outwardly and overhanging the track rails of the rack frame, and rollers carried by said bearing brackets to travel upon said track rails.

2. A wagon rack comprising a rack bed having side rails elevated above the level thereof and forming a track, rollers upon the rack bed at intervals along the length thereof, a carriage movable longitudinally of the rack bed below the level of said track rails, rails upon the carriage to travel upon said rollers, hanger brackets overhanging the track rails of the rack body, rollers carried thereby to travel upon said track rails, and supporting connections between said hangers and the carriage, said connections being adjustably connected with the carriage and with said brackets.

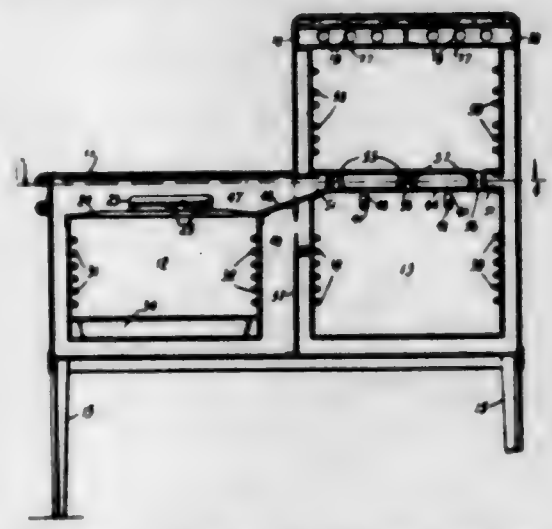
1,296,208. OUTFLOW-REGULATOR. HERMAN NIELSEN, Copenhagen, Denmark. Filed Feb. 6, 1917. Serial No. 146,977. 10 Claims. (Cl. 184—65.)

1. In an apparatus for regulating the flow of liquid, the combination with a container and an outlet valve therefor, of means for opening said valve as the quantity of liquid in said container decreases, and means for preventing the



opening movement of said valve as rapidly as the level of the liquid lowers.

1,296,209. HEATING APPARATUS. HENRY W. O'DOWD, Jersey City, N. J., assignor to William M. Crane Company, a Corporation of New York. Filed Feb. 12, 1916. Serial No. 77,861. 10 Claims. (Cl. 126—99.)



1. In a stove, a plurality of spaced-apart ovens, each provided with an opening; a duct extending from an opening in one oven and restricting the opening in the other oven; a source of heat; and a duct connecting one of said ovens with said source of heat through the restricted opening.

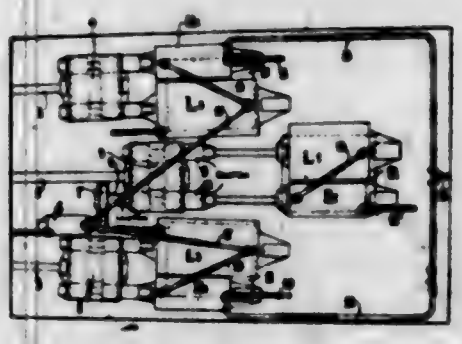
2. In a stove, a plurality of spaced-apart ovens, each provided with an opening therein; a duct extending from the opening in one oven and restricting the opening in the other oven; a source of heat; a duct connecting one of said ovens with said source of heat through the restricted opening; and an independent source of heat in communication with one of said ovens through one of said ducts.

3. In a stove, a plurality of spaced-apart ovens, each provided with an opening therein; a duct extending from an opening in one oven and restricting the opening in the other oven; flues extending around said ovens; and means for heating one of said ovens by radiation.

4. In a stove, a plurality of spaced-apart ovens, each provided with an opening therein; a duct extending from an opening in one oven and restricting the opening in the other oven; flues extending around said ovens; means for heating one of said ovens by radiation; and a plurality of baffles arranged in said flues, the area of said baffles being increased in proportion to the height at which the baffle is placed in said flues.

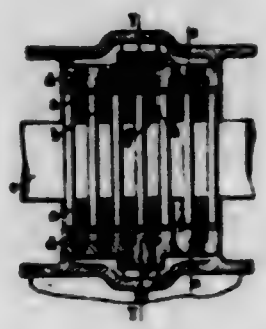
5. In a stove, a plurality of spaced-apart ovens, each provided with an opening therein; a duct extending from an opening in one oven and restricting the opening in the other oven; a horizontal flue disposed above one of said ovens; and a communicating passage between said oven and said horizontal flue.

1,296,210. MARINE-TURBINE INSTALLATION. CHARLES ALGERNON PARSONS, STANLEY SMITH COOK, and ROBERT JOHN WALKER, Wallsend, England; said Cook and said Walker assignors to said Parsons. Filed Sept. 18, 1915. Serial No. 51,496. 4 Claims. (Cl. 60—70.)



1. A turbine installation of the class indicated including a plurality of main turbine sets comprising high and low pressure stages, a propeller shaft for each set, a plurality of cruising turbines connected to certain of said shafts, means for exhausting the cruising turbine of one shaft directly into one of the pressure stages of the main turbine set of another shaft at cruising speeds, auxiliary steam machinery, means for exhausting steam from said machinery into the high pressure stages and means for exhausting steam from said high pressure stages to the low pressure stages.

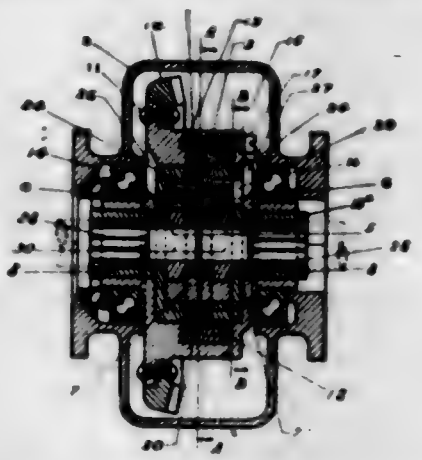
1,296,211. LUBRICATION OF THRUST-BEARINGS. CHARLES ALGERNON PARSONS, STANLEY SMITH COOK, and LOUIS MORTIMER DOUGLAS, Wallsend, England; said Cook and said Douglas assignors to said Parsons. Filed Jan. 15, 1917. Serial No. 142,544. 2 Claims. (Cl. 64—38.)



1. A thrust bearing comprising a rotating member, a plurality of collars on said member, a fixed member, stationary collars on said fixed member, said rotating collars interengaging with said stationary collars, two sets of gutters on the working faces of said stationary collars, said sets being oppositely inclined and extending completely across the working face, means for admitting lubricant to the roots of said revolving collars through passages extending centrally between the stationary collars, and outlets for lubricant at the roots of said stationary collars, as and for the purpose set forth.

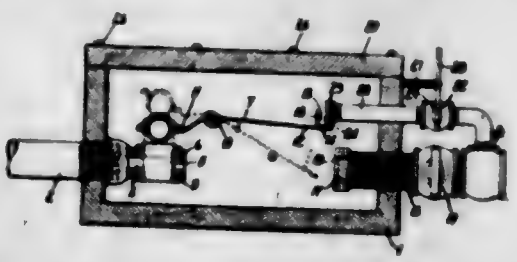
1,296,212. POWER-TRANSMISSION MECHANISM. LEVI B. PARSON, Norristown, Pa. Filed Oct. 23, 1917. Serial No. 198,045. 7 Claims. (Cl. 74—7.)

2. A power transmission mechanism comprising in alined arrangement axle parts having gear-hubs; an intermediate driving disk formed with driving-bar and insert recesses; strut-carrier disks mounted in the respective gear-hubs and carrying driving-bar projections engaged in said driving-bar recesses; and pairs of forward and rearward driving-struts pivotally mounted in said strut-



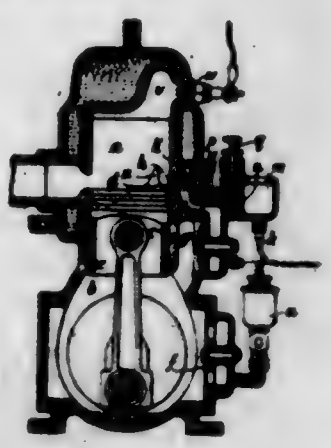
carrier disks and provided with setting projections engaged in said insert recesses.

1,296,213. SAFETY APPLIANCE FOR FLUID-CONDUITS. JAMES PERRY, Somerville, Mass. Filed Oct. 10, 1918. Serial No. 257,543. 6 Claims. (Cl. 67—115.)



1. A device of the class described having in combination, a fluid tube, a valve adapted to control the passage of fluid through said tube, a lever operatively connected at one end with said valve and having at its opposite end a pocket the weight of said valve being normally adapted to maintain said valve closed, means for moving said lever to open said valve and a second fluid tube adapted to direct fluid into said pocket to maintain said valve open.

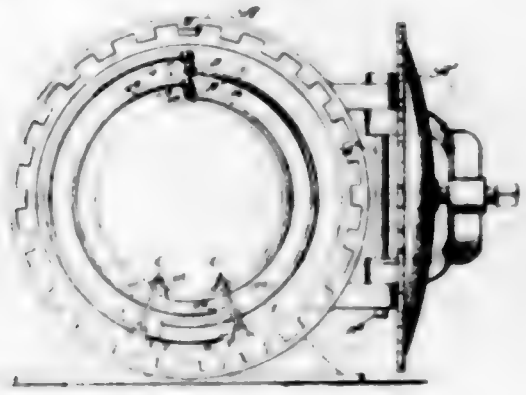
1,296,214. INTERNAL-COMBUSTION ENGINE OF THE TWO-CYCLE TYPE. ERNEST WILLOUGHBY PETTER, Yeovil, England. Filed May 8, 1916. Serial No. 95,032. 6 Claims. (Cl. 123—73.)



1. An internal combustion engine comprising a cylinder, a piston working in said cylinder, a crank chamber, a combustion chamber disposed at one end of said cylinder, means for admitting air to said crank chamber, a passage from said crank chamber to said combustion chamber, a source of fuel supply, a nozzle adapted to discharge into said cylinder, a fuel supply conduit leading to said nozzle,

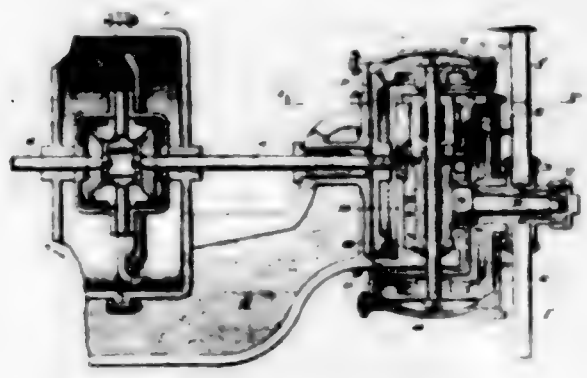
a non-return valve in said conduit, an air inlet from said passage to said nozzle, said air inlet being disposed between the end of the nozzle and the non-return valve, ports in said passage between the said nozzle and said crank chamber, means for rapidly closing the said ports to a predetermined area on the speed of the engine attaining a predetermined velocity, for leaving the ports unaltered during a predetermined range of variation of velocity, and for closing the port when the speed of the engine attains a certain higher predetermined velocity, said ports being opened conversely as the speed of the engine falls.

1,296,215. VULCANIZER. WILLIAM F. RAY, Chicago, Ill. Filed Oct. 2, 1918. Serial No. 256,571. 7 Claims. (Cl. 18—6.)



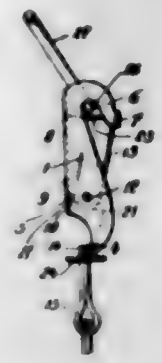
1. In a vulcanizer, the combination with a vulcanizer body, of steam-injecting means comprising a plurality of discharge orifices opening in a circumferential direction adjacent the inner surface of the wall of said vulcanizer body and adapted to produce circumferentially circulating steam-currents within the body of the vulcanizer.

1,296,216. MOTOR-PROPELLED VEHICLE. BERNARD A. REIF, Cody, Wyo. Filed Dec. 26, 1916. Serial No. 138,921. 4 Claims. (Cl. 180—43.)



1. In a motor propelled vehicle, the combination of an axle, a driven shaft having a bearing in said axle, a housing on said axle, a steering knuckle provided with an axial bore mounted in bearings in said housing so as to be rotatable about an upright axis, said steering knuckle comprising a steering arm and a journal, a vehicle wheel rotatably mounted on said journal, driving connection between said driven shaft and vehicle wheel, comprising an upright shaft rotatably mounted in bearings formed in the housing on said axle and which extends through the bore in said steering knuckle, and bevel gears secured to the driven shaft and to the vehicle wheel and which intermesh, respectively, with bevel gears secured to said upright shaft, the housing on the axle forming a casing which incloses the gear on the driven shaft and the gear on the upright shaft which meshes therewith, and a separate casing supported on said upright shaft and on the steering knuckle, which incloses the gear on the vehicle wheel and the gear on the upright shaft which meshes therewith, substantially as described.

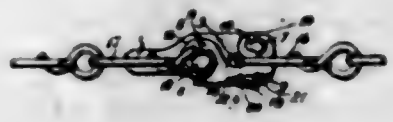
1,296,217. SNAP-HOOK. JOHN R. REYBURN, Fairfield, and CLAUDE D. SAGENDORF, Bridgeport, Conn., assignors to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed July 6, 1917. Serial No. 178,907. 8 Claims. (Cl. 24—230.)



3. The snap hook comprising a channeled sheet metal hook member having side plates provided with hook ends connected and held in substantially parallel position by an integral back web, integral alining closing means formed on said hook ends, a spring snap of such width as to fit loosely within the channel formed by said side plates and having a curved bearing portion and a recurved anchor end, an anchor locking tongue engaging said anchor end, and inwardly protruding integral spring bearing projections formed in said side plates to project into and coöperate with the bearing portion of said spring snap.

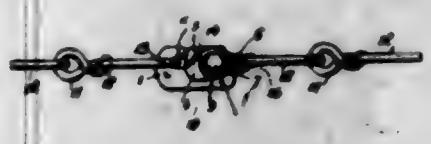
5. The snap hook comprising a channeled sheet metal hook member having side plates provided with hook ends connected and held in substantially parallel position by an integral back web, integral closing means formed on said hook ends, a spring snap of such width as to fit loosely within the channel formed by said side plates and having a portion operatively connected to said hook member, a transversely extending retaining spring end formed on said spring snap to normally extend across the receiving recess of said hook ends and project into a spring slot in the back web.

1,296,218. CHAIN-CONNECTING DEVICE. JOHN R. REYBURN, Fairfield, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed July 11, 1917. Serial No. 179,824. 6 Claims. (Cl. 24—242.)



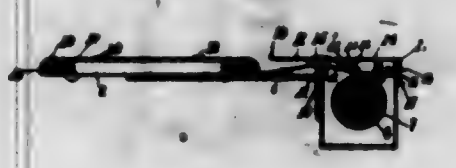
5. The connector device adapted to detachably connect the ends of the circumferential side chains of a chain tire grip, and which comprises a lever connector member formed with a connector hook, and a coöperating retainer member, a loose pin and slot connection between said retainer member and said connector member to render said members pivotally and longitudinally movable with respect to each other and enable said connector hook to lock said members in closed position, interlocking alining devices to cause longitudinal alining movement of said members during their angular closing movement and a releasing device to automatically disengage said alining devices when said closing movement is substantially completed.

1,296,219. CHAIN-CONNECTOR DEVICE. JOHN R. REYBURN, Fairfield, and CLAUDE D. SACHENDORF, Bridgeport, Conn., assignors to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Nov. 14, 1917. Serial No. 202,016. 3 Claims. (Cl. 24—231.)



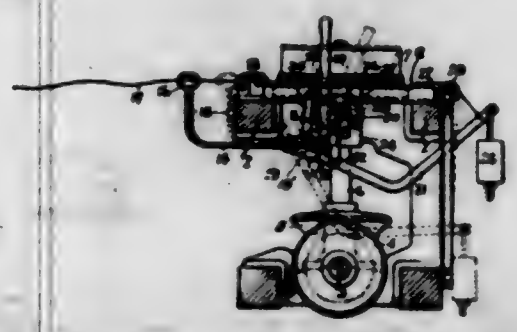
1. The connector device adapted to detachably connect the ends of the side chains of a chain tire grip and which comprises a connector having flat faces adjacent one end and a connector recess adjacent its other end, a securing stud engaging said connector and permanently securing adjacent the flat faces thereof the double eye end of a side chain link so that said connector can have swinging movement with respect thereto, a sheet metal retainer having securing holes through which said securing stud passes to mount said retainer adjacent the flat side of said connector, operating attaching lugs on said retainer and cooperating with the chain link secured to said connector so that said link and retainer move substantially in unison to swing said retainer substantially across said connector recess and spring detents formed in said retainer to releasably hold the same in closed position.

1,296,220. SANITARY TOILET-SEAT. CHARLES RIGBY, Cincinnati, Ohio. Filed Nov. 8, 1916. Serial No. 130,194. 2 Claims. (Cl. 4—18.)



1. The combination of a seat of the character described, a bracket secured to said seat and extending laterally solely at one side of said seat, a container for a flexible protective covering secured to said bracket, said container having an opening for said flexible protective covering presented toward said seat, and a pivoted clamp arranged to be received about the edge of said seat for clamping said flexible protective covering to said edge of said seat, and said container provided with a shelf above said opening, said shelf extending laterally over the position of said flexible protective covering and said bracket to a point proximate to the path of said pivoted clamp.

1,296,221. SAFETY DEVICE FOR WIRE-DRAWING APPARATUS. GEORGE O. ROSS and THOMAS KURTZ, Monessen, Pa., assignors to Pittsburgh Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 30, 1918. Serial No. 214,510. 4 Claims. (Cl. 205—16.)



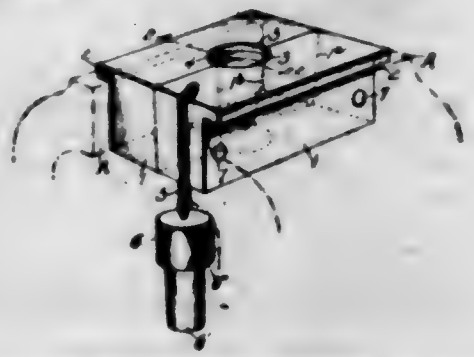
1. In a safety device for wire-drawing apparatus, the combination of a suitable frame, of a drum, a power-driven shaft, clutch connections between said shaft and said drum, a locking device for holding said drum in engagement with said shaft, a weight-controlled arm, connections between said locking device and said weight-controlled arm, a movable guard-arm, and connections between said arm and said locking mechanism whereby by the movement of said guard-arm said locking mechanism is released and said weighted arm moves the drum out of engagement with said shaft.

2. In a safety device for wire-drawing apparatus, the combination with a suitable frame, of a drum, a power-driven shaft, clutch connections between said shaft and said drum, a latch, a keeper engaged by said latch, a weighted arm, connections between said arm and said latch, a movable guard-arm, and connections between said guard-arm and said latch whereby by the movement of said guard-arm said latch is released from said keeper, and by the action of said weighted arm said drum is disengaged from said shaft.

3. In a safety device for wire-drawing apparatus the combination with a suitable frame, of a drum, a power-driven shaft, clutch connections between said drum and said shaft, a latch, a keeper for said latch having an offset on which said latch is supported, a weighted arm connected to said latch, a movable guard-arm, and connections between said latch and said guard-arm whereby when said guard-arm is moved said latch is released from its support and said drum is lifted from engagement with said shaft by the action of said weighted arm.

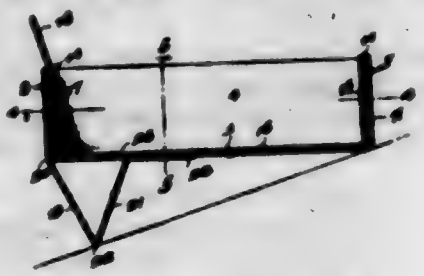
4. In a safety device for wire-drawing apparatus, the combination with a suitable frame, a drum, a power-driven shaft, clutch connections between said shaft and said drum, a lever-arm for actuating said clutch mechanism, a latch, a projection on said latch overhanging said lever-arm, a weighted arm connected to said latch, a movable guard-arm, and connections between said latch and said guard-arm whereby by the movement of said guard-arm said latch is released and lowered by the action of said weighted arm to operate said lever-arm to release said drum from said power-shaft.

1,296,222. DEVICE FOR SECURING COUPLINGS TO FLEXIBLE HOSE. JOHN D. RUSS, Spencer, W. Va. Filed June 27, 1918. Serial No. 242,229. 4 Claims. (Cl. 29—88.2.)



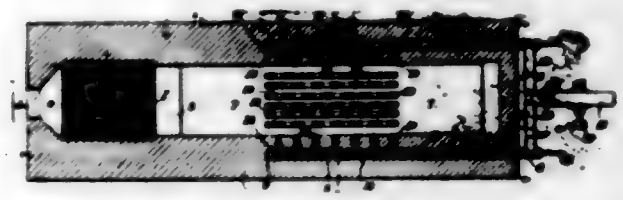
1. In a device for securing couplings on flexible hose, complemental dies provided each with a corrugated die-socket adapted to compress a soft-metal outer ring or "binder" onto the end of a flexible hose, and a cylindrical plug adapted to be inserted into the inner coupling-ring.

1,296,223. EASEL DISPLAY-CARTON. CHESTER A. SAYBOLT, Philadelphia, Pa., assignor to Lockwood Folding Box Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 13, 1918. Serial No. 234,059. 9 Claims. (Cl. 206—44.)



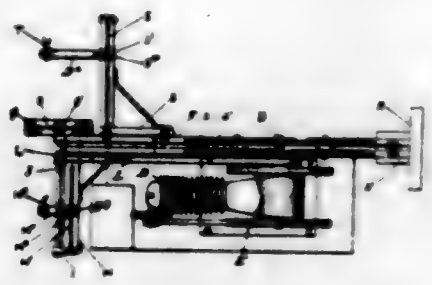
1. A carton formed from a single blank of cross-form and folded to provide interior and exterior, wall and bottom sections, one interior wall section extended to provide a sign card.

1,296,224. COMBINED COAL AND GAS BURNING FURNACE. HENRY C. SMART, Brooklyn, N. Y., assignor to Standard Oil Company of New York, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1917. Serial No. 190,739. 9 Claims. (Cl. 110—22.)



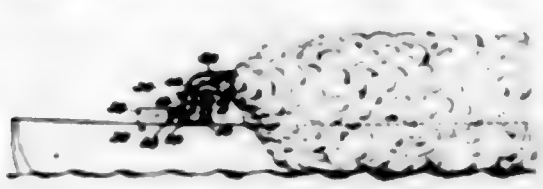
1. In a combined coal and gas burning furnace embodying among other things a bridge wall, a combustion chamber in rear of the bridge wall, and a stack, the combination of coal burning devices at the front end of the furnace, baffle walls in the combustion chamber on substantially the same level as the coal burning devices, an air supply pipe, a series of burner tubes connecting therewith located on opposite sides of the combustion chamber opposite the baffle walls and discharging against them, a gas supply pipe, and a series of jets connecting with the gas supply pipe and discharging within the respective burner tubes.

1,296,225. ICE-CUTTING MACHINE. EDGAR L. STONE, Waterford, Me. Filed Sept. 30, 1918. Serial No. 256,338. 4 Claims. (Cl. 262—20.)



4. An apparatus for cutting ice, comprising a sled with a standard thereon, a driving shaft journaled in suitable bearings upon the standard, an arbor journaled in suitable bearings at the forward end of the beam, a counterbalanced weight and a handle at the rear end, and belted connections between the arbor and driving shaft, a hinged bracket member mounted upon the walking beam, and an adjustable marker mounted upon said bracket member.

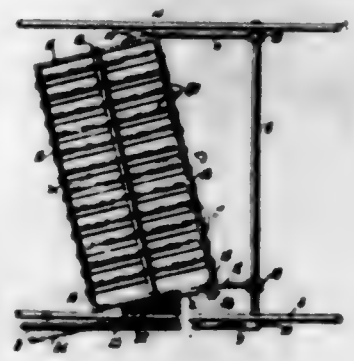
1,296,226. METHOD OF AND MEANS FOR PRODUCING SMOKE SCREENS FOR SHIPS. AUDLEY HART STOW, Maybeury, W. Va. Filed Apr. 9, 1917. Serial No. 160,863. 8 Claims. (Cl. 114—15.)



1. The art of producing a smoke screen for a ship which consists in subjecting the funnel smoke adjacent to its point of delivery to a liquid spray which causes the smoke to descend and form a cloud adjacent to the ship.

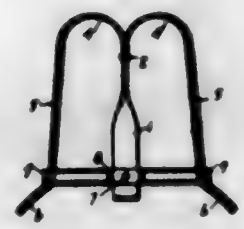
1,296,227. RAKING APPARATUS. GEORGE STRAND, Cortland, Ill. Filed Oct. 19, 1916. Serial No. 126,567. 2 Claims. (Cl. 56—115.)

1. In a device of the character described, the combination of a main frame including parallel side bars, a supporting shaft mounted upon said side bars, means for rocking said supporting shaft and retaining the same in a set condition, supporting arms provided with sleeves keyed upon said shaft, one of said arms being longer than the remaining arms, said arms extending parallel to said side bars, the ends of said arms being bent to extend ob-



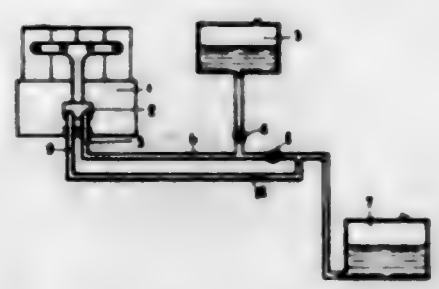
liquely, a raking frame carried by said obliquely extending ends whereby said raking frame will extend obliquely to said first mentioned frame, although being between said side bars, and raking means for said raking frame.

1,296,228. REMOVABLE HANDLE FOR VESSELS. SAMUEL SULZBACHER, Cincinnati, Ohio. Filed Feb. 10, 1917. Serial No. 147,898. 3 Claims. (Cl. 65—32.)



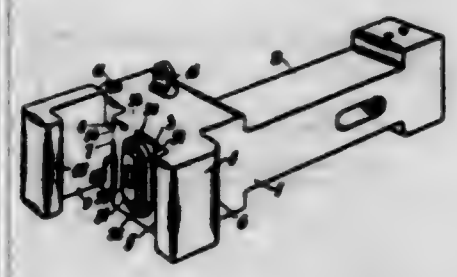
1. In a removable handle for vessels, a central handle piece having a finger at its forward end, said central piece rounded at the rear, and extending outward and forward at each side to form side arms ending in flaring fingers, the arms being united at the rear and the central arm flattened at its forward end; the arms capable of being pressed together to grip the vessel in connection with the finger on the central part.

1,296,229. FEEDING APPARATUS FOR INTERNAL-COMBUSTION MOTORS. RENÉ JEAN CAMILLE TAMPIER, Boulogne-sur-Seine, France. Filed Oct. 21, 1918. Serial No. 258,926. 1 Claim. (Cl. 158—36.)



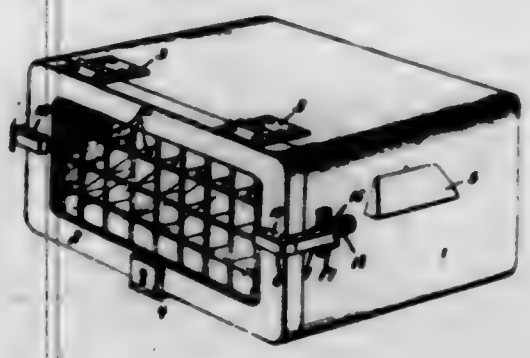
A feeding apparatus for internal combustion motors, comprising a nozzle, two hydrocarbon tanks communicating with the nozzle, one of which is placed at a higher level, the second at a lower level than the nozzle, means to effect communication between both tanks and the nozzle, an extra nozzle adjacent the first nozzle, and means to effect communication between the extra nozzle and the lower tank whereby an extra amount of hydrocarbon is delivered to the motor when fed from the lower tank.

1,296,220. COMBINED CAR AND PIPE COUPLING. JOSEPH THIEM and GERARD F. HEHMAN, Newport, Ky. Filed May 18, 1918. Serial No. 235,222. 22 Claims. (Cl. 213—40.)



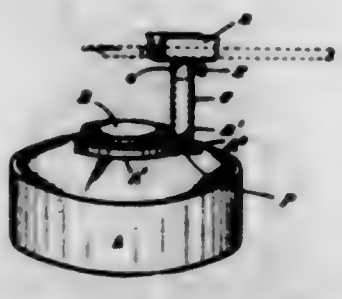
1. A pair of car-coupling heads, engaging means on the respective heads to prevent longitudinal and transverse separation of said heads but permitting relative vertical movement of said heads without separation thereof, and pipe-coupling means on the respective heads substantially within the upper and lower limits of said engaging means, and having apertured transverse faces mutually contacting whereby said apertures communicate with each other.

1,296,231. FASTENER FOR TOOTH-BRUSH HOLDERS. ALBERT G. TILLMAN, Vicksburg, Miss. Filed June 24, 1914, Serial No. 847,055. Renewed Jan. 13, 1919. Serial No. 270,944. 1 Claim. (Cl. 70—116.)



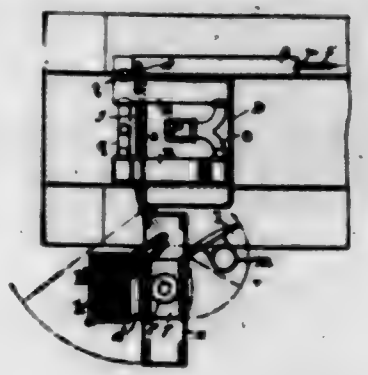
In combination with a receptacle having a hinged door, a fastener for the door, said fastener having a shank extending from the same, a spring surrounding the shank, a sleeve within which the shank is received, a nut to hold the spring on the arm, and pins extending through the sleeve to hold the spring in place, so that the door will be under constant pressure.

1,296,232. COVER FOR INK-WELLS AND OTHER RECEPTACLES. ALFRED TOYE, Hammersmith, London, England. Filed June 12, 1918. Serial No. 239,542. 1 Claim. (Cl. 129—4.)



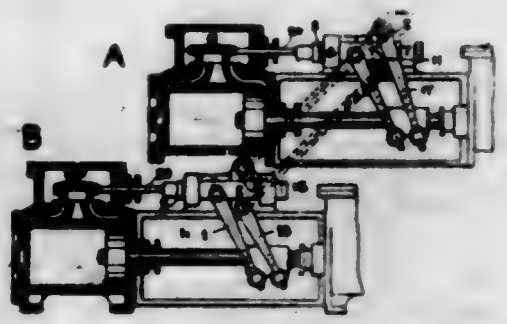
In the herein described lid for inkwells and the like receptacles, the combination, of a lid fitting over the opening of the receptacle and having a fork-shaped hinge attached to the said receptacle, a tubular member formed integral with the lid and situated immediately above the fork-shaped hinge, a pen-rest in the form of a spring clip and having an extension fitting into the said tubular member and an opening in its central portion, and means to attach the said pen-rest to the tubular member, all substantially as and for the purpose set forth and shown.

1,296,233. LOCOMOTIVE AND LIKE BOILER. FREDERICK HARVEY TREVITHICK, Cairo, Egypt. Filed Dec. 7, 1912. Serial No. 735,470. 8 Claims. (Cl. 122—428.)



1. In a boiler the combination of a smoke-box, a movable member thereon, an auxiliary heater within the smoke-box and an uptake, both auxiliary heater and uptake being carried by the movable member.

1,296,234. AUTOMATIC CUT-OFF OR CUSHIONING GEAR FOR DUPLEX PUMPS. ARTHUR HUGHES TWELLS, township of Urmston, county of Lancaster, England. Filed Oct. 7, 1915. Serial No. 54,546. 2 Claims. (Cl. 121—4.)



1. In a duplex pump, each pump having valves, valve operating mechanism comprising means including in each pump a movable member, a fulcrum upon said movable member, a valve operating lever mounted on said fulcrum, a second lever for shifting said movable member of the opposite pump, said second lever being capable of a certain amount of free movement as regards said movable member, and fixed stops to terminate the movement of the movable member, the valve of either pump being opened by a movement of its valve operating lever effected by the shifting of the movable member carrying the fulcrum of the said lever brought about by the second lever of the opposite pump at the termination of its free movement, and the closure of the valve of each pump being effected by an actuation of its valve operating lever by its own pump, said lever prior to closing the valve shifting the movable member carrying its fulcrum up to one of the fixed stops toward which it was previously moved by the second lever of the opposite pump.

1,296,235. METHOD OF MANUFACTURING PICK-MATTOCKS. SAMUEL T. TYLER, Wheeling, W. Va., assignor to Warwood Tool Company, Warwood, Wheeling, W. Va., a Corporation of West Virginia. Filed Apr. 28, 1917. Serial No. 165,122. 2 Claims. (Cl. 76—109.)

1. The herein-described method of making a tool having a centrally located head and oppositely extending shanks disposed in offset relation, consisting in forging

the end portions of the blank to offset them in opposite directions and leave the center portion in its original condition, displacing the undisturbed center portion by a



punching operation thus bending but not breaking the grain or fiber of the original blank, and then forging the end portions to the desired shape.

1,296,236. FRUIT-GATHERING DEVICE. CATEN UHLARICK, Big Sandy, Mont. Filed June 1, 1918. Serial No. 237,753. 3 Claims. (Cl. 56—99.)



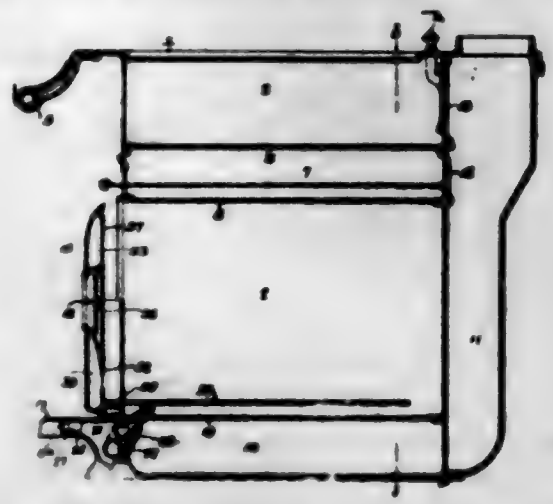
1. A fruit gathering apparatus, comprising an open-ended tubular shell, a spring pressed knife pivoted thereto, and means upon the shell for engaging and holding the twig while the fruit is being cut, a pivotal lever having an aperture therein through which said cord passes, a set screw for holding the cord in adjusted position, and a reel upon which the slack cord is adapted to wind.

2. A fruit gathering apparatus, comprising an open-ended tubular shell, a pivotal spring actuated knife mounted thereon, telescoping tubes, two of which are fastened to said shell, a lever pivoted upon one of the tubular portions having an aperture, a set screw mounted upon the lever and adapted to engage a cord passing through said aperture, a reel upon one of the tubes about which the cord winds, a ratchet rotating with the reel, and a crank fixed to the latter, a flexible pipe connected to the open-ended tubular shell, and means for holding the pipe rigid.

3. A fruit gathering apparatus, comprising an open-ended tubular shell, a pivotal spring actuated knife mounted thereon, telescoping tubes, two of which are fastened to said shell, a lever pivoted upon one of the tubular portions having an aperture, a set screw mounted upon the lever and adapted to engage a cord passing through said aperture, a reel upon one of the tubes about which the cord winds, a ratchet rotating with the reel, and a crank fixed to the latter, a flexible pipe connected to the open-ended tubular shell, metallic strips upon either side of the pipe, a coupling secured to one of said tubes and to which the flexible pipe is connected, said coupling having resilient fingers adapted to engage said metallic strips.

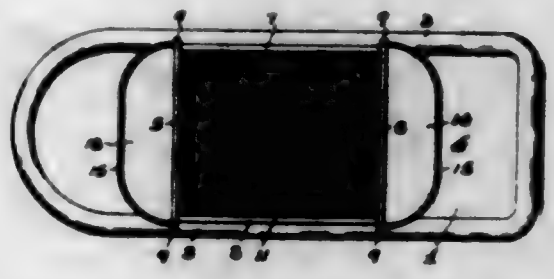
1,296,237. COMBINED COAL AND GAS RANGE. JARVIS S. VAN BUREN, Albany, N. Y. Filed Oct. 12, 1915. Serial No. 55,651. 2 Claims. (Cl. 126—36.)

1. In a combined coal and gas range, the combination of an oven; flues surrounding the oven; a fuel chamber at one side of the oven communicating with the flues; a gas burner extending longitudinally under the oven near the forward end thereof; a door for the oven extending beyond the burner; a sliding hearth plate on a line substantially with the bottom of the oven and arranged to



extend over the burner and close the burner opening leading to the oven, the parts being so arranged that the oven gas burner can be used with or without the coal fuel.

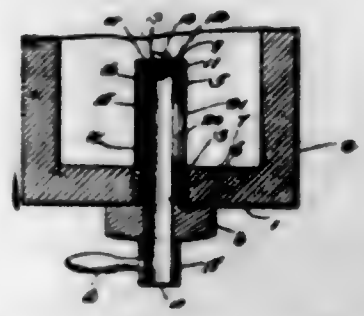
1,296,238. BATHING OR WASHING ATTACHMENT FOR INFANTS. ROY C. VANDEMOOY, Ocean Grove, N. J. Filed Mar. 28, 1918. Serial No. 225,146. 2 Claims. (Cl. 45—31.)



1. A bathing or washing attachment for use with bath-tubs, and the like, comprising a frame-like structure consisting of vertically disposed and longitudinally extending side-members and vertical end-members extending laterally between and secured to said side-members so as to form an open frame, a supporting means for the placing of an infant or child thereon, said supporting means being disposed between said side-members and said end-members, and standards extending from said end-members for detachably mounting said attachment upon the edges or sides of the bath-tub, or the like

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1,296,239. DRAIN-COCK. JOHN N. VAN METER, Norton, Kans., assignor of one-third to Fred S. Haselton and one-third to Frank W. Kidder, Norton county, Kans Filed Oct. 31, 1917. Serial No. 199,426. 1 Claim. (Cl. 137—21.)



The combination with a liquid container, of a drain cock including a tubular casing extending through the

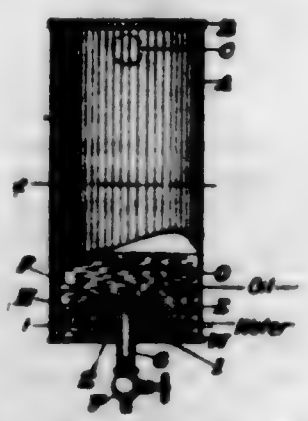
bottom of the container and closed at its upper end, the lower end of said casing being flush with the bottom of the container and there being an outlet opening in the casing close to the bottom of the container, an inner tube or valve fitted for rotation in the outer tube or casing and closed at its upper end, the lower end of the valve extending below the outer tube or casing and having an enlarged angular or nut portion, said valve having a bore of uniform diameter extending to the lower or outlet end thereof, a screw detachably connected to the upper ends of the casing and of the inner tube or valve for adjustably connecting the upper ends of the casing and valve to hold the nut portion pressed flat against the bottom of the container, and a handle connected to the lower portion of the inner tube or valve, said valve having an opening in the wall thereof movable into and out of register with the opening in the casing.

1,296,240. DOOR-STOP. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 20, 1917. Serial No. 163,409. 3 Claims. (Cl. 16—88.)



3. In a door stop, a pair of arms, a bolt pivotally securing said arms together, said arms having an inclosed chamber formed therebetween, an eccentric ring mounted upon said pivot bolt within said chamber and non-rotatably connected to one of said arms by said bolt, and a non-yielding stop carried by the other arm within said chamber and positioned to engage said eccentric ring to limit the relative angular movement of said arms.

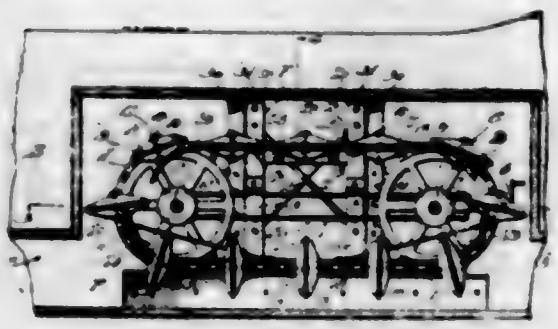
1,296,241. APPARATUS FOR MIXING OR IMPREGNATING ONE LIQUID WITH ANOTHER. JAMES WILLIAM WALKER, New York, N. Y., assignor of one-half to George Lewis Hogan, New York, N. Y. Filed July 30, 1918. Serial No. 247,468. 4 Claims. (Cl. 44—8.)



1. An apparatus for impregnating or mixing one liquid with another, consisting of a porous material saturated with the one liquid, and means for passing the other liquid through such saturated material as and for the purpose described.

1,296,242. PROPELLER. ALVA SMITH WARREN, Batavia, N. Y. Filed May 16, 1918. Serial No. 234,862. 7 Claims. (Cl. 170—135.)

8. A propeller comprising an endless chain structure including pivoted paddles, wheels around which said chain structure is trained, a pair of parallel side beams upon whose ends said wheels are mounted, front and rear side bars extending across and secured between their ends to said side beams, longitudinal guide tracks carried by one end of said bars for retaining the paddles in operative position as they travel in one direction



along said tracks, and additional chain and paddle guiding means carried by the other ends of said side bars; together with a water passage in which the propeller is located, and parallel retaining bars secured in said passage and abutting said side bars to hold the device against longitudinal shifting.

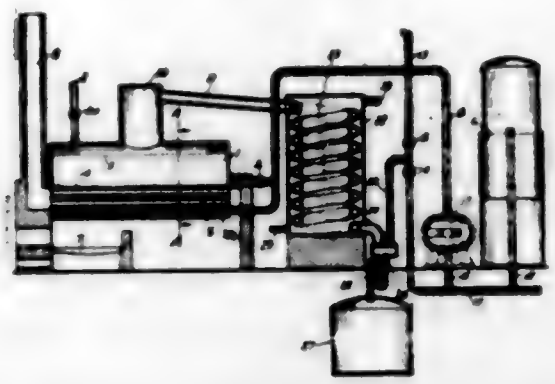
1,296,243. INCLOSURE FOR PORCHES. JOHN OSCAR WEISER, La Crosse, Wis. Filed June 19, 1918. Serial No. 240,813. 2 Claims. (Cl. 20—1.)



1. An inclosure for porches, etc., including corner and ends posts, intermediate posts arranged in pairs, frames fixedly connected to the intermediate posts of the respective pairs and closing the spaces therebetween, hinged frames connected to the sides of each of the fixed frames and either one of which is adapted to swing to position either against the outer face of the fixed frame or across the space between the adjacent intermediate and corner or end posts, and hinged frames connected to the inner sides of the intermediate posts either one of which is adapted to swing to position across the space between said intermediate posts or across the space between the adjacent intermediate and end or corner posts.

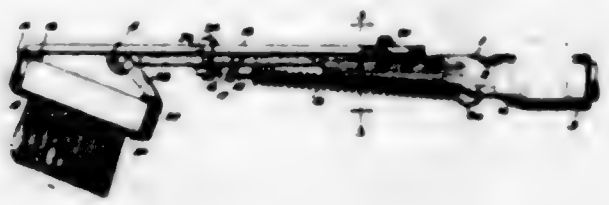
2. An inclosure for porches, etc., including corner and end posts, intermediate posts arranged in pairs, frames fixedly connected to the intermediate posts of the respective pairs and having glass therein for closing the spaces therebetween, an outer pair of hinged frames connected to the sides of each of the fixed frames and either one of which is adapted to swing to position either against the outer face of the fixed frame or across the space between the adjacent intermediate and corner or end posts, and an inner pair of hinged frames connected to the inner sides of the intermediate posts, either one of which is adapted to swing to position across the space between said intermediate posts or across the space between the adjacent intermediate and end or corner posts, one frame of each hinged pair being closed with glass and the other frame of each hinged pair being screened, each glass carrying hinged frame being normally located in the space with a screened frame of the opposed pair.

1,296,244. PROCESS OF REFINING, FRACTIONATING, AND REDUCING OILS. WILLET C. WELLS and FRANK E. WELLS, Columbus, Ohio. Filed Dec. 2, 1913, Serial No. 804,201. Renewed July 8, 1918. Serial No. 243,947. 3 Claims. (Cl. 196—25.)



3. The process of evaporating crude petroleum to a desirable dry residue consisting in providing a heated non-evaporable fluid bath upon which said petroleum is superposed and thereby prevented from burning to the heated portion of the container, passing a permanent gas into and through said bath and thence through said petroleum, whereby said gas is saturated with the vapors of petroleum, and conveying said saturated gas to a condenser.

1,296,245. BRUSH-HOLDER. GEORGE W. WEST, Fairfield, Iowa, assignor to Frank L. McClain, Fairfield, Iowa. Filed May 25, 1918. Serial No. 236,567. 6 Claims. (Cl. 15—54.)



1. In a device of the class described, the combination of a frame provided at one end with a hook, a sliding plate carried by said frame, said plate provided at its outer end with a jaw, a pivotally-mounted jaw carried by said hook, and means carried by said frame and normally exerting an inward pull upon said plate.

2. In a device of the class described, the combination of a frame provided at one end with a handle socket and at its opposite end with a hook, a plate slidably mounted upon said frame, means for retaining said plate in an assembled position upon said frame, said plate provided at its outer end with a jaw, a second jaw pivotally mounted upon the hook of said frame, said frame provided with a lug, said plate provided with a lug, and a spring positioned between said lugs and attached thereto for normally exerting an inward pull upon said sliding plate.

3. In a device of the class described, the combination of a frame provided at one end with a handle-receiving socket and at its opposite end with an inwardly-curved hook, said frame provided between said hook and socket with primary and auxiliary elongated slots, said frame provided with a pair of parallel ribs extending into said primary slot and also provided with a lug extending into said primary slot at one end thereof, said primary slot being enlarged contiguous to said lug, a sliding plate positioned upon said frame, said plate provided at its outer end with an integral jaw, said jaw being comparatively broad and provided with an upper and lower set of brush-gripping lugs, said plate provided at its inner end on its upper face with a thumb socket and with a T-shaped extension under said socket, said T-shaped extension being adapted to be positioned through the enlarged portion of the primary slot of the frame and having its ends positioned under the parallel ribs, said plate provided near its middle with an inclined depending extension and with and aperture, fastening means extending through the aperture of said plate and through the auxiliary aperture of said frame for assisting in securing the plate and frame together, said inclined extension provided with a notch, a coil-spring fastened at one end in the notch of the inclined extension and at its opposite end in the aperture of the inwardly-extending lug of the frame, a jaw provided with an apertured extension movably mounted in the hook of said frame, and said last-mentioned jaw being comparatively wide and provided with an upper and lower set of brush-gripping lugs.

4. In a device of the class described, the combination with a frame, of a plate slidably mounted upon said frame, a jaw fixedly secured to said plate, a second jaw pivotally mounted upon said frame, each jaw being comparatively broad and provided with an upper and lower set of lugs, and means for retaining said plate and frame in an assembled position.

5. In a device of the class described, the combination of a frame provided with a jaw, a plate mounted upon said frame and provided with a jaw, said plate provided with a depending extension, said frame provided with an apertured lug, and a spring secured at one end to said extension and at its opposite end to said lug for exerting an inward pull upon the plate.

1,296,246. INTERCHANGEABLE-LETTER SIGN. FREDERICK MONTILIOUS WHITTEMORE, New York, N. Y. Filed Aug. 14, 1917. Serial No. 186,138. 2 Claims. (Cl. 40—86.)

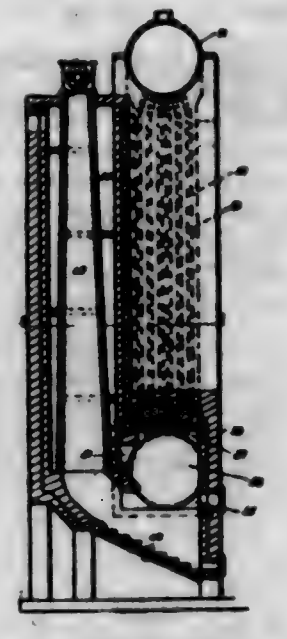


2. In an interchangeable letter sign, a casing having an opening in its front, a lamp in said casing, a plate in said casing between said lamp and said opening and provided with a series of rows of openings, said series registering with said opening of the casing, and an apron extending between the opening of said casing and the openings of said plate and being movable relative to said casing and plate and provided with different opaque letters and with light openings within the confines of said letters and themselves combining to form such letters, the openings of each of said sets being adapted to register with and thereby select a corresponding set of the openings of said plate, said apron hiding the openings of said plate which are not in registry with a set of its own openings.

1,296,247. COAL-FIRED BOILER-FURNACE. GEORGE WILKINSON, Harrogate, England. Filed May 14, 1917. Serial No. 168,456. 2 Claims. (Cl. 110—29.)

1. The combination, with a boiler furnace provided with a grate and a heating chamber for the boiler, said furnace having also a vertical heating flue arranged to

one side of the grate and a lateral passage connecting the said heating chamber and flue, of a gas retort arranged in



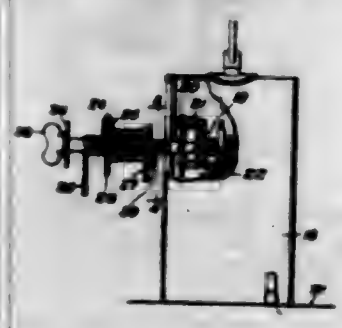
the said heating flue and operating to discharge coke automatically onto the said grate.

1,296,248. TRACK-LEVELING SIGHT. ALPHEUS J. WILLIAMSON, Cocolalla, Idaho. Filed Feb. 16, 1918. Serial No. 217,661. 1 Claim. (Cl. 24—257.)



A rail clamp for vertical sight bars comprising a pair of parallel resilient gripping arms having the upper ends thereof adapted to be secured to opposite sides of the bar adjacent the lower end of the latter, the intermediate portion of said arms being bowed outwardly to engage opposite sides of the ball of a rail and the extremities of said clamping arms being then extended inwardly and downwardly for engagement with the sides of the web of the rail, said extremities being then directed outwardly to provide base engaging portions adapted to engage the base of the rail to limit lateral movement of the sight bar when secured thereto and to facilitate engagement of the clamping arms with the rail.

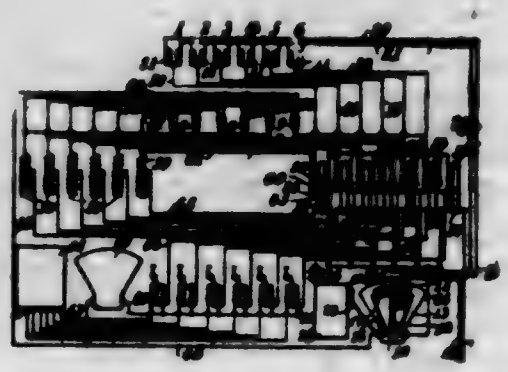
1,296,249. DAMPER-CONTROL MEANS. JOSEPH E. WINTERBOTHAM, Winnetka, Ill. Filed Apr. 14, 1915. Serial No. 21,234. 4 Claims. (Cl. 161—8.)



1. In damper control means for furnaces, a clock having an alarm mechanism provided with a shaft, an actuating spring and tripping mechanism, said shaft including an integrally formed disk and handle, said disk having an opening therethrough, and a flexible member extending through said opening to form securing means for the flexible member and being operatively connected to the dampers of the furnace, said flexible member being arranged to be wound on said shaft on one side of said disk and unwound from said shaft on the other side of said disk when said shaft is actuated by said handle to store actuating energy in said spring and cause a manual operation of the dampers in one direction.

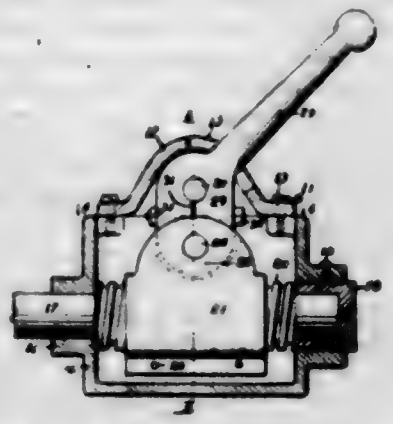
4. In damper control means for furnaces, a clock having an alarm mechanism provided with a controlled shaft, a key secured thereto having a disk, a flexible member connected to the dampers of the furnace and associated with said disk and adapted to be wound and unwound on said key on opposite sides of said disk simultaneously, when the key is actuated.

1,296,250. AUTOMATIC TEMPERATURE-REGULATOR. WALTHER WYSS, Arbon, Switzerland, assignor to Firma Adolphe Saurer, Arbon, Switzerland. Filed Mar. 23, 1918. Serial No. 224,220. 12 Claims. (Cl. 236—4.)



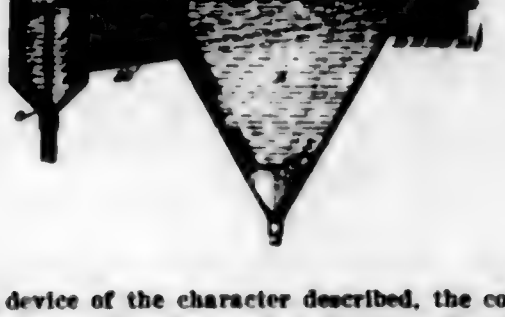
1. In an automatic temperature regulator for a plurality of furnaces, the combination of a plurality of thermoelectric elements, a plurality of temperature regulating motors, a circuit controller adapted to be influenced by the condition of one or another of the thermoelectric elements and to direct motor current through one or another of the motors, and a common distributer with switches and connections whereby the circuit controller is placed in operative relation with one or another of said thermoelectric elements and with one or another of said motors.

1,296,251. STEERING-GEAR. FRANCIS B. ALLDREDGE, Des Moines, Iowa. Filed July 31, 1918. Serial No. 247,686. 1 Claim. (Cl. 74—79.)



In a device of the class described, a casing, a shaft mounted therein having a screw-threaded portion, a split nut on said shaft, means for adjustably tightening said nut, a second shaft, a bearing mounted thereon, a steering arm on said bearing, said nut having an extension provided with a recess, a pin extended across said recess, said bearing having a groove receiving said pin, said bearing being split from said shaft to said groove, and means for adjustably tightening the split portion of the bearing.

1,296,252. OVERFLOW CONTROL FOR SEPARATING-TANKS. CHARLES ALLEN, El Paso, Tex. Filed Aug. 16, 1915. Serial No. 45,821. 10 Claims. (Cl. 210—5.)



1. In a device of the character described, the combination with the settling tank, of a discharge launder exteriorly of the tank and surrounding same, and automatic means for maintaining a constant water level in the launder higher than the upper overflow end of the tank, said means comprising a float actuated valve mounted in the discharge launder and regulating the discharge therefrom.

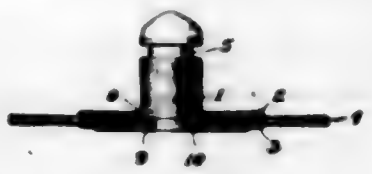
8. In a slimer, the combination with the settling tank, of a launder exteriorly of the tank and surrounding the same, and means for producing a uniform flow from the center of the tank to all points of the discharge lip, said means comprising a series of annular ring members, positioned one exteriorly of the other within the launder and interspaced, a plurality of openings formed in the innermost of said rings, and a decreasing number of openings formed in the succeeding rings.

1,296,263. SIGNALING MEANS. WILLIAM LOOMIS ALLEN, Jacksonville, Fla. Filed Feb. 28, 1918. Serial No. 219,713. 1 Claim. (Cl. 40—77.)



In a signaling device of the character described, a cylindrical casing, a disk secured in one end thereof, a cylinder rotatably mounted in said casing and provided in one end with an outwardly projecting stub shaft, a closure disk loosely mounted on said stub shaft and adapted to fit in the other end of said casing so as to close the same, a pulley demountably secured on said stub shaft outside of the second mentioned disk, and means for releasably securing the closure disk carried by said stub shaft in the other end of the casing.

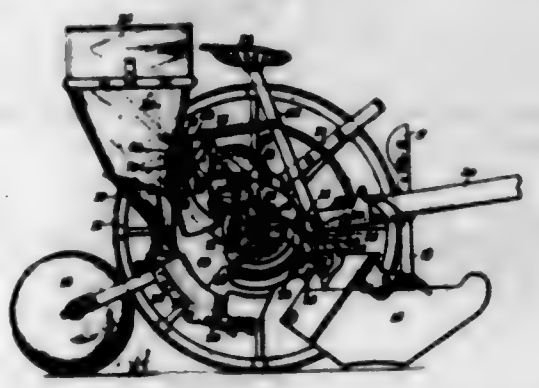
1,296,254. FASTENER. LOUIS ARKIN, Boston, Mass. Filed June 12, 1918. Serial No. 239,665. 10 Claims. (Cl. 24—219.)



1. The method of securing a stud in a base member which comprises forming an annular recess in the stud, forming an opening in the base member, striking up the edge of the base member surrounding the opening to form a flange, the opening being large enough to receive the stud after the edge is struck up, inserting the stud into the opening with the recess in the region of the flange, and then compressing the flange so as to force the flange into the recess.

7. In a device of the character described the combination of a thin base member having an opening therein, a central member extending into the opening in the base member and having an annular recess in the region of the base member, and an annular flange on the base member extending into said recess, said annular flange being formed by outwardly folding the edge of the base member surrounding said opening.

1,296,255. POTATO-PLANTER. LEWIS AUGUSTUS ASPINWALL, Jackson, Mich., assignor to Aspinwall Mfg. Co., a Corporation of Michigan. Original application filed Aug. 25, 1916, Serial No. 116,795. Divided and this application filed Sept. 11, 1917. Serial No. 190,714. 7 Claims. (Cl. 275—9.)



1. In a potato planter, a frame, an axle mounted therein, a hopper, a feed gate mounted to swing in the said frame, an arm pivotally connected at its lower end to the feed gate an appreciable distance from the upper end thereof, an adjustable member for determining the relationship between the said arm and the upper end of the feed gate, means for maintaining the feed gate against the said adjustable member, and means for actuating the said arm so that with the coaction of the aforesaid means, the feed gate opens and closes.

1,296,256. DIFFERENTIAL GEARING. FREDERICK J. BAKER, Dayton, Ohio. Filed Mar. 12, 1918. Serial No. 222,024. 3 Claims. (Cl. 74—7.)



1. In a differential gearing, the combination with a solid axle, means for turning said axle, a rotatable sleeve on each end of the latter, a traction wheel fixedly secured to the outer end of each sleeve, a differential housing fast on each end of said axle to receive a respective sleeve, radial means loosely mounted on each sleeve within its respective housing, for independent revolution within the latter, and means carried by each housing to engage the radial means on its respective sleeve, to rotate the latter until it is turned by its respective traction wheel at a faster rate of speed than the axle.

1,296,257. VALVE. CARL F. BRACH, Battle Creek, Mich. Filed Nov. 9, 1917. Serial No. 201,110. 4 Claims. (Cl. 251—46.)



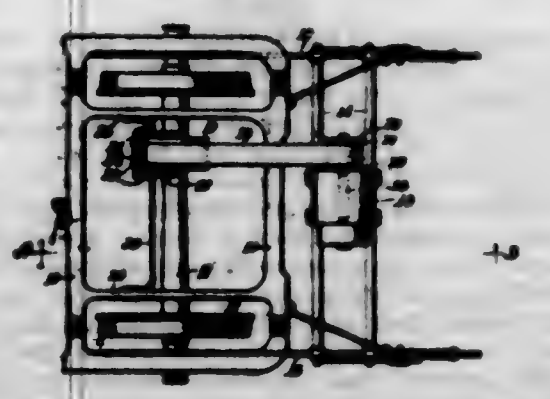
1. In a valve, the combination with a conduit having an apertured packing nut screw-threaded over the end thereof, and a gasket interposed between said nut and said conduit, a valve-operating screw screw-threaded into the end of said conduit and having a reduced operating shank extending through said gasket and packing nut, of a stem extending from the opposite end of said valve-operating screw, a hollow cylindrical link having a longitudinally-disposed transverse aperture therethrough swiveled at one end to said stem, the opposite end of said link having longitudinally-disposed grooves extending from the end to the aperture through said link, a valve affixed to the end of said link having said grooves, and a concentric valve seat within said conduit about said link in close proximity to said valve whereby by the turning of said operating screw said valve may be moved to and from said valve seat.

1,296,258. COW-TAIL HOLDER. ALBERT F. BLACK, Sandusky, Mich. Filed Dec. 15, 1916. Serial No. 137,112. 2 Claims. (Cl. 119—105.)



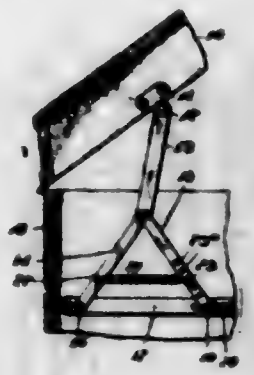
1. A cow tail holder comprising a leg clamp, and a tail clamp consisting of a pair of gripping arms of relatively different lengths, the longer arm extending forwardly beyond the shorter arm and pivoted at its forward end to said clamp, a hook carried by the forward end of the shorter arm for detachable engagement with the longer arm, and a laterally projecting handle carried by each arm.

1,296,259. BELT-GUARD FOR PULLEYS. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Sept. 18, 1914. Serial No. 862,220. 1 Claim. (Cl. 105—102.)



The combination of a truck including an axle mounted therein having a flangeless pulley, a guard for said pulley, and supporting means for said guard having extremities extending away from said guard in opposite directions for attachment to adjacent parts of the truck frame.

1,296,260. COVER-SUPPORT. BURR B. BLOOD, Chicago, Ill., assignor to George Heidman and Norman A. Street, Chicago, Ill. Filed June 4, 1917. Serial No. 172,576. 4 Claims. (Cl. 217—60.)



4. A cover support, comprising a member adapted to be pivotally secured at one end to a cover and depend therefrom, a pair of members pivotally secured at one of their ends to the lower end of said first member, while the other ends of said pair of members have pivotal relation with the cabinet or device to which the cover is applied so as to permit said pair of members to swing upwardly, the pivotal relation between the cabinet and one of said pair of members being at a fixed point, while the pivotal relation with the cabinet of the other member of said pair is such that said member may move bodily toward the first mentioned member of said pair of members when the cover is raised, and means whereby the members of said pair of members are maintained under pressure and yieldingly held in their upwardly swung position.

1,296,261. DIRIGIBLE HEADLIGHT. ANTON A. BONASS and GNOMO PIRC, Sheboygan, Wis. Filed Aug. 8, 1918. Serial No. 248,989. 2 Claims. (Cl. 240—62.)

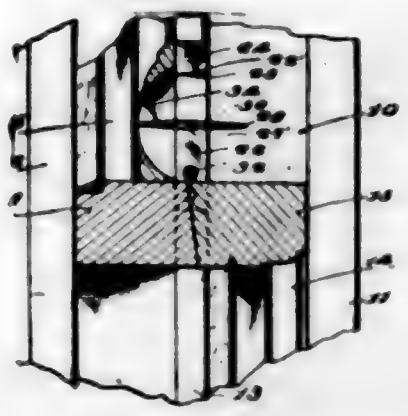


1. A dirigible headlight mechanism including an attaching member adapted for securement to a chassis side sill, an arm extending from said attaching member and having one end curved laterally whereby to lie at one side of the chassis sill, a tubular post on said end of the arm, a yoke including a depending shank pivoted in said post and adapted to extend below the chassis side sill, a laterally extending arm on the lower end portion of the shank, and a link pivotally connected with said arm and adapted for securement to a movable chassis carried portion of the steering mechanism.

1,296,262. BURGLAR-ALARM. FRED A. BRUNEL, Hempstead, N. Y. Filed May 22, 1917. Serial No. 170,261. 6 Claims. (Cl. 200—46.)

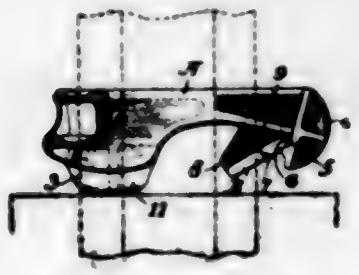
3. In a burglar alarm, a window casing including guide beads and a parting bead, a portion of the parting bead being removed, upper and lower sashes movable at either side of the parting bead and having sash bars which overlap in closed position of the window, the upper sash being formed with a pocket adjacent the cut-away portion of the parting bead, and a circuit closer mounted in the cut-away portion of the bead and including a switch blade adapted in open position of the circuit closer to project at one end in the pocket of the upper

sash and at its other end in the path of movement of the lower sash, said switch blade being resiliently urged to automatically and frictionally lock in either its active or inactive positions.



4. In a burglar alarm a circuit closer including a housing binding posts carried by the housing, one in electrical engagement therewith and the other insulated therefrom, a pivot shaft fixed in the housing and having a square portion, and a pair of leaf springs having their ends secured to each other and their intermediate portions engaging against opposite sides of the squared portion of the shaft whereby in one position the switch blade formed by these springs will project at its ends laterally from the housing while in its other position it will be disposed longitudinally of the housing with one end engaging the housing and the other end engaging that binding post insulated from the housing.

1,296,262. RAIL-ANCHOR. JACOB J. BYRNE, Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 27, 1917. Serial No. 188,276. 6 Claims. (Cl. 238—4.)

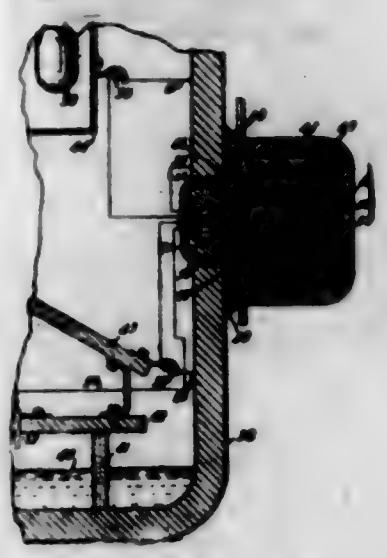


1. In a rail anchor, a pair of members having a rotative engagement about a vertical axis, each having a rail flange receiving jaw, one of said members having a convex surface on its under side and the other of said members having a concave surface adapted to coöperate with the convex surface to draw down the jaw on the last mentioned member upon a rail flange.

2. In a rail anchor, a base member having on one side a rail flange receiving jaw and on the other a vertically-disposed socket, a spring clamp having a bearing adapted to fit in the said socket, and a rail flange receiving jaw, the spring clamp being adapted to be rotated into position to force the jaws to clamp on the rail.

6. In a rail anchor, a pair of members having a rotative engagement, each having a jaw engaging the upper and lower faces of a rail flange, one of said members having a convex surface on its under side and the other of said members having a concave surface adapted to coöperate with the convex surface to draw down the jaw on the last-mentioned member upon a rail flange.

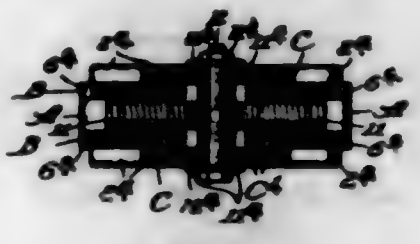
1,296,264. VAPOR-RECTIFIER. DAVID E. CARPENTER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 843,943. 3 Claims. (Cl. 175—354.)



1. The combination with a vapor rectifier, comprising an evacuated container and suitable shielded working electrodes therein, of means for simultaneously generating ions at a plurality of points adjacent the arcing path between the working electrodes between which points there are means preventing free ionic travel.

3. The combination with a vapor rectifier, comprising an evacuated container and suitable working electrodes therein, of means, including an auxiliary circuit, for generating ions adjacent one portion of the main arc path, means, including an auxiliary circuit, for generating ions adjacent another portion of the main arc path, and means for preventing the flow of pulsating current from one auxiliary circuit to the other.

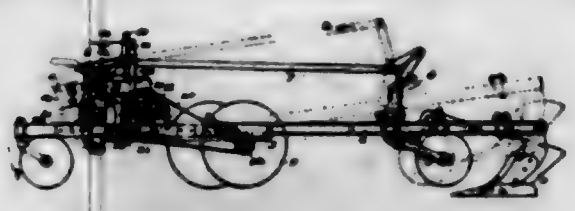
1,296,265. BOLT AND NUT CUTTER. WILLIAM B. CAROLUS, Sterling, Ill. Filed Oct. 30, 1916. Serial No. 293,246. 13 Claims. (Cl. 81—180.)



1. An implement of the character set forth, comprising a pair of pivotally-supported blades, hand-levers pivotally connected with said blades, a pair of spaced fulcrums for said hand-levers, and adjusting stems interposed between and connecting said fulcrums.

13. An implement of the character set forth, comprising a pair of main plates provided at their rear portions with longitudinal guide slots, a pair of blades pivotally connected with the other portion of said plates, a pair of hand-levers pivotally connected with the long arms of said blades, each hand-lever comprising a handle portion and a pair of complemental attaching plates provided with flat pivotal and fulcrum portions receiving the handle portions, a fulcrum journaled in each complemental pair of attaching plates, an adjusting screw connected with each fulcrum and disposed between the said complemental plates, said adjusting screws having head portions movable in said guide slots, and connecting means, between said plates and the head portions of said adjusting screws, movable in said guide slots.

1,296,206. POWER-LIFT GANG-PLOW. REMMY C. CADENET, Dixon, Ill., assignor to Grand Detour Plow Company, Dixon, Ill., a Corporation of Illinois. Filed May 22, 1914. Serial No. 840,206. 17 Claims. (Cl. 97—70.)



1. In a plow, power-lift mechanism comprising a continuously rotating member positively driven from one of the wheels of the plow, a normally idle rotary member normally disconnected from said rotating member, clutch mechanism carried by said normally idle member for operatively engaging the same with the rotating member, manually operated means for engaging said clutch, a cam shaft, gearing between said cam shaft and said normally idle member adapted to drive the cam shaft at one-half the speed of the normally idle member, lifting mechanism operated by said cam shaft and adapted to raise the plows from the ground during one-half of a revolution of said cam shaft, release mechanism operated by said cam shaft during the other half of the revolution of said cam shaft for permitting the descent of the plows by gravity into their operative positions, and automatic means for disengaging said clutch after the said normally idle member has effected a single revolution.

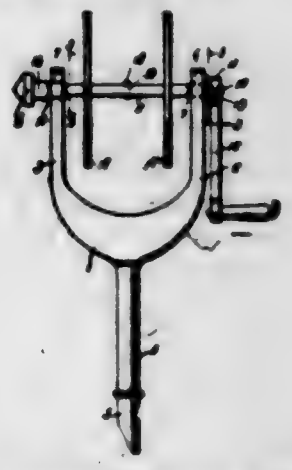
4. In a plow, the combination of a plow unit adapted to be raised and dropped out of or into operative position, power-operated means for elevating said plow into inoperative position, means also operated by power for lowering said plow into its operative position, and manually operated means for further elevating said plow unit and beyond the influence of said power-operated lowering means.

1,296,267. PLANTER. JAMES D. CHAPPLER, Freeport, N. Y. Filed Nov. 7, 1917. Serial No. 200,740. 1 Claim. (Cl. 111—86.)



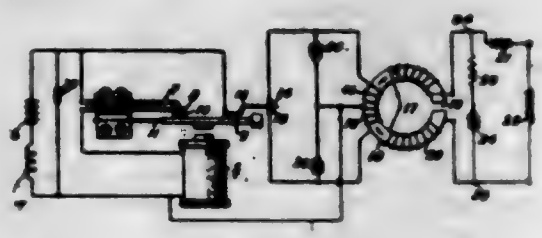
A planter comprising a hopper provided with an outlet above the bottom, said outlet forming a transfer pocket adapted to contain a measured amount of seed, a deflector plate within the hopper dividing it into an upper and a lower compartment, a measuring plunger reciprocating within the hopper in line with the transfer pocket adapted to deliver seed from the hopper to the transfer pocket, a slide on the outside of the hopper in line with the transfer pocket reciprocating with the measuring plunger and adapted to cover and uncover the exit side of the transfer pocket, a back wall spaced from the hopper and extending below the same and adapted to contact with the ground, a handle adapted to reciprocate between the back wall and the hopper and having a delivery chute in its lower end and carrying the measuring plunger and outside slide, and a shovel rigidly secured to the lower end of the handle.

1,296,268. KITE-STRING HOLDER. JOHN J. CRAIG, Carnegie, Pa. Filed May 28, 1918. Serial No. 237,071. 2 Claims. (Cl. 242—96.)



2. In a reel, a supporting frame, said frame being provided with upwardly projecting spaced supporting arms, each having a polygonal opening, a shaft mounted in said arms provided with cylindrical portions and polygonal portions adjacent thereto, the shaft being movable longitudinally to the supporting arm and provided at one end with an enlarged head, the cylindrical portions of the shaft being adapted to rest in the opening of the arms so as to rotatably support said shaft and the polygonal portions being adapted to fit snugly into said openings so as to lock the shaft against rotation when the shaft is moved longitudinally in one direction, and a winding crank secured on the other end of the shaft and coöperating with said head to normally prevent complete withdrawal of the shaft from said supporting arms.

1,296,269. GENERATING SYSTEM. GUSTAVUS C. CRAWFORD, East Orange, N. J., and GEORGE H. STEVENSON, Mount Vernon, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1917. Serial No. 184,073. 6 Claims. (Cl. 175—365.)



1. An electric generating system comprising a transformer having primary and secondary windings, means for causing current to flow intermittently in said primary winding, and a bridging circuit comprising resistance and capacity in series connected to the terminals of the secondary winding of the transformer.

2. In an electric generating system, a transformer having primary and secondary windings, a tuned interrupter for controlling current in said primary winding, a source of energizing current for said primary winding, and a bridge circuit connected to the terminals of said secondary winding, said bridging circuit comprising a resistance and a capacity connected in series relationship.

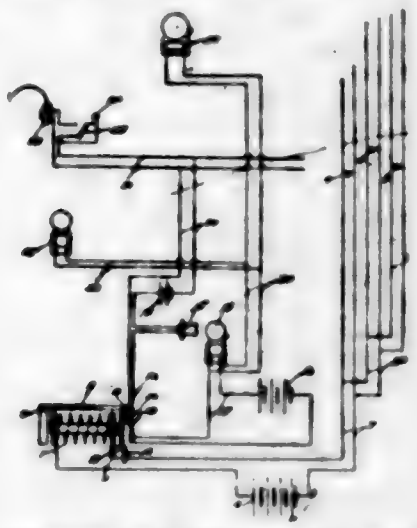
3. An electric generating system comprising a transformer having primary and secondary windings and a core having a non-magnetic gap therein, means for causing current to flow intermittently in said primary winding, a source of unidirectional current in series relation with the secondary winding of the transformer, and

a condenser in bridge across the terminals of said secondary winding.

5. In an electric generating system, a transformer having primary and secondary windings and a core having a non-magnetic gap therein, a tuned interrupter for controlling current in said primary winding, a source of energizing current for said primary winding, a source of unidirectional current in series relation with the secondary winding of the transformer, and a condenser in bridge across the terminals of said secondary winding.

6. In an electric generating system, a transformer having primary and secondary windings and a core having a non-magnetic gap therein, a tuned interrupter for controlling current in the primary winding of the transformer, a source of energizing current for said primary winding, and a bridge circuit connected in parallel with the secondary winding of the transformer, said bridging circuit comprising a resistance and a capacity in series relationship.

1,296,270. FIRE-ALARM. WILLIAM M. DANA and CHARLES C. PALMER, Minneapolis, Minn.; said Palmer assignor to said Dana. Filed Mar. 4, 1918. Serial No. 220,187. 6 Claims. (Cl. 179—5.)

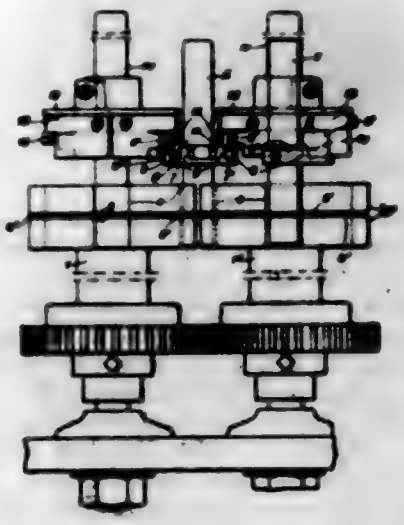


1. A fire detecting and alarm system comprising a detecting circuit having therein a multiplicity of normally open thermally actuated circuit closers, an alarm circuit having therein an alarm device and a normally open switch, and an electromagnetic switch actuator whereby, when said detector circuit is closed, the switch of said alarm circuit will be closed, said detector circuit having a normally closed switch arranged to be opened by the switch closing movement of said switch actuator.

6. In a fire detecting and alarm system, the combination with a detecting circuit including an electromagnet and a multiplicity of normally opened thermally actuated circuit closers, of an alarm circuit including an electrically actuated gong, a line circuit, a telephone transmitter located closely adjacent to said gong and connected across said line circuit, normally open switches in said alarm and transmitter circuits, a switch actuator operative when released to close said two switches, a latch normally holding said switch actuator but arranged to be released when said electromagnet is energized by closing of said detector circuit, a normally closed circuit closer in said detector circuit arranged to be opened by the switch closing movement of said switch actuator, said line circuit at a central station having a telephone receiver, a central call device, and a switch whereby said receiver and call device may be connected in the line circuit at will.

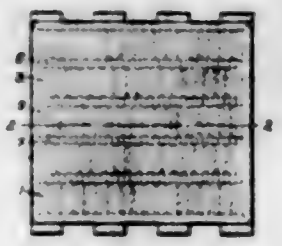
1,296,271. BRAIDING-MACHINE. EMIL DIBBOLD, Ennetbaden, Switzerland. Filed May 18, 1917. Serial No. 169,480. 8 Claims. (Cl. 28—4.)

1. In a braiding machine without a track plate the combination of bobbin spindles each carrying a plate having two segmental guide-grooves concentric to two adjacent drivers, the outer wall of each groove being formed into steps, a guide- and holding-rim on each stationary tube of a driver to guide the said grooves and to prevent flinging away of the spindles the said rim having a recess at the points where a spindle is transferred from one driver to another, the said rim also having two cams of



which one is directed inward and the other outward, which cams are adapted to produce a slight turning of the spindles at the point of transfer in order to effect the entering of the higher portion of the respective outer wall of the groove of the transferring spindle into the next guide-rim and to turn off the spindle.

1,296,272. HOLLOW PANEL. WILLIAM H. DOBLE, Quincy, Mass., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass., a Corporation of Maine. Filed July 22, 1918. Serial No. 246,289. 6 Claims. (Cl. 220—17.)



1. A hollow panel composed of two face plates parallel with each other and an interposed truss plate having strut portions which extend crosswise from one face plate to the other, and having tab portions which form flat faced surfaces which contact with said face plates.

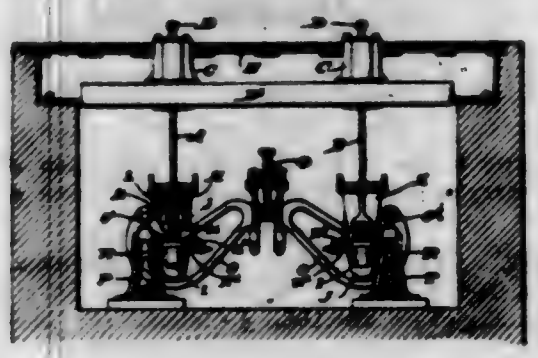
1,296,273. SUBMARINE MINE. GIOVANNI EMANUELE ELIA, Westminster, London, England, assignor to Vickers Limited, London, England. Filed July 3, 1917. Serial No. 178,368. 8 Claims. (Cl. 102—8.)



1. A submarine mine comprising a flotation chamber, an anchor, a mooring cable connecting said flotation chamber and said anchor, paying-out gear for said mooring cable, a hydrostatic contrivance which normally holds a

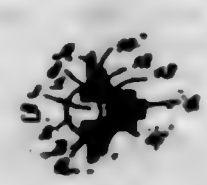
length of the mooring cable in a coiled or slack condition, and a device for arresting the paying-out movement of said gear, said device being so constructed that it will be brought into operation by the sudden pull exerted on the mooring cable due to the release of said coiled or slack length of mooring cable by said hydrostatic contrivance.

1,296,274. RAILWAY TRACK-SCALE. ALONZO W. EFRIGHT, Altoona, Pa. Filed Mar. 20, 1918. Serial No. 225,429. 4 Claims. (Cl. 265—71.)



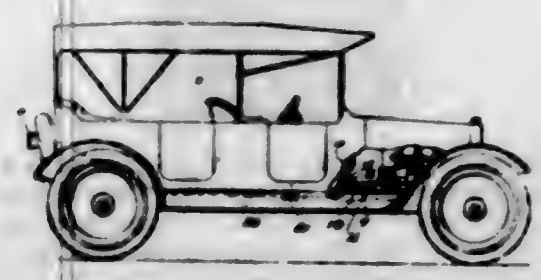
1. In a suspension bearing for a weighing scale, the combination of a main bearing member in the form of an inverted U, having slotted bearings in its legs, a cross bar having its ends received in said slotted bearings, and a wedge member transverse to the bar, slidingly mounted in said main bearing member and interposed between the latter and one end of the cross bar.

1,296,275. HOLDING DEVICE. WILLIAM C. FIRTH, East Cleveland, Ohio. Filed Oct. 21, 1918. Serial No. 259,093. 5 Claims. (Cl. 137—99.)



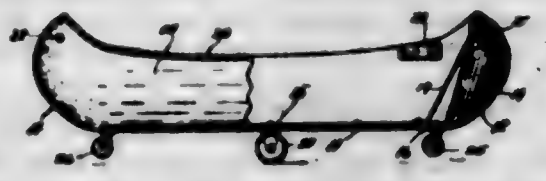
1. In a device of the character described, a bolt consisting of a T-head, a rectangular shoulder integral with said T-head, and a cylindrical threaded portion integral with said shoulder; a washer loosely-fitting the cylindrical portion of the bolt, and a nut threaded on the cylindrical portion of the bolt to force said washer toward the T-head.

1,296,276. CIRCUIT-CLOSER FOR SIGNALS FOR AUTOMOBILES. MORITZ B. FISCHER, Chicago, Ill. Filed Jan. 24, 1918. Serial No. 213,598. 3 Claims. (Cl. 175—366.)



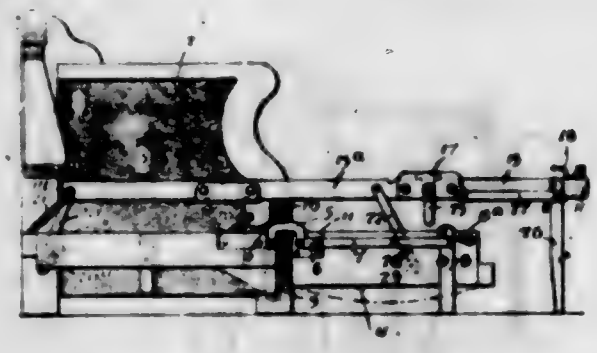
1. In a device for the purpose set forth, the combination of electric conductors, spaced forwardly projecting terminals for said conductors, a push button slidable longitudinally and adapted at its rear end to enter between and engage said terminals, a spring bearing upon the said rear end of the button and holding the button normally out of engagement with the terminals, a lever fulcrumed at its lower end and having its upper end secured to the fuel-controlling member of an engine and bearing upon the front end of the push button in opposition to said spring, and a spring connected with said lever to retract the same and thereby move the push button into engagement with the terminals.

1,296,277. WHEELED-TOY WATER-CRAFT. HOOPER S. FOLJAMBE, Drexel Hill, Pa. Filed Apr. 18, 1918. Serial No. 229,396. 2 Claims. (Cl. 46—48.)



2. A toy of the character stated comprising a wheeled conveyance symbolic of water-craft provided with means for permitting of a rocking movement of said conveyance and an adjunct for said conveyance in the form of a push-pole.

1,296,278. DAVENPORT-BED STRUCTURE. HYMAN FREEDMAN and NATHAN M. FREEDMAN, Chicago, Ill., assignors to Davoplane Bed Company, a Corporation of Illinois. Filed May 15, 1916. Serial No. 97,663. 2 Claims. (Cl. 5—51.)



1. In a davenport comprising a main frame having sides the ends of which are respectively rigidly connected by a back and front, a seat hinged to said main frame, a bed comprising a plurality of pivotally connected sections including an innermost section and a large outward section foldable thereon, and means for mounting said bed upon said frame and seat including standards rigidly secured to and arising from said main frame and brackets secured to said outward section, each of said brackets having an offset portion pivotally secured to its respective standard and disposed rearwardly when the bed is extended, whereby in unfolding the device a greater outward throw of the second-mentioned section is attainable.

1,296,279. VALVE-TOOL. FRED C. FRIESS, Bay City, Mich. Filed Sept. 17, 1917. Serial No. 191,859. 3 Claims. (Cl. 7—1.)



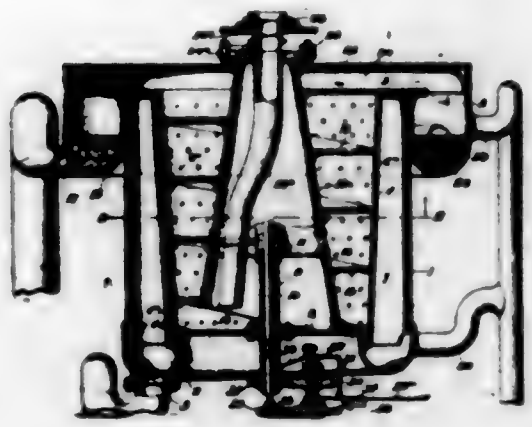
1. A valve tool comprising a cylindrical head interiorly threaded at one end and recessed beyond the threads to

provide a striking edge, and a tapered drift extending longitudinally from the other end of the said head and having angularly related side faces forming edges adapted to be driven into engagement with a valve, the striking edge of the head permitting the tool to be struck for driving the drift into a valve without injuring the threads.

2. A valve tool comprising a head having a transversely disposed pin extending from opposite sides of the head and tapered at one end to form a truing portion and threaded at the other end and reduced beyond the screw-threads to provide a striking end to permit the truing end to be driven into a valve stem without injuring the threads.

3. A valve tool comprising a cylindrical head interiorly threaded at one end and recessed beyond the threads to provide a striking edge, a drift extending from the other end of the head, the striking edge of the said head permitting the tool to be struck for driving the drift into a valve without injuring the screw-threads, and a transverse cleaning pin extending from the head at a point between the threads and the drift and forming a handle for the tool when driving the drift, and also when rotating the head, and the latter forming a handle for the cleaning pin in the operation of the same.

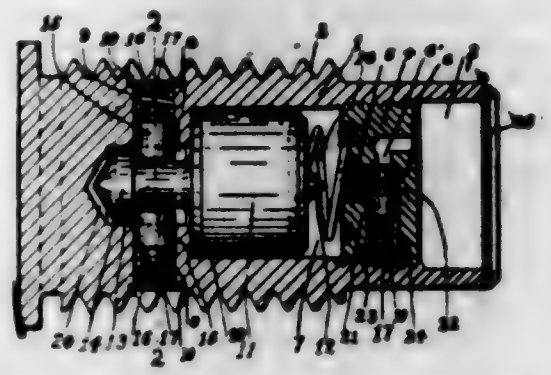
1,296,280. MEANS FOR NITRATING GUNCOTTON. GEORGE FUSSELL, Lockport, N. Y. Filed Mar. 1, 1917. Serial No. 151,772. 13 Claims. (Cl. 210—80.)



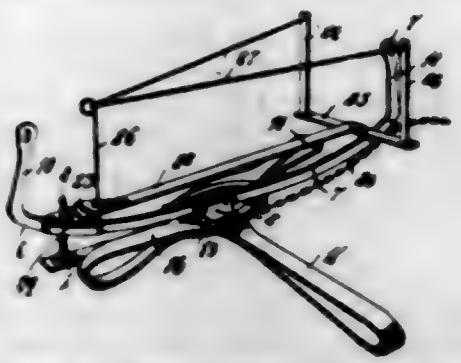
1. In an apparatus of the class described, the combination of a casing provided at its bottom with a continuous acid receiving gutter, a perforated basket rotatably mounted in the casing above the acid receiving gutter and spaced from the walls of the casing, a rotatably mounted hollow screw in the basket, one edge of the hollow screw below the thread being cut away to form an opening for the passage of cotton, the lower edge of the screw thread engaging the bottom of the basket, means for feeding saturated cotton to the interior of the screw, means inclosed within the casing and below the top of the basket for receiving and conveying the treated cotton from the top of the screw, and means for rotating the screw and basket at different speeds.

1,296,281. PERCUSSION-FUSE FOR EXPLOSIVE SHELLS. EMIL GATHMANN, Baltimore, Md. Filed Oct. 16, 1917. Serial No. 196,788. 5 Claims. (Cl. 102—39.)

1. In a percussion fuse adapted to be carried by an explosive projectile, a chambered fuse stock, in combination with a relatively fixed anvil therein, a primer secured on one side of said anvil, a firing hammer, means for normally holding said hammer out of contact with the primer, an axial vent extending from the said primer into the valve chamber, a radially inclined vent communicating from an end portion of the valve chamber to a booster chamber, and a valve within said valve chamber normally interposed between said axial and radially inclined vents, said valve being arranged to open a passage between the said vents upon projection of a projectile carrying the said percussion fuse from a cannon.

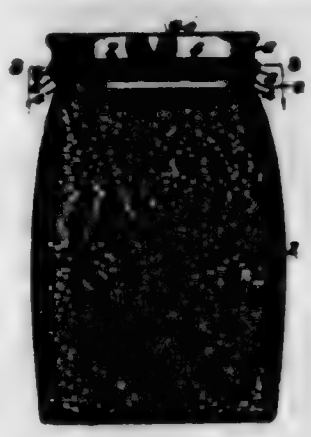


1,296,282. ANIMAL-TRAP. HENRY GAUTHIER, Chemin Gouin, Hebert Station, Quebec, Canada. Filed Aug. 16, 1918. Serial No. 250,106. 4 Claims. (Cl. 43—23.)



1. An animal trap comprising a pair of swinging jaws, springs for closing said jaws, a vertical post, said post adapted to extend within one of said jaws when the latter are in their open or set position, and a trigger detachably connected to and adapted to swing around said post substantially as and for the purpose set forth.

1,296,283. JAR FOR PRESERVES, &c. EDGAR A. GILLINDER, Philadelphia, Pa. Filed Apr. 15, 1918. Serial No. 228,571. 4 Claims. (Cl. 215—30.)



1. A preserve jar having a neck provided with a crimp extending inwardly from the exterior thereof forming a double-wall-inturned shoulder, a crimp extending outwardly from the interior of the neck forming an outwardly extending channel, a cover for the jar having its peripheral portion adapted to be seated on the upper wall of said shoulder, and a sealing pad on said cover having its peripheral portion adapted to be seated in said channel, said cover having a handle-like member which rises therefrom and is adapted to have its top edge flush with the top edge of the mouth of the jar whereby when the sealed jar is inverted it will rest flat on both said top edge of the mouth of the jar and said top edge of the handle-like member.

1,296,284. GUITAR-PICK. HARRY K. GILMAN, Washington, D. C. Filed Feb. 6, 1918. Serial No. 215,698. 1 Claim. (Cl. 84—117.)



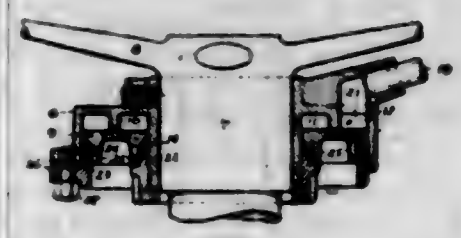
A guitar pick comprising a finger ring, and a picking tongue extending therefrom, the said tongue being formed between its ends with a well defined transverse bend and from the bend to its extremity having its picking face flat and unobstructed.

1,296,285. BILLIARD-CUE. ALBERT GREENFIELD, Chicago, Ill. Filed June 7, 1918. Serial No. 102,806. 1 Claim. (Cl. 46—9.)



A billiard cue comprising a tapered body portion and a cylindrical handle portion, said cylindrical portion being equal in diameter to the adjacent portion of the tapered body portion, and a shoulder formed on the butt-end of the handle portion, in combination with a composition grip element adapted to be slipped over the tapered body portion and snugly engaging the handle portion, substantially as described.

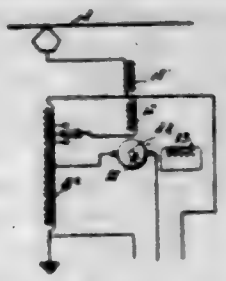
1,296,286. MEANS FOR HEATING STEERING-WHEELS. HUGO HAASS, Alliance, Ohio. Filed July 5, 1918. Serial No. 243,812. 5 Claims. (Cl. 285.9.)



1. A heating attachment for steering wheels, comprising a collar having fluid circulating channels, a ring within said collar closing said channels, packing between said ring and collar, and adjustable means for holding and compressing said packing.

1,296,287. PHASE-CONVERTING SYSTEM. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 23, 1915. Serial No. 3,917. 5 Claims. (Cl. 172—238.)

1. The combination with a source of single-phase energy, and a transformer receiving energy therefrom, of a single-phase commutator dynamo-electric machine comprising a main shunt field winding connected across a portion of said transformer, a series field winding connected in series circuit with said transformer, driving means therefor, and an armature connected in an independent circuit to said transformer.



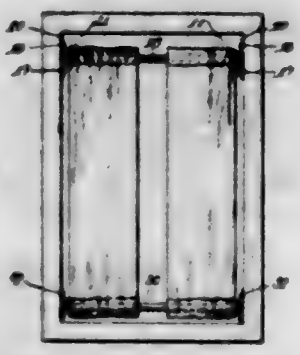
5. The combination with a source of single-phase energy, and polyphase electric means receiving energy therefrom, of means interposed between said source and said polyphase means for supplying single-phase energy of displaced phase and embodying a single-phase commutator dynamo-electric machine having a substantially constantly excited field winding and another field winding excited in accordance with variations of the load upon said polyphase means, whereby compensations for phase distortions in said converting means are automatically effected.

1,296,288. BOTTLE. CARL G. HILGENBERG, Baltimore, Md. Filed Jan. 18, 1917. Serial No. 142,118. 3 Claims. (Cl. 215—60.)



1. The combination with a glass container having a neck portion, of a stopper insertible into said neck portion and having a tapered portion, one of said portions having an annular groove, an inert soft metal ring slidable into position opposite the groove, and means for holding the ring in such position, said ring being adapted to be pressed into the groove during the first insertion of the stopper into the neck portion to form a permanent filling for the groove, said ring constituting a friction seal between the stopper and neck.

1,296,289. CURTAIN-FIXTURE. BEULAH C. HILL, Chicago, Ill. Filed Sept. 8, 1918. Serial No. 252,290. 8 Claims. (Cl. 156—22.)



1. A curtain fixture comprising a relatively long and narrow plate-like base having intermediate its ends a support for a curtain rod, said support being carried by

said base, each end portion of the base having a longitudinal slot therein provided with a plurality of branches extending laterally therefrom, each of said slots and the branches thereof being respectively adapted to accommodate a screw-like holding element, substantially as described.

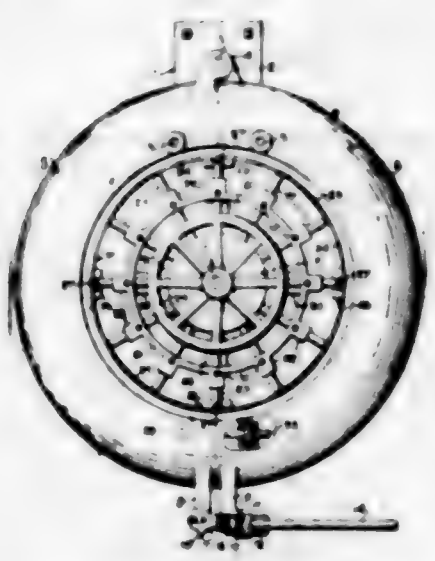
1,296,290. FRUIT-JAR AND BOTTLE CLEANER. WALTER L. HUNTER, Roanoke, Tex. Filed Oct. 2, 1917. Serial No. 194,379. 2 Claims. (Cl. 141—7.)



1. A receptacle cleaner comprising a pair of handles pivotally connected, a pair of jaws pivotally secured to said handles, a fulcrum member pivotally connecting the two jaws together, and a cleaning element adapted to be detachably secured to each of said jaws.

2. A receptacle cleaner comprising a pair of crossed handles pivotally connected together and having their ends extending beyond the pivot, a pair of jaws pivotally secured to said extended ends, a rivet carried by each of said jaws adjacent their connection with said handle, a fulcrum member having an eye formed upon each end thereof for pivotal engagement with said rivets and for connecting the two jaws together, hooks on said jaws and a cleaning element adapted to be detachably connected to said hooks.

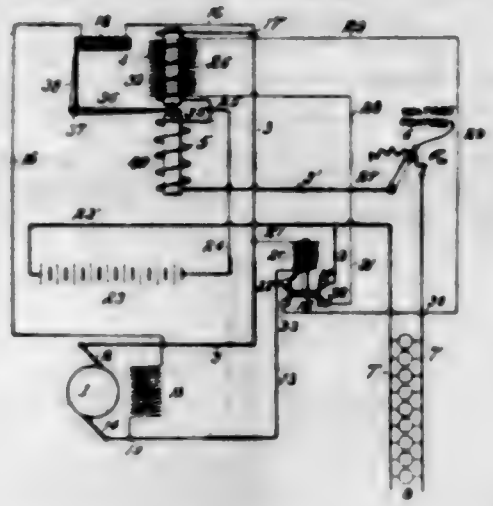
1,296,291. VULCANIZING APPARATUS. JESSE E. JAMES and ALFRED W. ADAMS, Alameda, Cal. Filed May 1, 1918. Serial No. 231,884. 7 Claims. (Cl. 18—38.)



2. A vulcanizing apparatus including a mold, said mold comprising two sections connected at adjacent ends for relative swinging movement, and supporting wheels carried by the opposite end portions of the sections.

5. A vulcanizing apparatus including a mold, said mold comprising two sections, each of said sections being substantially semi-circular in form, the ends of said sections contacting when the sections are in assembled relation, a member for pivotally connecting adjacent ends of the sections, said member also serving as a support for the mold, and supporting wheels carried by the opposite end portions of the sections.

1,296,292. SYSTEM OF ELECTRICAL DISTRIBUTION. JOHN W. JEPSON, New York, N. Y. Filed Apr. 17, 1906. Serial No. 312,223. 12 Claims. (Cl. 171—318.)

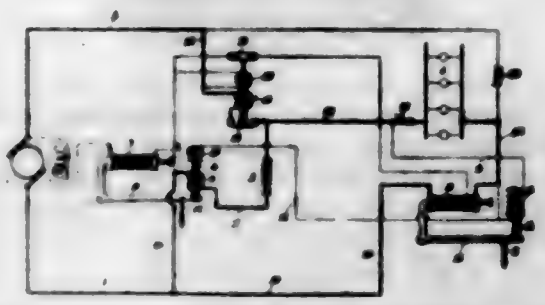


1. The combination with a storage battery, a generator and regulating means therefor, of means for affecting the regulating means in response to voltage fluctuations, and means for affecting the regulating means in response to current fluctuations, said affecting means including means whereby the affecting means coöperate in the regulation of the generator.

8. In a system of electrical distribution the combination with a consumption circuit, a storage battery and a generator for supplying said circuit, of a voltage regulator for the generator, means to adjust the voltage in the consumption circuit, and means operated by the potential difference between the supply and the consumption circuit to operate the voltage regulator.

12. In an electrical system, the combination of a generator, a storage battery and work circuit in operative relation thereto, regulating means for the work circuit and means for regulating the generator affected by the actuation of the work circuit regulating means.

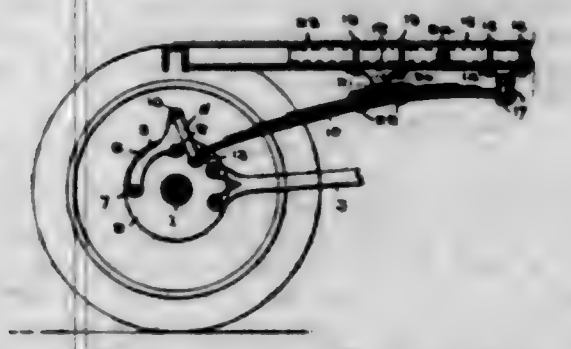
1,296,293. ELECTRICAL SYSTEM OF DISTRIBUTION. JOHN W. JEPSON, Buffalo, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Original application filed Nov. 27, 1907, Serial No. 404,272. Divided and this application filed Nov. 12, 1915. Serial No. 61,031. 11 Claims. (Cl. 171—318.)



3. In combination, a generator, a main circuit extending therefrom and divided into a battery circuit and a lamp circuit, a storage battery connected in the battery circuit and translating devices connected in the lamp circuit, a lamp regulator operatively connected in the lamp

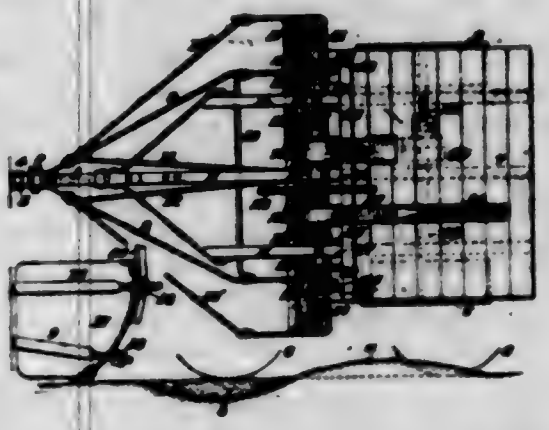
circuit to regulate the voltage impressed upon the lamps, and means for modifying the action of the regulator when the battery furnishes the current to operate the lamps.

1,296,294. CANTALIVER-SPRING FOR AUTOMOBILES. EUGENE R. KAAR, Galva, Ill. Filed Dec. 12, 1917. Serial No. 206,771. 1 Claim. (Cl. 267—27.)



In an automobile, the combination with the frame and rear axle assembly, of a spring perch bracket supported by one end of the axle housing, and having a lateral boss from which a stud bolt extends substantially parallel with and above the longitudinal axis of the axle, a spring hanger supported by one side of the frame, a diagonally arranged cantaliver spring having one end pivotally suspended from said stud to permit it under load to swing over the longitudinal center of said axle, means pivotally connecting the other end of the spring to said hanger, and means for pivotally supporting said spring intermediate its ends.

1,296,295. EARTH SCRAPER AND LEVELER. HENRY A. LAGE, Merced, Cal. Filed Apr. 9, 1914, Serial No. 830,657. Renewed Aug. 22, 1918. Serial No. 251,010. 5 Claims. (Cl. 37—7.)



1. In an earth scraper, a frame, a scraper, rigid means borne by the frame for providing a pivotal support for the front portion of the scraper to prevent bodily forward movement of the latter, rods connected at their forward ends to the frame and having their rear portions disposed above and below said pivotal point and connected to the scraper, and adjusting means carried by said rear ends of the rods and engaged with the rear end of the scraper so that loosening and tightening of the respective adjusting means will rock said scraper about said pivotal support of the scraper.

2. In an earth scraper, a horizontal frame, wheels supporting the rear of said frame, a downwardly extending member at the front of the frame, a scraper between said wheels and member, rigid elements connected to the frame and extending downwardly therefrom and engaged with the back of the scraper, draw bars connected at their front ends to said member and being divergent at their rear ends and connected to the scraper bottom, draw bars connected at their front ends to the first named draw bars and diverging at their rear ends and connected to the scraper ends at points substantially central between the scraper top and bottom, and draw bars connected at their front ends to the first named draw bars and converging at their rear ends and connected to the scraper back at substantially the center of the length of the latter.

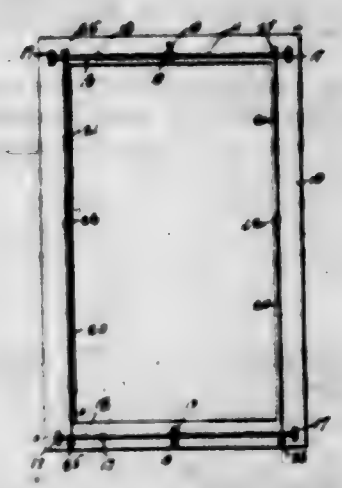
4. In an earth scraper, a frame having wheels at its rear, a scraper in front of the wheels having its ends turned to extend forwardly, draw bars connected to the frame front and to the front sides of said ends of the scraper, draw bars having connection with the frame front and at their rear ends connected to the scraper bottom at points between the first named draw bars, draw bars having connection with the frame front and at their rear ends connected to substantially the center of the length of the scraper, and means to adjustably support the scraper from the frame.

1,296,296. BAR SUPPORT AND SPACER FOR CONCRETE-REINFORCEMENTS. HENRY H. LAMPERT, Chicago, Ill. Filed Mar. 11, 1918. Serial No. 221,722. 5 Claims. (Cl. 72—122.)



1. As an article of manufacture, a spacing and supporting device for bar reinforcements for concrete, comprising a spacing member, a plurality of bar clamping members attached at intervals to said spacing member for securing transverse reinforcing bars thereto, and a corresponding number of supporting members, all of said members being separately formed and afterward assembled, and means on said supporting members adapted to have interlocking engagement with the respective clamping members for holding said supporting members in place.

1,296,297. WINDOW-CURTAIN STRETCHER. CHARLES LATHAM, Detroit, Mich. Filed Sept. 24, 1918. Serial No. 255,461. 4 Claims. (Cl. 45—24.)



1. A device of the class described comprising two parallel tubes, each having each end bent at right angles to its body, fastening devices in each extremity thereof, two other parallel tubes having blocks in their extremities, threaded stems projecting from said blocks beyond the ends of these tubes and adapted to be passed through the other tubes, and knobs screwed onto said stems where they protrude.

1,296,298. GREASE-GUN. SAMUEL H. LEVEY, Chicago, Ill. Filed Nov. 4, 1918. Serial No. 260,922. 3 Claims. (Cl. 221—78.)

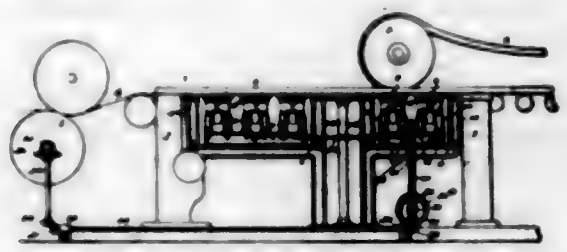
1. A grease gun comprising a cylinder having a discharge at one end thereof; a piston in said cylinder; a piston rod for said piston having opposite threads; and a

bearing for said piston rod, consisting of two oppositely rotatable members surrounding said piston rod, one en-



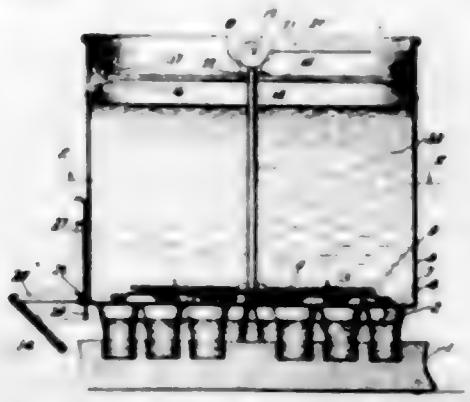
gaging one of said threads and the other the other thread, substantially as described.

1,296,299. PAPER-MAKING MACHINE. GEORGE MCAULAY, Rumford Falls, Me., assignor to International Paper Company, a Corporation of New York. Filed Dec. 7, 1917. Serial No. 205,974. 10 Claims. (Cl. 92—81.)



1. In a paper making machine, the combination of a traveling forming belt or "wire" to support the pulp layer, a suction box extending transversely beneath the belt and movable at one end in the general direction of travel of the same, means for restraining the other end of the box against such movement, and means acting at said movable end of the box and operable to move it periodically.

1,296,300. CUP-FILLING DEVICE. JUNIUS DALLAS MCCABE, Coraopolis, Pa. Filed Dec. 27, 1917. Serial No. 208,148. 8 Claims. (Cl. 226—21.)

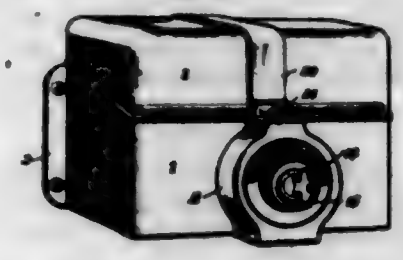


1. A cup filling device comprising a tank having a plurality of apertures in the bottom, a closure for each aperture, a plurality of rings, means for connecting said rings with said closures, a cross bar rigidly secured to said rings, an actuating pin connected with said bottom and extending through said bar, a spring acting on said bar for moving the same away from said bottom and consequently causing said closures to uncover said apertures, and manually actuated means for moving said bar and parts associated therewith so as to cause the closures to close said apertures.

2. The combination with a cup filling device, a mirror for observing the contents of the cups, means for adjustably supporting said mirror, and a gage coacting with the mirror and the cups for indicating the level of the liquid in the cups.

3. A cup filling device comprising a tank having apertures in the bottom formed with inwardly extending bars, a spider structure arranged in said tank, gasket members connected with said spider structure acting as closures, said gaskets being positioned to fit said bars, a pair of rods connected with said bottom and extending slidingly through said spider structure, a spring surrounding each of said rods and acting on the spider structure for raising the same so as to uncover said apertures, and a manually coacting member for moving said spider structure downwardly and locking the same against the action of said springs.

1,296,301. AUTOMOBILE-LOCK. JOHN H. MCCLURE, Detroit, Mich. Filed Feb. 25, 1918. Serial No. 218,905. 6 Claims. (Cl. 70—14.)

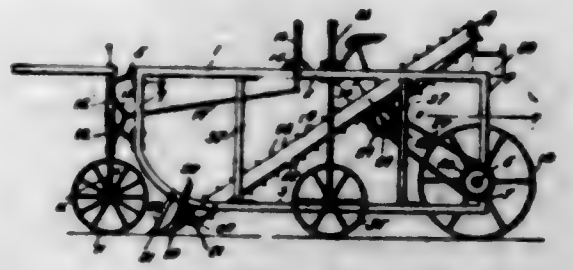


1. The combination with a coil box having a lid, a casing connected to said box, a strap having one end thereof held rigidly relative to said box, and the other end adapted to extend into said casing, a latch in said casing adapted to hold the said other end of the strap therein, and a lock in said casing adapted to hold said latch against actuation.

2. The combination of a coil box having a lid and a switch, a casing inclosing said switch, a latch carried by said casing for holding the lid of said box closed, and a lock carried by said casing adapted for actuating said switch and holding said latch against actuation.

6. The combination of a coil box having a lid, a strap to hold said lid closed, a switch, a lock on said box adapted to receive and hold an end of said strap, and lock controlling means having connection with said switch so that said lock controlling means may actuate the switch.

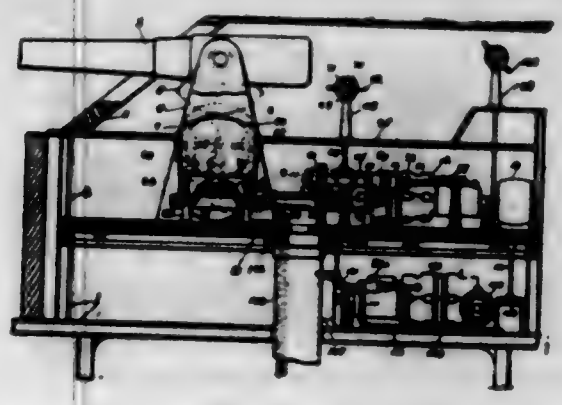
1,296,302. DITCHING-MACHINE. MELVIN C. MCLAUGHLIN, Marietta, Mich. Filed Dec. 14, 1915. Serial No. 66,827. 1 Claim. (Cl. 37—25.)



In a machine of the character described, a vertically disposed frame, a ground wheel mounted at the longitudinal center of said frame at its rear end, a front guide wheel forwardly of the frame, a bracket mounted on the forward end of the frame and having a vertically

disposed sleeve at the longitudinal center of said frame, a wheeled fork supporting the front guide wheel and having a stem slidably and rotatably journaled in the sleeve, a toggle pivotally connected for vertical movement to the sleeve and loosely connected with the stem of the fork for imparting sliding movement thereto and permitting free rotation of the same, hand operable means mounted in the frame and connected with the toggle to operate the same, a side wheel arranged medially of the frame at one side thereof, a support horizontally pivoted in the frame and forming a journal for the side wheel, means for moving said support, and means for locking the first and last named means in adjusted position.

1,296,302. POWER-DRIVEN ADJUSTING MECHANISM. CHARLES MATTHEWS MANLY, Freeport, N. Y. Filed July 23, 1912. Serial No. 711,189. 10 Claims. (Cl. 90—41.)



1. In a mechanism of the class described, the combination of a support, an element movably connected to said support, power operated means for relatively adjusting said element and said support at varying speeds and a control mechanism for said power operated means operating automatically to cause said power operated means to maintain an axis of said element parallel with a fixed line irrespective of movements of said support in any direction and at varying speeds.

5. In a mechanism of the class described, the combination of a support, an element movably mounted thereon, a power operated means for adjusting said element relative to said support, a control mechanism actuated by movement of said support for causing said power operated means to adjust said element relatively to said support at a speed and to an extent corresponding to the speed and extent of movement of said support, and means for varying the effect of said control mechanism.

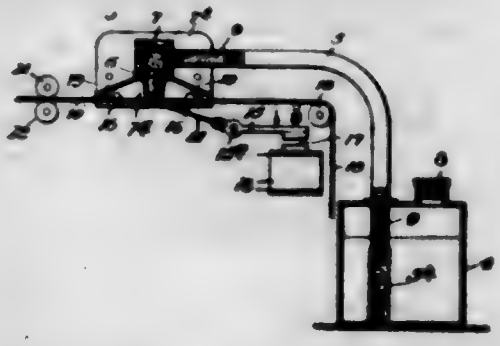
10. In a power operated adjusting mechanism, the combination of an element to be adjusted, a support for such element, a power operated device for adjusting said element relatively to said support, said mechanism embodying a variable speed reverse gear, an automatic control means for said gear comprising a movable control member whose speed and direction of movement determine the speed and direction of movement of said element, said member being operated by angular movement of said support with relation to a fixed plane to cause said gear to adjust said element relatively to said support in an opposite direction to the direction of movement of said support and at a corresponding speed.

1,296,304. CALENDAR-STAND. RICHARD MARX, Philadelphia, Pa., assignor to Defiance Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 31, 1916. Serial No. 75,990. 13 Claims. (Cl. 40—130.)

1. The combination in a calendar stand of a supporting body; guide bars extending upwardly and terminating in rearwardly projecting free end portions; with means movable toward and from said portions for supporting the calendar sheets and pressing them against the extremities of said end portions.

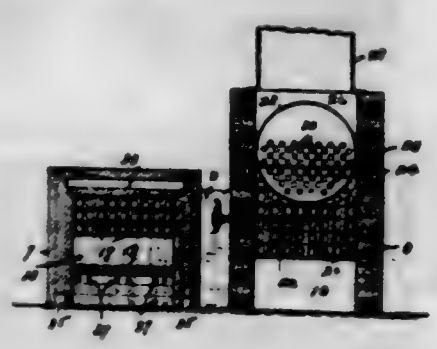


1,296,305. INK-FED MARKING DEVICE. JACOB F. MEEKER, Chicago, Ill. Filed July 16, 1918. Serial No. 245,239. 6 Claims. (Cl. 101—364.)



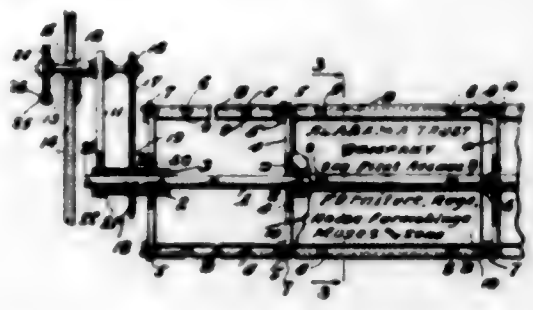
1. An ink-fed marking device comprising a duct having a lower downwardly-extending section and a higher section extending at an angle to said lower section, a marker having a chamber-containing head, in which said higher section terminates, and a marking implement extending outwardly from said chamber, an ink-reservoir supported at a level below that of the marker and into which said lower duct-section dips, and means in the duct for feeding ink therethrough from the reservoir into said chamber by capillary attraction.

1,296,306. FURNACE. PETER MOQUIST, Minneapolis, Minn. Filed June 11, 1917. Serial No. 178,948. 7 Claims. (Cl. 110—28.)



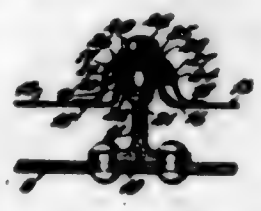
1. A furnace having primary, secondary and tertiary combustion chambers, main flues connecting the primary and secondary combustion chambers, secondary flues connecting the secondary and tertiary combustion chambers, and a boiler having flues in communication with the tertiary combustion chamber.

1,296,307. ADVERTISING DISPLAY APPARATUS. THOMAS W. MORAN, Birmingham, Ala., assignor of one-fourth to E. S. Curtin. Filed Nov. 13, 1918. Serial No. 262,364. 8 Claims. (Cl. 40—68.)



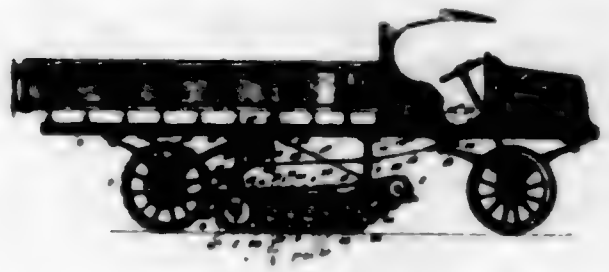
1. In a display mechanism, a rotary rack having a plurality of display surfaces, swinging supports for the rack and a rotatable pusher element to effect the intermittent rotation of said rack, and means to support the rack free for a gravitating movement.

1,296,308. CAR-ROOF. WALTER P. MURPHY, New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Oct. 26, 1918. Serial No. 259,771. 9 Claims. (Cl. 105.5.)



1. A car roof comprising spaced roof sheets movably mounted on the substructure, bolts secured to said substructure and arranged between the spaced roof sheets, seam covers straddling the spaces between the roof sheets, and saddle members for supporting said seam covers independently of the sheets, said saddle members being mounted on the bolts secured to the substructure and having drainage grooves in their top and bottom surfaces.

1,296,309. TRACTOR DEVICE FOR MOTOR-VEHICLES. RICHARD J. NETZEL, Cleveland, Ohio. Filed Oct. 9, 1917. Serial No. 195,522. 22 Claims. (Cl. 180—9.)



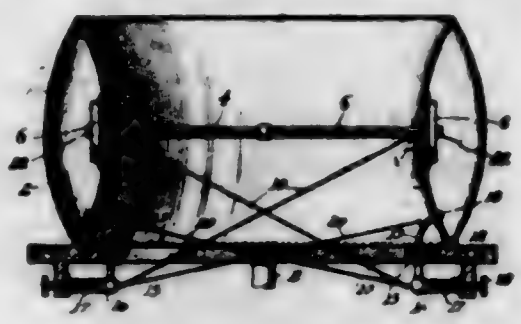
1. A tractor device for motor vehicles, comprising a vehicle frame, a tractor frame beneath said vehicle frame, wheels carried by said tractor frame, an endless tractor member carried by said wheels, means for movably and bodily supporting said tractor frame in different positions, a relatively movable driving shaft in said tractor frame, and shaft-actuating gearing flexibly connected to said tractor frame for driving said shaft in said different positions of said tractor frame.

6. An auxiliary caterpillar tractor, comprising a movable caterpillar frame, wheels rotatably supported at each end of said frame, an endless tractor device supported on and carried by said wheels, tension rollers and spring-resisted bearing members in said frame, variable worm gear mechanisms for driving said wheels, and means for movably and bodily supporting, adjusting and attaching said caterpillar frame to a motor vehicle.

8. A tractor device for motor vehicles, comprising in combination with a motor vehicle, a tractor frame, means for movably and variable supporting and suspending the latter in different bodily adjusted positions from said motor vehicle, caterpillar tractor mechanism carried by said tractor frame, and flexibly connected worm gear mechanism for driving said caterpillar mechanism from the driving mechanism of the motor vehicle in the variable positions of said tractor frame.

10. A tractor device for motor vehicles, comprising a tractor frame, spring-resisted wheels and tension rollers vertically movable in said frame, an endless tractor member carried by said wheels and tension rollers, a driving shaft connected to some of said wheels, and floating frames carrying said tension rollers and having a limited oscillatory movement in said frame.

1,296,310. PROJECTILE. HERBERT T. NOWELL, Billings, Mont., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 28, 1918. Serial No. 214,050. 17 Claims. (Cl. 244—2.)



1. As an article of manufacture, an explosive projectile adapted to be rapidly rotated, and to maintain such rotation by momentum for the period of time necessary to carry it the desired distance, and provided with one or more propeller blades to cause the flight of the propeller through the air, so that the projectile is dependent upon said rotation for its propelling power, and having provisions to prevent any effort of the projectile to rise until the requisite speed of rotation is reached.

5. A structure as specified in claim 1, and means including springs to automatically adjust said blade or blades to operative position as soon as the projectile has acquired the necessary speed of rotation.

7. A structure as specified in claim 1, in combination with means to rotate the projectile and including centrifugally operating devices to automatically release the same when the necessary speed of rotation is obtained.

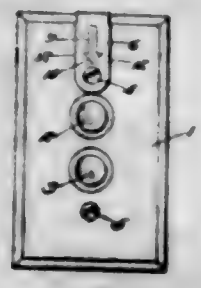
11. The combination of a whirling projectile having a propeller by which to propel itself through the air, when rotating at high speed, power-operated means to rotate said projectile without any effort thereof to rise until it attains the requisite speed of rotation for flight, and locking devices and means to operate said devices to release the projectile after the required speed of rotation is reached.

17. The combination of a whirling projectile having a propeller by which to propel itself through the air, when rotating at high speed, and power-operated means to rotate said projectile until it attains the requisite speed of rotation for flight, and instrumentalities to maintain said propeller inoperative before the requisite speed of rotation is acquired, and to then render said propeller operative when the projectile has attained the speed of rotation necessary for flight.

1,296,311. LUMINOUS SWITCH-INDICATOR. ELIOT O'HARA, Waltham, Mass. Filed Sept. 20, 1918. Serial No. 254,981. 8 Claims. (Cl. 240—1.)

1. A switch plate indicator attachment comprising a body plate having a slot therein shaped in the form of a pointer, said slot extending through the body plate, a luminous sheet secured to the back face of the body plate

covering said opening in such manner that a luminous design is shown through the said slot corresponding with



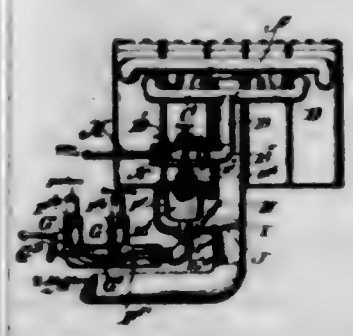
the contour of the slot, means for securing said luminous sheet to the body plate, and means for securing the said device to a switch plate.

1,296,312. TUNNEL-SHIELD. JOHN F. O'ROURKE, New York, N. Y. Filed Feb. 4, 1918. Serial No. 215,231. 10 Claims. (Cl. 61—85.)



2. In a shield for tunneling, a series of members fastened to the tail of the shield in end relation to one another in the space between said shield and a tunnel lining therein, and means connected to said members and forced into contact with the lining by external fluid pressure.

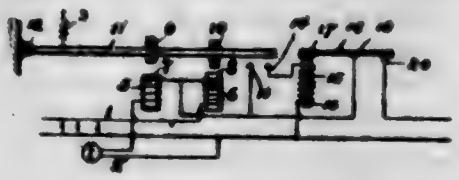
1,296,313. EXHAUST AND INTAKE MANIFOLD FOR CARBURETERS FOR BURNING HEAVY OILS. EARL MARCUS BAUMER and EMIL J. OTTO, Mitchell, Nebr. Filed Dec. 15, 1917. Serial No. 207,254. 1 Claim. (Cl. 261—12.)



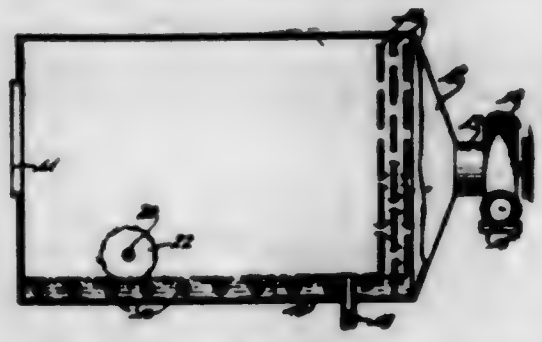
An attachment to engines for vaporizing heavy oils, comprising in combination with the exhaust and intake pipe of a manifold, a fuel float chamber, a carbureter communicating with the upper portion of said float chamber, a pipe leading from the carbureter and passing through the wall of the exhaust pipe from the manifold, a casing about said chamber, and a fuel supply pipe leading through the wall of the casing and communicating with the float chamber, the casing having an opening in one side communicating with the exhaust pipe, a valve regulating said opening, a baffle projecting laterally from the inner surface of the exhaust pipe with its free end terminating a slight distance from the bottom of said opening into the casing below said valve.

1,296,314. CURRENT-LIMITER. KRISTIAN FREDRIKSEN, Sarpsberg, Norway. Filed Jan. 25, 1916. Serial No. 74,228. 2 Claims. (Cl. 175—298.)

1. In a current limiter, a pivoted lever, a pair of adjustable armatures therein, two branch electric circuits, translating devices in each branch circuit, a winding included in each branch circuit and a core for each winding arranged opposite the respective adjustable armatures.



1,296,315. AIR-WASHING APPARATUS. WILLIAM D. PHILIPS, Brooklyn, N. Y. Filed June 15, 1917. Serial No. 174,915. 5 Claims. (Cl. 261—92.)

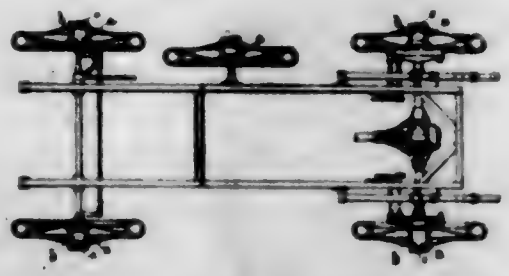


1. An apparatus of the kind described comprising a water containing casing, means for passing air therethrough, a rotatable shaft extending through the casing above the water, and disks spaced apart on the shaft and dipping into the water, each disk having near its periphery and on the sides tangentially arranged buckets of generally conical shape with widely flaring mouths.

2. A rotatable spraying device comprising disks spaced apart and having buckets on the sides thereof.

6. In an apparatus of the kind described, the spraying disk having a serrated edge and buckets formed between the serrations.

1,296,316. DETACHABLE WHEEL. JOHN VERNON PUGH, Coventry, England, assignor, by mesne assignments, to Wire Wheel Corporation of America, a Corporation of New York. Filed Mar. 5, 1912. Serial No. 681,760. 12 Claims. (Cl. 21—31.)



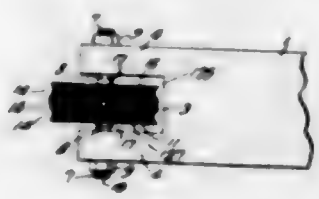
1. In a detachable wheel the combination of an inner hub part, an outer hub part mounted on said inner hub part to revolve therewith but subject to a slight eccentric displacement, and a nut pressed tightly in contact with both said eccentrically displaced hub parts and given a rotative movement by the driving effect from both said parts, said nut engaging a similarly disposed surface of each hub part so that the rotative movement transmitted to said nut is the sum of the driving effects of both parts acting in the same direction.

3. In a detachable wheel the combination of an inner hub part, an outer hub part mounted on said inner hub part to revolve therewith but subject to a slight eccentric displacement, and a nut having one surface contacting one side of said inner hub part and a second surface contacting a similarly disposed side of said outer hub part whereby said nut has a tendency to rotate relatively to both said hub parts, one of said surfaces and its contacting hub part being tapered and the other of said

surfaces and its contacting hub part having a suitably arranged threaded engagement so that the relative rotation of the nut and hub parts tends to tighten up the nut during the forward movement of the wheel.

5. In a detachable wheel the combination of an inner hub part, an outer hub part mounted on said inner hub part to revolve therewith but subject to slight eccentric displacement and a nut having one surface contacting one side of inner hub part and a second surface contacting a similarly disposed side of said outer hub part whereby said nut has a tendency to rotate relatively to both said hub parts, the nut and outer hub part contacting surfaces being tapered and the nut and inner hub part contacting surfaces having a suitably arranged threaded engagement so that the relative rotation of the nut and hub parts tends to tighten up the nut during the forward movement of the wheel.

1,296,317. STONE-CREASING TOOL. EDWARD E. RICE, Elmira, N. Y. Filed Apr. 25, 1916. Serial No. 93,516. 2 Claims. (Cl. 125—37.)



1. A device for grooving glass-cutting stones with grit, embodying an inflexible and unyielding wheel provided on its periphery with circumscribing V-shaped ribs disposed at right angles to the axis of the wheel, the periphery of the wheel being equipped with transverse grooves extended from one side face of the wheel to the other, each of the transverse grooves intersecting all of the ribs, the grooves being enlarged intermediate their ends to form circular openings in the tread of the wheel

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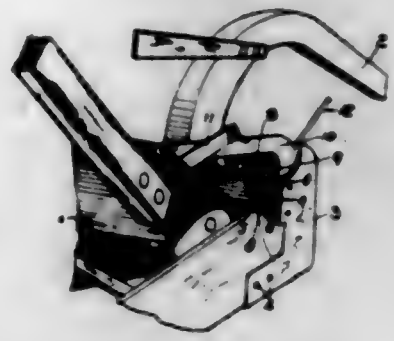
1,296,318. SPARK-PLUG. ALFRED LEANDER RIGGS, Pittsburgh, Pa., assignor to Visible Spark Plug Company, a Corporation of Delaware. Filed Jan. 23, 1917. Serial No. 143,973. Renewed July 31, 1918. Serial No. 247,672. 7 Claims. (Cl. 123—169.)



1. In a spark plug, a split feed ring with beveled extremities encircling one of the electrodes and forming an annular gap space surrounding said electrode, a current conducting cap serving to hold said feed ring in fixed relation to said electrode, and means for anchoring said cap to the core of the plug, said means consisting of a clamping band encircling said cap and having a separable and interlocked connection therewith.

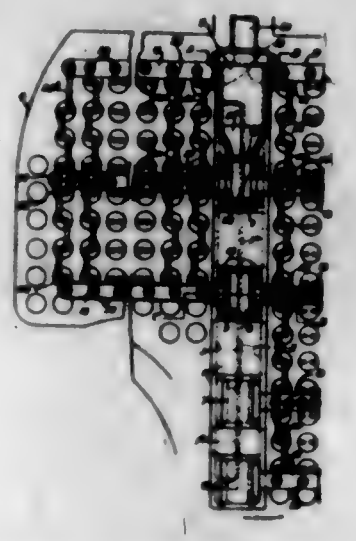
1,296,319. ATTACHMENT FOR PLOWS. JACOB H. RIZOR, Van Wert, Ohio. Filed June 11, 1918. Serial No. 239,366. 3 Claims. (Cl. 97—6)

3. The combination with a plow bottom and the carrying beam therefor, of a bracket arm extending forward from the lower rear portion of said beam, a frog carried by said bracket arm in advance of the plow bottom, a fin cutter secured to and extending downward from said frog in advance of the land side of the plow, and secured at



its lower end portion of the plow bottom at said side, a jointer blade carried by said frog over the forward end portion of the mold board of the plow and having its forward edge in close engagement with the adjacent side of the fin cutter.

1,296,320. STEAM-SUPERHEATER. JOHN GEORGE ROBINSON, Manchester, England. Filed Aug. 9, 1915. Serial No. 44,569. 3 Claims. (Cl. 122—462.)

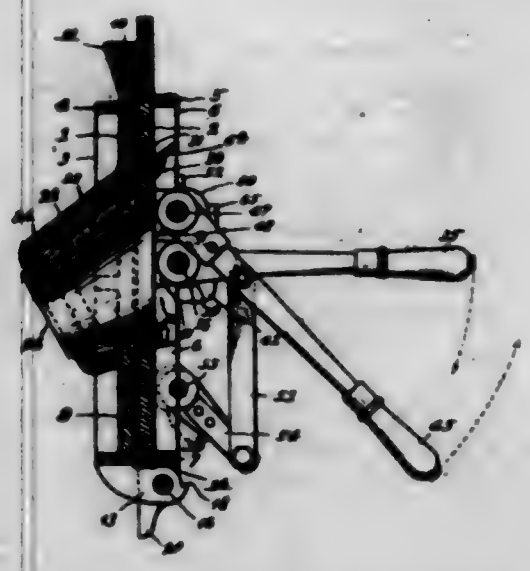


1. The combination, with a boiler tube plate, and fire-tubes; of a main superheater header arranged in front of the tube plate, horizontal auxiliary headers for saturated and superheated steam respectively connected to the said main header and having openings for steam in their rear sides, and superheater elements each having a series of U-shaped bends arranged one above another in the fire-tubes and having relatively long and inclined resilient end portions which project from the fire-tubes and are suitably connected to the steam openings of the auxiliary headers, each superheater element being separately detachable from its auxiliary headers without detaching them from the main header, and being adapted to be slid forwardly through the space between its said auxiliary headers when detached from them.

1,296,321. MOLD FOR CASTING VENT-PIPE FLASHINGS. JOHN H. ROSS, Kansas City, Mo. Filed Nov. 4, 1918. Serial No. 260,997. 11 Claims. (Cl. 22—152.)

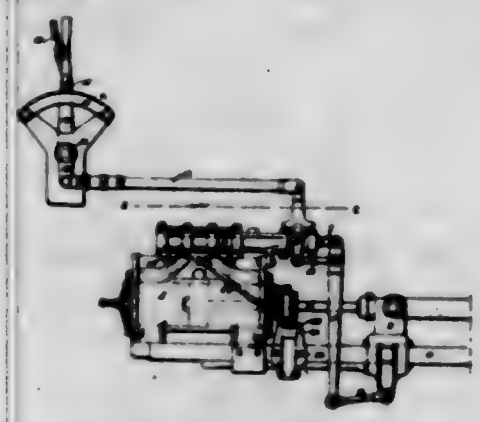
1. In a mold of the character described, two main members adapted to fit together and having a sheet-like space between them, a gate leading from the exterior of said members to the said space, a tubular protuberance projecting from one of the main members, and a core operably-mounted on the other main member and adapted to

extend into the tubular protuberance, a tubular space being formed between the protuberance and said core and



communicating with the sheet-like space between the two main members.

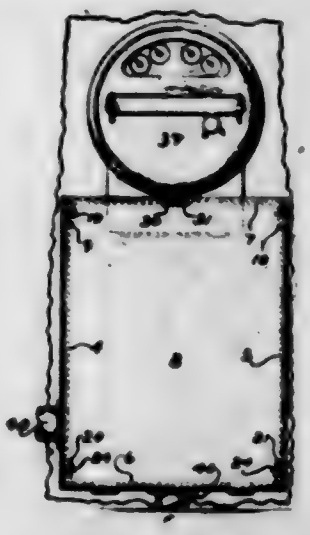
1,296,322. POWER-REVERSE MECHANISM. KENNETH ROBERTON, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 12, 1916. Serial No. 125,494. 2 Claims. (Cl. 121—98.)



2. The combination in means for locking the reverse gear of a locomotive, consisting of a main cylinder; a piston; a slide connected to the piston; a hand lever; a lever connected to the hand lever; a second lever connected to the slide and to the hand lever; a valve chest; a valve therein, the rod of the valve being also connected to the last mentioned lever; ports leading from the valve chest to each end of the main cylinder, said ports being V-shaped in cross-section with the narrow ends toward each other; a central exhaust port; a latch for locking the slide in the position in which it is adjusted: a cylinder having a piston therein connected to the latch; and a port at one side of the exhaust port in the valve chest communicating with the cylinder controlling the latch; a leakage groove between the said port and the exhaust port, so that the latch will be released prior to the movement of the main piston and, when the valve is shifted to stop the movement of the piston, the latch will immediately engage the slide, holding it in a fixed position.

1,296,323. CONVERTIBLE ELECTRIC-APPLIANCE-RECEIVING BOX. JOSEPH SACHS, Hartford, Conn. Filed July 26, 1916. Serial No. 111,996. 13 Claims. (Cl. 247—17.)

9. A box having a compartment to receive an electric circuit controlling device, a portion of the walled part of the box having an opening to receive a part of an electric meter for the protective projection of said meter part into said compartment containing said circuit controlling device, the box having a front closing said compartment



and the meter extending into the box independently of the front.

1,296,324. ROOFING MATERIAL. JOHN A. SCHARWATH, Elizabeth, N. J. Filed Nov. 5, 1918. Serial No. 261,231. 2 Claims. (Cl. 154—51.)



1. A composite roofing material comprising an under layer of unsaturated asbestos felt, a plurality of superposed layers of unsaturated asbestos felt with interposed thick layers of asphalt, and a top layer of asphalt having small slate or stone particles set into the asphalt to provide a slate or stone outer surface.

1,296,325. JOINTER. ARTHUR E. SCHUFFENHAUER, South Chicago, Ill. Filed Nov. 23, 1915. Serial No. 63,092. 2 Claims. (Cl. 72—138.)



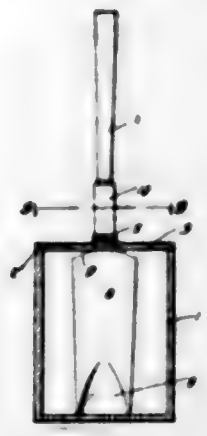
1. A tool of the class described, comprising an elongated body of shell like form the outer face thereof constituting a smooth engaging surface, the ends of said body being defined by upwardly and inwardly inclined faces intercepting said engaging surface at an obtuse angle, substantially as described.

2. A jointer of the class described comprising an elongated sheet metal body formed of a pair of integral angularly disposed sides, the ends of said sides being upwardly and inwardly inclined, the faces of said ends intercepting the outer faces of said sides at an obtuse angle, substantially as described.

1,296,326. MIXING DEVICE. RICHARD SCOLLON, Barnesboro, Pa. Filed Sept. 8, 1916. Serial No. 119,082. 2 Claims. (Cl. 259—108.)

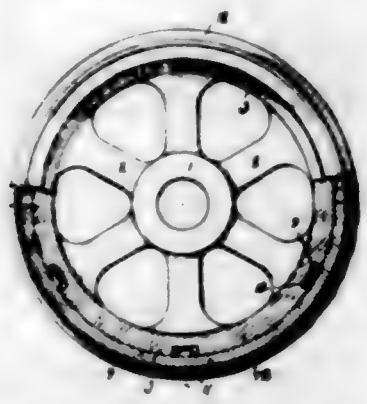
1. The combination with a container, of a closure removably and revolubly mounted thereon and provided with an angular recess in the periphery thereof, a paddle within the container and having its back face rounded transversely to lie concentric with the wall of the container when pressed thereagainst and having a flat front face, said faces converging toward one end of the paddle, there

being a recess in the flat face of the paddle at the free end thereof, said recess being of varying depth, and a stem



projecting from the paddle and having an angular portion fitting snugly within the peripheral recess in the closure, there being a handle upon the stem.

1,296,327. DEMOUNTABLE CLUTCH-RIM. OLIVER JAMES SHAUL, Edmon, Pa. Filed Jan. 25, 1918. Serial No. 213,787. 3 Claims. (Cl. 192—1.)



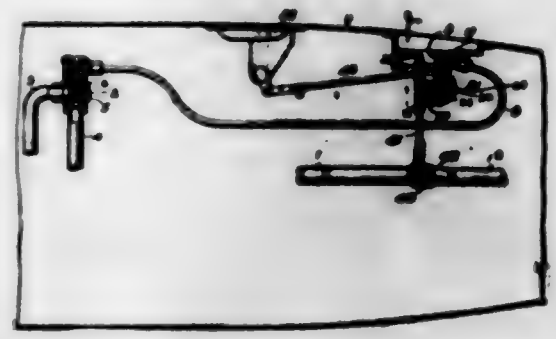
1. In a clutch, the combination with a clutch member whose rim is channeled on its periphery, one wall of the channel being undercut, and a ring removably closing the opposite side of the channel and undercut to form the complementary wall; of a band removably mounted in said channel and tapered at its edges to conform with the undercut walls, and facing elements secured on the band.

3. In a cone clutch, the combination with a hub, spokes, a conical rim having a channel in its periphery, a ring at the larger end of the rim, and means for holding it removably attached thereto, the walls of said channel being undercut; of a sectional band whose sections fit said channel end to end and with their edges contacting with said undercut walls, and a facing secured on said sections.

1,296,328. DISTANCE-GEAR FOR AUTOMOBILE TORPEDOES. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 27, 1916. Serial No. 128,083. 6 Claims. (Cl. 114—20.)

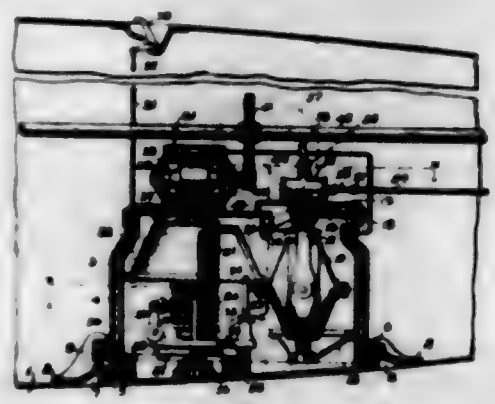
1. In an automobile torpedo, the combination with propelling mechanism therefor, of a distance gear comprising a motive fluid controller held yieldingly in closed position, a single member for moving said controller to and holding it in open position, and means coördinated with the propelling mechanism for releasing said member.

4. In an automobile torpedo, the combination with propelling mechanisms therefor, of a distance gear comprising a motive fluid controller, a driven member for operating said controller, a driver for moving said driven member, operative connections between said driver and the propelling mechanisms, and pawl and ratchet connections between said driver and driven member.



6. In an automobile torpedo, the combination with propelling mechanism therefor, of a distance gear comprising a motive fluid controller, a rotatable driven member for operating said controller, a driver rotatable on an axis eccentric to but parallel with that of said driven member whereby said driver after having moved said driven member may move farther without moving said driven member, operative connections between said driver and the propelling mechanism, and a clutch between said driver and driven member effective to cause said parts to move in unison when the driver is turned in but one direction.

1,296,329. TORPEDO STEERING UNIT. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 30, 1917. Serial No. 165,430. 7 Claims. (Cl. 114—24.)



1. The combination with an automobile torpedo having its hull provided with an opening to receive a steering unit, of a steering unit support adjacent to such opening and secured to the torpedo hull, and a steering unit secured to such support, said unit including a water-jacketed housing provided at its lower end and adjacent to said hull opening with ports for admitting water to and discharging it from said jacket, said ports being adapted solely upon the attachment of said unit to said support to place the water-jacket portion of said housing in communication with the exterior of the torpedo.

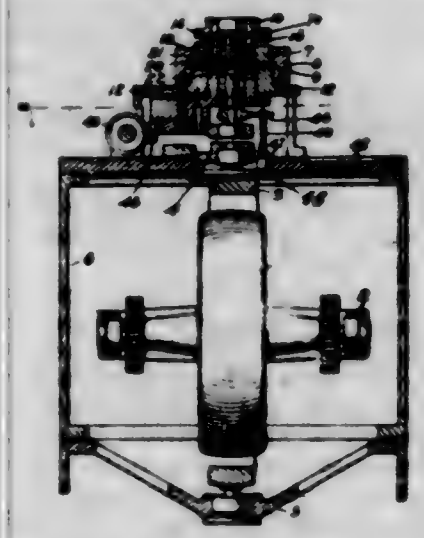
2. The combination with an automobile torpedo having its hull provided with an opening to receive a steering unit, of a steering unit support adjacent to such opening provided with a passageway open at one end to the exterior of the torpedo hull, and a steering unit secured to such support, said unit including a water-jacketed housing provided at its lower end with a port communicating at one end with the water-jacketed portion of said housing and at its other end registering with said passageway, such communication being effected solely by the attachment of said housing to said support.

4. The combination with an automobile torpedo having its hull provided with an opening to receive a steering unit; of a gyroscopic steering unit comprising an electric

motor gyroscope, a spring motor for effecting the preliminary spinning of said gyroscope, a source of electrical energy for supplying said gyroscope with current for a continued spinning thereof, and a common frame for said gyroscope, spring motor and source of electrical energy; said unit being removable as a whole through said opening in the hull.

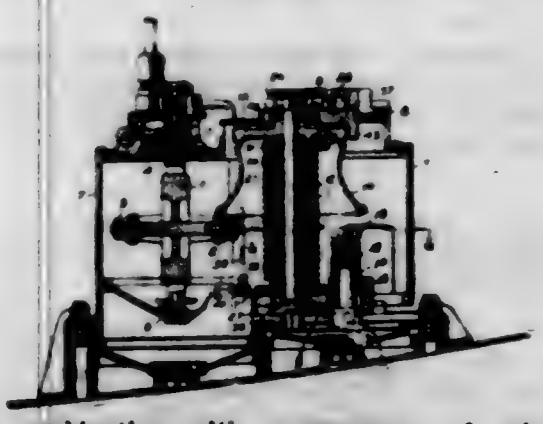
7. In an automobile torpedo, the combination of steering mechanism, an electric motor gyroscope for controlling said mechanism, a spring motor for effecting the preliminary spinning of the gyroscope, a source of electrical energy within the torpedo for supplying the gyroscope with current for its continued spinning, and a common frame for said gyroscope, spring motor and source of electrical energy.

1,296,330. GYROSCOPIC STEERING MECHANISM. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 25, 1917. Serial No. 171,045. 6 Claims. (Cl. 114—24.)



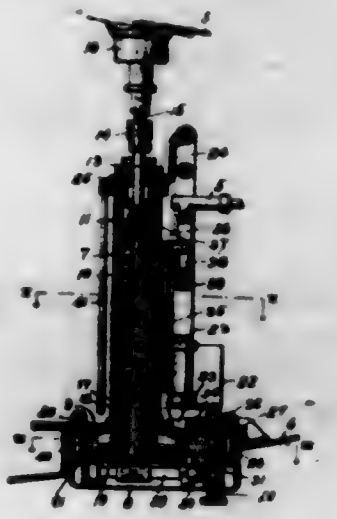
1. In a gyroscopic steering mechanism, the combination of a pivotally mounted gyroscope, a fluid pressure steering engine, a valve for controlling motive fluid for said engine, said valve comprising an outer fixed casing, a ported indexing sleeve and a ported spindle each rotatably mounted on an axis coincident with the pivot axis of said gyroscope, means for rotating said sleeve relatively to said spindle, and connections between said spindle and gyroscope for rotating the former in response to the movements of the latter.

1,296,331. GYROSCOPE-SPINNING MECHANISM. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 25, 1917. Serial No. 171,046. 15 Claims. (Cl. 74—78.)



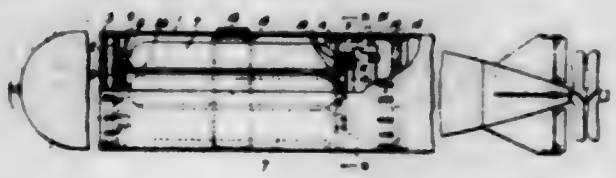
1. The combination with a gyroscope, of spinning mechanism comprising a spring motor and a member secured thereto for making driving connections with said gyroscope, and means effective upon the spinning of the gyroscope to move said mechanism including the spring motor from the gyroscope.

1,296,332. DIVING-GEAR. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 21, 1917. Serial No. 176,094. 5 Claims. (Cl. 114—25.)



1. In a diving gear, the combination of a casing, a reciprocable piston slidably mounted within said casing and having an extended surface contact with an inner wall thereof, a spring bearing on one side of said piston, a hydrostatic diaphragm at the opposite side of said piston, and a rod connected to said diaphragm and having thrust bearing engagement with said piston in a plane substantially common with the bearing plane of said spring upon the piston.

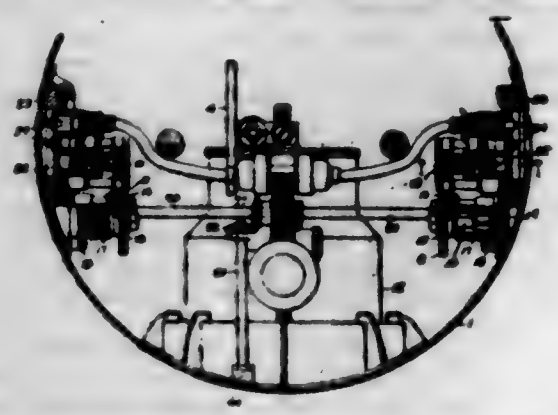
1,296,333. AUTOMOBILE TORPEDO. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 21, 1917. Serial No. 176,095. 7 Claims. (Cl. 114—20.)



1. A compressed gas section of an automobile torpedo comprising an outer hull or body portion closed at its opposite ends by bulkheads, and a plurality of elongate flasks arranged longitudinally of said hull and supported at their opposite ends by and between said bulkheads,

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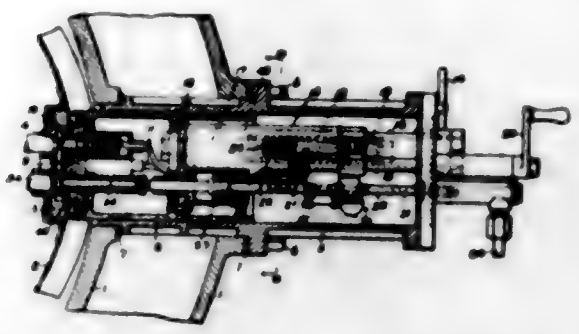
1,296,334. GYROSCOPICALLY-CONTROLLED TORPEDO. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 30, 1917. Serial No. 188,955. 7 Claims. (Cl. 114—24.)



1. In a gyroscopically controlled torpedo, the combination with a gyroscope, of a member movable to and from a position to lock said gyroscope, spring-impelled mecha-

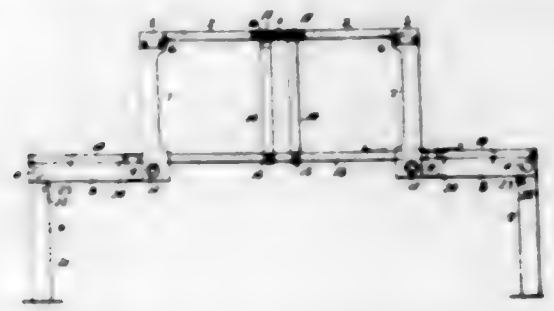
nism for releasing the locking member, means for moving said member to locking position, and means independent of said last named means for setting said lock-releasing mechanism.

1,296,335. LAUNCHING-TUBE. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 30, 1917. Serial No. 188,956. 15 Claims. (Cl. 114—238.)



1. The combination with a launching tube for automobile torpedoes, of a member movable through the wall thereof and provided with a contactor for closing an electrical circuit through the wall of a torpedo, and means coördinated with said member for moving a gyroscope lock-controlling member of a torpedo.

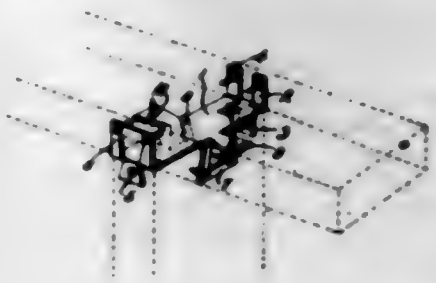
1,296,336. FOLDING CAMP TABLE AND SEAT. GEORGE R. STINE, Oakland, Cal., assignor of one-half to John S. Day, San Francisco, Cal. Filed Nov. 13, 1917. Serial No. 201,748. 8 Claims. (Cl. 45—31.)



1. A combination table and seats comprising a pair of seat members, a pair of foldable table sections elevated with relation to the seats, a pair of legs pivotally attached to each seat and supporting the same, means for locking the said legs against pivotal movement, a second pair of legs pivotally attached at one end of the seats and at the opposite ends of the table sections, a pair of bars extending under the table between the seats, one at each end of the table and seats, and means on said bars for locking the table supporting the legs against pivotal movement.

3. A combination table and seats, comprising a pair of seat members, legs supporting said seat members, a foldable table section elevated with relation to the seats and positioned between the same, legs pivotally attached to the seat sections supporting the table sections, said seat legs, seats and table sections adapted to be folded to form a compact unit, means for locking said seats and table sections against folding movement when extended, said means comprising a pair of bracing bars positioned one at each end of the table and seat sections, said bracing bars being notched at each end to embrace the table legs, means on the seats for locking the bracing bars against lateral movement with relation to the table legs, a bar pivotally attached to each bracing bar, a latch on the free end of each of said bars, and a locking member on each table section dapted to receive the latches to permit said bars to support the center portions of the table sections.

1,296,337. STUD-FASTENER PLATE. LEONARD J. SULLIVAN, North Sydney, New South Wales, Australia. Filed September 30, 1916. Serial No. 123,158. 2 Claims. (Cl. 20—94.)



1. A stud fastener plate comprising a body portion, an extension formed at one end of said body portion and bent upwardly, a tongue struck from said extension and bent downwardly, side wings provided from the body portion to be bent downwardly, side tongues struck from the side wings to lie in the same plane with the body portion, a central tongue provided at the remaining end of the body portion to be bent at right angles thereto, and side-tongues provided adjacent said central tongue to be bent at right angles to the body portion in a direction opposed to the bending of the central tongue, the several portions of the structure each being provided with openings to receive fastening means to permit securement of the plate in a relation to mount a pair of framing timbers in the proper relation.

2. A stud fastener formed from a single piece of sheet metal comprising an elongated body provided with a tongue struck from each end thereof, said tongues and ends being bent to extend in an opposite direction with respect to each other, said body provided with laterally extending portions, a tongue struck from each laterally extending portion and projecting in the same horizontal plane as the body and said laterally extending portions being bent to extend at right angles to said body.

1,296,338. PERCUSSION-TOOL. WILLIAM B. SULLIVAN, Chicago, Ill. Filed May 11, 1918. Serial No. 233,942. 6 Claims. (Cl. 75—1.)



1. A percussion tool for punching, rivet setting, and like hot or cold operations, comprising an impact receiving shank and a punch head composed of steel containing approximately two per cent. silicon.

1,296,339. JAR-CAP HANDLE. JOSEPHINE L. TABOUR, Englewood, Colo. Filed Dec. 5, 1917. Serial No. 205,638. 2 Claims. (Cl. 220—74.)

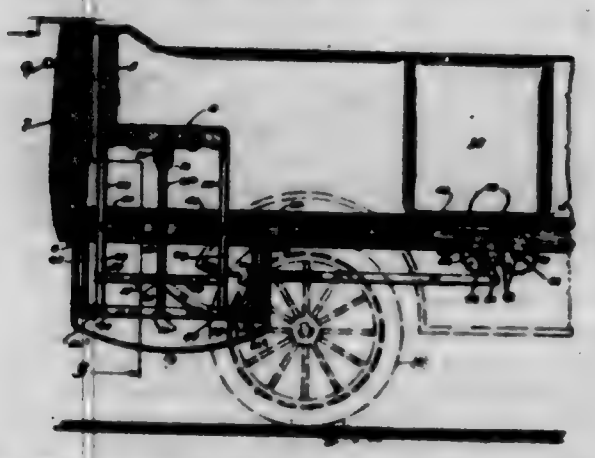


1. The combination with a container closure having a depending externally and internally threaded rim, of oppositely disposed coacting handles rigidly secured to the rim of the closure and disposed at different eleva-

tions, said handles being provided with laterally extending arms conforming to and fitting within the adjacent threads on the rim.

2. The combination with a container closure having a depending externally and internally threaded rim, of oppositely disposed coacting handles each comprising a body portion having a finger opening therein and provided with laterally extending arms conforming to and fitting within the adjacent threads on the rim and rigidly secured to said rim, said handles being disposed at different elevations and arranged in the plane of the adjacent threads.

1,296,340. MOTOR-VEHICLE-CONVERTING APPARATUS. GEORGE TOSTTCHER and CHARLES O. WINKLER, St. Louis, Mo. Filed Apr. 17, 1918. Serial No. 229,152. 9 Claims. (Cl. 21—42.)



8. In a mechanism of the character described, a vertically movable seat, a frame dependent from each side of the vehicle, a vertical rounded bar supported by each of the said frames, a grooved roller at each end of the seat and adapted to ride upon the said bar, a plurality of foldable supports pivoted at the front and rear of the seat and to the frames, and a system of levers connected to the foldable supports including a pair of bell cranks, whereby to raise and lower the seat.

1,296,341. AIR-INLET MEANS FOR CONTAINERS. WILLIAM J. TOWLE, St. Paul, Minn. Filed Apr. 2, 1917. Serial No. 159,141. 6 Claims. (Cl. 221—31.)



1. In combination, a container formed with a discharge opening, said container at a point removed from said opening having a portion of its wall joined with the surrounding wall portion by spaced relatively weak but normally unbroken connections interposed by stronger non-breakable connections for supporting said part when the weakened portions are broken, said part being adapted to be forced inward to form a break at said weakened portions and constitute a vent.

1,296,342. DOWEL FOR CONDUIT-SECTIONS. ANGELO M. TOSSI, Bayonne, N. J. Filed Sept. 27, 1916. Serial No. 122,845. 2 Claims. (Cl. 72—101.)

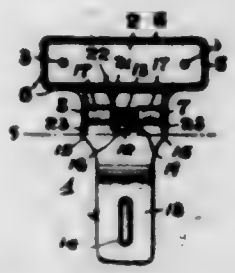
1. A dowel of the kind described comprising a sheet metal tubular body in which the longitudinal edges of the metal are in close relation to each other, and a circumferentially folded segmental flange formed on and integral with the said body with the ends of the flange separated from each other and merging into the respective longitudinal edges of the metal, the said body providing two aligning members and the said flange affording an integral yielding connection therebetween.

2. A dowel of the kind described comprising a sheet metal tubular body in which the longitudinal edges of the metal are in close relation to each other, a circumferentially folded segmental flange formed on and integral with the



said body with the ends of the flange separated from each other and merging into the respective longitudinal edges of the metal, and integral overlapping tongues closing the ends of said body.

1,296,343. HASP. BANNO VON HIEMS, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Apr. 20, 1918. Serial No. 229,628. 5 Claims. (Cl. 70—115.)



1. A hasp comprising a main body having an outwardly and forwardly extending portion formed with perforated side-members located in planes at right angles to the plane of the face of said main body, an inwardly projecting hook-shaped member connected with and extending from said outwardly and forwardly extending portion, a pintle having its end-portions mounted in the perforations of said side-members, said pintle extending beneath said hook-shaped member, a hasp or lock-engaging element hinged upon said pintle, and a coil-spring mounted upon said pintle and concealed beneath said hook-shaped member, said spring having its respective end-portions in engagement, respectively, with the back of said main body and the said hasp or lock-engaging element.

3. A hasp comprising a main body having a chambered element connected therewith, pintle-receiving lugs extending from said chambered element and forming the sides thereof, said lugs being of elongated configuration to form stops, a pintle connected with said lugs, a hasp or lock-engaging element mounted upon said spindle, said hasp or lock-engaging element having portions adapted to be brought into arresting engagement with the stop-portions of said pintle-receiving lugs, and a coil-spring mounted upon said pintle, said spring having its respective end-portions in engagement, respectively, with the back of said main body and the said hasp or lock-engaging element.

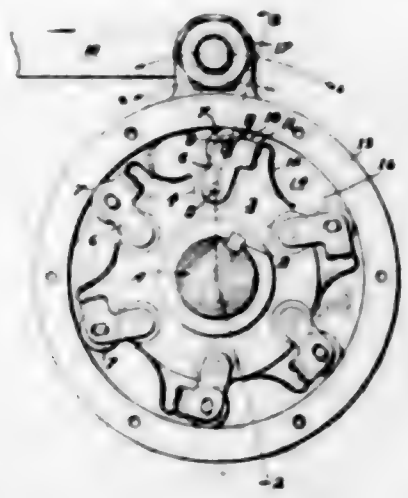
5. A hasp comprising a main body having a chambered element connected therewith, pintle-receiving lugs extending from said chambered element and forming the sides thereof, said lugs being of elongated configuration to form stops, a pintle connected with said lugs, and an inwardly projecting hook-shaped member connected with and extending from said chambered element, said pintle extending beneath said hook-shaped member, a hasp or lock-engaging element, pintle-receiving lugs connected with said hasp or lock-engaging element for hinging the same upon said pintle, one of said lugs having a marginal cut away portion, said hasp or lock-engaging element also having portions adapted to be brought into arresting engagement with the stop-portions of said pintle-receiving lugs of said chambered element, and a coil-spring mounted upon said pintle and concealed be-

neath said hook-shaped member, said spring having one end-portion mounted in the cutaway portion of said pintle-receiving lug of the hasp or lock-engaging element, and extending therefrom into engagement with the rear face of said hasp or lock-engaging element, the other end-portion of said spring bearing upon the rear face of said main body.

1,296,344. METHOD OF PRODUCING ZINC ARSENITE. CORNELIUS D. VREELAND, Upper Montclair, N. J. Filed Aug. 28, 1918. Serial No. 251,733. 6 Claims. (Cl. 167—6.)

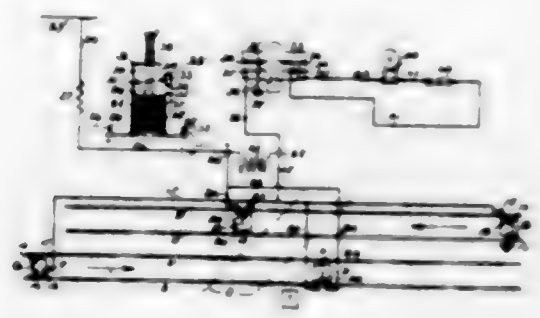
1. The hereindescribed method of producing zinc arsenite from arsenious oxid and zinc oxid which consists in reducing one of the oxids to soluble form by heating the same and causing it in such form to react with the other oxid in water, whereby to cause arsenite of zinc to be precipitated.

1,296,345. ROLLER-CLUTCH. JASPER J. WALK, Oakland, Cal. Filed Aug. 7, 1918. Serial No. 248,670. 8 Claims. (Cl. 74—53.)



1. A roller clutch comprising an inner and an outer clutch member, each turnable independent of the other, a plurality of cam rollers carried by the inner clutch, a roller interposed between each cam roller and the outer clutch, and means for maintaining each roller in positive alinement with the outer clutch face and the inner cam rollers.

1,296,346. ELECTRIC SIGNAL SYSTEM. ROYAL C. WARRING, Utica, N. Y., assignor of one-half to William F. Bossert, Utica, N. Y. Filed Aug. 11, 1916. Serial No. 114,465. 4 Claims. (Cl. 246—126.)



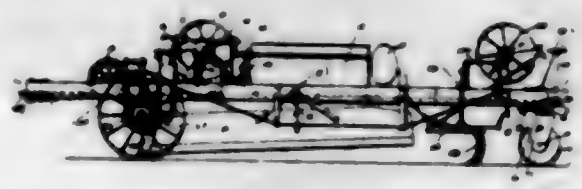
1. A signaling device adapted to be actuated by a car wheel movable over a rail having a peripheral flange portion extending below the upper surface of the head of the rail, the same comprising a shiftable signal operating member positioned adjacent the rail and adapted to be engaged only by the wheel flange, said shiftable signal actuating member comprising a lever pivoted intermediate its length and positioned at right angles to the rail, substantially as described.

2. A signaling device adapted to be actuated by a car wheel movable over a rail having a peripheral flange portion extending below the base of the rail, the same comprising a lever pivoted adjacent the rail, one end of said lever being positioned so as to be engaged by the wheel flange and adapted to be depressed thereby, the other end of said lever having a contact portion, a housing into which the contact end of said lever extends, a contact member mounted within said housing and adapted to be engaged by the contact member on the lever when the said lever is rocked by the flange of the car wheel, for the purpose described.

3. A signaling device adapted to be actuated by a car wheel movable over a rail having a peripheral flange portion extending below the upper surface of the head of the rail, the same comprising a lever pivoted intermediate its length and located adjacent the rail and disposed at right angles thereto, one end of said lever being positioned so as to be engaged by the wheel flange, and adapted to be depressed thereby, the other end of said lever having a contact portion, a housing into which the contact end of said lever extends, a contact member mounted within said housing and adapted to be engaged by the contact member on the lever when the said lever is rocked by the flange of the car wheel, and means for mounting said contact within the housing comprising a bridge from which the contact depends.

4. A signaling device adapted to be actuated by a car wheel movable over a rail having a peripheral flange portion extending below the base of the rail, the same comprising a shiftable lever provided with a part adapted to be engaged and shifted by the flange of the wheel, a contact device adjacent said lever including a resilient contact adapted to be engaged by the lever when the latter is depressed by the flange of the car wheel, and means for supporting said contact comprising a bridge composed of insulated material, and means for normally maintaining said contacts disengaged.

1,296,347. EARTH-HANDLING MACHINE. CLIFTON E. WERTS and WALTER G. WERTS, Russell, Iowa. Filed Jan. 31, 1918. Serial No. 214,774. 11 Claims. (Cl. 37—39.)



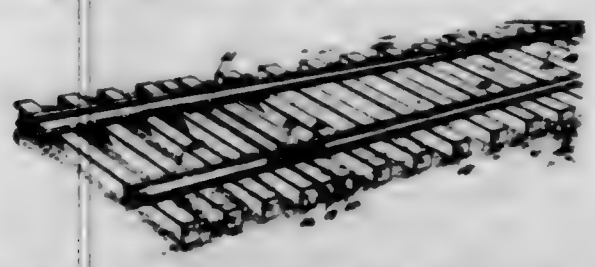
1. In a device of the class described, a frame mounted on wheels, an endless conveyer frame tiltably supported on said frame, an endless conveyer on said second frame, a load supply device adjacent to one end of said conveyer, means for mounting said load supply device on said conveyer frame for permitting adjustment of the load supply device with relation to the endless conveyer, a plate mounted above one end of said conveyer adjacent to said load supply means and operatively connected with said load supply means.

8. In an earth handling machine, a frame mounted on wheels, a conveyer frame tiltably mounted on said first frame, an earth cutting and elevating device mounted to be moved with said conveyer frame, and adapted to be adjusted with relation thereto, means for raising and lowering the end of said conveyer frame, together with said earth cutting and elevating means for varying the depth of cut of the latter, a conveyer on said conveyer frame, means for operating said conveyer and throwing it into or out of gear, whereby the conveyer may be used to move a load or to retain the load while the machine is being moved from one location to another, and a scraper adjacent to the end of said conveyer opposite said earth cutting means adapted to act on material discharged from the last mentioned end of said conveyer.

7. In an earth handling machine, a frame mounted on wheels, an endless conveyer, a load supplying device arranged adjacent to one end of said conveyer, and an adjustable cutting blade arranged adjacent to the other end of said conveyer adapted to cut earth at the side of the machine for cutting away banks or hill-sides.

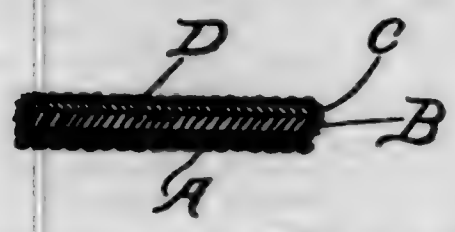
10. In a device of the class described, the combination of a frame having supporting wheels near one end, and a supporting wheel near the other end, an endless conveyer adapted to discharge near said one end, a digging device arranged substantially in line between said first described wheels for digging dirt or the like for loading said conveyer, with a sheave wheel, a cable on said sheave wheel, and means for causing the entire machine to travel along said cable.

1,296,348. RAILWAY-TRACK CONSTRUCTION. JOHN M. WHEELER, Cadiz, Ohio. Filed Aug. 6, 1918. Serial No. 248,966. 1 Claim. (Cl. 238—1.)



In railway track construction including parallel track rails each having joints, and spaced cross ties supporting the rails between the joints, the combination of a set of joint supporting ties bunched at each of the joints and including a tie disposed beneath the meeting ends of adjacent rails, and ties disposed at opposite sides of the first tie and lying close thereto, and sleepers extending longitudinally of the rails beneath adjacent ends of the joint supporting ties of said sets and centered with respect thereto at the rail joints for supporting said ends of the ties of the sets adjacent the joints, the sleepers being independent of said sets of joint supporting ties and terminating beyond the cross ties of the track lying immediately at opposite sides of the sets of joint supporting ties.

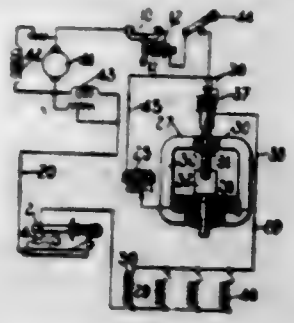
1,296,349. REPAIR-PATCH. GEORGE BENTON WOOD, Duluth, Minn., assignor of one-half to Winfield C. Wood, Minneapolis, Minn. Filed July 3, 1915. Serial No. 37,899. 8 Claims. (Cl. 152—26.)



2. A repair patch for inner tubes and tires comprising a layer of substantially non-elastic fabric and a layer of rubber heat pressed together to form a unitary structure of sufficient thickness to entirely prevent the passage of air at all pressures to which the tube is subjected, the fabric being co-extensive with the layer of rubber, a covering of uncured gum of air curing quality permanently adhering to the exposed surface of said rubber layer, and a protecting fabric covering strip removably adhering to the surface of said gum covering.

1,296,350. ELECTRIC WELDING SYSTEM. EMMANSON S. ZOCK, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,125. 14 Claims. (Cl. 219—15.)

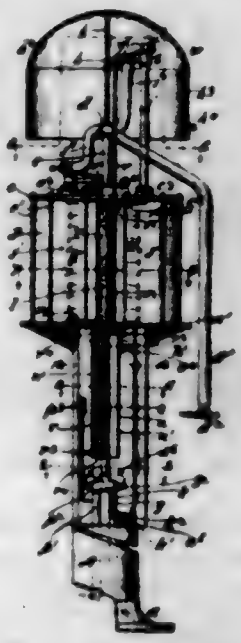
1. An electrical welding system comprising a source of current supply, an auxiliary circuit connected thereto for starting the welding arc, a main welding circuit, and means for automatically opening said auxiliary circuit when the current flowing therein reaches a predetermined value.



7. An electrical welding system comprising a source of current supply, an auxiliary circuit comprising a welding tool and an inductive winding by means of which a substantially large amount of electromagnetic energy may be stored in the said auxiliary circuit, a main operating circuit, and electro-responsive means for connecting the main operating circuit to the source of current supply.

14. An electrical welding system comprising a source of current supply adapted to maintain a substantially constant potential under all load conditions, a plurality of independently operated welding tools adapted to be connected to said source of current supply, each tool having associated therewith an auxiliary circuit for starting the welding arc, a main operating circuit, and electro-responsive means controlled by the current flowing in said auxiliary circuit whereby the welding tool is inserted in its main operating circuit.

1,296,351. LIQUID-DISPENSER. ELMER ELSWORTH ALLEN, Flushing, N. Y. Filed May 28, 1918. Serial No. 236,984. 22 Claims. (Cl. 221—100.)



1. In liquid dispensing apparatus of the character designated, in combination, a measuring jar, means for supplying liquid thereto, a vertically-slidable discharge pipe projecting into said measuring jar, a discharge hose connected with said discharge pipe, a vertically-movable hood into which said discharge pipe extends, and means for introducing air pressure into said measuring jar to superinduce discharge of liquid from said measuring jar, for the purpose described.

1,296,352. MEANS FOR PROPELLING MARINE VESSELS. RAFAEL ANDREU, New York, N. Y. Filed Jan. 19, 1918. Serial No. 212,593. 1 Claim. (Cl. 115—38.)

In marine craft of the character designated, a plurality of auxiliary propellers on each side of the hull arranged in alinement and in parallelism with the keel and the mean water line, and in approximate medial relation thereto, the shaft of each auxiliary propeller being jour-

naled in a bearing protuberant beyond the side of the hull and of a diameter sufficient to include the radial



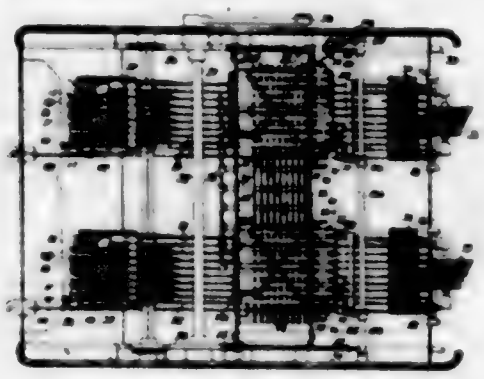
extension of the propeller blades, and the casing of the bearing merging gradually and uniformly into the hull, for the purpose described.

1,296,353. POUCH. JOHN ACKS, New York, N. Y. Filed June 20, 1918. Serial No. 241,001. 2 Claims. (Cl. 206—41.)



1. A pouch having a side opening one edge of which has an extension normally forming a closing flap for the opening and which extension is adapted to form a delivery scoop when pressure is applied to the body of the pouch along the opening.

1,296,354. COMBINED TYPE-WRITING AND COMPUTING MACHINE. RICHARD M. BECKER, Brooklyn, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 31, 1913. Serial No. 782,307. 39 Claims. (Cl. 235—60.)

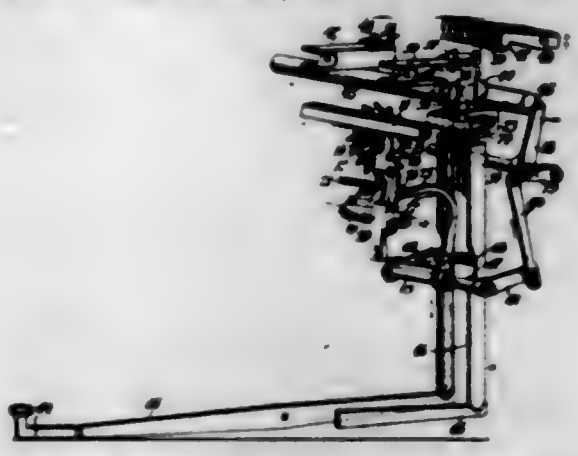


1. The combination with a plurality of computing heads, each comprising a plurality of computing wheels, of a nest of pins for each computing head for determining the extent of rotation of the wheels thereof, a secondary setting mechanism individual to each nest of pins, and a master setting mechanism for actuating all of said secondary mechanisms.

3. The combination with a plurality of computing heads, each including a plurality of computing wheels, of a nest of pins for each computing head for determining the extent of rotation of the wheels thereof, a secondary set of linkages individual to each nest of pins for setting said pins, a set of master linkages common to all of said secondary linkages and capable of actuating the same concomitantly, and shifting means for varying the setting action as determined by the secondary linkages so as to vary the type of computation effected.

33. A computing machine comprising, in combination, a plurality of computing heads each including a plurality of computing wheels, and operating mechanism therefor including a set of variably settable movement-determining members individual to each computing head for determining the extent of rotation of the wheels thereof, a set of secondary setting devices individual to each set of movement-determining members, and a set of master setting devices available in common for setting secondary setting devices of each of said sets.

1,296,355. COMBINED TYPE-WRITING AND COMPUTING MACHINE. RICHARD M. BECKER, Brooklyn, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed June 11, 1914. Serial No. 844,421. 18 Claims. (Cl. 235—60.)

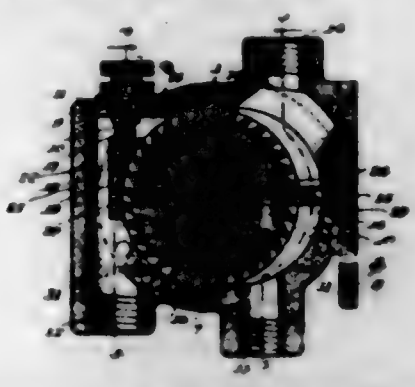


1. The combination with a computing mechanism, of denominational selecting mechanism for said computing mechanism including a series of jacks and a tappet arranged to come *seriatim* in an advance movement into engagement with said jacks, so as to engage said jacks individually, said jacks being spaced apart distances corresponding to the step-by-step movement of said tappet, and means for giving said tappet a settling movement greater than the distance between two jacks after a movement of said tappet in a return direction.

5. The combination with a computing mechanism, of denominational selecting mechanism for said computing mechanism including a series of jacks, a tappet arranged to come *seriatim* into engagement with each of said jacks, said tappet having a normal advancing movement corresponding to the distance between two successive jacks, and compensating means for increasing from a normal space movement, the advancing movement of said tappet when settling from a return movement.

16. In a computing machine, the combination with a denominational selecting mechanism including parts having a relative movement, of means for effecting relative step-by-step advancing movements of one magnitude between said parts, to bring said parts to predetermined relative positions of rest, said movement-effecting means including an excessive-lost-motion connection to render the same effective as a means for causing an advancing movement to any normal position of rest after a return movement of a magnitude greater than one step and less than two steps beyond said position, and tabulating mechanism having means to limit the extent of relative advancing movement between said parts after an action thereof which it controls.

1,296,356. COMBINED MOTOR AND PUMP. GEORGE BET, Jersey City, N. J. Filed May 4, 1918. Serial No. 232,631. 3 Claims. (Cl. 103—67.)



1. A combined motor and pump, comprising a casing having an inlet nozzle for the motive fluid, an exhaust

outlet therefor, and also provided with liquid inlet and outlet ports, a rotor mounted within said casing and formed in the periphery thereof with pockets the walls of which form impact faces against which the motive fluid operates to transmit motion to the rotor, the casing having a portion of its inner peripheral wall eccentric to the periphery of the rotor, forming a crescent shaped pumping chamber, pumping blades carried by said rotor and slidable radially in relation to the center of the rotor, and yieldable means for urging said blades outwardly.

1,296,357. [WITHDRAWN.]

1,296,358. WELDING-ELECTRODE. BARTON WELLER BOWERS, Easton, Pa. Filed June 27, 1918. Serial No. 242,285. 3 Claims. (Cl. 219—8.)

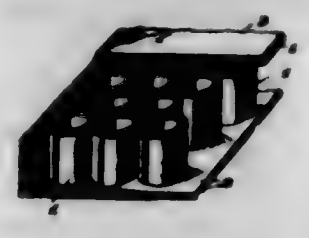


1. A device of the class described comprising a tubular body expanded at one end, an electrode extending substantially transversely to the axis of the body, and means for holding the electrode attached to the body and for permitting the electrode to be adjusted through three hundred and sixty degrees, said means comprising a pair of clamping members tapered to fit in the expanded end of the body and having projecting portions shaped to embrace the electrode.

4. A device of the class described comprising a tubular body member, means at one end for holding an electrode, means at the opposite end for connection with a cable, there being ventilating apertures in the last-mentioned end, a tubular handle of insulation fastened around the apertured end of the body member and forming therewith an air chamber communicating with the said apertures, the handle being provided with ventilating apertures, and means for fastening the handle to the body member.

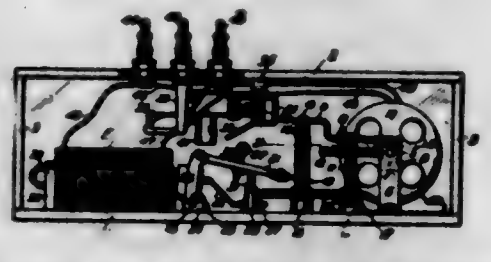
8. A device of the class described comprising a tubular body member having spaced peripheral flanges and apertures in the portions between the flanges, a tubular handle of insulation surrounding the apertured portion of the body member and having its ends fastened to the flanges, said handle being provided with apertures whereby air can circulate through the body member to keep the same cool, a shield disposed over the inner end of the handle, and a belt passing through the member, handle and shield and insulated from the body member.

1,296,359. PNEUMATIC MAT. DANIEL WEBSTER BROWN, Youngstown, Ohio. Filed Mar. 1, 1915. Serial No. 11,439. 5 Claims. (Cl. 5—1.)



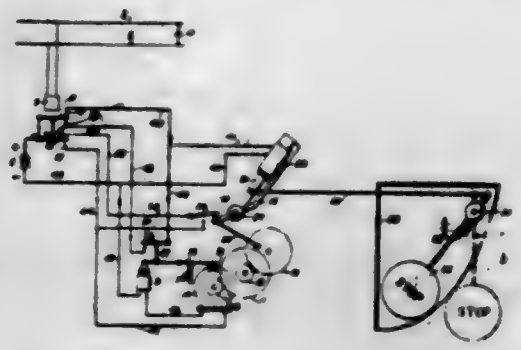
5. A mat including a body made of resilient tubing having squarely-cut ends and arranged uprightly in laterally abutting series and a cover inclosing a body, the body and cover being compressed to flatten the sides of the tubing and secured together by rubber cement and a vulcanizing process.

1,296,360. TIME-CONTROLLED HIGHWAY-CROSSING ALARM. STANLEY CHARLES BRYANT, Chicago, Ill., assignor to Bryant Zinc Company, Chicago, Ill., a Corporation of Illinois. Filed July 13, 1916. Serial No. 109,087. 4 Claims. (Cl. 246—126.)



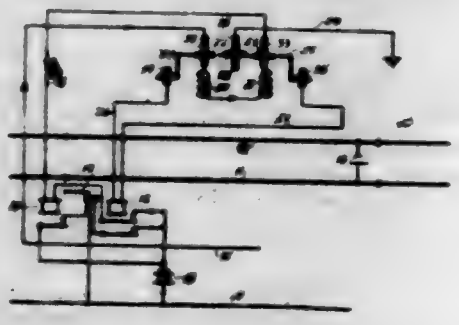
1. In a time controlled highway crossing alarm, in combination: a crossing alarm; a normally closed circuit controller for governing said alarm; an electric motor; a movable member adapted to open said circuit controller; reduction gearing operated by said motor; electromagnetic means for connecting said movable member with said reduction gearing; and circuits for simultaneously supplying current to said motor and to said electromagnetic means, the circuit for said electromagnetic means including said circuit controller.

1,296,361. HIGHWAY-CROSSING SIGNAL. STANLEY CHARLES BRYANT, Chicago, Ill., assignor to Bryant Zinc Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1917. Serial No. 171,624. 34 Claims. (Cl. 246—130.)



1. In a railway crossing signal, a swinging visible signal member; means whereby said member is normally hidden from view; a source of electricity; an electric motor operated by current from said source and operatively connected with said signal member and adapted to move the same into a visible position a plurality of times; and means for causing said motor to operate said signal member.

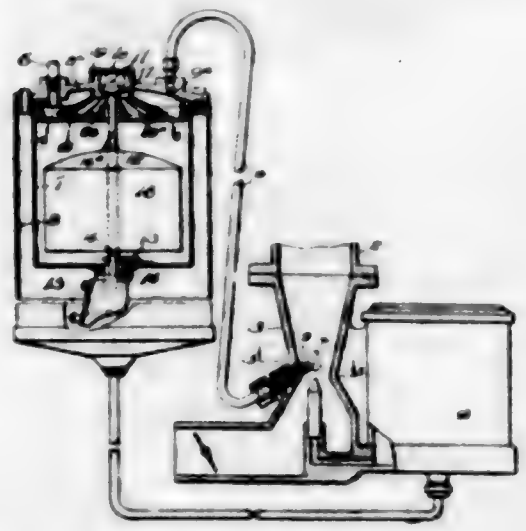
1,296,362. LIGHTNING-ARRESTER. STANLEY CHARLES BRYANT, Chicago, Ill., assignor to Bryant Zinc Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1917. Serial No. 171,625. 6 Claims. (Cl. 175—30.)



6. In a lightning arrester for railway signaling systems, a controlling circuit; a choke coil included in said circuit; two insulated rails; means for providing two spark gaps, one adjacent each end of said coil; two con-

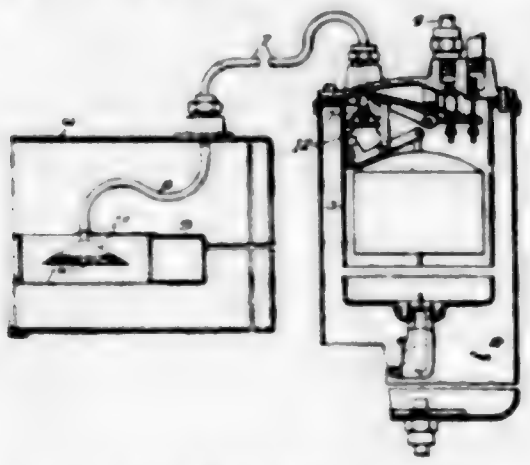
ductors, one leading from one of said rails to one of said spark gaps and the other from the other rail to the other spark gap; a ground connection; and means for providing a spark gap between each end of said coil and said ground connection.

1,296,363. FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CHARLES S. BURTON, Oak Park, Ill. Filed July 9, 1917. Serial No. 179,579. 5 Claims. (Cl. 158—36.)



1. In an internal combustion engine, in combination with a Venturi tube air intake, a low level fuel supply tank, a supplemental reservoir which constitutes the source of supply to the engine, a chamber from which the liquid fuel is delivered by gravity into said supplemental reservoir, and a duct from the upper part of said chamber leading to and opening within the Venturi tube at a point therein removed from the wall thereof and relatively near the axis of the tube.

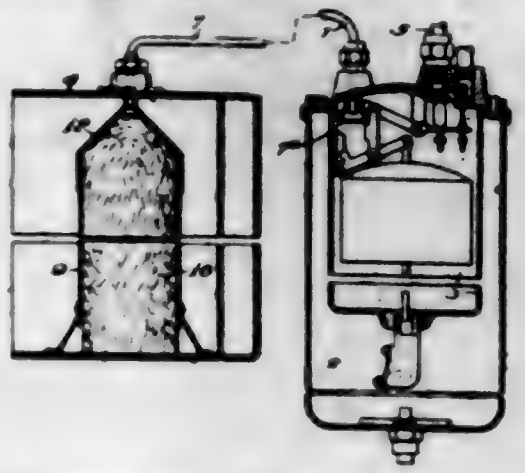
1,296,364. FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CHARLES S. BURTON, Oak Park, Ill. Filed July 9, 1917. Serial No. 179,580. 5 Claims. (Cl. 158—36.)



1. In a vacuum fuel feeding device in combination with a low level main supply tank, a reservoir at a higher level, a duct leading from the low level tank to said reservoir, and means for inducing suction therethrough; a horizontally-extended mouth-piece for said duct in the low level tank, and means for positioning said mouth-piece with its intake margin substantially as the surface of the liquid in the tank.

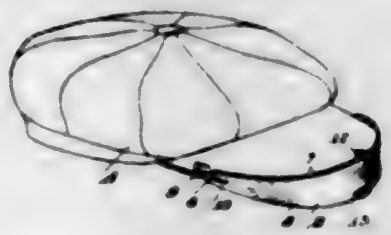
1,296,365. FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CHARLES S. BURTON, Oak Park, Ill. Filed July 9, 1917. Serial No. 179,581. 4 Claims. (Cl. 158—36.)

1. In a vacuum fuel feeding device, in combination with a low level main supply tank, a reservoir at a higher level; a duct leading from the low level tank to said reservoir; a wick device positioned in the tank extending above the



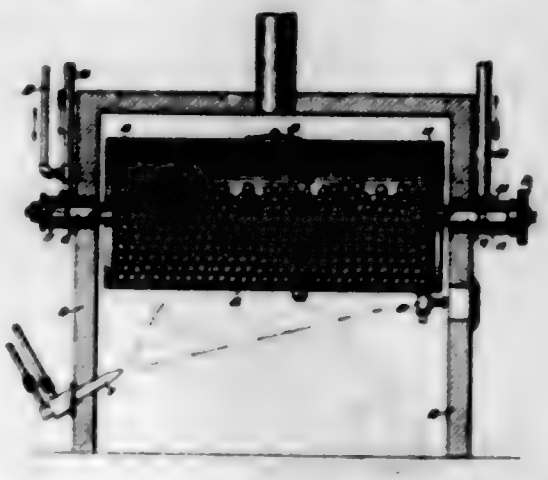
level of the liquid therein, the duct having a mouth-piece in the tank having its margin in close proximity to said wick, and means for producing suction through the duct.

1,296,366. ATTACHMENT FOR HEADWEAR. HERVEY D. CLARK, Decatur, Ill. Filed May 20, 1918. Serial No. 235,582. 2 Claims. (Cl. 2—149.)



1. An attachment for the purpose set forth comprising a flexible strip of material having means for connecting its ends with the visor of a cap so that the inner side of the strip is opposed to the edge of the visor and also having spaced stops to engage the visor at an intermediate point in its length and to bring up against the visor and thereby limit the up and down movements of the strip on the same.

1,296,367. PROCESS AND APPARATUS FOR CRACKING AND DISTILLING HYDROCARBONS. ALFRED COCHRAN, Brooklyn, N. Y., assignor of one-half to Thomas Cochran, New York, N. Y. Filed Apr. 8, 1916. Serial No. 89,827. 14 Claims. (Cl. 196—26.)

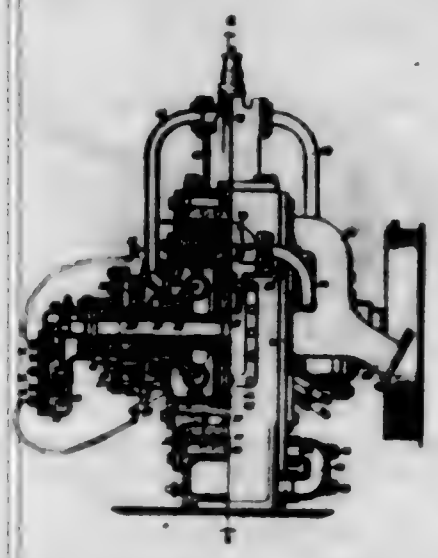


1. The method of cracking and distilling hydrocarbon oils, which consists in simultaneously subjecting the hydrocarbon oil under pressure, to heat, and to the attrition action of moving heat conducting metallic balls in the presence of catalytic agents.

8. An apparatus for cracking and distilling hydrocarbons, comprising a furnace, a retort within the said furnace and having heads provided with hollow trunnions,

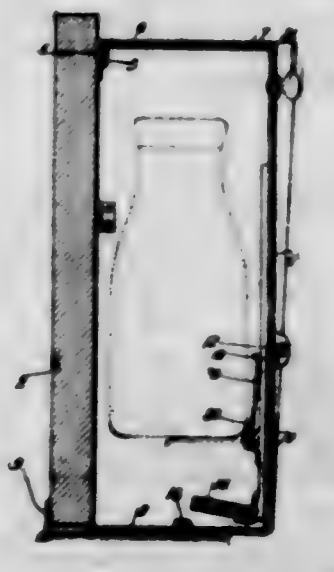
bearings attached to the ends of the furnaces in which the said trunnions are journaled, the said trunnions being provided with apertures, driving means for rotating the said retort, a combined hydrocarbon and steam or water supplying means connected with the bearing of one of the hollow trunnions and in register with the apertures in the trunnion for charging the retort with the hydrocarbon to be cracked and distilled, and an outlet connected with the bearing of the other trunnion and registering with the apertures in the trunnion for carrying off the resultant gases and vapors, the outer ends of the trunnions being closed, and the heads of the retorts being provided with apertures opening into the inner ends of the trunnions.

1,296,868. INTERNAL-COMBUSTION ENGINE. GEORGE JAMES COOPER, Havre, Mont. Filed Mar. 15, 1918. Serial No. 222,707. 5 Claims. (Cl. 60—42.)



1. An engine as characterized comprising a rotor having a plurality of impulse faces; a plurality of power generators for emitting expanding gases and expanding vapors alternately against said faces; an exhaust chamber for said gases; and a vapor-generating apparatus, a portion of said apparatus being disposed within said chamber for heating said vapor by the exhaust gases from said generators.

1,296,869. MILK-BOTTLE HOLDER. PELLEGRINO D'ANGELILLO, New York, N. Y. Filed Mar. 9, 1918. Serial No. 221,467. 5 Claims. (Cl. 232—42.)



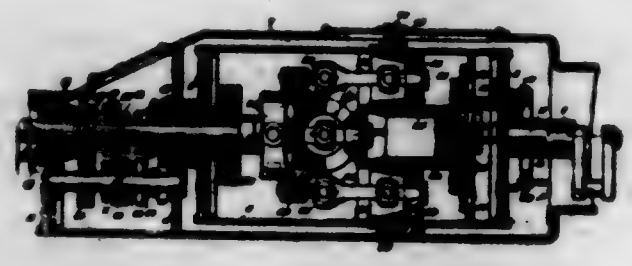
4. A milk bottle holder comprising a box open at one side, means for connecting the box to a door so that the open side will be closed by the door, a door member forming part of the box, said door member being supported by a hinge, a plate connected with said door member and extending to the bottom of the box, said door member being hinged above the bottom of the box, a spring pressed catch connected to the bottom of said plate, a lug for locking said catch when the spring acting thereon has been compressed, a pair of arms pivotally mounted on said plate adapted to support an empty milk bottle above said catch when in a lowered position, and a spring continually acting on said arms for causing said arms to support the empty milk bottle when in one position and to hold said arms in a position substantially parallel to said door when not engaging an empty bottle.

1,296,870. FISHING-TACKLE DEVICE. WILLIS FORREST DARLING, Derry, N. H. Filed Mar. 26, 1918. Serial No. 225,269. 4 Claims. (Cl. 43—31.)



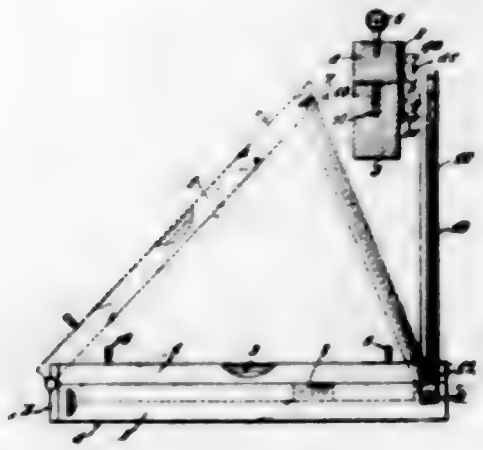
1. The combination of a fish line, a rotatable body connected therewith, a bait holder having a swivel connection with the body, and a sinker connected with the said body and automatically released therefrom by a pull on the bait holder.

1,296,871. SPEED-CHANGING TRANSMISSION MECHANISM AND BRAKE. SMITH V. DICKMAN, Shavertown, N. Y. Filed Sept. 26, 1917. Serial No. 193,320. 4 Claims. (Cl. 192—18.)



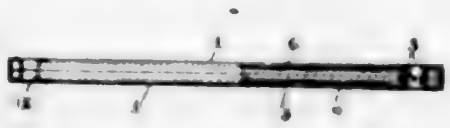
1. A mechanism of the class described comprising a driving shaft, a rotatable structure connected therewith, and including a central cylinder closed at one end and a plurality of cylinders around the central cylinder and each having a closed end, a chamber between one end of the structure and the ends of the cylinders and communicating with all the cylinders and containing a hydraulic medium, solid headed pistons reciprocating in the outer cylinders, an axially movable valve in the central cylinder for controlling communication between the said chamber and the pistons, and means connected with the valve and extending to a point outside the chamber for operating the valve.

1,296,372. LEVEL. ROBERT A. DITTRICK, Fort Myers, Fla. Filed Jan. 25, 1917. Serial No. 144,502. 1 Claim. (Cl. 33—70.)



The combination of a level bar and an accessory level bar, the ends of the bars being hingedly connected together whereby the said level bar may normally rest upon the said accessory bar, the free end of each bar being provided at one side thereof with a fastening screw carrying a removable thumb nut, a relatively long longitudinally slotted scale having one end mounted on the fastening screw in the said accessory bar, the other screw being extended through the said slot near the lower end thereof whereby the said scale is normally held at right angles to the said bars when the latter are in engagement with each other, the said fastening screw on the accessory bar acting as a pivot for the said scale when the other fastening screw is moved longitudinally of the slot when the said level bar is swung on the hinge.

1,296,373. MECHANICAL OR STRUCTURAL ELEMENT. HERBERT H. DOW, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Mich. Filed July 14, 1916. Serial No. 109,216. 11 Claims. (Cl. 29—181.)



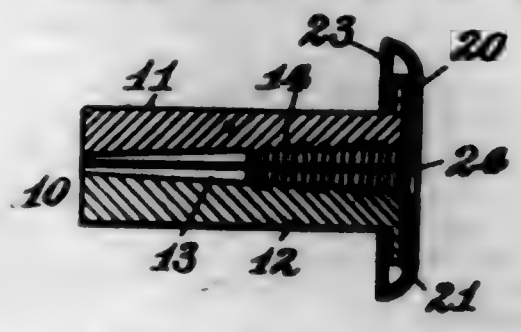
1. As a new article of manufacture, a structural or mechanical element consisting of a shell of steel, and a core of lighter malleable metal, substantially as described.

6. As a new article of manufacture, a structural or mechanical element consisting of a shell of steel strong enough to withstand tensile strains, and a core of magnesium cast in said shell to render the same capable of withstanding compression strains, the walls of said shell being deformed after said core has cooled, so as to reduce the contained space in said shell.

11. As a new article of manufacture, a structural or mechanical element consisting of a shell made of plural parts having undercut projections on their respective inner faces, and a core of magnesium cast in said shell and engaging with such projections so as to hold said shell-parts together, said shell being deformed after said core has cooled, so as to reduce the contained space in said shell.

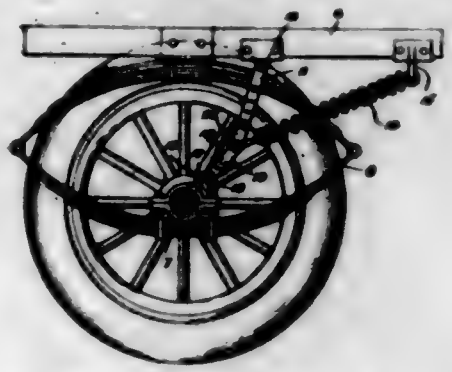
1,296,374. EXPANSION SOCKET OR PLUG. OSCAR E. DEGGES, Pompton Lakes, N. J., and GEORGE A. ROBINSON, New York, N. Y. Filed Oct. 29, 1918. Serial No. 260,189. 1 Claim. (Cl. 85—2.)

An expansion socket or plug, comprising a body made of soft material approximately of cylindrical shape, the body being formed of longitudinal sections having a conical bore, the front end of which is partly threaded, and a threaded expanding member screwing into the said



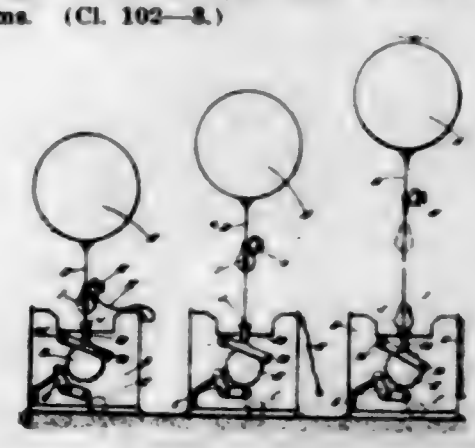
threaded bore to expand the body against the wall of a hole.

1,296,375. SHOCK-ABSORBER. FRANK R. HARSHAW, Lake Beulah, Wis. Filed July 11, 1916. Serial No. 108,677. 1 Claim. (Cl. 267—19.)



In a device for the purpose set forth, the combination with a vehicle including the frame thereof, a suspension spring carried thereby and a wheel carrying an axle supported on said suspension spring; of a band having an ear thereon secured on the axle, a link pivotally connected to the ear of the band and comprising a central member and side members adjustably connected to said central member and to each other, a second link pivotally secured to the frame to one side of the axle, said second link also comprising an intermediate and side members, adjustable means for connecting said members, the side members of the first mentioned link receiving therebetween the central member of the last mentioned link, a pivot passing through the ends of said links, a yoke secured on the pivot, and an angularly disposed helical spring connected with said yoke and to the frame of the vehicle whereby to normally hold said links at a right angle with respect to each other.

1,296,376. SUBMARINE MINE. GIOVANNI EMANUELE ELIA, New York, N. Y., assignor to Vickers Limited, London, England. Filed July 3, 1917. Serial No. 178,267. 9 Claims. (Cl. 102—8.)



1. Submarine mine comprising a flotation chamber or mine proper, an anchor, a mooring cable, connecting said flotation chamber and said anchor, paying out gear for said mooring cable, means for releasing the flotation chamber from the anchor after the mine has been launched and the parts thereof approach or reach the sea bed, a weight

normally held attached to the mooring cable, means for releasing said weight at a predetermined point in the ascent of the flotation chamber, and means actuated by said weight for arresting the continued unwinding or paying out of the mooring cable.

1,296,277. COMPASSES. CHRISTIAN M. FINSTAD, Brooklyn, N. Y. Filed May 29, 1918. Serial No. 237,271. 3 Claims. (Cl. 33—37.)

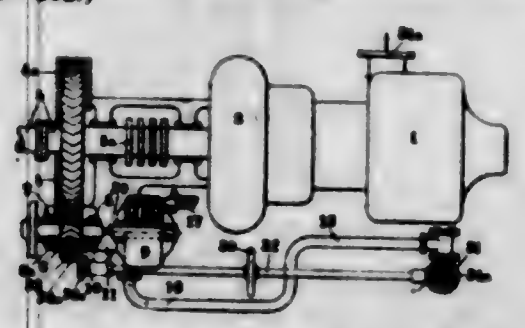


1. A compass comprising a beam provided with a longitudinal slot adapted to receive a marker therein, a fulcrum post at one end of the beam, and a plurality of clamping devices freely slidable over the beam and adapted to advance the walls of the slot into clamping engagement with the marker.

2. A compass comprising a beam consisting of substantially identical strips, a spacer located at one end of the beam and secured between the strips so that the sides of the beam beyond the spacer are free for relative adjustment, a pin passing through the opposite end of the beam, a fulcrum post extending through the first end of the beam, and clamping means slidable on the beam between the pin and said fulcrum post.

3. A compass comprising a longitudinally slotted beam, a fulcrum post at one end of the beam and a plurality of ring like clamps slidable on the beam and co-acting with the same to permit of the clamping of a marker between the walls of the slot of the beam, each of said rings having a relatively flexible inner body arranged for effective contact with the walls of the beam.

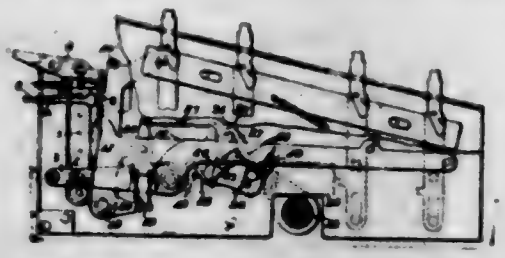
1,296,878. STEAM-TURBINE PLANT FOR SHIPS. HERMANN FÖTTINGER, Zoppot, near Danzig, Germany. Filed June 10, 1914. Serial No. 844,192. 3 Claims. (Cl. 60—102.)



1. In a steam turbine power plant for ships, the combination with main and cruising turbines interconnected by steam pipings, of a gear wheel connected to the main turbine, a pinion connected to the cruising turbine, means for engaging and disengaging the pinion with the gear wheel by moving it in a substantially radial direction, steam supplying valves for the turbines, and controlling means adapted to regulate the displacement of the pinion in interdependence with and in relation to the steam supply.

1,296,879. KEYBOARD-LOCKING MEANS FOR CALCULATORS. WARREN FUHRMANN, Westfield, N. J., and EDWARD M. SQUIRE, Tuckahoe, N. Y., assignors, by mesne assignments, to Wilkinson Brothers and Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 18, 1917. Serial No. 175,290. 3 Claims. (Cl. 235—130.)

1. In an adding machine, the combination with a keyboard mechanism and an operating member arranged to reciprocate, of a stop on the operating member, a locking member mounted to swing, means to retract the locking member when advanced, a stop-plate movable on the locking member and arranged to be engaged at once by said stop on advance of the operating member, means to normally hold the stop-plate fast on the locking member whereby advance of the operating member stop will at once shift the locking member to lock the keyboard mechanism, said means on retraction of the said operating member stop serving to release the stop-plate and permit retraction of the locking member to release the keyboard mechanism prior to final return movement of the operating member.



2. In an adding machine, the combination with a keyboard mechanism and an operating member arranged to reciprocate, of a stop on the operating member, a locking member arranged to lock the keyboard mechanism, means to retract the locking member, a movable stop-plate on the locking member that is engaged at once by said stop on advance of the locking member, a pivoted latch normally engaging the stop-plate to hold it against movement by the said stop whereby the stop when advanced will at once swing the locking member to lock the keyboard mechanism, and a trip-pawl that is swung by a by-pass on advance of the operating member stop, which pawl on return of said stop will swing said latch to release the stop-plate to swing on the locking member and permit retraction of a locking member to release the keyboard mechanism prior to full return of the operating member.

3. In an adding machine, the combination with a keyboard mechanism and an operating member arranged to reciprocate, of a stop on the operating member, a locking member arranged to lock the keyboard mechanism, means to retract the locking member, a movable stop-plate on the locking member that is engaged at once by said stop on advance of the locking member, a pivoted latch normally engaging the stop-plate to hold it against movement by the said stop whereby the stop when advanced will at once swing the locking member to lock the keyboard mechanism, and a trip-pawl carried by the latch that is swung as a by-pass on advance of the operating member stop, which pawl on return of said stop will swing said latch to release the stop-plate to swing on the locking member and permit retraction of the locking member to release the keyboard mechanism prior to full return of the operating member.

1,296,880. KEY-ACTUATED KEYBOARD RELEASE AND LOCK. WARREN FUHRMANN, Westfield, N. J., and EDWARD M. SQUIRE, Tuckahoe, N. Y., assignors, by mesne assignments, to Wilkinson Brothers and Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 10, 1917. Serial No. 179,628. 15 Claims. (Cl. 235—130.)



1. In a calculator the combination with adding mechanism, a keyboard, a main operating member and totaling means including a special key arranged to cause a total to be taken by the operating member, of a releasing member positively actuated by the depression of said total key to release any key in the keyboard that may have been depressed, and a keyboard lock also actuated by the depres-

sion of the total key that is operated on the final movement of the total key when depressed after said operation by the key of the releasing means, whereby the keyboard will be first cleared and thereupon locked by the act of depressing the total key.

3. In a calculator the combination with adding mechanism, a keyboard, a main operating member, totaling means including a special key arranged to cause a total to be taken by the operating member, and a subtotal key, of a releasing member positively actuated by the depression of either said total or said sub-total keys to release any key in the keyboard that may have been depressed, and a keyboard lock also actuated by the depression of the said key that is operated on the final movement of the said key when depressed after said operation by such key of the releasing means, whereby the keyboard will be first cleared and thereupon locked by the act of depressing the said key.

4. In a calculator, the combination with a keyboard including keys and stop bars, and latch bars arranged to control the stop bars, and a total key, of means for causing elevation of all of the latch bars by the act of depressing the total key when first moved to release all stop bars and keys advanced whereby to clear the keyboard, a locking member arranged to be moved to engage and lock all of the latch bars to prevent advance of any of the stop bars, and means for moving said latter member to locking position by the depression of the total key at the latter portion of its movement after such key has actuated the latch bars to release all stop bars advanced.

8. In a calculator, the combination with a keyboard, a total key, and a main operating member, of a releasing member positively actuated by the depression of said key to release any key that may be in advanced position, a keyboard lock also actuated by the depression of the total key to be operated on the final movement of said key when depressed and after operation of said releasing means, whereby the keyboard will be first cleared and thereupon locked on the final depression of said key, said locking means being released at the latter portion of the movement of the said operating member.

10. In a calculator, the combination with a keyboard, and a total key, a member arranged to swing to release all of the keys when advanced and to free the keyboard when retracted, of a pivoted plate that is swung on depression of the total key, a latch pivoted on the said plate, a pawl pivoted on said plate and normally engaging the latch to cause it to engage and swing said releasing member on swinging of the plate by the key, a fixed stop arranged to engage said pawl on movement of the swinging plate to cause the pawl to release the latch plate therefrom, whereby on retraction of the swinging plate the latch plate will be swung on the swinging plate on engagement with the releasing member without moving the releasing member.

1,296,381. COMBINED RAILROAD LEVEL AND GAGE. BEN A. FULLER, Lampasas, Tex. Filed May 25, 1918. Serial No. 236,605. 15 Claims. (Cl. 33—145.)



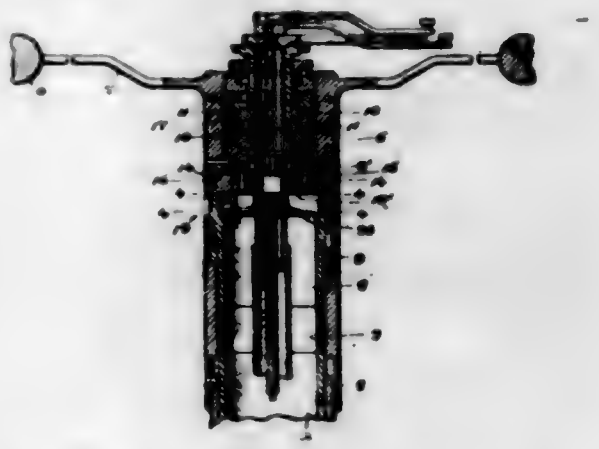
1. A track level and gage indicating device having an intermediate level mechanism including a scale, and fixed loop gage devices at opposite extremities, one extremity also having a supplemental outwardly and inwardly slidable gage coöperating with a scale and comprising a gage arm movable into the adjacent fixed loop gage device when in normal position, the said supplement gage being provided with means for moving it into normal position.

6. A track level and gage indicating device having a stock, and a level mechanism mounted in the intermediate portion of the stock and comprising an upper arcuate scale having a transparent covering, a spindle below the scale provided with an indicator movable over the scale and also with actuating means, and a weight pivoted at its upper end and having a rigid arm provided with means to loosely receive said actuating means and effect an oscillation of the spindle and the indicator when the stock is disposed in opposite angular positions relatively to a horizontal.

11. In a device of the class specified, a stock, level mechanism mounted in the stock and comprising a longitudinally shiftable scale having an opening in one end thereof, and adjusting means having a rocking lever with an inclined arm engaging the opening in one end of the scale.

15. In a device of the class specified, a stock, level mechanism mounted in the stock and comprising a scale and indicator means movable thereover, a weight suspended within the stock and connected to said indicator means, and a locking device for the weight consisting of a rotatable head having an arm with an angular foot to engage one edge of the weight, the head also having means connected thereto and extending exteriorly of the stock for operating the head and arm.

1,296,382. AUTOMOBILE-LOCK. LEWIS L. GIBSON, Macon, Ga. Filed Apr. 29, 1918, Serial No. 231,444. Renewed Dec. 18, 1918. Serial No. 267,406. 4 Claims. (Cl. 70—129.)



1. In a steering mechanism, a tubular steering shaft comprising an upper section and a lower section, the upper section being movable longitudinally in relation to the lower section, interfitting projections on the adjacent ends of said upper and lower sections, lock mechanism housed within said upper section, and means controlled by said lock mechanism and movable into the recesses between said projections to prevent the downward or return movement of said upper section.

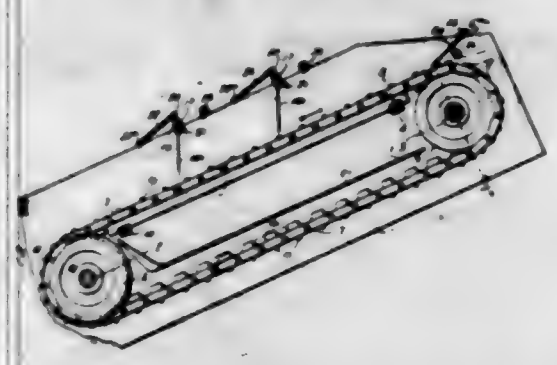
1,296,383. TRASH-SEPARATOR FOR BEETS AND BEET-TAILINGS. CHARLES R. GREY, Billings, Mont. Filed Mar. 13, 1916. Serial No. 83,925. 14 Claims. (Cl. 130—32.)

1. A machine of the character described comprising a series of endless carriers arranged at an inclination to a horizontal plane and positively driven means for said carriers to cause adjacent carriers to move at different speeds while alternate carriers move at the same speed.

3. A machine of the character described comprising a series of carriers arranged at an inclination to the horizontal and spaced from one another, and positively driven means for actuating said carriers to cause adjacent carriers to move at different speeds while alternate carriers move at the same speed.

5. A machine of the character described comprising an inclined frame, endless chains arranged to travel longitudinally of the frame, cornered lugs on the outer sides of

the chains, and positive means for actuating the chains to cause their upper stretches to move upwardly and for causing each of said chains to move at a continuously greater or less speed than that of adjacent chains.



7. In a machine of the character described, the combination with an inclined frame, of shafts near the opposite ends of said frame, each shaft being provided with a series of pulleys of different sizes alternating with each other, and alternate pulleys being fast on said shafts while the other alternate pulleys, between said first-named pulleys, are loose on said shafts, a series of endless carriers moving upwardly at their upper stretches and each of which runs from a fast pulley on one shaft to a loose pulley on the other shaft, said carriers having cornered lugs projecting upwardly at their upper stretches, and means for driving said shafts at different speeds; whereby alternate carriers will be caused to travel at different speeds while the intervening alternate carriers travel at the same speed.

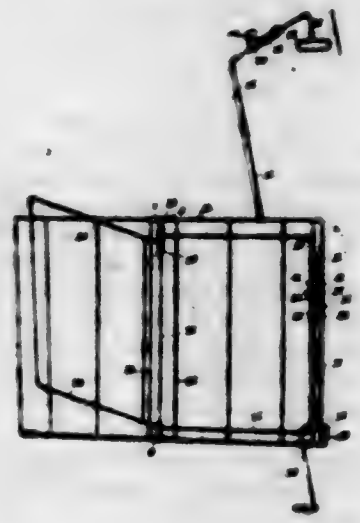
9. In a machine of the character described, the combination with an inclined frame, of shafts near the opposite ends of said frame, each shaft being provided with a series of pulleys of different sizes alternating with each other, and alternate pulleys being fast on said shafts while the other alternate pulleys, between said first-named pulleys, are loose on said shafts, a series of endless carriers moving upwardly at their upper stretches and each of which runs from a fast pulley on one shaft to a loose pulley on the other shaft, and means for driving said shafts at different speeds; whereby alternate carriers will be caused to travel at different speeds while the intervening alternate carriers travel at the same speed, and a series of fingers near the upper ends of said carriers to prevent the material from being carried over said upper ends.

1,296,384. MANUFACTURE OF GRAY CAST-IRON. WALTER BIRKETT HAMILTON, Yorkshire, England. Filed Dec. 20, 1917. Serial No. 208,071. 3 Claims. (Cl. 204—62.)

1. The manufacture of gray cast iron in an electric furnace by first lining the furnace with an acid lining, then charging into the furnace metallic iron and carbon and adding a basic material and silica to form a slag on the surface of the molten iron.

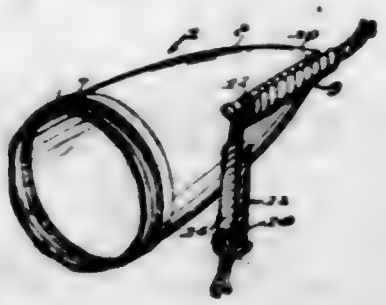
1,296,385. MUSIC-LEAF TURNER AND RACK. WALTER W. HANKS, Eunice, La., assignor of one-eighth to Clayton B. Stagg, Church Point, La. Filed Mar. 23, 1917. Serial No. 157,006. 3 Claims. (Cl. 84—135.)

3. In a device of the class described, a main frame, a plurality of spring-held leaf turning devices pivotally mounted to swing on a vertical axis at approximately the central portion of the frame, a supporting member at one side of the frame provided with a slot, a plurality of triggers pivoted above the supporting member and adjacent to the slot, one end of each trigger extending into the slot when the trigger is in a released position, a spring-held plunger above the supporting member, means for guiding the plunger, a spring-held operating rod, an engaging device on said rod contacting with the plunger and adapted to shift the latter and withdraw one end of the plunger from beneath one end of each trigger and allow said end of the trigger to extend into the slot for releasing the leaf



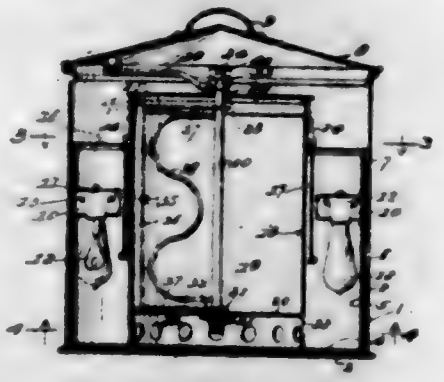
turning member, and means for throwing said connecting rod.

1,296,386. NET-FLOAT. ADAMS O. HARRIS, Goble, Oreg. Filed May 31, 1918. Serial No. 237,553. 3 Claims. (Cl. 43—4.)



1. A net float comprising a body portion, members connected therewith and having means for attachment to the float line of a net, and detachable members also having means for connection with the float of a net, said detachable members coöperating with the aforesaid members to permit the float line to be attached to or detached from the float line.

1,296,387. BREAD-RAISER. MARY ELLA HARRIS, Modesto, Cal. Filed Aug. 16, 1917. Serial No. 186,549. 3 Claims. (Cl. 219—44.)



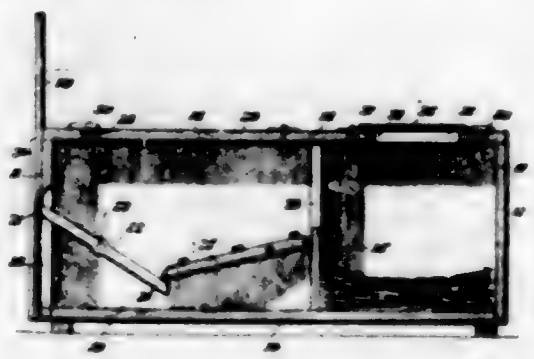
1. A device of the character described including a main heating receptacle, heating means in the receptacle, a dough containing receptacle removably mounted in the heating receptacle, common means mounted in the main receptacle for guiding the sliding movement of the dough containing receptacle and for deflecting the heat toward the bottom of the dough containing receptacle, and a cover removably mounted on the main receptacle.

2. A device of the character described including a main heating receptacle, electrical heating means in the main receptacle, means for controlling the flow of electricity through the heating means, an annular band supported in

the main receptacle, a sleeve depending from the inner edge thereof, the band and the sleeve deflecting the heat toward the bottom of the receptacle, a dough containing receptacle mounted in the main receptacle and guided during its insertion and supported centrally of the main receptacle by the band and the sleeve, and a cover removably mounted on the main receptacle.

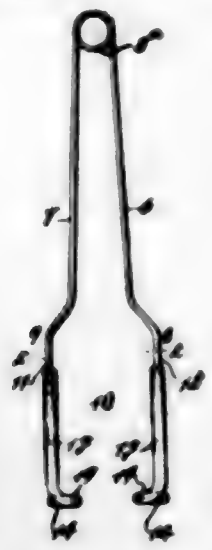
3. A device of the character described including a main heating receptacle the walls of which are formed of heat insulating material, a plurality of sockets supported in the receptacle, a plurality of lamps mounted in the sockets and arranged in series with each other, means for controlling the flow of current to the lamps, an annular band supported horizontally in the receptacle, a sleeve depending from the inner edge of the band, the band and the sleeve deflecting the heat toward the bottom of the receptacle, a dough containing receptacle, a cover therefor, the dough containing receptacle being removably arranged in the main receptacle and guided during its insertion by the band and the sleeve, a flange depending from the bottom of the dough containing receptacle and provided with openings through which the heat circulates, and a cover removably mounted on the main receptacle.

1,296,388. TRAP-NEST. RALPH GORDAN HARRIS, Salida, Colo. Filed Nov. 3, 1917. Serial No. 200,152. 2 Claims. (Cl. 119—49.)



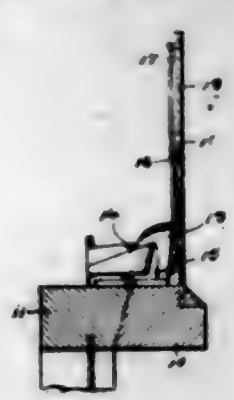
1. A trap nest embodying a receptacle, a partition dividing said receptacle into an entrance compartment and a nest compartment, said partition having openings therein establishing communication between the compartments, an entrance opening for said receptacle, a gravity door for said entrance opening, a door engaging lever pivoted intermediate its ends and located within the entrance compartment and a pivoted platform located at the partition opening in the path of the fowl and having one end normally resting on one end of the pivoted lever for supporting the web of the door in open position.

1,296,389. JAR-LIFTER. KURT HEITLER, New York, N. Y. Filed Nov. 29, 1918. Serial No. 264,545. 2 Claims. (Cl. 65—26.)



1. A lifting device consisting of a pair of leg-members yieldably connected, jaw-members carried thereby at the lower ends thereof, said jaw-members being formed into a loop embodying an arcuate gripping member, said arcuate gripping member being offset with respect to the side members of the loop.

1,296,390. CARD-HOLDER. LEROY W. HILL, Wichita Falls, Tex. Filed July 13, 1918. Serial No. 244,710. 4 Claims. (Cl. 40—11.)



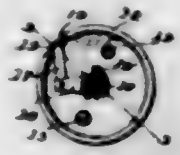
8. In a card holder, the combination with a window sash, of a substantially semi-circular bracket secured to one rail of the sash, a spring finger having one end secured to the shaft between the bracket and the window pane and an off-set portion formed on the semi-circular bracket for engagement with the finger to increase the spring action thereof and to yieldingly hold said finger in position.

1,296,391. LIQUID-DISPENSER. LESTER S. HIRSCH and HARRY HIRSCH, New York, N. Y. Filed Aug. 31, 1918. Serial No. 252,192. 3 Claims. (Cl. 221—77.)



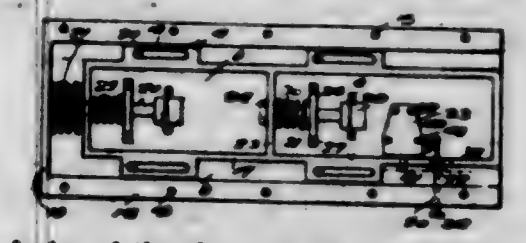
1. A bottle attachment for the purpose described, comprising a hollow metallic casing having a neck portion designed to surround the neck of a bottle, a compressible bulb in said casing, a tube having a spout extending angularly through the casing and said tube designed to be received in the bottle and a plunger movable through the casing and contacting with the bulb.

1,296,392. MUSIC-ROLL. JOHN R. HOFFMAN, Philadelphia, Pa. Filed July 20, 1918. Serial No. 245,872. 9 Claims. (Cl. 242—74.)



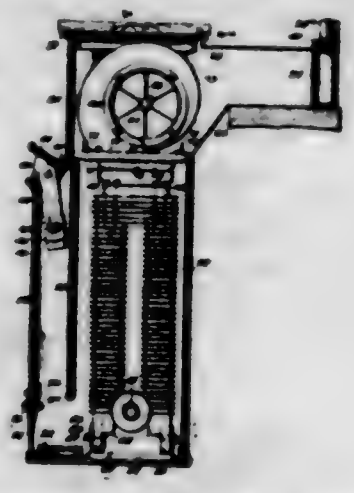
1. The combination with a music feed roll for piano players and driving means therefor, of a clamp for engagement with the record sheet, and means connecting said clamp with said driving means to operate the clamp and hold the same in clamping position.

1,296,393. COMBINED LATCH AND LOCK. VON W. HOOVER and OREL D. HOOVER, Martin, Ind. Filed Jan. 8, 1918. Serial No. 209,411. 6 Claims. (Cl. 70—5.)



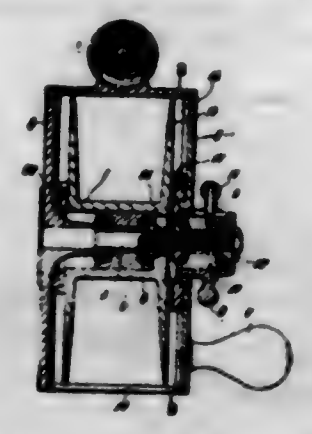
4. A device of the character described in combination with keeper staples, a swingably mounted casing including a relatively flat plate and stationary semi-cylindrical shell, the plate being provided with slots adapted to be arranged over the keeper staples when the casing is swung to an engaged or locked position, another semi-cylindrical shell is slidably mounted in the casing, resilient means for normally holding said shell slightly beyond the open end of the casing, latching bolts slidably and resiliently mounted in said movable shell and normally positioned to engage the keeper staples.

1,296,394. VENTILATOR UNIT. MOSES G. HUBBARD, Summit, N. J., assignor, by mesne assignments, to Moline Heat, Moline, Ill., a Corporation of Illinois. Original application filed Aug. 6, 1913, Serial No. 783,346. Divided and this application filed Apr. 17, 1917. Serial No. 162,442. 8 Claims. (Cl. 257—126.)



8. A ventilator having a housing provided with an air intake and an air outlet and comprising in combination a pair of end plates having front, rear and intermediate flanges, and double front, rear and intermediate walls embracing and secured to the respective flanges, said double walls being packed with sound insulating material and forming separate communicating compartments.

1,296,395. FISHING-REEL. ALBERT H. HUNT, Wellington, New Zealand. Filed Nov. 25, 1916. Serial No. 133,877. 11 Claims. (Cl. 242—84.5.)



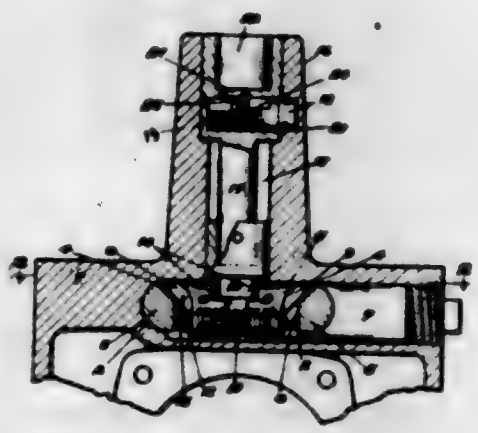
6. In a fishing reel, a casing, a circumferential flange thereon, a spool revolubly mounted within the casing, a winding disk carried by the reel and having circumferential notches, means for applying a frictional connection between the disk and the spool, and a pawl on the aforesaid flange and engaging the said notches in order that the winding disk can only be rotated for the purpose of winding in the line.

1,296,396. METALLIC RAILWAY-TIE. JACOB A. HYLE, St. Louis, Mo., and JACOB W. HERMAN, Philadelphia, Pa., assignors to Tri-City Steel Company, St. Louis, Mo., a Corporation of Delaware. Filed Oct. 29, 1917, Serial No. 199,045. Renewed Jan. 23, 1919. Serial No. 272,779. 4 Claims. (Cl. 238—5.)



1. A metallic railway tie comprising a flat base portion having a central recess at each side thereof, a central vertical member inclined outwardly at each end, two wooden blocks resting upon the base at each side for supporting the track rails, means for securing said blocks to the tie, means for securing the track rails to the blocks, and a plurality of integral vertical extensions stamped from the base of the tie and resting in contact with the outer end face of each block.

1,296,397. TRANSMISSION-SHIFT-DEVICE RETAINER AND LOCK. GEORGE C. JENSEN, Oakland, Cal. Filed Aug. 8, 1918. Serial No. 248,867. 12 Claims. (Cl. 70—126.)

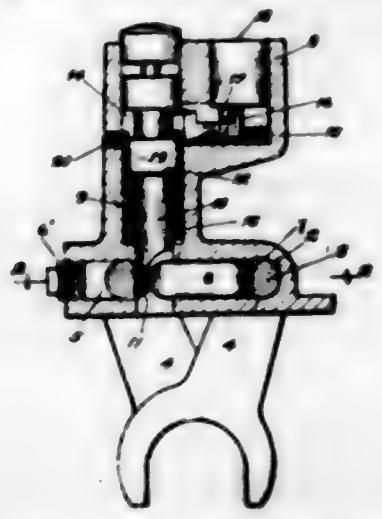


1. In combination with a pair of spaced movable shifter devices provided in their adjacent surfaces with stops, a pair of spring pressed retaining lugs positioned between said devices for engagement at their outer ends with said stops to retain said rods in their set position and their inner ends lying adjacent each other, and a lock controlled rotatable bolt for separating the said lugs to retain the same in engagement with said stops when it is desired to lock said devices in their set position.

1,296,398. BOLT-OPERATED LOCKING DEVICE. GEORGE C. JENSEN, Oakland, Cal. Filed Dec. 10, 1918. Serial No. 266,157. 6 Claims. (Cl. 70—126.)

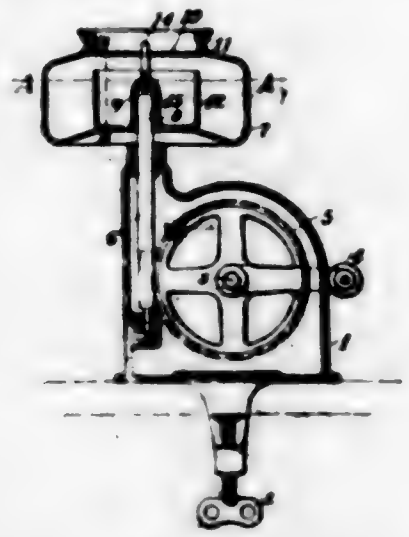
1. The combination with a plurality of longitudinally movable shifter devices, each provided with a stop, a movable locking bolt adapted when in locking position to engage with the stop of one of the shifter devices, and a disengageable member actuated by said bolt when moved into locking position for engaging the stop of the

opposing shifter device, whereby the said devices are held locked against longitudinal movement, and lock



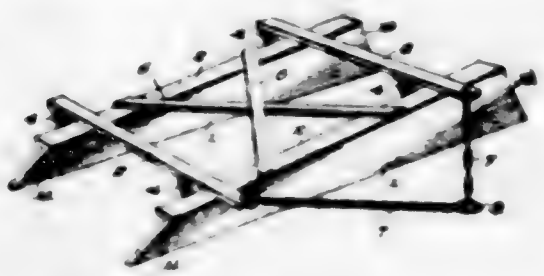
controlled means for locking the said bolt when moved to locking position.

1,296,399. CREAM-SEPARATOR. GUSTAF WILHELM JOHANSSON, Södertelje, Sweden, assignor to Aktiebolaget Baltic, Stockholm, Sweden, a Corporation of Sweden. Filed Dec. 20, 1918. Serial No. 267,693. 5 Claims. (Cl. 233—27.)



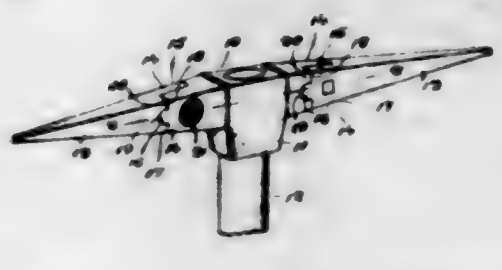
1. In an intermittently operating cream separator the combination of a drum, means for rotating the same, and a central cream receiving vessel mounted in the said drum in a detachable manner and partaking in its rotary motion, the said vessel having an open top, and freely and directly communicating at said top with the interior of the drum, substantially as described and for the purpose set forth.

1,296,400. ROAD-DRAG. NELS O. JOHNSON, Mission-hill, S. D. Filed Mar. 16, 1917. Serial No. 155,318. 1 Claim. (Cl. 37—5.)



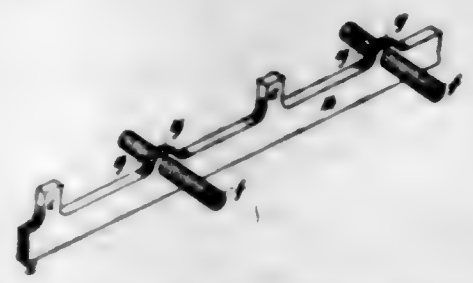
A road drag comprising a pair of spaced parallel sinuous blades, the opposite ends of which are equally inclined in opposite directions, each blade being formed with a horizontal rearwardly extending integral flange at its upper side, bars connecting the blades and bearing on said flanges thereof and inclined braces on the rear sides of the blades, arranged in the angles between the blades and the bars and being secured to the blades and the bars, said braces bearing against the rear side of said flanges.

1,296,401. TOOL. JAMES E. JOHNS and JAMES C. CULVER, Camden on Gauley, W. Va., assignors of one-third to Charles H. Smoot, Camden on Gauley, W. Va. Filed June 22, 1918. Serial No. 241,302. 2 Claims. (Cl. 145—3.)



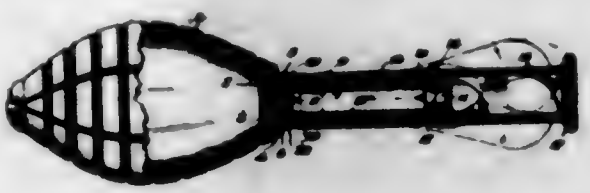
2. A joint of the class described embodying complemental engaging sections, each section comprising a tongue, an extension provided upon the extremity of said tongue, said extension being of the greatest width at a point beyond its connection with the tongue for engagement with a socket of the same size and shape upon the opposite engaging section, said extension and socket being of less width than the end of the tongue to provide engaging shoulders at each side thereof and a fastening element secured transversely through the tongues.

1,296,402. METAL FABRIC FOR USE IN FERROCONCRETE CONSTRUCTION. MORITZ KAHN, Westminster, London, England. Filed July 27, 1915. Serial No. 42,115. 1 Claim. (Cl. 72—110.)



A metal fabric for use in concrete construction comprising cross bars and longitudinal bars having at intervals at the lower edge integral depending legs and provided also at the lower edge with lugs arranged in pairs between the legs and closed upon the cross bars to hold the latter in place on the under side of the longitudinal bars between the legs thereof, said longitudinal bars being of substantial thickness and the legs being extended below the cross bars and the lugs and having their side faces arranged in substantially the planes of the side faces of the longitudinal bars.

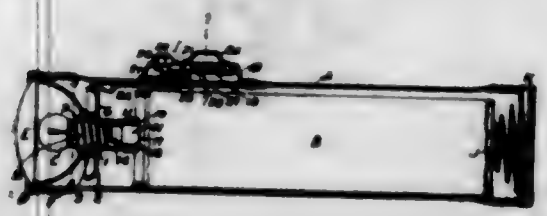
1,296,403. GRENADE. CHARLES H. KINDLE, Washington, D. C. Filed Mar. 27, 1917. Serial No. 157,728. 10 Claims. (Cl. 102—29.)



1. A grenade comprising a body, a shank thereon, a firing element movable when released relative to the

shank, and a combined vane and latch possessed of resiliency and adapted when confined to hold the firing element against said movement and when unconfined to assume a working position as a vane and incidentally release the firing element.

1,296,404. FLASH-LIGHT. HARRY M. KORETSKY, New York, N. Y., assignor to Joseph Satlow, Brooklyn, N. Y. Filed May 10, 1918. Serial No. 233,079. 9 Claims. (Cl. 240—8.5.)



1. In a flashlight, the combination of a reflector having an opening and a flange at the opening, with an insulating bushing in one piece fitting in the opening and having an annular groove into which the flange is upset to permanently connect the bushing with the reflector.

6. In a flashlight, a device for electrically connecting the central terminal of a battery with the central contact of a lamp and for resisting the thrust of the battery on the lamp, said device comprising a supporting means including an insulating member, a fixed contact carried by the said member, a movable contact slidably mounted in the fixed contact, spring means compressing on the movable member, and interengaging flanges on the fixed and movable contacts to permanently connect the same together.

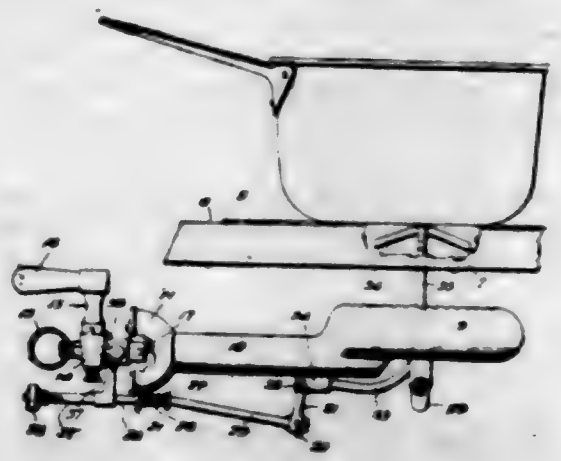
1,296,405. SAFETY-CATCH FOR BROOCHES. CONRAD JOHN KRAFT, Memphis, Tenn., assignor of one-half to Otto P. Bailer, Memphis, Tenn. Filed Dec. 2, 1918. Serial No. 265,013. 1 Claim. (Cl. 24—157.)



A safety catch for brooches and the like, including a hooked catch beneath which the pin of the brooch may engage, the hook of said catch having a notch in the end thereof, and a lever latch secured at its base to the shank of said hook by a transverse pivot, the pivoted end of said latch lying in a plane within the hook of said catch and the outer portion of the latch being offset at an incline to extend in the fastened position obliquely across the hook of the catch and form a closure of the latter, said latch, when swung to the fastened position, being adapted to be sprung into the notch of the catch.

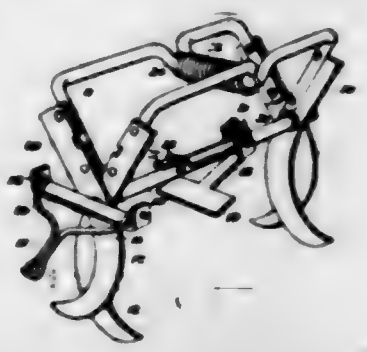
1,296,406. GAS-SAVER. COSTAS KYRIAKOS, Flint, Mich. Filed Jan. 12, 1918. Serial No. 211,663. 3 Claims. (Cl. 126—52.)

2. In combination with a gas stove provided with a burner and a gas controlling valve therefor having an outlet nozzle communicating with the burner; of a second valve in said nozzle having a head portion provided with an angle forked extension, a spider arranged over the burner, an angle arm connected with the spider and pivotally associated with the burner, a spring pressed rod loosely connected to the angle arm, a guide bracket therefor, a sleeve thereon having an offset finger engaging with the angle forked extension of the second mentioned valve, and an adjusting element associated with the sleeve and co-engaging with the rod for sliding the



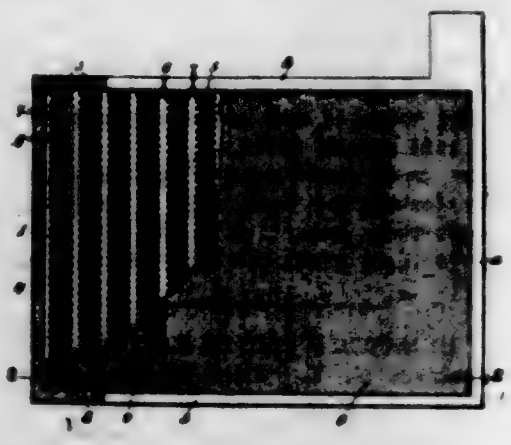
sleeve on said rod to regulate the degree of opening of the second mentioned valve.

1,296,407. TRAP. CHURCHILL G. LAYTON, Albany, Oreg. Filed July 20, 1918. Serial No. 245,935. 3 Claims. (Cl. 43—23.)



1. A trap embodying a pair of complemental members, each including a pair of alined oppositely disposed parallel jaws, a pivot rod extending through said jaws in a manner to pivot the two members together with the jaws of one member in contact with the jaws of the other member, means carried by one end of the pivot rod and capable of being swung into position between the jaws to hold the latter separated, a trigger engageable with said holding means and means for automatically causing the blades to assume an overlapping position upon the operation of the trigger.

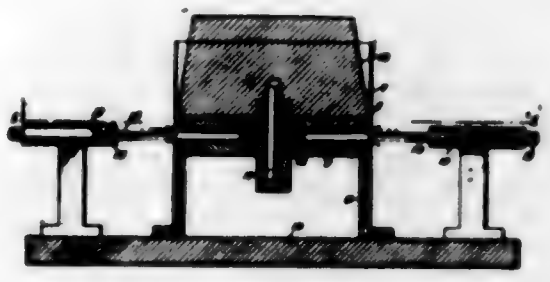
1,296,408. STORAGE BATTERY. ORVILLE LIVINGSTON LEACH, Providence, R. I. Filed Apr. 24, 1918. Serial No. 230,519. 3 Claims. (Cl. 204—29.)



2. A storage battery plate, comprising a grid consisting of a border frame with top, bottom and end bars and

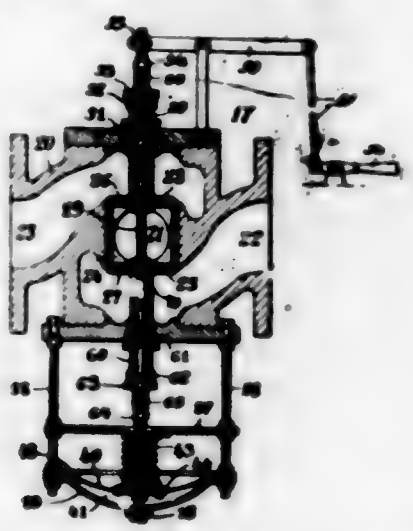
posts joining the top and bottom bars and each formed of a central core with an outstanding helical flange or web of short pitch extending from end to end of the post to provide a continuous helical pocket, and active material lodged in each pocket and continued from post to post filling the spaces between the posts with active material, and the opposite faces of the plate being grooved to provide a wavy or corrugated surface.

1,296,409. FOLDING AND GATHERING DEVICE. ALEXANDER LEVETT, New York, N. Y. Filed May 10, 1918. Serial No. 233,751 10 Claims. (Cl. 15—7.)



1. In a folding and gathering device, a pair of spaced disks, a support for maintaining said disks one above the other, means associated with the disks for guiding a sleeve of pliable material over the disks, and means for drawing the material of the sleeve into the groove formed by the spaced disks.

1,296,410. STEAM-REGULATING VALVE. CLAUS LEVINSEN, Brooklyn, N. Y. Filed Nov. 17, 1916. Serial No. 131,852. 5 Claims. (Cl. 277—20.)

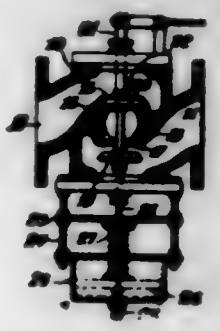


1. A valve mechanism comprising a casing provided with an inlet passage, and two outlet passages, a valve controlling the communication between said inlet passage and one of the said outlet passages, resilient means for controlling said valve, a second valve for controlling the communication between said inlet passage and the other of said outlet passages and pressure regulated means for controlling said second valve.

5. A valve mechanism comprising two valves, resilient means for closing the same and a pressure regulated member operatively connected to the said two valves for closing one of them while the other is being operated.

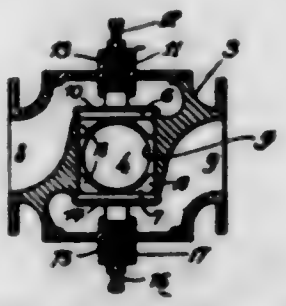
1,296,411. PRESSURE CHECK-VALVE. CLAUS LEVINSEN, Brooklyn, N. Y. Filed Mar. 21, 1917. Serial No. 156,324. 6 Claims. (Cl. 60—64.)

1. The combination with a steam engine, a condenser therefor, a second steam engine, a passage leading from the exhaust of said second steam engine to the said condenser, means in said passage for automatically connecting the exhaust of said second engine with the said condenser, when the latter and said first named steam engine are operating, or connecting said exhaust with the atmosphere, when said first engine and condenser are



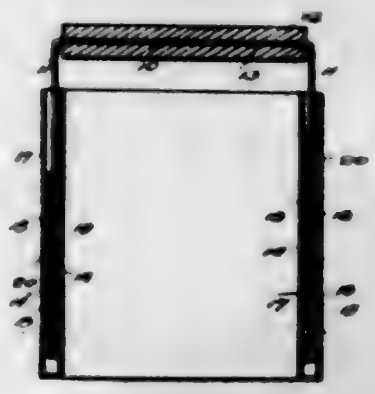
not operating and a check valve in said passage for causing a constant back pressure against the admission of the exhaust steam from the said second steam engine to either the said condenser or to the atmosphere.

1,296,412. VALVE MECHANISM. CLAUS LEVINSEN, Brooklyn, N. Y. Filed Nov. 12, 1918. Serial No. 262,118. 2 Claims. (Cl. 60—89.)



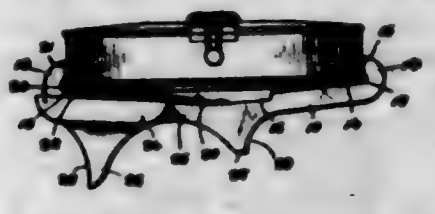
1. The combination with a main steam engine and its condenser, an auxiliary steam engine, of a valve mechanism comprising a casing provided with a steam inlet and two outlets, said steam inlet being connected with the exhaust side of said auxiliary team engine, one of the said outlets being connected to the atmosphere, the other of said outlets being connected to the said condenser, valves for controlling the said two outlets and means for exerting a greater closing pressure on the valve which controls the outlet connected to the said condenser.

1,296,413. WICK-EXTRACTOR. IVAN B. LITTLE, North Manchester, Ind. Filed Sept. 11, 1918. Serial No. 253,572. 2 Claims. (Cl. 67—75.)



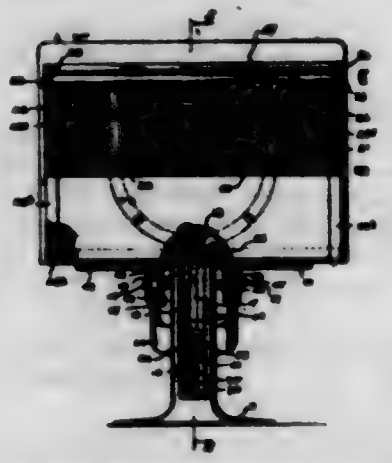
1. A wick extractor for tubular wicks comprising a U-shaped member having outwardly springing flattened shank portions and outwardly disposed shoulders at the extremities of said shank portions.

1,296,414. VIOLIN SHOULDER-REST. JOHN MCLAY, Valleyfield, Quebec, Canada. Filed May 25, 1918. Serial No. 236,636. 2 Claims. (Cl. 84—115.)



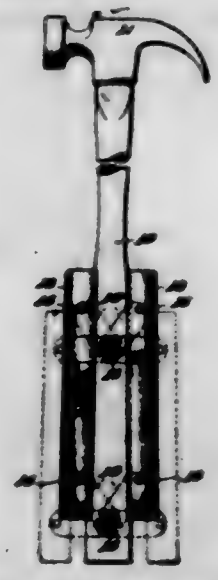
1. In a device of the class described, a bar provided with means for engaging the shoulder of the player, said bar including an upstanding member at one end thereof for engaging the body portion of a violin at one side thereof, guides carried by the bar, a slidable member movable between the guides and longitudinally of the bar, means connecting the slidable member with the bar, and an upstanding device on the slidable member for engaging the violin at the opposite side thereof.

1,296,415. SCHOOL-DESK. JOHN JAMES MCMILLAN, New York, N. Y. Filed Oct. 24, 1918. Serial No. 259,540. 6 Claims. (Cl. 155—34.)



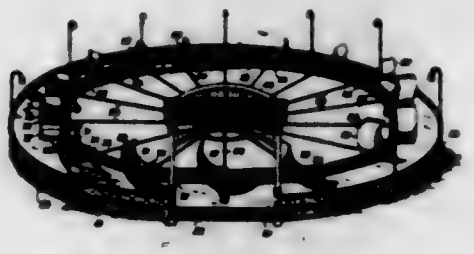
1. In a school desk, the combination of a pedestal having a longitudinal bore and front and rear slots lying in the same plane on opposite sides of the bore and communicating therewith, a clamping member projecting through said slots and intercepting the bore, and a vertically adjustable member having a shank fitted in said bore and held in place by said clamping member.

1,296,416. ADJUSTABLE TOOL-HANDLE. ROBERT D. MADDOX, Washington, D. C. Filed Oct. 19, 1918. Serial No. 258,872. 5 Claims. (Cl. 145—61.) (Filed under the act of Mar. 3, 1883, 22 Stat. L., 625.)



2. The combination with an implement handle, of a hand grip member movable laterally relatively to the handle, and means for holding said grip member in adjusted position.

1,296,417. AMUSEMENT APPARATUS. WILLIAM FREDERICK MANGELS, Brooklyn, N. Y. Filed Mar. 19, 1918. Serial No. 223,306. 24 Claims. (Cl. 46—27.)

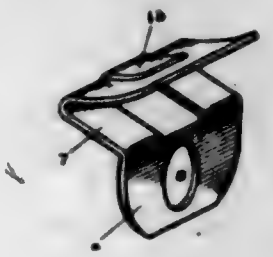


1. In an amusement apparatus, a track, a vehicle mounted to travel on the track, propelling means for propelling the vehicle on the track, and rocking means under the control of an operator for rocking the body of the vehicle backward and forward at the will of the operator and in the direction in which the vehicle travels.

5. In an amusement apparatus, a track, a vehicle having an axle, a vehicle body and a vehicle wheel, the latter traveling on the said track and turning loosely on the axle, the said vehicle body being attached to the said axle to rock with the latter, means for propelling the vehicle and means for rocking the vehicle axle.

13. In an amusement apparatus, a mast, a frame mounted to turn on the said mast, radially disposed axles having their inner ends mounted on the said frame to swing up and down and to rock on their axes, vertically elongated bearings on the said frame and engaged by the said axles intermediate the inner pivoted and the outer free ends of the axles, a circular track, the center of which coincides with the center of the said mast, and vehicles mounted on the outer ends of the said axles and traveling on the said track.

1,296,418. SHIM. JAMES E. MERWIN, Portland, Oreg., assignor to A. E. Perry, Portland, Oreg. Filed Oct. 15, 1917. Serial No. 196,769. 4 Claims. (Cl. 152—21.)



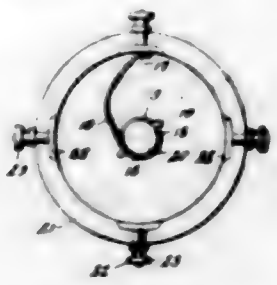
1. In a one piece shim, a body portion; an apron substantially normal to said body portion; and a tongue in said body portion, adapted to be bent back thereupon.

1,296,419. WHEEL-RIM LUG. JAMES E. MERWIN, Portland, Oreg., assignor to A. E. Perry, Portland, Oreg. Filed Mar. 11, 1918. Serial No. 221,845. 4 Claims. (Cl. 152—21.)



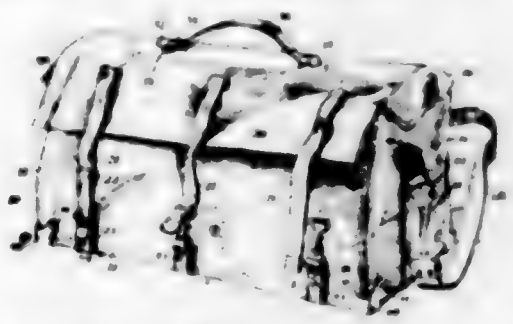
1. A combined wheel lug and shim, consisting of a lug having a wedge portion and an apron portion, and a shim of thin material pivotally secured to said lug substantially at the juncture of said apron and said wedge portions, and adapted to lie against either said wedge portion or said apron portion

1,296,420. TIMER-BRUSH. EARL L. MILLER, Overbrook, Kans. Filed Nov. 17, 1917. Serial No. 202,586. 2 Claims. (Cl. 123—167.)



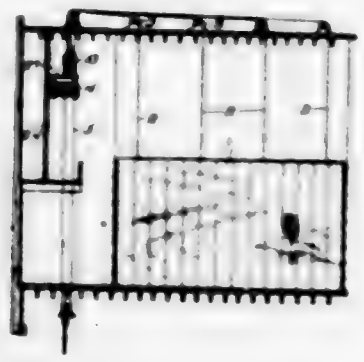
1. The combination with a timer shaft having radial projections, of a brush to be removably secured upon said shaft comprising a single sheet of metal bent at one end to form a sleeve to fit over the shaft and project it beyond the sleeve portion in reduced width to form a contact arm, one end edge of the sleeve being formed with notches to engage said radial projections, the projections being removable to permit application of the sleeve.

1,296,421. TOOL-BAG. MAX MILLER and SAMUEL H. GOLDING, New York, N. Y. Filed Oct. 15, 1918. Serial No. 258,153. 4 Claims. (Cl. 190—53.)



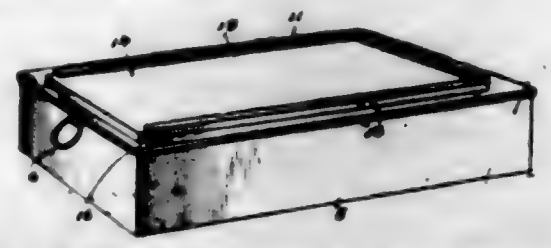
1. As an article of manufacture, a tool bag having a body of flexible material comprising a back, bottom, sides and front, a closing flap extending from the said back over the mouth of the bag to the front thereof to close the bag body, a reinforcing back-plate of stiff material overlying approximately the entire inner face of the said back and being permanently secured thereto, and a reinforcing bottomplate overlying approximately the entire upper face of the said bottom and being permanently secured thereto.

1,296,422. TRIMMING DEVICE FOR SCENERY AND THE LIKE. ELZY V. MORRIS, Chicago, Ill., assignor to James H. Channon Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1917. Serial No. 141,526. 8 Claims. (Cl. 254—141.)



1. In combination, a member to be lifted, a counterweight, a plurality of cables extending from distributed points on said member to said counterweight, a device connected to the counterweight for raising and lowering the same to cause said member to be lowered and raised, and means between each cable and the counterweight for winding up the cable.

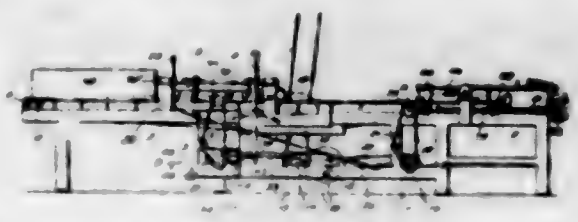
1,296,423. BAKING-PAN. WILLIAM NEMP, Pocatello, Idaho. Filed Mar. 29, 1918. Serial No. 225,560. 2 Claims. (Cl. 53—6.)



1. In a device for the purpose set forth, an outer pan, a perforated plate arranged longitudinally in the pan having depending flanged ends secured to the bottom of the pan, upstanding flanges on the sides of the plate, a baking pan designed to rest on the plate and to be engaged by the upstanding flanges thereof, said baking pan being of a less size than the outer pan whereby the same is spaced from the sides and ends of the said outer pan, and a slidable cover for the baking pan.

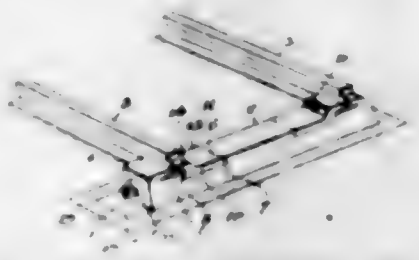
2. In a device for the purpose set forth, an outward substantially rectangular pan, a plate arranged longitudinally thereon having its ends downturned and secured to the bottom of the pan, said plate having spaced openings, said plate having its sides flanged upwardly and outwardly, a baking pan having its sides and ends inclined outwardly from its bottom and its said sides and ends flanged outwardly at the upper edge of the pan, the side flanges and one of the end flanges being bent over themselves to provide ways, a flat plate providing a cover guided through the ways, said plate having its outer end flanged and provided at its edge with an inturned portion, said inturned portion designed to frictionally engage with the straight flange on the end of the pan.

1,296,424. BOX-SHOOK MACHINE. WILLIAM H. PEACE, Thomasville, N. C., assignor of one-half to Hughes Peace Lumber Co., Thomasville, N. C. Filed Nov. 3, 1917. Serial No. 200,136. 5 Claims. (Cl. 144—7.)



1. A machine of the class described comprising a hopper, a press, feeding means, means for opening the press and actuating the feeding means to pass the boards from the hopper to the press and for stopping the feed and closing the press, a single operating lever for actuating said means, means for subjecting the boards to side-wise pressure while held in the press, means in the path of the feeding means for cutting the assembled boards to the proper width, and means for cutting said boards to the proper length.

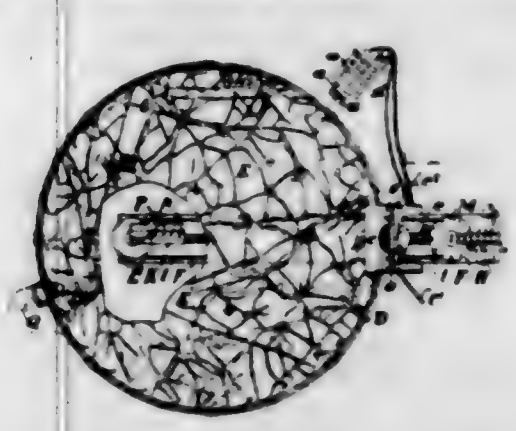
1,296,425. METALLIC TIE. WILLIAM WILEY PLOWMAN, Camargo, Ill. Filed Oct. 13, 1916, Serial No. 125,470. Renewed Aug. 3, 1918. Serial No. 248,226. 1 Claim. (Cl. 238—5.)



A metal tie for railway rails designed to have its lower portion embedded in concrete, including a member, the sides of which converge upwardly and the ends of which,

at the bottom of the said tie, being projected, the top of the tie, at the upper corners thereof, being integrally formed with overlying lips providing rail base engaging members, and straight seats for the rails below the said lips, the said top of the tie adjacent the rail seats, having dove-tailed recesses, rail clamping plates having dove-tailed base portions received in the said recesses, each of said plates having a rail engaging extension overlying the rail seat designed to engage with a rail when arranged on the seat, said extensions, at the juncture with the body portions of the clamping plates having a downwardly inclined opening and the rail, below the said seat having a similar opening communicating with the end thereof, a headed member having its shank passing through the alining openings, and its threaded end projecting beyond the end of the tie, a washer member on said bolt, and a nut screwed on said bolt and contacting with said washer.

1,296,426. MODEL ARTILLERY-RANGE FOR INSTRUCTIONAL PURPOSES. RICHARD FITZ POWER, Doveridge, England. Filed Aug. 15, 1917. Serial No. 186,432. 17 Claims. (Cl. 35—12.)



1. In a device of the character described, a raised frame having a perforated or semi-perforated fabric mounted thereon, a picture with natural features depicted on the said fabric, a movable member thereunder, a series of lamps at one end of said member, and means on the movable member at the other end for actuating the lighting of said series of lamps, whereby a flash may be shown through the fabric at any point chosen by the operator with regard to a target as to which he is instructing an observer located above the picture.

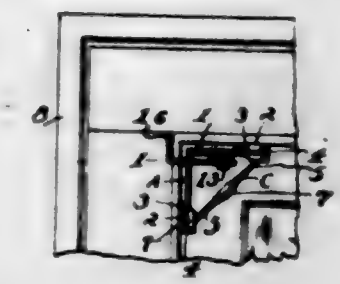
1,296,427. CURTAIN-FASTENER. JOHN R. RAMSHAW, Edmonton, Alberta, Canada. Filed Mar. 19, 1918. Serial No. 223,384. 2 Claims. (Cl. 24—211.)



1. A curtain fastener comprising a notched stud, a housing secured to the curtain, a sliding plate mounted in the housing and provided on the edges with notches and adjacent the lower end with an elongated opening adapted to receive the stud, and springs secured to the housing and adapted to engage the notches in the edges of the plate.

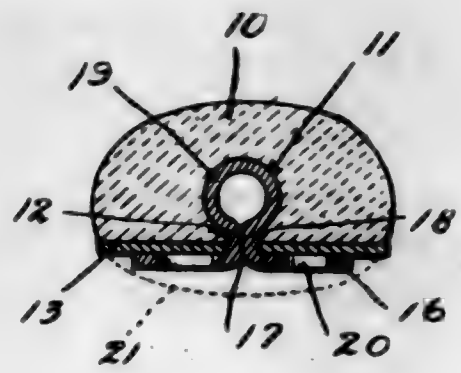
1,296,428. WINDOW-SHADE BRACKET. HENRY W. RANEY, Milstead, Ala. Filed Dec. 4, 1918. Serial No. 265,208. 6 Claims. (Cl 156—24.)

1. A window shade bracket including a resilient angle iron corner piece adapted to be fitted in the interior corner of a window frame, gripping members at the ends of the arms of the corner piece, an extensible diagonal extending between the arms of the corner piece for forcing the gripping members into engagement with the window casing, and a bracket member carried by the corner piece.



6. A window shade bracket including a resilient angle iron corner piece adapted to be fitted in the interior corner of a window frame, gripping members at the ends of the corner piece, an extensible diagonal brace between the ends of the corner piece, a socket applied to one of the arms of the corner piece, a slide adjustable in the socket and movable in a plane at right angle to that of the corner piece, said slide terminating in a second socket, a second slide adjustable in the second socket and arranged at right angles to the first slide, and a bracket arm carried by the second slide.

1,296,429. ARTIFICIAL TOOTH. HUGH W. REYNOLDS, Kendallville, Ind. Filed July 22, 1918. Serial No. 246,065. 1 Claim. (Cl. 32—9.)

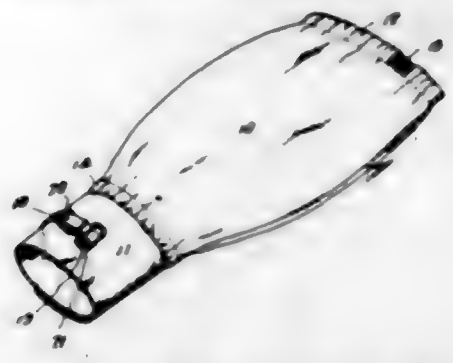


An artificial tooth provided with a longitudinally extending tapered bore, and a constricted recess communicating therewith and extending to the rear face of the body, an overhang formed at the lower end of the bore, a backing plate disposed against and entirely covering the rear face of said body and provided with a slot extending to its upper edge and registering with said recess, a thickened portion formed on the lower end of said backing plate and defining a shoulder, a reinforcing plate disposed against said backing plate and terminating in abutting engagement with the shoulder thereon, a tongue projecting from said reinforcing plate and passing through said slot and said recess, and an enlarged tapered head on the end of said tongue engaged within said bore, said head being of greater length than said tongue whereby to engage within said overhang.

1,296,430. SLEEVE-PROTECTOR. JAMES F. RILEY, Lexington, Nebr. Filed Feb. 2, 1918. Serial No. 215,091. 1 Claim. (Cl. 2—95.)

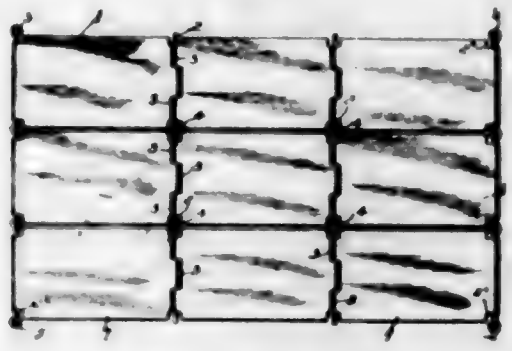
A sleeve protector embodying a sleeve portion, a cuff secured thereto, said cuff comprising an elongated strip of material provided with a slot and adapted to be wrapped about the wrist with the ends overlapped, a tapered portion formed at each end of the strip, said portion termi-

nating in alined tongues, one of which is adapted to be placed through the slot and a fastening element carried by



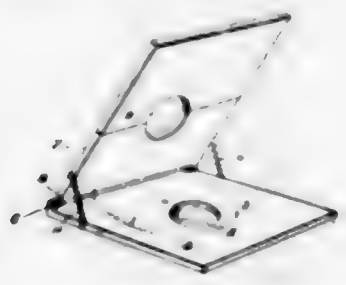
one tongue and engageable with the other tongue to hold the cuff in position.

1,296,431. SACK-PROTECTOR. WILLIAM A. ROSS, Wichita Falls, Tex. Filed May 8, 1918. Serial No. 233,282. 2 Claims. (Cl. 21—48.)



1. A cotton sack protector comprising a series of sections pivotally connected together at their ends for longitudinal angular movement and also for transverse relative angular movement, so that the protector is rendered flexible and can be bent either longitudinally or transversely.

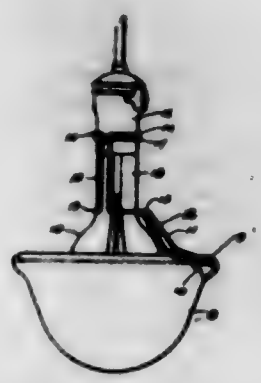
1,296,432. RETOUCHING-FRAME. WILLIAM P. RUSSELL, Anniston, Ala. Filed Apr. 27, 1918. Serial No. 231,187. 4 Claims. (Cl. 95—102.)



1. A device of the class described comprising a frame having a central opening therein, a flange around said opening and depending therefrom, and a hinged cover on said frame having an opening therein.

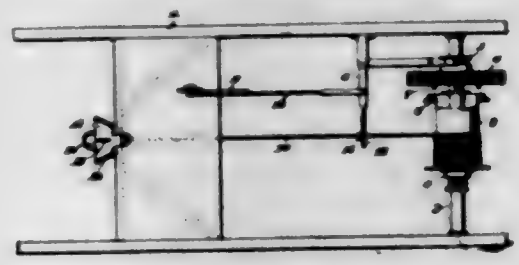
1,296,433. SUPPORTER FOR ELECTRIC-GLOBE SHADES. CELIA L. SCHAFER and IRWIN ARNOW, New York, N. Y. Filed Aug. 8, 1918. Serial No. 248,975. 3 Claims. (Cl. 240—115.)

3. A supporter as characterized embodying a single piece of wire bent to form a normally open-ended hoop inwardly and upwardly extended bracket arms connecting the ends of said hoop; two lower circular collar sections, the ends of said sections being spaced apart; two vertically arranged reach bars, said bars being disposed in spaced relation; and two upper circular collar sections, the ends of said sections being spaced apart, said sections forming holding members for engaging simultane-



ously in service the socket of an electric globe and the neck of said globe below said socket.

1,296,434. TRACTOR ATTACHMENT. FRED H. SCHANIL, Gahern, Alberta, Canada. Filed May 14, 1918. Serial No. 234,546. 2 Claims. (Cl. 254—166.)



1. In combination with a tractor frame, a detachable coupling head, a casing secured to the frame for receiving the head, means for removably securing the coupling in the casing, a cable connected with the coupling head, and means for winding the cable by the motor.

1,296,435. FINGER-RING. AUGUST SCHMIDT, Washington, D. C., assignor to George Mossop, Philadelphia, Pa. Filed Apr. 11, 1917. Serial No. 161,186. 2 Claims. (Cl. 63—16.)

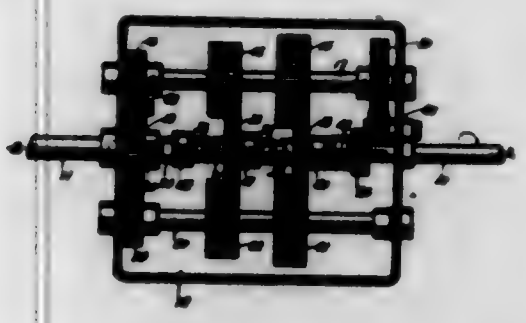


1. As an article of manufacture, a finger ring comprising an expansible split ring one end having a reduced slotted extremity and transverse grooves at the inner end of the slot at the sides thereof, the other end having a pin movable in said slot and stops at either side of said pin adapted to be engaged by and seated in said grooves.

1,296,436. GEAR-SHIFTING DEVICE. GEORGE Q. SHAMAN, Brooklyn, N. Y. Filed Feb. 15, 1918. Serial No. 217,298. 9 Claims. (Cl. 74—69.)

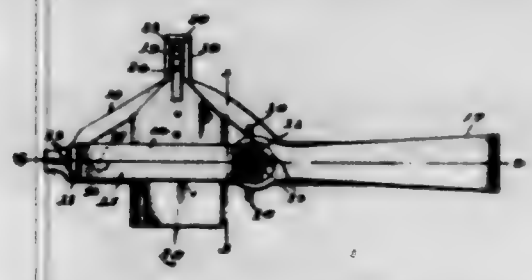
1. A gear shifting device for a change speed gearing, comprising a screw mounted to turn and be rotated from the power shaft, a carriage mounted to travel and having

means adapted to engage the screw to cause the carriage to travel on rotating the screw, and a shifting member



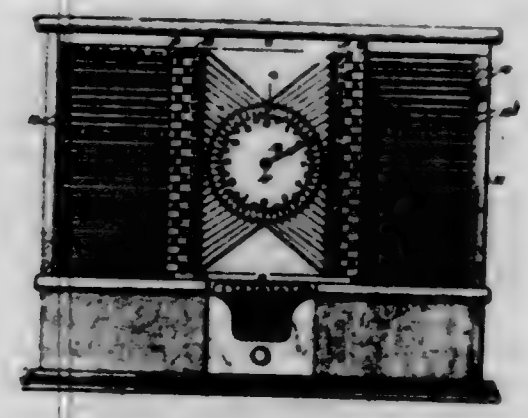
mounted on the carriage and adapted to engage the shifting means of the change speed gearing.

1,296,437. TRAP. JACOB B. SITTS, Wampsville, N. Y. Filed Sept. 4, 1918. Serial No. 252,557. 1 Claim. (Cl. 43—23.)



In an animal trap, a base, U-shaped jaws pivotally secured to the base, a knob on the inner face of one of the dogs adjacent to the outer end thereof, the second jaw having a socket to receive the knob, outwardly projecting upstanding inclined fingers on the jaws adjacent to the inner pivots thereof, a spring secured to the base and having an eye designed to contact with said fingers to swing the jaws to their open position when the spring is compressed, a pan, a dog secured to the pan, a housing therefor, a loose pivotal connection between the housing and the dog, means for limiting the swinging of the dog in two directions, said dog including an outwardly extending lip having a depressed curved portion projecting therefrom, an upstanding projection on the latter, one of said jaws having a socket therein, and said jaw designed to contact with the projection of the dog to swing the latter and bring the lip thereof into the socket to hold the spring contracted and the jaws in their open position.

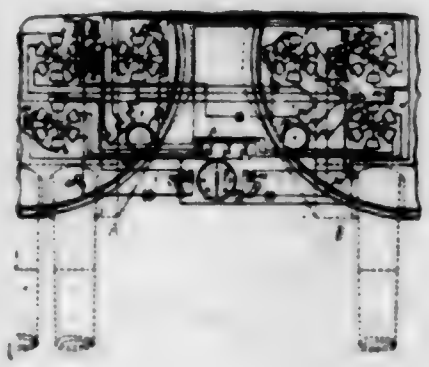
1,296,438. REMINDER-CLOCK. AUGUSTUS W. SOUTH, Chicago, Ill., assignor to Automatic Reminder Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 6, 1915. Serial No. 731. 3 Claims. (Cl. 161—5.)



1. The combination with a time circuit closing mechanism, an alarm and electric circuit in an appointment reminder, of a box provided with a plurality of transversely extending pockets, and appointment cards designed to be located in said pockets and adapted to close the electric circuit.

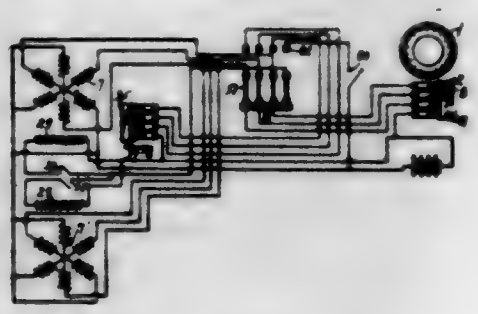
3. A reminder clock comprising clock mechanism, a dial, a hand traversing the dial, spaced contacts about the dial corresponding to the divisions of time, receptacles for data of matters to receive attention at a predetermined time, said receptacles corresponding in number to the said contacts, a plurality of terminals arranged in pairs corresponding to the number of receptacles, a source of electric current having one pole connected to the hand and the other to one terminal of each pair, and means controlled by the presence of a card or the like in a given receptacle to close and maintain the circuit between the pair of terminals corresponding to that receptacle, whereby to provide a circuit open only at the dial contact which circuit is closed when the hand reaches said contact, the receptacles grouped on the two sides of the dial, and the dial bearing radiating lines leading toward the receptacles of each group from the time divisions on that side of the dial whereby to visually connect each receptacle with its corresponding time division.

1,296,439. MULTIPLE-TURRET TARGET-INDICATOR. ELMER A. SPERRY, Brooklyn, N. Y., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 31, 1914. Serial No. 859,329. 29 Claims. (Cl. 177—351.)



1. A turret indicator system comprising a plurality of turrets, an electrical transmitter in each turret actuated by the rotation of the turret, a plurality of position indicators in each turret, each transmitter being connected to a position indicator in each turret.

1,296,440. REPEATER SYSTEM FOR GYRO-COMPASSES. ELMER A. SPERRY, Brooklyn, N. Y., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y., a Corporation of New York. Continuation in part of application Serial No. 634,695, filed June 21, 1911. This application filed Aug. 23, 1915. Serial No. 46,819. 19 Claims. (Cl. 177—351.)



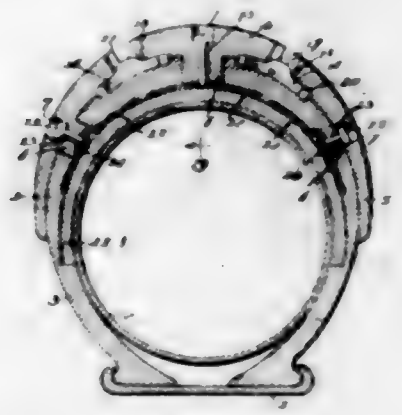
1. In combination with a master instrument and a distant repeating indicator for repeating the movements of said instrument, two electrical transmitters, one driven by the movements of said instrument, and means for throwing the repeating system into connection with either one or the other of such transmitters.

2. In combination with a gyro-compass and a distant repeating dial or pointer for repeating the indications of the compass, two electrical transmitters, one driven by the movements of the gyro-compass and the other adapted to be actuated at will, and means for throwing the repeating system into connection with either one or the other of such transmitters.

3. In navigational apparatus, the combination with a master instrument, of a distant repeating device including a movable indicator, an electrical connection between the instrument and the device and electrical means for setting or adjusting the indicator to agree with the indications of the instrument including means for temporarily arresting said indicator at a predetermined point.

19. A system for repeating the position of an object at a distance comprising a repeating device remotely located with reference to said object, means for actuating said repeating device on movement of said object and means including an element actuatable at a position adjacent said object for causing actuation of said repeating device without disturbing the position of said object.

1,296,441. ARMORED TIRE. HARVEY H. STONER, Springfield, Ohio, assignor of one-half to Willis D. Stoner, Springfield, Ohio. Filed May 15, 1918. Serial No. 234,645. 10 Claims. (Cl. 152—16.)



6. An armored tire comprising a resilient casing, armor plates carried on the exterior of the casing, and means whereby the said plates are detachably secured to the casing so that the resiliency of the casing holds them in attached position.

9. An armored tire comprising a resilient casing, plates carried on the exterior of the casing, plates carried interior to the casing, means interconnecting adjacent exterior plates, and locking means attaching the exterior plates to the interior plates whereby the resiliency of the casing holds the said plates in attached position and the interconnecting means thereby held in attached position.

10. An armored tire comprising a resilient casing, a plurality of plates distributed over the tread and sides of the casing, means detachably securing the plates to the casing so that the resiliency of the latter retains them in attached position, and joggle joint connectors interconnecting adjacent plates and held in position when the plates are in attached position.

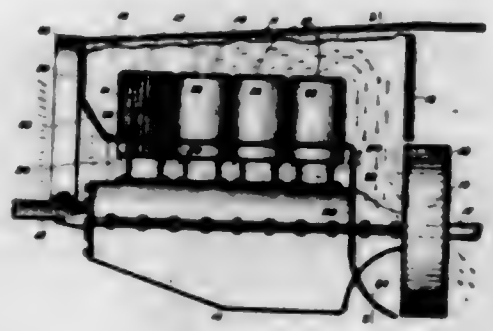
1,296,442. ELASTIC HOSE. MARY E. THOMPSON, Newark, N. J., assignor of one-half to Laura I. Green, East Orange, N. J. Filed Dec. 22, 1916. Serial No. 138,419. 1 Claim. (Cl. 2—23.)

A hose comprising a body of relatively inelastic material, elastic strands woven into the inelastic material at the edge portion of the body whereby the said edge portion will be normally constricted but capable of expansion, there being provided in the inelastic portion of the body and immediately below the elastic strands openings which permit the upper inelastic portion of the body to expand and contract without wrinkling, said openings be-



ing of maximum width at the edge portion and tapering throughout their length.

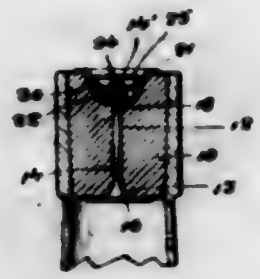
1,296,443. AIR-COOLING SYSTEM FOR INTERNAL-COMBUSTION MOTORS. HORACE W. TURNER, Wilmington, Del. Filed Mar. 29, 1918. Serial No. 225,609. 3 Claims. (Cl. 123—171.)



1. In a motor including cylinders and a crank case, a hood inclosing the motor, an apron encircling the cylinders and forming upper and lower compartments within the hood, an air inlet through the hood into the lower compartment, stacks encircling the cylinders and providing flues for the air admitted in the lower compartment to pass into the upper compartment, around the cylinders, and a depending partition forming a continuation of said apron and providing a flue separate from the lower compartment and in communication with the upper compartment, to carry off from said upper compartment through said flue, the air received into said upper compartment, whereby said air will be carried exteriorly of said hood.

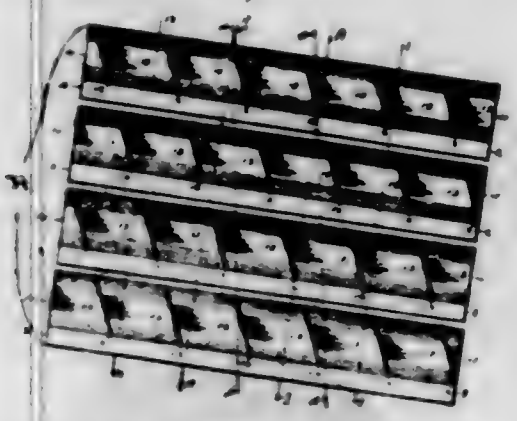
2. In a motor including cylinders and a crank case, a hood inclosing the motor, an apron encircling the cylinders and forming upper and lower compartments within the hood, an air inlet through the hood into the lower compartment, stacks encircling the cylinders and providing flues for the air admitted in the lower compartment to pass into the upper compartment, around the cylinders, a depending partition forming a continuation of said apron and providing a flue separate from the lower compartment and in communication with the upper compartment, to carry off from said upper compartment through said flue, the air received into said upper compartment, whereby said air will be carried exteriorly of said hood, a rotating fly wheel adjacent the exit of said flue, and means on the fly wheel for inducing a suction through the flue to facilitate the removal of the air therethrough.

1,296,444. BOTTLE-STOPPER. THOMAS WM. VICTOR WEBB, Macleod, Alberta, Canada. Filed Aug. 10, 1918. Serial No. 249,364. 2 Claims. (Cl. 215—53.)



2. In a device of the class described, a body portion having a central bore, a stem located within the bore and having a head on one end thereof engaging one end of the body portion, said body portion having a recess at the upper end in communication with the bore, a washer having a dished central portion projecting into the recess and being provided with an annular groove portion on its outer edge, a handle member detachably connected with the stem and proportioned to be received within the groove portion when detached.

1,296,445. MIXING-MACHINE. FREDERICK H. WEBSTER, Oakland, Cal., assignor of one-half to Charles L. Brown, San Francisco, Cal. Filed Sept. 21, 1914. Serial No. 862,712. 10 Claims. (Cl. 83—73.)



1. A mixing drum comprising a chamber with cups in its peripheral wall, and having division plates in said cups; said division plates being inclined, substantially as described.

2. A mixing drum comprising a chamber with longitudinal cavities therein, forming cups in its peripheral wall, and having divisional plates in said cups spaced from said wall forming subterfluous passages.

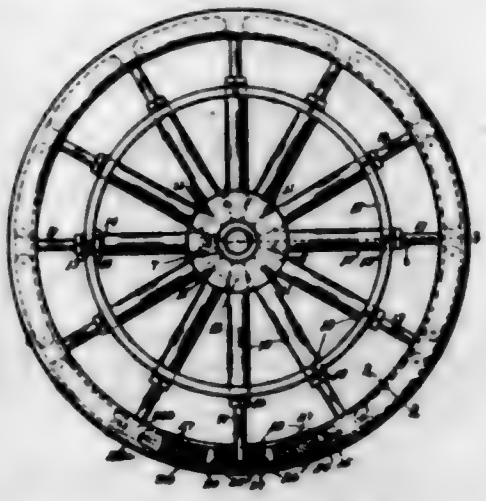
3. A mixing drum having its shell corrugated in cross section forming cups and provided with inclined division plates in said cups spaced from said shell forming subterfluous passages as described.

4. A mixing drum comprising a chamber with longitudinal cavities therein forming cups in its peripheral wall, and having divisional plates in said cups extending partially across said cups, substantially as described.

5. A mixing drum comprising a chamber with cups in its peripheral wall, and having perpendicular division plates in said cups; said division plates being stepped in their sequence in said drum, substantially as described.

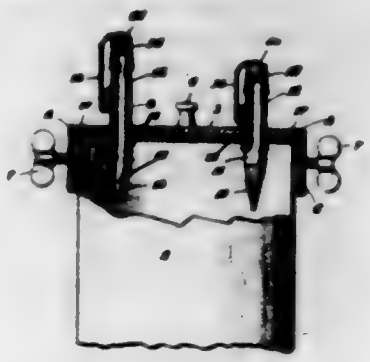
1,296,446. SPRING-WHEEL FOR VEHICLES. ALFRED WICKSTROM and CARL A. BORGSTROM, Minneapolis, Minn. Filed Jan. 16, 1918. Serial No. 212,120. 2 Claims. (Cl. 152—30.)

1. A vehicle wheel comprising a hub, a rim composed of alternate short and long sections, and an intermediate ring disposed concentrically between the hub and the rim, spokes consisting of tubular sections securely mounted in the ring and hub, and spring pressed plunger sections respectively secured at their outer ends to the short sections of the rim and adapted to slide with their inner ends in the tubular sections, said short rim sections having each end provided with a gap, said long rim sections having bifurcated ends adapted to straddle the ends of the short sections and provided in the bifurcations with pins adapted to slide in the gaps of the short rim sections.



2. A vehicle wheel comprising a hub, a rim composed of alternate short and long sections, and an intermediate ring disposed concentrically between the hub and the rim, spokes consisting of tubular sections securely mounted in the ring and hub, plunger sections respectively secured at their outer ends to the short sections of the rim and adapted to slide with their inner ends in the tubular sections, a main spring and an auxiliary spring mounted within each tubular section and adapted to yieldingly resist the inward movement of the plunger section; said short rim sections having each end provided with a gap, said long rim sections having bifurcated ends adapted to straddle the ends of the short sections and provided in the bifurcations with pins adapted to slide in the gaps of the short rim sections.

1,296,447. SPOUT FOR SEALED CONTAINERS. FRANCIS A. WHITNEY, Kabugao Apayao, Philippine Islands. Filed Mar. 14, 1917. Serial No. 154,857. 3 Claims. (Cl. 221—28.)



1. In a device for the purpose set forth, a substantially U-shaped member bridging the receptacle, means upon the arms of said U-shaped member engaging with the sides of the receptacle to hold the said member upon the receptacle, spout members having pointed ends upon the member and adapted to be inserted in the receptacle, caps for the spout members, and compressible elements for the said spout members contacting with the receptacle at the puncture portions thereof.

1,296,448. STEERING AND MANEUVERING OF SHIPS. HAROLD E. YARROW, Scotstoun, Scotland. Filed Oct. 18, 1917. Serial No. 196,436. 5 Claims. (Cl. 114—145.)

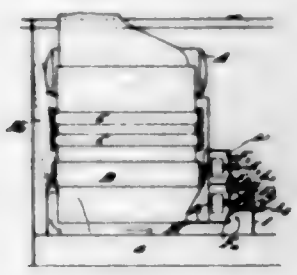
1. In a ship provided with two rudders, the combination with a hand operated member, of mechanism controlled

thereby which in one position allows the rudders to be operated independently, in a second position causes the



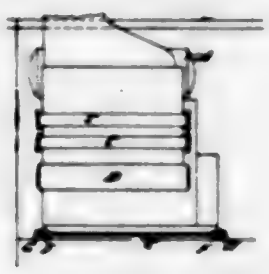
rudders to be moved through equal angles in opposite direction, and in a third position causes both rudders to be moved through equal angles in the same direction.

1,296,449. STORAGE OF OIL-FUEL IN VESSELS. HAROLD E. YARROW, Glasgow, Scotland. Filed Oct. 30, 1917. Serial No. 199,314. 2 Claims. (Cl. 114—16.)



1. In ships in which oil tanks are placed amidships below the boilers, means for preventing the tanks from attaining an undue temperature, comprising a duct between the brick pan and the top of the tanks, through which duct air passes to a casing surrounding some or all of the oil fuel sprayers.

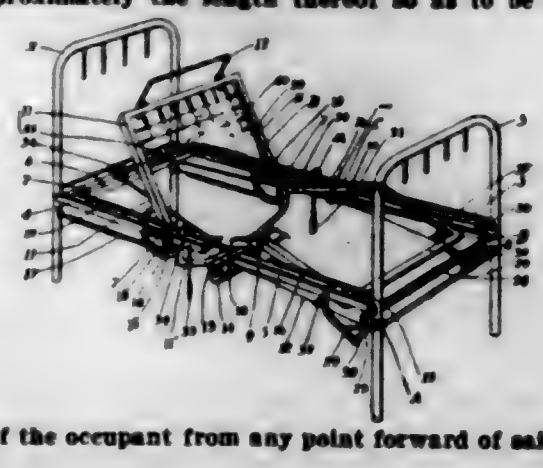
1,296,450. STORAGE OF OIL-FUEL IN VESSELS. HAROLD E. YARROW, Glasgow, Scotland. Filed Oct. 30, 1917. Serial No. 199,315. 2 Claims. (Cl. 114—16.)



1. In a ship provided with boilers fired by oil fuel, oil tanks placed below the boilers, grids of tubes placed between the boilers and the tanks, headers connected to the tubes at opposite ends thereof, a water inlet at one set of headers and a water outlet at the opposite headers, and means for circulating the water through said tubes.

1,296,451. INVALID-BED. GUIDO ARRIGONI, St. Paul, Minn. Filed July 22, 1918. Serial No. 246,051. 5 Claims. (Cl. 5—12.)

1. In an invalid bed, in combination with a frame, of a pivotally jointed body support pivotally hung on said frame and comprising a plurality of sections including a fulcrumed head section, locking means for said head section to lock it to said frame and actuation means for said locking means adjacent the side of said frame and extending approximately the length thereof so as to be within



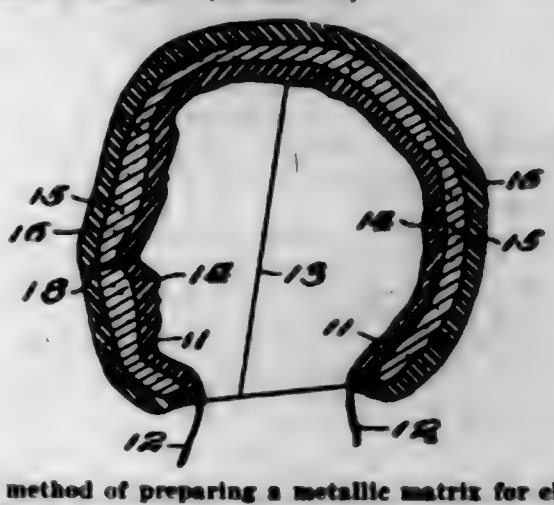
reach of the occupant from any point forward of said head section.

1,296,452. SUPPORT FOR CULTIVATOR-DISKS. WILLIAM L. BALLARD, Vermilion, S. D. Filed Nov. 26, 1917. Serial No. 203,989. 2 Claims. (Cl. 97—64.)



1. In a cultivator, the combination with a draft beam, of a J-shaped bar, means for securing the shank of said bar to the draft beam, a second bar having a laterally extending journal shaft at one end, means for detachably securing the other end of the bar to the first named bar and a disk journaled on the shaft between the bars.

1,296,453. PROCESS OF GALVANOPLASTY. BLASIUS BART, Providence, R. I., assignor, by mesne assignments, to Dymalkon Metals Corporation, Croton-on-Hudson, N. Y., a Corporation of New York. Filed Mar. 31, 1916. Serial No. 88,166. Renewed June 3, 1918. Serial No. 238,035. 6 Claims. (Cl. 204—8.)



1. A method of preparing a metallic matrix for electrodeposition by spraying the pattern with a metal.

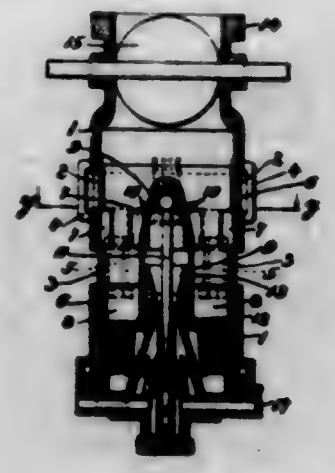
2. A method of preparing a metallic matrix for electrodeposition by spraying the pattern with a metal of low fusibility.

3. A method of preparing a metallic matrix for electrodeposition by spraying the pattern with metal and coating the portions of the surfaces of the matrix so sprayed and which are not to be subjected to the metallic deposit with a non-conducting material.

5. A method of preparing a metallic matrix for electrodeposition by spraying a pattern with metal, placing conducting wires upon the metallic surface so sprayed and uniting said conducting wires and surfaces by further spraying metal thereon.

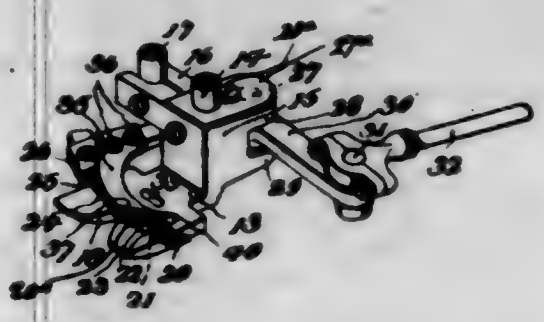
6. A method of preparing a metallic matrix for electrodeposition by spraying the pattern in sections with a metal, removing the matrix so made in sections and reassembling said sections.

1,296,454. CARBURETER. ABRAM SCHENCK RUMSEY, New York, N. Y. Filed Sept. 15, 1915. Serial No. 50,787. 1 Claim. (Cl. 261—46.)



A carbureter comprising a plurality of cylinders arranged one above the other on a common axis and secured to each other by outstanding ribs which form a continuous annular inlet port between the adjacent ends of the cylinders, a suction operated piston valve provided with ports in its side walls adapted to register with the continuous annular air inlet port when the valve is elevated, a carbureting chamber, a fuel inlet adapted to discharge into the carbureting chamber and a throttle valve.

1,296,455. TRIMMING MECHANISM FOR SEWING-MACHINES. JOSEPH BUSOM, Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1914. Serial No. 815,206. 4 Claims. (Cl. 112—6.)

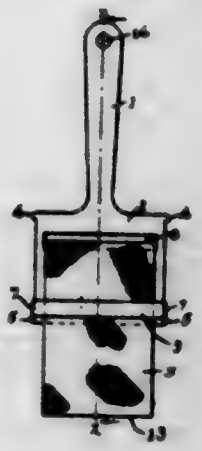


1. A trimming mechanism for sewing machines including in combination, a work support, stitch-forming mechanism, a presser foot, a trimming blade, means for supporting and moving the trimming blade in substantially a horizontal plane, a stationary trimming blade coöperating with said movable trimming blade, said stationary blade having its forward edge upturned to provide a cutting edge to coöperate with said movable blade.

4. A sewing machine including in combination a movable trimming member, a presser bar, a presser foot carried by said bar, a horizontally disposed stationary trimming blade mounted on the presser foot, a rod parallel with the presser bar, said presser foot having a projecting arm engaging the rod whereby the tendency of the presser foot to turn under the strain of the trimming action will be prevented.

1,296,456. SKILLET, GRIDDLE, AND BAKE-PAN OILER. WILLIAM F. BLAKE, Detroit, Mich. Filed Feb. 14, 1916. Serial No. 78,232. 4 Claims. (Cl. 86—12.)

2. In a skillet, griddle and bake pan oiler, the combination of a holder with a slotted blade having extensions at each end and a round projection just above the lower extensions, and a rectangular holding band with openings



in its ends, said openings fitting over said projections to hold the band in its relative position to said blade.

1,296,457. PROCESS OF EXTRACTING POTASSIUM SALTS FROM FELDSPAR. HENRY BLUMENBERG, Jr., Los Angeles, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed July 23, 1917. Serial No. 182,260. 2 Claims. (Cl. 23—22.)

2. A process of extracting potassium from potassium containing materials, comprising mixing a potassium containing material with a sulfate of an alkaline earth metal and acid sludge, heating the same in the presence of air to form a soluble potassium salt, and separating said potassium salt from the mass.

1,296,458. PROCESS OF EXTRACTING POTASSIUM FROM MINERALS. HENRY BLUMENBERG, Jr., Los Angeles, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed Dec. 4, 1917. Serial No. 205,447. 4 Claims. (Cl. 23—22.)

1. A process of extracting potassium salts from minerals containing potassium in an insoluble form, comprising mixing the potassium containing mineral with a metal nitrate capable of giving up its nitric acid radical when heated and other than alkali and alkaline earth metal nitrate, heating the mass until it fuses and all the nitric oxids have been expelled, treating the mass with an acid, and separating the potassium salt thus formed from the mass.

2. A process of extracting potassium salts from minerals containing potassium in an insoluble form, comprising mixing the potassium containing mineral with lead nitrate, heating the mass until it fuses and all the nitric oxids have been expelled, treating the mass with a mineral acid, and separating the potassium salt thus formed from the mass.

4. A process of extracting potassium salts from silicates containing potassium in an insoluble form, comprising mixing the silicates with a metal nitrate capable of yielding up its nitric acid radical when heated and other than alkali and alkaline earth metal nitrate, heating the mass until it fuses and all the nitric oxids have been expelled, treating the mass with a mineral acid, dehydrating the mass to render the silicates insoluble in water, and mixing water with the dehydrated mass and separating the potassium salt therefrom.

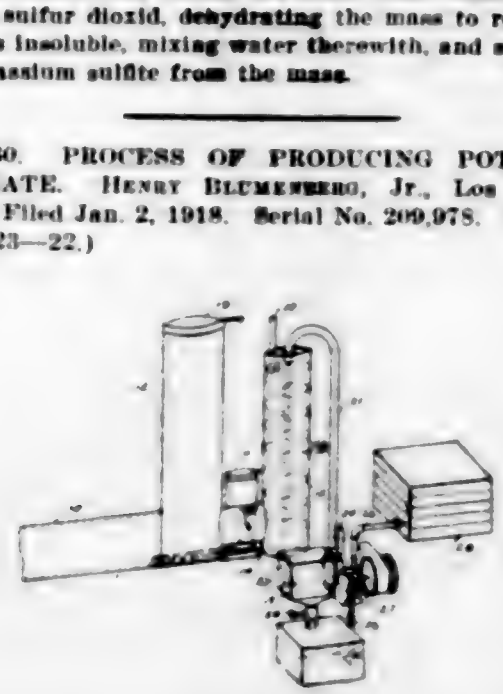
1,296,459. PROCESS OF PRODUCING POTASSIUM SALTS. HENRY BLUMENBERG, Jr., Los Angeles, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed Dec. 4, 1917. Serial No. 205,449. 3 Claims. (Cl. 23—22.)

1. A process of extracting potassium salts from minerals containing potassium in an insoluble form, compris-

ing mixing the powdered mineral with a reagent capable when fused therewith to render the potassium amenable, heating the mass until fusion takes place and the volatile gases are driven off, mixing the fused mass with water, treating it with sulfur dioxid, and separating the potassium sulfite from the mass.

3. A process of extracting potassium salts from silicates containing potassium in an insoluble form, comprising mixing the powdered silicate with sodium carbonate, heating the mass until fusion takes place and the carbon dioxid is driven off, mixing the mass with water, treating it with sulfur dioxid, dehydrating the mass to render the silicates insoluble, mixing water therewith, and separating the potassium sulfite from the mass.

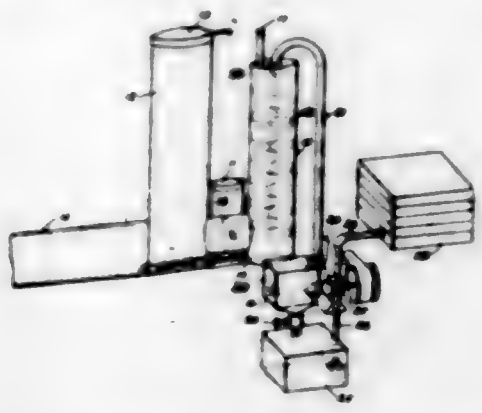
1,296,460. PROCESS OF PRODUCING POTASSIUM NITRATE. HENRY BLUMENBERG, Jr., Los Angeles, Cal. Filed Jan. 2, 1918. Serial No. 209,978. 4 Claims. (Cl. 23—22.)



1. A process of recovering potassium salts from gases containing potassium compounds in suspension, comprising contacting said gases with a metal nitrate solution, thereby forming potassium nitrate, and separating the potassium nitrate from the mixture.

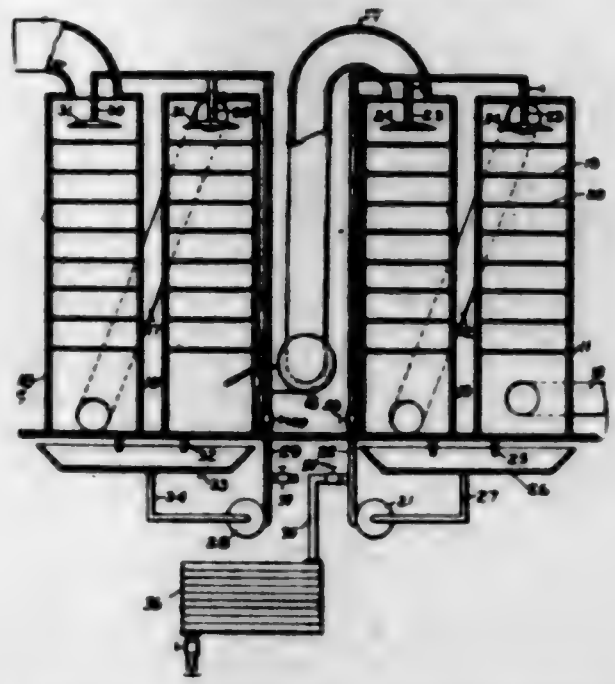
4. A process of recovering potassium salts from gases containing potassium compounds and cement dust in suspension, and carbon dioxid, comprising contacting said gases with a sodium nitrate solution, thereby forming potassium nitrate and sodium carbonate and hydrosilicates, evaporating to dryness to render the silicates insoluble, mixing with water and separating the potassium nitrate from the mixture.

1,296,461. PROCESS OF MAKING POTASSIUM CHLORID. HENRY BLUMENBERG, Jr., Los Angeles, Cal. Filed Jan. 28, 1918. Serial No. 214,213. 2 Claims. (Cl. 23—22.)



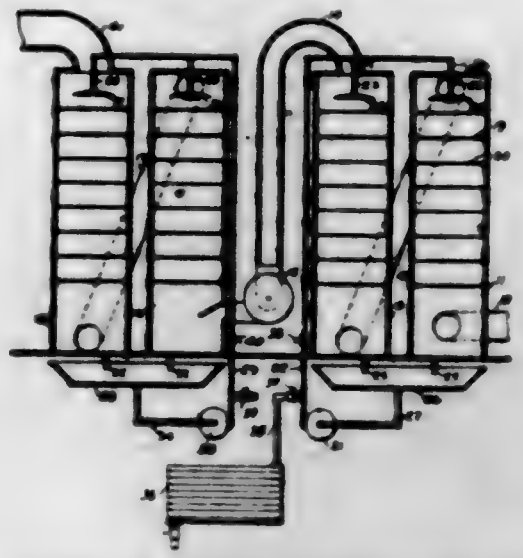
1. A process of producing potassium chlorid from waste gases containing carbon dioxid, cement dust and potassium compounds, comprising treating said gases with an aqueous mixture of sodium chlorid, thereby forming potassium chlorid and sodium carbonate, and separating the potassium chlorid from the mixture.

1,296,462. APPARATUS FOR RECOVERING POTASSIUM SALTS FROM CEMENT-KILNS. HENRY BLUMENBERG, Jr., Oro Grande, Cal. Filed Mar. 15, 1918. Serial No. 222,766. 1 Claim. (Cl. 23—22.)



An apparatus for recovering potassium compounds carried in suspension by hot gases and mixed with other solids, comprising a precipitating chamber through which the gases are caused to circulate, means for causing a precipitating liquid to come in intimate contact with said gases in said chamber, whereby a large portion of the potassium compounds and substantially all the other solids are precipitated, means for separating potassium compounds from the precipitated matter, means for conducting the gases from said chamber into a second chamber, means for causing a precipitating liquid to come in intimate contact with said gases in said second chamber, whereby substantially all the remaining potassium compounds are precipitated, and means for conveying the potassium compounds containing liquid from said second chamber independently of the liquid mixture collected in the first chamber.

1,296,463. PROCESS OF RECOVERING POTASSIUM COMPOUNDS FROM WASTE GASES OF CEMENT-KILNS AND THE LIKE. HENRY BLUMENBERG, Jr., Oro Grande, Cal. Filed Mar. 15, 1918. Serial No. 222,767. 3 Claims. (Cl. 23—22.)



1. A process of recovering potassium compounds from hot gases carrying the same mixed with other materials in suspension, comprising passing said gases through a precipitating chamber, and causing the same to be contacted with a precipitating liquid whereby substantially

all the solids carried by the gases and a portion of the potassium compounds are precipitated, forming a slurry, separating the potassium compounds from said slurry, passing the gases from the precipitating chamber into a second precipitating chamber, and causing said gases to come in contact with a precipitating solution, whereby substantially all the remaining portions of the potassium compounds are precipitated in the form of a clear solution.

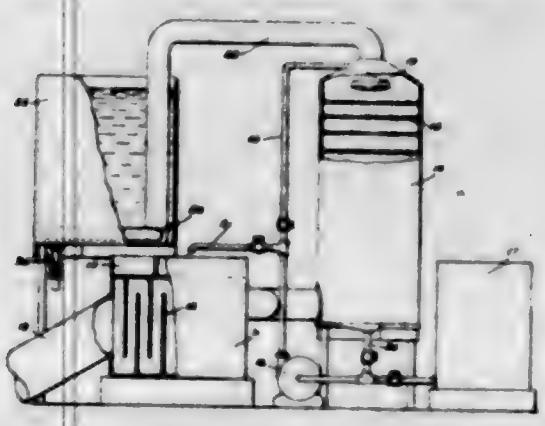
3. A process of recovering potassium compounds from hot gases carrying the same mixed with other materials in suspension, comprising passing said gases through a precipitating chamber and causing the same to be contacted with a precipitating liquid whereby substantially all the solids carried by the gases and a portion of the potassium compounds are precipitated, forming a slurry, separating the potassium compounds from said slurry, causing the gases from the precipitating chamber to come in contact with sulfuric acid, whereby substantially all the remaining portions of the potassium compounds are precipitated in the form of a clear potassium sulfate solution.

1,296,464. PROCESS OF TREATING CEMENT MIXTURES FOR THE RECOVERY OF POTASSIUM COMPOUNDS. HENRY BLUMENBERG, Jr., Oro Grande, Cal. Filed Mar. 15, 1918. Serial No. 222,769. 3 Claims. (Cl. 23—22.)

1. A process of treating cement mix to increase the volatility of the potassium compounds contained therein, comprising adding a small percentage of a metal nitrate.

3. A process of treating cement mix to increase the volatility of the potassium compounds contained therein, comprising adding one to two per cent. of sodium nitrate.

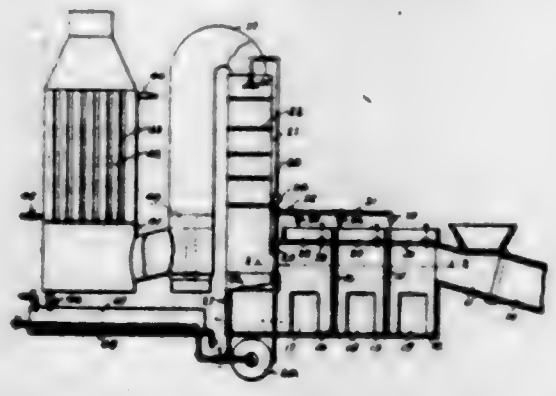
1,296,465. PROCESS OF TREATING CEMENT-KILN GASES. HENRY BLUMENBERG, Jr., Oro Grande, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 24, 1918. Serial No. 230,577. 2 Claims. (Cl. 23—22.)



2. A process of recovering potassium compounds from the hot gases of cement kilns and the like, comprising cooling said gases and precipitating the larger portion of the cement dust, treating said gases with a suitable liquid for extracting the remainder of the cement dust and a portion of the potassium compounds, and passing said gases through an aqueous mixture containing a compound having an affinity for carbon dioxid, where the remainder of the potassium compounds is absorbed, thereby forming a carbonate with the base of said compound and potassium bicarbonate, and separating the potassium bicarbonate from the mixture.

1,296,466. PROCESS FOR RECOVERING POTASSIUM COMPOUNDS FROM WASTE GASES OF CEMENT-KILNS OR THE LIKE. HENRY BLUMENBERG, Jr., Oro Grande, Cal., assignor to Chemical Construction Company, Los Angeles, Cal., a Corporation of California. Filed May 20, 1918. Serial No. 235,722. 1 Claim. (Cl. 23—22.)

A process of recovering potassium compounds from the waste gases of cement kilns and the like, comprising subjecting said gases to a preliminary cooling of 200° F. and saturating the same with an aqueous vapor, and cooling said gases to about 40° F., by passing them through a refrigerating zone, whereby the aqueous vapor is condensed and collects the potassium compounds.



1,296,467. PROCESS OF TREATING PORTLAND CEMENT AND THE RESULTING PRODUCT. HENRY BLUMENBERG, Jr., Oro Grande, Cal. Filed May 31, 1918. Serial No. 237,610. 7 Claims. (Cl. 106—25.)

1. A process of treating hydraulic cement after it has been clinkered, with an ammonium salt, whose acid radical is capable of forming an insoluble compound with the magnesium in the cement.

5. A hydraulic cement containing an ammonium salt, having an acid radical capable of forming an insoluble compound with the magnesium, aluminum and iron bases contained in the cement.

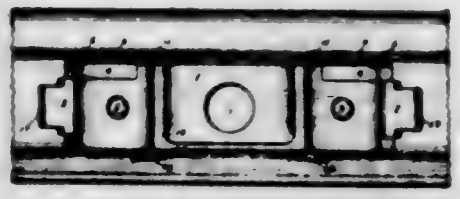
1,296,468. TOXIC CEMENT. HENRY BLUMENBERG, Jr., Oro Grande, Cal. Filed May 31, 1918. Serial No. 237,611. 1 Claim. (Cl. 106—25.)

A composition of matter consisting of hydraulic cement and copper sulfate not exceeding one-half per cent. of the mass.

1,296,469. ACCELERATOR FOR THE VULCANIZATION OF RUBBER. CHARLES REID BOGGS, Arlington Heights, Mass., assignor to Simplex Wire & Cable Co., Boston, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1914. Serial No. 824,950. 1 Claim. (Cl. 18—53.)

As an article of manufacture, vulcanized rubber containing before vulcanization rubber and beta-naphthylamin.

1,296,470. CLAMPING MECHANISM. WILLIAM P. BOYARD, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Dec. 15, 1916. Serial No. 137,164. 12 Claims. (Cl. 77—11.)



1. The method of forming an attachment to a support provided with a flange or flanges consisting in first positioning in juxtaposition to one side only of the support a holding device provided with a slidable gripping member or members to engage the surface of the flange or flanges, then moving the gripping member or members obliquely toward the support along the surface of the flange or flanges and simultaneously forcing the grip-

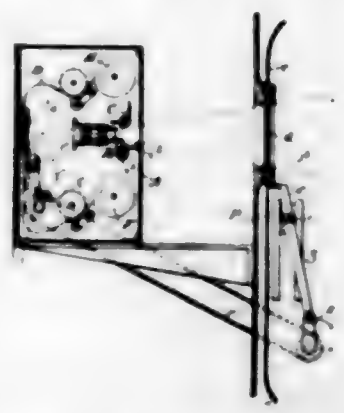
ping member or members into constantly increasing engagement with the surface of the flange or flanges to embed the gripping member or members into the surface of the flange or flanges.

8. The method of making attachment to track rails consisting in positioning on one side only of the rail and between the head and base flanges thereof a body member provided with a wedge member having engaging cutting edges moving toward the rail and engaging the opposing beveled faces of the head and base, then moving the wedge member toward the rail at an oblique angle thereto until the cutting edges of the wedge have sufficiently engaged the opposing beveled faces of the rail by means of the combination of a constantly increasing engaging pressure and a sliding movement over the beveled face of the head and base to embed the cutting edges into the beveled faces of the rail.

6. A holding device adapted for engagement to a support provided with flanges having oppositely disposed beveled faces comprising in combination, a body member, wedge members slidably mounted in the body member and oppositely disposed cutting edges combined with the wedge member to engage the beveled faces of the support flanges, the cutting edges being angularly disposed with respect to each other and each cutting edge approximately coinciding with the angle of the beveled face of the support at the line of engagement of the two, the wedge member and cutting edges being positioned and moving in a direction coinciding with a plane cutting both support flanges and extending obliquely to the support.

9. In a holding device, the combination of a body member, a one-piece wedge member slidably mounted at each end of the body member and having engaging edges extending above and below the faces of the body member, the wedge members being disposed in inclined planes with respect to each other and movable in a lateral direction toward and away from each other and toward and away from the back edge of the body member, each of the wedges having a surface adapted to receive impact forces for moving it in its path and means engaging one side of each wedge for moving it away from the other.

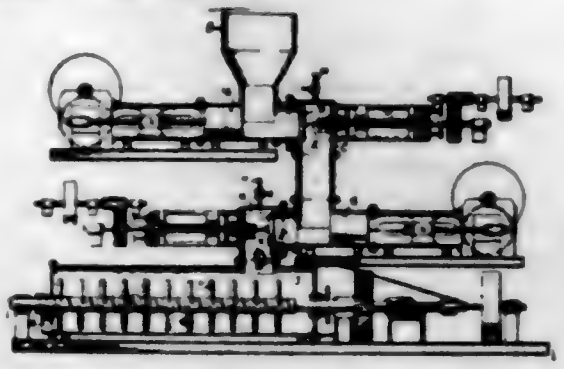
1,296,471. METHOD OF MAKING MOTION-PICTURES. LUBA S. BRAINERD, Meriden, Conn. Filed Jan. 18, 1915. Serial No. 2,894. 5 Claims. (Cl. 88—16.)



1. The method of producing motion picture films that consists in placing animate objects and pictures of inanimate objects successively in the same line of reflection to a moving picture camera in operation, and one picture after another in front of the camera whereby the pictures of the inanimate objects and of the animate objects one following the other are produced in the same field upon the film in the camera.

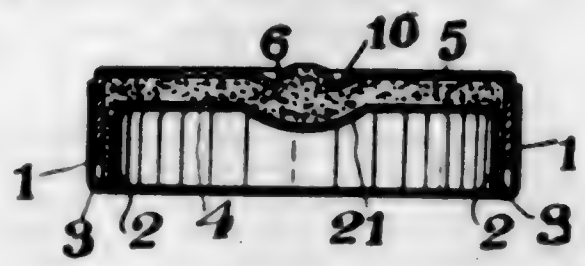
3. The method of making a moving picture film that consists in moving cartoon pictures in rapid succession between a camera and a stage setting including living actors, and in removing the cartoons from the range of the camera while continuing the operation of the latter to produce pictures from said stage setting.

1,296,472. CLAY-WORKING. JOHN J. F. BRAND, Roseville, Ohio. Filed Jan. 17, 1918. Serial No. 212,820. 20 Claims. (Cl. 25—156.)



1. The method of treating clay or the like, which consists of pugging in substantial vacuum.

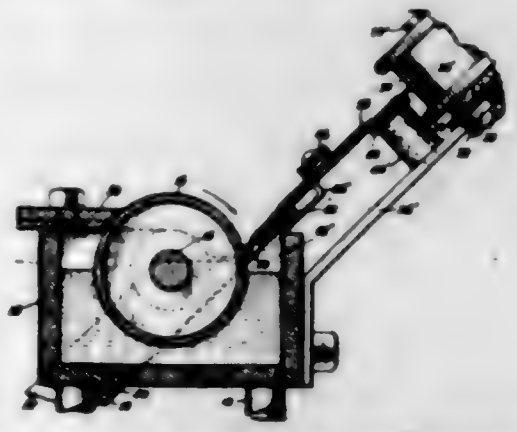
1,296,473. RECEPTACLE FOR BLACKING, TOOTH-PASTE, AND LIKE PLASTIC MATERIALS. HENRY JAMES BRASHER, London, England. Filed Mar. 27, 1918. Serial No. 225,075. 5 Claims. (Cl. 220—6.)



1. A receptacle for plastic material comprising a box having a central piston portion in spaced relation to the side of the box forming therewith an annular pocket, and an apertured lid for containing the plastic material placed over such central piston portion the side of which lid engages within and fits the side of the box and during the whole period of use in the extrusion of the contents thereof enters the aforesaid pocket.

5. A receptacle for plastic material comprising a box having a central piston portion in spaced relation to the side of the box forming therewith an annular pocket, and an apertured lid placed over such central piston portion the side of which lid engages within and fits the side of the box and enters the aforesaid pocket, and a cardboard disk above said piston portion and fitting inside said lid which is provided with lugs to hold said disk, and an auxiliary lid adapted to fit over the aforesaid slotted lid, substantially as and for the purpose hereinbefore set forth.

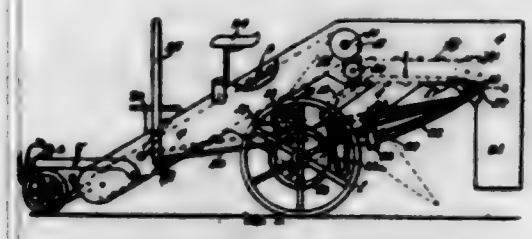
1,296,474. MACHINE FOR APPLYING A SEAM-PACKING COMPOSITION TO CAN-COVERS. JULIUS BASSINGER, Fairfield, Conn. Filed Jan. 10, 1918. Serial No. 211,225. 8 Claims. (Cl. 113—80.)



1. In a machine for applying a seam-packing composition to can covers, the combination, with a rotating cylin-

der and means for applying to the cylindrical face thereof a substantially uniform liquid film or coating, of a slideway paralleling said cylinder and adapted to support a can end or cover through a flat side thereof with its edge directed against said cylinder, means for pressing said cover edgewise against said cylinder and at the same time imparting rotary movement to said cover whereby it is rolled along said cylinder, and a guideway chute for directing gravity-actuated covers successively to said slideway and between said cylinder and said rotating means.

1,296,475. POTATO-HARVESTER. GEORGE W. BAUCH, Larimore, N. D. Filed Feb. 19, 1918. Serial No. 218,168. 2 Claims. (Cl. 130—82.)



1. In a potato harvester, a skeleton vine conveyer, a receptacle mounted to receive the potatoes from the conveyer which by a tilting movement deposits them in heaps on the ground, means for tilting said receptacle at will so as to empty it, a forwardly open substantially vertical chute arranged to guide the vines to the ground, and fingers at the rear end of the receptacle for dislodging vines if they stick in the upper end of the open front side of the chute, where the lower run of the conveyer starts on its forward movement.

2. In a potato harvester, a receptacle arranged to tilt and deposit the potatoes in spaced heaps on the ground, said receptacle being formed with longitudinal spaced bars and a downwardly arched bar having perforations, and U-shaped bolts in said perforations and adjustably securing the arch across the underside of the longitudinal bars, the ends of said arched bar being trunnioned in the main frame of the machine so as to support the receptacle in a tiltable position.

1,296,476. MOTION-PICTURE-FILM MAGAZINE. JOHN P. BURKETT, Oak Park, Ill., assignor, by direct and mesne assignments, to Ad Photoscope Company, Inc., Chicago, Ill., a Corporation of Delaware. Filed Oct. 9, 1917. Serial No. 195,632. 16 Claims. (Cl. 88—16.7.)



1. A motion picture film magazine comprising a housing adapted to receive the film; a film shifting element mounted in said housing for rotation about a horizontal axis; and film engaging means on said element, substantially as described.

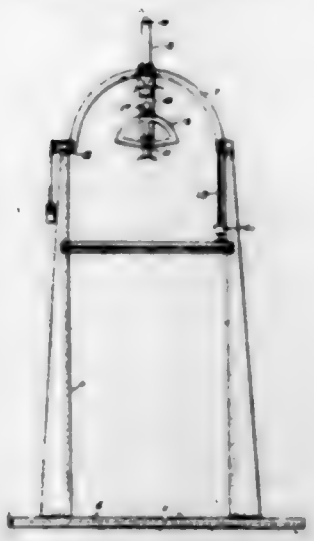
2. A motion picture film magazine comprising a housing adapted to receive the film; a film shifting element mounted in said housing for rotation about a horizontal axis; and substantially radially disposed film engaging means on said element, substantially as described.

6. A motion picture film magazine comprising a housing adapted to receive the film; a film shifting element arranged in said housing comprising a vertically disposed disk mounted for free rotation about a horizontal axis; and vanes carried by said disk for engagement with the film introduced into said housing, substantially as described.

11. A motion picture film magazine comprising a housing into which the film is adapted to be guided and folded; and means for simultaneously bodily shifting all of the folds of film in said housing, substantially as described.

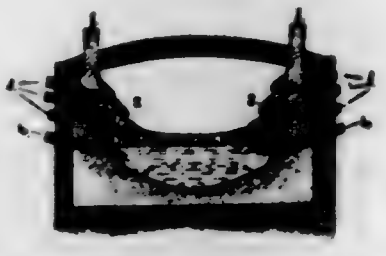
13. A motion picture film magazine comprising a housing into which the film is adapted to be guided and folded and from which the film is adapted to be withdrawn; and means for bodily shifting the folds of film in said housing so that each fold of the film, as the same is unfolded in the withdrawal of the film from the magazine, will be uppermost, substantially as described.

1,296,477. INSTRUMENT FOR RECORDING THE PATHS OF AEROPLANES. GEORGES J. N. CARPENTIER, Washington, D. C., assignor to the Government of the United States. Filed Jan. 8, 1918. Serial No. 210,950. 14 Claims. (Cl. 234—26.)



11. A sighting device for observing aeroplanes, comprising in combination, a pivotally mounted member provided with an arched arm, a calibrated segment movable by said member for indicating the angular position of said member, a second member, provided with sighting means, pivotally mounted on said first member to turn at right angles to said first member, and calibrations on said arc-shaped member for indicating the angular position of said second member.

1,296,478. PROCESS FOR TREATING ORES AND METALS IN REVERBERATORY FURNACES. GEORGE CAMPBELL CARSON, San Francisco, Cal. Filed Oct. 4, 1916. Serial No. 123,967. 5 Claims. (Cl. 75—17.)



1. The process of smelting sulfur and iron-bearing copper ores or concentrates consisting in charging the mate

rial to form a sloping embankment against the walls of a furnace chamber, delivering a blast of air to the interior slope of the embankment to oxidize sulfur and iron compounds and for smelting the material.

3. The process of treating uncalcined ores or concentrates consisting of charging the material so as to form a sloping embankment along the walls of a furnace chamber, smelting said material, utilizing the sulfur of said material to produce copper matte bessemerizing said copper matte within said furnace.

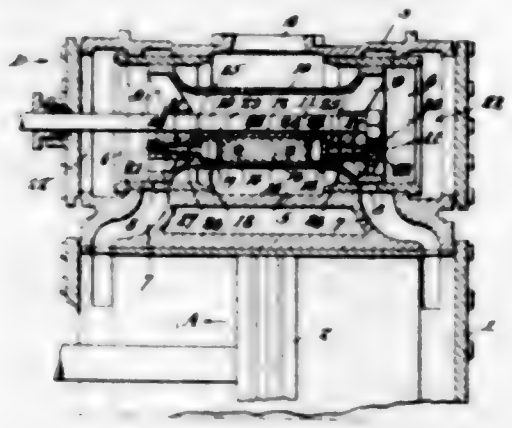
5. The duplex process consisting of simultaneously smelting and bessemerizing ores and concentrates by charging the materials so as to form sloping embankments against the walls of the furnace chamber, smelting the material upon the slope of said embankments and accumulating the slag and metal produced thereby at the foot of said embankments, bessemerizing said metal within said chamber, utilizing the heat of oxidation of the sulfids of said materials and metal to smelt with.

1,296,479. PORCELAIN THREAD-GUIDE. FREEMAN CASS, Brooklyn, N. Y., assignor to Mitchell-Bissell Co., New York, N. Y., a Corporation of New Jersey. Filed Dec. 17, 1918. Serial No. 267,149. 5 Claims. (Cl. 242—157.)



1. A thread guide comprising a metal hook having a shank for attachment to a textile machine, in combination with a vitreous body comprising a sleeve adapted to fit the shank of the metal hook, and a hooked portion fitting the return bend of the metal hook.

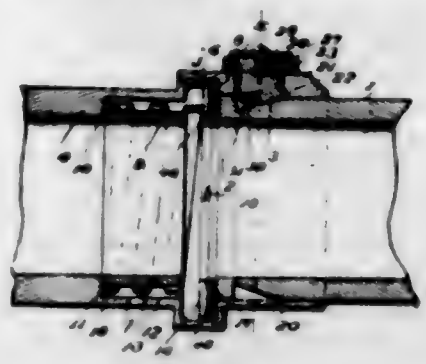
1,296,480. VALVE. THOMAS H. CLAPHAM, Pittsburg, Kans. Filed June 5, 1917. Serial No. 172,913. 3 Claims. (Cl. 121—14.)



1. In a device of the class described, a cylinder; a piston working in the cylinder; a chest having ports leading to the ends of the cylinder; an admission valve operating in the chest and provided in its ends with openings having seats, the admission valve having inner and outer ports communicating with each opening, and with the interior of the chest; inwardly opened pressure-controlled valves in the openings and coöperating with the seats, the valves closing the outer ports when the valves move outwardly to closed positions on the seats; and means for limiting the inward movement of the valves thereby to maintain the inner ports open continuously and to supply pressure behind the valves.

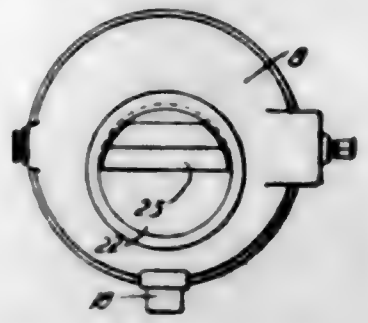
2. In a device of the class described, a cylinder; a piston working in the cylinder; a chest having ports leading to the ends of the cylinder; an admission valve operating in the chest and provided with a bore, one end of the bore communicating with one end of the chest, the other end of the bore communicating with the chest, there being a seat in the bore, intermediate the ends thereof; and a valve structure operating in the bore, the valve structure including a stem, a head on the stem and coöperating with the seat, and wings on the stem and guided in the bore, parts of the wings being inclined to effect a rotation of the valve structure under pressure.

1,296,481. HOSE-COUPLING. ARTHUR JAMES CLARK, Traverse City, Mich. Filed Oct. 29, 1918. Serial No. 260,163. (Cl. 285—169.)



1. A hose coupling comprising two members, one of which is provided with an expansible spring and a packing gland with which the spring engages, the other member having an annular flange with which the packing gland engages, a threaded lock mounted on the first mentioned member and engaging behind the flange to lock the two members together, a nut engaging the threaded portion of the lock to actuate the same, and a spring for normally drawing the lock inwardly to locking position.

1,296,482. SIDE LAMP FOR AUTOMOBILES. FRANK CONRAD, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 26, 1918. Serial No. 868,731. 3 Claims. (Cl. 240—46.)

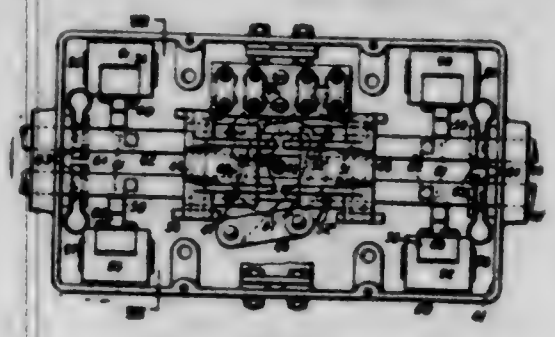


1. The combination with a casing, and a source of light within the casing, of a reflector within said casing provided with an opening, a lens adjacent said opening and a second reflector adjacent said lens and without said casing.

1,296,483. GEAR-SHIFTING MECHANISM. FRANK CONRAD, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 30, 1914. Serial No. 815,256. Renewed May 16, 1917. Serial No. 169,096. 18 Claims. (C. 74—58.)

1. In a gear shifting mechanism, the combination with a shiftable gear wheel, of a clutch member, a pedal for

controlling said clutch member, and electro-responsive means for connecting said pedal to said gear wheel when said clutch member is in an inoperative position.



2. In a gear shifting mechanism, the combination with a shiftable gear wheel, of a lever, and means for effecting the connection of said lever to said gear wheel when said lever is in a predetermined position and for maintaining said connection until said lever is again in the predetermined position.

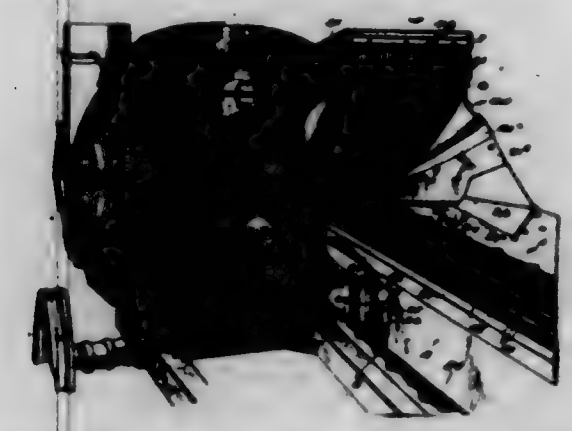
3. In a gear shifting mechanism, the combination with a shiftable gear wheel, a pivotally mounted member, means for connecting said member to said gear wheel, and means comprising an electromagnet for controlling said connecting means.

1,296,464. CARD-CASE. WILLIAM C. CUTLER, North Glendale, Cal. Filed June 27, 1917. Serial No. 177,264. 5 Claims. (Cl. 206—39.)



1. In a card case of the class described a frame comprising a base bar, end- and side-bars pivotally connected to the base bar, and spring members provided on the base bar projecting toward the case for shifting the base bar into a suitably inclined position when the case is open.

1,296,485. FODDER-CUTTER FEED MECHANISM. JOSEPH DICK, Canton, Ohio, assignor to The Joseph Dick Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed July 8, 1916. Serial No. 108,191. 8 Claims. (Cl. 193—14.)

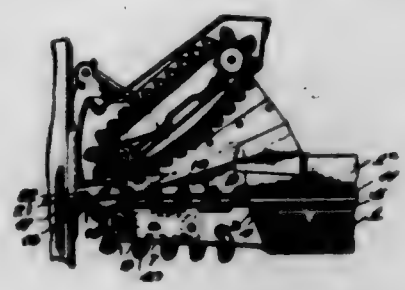


1. Feed mechanism for fodder cutters and the like, comprising a feed trough having a feed hopper at its rear end with an endless conveyer therein, an oscillating feed hood on the hopper having an inverted endless conveyer cooperating with the trough and hopper conveyer, the face of the hood conveyer being convexly curved intermediate its ends and converged toward the hopper conveyer to form a throat adjacent to the rear end thereof.

3. Feed mechanism for fodder cutters and the like, including an inverted conveyer having walls on its sides, gear wheels in its forward and rearward ends and an endless chain operating around the wheels, a transverse shielding sheet between the walls extending rearward from the forward wheels under the rearward wheels, then looped around and over the rearward wheels and extending forward to a point intermediate the gear wheels, there being slots in the looped portion of the sheet for the sprockets of the rearward wheels, and a closure between the looped end of the sheet and the adjacent portion thereof, and there being openings in the side walls of the conveyer in front of said closure.

5. Feed mechanism for fodder cutters and the like, including a feed trough, a feed hood at the rear end of the trough with feed mechanism on their opposing faces, gearing for operating the feed mechanism with controlling means for starting, stopping and reversing the same, including a laterally extending lever fulcrumed on upright pivots at the side of the feed trough in front of the feed hood.

1,296,486. FODDER-CUTTER FEED-CONVEYER. JOSEPH DICK, Canton, Ohio, assignor to the Joseph Dick Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed July 8, 1916. Serial No. 108,192. 8 Claims. (Cl. 193—8.)



1. A feed conveyer for fodder cutters and the like, having wooden cross bars with series of grooves across each side edge, and V-shaped malleable teeth having their free ends pressed into the grooves by a bending of the teeth, there being shoulders on the inner edges of the teeth bearing on the face of the bar and prongs on the edges of the teeth engaging in the bottoms of the grooves.

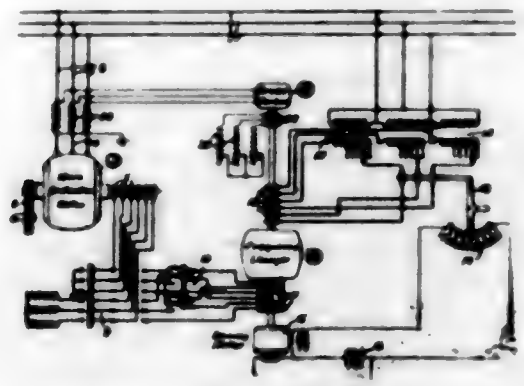
2. A feed conveyer for fodder cutters and the like, having wooden cross bars with series of grooves across each side edge, and V-shaped malleable teeth having their free ends pressed into the grooves by a bending of the teeth, there being shoulders on the inner edges of the teeth bearing on the face of the bar, and prongs on the teeth engaging in the grooves.

3. A feed conveyer for fodder cutters and the like, having wooden cross bars with series of grooves across each side edge, and V-shaped malleable teeth having their free ends pressed into the grooves for engagement with the cross bar.

1,296,487. SYSTEM OF SPEED CONTROL FOR INDUCTION-MOTORS. ADOLPHUS M. DUDLEY, Oakmont, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 21, 1916. Serial No. 126,891. 4 Claims. (Cl. 172—274.)

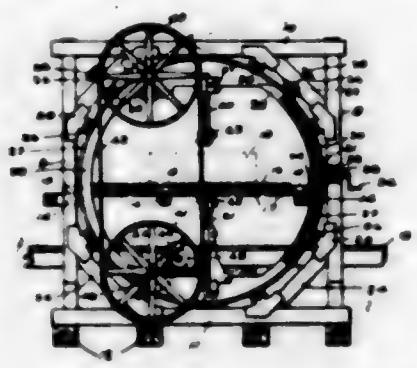
1. In an induction-motor-control system wherein a frequency-changer is associated with the secondary winding of the induction motor for the speed control thereof, the combination with means for exerting a braking action on said frequency changer with a load increase of the main motor, of a phase-rotation reversing switch electrically associated with said frequency-changer, whereby,

if said switch be reversed when the main induction motor passes through synchronism, subsequent acceleration of the main motor may be obtained by decreasing the speed of said frequency-changer, and said braking means may be effective in increasing the stability of operation of the main motor.



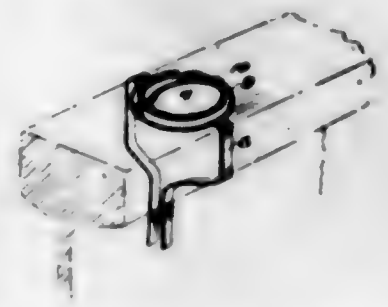
4. The combination with a source of alternating current, of an induction motor having primary and secondary windings, connections from said source to the primary winding of said motor, a frequency-changer, connections from said source through said frequency-changer to the secondary winding of said motor, means whereby said frequency-changer may be operated at synchronous speed for synchronous operation of said motor and decreased in speed to adjust the speed of said motor down to zero or up to double-synchronism, an auxiliary motor of the induction type coupled to said frequency-changer, a current transformer associated with the supply leads of said main motor and connected to energize said auxiliary motor in accordance with the load current of said main motor, said auxiliary motor being driven against its torque in accordance with the speed of said frequency-changer.

1,296,488. BAND-SAW. JAMES ALLEN DU LANEY, Seattle, Wash. Filed Apr. 2, 1918. Serial No. 226,148. 1 Claim. (Cl. 143—24.)



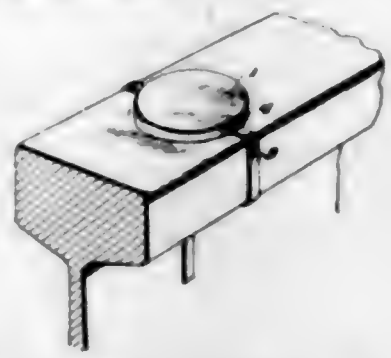
A saw of the class described comprising an upright supporting frame, an open annular saw frame disposed within said supporting frame, a circular track on the periphery of said annular saw frame, a plurality of flanged rollers rotatably mounted on said supporting frame for the reception of said track whereby said annular saw frame may be rotated about a central axis, brake shoes engaging said track, saw carrying wheels mounted for rotation on said annular saw frame, a band saw carried by said wheels, the said saw wheels being located so that the cutting edge of said band saw will pass through the center of said annular frame, a motor mounted on said annular saw frame and movable therewith for driving the lowermost one of said saw wheels, means for rotating said annular saw frame, adjustable saw guides carried by said annular saw frame, a supporting table disposed at right angles to said upright supporting frame, and extending through said annular saw frame, a plurality of feed rollers mounted for rotation on said table, and power actuated means for driving said feed rollers to advance timbers to said saw.

1,296,489. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 15, 1918. Serial No. 258,171. 4 Claims. (Cl. 246—487.)



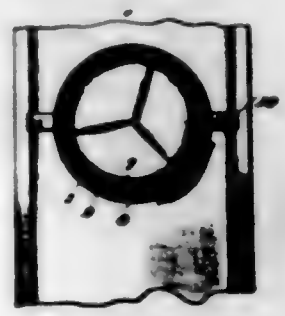
3. A fibrous water-proof non-flying railway signal torpedo, comprising a fibrous cup-shaped case, an explosive therein, a dome-shaped top within the case and inclosing the explosive, the side of the case extending beyond the top and turned smoothly inward over the top and water-proof cemented thereto throughout its periphery to make a water-tight joint, and a rail-attaching member connected with the case.

1,296,490. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 15, 1918. Serial No. 258,172. 5 Claims. (Cl. 246—487.)



5. An improved railway signal torpedo, comprising an outer explosive containing case, an explosive therein, an explosive holding member within the case, the side wall of the case projecting beyond the said holding member and crimped inward tightly against the holding member forming a recess, and a locking disk within the recess and engaging the inwardly crimped portion, for the purpose described.

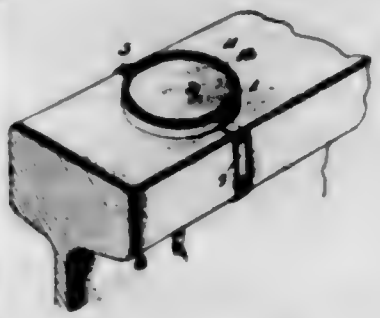
1,296,491. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 15, 1918. Serial No. 258,173. 4 Claims. (Cl. 246—487.)



1. A railway signal torpedo of the type described, comprising a fibrous cup-shaped member, a dome-shaped top for the cup-shaped member with its periphery inside of the edge of the flange of the cup-shaped member, an ex-

plosive between the said members, a holding ring surrounding the flange of the cup-shaped member and cemented around the periphery of the dome-shaped cover at the juncture thereof with the flange of the cup-shaped member.

1,296,492. RAILWAY SIGNAL-TORPEDO AND METHOD OF MAKING THE SAME. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 18, 1918. Serial No. 258,714. 6 Claims. (Cl. 246—487.)



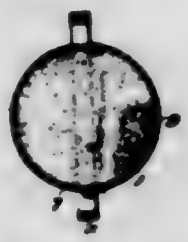
4. A railroad torpedo having a case, comprising a fibrous ring with inwardly extending flanges at its two edges, fibrous top and bottom disks within the ring and supported by said flanges, an explosive between the disks, and water-proof cement at the junction of the peripheries of the disks and said flanges.

1,296,493. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 18, 1918. Serial No. 258,715. 10 Claims. (Cl. 246—487.)



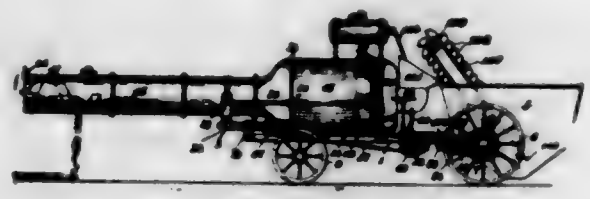
6. An improved railway signal torpedo, comprising a case having a double wall bottom, of a rail-engaging member passing through the side wall of the case and between the walls of the bottom.

1,296,494. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 18, 1918. Serial No. 258,716. 4 Claims. (Cl. 246—487.)



2. An improved railway signal torpedo comprising an explosive containing case having its side wall extending below the bottom of the case, the extended wall having oppositely arranged openings, said openings having a bottom wall, and a rail-engaging member passing through the said openings and below the bottom.

1,296,495. CONCRETE-PAVING MACHINE. DONALD ELDER, New York, N. Y. Filed Sept. 27, 1916. Serial No. 122,858. 14 Claims. (Cl. 94—6.)



1. The combination of a cylinder for mixing and conveying concrete and the like, a frame on which the same is rotatably mounted, movable supports for said frame, a source of power, power transmitting mechanism connected with said source and with the cylinder arranged to impart rotary movement to the latter, a fixed member and gearing connecting said cylinder and fixed member arranged to impart lateral movement to said cylinder simultaneously with the rotary movement thereof.

1,296,496. NICKEL-FORMATE CATALYZER AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J. Filed Nov. 15, 1917. Serial No. 202,170. 20 Claims. (Cl. 23—28.)

1. The process of making a nickel catalyzer which comprises dissolving basic nickel material while in a freshly precipitated condition in formic acid, in drying to remove substantially all the moisture but without blackening of the formate, in grinding and in heating with stirring to a temperature of between 240° and 250° under reduced atmospheric pressure but in the absence of any added reducing gas, whereby catalytic material is obtained.

4. The process of making a catalyzer adapted for the hydrogenation of fatty oil, which comprises forming nickel formate substantially free from catalyzer poisons and in heating without the addition of a reducing gas to form a catalyzer.

6. The process of making a catalyzer adapted for the hydrogenation of fatty oil, which comprises forming nickel formate and in heating in a sealing vehicle without the addition of a reducing gas to form a catalyzer.

8. The process of making a catalyzer which comprises heating dry nickel formate to a decomposing temperature under reduced atmospheric pressure while agitating the formate material.

1,296,497. CONVEYING APPARATUS FOR DISINTEGRATED MATERIAL. LOUIS ELLMAN, Pittsburgh, Pa., assignor to The Hagan Corporation, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 16, 1918. Serial No. 234,875. 5 Claims. (Cl. 198—10.)



1. The method herein described of conveying disintegrated material from a plurality of separated points through a conduit to a common point which consists in charging the material into said conduit at said points successively and successively creating currents of fluid through the conduit having conveying capacities proportional to the distance of such charging points from the point of discharge from the conduit.

5. In a plant for conveying disintegrated material, the combination of a conduit having a plurality of openings through which material may be fed into the conduit, means for creating a current of fluid through the conduit, a shaft extending along the conduit, connections from the shaft to the current controlling means, and means arranged adjacent to each hopper for turning the

shaft, the means at successive hoppers from the delivery end of the conduit being adapted to impart a larger turning movement to the shaft.

1,296,498. PROCESS OF REPRODUCING ARTICLES IN METAL. ANTAL FODOR, New York, N. Y., assignor to Dymalkon Metals Corporation, New York, N. Y., a Corporation of New York. Filed Apr. 17, 1917. Serial No. 162,797. 6 Claims. (Cl. 204—8.)



1. A method of making metallic reproductions by preparing positive metal copies from negative matrices in several parts and joining said parts by a material of low fusibility.

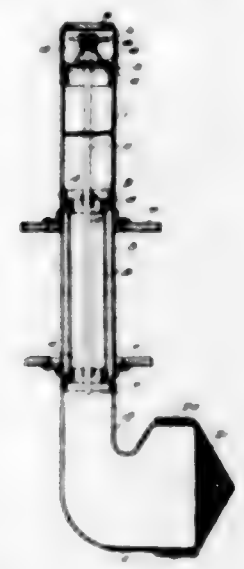
2. A method of making metallic reproductions by preparing positive metal copies from negative matrices in several parts and joining said parts by a material of low fusibility and afterward electroplating said parts.

3. A process of making metallic reproductions by producing positive copies from negative matrices, joining said copies by material of low fusibility, electroplating said copies and afterward reinforcing said electroplated object.

4. A method of making metallic reproductions by preparing a negative matrix in several parts, preparing positive copies therefrom, joining said positive copies and electroplating said positive copies so as to produce a single piece.

6. A method of making metallic reproductions by making a negative matrix, producing a positive copy in a thin metallic sheet upon said matrix by spraying, reinforcing said positive copy with an insulating material of low fusibility, electroplating said positive copy, removing said insulating material and reinforcing said positive copy after said insulating material has been removed.

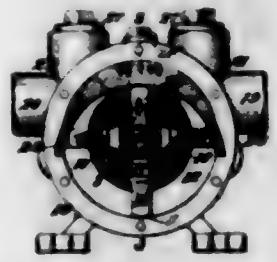
1,296,499. HOT-BOX DETECTOR FOR RAILWAY-CARS. SIMON H. FETHEN, Archbold, Ohio. Filed Mar. 1, 1918. Serial No. 219,920. 6 Claims. (Cl. 116—9.)



4. A device of the class described including in combination with a railway car, a tubular member adapted to be rotatably mounted through the floor of the railway car, an angular inlet member connected with the lower end of said tube, said member having an enlarged outer end, a protective screening therefor, and means for rotating said member from the opposite end of the tube.

6. A device of the class described including in combination with a railway car, a tubular member adapted to be positioned in the side of the railway car, an extension on the lower end thereof rotatably mounted through the floor of said car, an angular inlet communicating with said extension and connected with the lower end thereof, a rotatable operating rod extending through said tube and extension and connected with the inlet member, and means on the upper end of said rod whereby the same is adapted to be rotated, said means including a member to hold the rod in fixed position.

1,296,500. ROTARY PUMP. JOHN FRODSHAM, Frodsham, Cal. Filed May 31, 1917. Serial No. 171,904. 4 Claims. (Cl. 103—44.)



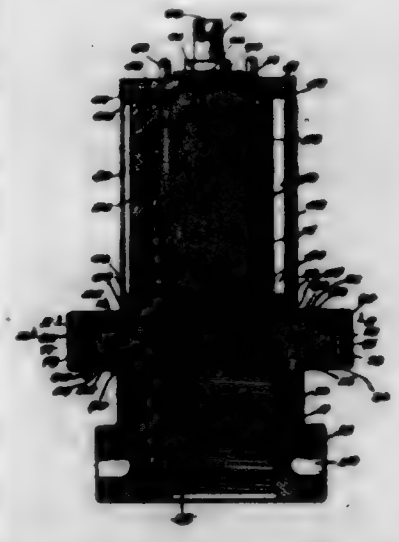
2. A rotary pump or motor, comprising a cylindrical casing, a cylindrical rotor therein having end flanges concentric with the casing and a cylindrical body portion of reduced diameter and concentric with said end flanges, radial slots being formed through the cylindrical wall of the rotor and entirely through the end flanges, separate vanes independently mounted within the radial slots, means formed upon said vanes for limiting their outward movement, and means formed upon the end walls of the casing, whereby the outward movement of said vanes will be predetermined to cause their outer ends to describe an elliptical path of travel.

4. In a rotary pump, a cylindrical casing, a tubular cylindrical rotor positioned therein and having enlarged end flanges at its opposite ends, radial slots formed the entire width of the rotor and through the end flanges, said apertures in the end flanges having an enlarged T-shaped opening at their inner ends, circular recesses formed in the outer faces of said end flanges, separate vanes positioned for radial movement within the slots of the rotor, and oppositely extending lugs at the opposite ends of said vanes adapted to pass through the T-slots in the rotor flanges and to seat within the recesses of said flanges, whereby the vanes may be inserted from either side of the rotor and when moving radially will be locked against lateral movement.

1,296,501. AUTOMATIC SELF-LOCKING EXPANDING MANDREL. SHIRLEY L. GARY and FRANK B. MOSS, Richmond, Va. Filed Aug. 21, 1917. Serial No. 187,400. 12 Claims. (Cl. 82—44.)

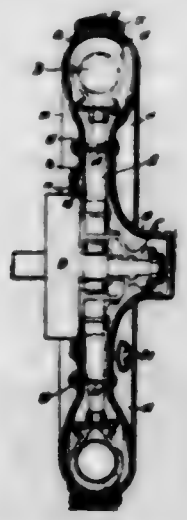
8. An expanding mandrel including a spindle, a member fixed to the spindle and having radially curved longitudinally extending cam blades, rings secured to the ends of the member and formed with corresponding cam seats, a hood surrounding such member, a plurality of arms pivoted to the hood adjacent its ends and having pawl portions engaging the cam seats, rollers journaled in the arms and engaging the cam blades whereby turning of the hood relative to the spindle and member mounted thereon will act through the engagement of the rollers with the cam blades and of the arms with the cam seats to project and retract the rollers through swinging of the arms, means normally tending to hold the hood in a predeter-

mined position relative to the spindle and to automatically return it to such position when moved to another



position, and means for locking the hood against such return movement.

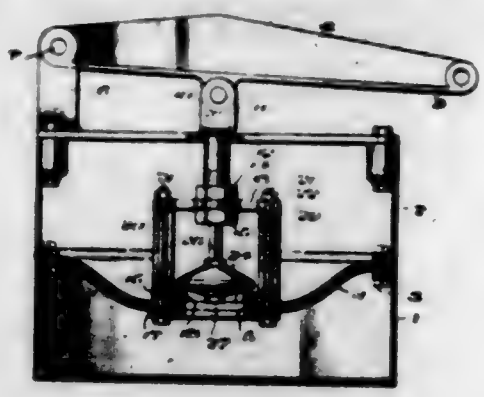
1,296,502. VEHICLE-WHEEL CASING AND TIRE-PROTECTOR. FRANK P. GOEHRING, Richmond, Minn. Filed Aug. 20, 1917. Serial No. 187,309. 2 Claims. (Cl. 152—35.)



1. The combination with a vehicle wheel having an ordinary pneumatic tire thereon, of a casing for the wheel comprising an inner and outer plate shaped to house the wheel, the edges of said plates rolled inwardly for overlapping engagement and to conform to the configuration of the tread of the pneumatic tire, bolts extending through said plates between the adjacent spokes of the wheel to bind said ends in overlapping engagement and whereby limited circumferential movement of the wheel within the casing will be permitted, the internal diameter of the casing being greater than the external diameter of the wheel to permit limited radial movement of the wheel within the casing.

1,296,503. DIAPHRAGM-PUMP. JAMES C. GORMAN, Jr., Mansfield, Ohio, assignor to The Barnes Manufacturing Company, Mansfield, Ohio, a Corporation of Ohio. Filed May 7, 1917. Serial No. 167,005. 3 Claims. (Cl. 103—10.)

1. A diaphragm pump comprising a casing having an elastic diaphragm therein provided with a central opening, a ring-shaped casting on said diaphragm having a valve seated thereon over said opening, said casting being formed with tubular projections extending upwardly therefrom and having a cross-piece or yoke mounted thereon, and fastening bolts securing said diaphragm to said casting and extending through said projections and through said yoke, a lever pivoted on said casing, and a tubular valve-stem guide depending from and pivoted at its upper



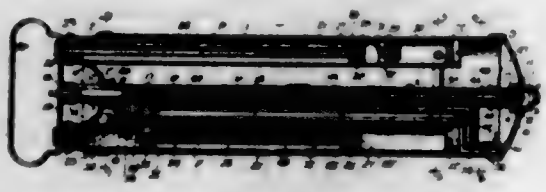
end to said lever and having its lower end firmly secured to said yoke; said valve having a stem slidably fitted in said guide, substantially as described.

1,296,504. RADIO TELEGRAPHY AND TELEPHONY. JOHN HAYS HAMMOND, Jr., Gloucester, Mass. Filed Aug. 24, 1912, Serial No. 716,864. Renewed May 10, 1918. Serial No. 233,790. 11 Claims. (Cl. 250—17.)



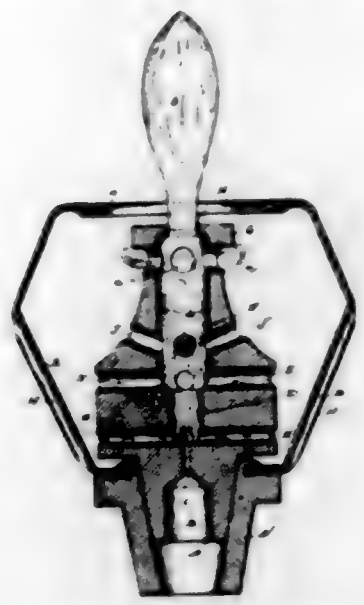
3. In a radio system, the combination with means including an electrical inductance for transmitting high frequency waves, of rotary means operative to vary the said inductance periodically and at a rate above the limits of audibility to impress amplitude variations upon said waves in such a manner that the time-intensity curve shall be peaked.

1,296,505. FIRE-EXTINGUISHER. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 10, 1915. Serial No. 49,859. 4 Claims. (Cl. 169—17.)



1. In a fire extinguisher of the class described, the combination of a liquid container having a discharge outlet, two air pumps within the container each comprising a barrel and piston structure and piston rods extending from said structures, a handle at the exterior of the extinguisher connecting with the piston rods to effect reciprocation thereof, one end of each barrel being partitioned off to form storage compartments and a pipe connecting said compartments, valve mechanisms controlling the flow into said compartments of air compressed by the piston structures, there being an air outfit into the container from said reservoir compartments, and a valve adapted to resist flow of air through said outlet, the air fed to said container acting as a piston against the liquid to force ejection thereof through the discharge outlet.

1,296,506. BURNER-TIP FOR ACETYLENE AND SIMILAR HYDROCARBON GASES. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1916. Serial No. 133,315. 9 Claims. (Cl. 67—105.)



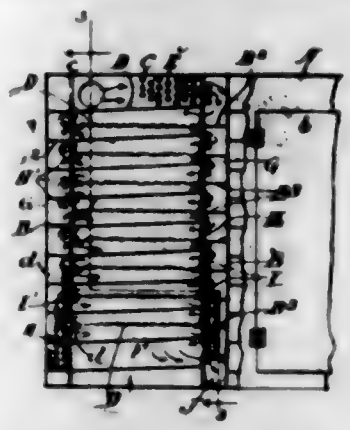
1. A burner tip for acetylene or similar hydrocarbon gas having a contracted orifice through which a gas stream is projected under pressure, and provided with a body of refractory material with which the gas stream comes into contact or close proximity, air openings for supplying to the gas stream a limited supply of air so as to result in the production of a non-illuminating, non-carbonizing flame which heats the refractory body to the ignition temperature, the pressure being sufficient to force the flame beyond the heated refractory body where it is supplied with additional air so as to become luminous, substantially as set forth.

1,296,507. METHOD OF BURNING ACETYLENE AND SIMILAR HYDROCARBON GASES FOR ILLUMINATING PURPOSES. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1916. Serial No. 133,316. 5 Claims. (Cl. 67—105.)



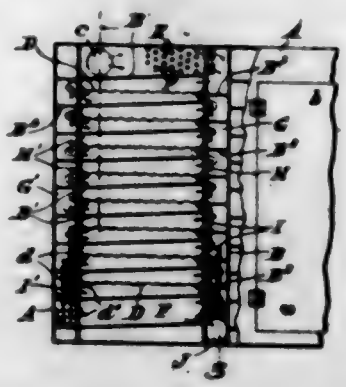
1. The method of burning acetylene or similar hydrocarbon gases for illuminating purposes, which consists in projecting a gas stream through a restricted orifice, in igniting the same, in subdividing the resulting flame into two defined zones, one of which is non-illuminating and non-carbonizing and the other of which is an illuminating zone, and in causing the non-illuminating zone to heat a body of refractory material with which the gas stream when not ignited comes into close proximity or contact, whereby the gas stream will be ignited, as and for the purposes set forth.

1,296,508. PROCESS OF EVAPORATING MOISTURE-CONTAINING MATERIALS. GORDON DON HARRIS, Bayonne, N. J. Continuation of application Serial No. 759,087, filed Apr. 5, 1913. This application filed Nov. 11, 1915. Serial No. 60,890. 11 Claims. (Cl. 34—24.)



1. In the art of drying moisture-containing materials, the process which consists in circulating a gaseous drying medium into contact with a mass of material to be treated and simultaneously therewith retarding the flow of such drying medium so as to direct it against the material and reheating the drying medium subsequent to its contact with said material, and repeating the operations until said drying agent absorbs a predetermined quantity of moisture from said material.

1,296,509. APPARATUS FOR EVAPORATING MOISTURE-CONTAINING MATERIALS. GORDON DON HARRIS, Freeport, N. Y. Continuation of application Serial No. 739,603, filed Jan. 2, 1913. This application filed Nov. 11, 1915, Serial No. 60,889. Renewed July 16, 1918. Serial No. 245,236. 29 Claims. (Cl. 34—39.)



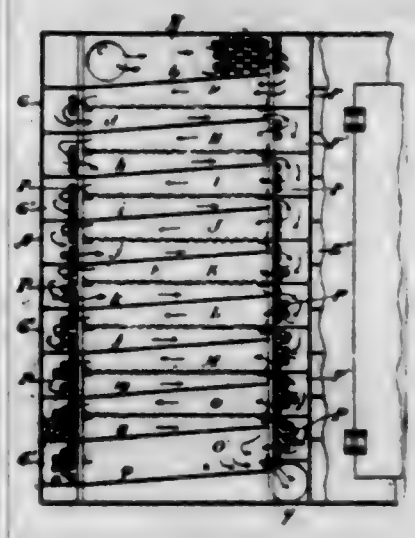
1. In an evaporator, the combination of a series of compartments, means positioned therein for supporting material in separated masses, one mass in each compartment, means for heating a drying medium to a predetermined temperature, means for circulating such drying medium back and forth above and below the material within each compartment and successively through the series of compartments, and means for reheating the drying medium to the predetermined temperature as it flows from one compartment into the next and also for reheating the drying medium in the interval between the contacts of such drying medium with the upper and under surfaces of the mass of material in each compartment.

2. In an evaporator, a treating chamber, means for supporting material in separated masses therein, means for heating a drying medium to a predetermined temperature, means for circulating said drying medium back and forth above and below the material, means opposing the flow of the drying medium in presence of each mass of material and while in contact with the upper and under surfaces of such mass, and reheaters positioned for the drying me-

dium to flow into contact therewith so as to reheat the drying medium in the intervals between its contacts with the successive masses and with the upper and under surfaces of each mass.

8. In an evaporator, the combination of a series of compartments, means for supporting material to be treated in separated masses respectively in each compartment, means for preheating a drying medium to a desired temperature, means for circulating such a drying medium within the compartments and successively through them, and reheaters in the path of the drying medium for reheating said drying medium so as to maintain it at the predetermined temperature, in the intervals between its contacts with the successive masses, the walls of said compartments being positioned with reference to the material-supporting means so as to oppose or retard the flow of the drying medium while in the presence of the masses of material and to thereby secure an intimate contact of the drying medium with such material.

1,296,510. EVAPORATING SYSTEM FOR MOISTURE-CONTAINING MATERIALS. GORDON DON HARRIS, Bayonne, N. J. Continuation of application Serial No. 782,007, filed Aug. 5, 1913. This application filed Nov. 11, 1915. Serial No. 60,891. Renewed Nov. 4, 1918. Serial No. 261,148. 7 Claims. (Cl. 34—29.)

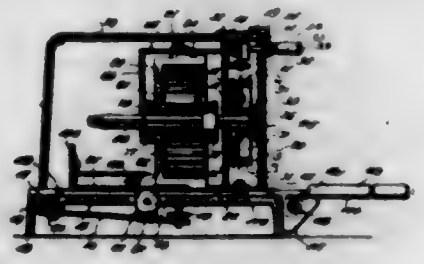


1. In the art of drying moisture-containing materials, the process which consists in circulating a drying agent, heated to a predetermined temperature, into contact with successive masses of material and simultaneously therewith retarding the flow of such drying agent while in the presence of each mass so as to secure intimate contact with such material and during such circulation reheating or boosting the drying agent between the intervals of contact with the material and to increasingly higher temperatures for expanding the volume of such drying agent and increasing its absorptive power and the pressure under which such drying agent is brought into contact with successive masses.

1,296,511. MACHINE FOR PROTECTING CHECKS AND THE LIKE. CHARLES H. HASBROUCK, Binghamton, N. Y. Filed Nov. 27, 1917. Serial No. 204,210. 21 Claims. (Cl. 197—6.4.)

1. In a device of the character described, a base, a pivoted and transversely movable frame mounted thereon, a type wheel mounted in a frame, a platen wheel mounted on the base, means for bringing the character of the type wheels selectively into alinement with the platen, and means for shifting the type wheel across the platen.

5. A device of the character described comprising a shaft, a drum secured to the shaft, a plurality of guide rollers, a flexible belt passed over the guide rollers and having its ends secured to the drum, a printing wheel movably mounted upon said shaft, a platen wheel arranged in proximity to the printing wheel, manually operated means for horizontally moving the printing wheel into engagement with and over the platen wheel, means for disengaging said printing wheel and platen wheel subsequent to the engagement therebetween, and means for returning the printing wheel to a normal position subsequent to the disengagement of the same from said platen wheel.

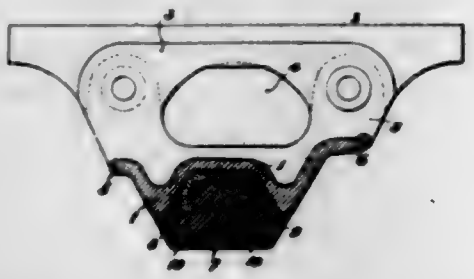


7. In a device of the character described a shaft, a printing wheel slidably mounted thereon, a platen wheel, a drum secured to the shaft, a plurality of guide rollers, a belt passed over the rollers and having its ends secured to the drum, means for varying the tension of the belt, and means for moving the printing wheel into engagement with and over the face of the platen wheel.

14. In a device of the character described, a horizontally movable printing wheel; manually operable means for moving the printing wheel into engagement with and over the face of the platen wheel whereby the work is fed between the printing wheel and platen wheel, means for frictionally engaging the work in its course of travel, the last mentioned means comprising a rod having a spur wheel rotatably mounted thereupon; an adjustable table to support the work when being fed; and a guide for guiding the work during its passage between the printing wheel and platen wheel.

15. In a device of the character described, a base, a pivoted and transversely movable frame mounted thereon, a type wheel mounted in the frame, said type wheel being provided with printing blocks, a platen wheel, means for moving the printing blocks successively into engagement with and over the face of the platen wheel whereby work may be fed between the platen wheel and the printing wheel to receive thereupon the imprint of printing character carried by selected printing blocks, means for varying the space between the imprint of one set of characters carried by one printing block and the second set of characters carried by the second printing block, and means for lifting the printing wheel from the platen wheel subsequent to its engagement therewith.

1,296,512. ENDLESS TRACK. HUBERT AVERY HATFIELD, London, England, assignor to H. A. H. Tractors Limited, Birmingham, England. Filed June 13, 1918. Serial No. 239,888. 3 Claims. (Cl. 21—150.)



1. In combination with a ground engaging trough of a track link for endless tracks, a cushion device for securement in said trough comprising a channel member having inwardly projecting edges, a cushion of comparatively soft material secured between the edges of said channel member and means for removably securing the cushion device in said trough.

1,296,513. TIE-PIECE FOR METALLIC REINFORCES. JOHN F. HAVEMEYER, Ardsley-on-Hudson, N. Y. Filed Nov. 12, 1913, Serial No. 800,470. Renewed Feb. 14, 1918. Serial No. 217,253. 6 Claims. (Cl. 72—122.)

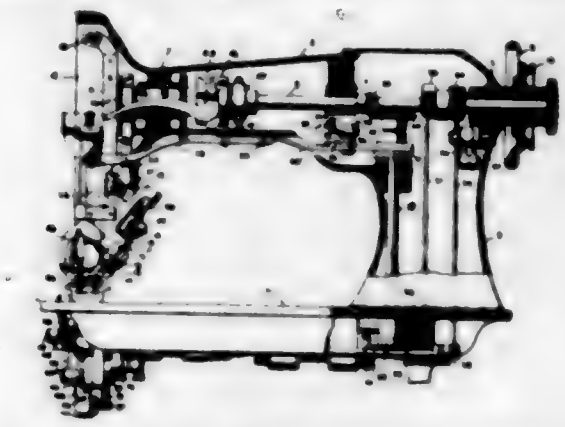


1. A tie-piece for intersecting rods in concrete construction, comprising a resilient yoke adapted to embrace one of the rods, each side member of the yoke being divided into two separate parts, thereby providing means to fit over, embrace and hold the other rod.

3. A tie-piece for intersecting rods in concrete construction, comprising resilient yokes adapted to embrace the upper rod, loops formed between said yokes for engagement with the lower rod, said loops lying in planes at right angles to the planes of said yokes, and downwardly extending projections between each yoke and loop, whereby the rods are held together and supported above the centering.

6. A combined clip and support for metallic reinforces, comprising a pair of wire yokes adapted to pass over and engage one of two intersecting rods, said yokes being extended downwardly to form supports for the rods, and a pair of loops integral with the yokes passing around the other rod, whereby the rods are firmly held together and supported above the centering.

1,296,514. BLINDSTITCH SEWING-MACHINE. THOMAS J. HAYES, Alameda, Cal., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed June 19, 1915. Serial No. 35,079. 20 Claims. (Cl. 112—24.)



1. In a blind stitch sewing machine for felling a superposed layer upon a base layer of material, comprising a work support, a curved oscillating needle and complementary stitch forming mechanism located above said work support, means for presenting the work to the needle at each penetrating oscillation thereof to cause the needle to enter and emerge from the upper surface of the base layer without passing entirely through said layer and means for directing the needle in certain predetermined oscillations to cause it in forming some of the stitches to pass through the base layer only and in other stitches first to enter the base layer and emerging from the base layer to enter the under surface of the superimposed layer and emerge therefrom at or adjacent the edge of said superimposed layer.

3. In a blind stitch sewing machine comprising a work support, a curved needle oscillating in a plane inclined to the work supporting surface of said work support, and complementary stitch forming mechanism located above the work support, work presenting mechanism including feeding mechanism and a bender, and means for causing the bender to rise at every oscillation of the needle whereby the base layer of fabric will be engaged upon each penetration of the needle.

6. In a blind stitch sewing machine comprising a work support, a needle and complementary stitch forming mechanism located and operating above the work support; work presenting mechanism including feeding mechanism, a bender and a plurality of variably operable mechanisms for actuating said bender whereby the bender will be caused to dwell during the laying of the stitch and during the feeding of the work and will be rapidly raised and lowered between said respective dwells.

7. In a blind stitch sewing machine comprising a work support, a needle and complementary stitch forming mechanism located and operating above the work support; work presenting mechanism including a bender, a bender shaft, a cam operable thereby, and differentially operable means actuated by said cam to raise and lower said bender.

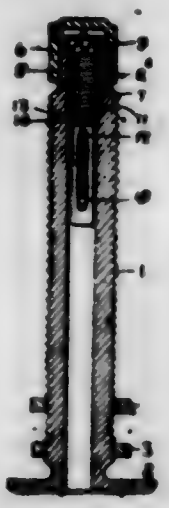
12. In a blind stitch sewing machine comprising a work support, a curved needle oscillating in planes inclined to the work supporting surface of the work support and complementary stitch forming mechanism located above the work support; work presenting mechanism including feeding mechanism, a bender, a bender supporting lever slidably mounted upon a stationary fulcrum, an actuating lever and means for adjusting the relative position of said levers.

1,296,515. POWDER-BAG CLAMP. DONALD S. HAYS, Washington, D. C. Filed July 30, 1918. Serial No. 247,466. 1 Claim. (Cl. 24—263.) (Filed under the act of Mar. 3, 1883, 22 Stat. L., 625.)



A clamping device comprising coacting body members pivotally united at one end to swing with their confronting faces in constant parallel relation, means for detachably uniting said members at their other ends, and means for adjusting said members bodily toward each other.

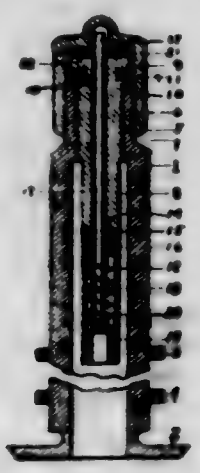
1,296,516. TIRE-VALVE. ROBERT H. HENEMIER, New York, N. Y., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 4, 1915. Serial No. 490. 3 Claims. (Cl. 152—12.)



1. In a tire valve, the combination of a tubular stem member having its outer end portion threaded to receive

a standard size coupling of an inflating device and a screw valve member for closing the stem threaded thereto and provided with an integral manipulating flange of a diameter less than said outer end portion and of slight depth to lie close to said end portion when in position so as to be freely inclosed within the coupling to permit of the connection being made independent of the valve member whereby the latter is not subjected to the strains to which the coupling is subjected, said valve member being formed with a valve seat, a normally yielding valve plunger arranged to engage the valve seat and a packing washer interposed between the valve member and the stem to form a permanent seal therebetween.

1,296,517. TIRE-VALVE. ROBERT H. HEINEMAN, New York, N. Y., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 9, 1915. Serial No. 1,224. 3 Claims. (Cl. 152—12.)



1. In a tire valve, the combination of a tubular stem member having its outer end threaded to receive a standard size coupling of an inflating device and a self contained valve unit threaded thereto and provided with an integral manipulating flange of a diameter less than said outer end portion and of slight depth to lie close to said end portion to be freely inclosed within the coupling, said valve unit being provided with a washer arranged to underlie the manipulating flange for sealing the stem by engaging the end thereof and an inwardly directed valve seat, and a yielding plunger engaging said seat.

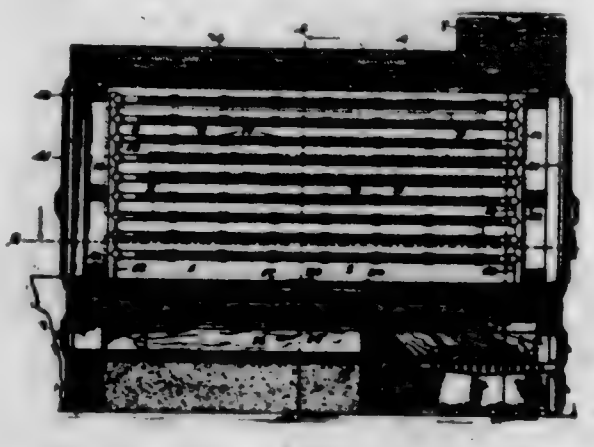
1,296,518. METHOD OF MOLDING SHEETS OF LEATHER AND ANALOGOUS MATERIAL. JOHN J. HEYS, Lynn, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Original application filed May 7, 1915, Serial No. 26,551. Divided and this application filed July 1, 1918. Serial No. 242,703. 4 Claims. (Cl. 12—146.)



1. A method of molding soles which consists in subjecting a flat sheet of leather or analogous material to a series of progressively increased pressures between suitable shaping members with an intermediate relief of pressure separating the increased pressures.

4. A method of shaping soles which consists in subjecting a flat sheet of leather or analogous material to an initial comparatively light pressure between codperating shaping members, relieving the pressure exerted by the shaping members, next applying an increased pressure for an indeterminate period, and thereafter relieving the pressure and applying a final and heaviest pressure.

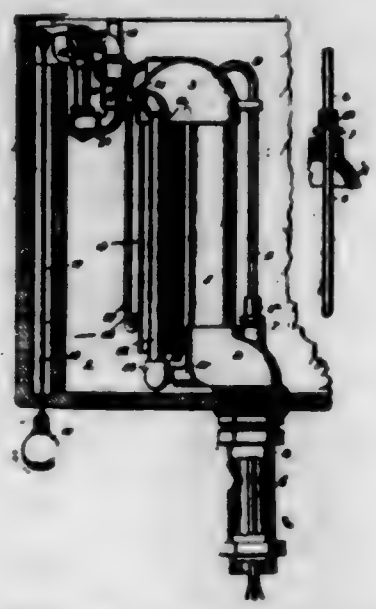
1,296,519. DRIER AND EVAPORATOR. DAVID HILL and JOHN A. MISSONEY, Sr., San Francisco, Cal., assignors to Frank E. Tiscornia, San Francisco, Cal. Filed Oct. 8, 1917. Serial No. 196,342. 13 Claims. (Cl. 34—46.)



1. A drier and evaporator comprising a heated oven to receive perishable produce; means for sustaining the produce in layers; means for directing separate streams of warm dry air from one side of the oven to the other and between the layers of produce; means for removing the air from the oven directly it has passed over the produce, drying and returning the air to the oven; and means for reversing the direction of the air streams; and means for sulfurating the air before returning same to the oven.

2. A drier comprising a heated oven to receive produce to be dried and evaporated; means for delivering separate streams of warm, dry air directly across the oven; means for removing the air from the oven, drying and returning said air to the oven through the delivering means; and means for sulfurating the air before returning same to the oven.

1,296,520. FLUSH-TANK MECHANISM. WINFIELD E. HINSDALE, Trenton, N. J., assignor to The Trenton Potteries Company, Trenton, N. J., a Corporation of New Jersey. Filed Dec. 14, 1917. Serial No. 207,102. 12 Claims. (Cl. 4—5.)



1. In combination with a tank, a siphon therein; a fitting or pipe extending from the downleg thereof; and an air vent tube extending through the fitting and having its lower end spread or coned.

1,296,531. ASH-RECEPTACLE. CLINTON MARVIN HOGUE, Richmond, Va. Filed Sept. 6, 1918. Serial No. 252,934. 3 Claims. (Cl. 181—51.)

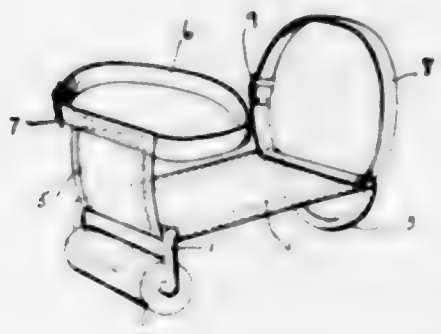
1. An ash receptacle comprising a hopper with one side adapted for adjustment against the edge of a shelf-like

support and having a lateral abutment lug to rest upon the support; a base plate on the bottom of the hopper and through which it discharges, said plate extending laterally so as to project beneath the support to which



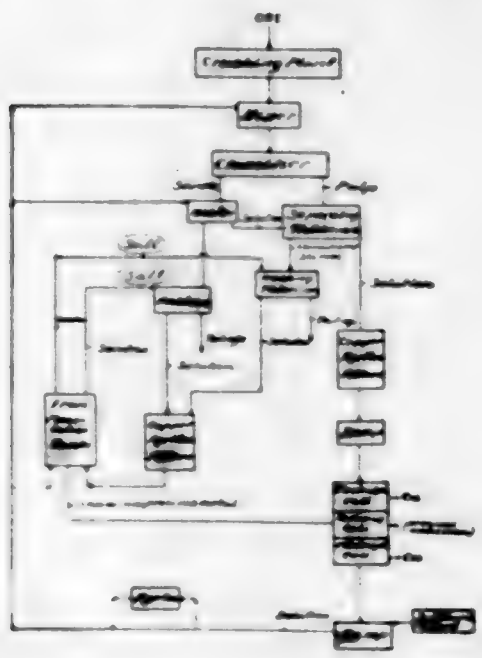
the hopper may be applied; means coöperative with the lug to clamp the hopper *in situ;* and a bowl detachably connectible to the plate to extend, with it, beneath the support.

1,296,522. KNEE-PAD. WALTER R. HOLSEY, Corsicana, Tex. Filed Sept. 10, 1917. Serial No. 190,423. 1 Claim. (Cl. 2—130.)



In a device of the character described, a frame of wire bent downwardly at its forward end then inwardly to form a rod, the body of the frame bent at the rear to form a half circle to rock laterally on the ground, a cloth partly covering the frame to form a pad and a roller revolving on the rod at the front end of said frame.

1,296,523. PROCESS FOR TREATING ORES. JOSEPH IRVING, Bisbee, Ariz. Filed Jan. 27, 1917. Serial No. 144,890. 11 Claims. (Cl. 204—15.)



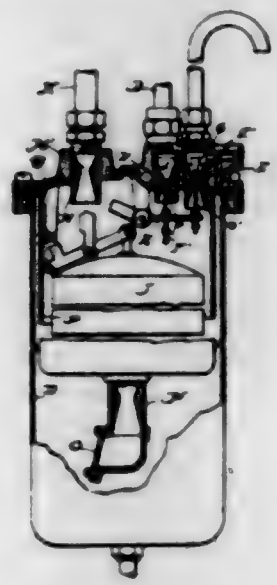
1. In the treatment of cupriferous ores, compounds or products subjecting the ore to the action of iron-containing electrolyte from the copper depositing tanks, removing the electrolyte and removing the copper therefrom, washing the treated ore with an iron-containing solution, passing the said solution over iron, thereby reducing the iron salts contained therein and precipitating copper therefrom, and again washing treated ores with the said solution.

4. In the treatment of cupriferous ores, compounds or products, subjecting the ore to the action of the iron-containing electrolyte from the copper depositing tanks, reducing the iron salts contained therein, depositing the copper therefrom electrolytically and thereby re-oxidizing the iron contained therein, increasing the iron content of the electrolyte and then again treating ore with the resulting liquid.

6. In the treatment of cupriferous ores, compounds or products, subjecting the ore to the action of iron-containing electrolyte from the copper depositing tanks, reducing the iron salts contained therein, depositing the copper therefrom electrolytically and thereby re-oxidizing the iron contained therein, passing a part thereof over metallic iron and replenishing the volume of the electrolyte, thereby diminishing its content of foreign salts, again treating the ore with the resulting liquid, and utilizing the liquid resulting from the precipitation with iron to wash ore previously treated with electrolyte.

11. In the treatment of cupriferous ores, compounds or products, containing precious metals, subjecting the ore to the action of iron-containing electrolyte from the copper depositing tanks, removing the electrolyte, washing the thus treated ore with a solution containing iron and chlorids, then passing said solution over iron, thereby reducing the iron contained therein and precipitating copper and the precious metals, removing the precipitate and treating the electrolyte from the treatment of the ore therewith, thereby reducing the iron contained in said electrolyte and dissolving the copper, recovering the precious metals from the residual sludge and depositing the copper in said electrolyte electrolytically.

1,296,524. VACUUM FUEL-FEED DEVICE. WEBB JAY, Chicago, Ill. Filed Apr. 26, 1918. Serial No. 230,961. 6 Claims. (Cl. 158—36.)



1. In a vacuum fuel feed device for internal combustion engines, the vacuum chamber having an atmosphere inlet and a suction connection; a valve controlling the atmosphere inlet, and means for operating said valve according to the level of the liquid in the chamber, the passage constituting said atmosphere inlet being in the form of a Venturi tube having the more abrupt taper at its outer end.

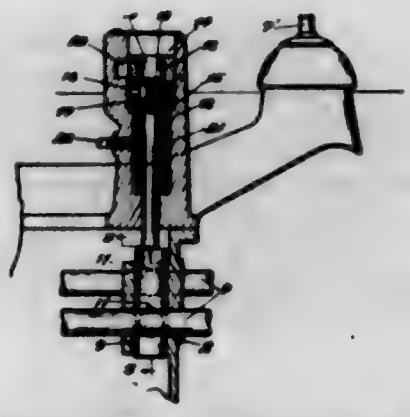
2. In a construction such as set out in claim 1 foregoing, the valve for closing the atmosphere inlet passage being positioned in the outer tapered portion of the Venturi tube for seating inwardly, and being of sharper taper than said outer portion of the venturi.

1,296,525. BUILDING-SLAB. EMANUEL JENSEN, Frederiksberg, near Copenhagen, Denmark. Filed Mar. 4, 1918. Serial No. 220,283. 1 Claim. (Cl. 72—124.)



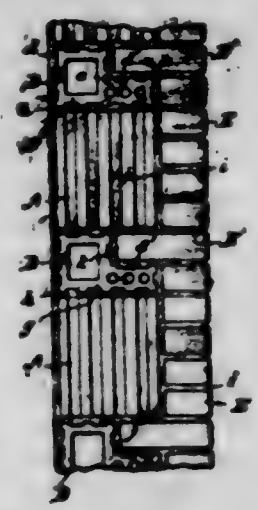
A building slab or lathing material comprising a plurality of wooden laths having means binding them together in spaced relation, each of said laths having a flat surface on one of its sides extending the width thereof, and provided with a groove, and a plastic filling material covering the laths and occupying the space therebetween, said filling material being anchored to the laths by the binding means and said grooves, and a second covering of material overlying one side of the slab, said material presenting a roughened surface whereby a coat of finishing material may be applied thereto.

1,296,526. VACUUM-OPERATING LOCK. GEORGE C. JENSEN, Oakland, Cal. Filed Dec. 24, 1918. Serial No. 268,194. 6 Claims. (Cl. 70—126.)



1. In combination with a movable member, an internal combustion motor associated therewith, a lock associated with said movable member, and adapted when in operative position for locking said member from movement, a connection between said lock and motor whereby the vacuum created in the motor during the operation thereof maintains said lock in inoperative position, means for throwing said lock to operative position on the interruption of the vacuum due to the stopping of the motor and releasable means for locking said lock in its later position.

1,296,527. BUILDING CONSTRUCTION. ROWLAND P. KRAMER, New York, N. Y., assignor to National Fire Proofing Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 21, 1916. Serial No. 92,562. 8 Claims. (Cl. 72—41.)



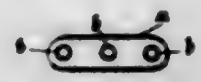
1. In building construction, a wall embodying courses of cellular tiles the openings in which extend vertically so as to open through the top and bottom of said tiles, hollow stepped tiles the openings in which extend horizontally, each stepped tile comprising a plurality of members one of which exceeds the other in height and provided with a continuous bottom slab common to the two members, and a facing composed of brick which includes header courses the latter being in overlapping relation to and bonded with the smaller members of said stepped tiles.

1,296,528. AEROPLANE. JOHN F. KINNEY, Humboldt, Kans. Filed Feb. 16, 1917. Serial No. 149,064. 4 Claims. (Cl. 244—29.)



4. The combination with the controlling surfaces of an aeroplane, of a pendulum, means whereby said pendulum is adapted for controlling said surfaces, and a manually operable lever having divergent extensions adapted to be projected into the path of movement of the pendulum to limit the controlling action of the pendulum to a desired degree.

1,296,529. SHOE AND STIFFENER-STRIP FOR THE UPPERS THEREOF. FRANK KOBSTER, New York, N. Y. Filed Aug. 4, 1917. Serial No. 184,888. 6 Claims. (Cl. 36—50.)



1. As an article of manufacture, a laced-shoe having a thin, highly flexible resilient stiffening-strip secured to the shoe-upper along each side of the lace-slit, provided with a plurality of apertures, for the reception of the shoe-lace.

5. As an article of manufacture, a stiffening-strip for stiffening shoe-uppers which is provided with perforations, and adapted to be secured to the shoe-upper, adjacent to the securing or lace-slit, by having passed therethrough, as well as through the fabric of the shoe-upper, the securing-members, or lace-eyelets; such stiffening-strip being composed of thin, highly flexible, resilient material.

1,296,530. SHOE AND STIFFENER-STRIP FOR THE SAME. FRANK KOBSTER, New York, N. Y. Filed Sept. 11, 1917. Serial No. 190,730. 4 Claims. (Cl. 36—50.)

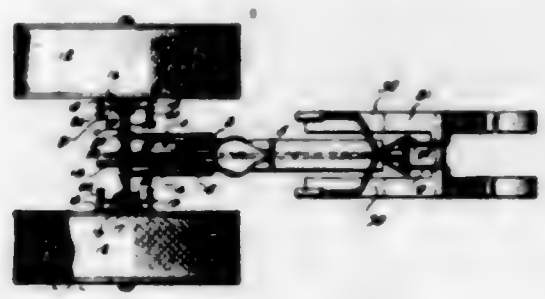


1. As an article of manufacture, a thin, highly flexible, resilient stiffener strip for shoes, adapted to be secured between the plies of the fabric of the upper adjacent to the bottom end of the closure-slit, and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge.

2. As an article of manufacture, a thin, highly flexible, resilient stiffener-strip for shoes, adapted to be secured between the plies of the fabric of the upper adjacent to

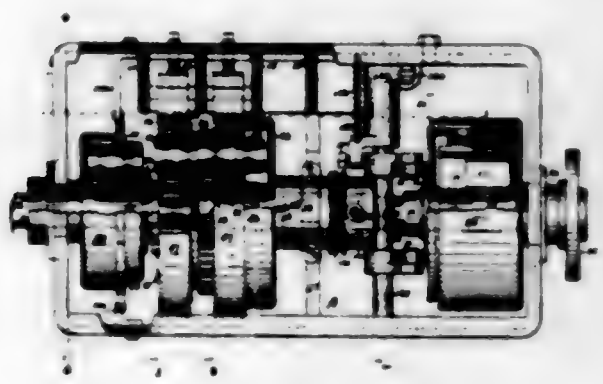
the bottom end of the closure-slit and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge, such stiffener-strip being provided with one or more projecting securing end portions formed integral therewith, and having the main body portion thereof curved.

1,296,531. AUTOSLEIGH. MARTIN LANDBY, JOHN LANDBY, and ANDREW LANDBY, Swift, Minn. Filed June 27, 1918. Serial No. 242,260. 1 Claim. (Cl. 180—6.)



An attachment for vehicles comprising a frame, an axle in said frame, traction wheels loosely mounted on said axle, heads keyed upon said axle and adapted to move into contact with said wheels, posts extending from said wheels, a plate on each head slidably engaged with said posts, springs on said posts forcing said plates toward said wheels, nuts for regulating the tension of said springs, a pair of levers on said frame, cords connecting said levers with said heads, and means for attaching said frame to a vehicle.

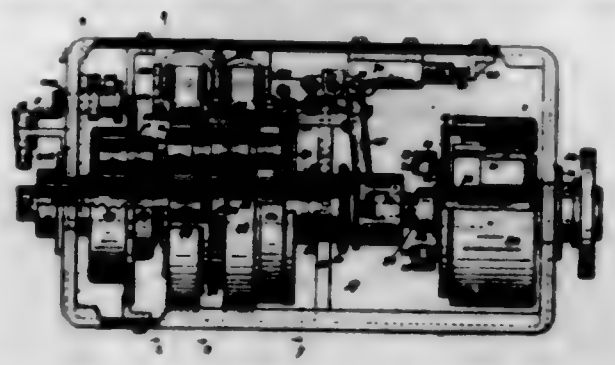
1,296,532. CHANGE-SPEED TRANSMISSION-GEARING. ABRAHAM B. LANDIS, Enfield, Pa. Filed July 11, 1916. Serial No. 108,739. 21 Claims. (Cl. 74—34.)



1. A change speed gearing comprising driving and driven elements, a frictional clutch connecting said elements, revoluble housings on said driven element, a set of change speed gearing in each of said housings, gripping devices on said housings to hold an element of the set of change speed gearing stationary, means for automatically closing and locking said gripping devices, and means for automatically resetting the frictional clutch, substantially as described.

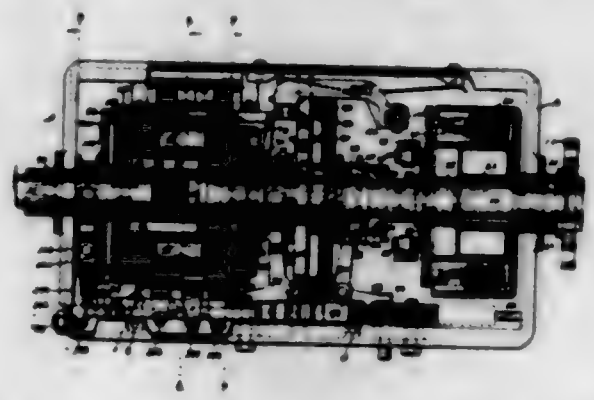
1,296,533. CHANGE-SPEED TRANSMISSION. ABRAHAM B. LANDIS, Enfield, Pa. Filed Dec. 15, 1916. Serial No. 137,253. 14 Claims. (Cl. 74—34.)

1. A change speed gearing comprising a casing, a shaft journaled therein, a source of power, a frictional clutch coupling said shaft with said source of power, speed elements mounted on said shaft, grip bands encircling said speed elements, pressure devices by which said grip bands are compressed to hold one of the members of said speed elements, actuating means by which said pressure devices



are made effective to compress and release said member of the speed elements, substantially as set forth.

1,296,534. CHANGE-SPEED TRANSMISSION-GEARING. ABRAHAM B. LANDIS, Enfield, Pa. Filed Jan. 15, 1916, Serial No. 72,237. Renewed July 31, 1918. Serial No. 247,673. 29 Claims. (Cl. 74—34.)



1. A change speed gearing comprising a casing, two shafts in alinement with each other, a frictional clutch, one of said shafts having a driven clutch member of said frictional clutch secured thereon coupling with a driving clutch member connected with the source of power, said shaft having a frictional brake thereon to check or stop its motion when said frictional clutch has been released, a revoluble housing on said shaft, change speed gearing mounted on said housing, means to connect said housing with the other of said shafts through said change speed gearing, substantially as specified.

5. A change speed gearing comprising two shafts in alinement, a revoluble housing loosely mounted on said shafts, change speed gearing in said housing, a frictional clutch connecting the first driven of said shafts with the source of power, means on said shaft to check or stop its motion when the frictional clutch is released; means for coupling and uncoupling said shaft to said housing, means for coupling and uncoupling said housing with the second driven shaft and means for resetting the frictional clutch, substantially as specified.

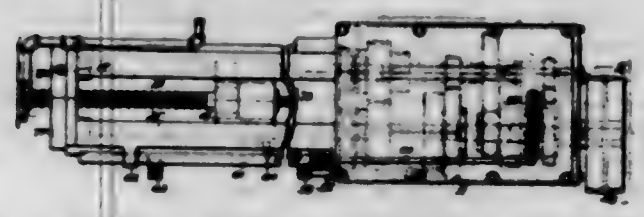
7. A change speed gearing comprising two shafts in alinement, a frictional clutch connecting one of said shafts with the source of power, a revoluble housing loosely mounted on said shaft, change speed gearing mounted in said housing, means to couple and uncouple said housing with said shaft, a sliding cam bar by which said means are actuated, means for securing the correct position of said bar for the different speeds and means for moving said cam bar, substantially as specified.

14. A change speed gearing comprising a casing, two shafts in alinement journaled therein, a frictional clutch coupling the first driven said shafts to the source of power, means on said first driven shaft to check or stop the motion thereof automatically when the said frictional clutch has been released, a revoluble housing loosely mounted on said shaft, change speed gearing mounted in said housing, means for engaging any of the change speed gearing with said first driven shaft, means by which any

of the change speed gearing by their engagement with the said shaft brings means into action which automatically closes or sets the said frictional clutch, substantially as set forth.

23. A change speed gearing comprising a casing, a revoluble housing mounted upon a shaft journaled in said casing, speed change elements mounted in said housing, a frictional clutch coupling said shaft with the source of power, a lever secured to a shaft journaled in said casing, means by which said clutch can be closed by the movement of said lever by foot pressure, means by which the same can be automatically closed by the rotary motion of the driven elements through means of a cam secured to said lever which engages the frictional clutch, a cam bar, means upon which said bar acts by which the said friction clutch is disengaged, the motion of said shaft is checked or stopped through a brake mechanism, the driving action changed from one speed element to another and automatically reëngages said frictional clutch by the power in the elements, substantially as specified.

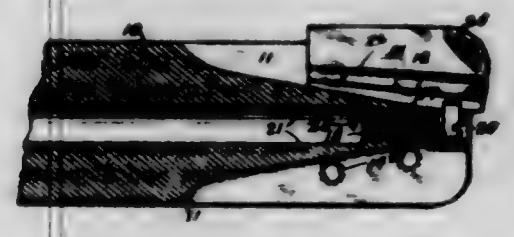
1,296,535. BROACHING-MACHINE. RALPH R. LAPOINTE, Hudson, and BENJAMIN F. LEVY, Boston, Mass. Filed Mar. 3, 1917. Serial No. 152,413. 14 Claims. (Cl. 90—33.)



1. A broaching machine, comprising a broach draw head, a plurality of operating screws engaged therewith at spaced apart points, and means for operating said screws in unison, said draw head having provision to receive and hold for operative movement the end of a broach substantially in a median line between said screws and in the horizontal plane thereof.

14. A broaching machine, comprising a broach draw head, a plurality of spaced apart and geared together screws operatively engaged with said head, each of said screws having a shaft extension and change gear drive mechanism including a series of spaced apart gears of diverse sizes rotatably fitted on one of said shaft extensions, and a set of gears slidably keyed on the other of said shafts and selectively engageable with the first mentioned series of gears whereby said screws may be driven at any one of a range of selective speeds.

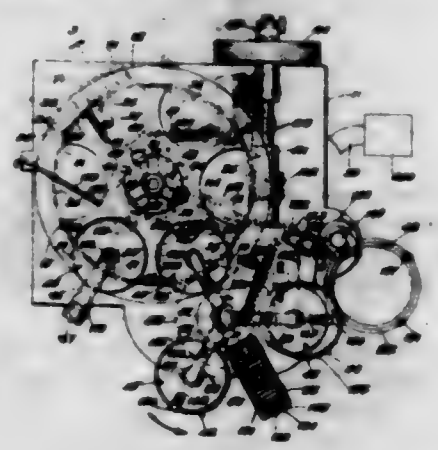
1,296,536. EXPANDING-REAMER. JOSEPH P. LEECH, Buffalo, N. Y. Filed Nov. 20, 1916. Serial No. 132,459. 11 Claims. (Cl. 77—75.)



1. A reamer blade formed with a cutting edge and with a groove extending longitudinally of said cutting edge and varying in depth at different points throughout its length.

1,296,537. CAN-COVER-APPLYING MECHANISM. LEVI W. LOUNSBURY, Waltham, Mass. Filed Feb. 5, 1915. Serial No. 6,855. 8 Claims. (Cl. 113—1.)

1. In a can covering machine, the combination of a can support, a cover carrier, mechanism for reciprocating said cover carrier, and means for moving the said cover carrier in a plane other than that in which it is reciprocated to cause it automatically to take a cover from the said reservoir and carry it to the said applier, mechanism for reciprocating said cover applier, and means for moving the same in a plane other than that in which it is reciprocated to cause it automatically to take a cover from the said cover carrier, carry it to a can on the said support, and apply it to said can.



3. In a cover applying machine, the combination of a can support, a cover applier, cover gripping mechanism thereon, a cover reservoir, a cover carrier, suction mechanism for gripping a cover on said carrier, means for automatically releasing a cover from said carrier, mechanism for reciprocating said carrier, and means for moving the same in a plane other than that in which it is reciprocated to cause said carrier to take a cover from said reservoir and convey it to a position to be taken by said cover applier, mechanism for reciprocating said cover applier, and means for moving it in a plane other than that in which it is reciprocated to cause it to take a cover from said cover carrier, move with it to a can on said support, and apply it thereto.

6. In a machine of the character described, a rotating holder for cans which stops at intervals during its rotation, a label reservoir, an adhesive applying device, a revolving cover applier which stops at intervals during each revolution once above a can in said holder while the holder is stationary, once above said label reservoir and once at a point at one side of said holder and said adhesive applying device, said adhesive applying device being located adjacent the path of revolution of said applier, a cover reservoir, a cover carrier movably mounted to convey a cover from said cover reservoir to a point adjacent that at which said applier stops when adjacent said adhesive applying device label and cover gripping mechanism on the said cover applier, means for reciprocating said applier to and from said label reservoir, said can holder and said cover carrier when in a position adjacent each whereby said cover applier picks up a label from said reservoir, wipes it over the adhesive applying device, picks up a cover from said cover carrier and applies the label and cover to a can, and a presser acting upon the label and cover after the cover has been placed on a can.

8. In a machine of the character described, the combination with a can holder of a traveling cover applier, comprising a head having holes in the surface thereof with which the cover contacts, means for creating a suction therethrough, and a spring about the edge of the head to assist in holding the cover in place against the head.

1,296,538. LOCK. ROLLIN C. LEWIS, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 2, 1918. Serial No. 243,066. 2 Claims. (Cl. 70—58.)

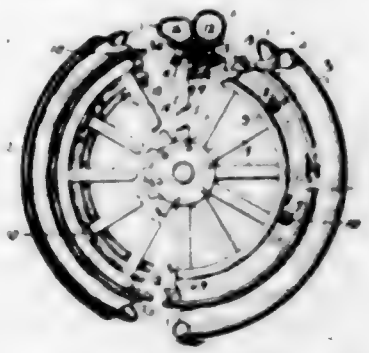
1. In a lock, the combination of a lock case open at the rear and provided with a plurality of slots, communicating with said opening, and a locking flange on the lock case adjacent each slot, a cover plate having an inwardly projecting circular flange adapted to make a close fit with the opening in the lock case and provided with a plurality of outwardly projecting lugs adapted to enter the slots in the lock case and by a turning movement of the cover

plate be carried behind the locking flanges on the lock case for holding the cover plate against outward displacement and a spring pressed plunger carried by the lock case transversely of the latter and projecting from the rear



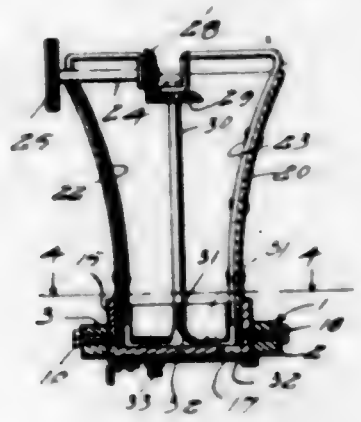
face of the lock case and in a position to be engaged by the cover plate and enter a hole in the latter for preventing rotation of the cover plate, the free end of said plunger being exposed and accessible at the rear of the lock case.

1,296,539. AUXILIARY RIM AND TIRE. JOHN V. LOEFFLER, Evansville, Ind. Filed Feb. 25, 1918. Serial No. 219,013. 7 Claims. (Cl. 152—23.)



7. In combination with a motor vehicle wheel carrying a pneumatic tire, a detachable felly having a tire rim, hook-bolt members carried by the felly to engage the spokes of said wheel, one terminal of each bolt member provided with threads and enlarged, an irremovable nut on each bolt member, an adjusting ring for said felly to enable adjustment thereof to various sizes of wheels, and lining to prevent marring of the finish of the wheel structure.

1,296,540. PLANTER. CHARLES S. LONG, Toledo, Ohio. Filed Nov. 14, 1917. Serial No. 201,988. 1 Claim. (Cl. 221—120.)



In a planter structure, a supporting frame, a hopper bottom carried by said supporting frame and having a dispensing opening therein, a hopper carried by said hopper bottom, a bearing bracket carried by said hopper, a vertical shaft supported by said bracket and extending downwardly within said hopper, a plurality of radiating blades mounted upon the lower end of said vertical shaft and having their lower edges curved for guiding seed downwardly toward the bottom of the hopper, means for rotating said shaft, a seed plate provided with a plurality of openings of different diameter slidably positioned beneath the hopper bottom, a set screw for holding the seed plate in adjusted position for regulating the opening which alines with the opening of said hopper bottom.

1,296,541. LOCOMOTIVE-STOKER. NATHAN M. LOWRY, Pittsburgh, Pa., assignor to Locomotive Stoker Company, a Corporation of Pennsylvania. Filed May 9, 1918. Serial No. 233,453. 3 Claims. (Cl. 198—18.)



1. In combination, a locomotive, a tender, means mounted on the locomotive for delivering fuel into the fire-box thereof, a laterally movable saddle block carried by the tender, and a conduit connected with the delivering means and being mounted and longitudinally movable upon the saddle block.

3. In combination, a locomotive, a tender, means mounted on the locomotive for delivering fuel to the fire-box thereof, a laterally movable saddle block carried by the tender and having its upper face channeled, a conduit connected with the delivering means and being slidably supported within the channel of the saddle block, such channel and the transverse contour of the bottom of the conduit being complementary in form.

1,296,542. SPRAY-NOZZLE. JAMES W. MCCONNELL, Washington, D. C., assignor to the Government of the United States. Filed May 23, 1918. Serial No. 236,242. 2 Claims. (Cl. 137—57.)

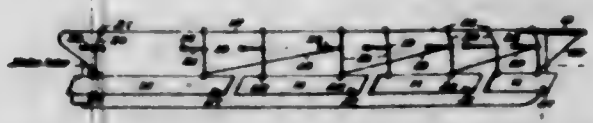


1. A spray nozzle for the combustion flask of torpedoes, comprising a head member, a flange formed integral with said head member and defining with said head member a chamber open at one end, said head member being provided with a plurality of passages communicating with said chamber and having their longitudinal axes parallel to the longitudinal axis of the head member and disposed so that the points of their peripheries at the greatest radial distance from the center of the head member is tangent to the inner periphery of said chamber, and a dispersion member secured to said head member having dispersion surfaces projecting above said passages.

1,296,543. TORPEDO-GUARD. JAMES OTIS MCINTOSH, Milford, Utah. Filed June 11, 1917. Serial No. 174,666. 3 Claims. (Cl. 114—240.)

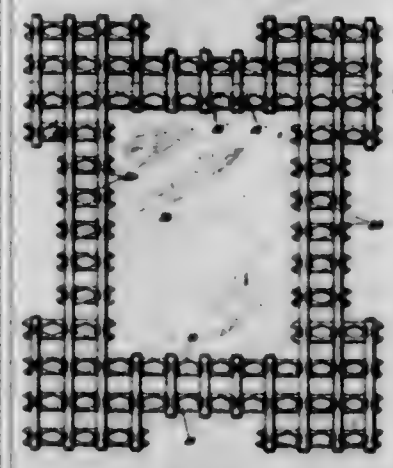
1. The combination with a vessel having a towing boom at the bow thereof, of a plurality of guard fenders disposed in tandem formation along the side of the vessel, flexible supporting means for each fender attached to each fender at spaced points, near each end thereof, spacing booms en-

guging the flexible supports for holding the fenders spaced away from the sides of the vessel, a main tow line attached to the towing boom and to the forward fender of the se-



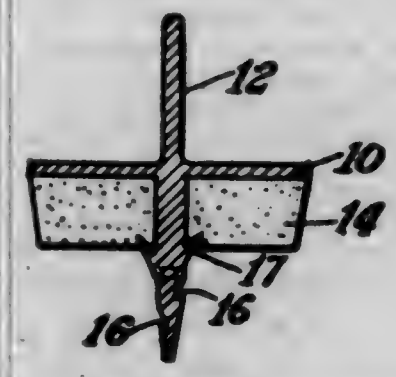
ries adjacent the forward end of said fender, and auxiliary tow lines connecting each succeeding fender with one of the spacing booms of the adjacent preceding fender.

1,296,544. PICTURE-FRAME. JOHN MALKEVIC, Amsterdam, N. Y. Filed July 19, 1918. Serial No. 245,625. 2 Claims. (Cl. 40—155.)



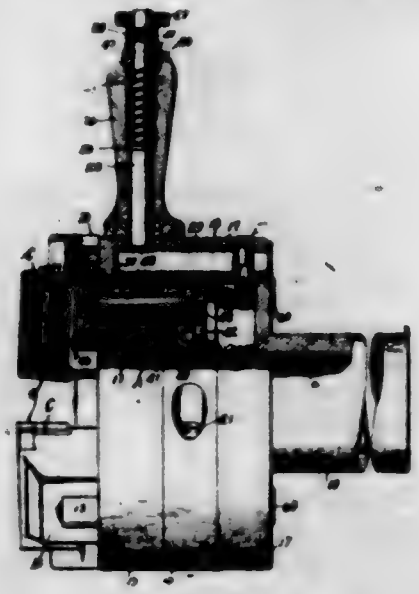
2. In a picture frame, the combination with a plurality of longitudinally disposed pairwise arranged bars having transverse recesses, a similar plurality of recessed transverse bars arranged at the end of said longitudinal bar, recessed connecting elements engageable with said transverse and longitudinal bars respectively, the connecting elements at the upper portion of said frame being placed so as to permit the insertion of a plate, and means formed with the backs of said connecting elements adapted to hold said plate against lateral or longitudinal movement.

1,296,545. COMBINED EXTRACTOR FOR CLOSURES FOR BOTTLES, &c., AND STOPPERS. ROBERT J. MALONEY, Holyoke, Mass. Filed Dec. 26, 1916. Serial No. 138,778. 1 Claim. (Cl. 215—53.)



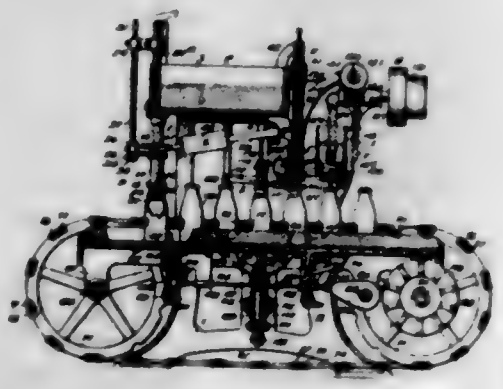
A combined stopper and disk extractor consisting of a disk having an integral handle projection extending from one side thereof an integral tapered shank extending from the opposite side thereof, a closure member mounted on said shank and against the under side of the disk, the closure member being held against the under side of the disk by prongs formed on said shank, said shank being formed with upwardly inclined notches located at longitudinally spaced points on opposite sides thereof, the disk serving to limit the movement of the closure in one direction and the prongs serving to limit the movement of the closure in the opposite direction.

1,296,546. DIE-HEAD. DANIEL J. MILLER, Waynesboro, Pa., assignor to Landis Machine Company. Filed July 22, 1918. Serial No. 246,184. 7 Claims. (Cl. 10—100.)



5. A cutter-head comprising a shank for mounting the same on the machine turret and formed with an outer ring-frame, a body mounted to turn within said ring-frame, a second ring mounted on said body adjacent to said ring-frame and held from independent turning movement but mounted to have a short sliding movement toward and from said ring-frame, a tangential screw mounted in said second ring and engaging threads in the adjacent side of said body, whereby said body may be turned to secure different circumferentially adjustments and held in any adjustment desired, another ring mounted alongside said second ring to have a limited independent turning movement, a handle on said ring, a latch in said handle, a latch-pin carried by said ring-frame and having a notch with which said latch is adapted to engage, trunnions mounted in said body, cutter-holders mounted to rock on said trunnions, springs for normally holding said cutter-holders to open the die, a connection between said cutter-holders and said last mentioned ring, the engagement between the latch and latch-pin being such that when the body is drawn away from the ring-frame slightly the latch will ride out of the notch in said latch-pin and allow the die to open automatically under the expansion of said springs, means for returning the parts to closed position, and means for separating the parts near the finish of the work, substantially as set forth.

1,296,547. BOTTLE-HANDLING APPARATUS. JOHN C. MILLER, Covington, Ky., assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of Ohio. Original application filed Aug. 24, 1903, Serial No. 170,645. Divided and this application filed Apr. 16, 1917. Serial No. 162,537. 5 Claims. (Cl. 198—6.)



1. In apparatus of the class described, the combination of a support, a plurality of transverse bars for

moving the bottles over said support, a plurality of members connected to one side of each bar and movable relative thereto independently of each other, each said member being recessed to engage a bottle, and a pair of springs interposed between the opposite ends of each said member and the adjacent transverse bar and tending to move the member therefrom, whereby said member may engage one wall of a bottle and hold it in engagement with the opposing wall of the other bar while moving it over said support.

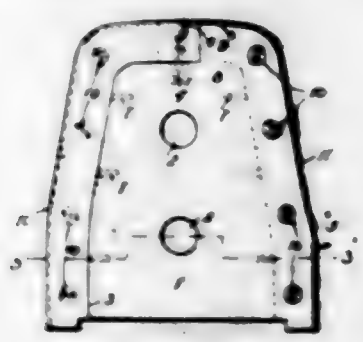
3. In apparatus of the class described, the combination of a support, and means for moving bottles over said support, said means including pairs of transverse bars, pairs of pins projecting horizontally from one side wall of each bar, a jaw slidably mounted at its opposite ends on each pair of said pins and adapted to engage a bottle, and a spring normally tending to move the jaw away from the adjacent bar to maintain the bottle against the opposing wall of the other bar.

1,296,548. DEVICE FOR MAKING AND FORMING CIGARETTES. HECTOR J. MONDOR, Holyoke, Mass. Filed July 3, 1918. Serial No. 243,690. 3 Claims. (Cl. 131—5.)



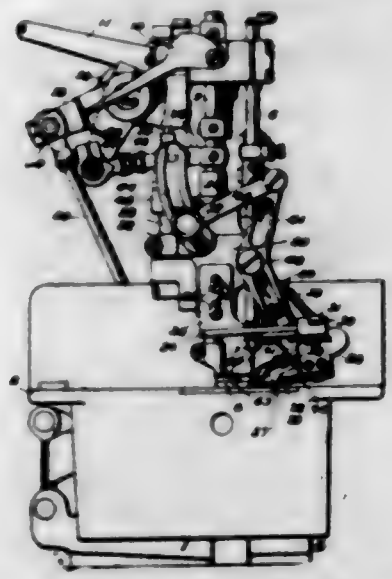
1. A device for the purpose described, comprising a tubular member for receiving the paper casing of the cigarette, means for temporarily closing one end of the member, a removable spout or funnel formed with a split part to frictionally engage the outer upper end of the tubular member to retain the same in place on the tubular member and a delivery end entering the upper end of the tubular member for directing the flow of the contents of the cigarette into the paper casing of the cigarette.

1,298,549. CUTTER. HARRY MUNDY and ALBERT STOCK, Montreal, Quebec, Canada; said Mundy assignor to said Stock. Filed Dec. 10, 1917. Serial No. 206,821. 1 Claim. (Cl. 77—58.)



A cutting tool of the type described, including a body member, with its lateral and forward edges provided with grooves formed in upper and lower opposite edges thereof, respectively, the forward central edge of said body member having an oblique-walled recess communicating with said grooves, said oblique-walled recess having a bore extending inwardly therefrom, said grooves having their inner walls each provided with a plurality of recesses, and cutting tips filling said grooves, recesses and bore, said tips each having a cutting nose positioned in said oblique-walled recess.

1,296,550. RUFFLING SEWING-MACHINE. LANSING ORDEMDONK and AUGUST J. WOHLPART, New York, N. Y., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 21, 1915. Serial No. 57,090. 12 Claims. (Cl. 112—16.)



1. The combination of a work support, an overhanging arm, stitch forming mechanism including a needle, means for gathering a fabric in advance of the needle including a gathering blade, a separating blade coöperating with the gathering blade, a folder for turning the edge of the fabric to be gathered, said folder being independent of the separating blade and disposed above the same, and means for suspending said separating blade and folder from the overhanging arm whereby a clearance space is provided between the separating blade and the work support, said supporting means for the separating blade and folder including devices whereby said separating blade and folder may move at the will of the operator away from the needle and to one side of the line of feed.

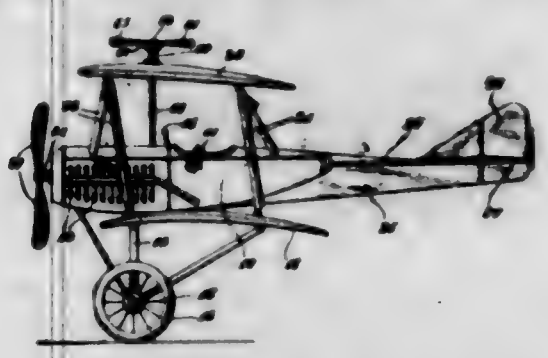
3. The combination of a work support, an overhanging arm, stitch forming mechanism including a needle, a presser foot, a presser bar carrying said presser foot, a bracket mounted on the presser bar and through which said presser bar is movable, means for holding the bracket from movement with the presser bar, a lever pivoted to said bracket, means for vibrating said lever, and a gathering blade carried by said lever.

7. The combination of a work support, an overhanging arm, stitch forming mechanism including a needle, a bracket supported by said overhanging arm, a lever pivoted to said bracket, a gathering blade pivoted to said lever for gathering the fabric in advance of said needle, a slotted segment carried by said bracket, a link pivoted at one end to said lever and having an adjustable connection with said slotted segment, a rock shaft carried by said overhanging arm, means for rocking said shaft, said rock shaft having a depending arm at its outer end, and a link for connecting said depending arm to said slotted segment.

1,296,551. AEROPLANE. DANIEL PECHER, Princeton, British Columbia, Canada, assignor of one-third to Tom Guyton and one-third to Joseph Pawlick, Princeton, British Columbia, Canada. Filed Sept. 28, 1918. Serial No. 256,010. 1 Claim. (Cl. 244—15.)

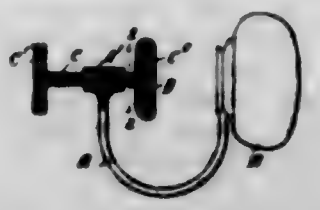
In a flying machine, the combination with a hollow casing, a motor carried therein, a horizontal shaft operated by said motor and a propeller at the front of said casing driven by said shaft, of a vertical shaft mounted

in said casing extending thereabove, a sleeve on the end of said vertical shaft, a gear carried on said sleeve, a second gear carried on the end of said horizontal shaft, means for connecting and disengaging said gears, means for raising or lowering said vertical shaft, a collar fixed upon the upper extending end of said vertical shaft, lugs



extending outward from said collar, a pair of opposed blades pivoted in said lugs, links engaging with said blades extending convergingly downward, and a collar with which the ends of said links are engaged whereby when said vertical shaft is raised said blades are caused to assume an angular position.

1,296,552. EAR-RING. JOSEF PESCHAR, Brooklyn, N. Y. Filed June 15, 1916. Serial No. 103,771. 1 Claim. (Cl. 63—14.)



An ear-ring comprising a body member provided with a screw-threaded portion, an adjusting member provided with a screw-threaded shank fitting said threaded portion of the body member, an outer head rigid with said shank and serving as a handle for turning it, a disk located at the inner end of said shank and rigid therewith, and a clamping member mounted to turn on said disk and comprising a clamping disk located adjacent to the inner face of the first-named disk and an inturned portion extending from the edge of the clamping disk around the edge of the first-named disk to the outer face of said first-named disk.

1,296,553. PROCESS FOR REMOVING NATURAL ENAMEL FROM THE SURFACE OF RATAN, &c. AXEL FRANCK-PHILIPSON, Chicago, Ill. Filed May 31, 1916, Serial No. 100,923. Renewed Jan. 25, 1919. Serial No. 273,169. 6 Claims. (Cl. 92—10.)

1. The hereindescribed process for removing the natural enamel from the surface of rutan and the like which consists in subjecting said material to the action of an alkaline hydrate solution containing silicate of soda.

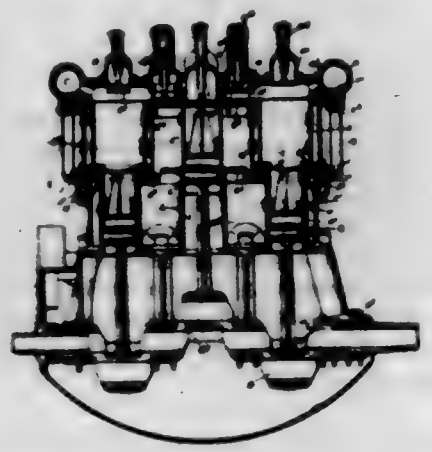
1,296,554. CUTTING MECHANISM. FRANK B. REDINGTON and MICHAEL J. MILMOE, Chicago, Ill., assignors to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Original application filed Mar. 22, 1913, Serial No. 756,087. Patent No. 1,133,668, dated Mar. 30, 1915. Divided and this application filed June 3, 1914. Serial No. 842,581. 5 Claims. (Cl. 164—68.)

1. A cutting mechanism of the character described, having, in combination, a rotary blade, a relatively stationary blade, means for feeding a strip of paper or similar material across the path of rotation of said rotary blade and maintaining the plane of said strip substantially parallel to the axis of rotation of said blade in the neighborhood of said blades, said rotary blade having its axis disposed perpendicular to the edges of said strip and having its cutting edge extending at an angle causing the



point of shearing action to progress across the strip and to advance with the motion of the strip, whereby said blades will sever said strip along a line perpendicular to the edges of said strip.

1,296,555. INTERNAL-COMBUSTION ENGINE. HARRY RALPH RICARDO, London, England. Filed Aug. 15, 1917. Serial No. 186,275. 17 Claims. (Cl. 60—15.)

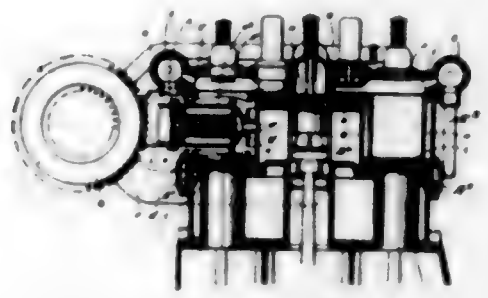


1. In an internal combustion engine the combination of two cylinders each formed with a pump chamber at one end, a piston in each cylinder, means for conveying successive gaseous charges from these pump chambers to the combustion chambers of these cylinders wherein these charges form part of the main charges and as such are further compressed and subsequently ignited, a third cylinder formed with a pump chamber at one end and a working chamber at the other end, a piston in this cylinder, means for conveying gaseous charges from this third cylinder pump chamber to the combustion chambers of the first two cylinders in turn wherein these charges form a considerable part of the main charges and as such are there further compressed and subsequently ignited, and valve-controlled passages between the combustion chambers of the first two cylinders and the corresponding working end of the third cylinder through which passages the products of combustion after partial expansion in the first two cylinders pass in turn into the third cylinder wherein further expansion takes place and the gases perform work on the piston during each outstroke thereof as set forth.

1,296,556. INTERNAL-COMBUSTION ENGINE. HARRY RALPH RICARDO, London, England. Filed Aug. 15, 1917. Serial No. 186,618. 15 Claims. (Cl. 60—15.)

1. In a compound internal combustion engine the combination of two high pressure cylinders, a low pressure cylinder, means for conveying a portion of the products of combustion from the low pressure cylinder to each

high pressure cylinder in turn wherein these gases form part of the main charge, and means for cooling these



products of combustion after they leave the low pressure cylinder and before they enter a high pressure cylinder as set forth.

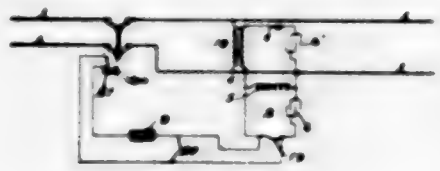
1,296,557. PROCESS OF MAKING ARSENATE OF LEAD. GEORGE R. RICHES and WILLIAM C. PIVER, Hoboken, N. J. Filed Feb. 3, 1917. Serial No. 146,327. 8 Claims. (Cl. 23—13.)

1. The process of making arsenate of lead which consists in producing a solution of a basic lead salt in water and subsequently adding arsenic acid thereto gradually while maintaining the mixture slightly warm.

4. The process of making arsenate of lead which consists in first reacting between lead oxid and lead nitrate in water to produce basic lead nitrate, and subsequently adding arsenic acid thereto, the temperature being maintained during the entire series of reactions at from 30 to 35 degrees centigrade.

7. The process of making arsenate of lead which consists in first causing a reaction between lead oxid and a lead nitrate solution of specific gravity 1.02 at a temperature of 30 to 35 degrees centigrade, in the proportions of one thousand pounds of lead oxid and nine hundred gallons of lead nitrate solution, and subsequently adding thereto sufficient arsenic acid to combine with the basic lead nitrate formed by the first reaction while maintaining the above mentioned temperature throughout the final reaction.

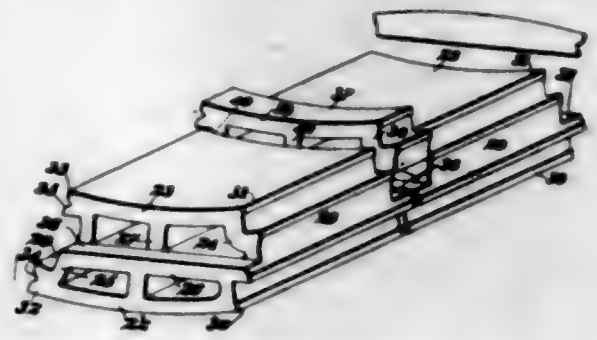
1,296,558. PROTECTIVE DEVICE FOR ELECTRIC CIRCUITS. LLOYD N. ROBINSON, Berkeley, Cal. Filed Nov. 28, 1916. Serial No. 133,863. 16 Claims. (Cl. 175—294.)



1. A protective device for electric circuits, comprising an auxiliary circuit connected with the circuit to be protected, an electrostatic condenser and an electrothermal device included in series in said auxiliary circuit, an inductance coil shunted across said condenser and said electrothermal device, and means for connecting said electrothermal device with the main circuit for the control thereof.

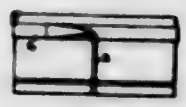
1,296,559. STRUCTURAL BLOCK. WILLIAM H. ROOK, Jr., Akron, Ohio, assignor to George R. Hill, Akron, Ohio. Filed Jan. 14, 1915. Serial No. 2,166. 5 Claims. (Cl. 72—51.)

5. A structure of the character described, comprising structural blocks, each block having its opposite ends provided with transverse rabbets of substantially equal dimensions and extending inwardly and in the same longitudinal plane, the rabbets of adjacent blocks when laid end for end forming a cavity, and a filler applied in said cavity and thereby closing the joint between the ends



of adjacent blocks and forming a clench with such block ends.

1,296,560. HERMETICAL-SEALING DEVICE FOR BOXES, TINS, OR CANS FOR PRESERVES OR FOR OTHER VESSELS. ANDERS ANDERSSON ROSENGREN, Malmö, Sweden. Filed June 27, 1918. Serial No. 242,274. 3 Claims. (Cl. 220—78.)



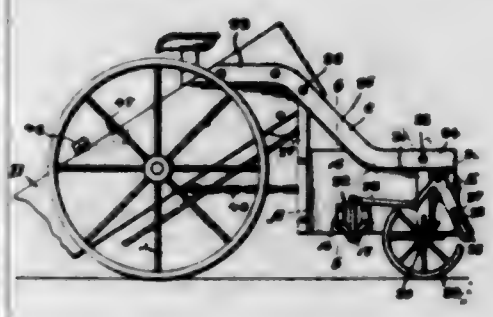
1. In a can, the combination with a can body having an open top and upper and lower circumferential recesses arranged near the top of the body, an elastic packing located in the upper recess, of a cover for said open top having a depending flange embracing the upper portion of the can body and compressing said packing to seal the can, a metallic strip located at the lower recess, engaging the lower edge of the cover flange and extending around the can body, and fusible material sealing the joints between the strip, cover and body.

1,296,561. SPIKE ATTACHMENT FOR RAILWAY SIGNAL-FUSEES. LOUIS S. ROSS, Newtonville, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 29, 1918. Serial No. 264,573. 8 Claims. (Cl. 102—24.)



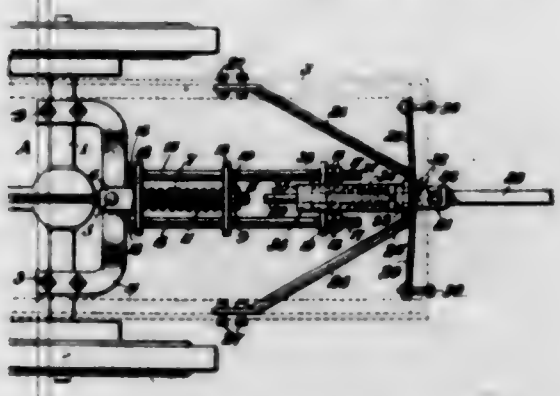
1. A railway signal fusee having a spike receiving end, comprising a tube, a burning composition therein, one end of the tube substantially in the transverse plane of the compound at the spike end of the fusee, and a spike carrying member attached to said end of the tube and located substantially wholly outside of the tube, whereby waste of the burning composition in the manufacture of the fusee is prevented.

1,296,562. BUNCHING ATTACHMENT FOR POTATO-DIGGERS. DANIEL H. SCHLABSEL, Wadena, Minn. Filed Mar. 23, 1918. Serial No. 224,335. 5 Claims. (Cl. 21—20.)



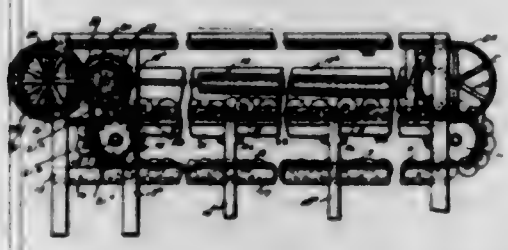
1. In a bunching attachment for potato diggers, a bunching receptacle, a shaft extending transversely beneath the receptacle, a tiltable bottom member carried by said shaft, a swingingly supported door forming a member of the rear wall of the receptacle, said door having a laterally extending pin, a bell crank fulcrumed on the receptacle and having a slotted arm engaging said pin, a crank on the transverse shaft, and a link connecting said crank at the other end of the bell crank.

1,296,563. TRACTION COUPLING OR HITCH. HARRY B. SIMONS, Montesano, Wash. Filed Dec. 30, 1918. Serial No. 268,931. 5 Claims. (Cl. 213—67.)



1. A traction coupling or hitch for connecting a trailer or load to a motor vehicle to be drawn by the latter, comprising devices connected to the rear axle of the motor vehicle, and other devices connected to the chassis frame of the motor vehicle, said connections each including a spring, whereby the load is elastically distributed to the axle and chassis frame of the motor vehicle.

1,296,564. FRUIT-GRADER. AUGUSTUS R. STEVENS, Lindsay, Cal., assignor of one-half to Fred Tucker, Lindsay, Cal. Filed May 19, 1916. Serial No. 98,570. 9 Claims. (Cl. 130—32.)



1. A fruit grader including a conveyer provided with a series of spaced rolling members arranged to support the fruit as it is advanced, a longitudinally extending confining roller arranged substantially parallel to the path of the conveyer, and means for supporting the spaced rolling members in a graduated relation to the confining roller to provide for grading, each article of fruit having a three point rolling support upon two of the rolling members and the confining roller.

2. A fruit grader including a conveyer provided with a series of spaced rolling members arranged to rotate and support the fruit as it is advanced, a longitudinally extending confining roller arranged substantially parallel to the path of the conveyer, an adjustable guide for the rolling members whereby a graduated relation is established between the confining roller and the series of rolling members, each article of fruit having a three point rolling support upon two of the rolling members and the confining roller.

3. An improved fruit grader, comprising a plurality of spaced conveying bodies, means for advancing the same along a predetermined path, means for confining the fruit in conjunction with such bodies in the advance of the bodies and fruit to a point at which the fruit escapes from such confining means, means in step formation upon which such bodies are supported in the advance thereof, and means for varying such step formation; said last named means producing a progressively wider interspace as between the said steps thereof and said temporary confining means; said temporary confining means comprising a roller extending substantially parallel with the course of travel of said bodies, whereby the fruit has a three-point support upon two of said bodies and said roller prior to the grading of the fruit.

4. An improved fruit grader, comprising a plurality of spaced conveying bodies, means for advancing the same along a pre-determined path, means for confining the fruit in conjunction with such bodies in the advance of the bodies and fruit to a point at which the fruit escapes from such confining means, means in step formation upon which such bodies are supported in the advance thereof, and means for varying such step formation; said last named means producing a progressively wider interspace as between the said steps thereof and said temporary confining means; said temporary confining means comprising a roller extending substantially parallel with the course of travel of said bodies, whereby the fruit has a three-point support upon two of said bodies and said roller prior to the grading of the fruit; said means in step formation being adapted to rotate the fruit on one axis and said roller being adapted to impart rotation to the fruit upon another axis.

5. A fruit grader including a movable belt, a series of spaced rolling members trailing from one side of the belt and movable vertically independently thereof, a longitudinally extending confining member arranged substantially parallel to the path of the conveyer, and an adjustable track for the rolling members whereby a graduated relation is maintained between the confining member and series of rolling members, each article of fruit having a three point support upon two of the rolling members and the confining member.

1,296,565. BOOTJACK. HERMAN FOSTER STONE, Lawrence, N. Y. Filed Jan. 14, 1918. Serial No. 211,773. 5 Claims. (Cl. 132—30.)

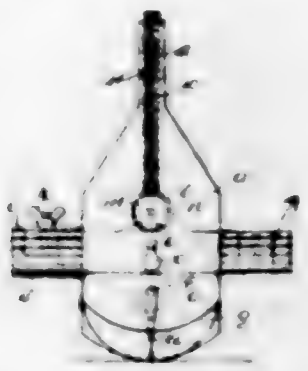


1. A boot-jack, comprising a flexible strap forming a combined heel loop and pulling yoke, and means for releasably tightening the loop upon a boot heel; substantially as described.

3. A boot jack, comprising a flexible strap forming a combined heel loop and pulling loop, and a connection from each end of the strap to one of the loops, one of said connections being a slip connection whereby the application of strain to the pulling loop causes the heel loop to tighten upon the heel of a boot.

5. A boot-jack, comprising a flexible strap forming a combined heel loop and pulling yoke, and means for releasably tightening the loop upon the boot heel, said means consisting of two rings carried by one end of the strap, and a ring carried by the other end of the strap and likewise engaging a portion of the loop; substantially as described.

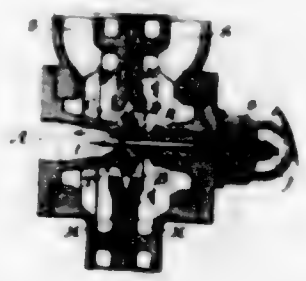
1,296,566. MEASURING INSTRUMENT. NATHANIEL A. STRATTON, Melrose, Mass., assignor of one-sixth to Willard L. Day, Boston, Mass. Filed June 14, 1915. Serial No. 33,862. 9 Claims. (Cl. 33—141.)



1. A measuring instrument comprising a frame, a disk rotatably mounted on said frame and rotated by contact of its periphery with a surface over which the instrument is moved, a driving wheel connected to said disk, a reel mounted on said frame, and a tape bearing indicating graduations wound upon said reel, extending therefrom and being engaged with said wheel so that it will be propelled by rotation thereof.

9. A measuring instrument comprising a frame, a measuring wheel carried by said frame, a toothed driving wheel connected thereto, a graduated tape having its opposite edges serrated and supported by said frame, the serrations of one of said edges meshing with said driving wheel, a transmission toothed wheel mounted on said frame meshing with the serrations on the opposite edge of said tape and having a beveled gear element, a rotatable indicator bar mounted on said frame having a gear element meshing with the said bevel gear element and bearing an indicating helix, the frame having a relatively stationary index parallel to the axis of said indicating member.

1,296,567. EJECTOR APPARATUS. ROBERT SUCZEK, Philadelphia, Pa., assignor to C. H. Wheeler Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1918. Serial No. 216,335. Renewed Jan. 31, 1919. Serial No. 274,364. 10 Claims. (Cl. 230—13.)



1. Ejector apparatus comprising a diffuser and coöperating nozzle structure, said nozzle structure comprising nozzle members spaced from each other to form a nozzle passage, said nozzle passage having a throat, and means for varying the throat area with a given separation of said nozzle members.

2. Ejector apparatus comprising a diffuser and coöperating nozzle structure, said nozzle structure comprising members spaced from each other to form a nozzle passage, said nozzle passage having a throat, and means for changing the ratio of the throat area to the nozzle outlet area for a given separation of said members.

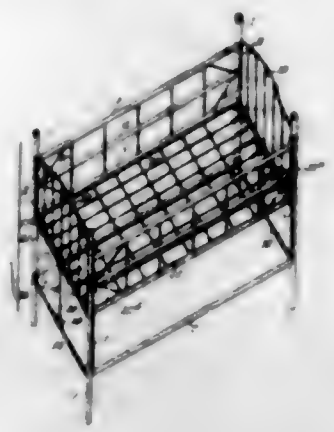
10. Ejector apparatus comprising a diffuser and coöperating nozzle structure, said nozzle structure comprising nozzle members spaced from each other to form a nozzle passage, said nozzle passage having a throat, means for varying the distance between said members, and means for independently varying the ratio of throat area to nozzle outlet area.

1,296,568. DIRIGIBLE-HEADLIGHT CONSTRUCTION. WALTER SUMMERS, Hollsopple, Pa. Filed Sept. 26, 1918. Serial No. 255,778. 7 Claims. (Cl. 240—62.)



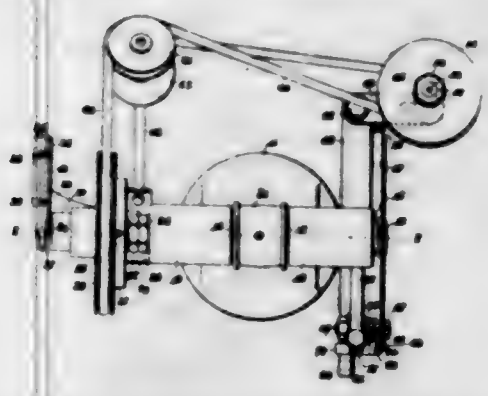
1. A dirigible headlight for vehicles, including a clamp for engaging the vehicle frame, arms extending upwardly and downwardly from the clamp, bearing collars at the extremities of the arms, a vertical shaft extending through the collars, a lamp carried by the upper end of the shaft, a lateral arm rigid with the lower end of the shaft, an operating lever pivotally mounted between its ends on the vehicle axle, an operative connection between one end of the lever and the lateral arm of the vertical shaft, and an operative connection between the other end of the lever and the steering rod of the vehicle.

1,296,569. FOLDING BABY-CRIB. STEVE TAKACS, Harvey, Ill. Filed Sept. 4, 1917. Serial No. 189,446. 3 Claims. (Cl. 5—58.)



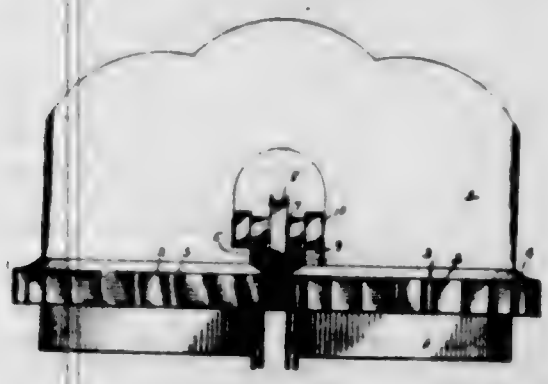
1. A folding bed made up of a light metal framework comprising four corner posts, side frames connecting each pair of posts at the upper ends of the posts, a foldable mattress spring-frame pivotally connecting the side frame and corner posts intermediate thereof, end frames pivotally connecting the side frames, swinging end gates at the upper ends of the corner posts adjacent the side frames, whereby said end gates may be swung inwardly against the side frames at the upper part of the bed and the mattress-spring frame swung downwardly below the end gates when the side frames are folded together so as to form a compact structure.

1,296,570. INSEAM-TRIMMING MACHINE. ALFRED J. THOMAS, Boston, Mass. Filed June 18, 1918. Serial No. 241,072. 24 Claims. (Cl. 12—82.)



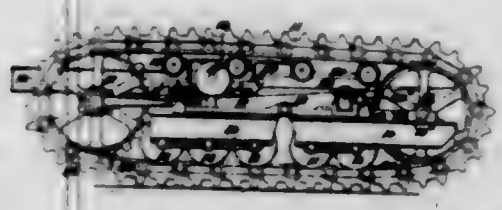
1. In an inseam trimming machine, a rotary disk knife having its outer face beveled to form a cutting edge; and a non-revoluble work guide having a peripheral groove extending partially about the axis thereof and into which extends the cutting edge of said knife.

1,296,571. CABLE-SUPPORT. DAVID A. TRIPP, Barberton, Ohio. Filed Sept. 6, 1918. Serial No. 252,926. 3 Claims. (Cl. 104—182.)



1. A cable support comprising a bracket, disks journaled thereon and having intermeshing teeth, a cable supported upon the teeth at the point where they intermesh, a carrier having a trolley wheel adapted to move along the cable and provided with a rod adapted to enter the spaces between the teeth at the points where the teeth of the disk intermesh, and means operating to relieve said cable and the disk of the weight of said carrier when the carrier passes the disk.

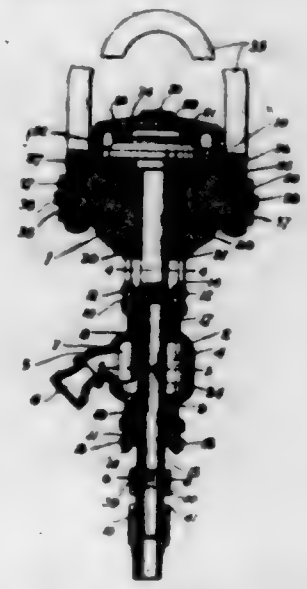
1,296,572. CREEPER-TRACTOR. WILLIAM TURNBULL, Peoria, Ill., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Original application filed Dec. 11, 1916, Serial No. 136,208. Divided and this application filed Mar. 15, 1918. Serial No. 222,731. 4 Claims. (Cl. 21—150.)



1. In a tractor of the self-laying track type, the combination of a main frame, a truck frame on which the main frame is yieldingly supoprted, a rear drive sprocket wheel, a front idler wheel mounted on the truck frame, an endless, flexible, self-laying track passing around the two wheels, and guide means adjacent to the front sprocket and pivotally mounted so as to move vertically or approximately so in accordance with the vertical movements of the front of the truck.

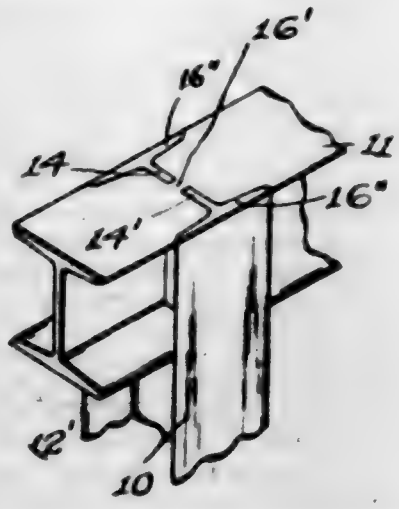
2. In a tractor of the self-laying track type, the combination with a main frame, a rear drive sprocket mounted thereon, an articulated truck in line with the rear sprocket, springs interposed between the main frame and the truck for yieldingly supporting the load on the truck, a front idler on the truck, an endless, flexible, self-laying track passing around said sprocket and idler, and guide means adjacent to the idler sprocket and pivotally mounted to move vertically or approximately so in accordance with the vertical movements of the front of the truck.

1,296,573. HYDRAULIC SWIVEL. WALTER G. VREELAND, Chattanooga, Tenn., assignor to Lucey Manufacturing Corporation, Chattanooga, Tenn., a Corporation of Tennessee. Filed Dec. 29, 1916. Serial No. 139,567. 8 Claims. (Cl. 255—25.)



1. A hydraulic swivel comprising upper and lower housings, said upper housing having a removable bonnet, a swivel stem having its upper end enlarged to form the upper seat of a swivel bearing with the upper housing, a wearing ring interposed between the bonnet and the stem, the lower portion of the stem having at least one passage and projecting through the lower housing and said passage forming communication between the housing and the stem.

1,296,574. BUILDING CONSTRUCTION. WESLEY WAIT, Newburgh, N. Y. Filed Mar. 17, 1917. Serial No. 155,489. 5 Claims. (Cl. 189—36.)



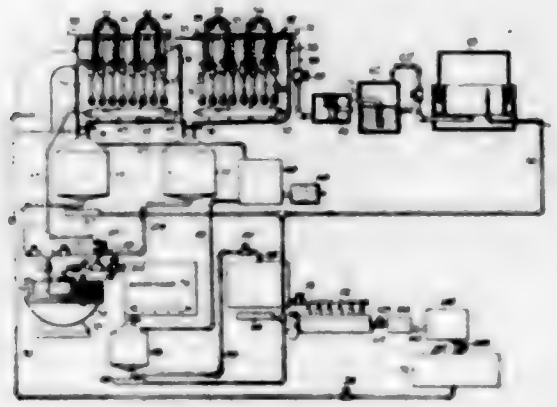
1. A construction comprising an upright provided with a vertical and a transverse flange and having the transverse flange at the upper end of the upright cut away in the longitudinal line of the transverse flange to form a recess, and a flange recessed beam constructed to engage the inner side and adjacent edges of the vertical flange

of the upright and to engage the transverse flange of the upright and to engage the recess in the transverse flange of the upright whereby the beam is prevented from moving laterally or longitudinally.

2. A construction comprising an upright provided with vertical flanges and a connecting web and having the web at the upper end of the upright cut away in the longitudinal line thereof to form a recess, and a recessed beam provided with horizontal flanges and a connecting web and constructed to engage the inner sides and adjacent edges of the vertical flanges of the upright and to engage the web of the upright and having an exposed portion of the web to engage the recess of the upright whereby the beam is prevented from moving laterally or longitudinally.

3. A construction comprising an upright provided with vertical flanges and a connecting web and having the web cut away in the longitudinal line of the web to form a recess, and a beam provided with horizontal flanges and a connecting web and having a longitudinal recess in the upper flange at opposite sides at the edge at the end of the beam to engage the inner sides and adjacent edges of the flanges of the upright at the upper end thereof, and having a longitudinal-transverse recess in the under flange at opposite sides of the edge at the end of the beam to engage the inner sides and adjacent edges of the flanges and the web of the upright and having an exposed portion of the web to engage the recess of the upright.

1,296,575. APPARATUS FOR CARRYING OUT PROCESSES OF WINNING METALS. VICTOR M. WEAVER, Harrisburg, Pa., assignor to Weaver Company, a Corporation of Wisconsin. Original application filed Aug. 22, 1914, Serial No. 858,001. Divided and this application filed Aug. 9, 1915. Serial No. 44,517. 53 Claims. (Cl. 204—20.)



1. In combination, a furnace, a condenser connected therewith, a collecting receptacle connected with said condenser, an electrolytic vat connected with said receptacle, and a gas-collecting tank connected with said vat.

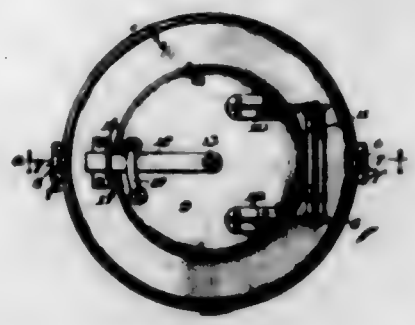
10. In combination, a furnace, a condenser connected therewith, a collecting receptacle connected with said condenser, a second furnace connected with said receptacle, a second condenser controllably connected to said second furnace, an electrolytic vat connected with said second condenser, and a gas-collecting tank connected with said vat, said second furnace having a controllable by-pass back to said first condenser.

20. In combination, a furnace, condensing means connected therewith, a collecting receptacle connected with said condensing means, a second furnace connected with said receptacle, condensing means being connected to said second furnace, an electrolytic vat connected with said condensing means, and a gas-collecting tank connected with said vat.

30. In combination, a combining chamber having an inlet and an outlet, a second chamber having sealed connection with the outlet of said combining chamber to receive exclusively a charge from said combining chamber, and means in said second chamber for releasing a gas from a compound.

53. In combination, a furnace, a condenser connected therewith, a collecting receptacle connected with said condenser, a pump connected with said condenser, a receiver connected with said pump, a burner associated with said collecting receptacle and connected with a receiver, and an electrolytic vat connected with said receptacle.

1,296,576. ANIMAL-PROOF GARBAGE-CAN. GUSS S. WEBB and OLOF B. ANDERSON, Marquette, Mich. Filed Sept. 5, 1916. Serial No. 118,892. 1 Claim. (Cl. 220—60.)



A device of the character described, comprising a can, a removable cover for said can, a strengthening rib for the cover disposed on the exterior thereof, locking mechanism including a spring finger for holding the cover in closed position on the can, said spring finger being secured to the can and adapted to engage on the outer side of said strengthening rib of the cover, a cam for forcing the spring finger into locking engagement with the reinforcing rib, and a reinforcing rim for the cover extending around the inner face thereof at the inner side of said strengthening rib, said reinforcing rim being constructed to seat upon the can and to determine the position of the strengthening rib relative to the spring finger.

1,296,577. LAWN-MOWER. LAURENCE C. WEBB, Mechanicsburg, Pa. Filed June 21, 1918. Serial No. 241,236. 1 Claim. (Cl. 56—19.)



A lawn mower comprising a main frame, rear wheels journaled to the frame, a front wheel pivotally mounted in said frame, means steering said front wheel, an engine carried by said frame, a clutch associated with said engine, a driven shaft journaled in said frame, a transverse shaft journaled in said frame and connected to the driven shaft, means connecting the transverse shaft with the rear wheels, a counter shaft journaled in said frame, a pair of gears carried by said counter shaft, a stub shaft carried by said frame, a gear journaled to the stub shaft and in mesh with one of the gears of said pair, a drive shaft journaled in said frame and connected to the engine, a gear secured to the drive shaft, a clutch element formed on said last-named gear, a gear splined to the driven shaft, a clutch element carried by the last-named gear and adapted to engage the first-named clutch element for driving the rear wheels in a forward direction, cutting means carried by said frame, and means driving said cutting means by the driven shaft.

1,296,578. AEROPLANE. CLYDE L. WELSH, Pittsburgh, Pa., assignor to Welsh Adjustable Aeroplane Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Jan. 3, 1917. Serial No. 140,841. 2 Claims. (Cl. 244—12.)

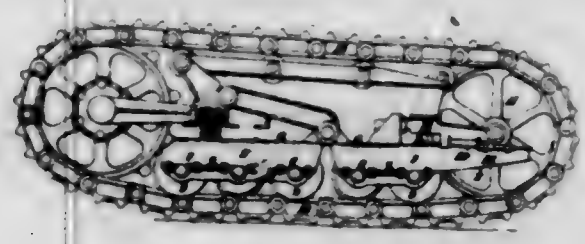
1. In combination with the upper and lower plane of a bi-plane, a sleeve rigidly connected to the upper plane and

rotatably supported by the body of the bi-plane, a second sleeve rigidly supported upon the body of the bi-plane and having a rotatable connection with the lower plane, a



shaft detachably associating the lower plane with its sleeve and the sleeve of the upper plane with the body of the bi-plane and driving means connected to said shaft.

1,296,579. ROLLER-TRUCK FRAME FOR TRACTION-ENGINES. ELMER R. WICKERSHAM, Stockton, Cal., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Filed Jan. 24, 1918. Serial No. 218,469. 4 Claims. (Cl. 21—150.)



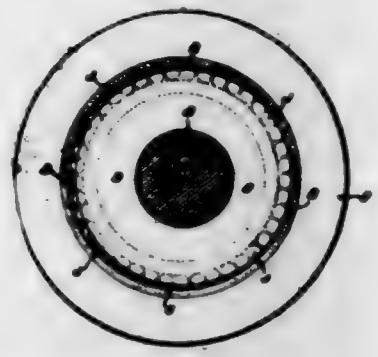
1. A one-piece roller truck frame for self-laying track tractors comprising vertical members having flanges at their lower edges forming supports for roller journals, and a horizontal web connecting the upper edges of said vertical members, said web being cut out at one end between the vertical members to receive a track carrying wheel, and provided with a transverse reinforcing rib.

2. A one-piece roller truck frame for self-laying track tractors comprising a horizontal web connecting the upper edges of two vertical members, extensions on said vertical members projecting beyond the horizontal member to form supports for a track carrying wheel, and a reinforcing rib extending across the horizontal member at the base of the extensions.

3. A one-piece roller truck frame for self-laying track tractors comprising a horizontal web connecting the upper edges of two vertical members, extensions on said vertical members projecting beyond the horizontal member to form supports for a track carrying wheel, and a reinforcing rib extending across the horizontal member at the base of the extensions and curving outwardly to form flanges on said extensions.

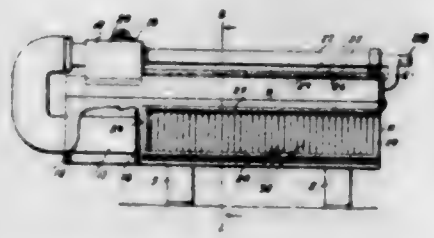
4. A one-piece roller truck frame for self-laying track tractors comprising a horizontal web connecting the upper edges of two vertical members, supports for roller truck journals on the lower edges of said members, extensions on said vertical members projecting beyond the horizontal member to form supports for a track carrying wheel, and a reinforcing rib extending across the horizontal member at the base of the extensions and curving outwardly to form flanges on said extensions.

1,296,580. MANUFACTURE OF SPRING PACKING-RINGS FOR PISTONS AND THE LIKE. GEORGE WOODVINE, Shrewsbury, England. Filed Nov. 22, 1917. Serial No. 203,441. 4 Claims. (Cl. 29—1.)



1. In the manufacture of cut or split spring packing rings for pistons and the like, a holder to receive the rings and a tool comprising a body portion carrying projections arranged eccentric to the body thereof in such manner that when applied to the rings the maximum projections bears on each ring at the point opposite to the cut ends thereof, the projections gradually diminishing from this point in both directions until they finally disappear at points a little distance away from the part of the tool adjacent to and adapted to bear upon the cut ends of the rings, as described.

1,296,581. GAS-BURNER. MATTHIAS S. YEAGER, Los Angeles, Cal., assignor to Liberty Burner Co., a Corporation of California. Filed Feb. 7, 1918. Serial No. 215,734. 2 Claims. (Cl. 158—65.)



1. A gas burner construction, comprising a hollow burner head having a gas inlet leading thereto and being provided with downwardly and outwardly divergent side walls, each of said walls having longitudinally extending openings formed therein, and a pair of burner plates having vertically disposed slots therein adapted to seat in said openings.

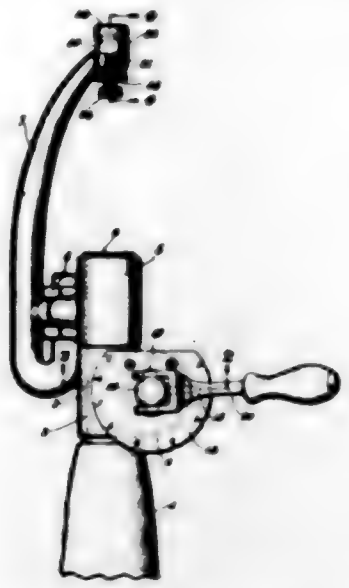
1,296,582. HORN FOR FASTENER-INSERTING MACHINES. STEPHEN A. DOBYNS, St. Louis, Mo., assignor to Champion Shoe Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed June 11, 1917. Serial No. 174,097. 13 Claims. (Cl. 1—41.)

1. In a machine of the class described, a horn spindle, a horn mounted for vertical adjusting movement thereon, means for adjusting said horn on said spindle and for locking said horn in adjusted position, and a controlling member connected to operate said adjusting and locking means, adapted upon adjusting movement to adjust said horn, and adapted upon locking movement to lock said horn, while maintaining the final adjustment of the horn unaltered.

8. In a machine of the class described, a horn spindle, a horn mounted for vertical adjusting movement thereon, a bearing on said spindle, an actuator mounted for rotation in said bearing and adapted to adjust said horn in said spindle, and a member mounted on said actuator, adapted to rotate said actuator to adjust said horn and adapted to move on said actuator to lock the same.

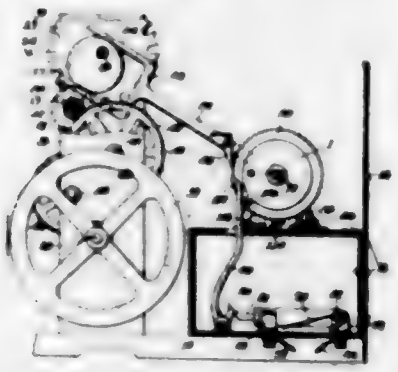
10. In a machine of the class described, a horn having a curved end, a horn tip removably mounted on and em-

bracing the curved end, and means for clamping said tip on said horn.



12. In a machine of the class described, a horn having a clenching anvil, and a slugging anvil adapted to be placed over said clenching anvil.

1,296,583. AUTOMATIC STEREOPTICON. FRANK L. OLSSON, Chicago, Ill. Filed Apr. 2, 1917. Serial No. 159,108. 5 Claims. (Cl. 88—27.)



1. An automatic stereopticon including a rotatable cylindrical carrier for slides consisting of a hub, radial spokes extended therefrom and provided at their outer ends with lateral extensions, a pair of spaced apart bands uniting said extensions circumferentially, and means on said bands for detachably holding a slide thereon between each pair of said extensions.

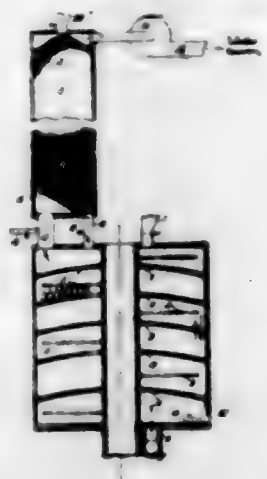
5. An automatic stereopticon including a driven shaft, a slide carrier mounted thereon for rotation, an eccentric fixed on said shaft, a bar mounted at one of its ends on another shaft and having at its other end a yoke embracing said eccentric, a ratchet wheel mounted on the last named shaft, a pawl carried by the said bar to engage the teeth of the ratchet wheel, electrical means for driving the carrier, a switch in the electric circuit, a tripping lever to engage the switch, and means operated by the ratchet wheel to trip said lever.

1,296,584. DISPLAY CLIP. EDGAR B. BICKEL, St. Louis, Mo. Filed May 7, 1918. Serial No. 233,038. 3 Claims. (Cl. 24—81.)



8. As a new article of manufacture, a clip comprising a coil having a pair of helices, between which a support may be frictionally held, there being an eye formed in each helix the legs of which eyes are relatively spaced whereby they may be readily sprung over the shank of a tack or the like.

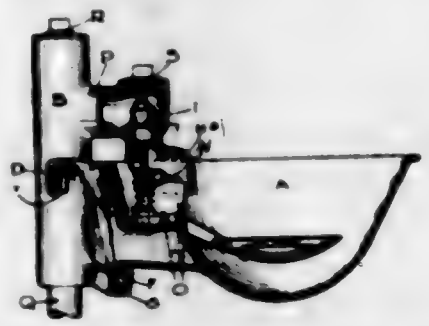
1,296,585. PROCESS OF DESULFURIZING METAL SULFIDS. ARTHUR B. FOSTER, Washington, D. C., assignor to Sulphur Syndicate, Limited, London, England, a Corporation of Great Britain. Filed May 1, 1915. Serial No. 25,259. 21 Claims. (Cl. 75—6.)



6. A process of desulfurizing metal sulfids which comprises roasting metal sulfid to produce gases containing sulfur dioxid, treating metal sulfid, at a temperature of above 700° C., with the gases containing sulfur dioxid produced in said first step until at least the major portion of the sulfur dioxid is reduced.

20. The herein described process which comprises oxidising the metal content of a metal sulfid, by the oxygen content of an oxid of sulfur.

1,296,586. WATER-BOWL. WILLIAM LOUDEN, Fairfield, Iowa. Filed Oct. 17, 1918. Serial No. 258,609. 7 Claims. (Cl. 119—75.)

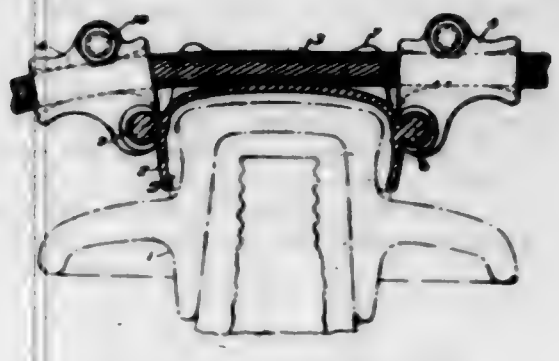


1. The combination of a water bowl and a support, mutually engaging parts on said bowl and support, said parts being separable by a movement of the bowl in a direction parallel to the contacting faces of the engaging parts, a fixed portion projecting into the bowl, and a member pivoted within the bowl and adapted when in its normal position to come in contact with said projecting fixed portion and prevent the separating movement of the bowl, but when turned on its pivot out of its normal position, to be free from said projecting fixed portion, whereby the engaging parts may be separated and the bowl be removed from the support without the movement of any additional parts.

1,296,587. INSULATOR. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 5, 1917. Serial No. 159,956. 10 Claims. (Cl. 173—313.)

1. An insulator comprising a plurality of upwardly extending cable-positioning lugs, a rib, and clamps adapt-

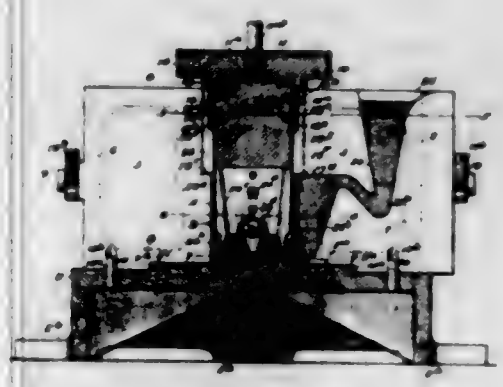
ed to be slidably secured to said rib to hold the cable in place.



8. The combination with an insulator, of a cap member provided with a rib extending nearly around the periphery thereof, and clamps adapted to be slidably secured upon said rib, said rib and clamps serving to secure an electrical conductor to said cap and the interruption in said rib being for the purpose of permitting the rib to receive said clamps.

10. An insulator comprising a plurality of cable-positioning lugs, an annular rib having an opening at one side, and clamps adapted to be slidably received by said rib through said opening and to grip said cable, the engagement of said cable and said lugs being adapted to prevent the disengagement of said clamps and said rib after said clamps are positioned on said cable.

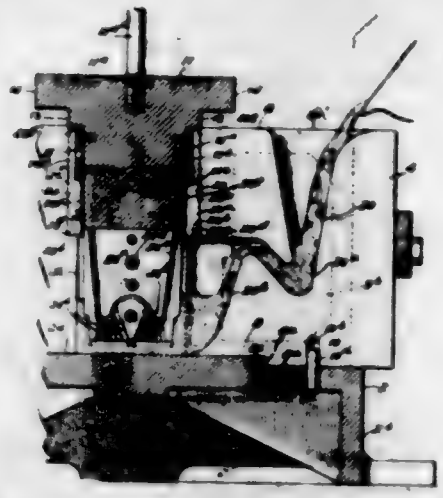
1,296,588. METAL-MOLD. JOSEPH H. BAMBERG, Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 7, 1916, Serial No. 82,528. Renewed Jan. 9, 1919. Serial No. 270,446. 69 Claims. (Cl. 22—136.)



1. In a mold for casting pistons, the combination of a permanent base member, a pair of permanent mold members movably supported on said base member and formed with complementary walls coöperable with a portion of the upper wall of said base member to form the outer walls of a mold cavity for casting a cup-shaped article having a head end with a skirt extending therefrom, and a permanent core movable relative to and spaced from said outer-cavity walls to form the inner walls of the cup-shaped cavity.

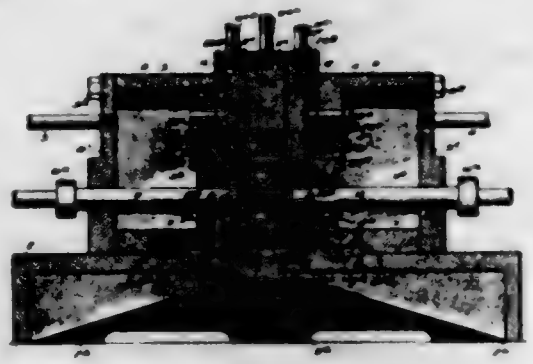
1,296,589. CASTING AND PROCESS OF MAKING SAME. JOSEPH H. BAMBERG, Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 7, 1916. Serial No. 82,529. 25 Claims. (Cl. 22—200.)

4. The process of making internal combustion motor piston castings, which consists in bringing a molten metallic alloy having relatively low specific gravity and relatively high coefficient of heat conductivity against chilling surfaces disposed to form a piston casting having hollow wrist pin bosses, removing the chilling surfaces which extend into the wrist pin bosses, then removing the chilling surfaces for the remaining inner



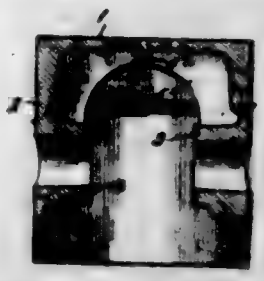
walls of the casting, and then removing the casting therefrom.

1,296,590. METAL-MOLD. JOSEPH H. BAMBERG, Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 7, 1916. Serial No. 102,233. 15 Claims. (Cl. 22—152.)



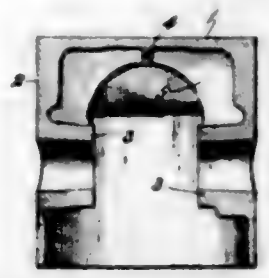
1. In a mold for casting pistons, the combination of a permanent mold body having an opening, the walls of which form the outer walls of a mold cavity for a piston casting having a head and a skirt, and a permanent three part core insertible within said body to form the inner walls of the cavity, the said core comprising a center section, the opposite end walls of which are shaped to form parts of the inner wall of the mold cavity, and a section arranged at either side of the center section having an outer wall in which is formed between its opposite longitudinal ends a boss cavity.

1,296,591. PISTON-CASTING. JOSEPH H. BAMBERG, Toledo, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 7, 1916, Serial No. 82,529. Divided and this application filed Mar. 1, 1917. Serial No. 151,777. 4 Claims. (Cl. 74—85.)



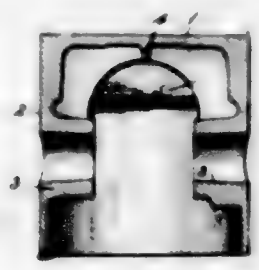
1. As a new article of manufacture, an internal combustion motor piston casting made of an alloy consisting predominantly of aluminum and containing copper and magnesium, the casting having chilled walls and being fine grained and substantially free from porosity due to crystallization shrinkage.

1,296,592. PISTON-CASTING. JOSEPH H. BAMBERG, Toledo, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 7, 1916, Serial No. 82,529. Divided and this application filed Mar. 6, 1917. Serial No. 152,896. 4 Claims. (Cl. 74—85.)



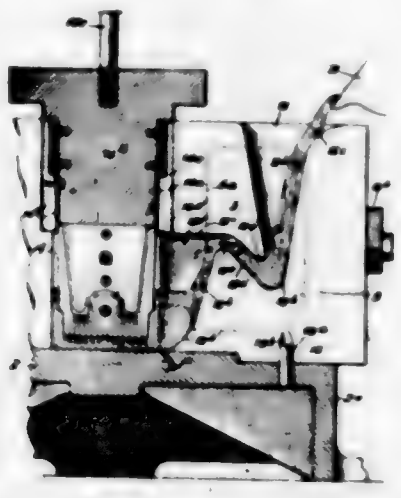
1. As a new article of manufacture, an internal combustion motor piston casting made of an alloy consisting predominantly of aluminum and containing tin and copper, the casting having chilled walls and being fine grained and substantially free from porosity due to crystallization shrinkage.

1,296,593. PISTON-CASTING. JOSEPH H. BAMBERG, Toledo, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 7, 1916, Serial No. 82,529. Divided and this application filed Mar. 8, 1917. Serial No. 153,406. 4 Claims. (Cl. 74—85.)



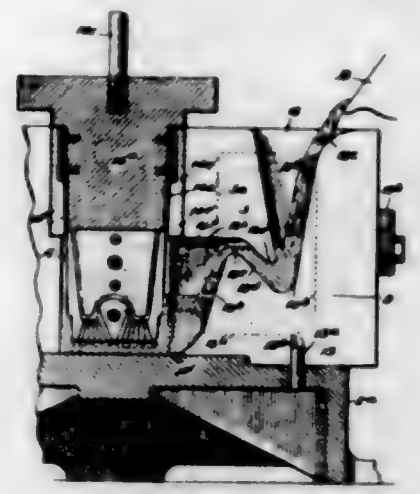
1. As a new article of manufacture, an internal combustion motor piston casting made of an alloy consisting predominantly of aluminum and containing magnesium, tin and copper, the casting having chilled walls and being fine grained and substantially free from porosity due to crystallization shrinkage.

1,296,594. MOLD. ALLEN B. NORTON, Detroit, Mich., assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 9, 1916, Serial No. 83,021. Renewed Jan. 9, 1919. Serial No. 270,440. 36 Claims. (Cl. 22—155.)



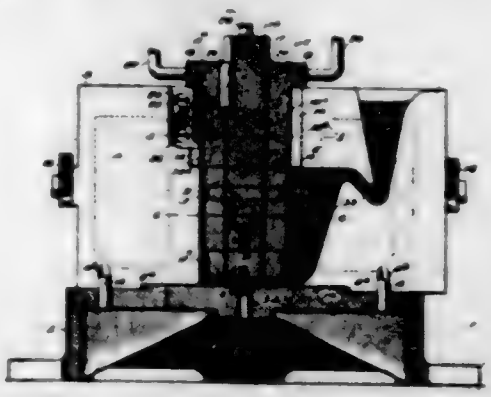
1. A gate for a mold cavity comprising a downwardly extending inlet, an upwardly extending discharge neck connected at its lower end to the lower end of said inlet and coöperating therewith to form a liquid seal to oppose the passage of air, gas, oxid and other impurities, and a feeder extending from the upper and discharge end of said neck to the bottom of the mold cavity.

1,296,595. PROCESS OF MAKING CASTINGS. ALLEN B. NORTON, Cleveland, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 9, 1916, Serial No. 83,021. Divided and this application filed Apr. 20, 1918. Serial No. 229,704. 16 Claims. (Cl. 22—209.)



1. The herein described process, which consists in causing molten metal to flow downwardly under the action of gravity toward a mold cavity and then at an angle to the first mentioned direction to form a liquid seal of the flowing metal itself and then downwardly and into the mold cavity at the bottom thereof and progressively filling the mold cavity from the bottom to the top.

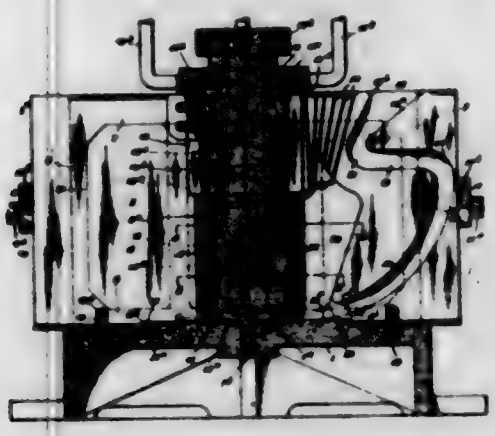
1,296,596. METAL-MOLD. FREDERIC A. PARKHURST, Cleveland, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 1, 1917. Serial No. 194,189. 9 Claims. (Cl. 22—151.)



1. In a permanent mold for piston castings, the combination with the permanent mold body having a cavity adapted to form the outer side wall of the piston casting and having a gate through which molten metal may be introduced into the cavity, of a permanent sectional core supported on the mold body and extending into its cavity to form the inner side wall of the piston casting, the said core comprising a series of more than two sections arranged in a row across the mold cavity with two of them engaging the inner side wall of the casting, and a third, interior section between the said two, and the core having also additional sections arranged on opposite sides of the said row of sections to engage the inner side wall of the casting, the said additional sections being exteriorly formed with cavities to form a pair of pin bosses on the inner side wall of the piston casting with their common axis at right angles to the said row of core sec-

tions and all of the exterior sections of the core being formed with aligning depressions arranged to form an inwardly extending circumferential flange on the inner side wall of the piston casting, the several sections of the core being formed and arranged so that the said interior section when moved endwise affords clearance to permit the outer sections of the core to be successively moved laterally out of engagement with the internal projections of the piston casting and then endwise from said casting.

1,296,597. MOLD AND PROCESS OF CASTING. FREDERIC A. PARKHURST, Cleveland, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 20, 1918. Serial No. 229,703. 23 Claims. (Cl. 22—209.)



1. A mold having a cavity for the casting proper and provided with a gate comprising a conduit adapted to discharge molten metal into the bottom of the mold cavity and an upright feeder disposed at one side of the mold cavity, said feeder having an opening at its lower end to receive molten metal supplied through the said conduit and being adapted to feed said metal into the mold cavity at various levels ranging substantially from the bottom to the top thereof.

19. The method of introducing molten aluminum alloys or the like into a mold which consists in pouring the molten metal under the action of gravity and delivering it into the bottom of the mold cavity proper and an upright feeder cavity arranged at one side of the mold cavity, and causing the metal to rise in said mold and feeder cavities from the bottom thereof as the pouring continues and to flow from said feeder at various levels into the mold cavity proper to compensate for crystallization shrinkage.

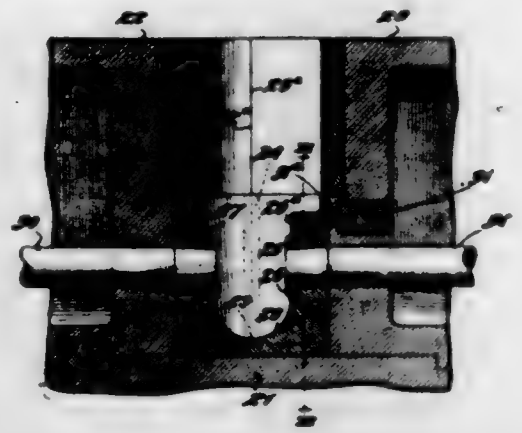
1,296,598. METAL-MOLD. ZAY JEFFRIES, East Cleveland, Ohio, assignor to The Aluminum Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 18, 1916. Serial No. 126,358. 7 Claims. (Cl. 22—136.)

1. A permanent mold for casting bodies having an irregular distribution of their constituent material, the said mold having walls of ferrous metal with a metallic insert of relatively high thermal conductivity arranged to be engaged by the thick part of the casting.

3. A permanent mold for casting bodies of low fusing point metal having an irregular distribution of their constituent material, the said mold having walls of ferrous metal with an insert of copper arranged to be engaged by the thick part of the casting.

4. A composite permanent mold having its cavity forming walls formed in part of ferrous metal and in part of copper.

6. A mold for casting bodies having an irregular distribution of their constituent material, the said mold having walls formed with a cavity for the casting and with a gate adapted to afford a supply of molten metal in communication with the cavity, the said cavity having a lesser volume at points intermediate the gate opening and other points more remote from the gate opening than at said last named points, and the walls of the mold adjacent the latter points being formed of material having a higher thermal conductivity than the material forming the walls at the said other points nearer the gate.



7. A composite metal mold for casting bodies having an irregular distribution of their constituent material, the said mold having walls formed with a cavity for the casting and with a gate adapted to afford a supply of molten metal in communication with the cavity, the said cavity having a lesser volume at points intermediate the gate opening and other points more remote from the gate opening than at said last named points, and the walls of the mold adjacent the latter points being formed of metal having a higher thermal conductivity than the metal forming the walls at the other points nearer the gate.

1,296,599. PROCESS FOR PRODUCING AN EXTRACT OF PROTEOLYTIC ENZYMS. TOMENOSUKE MUTO, Kobe, Japan, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Filed Apr. 25, 1917. Serial No. 164,343. 7 Claims. (Cl. 8—2.)

1. A process of producing a proteolytic enzym from products of cocoon-forming insects which comprises adding an antiseptic material not capable of materially injuring the enzym to said material, digesting the mixture with water at a temperature not materially above 40° C., separating the liquor from the undissolved matter, and then separating the enzym from the liquor.

2. A process of producing a proteolytic enzym which comprises digesting material containing products of cocoon-forming insects with water at a temperature not materially above 40° C., separating the liquor from the undissolved matter, and then separating the enzym from the liquor.

4. A process of producing a proteolytic enzym from products of cocoon-forming insects which comprises adding an antiseptic material not capable of materially injuring the enzym to said material, digesting the mixture with water at a temperature not materially above 40° C., separating the liquor from the undissolved matter, concentrating the liquor in vacuum to about 10 to 20% of its original volume, while at a temperature of not materially above 45° C., and then precipitating the enzym in a substantially pure state, from the concentrated extract.

5. A process of producing a proteolytic enzym from cocoon-forming insect material which comprises digesting such material with glycerin and water at a temperature too low to materially injure the proteolytic enzym, separating the liquor from the undissolved matter, and separating the enzym from the liquor.

1,296,600. PROCESS OF PRODUCING AN EXTRACT OF PROTEOLYTIC ENZYMS. TOMENOSUKE MUTO, Kobe, Japan, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Filed Dec. 14, 1918. Serial No. 266,814. 2 Claims. (Cl. 8—2.)

2. A process of producing a proteolytic enzym from cocoon-forming insect material which comprises digesting

said material with a solution containing sodium chlorid at a temperature below about 50° C., thereafter adding a suitable antiseptic material to the said substance, separating the liquor from the undissolved matter, and then separating the enzym from the liquor.

1,296,601. PROCESS FOR TREATING SILK FIBERS. TOMENOSUKE MUTO, Kobe, Japan, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Filed Apr. 25, 1917. Serial No. 164,344. 4 Claims. (Cl. 8—2.)

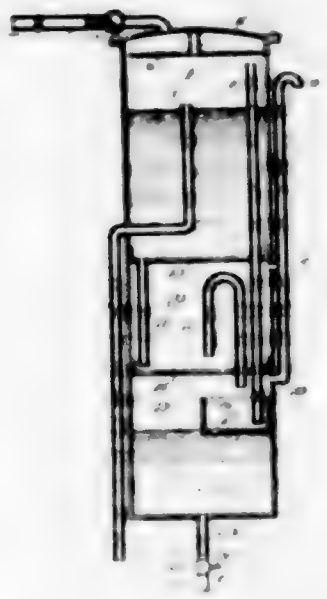
3. In the process of treating silk material, the step of subjecting the said material to the action of a liquid containing the proteolytic enzym extracted from cocoon-forming insect material and of another silk-scouring material.

1,296,602. PROCESS FOR THE BENZOYLATION OF ORGANIC AMIDO COMPOUNDS. FREDERICK REVERDIN, Geneva, Switzerland, assignor to Newport Chemical Works, Inc., Milwaukee, Wis. Filed July 16, 1918. Serial No. 245,261. 1 Claim. (Cl. 23—24.)

The process herein described for the benzoylation of organic compounds of the amido group by reaction of benzol chlorid on the said compounds, which consists in the addition of a small amount of concentrated sulfuric acid to the mixture of amido derivatives and benzoyl chlorid, the reaction taking place at moderate temperatures and without the use of a solvent.

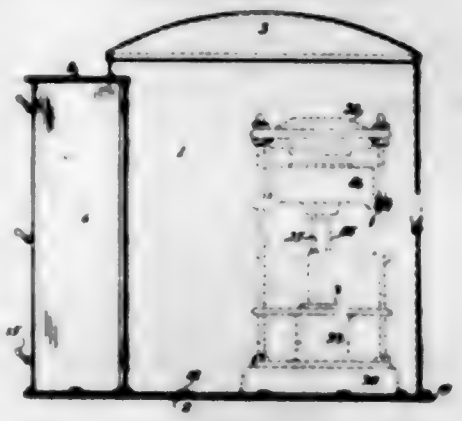
REISSUES.

14,602. FUEL-FEEDING DEVICE FOR AUTOMOBILES. WILLIAM H. MURRY, Chicago, Ill. Filed Oct. 25, 1918. Serial No. 259,727. Original No. 1,201,977, dated Oct. 10, 1916, Serial No. 15,895, filed Mar. 20, 1915. 10 Claims. (Cl. 158—36.)



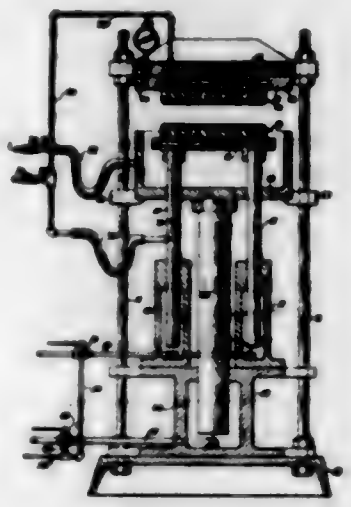
1. In a fuel feeding system, the combination of a main low level fuel tank, a vacuum chamber at a higher level, a liquid conduit from the low tank to the vacuum chamber, means for producing partial vacuum in the vacuum chamber for lifting liquid by suction from the low tank, a chamber to which liquid is supplied by gravity from that which is lifted by the suction of the vacuum chamber, and means for admitting air to the vacuum chamber controlled solely by the level of the liquid in said gravity supplied chamber.

14,603. PROCESS OF AND APPARATUS FOR MAKING HOLLOW RUBBER ARTICLES. FRED THOMAS ROBERTS, Cleveland Heights, Ohio, assignor to The Aranar Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 2, 1918. Serial No. 238,013. Original No. 1,219,351, dated Mar. 13, 1917, Serial No. 125,598, filed Oct. 14, 1916. 33 Claims. (Cl. 18—19.) Division A.



1. The process of making hollow articles of plastic material consisting of bringing the parts together within a room occupied by the operator and containing air under pressure.

14,604. PROCESS OF AND APPARATUS FOR MAKING HOLLOW RUBBER ARTICLES. FRED THOMAS ROBERTS, Cleveland Heights, Ohio, assignor to The Aranar Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 3, 1918. Serial No. 238,014. Original No. 1,219,351, dated Mar. 13, 1917, Serial No. 125,598, filed Oct. 14, 1916. 34 Claims. (Cl. 18—19.) Division B.

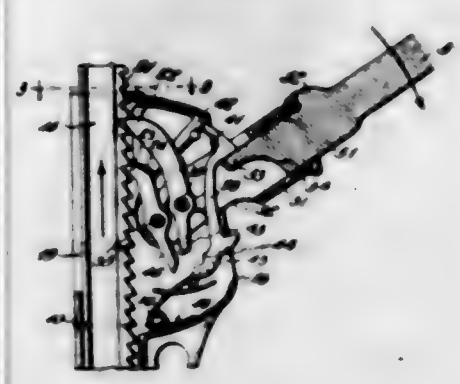


1. The process of making hollow rubber articles, consisting of pneumatically seating a part of the article in a mold cavity which has a rigid inward protuberance, closing such seated part upon another part of the article, then transferring such closed article to a vulcanizing mold having a cavity of the shape of the finished article, and thereafter vulcanizing the article while in such vulcanizing mold.

14,605. JACK. LE ROY WILLOUR, Ashland, Ohio, assignor to The Ashland Products Co., Ashland, Ohio, a Corporation of Ohio. Filed Dec. 19, 1918. Serial No. 267,399. Original No. 1,240,278, dated Sept. 18, 1917, Serial No. 171,976, filed May 31, 1917. 7 Claims. (Cl. 254—111.)

1. A lifting jack of the character described, comprising a standard, a lift-bar having slidable contact therewith and provided with a longitudinal set of teeth, a holding pawl connected with the standard and adapted

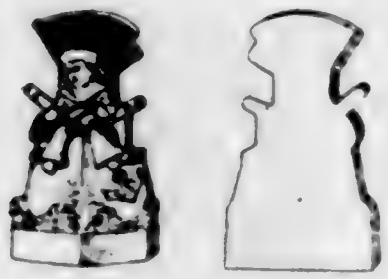
to engage the teeth and having a shank, an operating pawl adapted to engage the teeth and having a shank, a handle socket pivotally connected with the standard and pivotally carrying the operating pawl, yielding means to hold the pawls in contact with the teeth, a pivoted control-member arranged to contact with the shanks of the pawls, means to swing the pivoted control-member in one direction upon its pivot, and a lever adapted for insertion within the handle socket and having a key adapted to alternately contact with opposite ends of the control-member when the lever is reversed.



7. A lifting jack of the character described, comprising a standard, a lift bar slidably contacting therewith and provided with a longitudinal set of teeth, a holding pawl connected with the standard to engage the teeth, an operating pawl adapted to engage the teeth, a handle socket pivotally connected with the standard and pivotally carrying the operating pawl, means to move the pawls into contact with the teeth, a single control member separate from and movable with relation to the pawls and carried by the standard in coöperative relation to the pawls to contact with portions thereof, means to move the control member in one direction, and a lever having one end adapted to be inserted within the handle socket and having a longitudinal extension at its forward end, said longitudinal extension being so positioned with respect to the longitudinal axis of the lever that when the lever is inserted within the handle socket in one position such extension will coact with the control member so that it will cause the pawls to move the lift bar in one direction and when the lever is inverted and inserted within the socket member said extension will then coact with said control member so that such control member causes the pawls to move the lift bar in the opposite direction.

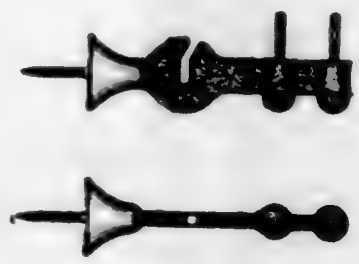
DESIGNS.

53,026. STATUETTE. EDWARD E. ALLEN, Rutland, Vt. Filed Dec. 2, 1918. Serial No. 265,070. Term of patent 3½ years.



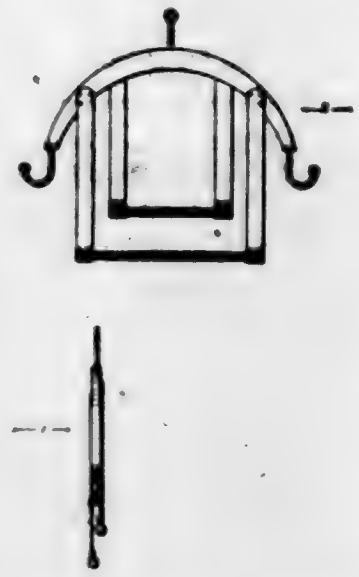
The ornamental design for a statuette as shown.

53,027. COMBINATION SHADE AND CURTAIN BRACKET. JAMES J. ALLEN, Spokane, Wash. Filed July 18, 1918. Serial No. 245,862. Term of patent 7 years.



The ornamental design for a combination shade and curtain bracket as shown.

53,028. CLOTHES-HANGER. EMMA W. BOSKOWITZ, Watts, Cal. Filed Feb. 6, 1918. Serial No. 215,706. Term of patent 7 years.



The ornamental design for a clothes hanger, as shown.

53,029. ASH-RECEIVER. SARKIS A. CIRKINIAN, New York, N. Y. Filed Dec. 11, 1918. Serial No. 266,343. Term of patent 7 years.



The ornamental design for an ash receiver, as shown.

53,030. HAIR-PIN. SAMUEL E. CRESCH and PERRY BLAND, Sullivan, Ill. Filed June 26, 1917. Serial No. 177,142. Term of patent 14 years.



The ornamental design for a hair pin, as shown.

53,031. LAMP-GLOBE. LOUIS DUPUIS, Tacoma, Wash. Filed Jan. 31, 1918. Serial No. 214,781. Term of patent 7 years.



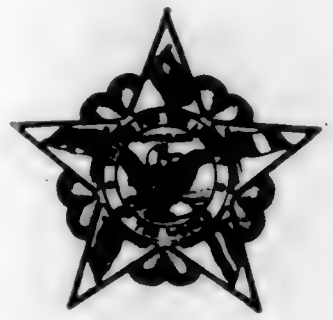
The ornamental design for a lamp globe, as shown.

53,032. EMBLEM, BADGE, STICK-PIN, OR SIMILAR ARTICLE. HAROLD G. ESSAYAN, Brookline, Mass. Filed Apr. 27, 1918. Serial No. 231,258. Term of patent 3½ years.



The ornamental design for an emblem, badge, stick-pin, or similar article as shown.

53,033. EMBLEM, BADGE, STICK-PIN, OR SIMILAR ARTICLE. HAROLD G. ESSAYAN, Brookline, Mass. Filed July 27, 1918. Serial No. 247,073. Term of patent 7 years.



The ornamental design for an emblem, badge, stick-pin, or similar article as shown.

53,034. SHOPPING-BAG. ELI A. FINN, Springfield, Mass. Filed Nov. 16, 1918. Serial No. 262,881. Term of patent 3½ years.



The ornamental design for a lady's shopping bag, as shown and described.

53,035. BRACELET, WATCH-FOB, OR VEST-CHAIN. JOHN M. FISHER, Attleboro, Mass. Filed June 13, 1917 Serial No. 174,627. Term of patent 3½ years.



The ornamental design for a bracelet, watch fob, or vest chain as shown.

53,036. BUTTON. ARLANDO T. HARRELL, Chicago, Ill. Filed Nov. 29, 1918. Serial No. 264,745. Term of patent 14 years.



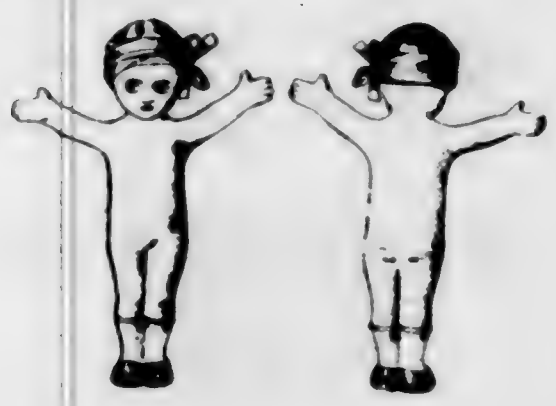
The ornamental design for a button, as shown.

53,037. DOLL OR STATUETTE. SAMUEL HASKELL, New York, N. Y. Filed Dec. 26, 1918. Serial No. 268,398. Term of patent 3½ years.



The ornamental design for a doll, or statuette, as shown.

53,038. DOLL. ANTONIO ISASI, New York, N. Y. Filed Nov. 18, 1918. Serial No. 263,095. Term of patent 7 years.



The ornamental design for a doll, as shown.

53,039. COLLAR-BUTTON. WILLIAM M. ISAACS, Cleveland, Ohio. Filed Aug. 14, 1916. Serial No. 114,916. Term of patent 3½ years.



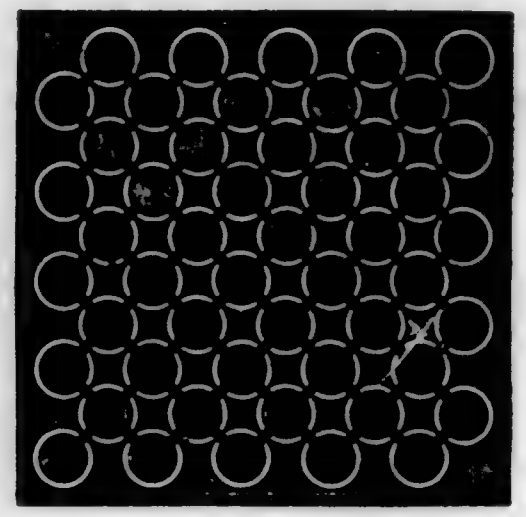
The ornamental design for a collar button, as shown.

53,040. FINGER-RING. MAGDALENE HOMAN KNOPF, New York, N. Y. Filed Oct. 5, 1917. Serial No. 194,989. Term of patent 3½ years.



The ornamental design for a finger-ring, as shown.

53,041. GAME-BOARD. ADA L. LANDIS, Nashville, Tenn. Filed Mar. 15, 1918. Serial No. 222,746. Term of patent 14 years.



The ornamental design for a game board, as shown.

53,042. STATUETTE. LEWIS A. MAPEL, St. Louis, Mo., assignor to The Automatic Appliance Company, St Louis, Mo., a Corporation of Missouri. Filed Sept. 8, 1918. Serial No. 252,495. Term of patent 3½ years.



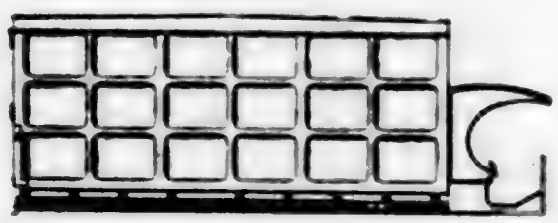
The ornamental design for a statuette, substantially as shown.

53,043. CANDLE. CHARLES J. MEEKER, Syracuse, N. Y. Filed Apr. 5, 1918. Serial No. 226,957. Term of patent 7 years.



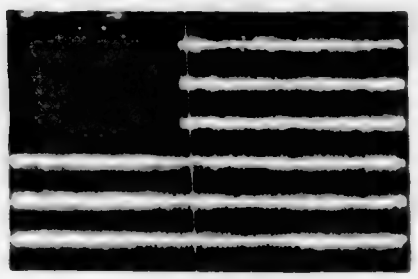
The ornamental design for a candle as shown.

53,044. VEHICLE-BODY. HARRY G. MOORE, Philadelphia, Pa. Filed Oct. 16, 1918. Serial No. 258,389. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

53,045. EMBLEM, FLAG, PENDANT OR ARTICLE OF SIMILAR NATURE. GABRIEL MUELLER, Cincinnati, Ohio. Filed Aug. 28, 1918. Serial No. 251,200. Term of patent 14 years.



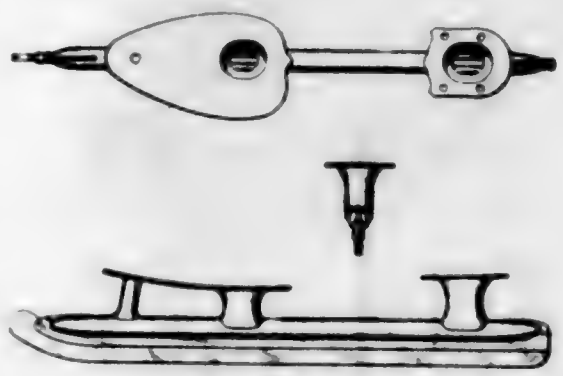
The ornamental design for an emblem, flag, pendant, or article of similar nature, substantially as shown.

53,046. COLLAR. JOSEPH PERLSTEIN, Chicago, Ill. Filed June 6, 1918. Serial No. 238,599. Term of patent 7 years.



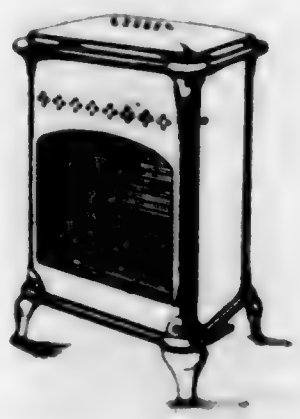
The ornamental design for a collar as shown.

53,047. TUBULAR ICE-SKATE. WILLIAM F. ERACH, Chicopee, Mass., assignor to A. G. Spalding & Bros., Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 18, 1918. Serial No. 254,684. Term of patent 14 years.



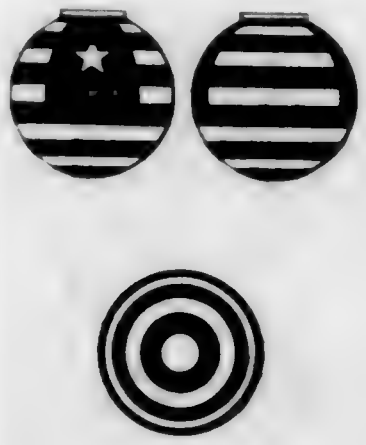
The ornamental design for a tubular ice skate as shown.

53,048. GAS-HEATER. CLARENCE V. ROBERTS, Philadelphia, Pa., assignor to Roberts & Mander Stove Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1918. Serial No. 267,414. Term of patent 7 years.



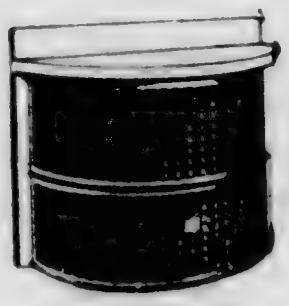
The ornamental design for a gas heater, substantially as shown.

53,049. LAMP-GLOBE. ARTHUR SALSER, New York, N. Y. Filed Oct. 12, 1918. Serial No. 257,886. Term of patent 3½ years.



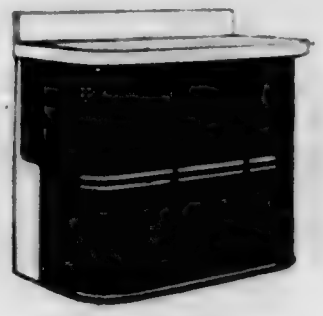
The ornamental design for a lamp globe, as shown.

53,050. REGISTER. ALBERT G. SCHARER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1918. Serial No. 259,434. Term of patent 3½ years.



The ornamental design for a register as shown.

53,051. REGISTER. ALBERT G. SCHARER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1918. Serial No. 259,435. Term of patent 3½ years.



The ornamental design for a register as shown.

53,052. REGISTER. ALBERT G. SCHARER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1918. Serial No. 259,436. Term of patent 3½ years.



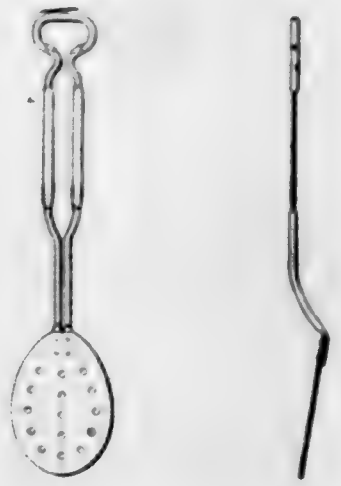
The ornamental design for a register, as shown.

53,053. TIME-STAMP. MORRIS SHERAS, Chicago, Ill. Filed Dec. 16, 1918. Serial No. 267,061. Term of patent 14 years.



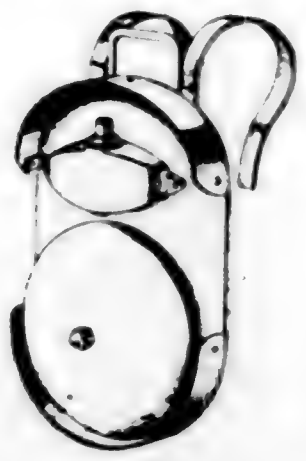
The ornamental design for a time stamp, as shown.

53,054. CAKE-TURNER OR SIMILAR KITCHEN UTENSIL. JOHN L. SOMMER and THOMAS HARDING, Newark, N. J., assignors to J. L. Sommer Manufacturing Co., a Corporation of New Jersey. Filed Oct. 5, 1917. Serial No. 194,995. Term of patent 14 years.



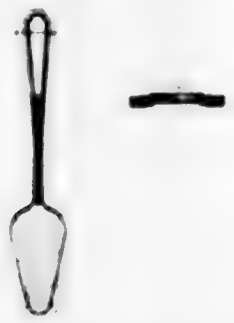
The ornamental design for a cake turner or similar kitchen utensil, as shown.

53,055. SIGNALING DEVICE. WILLIAM D. STOWE, Scranton, Pa. Filed Dec. 30, 1918. Serial No. 268,991. Term of patent 14 years.



The ornamental design for a signaling device, substantially as shown.

53,056. SPOON, FORK, OR SIMILAR ARTICLE. GUSTAV STROHHAKER, Wallingford, Conn., assignor to The United Jewelers, Incorporated, New York, N. Y., a Corporation. Filed Dec. 26, 1918. Serial No. 268,397. Term of patent 7 years.



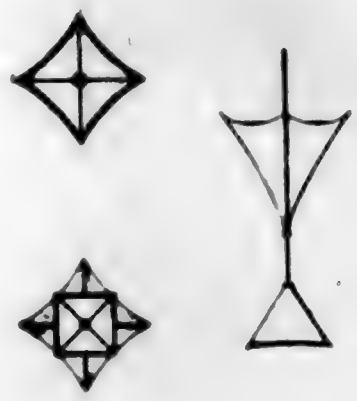
The ornamental design for a spoon, fork, or similar article, as shown.

53,057. BADGE. BLANCHE A. STUMP, Toledo, Ohio. Filed Oct. 30, 1918. Serial No. 260,403. Term of patent 3½ years.



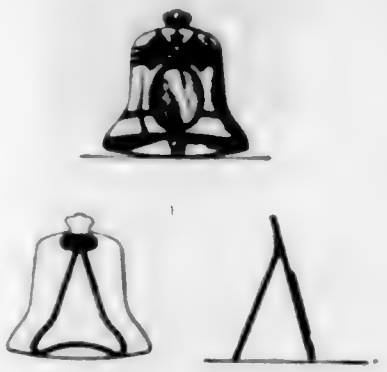
The ornamental design for a badge, substantially as shown.

53,058. WORK-STAND. ISAAC H. WEINBERG, New York, N. Y. Filed Aug. 29, 1917. Serial No. 188,875. Term of patent 3½ years.



The ornamental design for a work stand, as shown.

53,059. SERVICE-EASEL. JOHN HATHAWAY WILSON, Minneapolis, Minn., assignor to Wilson Brothers, Minneapolis, Minn., a Firm composed of Thomas B. and John H. Wilson. Filed June 15, 1918. Serial No. 240,246. Term of patent 7 years.



The ornamental design for a service easel, substantially as shown.

TRADE-MARKS

OFFICIAL GAZETTE, MARCH 4, 1919.

[PUBLISHED MARCH 20, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 94,942. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



Particular description of goods.—Self-Rising Flour.
Claims use since Dec. 18, 1914.

Ser. No. 100,105. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Dec. 22, 1916.

SEALONKOTE

Particular description of goods.—Oil or Rubber Treated Rainproof Overcoats.
Claims use since Aug. 7, 1916.

Ser. No. 100,615. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. H. DUNBAR & SONS, INC., Gulfport, Miss. Filed Jan. 15, 1917.

LASSES-TAYTERS



READY TO EAT LIKE LASSES

No claim being made to the words "Lasses—Tayters" or "Ready to Eat Like Lasses" or the representation of the sweet potatoes apart from the mark as shown.

Particular description of goods.—Canned Molasses and Canned Sweet Potatoes.
Claims use since Jan. 4, 1917.

Ser. No. 102,751. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED H. OSBORNE, Detroit, Mich. Filed Apr. 5, 1917.

U
URE
E

Particular description of goods.—Preparations for the Treatment of Earache, Toothache, Headache.
Claims use since January, 1916.

Ser. No. 104,574. (CLASS 39. CLOTHING.) EVERWEAR MFG. CO., San Francisco, Cal. Filed June 21, 1917.



No claim being made to the representation of the pair of trousers apart from the mark shown on the drawing.
Particular description of goods.—Overalls and Coats to Match.
Claims use since Dec. 22, 1911.

Ser. No. 104,591. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE LAWSON NEFF, Pittsburgh, Pa. Filed June 21, 1917.

NEFFGO

Particular description of goods.—Coffee, Tea, Cocoa, Lemon Extract and Vanilla Extract for Flavoring Foods.
Claims use since Feb. 8, 1915.

Ser. No. 104,845. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GUTTA PERCHA & RUBBER MANUFACTURING COMPANY, New York, N. Y. Filed July 5, 1917.

SATURN

Particular description of goods.—Belting Composed of Rubber and Fabric.
Claims use since July, 1896.

Ser. No. 105,178. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE HENRY PARKER, Stamford, Conn. Filed July 21, 1917.

ROYAL CHESS

Particular description of goods.—Game-Boards and Pieces Therefor.
Claims use since May 20, 1917.

Ser. No. 105,433. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ERCOLE MARELLI & Co., Milan, Italy. Filed Aug. 2, 1917.

"NORDICO,,

Particular description of goods.—Electric Oscillating Fans.
Claims use since 1911.

Ser. No. 105,886. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE BERGER MANUFACTURING COMPANY, Canton, Ohio. Filed Aug. 27, 1917.

B
BERGER

Particular description of goods.—Black Steel and Galvanized Steel.
Claims use since June 5, 1917.

Ser. No. 106,378. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BURNETT-LARSH MANUFACTURING COMPANY, Dayton, Ohio. Filed Sept. 22, 1917.

DURO

Particular description of goods.—Pneumatic-Pressure Systems for Pumping, Storing, and Supplying Water or other Fluids.
Claims use since about the 1st day of January, 1916.

Ser. No. 106,902. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WORLD FILM CORPORATION, New York, N. Y. Filed Oct. 22, 1917.

WORLD.

Particular description of goods.—Cinematographic Films.
Claims use since May 28, 1917.

Ser. No. 107,269. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED STATES MACARONI COMPANY, Los Angeles, Cal. Filed Nov. 6, 1917.

elnaco

Particular description of goods.—Macaronic Foods—Namely, Macaroni, Vermicelli, Spaghetti, and Egg-Noodles.
Claims use since Aug. 1, 1907.

Ser. No. 107,866. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FACTORY SUPPLY COMPANY, Chicago, Ill. Filed Dec. 10, 1917.



Particular description of goods.—Hammers, Sledges, Picks, Pickaxes, Axes, and Hatchets, and Handles Therefor.

Claims use since about July 10, 1917.

Ser. No. 108,000. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME TEA COMPANY, Philadelphia, Pa. Filed Dec. 17, 1917.



Which consists of the word "Victor."

Particular description of goods.—Bread and Bread-Crumbs.

Claims use since January, 1911.

Ser. No. 108,007. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) EASTERN LUMINOUS INDICATOR CO. INC., Waltham, Mass. Filed Dec. 17, 1917.



Particular description of goods.—Radium Luminous Buttons Adapted to be Attached to Any Object That It may be Desired to Locate in the Dark.

Claims use since Nov. 24, 1917.

Ser. No. 108,195. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BURKHARDT BREWING COMPANY, Boston and Roxbury, Mass. Filed Dec. 28, 1917.



The lining shown in the drawing is not intended to represent color.

Particular description of goods.—A Malt-less Cereal Beverage Containing Less Than One-Half of One Per Cent. Alcohol, Sold as Soft Drink.

Claims use since July 1, 1917.

Ser. No. 108,843. (CLASS 37. PAPER AND STATIONERY.) OSWEGO RIVER PAPER MILLS, Phoenix, N. Y. Filed Feb. 5, 1918.



The word "Castle" is in red on a white background, and the flowers shown in the main portion of the label and in the margin are also in red on a white background.

Particular description of goods.—Toilet-Paper.

Claims use since Aug. 1, 1911.

Ser. No. 109,226. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. LENNON, Providence, R. I. Filed Feb. 26, 1918.



Particular description of goods.—Wheat-Flour.

Claims use since Apr. 25, 1904.

Ser. No. 109,558. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JEAN L. FRIEDMAN, New York, N. Y. Filed Mar. 14, 1918.



The trade-mark consists of the words "Liberty Belle."

Particular description of goods.—Toy Dolls.

Claims use since Nov. 1, 1917.

Ser. No. 109,765. (CLASS 39. CLOTHING.) FRIEDMAN BROS. & SON NECKWEAR COMPANY INC., New York, N. Y. Filed Mar. 25, 1918.

Shur-On

Particular description of goods.—Ties, Cravats, Four-in-Hand Ties, and Bow-Ties.
Claims use since Mar. 1, 1917.

Ser. No. 110,015. (CLASS 5. ADHESIVES.) SAMUEL E. BRICK, Salina, Kans. Filed Apr. 6, 1918.

NUREX

Particular description of goods.—Adhesive Paste.
Claims use since about Dec. 1, 1917.

Ser. No. 110,020. (CLASS 12. CONSTRUCTION MATERIALS.) THE FLINTKOTE COMPANY, Boston, Mass. Filed Apr. 6, 1918.

GUARDIAN

Particular description of goods.—Roofing Material Comprising Felts Saturated with Compounds.
Claims use since on or about Feb. 9, 1918.

Ser. No. 110,095. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHNSON, COWDIN & CO., New York, N. Y. Filed Apr. 10, 1918.

J.C.Co.

The section-lines shown in the drawing merely representing shading.
Particular description of goods.—Ribbons.
Claims use since Feb. 1, 1884.

Ser. No. 110,131. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) REID BROS., Seattle, Wash., and San Francisco, Cal. Filed Apr. 11, 1918.

"Woodastic"

Particular description of goods.—Surgical Bandages and Bandaging Material of Pure Cotton Fabric without Rubber.
Claims use since January, 1916.

Ser. No. 110,445. (CLASS 43. THREAD AND YARN.) THE CLARK THREAD CO., Newark, N. J. Filed Apr. 26, 1918.

WOOLSAVER

No claim being made to the word "Wool" apart from the mark shown in the drawing.
Particular description of goods.—Cotton Thread.
Claims use since Jan. 29, 1918.

Ser. No. 110,911. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUGAR PRODUCTS COMPANY, New York, N. Y. Filed May 15, 1918.

MMM

Particular description of goods.—Molasses.
Claims use since Mar. 1, 1918.

Ser. No. 110,912. (CLASS 39. CLOTHING.) SAKS & COMPANY, New York, N. Y. Filed May 15, 1918.

"Paddington"

Particular description of goods.—Men's Outer Wearing-Apparel—Namely, Coats, Overcoats, and Suits.
Claims use since Apr. 1, 1918.

Ser. No. 111,524. (CLASS 39. CLOTHING.) LAURUM & GOLDSMITH, New York, N. Y. Filed June 12, 1918.

SLIMLINE STOUTS

No claim is made to the words "Slimline Stouts" apart from the mark as shown.
Particular description of goods.—Ladies' Dresses.
Claims use since Jan. 1, 1918.

Ser. No. 111,610. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE DUBLIN DISTILLERS CO. LTD., Dublin, Ireland. Filed June 17, 1918. Under ten-year proviso.



Particular description of goods.—Whisky.
Claims use since the year 1874.

Ser. No. 111,805. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN HOMINY COMPANY, Indianapolis, Ind. Filed June 26, 1918.

QUICI
MALT

Particular description of goods.—A Breakfast-Cereal in Flake Form.
Claims use since October, 1891.

Ser. No. 112,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CYRIL C. MAHAN, Baltimore, Md. Filed July 15, 1918.



Particular description of goods.—Candy.
Claims use since Dec. 1, 1916.

Ser. No. 112,164. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CROCKER & COMPANY, Seattle, Wash. Filed July 16, 1918.

VENCEDOR

Particular description of goods.—A Canned Article of Food Consisting Principally of Fried Fresh Codfish and Mashed Potatoes.
Claims use since June 15, 1918.

Ser. No. 112,427. (CLASS 39. CLOTHING.) FRANK KATZ HAT CO. INC., New York, N. Y. Filed July 30, 1918.



No claim is made to the exclusive use of the words "The Mercer" apart from the mark shown in the drawing.
Particular description of goods.—Men's, Women's, and Children's Hats Made of Cloth, Felt, or Straw.
Claims use since the 1st day of July, 1917.

Ser. No. 112,448. (CLASS 39. CLOTHING.) THE SAMUEL STORES, INC., New York, N. Y. Filed July 31, 1918.

MILWARD'S

Particular description of goods.—Ladies' Outer Apparel—to wit, Coats, Suits, Dresses, Waists, and Skirts.
Claims use since about Mar. 1, 1918.

Ser. No. 112,491. (CLASS 10. PAINTS AND PAINTERS' MATERIALS.) JOHN HARDY, Buffalo, N. Y. Filed Aug. 3, 1918.



Particular description of goods.—Piano-Polish.
Claims use since Mar. 1, 1915.

Ser. No. 112,696. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLIFFORD V. NEWELL, Oklahoma, Okla. Filed Aug. 13, 1918.



The shading on the drawing is simply fanciful and not essential and does not represent coloring.
Particular description of goods.—Rheumatism Medicine.
Claims use since July 1, 1918.

Ser. No. 112,758. (CLASS 39. CLOTHING.) ROGERS PEET COMPANY, New York, N. Y. Filed Aug. 16, 1918.

THE
COMPOSITE

Comprising the words "The Composite."
Particular description of goods.—Men's Hats.
Claims use since Aug. 3, 1918.

Ser. No. 112,891. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HEINSTER & CANFIELD CO., Grand Rapids, Mich. Filed Aug. 27, 1918.

CRITERION

Particular description of goods.—Ready-Mixed Paints, Varnishes, Shellacs, Varnishing and Flat Stains, Paint Enamels, Oil Colors, Japan Colors, Oil and Flat-Drying Wall-Finishes, and Japan Drier.

Claims use since 1916.

Ser. No. 113,101. (CLASS 37. PAPER AND STATIONERY.) S. D. WARREN COMPANY, Boston, Mass. Filed Sept. 9, 1918.

CAMEO

Particular description of goods.—Printing-Paper.

Claims use since about Mar. 1, 1902.

Ser. No. 113,196. (CLASS 39. CLOTHING.) LIGON, HINCKLE & CO., INC., Petersburg, Va. Filed Sept. 16, 1918.

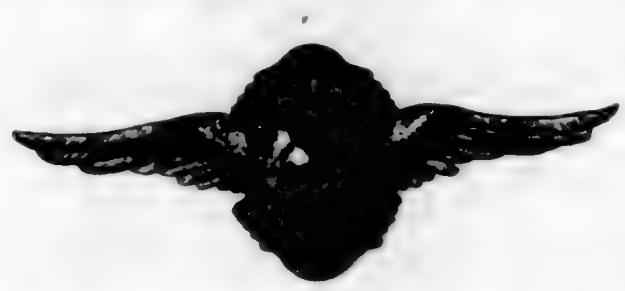


No claim being made to the word "Appomattox."

Particular description of goods.—Men's, Women's, and Children's Knitted and Woven Underwear; Men's Outer Shirts, Sweaters, Cravats; Women's and Children's Dresses; Men's, Women's, and Children's Hosiery, Leather and Fabric Gloves, and Men's, Ladies', and Misses' Caps; Men's Overalls and Trousers, Outer Jackets for Men and Boys, and Ladies' Waists.

Claims use since the year 1910.

Ser. No. 113,243. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE ENGEL AIRCRAFT COMPANY, Niles, Ohio. Filed Sept. 19, 1918.



Said trade-mark consists of a representation of a sphere, with the continents of North and South America appearing thereon, with the word "Engel" written through the same, and attached to either side of said sphere are spreading wings. A background appears between the wings above and below the representation of the sphere. No claim is made to the use of the word "Engel" apart from the mark shown in the drawing.

Particular description of goods.—Aeroplanes and Flying-Boats.

Claims use since about August, 1917.

Ser. No. 113,370. (CLASS 37. PAPER AND STATIONERY.) MOORE PAPER COMPANY, Chicago, Ill. Filed Sept. 25, 1918.



Particular description of goods.—Paper—Namely, Writing, Printing, Wrapping, Toilet, Blotting Paper; Cardboard, Blank Cut Cards, Blank Tags, Envelops, Gummed Paper in Sheet Form for Making Labels, and Strawboard.

Claims use since Feb. 28, 1918.

Ser. No. 113,411. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) UTICA STEAM & MOHAWK VALLEY COTTON MILLS, Utica, N. Y. Filed Sept. 25, 1918. Under ten-year proviso.



Particular description of goods.—Sheets, Sheetings, Pillow-Cases, and Cotton Piece Goods.

Claims use since Nov. 1, 1851.

Ser. No. 113,530. (CLASS 39. CLOTHING.) COOPER UNDERWEAR COMPANY, Kenosha, Wis. Filed Oct. 3, 1918.



The trade-mark being in the handwriting of Henry S. Cooper, secretary of the applicant corporation and the founder of its business.

Particular description of goods.—Underwear, Consisting of Knitted and Woven Union-Suits, Shirts, and Drawers for Men, Women, and Children, and Socks for Men and Children.

Claims use since some time during February, 1915.

Ser. No. 113,571. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) STATEN ISLAND SHIPBUILDING COMPANY, New York, N. Y. Filed Oct. 3, 1918.

SISCO

Particular description of goods.—Circulating-Pumps, Steering-Engines, and Steam-Engines.

Claims use since 1910.

Ser. No. 113,606. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FARNSWORTH, HOYT CO., Boston, Mass. Filed Oct. 7, 1918.

-Red-line-in-

Particular description of goods.—Cotton-Twill Shoe-Linings in the Piece.
Claims use since Feb. 13, 1914.

Ser. No. 113,638. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHRIST J. ULRICH, St. Louis, Mo. Filed Oct. 9, 1918.

UNIVERSAL

Particular description of goods.—Chemical Carbon-Remover and Chemical Gas-Saver Adapted to Obtain Better Efficiency by Preventing Accumulation and Eliminating Carbon Deposits.
Claims use since June 12, 1918.

Ser. No. 113,790. (CLASS 12. CONSTRUCTION MATERIALS.) GENERAL INSULATING & MANUFACTURING COMPANY, St. Louis, Mo., and Alexandria, Ind. Filed Oct. 18, 1918.

THERMALITE

Particular description of goods.—Heat and Cold Insulation Materials in Which Mineral Wool is the Main Ingredient.
Claims use since Aug. 15, 1918.

Ser. No. 113,836. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE RIALTO CORPORATION, Long Beach, Cal. Filed Oct. 21, 1918.

PIM-OLIVE

No claim is made to the exclusive right to the use of the word "Olive" apart from the mark shown in the drawing.
Particular description of goods.—A Salad Sandwich-Filling.
Claims use since Sept. 9, 1918.

Ser. No. 113,899. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) W. R. GRACE & Co., New York, N. Y., and San Francisco, Cal. Filed Oct. 26, 1918.

SIEMPRE EN DEMANDA

The words "Siempre en Demanda" are hereby disclaimed apart from the mark shown in the drawing.
Particular description of goods.—Textile Fabrics Consisting of Cotton Piece Goods.
Claims use since Sept. 1, 1918.

Ser. No. 113,940. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) DEN KONGELIGE PORCELAINSFABRIK, Copenhagen, Denmark. Filed Oct. 30, 1918. Under ten-year proviso.



Particular description of goods.—Porcelain Ware—viz., Bric-à-Brac and Table-Porcelain.
Claims use since the year 1779.

Ser. No. 113,973. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY A. KESTING, Kansas City, Mo. Filed Oct. 31, 1918.

Sunflower



Particular description of goods.—Unpopped Popcorn.
Claims use since Dec. 4, 1917.

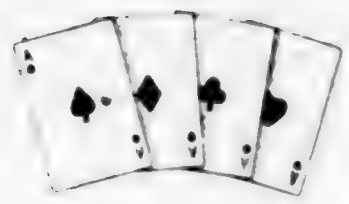
Ser. No. 114,010. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEUSS, HESSLEIN & CO., New York, N. Y. Filed Nov. 1, 1918.



Particular description of goods.—Woven Cotton Piece Goods.
Claims use since April, 1914.

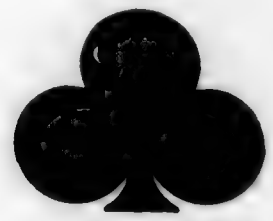
Ser. No. 114,046. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WATTS, STEBBINS & CO., New York, N. Y. Filed Nov. 4, 1918.

"THAT'S GOOD."



Particular description of goods.—Cotton Piece Goods.
Claims use since about 1903.

Ser. No. 114,099. (CLASS 11. INKS AND INKING MATERIALS.) EDGAR FREDERICK MUNDAY, London, England. Filed Nov. 8, 1918.



Particular description of goods.—Writing-Inks, Printing-Inks, Marking-Inks, Drawing-Inks, Type-Writer Ribbons, Inking-Ribbons, and Inking Stamp-Pads.
Claims use since Mar. 20, 1889.

Ser. No. 114,147. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) AMERICAN PIANO COMPANY, New York, N. Y. Filed Nov. 13, 1918. Under ten-year proviso.

Franklin

Particular description of goods.—Pianos.
Claims use since about 1893.

Ser. No. 114,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED SANITARY PRODUCTS CO., INC., New York, N. Y. Filed Nov. 18, 1918.

CRECO

Particular description of goods.—Disinfectants and Insecticides.
Claims use since about June 1, 1918.

Ser. No. 114,242. (CLASS 39. CLOTHING.) LINDA HITZEMAN, Fort Wayne, Ind. Filed Nov. 19, 1918.

LINDA LOU

Particular description of goods.—Women's and Girls' Undergarment of Combination Design Made from Textile Fabric.
Claims use since Oct. 22, 1918.

Ser. No. 114,245. (CLASS 39. CLOTHING.) REGATTA MANUFACTURING CO., INC., Baltimore, Md. Filed Nov. 19, 1918.



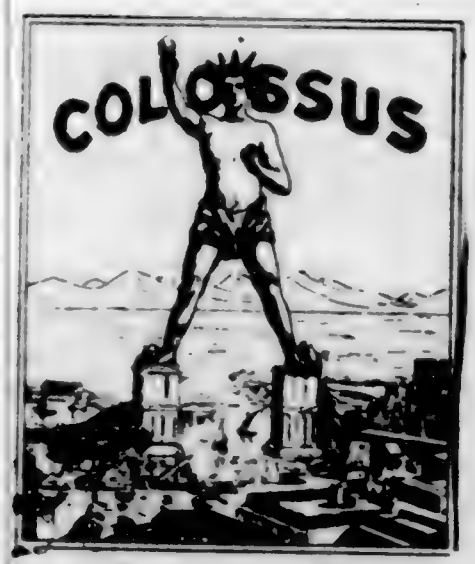
The lining in the drawing is for shading only.
Particular description of goods.—Union-Suits Made of Woven Fabrics, Men's Undershirts and Drawers Made of Woven Fabrics, and Men's Top Shirts Made of Woven Fabrics.
Claims use since about the month of April, 1918.

Ser. No. 114,252. (CLASS 39. CLOTHING.) EMERY HEEL SALES COMPANY, Boston, Mass. Filed Nov. 20, 1918.



Particular description of goods.—Tape Made of Rubber, Rubber Composition, and Fiber for Boots and Shoes.
Claims use since Nov. 15, 1918.

Ser. No. 114,282. (CLASS 42. KNITTED, NETTED, TEXTILE FABRICS.) AMORY BROWNE EXPORT CORP., Boston, Mass., and New York, N. Y. Filed Nov. 22, 1918.



The lining of the drawing merely indicating shading.
Particular description of goods.—Cotton Piece Goods.
Claims use since Nov. 6, 1918.

Ser. No. 114,289. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FULD, TRAUBE & Co., INC., New York, N. Y. Filed Nov. 22, 1918.

MULTIWEAR

Particular description of goods.—Veils and Veilings.
Claims use since about Mar. 1, 1916.

Ser. No. 114,303. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THORNDIKE COMPANY, Thorndike, Mass. Filed Nov. 22, 1918. Under ten-year proviso.

THORNDIKE

Particular description of goods.—Cotton Piece Goods.
Claims use since about 1838.

Ser. No. 114,326. (CLASS 10. FERTILIZERS.) A. D. ADAIR & MCCARTY BROS. INC., Atlanta, Ga. Filed Nov. 26, 1918.



Applicant disclaims the words "Old Reliable" apart from the mark shown on the drawing.
Particular description of goods.—Cotton-Plant Fertiliser.
Claims use since Oct. 25, 1918.

Ser. No. 114,334. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE DRAEGER OXYGEN APPARATUS COMPANY, New York, N. Y., and Pittsburgh, Pa. Filed Nov. 25, 1918.



The representation of a flask used apart from the word "Atmos" being disclaimed.
Particular description of goods.—For Resuscitating Apparatus, Apparatus to Permit Breathing While in a Noxious Atmosphere, Such as Mine Rescue Apparatus and Apparatus Used by Firemen and for other Industrial Requirements; Masks, Helmets, Pressure-Regulators, Air-Regenerators, Valves and Parts, All Specially Designed and Constructed for Use in Connection with Said Apparatus.
Claims use since Nov. 22, 1918.

Ser. No. 114,336. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FAIRFAX TEXTILE MILLS, INC., New York, N. Y. Filed Nov. 25, 1918.



Particular description of goods.—Textile Goods for Underwear Made of Cotton, Wool, Silk, or a Mixture of These.
Claims use since about Aug. 1, 1918.

Ser. No. 114,447. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GOUDEY GUM CO., Boston, Mass. Filed Dec. 2, 1918.



No claim, however, being made to the use of the word "Gum."
Particular description of goods.—Chewing-Gum.
Claims use since Oct. 28, 1918.

Ser. No. 114,456. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) RUSSELL, BURDSALL & WARD BOLT & NUT CO., Port Chester, N. Y. Filed Dec. 2, 1918.

EMPIRE

Particular description of goods.—Bolts, Nuts, Rivets, and Metal Washers.
Claims use since January, 1883.

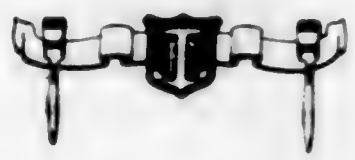
Ser. No. 114,466. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE P. KASSMAN, Binghamton, N. Y. Filed Dec. 3, 1918.

Moltose

Particular description of goods.—A Preparation for Coughs, Colds in the Chest, Bronchitis, Croup, Rheumatism, Pleurisy, Asthmas, Headaches, Neuralgia, Sore Joints and Muscles.

Claims use since Feb. 1, 1917.

Ser. No. 114,469. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PRESERVATIVE PAINT COMPANY, Seattle, Wash. Filed Dec. 3, 1918.



Particular description of goods.—Ready-Mixed Paints and Varnishes.

Claims use since the 1st day of January, 1908.

Ser. No. 114,530. (CLASS 20. MEASURING AND SCIENTIFIC APPLIANCES.) DETROIT ACCESSORIES CORPORATION, Detroit, Mich. Filed Dec. 7, 1918.

MOTORSCOPE

Particular description of goods.—Spark-Plug-Firing Indicators.

Claims use since April, 1917.

Ser. No. 114,572. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIDEL-RATTNER MANUFACTURING COMPANY, Brooklyn, N. Y. Filed Dec. 9, 1918.



The Sidel-Rattner Manufacturing Company hereby specifically disclaims the exclusive right to the use of the words "A Real Pump" and the word "Products" in conjunction with its adopted trade-mark.

Particular description of goods.—Automobile-Tire Pumps.

Claims use since Sept. 30, 1917.

Ser. No. 114,580. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HABIRSHAW ELECTRIC CABLE COMPANY, INC., New York, N. Y. Filed Dec. 10, 1918.

"HABIRLITE"

Particular description of goods.—Electrically-Insulated Locomotive-Headlight Wire.

Claims use since Nov. 15, 1918.

Ser. No. 114,585. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EARL L. MILLER, Overbrook, Kans. Filed Dec. 10, 1918.



No claim being made to the words "Never Miss" apart from the mark shown in the drawing.

Particular description of goods.—Timer-Brushes for Ignition Systems.

Claims use since Feb. 11, 1918.

Ser. No. 114,595. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHAIN BELT COMPANY, Milwaukee, Wis. Filed Dec. 11, 1918.



Particular description of goods.—Elevator-Boots, Elevator-Buckets, Sprocket-Wheels, Pulleys, Shafting and Gearing, Shaft-Hangers and Shaft-Bearings, Clutches for machinery and Parts Thereof, Shaft-Couplings, Machinery for Conveying and Distributing Concrete, Traveling Water-Screens, Screens for Sand, Gravel, and other Solid Material, Wire and Rod Cutters, Traction-Wheels, and Bracket Wheels or Rollers.

Claims use since about April, 1917.

Ser. No. 114,604. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BECKER STEEL CO. OF AMERICA, Charleston, W. Va. Filed Dec. 12, 1918.



Particular description of goods.—High-Speed Tool-Steel.

Claims use since the 19th of March, 1915.

Ser. No. 114,698. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JEROMES KNITTING MACHINE CO., Pawtucket, R. I. Filed Dec. 12, 1918.

INVINCIBLE

Particular description of goods.—Knitting-Machines.
Claims use since October, 1899.

Ser. No. 114,698. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) KAUFMANN BROS. & BONDY, New York, N. Y. Filed Dec. 17, 1918.

DINWOODIE

Particular description of goods.—Smokers' Pipes, Cigar and Cigarette Holders.
Claims use since November, 1916.

Ser. No. 114,728. (CLASS 15. OILS AND GREASES.) PETER ALEXANDER BEATTY, New Orleans, La. Filed Dec. 20, 1918.

ST. RITA OF CASCIA

Particular description of goods.—Night-Tapers.
Claims use since June 21, 1918.

Ser. No. 114,758. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ZENITH METAL COMPANY, Indianapolis, Ind. Filed Dec. 20, 1918.

HYWAY

Particular description of goods.—Timers for Internal-Combustion-Engine Ignition Systems.
Claims use since May 25, 1918.

Ser. No. 114,787. (CLASS 15. OILS AND GREASES.) PITTSBURGH BY-PRODUCT COKE COMPANY, Wilmington, Del., and Pittsburgh, Pa. Filed Dec. 23, 1918.

B-ZOL

Particular description of goods.—A Motor-Fuel in Liquid Form.
Claims use since Dec. 9, 1918.

Ser. No. 114,799. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SWARTS ELECTRIC COMPANY, Indianapolis, Ind. Filed Dec. 23, 1918.



Particular description of goods.—Electric Power and Light Systems Comprising Generators, Motors, Governors, Batteries, Switchboards, and Associated Parts.
Claims use since early in 1915.

Ser. No. 114,855. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE H. IRVINE, Detroit, Mich. Filed Dec. 28, 1918.

SNO-FLAKE

Particular description of goods.—Automobile-Body Polish and Furniture-Polish.
Claims use since June, 1916.

Ser. No. 114,950. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Jan. 2, 1919.



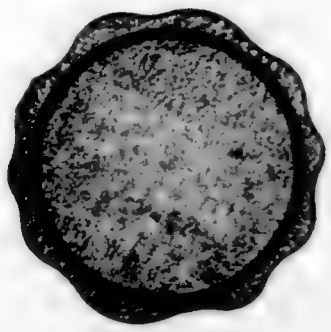
No claim is made to the words "Coolidge Tube" apart from the mark shown in the drawing.
Particular description of goods.—Vacuum-Tube Discharge Devices—Namely, Those Commonly Known As X-Ray Tubes.
Claims use since April, 1914.

Ser. No. 115,002. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AMERICAN TEXTILE PRODUCTS COMPANY, Chicago, Ill. Filed Jan. 6, 1919.



The word "Pershing" being disclaimed except in the particular form and relation shown in the drawing.
Particular description of goods.—Garters and Hose-Supporters.
Claims use since Dec. 1, 1918.

Ser. No. 115,006. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE CONGOLEUM COMPANY, Philadelphia, Pa. Filed Jan. 6, 1919.



The mark being lined for gold.

Particular description of goods.—Prepared Floor-Coverings of the Oiled-Cloth Type.

Claims use since December, 1917.

Ser. No. 115,019. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) R. RAYMOND, St. Paul, Minn. Filed Jan. 6, 1919.

MYTHAL

Particular description of goods.—Ready-Mixed Paints and Varnishes.

Claims use since Nov. 11, 1918.

Ser. No. 115,023. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE CONGOLEUM COMPANY, Philadelphia, Pa. Filed Jan. 7, 1919.

SEAL LINE

No claim being made to the word "Line" apart from the mark shown in said drawing.

Particular description of goods.—Prepared Floor-Coverings of the Oiled-Cloth Type.

Claims use since Jan. 4, 1919.

Ser. No. 115,038. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AUGUSTUS A. WEST, Philadelphia, Pa. Filed Jan. 7, 1919.



No claim being made to the exclusive use of the words "West" and "Hair Net" apart from the mark as shown in the drawing.

Particular description of goods.—Hair-Nets.

Claims use since Nov. 22, 1918.

Ser. No. 115,048. (CLASS 12. CONSTRUCTION MATERIALS.) IRVING IRON WORKS COMPANY, Long Island City, N. Y. Filed Jan. 8, 1919.

RETICULINE

Particular description of goods.—Metal Floorings or Gratings.

Claims use since 2d day of December, 1918.

Ser. No. 115,085. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

ROSAEMI

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,088. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

AMETHYSTINE

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,089. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

ILLUMINAURA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,090. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

BEATIFIC

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,092. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

CONSTRUCTAURA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,093. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

LAMBENT

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,096. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

REDATMA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,097. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

TWILETTAURA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,098. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

ROSATMA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,099. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

AURAGLOW

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,100. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

LAVENDAURA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,101. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

GRENIMBIC

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,103. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 10, 1919.

NEWERA

Particular description of goods.—Fabrics of Silk and Silk Mixtures.

Claims use since about Dec. 17, 1918.

Ser. No. 115,105. (CLASS 15. OILS AND GREASES.) KEYSTONE LUBRICATING COMPANY, Philadelphia, Pa. Filed Jan. 10, 1919.

KEYLUBRIC

Particular description of goods.—Lubricants, Consisting of Oils and Greases.

Claims use since December, 1918.

Ser. No. 115,131. (CLASS 5. ADHESIVES.) VAN SCHAACK BROS. CHEMICAL WORKS, Chicago, Ill. Filed Jan. 11, 1919.

VANITE

Particular description of goods.—Waterproof Cement for Use on Leather, Artificial Leather, Cloth, Canvas, Paper, and Wood.

Claims use since July, 1918.

Ser. No. 115,132. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM B. WARD, Buffalo, N. Y. Filed Jan. 11, 1919.

HOSTESS

Particular description of goods.—Bread, Biscuits, and Cakes.

Claims use since Jan. 3, 1919.

Ser. No. 115,145. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. G. HILL GROCERY COMPANY, Nashville, Tenn. Filed Jan. 13, 1919.

ACKA PACKA

Particular description of goods.—Canned Vegetables, Canned Fruits, Wheat-Flour and Self-Rising Flour, and Coffee.
Claims use since Dec. 26, 1918.

Ser. No. 115,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. KOHNSTAMM & CO., New York, N. Y. Filed Jan. 13, 1919.

VANATROL

Particular description of goods.—A Flavoring Extract for Foods.
Claims use since Dec. 18, 1916.

Ser. No. 115,155. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NATIONAL WATCH COMPANY, INC., New York, N. Y. Filed Jan. 13, 1919.

ENICAR

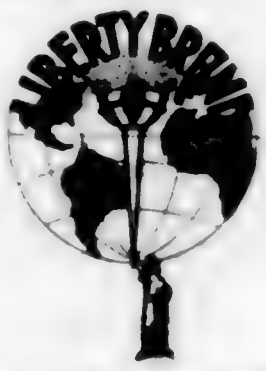
Particular description of goods.—Watch-Movements.
Claims use since about Sept. 14, 1916.

Ser. No. 115,186. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PELGRAM & MEYER, New York, N. Y. Filed Jan. 14, 1919.



Particular description of goods.—Ribbons.
Claims use since Aug. 21, 1918.

Ser. No. 115,253. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NEW PROCESS METALS CO., INC., New York, N. Y. Filed Jan. 17, 1919.



No claim being made to the word "Brand" apart from the mark as shown in the drawing.
Particular description of goods.—Pyrophoric Alloys or Sparking Metal Alloys.
Claims use since Jan. 2, 1919.

Ser. No. 115,252. (CLASS 37. PAPER AND STATIONERY.) GEORGE WADSWORTH HUGHES, Birmingham, England. Filed Jan. 18, 1919.

THE PEACEMAKER

Particular description of goods.—Steel Pens.
Claims use since about Aug. 31, 1907.

Ser. No. 115,478. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 28, 1919.

Shapspun

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,479. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 28, 1919.

Sunspun

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,483. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHNSON, COWDIN & CO., New York, N. Y. Filed Jan. 28, 1919.

DREAM

Particular description of goods.—Ribbons.
Claims use since Jan. 16, 1919.

Ser. No. 115,485. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH L. NAFZIGER, Kansas City, Mo. Filed Jan. 28, 1919.

My-kind-a

Particular description of goods.—Bakery Products—Namely, Bread.
Claims use since about Jan. 15, 1919.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 4, 1919.

124,634. PREPARATION IN TABLET FORM FOR THE TREATMENT OF FOOT DISEASES. HERMAN A. GROTH, Chicago, Ill.
Filed September 3, 1918. Serial No. 112,980. PUBLISHED NOVEMBER 26, 1918.

124,635. NEUTRALIZING-CORDIAL FOR TREATMENT OF DERANGEMENT OF STOMACH AND BOWELS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,145. PUBLISHED NOVEMBER 26, 1918.

124,636. CERTAIN NAMED CHEMICALS, MEDICINES, PHARMACEUTICAL PREPARATIONS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,144. PUBLISHED NOVEMBER 26, 1918.

124,637. EXTRACTS OF ERGOT AND A PREPARATION OF HYDRASTIS FOR TREATMENT OF CERTAIN NAMED AFFECTIONS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,142. PUBLISHED NOVEMBER 26, 1918.

124,638. CERTAIN NAMED COMPOUNDS FOR THE TREATMENT OF CERTAIN AFFECTIONS AND CONDITIONS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,141. PUBLISHED NOVEMBER 26, 1918.

124,639. DISTILLATE FROM APOCYNUM CANNABINUM FOR THE TREATMENT OF DROPSY AND NEPHRITIS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,140. PUBLISHED NOVEMBER 26, 1918.

124,640. CERTAIN NAMED PHARMACEUTICAL PRODUCTS. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,137. PUBLISHED NOVEMBER 26, 1918.

124,641. TOBACCO-DISTILLATE USED TO RELIEVE CERTAIN NAMED PAINS AND TO TREAT FURFURACEOUS SKIN DISEASES. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,138. PUBLISHED NOVEMBER 26, 1918.

124,642. PREPARATION OF ECHINACEA FOR SURGICAL USES. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,139. PUBLISHED NOVEMBER 26, 1918.

124,643. PREPARATION OF CAULOPHYLLUM FOR TREATMENT OF AMENORRHEA, DYSMENORRHEA, CUTANEOUS DISEASES, AND IN GYNECOLOGY. LLOYD BROTHERS, Cincinnati, Ohio.
Filed July 15, 1918. Serial No. 112,146. PUBLISHED NOVEMBER 26, 1918.

124,644. MACARONI. A. MORTELLARO & Co., Tampa, Fla.
Filed August 8, 1918. Serial No. 112,635. PUBLISHED OCTOBER 22, 1918.

124,645. BLOOD BUILDER AND PURIFIER. SAMUEL M. NOYES, Wheeling, W. Va.
Filed April 19, 1918. Serial No. 110,329. PUBLISHED NOVEMBER 12, 1918.

124,646. HERNIA-PADS. PLAPAO LABORATORIES, INC., St. Louis, Mo.
Filed March 8, 1917. Serial No. 101,993. PUBLISHED DECEMBER 11, 1917.

124,647. SHAMPOO USED IN THE TREATMENT OF THE SCALP AND HAIR. WILLIAM ZIMMERMAN, Cedar Rapids, Iowa.
Filed June 1, 1918. Serial No. 111,328. PUBLISHED NOVEMBER 26, 1918.

TRADE-MARK REGISTRATIONS RENEWED.

16,644. WHEAT-FLOUR. WALTER, HORNING & Co., Philadelphia, Pa., and Minneapolis, Minn.; Zenith Milling Company, assignee.
Registered May 28, 1889. Renewed May 28, 1919.

16,645. WHEAT-FLOUR. WALTER, HORNING & Co., Philadelphia, Pa., and Minneapolis, Minn.; Zenith Milling Company, assignee.
Registered May 28, 1889. Renewed May 28, 1919.

16,646. WHEAT-FLOUR. WALTER, HORNING & Co., Philadelphia, Pa., and Minneapolis, Minn.; Zenith Milling Company, assignee.
Registered May 28, 1889. Renewed May 28, 1919.

16,647. WHEAT-FLOUR. WALTER, HORNING & Co., Philadelphia, Pa., and Minneapolis, Minn.; Zenith Milling Company, assignee.
Registered May 28, 1889. Renewed May 28, 1919.

TRADE-MARK REGISTRATIONS CANCELED.

118,117. CRUCIBLES. VESUVIUS CRUCIBLE COMPANY, Swissvale, Pa.
Registered August 14, 1917. Canceled February 28, 1919.

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REPORT

OF THE

COMMISSIONER OF PATENTS

TO CONGRESS

FOR THE YEAR ENDED DECEMBER 31, 1918.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1919.

To the Senate and House of Representatives:

In compliance with section 494 of the Revised Statutes I have the honor to submit the following report of the business of the Patent Office for the year ended December 31, 1918:

RECEIPTS.

Detailed statement of all moneys received for patents, for copies of records or drawings, or from any source whatever.

Applications:		
Cash received	$1,695,983.00	
Cash refunded	8,570.50	
Net cash	1,687,362.50	
Certificates of deposit	57,885.00	
Total cash and certificates		1,745,247.50
Copies:		
Cash received	188,862.75	
Cash refunded	3,913.85	
Net cash	184,948.90	
Certificates of deposit	1,030.30	
Total cash and certificates		185,979.20
Recording assignments:		
Cash received	25,797.20	
Cash refunded	1,233.86	
Net cash	24,563.34	
Certificates of deposit	136.00	
Total cash and certificates		24,699.34
Registration of prints and labels:		
Cash received	5,945.00	
Cash refunded	306.00	
Net cash	5,639.00	
Certificates of deposit	42.00	
Total cash and certificates		5,681.00
Court costs:		
Cash received	97.28	
Cash refunded	-----	
Net cash	97.28	
Certificates of deposit	-----	
Total cash and certificates		97.28
Aggregates.		
Cash received	1,916,635.28	
Cash refunded	14,024.21	
Net cash	1,902,611.02	
Certificates of deposit	59,093.30	
Total cash and certificates	1,961,704.32	
Receipts from sale of Official Gazette and other publications through Government Printing Office, estimated	15,814.50	
Grand total		1,977,518.82

EXPENDITURES.

Amounts expended under the several appropriations from January 1 to December 31, 1918.

Salaries	$1,962,915.14
Scientific library	2,591.94
International Union for Protection of Industrial Property	672.18
Stationery	15,022.78
Postage on foreign matter	479.45
Furniture, carpets, ice, telephones, washing towels, and sundries	25,835.37
Photolithographing:	
Current issue	51,917.95
Reproductions	55,881.07
Photographic copies	3,614.23
Photostat supplies, etc	16,494.02
Foreign patents	7,383.60
Printing and binding:	
Official Gazette, with indexes	140,258.35
Specifications	343,575.85
Miscellaneous	24,000.12
Defending suits	293.89
Total	2,050,938.17

RECEIPTS AND EXPENDITURES.

Expenditures	$2,050,938.17
Receipts from all sources	1,977,518.82
Deficit	73,419.35

Surplus earnings of the Patent Office, deposited in the Treasury of the United States.

Amount of total net surplus in Treasury, Jan. 1, 1918	$8,223,883.45
Deficit for the year 1918	73,419.35
Total net surplus, Dec. 31, 1918	8,150,464.10

SUMMARY OF THE BUSINESS OF THE PATENT OFFICE.

Applications for patents for inventions	57,180
Applications for patents for designs	2,232
Applications for reissues of patents	203
Total	59,615
Applications for registration of trade-marks	6,846
Applications for registration of labels	754
Applications for registration of prints	242
Disclaimers filed	17
Appeals on the merits	1,918
Notices of opposition	154
Total	9,931
Applications without fees:	
For inventions, (act of Mar. 3, 1883)	167
For designs, (Rule 170)	2
For reissues, inventions, (Rule 170)	15
For reissues, designs, (Rule 170)	1
Total	185
Patents issued, excluding designs	38,569
Design patents issued	1,207
Patents reissued	165
Total	39,941
Trade-marks registered	4,061
Labels registered	654
Prints registered	197
Total	4,912
Patents expired during the year	25,558
Applications forfeited for nonpayment of final fees	9,040
Applications allowed awaiting payment of final fees	14,378
Trade-mark applications passed for publication	4,607

PATENTS ISSUED.

Patents issued to citizens of the United States with the ratio of population to each patent granted.

States.	Patents and designs.	One to every—	States.	Patents and designs.	One to every—
Alabama	196	18,909	North Dakota	146	3,952
Arizona	98	2,085	Ohio	2,508	1,856
Arkansas	117	13,457	Oklahoma	334	4,902
California	2,151	1,106	Oregon	336	2,002
Colorado	423	1,889	Pennsylvania	3,163	2,423
Connecticut	909	1,228	Rhode Island	298	1,821
Delaware	80	2,529	South Carolina	106	14,298
Florida	160	4,704	South Dakota	186	3,743
Georgia	222	11,753	Tennessee	189	10,979
Idaho	121	2,691	Texas	682	6,165
Illinois	3,963	1,426	Utah	154	2,424
Indiana	827	3,366	Vermont	64	5,562
Iowa	704	3,160	Virginia	280	7,169
Kansas	380	4,480	Washington	490	1,679
Kentucky	243	9,423	West Virginia	218	5,679
Louisiana	151	10,909	Wisconsin	1,048	2,227
Maine	120	6,186	Wyoming	57	2,981
Maryland	305	4,247			
Massachusetts	2,174	1,548			
Michigan	1,617	1,738			
Minnesota	871	2,383	Alaska	16	4,022
Mississippi	62	21,652	Canal Zone	5	6,210
Missouri	1,071	3,075	District of Columbia	253	1,309
Montana	189	1,990	Hawaii	38	5,050
Nebraska	330	3,517	Philippine Islands	20	443,999
Nevada	41	1,997	Porto Rico	3	223,002
New Hampshire	132	3,500	United States Army	12	.....
New Jersey	1,993	1,279	United States Navy	5	.....
New Mexico	55	5,951	United States Marines	1	.....
New York	6,075	1,500			
North Carolina	194	11,373	Total	[1] 36,776	.....

[1] Not including 165 reissues and 117 patents withdrawn.

Patents granted to residents of foreign countries.

Algeria	2	Dominican Republic	1	Japan	28	South Australia	4
Argentina	8	Dutch East Indies	4	Java	1	Spain	9
Austria-Hungary	15	Ecuador	1	Mexico	19	Sweden	109
Belgium	11	England	818	Morocco	1	Switzerland	146
Bermuda	2	France	208	Netherlands	30	Tasmania	2
Brazil	8	Germany	235	New South Wales	45	Transvaal	5
British West Indies	3	Gold Coast Colony	1	New Zealand	32	Uruguay	3
Canada	742	Greece	3	Norway	62	Venezuela	11
Chile	6	Guatemala	1	Panama	3	Victoria	31
China	6	Honduras	4	Peru	3	Wales	22
Colombia	4	India	3	Queensland	9	West Australia	2
Cuba	29	Ireland	23	Russia	10		
Denmark	29	Italy	50	Scotland	71	Total	2,883

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 and exhibit in detail the business of the Office during the last calendar year:

Comparative statement of the business of the Office from 1837 to 1918, inclusive.

Year.	Applications.[1]	Caveats filed.[1]	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289.00	$23,506.98	.....
1838	.....	.....	520	42,122.54	37,338.92	$4,784.62
1839	.....	.....	426	38,019.97	34,543.51	3,476.46
1840	765	228	473	38,066.81	39,020.07	.....
1841	847	312	606	40,413.01	32,666.57	.....
1842	781	291	517	36,505.63	31,241.43	5,264.20
1843	819	315	519	35,315.81	30,776.96	4,538.85
1844	1,045	380	497	42,509.26	38,344.53	4,164.73
1845	1,246	452	503	51,078.14	39,398.65	11,679.49
1846	1,272	448	628	50,264.16	46,158.71	4,105.45
1847	1,531	583	569	62,111.19	41,878.35	31,232.84
1848	1,628	607	653	67,578.80	58,908.84	8,670.85
1849	1,965	595	1,077	80,782.78	77,716.44	3,066.34
1850	2,193	692	903	88,927.05	80,169.95	8,756.10
1851	2,258	760	872	96,738.61	86,916.93	8,821.68
1852	2,570	996	1,019	112,056.34	95,916.91	16,139.43
1853	2,673	901	981	121,537.45	122,989.83	.....
1854	3,324	958	1,844	163,789.84	167,146.32	.....
1855	4,435	908	2,013	216,459.35	179,540.33	36,919.02
1856	4,980	1,094	2,305	192,949.02	189,981.03	.....
1857	4,771	1,010	2,896	186,132.01	211,582.69	.....
1858	5,364	943	3,710	203,716.16	193,193.74	10,522.42
1859	6,225	1,079	4,538	245,942.15	200,278.41	45,663.74
1860	7,653	1,084	4,819	258,352.59	252,820.80	5,531.79
1861	4,643	709	3,340	127,284.46	221,491.91	.....
1862	5,083	824	3,321	215,754.99	122,810.28	92,944.66
1863	6,014	787	4,170	165,868.29	159,454.14	6,170.15
1864	6,972	1,083	5,020	240,919.98	229,268.69	11,651.98
1865	10,664	1,222	6,616	348,791.84	274,190.34	74,382.50
1866	15,209	2,723	9,480	486,665.38	364,724.28	122,941.10

Comparative statement of the business of the Office from 1837 to 1918, inclusive—Continued.

Year.	Applications.[1]	Caveats filed.[2]	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	21, 278	3, 897	13, 015	$448,581.52	$439, 263. 32	$7, 318. 60
1838	20, 445	3, 705	13, 378	681, 565. 86	629, 679. 77	52, 586. 09
1839	19, 271	3, 624	15, 998	693, 145. 81	486, 430. 74	206, 715. 07
1840	19, 171	3, 273	13, 221	699, 456. 78	587, 147. 19	112, 309. 57
1841	19, 472	3, 288	15, 033	678, 716. 46	562, 691. 64	116, 624. 82
1842	18, 246	3, 090	13, 899	699, 728. 39	665, 595. 00	34, 131. 39
1843	20, 414	3, 248	12, 854	703, 191. 77	691, 178. 98	12, 012. 79
1844	21, 668	3, 181	13, 891	738, 278. 17	679, 298. 41	58, 979. 76
1845	21, 636	3, 094	14, 537	743, 453. 36	721, 657. 71	21, 795. 65
1846	21, 435	2, 697	15, 595	757, 987. 66	652, 542. 60	105, 445. 05
1847	20, 308	2, 809	14, 187	732, 342. 85	613, 152. 62	119, 190. 23
1848	20, 260	2, 755	13, 444	726, 375. 55	603, 092. 99	123, 282. 56
1849	20, 059	2, 620	13, 213	708, 931. 47	537, 638. 97	174, 292. 50
1850	22, 012	2, 490	13, 947	749, 685. 33	538, 866. 17	210, 820. 15
1851	26, 050	2, 406	16, 564	863, 665. 89	605, 173. 28	249, 492. 61
1852	31, 522	2, 563	19, 267	1, 008, 219. 45	683, 887. 67	325, 351. 78
1853	34, 576	2, 741	22, 263	1, 146, 240. 00	675, 234. 86	471, 005. 14
1854	35, 600	2, 582	20, 413	1, 075, 798. 89	970, 579. 76	105, 219. 04
1855	35, 717	2, 552	24, 223	1, 188, 089. 15	1, 024, 378. 85	163, 710. 30
1856	35, 998	2, 513	23, 508	1, 154, 551. 40	992, 503. 45	162, 047. 95
1857	35, 613	2, 622	21, 477	1, 144, 509. 60	994, 472. 22	150, 037. 38
1858	35, 797	2, 251	20, 506	1, 118, 516. 10	973, 108. 78	145, 407. 32
1859	40, 575	2, 481	24, 158	1, 281, 728. 06	1, 082, 956. 96	228, 772. 09
1860	41, 048	2, 311	26, 392	1, 340, 272. 66	1, 099, 297. 74	241, 074. 92
1861	40, 552	2, 408	23, 244	1, 271, 285. 78	1, 139, 713. 35	131, 572. 43
1862	40, 753	2, 290	23, 559	1, 286, 231. 88	1, 110, 739. 24	175, 592. 89
1863	38, 473	2, 247	22, 709	1, 243, 871. 64	1, 141, 038. 45	101, 833. 19
1864	36, 439	2, 296	20, 887	1, 187, 439. 58	1, 100, 047. 12	87, 392. 46
1865	40, 680	2, 415	22, 057	1, 245, 246. 93	1, 106, 388. 49	138, 857. 44
1866	43, 982	2, 271	23, 373	1, 324, 059. 83	1, 113, 413. 71	210, 646. 12
1867	47, 906	2, 176	23, 794	1, 375, 641. 72	1, 122, 843. 13	252, 798. 59
1868	36, 842	1, 660	22, 267	1, 137, 734. 46	1, 136, 196. 20	1, 538. 26
1869	41, 443	1, 716	25, 527	1, 326, 457. 03	1, 211, 783. 73	113, 673. 30
1870	41, 980	1, 731	26, 499	1, 350, 828. 53	1, 260, 019. 62	90, 808. 91
1871	46, 449	1, 842	27, 373	1, 449, 396. 16	1, 297, 365. 64	152, 012. 52
1872	49, 641	1, 851	27, 998	1, 552, 850. 08	1, 393, 345. 54	159, 513. 54
1873	50, 213	1, 771	31, 699	1, 642, 201. 81	1, 445, 645. 81	193, 156. 00
1874	52, 143	1, 808	30, 934	1, 657, 226. 53	1, 476, 600. 38	181, 326. 15
1875	54, 971	1, 896	30, 399	1, 808, 756. 14	1, 479, 633. 22	327, 124. 92
1876	56, 482	1, 895	31, 965	1, 790, 921. 38	1, 554, 891. 20	236, 030. 18
1877	58, 782	1, 967	26, 620	1, 910, 618. 14	1, 631, 456. 36	279, 159. 78
1878	61, 475	2, 110	33, 892	1, 896, 847. 67	1, 712, 203. 42	184, 544. 26
1879	66, 889	1, 948	37, 421	2, 042, 828. 14	1, 955, 151. 14	87, 677. 00
1880	64, 629	970	35, 930	2, 028, 586. 69	2, 008, 711. 94	19, 834. 75
1881	69, 121	.....	34, 084	2, 019, 388. 08	1, 953, 692. 91	65, 695. 13
1882	70, 976	.....	37, 731	2, 118, 186. 30	2, 022, 694. 11	95, 092. 19
1883	70, 367	.....	35, 795	2, 094, 417. 79	1, 947, 383. 28	137, 034. 51
1884	70, 494	.....	41, 850	2, 251, 892. 82	2, 000, 770. 12	251, 122. 70
1885	70, 680	.....	44, 934	2, 290, 773. 47	2, 053, 442. 16	239, 331. 32
1886	71, 083	.....	45, 927	2, 345, 540. 94	2, 115, 267. 91	228, 173. 03
1917	70, 373	.....	42, 709	2, 258, 877. 10	2, 045, 173. 16	210, 203. 94
1918	69, 615	.....	39, 941	1, 977, 518. 82	2, 050, 938. 17	−73, 419. 35

[1] Including patents, designs, and reissues.

[2] Caveat law repealed June 25, 1910.

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of Letters Patent commenced.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	1						109							
1837	110						436							
1838	546		1				515		6					
1839	1,061		7				404		13					
1840	1,465		20				458		10					
1841	1,923		30				490		6					
1842	2,413		36				488		13					
1843	2,901	1	49				494	14	11	519				
1844	3,395	15	80				478	12	7	497				
1845	3,873	27	67				475	17	11	503				
1846	4,348	44	78				566	59	13	638				
1847	4,914	103	91				495	60	14	569				
1848	5,409	163	105				584	46	23	653				
1849	5,993	209	125				958	49	30	1,037				
1850	6,981	258	158				884	83	26	993				
1851	7,865	341	184				757	90	25	872				
1852	8,622	431	209				890	109	20	1,019				
1853	9,512	540	229				846	86	29	961				
1854	10,358	626	258				1,759	57	28	1,844				
1855	12,117	683	288				1,982	70	51	2,013				
1856	14,009	753	337				2,315	107	83	2,505				
1857	16,324	860	420				2,686	113	97	2,896				
1858	19,010	973	517				3,467	102	126	3,695				
1859	22,477	1,075	643				4,166	109	231	4,504				
1860	26,642	1,183	674				4,363	183	232	4,778				
1861	31,006	1,366	1,106				3,040	142	147	3,329				
1862	34,045	1,508	1,253				3,221	195	116	3,532				
1863	37,266	1,703	1,369				3,781	176	227	4,184				
1864	41,047	1,879	1,506				4,638	139	248	5,025				
1865	45,685	2,018	1,844				6,099	221	296	6,616				
1866	51,784	2,239	2,140				8,874	264	320	9,458				
1867	60,658	2,533	2,430				12,301	325	402	13,028				
1868	72,959	2,858	2,830				12,544	446	420	13,410				
1869	85,501	3,304	3,250				12,957	506	534	13,997				
1870	98,460	3,810	3,784	1			12,157	737	439	13,333	121			121
1871	110,617	4,547	4,223	122			11,687	905	464	13,056	436			436
1872	122,304	5,452	4,887	608			12,300	884	520	13,613	491			491
1873	134,504	6,336	5,216	1,099			11,616	747	501	12,864	492			492
1874	146,120	7,083	5,717	1,391	1		12,230	898	463	13,590	559	232		791
1875	158,350	7,969	6,300	2,150	233		13,291	915	971	14,537	1,138	232		1,370
1876	171,641	8,884	6,931	3,283	466		14,172	902	621	15,595	959	472		1,431
1877	185,813	9,666	7,452	4,247	937		13,920	699	568	14,187	1,216	392		1,608
1878	198,733	10,385	8,020	5,463	1,329		12,345	590	509	13,444	1,455	492		1,947
1879	211,078	10,975	8,529	6,918	1,821		12,133	502	488	13,213	872	355		1,227
1880	223,211	11,567	9,017	7,790	2,176		12,926	515	505	13,947	349	203		552
1881	236,137	12,082	9,523	8,139	2,379		15,548	566	471	16,584	934	202		1,036
1882	251,685	12,647	9,994	8,973	2,581		18,135	861	271	19,267	947	304		1,251
1883	269,920	13,508	10,265	9,920	2,885		21,106	1,020	187	22,353	902	906		1,808
1884	291,016	14,528	10,432	10,922	3,791		19,147	1,150	116	20,413	1,021	513		1,534
1885	310,163	15,678	10,548	11,843	4,304		23,331	773	129	24,233	1,067	291		1,458
1886	333,494	16,451	10,677	12,910	4,695		21,797	595	116	22,508	1,029	378		1,407
1887	355,291	17,046	10,793	13,939	5,073		20,429	949	99	21,477	1,133	380		1,513
1888	375,720	17,995	10,892	15,072	5,453		19,585	835	86	20,506	1,039	227		1,266
1889	395,305	18,830	10,978	16,131	5,790		23,360	723	75	24,158	1,229	319		1,548
1890	418,665	19,553	11,053	17,360	6,099		25,322	886	84	26,292	1,415	304		1,719
1891	443,987	20,439	11,137	18,775	6,403		22,328	836	80	23,244	1,762	137		1,899
1892	466,315	21,275	11,217	20,537	6,540		22,661	817	81	23,559	1,737	[1] 6		1,743
1893	488,976	22,092	11,298	22,274	None.	1	22,768	902	99	23,769	1,677	None.	2	1,679
1894	511,744	22,994	11,397	23,951	None.	3	19,875	928	64	20,857	1,806	None.	4	1,810
1895	531,619	23,922	11,461	25,757	None.	7	20,883	1,115	59	22,057	1,829	None.	3	1,832
1896	552,502	25,037	11,520	27,586	6,546	10	21,867	1,445	61	23,373	1,813	1	32	1,846
1897	574,369	26,482	11,581	29,709	6,547	42	22,098	1,631	65	23,794	1,671	14	16	1,701
1898	596,467	28,113	11,646	31,070	6,561	58	20,404	1,803	60	22,267	1,336	200	35	1,473
1899	616,871	29,916	11,706	32,308	6,761	93	23,296	2,139	92	25,527	1,649	511	100	2,260
1900	640,167	32,055	11,798	33,957	7,272	193	24,660	1,758	81	26,499	1,721	737	93	2,551
1901	664,827	33,813	11,879	35,678	8,009	296	25,558	1,734	81	27,373	1,928	878	156	2,965
1902	690,385	35,547	11,960	37,606	8,887	445	27,136	640	110	27,886	2,006	767	158	2,931
1903	717,521	36,187	12,070	39,612	9,654	603	31,046	536	117	31,699	2,196	990	270	3,446
1904	748,567	36,723	12,189	41,798	10,644	873	30,267	557	110	30,934	2,158	1,114	287	3,559
1905	778,834	37,280	12,290	43,956	11,758	1,170	29,784	486	129	30,399	1,480	830	358	3,670
1906	808,618	37,766	12,428	45,446	12,588	1,529	31,181	625	159	31,965	10,568	709	636	11,933
1907	839,799	38,391	12,587	50,014	13,297	1,874	35,990	589	151	36,620	7,878	667	315	8,860
1908	875,679	38,980	12,738	66,892	13,964	2,189	32,757	757	168	33,682	5,191	616	230	6,039
1909	908,436	39,737	12,906	72,083	14,582	2,409	36,574	687	160	37,421	4,184	492	148	4,824
1910	945,010	40,424	13,066	76,267	15,074	2,557	35,168	679	123	35,970	4,238	370	120	4,728
1911	980,178	41,063	13,149	80,506	15,444	2,677	32,917	1,010	157	34,084	4,205	659	348	5,212
1912	1,013,095	42,073	13,346	84,711	16,103	2,925	35,231	1,342	158	37,731	5,020	633	343	5,996
1913	1,049,326	43,415	13,504	89,731	16,736	3,168	33,941	1,693	164	35,798	5,065	705	280	6,050
1914	1,083,267	45,098	13,668	94,796	17,444	3,458	39,945	1,715	190	41,850	6,817	719	338	7,874
1915	1,123,212	46,813	13,858	101,613	18,163	3,796	43,207	1,545	192	44,934	6,282	803	371	7,456
1916	1,166,419	48,358	14,040	107,875	18,966	4,167	43,970	1,759	198	45,927	6,791	864	482	8,087
1917	1,210,389	50,117	14,238	114,666	19,836	4,569	41,060	1,512	179	42,750	5,329	613	245	6,187
1918	1,251,458	51,629	14,417	120,005	20,443	4,844	38,569	1,207	165	39,941	4,061	654	197	4,912
1919	1,290,027	52,836	14,582	124,066	21,097	5,041								

[1] Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al.* v. *Keuffel et al.* (55 O. G., 1139) with the registration No. 6,545, June 14, 1892. Resumed June 9, 1896, with the registration of No. 6,546.

Expenditures for photolithographic and photographic work since 1912–13.

Fiscal year.	Contractor.	Price per page. Current issue.	Reproduction of exhausted copies, etc.	Photographic copies.	Total.
1912–13	Columbia Planograph Co.	[1] $0.63 [2] .50			
	Sackett & Wilhelms Co.		[3] $0.52 [4] .60		$140,000
	F. W. Ernst			[5] $0.09 [6] .10	
1913–14	Columbia Planograph Co.	[1] .57½ [2] .48			
	Sackett & Wilhelms Co.		[3] .57 [4] .47		140,000
	Lest Bros.			[5] .078 [6] .078	
1914–15	Norris Peters Co.	[1] .64 [2] .50			
	A. J. Ingram		[3] .40½ [4] .50		140,000
	Commercial Photo. Co.			[5] .054 [6] .067	
	Lest Bros.				
	Webb & Bocorselski		[4] .42		
1915–16	Columbia Planograph Co.	[1] .61.5/6 [2] .49			
	The Norris Peters Co.				
	A. J. Ingram		[3] .39 [4] .49		140,000
	Commercial Photo. Co.			[5] .056 [6] .06	
	Webb & Bocorselski		[4] .40		
1916–17	Norris Peters Co.	[1] .76 [2] .60			
	Sackett & Wilhelms Co.		[3] .57 [4] .42½		140,000
	F. W. Ernst		[4] .35	[5] .07 [6] .06	
	C. J. Ernst		[4] .41½		
1917–18	Sackett & Wilhelms Corporation	[1] .77 [2] .67	[3] .59 [4] .45		
	Webb & Bocorselski				140,000
	Commercial Photo. Co.			[5] .054 [6] .059	
1918–19	Norris Peters Co.	[1] .75 [2] .66			
	Norris Peters Co. (July)		[3] .41½ [4] .55		
	Sackett & Wilhelms Co. (August-December, inclusive)		[3] .52 [4] .62		[9] 140,000
	Commercial Photo. Co.			[5] .050 [6] .059	
	Rapid Process Co.		[4] .45		

[1] For 100 thin, 2 thick, and 1 bond copies of patents.
[2] For 50 thin, 2 thick, and 1 bond copies of trade-marks and designs.
[3] For 50 copies each, mechanical and design patents and trade-marks.
[4] For 100 copies each, mechanical and design patents and trade-marks.
[5] Size, 8 by 12½ inches.
[6] Size, 10 by 15 inches.
[7] For 50 thin, 2 thick, and 1 bond copies of designs.
[8] For 2 copies of drawings of foreign patents.
[9] Estimated.

Number of patents issued by the United States to December 31, 1918, and by foreign countries to December 31, 1917.

Countries.	To 1870, inclusive.	1871 to 1917.	Total.
Argentina [1]	83	13,779	13,862
Australia		19,321	19,321
Austria		92,723	92,723
Austria-Hungary	15,350	67,583	82,933
Bahamas [2]		2	2
Barbados		165	165
Belgium [1]	35,064	236,954	271,998
Bolivia [1]	42	65	107
Brazil [2]	185	9,823	10,008
British Guiana [1]	32	94	126
British Honduras	1	19	20
Canada	4,081	180,624	184,705
Ceylon [1]	58	829	887
Chile	266	3,141	3,407
Colombia [1]		1,168	1,168
Congo Free State [1]		294	294
Costa Rica [1]		74	74
Cuba		2,521	2,521
Denmark	464	29,854	30,318
Ecuador [1]		10	10
Fiji Islands [1]		47	47
Finland	112	6,174	6,286
France	103,934	411,864	515,798
Germany	9,998	310,184	320,180
Great Britain	53,408	469,327	522,735
Guatemala [1]		57	57
Hawaii [1]		148	148
Kongkong		291	291
Hungary [1]		65,973	65,973
India	445	14,108	14,553
Italy and Sardinia [2]	723	132,248	136,971
Jamaica	22	270	292
Japan		31,956	31,956
Leeward Islands		31	31
Liberia [1]		2	2
Luxemburg [1]		10,687	10,687
Malta [1]		106	106
Mauritius [1]	113	311	424
Mexico [1]	22	14,334	14,356
Netherlands	4,535	2,337	6,872
Newfoundland	40	538	578
New South Wales	236	11,740	11,976
New Zealand	109	18,426	18,535
Norway	737	29,314	30,051
Paraguay [1]		102	102
Peru [1]		160	160
Portugal	245	9,375	9,620
Queensland	67	6,368	6,435
Russia [1]	1,464	30,844	32,308
St. Helena [1]		4	4
South African Republics		1,262	1,262
South Australia	123	6,221	6,344
Spain		60,522	60,522
Straits Settlements		391	391
Sweden	1,629	45,090	46,719
Switzerland		76,954	76,954
Tasmania [1]	43	2,426	2,469
Trinidad	6	304	310
Tunis [1]		1,102	1,102
Turkey [1]		2,560	2,560
Union of South Africa		4,611	4,611
Uruguay [1]		455	455
Venezuela		329	329
Victoria	822	12,463	13,285
West Australia		3,524	3,524
Total foreign	238,437	2,454,583	2,693,020
United States	120,573	1,140,841	1,261,414
Total to 1870	359,010		
Total, 1871–1917		3,595,424	3,954,434
United States, 1918			38,569
Grand total, including 1918, United States			3,993,003

[1] 1916 and 1917 not included. No information. [2] Information for 1917 not included.

Applications for patents pending December 31, 1918.

Division.	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908 to 1905.	Prior to 1904.	Total.
1	732	385	206	71	32	10	2	1	2				1,440
2	1,209	850	393	132	48	14	2	2					2,710
3	1,281	552	222	84	25	5	6	2					2,177
4	923	526	232	115	51	12	7	1	1				1,868
5	605	402	237	87	31	8	3	6					1,379
6	1,123	625	240	90	32	11	4						2,125
7	863	488	257	90	28	13	1				1		1,751
8	843	612	366	168	51	12	4	1					2,062
9	955	630	260	112	66	6	11		2				2,022
10	1,565	900	363	122	33	9							3,092
11	820	536	297	85	45	17	3	10					1,813
12	1,419	753	320	112	65	28	13	3	3	1			2,717
13	1,102	601	211	74	18	8	3	2		1	1		2,021
14	848	513	255	98	30	8		2	1		2		1,757
15	1,300	704	341	160	60	23	10	5	4	2	1		2,610
16	812	555	308	147	49	13	13	4	3	3	66	4	1,979
17	522	359	189	108	30	5	7	2	4				1,226
18	1,200	798	364	160	43	7	4				1		2,577
19	934	676	365	162	50	6	8	1		1	4		2,202
20	924	559	326	124	33	8	3	3	1				1,981
21	767	429	190	77	42	10	5	2	2		4	2	1,530
22	1,031	456	173	46	7	5	2	5	1	9	6		1,741
23	856	612	342	175	48	16	17	6		2	15	23	2,152
24	850	272	128	106	23	2	4	7	1	2			1,394
25	942	662	525	130	37	6	2			1	4		2,309
26	624	725	551	189	67	23	8	6	3	1	9		2,206
27	924	651	327	144	49	7	6		2				2,110
28	1,186	906	347	133	35	8	7		2	1			2,625
29	991	667	327	92	16	3							2,096
30	1,106	773	265	79	15	3	1	1	1	1	2	1	2,247
31	880	708	338	137	48	22	8	1		1	1		2,154
32	925	757	360	114	40	8	2		1				2,207
33	666	432	280	108	51	9	1	3	2		3		1,555
34	606	425	214	99	20	10	3	3			4		1,384
35	1,128	728	333	113	33	5	1	1					2,342
36	1,074	535	301	145	48	13	7	6	5	1			2,135
37	915	747	417	161	72	26	1	7	1		3		2,350
38	707	543	197	81	46	15	1	1					1,891
39	911	546	309	104	34	4		3	1		1		1,913
40	1,267	1,072	522	254	89	13	3	1	1				3,222
41	1,122	827	399	176	37	8	2	1	1	1	1		2,575
42	752	513	207	83	23	4	4	3	1		1		1,601
43	845	622	368	192	51	28	5	2			1		2,109
44	1,068	650	95	34	10	4			1		1		1,863
45	639	412	182	54	16		1						1,304
Total	42,831	27,694	13,518	5,331	1,779	472	190	104	47	28	122	30	92,136

Attention is invited to the following comparisons:

Number of applications pending fifteen years or longer:	
December 31, 1914	37
December 31, 1915	29
December 31, 1916	15
December 31, 1917	18
December 31, 1918 [1]	80
Number of applications pending ten years or longer:	
December 31, 1914	239
December 31, 1915	183
December 31, 1916	141
December 31, 1917	157
December 31, 1918	162
Number of applications pending eight years or longer:	
December 31, 1914	633
December 31, 1915	419
December 31, 1916	283
December 31, 1917	261
December 31, 1918	237
Number of applications pending five years or longer:	
December 31, 1914	3,621
December 31, 1915	2,646
December 31, 1916	1,614
December 31, 1917	1,149
December 31, 1918	1,003
Number of applications pending two years or longer:	
December 31, 1914	30,682
December 31, 1915	26,171
December 31, 1916	22,093
December 31, 1917	20,548
December 31, 1918	21,431
Total number pending not in issue or forfeited:	
December 31, 1914	109,846
December 31, 1915	102,632
December 31, 1916	97,463
December 31, 1917	98,558
December 31, 1918	92,156

OTHER DETAILS OF BUSINESS.

During the year a total of 39,615 applications for patents, reissues of patents, and designs and 151,903 amendments in pending applications were filed. This represents a decrease of 10,758 in the number of applications and a decrease of 13,630 in the number of amendments. There were filed without fees, under the act of March 3, 1883, 167 applications for patent, and under Rule 170 of the Rules of Practice 18 applications for designs and reissues, making a total of 185 applications without fees.

The fees received by mail and express amounted to $1,180,541.39, and the fees paid by hand to the Financial Clerk amounted to $736,093.84. The number of letters indexed and filed, constituting the general correspondence of the Office, was 232,187. In addition to this 18,262 letters of inquiry were returned with circulars of information answering the questions propounded. The number of parcels received by registered mail was 11,315, and the number of parcels by express was 2,379.

During the year 9,040 applications were forfeited by reason of failure to pay the final fee within the time prescribed by section 4885, Revised Statutes.

In the Drafting Division 887 drawings were made for inventors, who paid $2,950.92 therefor, and 5,777 drawings previously filed were corrected upon request by the inventors, for which the office received $5,278.52. One tracing was made, at a cost of $27.00. The total fees received for work by the Drafting Division were $8,256.44. In addition to this, 7,987 corrections in drawings were made without cost to the inventors.

In the Assignment Division 26,315 deeds, transferring the titles to patents, etc., and containing 11,994,250 words, averaging 455 words per deed, were recorded. For this work the Office received $40,815.34. In addition to this, the Assignment Division prepared 1,786 abstracts of title and 8,494 briefs, for which fees amounting to $2,942.05 were paid. The total earnings of the Assignment Division were $43,217.39.

Type-written copies of records aggregating 24,329,400 words and photostat copies aggregating 1,453,800 words were furnished, and other copies containing 2,444,600 words, made by outsiders, were compared and certified by the Office. For the whole of this work the Office received $28,227.80. For the certificates attached to certain of these copies the Office received $1,172.50, a total of $29,400.30. The Office supplied 1,474 certified printed copies of patents, 2,748 trade-marks, 30 copies of prints and labels, 28 copies of designs, etc., and received therefor $3,477.30.

Inventors and attorneys were furnished with 48,089 photographic copies of drawings, 8 by 12½, at fifteen cents each, and 4,210 photographic copies of drawings, 10 by 15, at twenty-five cents each; also, 53,643 photostat copies at fifteen cents each and 43,886 photostat copies at twenty-five cents each. The amounts received for these photographic and photostat copies were $8,265.85 and $19,017.95, respectively. The expenditures during the year for supplies for the photostat-machine were $12,248.02.

Printed copies of specifications and drawings of patents to the number of 1,951,283 were sold at five cents each, bringing to this Office on this account $97,564.15. For 906,232 copies sold to libraries the Office received $1,100.00. The total received from the sale of copies of patents was $98,664.15. Copies to the number of 1,054,210 were shipped to foreign Governments, and 134,892 copies were drawn for Office use. The total number of printed copies of patents distributed during the year was 4,329,800.

PHOTOSTAT COPIES.

Since October 1, 1918, the Office has been furnishing photostat copies of type-written records instead of type-written copies where the original matter is sufficiently distinct to make a good photostat copy. This practice has three advantages: (1) being a photographic copy, it is absolutely correct; (2) copies can be made very rapidly and furnished without delay, and (3) no comparison with the original has to be made. The main disadvantage is that frequently the photostat copy is not as distinct as the type-written copy.

Experience so far indicates that orders for copies of official records may be kept up to date instead of being from two weeks to a month behind, as under the former practice of supplying type-written copies exclusively.

CHANGE IN PRACTICE IN ANSWERING LETTERS.

Since last June the practice has been followed of having the Examiners prepare answers to letters written to the Office inquiring as to the status of applications. For many years it was the practice of the Chief Clerk to reply to these letters, basing his

[1] Increase explained by the fact that a number of cases were filed the past year which were divisions of a case filed in the year 1900.

answers upon reports made to him by the Examiners. The change has relieved the Chief Clerk's office of the burden of preparing a large volume of correspondence and considerable delay and extra work necessarily incident to the old procedure.

WITHHOLDING PATENTS ON INVENTIONS USEFUL TO ENEMY.

Under the provisions of the act of October 6, 1917, (Public No. 80,) authorizing the Commissioner of Patents to withhold the grant of a patent whenever the subject-matter of the invention in his opinion, if published or otherwise disclosed, might be detrimental to the public safety, convey useful information to or assist the enemy, there was established in May of 1917 the Primary Examiners' Advisory Committee, composed of Primary Examiners, (examining most of the inventions pertaining to war,) to determine what inventions, as disclosed by pending applications, should be maintained in secrecy or disclosure and publication prevented.

Up to the signing of the armistice this committee, acting on its own initiative or in coöperation with the Army and Navy Patent Board, had recommended and by my approval had applied orders preventing disclosure and publication in about 2,100 applications, of which 1,040 were either withdrawn or withheld from issue upon being found allowable and upward of a thousand (1,000) were still pending and being prosecuted to determine their patentability.

Since the signing of the armistice, rescinding orders have been applied to nearly all cases to which the original orders preventing disclosure, etc., were applied, releasing the applicants from maintaining secrecy.

The Primary Examiners' Advisory Committee and the Army and Navy Board, acting for and on behalf of the Federal Trade Commission (Pub. No. 91) and for the War and Navy Departments, have closely coöperated in the producing of the results desired and it is believed far more effectively than could have been done under the provisions of either Pub. No. 80 or Pub. No. 91 alone in that possible defects in the provisions of either have been overcome and supplemented by those of the other.

By mutual agreement with the Federal Trade Commission practically all orders for maintaining secrecy and for vacating such orders and the granting of permits for disclosures, etc., have been issued through the instrumentality of the Primary Examiners' Advisory Committee, and requests therefor have eventually been referred to this committee for consideration and action, and by such agreement and action it is believed the rights of the inventors have been well protected.

This committee has also examined and considered approximately two thousand ideas, suggestions, devices, etc., submitted by sketch or description, that it was believed might be of service to the cause of the allies or the United States Government. These were independent of applications for patents and were received from all quarters of the globe.

Wherever proposed plans or devices were found practical and of possible or probable value, the attention of that department of the Government most interested therein was directed thereto or the writers placed in correspondence therewith.

Of these suggestions some two hundred involved disclosure of sufficient merit and importance to be forwarded, and it is believed many of them were approved or adopted by some department or branch of the Government.

CLASSIFICATION OF PATENTS.

Some twenty years ago a Division of Classification was established in order to revise, according to a more comprehensive and systematic plan, the classification of the patents granted by this Government, so that searches for novelty of inventions could be more quickly and accurately made.

This work is extremely technical and involves most exhaustive research and much careful consideration. Owing to the fact that the same devices, processes, or machines often are adapted to be and actually are used in many different arts and for many different purposes a purely academic classification, as in biology, botany, or chemistry, is not possible. The number of patents now reaches a million and a third, and these patents relate to every conceivable art and subject and every conceivable branch of such known to mankind. There exists no precedent to aid in the stupendous task of satisfactorily classifying such an enormous number of complex, intimately interlaced, and comprehensive subjects-matter. Necessarily the work has proceeded very slowly.

One year ago about sixty per cent. of the old classes had been revised. As this, however, had taken nineteen years, the necessity of completing the revision of the remaining classes in a shorter period became apparent and led to the adoption of a different plan of procedure, which has since been in operation.

While previous to this change in procedure the revision was carried on by a group of Assistant Examiners under the supervision of an Examiner of Classification, by the present plan the work is done in the examining divisions. Each Principal Examiner, with the aid of his Assistant Examiners, is required to revise the classes of his own division, with the patents of which he is presumed to be familiar, the work of all the divisions being under the general supervision of the Examiner of Classification. This plan has resulted in greatly expediting the work, and but for lack of clerical force to mount the patents, compare the Examiners' and searchrooms' lists to detect and resupply missing copies, etc., classification of domestic patents could be completed in two more years. Notwithstanding the handicap of lack of clerical force, over one hundred and twenty-five thousand patents have been reclassified during the past year. There remain, roughly, half a million patents yet to be reclassified.

PATENT INTERFERENCES.

The practice established in 1914 of submitting all prospective interferences to a Law Examiner for review, as described in the last annual report, has been continued.

There were submitted for consideration by the Law Examiner 1,193 proposed interferences, of which 653, or 54.7 per cent, were approved as proposed; 257, or 21.5 per cent, were approved after modification, and 283, or 23.8 per cent, were disapproved. Patents were involved in 279 cases, and in 407 cases correspondence with the applicants was necessary to determine whether the interference should be declared.

MOTIONS TO DISSOLVE INTERFERENCES.

Under the provisions of Rule 122, 195 motions to dissolve interferences were heard in 1918. Of these, 69 were based on want of patentability, 121 on lack of right to make claims corresponding to the issue, and 5 on informality in the declaration. Of the 69 motions to dissolve for want of patentability, 38 were granted in whole, 10 in part, and 21 were denied. Of the 121 motions for lack of right to make claims corresponding to the issues, 45 were granted in whole, 10 in part, and 66 were denied. All motions based on informality were denied.

Under the provisions of Rule 109, 76 motions to amend were heard. Of these, 16 were granted in whole, 18 in part, and 42 were denied.

Under the provisions of Rule 128, 21 interferences were considered. Twenty of these were dissolved for want of patentability and one for want of right to make claims corresponding to the issue.

Miscellaneous motions, such as motions for rehearing, postponements, admissibility of affidavits and arguments, were decided to the number of 61, bringing the total number of motions before the Law Examiner charged with deciding motions in interference cases to 363.

REQUIREMENT OF DIVISION.

Action was given during the year upon 60,717 new applications for patents, requirements of division of the applications being made in 5,002 instances—one requirement in 12.14 cases, or 8.24 per cent. This does not differ materially from the figures of the preceding year, when one requirement was made in 12.23 cases, or 8.18 per cent.

Formal decision of the Law Examiner, as required by Rule 42, was given in 620 proposed final requirements of division, of which 327, or 52.7 per cent, were approved; 87, or 14 per cent, were approved in part, and 206, or 33.2 per cent, were disapproved. It is probable that the number of requirements of division can not be much reduced below the proportion of one to twelve or thirteen cases, due regard being had to the state of the art and the necessities of proper search and classification.

Further extension of the practice of reviewing with the Examiner requirements in doubtful cases before making them in the first instance is desirable to avoid the waste of time and delay of cases caused by requirements made but subsequently disapproved. This has been done as far as possible and as far as the time of the Law Examiner in charge of division permitted. The purpose steadily held in mind has been to make the practice uniform throughout the Office and to avoid annoyance to inventors by trivial requirements and danger to their real interests by requirements which might raise questions of double patenting. When distinct inventions are disclosed and claimed, capable of use apart from each other, the possibility of division arises and should always be enforced if the inventions relate to recognized branches of the art having different fields of search, as evidenced by the Office classification or otherwise.

APPEALS TO THE COURT.

The number of appeals taken from the decision of the Commissioner to the Court of Appeals of the District of Columbia during the year ending December 31, 1918, is as follows:

Ex parte patent cases	23
Inter partes patent cases	66
Ex parte trade-mark cases	11
Inter partes trade-mark cases	16
Total	116

Of the cases adjudicated during the year ending December 31, 1918, the Commissioner's decision was affirmed in 38 cases, affirmed in part in 1 case, reversed in 16 cases, and 14 cases were dismissed.

OTHER SUITS.

During the year two *ex parte* equity suits under section 4915, Revised Statutes, were decided in favor of the Commissioner of Patents, and two are still pending—one in the District Court in the Western District of Texas and one in the Supreme Court of the District of Columbia. One *ex parte* trade-mark case on writ of certiorari to the Court of Appeals of the District of Columbia is now pending in the Supreme Court of the United States, and three petitions for writs of mandamus against the Commissioner of Patents were denied by the Supreme Court of the District of Columbia.

SCIENTIFIC LIBRARY.

During the year 1918 the work of arranging in classified order the patents of all foreign countries from which *three* copies have been received was continued, and a total of 1,360 volumes, comprising more than two hundred thousand patents, were prepared and sent to the bindery.

The work of binding these volumes is practically over, and with their return the Scientific Library will have complete files of the published patents of Austria, Denmark, France, Norway, Sweden, and Switzerland, bound in classified order and available to searchers.

The third copy of the first 66,500 German patents was never received; but as the classified set, Nos. 66,501 to 288,000, now bound and available for search purposes, has proved to be of inestimable value in patent research it is hoped that after peace is established the third copy of the earlier

patents, now lacking, may be secured for classifying and binding.

For searching British patents the classified abridgments to the beginning of 1915 are now in use. In order to bring the British classified files to date the third copies of British patents for 1915, 1916, 1917, and a part of 1918, have been arranged by classes in file-boxes, and it is contemplated that the remaining earlier third copies now on hand be classified and filed in like manner for the more satisfactory use of searchers who prefer examining full patents rather than their abridgments.

To complete the binding of the classified patents, which were proving to be of such great value in research work, preference was given to this branch over all others, thereby lessening the amount of regular binding in the miscellaneous branches because of lack of funds. However, 200 volumes of foreign patents, (originals,) 300 volumes of periodicals, and 200 volumes of "rebinds" were sent to the bindery during the year. The accumulation of this matter, held back for reasons above explained, may be cared for gradually, together with the usual current binding, with a fair apportionment to the library from the annual appropriation for printing and binding.

Considerable progress has been made in revising the classification of books on applied science and in transferring the old book-catalogue records to the corresponding cards among those now regularly received as a deposit from the Library of Congress. This arrangement will eventually provide one complete catalogue for consultation in place of the three separate catalogues now in use. It is estimated that about seventy-five per cent of this work has been done, and its completion within the present year may be expected. With these revisions all reference matter will be more accessible and the consequent efficiency of the Scientific Library greatly increased.

This efficiency would be still further improved by a substantial increase of the Scientific Library appropriation for the purchase of scientific and technical books in the arts so rapidly developing and which require constant additions in order to maintain the high standard of efficiency necessary in patent research.

At the close of the year 1918 the official translator of the Patent Office completed the work of translating the alphabetical index to the German patent office classification. A copy of this translation has already been forwarded to the Printing Office. When in print, it will be of great service in enabling searchers to readily determine the German classification of the art in which they are interested.

PERSONNEL OF EXAMINING CORPS.

In my report for the year 1917 comment was made on the unusual number of changes in the personnel of the examining corps. The past year has been marked by a still greater number of changes. The existing war has, of course, been responsible for the majority of the separations from the corps. Two former Assistant Examiners were killed in France while in the service.

Resignations from the various grades have been as follows:

Principal Examiners	2
First Assistant Examiners	7
Second Assistant Examiners	21
Third Assistant Examiners	38
Fourth Assistant Examiners, (permanently appointed)	7
Fourth Assistant Examiners, (temporarily appointed)	35
Total	113

Of the above the following have resigned to enter the military or naval service:

First Assistant Examiners	2
Second Assistant Examiners	11
Third Assistant Examiners	29
Fourth Assistant Examiners, (permanently appointed)	6
Fourth Assistant Examiners, (temporarily appointed)	16
Total	64

It has been impossible to keep the ranks full. Six examinations have been held this year by the Civil Service Commission for entrance to the corps, and certifications from four of these have resulted in the appointment of thirty-six men and two women. It has been necessary to make temporary appointments of persons apparently qualified to do the work, with the understanding that these appointees would take the regular entrance examination at the earliest opportunity. It is interesting to note that sixteen of those appointed after certification by the Civil Service Commission were first given temporary appointments.

The total number of temporary appointments made during the year has been seventy-two, and the number of Fourth Assistant Examiners holding temporary appointments on December 31, 1918, was forty-three.

Since the demobilizing of troops began, twenty men have returned to the corps and have been restored to their former grades. It is not expected that all men who entered the service will wish to return to the Patent Office; but those who do will find their former positions waiting for them.

CLERKS.

The great percentage of the clerical employees in the Patent Office are grouped in grades paying $900, $1,000, and $1,200 per annum, respectively. There are only forty-four places above $1,200 to which a clerk can aspire. This condition in an Office having over five hundred clerks renders promotions to grades above $1,200 very slow. A comparison of the salaries paid the clerks in the Patent Office with those paid clerks doing similar work in other bureaus of the Government will show that the percentage of clerks employed receiving more than $1,200 per annum is less in the Patent Office than in almost any other bureau in any department. This situation is responsible for a great deal of dissatisfaction and results in a large number of transfers and resignations. The separations from the clerical force alone during the last year numbered 294. This out of a force of 500 has seriously

enable the Office to do its clerical work properly.

MISLEADING ADVERTISEMENTS.

On July 31, 1918, with the approval of the Secretary of the Interior, there was added the following amendment to Patent Office Rule 15, relating to attorneys:

(h) Every attorney registered to practice before the United States Patent Office shall submit to the Commissioner of Patents for approval copies of all proposed advertising matter, circulars, letters, cards, etc., intended to solicit patent business, and if it be not disapproved by him and the attorney so notified within ten days after submission, it may be considered approved.

Any registered attorney sending out or using any such matter, a copy of which has not been submitted to the Commissioner of Patents in accordance with this rule, or which has been disapproved by the Commissioner of Patents, shall be subject to suspension or disbarment.

The main object of the rule has been to prevent misleading advertisements, the most common form of which were those stating only a part of the truth. Others unduly exaggerated part of the truth. Both forms were ingeniously framed to induce inexperienced inventors to apply for domestic patents, and even to spend large amounts for foreign patents, when their inventions were of a trivial character, if, indeed, there were any inventions at all.

In administering the rule there was stated, first, what might be set forth in advertisements; second, what should not be included, as follows:

(1) Advertising-matter may contain clear, correct, and explicit statements of the law, instructions relating to obtaining patents or registration of trade-marks, the name and address of the attorney, and the information that he prosecutes applications for patents and trade-marks.

(2) It shall be regarded as gross misconduct to advise applying for foreign patents under circumstances clearly indicating the purpose to secure fees from a client without consideration of his best interest or without fully advising him of the incidents of foreign patents, such as recurrent taxes, working, etc., and of the advantage of awaiting a favorable determination of the prosecution of an application for the invention in the United States Patent Office unless business reasons of the client require a different course; to stimulate the uninformed to apply for patents by enumerating a list of supposed inventions demanded by the public, or by citing instances of great profits made by inventors to offer services for nothing for the purpose of securing a client; to induce, by advertising, the filing of applications for patents by offering to publish the patent without specifying the medium of publication or to sell the same without reservation when obtained, or in any way to create a false or misleading impression in the mind of the reader.

Practically all the attorneys have approved the rule and are cooperating in the enforcement of it; but it may be necessary to institute disbarment proceedings in a few instances.

REGISTRATION OF TRADE-MARKS UNDER THE BUENOS AIRES CONVENTION.

The Buenos Aires Convention of 1910 divided American republics into a northern and southern group and provided, in effect, that when a two-thirds majority of the countries in the northern group ratified the Convention an International Registration Bureau should be established at Habana, Cuba, and for fifty dollars any trade-mark that had been registered in the country of origin might be registered in this bureau, having the effect of registration in the other republics. A sufficient number of the republics having ratified the Convention, the Government at Cuba has established a Registration Bureau at Habana, in charge of Dr. Mario Diaz Irisar.

The rules and regulations governing the proceedings for registration in the Habana bureau were published in the Patent Office OFFICIAL GAZETTE, (vol. 258, p. 644,) and while it will require legislation to permit registration in this country of all marks registered in Habana no reason is seen why United States applicants may not take advantage at present of the facilities afforded them for registration in the South and Central American republics, and any application duly filed in accordance with the rules will be forwarded to the bureau forthwith.

Since registration in the South and Central American republics gives validity to the mark, the importance of registration there may readily be seen. The Department of Commerce is urging all exporters and those who contemplate engaging in trade with those republics to be careful to register their marks before unscrupulous persons in those countries anticipate them in registration and cause unnecessary trouble and expense.

LEGISLATION.

Bills have been introduced in both houses of Congress and are still pending covering the following points:

First. Authorizing the Federal Trade Commission to accept and administer for the benefit of the public patents the proceeds from which may be used as a fund to encourage scientific research, etc.

Second. An act amending chapter 142 of the act of March 3, 1883, providing for granting to persons without payment of fees patents for inventions that are useful in the public service when the applicants will stipulate that the inventions may be used without payment of royalty by the Government or any one contracting with the Government of the United States.

Third. To allow inventors to prove the date of their inventions in a foreign country and to get the benefit of the same in interference proceedings.

Fourth. An act to extend temporarily the time for filing an application by a citizen of an ally country that grants similar privileges to our citizens from twelve to twenty-one months after the application for the same invention has been filed in a foreign country.

Fifth. An act to give effect to the provisions of the Buenos Aires Convention of August 10, 1910, for the registration of trade-marks, the trade-mark bureau in Habana having been established under the provisions of that Convention.

These bills have all been favorably reported and several have passed one or the other house of Congress.

Respectfully submitted.

J. T. NEWTON,
Commissioner of Patents.

ADJUDICATED PATENTS.

(U. S. D. C. Ill.) The Barney patent, No. 885,135, for a separable cuff link-button, *Held* valid and infringed. *Lyons* v. *F. Lewald & Co.*, 254 Fed. Rep., 708.

(U. S. C. C. A. N. Y.) The Fligel patent No. 1,000,031, for a waterproof garment, including a cape and hood, *Held* valid but not infringed. *Fligel* v. *Sears, Roebuck & Co.*, 254 Fed. Rep., 698.

(U. S. D. C. Iowa.) The Luten patents, No. 852,970, for concrete bridge, No. 853,202, for arch structure, No. 934,411, for wall, *Held* void for lack of invention. *Luten* v. *Marsh*, 254 Fed. Rep., 701.

(U. S. D. C. Iowa.) The Luten patent, No. 853,203, for method of reinforcing concrete arches in bridges, *Held* void for lack of invention; also held not infringed if conceded validity. *Luten* v. *Marsh*, 254 Fed. Rep., 701.

Notice—Patent and Trade-Mark Laws.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., March 4, 1919.

The following letter taken from *La Propriété Industrielle*, 1919, page 8, is published for the information of those concerned.

J. T. NEWTON,
Commissioner.

[*La Propriété Industrielle*, 1919, page 8. Letter from the Republic Czecho-Slovakia.]

The new State Czecho-Slovakia, comprising Bohemia, Moravia, and Austrian Silesia and the Slovak part of Hungary, a territory of about 130,000 square kilometers, includes the most important industrial districts of the former dual monarchy, Austria-Hungary, and, with its 13,000,000 inhabitants, energetic, industrious and highly cultured, will undoubtedly be the most important, from an industrial standpoint, of all the new States resulting from the recent World War. The internal consolidation of the new republic progresses in a very satisfactory manner.

The first law of the National Government of Czecho-Slovakia (*Narodni rybor*), dated November 2, 1918, article 2, proclaims the temporary confirmation of all the laws and statutes which were in force in the territory of the Republic of Czecho-Slovakia at the date of the declaration of its independence, included therein being the laws governing the protection of industrial property, particularly the Austrian law relating to patents of January 11, 1897, the laws relating to trade-marks of January 6, 1890, and July 30, 1895, and the law relating to designs and models of December 7, 1858. The Hungarian law relating to patents of July 14, 1895, will remain in force only in the territory hitherto Hungarian (Slovakia) and with reference to Hungarian patents already issued, as it is intended to create the Czecho-Slovak patent bureau in accordance with the constitution of the Austrian law.

The protection of industrial property will be under the jurisdiction of the Ministry of Industry and Commerce. A commission of experts has already prepared the draft of a modifying and supplementing law on patents, comprising three articles:

First. The establishment of a patent bureau and of a patent court at Prague.

Second. Modification of the existing law to conform to the new political conditions, (for example the substitution of the word "Czecho-Slovak" for the word "Austrian,") and, third, rules for changing the Austrian and Hungarian patents into Czecho-Slovak patents.

In reference to this last point, it is proposed to permit the Austrian patents already issued to remain in force in the territory previously Austrian (Bohemia, Moravia, and Silesia) and the Hungarian patents in the territory previously Hungarian (Slovakia) if the owners request the registration of them in the Czecho-Slovak patent bureau at Prague within a reasonable time (probably up to June 30, 1919). The duration of these patents as well as the date when the annual taxes fall due and their amounts will not undergo any change.

Applications filed in the patent bureaus at Vienna and Budapest already published or still pending will have the priority of the date of filing if they be registered in the Czecho-Slovak patent bureau at Prague within the above-mentioned period.

The registration of the trade-marks of foreign companies will be under the jurisdiction of the Chamber of Commerce and Industry at Prague. It is proposed to continue in force all trade-marks, including those of foreign companies registered at Vienna or Budapest, up to the close of the legal period of ten years. A new registration only is required without fees at the Chamber of Commerce and Industry at Prague.

The patent bureau at Prague has already begun activities, and is accepting applications for patents starting from January 1, 1919. Foreign applicants are naturally required to be represented by agents domiciled in Czecho-Slovakia.

All the rules relating to authorized patent agents will remain in force.

This draft of a modifying and supplementing law will be presented as soon as possible to the National Assembly at Prague. At the same time it is proposed to begin the preparatory work on a plan for the thorough and systematic reform of the legislation relating to the protection of industrial property, especially of the antiquated law relating to designs and models.

ENGINEER DR. JAN. VOJACEK,
Minister of Commerce of October 14, 1892.

[NOTE OF THE EDITOR.—One will be surprised to learn that in the above communication there is no discussion of the question of the keeping in force of the rules of the Union in the republic whose territory, in so far as it was incorporated in the old Hapsburg monarchy, was included in that of the International Union. We know that this question is seriously occupying the minds of the authorities of the new State and we are able already to give a convincing proof of it.

In fact Mr. Vojacek wrote us under date of January 6, 1919, that the Czecho-Slovak Ministry of Industry and Commerce issued in December 31, 1918, a decree in the following terms: "If the citizens of foreign States request the registration of their trade-marks within the territory of the Czecho-Slovak Republic in virtue of international agreements the Chamber of Commerce and Industry at Prague will be charged with the execution of such registrations. The present decree abrogates the first paragraph of the decree of the Austrian Ministry of Commerce of October 14, 1892, Official Collection of Laws No. 49543."

In a second letter under date of January 9 Mr. Vojacek communicates to us the text of another decree issued December 31, 1918, No. 2074, by the Czecho-Slovak Ministry of Commerce and Industry, text as follows:

"Trade-marks actually filed in the central registry of trade-marks in Vienna will remain in force in the territory of Czecho-Slovakia, but their owners are obliged to file their applications anew, accompanied with one copy of the trade-mark in question, through the competent Chamber of Commerce and Industry, not later than June 30, 1919. The Chamber of Commerce and Industry will certify the identity of the trade-mark presented with that previously registered. The portion elapsed of the period of protection is to be deducted from the legal period of ten years. All lawsuits relating to trade-marks are to be started anew."

Finally it would appear that the modifying and supplementing law relating to patents of which there is discussion in the above letter has been presented to the National Assembly in the course of the month just closed.]

Patents Noe. 1,296,603 to 1,297,307.

THE OFFICIAL GAZETTE

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Issue of March 11, 1919.

Patents	705—No.	1,296,603 to No.	1,297,307, inclusive.
Designs	40—No.	53,060 to No.	53,099, inclusive.
Trade-Marks	161—No.	124,648 to No.	124,808, inclusive.
Labels	5—No.	21,168 to No.	21,172, inclusive.
Prints	2—No.	5,070 to No.	5,071, inclusive.
Reissues	5—No.	14,606 to No.	14,610, inclusive.
Total	918		

WATCH THE STOCK PEDDLERS.

Get the names and addresses of all persons and companies offering you speculative or doubtful stocks and securities in exchange for your Liberty Bonds or War Savings Stamps, with copies of their "literature." Mail them promptly for investigation to the

FEDERAL TRADE COMMISSION,
Washington, D. C.

HELP THE VICTORY LIBERTY LOAN.

Disclaimer.

12,967. (Reissue.)—*Charles A. Juengst*, Croton Falls, N. Y. SIGNATURE-CONVEYING AND WIRE-STITCHING MACHINE. Patent dated August 24, 1915. Disclaimer filed March 6, 1919, by the patentee and the assignee, *George Juengst & Sons*.

Enter this disclaimer—

"To that part of the claim in said specification which is in the following words:

"Claim 44. The combination with devices for delivering groups of signatures progressively from a signature gathering machine, of a clamp for the signature group, means for uniting the signatures of a group while thus clamped, intermediate conveyer devices for transferring the signature groups from the delivery devices to the clamp, and means for automatically closing the clamp on the signature group."

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1919.

Jesse B. Pitt, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Peninsular Chemical Company, corner of Brooklyn avenue and Lafayette Boulevard west, Detroit, Mich., for registration of a trade-mark and trade-mark registered May 20, 1902, No. 22,146, to Jesse B. Pitt, of Kansas City, Mo., and a notice of such declaration sent by registered mail to said Jesse B. Pitt at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jesse B. Pitt, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

ADJUDICATED PATENTS.

(U. S. C. C. A. Va.) The Armstrong patent, No. 1,195,946, for marking bivalves by means of a tag attached to the lower shell of an oyster, *Held* void for lack of invention. *Armstrong Seatag Corporation* v. *Smith's Island Oyster Co.*, 254 Fed. Rep., 821.

(U. S. D. C. Ill.) The Todd patent, No. 793,249, for a printing apparatus for protecting checks from alteration, *Held* valid; claims 3, 4, and 5 *Held* infringed, while claims 1, 6, and 8 *Held* not infringed. *Todd Protectograph Co.* v. *Hedman Mfg. Co.*, 254 Fed. Rep., 829.

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 7, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Jan. 28	Feb. 1	183
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Oct. 11	Nov. 18	225
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Jan. 17	Nov. 13	187
234	4. Conveyors; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Sept. 16	Jan. 29	345
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Oct. 14	Oct. 24	176
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Nov. 4	Dec. 26	379
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Jan. 11	Jan. 9	209
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 16	Jan. 16	115
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Aug. 12	Nov. 14	396
235	10. Carriages and Wagons; Motor Vehicles	Jan. 2	Jan. 28	422
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 2	Feb. 19	167
322	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Aug. 29	Aug. 23	1018
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 7	Oct. 28	577
323	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 3	Dec. 21	163
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 2	235
112	16. Radiant Energy; Telegraphy; Telephony	Oct. 18	Nov. 4	561
307	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 7	Jan. 11	88
229	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 2	Sept. 7	502
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Dec. 7	Jan. 4	228
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 6	Feb. 6	180
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spanning; Weaving; Winding and Reeling.	Aug. 19	Dec. 13	342
249	22. Aeronautics; Firearms; Ordnance	Dec. 17	Jan. 30	206
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Dec. 6	Jan. 21	176
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 4	295
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Nov. 18	Jan. 20	164
105	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Sept. 16	Nov. 1	578
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 7	Dec. 17	418
225	28. Internal-Combustion Engines	Sept. 16	Nov. 9	535
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Nov. 6	Dec. 3	476
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Dec. 9	Feb. 18	237
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 28	Nov. 22	241
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Aug. 1	Nov. 15	705
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads and Pavements; Roofs.	Nov. 13	Nov. 13	235
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Oct. 8	Dec. 13	252
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Feb. 10	Dec. 16	241
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Feb. 3	Jan. 20	350
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Aug. 9	Sept. 25	654
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice-Harvesting; Stationery; Stone-Working; Wells.	Jan. 13	Jan. 6	143
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Oct. 7	Nov. 12	416
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 22	Jan. 16	393
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 9	Dec. 21	207
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Sept. 16	Oct. 21	448
382	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 2	Jan. 6	117
353	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Jan. 15	Jan. 22	96
379	45. Clutches; Lubrication; Motors; Railway Brakes	Nov. 4	Nov. 9	288

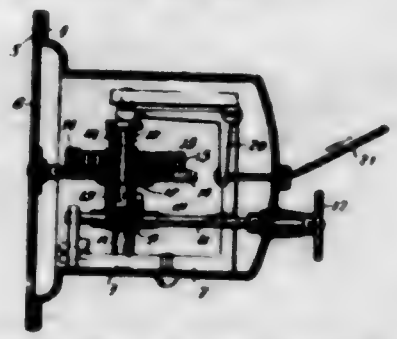
Oldest new case, Aug. 1; oldest amended, Aug. 22.
Total number of applications awaiting action..... 15,037

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 28	Feb. 21	687
	Designs	Jan. 27	Feb. 17	217
	Labels and Prints	Feb. 10	Feb. 24	82

PATENTS

GRANTED MARCH 11, 1919.

1,296,603. ENGINE-ACTUATED ALARM. EMANUEL AUPPENO, Brooklyn, N. Y. Filed Oct. 29, 1912. Serial No. 728,407. 13 Claims. (Cl. 116—1.)



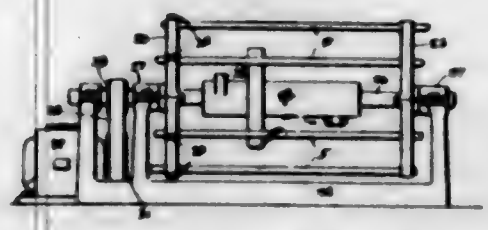
1. In a signaling device, a prime mover, a shaft continuously rotated by said prime mover, and in combination therewith an elastic diaphragm, a spring mounted loosely on said shaft, a spring barrel for said spring, one end of said spring being adapted for frictional engagement with the wall of said spring-barrel, means actuated by said spring for mechanically agitating said diaphragm, and means for interlocking said spring and said continuously rotating shaft for the purpose described.

1,296,604. SWITCH-OPERATING MECHANISM. ARTHUR H. ADAMS, Sparkill, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1916. Serial No. 88,118. 14 Claims. (Cl. 172—239.)



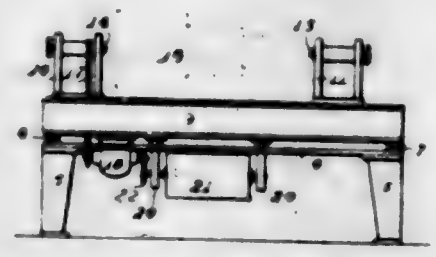
1. In a power transmitting mechanism, a driving member and a driven member, a helix for causing said driven member to be operatively connected to said driving member, a series of stops on said driven member, and a pawl arranged to be attracted into the path of said stops by the energization of said helix.

1,296,605. METHOD OF AND APPARATUS FOR OBTAINING DYNAMIC BALANCE. NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor, by mesne assignments, to Dynamic Balancing Machine Company, Philadelphia, Pa. Filed June 5, 1915, Serial No. 32,296. Renewed July 6, 1918. Serial No. 243,697. 37 Claims. (Cl. 73—51.)



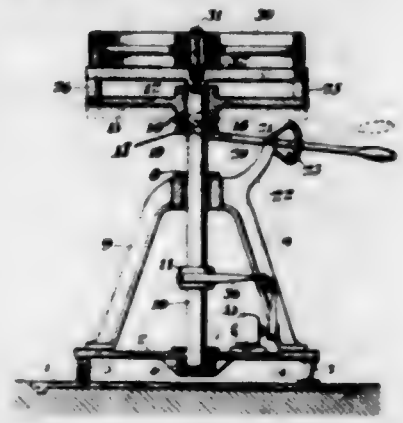
1. A system, rotatable about an axis fixed within said system, said system comprising a body provided with adjustable weights, means coöperating with said weights and adapted to adjust the same during the rotation of said system, to alter the position of the principal axis of inertia of said body relative to the direction of the axis of rotation of the system.

1,296,606. DYNAMIC BALANCING-MACHINE. NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor, by mesne assignments, to Dynamic Balancing Machine Company, Philadelphia, Pa. Filed Nov. 4, 1915, Serial No. 59,659. Renewed July 6, 1918. Serial No. 243,698. 29 Claims. (Cl. 73—51.)



1. A balancing machine, comprising a rotatable support for a body to be tested, a rotatable body revoluble upon an axis out of coincidence with the axis of rotation of said support, and provided with adjustable parts to alter the degree of its dynamic balance, and means operative to drive said support and said body in synchronism.

1,296,607. DYNAMIC BALANCING-MACHINE. NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor, by mesne assignments, to Dynamic Balancing Machine Company, Philadelphia, Pa. Filed Mar. 31, 1916, Serial No. 87,926. Renewed July 6, 1918. Serial No. 243,699. 5 Claims. (Cl. 73—51.)



1. A dynamic balancing machine, comprising a pair of disks rotatable upon a common axis, one being axially movable with respect to the other, means to revolve said disks synchronously, and equal weights secured to the respective disks and creating a couple adapted to neutralize the disturbing couple in a body rotatably supported by said machine.

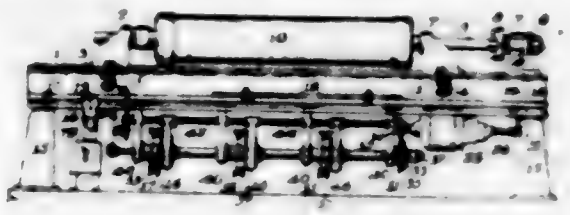
2. A dynamic balancing machine, comprising a pair of disks rotatable upon a common axis and one movable axially with respect to the other, means to revolve said disks synchronously, and equal weights secured to diametrically opposite positions upon said disks, and creating a couple adapted to neutralize the disturbing couple in a body rotatably supported by said machine.

4. A dynamic balancing machine, comprising a shaft, a disk carried by said shaft and adapted to support a body to be tested, a second disk longitudinally adjustable upon said shaft but revoluble therewith, equal weights secured to the diametrically opposite sides of said disks to create a mechanical couple adapted to neutralize the disturbing couple of said body, and means to adjust the respective positions of said weights while the system comprising said disks and said body are rotating.

7. A dynamic balancing machine, comprising a support for a body to be tested, a pair of disks revoluble upon coincident axes and axially movable with respect to each other, each disk being provided with a weight diametrically disposed with respect to the weight of the other, and means connecting said disks and operative to revolve them synchronously with said support.

8. A dynamic balancing machine, comprising a support for a body to be tested, a pair of disks revoluble upon coincident axes and axially movable with respect to each other, each disk being provided with a weight equal to and diametrically disposed with respect to the weight of the other, means connecting said disks and operative to revolve them synchronously with said support, and means to shift the relative positions of said disks while rotating, to create a couple operative to counteract a disturbing couple in a body carried by said support.

1,296,608. **DYNAMIC BALANCING-MACHINE.** NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa. Filed July 20, 1916, Serial No. 110,275. Renewed July 6, 1918. Serial No. 243,700. 21 Claims. (Cl. 73—51.)



1. A balancing machine, comprising a rotatable support for a body to be tested, a plurality of rotatable units revoluble upon an axis out of coincidence with the axis of rotation of said support, each of said units being provided with adjustable parts to alter its state of dynamic balance, a vibratory base to which said support and said units are rigidly secured, and means operative to drive said support and said units in synchronism.

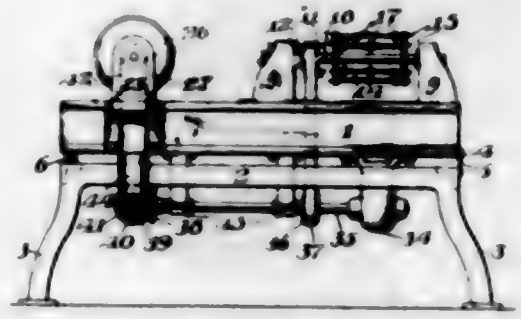
7. A balancing machine, comprising a rotatable support for a body to be tested, a plurality of rotatable units provided with adjustable parts to alter the degree of their dynamic balance, a vibratory base to which said support and said units are rigidly secured, while they are rotating, and means operative to revolve said support and said units in absolute synchronism.

11. The combination of a plurality of units rotatable about an axis passing through their centers of mass and provided with adjustable weights operative to create a centrifugal couple, a support for a body associated to rotate synchronously with the said units and about an axis spaced from said first axis, and a vibratory base to which said support and said units are rigidly secured, said units being operative to neutralize a centrifugal couple in a body carried by said support.

13. The combination of a rotatable system including a plurality of units, each comprising weights eccentric to and relatively movable along a common axis, means whereby said system is revolubly associated with a rotatable body to be tested, and means whereby corresponding weights of said units are connected to move in unison longitudinally of their common axis.

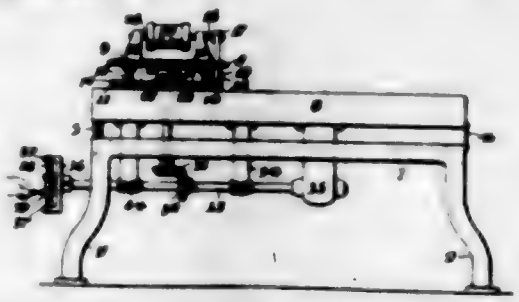
18. The combination of a rotatable system including a plurality of units, each comprising weights, means whereby said system is revolubly associated with a rotatable body to be tested, said system and said body being rotatable about parallel axes passing through their respective centers of mass, means whereby corresponding weights of said units are connected means to alter the angular relation of said units with respect to said body, and means to alter the relative positions of the planes of rotation of said connected weights.

1,296,609. **STATIC BALANCING-MACHINE.** NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 15, 1916, Serial No. 114,986. Renewed July 6, 1918. Serial No. 243,701. 17 Claims. (Cl. 73—51.)



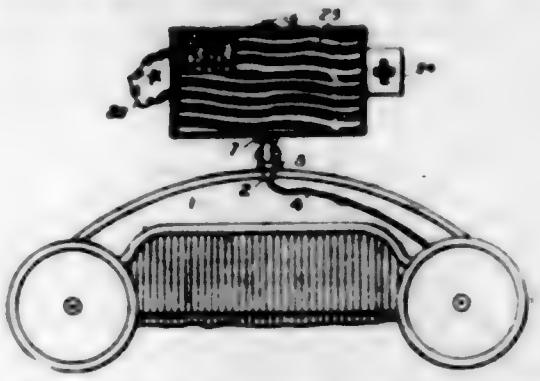
1. The method which consists in associating a statically unbalanced body with a body adjustable to be perfectly balanced dynamically so that the two revolve synchronously, and form part of an unbalanced movable system, and then adjusting said last-named body while said system is in motion, to neutralize the unbalanced condition of said first body to balance said system.

1,296,610. **BALANCING-MACHINE.** NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1916, Serial No. 137,384. Renewed July 6, 1918. Serial No. 243,702. 18 Claims. (Cl. 73—51.)



1. A balancing machine, comprising an oscillator limited to one degree of freedom, a rotatable support for the body to be tested carried by said oscillator, and means also carried by said oscillator and rotatably associated with the said support, and operative to test the dynamic or static balance of a body thereupon.

1,296,611. **ATTACHMENT FOR RADIATOR-HOODS.** ANGELO AUVIDI, Pittsburgh, Pa. Filed Sept. 19, 1918. Serial No. 254,803. 3 Claims. (Cl. 46—14.)



1. An attachment for an automobile radiator hood comprising a revoluble yoke provided with angle-shaped arms,

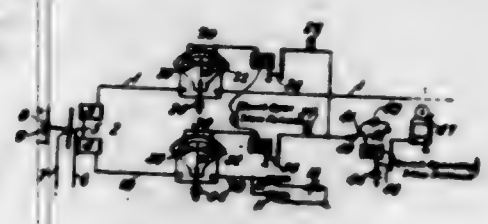
a support for the yoke, a lamp carried by the support, a bar secured to the support and extending around and above the lamp, a brace member revolubly mounted on said bar, opposed frames secured to said arms and to said member and having said lamp arranged therebetween, and transparent panels mounted in said frames and each provided with a representation of an emblem.

1,296,612. SOFA-BED. HARRY D. BARTLETT, Delavan, Wis., assignor to Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed May 24, 1915. Serial No. 30,074. 12 Claims. (Cl. 5—51.)



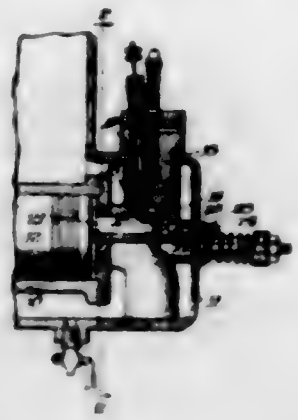
4. A device of the class described, comprising a foldable series of bed bottom sections in combination with a rigid frame, links turnably connected to said frame for swinging forwardly and upwardly one behind another at each side of said series, said series including a main section, and said links being turnably connected to said section adjacent to their free ends, and a member turnably connected to said section and a rigid part of said frame for positively limiting the forward swing of said links, which said member may serve also as a bed section.

1,296,613. TELEGRAPH SYSTEM. JOHN HUMB BELL, East Orange, N. J., assignor to Western Electric Company, Incorported, New York, N. Y., a Corporation of New York. Filed Aug. 1, 1917. Serial No. 183,868. 2 Claims. (Cl. 178—58.)



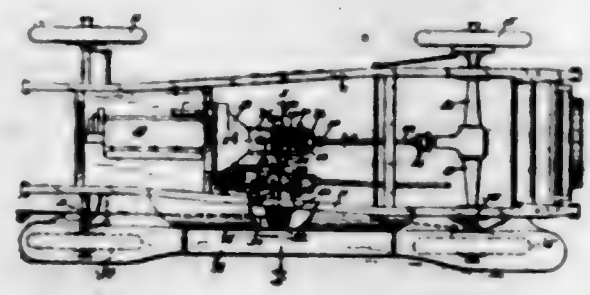
1. In a telegraph duplex equipment, a main line conductor, an ammeter included with said line conductor, an artificial line, an ammeter included with said artificial line, a line relay included with said main line and said artificial line, contacts controlled by said ammeters, relays controlled by said ammeter contacts, and signals under control of said relays.

1,296,614. VALVE FOR OIL-ENGINES. EDWARD B. BLAKELY, Chicago, Ill., assignor to R. M. Hvid Company, Chicago, Ill., a Corporation of Michigan. Filed May 3, 1918. Serial No. 232,226. 3 Claims. (Cl. 123—33.)



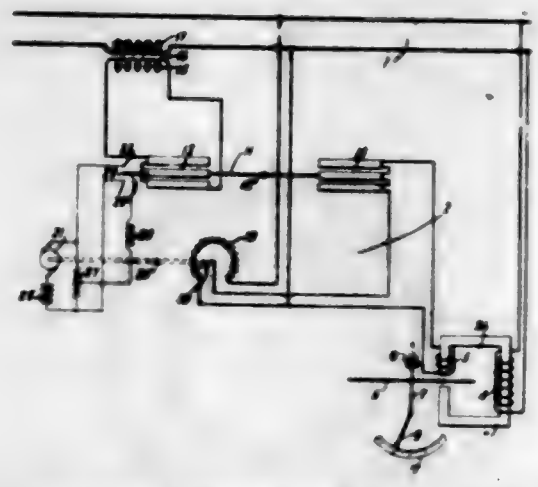
1. In an oil burning engine, the combination with the cylinder and piston of a cylinder head having a space communicating with the cylinder and within which space the ignition of the fuel takes place, a main valve for admitting air to the cylinder, and an auxiliary valve for admitting air to said space at a point in each cycle of the engine during normal operation, substantially as described.

1,296,615. WINDLASS ATTACHMENT FOR MOTOR-DRIVEN VEHICLES. ELMER L. BLY, Stanley, Wis. Filed June 18, 1918. Serial No. 239,716. 3 Claims. (Cl. 254—166.)



1. The combination with a motor-propelled vehicle having a running board, and a guard between the running board and frame of the vehicle, of a windlass having a shaft, driving connections including a clutch for connecting the windlass shaft to the transmission shaft of the motor, at will, said windlass being located under said guard, a crank adapted to be attached to the windlass outward of the guard for rotating said windlass when its shaft is disconnected from said transmission, and a cable secured to the windlass and adapted to be anchored at a distant point.

1,296,616. ELECTRICAL MEASURING INSTRUMENT. CLARENCE A. BODDIE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 21, 1915. Serial No. 51,890. 12 Claims. (Cl. 175—183.)



1. A volt-ampere meter for an electric circuit comprising a potential winding, a current winding, an armature, and means for suppling the current winding with current that is proportional to the current traversing the circuit and having a predetermined definite phase relationship to the current traversing the potential winding.

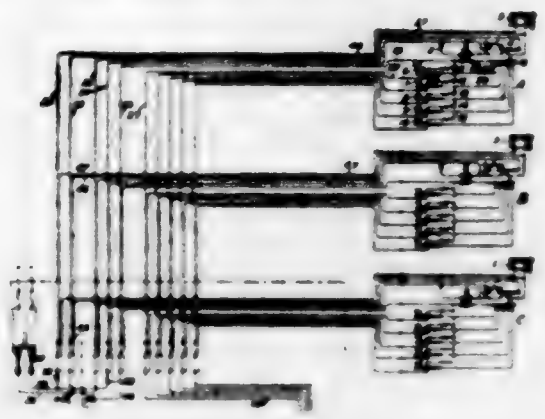
4. A volt-ampere meter for an electric circuit comprising a potential and a current winding and means interposed between the circuit and the current winding whereby the current winding is supplied with current proportional to the current that traverses the circuit and bearing a predetermined definite phase relation to the current traversing the potential winding, irrespective of the power factor of the circuit.

5. A volt-ampere meter for an electric circuit comprising coöperating potential and current windings, a Kelvin balance operatively connected to the circuit and to the current winding and means controlled by the Kelvin balance for controlling the current that traverses the current winding.

9. A volt-ampere meter for an alternating-current circuit comprising a movable member, windings connected in shunt relation to the circuit and means for so controlling the current traversing one of the windings that the movable member develops a torque directly proportional to the product of the current and voltage of the circuit.

11. A measuring instrument for an electric circuit comprising a winding, a Kelvin balance operatively connected to the circuit and means controlled by the Kelvin balance for controlling the current supplied to the winding from the circuit.

1,296,617. **TELEPHONE SYSTEM.** WILLIAM G. BRITTEN, Fanwood, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 29, 1918. Serial No. 112,030. 5 Claims. (Cl. 179—1.)



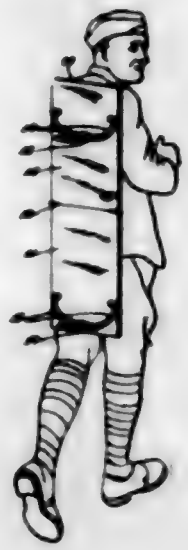
2. A telephone system including a transmitting station, amplifiers, circuits adapted to selectively associate the amplifiers with said station, compensating resistances, and means for effecting the interchanging of said amplifiers and said resistances in a given circuit.

1,296,618. **ROTARY ENGINE.** BARIAH BROWN, Seattle, Wash. Filed Apr. 14, 1917. Serial No. 162,146. 2 Claims. (Cl. 121—87.)



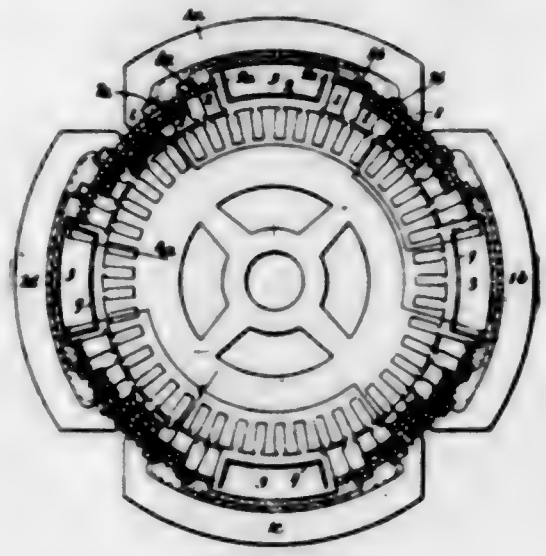
1. In a rotary engine, the combination of an engine casing having intake and exhaust ports, a rotary piston mounted in the engine casing and having a thickened rim, rings extending but part way around the engine casing and engaging the inner portion of said thickened piston rim, the piston having a cut away portion, a reciprocating L-shaped blade pivotally mounted on the piston and arranged to engage the peripheral inner wall of the engine casing at predetermined times to rotate the piston, said rings serving to operate the swinging blade, the engine casing having an inwardly projecting back check member adjacent the intake port, and a valve regulating the intake of steam or gas through said port, substantially as described.

1,296,619. **CARRIER.** NICOLAI BULAT, Lawrence, Mass. Filed Nov. 2, 1918. Serial No. 260,785. 2 Claims. (Cl. 224—25.)



1. In devices of the class described, the combination with a pair of rectangular plates hingedly engaged together at one end, of straps secured to each of said plate upon one side thereof, means for adjustably engaging the free ends of said straps, brackets fixed on the opposite side of one of said plates, hooks having stems slidably and rotatably engaged in said brackets, and resilient elements adapted to retract the stems of said hooks.

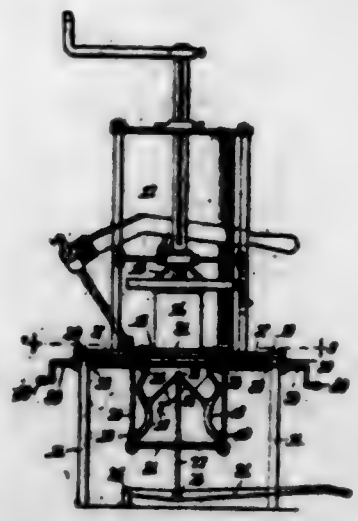
1,296,620. **ALTERNATING-CURRENT MOTOR.** JAMES BURKE, Erie, Pa., assignor to Burke Electric Company, a Corporation of Pennsylvania. Filed Feb. 7, 1917. Serial No. 147,067. 6 Claims. (Cl. 172—276.)



1. An alternating current motor having in combination a distributed field winding, distributed low resistance conductors on the field element short-circuited in a plurality of local circuits, and an armature having a winding distributed on its core connected to all the bars of said commutator and also having a winding distributed on its core connected to said first named winding at a less number of points than there are commutator bars.

4. An alternating current motor having in combination a magnetic field element divided into separate magnetic sections circumferentially, a distributed field winding having the windings creating each pole located upon adjacent portions of said sections, closed circuited conductors located on and distributed over and confined to each of said sections respectively, and an armature of the commutator type.

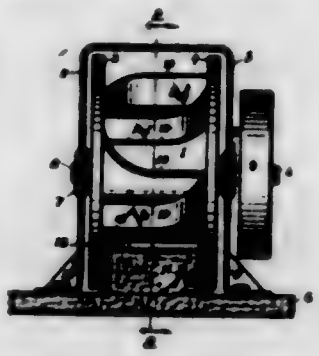
1,296,621. HOLDER FOR CAN-OPENING MACHINES. CHARLES CAMPBELL and ALEXANDER H. FORD, Metropolis, Ill. Filed Feb. 8, 1918. Serial No. 216,065. 6 Claims. (Cl. 29—69.)



1. In a device of the class described, a base, a plurality of grip members mounted for sliding movement on said base and adapted to engage and hold an article placed thereon, a pair of rods beneath said base, blocks movable on said rods, springs for forcing said blocks toward each other, a lever disposed in the path of travel of each block and connected to each of said grip members, and a treadle for moving said levers against the tension of said springs.

4. In a device of the class described, a table having a slot therein, grip members slidably arranged in said slot and each having an opening therein, a pair of levers pivoted adjacent to said table and each having an end disposed in the openings of said grip members, means for yieldably holding said grip members at the limit of their movement in one direction in said slot, a treadle, and links connecting said levers with said treadle whereby movement of the latter will cause the grip members to move against the tension of said holding means.

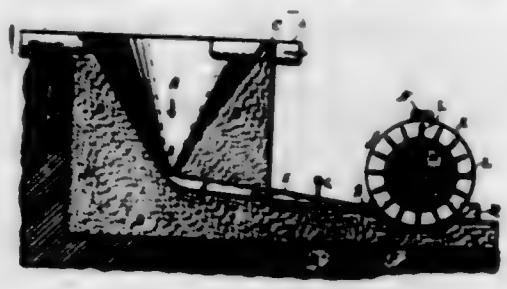
1,296,622. WATER-MOTOR. JAMES CHARLES, Richmond, Ind. Filed Nov. 16, 1918. Serial No. 262,791. 6 Claims. (Cl. 253—136.)



1. A water motor including a wheel having a cylindrical body, flanges extending out from around the ends of the body, vanes radiating from the periphery of the body and connected with said flanges, one portion of each vane being straight and the other portion being curved at right-angles thereto, the curve of each vane being located opposite to the straight portion of the vane next thereto.

1,296,623. SYSTEM OF HYDRAULIC-POWER UTILIZATION. JAMES CHARLES, Richmond, Ind. Filed Nov. 16, 1918. Serial No. 262,792. 2 Claims. (Cl. 61—19.)

1. A system of hydraulic power utilization including a permanent base, a basin formed thereon, the basin being formed with vertical outer walls and upwardly flaring inner walls terminating at their lower ends in a large slot-like nozzle, a flume connected with said nozzle and extending slightly downward from right-angle thereto, said flume being formed tapering both laterally and vertically, a small nozzle forming the terminal of the



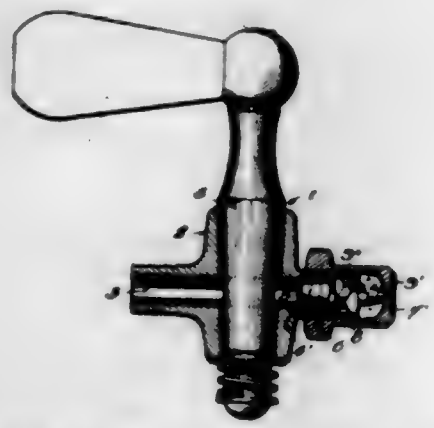
outer end of the flume the same being located on the base and at a distance laterally from the basin, and a head-gate located in the flume, all substantially as shown and described and for the purposes set forth.

1,296,624. CASE FOR FUNNELS. VINCENT W. CLARK, Douglas, Ariz. Filed Sept. 21, 1917. Serial No. 192,580. 1 Claim. (Cl. 206—1.)



A case adapted to receive a funnel comprising a plurality of nesting body sections which complementally form a structure of usual funnel shape, a cover for the case and a plurality of depending ring like members carried by said cover which are inclined and which conform in their inclination to the inclination of the funnel sections whereby when the cover is placed in position said ring like members center the funnel sections within the case and hold them against lateral movement with respect to each other.

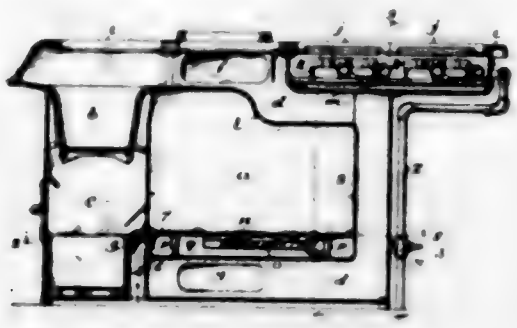
1,296,625. GAS-COCK. EMIL L. CLAUS, Milwaukee, Wis. Filed May 21, 1918. Serial No. 235,775. 9 Claims. (Cl. 67—121.)



4. A jet plug for gas cocks embodying a resilient ribbon wound in a series of closed flat coils at its base and

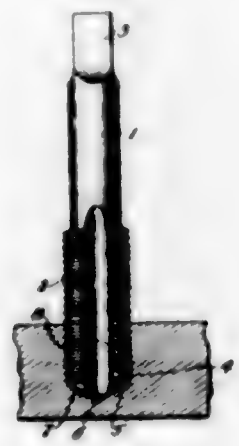
a series of closed conical flat coils at its end, the end and base being connected by a resilient winding of comparatively greater pitch than its end coils.

1,296,626. COOKING-RANGE. GEORGE M. COKE, Milwaukee, Wis., assignor to The Fuller-Warren Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 26, 1914. Serial No. 868,570. 6 Claims. (Cl. 126—36.)



1. In a cooking range the combination with an oven having an opening in the back wall adjacent the bottom, of a self-closing valve controlling the admission of air through said opening into the oven, a gas supply pipe outside the oven adjacent said opening, a removable plate insertible through the door-way of the oven and fitted in the oven above and parallel with its bottom and adapted to form therewith a combustion chamber, and a burner attached to the under side of and removable with said plate and adapted when placed in working position in the oven to open said valve and to make operative connection with the gas supply pipe.

1,296,627. BOTTOMING-TAP. WALLACE A. COOK, Greenfield, Mass., assignor to Greenfield Tap and Die Corporation, Greenfield, Mass. Filed Feb. 12, 1917. Serial No. 148,117. 1 Claim. (Cl. 10—141.)



A tap for cutting a full thread to the bottom of the wall of a blind hole having a conically depressed bottom, comprising a shank having cutting teeth near one end and a forwardly projecting conical surface at said end so disposed as to seat on the bottom of the hole when the foremost cutting tooth reaches the bottom of the wall.

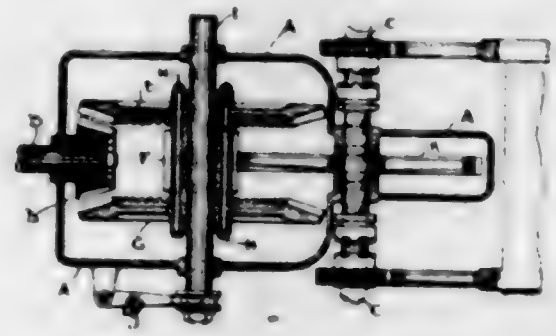
1,296,628. STABILIZING FOUNDATION. MICHAEL J. COONEY, Forbestown, Cal. Filed Oct. 5, 1916. Serial No. 123,915. 2 Claims. (Cl. 61—57.)

1. In an earth anchoring device, a pillar including a casing embedded solidly at one end beneath the ground and protruding at its opposite end beyond the surface, a core pipe arranged centrally within said casing and protruding beyond the upper open end thereof, a jacket of reinforcing steel rods surrounding said core pipe, spacing members extending radially from said jacket, the said casing being filled with concrete, and a screw cap on the



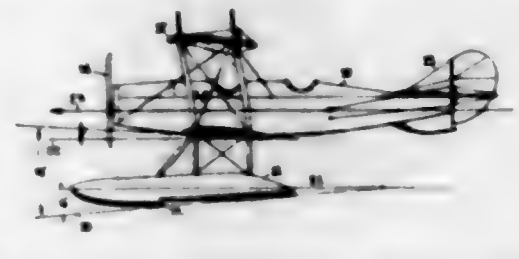
protruding end of said core pipe, substantially as described.

1,296,629. TRANSMISSION MECHANISM. FLOYD CONNELISON, Hague, N. D. Original application filed Dec. 4, 1916, Serial No. 135,079. Divided and this application filed Dec. 8, 1917, Serial No. 206,319. Renewed Jan. 13, 1919. Serial No. 270,947. 2 Claims. (Cl. 74—58.)



1. In a mechanism of the kind described a drive shaft and pinion, a transmission shaft having mounted thereon two bevel gears and a driving gear, means for engaging either of the bevel gears with the pinion and thereby imparting a forward or reverse motion to the drive gear, a driven gear mounted upon a driven shaft and adapted to be held continuously in mesh with the driving gear.

1,296,630. HYDROAIRCRAFT. GLENN H. CURTISS, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Feb. 28, 1917. Serial No. 151,504. 7 Claims. (Cl. 244—2.)

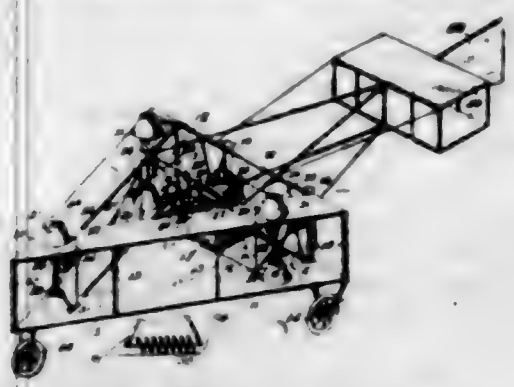


1. In an aircraft, a flotation body having a non-salient bottom, a motor, and supporting surfaces fixed permanently in such relation to said flotation body as to make an angle with the keel line thereof equal at least to the angle of incidence calculated to give a lift-drift ratio sufficient to pull the craft from the surface of the water without rocking said body fore and aft.

1,296,631. FLYING-MACHINE. WILLIAM I. DAVIS, Little Rock, Ark., assignor of one-half to Emil A. Vogel, Little Rock, Ark. Filed Jan. 16, 1917. Serial No. 142,691. 14 Claims. (Cl. 244—15.)

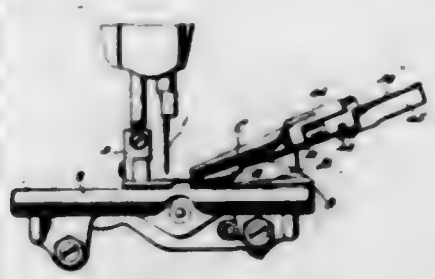
1. In an air craft, the combination of a biplane provided with the usual propelling means, of pairs of vertically alined elevating propellers one of which is ar-

ranged in each plane of said biplane, and means for driving each pair of propellers as a unit.



14. In an air craft, the combination, of a pair of vertically spaced apart planes substantially triangular in shape, vertical open ended upwardly tapering casings arranged at each corner of the planes in alining pairs, spiral bladed propellers rotatable within said casings and means connecting said spiral propellers to rotate them simultaneously for equalizing the pressure beneath each corner of each plane, means for controlling the rotation of said propellers whereby any alining pair may be driven independently of the other propellers, and louver blinds positioned at the lower ends of said casings for regulating the quantity of air passing therethrough.

1,296,632. ATTACHMENT FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 24, 1918. Serial No. 230,396. 14 Claims. (Cl. 112—147.)



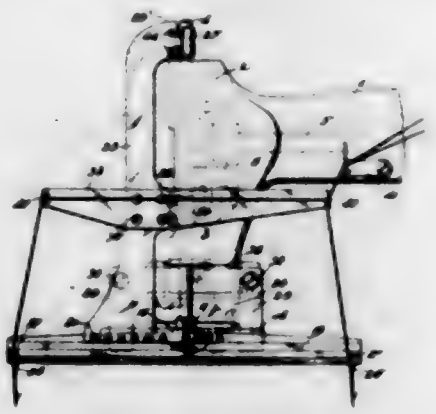
1. An attachment for sewing machines including in combination, a hemmer and a superposed strip-folder, and means for supporting the strip-folder permitting it to be moved laterally from a position over the hemmer to a position at one side thereof to facilitate introduction of work into the hemmer.

7. An attachment for sewing machines including in combination, a base-plate, a hemmer and a superposed strip-folder, a bracket-arm extending from said strip-folder downwardly and laterally beneath the base-plate, a slide-way provided in the under side of said base-plate to receive the laterally extending portion of said bracket-arm, a latch pivoted to said laterally extending portion of the bracket-arm, and a spring sunk within the base-plate and connected at its opposite ends to said base-plate and said latch whereby the strip-folder may be secured in one of a plurality of predetermined positions.

9. In combination with a multiple needle sewing machine having needles arranged into spaced pairs, a hemmer arranged in front of one pair of the needles to deliver the folded edge of a body-fabric thereto, a strip-folder normally occupying a position above the hemmer and delivering the opposite sides of a folded strip to both pairs of needles, said folder being adjustable to accommodate strips of different widths and being also bodily movable from above the hemmer to a position at one side thereof.

14. In an attachment for sewing machines, in combination, a base-plate, a hemmer and an overlying strip-folder supported on said base-plate, said strip-folder having pairs of arbor-fingers and surrounding scrolls for folding a strip into a band one of which pairs is detachably and adjustably secured in position relative to the other of said pairs.

1,296,633. NEEDLE-BAR MECHANISM. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New York. Filed Apr. 24, 1918. Serial No. 230,399. 13 Claims. (Cl. 112—29.)

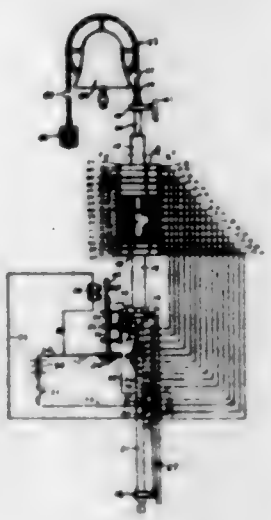


1. In a sewing machine, a needle-bar mechanism comprising a reciprocatory needle-bar, a cross-bar secured to the lower end thereof, and means secured to the cross- and needle-bars, respectively, at points removed from their junction for bracing the cross-bar.

7. A sewing machine having a needle-bar, a cross-bar secured to the lower end of the needle-bar, means for securing needles to said cross-bar, and means in addition to the bars for preventing endwise and lateral displacement of the needles.

11. A sewing machine having a needle-bar, a cross-bar secured thereto at its lower end and adapted to carry needles, and guiding means on both sides of said needle-bar and contiguous to said cross-bar for preventing lateral displacement of the needles.

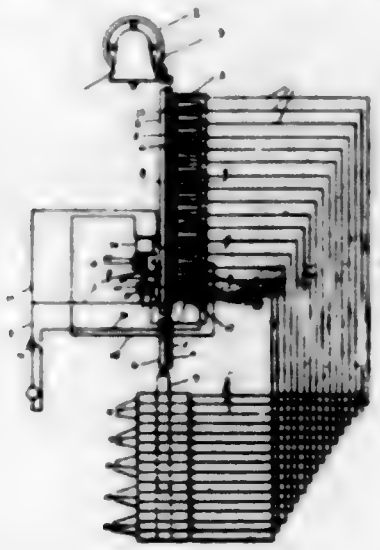
1,296,634. ELECTROMECHANICAL MOTOR. GEORGES A. DE GUISE, Montreal, Quebec, Canada. Filed May 9, 1916. Serial No. 96,437. 5 Claims. (Cl. 172—126.)



4. An electro-mechanical motor of the character described, comprising a solenoid composed of a plurality of separate coils, a core operative therein, circuits connecting the aforesaid coils in series, means controlled by the aforesaid core and conductively connected to said coils, to successively energize and deënergize said coils, means for automatically breaking the circuit through the solenoid when the desired stroke of said core is ended, means for automatically lifting the core and devices for closing the circuit again, comprising means actuated by said core and

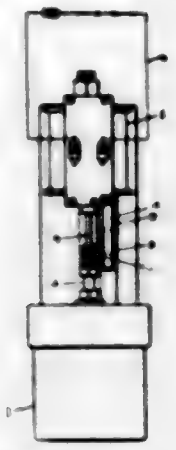
means coöperating therewith, a part of the circuit closing devices being adapted to yield when the core moves in one direction and adapted to be moved to close the circuit when the core moves in the other direction.

1,296,635. ELECTROMECHANICAL MOTOR. GEORGES A. DE GUIRE, Montreal, Quebec, Canada. Filed Apr. 30, 1917. Serial No. 165,458. 18 Claims. (Cl. 172—126.)



10. An electromechanical motor comprising a main circuit, an endwise movable magnetizable core, magnet coils surrounding said core and connected in series, terminals connected to said main circuit, movable contactors connected to said coils respectively and coöperating with said terminals and a device carried by said core and provided with means for mechanically actuating said contacts successively to make a circuit through some of said coils.

1,296,636. TRIP-SWITCH. GEORGES A. DE GUIRE, Montreal, Quebec, Canada. Filed Apr. 30, 1917. Serial No. 165,460. 16 Claims. (Cl. 175—281.)



1. A trip switch comprising, a movably mounted contactor, means for moving said contactor in one direction, magnetically operated means for returning it, a pivoted arm, a part moving with said contactor and engaged by said arm for locking said contactor against return and means for releasing said arm.

4. A trip-switch comprising a movably mounted contactor, an electro-magnet for moving said contactor in one direction, a spring for returning it, a pivoted arm for locking it against such return, and a longitudinally operated bar carrying a laterally extending device arranged to be moved into contact with said movable locking part and to actuate the same for freeing said contactor.

6. A trip switch comprising, an electromagnet, a rod actuated in one direction thereby, a contactor carried by said roll, a spring adapted to return said contactor, a trip arm adapted to hold said rod against return movement and means for tripping said arm actuated independently of said electromagnet.

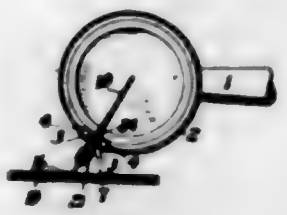
15. A trip switch comprising, a movably mounted contactor, means for moving said contactor in one direction, means for returning said contactor, a pivotally mounted arm adapted to lock said contactor against return, a tip pivotally mounted in said arm, means actuated independently of said contactor-moving means adapted to engage said tip and trip said arm, and means for yieldingly maintaining said tip in alinement with its arm.

1,296,637. TRANSMISSION MECHANISM FOR FEEDERS CONNECTED IN GANGS. EMIL R. DRAVES, Richmond, Ind. Filed Apr. 29, 1918. Serial No. 231,820. 5 Claims. (Cl. 74—54.)



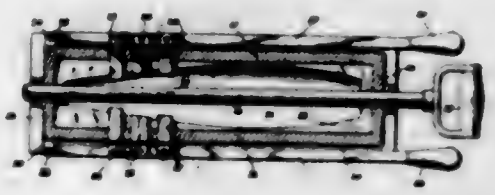
1. A self contained gang of machines having a common power driven shaft mounted in suitable bearings thereon, a variable stroke ratchet mechanism on each machine, a variable stroke connection between each ratchet mechanism and said common shaft, and means for throwing said variable stroke connections, independently into and out of action at will.

1,296,638. NEEDLE-ARM FOR TALKING-MACHINES. WALTER L. ECKHARDT, Philadelphia, Pa. Filed Mar. 11, 1916. Serial No. 83,475. 4 Claims. (Cl. 274—37.)



3. A needle arm comprising a portion having a slot extending longitudinally thereof throughout its entire length said slot extending only part way through the said portion, a stylus or needle wire situated in the bottom of said slot, and means for moving the parts of said arm upon opposite sides of said slot toward each other to clamp the said stylus or needle wire.

1,296,639. MOLD FOR DUMMY AERIAL BOMBS. ECKARDT V. EBERSEN, New York, N. Y. Filed Aug. 8, 1918. Serial No. 248,967. 3 Claims. (Cl. 25—17.)



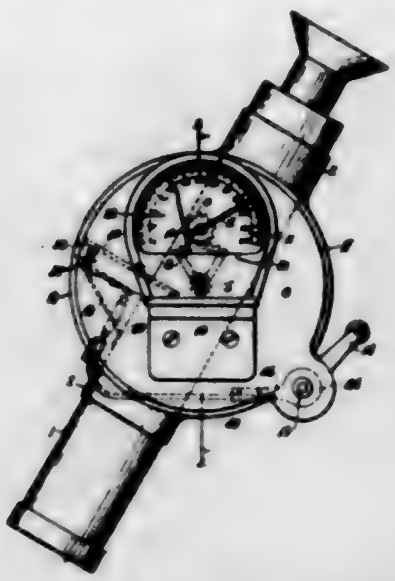
1. A mold of the character described comprising superposed mold sections forming a mold cavity therebetween and having recessed side and end portions, forming side and end openings, a mold case in which the said mold sections are movable vertically, having side and end openings to register with the side and end openings of the mold sections, a rod for insertion longitudinally within the mold cavity through the end openings, and transverse plungers shiftable in the side openings, as described.

1,296,640. SIGHTING APPARATUS. GEORGES ESTOPPEY, Orange, N. J., assignor to Musa, Estoppey & Co. Inc., New York, N. Y., a Corporation of New York. Filed Dec. 15, 1917. Serial No. 207,230. 20 Claims. (Cl. 33—46.)



1. In apparatus of the class described, the combination of sighting means comprising a member pivoted for movement to change the direction of the line of vision with respect to the vertical, and means comprising a movable stop coacting with said member and operable to determine the position of said member for sighting a stationary target from a moving body adapted to travel at different heights and speeds at the moment when an object should be released from said body to fall upon said target.

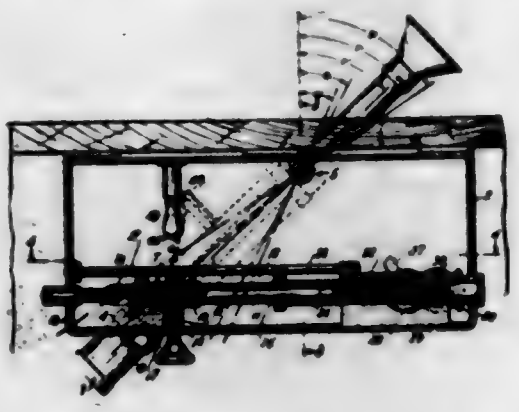
1,296,641. SPEED-INDICATOR. GEORGES ESTOPPEY, Orange, N. J., assignor to Musa, Estoppey & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 24, 1918. Serial No. 246,483. 16 Claims. (Cl. 33—46.)



1. In apparatus of the class described for use on a moving body, such as an aeroplane, the combination of sighting means comprising a movable sighting member, and means operable by maintaining the line of vision of said means upon a certain point for a predetermined period of time to indicate directly the speed of the body relatively to the body containing the point.

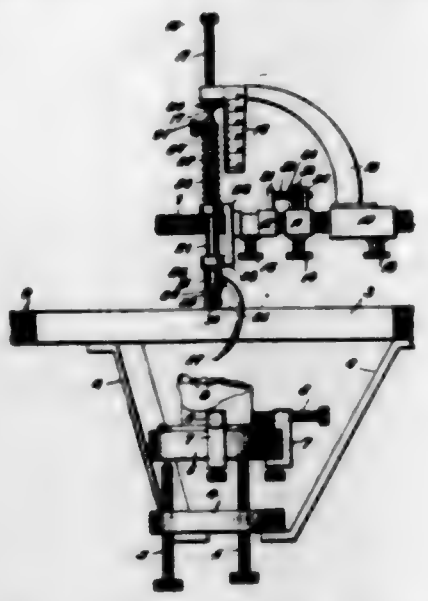
1,296,642. SIGHTING APPARATUS. GEORGES ESTOPPEY, Orange, N. J., assignor to Musa, Estoppey & Co. Inc., New York, N. Y., a Corporation of New York. Filed July 24, 1918. Serial No. 246,484. 22 Claims. (Cl. 33—46.)

1. In apparatus of the class described for use upon a body in motion, the combination of sighting means comprising a member pivoted for movement to change the direction of the line of vision with respect to the vertical, and means co-acting with said member and operable to locate the same to cause the line of vision thereof to make with the vertical an angle, the tangent of which is equal to the quotient obtained when the distance traveled by the body in the time required by an object to fall from



said body to the ground is divided by the distance of the body from the ground, said apparatus having means for determining the correction of the angle of the line of vision to the vertical to provide for resistance of the wind to the falling object.

1,296,643. DENTAL SURVEYING APPARATUS. GILBERT DUDLEY FISH, New York, N. Y., assignor to Frederick L. Stanton, New York, N. Y. Filed Oct. 6, 1917. Serial No. 195,018. 5 Claims. (Cl. 33—23.)



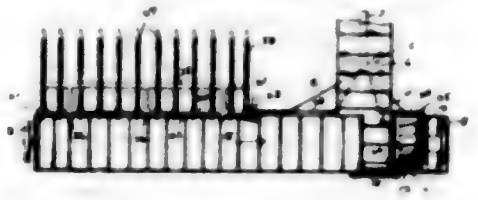
4. In a device of the class described, a pantograph arm, a spindle adapted to move laterally on said arm, means for connecting said spindle and said arm so that the spindle may move laterally, micrometer means for moving said spindle laterally, and a pivoted point on said spindle with the point substantially in the axis of the spindle at all times.

5. In a device of the class described, a pantograph arm, a series of slides mounted on said arm, a micrometer screw connected to one of said slides, a vertically movable spindle connected to another of said slides and an adjusting mechanism connected to the third of said slides.

1,296,644. GRAIN-SHOCK LOADER. CHARLEY FRAHM, Westbrook, Minn. Filed July 19, 1918. Serial No. 245,754. 1 Claim. (Cl. 56—61.)

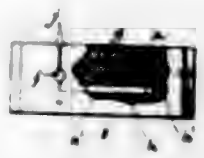
In a loader, the combination with a frame relatively long in a direction at right angles to the line of draft and having supporting wheels near its extremities, driving mechanism at its inner end, an elevator whose frame is connected with the main frame near said driving

mechanism and which elevator is driven thereby, and a carrier extending the length of the main frame and delivering to the elevator, the carrier being also driven by



such driving mechanism; of gathering tines along the front edge of said frame near its outer end, and an elevator carried by each tine for raising the material picked up by it and delivering the same to said carrier.

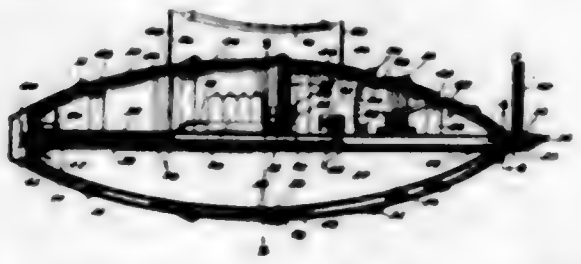
1,296,645. LOOM-SHUTTLE. GUSTAV J. FRIEDRICH, New York, N. Y., assignor of two-thirds to himself and one-third to Alfred Baker, trustees, New York, N. Y. Filed May 1, 1916. Serial No. 94,581. 5 Claims. (Cl. 139—43.)



1. In a shuttle having a recess in a side wall thereof, said recess having a portion of an eye opening in one of its vertical walls providing an opening through said wall, a threading means embodying therein a member movably mounted in said recess and adapted to guide the yarn from the top of said recess to said eye opening, and a spring acting upon said member, whereby said member may be moved to permit the yarn to enter said eye opening, and will be restored to normal after each threading operation.

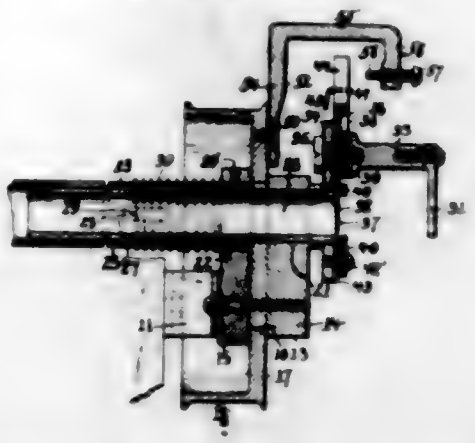
3. In a shuttle having a recess in a side wall thereof, said recess having a portion of an eye opening in one vertical wall thereof providing an opening through said wall, a threading means comprising a movable member slidably mounted in said recess, said member having a complemental portion of said eye opening in that wall thereof presented toward the wall of said recess having said portion of an eye opening therein, means permitting reciprocatory movement of said member and preventing its escape from said recess, and a spring acting upon said movable member, normally tending to force it toward said wall of said recess having said portion of an eye opening, the edges of said recess and of said movable member above said eye opening, being rounded, whereby pressure from a taut section of yarn will actuate said movable member to permit the passage of said yarn between said member and the wall of said recess, until it enters said eye opening.

1,296,646. SUBMARINE-DESTROYER. GEORGE H. GEORGELIS, Fort Screven, Ga. Filed Feb. 6, 1918. Serial No. 215,639. 5 Claims. (Cl. 115—20.)



1. In a submarine, the combination of a body part, a hull pivotally connected to and surrounding the body part, means on the body part connected to the hull for revolving the latter, doors hinged in the wall of the hull and opening inwardly and adapted to be urged into closed position by centrifugal force incident to the rotation of the hull, and means for propelling the submarine when the hull is stationary.

1,296,647. CUTTING-OFF MACHINE FOR TAFFY OR THE LIKE. HENRY GILLAR and SAMUEL W. CROUSE, South River, N. J. Filed June 12, 1918. Serial No. 239,622. 9 Claims. (Cl. 107—20.)



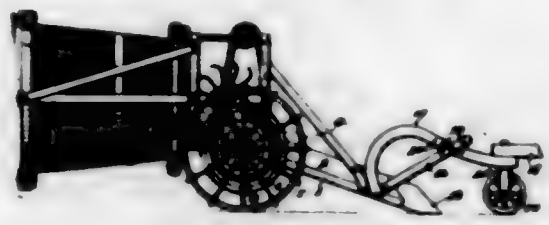
1. In a cutting off apparatus, a slidable conduit through which material to be cut off may be fed, means connected with said conduit and interposed in the path of material passing beyond the mouth of the conduit whereby the conduit is slidably moved by material passing therethrough, and cutting off means brought into operation by the movement of the conduit for cutting off such material when the conduit reaches a predetermined position.

2. In cutting off apparatus, cutting off means adapted to be moved with the material to be cut off, means whereby said cutting off means is moved along by the advancing material only, and rotatable actuating means for said cutting off means normally rotating freely and adapted to operate said cutting off means when the latter reaches a predetermined position.

4. In cutting off apparatus, a slidable tube, a spring-pressed knife thereon and having an operating lever, and means rotatable about said tube for actuating said knife when the knife reaches a predetermined position.

9. In cutting off apparatus, a slidable member having a bore therein, means sliding with said member and normally located opposite the end of the bore for imparting movement from material passing through and out of said bore to the said member, a knife on the slidable member, and means for simultaneously operating said knife and moving said movement imparting means from position opposite the end of the bore.

1,296,648. AGRICULTURAL MACHINE. FRANK P. GINSBACH, Watertown, S. D. Filed Oct. 2, 1916. Serial No. 123,354. 1 Claim. (Cl. 55—9.)



In a machine of the character described, a wheel mounted axle, a downwardly and forwardly inclined conveyer frame rockably mounted thereon adjacent its upper end, a beam having its rearward portion bifurcated to form two rearwardly diverging arms bent into arcuate shape and having their rearward ends pivotally secured to the sides of the conveyer frame, a ground wheel carried at the forward end of said beam and serving to maintain the same in fixed relation to the ground surface, and a brace bar pivotally secured at its rearward end to the conveyer frame in advance of the lower ends

of said arms and adjustably secured adjacent its forward end to the forward portion of said beam so as to normally prevent relative movement between the beam and the conveyer frame, and to permit the inclination of the conveyer frame to be varied, said bar extending across the arc formed by one of the arms so as to provide a bracing member for preventing distortion of said arms, the bar being so disposed as to have all strains transmitted longitudinally thereof.

1,296,649. PROCESS OF HEAT TREATMENT OF STEEL. FEDERICO GIOLITTI, Turin, Italy, assignor to Società Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Filed Oct. 14, 1914. Serial No. 866,702. 1 Claim. (Cl. 148—13.)

The process of heat treatment of steel which comprises heating the steel to a temperature in the neighborhood of that at which the diffusion phenomena of the different components of the steel take place with the greatest rapidity, that is to say at least 100° C. higher than the third transformation point on heating of the steel under treatment, then lowering its temperature to at least 30° C. below the temperature necessary for effecting the ordinary uniform hardening and therefore at least about 50° C. above the critical point Ar_3.

1,296,650. BALL-BEARING. DAVID F. GRAHAM, Coudersport, Pa. Filed Nov. 6, 1918. Serial No. 261,327. 5 Claims. (Cl. 64—38.)



1. In a bearing, the combination of annular bearing members, bearing balls, and a ball retainer comprising opposed annular plates having their peripheries seamed together and their inner edges flanged outwardly and engaging the inner edges of the bearing members so that they are retained in assembled relation and relative rotation thereof permitted, the plates being perforated to provide retaining pockets for the balls.

1,296,651. METHOD OF SECURING TOGETHER HEAVY STEEL PLATES. JAMES H. GRAVELL, Brooklyn, N. Y., assignor to Thomson Spot Welder Company, Boston, Mass., a Corporation of Massachusetts. Filed July 26, 1918. Serial No. 246,826. 5 Claims. (Cl. 219—2.)



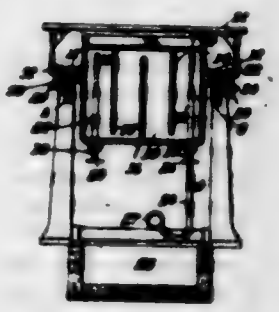
1. The method of securing two members together, consisting in providing a perforated member, passing a rivet blank through said member and into contact with the other member, electrically welding said blank to the second named member, continuing the current and pressure until the head of the rivet engages the perforated member and thereafter to cause the head to act as a slug or button to weld the three members together.

2. The method of securing two members together, consisting in providing a perforated member, passing a rivet blank through said member and into abutted contact with an imperforate surface of the other member, electrically welding said blank to the imperforate member, forcing the rivet head into contact with the perforated member and passing the heating current and pressure through the members in line with said head to cause the plates to weld direct to each other.

3. The method of securing two members together, consisting in providing one member with a perforation, superposing the members, inserting a rivet blank through the perforation and into contact with an imperforate surface of the other member, electrically welding said rivet to the imperforate member and continuing the current and pressure after the rivet head has become seated to cause the three members to weld together.

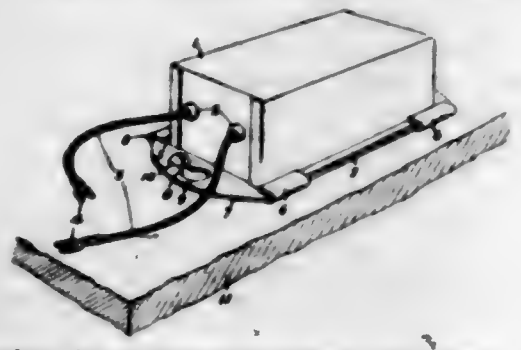
4. The method of uniting two plates, consisting in providing a perforated and an imperforate plate, inserting a rivet blank through a perforation in one plate and abutted against the other plate, electrically welding the blank to the imperforate plate and at the same time causing the outer end of the blank to mushroom over on the outer surface of the perforated plate and continuing the current and pressure to weld the plates direct to each other.

1,296,652. CHILL-PLATE. ALANSON MCD. GRAY, Elizabeth, N. J. Filed Aug. 3, 1916. Serial No. 112,942. 12 Claims. (Cl. 257—256.)



1. A chill plate, comprising a horizontally narrow hollow vessel, a cooling fluid supply pipe having an opening at its upper extremity, and located at one end of and extending through the bottom of said vessel, said open extremity terminating a short distance below the top of said vessel, a discharge pipe having an opening at its upper extremity and located at the other end of and extending through the bottom of said vessel, its open extremity terminating a short distance below the top of said vessel, and means for vertically adjusting said pipes, whereby the flow of fluid through the vessel may be regulated commensurately with the head of the fluid supply.

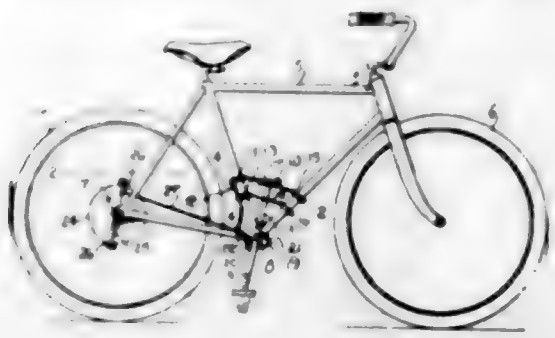
1,296,653. CONTAINER FOR ELECTRICAL APPARATUS. GEORGE L. GRISWOLD, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1916. Serial No. 137,718. 1 Claim. (Cl. 220—5.)



A container for electrical apparatus or the like, consisting of an inclosing casing substantially rectangular in

section and a cover plate, said casing being provided with perforations fitted with eyelets through which flexible terminal leads may be inserted and having outwardly flanged side walls engaged at opposite corners by inwardly extended portions of said cover plate, said cover plate being provided with extended end portions equipped with mounting slots having enlarged portions, said slots being formed in the arc of a circle, the diameter of which is the distance between slots.

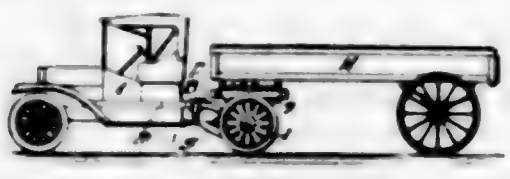
1,296,654. POWER-TRANSMITTING MECHANISM. ORIN A. GRUBB, Wichita Falls, Tex. Filed Apr. 22, 1918. Serial No. 230,083. 11 Claims. (Cl. 208—20.)



1. In a power transmission mechanism, in combination with a driving shaft and a driven wheel, a ratchet wheel fixed to the driven wheel, a spring lever, a cam element fixed upon the driving shaft and constantly engaged with the free end of said lever, means operatively engaged with the teeth of the ratchet to positively rotate the driven wheel in one direction, and means operatively connecting the last named means to said spring lever.

8. In a power transmission mechanism, in combination with a driving shaft and a driven wheel, a ratchet fixed to the driven wheel, a relatively movable lever, a pawl carried by the lever and coacting with the ratchet in the movement of the lever in one direction to rotate the driven wheel, a spring lever pivotally mounted at one of its ends, an actuating element fixed to the driving shaft and constantly engaged with the other end of said spring lever, and an operative connection between the latter end of the spring lever and said first named lever.

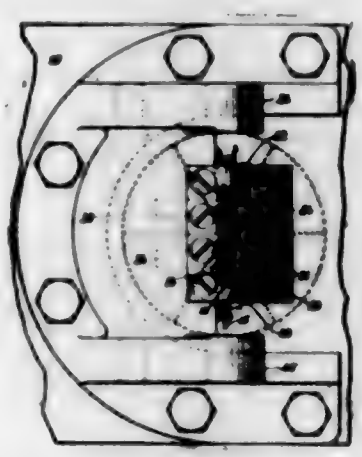
1,296,655. TRACTOR-TRAILER CONSTRUCTION. ERVING R. GURNEY, Springfield, Mass., assignor to Knox Motors Company, Springfield, Mass., a Corporation of Massachusetts. Filed July 5, 1917. Serial No. 178,690. 2 Claims. (Cl. 180—14.)



1. A traction unit having in combination an axle, driving wheels connected therewith, a plurality of springs on the axle, some of which are more resilient than others, a fifth wheel device supported by the springs of least resiliency, and attaching means connected to the springs of greatest resiliency, the unit being constructed and arranged for attachment to existing motor vehicles by substituting the one unit for the rear axle and springs of an automobile and the front axle and springs of a trailer vehicle, and an internal gear drive mechanism on the axle to connect the driving wheels with the motor, whereby a tractor-trailer combination may be made by the substitutions stated, said mechanism designed to render the combination suitable for hauling heavy loads when connected to a motor originally designed for pleasure vehicles.

2. A traction unit adapted to replace the rear axle of an existing automobile, comprising, an axle, driving wheels connected therewith, springs on the axle, a fifth wheel device supported by said springs, other springs of greater resiliency than the first-named springs and connected to said axle, a cross-bar to the ends of which the last-named springs are fixedly connected, and torque arms connecting said axle and cross-bar, the latter being adapted for attachment to the frame of an automobile after its rear axle has been removed, and driving means adapted to connect said wheels to the power plant of the automobile.

1,296,656. SOLDER CUTTER AND FEEDER. WILLIAM S. HAMM, Hubbard Woods, and WILBUR F. STEWART, Chicago, Ill., assignors to The Adams & Westlake Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1916. Serial No. 93,170. 1 Claim. (Cl. 113—94.)



In a solder cutter and distributer, in combination, a series of T-shaped stationary cutters, a series of T-shaped reciprocating cutters movable between and coöperating with the stationary cutters, and a series of conduits located below the cutters, one in advance of each cutting element.

1,296,657. PRESSURE-REGULATOR. THEODORE A. HAMMOND, Passaic, N. J., assignor of one-half to William P. Hammond, Passaic, N. J. Filed Oct. 10, 1912. Serial No. 724,984. 3 Claims. (Cl. 277—71.)

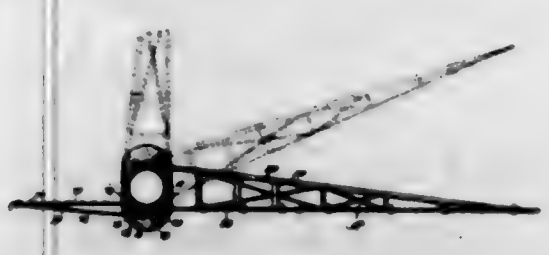


1. The combination of a fluid pressure container, an inflation tube for the container, an induct tube movably mounted within the inflation tube, a diaphragm carrying the induct tube and exposed to the action of the pressure within the container, a valve and a valve seat within the induct tube, one of the valve members being carried by the induct tube, and means for mounting the opposite valve member independently of the induct tube, the movement of the diaphragm and induct tube operating to automatically close the valve when the pressure within the container reaches a predetermined point.

3. The combination of a fluid pressure container, an inflation tube for the container, an induct tube slidably

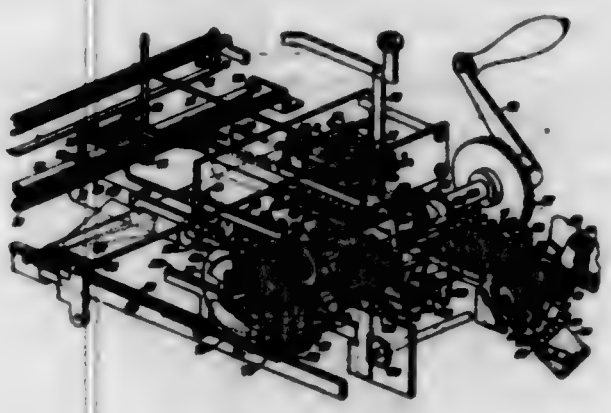
mounted within the inflation tube, a diaphragm carrying the induct tube and exposed to the action of the pressure within the container, a valve and valve seat within the induct tube, one of the valve members being carried by the induct tube, means for mounting the opposite valve member independently of the induct tube, the movement of the diaphragm and induct tube serving to close the valve when the pressure within the container reaches a predetermined point, and a cap adapted to be applied to the induct tube and to engage the inflation tube to hold the valve in a closed position.

1,296,658. BARRIER-GATE. OTTO W. HANSEN, Chicago, Ill. Filed June 9, 1917. Serial No. 172,750. 10 Claims. (Cl. 39—7.)



1. In a barrier gate structure, the combination of a supporting base, a turret frame mounted on said base, a gate arm pivoted to said turret frame to swing vertically, said turret frame being adapted to rotate about its vertical axis, a blade extending downwardly from said turret into said base, and fluid confined in said base for yieldingly resisting movement of said blade and thereby turning of said base by said gate arm.

1,296,659. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Dec. 9, 1914. Serial No. 876,189. 50 Claims. (Cl. 235—60.)



1. The combination with a plurality of series of computing wheels, having computing wheels of according denominations always intergeared so as to be driven from each other, of a single series of racks for driving said computing wheels in alternation, shifting means for moving one or the other of said series of computing wheels into mesh with said racks to bring about a direct driving relation with one or the other of said series of computing wheels so as to effect either an adding or a subtracting operation on the same type of movement of said racks, a general operator for driving said racks and operating said shifting means, a subtraction key, locking means for holding said shifting means, and connections whereby said operator locks said shifting means independently of said key.

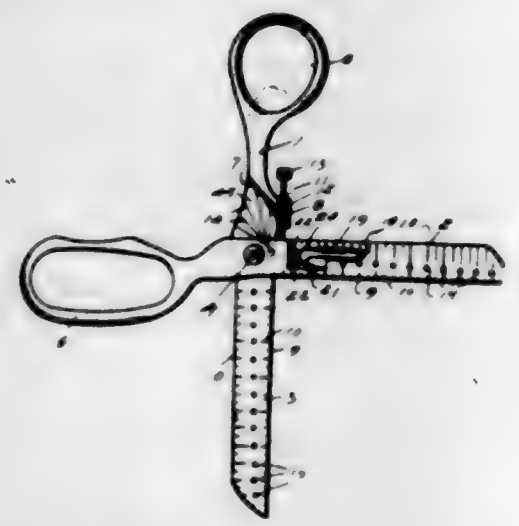
2. The combination with two series of computing wheels having like denominations intergeared so that the one will be driven from the other, of a series of racks for driving said computing wheels, a floating frame for swinging said computing wheels alternatively into mesh with said racks so as to drive said computing wheels in opposite directions, a rack bar for shifting said floating frame, and a gear for driving said rack bar.

48. The combination with a computing mechanism, including numeral keys, of a traveling denominational selector for said computing mechanism, a traveling typewriter carriage controlled by said numeral keys, gearing between said carriage and said selector, whereby both always positively move together when either moves, a single actuating means operated by said keys and universal to all the positions of said selector to actuate it in any selected position, and connections whereby each key is effective on said universal means.

49. The combination of a series of computing wheels, of a gang-drive for said computing wheels, a series of pins on the elements of said drive, some normally projected and other settable to determine the extents of driving and computing movements thereof, obstructing members lying in the path of said projected pins for limiting the driving movement thereof, and arranged to determmine extra movements of said driving elements for carry-over operations, pin-restoring and clearing means acting as the driving elements advance to clear any pins, tending to engage said obstructing members in advance of the pins set to determine the computation, restoring means for the pins set to determine the computation acting on the return stroke of said gang-drive, and a plurality of cams, one for each restoring means, having their actions timed to cause the actions of the restoring means to take place at proper intervals relatively to each other.

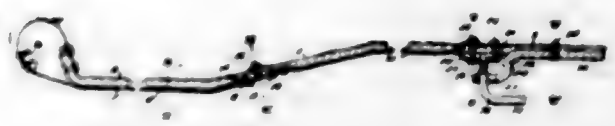
50. The combination with a series of computing wheels, of racks for driving said computing wheels, said computing wheels being normally out of mesh with said racks, detent means for holding said computing wheels against accidental rotation when out of mesh with said racks, and shifting means for moving said detent means toward said computing wheels, and said computing wheels toward said detent means, at the same time moving said computing wheels away from said racks, said shifting means also moving said detent means away from said computing wheels, and said computing wheels away from said detent means, at the same time moving said computing wheels toward said racks to engage therewith.

1,296,660. COMBINED SCISSORS AND SQUARE. ZERAH G. HAYDEN, Eldora, Iowa. Filed Mar. 15, 1918. Serial No. 222,621. 1 Claim. (Cl. 7—6.)



In a pair of scissors including a pair of pivoted blades, operating handles therefor, a protractor formed on one blade adjacent the rear end thereof, the opposite blade being adapted to coöperate with the protractor for determining the angular relation of the blades to each other, and a set-screw carried by one blade for engagement with the opposite blade to limit the opening movement of the blades in relation to each other, as and for the purpose specified.

1,296,661. DEVICE FOR SPLITTING GLASS. HARRY F. HITNER, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed June 26, 1916. Serial No. 105,926. 7 Claims. (Cl. 49—50.)



1. In an electrical splitting device, a support, a metal terminal block carried thereby, a high-resistance band adapted to be heated electrically to a relatively high temperature, means for securing one end of the band to the block, means for securing the other end of the band to the support, a contacting surface on the block intermediate the points at which the band is secured, and means for applying tension to the band to hold it in engagement with said contacting surface.

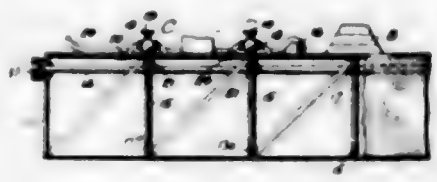
3. In an electrical splitting device, a metal terminal block, a spring carrying said block, a high resistance band adapted to be heated electrically to a relatively high temperature, means for clamping the end of the band to the block, and a contact surface on the block engaging said band, and lying between said clamping means and the other end of the band, said spring being arranged to apply tension to the band to hold it in engagement with the contact surface.

4. In an electrical splitting device, a metal terminal block provided intermediate its ends with a transverse groove, a high resistance band fixed at one end and having its other end extending across the groove, a clamping edge for forcing the band into the groove, and means for yieldingly forcing the block away from the fixed end of the band to cause the band to yieldingly engage the block in advance of the clamping edge.

5. In an electrical splitting device, a metal terminal block provided intermediate its ends with a transverse groove, a high resistance band having one end extending across the groove and contacting with the block in advance of the groove, a leaf spring for applying tension to the band having its end bent so as to provide a clamping edge for the band at said groove, and clamping means for causing said edge to bend the band into said groove, the said band yieldingly engaging the block intermediate the groove and the other end of the band, whereby overheating of the edge and the band at the point of bending is avoided.

7. In an electrical splitting device, a terminal block of metal having a groove, a flat high resistance band fixed at one end and having its other end extending transversely across the groove, and a spring clamping means for carrying the block and for applying tension to the band and having a pointed edge for engaging the band opposite the groove, the said band being bent over a part of the block in advance of the said edge.

1,296,662. DRY-DOCK. WILLIAM F. HONORST, San Diego, Cal. Filed Aug. 6, 1918. Serial No. 248,589. 4 Claims. (Cl. 61—65.)



1. A dry dock including a floatable structure, partitions therein dividing the same into compartments, said structure being open at the under side, means to direct air pressure to the central compartments to displace the water therefrom, means to permit entrance of air to the compartments other than the central compartments upon the rising of the structure, and means adapted to permit air to escape from the compartments other than the central ones to the latter upon lowering of the structure.

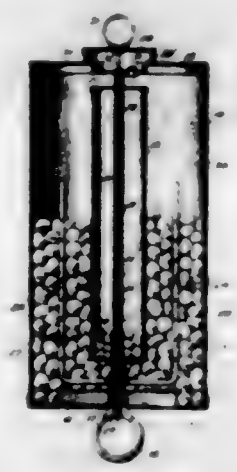
4. A dry dock including a floatable structure open at the under side, vertical partitions dividing the structure into compartments, and means for directing air under pressure to the central compartments to displace the water therefrom, said compartments communicating with the lateral compartments by means arranged below the tops of the said compartments for the purpose specified.

1,296,663. CHURN-DASHER. ARTEMAS E. F. HOLDEN, Centralia, W. Va. Filed Feb. 23, 1918. Serial No. 218,831. 1 Claim. (Cl. 259—140.)



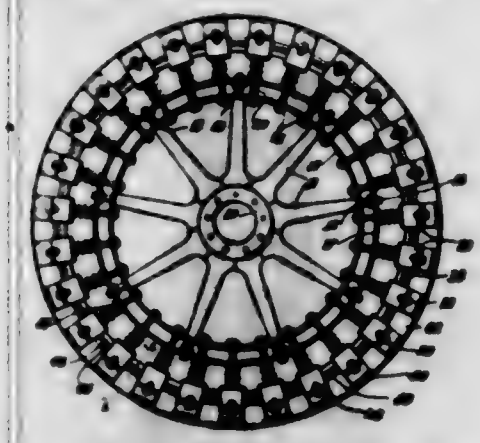
A churn dasher comprising a disk having central, peripheral and radially disposed portions lying in the same plane, said radially disposed portions having openings therein, oppositely arranged angularly disposed blades provided along each edge of the radially disposed portions, said blades being arranged in radially alined pairs and extending in opposite directions to form opposite angularly disposed passages between each of the radially disposed portions and cone shaped hoods provided upon the central portion and disposed some above and others below the plane thereof, the larger ends of the hoods being disposed outwardly and open.

1,296,664. MARINE TORCH. GWYLLYM R. HOLMES, Baltimore, Md. Filed Nov. 7, 1918. Serial No. 261,523. 7 Claims. (Cl. 9—8.8.)



1. A marine torch including a container having two separate chambers, one adapted to hold the igniter gas forming material and the other the illuminating gas forming material, both gases being generated by the addition of water, said container having an opening through one of its walls in communication with each of said chambers, said chambers being disposed so that water entering through said opening will flow to both the chambers when the container is placed in water, and releasable means normally closing said opening.

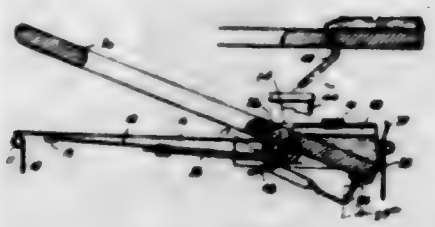
1,296,665. AUTOMOBILE-WHEEL. ANDREW HRABOVSKY, Philadelphia, Pa. Filed Mar. 29, 1918. Serial No. 225,894. 8 Claims. (Cl. 152—8.)



2. In a wheel, the combination with a pair of fixed spaced bands, spindles extending therethrough, brackets having extensions carried at the ends of said spindles, springs interposed between the outer of said bands and the bases of said brackets, a continuous tread having regularly spaced recesses formed upon opposite sides engageable with the extensions of said brackets, means for clamping said brackets thereto, a pair of flexible endless bands supported in said brackets on which said tread rests and a reinforcing means disposed between said flexible bands.

3. In an automobile wheel, the combination with a pair of concentrically spaced rigid bands, spindles extending through said bands, brackets secured on the ends of said spindles, springs interposed between the outermost of said bands and the bases of said brackets, an endless tread element having opposed peripheral recesses upon either side thereof, hooked elements and clamp elements formed with said brackets engageable in the mentioned recesses on opposite sides of said tread element, a pair of endless spaced flexible bands arranged circumjacent to said brackets, said tread resting upon the outer of said bands, and a plurality of wires interposed between said flexible bands and acting as a reinforcement therefor.

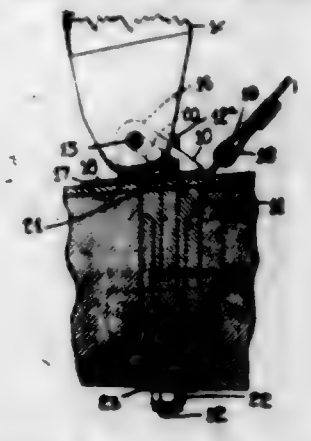
1,296,666. AUTOMATIC CLOSURE AND DISINFECTING SEAT-CABINET FOR PAN-CLOSETS. GEORGE EDWARD KINCH, Quirindi, New South Wales, Australia. Filed June 26, 1917. Serial No. 177,006. 4 Claims. (Cl. 4—18.)



1. An automatic shutter operating mechanism for pan closet cabinets having an apertured cover, a pivotally mounted apertured seat, shutters movable to open and close the aperture in the cover, and pivoted levers connected to said shutters and operable by movement of the seat to open or close said shutters, characterized in this, that a pair of arms are fixedly connected at one end to said seat with their other ends laterally offset from the pivotal axis of said seat, and the last mentioned ends of said arms are connected by direct connections to said levers to operate the same when the seat is moved about its pivots.

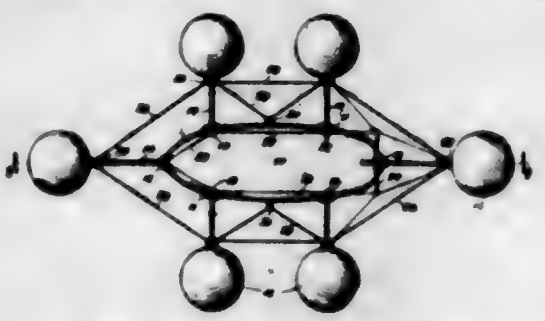
1,296,667. WING-POST SOCKET. HENRY KLOCKLER, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Nov. 17, 1916. Serial No. 131,968. 8 Claims. (Cl. 244—61.)

1. A strut socket for air craft comprising a body having upstanding ears arranged to receive a strut end between them and having therein alined slots lying in a plane at an angle to said body, securing means for the socket passing transversely through said slots at one end



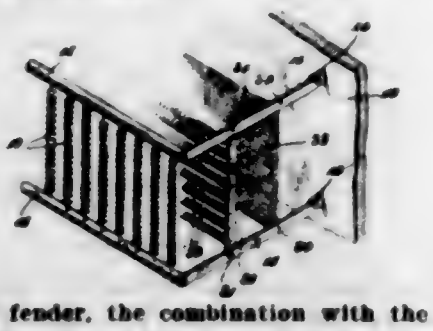
thereof and securing means for the strut end passing transversely of said slots toward the other end thereof.

1,296,668. LIFE-BOAT. JOSEPH KOSTOL, Des Moines, Iowa. Filed Jan. 29, 1918. Serial No. 214,272. 1 Claim. (Cl. 114—68.)



In a buoyant lifesaving boat of the character described, the combination with the hull of a vessel of a plurality of buoyant inflatable floats rigidly secured thereabout at a distance from said hull, of tubular connections between said floats and said hull, adapted to supply an inflating medium to said floats, valves in said tubular connections, cranks on the stems of said valves adapted to be operated automatically when the pressure within said floats rises above a predetermined point and exhaust pipes engaged with said valves, for the exhaust of the surplus of inflating medium, and masts on said boat supporting cables for suspending said floats therefrom.

1,296,669. SHIP-FENDER. PROKOPY KUHARCHEK, Jerome, Pa. Filed July 19, 1918. Serial No. 245,614. 1 Claim. (Cl. 114—240.)



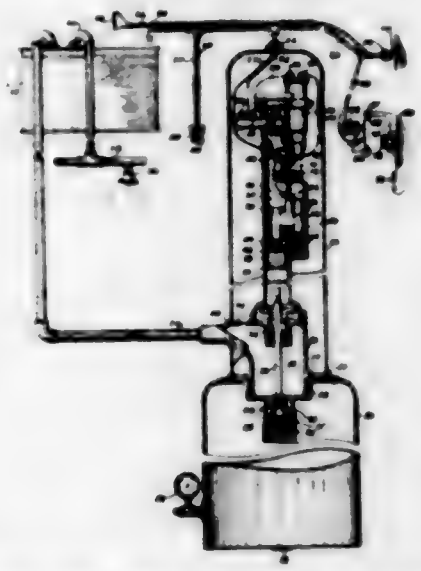
In a ship fender, the combination with the hull of a ship, and a plurality of lugs secured in spaced relation in two rows to the sides of said hull, of link bars pivotally engaged with said lugs, said link bars being adapted to fold in the manner of a hinge, rails pivoted at the extremities of said link bars, winches fixed on the deck of the ship, cables operated by said winches, said cables being connected with the uppermost of said rails whereby they may be raised or lowered, a plurality of coiled springs extended vertically between said rails, vertical bars pivotally secured between said link bars, other coiled springs arranged horizontally and engaged at their ends with said vertical bars, and a meshed net pivotally engaged with said link bars, all of said bars, springs and nets being raised upon the operation of said winches, all substantially shown and described.

1,296,670. COMBINED KITCHEN CABINET AND SINK. FRANK LAVAN, Gorham, Colo. Filed Apr. 4, 1916. Serial No. 88,791. 1 Claim. (Cl. 45—16.)



The combination of a sink, a tank forming a support for the sink and having communication therewith by a valve-controlled opening in the sink, the latter having a horizontal rearwardly extending flange, a cabinet detachably connected with the said flange through the medium of hook-shaped and straight pins adapted to enter recesses formed in the sink flange for the purpose.

1,296,671. FIRE-EXTINGUISHING APPARATUS. DAVID LAWSON, West New Brighton, N. Y. Filed June 27, 1918. Serial No. 242,208. 17 Claims. (Cl. 169—22.)

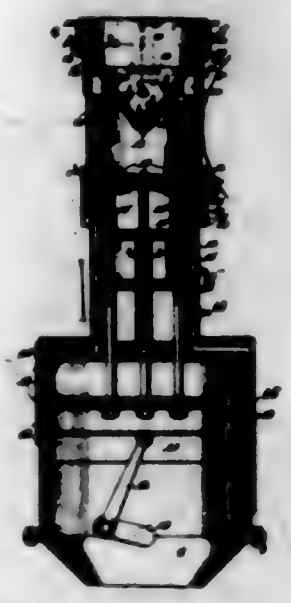


1. The combination with a tank for containing a fluid under pressure dischargeable to expel a fire-extinguishing element, of a pressure seal of plug shape for closing said tank against discharge and dislodgeable by a blow, and means for dislodging by a blow said pressure seal to discharge the tank upon a rise in temperature above a given maximum.

1,296,672. INTERNAL-COMBUSTION ENGINE. FREDERICK H. LEINWEBER, Chicago, Ill.; Curtis H. Leinweber, William H. Leinweber, and Victor H. Leinweber executors of said Frederick H. Leinweber, deceased. Filed Nov. 6, 1916. Serial No. 129,871. 4 Claims. (Cl. 123—75.)

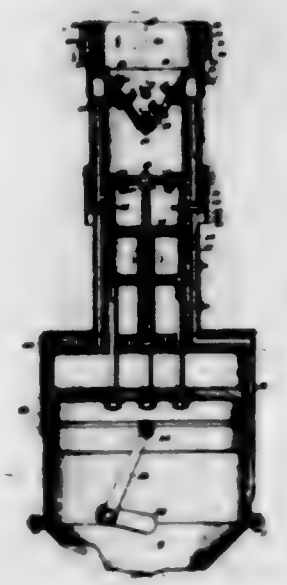
1. The combination with an internal combustion engine cylinder having one or more ports in the walls thereof, of a sleeve valve controlling said ports; yieldable means for normally holding said sleeve in port-closing position; pressure operable means for operating said sleeve to open said port or ports; and means for exhausting said pressure operable means, substantially as described.

4. The combination with an internal combustion engine cylinder having one or more ports in the walls thereof, of a sleeve valve controlling said ports; a spring normally holding said sleeve in port-closing position; an annular cylinder surrounding said engine cylinder; an annular piston operating in said annular cylinder; a port controlled by the piston in the engine cylinder for supplying pressure to said annular cylinder to give initial opening movement to said valve; an annular cylinder located ad-



jacent the ports in the walls of the engine cylinder; an annular piston on said sleeve valve operating in said last mentioned annular cylinder; and passages in said sleeve valve arranged to communicate with said ports after initial movement of said sleeve valve, substantially as described.

1,296,673. EXHAUST-VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FREDERICK H. LEINWEBER, Chicago, Ill.; Curtis H. Leinweber, William H. Leinweber, and Victor H. Leinweber executors of said Frederick H. Leinweber, deceased. Original application filed Nov. 6, 1916, Serial No. 129,871. Divided and this application filed Mar. 6, 1917. Serial No. 152,617. 2 Claims. (Cl. 123—75.)



1. The combination with an internal combustion engine cylinder having one or more ports in the walls thereof, of a sleeve valve controlling said ports; yieldable means for normally holding said sleeve in port-closing position; an annular cylinder surrounding said engine cylinder; an annular piston on said sleeve valve operating in said annular cylinder; a piston-controlled port adapted to admit pressure from said engine cylinder to said annular cylinder; a plurality of piston-controlled ports at different positions in said annular cylinder and arranged to be successively opened by the piston therein; and an adjustable sleeve surrounding said annular cylinder and controlling the port therein, substantially as described.

1,296,674. HOSE AND GARMENT SUPPORTER. JAMES R. LINDSAY, Selma, La. Filed Dec. 16, 1916, Serial No. 137,394. Renewed Dec. 11, 1918. Serial No. 266,900. 1 Claim. (Cl. 24—260.)



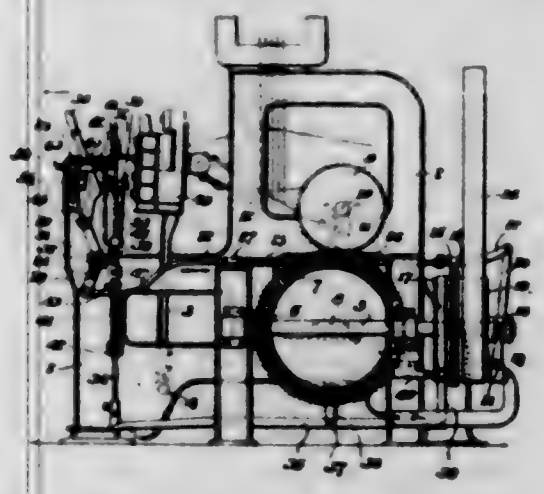
A garment supporter comprising a pair of elongated arcuate jaws, a pair of substantially semi-cylindrical supporting arms, each arm having a series of depressions extending around the semi-cylindrical arm, a ferrule embracing the arm and provided at each end with a roller adapted for reception in the said depressions.

1,296,675. HAND-TRUCK. WILBUR S. LOMBELL, Philadelphia, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 7, 1917. Serial No. 166,893. 1 Claim. (Cl. 214—65.4.)



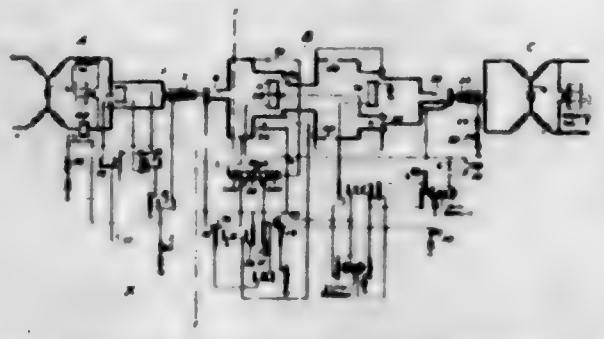
In a hand truck the combination of a lifting tongue at one end of the truck, a rack bar movable endwise of the truck, a screw-device for shifting the rack-bar, a carriage slidable in respect to the rack-bar, and a claw pivoted to the carriage and balanced for automatic engagement with the rack-bar when the truck is in operative position, substantially as described.

1,296,676. PROTECTOR MECHANISM FOR LOOMS. CHARLES J. LONG, Philadelphia, Pa., assignor to Andrew's Mill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 28, 1917. Serial No. 183,217. 8 Claims. (Cl. 139—51.)



1. In a loom, the combination of the frame thereof, a lay, operating means for the lay, a plurality of shuttle boxes carried by the lay and movable into registry with its shuttle race at each end thereof, a member movable to and from a set position, means to hold said member in its set position, means to move said member from its set position when released, a movable part, a spring to move said part, means to hold said part in a set position against the action of its spring, means operated by two shuttles when they are present in boxes which are in registry with the respective ends of said race to automatically release said part from its holding means, said part when released from its holding means operating to release said member from its holding means, and means operated by said member when released to stop the operation of the lay.

1,296,677. TELEPHONE-EXCHANGE SYSTEM. ERIC R. LUNDIUS, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 3, 1918. Serial No. 232,269. 5 Claims. (Cl. 179—43.)



1. A telephone exchange system comprising a trunk circuit extending from a first to a second switchboard, a link circuit at the first switchboard, a source of ringing current, means responsive to the connection of the link circuit with the trunk circuit for connecting a source of ringing current therewith, a link circuit at the second switchboard, a relay responsive to the connection of the second link circuit with the trunk circuit, and a low impedance bridge for the trunk circuit established upon the response of the relay for causing the disconnection of the source of ringing current from the trunk circuit.

2. A telephone exchange system comprising a trunk circuit having normally open talking conductors extending from a first to a second switchboard, a link circuit at the first switchboard, a source of ringing current, means responsive to the connection of the link circuit with the trunk circuit for connecting the source of ringing current therewith, a signal control relay in the trunk circuit responsive to the connection of the link circuit therewith, a link circuit at the second switchboard, means responsive to the connection of the second link circuit with the trunk circuit for connecting the signal control relay in bridge of the talking conductors, means in the first link circuit responsive to the connection of the signal control relay in bridge of the talking conductors for disconnecting the source of ringing current from the trunk circuit, means for thereafter energizing the signal control relay over the talking conductors, and means responsive to the energization of the bridged relay for closing the normally open talking conductors.

3. A telephone exchange system comprising a trunk circuit extending from a first to a second switchboard, a link circuit at the first switchboard, a source of ringing current, means responsive to the connection of the link circuit with the trunk circuit for connecting the source of ringing current therewith, a signaling device at the second switchboard, a relay energized upon the connection of the link circuit with the trunk circuit for operating the signaling device, a link circuit at the second switchboard, a relay operating upon the connection of the second link circuit with the trunk circuit to deënergize and connect the first relay in bridge of the talking conductors, and means in the link circuit responsive to the connection of the first relay in bridge of the talking conductors for disconnecting the source of ringing current from the trunk circuit.

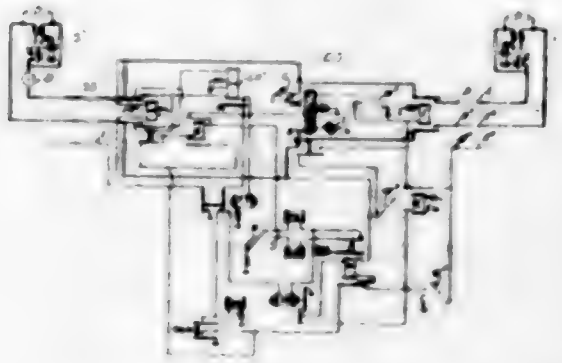
1,296,678. PIPE-PROTECTOR. PETER MCILROY, Allison Park, Pa., assignor to Enameled Metals Company, Sharpsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 23, 1915, Serial No. 3,876. Renewed July 25, 1918. Serial No. 246,783. 3 Claims. (Cl. 91—68.)

1. A thread protector for conduits consisting of a tube formed of relatively stiff absorbent material, the material of said tube being impregnated with rosin.

2. The combination with a conduit having a threaded end, of a protector for said threaded end, comprising a tube for covering the threads of said end, said tube being formed of relatively stiff absorbent material, the material of said tube being impregnated with rosin.

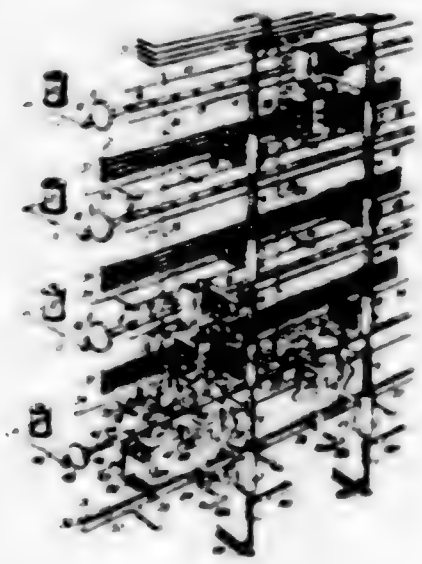
3. The combination with a conduit having a threaded end, of a protector for said threaded end, comprising a tube for covering the threads of said end, said tube being formed of relatively stiff absorbent material, the material of said tube being impregnated with an indurating material.

1,296,679. TELEPHONE SYSTEM. JAMES L. MCQUARRIE, Montclair, N. J., and HENRY P. CLAUSEN, Mount Vernon, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1917. Serial No. 184,028. 5 Claims. (Cl. 179—20.)



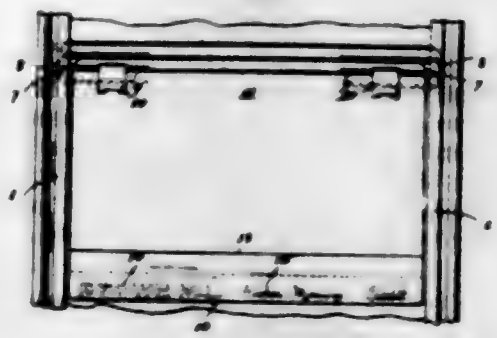
1. In a telephone system, the combination with telephone lines, a call bell associated with each of said lines, switching means for interconnecting said lines and a source of ringing current for actuating said call bells, of a slow-releasing relay having two windings included in said switching means for controlling the application of said ringing current to said lines, a transient circuit including one of said windings for the energization of said relay established upon the seizure of one of said lines as a called line by said means, and a circuit including an interrupter and the other of said windings for the subsequent energization of said relay.

1,296,680. TELEPHONE-EXCHANGE. JAMES L. MCQUARRIE, Montclair, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 26, 1917. Serial No. 203,971. 17 Claims. (Cl. 179—27.5.)



1. In a telephone exchange, a group of switches, a stepping device common to said switches, means for moving said device into position to engage and operate one of said switches, and a release device common to said switches for restoring the same to their normal positions.

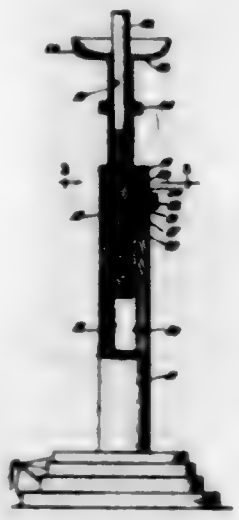
1,296,681. FILING SYSTEM. FRANK L. MACDONAGH, Chicago, Ill., assignor to Acme Card System Company, Chicago, Ill., a Corporation of South Dakota. Filed Apr. 26, 1917. Serial No. 164,500. 2 Claims. (Cl. 129—16.)



1. The combination with a frame member, of a plurality of card carriers mounted therein, a card for each carrier, a sheath removably mounted on the lower edge of each card and comprising a generally U-shaped portion having spring gripping engagement with the lower edge of the card and having a transparent part.

2. The combination with a frame member, having opposite channel portions, of a plurality of wire carriers mounted therein, a card detachably supported from each carrier whereby the lower edges of the overlapping cards are exposed and a transparent sheath detachably mounted on the exposed edge of each of the cards and comprising a narrow substantially U-shaped portion having at one edge an inwardly extending flange.

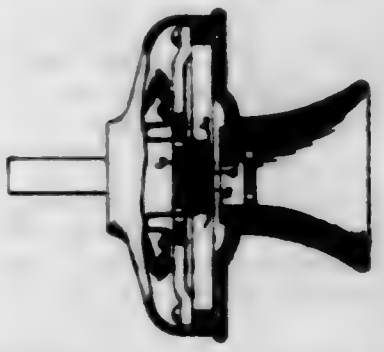
1,296,682. CANDLESTICK. KAZIMIRAS MASILIUNAS, Chicago, Ill. Filed Mar. 25, 1918. Serial No. 224,684. 1 Claim. (Cl. 67—23.)



In a candle-stick, the combination with a base composed of a plurality of superimposed disks, a standard arising therefrom, said standard having a cylindrical longitudinal recess extending therein provided with a rectangular formed part, a threaded and slotted stem slidable freely within said recess, a knurled nut for holding said stem in an adjusted position at the top of said standard, a slotted cup formed with said stem adapted to receive the drippings of a candle, and containing an opening in which said candle may be inserted, a block slidably engaged in an inner recess of said standard, said block being engageable with said screw threaded stem, a screw having a knob engageable with said block, and an

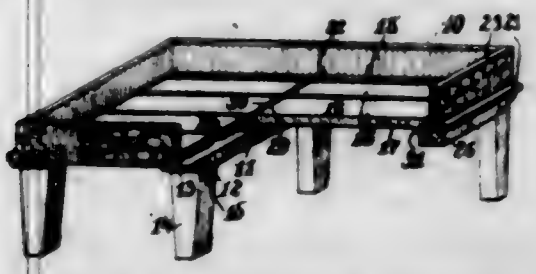
extending head formed with said threaded screw by means of which said block may be moved to or from said threaded stem, and a knurled nut on said stem for keeping the cup from expanding, substantially as described.

1,296,683. TELEPHONE-TRANSMITTER. JOSEPH P. MAXFIELD, Maplewood, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1916. Serial No. 69,947. 10 Claims. (Cl. 179—122.)



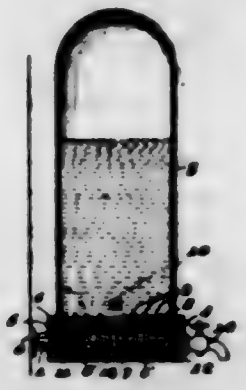
1. A telephone transmitter comprising a chamber containing electrodes and a resistance comprising a granular conducting material between said electrodes, and means for exposing said granules to the direct action of aerial sound waves whereby the value of said resistance is controlled in accordance therewith.

1,296,684. GREENHOUSE-BENCH. FRED J. MEAD, Newark, N. J. Filed July 9, 1917. Serial No. 179,588. 8 Claims. (Cl. 47—27.)



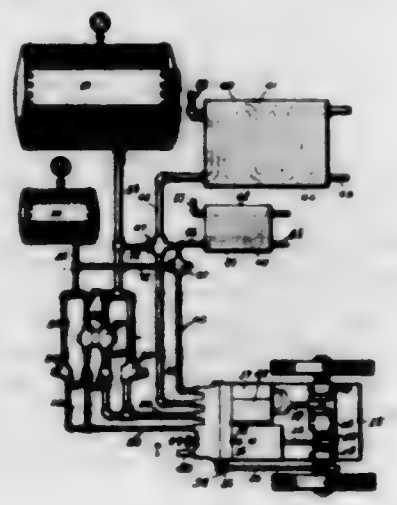
1. A greenhouse bench comprising members of ready molded and hardened concrete, including transversely arranged cross beams, longitudinally arranged floor beams supported on the cross beams, and side wall members having notched inwardly projecting portions and forming a portion of the floor, and a filling of cementitious material on the cross beams adjacent to the side wall members and extending into and filling the notches within the side wall members.

1,296,685. FILTER. GEORGE MOORE, Joplin, Mo. Filed Dec. 11, 1914. Serial No. 876,743. 1 Claim. (Cl. 210—15.)



In a filter, the combination of a container, a supply chamber and a substantially disk-shaped filtering medium interposed between the container and said supply chamber and controlling communication therebetween, the container being arranged for creating and maintaining pneumatic pressure on liquid entering the container from the supply chamber through said filtering medium tending to force said liquid back through the filtering medium, the filtering medium being disposed substantially horizontally at the upper surface of liquid contained in the supply chamber, means for supplying liquid to said supply chamber in a tangentially directed stream, a scrubbing solid of buoyant material arranged in said supply chamber and adapted to be moved in contact with said filtering medium during the inflow of liquid to be filtered, means for controlling delivery of liquid directly from said container, and means for controlling delivery of liquid from said supply chamber adapted when effecting such delivery to relieve pressure in the supply chamber and allow reverse discharge of filtered liquid from the container through the filtering medium, a tangentially disposed outlet passageway in form to communicate with said delivery controlling means for the supply chamber.

1,296,686. INTERNAL-COMBUSTION-ENGINE CONSTRUCTION. ADOLPH ANTON NEFF, Chicago, Ill. Filed May 28, 1915. Serial No. 30,891. 20 Claims. (Cl. 123—69.)



1. An internal combustion engine comprising a working cylinder having separate fuel and air passages opening thereinto, said passages meeting at an acute angle approximately at the point where they enter the cylinder and adapted to direct the fuel and air together as they enter the cylinder; sources of fuel and air supplies connected with said passages; and ignition means adjacent the point where the air and fuel passages meet adapted to ignite the fuel and air at substantially their meeting point.

5. In combination, an internal combustion engine comprising a working cylinder; a piston in the cylinder; sources of air and fuel supplies; means for admitting fuel and air from said sources of supply to the cylinder from a point near the beginning to a point near the end of the working stroke of the piston; and ignition means for igniting the fuel as fed into the cylinder.

13. In combination, an engine cylinder; air and fuel compressors having intake and exhaust ports; connections between said exhaust ports and said cylinder; throttle valves in said connections restricting the flow of fuel and air to the engine cylinder; storage tanks; pipes connecting the storage tanks with said connections adapted to convey parts of the fuel and air from said connections to said storage tanks; a pressure equalizing valve connected in said pipes and adapted to control the flow of air and fuel through said pipes in the direction toward said connections and cause such air and fuel to enter said connections at substantially the same pressures; and valves connected with the intake ports of the compressors and having communications with said pipes adapted to be operated upon by pressures of fluids in the

latter to control the passage of air and fuel to said inlet ports.

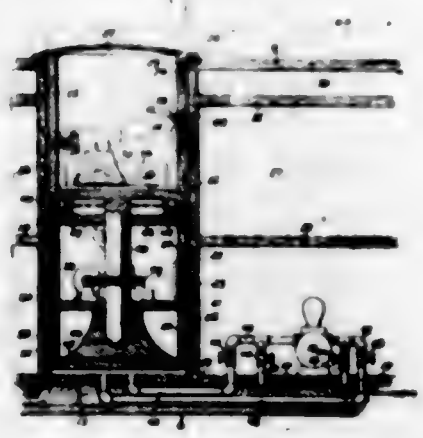
16. In combination, a working cylinder; a piston in the cylinder; independent air and fuel compressors connected with the cylinder and adapted to deliver air and fuel separately to said cylinder during the full working stroke of the piston; and means associated with the compressors for maintaining the air and fuel cool during compression.

1,296,687. MEANS FOR SIGNALING FROM CAPTIVE BALLOONS. HAROLD W. NICHOLS, Maplewood, N. J., assignor to Western Electric Company, Incoporated, New York, N. Y., a Corporation of New York. Filed Feb. 16, 1917. Serial No. 148,998. 6 Claims. (Cl. 179—1.)



1. An electric conductor having only one end grounded, means having appreciable capacity to ground at the ungrounded end of said conductor, and electric circuit comprising said conductor and said capacity means, means for signaling over said circuit comprising a source of electrical energy near the grounded end of said conductor, means at the ungrounded end for varying the power from said source in accordance with the signals to be transmitted, and means at the grounded end for detecting said variations.

1,296,688. SUBMARINE GUN-TURRET. ROBERT S. NOAH, Annapolis, Md., assignor to Henry B. Reinhardt, trustee, Roland Park, Md. Filed Dec. 13, 1916. Serial No. 136,791. 3 Claims. (Cl. 114—6.)

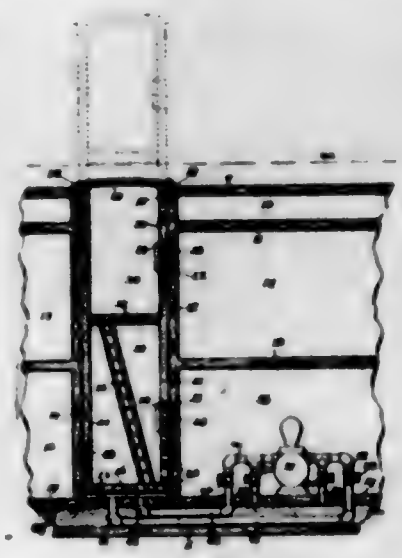


1. In a submarine vessel, the combination of a hull; a cylinder having fixed position vertically within the hull; a piston having a vertical reciprocating movement, and provided with a step-bearing; a gun-support movable in the cylinder and having a leg which sets in said step-bearing; and means carried by the vertically-moving piston to impart revoluble movement to said gun-support.

2. In a submarine vessel, the combination of a hull; a cylinder having fixed position vertically within the hull; a piston having a vertical reciprocating movement and provided with a step-bearing; a gun-support movable in the cylinder and having a leg which sets in said step-bearing; and means carried by the piston and connected with the said leg for revolving the gun-support.

3. In a submarine vessel, the combination of a hull; a cylinder having fixed position vertically within the hull; a piston having a vertical reciprocating movement within the lower part of said fixed cylinder; a gun-turret having circular inclosing walls and carried upon the said piston and fitting so as to move both vertically and revolubly within the upper part of said fixed cylinder, whereby the circular gun-turret may be elevated above the hull and deck and then revolved, and also lowered below the deck and concealed in the fixed cylinder.

1,296,689. DISAPPEARING TOWER FOR SUBMARINES. ROBERT S. NOAH, Annapolis, Md., assignor to Henry B. Reinhardt, trustee, Roland Park, Md. Filed Dec. 13, 1916. Serial No. 136,792. 1 Claim. (Cl. 114—16.)

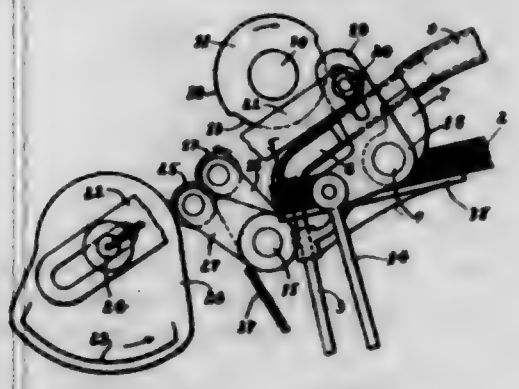


A submarine vessel having a hull provided with an inclosed uppermost deck, an inclosed lowermost deck, and an inclosed intermediate deck which form lower and upper compartments; a hollow vertical cylinder in fixed position and extending from the lowermost deck up through the intermediate deck and with its upper open end of the cylinder flush with the top surface of the upper deck—the walls of this cylinder being provided with a door-opening communicating into said lower compartment and a second door-opening communicating into said upper compartment; and a hollow cylindric tower movable like a piston within said fixed cylinder and the walls of the movable tower having two door-openings and doors which are positioned relatively to the said two door-openings in the fixed cylinder so as to coincide with the latter when the movable tower has its disappeared position, and when the movable tower has its elevated position one of its said door-openings will coincide with the door-opening in the fixed cylinder that communicates with said upper compartment while the other door-opening of the tower at the same time will be above the upper deck and exposed to the atmosphere.

1,296,690. BLANK-FEEDING MECHANISM. ABRAHAM NOVICK, New York, N. Y., assignor to F. L. Schmidt Company, New York, N. Y., a Corporation of New York. Filed Nov. 21, 1917. Serial No. 203,136. 9 Claims. (Cl. 271—27.)

1. A blank feeding mechanism including in combination, means for supporting and guiding a pile of blanks, a pair of feed rolls one of which is mounted on a fixed axis and is intermittently operable and the other of which is mounted on a movable axis, means for moving said movable
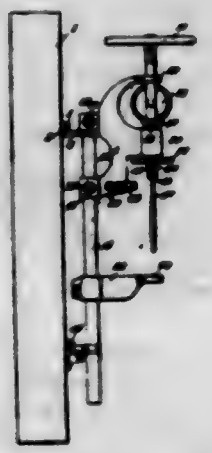
axis roll into coacting relation with said fixed axis roll, during the operable period of said fixed axis roll, means for lifting the leading end of the upper blank into engageable relation with said fixed axis roll while said movable axis roll is out of coacting relation with said fixed axis roll, and means for rotating said feed rolls in opposite directions, respectively, at the same peripheral speed.



4. A blank feeding mechanism including in combination, means for supporting and guiding a pile of blanks, an upper feed roll means for lifting the leading end of the upper blank into engageable relation with said upper feed roll, a lower feed roll mounted for movement into and out of the path of the leading end of said blank from the pile to its lifted position, means for moving said lower feed roll into coacting relation with said upper feed roll after said blank has been lifted, said upper feed roll having a segmental periphery adapted for coaction with said lower feed roll when that lower roll is moved into said path of the leading end of the blank, means for rotating said feed rolls in opposite directions, respectively, at the same peripheral speed, and means for timing the movement of said lower roll with the leading end of the segmental periphery of said upper roll.

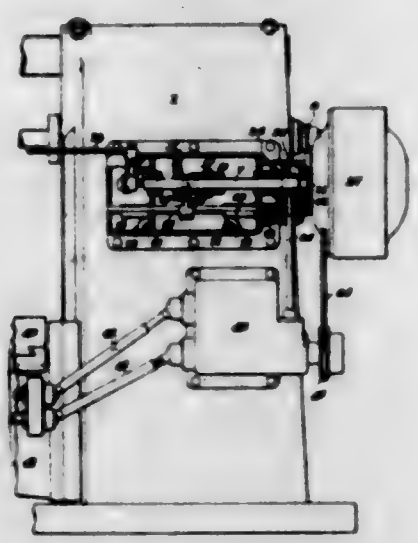
8. A blank feeding mechanism including in combination, means for supporting and guiding a pile of blanks, an upper intermittently acting feed roll, means for lifting the leading end of the upper blank into engageable relation with said upper roll, a lower feed roll mounted for movement into and out of the path of the leading end of said blank from the pile to its lifted position, means for moving said lower roll into coacting relation with said upper roll after said blank has been lifted, means for rotating said feed rolls at the same peripheral speed but in opposite directions, respectively, during their coaction, and means for timing the movement of said lower roll with the intermittent action of said upper roll.

1,296,691. COMBINATION POST-DRILL AND PORTABLE HAND-DRILL. OSMOND A. OSMONDSON, Salina, Kans. Filed June 25, 1917. Serial No. 176,862. 3 Claims. (Cl. 77—20.)



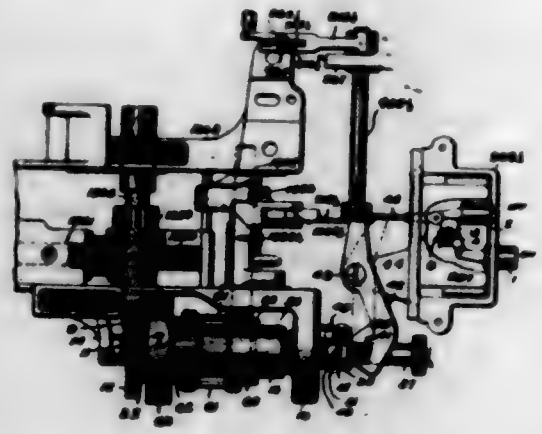
1. A device of the class described comprising spaced brackets having slots; a bar received in the slot of one bracket, a frame including a socket receiving the bar, the socket being received in the slot of the other bracket, the socket and said other bracket having coacting elements limiting the endwise movement of the bar with respect to the brackets; a drilling mechanism carried by the frame; and a work table carried by the bar and coacting with the drilling mechanism.

1,296,692. LUBRICATING SYSTEM FOR MILLING-MACHINES. FRED A. PARSONS, Milwaukee, Wis., assignor to The Kempsmith Manufacturing Co., West Allis, Wis., a Corporation of Wisconsin. Filed July 31, 1916. Serial No. 112,207. 5 Claims. (Cl. 90—18.)



1. In a milling machine the combination of a hollow column having a transverse partition forming with the walls of the column an oil receptacle in the upper part thereof, a work table movable mounted on the column, a tool spindle and a spindle driving gear train housed in the column above said partition, the lower gears of the train adapted to elevate oil from said receptacle to other parts of the gear train, a driving member connected with said gear train, and a secondary gear train for operating the work table connected with the driving member above the oil receptacle and extending below the same outside of the column.

1,296,693. CALCULATING-MACHINE. ARTHUR PENTECOST, East Orange, N. J., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Feb. 28, 1916. Serial No. 80,905. 54 Claims. (Cl. 172—239.)



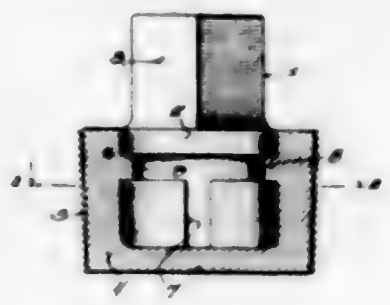
1. The combination with a motor; and a power controller to switch the power on and off relatively to the motor; of a motor-driven progressively-acting clutch mechanism to actuate the controller, the operation of said clutch mechanism being effected by the resistance offered by the controller; and means to disconnect the clutch mechanism from the motor at will, to enable the clutch mechanism to restore to its initial condition.

1,296,694. HYDROMETER-SYRINGE. ROBERT M. PIERSON, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1918. Serial No. 266,209. 2 Claims. (Cl. 265—45.)



1. A hydrometer syringe comprising a tubular glass member adapted to act as a sight chamber and having a relatively-long portion for housing the float when the syringe is empty, a compressible bulb at the upper end of said member, and a soft-rubber nozzle member formed with a nozzle and a socket above said nozzle which incases and protects said float-housing portion of the glass member for substantially the entire length of the latter and forms an elongated sealed joint therewith.

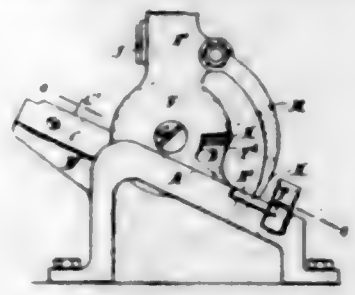
1,296,695. COMPOSITE METAL PLUG. ORTON L. PRIMM, Milwaukee, Wis. Filed June 19, 1918. Serial No. 240,819. 1 Claim. (Cl. 220—124.)



A composite metal screw plug comprising a body member and a wrench head extending therefrom and a cup-shaped shell of relatively non-corrosive metal cast upon the body of the plug and covering the peripheral face of the body and the end face thereof remote from the wrench head, said shell being provided with screw threads in its periphery whereby upon threaded engagement of the plug in a recess, a continuous expanse of shell material is presented, the shell and body being formed with interlocking rib and recess portions.

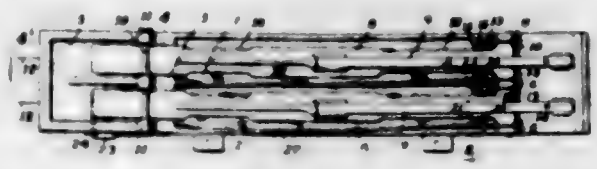
1,296,696. MACHINE FOR USE IN MAKING WIRE STAPLES. FREDERICK WILLIAM RASMUSSEN, Mangarama, New Zealand. Filed Aug. 14, 1918. Serial No. 249,843. 4 Claims. (Cl. 59—75.)

1. A machine for use in making wire staples, formed by a flat table having a flange extending upward on one edge, the inner face of which extends at right angles to the table surface, an aperture made in such flange and extending at an acute angle to the line of its surface in from one end of the flange and out through the inner face thereof in a line with the table's surface, a slot formed across the table top beyond the exit of the said aperture, a disk plate mounted against the inner face of the flange to turn on a central axial pin and provided with a radially disposed knife blade that passes across the aperture exit of the flange when the disk is turned,



a handle lever attached to such disk and a forked claw pivoted upon such handle lever and passing downward through the slot in the table top, substantially as specified.

1,296,697. LOOM. ARTHUR F. RAYMOND, ALPHONSE MATHIEU, and CYRIL LAVALLE, Webster, Mass. Filed Mar. 19, 1917. Serial No. 155,915. 10 Claims. (Cl. 139—54.)



1. In a loom, means for clamping the weft thread at the open end of the shuttle box, and means, located at the closed end of the shuttle box and actuated by the shuttle, for operating said clamping means, said operating means extending into the path of the shuttle.

5. In a loom, the combination with a shuttle box and traveling shuttle, of means for clamping the shuttle thread at one end of said box, and actuated by the shuttle upon its arrival at the other end of said box.

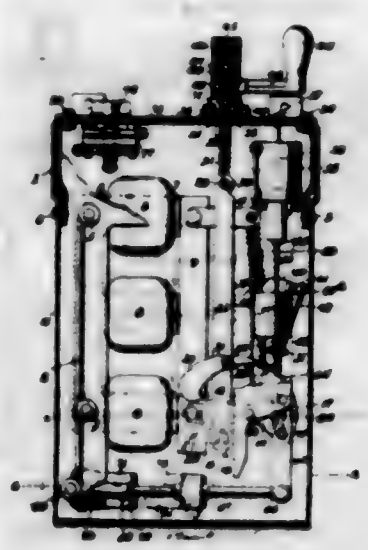
7. In a loom, the combination with the shuttle box, of means for clamping the weft thread at the open end of the box, means at the opposite or closed end of the shuttle box for actuating said clamping means, comprising a swinging lever in the path of the shuttle and a spring for reversing said lever and the clamping means as the shuttle begins its return movement.

9. In a loom, means for clamping the weft thread at the open end of the shuttle box, means located at the opposite or closed end of the shuttle box and in the path of the shuttle for actuating said clamping means, said actuating means comprising a pivoted swinging lever, a rack carried by said lever and curved concentrically with the pivot of the lever, a rocking shaft operatively connected with the clamping means, a pinion carried by said rocking shaft in engagement with said curved rack, and a spring for reversing said swinging lever as the shuttle leaves the shuttle box.

1,296,698. MANUALLY-OPERABLE CONTROLLING DEVICE FOR ELECTRIC MOTORS. CLEVELAND REDFIELD, Ogden, Utah, assignor to Automatic Controller and Manufacturing Company, a Corporation of Utah. Filed Aug. 10, 1916. Serial No. 114,239. 15 Claims. (Cl. 172—179.)

1. In a controlling device for alternating current electric motors, inductance means for controlling the flow of current to the motor, and manually operable means movable to introduce a gap in the magnetic circuit of the inductance means with the gap first widening slowly and then with progressively increasing rapidity at substantially constant speed of operation of the manual means, said manually operable means including means for introducing into its operation a prolonged time element.

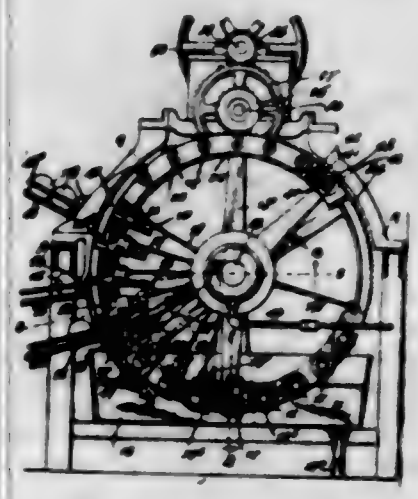
whereby a variation of the magnetic gap may be made to approximately correspond to the demand of the motor in starting and attaining speed or vice versa.



2. In a controlling device for alternating current electric motors, inductance means for controlling the flow of current to the motor, and means whereby the magnetic reluctance of the magnetic circuit of the inductance means may be varied at a rate and to an extent corresponding to the demand of the motor for voltage in starting and attaining speed, said second named means including manually operable means for actuating the second named means and having a range of travel to introduce a prolonged time element into the operation.

11. A controlling device for alternating electric currents having electromagnetic means with movable means for varying the magnetic reluctance thereof, and means for actuating the movable means for varying the magnetic reluctance comprising a long pitch screw, a nut engaging the screw, a manually operable member, and means for coupling the manually operable member at will to the part to be actuated thereby.

1,296,699. APPARATUS FOR DETECTING LEAKS IN CONTAINERS. JAMES ROGERS, Dixon, Ill., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed July 9, 1918. Serial No. 244,130. 5 Claims. (Cl. 73—51.)



1. In an apparatus for detecting leaks in containers, a container-holder comprising a pneumatic head, stationary relatively to the container, and having a compressible-resilient operative surface, or gasket, disposed and proportioned to continuously air-tightly join with the top of the container intermediate its periphery and its opening; a supplemental head reciprocatable in parallelism with the central longitudinal axes of the container and of said first mentioned head, and having its operative surface normally disposed to contact with the top of the container in advance of said sealing head; resilient means to yieldingly impel said supplemental head toward, and to restore it to, its said normal disposition; a clamping head reciprocatable in parallelism with said supplemental head, and disposed oppositely thereto; and means to force said clamping head toward said pneumatic head until an interposed container is clamped between the two heads and thereafter to return said clamping head to its original position.

1,296,700. PRIMARY BATTERY. OTTO E. RUHOFF, Madison, Wis., assignor to French Battery & Carbon Co., Madison, Wis., a Corporation of Wisconsin. Filed June 9, 1917. Serial No. 173,680. 6 Claims. (Cl. 204—38.)

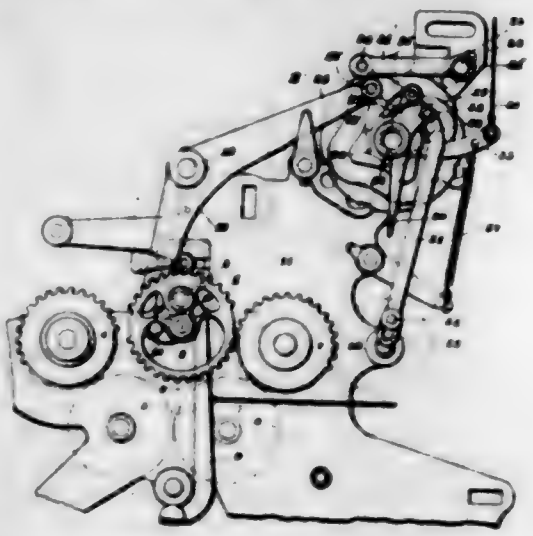
6. A depolarizing mixture for electrical batteries containing deflocculated conductive material and some other form of carbonaceous material, the deflocculated material being about twenty per cent. of total carbonaceous material.

1,296,701. ARTIFICIAL BAIT. SUIKEI SAKAUE, East San Pedro, Cal. Filed June 13, 1918. Serial No. 239,814. 1 Claim. (Cl. 43—30.)



In a fish bait of the class described, a hollow body having the appearance of a small fish and having a longitudinal slot in the top side, a hook having an engaging member slidingly disposed in the slot for longitudinal movement so as to allow the hook to rest with its larger part within the slot slightly clamped between the sides of the body in such resting position adapted to disengage from this resting position to beyond the rear end of the tail end of the device with only the engaging member of the hook remaining within the slot.

1,296,702. LOOM. OTTO W. SCHAUM, Philadelphia, Pa., assignor to Fletcher Works, Incorporated, a Corporation of Pennsylvania. Filed Apr. 13, 1916. Serial No. 90,803. 10 Claims. (Cl. 139—28.)



4. A loom having a change-motion mechanism and an indicator mechanism, said indicator mechanism comprising an intermittently-movable member, continuously operating means for moving said member, and a pattern-controlled device for rendering the continuously-operating means functionally operative or inoperative as desired, the continuously-operating means for moving said element comprising a continuously rotating crank, a link which has an elongated slot in which the crank-pin of

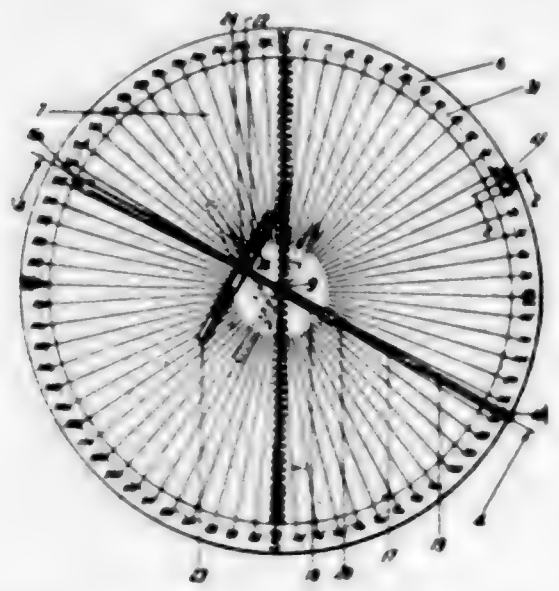
said crank enters, a carrier and pawl mounted thereupon, to which carrier the link is also connected, and a handle whereby the carrier and pawl thereupon together with the link can be moved a relative distance so that the slotted portion of the link will move relative to the crank-pin whereby the cam can be moved by hand a limited distance independent of the mechanism which normally actuates the link.

1,296,703. DEVICE FOR LOCKING REGISTER-FRAMES IN STACK-HEAD OPENINGS. ALBERT G. SCHEERER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed July 16, 1915. Serial No. 40,168. 1 Claim. (Cl. 98—54.)



A device for adjustably securing a register frame to a hot-air stack-head comprising a bracket of angular section slightly elongated and provided with means for securing one flange thereof to a register frame and the other flange thereof being provided with an open-ended slot parallel with the edge of the dihedral angle formed by said flanges and adapted to receive the shank of a member to secure said flange to the stack-head whereby when said bracket has been secured to the register frame it may be moved longitudinally while said stack-head securing means is in said slot.

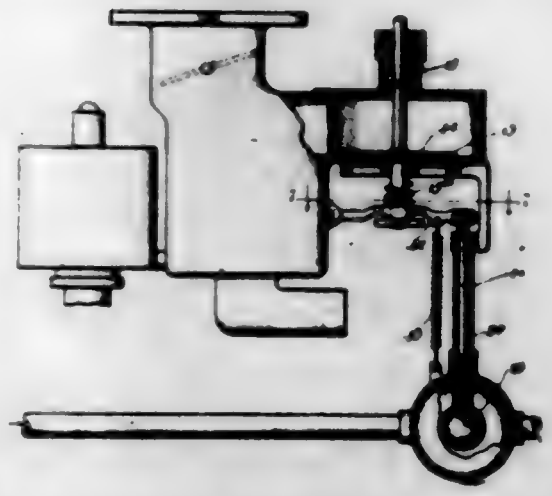
1,296,704. AERIAL-NAVIGATION PROTRACTOR. ROBERT H. SAYRE, Central City, Colo. Filed Feb. 8, 1918. Serial No. 216,074. 14 Claims. (Cl. 33—75.)



1. An aerial navigation protractor comprising a graduated ring, a disk having a distinctive graduated line, the disk and ring being mounted to permit one to move while the other remains stationary, a bar movable about the axis of the disk as a center, a slide movable longitudinally on the bar and graduated in terms of the graduated line on the disk, and an arrow having jointed connection with the slide and graduated with reference to the graduations of the slide and the distinctive line of the disk.

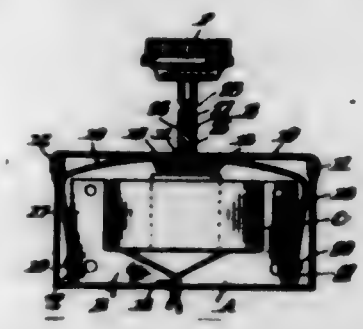
1,296,705. AUTOMATIC-ADJUSTING CARBURETER. JAMES HARRY SERR, Chicago, Ill. Filed Dec. 4, 1912. Serial No. 734,992. 9 Claims. (Cl. 123—119.)

8. In a device of the character set forth, the combination of a mixing duct, a liquid fuel jet nozzle arranged to discharge in said duct, means for supplying air to said duct, and thermostatic means operative through engine temperature and adapted to increase the



supply of air relative to the liquid fuel supplied to the mixing duct, as such temperature increases.

1,296,706. ELECTRICAL VIBRATOR. CHARLES ALPHA NUGENT SHEPPARD, Ottawa, Ontario, Canada. Filed Oct. 7, 1918. Serial No. 257,252. 3 Claims. (Cl. 128—52.)



1. In combination, a vibrating element including a laminated horse shoe magnet, a leaf spring of substantially inverted U-shape having its extremities secured to the outer surface of the arms on the horse shoe magnet, a contact element supported by the leaf spring and electrical means for effecting the vibrating action substantially as described.

1,296,707. EYE-CUP FOR GOGGLES. HARRY F. SHINDEL, Reading, Pa., assignor to T. A. Willson & Co., Inc., Reading, Pa., a Corporation of Pennsylvania. Filed May 6, 1918. Serial No. 232,855. 7 Claims. (Cl. 2—149.)

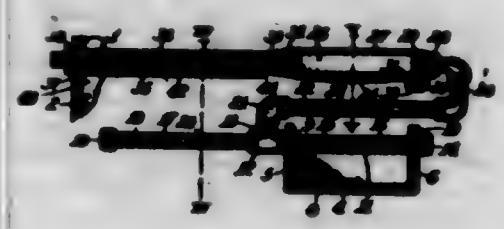


1. In combination with a lens, an eye cup comprising a folded sheet-material framing formed with a lens-engaging circumferential edge and outwardly turned clamping ends, and a clamping sheath in slidable engagement with said outwardly turned ends.

1,296,708. OIL-BURNER. FRANKLIN P. SPANGLER, Indianapolis, Ind. Filed Apr. 1, 1918. Serial No. 226,094. 5 Claims. (Cl. 158—63.)

1. An oil-burner including a generator comprising a side wall, a bottom connected to the side wall and having a convex under side, and a top connected to the side wall, one portion of the side wall being provided with a projecting supply-port boss, the opposite portion of the wall being provided with a projecting dual outlet-port boss.

2. An oil-burner including two burner-pipes, a superheater-pipe arranged above one and connected with both of the burner-pipes, a generator arranged above and con-



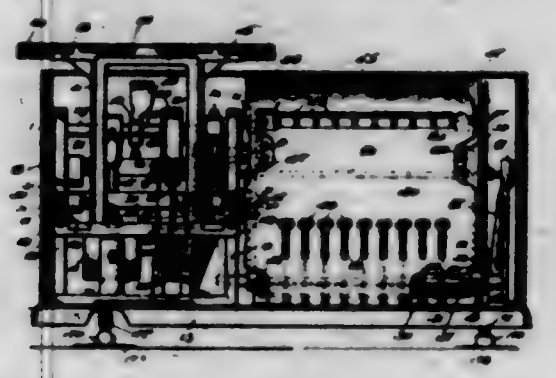
nected with the superheater-pipe, and a supply-pipe arranged above the remaining one of the burner-pipes and connected with the generator.

1,296,709. HYDROCARBON-BURNER. MARCUS C. SVANSA, Duluth, Minn. Filed Sept. 6, 1917. Serial No. 190,039. 4 Claims. (Cl. 158—75.)



1. In a hydro-carbon burner, the combination of fluid and hydro-carbon conveying conduits, the latter being wholly within the former, said conduits forming a relatively narrow opening for the passage of high pressure fluid, the opening of the hydro-carbon conveying conduit being unobstructed and such as to permit the high pressure fluid to draw the hydro-carbon from its conduit by suction, the openings of the conduits being arranged in a manner such that the hydro-carbon is sliced off by the high pressure fluid.

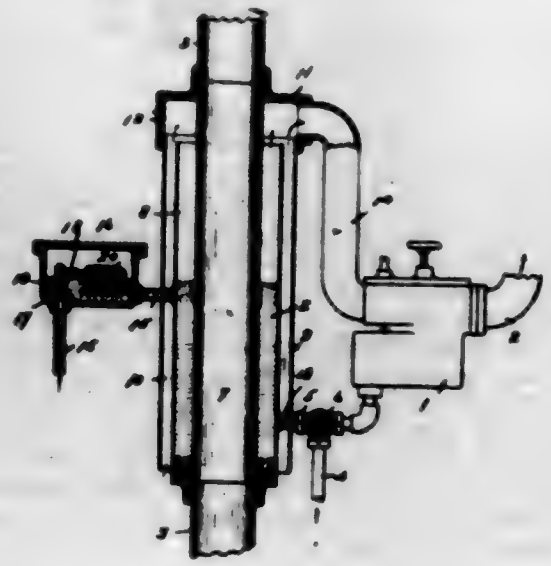
1,296,710. PARCEL-POST SCALE. GORDON L. STRUBLE, Chicago, Ill., assignor of ninety-nine one-hundredths to Parcel Post Scale Co., Logansport, Ind., a Corporation of Indiana. Filed Aug. 11, 1917. Serial No. 185,864. 34 Claims. (Cl. 265—37.)



1. In a scale, a stand, a scale lever fulcrumed on the stand, a weight indicating element provided with a pinion, a shaft rotatively mounted in the stand and provided with a gear sector meshing with said pinion, an eccentric mounted on said shaft, a strap for connecting the eccentric to said lever, a load counterpoise pendulum suspended from said shaft, and a multiple arm balancing weight carried with the shaft for balancing said gear sector and eccentric independently of the pendulum, in all angular positions of the shaft.

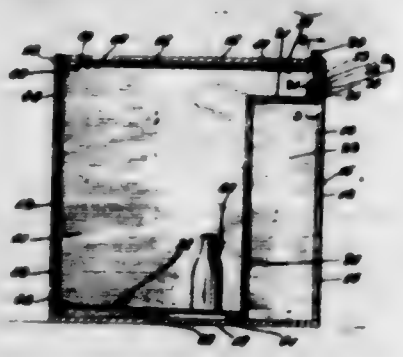
1,296,711. CARBURETING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. JOHN E. SYKORA, Windom, Minn. Filed Feb. 16, 1917. Serial No. 149,009. 6 Claims. (Cl. 123—127.)

1. The combination with the carbureter and exhaust pipe of an internal combustion engine, of a heavy hydro-carbon oil container surrounding the exhaust pipe, a mixing chamber also surrounding the exhaust pipe and into which the container opens, an air supply conduit leading to the mixing chamber, a vapor conduit leading from the mixing chamber to the carbureter, a liquid fuel intake pipe leading from the container, a light hydro-carbon oil supply pipe, and means for connecting either said intake pipe or supply pipe to the carbureter, at will.



6. The combination with the carbureter and exhaust pipe of an internal combustion engine, of inner and outer jackets surrounding the exhaust pipe, said two jackets being closed at opposite ends, the closed end of the outer jacket being extended outward of the open end of the inner jacket to afford a mixing chamber, said inner and outer jackets being spaced apart from each other and the latter from the exhaust pipe to afford therebetween a heavy hydro-carbon oil container and an air intake conduit, respectively, a vapor conduit leading from the mixing chamber to the carbureter, a liquid fuel intake pipe leading from the container, a light hydro-carbon oil supply pipe, and means for connecting either said intake pipe or supply pipe to the carbureter, at will.

1,296,712. COMBINATION MILK AND LETTER BOX. FRANK SZANISZLO, Cleveland, Ohio. Filed Oct. 5, 1918. Serial No. 256,957. 3 Claims. (Cl. 232—1.)



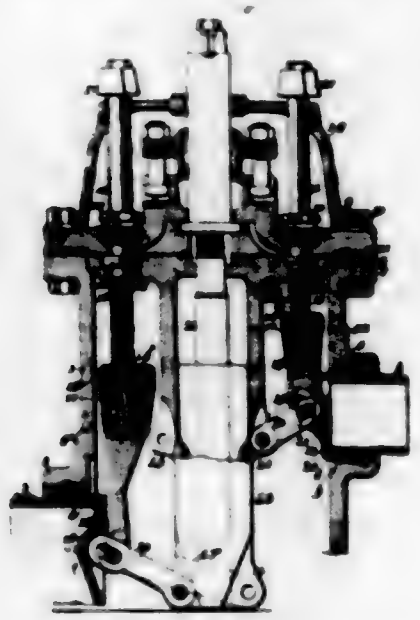
1. In a device of the class described, the combination with a hollow rectangular container, partitions, forming two compartments therein, means for entering articles into the smaller of said compartments, side door on said smaller compartment, a lock arranged thereon, a lever hingedly engaged in the main compartment of said container, a vertical rod operated by the action of said lever, a cover hinged over said container, a rod slidably engaged at the lower side of said cover, operative connections between said rods when said cover is in a lowered position, and means for normally retaining said cover when in a closed position until said side door is opened.

1,296,713. URINAL FOR FEMALES. EMMA PAULINE THIBRIGGE, New York, N. Y. Filed Apr. 5, 1916. Serial No. 89,192. 2 Claims. (Cl. 4—19.)



1. A urinal for females, comprising a flat plate tapering both forwardly and rearwardly, a continuous upright wall along the perimeter of said plate, a member projecting inwardly from the upper edge of said wall at the forward portion thereof, and a flange projecting inwardly from the upper portion of said wall at the rear portion thereof and of substantially uniform width, less than half the width of the tapering forward portion of the bottom plate thus leaving a longitudinal slot between the inner edge portions of said flange, the forward ends of said flange being spaced from the rear edge of said member, and located on the rearwardly-tapering portion of the urinal, rearwardly of the widest part of the bottom plate, to provide two lateral outlets oblique with reference to the longitudinal axis of the urinal.

1,296,714. FIRE-HYDRANT. ROBERT HARRY THORNE and FRANK JAMES MILLER, Williamsport, Pa. Filed Aug. 13, 1918. Serial No. 249,722. 11 Claims. (Cl. 137—13.)

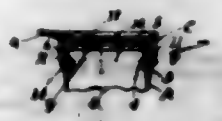


1. In a fire hydrant, a stand pipe having a recess depressed in the wall of the bore, a thickened portion on the outside compensating for the recess and providing an even thickness of wall, said thickened portion having a nozzle opening, and a nozzle in said opening, having a flange forming a valve seat, occupying said recess, said valve seat being flush with the wall of the bore and enabling the maintenance of an unrestricted passage through the stand pipe.

1,296,715. REFRACTORY ARTICLE. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Sept. 27, 1918. Serial No. 255,978. 5 Claims. (Cl. 106—10.)

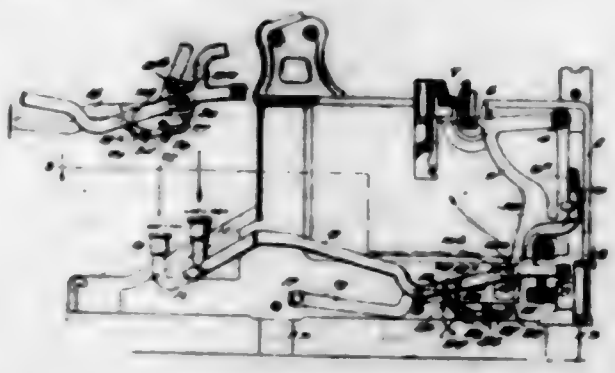
2. A refractory article containing fire-clay, grog and crystalline carborundum, the corborundum being of a grit, the major portion of which is substantially coarser than No. 60 and constituting less than 60% of the entire mix.

1,296,716. CLOSURE FOR CONTAINERS. WILLIAM J. TOWLE, St. Paul, Minn. Filed Apr. 2, 1917. Serial No. 159,140. 8 Claims. (Cl. 221—11.)



1. A closure of the class described comprising in combination, a neck and a cap fitted thereto and forming a normally complete closure for said neck, a second cap rotatably supported over said first cap and neck, both caps being permanently secured to the neck, said second cap being provided with an opening exposing a portion of said inner cap, and permitting the same to be cut away to form registering openings for the purpose set forth.

1,296,717. SHIFT MECHANISM FOR TYPE-WRITERS. MAURICE N. TRONE, Hanover, Pa. Filed Nov. 20, 1914, Serial No. 873,153. Renewed Sept. 3, 1918. Serial No. 252,466. 4 Claims. (Cl. 197—90.)



1. A typewriter having a movable platen carrier, a temporary shift key lever at each side of the key bank, a permanent shift lock key lever, means actuated by said last named lever for shifting the platen carrier independently of the temporary shift key levers, means for retaining the locking key lever in depressed position, and means actuated by each of said temporary shift key levers for releasing the shift lock key lever.

4. In a typewriter, a movable platen carrier, means for locking said movable platen carrier in its upper and lower positions, a pair of temporary shift key levers, means actuated by either of said levers for unlocking the movable carrier in its lower position and for simultaneously moving said carrier to its upper position, a shift lock key lever, means connecting said shift lock key lever with said platen carrier locking mechanism for moving the latter to unlock the movable carrier in its lower position and to simultaneously shift said movable carrier to its upper position independently of said temporary shift key levers, means for locking the shift lock key lever in its depressed position, and means actuated by either of said temporary shift key levers for releasing the shift lock key lever.

1,296,718. KEY-RING. HARRY LOCKWOOD VAUGHAN, Chicago, Ill. Filed Dec. 10, 1917. Serial No. 206,419. 4 Claims. (Cl. 59—97.)



1. A locking member for detachably connecting together the ends of a key supporting chain, said member being in

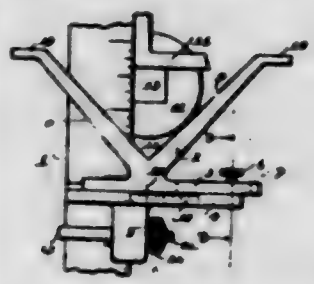
the form of a flat link comprising sides permanently connected together at one end to receive one end link of the chain and the other ends being semi-circular and in registering overlapping engagement to be spread apart to receive the other end link of the chain, and ears on the outside of said semi-circular ends to be engaged by said end link to separate said semi-circular ends to permit insertion of said end link.

1,290,719. BRUSH. MAX VERCK, La Fayette, Pa. Filed Sept. 5, 1918. Serial No. 252,680. 3 Claims. (Cl. 15—87.)



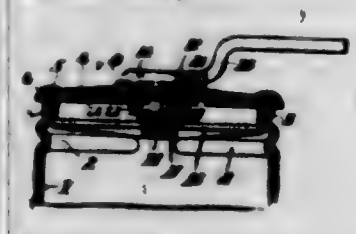
1. A brush having a stem formed of twisted wires in combination with a coiled wire twisted into a spiral brush and held between the wires of the stem, and a layer of bristle like material also twisted into a spiral form and held between the twisted wires of the stem.

1,290,720. MECHANIC'S GAGE. ABRAHAM VERWYS, Grand Rapids, Mich. Filed June 3, 1918. Serial No. 237,989. 5 Claims. (Cl. 33—95.)



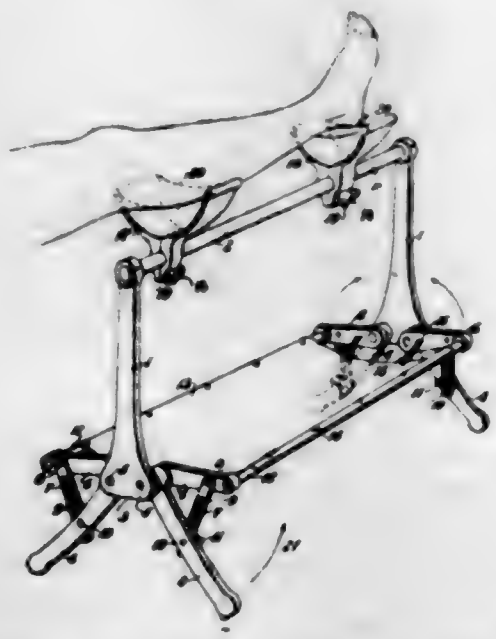
1. In a device of the character described; a rule; a work-holder extending on both sides of the rule and movable transversely to the rule; and means for securing the rule and the work-holder interrelatively; the work-holder being adapted to permit the rotation of the work on its axis, and the rule being in usable relation to the face of the work transverse to its axis.

1,296,721. METAL BARREL. CHARLES VOLTZ, New York, N. Y., assignor of one-half to Samuel B. Cochrane, Brooklyn, N. Y. Filed Aug. 14, 1917. Serial No. 186,157. 2 Claims. (Cl. 220—124.)



1. The combination with a container having sectional ribs near its mouth, of a continuous encircling abutment arranged at the mouth of the container and spaced from the sectional ribs, a locking bar adapted to span the interior of the container and engage the abutment after being passed between said sectional ribs, a cover, and means carried by said bar for locking the cover in place.

1,296,722. LEG-REST. CHESTER A. WASHBURN, Springfield, Mass. Filed Apr. 13, 1918. Serial No. 228,483. 5 Claims. (Cl. 128—82.)



1. A device of the character described, comprising, in combination with a pair of standards, a bar connecting their upper ends, stirrups adjustably secured to said bar for supporting the limb of the patient, supporting legs pivotally secured to the standards, means for adjustably securing the legs to the standards for varying the height of the stirrups from the floor, arms pivotally secured to the standards, rods connecting the outer ends of the arms, an apron attached to the rods, and means for supporting the apron in its extended position.

2. A device of the kind described, comprising in combination with suitable standards, legs pivotally secured to the lower ends of the standards, a bar connecting the upper ends of the standards, stirrups adjustably secured to the bar, means for supporting an apron below the stirrups, said means comprising arms pivotally secured to the standard and interconnecting devices between the legs and the arms for causing the arms to automatically fold inward toward the standard when the legs are folded, and means for securing the arms and legs in different positions of adjustment.

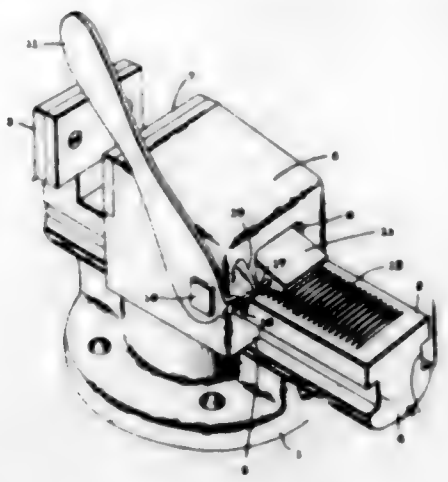
4. A device of the kind described, comprising, in combination, a pair of standards, legs pivotally attached thereto, arms pivotally connected to the standards, the arms and legs being connected together for operating one from the other, an apron secured to the arms, means for securing the arms and legs in their adjusted positions, means for supporting a plurality of leg supporting stirrups above the apron, as described.

5. A device of the kind described comprising end standards, a rod connecting the same, stirrups on the rod, supporting legs for the standards, an apron, means for attaching the apron to the standards comprising adjustable arms, and rods connecting the arms to which the side edges of the apron are secured, and means for attaching the ends of the apron to the arms, as described.

1,296,723. BENCH-VISE. MILTON E. WINANS, Newark, N. J. Filed Dec. 26, 1917. Serial No. 208,815. 9 Claims. (Cl. 81—26.)

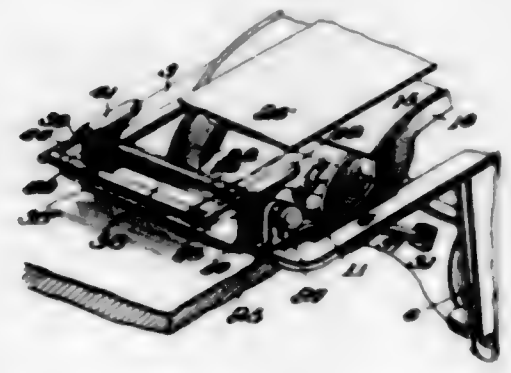
1. In a vise, a body portion providing a slideway, a movable jaw on said slideway having a recess opening through its rear end and closed at its sides, a shaft journaled in said movable jaw to turn without transverse

movement and extending through said recess, a pawl or ratchet on said shaft in the recess adapted to engage the slideway, the journal portions of said shaft and its pawl carrying portion being eccentric with respect to each other, and means at one end of said shaft outside the movable jaw for turning the same.



9. In a vise, a body portion providing a slideway, a movable jaw on said slideway having a recess opening through its rear end and closed at its sides, a shaft journaled in said movable jaw to turn without transverse movement and extending through said recess, a pawl or ratchet on said shaft in the recess adapted to engage the slideway, the journal portions of said shaft and its pawl carrying portion being eccentric with respect to each other, means at one end of said shaft outside the movable jaw for turning the same, a lateral projection on the pawl outside the movable jaw adapted to be engaged by said turning means when swung in one direction and release the pawl, and a stop on the movable jaw in the path of said projection for limiting such movement of the pawl.

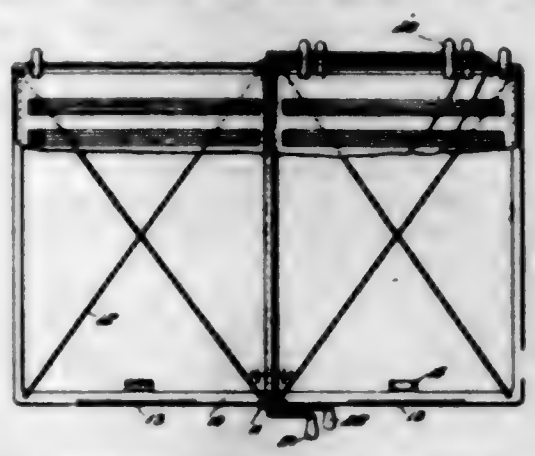
1,296,724. CIGAR-BUNCHING MACHINE. JASPER STANLEY WINGET, York, Pa. Filed June 18, 1917. Serial No. 175,329. 7 Claims. (Cl. 131—42.)



1. The combination with a cigar bunching machine comprising a bed-plate, a bunching apron co-acting therewith and adapted to form a pocket at one end of the bed-plate, the bed-plate having a depending edge adjacent the apron pocket, of guard plates adapted to be located at opposite ends of the apron pocket, each plate having an inwardly projecting arm, and means adapted to attachably and adjustably connect the arms with the depending edge of the bed-plate.

1,296,725. MUSIC-LEAF TURNER. FRANK S. WOOD, Lumberville, Pa. Filed July 28, 1916. Serial No. 111,872. 1 Claim. (Cl. 84—17.)

In a music leaf turner, the combination with a two part frame, hinges connecting the parts and including a tube and a shaft extending therethrough, and a leaf-turning mechanism proper, whereof said tube and shaft are parts; of the music leaf rack along the lower bar of



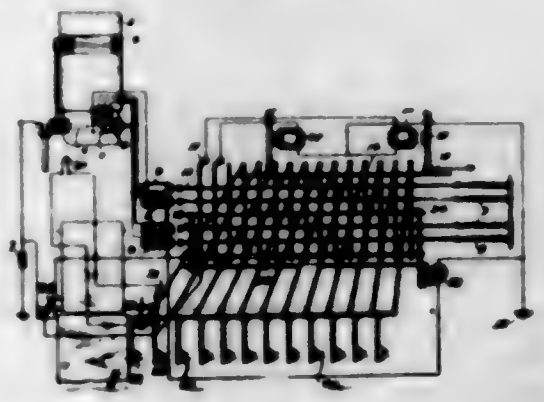
each part of the frame, and on each part an upstanding rearwardly bent hook provided with a soft covering adapted to engage over the music leaf rack of a piano.

1,296,726. INTERMITTENT OPERATING MECHANISM. EDWARD D. WOODS, Cleveland, Ohio, assignor, by direct and mesne assignments, to Woods Steel & Process Corporation, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 23, 1916. Serial No. 116,430. 1 Claim. (Cl. 74—53.)



In a clutch the combination with a shaft, a support thereon, a disk clutch member thereon, an arm pivoted on said shaft, a dog pivoted on said arm and provided with an operating lever, a spring connecting said lever and base and normally adapted to release said dog from contact with said disk member, and a supplemental spring attached at one end to said pivot for said dog and at the other end to said dog, to prevent accidental displacement of said dog.

1,296,727. TABULATING DEVICE. JOHN E. WRIGHT, New York, N. Y. Filed May 14, 1918. Serial No. 234,422. 5 Claims. (Cl. 235—92.)



1. An apparatus for tabulating all of the items of a given kind indicated by significant perforations in a series of cards, comprising, in combination, a permutation device containing a series of permutation bars, electrical contacts adapted to pass over the parts of the cards which contain the perforations and to thereby set the permutation bars, an adding or tabulating machine for recording the figures corresponding to the set combinations of said bars and means also controlled by perforations in the cards and the combinations set thereby, for locking or releasing the permutation device whereby the

desired perforations or figures corresponding thereto only will be recorded.

2. An apparatus for tabulating or recording all of the items of a given kind indicated by significant perforations in a series of cards, comprising in combination an adding or tabulating machine, a permutation device containing a series of permutation bars operatively connected with and adapted to operate the respective keys of the adding machine according to their adjustment, a series of contacts adapted to pass over the cards and to operate the permutation device by setting up therein the various combinations corresponding to the perforations, and means for locking and releasing the permutation device by means of special perforations in the cards whereby the figures corresponding to the perforations which immediately follow the unlocking perforations only, will be recorded.

3. The combination with a device for passing perforated cards under a limited number of electrical contacts to complete circuits by such contacts as pass over perforations, of a permutation device adapted to be set to a number of different conditions by such contacts dependent upon the number of permutations and combinations possible with the number of contacts, adding or tabulating machine operated by the permutation device to record figures corresponding to the set conditions, and means for locking or unlocking the permutation device controlled by special perforations in the cards and set conditions of the permutation device established thereby.

4. The combination with a device for passing perforated cards under a series of contacts, of a permutation device adapted to be set to different operative conditions by the contacts according to the number and position of the perforations over which they pass, of a plurality of permutation devices and adding or tabulating machines operated thereby, adapted to be thrown successively into operative relation with the contacts according to the nature of the items which the perforations in the cards represent, and means controlled by the contacts for locking and releasing the several permutation devices for the purpose set forth.

5. The combination with a device for passing perforated cards under a series of contacts, of a permutation device, a series of electro-magnets in circuit with the contacts and adapted to set the permutation device, a plurality of other permutation devices containing similar operating electro-magnets and adding or tabulating machines controlled by their operation, whereby the said other permutation devices are adapted to be thrown successively into series with the magnets of the first or controlling permutation device and means under the control of said first or controlling permutation device for establishing such relations and for locking and releasing the several other permutation devices according to need.

1,296,728. ADJUSTABLE CRUTCH. KATHERINE B. YATES, Buffalo, N. Y. Filed Nov. 12, 1917. Serial No. 201,569. 4 Claims. (Cl. 135—51.)

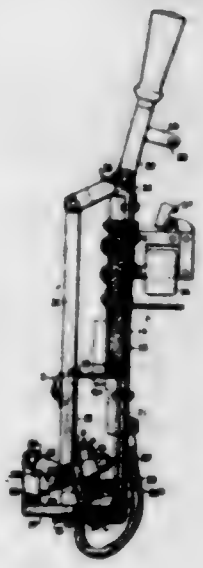
1. In a crutch, a pair of uprights spaced from one another, upper and lower end members connecting the upper and lower ends of the uprights, a hand-hold between and movable along said uprights, a leg longitudinally movable between said uprights and connected thereto through the medium of said lower end member, means correlated with said lower end member for securing the leg in different adjusted positions relative to said uprights, and means correlated with said leg, but independent of movement thereof, for adjusting said hand-hold relative to said leg and uprights.

3. In a crutch, a pair of uprights spaced from one another, upper and lower end members connecting the upper and lower ends of said uprights, a hand-hold secured between and movable along said uprights, a leg having external screw threads thereon and being longitudinally movable between said uprights and connected thereto through the medium of said end member, means correlated with the lower end member for securing the leg in different adjusted positions relative to the uprights, and means comprising an internally screw-threaded element for connecting said leg to said hand-hold, said internally screw-threaded element being in screw-threaded engagement with said leg and being rotatably connected to said hand-hold but incapable of longitudinal movement relative to the latter, said screw threaded element being operable to adjust said hand-hold relative to said leg and uprights.



4. In a crutch, a pair of uprights spaced from one another, upper and lower end members connecting the upper and lower ends of said uprights, a hand-hold secured between and movable along said uprights, a bearing element depending from said hand-hold, an externally screw-threaded leg longitudinally movable between said uprights and connected thereto through the medium of said lower end member, means correlated with said lower end member for securing said leg in different adjusted positions relative to said uprights, and an internally screw-threaded element in screw-threaded engagement with said leg and being rotatably engaged with said bearing element and operable to adjust the hand-hold relative to said leg and uprights.

1,296,729. CIRCUIT-CONTROLLER. PAUL H. ZIMMER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 20, 1916. Serial No. 132,349. 10 Claims. (Cl. 200—2.)



1. In a circuit controller, the combination with a plurality of stationary contacts, of a coöperating movable contact element, a slidably mounted member pivotally supporting said movable contact element and means for exerting an operating force upon said movable contact element to first rock the same upon said member to abut one of said stationary contacts and then slide the same

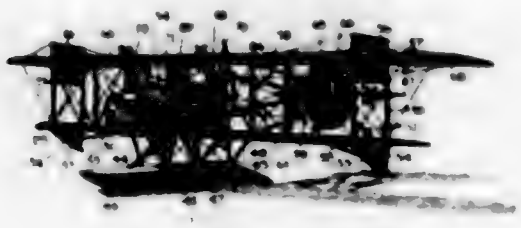
through movement of said member to engage another of said contacts.

5. In a circuit controller, the combination with a plurality of stationary contacts, of a coöperating contact element, a movable member pivotally supporting said contact element for abutment with one of said stationary contacts and movable to slide said contact element relatively to said stationary contacts, a toggle connection between said contact element and said supporting member and an operating member for said contact element acting thereon through said toggle to first move the same pivotally on said member and then slidingly through movement of said member.

7. In a circuit controller, the combination with a plurality of stationary contacts, of a coöperating movable contact element, a slidably mounted member pivotally supporting said contact, said member having means for opposing its sliding movement and operating means for said contact element including a toggle connection between the same and said member to initially rock said contact element toward and away from said contacts in response to reverse operating forces and thereafter effect sliding movements of said member in response to a continued operating force in a direction corresponding to that of the operating force.

10. In a circuit controller for alternating current motors, the combination with a plurality of sets of stationary contacts, a plurality of coöperating contact elements, and means supporting said elements for movement together first pivotally to engage certain of said contacts for establishing starting connections and then rectilinearly to engage other of said contacts to establish running connections, said supporting means also providing for return of said elements from final position to initial position without reëstablishment of starting connections.

1,296,730. PUSHER-HYDROAEROPLANE. PAUL G. ZIMMERMANN and HENRY KLECKLER, Buffalo, N. Y., assignors to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed May 4, 1916. Serial No. 95,495. 19 Claims. (Cl. 244—14.)



1. In an aircraft, superposed supporting planes, and a body structure mounted to rest directly upon the top surface of the lower plane for releasable fastening engagement therewith.

5. In an aircraft, a nacelle, an engine bed mounted upon and at the aft end of the nacelle to extend laterally beyond the rear longitudinal sides thereof, and a means bracing that portion of the engine bed thus extended.

10. The combination with the supporting wing of an airplane, of a tank having a greater portion of its area inclosed within the confines of the airplane wing and having a portion constituting a pump extending beneath the underneath surface of the wing.

15. In an aircraft, a propelling power plant, a radiator for the propelling power plant, a structural element of the aircraft mounted to penetrate the body of the radiator and a chair mounted on said element to engage with the radiator to form with said element the radiator support.

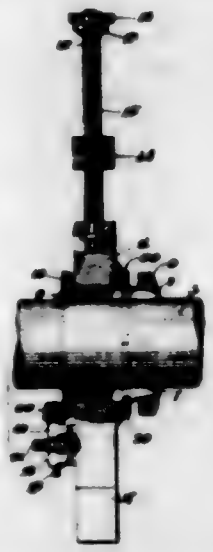
1,296,731. INSULATING-SLEEVE. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Filed Oct. 4, 1916. Serial No. 123,682. 2 Claims. (Cl. 173—311.)

1. In an insulating sleeve the combination of a tubular member composed wholly of graduated layered insulating material and an outer member composed wholly of molded insulating material, having a smooth concave



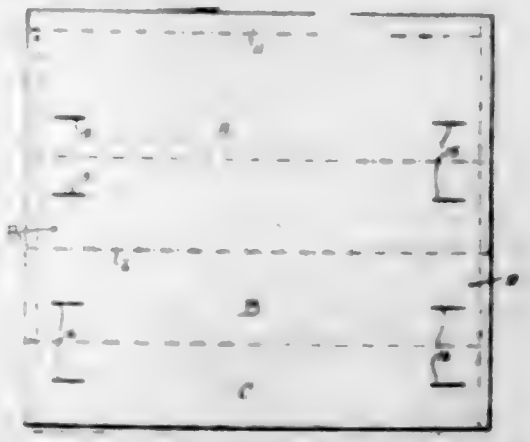
contour, the joint external surface of the two members constituting a stepped contour of a concave form.

1,296,732. BALANCING APPLIANCE. NICHOLAS W. AKIMOFF, Philadelphia, Pa., assignor to Vibration Specialty Company, a Corporation of Delaware. Filed Oct. 25, 1917, Serial No. 198,532. Renewed Jan. 29, 1919. Serial No. 273,884. 14 Claims. (Cl. 74—6.)



3. A balancing appliance comprising means for attaching the same upon a rotatable shaft, a frame journaled with respect to said attaching means, means for arbitrarily changing the angular position of said frame upon said attaching means during the rotation of said shaft, a weight carried by said frame and shiftable with respect thereto in a radial direction, means for arbitrarily changing the position of said weight during the rotation of said shaft comprising a rod in threaded engagement with said weight and a toothed wheel carried by said rod and adapted to be externally engaged to turn said rod.

1,296,733. GARMENT-CUFF. JOHN A. AKIN, North Little Rock, Ark. Filed July 15, 1918. Serial No. 244,962. 1 Claim. (Cl. 2—79.)



In combination with a garment sleeve provided at its outer end with a longitudinally disposed facing, and with

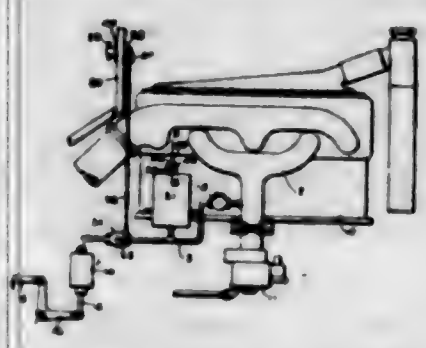
longitudinally spaced pairs of button-holes in said facing, a foldable cuff attached to the outer end of the sleeve and comprising a ply of material having button-holes at its four corners, said cuff being attached to the sleeve at a point approximately one-third of the width of the cuff, the distance between the point of attachment of the cuff, and a pair of button-holes at one side thereof being substantially equal to the distance between said point of attachment of the cuff and the innermost pair of button-holes in the facings of the sleeve, and the second pair of button-holes in the cuff being spaced a distance from the point of attachment of the cuff substantially equal to the distance between the point of attachment of the cuff and the outermost button-holes in the facings of the sleeve.

1,296,734. LANDING-GEAR FOR AEROPLANES. LLOYD S. ALLEN, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,131. 8 Claims. (Cl. 244—2.)



1. The combination with an aeroplane body, of a landing frame arranged to fold up against the same, said frame having landing wheels carried at the lower portion thereof and having an upward extension pivoted to said aeroplane body, and another upward extension slidably connected with said aeroplane body, guides on said aeroplane body for said slidable extension, resilient devices for holding said slidable extension in various adjusted positions, and means under the control of the operator for raising and lowering said landing frame.

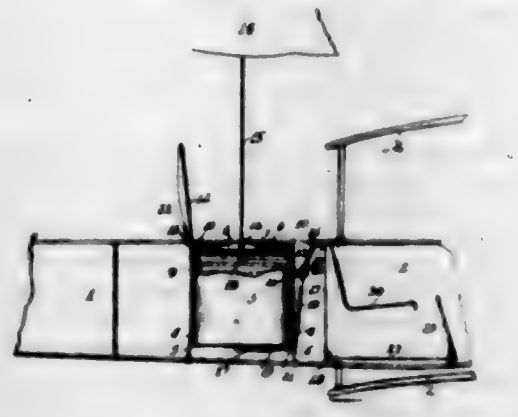
1,296,735. INTERNAL-COMBUSTION-ENGINE VACUUM ACTUATING MEANS. SAMUEL F. ARBUCKLE, Indianapolis, Ind. Filed Jan. 28, 1918. Serial No. 214,169. 9 Claims. (Cl. 188—6.)



6. Vacuum actuating means for internal combustion engines having an intake manifold, including a cylinder with one end in communication with the intake manifold of the engine and the other end open to the external air, a piston in said cylinder formed of a cup-shaped metal member, a leather disk closing the open end of said cup-shaped member and surrounding the periphery thereof to form packing between the piston and cylinder whereby a lubricating chamber is formed in said piston, a rod connecting the piston with the actuated means, and a valve for controlling the communication between the intake manifold and the cylinder.

1,296,736. AERO SAFETY DEVICE. ANDREW DOUGLAS AUSTIN, San Francisco, Cal. Filed Jan. 18, 1919. Serial No. 270,784. 4 Claims. (Cl. 244—21.)

1. A safety device for aerial vehicles comprising a container fitted and secured to the vehicle, said container having at its upper portion an inwardly projecting abutment flange; a diaphragm fitted for linear movement within the container and adapted to be limited on its outer stroke by contact with the abutment flange of the container; a spring under the diaphragm to effect its outward stroke; a parachute member adapted for storage within the container and for projection therefrom by the diaphragm; a line connecting the parachute member with the diaphragm; and locking and releasing connections for controlling the diaphragm.



1,296,737. CONCENTRATOR. ARTHUR BARING-GOULD, Placerville, Cal. Filed Mar. 28, 1918. Serial No. 225,358. 5 Claims. (Cl. 83—59.)



1. A concentrator comprising a tank filled with water, a receptacle for the precious metals positioned at the bottom of the vertical tank, a material delivery spout projecting into the upper end of the tank, a shaft turnable adjacent the spout, gate flanges on the shaft each alternately forming a closure and a material measure and pusher for the spout, power actuated means controlling the alternate action of the gate flanges whereby a positive quantity of material will pass from the spout into the tank at predetermined times and fall by gravity therethrough, and power actuated means for separating materials of different specific gravities during the fall thereof through the tank, the operation of such means synchronizing with the action of the gate flanges and the passage of the heaviest element through the tank whereby the materials of lesser specific gravities are separated from each other after the heaviest element has reached the bottom of the tank.

2. A concentrator comprising a vertical tank arranged to be normally filled with water, means for intermittently delivering the material to be separated into the upper end of the tank whereby it will drop by gravity through the water, and means for diverting the material at different points in its travel whereby materials of different specific gravity may be separated, such means including gates movable across the tank to divide it into separate compartments, the moving of such gates being timed, with the intermittent feed and catch receptacles arranged to be then placed into separate communication with each compartment.

3. A concentrator comprising a vertical tank arranged to be normally filled with water, means for delivering the material to be separated at intermittent intervals into the upper end of the tank whereby it will drop by gravity through the water, and means for diverting the material at different points in its travel whereby materials of different specific gravity may be separated, such means including a plurality of catch receptacles arranged at spaced points along the vertical length of the tank, the tank having openings communicating therewith, and inclined gates arranged to intermittently move across the tank adjacent the openings in predetermined relation with the material delivering means and divert the material through the openings into the receptacle.

4. A concentrator comprising a vertical tank arranged to be normally filled with water, means for delivering the material to be separated into the upper end of the tank whereby it will drop by gravity through the water, and means for diverting the material at different points in its travel whereby materials of different specific gravity may be separated, and means operable in conjunction with the aforementioned means for intermittently draining the dirty water and non-valuable material from the upper end of the tank.

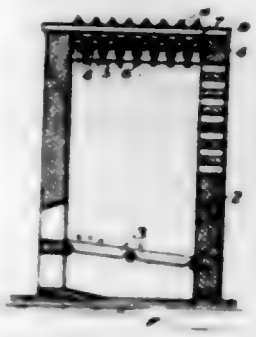
5. A concentrator comprising a vertical tank arranged to be normally filled with water, means for delivering the material to be separated into the upper end of the tank whereby it will drop by gravity through the water, means for diverting the material at different points in its travel whereby materials of different specific gravity may be separated, and means for intermittently draining the dirty water and non-valuable material from the upper end of the tank, this including a drain gate and a gate to close across the tank below the drain gate, with means for closing said closure gate and opening the drain gate simultaneously therewith.

1,296,738. POTATO-FORK. ATTE L. K. H. BAKKE, Sidney, Mich. Filed Nov. 13, 1918. Serial No. 262,873. 5 Claims. (Cl. 55—79.)



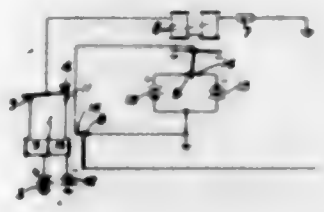
1. A potato fork comprising a head, a handle secured to the head, a clamp carried by the handle and provided with spaced depending ears the lower edges of which are disposed at an angle to the longitudinal plane of the clamp, a standard pivotally mounted between the ears to permit tilting movement of the handle thereon, and a shoulder on the standard and adapted to bear against the lower edges of the ears for limiting the tilting movement of said handle.

1,296,739. SUPERHEATER. JOHN E. BELL, New York, N. Y. Filed June 2, 1915. Serial No. 31,689. 9 Claims. (Cl. 122—485.)



1. A furnace having a superheater located in one of the walls thereof, a heat conducting casing surrounding the superheater and within the walls of the furnace, a portion of the outer face of said casing being exposed to the radiant heat of the furnace, substantially as described.

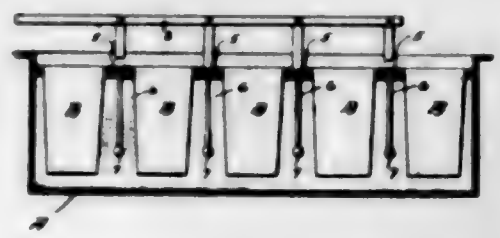
1,296,740. TELEGRAPH SYSTEM. JOHN H. BELL, South Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Apr. 22, 1918. Serial No. 230,193. 5 Claims. (Cl. 178—63.)



1. In a telegraph transmitting system, a local circuit comprising a neutral relay, a transmitting key, a polar relay and a condenser, line terminal circuits including a plurality of oppositely poled current sources and contacts of said polar relay, and contacts controlled by said neutral relay for connecting said line circuit to earth during periods that no change of current effects are taking place in said condenser.

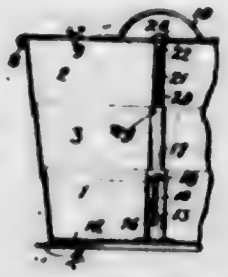
3. In a telegraph transmitting system, a line circuit, a plurality of current sources, a compound wound relay, a polar relay, a transmitting key for alternately connecting different windings of said compound wound relay in series with said sources of current and said polar relay, a condenser included in said circuit, and means jointly controlled by said relays for momentarily connecting said sources of current with said line conductor to effect signaling.

1,296,741. VIBRATOR. HARRY E. BEATTIE, Hagerstown, Md. Filed Apr. 15, 1918. Serial No. 228,681. 4 Claims. (Cl. 259—60.)



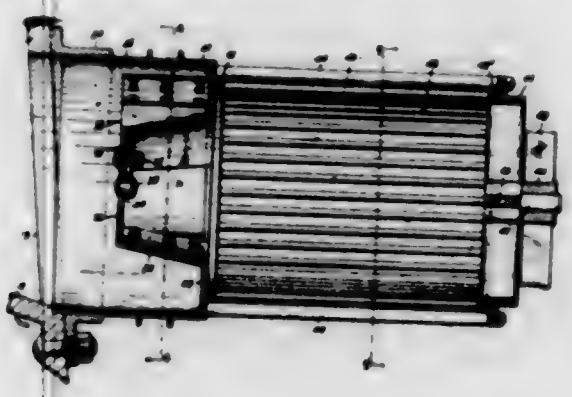
1. In an ice manufacturing apparatus, the combination with a liquid container, of a tapping device constructed and arranged to tap the container and establish molecular vibration without bodily displacing the container, for inducing trembling of the contained water.

1,296,742. COLLAPSIBLE RECEPTACLE. CHARLES C. BEVINGTON, Akron, Ohio, assignor of one-half to Frank L. Tragesser, Akron, Ohio. Filed Mar. 21, 1918, Serial No. 223,758. Renewed Dec. 23, 1918. Serial No. 268,087. 2 Claims. (Cl. 220—17.)



2. A bucket comprising a plurality of sections in the form of hollow conic frusta and arranged for telescopic engagement and arranged to be moved to an inoperative and collapsed position and also moved to an extended or open position, the lower section provided with a lower wall whereby said lower member is cup-shaped in cross section, a bar extending across the upper portion of the upper member of said bucket, a tubular standard mounted centrally of said lower wall and provided with a longitudinally-extending slot having offset portions at both ends, a rotatable sleeve mounted in said standard having a transversely-extending pin near its upper end and also provided with a pin near its lower end the latter adapted to travel in the slot in said tubular standard, a plunger adapted for slidable movement in said sleeve member and provided with a slot adapted to receive the upper pin in the sleeve member and having an offset portion arranged to coact with the pin in the sleeve member for holding all of said members in their extended position, the arrangement being such that when said sleeve member is rotated it disconnects the pins carried thereby from engagement with the upper member and tubular standard to permit the collapsing telescopically of the entire structure in unison with the telescopic collapsing of the members of said bucket.

1,296,743. CORK-FEEDING MECHANISM. JOHN BINDER and EMILIO ALBERTI, New York, N. Y., assignors to International Cork Company, Brooklyn, N. Y., a Corporation of New York. Filed May 10, 1918. Serial No. 233,778. 10 Claims. (Cl. 83—56.)



1. A feeding device for corks or the like, including a hopper having a discharge opening, a rotary drum in communication with said opening provided with an outlet, means within said drum for elevating the corks or the like therein and causing the same to pass through said outlet, and means for adjusting the size of said outlet.

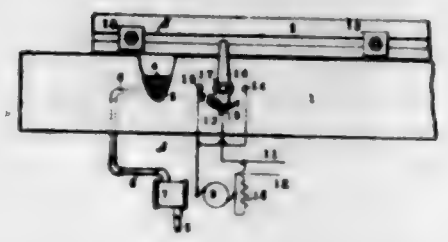
2. A feeding device for corks or the like, including a hopper having a discharge opening, a rotary drum in communication with said opening through one of its ends, an annular head provided with a hollow body extending into said drum and closing the other end of the latter, said hollow body being open at its base adjoining said annular head and provided with an opening within said drum, means within said drum for elevating the corks or the like therein and causing the same to pass through said outlet, and means for adjusting the size of said outlet.

5. A feeding device for corks or the like, including a hopper having a discharge opening, a rotary drum in communication with said opening through one of its ends, an annular head provided with a hollow body extending into said drum and closing the other end of the latter, said hollow body being open at its base adjoining said annular head and provided with an opening within said drum, a fixed vane within said drum abutting against said annular head and extending from the opening in said hollow body toward the cylindrical portion of said drum for elevating the corks or the like therein and permitting the same to pass through the opening in said hollow body, and means for adjusting the size of the opening in said hollow body.

7. A feeding device for corks or the like, including a hopper having a discharge opening, a rotary drum in communication with said opening through one of its ends, an annular head provided with a hollow conical body extending into said drum and closing the other end of the latter, said hollow body being open at its base adjoining said annular head and provided with an opening within said drum, means within said drum for elevating the corks or the like therein and causing the same to pass through the opening in said hollow body, and a screening drum attached to said first-named drum and adapted to receive the corks or the like passing through said hollow body.

9. A feeding device for corks or the like, including an inclined drum comprising a shell open at one end and closed at its other end by an annular head provided with a hollow conical body extending into said drum, said hollow body being open at its base adjoining said annular head and provided with an opening within said drum, and means within said drum for elevating the corks or the like therein and causing the same to pass through the opening in said hollow body.

1,296,744. SYSTEM OF LUBRICATION. HAROLD L. BLOOD, Plainfield, N. J., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 11, 1915. Serial No. 50,163. 21 Claims. (Cl. 184—5.)



1. Apparatus of the character described comprising, in combination, a machine tool mechanism having a reciprocating part, means for supplying a lubricant to said mechanism, a motor for operating said means, means for controlling said motor, and means on said reciprocating part for operating said motor controlling means.

1,296,745. ICE-CREAM SCOOP. JOSEPH BLUHM, Troy, N. Y., assignor, by direct and mesne assignments, to Dana Manufacturing Corporation, Troy, N. Y., a Corporation of New York. Filed Dec. 16 1915, Serial No. 66,059. Renewed Aug. 2, 1918. Serial No. 248,068. 1 Claim. (Cl. 107—48.)

In a scoop, a conical cup, a pair of integrally connected scraper arms operable therein, a stem engaged with said arms, said stem being revolubly mounted at the apex of said cup, a bevel pinion on said stem, a rod revolubly mounted transversely to said stem, a bevel pinion engageable with the first named pinion, removable means for normally maintaining said pinions in engagement, a spur pinion on said rod, a plunger having rings upon its pe-

riphery engageable with said spur pinion, said plunger being operable in a straight line, a housing for said



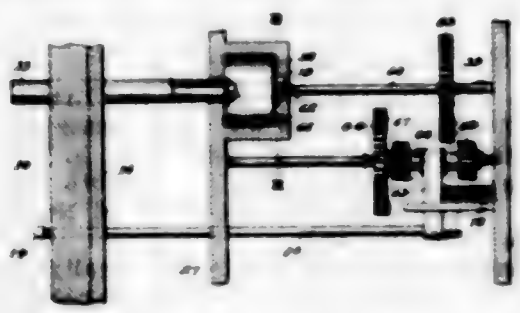
plunger and a spring in said housing for returning said plunger to its initial position.

1,296,746. COCK FOR LIQUIDS AND VAPORS. GOTTLIEB BODMER, Zurich, Switzerland. Filed Oct. 21, 1918. Serial No. 258,962. 3 Claims. (Cl. 251—4.)



1. A cock for liquids and vapors, comprising a casing provided with a flange and a passage-way for the fluid, said flange being formed by a plurality of single pieces, a plate provided with through-going slots, means for connecting said pieces forming the flange and the plate rigidly together, said plate inclosing together with a piece of the flange a chamber, a grid valve pressed by the pressure of the fluid entering into the passage-way of the casing against said plate, and a member supported in a bearing provided in said flange of the casing and adapted to move the grid valve within said chamber, the coöperating surfaces of the grid valve and plate forming a fluid-tight joint preventing the passage of any fluid to the point where said movable member engages the grid valve.

1,296,747. BULLET-FIRING ALARM-LOCK. CASSIMIR BOHACHIK, Chicago, Ill. Filed Aug. 27, 1917. Serial No. 188,373. 4 Claims. (Cl. 116—62.)



2. A lock comprising a casing, a sliding bolt arranged therein, a tubular barrel projecting from said casing, a housing within the casing and at the inner end of the barrel, a magazine in the housing adapted for holding cartridges and for alining the same with the barrel, a spring pressed firing pin carried by the housing, a swinging hammer for the pin, an operating cam for the hammer, a driven shaft, a slidable pinion splined on said shaft, operative connections between the said pinion and cam, safety disengaging means for the said pinion, and operative connections between the said bolt and driven shaft.

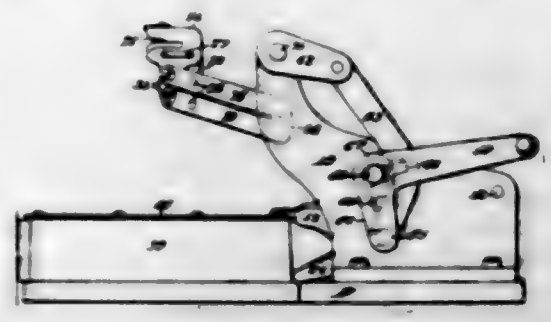
4. A lock comprising a casing, a sliding bolt arranged therein, a tubular barrel projecting from said casing, a housing within the casing at the inner end of the barrel, a magazine adapted for holding cartridges and for alining the same with the barrel, a spring pressed firing pin carried by the housing, a swinging hammer for the pin, an operating cam for the hammer, a driven shaft, a slidable pinion splined on said shaft, operative connections between the said pinion and cam, safety disengaging means for the said pinion, the said bolt being U-shaped and having toothed upper and lower arms an operating key for the bolt adapted for reception through the forward side of the casing in operative connection with the upper arm of said bolt, and operative connections between the driven shaft and the lower arm of the bolt, a shifting gear for said magazine, a pinion adapted for meshing with said gear arranged for simultaneous movement with the first named pinion, and an operating rod for said disengaging means terminating forwardly of the casing adjacent the free end of the barrel.

1,296,748. TROLLEY-WIRE HANGER. GLENN HENRY BOLES and WILLIAM A. DARRAH, Mansfield, Ohio, assignors to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed May 2, 1917. Serial No. 165,939. 3 Claims. (Cl. 191—41.)



1. A trolley wire hanger consisting of a wire clamping member, suspending means comprising substantially parallel arms attached to the clamping member and a member slidably mounted on the suspending means and adapted to engage a supporting cable, and means on the parallel arms to permanently retain the slidable member thereon.

1,296,749. TAG-AFFIXING MACHINE. WILLIAM BORCHERT and FRED L. BORCHERT, Rockford, Ill. Filed Nov. 30, 1917. Serial No. 204,664. 39 Claims. (Cl. 153—1.)



1. A device for clamping tags or the like onto flat material comprising a pair of relatively movable jaws, and

means for supporting the jaws consisting of a lever pivotally mounted at one end and connected at its free end respectively to each jaw, the pivots of which are unequally distant from the pivot axis of the lever, so that when the lever is swung about its pivotal mounting the jaws will be relatively moved by the lever in a clamping action.

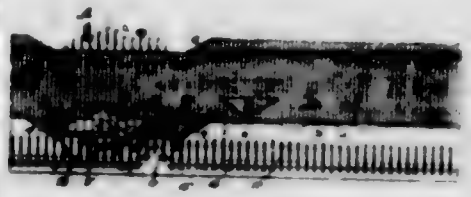
13. In a tag affixing machine, the combination of means for affixing a tag, a comb adapted to carry a row of tags, means for moving the comb in step by step movements to successively position the tags at a feeding station, and means for removing a tag at said station from the comb and positioning the tag in said affixing means.

28. In a tag affixing machine, the combination of a tag affixing device movable from a work-receiving to a tag-receiving position, a carrier adapted to carry a row of tags and being movable in step by step movements to successively position its tags at a feeding station, a feeder for moving the tag at the feeding station into the affixing device when the latter has been moved to its tag-receiving position, means for advancing the tag carrier in said step by step movements, and mechanism for operating the foregoing in timed relation including a single operating member having one movement in which to cause the affixing device to be moved to tag-receiving position and to cause a tag to be fed into the clamping device and having another movement in which to return the affixing device and other parts to their normal position.

35. In a tag-affixing machine, the combination of a tag-affixing device having relatively movable jaws for clamping a tag onto a piece of material inserted between the jaws, a tag magazine, means for moving the affixing device as an entirety from a work-receiving position to a tag-receiving position, and means for feeding a tag into the affixing device between the jaws thereof at the tag-receiving position.

39. In a tag-affixing machine, the combination of a tag-affixing device having normally separated jaws which are relatively movable in a clamping action to affix a tag to a piece of material inserted between the jaws, a tag magazine, a rock shaft, means for rocking the shaft, and means operated by the shaft during movement thereof in one direction for moving the tag-affixing device to a tag-receiving position and feeding a tag from the magazine to said device, and for returning the tag-affixing device to normal position during movement of the shaft in the opposite direction.

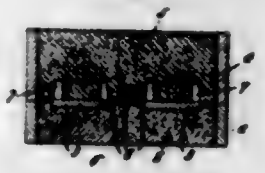
1,296,750. STOCKING-KNITTING MACHINE, ANTI-RAVELING. GEORGE P. BOSWORTH, Central Falls, R. I., assignor to Hemphill Manufacturing Co., Pawtucket, R. I., a Corporation of Rhode Island. Filed Aug. 31, 1914. Serial No. 859,492. 18 Claims. (Cl. 66—24.)



1. In a stocking knitting machine and in combination, needles, stitch cam means, a restoring cam on each side of said stitch cam means for raising the needle to normal plane, one of said restoring cams being movably mounted to allow needles to pass when raised from retired position, means in advance of said movable restoring cam for retiring the needles from normal plane while holding their loops, and means for raising alternate needles after being retired for clearing their loops below their latches and for taking the yarn, said movable restoring cam moving aside for this action of raising alternate retired needles, the other retired needles passing on in retired position without taking yarn or casting their loops while the alternately raised needles are retracted to cast their loops, substantially as described.

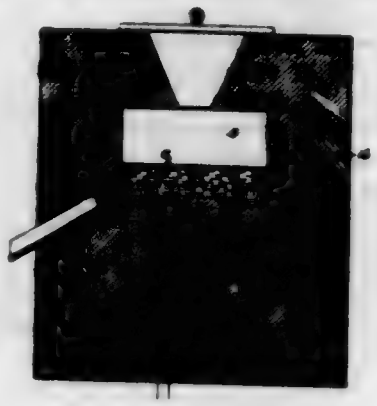
12. In combination in a knitting machine, a needle cam, a pattern drum having a projection thereon, a connection operated by said projection for controlling the needle cam, an oscillating segment, pawl and ratchet mechanism between the same and the pattern drum for operating it step by step and means operated from said oscillating segment for retracting the said connection step by step while the pattern drum is at rest.

1,296,751. METHOD OF CASTING CHILLED VALVE-SEATS. BURWELL BOYKIN, Jr., Beaumont, Tex. Filed Dec. 16, 1918. Serial No. 267,014. 1 Claim. (Cl. 22—213.)



The hereindescribed method of producing valve seats which consists in embedding a chilled plate in the sand of a drag with its face exposed, placing a pattern on the chill plate, packing sand in a cope and about the pattern, removing the pattern to form a blank closed at the bottom by the chill plate, and supply molten metal to the blank.

1,296,752. ELECTRIC INDUCTION-FURNACE. OSCAR ENGERY, Philadelphia, Pa. Filed June 12, 1918. Serial No. 239,538. 12 Claims. (Cl. 204—64.)



1. An induction furnace consisting of a core having a branch; a primary winding for said core; and a secondary in the form of a tubular body of molten metal substantially coaxial with said core branch and having opposite portions cut away to permit passage of portions of said core.

6. The combination of a substantially rectangular core having a central member; a tubular body of metal constituting a secondary for said core and mounted coaxial with the central member thereof, said body of metal being cut away at opposite points to permit of passage of a horizontally extending portion of the core; with a primary winding for the core mounted on the central branch partially within the tubular secondary.

9. The combination in an induction furnace of a body of metal to be treated including a main portion, a tubular portion and oppositely placed branches connecting said portions; a transformer core having a member extending between said branches and a second member extending coaxially with the tubular portion of said metal; and a winding on said latter member of the core, extending below the plane of the bottom of the tubular portion of the metal.

12. The combination in an induction furnace of a containing structure having main and auxiliary cavities for

molten metal; a core; and a winding for the core mounted to exert a repulsive action on the metal in the auxiliary cavity such as will force it out of the same into the main cavity, the core being positioned relatively to the metal in the auxiliary cavity to cause magnetic lines of force to cut through the same at definite points and thereby cause relatively intense circulation at said points.

1,296,753. SYSTEM FOR REDUCING THE VISIBILITY OF OBJECTS. GEROME BRUSH, Dublin, N. H. Filed June 2, 1917. Serial No. 172,556. 11 Claims. (Cl. 114—15.)



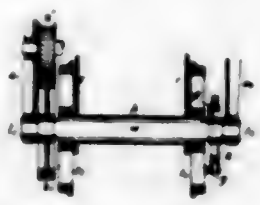
1. The process of reducing the visibility of an object which consists in dividing the surfaces of the object into a plurality of zones and in giving to the surfaces within the different zones different color tones, the single color tone of the surfaces within each zone being graduated from dark to light substantially according to the approximate average illuminating effect of light thereon.

3. The process of reducing the visibility of an object which consists in painting surfaces having different angles of incidence different shades of color which are graduated from dark to light by mixing together dark and light colors proportioned the light color to the sine and the dark color to the complement of the sine of the angle of incidence of the surface.

5. The process of reducing the visibility of an object which consists in painting the different surfaces of the object different shades of color graduated from dark to light by mixing together for each different surface dark and light colors proportioned the dark to the light colors substantially as the complement of the sine of the determined average angle of incidence of that surface.

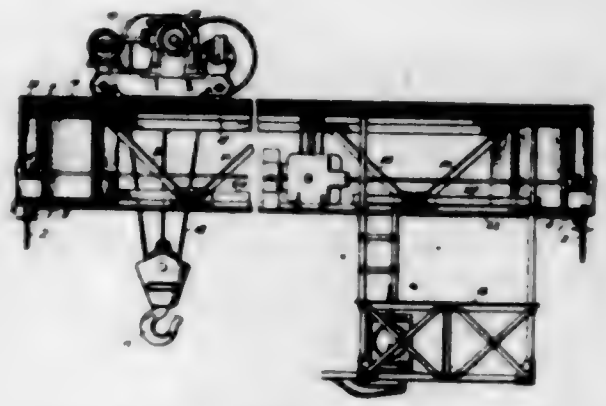
7. As a new article of manufacture, an object the surfaces of which have been divided into a plurality of zones and the surfaces within different zones given different color tones, the single color tone given to the surfaces within each zone being graduated from dark to light substantially according to the approximate average illuminating effect of light thereon.

1,296,754. DRIVING MECHANISM FOR ELECTRIC LOCOMOTIVES. JACOB BUCHLI, Baden, Switzerland, assignor to A. G. Brown Boveri & Cie., Baden, Switzerland. Filed Sept. 28, 1917. Serial No. 193,855. 1 Claim. (Cl. 105—99.)



Driving mechanism for electric locomotives having motors located in the framing thereof with toothed wheel transmission gear outside said framing, comprising a driving toothed wheel, a driven toothed wheel in mesh with said driving wheel, a solid shaft on one end of which said driven wheel is mounted, fixed bearings in the framing for said shaft, a hollow shaft on which the rail wheels are attached, said hollow shaft surrounding the solid shaft, a universal coupling mounted on the other end of the solid shaft, and projections on one of the rail wheels engaged by said coupling.

1,296,755. CRANE. SYDNEY BUCKLEY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 17, 1917. Serial No. 149,180. 11 Claims. (Cl. 104—180.)



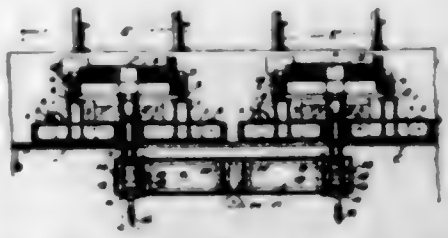
1. A traveling crane bridge element comprising a main girder, a rail-carrying girder supplemental to and separated from the main girder, and load transmitting members connecting the rail-carrying girder and the main girder at intervals.

4. The combination in a traveling crane bridge of four individually complete main girders arranged in pairs, two individually complete rail-carrying girders respectively positioned between the main girders of the said pairs, and connecting members positioned at intervals between the main girders of each pair and serving to support the corresponding rail-carrying girder.

7. A traveling crane bridge element comprising two individually complete main girders each comprising an upper longitudinal compression member, a lower longitudinal tension member and diagonal truss members, an individually complete rail-carrying girder between the main girders, and connecting members extending between the rail-carrying girder and one set of longitudinal members of the main girders, the said connecting members engaging the longitudinal members at the points where they are engaged by the diagonal members.

11. A traveling crane bridge element comprising two individually complete main girders, connecting members positioned at intervals between the main girders, and a rolled steel beam constituting an individually complete rail-carrying girder positioned between the main girders, the said beam being notched to receive the connecting members upon which it is supported.

1,296,756. LIFTING-BEAM FOR CRANES. SYDNEY BUCKLEY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed July 22, 1918. Serial No. 245,996. 14 Claims. (Cl. 212—10.)

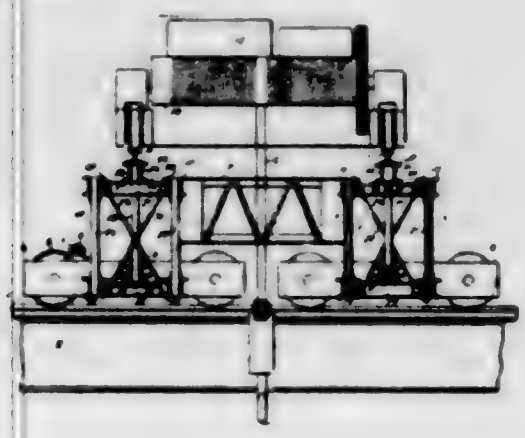


1. The combination of a lifting beam, means near the center of the beam for the attachment of a load, and means

at the ends of the beam for supporting the beam on crane bottom blocks independently of the hooks thereof.

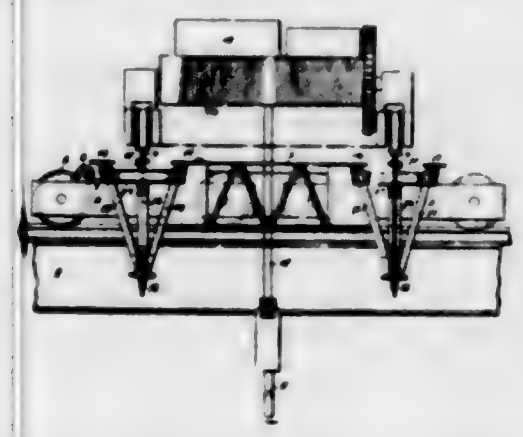
11. The combination of a lifting beam for cranes having means near the center for the attachment of a load and comprising two spaced side elements and transverse apertured elements forming end recesses adapted to receive the crane bottom blocks, and means for supporting the beam on the said blocks, the said means comprising removable pins extending through central apertures in the sheave pins of the blocks and through the apertures in the transverse elements.

1,296,757. BRIDGE FOR TRAVELING CRANES. SYDNEY BUCKLEY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed June 2, 1917, Serial No. 172,424. Renewed Jan. 7, 1919. Serial No. 270,059. 5 Claims. Cl. 105—163.)



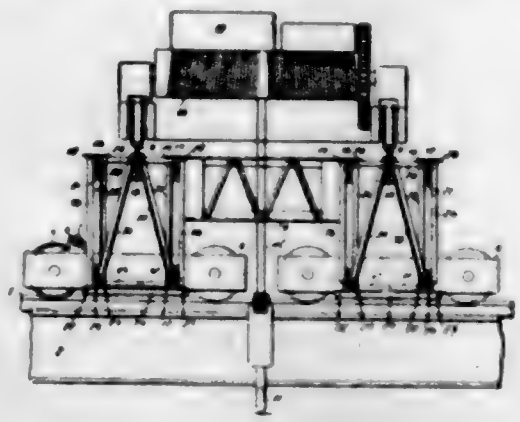
1. The combination in a bridge for a traveling crane of six individually complete main girders extending from end to end, the girders being arranged in groups of three with those in each group equally spaced, two rails supported respectively on the central girders of the groups, and connecting members for transmitting parts of the rail loads from the central girders to the adjacent side girders.

1,296,758. BRIDGE FOR TRAVELING CRANES. SYDNEY BUCKLEY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed June 2, 1917, Serial No. 172,425. Renewed Jan. 7, 1919. Serial No. 270,060. 5 Claims. (Cl. 105—163.)



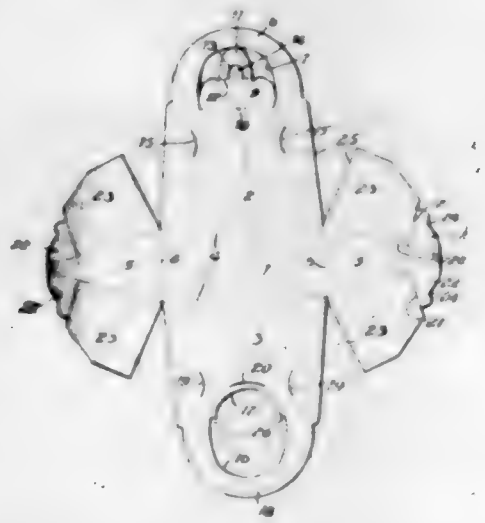
1. A traveling crane bridge element comprising two spaced upper longitudinal compression members, a single centrally located lower longitudinal tension member, diagonal truss members connecting the two upper members with the single lower member, a rail carrying girder positioned centrally between the two upper members, and means for supporting the rail carrying girder from the longitudinal members.

1,296,759. BRIDGE FOR TRAVELING CRANES. SYDNEY BUCKLEY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed June 2, 1917, Serial No. 172,426. Renewed Jan. 7, 1919. Serial No. 270,061. 2 Claims. (Cl. 105—163.)



1. A traveling crane bridge element consisting of two individually complete main girders each comprising an upper longitudinal compression member, a lower longitudinal tension member and diagonal truss members, a rail-carrying girder between the main girders at or near the level of the upper members of the main girder, and means for supporting the rail-carrying girder directly from the lower members of the main girder.

1,296,760. FOLDING PAPER BOX. ANDREW E. BUNSCHEL, Chicago, Ill, assignor of one-half to William Pente, Chicago, Ill. Filed Feb. 8, 1917. Serial No. 147,457. 5 Claims. (Cl. 229—54.)

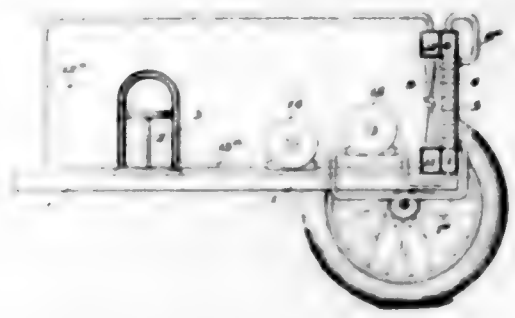


1. A folding paper box of the kind described, consisting of an integral sheet suitably cut and scored to constitute an integrally formed bottom, sides, handles and ends, one of sides formed with a slot adjacent the top edge, and the other with an extending part of a length to overlie the top edge of said first-mentioned side, and extend into said slot, said end portions each provided with extensions at each side and scored at their juncture with the end portions, the sides being formed with slots of a size to receive said extensions on the ends, said extensions formed to engage at said slots.

1,296,761. TEMPERATURE-CONTROL APPARATUS. LEON CAMMEN, New York, N. Y. Filed July 27, 1918. Serial No. 247,008. 3 Claims. (Cl. 123—174.)

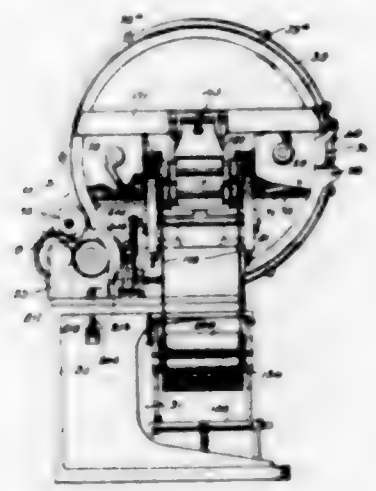
3. In a two flow circulatory system for internal combustion engines, a temperature control apparatus comprising an air cooled radiator, a fan therefor, a casing extending rearwardly from said radiator as a guide passage for said

fan, an engine jacket, a liquid passage in said casing in communication with said jacket, and another, contiguous,



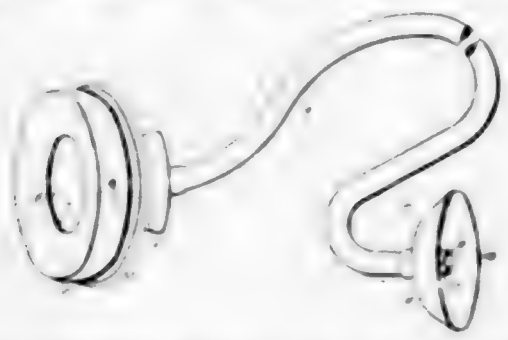
liquid passage in said casing, in communication with said radiator.

1,296,762. MACHINE FOR MAKING TIRE-CASINGS. FRED B. CARLISLE, North Kingston, R. I., assignor to Joseph M. Gilbert, New York, N. Y. Filed Sept. 26, 1916. Serial No. 122,195. 12 Claims. (Cl. 154—11.)



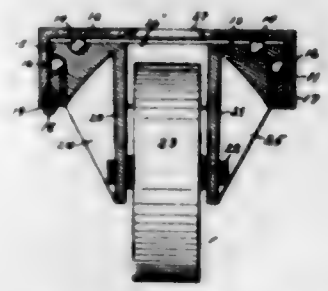
10. In a machine of the kind described, means for supporting a pair of rings in spaced, parallel relation to each other, means for winding a cord between said rings to form a cord layer extending circumferentially thereof, shifting means for periodically moving said rings in a circumferential direction, and maintaining means for positively holding said rings against movement during the movement of recovery of said shifting means.

1,296,763. SOUND-TRANSMITTING DEVICE. EDGAR CHERRY, Oakland, Cal. Filed July 29, 1918. Serial No. 247,202. 1 Claim. (Cl. 181—25.)



A sound transmitting device of the character described, comprising a body having a threaded opening in its back and a threaded periphery, the front of the body having a chamber formed in two diameters, a diaphragm secured at one point to the body to lie within the portion of the chamber having the larger diameter, an apertured cap screwing on the body, an externally threaded coupling member screwing into the threaded opening of the body, said member having a bore whose inner end is flared and provided with a nipple on its outer face, a flexible tube having one end secured on the nipple, and a hemispherical ear piece secured to the other end of the tube with the end of the tube extending into the same.

1,296,764. SWIVEL-CASTER. JOHN LOUCIEN CHESNUTT, Kansas City, Mo. Filed June 15, 1918. Serial No. 240,205. 4 Claims. (Cl. 16—73.)

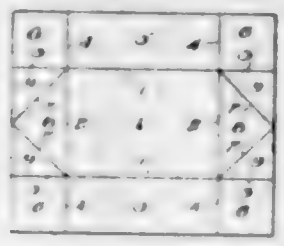


1. A swivel caster, comprising an outer frame formed of a top plate and an annular depending flange thereon, an inner frame mounted loosely within said annular flange, a wheel mounted for rotation in said inner frame, said inner frame being formed with a peripheral horizontal flange, anti-friction devices mounted between the inner frame and the top plate of the outer frame, a ring removably secured within the annular flange of the outer frame, and anti-friction devices mounted between said ring and the horizontal flange of the inner frame.

3. A swivel caster, comprising an outer load-bearing frame including a top plate and an annular depending flange thereon, means for attaching said top plate to a load, an inner frame loosely mounted for rotary movement within the annular flange of the top frame, anti-friction devices mounted between said inner frame and the lower surface of said top plate, a wheel mounted for rotation in said inner frame, said inner frame being formed with a horizontal peripheral flange, a ring tightly mounted within but detachable from the annular flange of the outer frame and spaced from the inner frame, bearing balls mounted between said ring and the horizontal flange of the inner frame, and connecting means for retaining said ring within said annular flange.
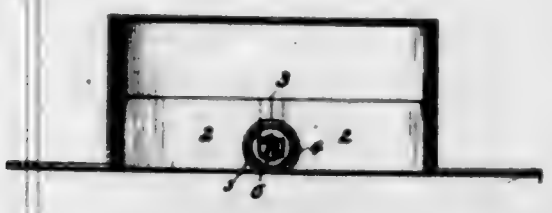
4. A swivel caster, comprising an outer frame, means for securing said outer frame to a load, said outer frame including a removable inwardly projecting member at its base, an inner frame within said outer frame and formed with an outwardly projecting horizontal flange above the removable member of the outer frame, a wheel journaled in said inner member, and bearing balls between said horizontal flange and the removable member of the outer frame.

1,296,765. WRAPPER. EBEN R. CHRISTENSEN, Chicago, Ill. Filed Dec. 22, 1916. Serial No. 138,312. Renewed Nov. 25, 1918. Serial No. 264,124. 2 Claims. (Cl. 229—31.)



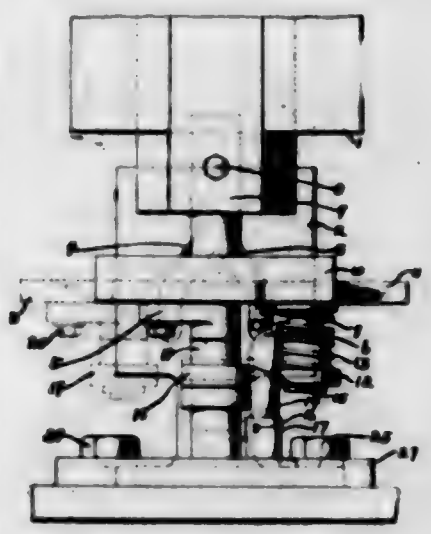
1. A wrapper sheet, grooved to define a central area adapted to lie in contact with one end of a pile of articles, two opposite side portions, two opposite end portions divided by diagonal lines into three triangular portions, and four rectangular corner portions, the corner portions being folded in against the end of the pile, and the triangular end portions being folded upon each other to form a flap which is folded against the outer side of said corner portions.

1,296,766. SWEAT-BAND STICKER, MARKER, AND FINISHER. CARLOS N. CLARK, South Orange, N. J. Filed Sept. 27, 1917. Serial No. 193,453. 1 Claim. (Cl. 40—9.)



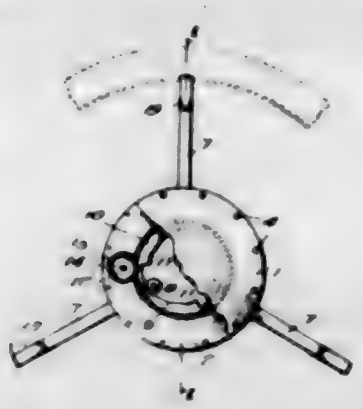
In a hat sweat band a sticker adapted to seal the meeting ends of the band on the back thereof and turning back on itself complete the ornamental finish of the meeting ends of the band on the front of the same.

1,296,767. MACHINE FOR MAKING CELLULOID BUTTONS. OVADIO COHN, New York, N. Y., assignor to Bijou Button Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 2, 1918. Serial No. 226,298. 10 Claims. (Cl. 79—4.)



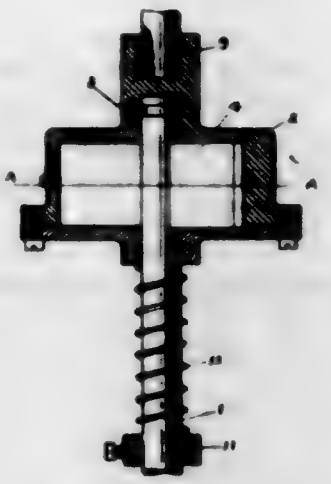
1. In a machine for making buttons, having a celluloid top and a metal base, the combination of a base-plate carrying the die 53, the die 18, means for holding the die 18 so that its internal flange is above the top of the die 53, means for holding said die 18 in a second and lowered position, the slide 11 carrying the dies 46 and 12 and the die 19 and the plunger 40 and means for moving the slide 11 from left to right and up and down.

1,296,768. TIRE-CARRIER. THOMAS JEFFERSON COLLINS and ROYAL BLAINE JORDAN, Brownwood, Tex. Filed May 27, 1918. Serial No. 236,843. 1 Claim. (Cl. 224—29.)



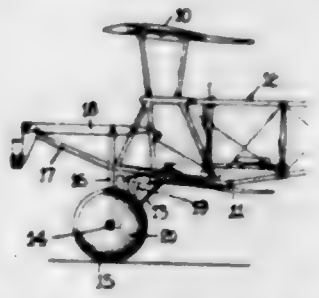
A device of the character specified comprising a central support, a gear ring journaled in the support and having a series of eccentric surfaces at its inner edge, radial arms mounted to slide on the central support and having a gripping mechanism at their outer ends for gripping a wheel rim, rollers journaled on the inner ends of the arms and engaging the eccentric surfaces, a pinion having means for rotating the same and meshing with the ring, each of the eccentric surfaces having a notch near its high end for engagement by the adjacent roller to lock the rollers from accidental displacement.

1,296,769. POWER-TRANSMITTING MECHANISM. RICHARD T. COOKE, Indianapolis, Ind. Filed Oct. 5, 1918. Serial No. 257,081. 2 Claims. (Cl. 64—96.)



1. In the transmission device the combination of a driving shaft, a driven shaft, a receptacle carried by said driven shaft, a viscous liquid in said receptacle, a paddle rigidly mounted on said driving shaft, a dam dividing said receptacle into two compartments and a connection between said compartments whereby the liquid can be driven from one to the other by the action of the paddle substantially as and for the purpose set forth.

1,296,770. AIRPLANE LANDING-GEAR. GLENN H CURTISS, Garden City, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Original application filed Dec. 22, 1916, Serial No. 138,499. Divided and this application filed Apr. 5, 1918. Serial No. 226,860. 6 Claims. (Cl. 244—2.)

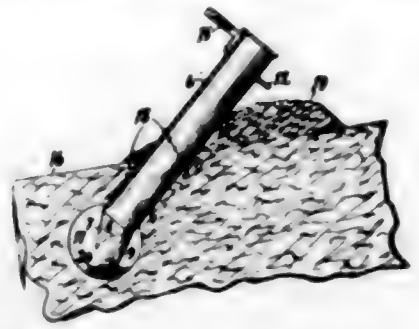


1. In a landing gear for airplanes, the combination with the fuselage, of downward extending struts connecting with the fuselage at their upper ends, and fairing for the struts of gradually increasing depth from the lower strut ends upwardly, the fairing being connected with the fuselage to conjointly function as strut braces.

1,296,771. GOPHER-POISONER. JOSEPH A. DADY, Kellogg, Minn. Filed Sept. 20, 1918. Serial No. 254,987. 1 Claim. (Cl. 43—14.)

In a gopher poisoner of the class described, a tube having its lower end pointed to a cone-shape and provided with a lateral aperture, said tube having near its upper end a longitudinal slot with a lateral notch near its top end, a hinged valve arranged to close said aperture, an operating rod attached with one end to the inner side of

the valve and extending wholly inside the tube to the said slot, and having there a laterally pointing handle



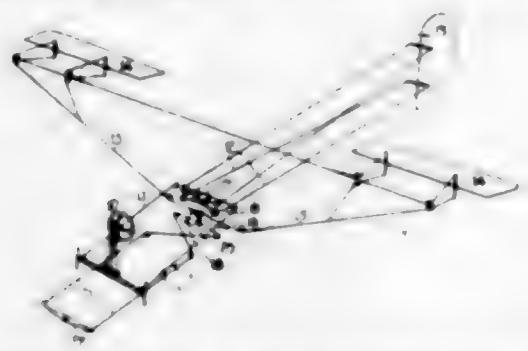
projecting outward through the slot and adapted to hold the valve closed when engaged in the notch of the slot.

1,296,772. FEED-BOX. CLARENCE I. DAILEY, Jeffersonville, Ind. Filed July 22, 1918. Serial No. 246,193. 1 Claim. (Cl. 119—61.)



In a device of the class described, the combination of a box, an apertured feed plate positioned within said box, the side edges and one end of said feed plate being spaced from the walls of the box, a pin carried by one end of said feed plate and engaging one wall of said box, thus holding the plate against shifting into engagement with the inner surface of the box and a removable cover extending transversely of said box, thus allowing access to the interior of the box whereby the contents thereof may be removed through and around said plate causing the forward end of the plate to move downwardly and gradually feed the contents of the box toward the front end of the plate.

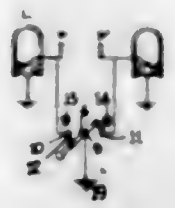
1,296,773. CONVERTIBLE CONTROL SYSTEM. NELSON W. DALTON, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Oct. 13, 1916. Serial No. 125,420. 16 Claims. (Cl. 244—29.)



1. A convertible control system comprising the control rudders of an aircraft, a control mechanism including one each of the elements common to each of two types of control mechanisms, one each of those elements individual to each of the two types, and interchangeable and detachable coupling devices intermediate said elements and said control rudders, whereby the rudders may be connected up according to either type of control.

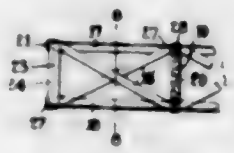
1,296,774. MAGNETO-CUT-OFF SWITCH. NELSON W. DALTON, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Nov. 11, 1916. Serial No. 130,811. 8 Claims. (Cl. 175—183.)

5. The combination with a dual magneto system for explosion motors, of a magneto switch comprising opposed contacts, means movable into and out of engagement with the respective contacts to simultaneously render both magnetos either operative or inoperative, and devices inde-



pendently coöperating with the respective contacts to render either magneto separately inoperative.

1,296,775. AEROFOIL CONSTRUCTION. NELSON W. DALTON, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Apr. 16, 1917. Serial No. 162,530. 6 Claims. (Cl. 244—31.)

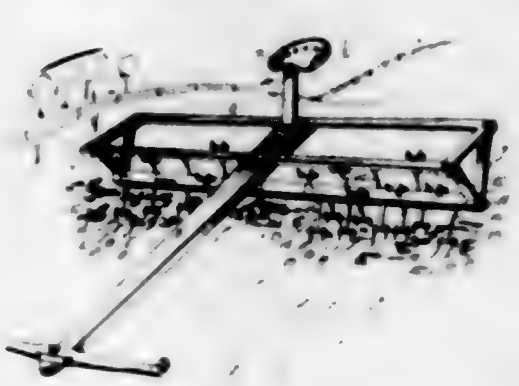


1. An aerofoil surface for aircraft including a plurality of intersecting longitudinally extending and transversely extending members, the longitudinally extending members comprising top chords and bottom chords and the transversely extending members comprising top chords and bottom chords, and connections between the chords of the longitudinally extending members located at the points of intersection of the transversely extending members whereby said connections jointly function as connections between the chords of the transversely extending members.

1,296,776. PAINT OR VARNISH AND PAINT OR VARNISH INGREDIENT. MARC DARRIN, Wilkinsburg, Pa., assignor to H. Koppers Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 20, 1918. Serial No. 242,637. 13 Claims. (Cl. 134—52.)

13. A paint or varnish comprising a coal tar pitch and crude solvent naphtha which has been subjected to an autoclave treatment and to a distillation process.

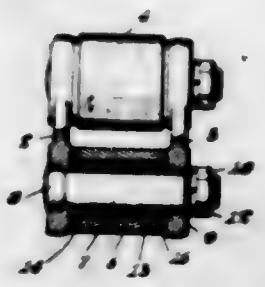
1,296,777. ROTARY HARROW. CLYDE L. DELAY, Sandborn, Ind. Filed July 8, 1918. Serial No. 243,792. 5 Claims. (Cl. 55—11.)



1. The combination in a tilling device of a rotary element, a plurality of radial arms thereon, a plurality of tilling teeth on each of said arms, and means on said arms whereby each of said teeth may be moved into and held in angular adjustments relative to said radial arms.

3. The combination in a tilling device, of a rotary shaft, a plurality of annular series of arms thereon, each arm of one series extending radially from the shaft, a cross-bar for each of said arms, each cross-bar being parallel with the axis of said shaft, and a plurality of tilling teeth on each cross-bar.

1,296,778. SPRING-SHACKLE. ERIE H. DELLING, Newton, Mass. Filed Dec. 9, 1918. Serial No. 265,906. 8 Claims. (Cl. 267—37.)



7. The combination with a spring eye, of shackle links at opposite ends of said eye, a bolt extending through said links and said eye, said links being provided with tapered seats, a tapered head on said bolt fitting in one of said seats, a split tapered bushing on said bolt fitting in the other seat, a spring washer bearing against said bushing, and a nut threaded on said bolt and bearing against said washer, whereby the pressure of said washer urges said bushing and said bolt head into their tapered seats and thereby forces said links toward said spring eye.

1,296,779. RECORD-CLEANER. WILLIAM L. DENIO, Rochester, N. Y., assignor of one-half to Harold H. Simms, Rochester, N. Y. Filed May 23, 1918. Serial No. 236,229. 3 Claims. (Cl. 274—1.)

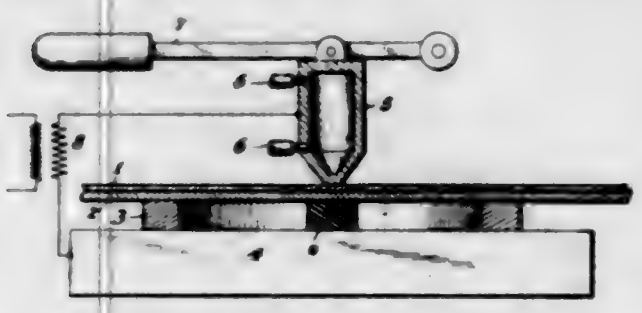


1. A talking machine comprising a rotary table with a record centering pin, a record on the table, and a reproducer coöperating with the record; combined with a cleaner held by the centering pin arranged to engage the reproducer to operate over the face of the record as the latter turns with the table.

2. A cleaner for records of talking machines comprising an elongated flat strip having an opening at one end for the record centering pin and a brush surface on its under face for coöperating with the grooved face of the record when the latter turns with the table.

3. A cleaner for records of talking machines comprising an elongated strip of sheet material having near one end a plurality of openings at different distances from the end to fit on the centering pin of a record supporting table, and a strip of textile material, with a pile or nap, secured to the elongated strip to coöperate with the grooved face of the record as the latter turns with the table.

1,296,780. ELECTRIC WELDING. FRANK L. DYER, Montclair, N. J. Filed Dec. 20, 1917. Serial No. 208,167. 4 Claims. (Cl. 219—10.)



1. The process of electrically welding two thin plates or similar metal objects together, by a series of disconnected separate welds each of small area, which consists in pressing a single electrode of small contact area against one of the plates to thereby apply pressure between the plates in the locality of the desired weld, in passing an electric current between the electrode and plate to concentrate the current at and in the neighborhood of the contact whereby the welding heat thus produced will be conducted to the surfaces to be welded and a weld will be formed under the pressure so imposed, and in diffusing the current radially to a contact of large area located annularly with respect to the electrode and at a substantial distance therefrom, substantially as set forth.

1,296,781. SYSTEM OF AUTOMOBILE TOWAGE. STERLING OWEN EDMONDS, Eagleville, Tenn. Filed June 4, 1917. Serial No. 172,685. 3 Claims. (Cl. 180—11.)



1. A system of automobile towage, comprising a vehicle to be towed having an axle with ground wheels; a towing vehicle carrying a prime mover and having at its forward end, steering ground wheels, and at its rear end, an axle driven by said prime mover, and a combined supporting and coupling structure connecting the rear end of the towing vehicle to, and supporting it on, the steering axle of the towed vehicle, and driving connection between said driven axle and the said ground wheels of the towed vehicle, said supporting and coupling structure embodying in its construction an inverted U-shaped hanger suspended from the towed vehicle in a manner to support the chassis of the towing vehicle and struts connecting the driven axle of the towing vehicle with the steering axle of the towed vehicle.

2. A system of automobile towage, comprising a vehicle to be towed having a steering axle with ground wheels; a towing vehicle carrying a prime mover and having at its forward end, steering ground wheels, and at its rear end, an axle driven by said prime mover, and a combined supporting and coupling structure connecting the rear end of the towing vehicle to, and supporting it on, the steering axle of the towed vehicle, and driving connection between said driven axle and the said ground wheels of the towed vehicle, said supporting and coupling structure embodying in its construction an inverted U-shaped hanger suspended from the towed vehicle and having its ends upturned in a manner to support the chassis of the towing vehicle.

3. A system of automobile towage for existing vehicles, comprising a vehicle to be towed having a steering axle with ground wheels; a towing vehicle carrying a prime mover and having at its forward end, steering ground wheels, and at its rear end, an axle driven by said prime mover, and a combined supporting and coupling structure connecting the rear end of the towing vehicle to, and supporting it on, the steering axle of the towed vehicle, and driving connection between said driven axle and the said ground wheels of the towed vehicle, said supporting and coupling structure embodying in its construction an inverted U-shaped hanger suspended from the towed vehicle and having its ends upturned in a manner to support the chassis of the towing vehicle and struts connecting the driven axle of the towing vehicle with the steering axle of the towed vehicle.

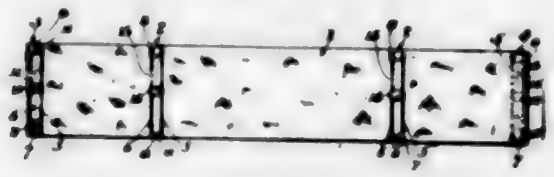
1,296,782. PRINTER'S BLANKET. FRANK E. ELLIS, Revere, Mass. Filed June 30, 1915. Serial No. 37,374. 3 Claims. (Cl. 154—54.5.)



1. A printer's blanket consisting of a body portion of woven woolen fabric having a felted face, and a coating or facing bonded to the said felted face of said fabric and

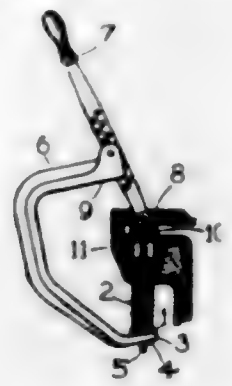
thus permanently associated with said body portion to form a unitary fabric, said coating or facing consisting of a homogeneous mixture of nitro-cellulose and castor oil; said coating or facing being soft and pliable and repellent to printers' ink so as to be adapted to come into direct contact with a freshly printed surface of a paper web without offsetting or slurring the fresh printing.

1,296,783. COLLAR SUPPORT AND FASTENER. TILLIE A. ENNIS, Los Angeles, Cal. Filed Jan. 16, 1918. Serial No. 212,134. 2 Claims. (Cl. 2—91.)



1. In a collar support, a U-shaped pin having straight arms of substantially equal length, a hook at the open end of the pin fastened to one arm and adapted to releasably engage the other arm, a second hook fastened to the first arm near the middle thereof and adapted to releasably engage said other arm, and means at both ends of the pin to fasten it to a collar.

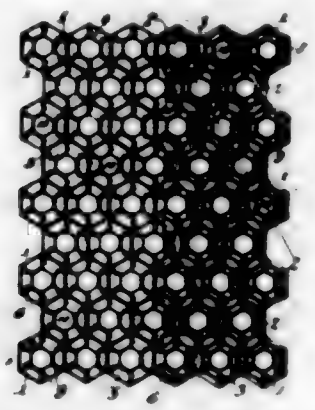
1,296,784. VALVE-LIFTER. ERIC E. EKMAN, Brooklyn, N. Y. Filed Mar. 16, 1918. Serial No. 222,941. 2 Claims. (Cl. 29—87.1.)



1. In combination in a valve lifter, a bracket having a lower bifurcated portion and a slotted block upon its upper portion, a lever movably pinned in said slotted block, and a foot movably jointed to said lever to provide a secondary fulcrum for the same, there being a series of holes in said lever to provide different leverages thereof.

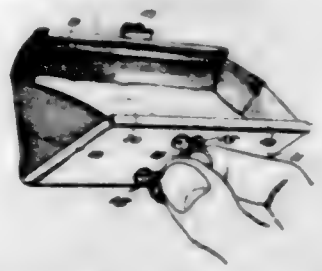
2. The combination in a valve lifter, of a bracket provided with a lower bifurcated portion and in its upper extremity a pin, with a lever operatively supported by said pin passing through one of a series of holes in said lever, and a foot movably joined to said lever.

1,296,785. RADIATOR. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Jan. 16, 1918. Serial No. 212,040. 6 Claims. (Cl. 257—128.)



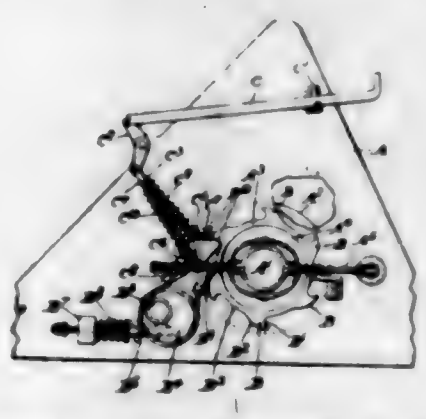
1. A radiator comprising a tube, and radiating means arranged within said tube and comprising a plurality of radiating sections arranged in an annular row and each being of U-shaped form in cross section and having its web innermost and its flanges projecting outwardly into engagement with the bore of said tube, and a retaining member engaging with the webs of said radiating sections.

1,296,786. DRINKING-CUP. VICTOR EMANUEL FERMIER, Forney, Tex. Filed Aug. 2, 1918. Serial No. 247,991. 4 Claims. (Cl. 229—1.)



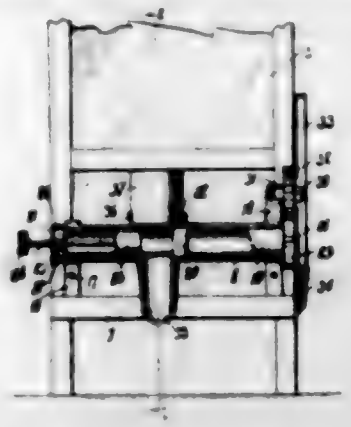
1. The combination of a holder or casing including hinged side plates having bent portions forming clasping members adjacent their free edges, and a foldable impervious fluid holding receptacle within the holder having portions engaged by the said bent clasping portions whereby to removably connect the receptacle with the holder and bring about a folding and unfolding movement thereof with closing and opening movements of the holder.

1,296,787. DETENT. WALTER FERRIS, Milwaukee, Wis., assignor to Bucyrus Company, South Milwaukee, Wis., a Corporation of Wisconsin. Original application filed Mar. 1, 1917, Serial No. 151,859. Divided and this application filed Feb. 23, 1918. Serial No. 218,743. 11 Claims. (Cl. 74—54.)



1. In a detent motion, a ratchet wheel, a pawl engaging said ratchet wheel, means for keeping it in such engagement, and a yielding operating member which may be set to cause withdrawal of the pawl when load is relieved therefrom.

1,296,788. SUGAR-DISPENSING DEVICE. THEODORE FREDERICK, Hammond, Ind. Filed Sept. 19, 1918. Serial No. 254,799. 3 Claims. (Cl. 221—107.)



1. In a sugar dispensing device, the combination with a cabinet, a conduit leading therefrom, a cylindrical casing crossing the lower end of the conduit, a hopper con-

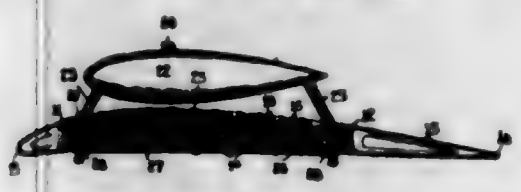
necting these elements, and a spout leading downward from the casing in line with the hopper; of a cylindrical dispensing tube mounted for oscillation within said casing and having an opening substantially at its mid-length with a fixed wall at one side of the opening, a follower movably mounted at the other side of the opening, a screw through one end of the dispensing tube and connected to the follower for adjusting the position of the latter, and manually operable means for turning said dispensing tube, as described.

1,296,789. SCRAPER. HENRY B. GEMMENHAUSEN, Woodland, Cal. Filed Oct. 14, 1918. Serial No. 257,960. 4 Claims. (Cl. 37—7.)



1. In a scraper, a frame movable along the earth's surface and comprising side beams and a cross beam, the latter having its ends secured to said side beams; a scraper element having parallel earth-scraping edges and being rotatably supported by said side beams, its axis of rotation being between and parallel with said edges; stop elements extending radially from the ends of said scraper to points adjacent to the respective side beams and being rotatable with said scraper element; and stop-levers each fulcrumed on said cross beam and movable into and out of the path of rotation of certain ones of said stop elements and being engaged with one of said side beams and thereby supplemented in detaining said scraper element against rotation.

1,296,790. RADIATOR FOR AEROPLANES. WILLIAM L. GILMORE and WILLIAM E. VALK, Jr., Buffalo, N. Y., assignors to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Nov. 16, 1917. Serial No. 202,428. 24 Claims. (Cl. 244—31.)

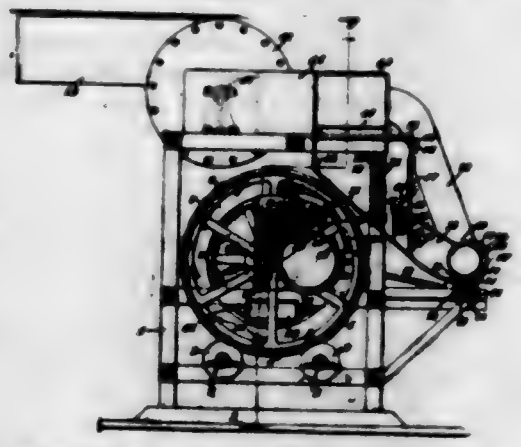


7. The combination with a radiator for aeroplanes of substantially aerofoil form, of means for regulating the quantity of air passing through it.

1,296,791. GRAIN-CLEANER. GUSTAVE W. GRABERT, Mount Vernon, Ind., assignor of one-half to Samuel J. Miller, Mount Vernon, Ind. Filed Dec. 7, 1917. Serial No. 206,005. 6 Claims. (Cl. 130—18.)

1. In a device of the class described, a drum mounted for rotation; a fixed hopper having an open top and extended into the drum, the hopper discharging downwardly directly upon the drum; fixed baffles extended transversely of the hopper; movable baffles disposed below from the fixed baffles and tiltable longitudinally of the hopper; means for tilting the movable baffles, longitudinally of the hopper; drum-carried means for elevating material in the drum and depositing the same in the open top of the hopper; and means for applying suction to the hopper.

2. In a device of the class described, a drum mounted for rotation; a fixed hopper having an open top and extended into the drum, the hopper discharging downwardly directly upon the drum; baffles mounted in the hopper and tiltable longitudinally of the hopper, to cause the material in the hopper to move longitudinally of the hopper as the material passes downward through the hopper; means for holding the baffles in adjusted tilted position of the hopper; drum-carried means for elevating material in the drum and discharging the same into the open top of the hopper; and means for applying suction to the hopper.

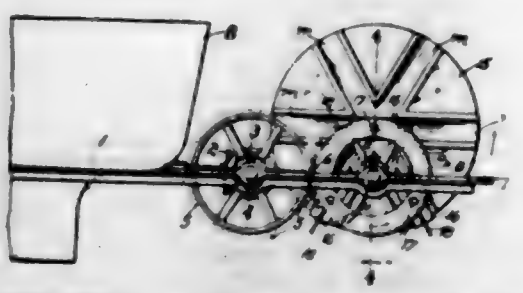


3. In a device of the class described, a drum mounted for rotation; a hopper in the drum and discharging into the drum; drum carried means for elevating the material in the drum and depositing the same in the hopper; a suction conduit communicating with the hopper intermediate the ends of the hopper and extended upwardly to form a top member; means for applying suction to the top member; a receiver whereinto the top member discharges; means for controlling the flow of material from the top member to the receiver; an extension communicating with the receiver and having an outlet; and a suction tube in the extension and having an opening communicating with the extension.

4. A device of the class described, a top member; means for discharging material into the top member; a receiver communicating with the top member and having an extension; means for controlling the flow of material from the top member into the extension; and a suction tube in the extension, the suction tube having an opening communicating with the interior of the extension, and the extension having a discharge outlet disposed adjacent the suction tube.

5. In a device of the class described, coöperating elements comprising a receiver and an extension; a pivotally mounted baffle located in one of the coöperating elements; a suction tube in the extension and having an opening communicating with the interior of the extension, the extension having an outlet disposed adjacent the suction tube and located between the baffle and the opening.

1,296,792. PROPELLER AND CURRENT-MOTOR. JAMES G. GRACEY, St. Louis, Mo., assignor to Economic Propeller Company, St. Louis, Mo., a Corporation of Delaware. Filed Feb. 7, 1916, Serial No. 76,691. Renewed Aug. 10, 1918. Serial No. 249,356. 4 Claims. (Cl. 170—144.)

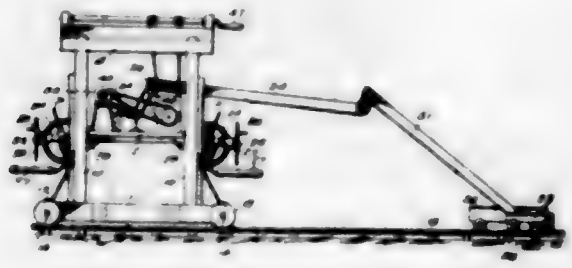


2. In combination with a rotatable member provided with a series of radial race-ways, a pair of rotatable driving members spaced apart and mounted to rotate about a common axis eccentric to the axis of the race-way member, a hollow shaft connecting the members aforesaid, a stationary rod serving as a bearing for and traversing the hollow shaft, one end of the rod projecting outside the hollow shaft and beyond one of the rotatable driving members, means for rigidly supporting said projecting end of

the rod, parallel shafts mounted loosely in and between the driving members, one end of each shaft projecting beyond the driving member which is adjacent the race-way member, blocks rigidly secured to said shafts and free to traverse the race-ways, and blades mounted centrally and rigidly to the shafts between the driving members and clearing said members.

4. In combination with a rotatable member provided with a series of race-ways disposed diametrically and intersecting at the axis of said member, a pair of rotatable driving members spaced apart and mounted to rotate about a common axis eccentric to the axis of the race-way member, blade-shafts supported loosely by, and between the driving members, slides secured at the terminals of the blade-shafts and free to traverse the race-ways, and blades on the shafts between the driving members.

1,296,793. BRICK OR TILE APPARATUS. CHARLES M. GROVES, Hudson, Wyo. Filed May 9, 1918. Serial 233,591. 7 Claims. (Cl. 193—3.)



1. An apparatus of the character described, comprising a wheeled frame, a vertically adjustable platform within the frame, a pair of conveyers extending from the platform and movably connected thereto, a forming machine mounted on the platform to receive material from one of said conveyers and discharge formed articles upon the other of said conveyers, means for adjusting the platform vertically, and means for adjusting the latter of the two conveyers in a vertical direction.

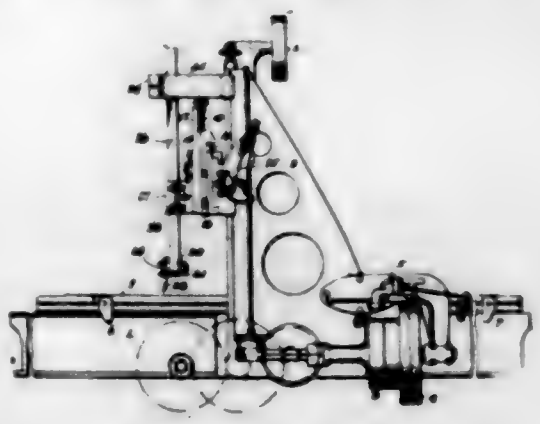
7. An apparatus of the character described, comprising a wheeled frame, a platform adjustable vertically within the frame, a wheeled loading platform, a conveyer extending from the said loading platform to the vertically adjustable platform, said conveyer being in flexibly connected sections movably connected to both the loading and vertically adjustable platforms, a forming machine on the vertically adjustable platform receiving material from the said conveyer, and a second conveyer leading from the vertically adjustable conveyer and movably connected thereto for receiving and discharging formed articles from the said machine and all substantially as described.

1,296,794. LIQUID-SAMPLER. CHARLES J. HAGGSTROM, Warren, Pa. Filed May 16, 1918. Serial No. 235,042. 4 Claims. (Cl. 137—18.)



1. A liquid sampler comprising a tube, a rod having a helical element thereon, a closure element carried by said rod, means supporting said tube and being movable along said rod, and means coöperative with said helical element and with the first said means so as to effect the closing of an end of said tube by a rotary movement of said closure element while the tube moves downward into contact with said closure element.

1,296,795. PLANER AND ATTACHMENT THEREFOR. WILLIAM J. HAGMAN, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed June 18, 1917. Serial No. 174,517. 7 Claims. (Cl. 90—52.)



1. An attachment for a planer, comprising a long tool-carrying bar adapted to be secured to a tool head, and means adapted to be secured to the planer uprights independently of the cross rail, the said means engaging the bar at a place remote from the tool head and thus relieving the tool head from excess stress.

1,296,796. UNIVERSAL JOINT. EDWARD JOHN HARDY, Coventry, England. Filed Apr. 24, 1918. Serial No. 230,569. 1 Claim. (Cl. 64—96.)

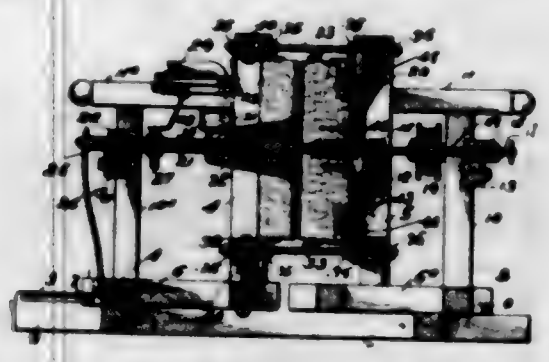


A universal joint comprising a series of layers of textile fabric united with each other, and having openings to receive driving and driven studs, each layer of textile fabric being formed in segments, each segment being of a size to join two adjacent studs, and having its threads running substantially parallel to a line joining the said studs, the joints between the segments in adjacent layers being located between different pairs of studs, for the purpose described.

1,296,797. GRAIN-GRINDING MILL. ASBURY T. HARN, Baileyton, Ala. Filed Dec. 26, 1916. Serial No. 138,934. 2 Claims. (Cl. 83—8.)

1. In a vertical grinding mill, a running stone carrying a crushing cone rigid therewith, a bed stone having a concave bur rigid therewith and adapted to receive said cone, a bed plate, a separate frame support for each

stone hinged to said bed plate, telescoping mandrels carried by said frame supports and means to permit said stones to be shifted apart sufficiently to disengage the mandrels and permit the cone to clear the concave as the stone frames swing apart on their hinge connections to said bed plate.



2. In a vertical grain grinding mill, the combination with a bed stone and its hinged support, of a running stone and its hinged support, a driving mandrel for the running stone which extends therethrough and into the eye of the bed stone, an extension mandrel detachably connected to said driving mandrel, bearings for said mandrels, a spring acting to press the extension mandrel toward the running stone, a set screw to limit the movements imparted to the mandrels and running stone by said spring and to hold the stones in predetermined running position, the stone supports being adapted to move apart sufficiently to disconnect the mandrels and permit the stones to swing with their supports to a horizontal position.

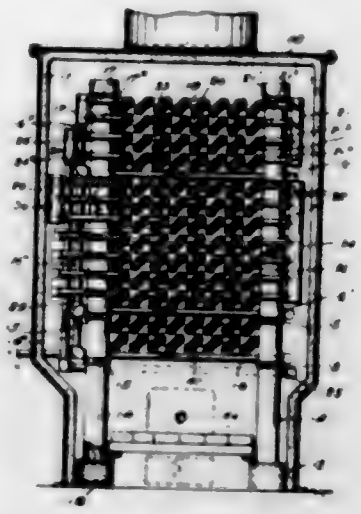
1,296,798. SAFETY OPERATING MECHANISM. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 19, 1914. Serial No. 862,480. 19 Claims. (Cl. 74—46.)



12. In a machine of the kind described, the combination with the actuating eccentric and the work-performing element, of two normally inoperative power-transmitting elements, one being mounted on the eccentric and the other associated with the work-performing element, and means automatically operable just prior to the engagement of the work by the work-performing element to shift one of said elements to establish a positive connection between the two.

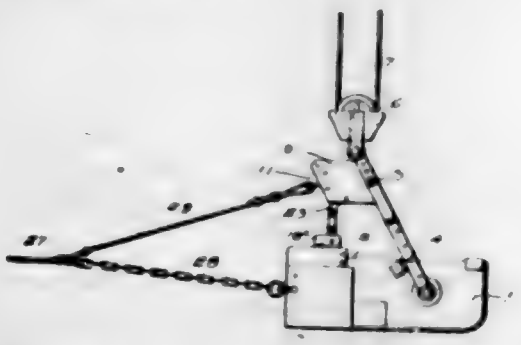
1,296,799. STEAM-BOILER. ADOLPH C. J. HENNIG, Seattle, Wash. Filed May 12, 1917. Serial No. 168,826. 4 Claims. (Cl. 122—247.)

1. In a steam boiler, the combination with the upright steam and water containing headers, and a feed water pipe connected therewith, of series of superposed steam generating coils connected with the headers at different elevations, a pump for effecting the flow of water and steam produced in said coils downwardly through all of said coils and returning the fluids into the steam spaces provided in the upper ends of the headers, and a series of coils connected with the upper ends of said headers and disposed below the aforesaid coils for superheating the steam subsequent to its delivery thereto from the headers.



4. In a steam boiler, the combination with steam and water-containing headers, water-heating pipes connected thereto, and groups of steam generating coils connected with said headers at different elevations, of a pump, connections between said groups of coils and arranged to enable said pump to effect the flow of water from the lower ends of said headers and thence progressively downward through said groups of coils and return the water and the produced steam into the upper ends of said headers, a second series of coils positioned below said steam generating coils, connections betwen said series of coils and the upper ends of the headers, and pressure-reducing means included in the connection between said headers and the said series of coils.

1,296,800. DIPPER OR BUCKET. HENRY HERRING, Kouts, Ind. Filed June 22, 1918. Serial No. 241,412. 8 Claims. (Cl. 37—54.)

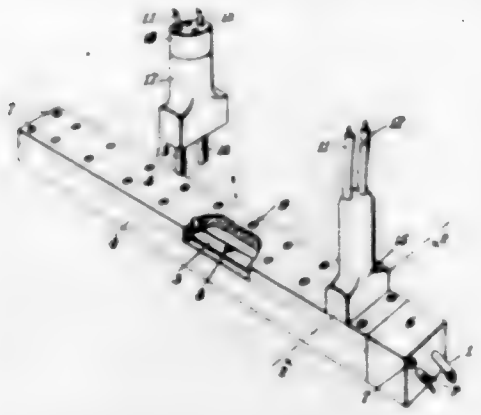


3. A device of the type described, including a bucket having an upper end curved arm, means for resiliently holding said arm in a predetermined position, and a suspending member having a pivoted member carrying a rotary clamping member, said suspending member being provided with a rotary clamping member coöperating with the aforesaid rotary member to receive and automatically clamp therebetween said curved end of said arm.

1,296,801. ELECTRICAL SWITCH DEVICE. WILLIAM F. HERRI, New York, N. Y. Filed Aug. 8, 1917. Serial No. 185,026. 2 Claims. (Cl. 173—334.)

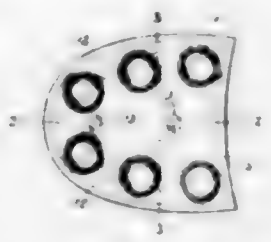
1. A portable multiple tap switch base including a pair of spaced and substantially parallel metal bus bars

which have a solid formation and are of uniform cross section from end to end, said bus bars being provided at corresponding intervals throughout their length with transversely disposed parallel openings, and an elongated substantially rectangular insulating block formed of tough material and adapted to be shifted from place to place, said block completely housing the bus bars and being di-



vided longitudinally into complemental sections which fit against the same from opposite sides, openings being provided in the block which register with the apertures of the bus bars and are adapted to direct the conducting arms of a detachable plug into the apertures of the bus bars, the base of the block being flat and serving to support the block in an upright position when it rests loosely upon a supporting surface.

1,296,802. RESILIENT TREAD FOR SHOES. MORRIS HIRSHFIELD, New York, N. Y. Filed Nov. 1, 1917. Serial No. 199,749. 1 Claim. (Cl. 36—36.)



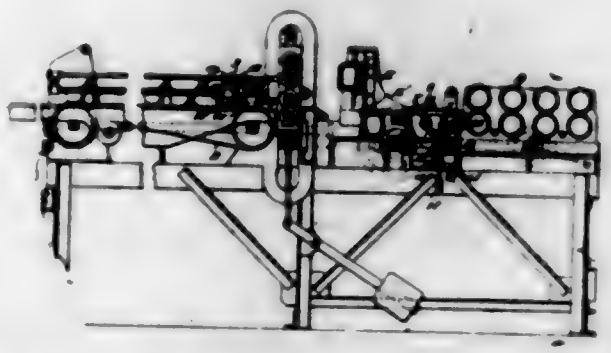
A tread for shoes comprising a plate having a central recess and a peripheral flange outside of said recess and being provided with a series of openings located at spaced intervals on said flange and with apertures in said recess for the accommodation of fastening devices, said plate being otherwise of unbroken continuity, and a heel of resilient material completely embedding said plate and fitting in surface contact with the opposite faces of said recess and said peripheral flange, said heel having a series of integral bonding portions extending through said series of openings transversely to said plate.

1,296,803. SHEET-TRIP. OTTO M. HOCH, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 11, 1917. Serial No. 161,379. 14 Claims. (Cl. 164—49.)

1. In a machine of the class described, the combination with clutch-controlling mechanism of an oscillatory shaft having a latch arm rigid therewith, means connecting said shaft with the clutch-controlling mechanism, a latch arranged to engage said latch arm to prevent the movement of the shaft, and a trip lever for operating the latch to disengage the same from the latch arm.

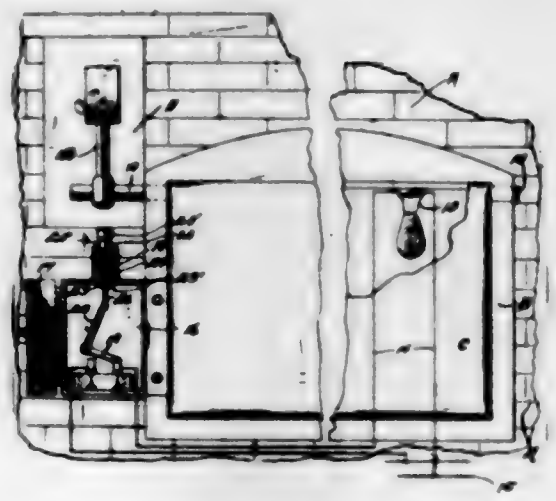
5. In a machine of the class described, the combination with a clutch rod, of an oscillatory arm positively connected therewith, a cam lever, a cam for controlling the latter, a latch connection between the cam lever and oscillatory arm, means controlled by the work for destroying the latch connection, and means for reëstablishing said latch connection.

10. In a machine of the class described, the combination with a clutch-controlled cam, of a shaft, an arm rigid with the shaft and having connection to the clutch, a pair of reversely acting cam levers loosely mounted on said shaft, a latch for securing one of said levers to the shaft, means for rendering the latch inoperative, and means operated by the other cam lever for subsequently rendering said latch operative.



14. In a machine of the class described, a clutch-controlling mechanism, an oscillatory shaft, a reciprocating rod connected to the shaft and to the clutch-controlling mechanism, a latch arm rigid with the shaft, a latch engageable with the latch arm to prevent the movement of the latter in one direction, a trip lever for rendering the latch inoperative, and a lost-motion connection between the trip lever and the latch, whereby the lever may continue its movement independent of the latch.

1,296,804. BAKER'S-OVEN LIGHT. JOHN F. HORNSINGER, Jr., Lancaster, Pa. Filed Sept. 23, 1918. Serial No. 255,333. 1 Claim. (Cl. 240—5.)



The combination with a baker's oven of an illuminating attachment, comprising a housing fixed to the door frame of the oven and having a plunger socket in its top, illuminating means arranged within the oven, a plunger slidably fitted in the socket and having a reduced stem working through the top of the housing, means within the housing for turning on and off the illuminating means, a swinging door on the housing for closing the same, a coiled spring concealed within the socket and active upon the plunger to normally elevate the same, a weighted arm connected with the door for movement therefrom, and disposed to engage and depress the plunger when the door is opened, and an adjustable collar on the stem of the plunger to limit the elevating movement thereof.

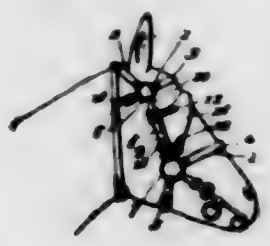
1,296,805. KNIFE. BOLESLAW HOLOWNIA, Syracuse, N. Y. Filed Dec. 10, 1918. Serial No. 266,053. 4 Claims. (Cl. 30—20.)

1. A device of the class described comprising a blade having a cutting edge, a disk eccentrically journaled

adjacent one end of the blade, a guard for said edge attached to the disk and adapted for adjustment at different distances from said edge and adjustment retaining means for the disk.



1,296,806. BRIDLE. WILLIAM T. HOPSON, Lexington, Miss. Filed Dec. 5, 1918. Serial No. 265,382. 3 Claims. (Cl. 54—6.)



2. A bridle including upper and lower units adjustably connected together and a throat strap pivoted on said upper unit, throat latches connecting said strap to said upper unit and means adjustably connecting the ends of said strap.

1,296,807. ROAD-MACHINE. JAMES B. JARMIN, Spokane, Wash. Filed Oct. 22, 1917. Serial No. 197,875. 5 Claims. (Cl. 37—7.)



1. The combination in a wheeled scraper with its main frame including fixed laterally projecting transverse bars, of a longitudinally slidable scraper frame including longitudinal bars below the projecting transverse bars and longitudinal rods above the transverse bars, scrapers supported from the longitudinal bars, a draft bar connecting the longitudinal bars, and an adjustable draft chain connecting said draft bar to the main frame.

3. The combination in a wheeled scraper with its main frame including fixed transverse bars, of a longitudinally slidable scraper frame including longitudinal bars below the transverse bars and supporting rods above the transverse bars, arched bars attached to said longitudinal bars, scraper blades tiltably supported from said arched bars and means for tilting the blades, a draft bar pivotally connecting the longitudinal bars, and an adjustable draft medium connecting the draft bar with the main frame.

5. The combination with a scraper frame including a pair of arched longitudinal bars, of a pair of transverse scraper blades, a clevis pivoted at the end of each longitudinal bar, stems on the clevises swiveled in pairs in said scrapers, means for tilting the scraper blades, and means for adjusting the blades on their swiveled connections.

1,296,808. INCLOSED FUSE. GEORGE McD. JOHNS, St. Louis, and JOHN B. TRESCOTT, Midland Heights, Mo., assignors to Killark Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 2, 1917. Serial No. 140,120. 14 Claims. (Cl. 175—273.)



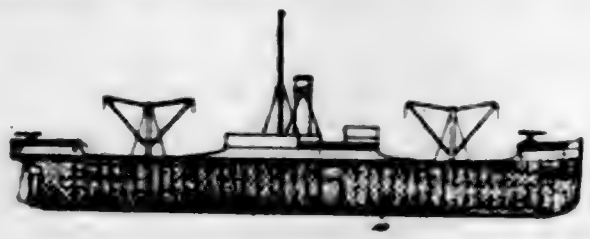
1. A renewable fuse of the class described comprising, in combination, a shell, a bar extending transversely across the shell at an end, the bar being fixed at its ends to the shell, a fuse-strip extending longitudinally within the shell, the strip having an end removably disposed upon said bar, an end-cap fitting removably upon the shell, and coöperating jaws on the end-cap projecting into the shell, said jaws clampingly engaging removably with the strip and bar for detachably securing the same together.

4. In a renewable fuse, the combination with a shell, of a bar extending transversely across, and having its ends fixed to, the shell, said bar intermediate its ends being sinuous in shape in longitudinal section, and a fuse-strip adapted for insertion within the shell and to engage at an end with said bar, the strip having a shape at its said end to conform approximately to the shape of the bar.

8. In a fuse, a flat fuse-strip provided within its area with a longitudinally disposed depression.

12. In a fuse of the class described, a shell, a fuse-strip within the shell, an end-cap fitting upon the shell and having engagement with the strip, and an insulation-cap fitting upon the shell over said end-cap.

1,296,809. REINFORCED CEMENT OR CONCRETE SHIP CONSTRUCTION. FREDERICK G. JORDAN, Cement, Wash. Filed May 11, 1918. Serial No. 234,004. 15 Claims. (Cl. 114—65.)



1. A reinforcement for concrete and cement vessels, including an embedded hull reinforcing member in sections, connected end to end, and bent to pass spirally around the sides, bottom, bow and stern, and forming an open mesh framework.

1,296,810. BOTTLE-CAPPING MACHINE. JOHN C. KAPPELHOFF, St. Paul, Minn. Filed Sept. 4, 1917. Serial No. 189,652. 1 Claim. (Cl. 113—2.)

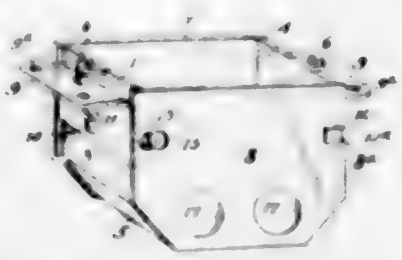
In a bottle capping machine, a bottle support consisting of a vertically slidable plunger having closed top and bottom and composed of two telescoped tubular sections and a hollow support upon the bottom of the lower section, a tubular inner member slidable with its upper portion in the upper section and having about its lower end a fixed collar slidable in the lower section and arranged to rest upon the hollow support; a partly

compressed coil spring inserted between the said fixed collar and the bottom end of the upper plunger section; a rod secured with its upper end in the top closure of the upper plunger section and having on its lower end



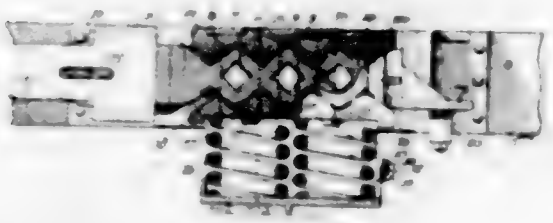
threaded a nut arranged to bear up under the member having the collar, and means preventing accidental turning of said nut; said hollow support having a clearance for said lower end of the rod and the nut on same.

1,296,811. SWITCH-BOX. CLAUDE A. KELLER, Cleveland, Ohio, assignor to The Mansfield Electric Hardware Manufacturing Company, Mansfield, Ohio. Filed Mar. 7, 1916. Serial No. 82,638. 6 Claims. (Cl. 247—5.)



1. A switchbox comprising a central portion forming bottom and sides, end plates secured to the central portion, brackets upon the sides of the box, said brackets having engagement with the ends of the box, thereby to prevent side or torsional movement of the brackets, and means for holding the brackets to the sides.

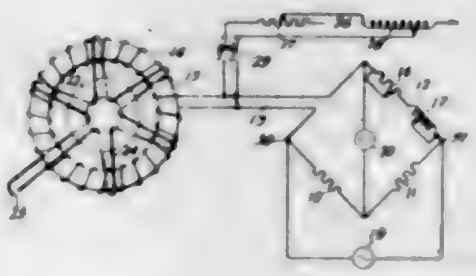
1,296,812. FRICTION DRAFT-GEAR. WILLIAM L. KELLOGG, Detroit, Mich., and RICHARD W. BURNETT, Chicago, Ill.; said Burnett assignor to said Kellogg. Filed Aug. 13, 1917. Serial No. 185,934. 11 Claims. (Cl. 213—64.)



1. In a friction draft gear the combination of a member adapted to be connected to a draw bar and having its opposite faces formed to provide a plurality of pairs of oppositely directed planes inclined to the longitudinal axis of said member, resiliently biased means capable of movement only in directions transverse to said longitudinal axis and frictionally engaging said planes to retard longitudinal movement of said member a housing embracing said member and resiliently biased means and cooperating lugs on member and housing to positively limit longitudinal movement of said member.

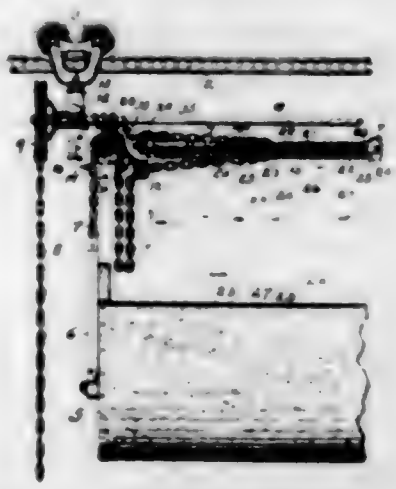
10. In a friction draft gear for railway cars the combination of a member adapted to be connected to a draw bar and having its opposite faces formed to provide a plurality of pairs of oppositely directed planes inclined to the longitudinal axis of said member, resiliently biased means capable of movement only in directions transverse to said longitudinal axis and frictionally engaging said plane to retard longitudinal movement of said member in both directions, means to positively limit longitudinal movement of said member, a housing embracing said member and resiliently biased means and connections between said housing and the car body to prevent longitudinal movement of the former while permitting vertical movement thereof relatively to said car body.

1,296,813. CORE-LOSS TESTER. GEORGE A. KELSALL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 17, 1916. Serial No. 104,183. 8 Claims. (Cl. 175—183.)



1. The method of measuring core losses which consists in finding the effect of a core to be tested upon the intensity of the current flowing through a winding and producing in said current, by an equivalent circuit, a change proportional to said first change.

1,296,814. HOISTING DEVICE FOR ELEVATED CARRIERS. ALFRED W. KNUTSON, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed Nov. 2, 1917. Serial No. 199,870. 7 Claims. (Cl. 254—178.)



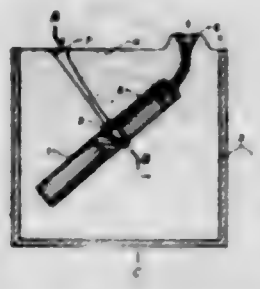
1. In a hoisting-device, a load, a pair of hoisting-chains secured to opposite ends of the load, a spring connecting adjacent ends of said chains, and means for applying power to the chains.

4. In a hoisting-device, a load, a hoisting-chain for raising and lowering it, a sliding take-up, and a spring for automatically moving the take-up in one direction.

7. In a hoisting-device, a load, a hoisting-chain connected therewith, a sprocket-wheel for driving it, means

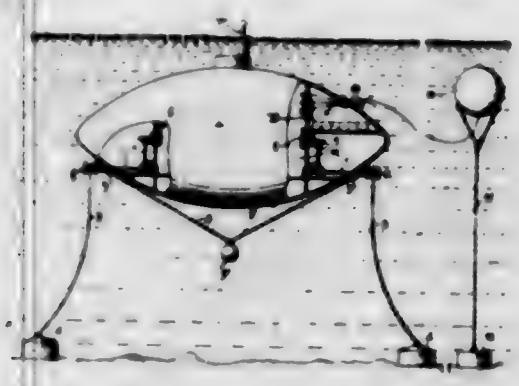
for driving the sprocket-wheel, a guide-shoe having a nose substantially concentric with the sprocket-wheel and overlying the chain, said shoe having also a mouth through which the chain passes, a slidable sheave over which the chain passes, a non-slidable sheave over which it also passes, and means for securing that end of the chain which is distant from the load.

1,296,815. PROCESS FOR WELDING TWO METALS OF UNEQUAL FUSIBILITY. CONRAD KOHLER, Zurich, Switzerland. Filed Dec. 28, 1917. Serial No. 209,307. 5 Claims. (Cl. 22—203.)



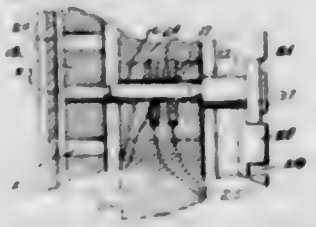
1. A process for welding two metals of unequal fusibility, which comprises welding a layer of the metal of easier fusibility to the metal of less fusibility by a reducing flame thereby simultaneously effecting the heating of the metals to their uniting temperature and simultaneously reducing any oxids to metal, and thereafter welding to said layer a body of like metal.

1,296,816. SUBMERSIBLE MINE CONTROLLER AND OBSERVATION STATION. JAN A. KRECIOCH and ALBERT KRECIOCH, Fall River, Mass. Filed Oct. 3, 1917. Serial No. 194,560. 1 Claim. (Cl. 102—3.)



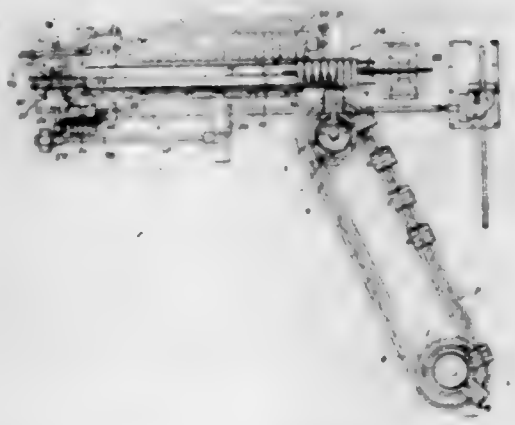
A submersible mine controller and observation station comprising a hull substantially egg-shape in form with its longitudinal axis horizontally disposed, anchoring means coacting with the opposite end portions of the hull and serving to maintain the longitudinal axis of the hull substantially horizontal, stabilizing means connected with the opposite end portions of the hull to afford further means for maintaining said hull substantially horizontal, and a periscope carried by the hull.

1,296,817. WINDOW-FASTENER. WILLIAM KUHEPUSS, Brooklyn, N. Y. Filed June 10, 1918. Serial No. 239,155. 3 Claims. (Cl. 16—119.)



3. The combination with a window frame and upper and lower sashes slidable therein, of a locking strip secured to one of the vertical stiles of said window frame and having a plurality of notches therein, a second locking strip secured to one of said sashes and having a plurality of openings therein, a lock casing carried by the other sash, a locking member adjustable in said casing and including a pair of arms engageable in the notches of the first named locking strip when the locking member is in its operative position, a bolt also forming a part of said locking member and having one end engageable in any one of the openings in the second named locking strip when the locking member is in its locking position, and a permutation device associated with said bolt for maintaining the locking member in its operative position.

1,296,818. LEER-CHARGING DEVICE. RICHARD LA FRANCE, Toledo, Ohio, assignor to The Toledo Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 15, 1913. Serial No. 789,779. 11 Claims. (Cl. 49—47.)



1. The combination with a leer-carrier of a pivoted frame arranged over the end thereof, adapted to hold a row of glass articles, means for feeding a row of articles thereon, and means for tilting the frame to discharge the articles upon the leer-carrier.

4. The combination of a leer-carrier, a tilting frame pivoted across and above the rear end thereof, a transverse carrier having a flight parallel with and adjacent the end of the tilting frame, a row of ware-holders on the frame, a pusher adapted to move a charge of the ware from the transverse carrier upon the tilting frame, and means for tilting the frame to discharge the ware upon the leer-carrier.

7. In a leer charging apparatus the combination of the frame, the ring-shaped sprocket wheel 6, the feed carrier passing around the same, the gear wheel 8 secured to the ring-shaped sprocket wheel, a drive pinion engaging the same, a reciprocating pusher lever within the ring-shaped sprocket wheel, a leer carrier, and means for feeding the ware to the leer carrier.

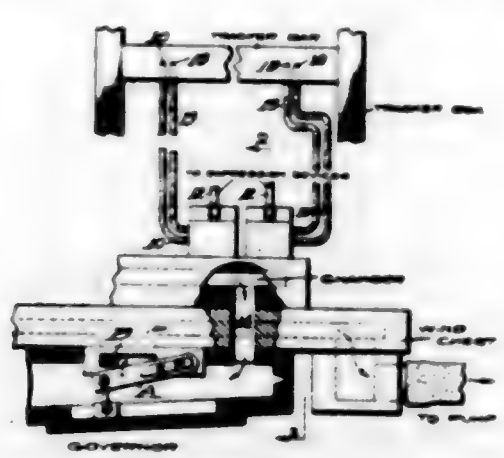
10. In a leer charging apparatus, the combination of an endless carrier having horizontal ware supports, a ring-shaped sprocket-wheel around which the carrier passes, a receiving-carrier adjacent the ring-shaped sprocket-wheel and a pushing device within the ring-shaped sprocket-wheel for pushing the ware from the holders on the endless carrier upon the receiving carrier, and means for transferring the ware from the receiving-carrier to the leer-carrier.

11. The combination with a leer carrier, a movable frame positioned across and over the end thereof, and means for causing a movement of said frame to tilt the latter for the purpose described.

1,296,819. EXPRESSION-CONTROLLING DEVICE. HERBERT J. LA JOIE, Orange, N. J., assignor to Autopiano Company, a Corporation of New York. Filed Oct. 1, 1917. Serial No. 194,136. 2 Claims. (Cl. 84—168.)

1. In a pneumatically operated musical instrument, means for throwing expression controlling devices into and out of operation comprising a chamber, a connec-

tion from said chamber to an exhaust pump, a governor arranged between said chamber and said connection for maintaining a constant tension in said chamber, connections from said chamber to the expression controlling

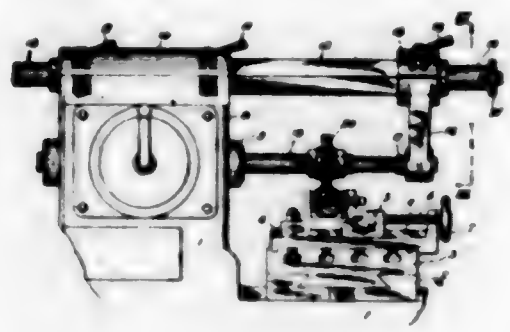


devices, valves in said connections, means for operating said valves, a tracker having accent controlling openings, and connections therefrom to the means for operating said valves.

1,296,820. PROCESS FOR THE PRODUCTION AND PURIFICATION OF AMMONIA. WALTER S. LANDIS, New York, N. Y., assignor to American Cyanamid Company, New York, N. Y., a Corporation of Maine. Filed Nov. 5, 1918. Serial No. 261,198. 9 Claims. (Cl. 23—21.)

1. The process of making ammonia from an impure compound of the nature of a cyanamid or a cyanid, which consists in mixing said compound with water to form a slurry; blowing an inert gas through said slurry to remove some of the impurities present; and subjecting the slurry to the action of heat and pressure to produce the desired ammonia, substantially as described.

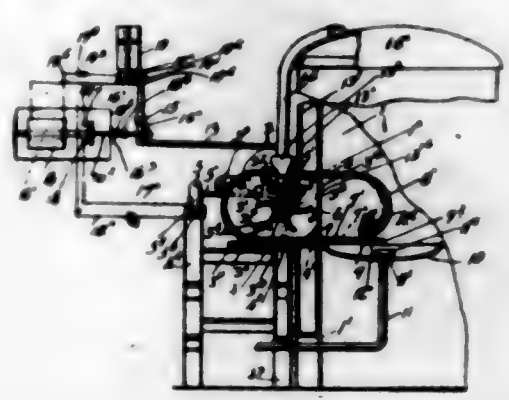
1,296,821. ARBOR SUPPORT. ERNEST J. LEES, Cleveland, Ohio, assignor, by mesne assignments, to Hosea T. Bradner, Gates Mills, Ohio. Filed Apr. 26, 1918. Serial No. 230,979. 9 Claims. (Cl. 90—18.)



1. An arbor support comprising a column provided with an angular socket, an over-arm having a section of corresponding angularity as and fitted in said socket, another section of said over-arm being rounded of reduced size and adapted to be withdrawn into said socket, and an arbor support fitted to said angular section and adapted to be swung around when such rounded section occupies said socket.

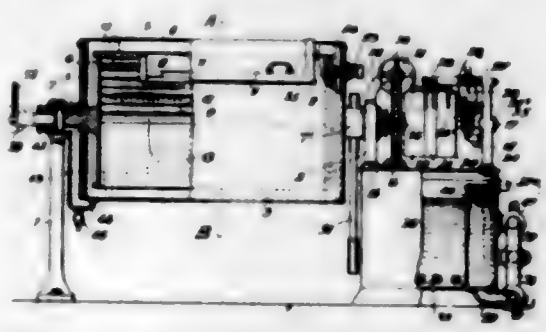
1,296,822. OIL-BURNER. WILLIAM HENRY LEGG, Toronto, Ontario, Canada. Filed May 10, 1918. Serial No. 233,738. 9 Claims. (Cl. 158—77.)

8. In a device of the class described, a casing having air orifices in the end walls thereof and a front discharge opening and air orifices in the bottom wall thereof, means for circulating the supply of air passing through such end orifices and bottom orifices, a fan revolubly mounted within the casing above such bottom orifices, means for supplying oil by gravity on to the



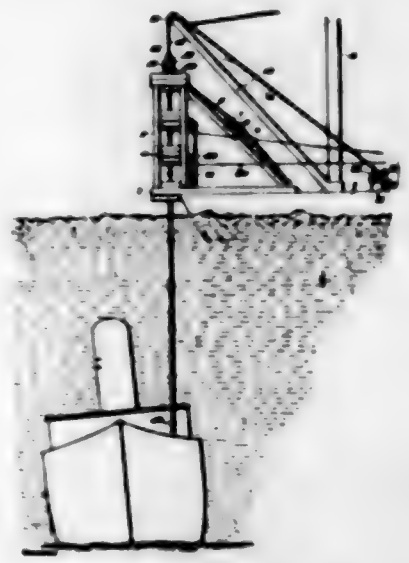
blades of the fan, a plate located in front of the discharge opening against which the oil is projected, and means for heating such plate.

1,296,823. WASHING AND RINSING MACHINE. EDUARD LEHMANN, Zurich, Switzerland. Filed July 6, 1917. Serial No. 178,974. 6 Claims. (Cl. 68—18.)



2. In a washing machine, in combination, a rotatable shell, a perforated rotatable drum in said shell, means for rotating the drum, a tank for washing fluid, a conduit connecting said tank and shell, a reversible rotary pump interposed in said conduit, and mechanism for simultaneously reversing the direction of rotation of said drum and pump.

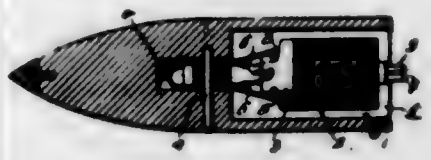
1,296,824. MEANS FOR RAISING SUNKEN VESSELS. GEORGE G. LEMONS, Prescott, Ariz. Filed Aug. 31, 1918. Serial No. 252,166. 8 Claims. (Cl. 114—51.)



2. The combination of a drill having a screw at the lower end thereof, a pivoted anchor normally retained in a pocket in the drill, gravity influenced wings pivotally secured to the drill above the anchor, latching

means for the anchor, releasing means for said latching means, guide means for the drill, means for revolving the drill comprising rollers and operating means therefor, means for regulating the contacting engagement of certain of said rollers with said drill, and suspending means for said drill.

1,296,825. BOBBIN-HOLDER FOR SHUTTLES. SAUL R. LIBERTY, Pawtucket, R. I. Filed July 29, 1918. Serial No. 247,224. 1 Claim. (Cl. 139—27.)



In combination with a shuttle having the usual bobbin recess and a spindle pivoted at one end to swing into said recess, a pair of yielding arms disposed one at each side of the pivoted end of said spindle and connected with the latter for movement bodily therewith, said arms having bobbin holders, and a pair of release arms pivoted at their upper ends in one end of said bobbin recess, and having downwardly diverging lower ends disposed between said spindle and said yielding arms and in the upward path of the formers, whereby raising of said spindle will spread said yielding arms to release the bobbin.

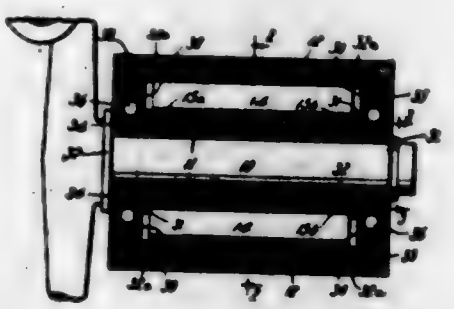
1,296,826. PIANO-ACTION. FREDERICK A. LINGSCH, New York, N. Y. Filed July 7, 1917. Serial No. 179,250. 1 Claim. (Cl. 84—26.)



A piano-action embodying a hammer butt, a back check rigidly mounted on the hammer butt and placed forward thereof, a jack provided at its upper end with a head to coöperate with the front face of the hammer butt, a block pivoted to the jack at its upper end and provided with an eccentric face to engage the back check, and means mounted on the back check for limiting the return movement of the hammer butt after the hammer is operated.

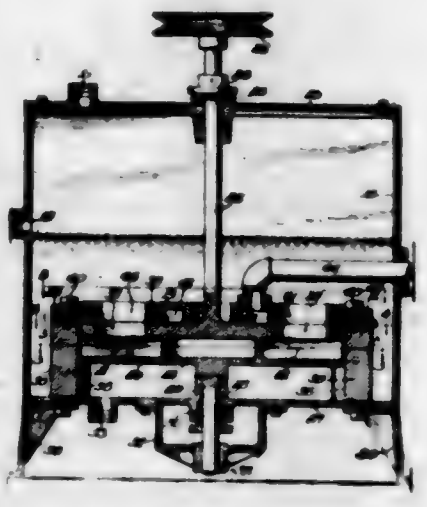
1,296,827. ROLLER-BEARING. LOWELL W. LYONS and JOSEPH WILLS, Los Angeles, Cal.; said Wills assignor to said Lyons. Filed Apr. 4, 1918. Serial No. 226,606. 4 Claims. (Cl. 64—39.)

2. A roller bearing comprising an inner shaft, an outer annular member having an inner cylindrical bearing surface, a cylindrical bearing sleeve on the shaft, rollers between the outer member and the bearing sleeve, the bearing sleeve being removably fitted on the shaft, roller confining collars at the ends of the sleeve, means for holding said collars in place with reference to the shaft, and housing collars mounted in the outer bearing member and extending inwardly to points longitudinally outside the roller confining collars, and end thrust bearings on the shaft outside the housing collars and bearing inwardly against them.



3. A roller bearing comprising an inner shaft, an outer cylindrical bearing member, a cylindrical bearing sleeve removably fitted on the shaft, rollers between the sleeve and the outer member, roller confining collars fitted against the ends of the sleeve and extending radially beyond its outer surface, said collars having reduced parts which extend longitudinally of the shaft away from the sleeve, housing collars fitted into the ends of the outer bearing member and extending inwardly with their inner peripheries surrounding the reduced parts of the roller confining collars, end thrust bearing members mounted on the shaft and bearing longitudinally inwardly against the housing collars, and means to hold said end thrust bearing members inwardly toward each other, said members pressing against the roller confining collars.

1,296,828. HYDROTURBINE VACUUM-PUMP. EDWARD F. MCCARTHY, Chicago, Ill., assignor to Vacuum Machinery Co., Marinette, Wis., a Corporation of Wisconsin. Filed Jan. 28, 1918. Serial No. 214,079. 22 Claims. (Cl. 230—14.)



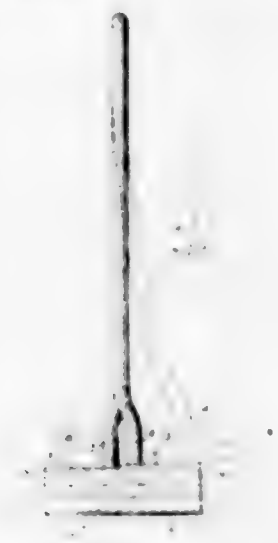
1. A device of the character described embodying a submerged rotary element having a water chamber therein provided with a discharge outlet, means for rotating said element, means whereby the chamber will be opened to the entrance of fluid at a predetermined point in the rotation of the element, said means operating to close the chamber to the entrance of fluid at another predetermined point in the rotation of the element and while the fluid is being discharged through the outlet, a conduit, and provisions whereby the discharge of the fluid from the said chamber will create a suction in the said conduit.

7. A device of the character described embodying a rotary element having a plurality of liquid chambers therein, means for rotating said element, means for alternately filling certain of said chambers with liquid and expelling the liquid therefrom at predetermined points in the rotation of said element, the said means embodying

provisions for trapping and confining the liquid in the chambers during a predetermined portion of the rotation of said element, and means whereby the said operations will produce a partial vacuum.

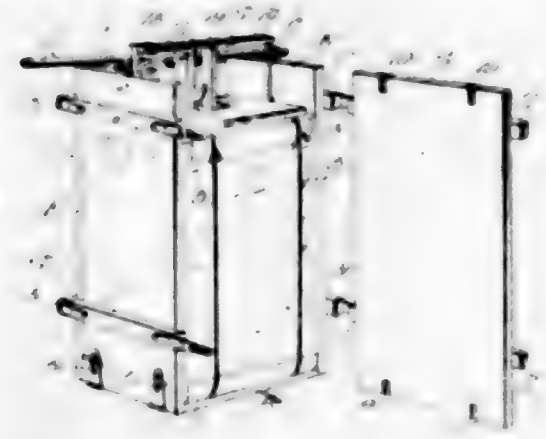
18. A device of the character described embodying a submerged rotary element having a plurality of liquid chambers therein each having a discharge outlet, provisions for filling the chambers with the liquid, means for rotating the element whereby the liquid will be expelled by centrifugal force from said chambers at predetermined points in the rotation of the element, means whereby such expelling action of the liquid will create a partial vacuum, stationary means with respect to which the element is rotatable and operating to close the outlet of the chambers to confine the liquid within the chambers during a portion of the rotation of the said element, and means adjacent the said stationary means adapted to confine the liquid as it is expelled from the chamber and convey the liquid under pressure to another of the chambers.

1,296,829. TROLLEY-WIRE HANGER. JAMES A. MCINTOSH, La Fayette, Ind., assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Feb. 2, 1918. Serial No. 215,014. 5 Claims. (Cl. 191—41.)



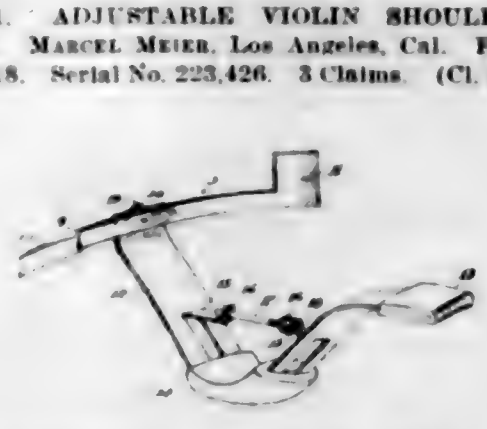
1. A trolley wire hanger comprising a one-piece holding member, a plurality of grooves in the holding member and a supporting member; one end of the supporting member to engage an overhead support, the other end positioned in one of the grooves and secured therein and another groove to receive and securely hold a trolley wire.

1,296,830. BALING-PRESS. EDWIN T. MARSH, Rochester, N. Y. Filed Feb. 27, 1918. Serial No. 219,489. 2 Claims. (Cl. 100—19.)



1. A baling press comprising an upright box open at its top, a pivoted bail extending across said open top, a follower for reception in said box, a hand lever for depressing said follower, and an arm pivoted to the upper side of said follower and adapted to be swung upwardly to a vertical position with its upper end abutting said bail, whereby to hold said follower in lowered position while tying the bale.

1,296,831. ADJUSTABLE VIOLIN SHOULDER-SUPPORT. MARCEL MEIER, Los Angeles, Cal. Filed Mar. 19, 1918. Serial No. 223,426. 3 Claims. (Cl. 84—115.)

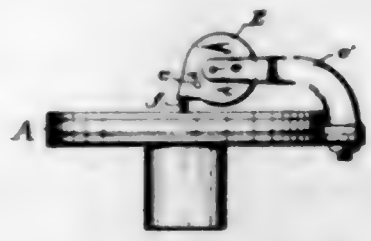


1. The combination with a violin and a chin rest thereon, of a shoulder support, said shoulder support comprising an attachment member held in place on the violin by the chin rest, a V-shaped dependent bracket on said attachment member adapted to seat on the shoulder of a player, and means for spreading or contracting the side members of the bracket.

1,296,832. FUEL FOR INTERNAL-COMBUSTION ENGINES. THOMAS MIDGLEY, Jr., Dayton, Ohio, assignor to The Dayton Metal Products Company, a Corporation of Ohio. Filed Jan. 7, 1918. Serial No. 210,687. 4 Claims. (Cl. 44—8.)

1. A fuel for hydrocarbon engines of a predetermined compression valve, comprising a mixture of a hydrocarbon having a compression value higher than said predetermined value, and a hydrocarbon of a lower compression value than said predetermined value, but the proportions of said hydrocarbons being such as to make the resultant compression value of the mixture substantially equal to the said predetermined compression value.

1,296,833. PHONOGRAPH-REPRODUCER. CARL N. MOLLER, New York, N. Y. Filed Oct. 7, 1916. Serial No. 124,245. 3 Claims. (Cl. 274—28.)



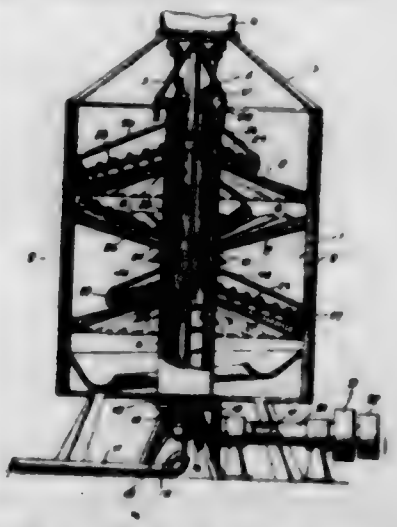
1. In a device of the class described, the combination of a sound box embodying a diaphragm, a mounting for a disk carried by said sound box, a disk pivotally mounted thereon, and a stylus bar pivotally mounted on a sound box, and secured at one end to the pivoted disk relatively close to the axis of said disk, and in operative connection between the diaphragm and the disk, said connection cooperating with the disk at a greater distance from its axis than the point whereat the stylus bar is associated with said disk, whereby the vibrations of the stylus bar are transmitted through the disk to the diaphragm in an amplified manner, said disk serving to steady the operations of the stylus bar.

2. In a device of the class described, the combination of a sound box embodying a diaphragm, a mounting for a disk carried by said sound box, a disk pivoted for oscillation thereon, a stylus bar mounted for universal piv-

otal movement on the sound box, and having one of its ends secured to the disk exterior of the point of pivoting thereof, whereby the vibrations of the stylus bar, in planes either perpendicular to the diaphragm or parallel, result in the oscillation of the disk, and an operative connection between the disk and the diaphragm for the purpose of translating the oscillations of the disk into vibrations of the diaphragm.

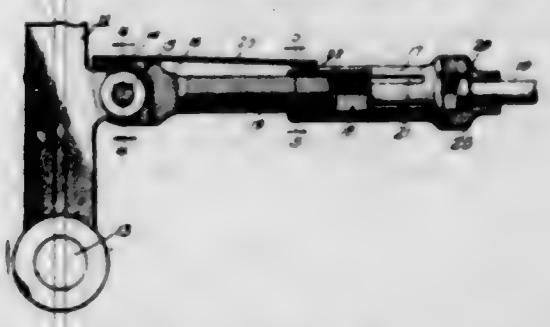
3. In a device of the class described, the combination of a sound box embodying a diaphragm, a mounting for a disk carried by said sound box, a disk pivoted for oscillation thereon, a stylus bar mounted for universal pivotal movement on the sound box, and having one of its ends secured to the disk exterior of the point of pivoting thereof, whereby the vibrations of the stylus bar, in planes either perpendicular to the diaphragm or parallel, result in the oscillation of the disk, and an operative connection between the disk and the diaphragm for the purpose of translating the oscillations of the disk into vibrations of the diaphragm, the connections between the disk and the diaphragm coöperating with the disk at a greater distance from the axis thereof than the point at which the stylus bar is secured to said disk for the purpose of amplifying the vibrations of the stylus bar during their transmission to the diaphragm.

1,296,834. APPARATUS FOR ROASTING OR DRYING ORES. JOSEPH MOLNAR, Goose Bill, Mont. Filed Oct. 8, 1918. Serial No. 256,749. 7 Claims. (Cl. 263—26.)



1. A roaster comprising a casing having a plurality of superposed platforms mounted therein and provided with openings whereby communication is established between the spaces between the proximate surfaces of platforms, and agitator elements adapted to swing above the upper surface of each platform to agitate the material received thereon, and means to actuate the said agitator elements to cause them to simultaneously swing in a circle and rotate.

1,296,835. BRAKE-ADJUSTING DEVICE. ADOLPH MOSSAN, Chicago, Ill., assignor of one-half to Newton Van Zandt, Logansport, Ind. Filed Mar. 11, 1918. Serial No. 221,675. 3 Claims. (Cl. 74—47.)



1. A rod tensioning device comprising a sleeve having two axial bores, one of which is threaded and the other of which is adapted to receive the headed end of a rod upon which the sleeve is rotatable, said sleeve having a series of grooves in its outer surface, another member adapted for pivotal but non-rotative connection to a support and having a threaded stem for inclusion in the threaded bore of the sleeve, and a dog connected to said other member to engage one of said grooves on said sleeve to lock the sleeve in selected rotary position relative to said other member.

3. A tension device for a rod comprising a member having a non-rotatable head and a threaded stem extending therefrom; a threaded sleeve to receive said stem and having longitudinal grooves in its outside surface and an angular wrench-engaging part; a rod provided with a head having swivel connection with said sleeve and a spring-impelled dog secured to said head, having a projection extending into a selected groove of the sleeve to prevent the latter from rotating with respect to the stem.

1,296,836. OIL-WELL TORPEDO. LEWIS A. MOSHER, Goose Creek, Tex. Filed July 29, 1918. Serial No. 247,203. 3 Claims. (Cl. 102—4.)



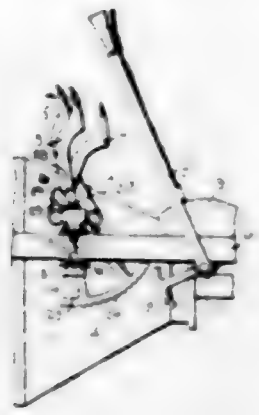
1. A well torpedo comprising an explosive container, a detonating head detachably connected to the container, and having therein a fulminate chamber and a primer seat, a firing pin slidably mounted in the detonating head above the primer seat, means for sustaining the firing pin in a safety position, and means for detachably connecting a wire to the detonating head.

3. A well torpedo including a tubular explosive container closed at its lower end and having screw-threads at its upper end, a detonating head having a chamber at its lower end for containing fulminate and connected by a coupling to the explosive container, there being a primer seat above the fulminate chamber and the upper portion of the detonating head being formed to provide an upwardly arching yoke, the yoke being formed with a medially disposed cross bar, the upper end of the yoke and the cross bar being both perforated, a bolt passing transversely across the upper end of the yoke, a firing pin slidably mounted in the perforation of the yoke and coacting with the primer seat, the upper end of the firing pin being vertically slotted, said bolt passing through the slot, a set screw passing through the lower cross bar of the yoke and engaging the firing pin to hold it in its raised position, a lowering wire connected to the bolt, and a dart pipe loosely surrounding the wire and adapted to engage the upper end of the firing pin when the dart pipe is dropped.

1,296,837. TRANSMISSION-CLUTCH CONTROL. STERLING L. MOWERY, Nescopeck, Pa. Filed June 19, 1918. Serial No. 240,758. 4 Claims. (Cl. 74—81.)

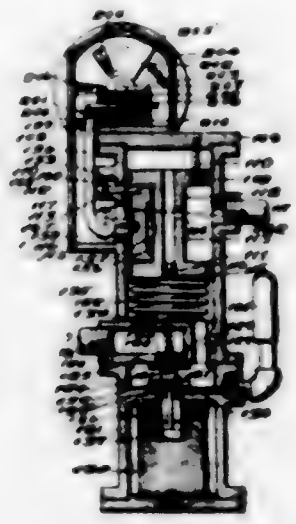
1. The combination with the speed controlling pedal and emergency brake lever of an automobile, of a toothed sector rotatably mounted upon the vehicle frame, means operatively connecting said sector to the said pedal, and means operated by the brake lever to coact with said

toothed sector when the pedal is actuated to change speed whereby the pedal is locked against movement to



neutral position when the pressure on the pedal is released.

1,296,838. TRAIN-CONTROL SYSTEM. WILLIAM B. MURRAY, Danville, Ill., assignor to The Miller Train Control Corporation, Staunton, Va., a Corporation of Virginia. Filed July 31, 1915. Serial No. 42,952. 3 Claims. (Cl. 246—49.)

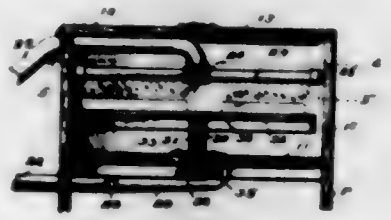


1. In a train control system, a track, a ramp arranged near the track, means for connecting and disconnecting the ramp with and from a source of current, a vehicle to travel upon the track, a cylinder mounted upon the vehicle, a plunger mounted to reciprocate within the cylinder and having a contracted port formed therethrough, means to supply pressure into the cylinder upon one side of the plunger, a valve for controlling the exhaust of pressure from the cylinder upon the opposite side of the plunger, mechanically operated means adapted to contact with the ramp to be moved thereby and connected with the valve to operate it, electrically operated means connected with the mechanically operated means and adapted when energized to render the valve inoperative with respect to exhausting pressure from the cylinder, signal means operated by and upon the movement of the plunger in one direction, a latch to hold the signal means in the active position, and electrically operated means to shift the latch and connected with the first named electrically operated means.

2. In apparatus of the character described, the combination with a cylinder, of a plunger mounted to reciprocate within the cylinder and having spaced ends and a longitudinal port passing through such spaced ends and provided with a laterally extending port, means arranged within one end of the longitudinal port for retarding the passage of pressure therefrom, means for supplying pressure into the cylinder between the spaced ends, a slide valve arranged within the cylinder between the spaced ends and provided with a longitudinal surface port and a transverse port extending through the opposite sides thereof for communication with the interior of the cylinder, a conduit having a port leading into the cylinder and adapted to be alternately placed in communication with the longitudinal and transverse ports of the slide valve, pressure operated train stopping means connected with the conduit, and electrically operated means for controlling the exhaust of pressure from the cylinder upon one end of the plunger.

3. In apparatus of the character described, the combination with a cylinder, of a plunger mounted to reciprocate therein, means for supplying pressure into the cylinder upon one side of the plunger to cause it to move in one direction, electrically operated means controlling the exhaust of pressure from the cylinder upon the opposite end of the plunger, train stopping means set into action by the movement of the plunger in one direction, a signal apparatus operated by the movement of the plunger, electrically operated means to lock the signal apparatus in one position and connected in series with the first named electrically operated means, and means for energizing the two electrically operated means.

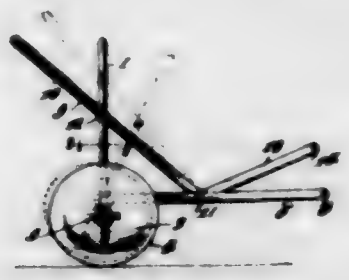
1,296,839. BLACKLEADING-MACHINE. ROBERT R. MYERS, Des Moines, Iowa, assignor to Capital City Printing Plate Company, Des Moines, Iowa. Filed July 31, 1916. Serial No. 112,419. 3 Claims. (Cl. 91—7.5.)



1. In a device of the class described, a receptacle, a rotatable platform mounted in said receptacle, a pump outside said receptacle, a tube for conveying fluid from the bottom of said receptacle to said pump, a tube leading from said pump to the upper central part of said receptacle, spraying devices operatively connected with said last described tube and designed to discharge upon material supported on said platform, a source of power, means for operatively connecting said source of power with said pump and with said platform, whereby the pump may be operated and the platform simultaneously rotated, said means including provisions whereby the pump may be operated without rotating the platform.

3. In a device of the class described, a receptacle, a bearing mounted on the bottom of said receptacle and extending upwardly, a shaft rotatably mounted in said bearing, and extending downwardly through the bottom of said receptacle, a rotatable platform fixed to said shaft and supported upon said bearing, a worm gear on said shaft below the bottom of said receptacle, a second shaft, a worm thereon in mesh with said worm gear, a third shaft, a pump operatively connected therewith, means for imparting rotation to said third shaft, and a gearing device for connecting said third shaft with said second shaft including a clutch, means for conveying fluid from the bottom of said receptacle to said pump, a tube leading from said pump to the upper central part of the interior of said receptacle, a fitting communicating with the inner end of said last tube, a plurality of tubes screwed into said fitting and extending away therefrom, said last tubes being screw-threaded at each end having caps on their outer ends, said tube being provided in their lower surfaces with apertures arranged to discharge at acute angles to the longitudinal axes of the tubes, said tubes being reversible end for end for varying the angle of position therefrom.

1,296,840. POTATO-HILLER. FRANK L. NAU and HARRY D. NAU, Crookston, Minn. Filed Nov. 30, 1917. Serial No. 204,733. 5 Claims. (Cl. 97—91.)



1. A potato hiller including an arch, axle sections arranged at an angle to said arch, disks adjustably mounted thereon, means for drawing the hiller, and slotted rods connected to the arch and drawing means for adjusting the angle of the arch.

3. A potato hiller including an arch, disks carried by said arch, drawing rods connected to said arch, and rods pivoted to said drawing rod and adjustably connected to said arch.

5. A potato hiller including an arch having its free ends bent outwardly thereof in opposite directions then downwardly to provide axle sections, disks adjustably mounted upon said axle sections, means for drawing the hiller, and slotted rods connected to the arch and drawing means for adjusting the angle of the arch and the axle sections.

1,296,841. CLOTHES-PIN. WILLIAM C. NEAL, Abilene, Tex. Filed Aug. 20, 1917. Serial No. 187,197. 1 Claim. (Cl. 24—261.)



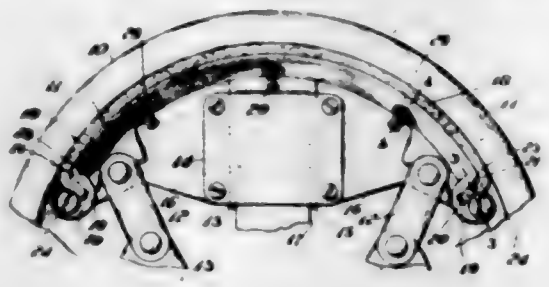
A wire clothes pin formed from a single length of wire bent to form a plurality of helical coils, the opposite ends of the coils being bent to extend in parallel relation to each other and to the series of coils and below said coils, said ends being bent to form clothes gripping loops extending downwardly from the coils and then transversely of the device in close parallel relation to the first parallel members, the said ends being then extended upwardly above the coils and formed into larger finger gripping handles, the remaining portions of the ends extending across the parallel portions at right angles.

1,296,842. METHOD OF MAKING CARTRIDGE-CASES. JOHN W. OFFUTT and JERRY J. DUNN, Ellwood City, and JOHN H. NICHOLSON, Pittsburgh, Pa. Filed Dec. 18, 1915. Serial No. 67,579. 6 Claims. (Cl. 29—1.3.)



1. In the manufacture of steel cartridge cases, the steps consisting of hot-drawing a hollow blank, allowing the same to cool, machining the exterior of the wall, then cold-drawing the blank, and then heat-treating the base of the case to raise its coefficient of elastic recovery, substantially as described.

1,296,843. FASTENER FOR CLUTCH AND BRAKE LININGS. ANDREW P. OLSON, Chicago, Ill. Filed July 19, 1918. Serial No. 245,607. 3 Claims. (Cl. 74—13.)



2. In a device of the character described, a friction drum and a band having tapered pin-holes near its ends, cross-channels in the band having depressions in one side and slots in the opposite side leading into the pin-holes, a flexible lining on the band having its ends in the channels, and tapered pins seating in the holes and protruding laterally into the channels to crowd the ends of the lining into the depressions.

1,296,844. TOY. AXEL VERNER OSTERBERG, Fremont, Ohio. Filed Mar. 14, 1917. Serial No. 154,657. 2 Claims. (Cl. 102—26.)



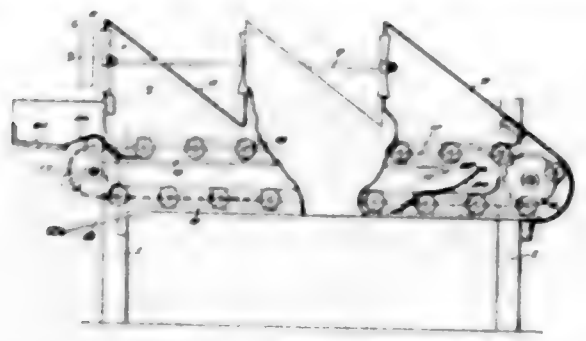
1. A toy comprising a cylinder closed at one end, a stopper for the open mouth of the cylinder, an elongated feathered shaft connected with the stopper, and a metal slug movable between the bottom of the cylinder and the inner end of the stopper.

2. A toy comprising a cylinder closed at one end, a stopper for the open mouth of the cylinder, an elongated feathered shaft connected with the stopper, and a metal slug movable between the bottom of a cylinder and the inner end of the stopper, combined with an explosive percussion-member interposed between the bottom of the cylinder and said slug.

1,296,845. FRUIT-DRYING APPARATUS. GEORGE D. PARKER, Riverside, Cal. Filed May 7, 1918. Serial No. 233,096. 10 Claims. (Cl. 34—13.)

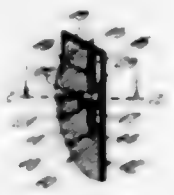
1. A fruit drier including a drying chamber, parallel spaced longitudinally disposed members dividing said chamber transversely into superimposed fruit runways on which the fruit rests as conveyed, an endless conveyer within said chamber, one flight of which operates over each of said fruit runways to convey the fruit longitudinally thereof, means for feeding fruit to the end of one of said runways, a flexible fabric member secured at one end to the upper fruit runway and beneath the free lower end

of which the lower conveyer flight operates for directing the partially dried fruit from the opposite end of said runway to the adjacent end of an adjacent runway, means for directing the fruit from the opposite end of the latter runway, and means for causing an air circulation within the chamber during the conveying of the fruit therethrough.



2. A fruit drier including a drying chamber, parallel spaced longitudinally disposed members dividing said chamber transversely into superimposed fruit runways formed with openings throughout their length, an endless conveyer within said chamber, one flight of which operates over each of said fruit runways to convey the fruit longitudinally thereof, said conveyer comprising a plurality of spaced conveyer members transversely disposed relatively to said runways and between which the fruit is received when resting on said runways, said members adapted to roll the fruit longitudinally of said runways in the direction of its travel during the conveying thereof, means for feeding fruit to the end of one of said runways, means for directing the partially dried fruit from the opposite end of said runway to the adjacent end of an adjacent runway, means for directing the fruit from the opposite end of the latter runway and means for causing an air circulation within the chamber during the conveying of the fruit therethrough.

1,296,846. ARTIFICIAL TOOTH. WILLIAM R. PHELPS, Milford, Del. Filed Apr. 25, 1918. Serial No. 230,728. 3 Claims. (Cl. 32—9.)



1. A tooth of the character described, comprising a porcelain tooth element provided upon its rear side with a longitudinally extending recess, a double headed pin anchored within the material of the tooth element and having the opposite headed end thereof projecting into the recess, a backing plate, and a tubular attaching element secured to one side of the backing plate and adapted for insertion within the longitudinal recess and having a longitudinal opening for the reception of the pin.

2. A tooth of the character described, comprising a porcelain tooth element having a portion of its rear side substantially flat and provided in the flat portion with a longitudinal recess, a pin having one end thereof embedded within the porcelain tooth element and provided with means to anchor the same therein and its opposite end provided with a head which is arranged within the longitudinal recess, a substantially flat backing plate disposed to contact with the flat portion of the tooth element, a tubular attaching element secured to the substantially flat backing plate and adapted for insertion within the recess and having a longitudinal opening for receiving the pin.

3. A tooth of the character described, comprising a porcelain tooth element provided upon its rear side with a longitudinal substantially semi-cylindrical recess and having openings formed therein at the closed end of the recess, a backing plate, a substantially semi-cylindrical tubular attaching element secured to the backing plate and adapted for insertion within the recess and provided at one end with extensions to enter the openings, said tubular attaching element being provided with a longitudinal slot, and a double headed pin having one end thereof embedded in the porcelain tooth element and its opposite end arranged within the longitudinal recess.

1,296,847. PROCESS FOR MAKING CELLULOSE ESTERS WITH OVER 20% OF BOUND FATTY ACID. ABRAHAM POLOTSKY, Berlin-Charlottenburg, Germany, assignor to Deutsche Gasglühlichtaktiengesellschaft (Auergesellschaft), Berlin, Germany. Filed Feb. 8, 1915. Serial No. 6,961. 7 Claims. (Cl. 23—24.)

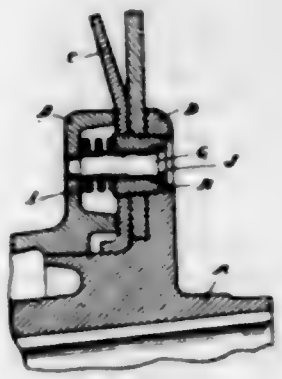
7. A process of producing a cellulose ester which comprises treating cellulose with sulfuric acid to form hydrated cellulose and re-acting upon the hydrated cellulose so produced with a mixture of esterifying catalyst and fatty acid.

1,296,848. CONTROL OF AEROPLANES. RICHARD FITZ POWER, Doveridge, England, assignor of one-half to Oliver Wolcott Thomas, Ithaca, N. Y. Filed July 21, 1917. Serial No. 182,054. 10 Claims. (Cl. 244—29.)



1. Dual control mechanism for aeroplanes including two control sticks, one of said control sticks being adapted to be moved lengthwise, and means whereby upon lengthwise adjustment of said last mentioned stick the other control stick is released and rendered inoperative.

1,296,849. METALLIC WHEEL. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 28, 1918. Serial No. 219,566. 6 Claims. (Cl. 21—31.)



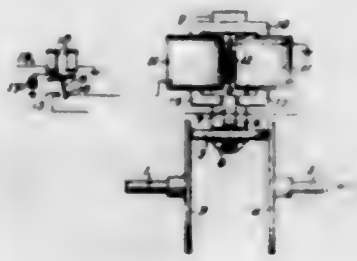
1. In a wheel the combination with complementary members having abutting portions, of clamping means for securing said abutting members to each other, and a tapering driving pin yieldably pressed by said clamping member and engaging correspondingly tapered registering apertures in said complementary members.

3. In a wheel the combination with a hub and demountable wheel section having abutting portions, of clamping means for securing the abutting portions to each other, a series of tapering pins for engaging registering tapering apertures in the abutting portions, and

means for yieldably forcing said pins to their seats by said clamping means.

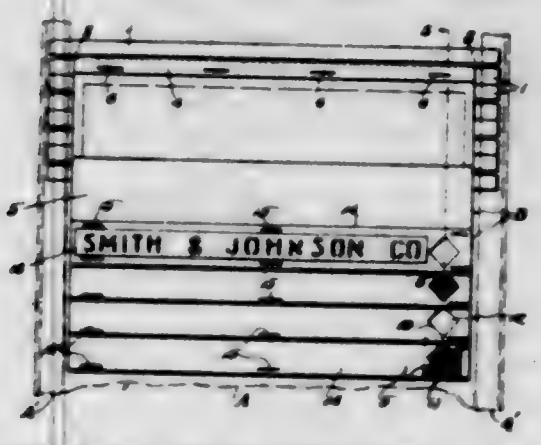
6. In a wheel, the combination with a hub and demountable wheel section having abutting portions, of clamping means for securing said abutting portions to each other comprising a clamping ring and a series of fastenings between said ring and said abutting portions, and a series of tapering pins alternating with said fastening devices and yieldably secured to said ring and engaging correspondingly tapered registered apertures in said hub and wheel section.

1,296,850. SPEED-CHANGING DEVICE. PAUL M. RAINEY, Glen Ridge, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Feb. 8, 1918. Serial No. 216,100. 5 Claims. (Cl. 74—26.)



1. A speed changing device comprising a driving and a driven surface, in combination with an intermediate rotating member for transmitting power between said driving and driven surfaces, said intermediate member being composed of resilient material, and means for moving said intermediate rotating member during the transmission of power to inversely and simultaneously alter the effective radii of contact between the intermediate rotating member and the driving and driven surfaces respectively without substantially reducing the effective pressure between the contact and surfaces.

1,296,851. SELF-INDEXING STORAGE DEVICE. JAMES H. RAND, Newton, Mass. Filed Oct. 29, 1917. Serial No. 199,020. 8 Claims. (Cl. 129—16.)



1. A self-indexing storage device having a channeled frame, supporting and spacing members therein, and a series of containers suspended from the supporting and spacing members, each of said containers having a supplementary pocket adapted to be exposed when the containers are in overlapping relation.

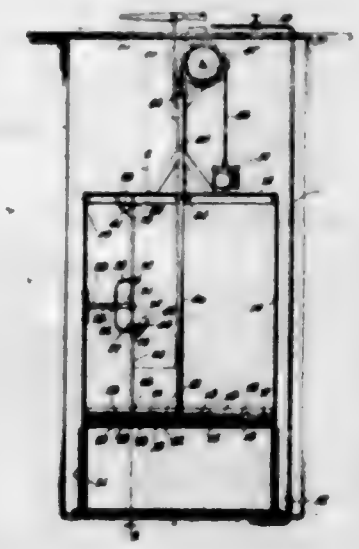
2. A self-indexing storage device having a channeled frame, primary supporting and spacing members therein, secondary supporting members carried by said primary members, and a series of containers suspended from said secondary members, each of said containers having a supplementary pocket adapted to be exposed when the containers are in overlapping relation.

3. A self-indexing storage device having therein a channeled frame, primary supporting members held in the channels in said frame, a series of containers suspended from said supporting members and spaced apart thereby, whereby, to hold in overlapped relation and expose the bottoms of said containers, a signal device at one side of the exposed portion adapted to be displayed when the container is empty, and means for supporting an identifying label at another part of the exposed area.

4. Container supporting means for a self-indexing storage device consisting of a rectangular wooden bar having slots at its ends, and having a wire secondary support upon which the container can be hung held on the bar by engagement of hooked ends of the wire with the slots in the bar.

7. A cardboard container for self-indexing storage systems comprising a pocket-forming fold, a supporting fold, a visible signal adapted to be displayed when the container is empty, and a supplementary pocket attached to said pocket-forming fold.

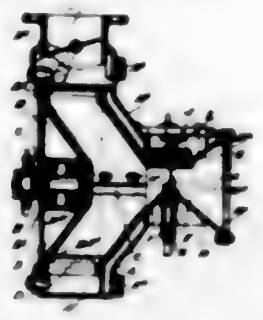
1,296,852. PUMPING APPARATUS. WILLIAM BENTON ROBINSON, Easley, S. C. Filed Jan. 22, 1917. Serial No. 143,744. 3 Claims. (Cl. 103—80.)



1. A well pumping apparatus including a cylinder to be disposed vertically in a well, a stand pipe extending from the surface of the ground into the well and having its lower end in communication with the lower end of the cylinder, a check valve in the lower end of the stand pipe, a piston movable vertically in the cylinder and having an opening, a rotary valve for controlling said opening, cam means for opening the valve when the piston has reached its lower position, similar means for closing the valve when the piston has reached its upper position, means for reciprocating the piston, and gravity means for counterbalancing the weight of the piston.

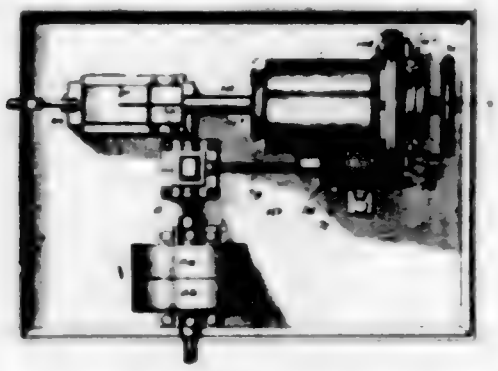
2. A well pumping apparatus including a cylindrical container to be disposed vertically in a well, a stand pipe extending from the surface of the ground into the well and having its lower end in communication with the lower end of the casing, a check valve in the lower end of the standpipe to prevent downward flow of water therein, a piston movable vertically in the casing and having an opening, a valve for controlling said opening comprising spaced plates secured over said opening, said plates having alined apertures, a disk valve mounted for rotation between the plates and having openings whereby the valve may be in open position when the openings of the valve and plates are in alinement, a valve rod for rotating said valves, means operable when the piston has moved to a lowermost position to rotate the rod to open the valve, gravity operable means for counterbalancing the weight of the piston, means operable when the piston has reached its upper position to rotate the rod and return the valve to closed position, and means for reciprocating the piston.

1,296,853. CARBURETER. JAMES DENNIS ROOTS, West Kensington, London, England. Filed Dec. 14, 1912, Serial No. 736,831. Renewed Oct. 4, 1918. Serial No. 256,913. 9 Claims. (Cl. 261—78.)



9. A carbureter including a fan casing, a power driven fan in the casing, the casing and fan being substantially cone shaped in form and the casing having a central inlet opening at one side at the apex thereof, an air intake adjoining the said inlet opening of the casing, a nozzle in the intake tube, and means for supplying liquid fuel to the nozzle.

1,296,854. MACHINE FOR CUTTING INTERNAL THREADS, &c. DAVID E. ROSS, La Fayette, Ind., assignor to The Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed July 8, 1915. Serial No. 38,702. 27 Claims. (Cl. 10—154.)



1. In a machine for the purpose specified the combination with a work holder adapted to hold an object to be internally threaded, a cutter head having a cutting tool projecting laterally near one end thereof adapted to project into said holder, a drive shaft entering said head at a point outside the holder, and means within the head for operating said cutting tool from said shaft; with means for producing both relative rotatorial movement and also relative linear movement of the work holder and cutter head.

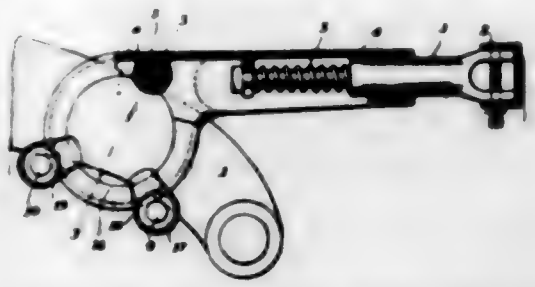
2. In a machine for the purpose specified the combination of a work holder and means for securing an object to be internally threaded in said work holder, a cutter head having adjacent its inner end a rotary radially projecting cutter adapted to project into said work holder and the object therein, said cutter head being provided with internal means for rotating said cutter, and having external means at a point remote from the cutter whereby the internal means may be driven so as to rotate the cutter at high speed; with means for producing both rotatorial and simultaneously linear relative movements of the work holder and cutter head.

3. In a machine for the purpose specified, a work holder, a support therefor, a cutter head supported at one end and having its other end adapted to project into the work holder to engage the object therein, a radially disposed cutting tool projecting from and adjacent the inner end of said cutter head, a driving shaft projecting radially from said cutter head at a point remote from the cutting tool, and means within the cutter head for driving the cutting tool from the said shaft; with means for producing both longitudinal and rotatorial movement of the work holder relative to said support.

4. In a machine for the purpose specified, a cutter head provided with a radially disposed cutting tool adjacent one end and means within the cutter head for transmitting motion to said cutter from a point remote from the tool; with a work holder in substantial alinement with the cutter head, a support for said holder, means for rotating said holder, and means for causing lineal movement of the holder while it is being rotated toward said cutter head.

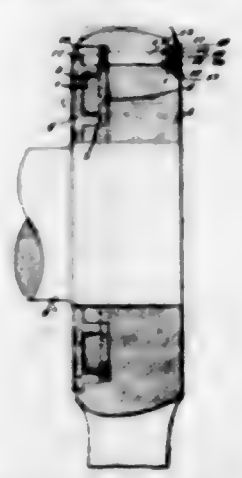
5. In a machine for the purpose specified, a tubular work holder, means for securing an object to be operated upon within said work holder, a work holder support and means for producing both longitudinal and rotatorial movement of the work holder relative to said support; with a cutter head comprising an elongated sectional body supported at one end and having its other end adapted to enter the work holder to engage the object therein, a radially disposed cutter projecting from and adjacent the inner end of said cutter head, a driving shaft projecting radially from said cutter head at a point remote from the cutting tool, and means within the cutter head for driving the cutting tool at high speed.

1,296,855. BUMPER. JAMES H. SAGER, Rochester, N. Y., assignor to J. H. Sager Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 30, 1916. Serial No. 128,409. 6 Claims. (Cl. 293—55.)



5. In combination with a vehicle frame bar, a bumper supporting arm abutting one side of said bar having an end with an overhanging curved flange, a hooked device on which said arm turns, lying on one side of the bar and a hooked device lying on the other side of the frame bar and having a hooked washer coöperating with the curved flange of the end of the arm.

1,296,856. ADJUSTABLE HUB-PLATE. ALBERT J. SAMS, Chicago, Ill. Filed June 3, 1918. Serial No. 238,071. 4 Claims. (Cl. 64—25.)



1. In a device of the class described, a hub having a recess; rings in the recess and threaded together, one ring being fixed against rotation with respect to the hub, and the other ring being rotatable; and means for rotating the rotatable ring to secure an advancement of one ring.

2. In a device of the class described, constructed as set forth in claim 1, and further characterized by the fact that the means for rotating the rotatable ring embodies a

rack on said ring, a pinion meshing into the rack and a shaft journaled in the hub and carrying the pinion.

3. In a device of the class described, a hub having a recess; rings in the recess and threaded together, one ring being fixed against rotation with respect to the hub, and the other ring being rotatable; means for rotating the rotatable ring to secure an advancement of one ring; and a locking device coacting with said means.

4. In a device of the class described, a hub having a recess; rings in the recess and threaded together, one ring being fixed against rotation with respect to the hub, and the other ring being rotatable, the rotatable ring being provided with a rack; a shaft journaled in the hub; a pinion carried by the shaft and meshing into the rack; and means for locking the shaft against rotation.

1,296,857. DAMPER. JOHN C. F. SCHAFER, Mount Pulaski, Ill. Filed Oct. 4, 1915. Serial No. 54,009. 5 Claims. (Cl. 126—292.)



1. A damper adapted for use in a pipe; comprising a discal main structure adapted for use as a damper plate and having rod supporting members, a central opening, a radial slit adapted to accommodate the wall of a stove pipe, and a notch in line with said slit and adapted to accommodate the upper edge of the wall of the pipe, a screw-threaded lug on one side of said slit, an abutment on the opposite side of said slit and in line with the screw-threaded lug, and a pointed damper rod having near its pointed end a screw adapted to engage in the screw-threaded lug to cause the point of the rod to perforate the wall of the pipe upon rotation of the rod.

2. A damper adapted for use in a pipe; comprising a discal base adapted for use as a damper plate and having a central opening, also having a slit adapted to accommodate the wall of a pipe; a screw threaded lug extended outwardly from the base on one side of the slit; an abutment extending outwardly from the base on the opposite side of the slit; rod supporting members diametric to the base and adapted to accommodate a damper rod to support the base in the pipe; and a screw-threaded damper-rod adapted to engage in the screw-threaded lug on the base while in use to perforate the wall of the pipe, also adapted to occupy said rod-supporting members while not in use for perforating the wall of the pipe.

3. In a damper, the combination of a damper plate, having rod-supporting members and a slit; a screw-support on the damper plate; an abutment on the damper plate and complemental to the screw support; and a pointed screw-rod adapted to serve as the axle of the damper plate and also adapted to engage in the screw-support to cause the rod to perforate the wall of the pipe in contact with the abutment during the rotation of the rod in the screw-support.

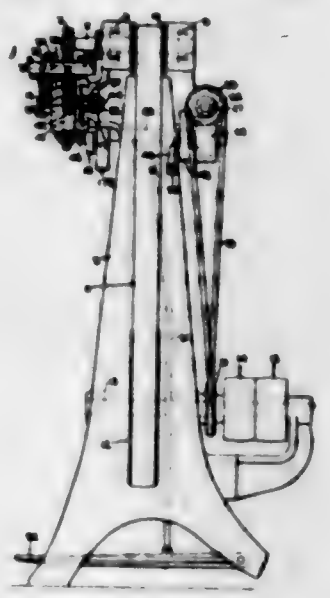
4. A damper adapted for use in a pipe, comprising a plate having a slit adapted to accommodate the wall of a pipe, a screw-threaded member on one side of the slit, an abutment on the opposite side of the slit, in line with the screw-threaded member and rod-supporting members transverse to the plate and adapted to accommodate a rod to support the plate in a pipe; and a screw-threaded damper rod adapted to engage in the screw-threaded member of the plate, while in use to perforate the wall of a pipe, also adapted to occupy said rod-supporting members while not in use for perforating the wall of the pipe.

5. In an appliance of the class described, the combination of a pipe, a damper-plate having rod-supporting members, a central opening, a slit, a notch in line with the slit, a screw-support and an abutment in line with the screw-support; and a pointed screw-rod adapted to serve as a support for the damper-plate, also adapted to engage in said screw-support to make a perforation in the wall of a pipe occupying the slit and notch in the damper plate, said perforation being at a distance from the end of the pipe equal to the distance from the apex of said notch to the axis of said screw.

1,296,858. SAFETY WRITING-INK. ERNEST E. SCHMIDT, Boston, Mass. Filed July 25, 1918. Serial No. 246,711. 4 Claims. (Cl. 134—32.)

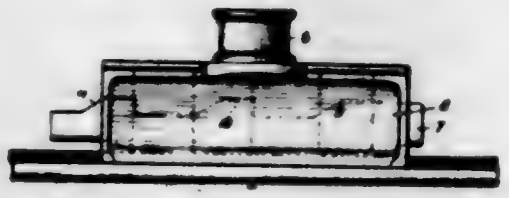
4. Safety writing ink made from water, and water-soluble ingredients including ferro-cyanid of iron constituting a coloring ingredient, oxalic acid constituting a solution-maintaining ingredient, Epsom salts constituting a color-fixing ingredient, and Turkey-red oil consituting a penetrative ingredient.

1,296,859. MACHINE FOR GROOVING LEATHER. AUGUST R. SCHOENKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed June 19, 1918. Serial No. 245,830. 14 Claims. (Cl. 12—40.)



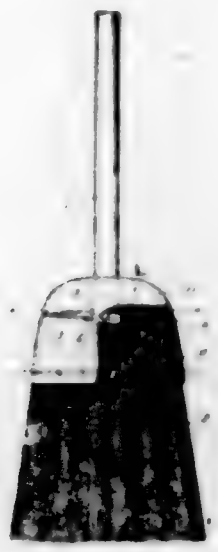
11. In a machine for grooving leather and similar material, the combination with a work support, of a rotatable grooving tool, means to move the work support beneath said tool, means to raise and lower the work support as it moves beneath the tool, a plurality of combined work-clamping members and edge gages adjustable transversely of the work support, and means to cause said members to clamp and unclamp the work as the work support is raised and lowered.

1,296,860. TROLLEY-WIRE HOLDER. HERMAN SCHUTTE, Wilkinsburg, Pa., assignor to Schutte Electric Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 25, 1918. Serial No. 230,832. 3 Claims. (Cl. 191—48.)



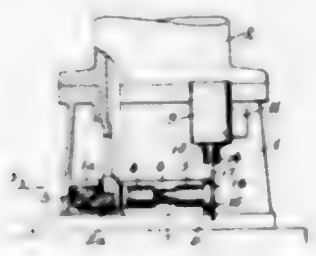
1. A trolley wire holder comprising two side members having projecting, interlocking, loop members, a key having serrations on its edges, the edges thereof being adapted to engage said loop members and lock the same firmly together, and means to attach said holder to a support.

1,296,861. BROOM FRAME. GEORGE H. SEARS, Guthrie, Okla. Filed Apr. 2, 1918, Serial No. 226,226. Renewed Feb. 1, 1919. Serial No. 274,569. 3 Claims. (Cl. 15—19.)



3. A broom frame comprising a handle, an upper broom corn clamping member connected with said handle and a lower broom corn clamping structure connected with said handle, said lower clamping structure comprising a cable encircling said broom corn, a plurality of transverse tie members extending through the broom corn, said tie members being looped over said cable at each end of the tie members, a bolt positioned with one end in said handle and the other end extending through said broom corn, said cable having the ends thereof connected with said bolt, said bolt being formed with a head having ratchet teeth and a resilient member having ratchet teeth coacting with the ratchet teeth on said head whereby when said head is rotated for winding said cable said ratchet teeth will prevent a reverse movement.

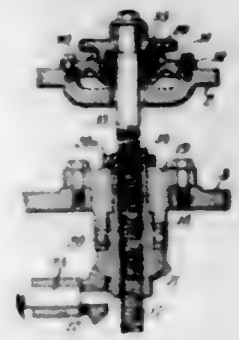
1,296,862. CLAMPING MECHANISM. WILLARD T. SEARS, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 12, 1916. Serial No. 119,772. 3 Claims. (Cl. 74—70.)



3. The combination with the base of a radial drill and the column rotatably mounted thereon of a clamp, a screw for setting the clamp to lock the column against rotative movement, a manually controllable solenoid, and a mechanism interposed between the solenoid and the screw whereby the solenoid upon successive similar movements serves to turn the screw first in one direction to effect clamping and then in the other direction to effect releasing.

1,296,863. ADJUSTING MECHANISM FOR DRILLING MACHINES. WILLARD T. SEARS, Brooklyn, N. Y., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 22, 1918. Serial No. 229,998. 9 Claims. (Cl. 77—28.)

1. In a drilling machine comprising a vertical column and an arm vertically adjustable thereon, the combination with the arm, of a supporting and adjusting means therefor comprising a vertical screw and a nut, power means for turning one of them relatively to the other to raise or lower the arm, and a frictional device normally holding the other of them against rotation but permitting it to turn when the arm is prevented from moving.

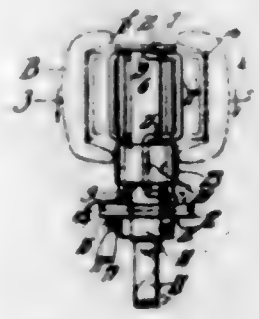


3. In a drilling machine comprising a vertical column and an arm vertically adjustable thereon, the combination of a vertical screw, a nut engaging the screw and serving to support the arm, power means for turning the nut to raise or lower the arm, and a frictional device normally holding the screw against rotation but permitting it to turn with the nut when the arm is prevented from moving.

5. In a drilling machine comprising a vertical column and an arm vertically adjustable thereon, the combination of a vertical screw, a nut engaging the screw and serving to support the arm, power means for turning the nut to raise or lower the arm, and a frictional device at the top of the column normally holding the screw against rotation but permitting it to turn with the nut when the arm is prevented from moving.

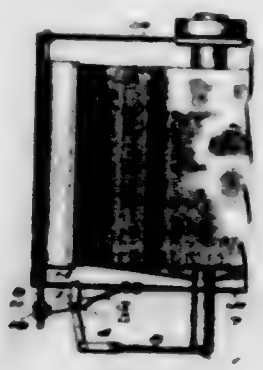
9. In a drilling machine comprising a vertical column and an arm vertically adjustable thereon, the combination of a vertical screw, a nut engaging the screw and serving to support the arm, power means for turning the nut to raise or lower the arm, and a frictional device supporting the screw and the parts carried thereby and normally holding the screw against rotation but permitting it to turn with the nut when the arm is prevented from moving, the frictional device being of the cone type and having one element secured to the screw and the other element carried by the column, the last said element being shaped to retain lubricant.

1,296,864. COLLAPSIBLE SPINDLE. JOSEPH H. SHEARS, Leeds, Mass., assignor to Nonotuck Silk Company, Leeds, Mass., a Corporation of Massachusetts. Filed Feb. 5, 1918. Serial No. 215,501. 4 Claims. (Cl. 242—46.3.)



1. A collapsible spindle, comprising, a spindle, and core holding devices pivotally mounted thereon to swing about axes substantially parallel to that of the spindle from collapsed to radial positions and beyond to expanded and core holding positions, mechanism independent of the core and engagable with each of said devices to maintain a relative uniform movement of the latter, and means to limit the angular movement of said devices.

1,296,865. AUTOMATIC FILTER-SCRAPER SHIFTER. PAUL D. SIDEY and GLEN L. HARLEY, Goldfield, Colo. Filed Feb. 3, 1917. Serial No. 146,467. 2 Claims. (Cl. 74—14.)



1. The combination with a filter press frame and an extension shaft carrying a scraper and slidably supported in the sides of the filter press frame, of a bell-crank lever detachably connected with said extension shaft, and a connecting rod extending from the bell crank lever to the filter press shaft and reciprocated thereby, whereby to rock the bell crank lever and reciprocate the scraper.

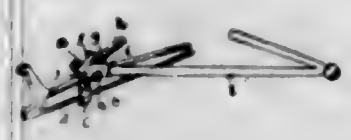
2. The combination with a filter press frame and an extension shaft carrying a scraper and slidably supported in the sides of the filter press frame, of a bell-crank lever detachably connected with said extension shaft, a connecting-rod extending from the bell crank lever to the filter press shaft and reciprocated thereby, whereby to rock the bell crank lever and reciprocate the scraper, and means for regulating the length of the scraper stroke.

1,296,866. FLAG-HOLDER. MARTIN SKRETTING, Opstead, Minn. Filed June 4, 1918. Serial No. 238,147. 2 Claims. (Cl. 248—38.)



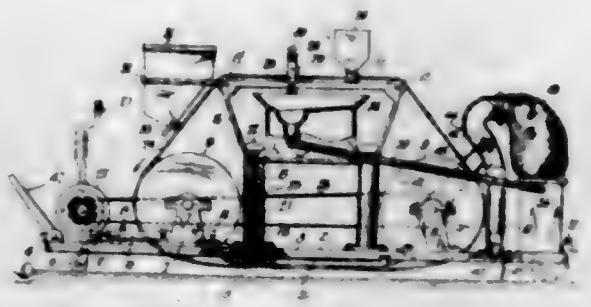
1. A flag holder for attachment to a fender comprising a single length of spring metal provided with an intermediate bend forming a standard and a seating shoulder, said length of metal being further bent at one side of the first bend to embrace and resiliently grip the fender, and bent at the other side of the first bend to form means for securing a flag pole to the standard.

1,296,867. RADIUS-BAR. HENRY LUND SMITH, Paterson, N. J. Filed Dec. 11, 1918. Serial No. 266,204. 2 Claims. (Cl. 21—182.)



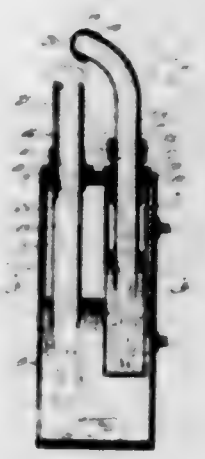
1. In combination, with the axle and one member of the radius bar of a vehicle, said member being arranged oblique to the axle, a connection between said member and axle consisting of a fixture on the axle, another fixture on said member, the latter fixture including a body portion having a bore therethrough and a projecting portion oblique to said bore and having a telescoped connection with said member, and a bolt penetrating said bore and the first fixture and having a nut screwed thereon and coacting with the bolt to clamp said fixtures together.

1,296,868. SCRUBBING AND POLISHING MACHINE. THOMAS A. SMITH, Denver, Colo. Filed May 1, 1917. Serial No. 165,647. 4 Claims. (Cl. 15—14.)



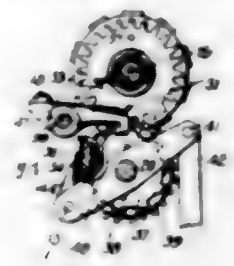
4. In combination with a wheeled carrier, an endless belt having a lower portion traveling below the carrier to engage a surface over which the carrier is propelled, and an upper portion moving above the carrier, a motor for operating the belt, means for supplying a wash-water to said upper portion of the belt, a wringer rearward of the washing means, to press the dirt-carrying wash-water out of the belt, a receptacle between the two portions of the belt to receive the wash-water passing through the fabric of the belt, and means rearward of the wringer to supply a liquid to the upper portion of the belt before it engages the surfaces.

1,296,869. BLOW-TORCH. LEON U. SNOW, Lincoln, Nebr. Filed Mar. 13, 1918. Serial No. 222,180. 6 Claims. (Cl. 158—27.5.)



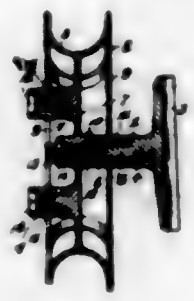
3. A blow-torch comprising a relatively long and narrow liquid fuel container having closed ends, one of which is provided with two apertures, a wick, a tube extending through one of said apertures and containing said wick, a second liquid fuel container in open communication with the other one of said apertures, a second wick, a second tube, said second tube containing said second wick and having one end in said second container and having its outer end curved and provided with a jet-opening normally in alinement with the length of the first said tube, the major part of the second said tube being substantially parallel with the first said tube, and means for effecting adjustment of one of said tubes with relation to the other said tubes.

1,296,870. PAWL-AND-RATCHET MECHANISM. ALFRED L. SOHM, Chicago, Ill., assignor, by mesne assignments, to Sohm Electric Company, trustee. Filed Nov. 17, 1913. Serial No. 801,370. 2 Claims. (Cl. 74—54.)



1. In combination, a first ratchet, a holding pawl for said first ratchet, a second ratchet having ratchet teeth facing opposite to the teeth on said first ratchet, a holding pawl for said second ratchet, said ratchets being secured together and having driving connection with a member to be driven, an operating link having forward and backward movement, an operating pawl carried on said operating link, said operating pawl engaging a succeeding tooth of the first ratchet upon forward movement of the operating link and rotating the ratchets upon backward movement of the operating link, and an arm carried on said operating link adapted to disengage the holding pawl from said second ratchet the moment the operating pawl engages with the said succeeding tooth on the first ratchet and to reëngage the holding pawl with said second ratchet when said operating link starts on its backward movement.

1,296,871. FISHING-REEL. DEWITT C. SOUTHWORTH and FRANCIS I. HARDY, South Bend, Ind. Filed Aug. 8, 1914. Serial No. 855,787. 1 Claim. (Cl. 64—66.)

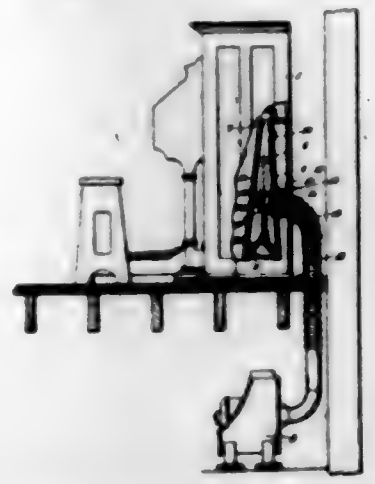


A bearing for fishing reels having a seat plate and a disk centrally provided with a hollow sleeve projection beyond both surfaces of the disk and to a greater extent on one side than on the other, the greater portion of the maximum sleeve projection being reduced exteriorly to provide an exterior bearing surface, the seat plate having a fixed post longitudinally recessed to provide an inner bearing member to fit within the sleeve, and an outer member to overlie the reduced portion of the sleeve projection, the outer member being of less length than the inner member and terminating closer to the disk than to the seat plate.

1,296,872. RESERVOIR AND CONTROLLING-VALVE FOR ORGANS. IRA H. SPENCER, West Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 9, 1916. Serial No. 77,193. 9 Claims. (Cl. 230—2.)

1. In combination in a musical instrument, a reservoir having a movably mounted wall with an opening therein, a valve located in the reservoir opposite said opening, a flexible tube communicating with said opening to conduct air flowing therethrough, and means for creating a flow of air through said tube and opening.

4. In combination in a musical instrument, a reservoir having a wall with an opening therethrough, a tube communicating with said opening to conduct air flowing through said opening and having its edge formed into a valve seat, a valve located in said reservoir opposite said valve seat, means influenced by atmospheric pressure to press the valve against its seat, and means for creating flow of air through said tube.



6. In combination in a musical instrument, a reservoir having a movable wall, a tube projecting through said wall into the reservoir, the edge of said tube forming a valve seat, a valve located in the reservoir opposite said seat, a spiral spring located opposite the mouth of said tube and against which said valve rests, means for variably determining the position of the valve, and means for creating flow of air through said tube.

9. In combination in a musical instrument, a reservoir having a movable and a fixed wall with an opening in the former, a tube to conduct air flowing through said opening, the end of said tube projecting through said opening and into the reservoir and with its edge forming a valve seat, means for creating flow of air through said tube, a pin projecting from the fixed wall of the reservoir substantially in line with the axis of the mouth of said tube, a spiral spring surrounding said pin, and a plate slidably mounted on said pin and seated on said spring, said plate being larger in size than the opening into said tube and constituting a valve to be seated against the valve seat formed by the edge of said tube.

1,296,873. SHEET-METAL WHEEL CONSTRUCTION. JOHN E. STRIETELMEIER, Cincinnati, Ohio, assignor to The Ideal Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 22, 1913. Serial No 802,349. 2 Claims. (Cl. 152—50.)



1. A resilient wheel of the nature disclosed combining a hub-member; a series of resilient sheet-metal spoke-elements emerging from said hub-member and each terminating in a hook-shaped end-portion; a first sheet-metal flanged ring constituting a tire-retaining member; a second sheet-metal flanged ring concentric therewith and having its flanges secured to the inner periphery of the first ring; an internal threaded boss located between said outer and inner rings; a series of spaced blocks at the inner periphery of the second ring, each having an inte-

gral rib-like portion interfitting within the pocket of its associated hook-shaped spoke-portion, and a bolt extending radially to secure a corresponding block, said bolt having a screw-threaded engagement with said boss.

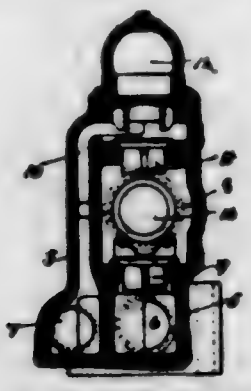
2. A resilient wheel of the nature disclosed combining an elongated yoke-block having an elongated central channel and elongated ribs at each side thereof having curved contours, a resilient flat spoke-element extending at one side of said block and terminating in a curved end-portion interfitting with the adjacent rib and having a bifurcated end, a counterpart spoke-element reversely arranged in similar relation with the other rib, a rim-member providing curved seats, and adjustable means for urging said block toward said rim-member to clamp said spoke-elements therebetween, said means being in nested relation with the bifurcations in said spoke-elements.

1,296,874. TIRE. JAMES SUMMERSON, Emporium, Pa. Filed Aug. 31, 1918. Serial No. 252,231. 6 Claims. (Cl. 152—8.)



6. A tire of the class described comprising in combination, a rim, a casing engaged within the rim, heads contacting with the inner face of the casing at the tread thereof, members depending from each of the heads and arranged in two pairs, the members of one pair being alined transversely of the rim, and the members of the second pair alined circumferentially midway between the members of the first pair, correspondingly arranged members carried by the rim, the members of the head and the members of the rim being telescopically engaged, an expansible member interposed between each of the heads and the rim, said expansible member being positioned within the field defined by the members, whereby said expansible member is held against buckling.

1,296,875. HYDRAULIC PUMP. PAUL SWENSON, West Minneapolis, Minn. Filed Sept. 17, 1917. Serial No. 191,730. 2 Claims. (Cl. 103—77.)



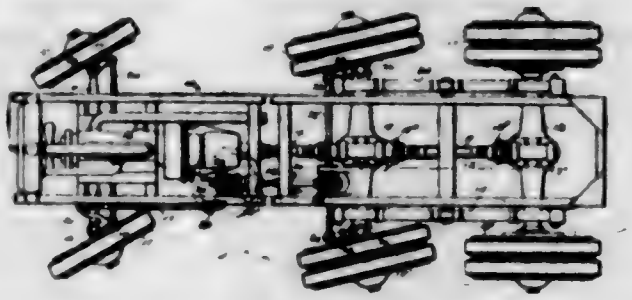
1. A duplex pump comprising a tubular body casting having two long approximately parallel conduits, one for affording an intake conduit and the other a discharge conduit, the said conduits being separated by a single integral wall, the said casting, at its ends having integral cylinder chambers, inlet valves between said chambers and intake conduit and outlet valves between said cylinders and discharge conduit, a rod affording a double-ended piston with its ends working in said cylinder chambers, and means for reciprocating said piston.

1,296,876. SKID STRUCTURE FOR HYDROAIRCRAFT. JOHN P. TABNOX, Garden City, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Mar. 25, 1918. Serial No. 224,689. 2 Claims. (Cl. 114—66.5.)



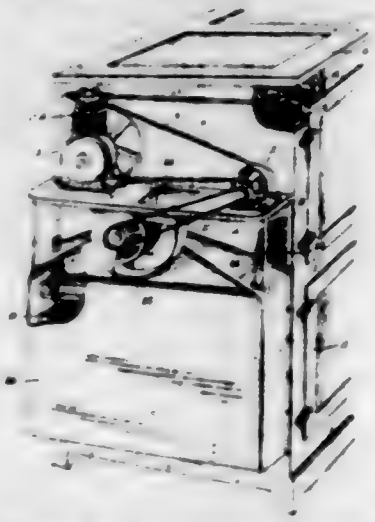
1. In a hydro-aircraft, a flotation body having a hydroplaning bottom surface, supports for the auxiliary hydroplanes continued beyond the lowermost point thereof, and skids provided at the ends of the supports to protect both the hydroplaning bottom surface and the auxiliary hydroplanes in launching and beaching the craft.

1,296,877. RUNNING-GEAR FOR AUTOMOBILES. GEORGE M. TEW, Kirkland, Wash. Filed Apr. 9, 1917. Serial No. 160,624. 1 Claim. (Cl. 180—24.)



The combination with the chassis, of a pair of traction wheels adjacent the rear end thereof, a pair of steering wheels at the forward end, a pair of steering and traction wheels intermediate the two aforesaid pairs of wheels, a steering post, independent connections between each pair of steerable wheels and said steering post, said connections with respect to the forward steering wheels including a worm gear, means for driving the two pairs of traction wheels, housings for both pairs of traction wheels, and a centrally disposed swiveled connection between said housings to afford relative oscillatory movements to the latter.

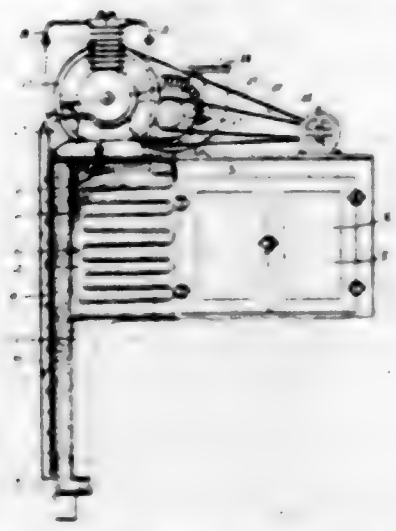
1,296,878. REFRIGERATING APPARATUS. MILTON TIBBETTS, Detroit, Mich., assignor, by mesne assignments, to The Isko Company, Chicago, Ill., a Corporation of Delaware. Filed Aug. 19, 1916. Serial No. 115,838. 5 Claims. (Cl. 62—116.)



1. In a refrigerating apparatus, in combination, a refrigerator box, a support mounted at one side of the box.

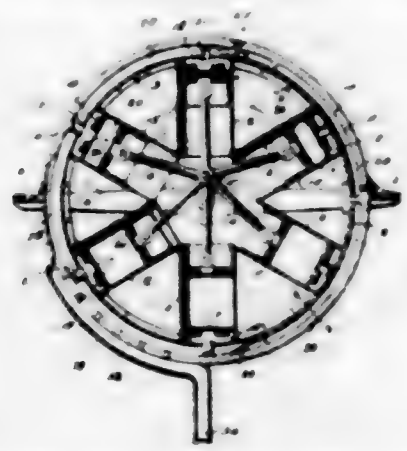
a compressor and motor therefor mounted on said support, a condenser coil arranged beneath the support, and a blower adapted to circulate air around said coil.

1,296,879. REFRIGERATING APPARATUS. MILTON TIBBETTS, Detroit, Mich., assignor, by mesne assignments, to The Isko Company, Chicago, Ill., a Corporation of Delaware. Filed Sept. 8, 1916. Serial No. 119,045. 21 Claims. (Cl. 62—116.)



1. In a refrigerating apparatus, in combination, a condenser, a pump for circulating the refrigerant through the condenser, means to cause a circulation of air around said condenser, a motor and alternating driving connections from said motor to said pump and means.

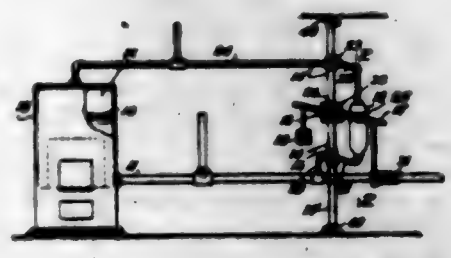
1,296,880. ROTARY INTERNAL-COMBUSTION ENGINE. JOHN W. TOLLIVER, Buffalo, N. Y. Filed Aug. 12, 1918. Serial No. 249,529. 4 Claims. (Cl. 123—16.)



1. A rotary internal combustion engine, comprising a stator, comprising a casing having a way or space in the inner face of a portion of the encircling wall, and having a fixed abutment at one end of the way, and a cam at the opposite end of such way, said stator having a plurality of openings in the outer wall inclosing said way and having a closed passage exterior to the wall having the openings for receiving the exhaust, a rotor within the stator, a cylinder carried by the rotor, and having a combustion chamber in its outer end, a sliding abutment at the outer end of the cylinder and adapted to extend into the way in the outer wall of the stator, and a piston mounted in the cylinder.

1,296,881. REGULATOR. WILLIAM J. TURNER, Providence, R. I. Filed Apr. 6, 1916. Serial No. 89,359. 4 Claims. (Cl. 137—101.)

1. In combination, an actuating balance-lever having weight on one arm and a receiver for liquid on its other arm; and means separate from the lever adapted to connect the receiver with a container for liquid subject to fluctuations of level and to permit free flow of liquid in both directions, said receiver being penetrated by said lever, and supported thereby at a point in the midst thereof but external to the walls thereof.

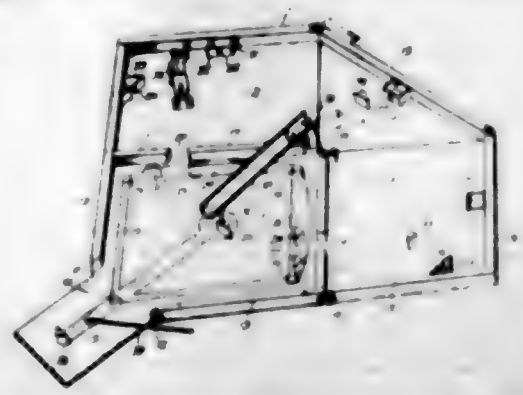


2. In combination, an actuating balance-lever having weight on one arm and a receiver for liquid on its other arm; and means separate from the lever adapted to connect the receiver with a container for liquid subject to fluctuations of level and to permit free flow of liquid in both directions, said receiver being relatively long vertically and having two intersecting horizontal passages through its upper part, not penetrating the liquid containing walls thereof, through one of which the said lever passes; and a pivot pin passing through the other and through said lever.

3. In combination, an actuating balance-lever having weight on one arm and a receiver for liquid on its other arm; and means separate from the lever adapted to connect the receiver with a container for liquid subject to fluctuations of level and to permit free flow of liquid in both directions, said receiver being arranged with its center of gravity below the point at which it is supported on said lever; there being a supporting column, having a potion holding at a rigid vertical distance apart the fulcrum for said lever and a fitting constituting part of the connection from the receiver to said container, and having other portions consisting of separate tubular pieces attached at top and bottom thereof and thence extending respectively upward to ceiling and downward to floor.

4. In combination, an actuating balance-lever having weight on one arm and a receiver for liquid on its other arm; and means separate from the lever adapted to connect the receiver with a container for liquid subject to fluctuations of level and to permit free flow of liquid in both directions, said receiver being arranged with its center of gravity below the point at which it is supported on said lever; there being a supporting column, having a portion holding at a rigid vertical distance apart the fulcrum for said lever and a fitting constituting part of the connection from the receiver to said container, and having other portions consisting of separate tubular pieces attached at top and bottom thereof and thence extending respectively upward to ceiling and downward to floor; said connecting means being flexible and extending in parallelism with said lever from the receiver to the said fitting.

1,296,882. GAME. WILLIAM L. VANCE, Chicago, Ill. Filed May 28, 1917. Serial No. 171,451. 2 Claims. (Cl. 46—61.)



1. In a game of the character described, a field provided with a wall substantially inclosing the same, a second wall partially dividing the infield from the outfield, said second wall having an opening for the passage of a ball

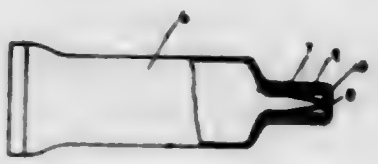
from the infield to the outfield in combination with a guiding trough arranged to direct a ball toward the plate and deliver the same in the field at a point near the pitcher's station, said trough being provided with an opening, and means for supporting the trough above the field, said means comprising a substantially U-shaped frame mounted at opposite sides upon said second wall at the sides of the opening therein, said frame having a portion at the top upon which the trough is adapted to rest, and also having a portion extending through the opening in the trough and serving to prevent endwise movement of the same, substantially as described.

1,296,883. CLAMP. FRANK J. VAN COTT, Umadilla, N. Y. Filed Oct. 3, 1917. Serial No. 194,630. 4 Claims. (Cl. 24—125.)



3. In a device of the class described, the combination of a wall having hoops on the outside and inside thereof, with a clamping device comprising two clamp members, having on their adjacent faces corresponding curved grooves, the grooves being so arranged that one of them will engage the lower part of a cable extended through the grooves, said clamp members having pairs of registering openings above and below the central portions of said grooves, one of said clamp members having on its outer surface a transverse groove to receive one of said hoops, and means extended through the silo wall and through said openings for engaging the inner hoop and said clamp members and locking them together.

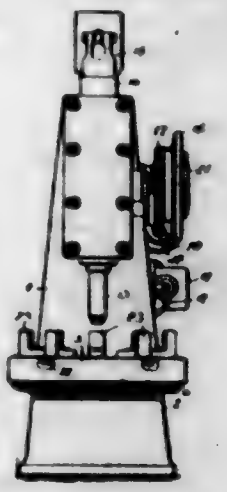
1,296,884. COLLAPSIBLE TUBE. EDWARD J. VOLK, Cleveland, Ohio. Filed Oct. 7, 1918. Serial No. 257,153. 6 Claims. (Cl. 221—60.)



1. A collapsible tube having a discharge opening, and a spring plate located within the tube and extending across such opening and movable laterally by pressure of the material in the tube to uncover such opening.

1,296,885. BORING-MILL. ALBERT CARL WAIS, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 19, 1918. Serial No. 212,579. 5 Claims. (Cl. 77—4.)

1. In a boring mill, the combination of a rotatable work table, a plurality of radially movable jaws on the table, a ring rotatable coaxially with the table and capable of relative movement independently thereof, means dependent on relative movement of the ring in one direction or the other for moving the jaws into or out of engagement with the work, means for rotating the ring in the direction to first engage the jaws with the work and to then rotate the table, and means movable in the opposite direction for applying a blow to start the ring in the opposite direction and thus release the jaws from the work.



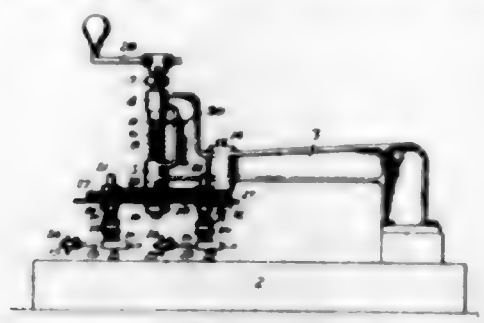
2. In a boring mill, the combination of a rotatable work table, a plurality of radially movable jaws on the table, a ring rotatable coaxially with the table and capable of relative movement independently thereof, means dependent on relative movement of the ring in one direction or the other for moving the jaws into or out of engagement with the work, a gear rotatable coaxially with the table and the ring, and a lost motion connection between the gear and the ring for rotating the ring in the direction to first engage the jaws with the work and to then rotate the table, the said lost motion connection enabling the gear at the end of rotation in the said direction to apply a blow to the ring in the opposite direction and thus release the jaws from the work.

3. In a boring mill, the combination of a rotatable work table, a plurality of radially movable jaws on the table, a ring rotatable coaxially with the table and capable of relative movement independently thereof, means dependent on relative movement of the ring in one direction or the other for moving the jaws into or out of engagement with the work, a gear rotatable coaxially with the table and the ring, a lost motion connection between the gear and the ring for rotating the ring in the direction to first engage the jaws with the work and to then rotate the table, and a reversible driving mechanism for the gear, whereby the direction of rotation of the gear may be reversed to apply a blow to the ring in the opposite direction and thus release the jaws from the work.

4. In a boring mill, the combination of a rotatable work table, a plurality of radially movable jaws on the table, a ring rotatable coaxially with the table and capable of relative movement independently thereof, means dependent on relative movement of the ring in one direction or the other for moving the jaws into or out of engagement with the work, a gear rotatable coaxially with the table and the ring, means for rotating the gear in either direction, and engaging lugs carried respectively by the ring and the gear and adapted to permit limited movement of the gear independently of the ring.

5. In a boring mill, the combination of a rotatable work table, a plurality of radially movable jaws on the table, a ring positioned below the table and rotatable coaxially therewith and capable of relative movement independently thereof, a downward projecting lug on the ring, means dependent on relative movement of the ring in one direction or the other for moving the jaws into or out of engagement with the work, a gear positioned below the ring and rotatable coaxially with the table and the ring, the gear having an annular groove into which the lug on the ring projects, and an obstruction in the groove for engaging the lug, the said lug and obstruction permitting limited movement of the gear independently of the ring.

1,296,886. GLASS-CUTTING MACHINE. JOHN WATERLOO, New Eagle, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 7, 1918. Serial No. 233,086. 8 Claims. (Cl. 33—27.)



1. A multiple circle glass-cutting machine, comprising a rotatable shaft, a gear wheel carried thereby, and a plurality of cutter shafts mounted around said gear wheel and having pinions meshing therewith, each of said shafts having a socket at its lower portion, and a cutter carrier mounted in said socket and extending radially with respect to the shaft, substantially as described.

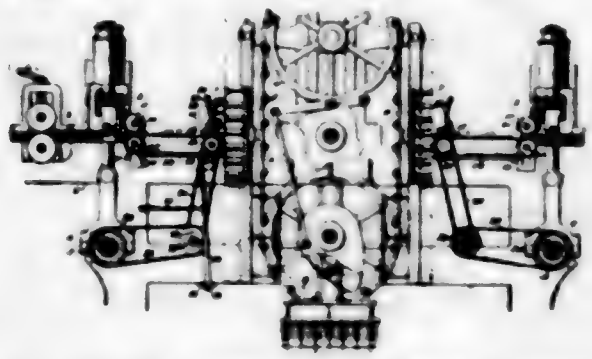
3. A multiple circle glass-cutting machine, comprising a vertical shaft mounted for both radial and vertical movements, spring means acting upon said shaft to hold it in a relatively raised position, a gear wheel carried by said shaft, a circle plate having a plurality of arcuate slots therein, and cutter shafts adjustably mounted in said slots and carrying pinions meshing with said gear wheel, each of said cutter shafts having a cutting tool, substantially as described.

6. A multiple circle glass-cutting machine, comprising a frame member, a shaft rotatably mounted in said frame member and also vertically movable in its mountings, a spring normally holding the shaft in a relatively raised position, and a plurality of vertical cutter-actuating shafts geared to the first named shaft, each of the cutter shafts being adjustable about the axis of the first named shaft, substantially as described.

7. A multiple circle glass-cutting machine, comprising a frame member, a shaft rotatably mounted in said frame member and also vertically movable in its mountings, a spring normally holding the shaft in a relatively raised position, and a plurality of vertical cutter-actuating shafts geared to the first named shaft, each of said cutter shafts having a vertically yieldable mounting, substantially as described.

8. A multiple circle glass-cutting machine, comprising a fixed support, a rotatable shaft journaled therein, a plurality of cutter shafts having their axes substantially parallel to the first named shaft and geared thereto, and a radially extending cutter carrier secured to each of the cutter shafts and carrying a cutter adapted to cut in a circular path around the axis of its said shaft; substantially as described.

1,296,887. CELL-CASE MACHINE. ALWIN W. D. WEIS, Quincy, Ill., and JOSEPH STARMAN, Cedar Rapids, Iowa. Filed Sept. 8, 1916. Serial No. 119,012. 9 Claims. (Cl. 93—38.)



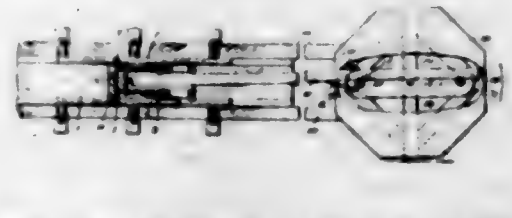
1. In a cell-case machine, combined with a continuously forward-moving gang of strip-carriers, a continuously moving strip-conveyer adapted to carry the strip from the point of cut-off and thrust it in the carrier, the conveying and thrusting movement of the strip-conveyer being transverse, and its turning movement being coincident with the movement of the strip-carrier.

1,296,888. COLLAR-BUTTON. PAUL R. WARNER, Philadelphia, Pa. Filed July 10, 1916. Serial No. 108,416. 1 Claim. (Cl. 24—101.)



A collar button consisting of a body having two extensions forming abutments projecting from one edge; and a tongue projecting from the same edge and between said abutments, said tongue being bent sharply adjacent the body to lie in a plane at right angles thereto and being thereafter again bent at right angles and curved inwardly into and terminating in the plane of the abutments.

1,296,889. HAY-PRESS. JOHN F. WHITE, Karnes City, Tex. Filed Aug. 9, 1918. Serial No. 249,149. 2 Claims. (Cl. 100—7.)



1. A baling press comprising a press box, a plunger operating in said box, a plunger rod, an operating member comprising a pair of cam parts, a pin on the plunger rod engaging said cams and a dog on said rod engaging with a part of the operating member for moving the plunger forward and spring means for returning the plunger to normal position.

1,296,890. FOUNTAIN-PEN AND THE LIKE. HARRY ALPHONSE WIDMER, London, England. Filed Dec. 6, 1918. Serial No. 265,632. 3 Claims. (Cl. 120—1.)



1. A blotting attachment for fountain pens and other instruments with ink reservoirs comprising a pen, a cap for said pen, a blotting attachment mounted within said cap and adapted to register with an opening in said cap, a spring adapted to project said blotting attachment through said opening and a rotatable shutter adapted to be moved off said opening to allow the attachment to project therethrough or to be moved over said opening to compress said attachment into the cap against the influence of its spring.

1,296,891. HOLDER FOR AUDITORY DEVICES. MILTON F. WILLIAMS, St. Louis, Mo. Filed Oct. 21, 1918. Serial No. 259,022. 2 Claims. (Cl. 181—25.)



2. In a device of the character described, the combination with a spring fork having turned-in ear tips and auditory connections, of a flat rigid band arched over the head and having fastening means on its ends engaging said ear tips, and holding the portions of the tips that enter the ears from turning out of alinement with the ear passages when the tips are inserted therein, under the inward spring tendency of said fork.

1,296,892. COKE-OVEN DOOR. LOUIS WILPUTTE, New Rochelle, N. Y., assignor of two-thirds to Alice A. Wilputte, New Rochelle, N. Y. Filed Apr. 12, 1918. Serial No. 228,069. 4 Claims. (Cl. 202—6.)

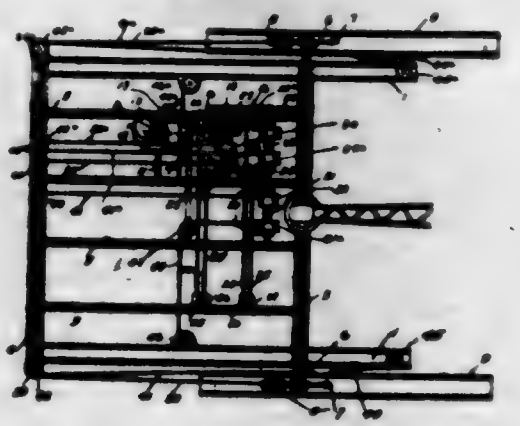


1. As a new article of manufacture a metallic frame for a coke oven door comprising a rim adapted to support a refractory door lining, and flange portion projecting laterally from the sides of said rim adjacent the outer edges of the latter, and formed with a luting surface running over the top portion of the rim along the side and inner edges of said top portion, and merging at its ends into the lateral faces of said flanges.

4. As a new article of manufacture a metallic frame for a coke oven door adapted to close the end of a coking chamber of a horizontal coke oven formed with a door receiving groove in the face of the oven structure extending upward from said coking chamber, comprising a rim adapted to enter the end of the coking chamber and to surround and support a refractory door lining, and flanges projecting laterally from the sides of said rim and adapted to overlap the portions of the oven structure at the sides of the coking chamber, and having the top portion of said rim projecting inwardly beyond the sides of the rim and adapted to seat against the bottom of said groove, and formed with a luting surface running over said top portion along its side and inner edges.

1,296,893. WALKING-MACHINE. CARL F. WILSON, Bay City, Mich. Filed July 8, 1916. Serial No. 108,167. 6 Claims. (Cl. 180—9.4.)

1. In a device of the character described, a pair of spaced main skids, a pair of auxiliary skids spaced from and adjacent the outer sides of the main skids, a frame mounted on said main skids, stud shafts mounted in the ends of said frame, pulleys mounted at each end of the main skids, a bell crank lever mounted on each stud shaft at each end of the frame directly over the respective auxiliary skid, a roller carried by each bell crank lever and adapted to ride on the respective auxiliary skid, cables for moving both pairs of skids with relation to each other, cables for operating said bell crank levers and raising said frame to lift said main skids at their forward ends, and means for operating said cables.



2. In a device of the character described, a pair of spaced main skids, a pair of auxiliary skids spaced from and adjacent the outer sides of the main skids, a frame mounted on each end and at the middle of said main skids, a bell crank lever mounted at each end of said frame and over-hanging the auxiliary skids, a roller carried by the bell crank levers and adapted to ride on the auxiliary skids, cables attached to the auxiliary skids for moving both pairs of skids with relation to each other, said cables running forward and rearward around the pulleys, cables running rearward around the pulleys for operating said bell crank levers and raising said frame and said main skids, and means for operating said cables.

3. In a device of the character described, a pair of main skids, a pair of auxiliary skids spaced from and arranged adjacent the outer sides of the main skids, a frame mounted on said main skids, a pair of bell crank levers mounted on said frame and overhanging the auxiliary skids, rollers mounted on said levers and adapted to ride on the auxiliary skids, cables for moving both pairs of skids with relation to each other, cables for operating said bell crank levers for raising the forward ends of said main skids, a plurality of shafts mounted on the frame, a plurality of drums on said shafts, and mechanism for winding and unwinding said cables on said drums.

4. In combination, a frame, skids spaced from and located adjacent the outer sides of the frame, lifting means mounted slightly in advance of the center of gravity of the machine and adapted to travel upon said skids, whereby the frame is lifted at two points only and whereby the machine when moving forwardly drags the rear end of the frame, means upon the frame for operating said lifting means to bring the lifting means into engagement with the skids and elevate the frame, and other means upon the frame for alternately advancing said frame and said skids.

5. In combination, a frame adapted to rest upon the ground, auxiliary supporting means therefor adapted to travel on the ground, lifting means mounted on said frame slightly in advance of the center of gravity of the machine and adapted to travel upon the auxiliary supporting means, whereby the frame is lifted at two points only and whereby the rear end of the frame is dragged along the ground as the machine moves forwardly, said supporting means being arranged on opposite sides of the frame adjacent the outer edges of the frame, means for alternately throwing the lifting means into and out of engagement with the auxiliary supporting means and means for alternately advancing the said frame and auxiliary supporting means.

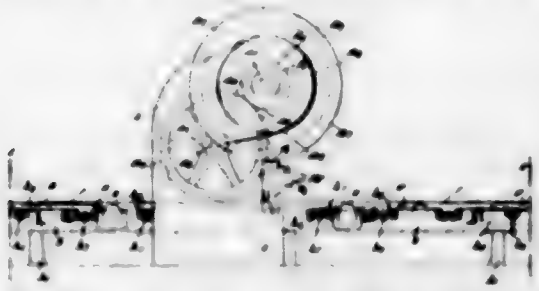
1,296,894. SOLE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. SIDNEY W. WINSLOW, Jr., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 5, 1917, Serial No. 159,931. Renewed Dec. 11, 1917. Serial No. 206,675. 13 Claims. (Cl. 36—22.)



4. As an article of manufacture, a rubber sole for turn shoes comprising a rubber body portion, and a fibrous layer extending transversely of the sole and secured to the upper side of the sole by vulcanization, the marginal portion of said fibrous layer being molded to produce a portion projecting above laterally adjacent surfaces of the sole and constituting a substantially all-fibrous sewing-rib.

10. As an article of manufacture, a rubber sole for turn shoes consisting of a vulcanized rubber compound body and a textile fabric member connected by vulcanization with the rubber compound body and having its marginal portion projecting above the rubber body and constituting an all-fibrous and non-stretchable sewing rib.

1,296,895. PUNCHING AND THE LIKE MACHINE. WILLIAM WOOD, Birkenhead, England. Filed July 20, 1917. Serial No. 181,877. 11 Claims. (Cl. 164—117.)



1. In a machine for perforating plates, the combination of perforating means, carrier means at each end of the plate to be punched, driving means to move the carriers longitudinally to thereby move the plate in respect to the punch, said carrier means being also adapted to have transverse movement, and two guides, one at each end of the plate for controlling the transverse movement of the carriers, substantially as described.

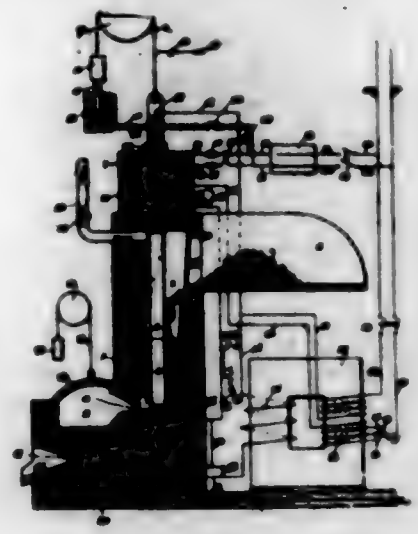
1,296,896. ELECTRIC FURNACE AND METHOD OF MELTING METALS AND SMELTING ORES. PARVIN WRIGHT and IVAN B. WRIGHT, Seattle, Wash. Filed Nov. 21, 1917. Serial No. 203,154. 52 Claims. (Cl. 204—64.)

1. An electric furnace comprising a chamber, magnetic means for retarding the downward movement of magnetizable material in said chamber, and means to apply heat to the material to melt it.

10. An electric furnace comprising a chamber, a resister in the lower portion of the chamber, means to suspend a body of metal and ores above and spaced from the resister, and a transformer having its secondary coil connected with the resister and body of metal and ores to form an electric arc therebetween.

20. An electric furnace comprising a chamber, means to suspend material in the chamber and to produce magnetic lines of force extending longitudinally of the chamber in the suspended material, and means to cause an electric current to flow in said suspended material parallel to the magnetic lines of force.

30. An electric furnace comprising a chamber, an electro-magnet to hold material suspended in the chamber, a solenoid, an armature movable by energization of the solenoid and connected with the electro-magnet, means to supply electric current to the electro-magnet and solenoid, and means to heat the material to melt it.



40. The method of melting metals and smelting ores, which consists in magnetically suspending the metal or ore in a chamber above a metallic body, and passing alternating currents through said suspended material to produce an electric arc between the suspended metal or ore and the metallic body to make the metal adjacent the arc molten.

1,296,897. VALVE. WALLACE C. YEOMANS, Pe Ell, Wash. Filed May 27, 1918. Serial No. 236,761. 2 Claims. (Cl. 251—44.)



2. The combination with a valve casing provided with a tubular boss and a partition formed with a circular seat, and an internally threaded bonnet carried by said boss, of a valve spindle in threaded engagement with said bonnet and having a flat sided neck and a head on the inner end thereof, and a relatively large one-piece valve body of slightly smaller diameter than the internal diameter of said boss and guided by the latter, said valve body having a transverse undercut groove on one end thereof forming a passage into which the spindle neck and head are introduced laterally, said head being of less thickness than the depth of the undercut portion of the groove and the flat sides of the neck engaging the adjacent side walls of the groove whereby said valve body will be positively rotated and longitudinal movement of the valve spindle relative to the valve body may be had upon rotation of the valve spindle after the valve body has seated upon said seat.

1,296,898. CHASE. WILLIAM YOUNG, Toronto, Ontario, Canada. Filed Sept. 14, 1918. Serial No. 254,126. 2 Claims. (Cl. 101—394.)

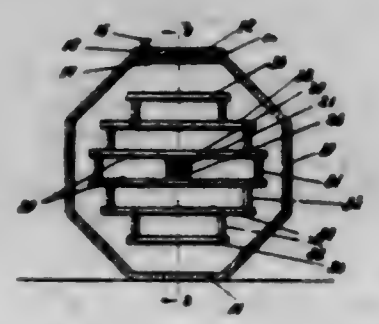
1. The combination with a chase-frame, of an adjustable frame mounted therewithin comprising longitudinal and transverse interfitting members; a pair of alined perforated plates positioned adjacent the outer sides of said longitudinal and transverse members, and extending there-

through, the ends of said perforated plates overlapping each other; removable means coupling the overlapping



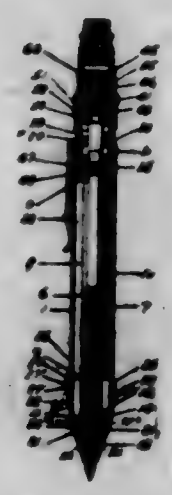
perforated plates together on the outer side of said adjustable frame, and a turn-buckle device co-acting with the inner opposed ends of said perforated plates.

1,296,899. CHURN. CHARLES J. ZELVIS, Cleveland, Ohio. Filed June 24, 1918. Serial No. 241,080. 2 Claims. (Cl. 259—109.)



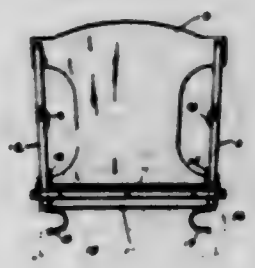
1. In a churn provided with a casing, the combination of a shaft journaled in the side elements of said casing, with a rectangular block fixed upon said shaft, a pair of plates rigidly engaged to said opposite sides of said blocks, opposed pairs of bars suited to recesses formed in the ends of said plates, a plurality of lugs formed upon the inner side of said bars, other plates engageable within the openings formed between said lugs, and means for clamping said bars with relation to the outermost of said plates.

1,296,900. MAGAZINE-PENCIL. JOHN B. EBERSOLE, San Francisco, Cal. Filed June 28, 1918. Serial No. 241,706. 9 Claims. (Cl. 120—21.)



1. In a pencil, a body, a lead magazine mounted within said body to move longitudinally and rotate in said body, means for clutching the lead while the lead is projected beyond the end of the magazine, means for locking the clutch in clutching position, a sharpening element mounted to slide toward the end of the body into position for sharpening the lead point and to slide away from the end of the body to allow the lead and the end of the magazine to pass therethrough, and means for holding the magazine in position with the lead projected beyond the end of the body.

1,296,901. DEVICE FOR ATTACHING A CHILD'S NURSERY TOILET-SEAT TO THE SEAT OF AN ORDINARY TOILET. ARTHUR LAVERN ADER, Vancouver, Wash., assignor to H. W. Arnold, R. C. Sugg, and Felix Robinson. Filed Mar. 1, 1917. Serial No. 151,851. 2 Claims. (Cl. 4—18.)



1. A removable nursery seat arranged for application to a toilet article having a flanged opening, comprising a back member and foldable bottom and side members having hinged connections with said back member whereby as said bottom member is swung to open position it will force said hinged side members outwardly, means associated with said hinged bottom member to lock said side members in open position, and outwardly facing hooks carried by said hinged side members adapted to be urged into engagement with the flanged opening of the toilet article as said side members are swung outwardly.

2. A removable nursery seat for a toilet article having a flanged opening, comprising a back member and foldable bottom and side members having hinged connections with said back member whereby as said bottom member is swung to open position it will force said hinged side members outwardly, and means associated with said hinged members to lock said side members in open position and in engagement with said flanged opening.

3. A removable nursery seat for a toilet having a flanged opening, comprising a rigid back member, a bottom member hinged along the lower edge thereof, and side members hinged to each side of the back member adapted to inclose the bottom member when swung upwardly parallel to the back member, said bottom member having notches at its forward edge adapted to coact with said side members and urge the same outwardly as the bottom member is moved to right angle position with respect to the back member, thereby to hold said side members against either inward or outward movement with respect thereto, and hooks carried by one of said parts adapted to coact with the flanged opening of the toilet.

1,296,902. LIQUID FUEL. ARTHUR A. BACKHAUS, Baltimore, Md., assignor to U. S. Industrial Alcohol Co., a Corporation of West Virginia. Filed Oct. 12, 1917. Serial No. 196,177. 15 Claims. (Cl. 44—3.)

1. A fuel comprising a petroleum distillate and an alcohol blended by a compound containing the acid radical of a hydroxy fatty acid.

6. A fuel comprising a petroleum distillate and an alcohol blended by a glyceryl containing the acid radical of ricinoleic acid.

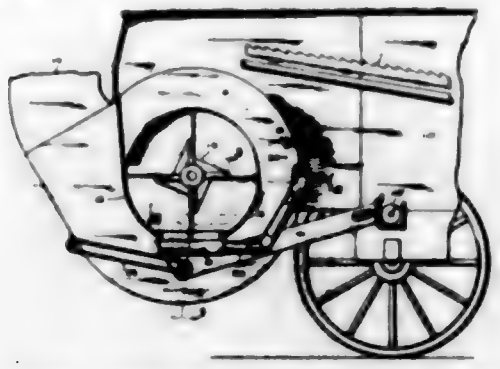
11. A fuel comprising gasolene and an alcohol blended by castor oil.

13. A fuel comprising gasolene, kerosene, and an alcohol blended by castor oil.

15. A fuel consisting essentially of a petroleum distillate, an alcohol and a vegetable oil containing an acid radical of a hydroxy fatty acid, the vegetable oil

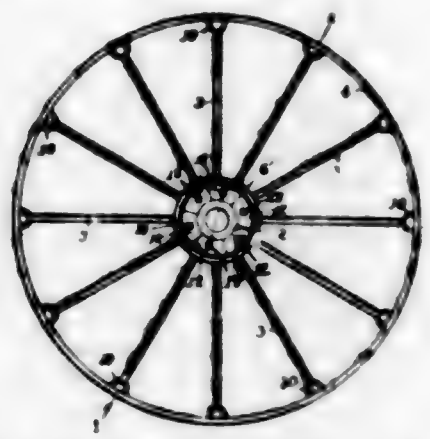
being in relatively small proportion and acting to blend the alcohol and petroleum distillate into a homogeneous mixture.

1,296,903. GRAIN-SAVING DEVICE FOR THRESHING-MACHINES. ABNER D. BAKER, Swanton, Ohio, assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Nov. 13, 1916. Serial No. 130,963. 6 Claims. (Cl. 130—17.)



2. In a grain saving device for threshing machines, a fan casing having an opening in its periphery, an air receiver positioned over said opening, a blast pipe detachably secured to said receiver, and an air distributer detachably secured to the opposite end of said pipe for receiving and discharging air conveyed from said fan casing into said distributer.

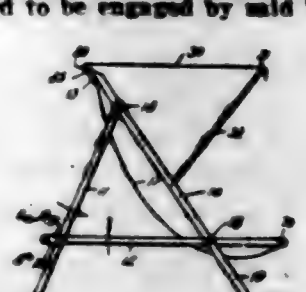
1,296,904. METAL WHEEL FOR STEAM AND GAS TRACTORS. ABNER D. BAKER, Swanton, Ohio. Filed Sept. 24, 1917. Serial No. 192,869. 2 Claims. (Cl. 21—69.)



1. A vehicle wheel comprising a rim, a hub, spokes disposed in radial pairs, said hub having at each end an outwardly opening annular recess through the surrounding walls of which the inner ends of the spokes loosely project, for each radial pair of spokes a segmental wedge conforming to the circle of said recesses and against which wedges the inner ends of the spokes abut in pairs, and means for the independent horizontal adjustment of said segments.

1,296,905. FOLDING CANOPY-CHAIR. JOHN BARKER, Venice, Cal. Filed Feb. 9, 1918. Serial No. 216,181. 3 Claims. (Cl. 135—5.)

1. In a device of the character described, a chair-frame embodying in its construction a pair of parallel leg members carrying at their upper ends a cross bar, roller brackets mounted upon said cross-bar, a roller revolubly mounted in said brackets, a spring on the roller adapted to rotate the roller, a canopy adapted to roll on the roller by action of the spring, a pair of canopy supporting arms pivotally mounted upon the two leg members and supporting a cross-bar to which the outer end of the canopy is affixed; grooves in the faces of the leg members in which the canopy supporting arms normally lie when the canopy is rolled upon the roller; the pivotal connection of the arms to the leg members embodying longitudinal slots in the ends of the arms, and pins on the leg members passing through said slots; and means to lock the arms against movement by the pull exerted upon the canopy by the spring roller embodying a hook in the end of each of the arms, and a pin on each of the leg members adapted to be engaged by said hook.



2. In a device of the character described, a chair-frame embodying in its construction a pair of parallel leg members carrying at their upper ends a cross bar and also embodying another pair of leg members pivoted to the first mentioned leg member, and seat members pivoted to the first mentioned pair of leg members and engaged by sliders pivoted to the second mentioned pair of leg members, roller brackets mounted upon said cross-bar, a roller revolubly mounted in said brackets, a spring on the roller adapted to rotate the roller, a canopy adapted to roll on the roller by action of the spring, a pair of canopy supporting arms pivotally mounted upon the two leg members and supporting a cross-bar to which the outer end of the canopy is affixed; grooves in the faces of the leg members in which the canopy supporting arms normally lie when the canopy is rolled upon the roller; the pivotal connection of the arms to the leg members embodying longitudinal slots in the ends of the arms, and pins on the leg members passing through said slots; and means to lock the arms against movement by the pull exerted upon the canopy by the spring roller embodying a hook in the end of each of the arms, and a pin on each of the leg members adapted to be engaged by said hook.

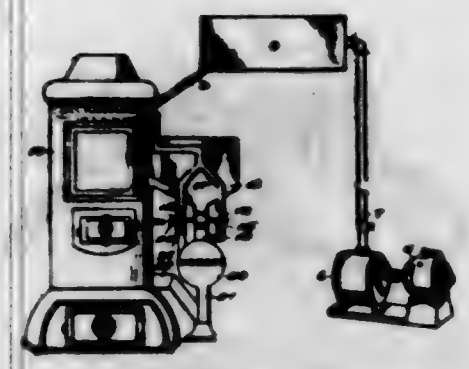
3. In a device of the character described, a frame embodying two upright parallel frame members, a roller revolubly mounted across the top of the frame between said members, a canopy mounted on and wound on the roller, spring means to rotate the roller to wind the canopy thereon, a cross bar to which the end of the canopy is secured, parallel arms carrying said cross bar and pivoted to the parallel frame members and adapted to be thrown back against the frame members when the canopy is rolled on the roller, the frame members having longitudinal grooves in their faces and the lower ends of the arms being pivoted in said grooves and the arms lying in said grooves when thrown back against the frame members.

1,296,906. FURNACE. HOMER BATCHELOR, Sheridan, Wyo. Filed May 28, 1915. Serial No. 30,980. 8 Claims. (Cl. 110—28.)

1. The herein described method which consists of feeding coal in finely powdered form together with air under pressure into a mixing chamber of such shape that the finely powdered coal will be agitated in suspension until the air and coal are intimately mixed, discharging such mixed air and coal into a preliminary combustion chamber in the presence of heat where preliminary combustion takes place and then conducting the products of combustion from the preliminary combustion chamber to a secondary combustion chamber containing a mass of porous incandescent matter.

2. An apparatus of the character described, comprising an air supply conduit, an air driven wheel disposed therein, a powdered fuel feeding element connected to said wheel, a mixing chamber into which the air is discharged after it passes said wheel and into which the powdered fuel is discharged and wherein said powdered fuel is mixed with said air, means for conducting the air and powdered fuel after said mixture from said mixing

chamber to a combustion chamber and means for varying the amount of fuel delivered in proportion to the amount of air which passes said wheel, said means comprising a friction device for retarding said wheel.



3. In a furnace construction a combustion chamber, a mixing chamber, a connection between the mixing chamber and the combustion chamber, a source of air under pressure, pipes leading from the source of air under pressure to the mixing chamber, a hopper for powdered coal, a pipe leading therefrom to the mixing chamber, a fuel feeding element disposed in said pipe, and means actuated by the passage of air through said pipes for actuating said fuel feeding means.

4. In combination, a furnace provided with a combustion chamber comprising a primary part and a secondary part, the secondary part containing a mass of non-combustible, porous material and the primary part being located therebeneath, a mixing chamber, a connection leading from said mixing chamber to the primary part of the combustion chamber of the furnace, a source of air under pressure, pipes leading from the source of air under pressure to the mixing chamber, a container for powdered coal, means for feeding coal from said container into the mixing chamber.

8. A structure as recited in claim 4, wherein said mixing chamber is in addition substantially spherical in form and the connection that leads to the combustion chamber leads from the lower portion and laterally from the mixing chamber and some of the air delivered to the mixing chamber enters the same tangentially to thereby set up swirling currents of air within said mixing chamber.

1,296,907. FLANGE-LUBRICATOR. THOMAS F. BELLHOUSE, Sacramento, Cal. Filed July 12, 1918. Serial No. 244,517. 3 Claims. (Cl. 184—3.)



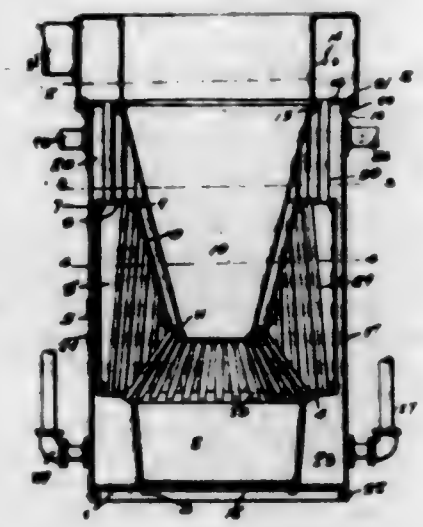
1. A flange lubricator comprising an oil cup, a discharge pipe therefrom, an offset steam chamber integral with the oil cup, and a vertical bleed hole discharging from said steam chamber onto the outer surface of the discharge pipe, the bleed hole being of such small diameter that the steam in the chamber will be held back from free exit therefrom and will condense and drip from the bleed hole in the form of water.

1,296,908. METALLIC KITCHEN-CABINET. CHARLES A. BERNHARD, Chicago, Ill. Filed July 26, 1918. Serial No. 246,854. 3 Claims. (Cl. 45—16.)



1. A kitchen cabinet of metallic construction comprising, a rear wall, two side walls, a top, and a bottom, said side walls having their longitudinal outer edges bent at right angles, and the right-angled portions bent upon themselves, a series of cross bars connecting these right-angled portions, a series of longitudinal bars, said longitudinal bars being secured to the inner surfaces of the side walls, said longitudinal bars being approximately U-shaped in cross section, there being on the upper members of these bars offsets, said upper members being flush with the upper surfaces of the cross bars, and said offsets being flush with the marginal edges of the right-angled portions of the side walls, and a series of drawers slidably mounted on said longitudinal bars at the offset portions thereof.

1,296,909. HOT-WATER HEATER. ALVIE E. BICKNELL, Indianapolis, Ind. Filed Feb. 14, 1918. Serial No. 217,101. 2 Claims. (Cl. 122—339.)

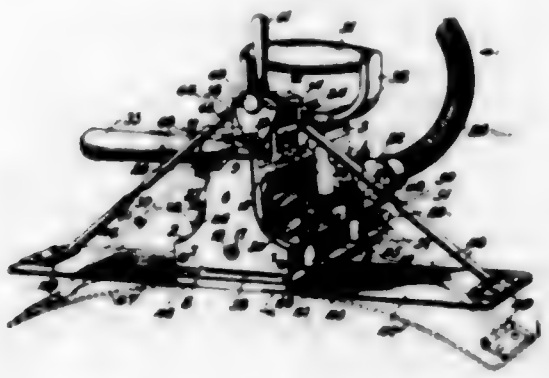


1. In a water heater the combination with a casing and a firebox forming a mud drum therein, return water pipe connections, an upper annular outwardly projecting flange to the firebox and a cylindrical drum secured thereon providing a water jacket in conjunction with the casing, a central inverted conical magazine above the firebox, a head ring closing the upper end of the cylindrical drum and an inverted conical jacket wall secured to said head, surrounding the magazine and forming a water jacket thereabout, a series of water tubes connecting the mud drum and magazine water jacket, a smoke box surrounding the upper end of the fuel magazine, and smoke flues connecting said smoke box and the interior of the cylindrical drum, and said drum being in open communication with the fire box.

2. The combination in a water heater with a casing, of an open, central firebox and an enlarged drum superposed thereon to form a mud drum beneath the enlarged drum and a water jacket in conjunction with the casing, an open bottom, central magazine forming a smoke box in the upper end of the casing and projecting into the enlarged drum, there being a water drum formed between

said smoke drum and the enlarged drum, a water jacket within the enlarged drum surrounding the magazine, water pipes connecting the mud drum and magazine water jacket and arranged in an annular series to bridge the space between the firebox and the bottom of the magazine, smoke flues connecting the enlarged drum and smoke box, and return water pipe connections.

1,296,910. PORTABLE HAND-PLANER. JAMES HENRY BLODGOOD, Jacksonville, Fla., assignor to Thomas H. Spencer, trustee, Birmingham, Ala. Filed July 23, 1918. Serial No. 246,398. 7 Claims. (Cl. 145—9.)



1. In a portable hand wood working device, in combination, a body member, a rotary tool carried by the body member, a bottom member forming a working face and provided with a throat for the rotary tool, and carrying means for the bottom member mounted on the body member for varying the distance of the bottom member from the body member, said carrying means comprising threaded posts fast to the bottom member, sleeves traversed by the posts and threaded through portions of the body member, and lock nuts on the sleeves and posts for adjusting and clamping the bottom member at chosen distances from the body member to thereby vary the depth of cut.

2. In a portable hand wood working device, in combination, a body member, a rotary tool carried by the body member, and a bottom member provided with a throat for the tool and adjustable bodily toward and from the body member, said bottom member having flexible extensions in the line of travel of the device, and means for flexing said flexible extensions.

7. In a portable hand wood working device, in combination, a body member, means for supporting a rotary tool in the body member, a bottom member forming the working face of the body member and provided with a throat through which an applied tool may project, means for adjusting the bottom member bodily toward and from the body member to vary the depth of cut, flexible plates projecting oppositely from the bottom member to constitute extensions thereof, manipulating means on the bottom member, and extensible and contractible connections between the manipulating means and the flexible plates for holding and flexing the latter into conformity with straight and curved surfaces.

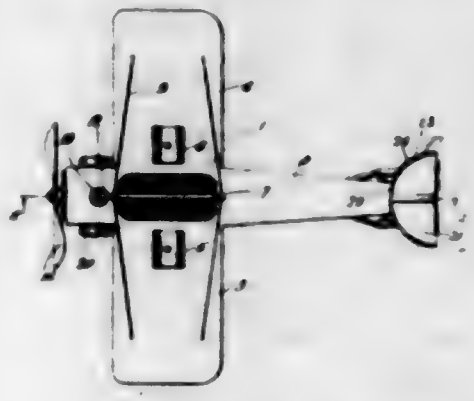
1,296,911. PORTABLE HAND-PLANER. JAMES HENRY BLODGOOD, Jacksonville, Fla., assignor to Thomas H. Spencer, trustee, Birmingham, Ala. Filed July 23, 1918. Serial No. 246,399. 7 Claims. (Cl. 145—5.)

1. In a portable power driven hand planer, in combination, a main frame including side walls and a base plate having an opening intermediate its ends, said frame open from its front to its rear end, a tool carrier pivotally supported at its rear end in the main frame adjacent its rear end and provided with a power driven tool operating through the opening in the base plate, said tool being reversible in said frame, and an adjusting device connecting the front end of the pivoted tool carrier to the main frame, whereby to adjust the tool through



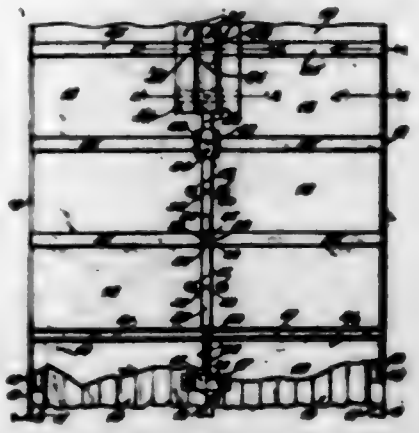
the opening relatively to the base plate and to hold the tool rigidly in its adjusted position.

1,296,912. MATCH-BOX. ISADORE BLUMENTHAL, New York, N. Y. Filed Mar. 28, 1918. Serial No. 225,256. 2 Claims. (Cl. 206—36.)



1. A device of the character described comprising a body, a match box arranged on said body, means for holding said match box in place on the body, said match box having a housing having an opening in the bottom, a pair of partition walls substantially straddling said opening whereby two compartments are provided for receiving different kinds of matches, and striking members arranged on one of the walls of said housing for the respective kinds of matches.

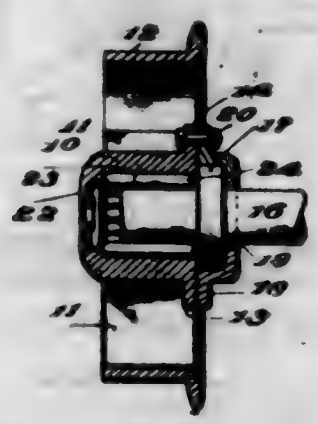
1,296,913. CAR-ROOF. WILLIAM A. BREWER, Pittsburgh, Pa., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1918. Serial No. 264,084. 12 Claims. (Cl 108—5.)



1. A car roof comprising roof sheets arranged transversely of the car, said roof sheets being movably secured to the car at the eaves, seam caps movably con-

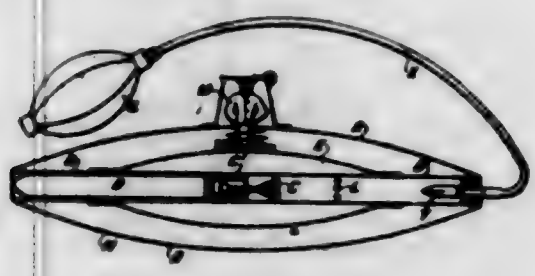
necting the adjacent side margins of the said roof sheets, the eaves ends of said seam caps having turned-under portions adapted to movably engage the under sides of the eaves ends of the roof sheets for holding said seam caps down on the car.

1,296,914. MINE-CAR WHEEL. HENRY W. E. BROSI, Girard, Kans. Filed Nov. 2, 1918. Serial No. 260,877. 2 Claims. (Cl. 295—44.)



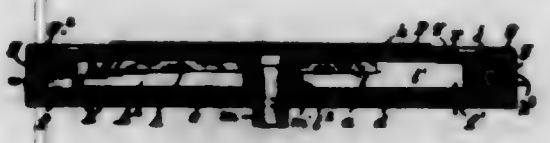
1. A wheel including a hub having one end closed save for an opening for lubricating, a removable cap plate detachably secured on the other end of the hub and having an offset portion spaced from the hub and provided with an axle receiving opening, and antifriction members disposed in the hub and having their ends arranged for contact with a portion of an axle and one end of the hub.

1,296,915. SUBMERSIBLE TOY. THEODORE BURNEY, London, England. Filed Oct. 15, 1915. Serial No. 56,050. 14 Claims. (Cl. 46—37.)



1. A submersible toy comprising a hull having means for the ingress and egress of water, means within the hull for forcing the water out of the hull to permit the toy to rise to the surface, and hand-operated means without the hull for controlling said last mentioned means.

1,296,916. HEATING OR COOLING PLATE FOR MOLDING-PRESSES. CHARLES F. BURROUGHS, East Orange, N. J. Filed Feb. 7, 1918. Serial No. 215,821. 8 Claims. (Cl. 257—256.)

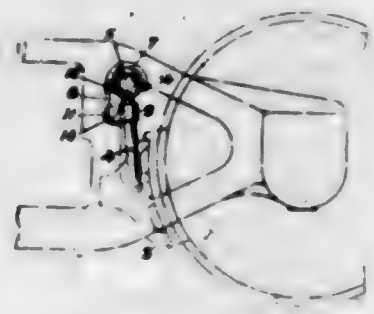


1. In a plate for heating or cooling, the combination, with a base having a radial pocket in its upper side disposed as set forth, of a top-seat united to the base and having ribs forming channels encircling the center of said seat and intersected radially by a partition extended downward into the pocket in the base, with clearance in the pocket, at opposite sides of the partition, connecting with the said channels, an inlet supplying a heating or cooling fluid to the said pocket at one edge of the base, and an outlet from the opposite side of the base, whereby fluid is distributed laterally in the said channels in both directions from the said pocket to reach the said outlet.

2. In a plate for heating or cooling, the combination, with a base having a flat top with opposite radial pockets therein, of a top-seat united to the base and provided next the base with a plurality of circular channels, an inlet and outlet in the base connected respectively to the outer ends of the said pockets, the fluid in the inlet-pocket being thus admitted from both sides of the inlet-pocket into the channels between the ribs, to reach the outlet connected with the opposite outlet-pocket.

3. In a plate for heating or cooling, the combination, with a base having a flat top with opposite radial pockets therein and an inlet and outlet in the base connected respectively to the outer ends of the said pockets, of a top-seat united to the base and having a plurality of concentric ribs and channels supported upon the top of the base, and partitions radially intersecting said ribs and extended downward into the said pockets, the partition in the outlet-pocket having its butt widened at the inner end to obstruct the flow from the central channels, and its outer end greatly reduced by taper to increase or facilitate the discharge from the outer channels.

1,296,917. HANGER DEVICE FOR BRAKE-SHOES. THOMAS L. BURTON, St. Louis, Mo., assignor to The American Brake Company, St. Louis, Mo., a Corporation of Missouri. Filed June 12, 1918. Serial No. 239,511. 5 Claims. (Cl. 188—70.)



1. In a brake device, the combination of a brake shoe, a hanger formed with two side bars pivoted to the truck frame, a friction arm, stops for limiting the movement of said arm, and a clamp secured to said side bars of the hanger and having a frictional connection with said arm.

2. In a brake device, the combination of a brake shoe, a hanger formed with two side bars pivoted to the truck frame, a friction arm mounted on the same pivot between said side bars, stops for limiting the movement of said arm, and a clamp secured to the side bars and having a frictional connection with said arm.

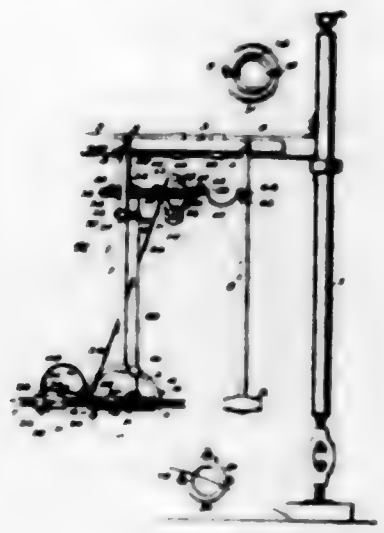
3. In a brake device, the combination of a brake shoe, a hanger formed with two side bars pivoted to the truck frame, a friction arm pivotally mounted between said side bars, stops for limiting the movement of said arm, a clamp secured to the side bars, and a clamping bolt and nut forming an adjustable frictional connection between the clamp and said arm.

4. In a brake device, the combination of a brake shoe, a U-shaped hanger, a suspension bracket having lugs, a pivot pin extending through the side bars of said hanger and said lugs, a friction arm pivotally mounted on said pin, stops for limiting the movement of said arm, and a clamp secured to the hanger and having a frictional connection with said arm.

5. In a brake device, the combination of a brake shoe, a hanger therefor, a suspension bracket having stop edges,

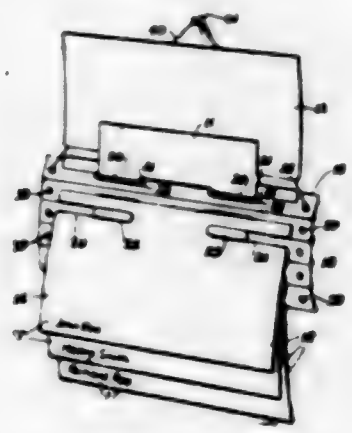
the hanger being pivoted to the bracket, a friction arm also pivoted to said bracket and having stops for engaging said stop edges thereof, and a clamp secured to the hanger and having a frictional connection with said arm.

1,296,918. DRILL-HOLDER. JOHN M. CALDERWOOD, Spanish Fork, Utah. Filed Aug. 10, 1918. Serial No. 249,231. 6 Claims. (Cl. 255—41.)



3. In a drill holder, the combination with a drill support, and a drill carried thereby, of a hammer for driving the drill, a slidable member operatively connected to the hammer, a drill projecting device, and a flexible member connecting the drill to the slidable member.

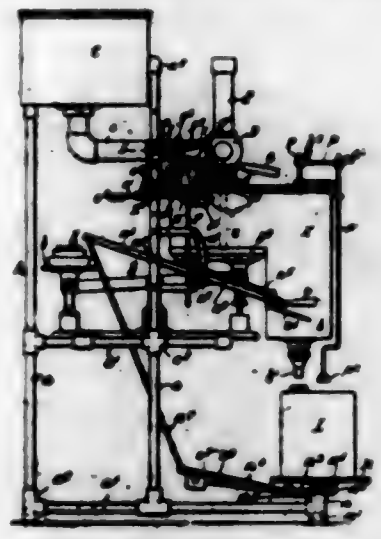
1,296,919. CARD-INDEX. JOSEPH R. CARROLL, Norfolk, Conn. Filed Sept. 12, 1918. Serial No. 253,726. 5 Claims. (Cl. 129—16.)



1. A card index, comprising a support made in sections detachably coupled together along adjacent edges, and card carriers, one for each section and mounted to swing thereon, each card carrier having card attaching means for engagement with a card to hold the latter in place, successive cards overlying each other with the name or title portions exposed.

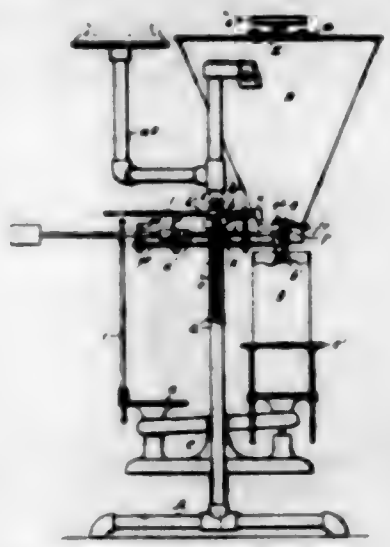
1,296,920. WEIGHING APPARATUS. FRANK B. CHAMBERS, Buffalo, N. Y. Filed Oct. 26, 1916. Serial No. 127,809. 14 Claims. (Cl. 73—180.)

1. In an apparatus for filling receptacles with liquid, the combination of a passage for the liquid, a valve in said passage for controlling the flow of liquid from said passage, means for opening said valve, a scale adapted to cause the closing of said valve, and means on said valve opening means adapted to engage a part of said scale for



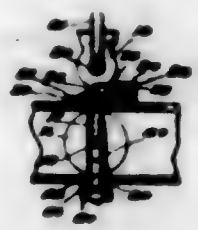
stopping movement of the scale when said valve is being opened.

1,296,921. VALVE-ACTUATING MECHANISM FOR DISPENSING OR WEIGHING APPARATUS. FRANK B. CHAMBERS, Buffalo, N. Y. Filed Oct. 17, 1917. Serial No. 197,167. 9 Claims. (Cl. 73—181.)



4. The combination of a container, a valve for controlling the flow of material from said container, a detent lever for holding said valve open, means for closing said valve when released from said detent lever, a hammer pivotally mounted above said detent lever, means for releasably holding said hammer to cause the same to swing about its pivot into engagement with said detent lever for releasing the valve.

1,296,922. COMBINED AIR AND DECARBONIZING VALVE. ADOLFO DE CLAIRMONT, Toledo, Ohio. Filed July 31, 1916. Serial No. 112,412. 6 Claims. (Cl. 251—11.)

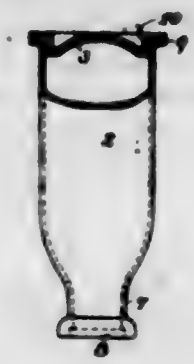


1. A device of the character described including a butterfly valve adapted to be inserted in an intake mani-

fold branch and having a diametric sleeve formed at one side with an opening, a stem adapted for passage through openings formed in opposite sides of the manifold branch and through the sleeve, a priming cup carried by one end of the stem, means applicable to the other end of the stem to hold the stem against displacement from the manifold while leaving it free for turning movement to turn the valve, yieldable tensioning means for the stem applicable between the said last mentioned means and the manifold, the stem being formed with a passage having uninterrupted communication at one end with the opening in the sleeve and at its other end with the priming cup, and a valve for the priming cup.

6. A device of the character described including a butterfly valve adapted to be positioned in an intake manifold of an internal combustion engine and formed with a diametric sleeve, a valve stem adapted to be secured in the sleeve and formed with a passage opening at its outer end at one end of the stem and opening at its inner end through one side of the stem within said sleeve, and a priming cup carried by the said end of the stem to communicate with said passage, the sleeve being provided with an opening forming an outlet constantly in communication with the passage at its inner end whereby liquid entering the passage from the cup will be completely drained from the passage through the said opening.

1,296,923. **RECEPTACLE.** WALTER E. CLAUSSEN, Hartford, Conn. Filed Mar. 18, 1915. Serial No. 15,851. 2 Claims. (Cl. 229—12.)



2. A bottle comprising a body and a bottom both of pulp, the two parts being cohesively united by compression while the pulp is in a plastic condition.

1,296,924. **FITTING FOR USE IN GLAZING ROOF AND LIKE STRUCTURES.** WILLIAM COACKLEY, Pendleton, Manchester, England. Filed Mar. 5, 1918. Serial No. 220,470. 2 Claims. (Cl. 108—16.)



1. A fitting for use in glazing roof and like structures, comprising an arm part adapted to support a T astragal and having a slotted upturned part to embrace the stem of a T astragal, as set forth.

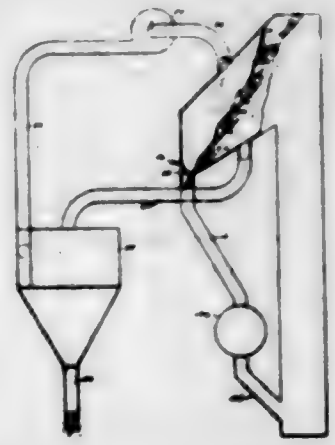
2. A fitting for use in glazing roof and like structures, comprising an element adapted to support a T astragal and to be itself attached to an angle iron, purlin or scantling upon the roof structure, and having a slotted upturned portion adapted to embrace the stem of a T astragal (supported on the angle iron or the like) adjacent the one supported on the fitting, as set forth.

1,296,925. **RESILIENT WHEEL.** GEORGE W. CONWAY, Newark, N. J. Filed Sept. 2, 1916. Serial No. 118,306. 2 Claims. (Cl. 152—8.)



2. A vehicle-wheel comprising a ring-like element, and circular side-members, said members extending beyond the outer cylindrical surface of said ring-like element to provide an outer annular receiving space, said ring-like element being formed with peripheral depressions providing spring-receiving seats, and pin-receiving guides extending from said seats through said ring-like element, a plurality of arc-shaped tread-blocks movably disposed between the side-members of said ring-shaped element, said blocks being formed in their inner surfaces with depressions providing spring-receiving seats, and pin-receiving guides in alinement with the guides in said ring-like element, said blocks being also provided in their outer surfaces with depressions, a pin disposed in each pair of oppositely disposed receiving guides, and a head upon each pin resting in one of said last-mentioned depressions, a spring encircling each pin, the respective ends of each spring being seated upon the respective oppositely placed spring-receiving seats, and means upon each pin for bringing said springs under tension and correctly positioning said tread-blocks.

1,296,926. **APPARATUS FOR PRODUCING COMMINUTED MATERIAL.** JOHN W. COX, Erie, Pa., assignor of one-fourth to George R. Metcalf and one-fourth to Edward E. Walker, Erie, Pa. Filed Feb. 10, 1917. Serial No. 147,774. 6 Claims. (Cl. 83—54.)



3. In an apparatus for producing comminuted material, the combination of devices for conveying the material and directing the same to fall by gravity in an open stream across an air passage; means for creating a current of air through the passage and falling material,

comprising a fan; pipes connecting the fan with the inlet and outlet of said passage; and a separator arranged in the pipe circuit.

1,296,927. STEERING MECHANISM FOR TRUCKS. JOHN W. COX, Erie, Pa., assignor of one-fourth to George R. Metcalf and one-fourth to Edward E. Walker, Erie, Pa. Filed May 15, 1918. Serial No. 234,583. 4 Claims. (Cl. 74—79.)



1. In a steering mechanism for trucks, the combination of a truck frame; a steering post; steering connections actuated by the post; a beveled post pinion on the upper end of the post; a beveled handle pinion meshing the post pinion; a handle extending from the handle pinion; a bearing for the post secured to the frame; a bearing pin for the handle pinion; and an extension from the bearing in supporting engagement with the pin at the side of the handle pinion away from the post.

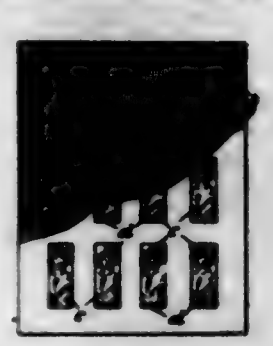
1,296,928. ARTIFICIAL TOOTH. ARTHUR N. CROSS, Philadelphia, Pa. Original application filed Feb. 1, 1917, Serial No. 145,838. Divided and this application filed Jan. 20, 1919. Serial No. 271,946. 2 Claims. (Cl. 32—9.)



1. An artificial tooth having a facing, said facing including two flat surfaces extending inwardly at an incline to each other; a cavity extending into said facing and intercepting at least one of said faces, said cavity extending at an incline to the direction of the biting movement of the tooth; and a plate having surfaces bent at an angle to each other and adapted to fit against the flat surfaces of said facing, said plate having a tongue extending therefrom in the direction of and adapted to fit within said cavity, substantially as described.

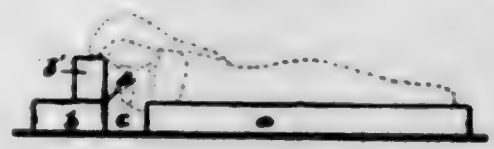
1,296,929. METHOD OF INSURING THE ACCURATE REGISTRATION OF THE PLATES FOR MULTI-COLOR PRINTING. HARVEY DALZIEL, London, England. Filed Dec. 26, 1918. Serial No. 268,232. 1 Claim. (Cl. 101—382.)

The improved method for insuring the accurate registration of a number of plates on mounting boards for multicolor printing, which consists in taking from plates prepared by the usual processes and bearing registering marks, a number of impressions, fixing the impressions onto an unshrinkable sheet, clamping the sheet with the impressions thereon, onto a mounting board, marking the board through the sheet at the registration points, removing the sheet, inserting vertical pins at the points so marked, applying plates onto the pins and fixing the



same and repeating the application of the same sheet to other boards substantially as described.

1,296,930. MEANS FOR OVERCOMING INSOMNIA. ALICE O. DARLING, Lebanon, N. H. Filed Dec. 12, 1916, Serial No. 136,533. Renewed Jan. 24, 1919. Serial No. 272,968. 2 Claims. (Cl. 5—13.)



1. A mattress comprising a major body supporting portion, and a two-part hingedly connected head portion, the outer part of the head portion being stationary and spaced from the adjacent end of the major portion and the other part of the head portion being adapted to be raised upon the first part into position for receiving the forehead of a person lying face down on the mattress to elevate the head and to provide an air space beneath the head and between the head and major portions of the mattress.

1,296,931. VELOCIPEDE. CLARENCE M. DAVIS, Cape May, N. J. Filed Sept. 10, 1918. Serial No. 252,448. 10 Claims. (Cl. 208—13.)



1. The combination with a velocipede having driving mechanism associated with the power delivering traction wheel thereof, of braking mechanism associated with the rear wheel of the velocipede, means whereby the braking mechanism may be actuated upon the opposite rotative movement of the driving mechanism with respect to the rotation of the power delivering traction wheel.

1,296,932. MAGNETO-TESTER. DANIEL C. DODDS, Boone, Iowa. Filed Mar. 22, 1918. Serial No. 224,034. 4 Claims. (Cl. 175—318.)

1. In a magneto tester, the combination with a casing, a rack bar slidably mounted therein and projecting be-

yond the casing and having a soft metal head at its outer end adapted to serve as the armature of a magnet, and a pinion rotated by movements of said rack bar; of indicating mechanism set by the turning of said pinion.

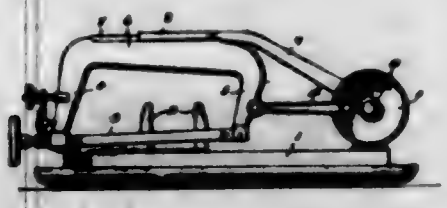


2. In a magneto tester, the combination with a casing, a rack bar slidably mounted therein and projecting beyond the casing and having a soft metal head at its outer end adapted to serve as the armature of a magnet, and a pinion rotated by movements of said rack bar; of an index fast on the shaft of said pinion and standing over the front face of the casing, and a scale marked on said face and with which the tip of said index coacts.

3. In a tester of the class described, the combination with a casing having an arcuate scale marked on its front face, a shaft journaled through the front and rear walls of said casing and carrying a pinion between them, and an index fast on the front end of said shaft and with its tip coacting with said scale; of guides in the casing, a rack bar slidably mounted in said guides and having a head at its lower projecting end and another head at its upper end, and an expansive spring coiled on the bar between said upper head and the upper guide, for the purpose set forth.

4. In a tester of the class described, the combination with a casing having an arcuate scale marked on its front face, a shaft journaled through the front and rear walls of said casing and carrying a pinion between them, and an index fast on the front end of said shaft, and with its tip coacting with said scale; of a vertically movable rack bar mounted in guides within the casing, a spring for moving it normally in one direction with certain force, a head on its outer end adapted to serve as the armature of a magnet, and a pawl pivoted within the casing with its inner end engaging said pinion and its outer end projecting outside the casing, for the purpose set forth.

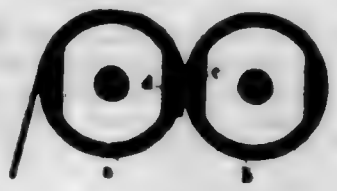
1,296,933. POWER-HACKSAW. CHARLES H. DRIVER, Racine, and ARTHUR H. GOERTZ, Mukwonago, Wis., assignors to J. Moores Jones, Racine, Wis. Filed Nov. 15, 1917. Serial No. 202,164. 4 Claims. (Cl. 29—78.)



1. A device of the class described comprising a blade holder in the form of a yoke, and a blade connected with the free ends of the arms of said yoke, both arms of said yoke being extended from the back thereof downwardly and rearwardly with respect to the cutting direction of the blade.

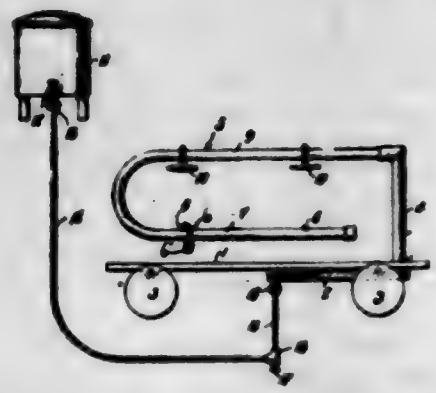
3. A device of the class described comprising a blade holder, a guide having one end pivoted, said blade holder being reciprocative in the free end portion of the guide, means for reciprocating the blade holder, and a blade carried by the holder, said blade being disposed out of parallel with the plane of the axis of the guide.

1,296,934. PROCESS FOR CUTTING AND PILING UP THIN ALUMINIUM SHEETS. EUGÈNE DROUILLY, Paris, France. Filed Apr. 21, 1914. Serial No. 833,427. 1 Claim. (Cl. 164—17.)



The process of cutting sheet aluminium which consists in assembling such sheets with sheets of paper of a dimension at least equal to the dimension of the aluminium sheet, arranging the paper sheets and aluminium sheets so that each sheet of aluminium is held out of contact with the adjacent sheet of aluminium by a sheet of paper, and cutting the combined aluminium and paper sheets.

1,296,935. OIL-BURNER. LEWIS A. EASTMAN, Laconia, N. H. Filed Sept. 26, 1918. Serial No. 255,888. 1 Claim. (Cl. 158—62.)



A burner of the class described comprising a wheel-supported base plate having a chamber on its lower face, fuel supply means connected with said chamber, a valve for controlling said supply, parallel pipes arranged above said plate in vertical alinement with each other, means for connecting said pipes with said chamber, nipples carried by the lower pipe, and a stopper for closing one of said nipples.

1,296,936. CLIP AND STRUCTURAL MEMBER FOR PLASTER-BOARD PARTITION CONSTRUCTION. WILLIAM C. EDWARDS, Jr., Kansas City, Mo. Filed Aug. 29, 1918. Serial No. 251,943. 2 Claims. (Cl. 72—118.)

1. In plasterboard partition construction, a composite stud comprising two channel-like elements integrally connected back to back, each channel element being provided with bent back stiffening flanges which in the composite stud form two hollow face elements of said stud, the adjacent edges of said paired flanges on each stud face being however spaced apart a distance to form a longitudinal slotted opening in said hollow face element; and one or more metallic clips in combination therewith and adapted to support plasterboards in desired structural relationship upon the faces of said studding; each clip having locking terminal means adapted to enter through a slotted opening in a hollow face element of said stud and engage behind flange elements adjacent thereto; and a tie member integral with said locking terminal means and with oppositely disposed plasterboard

supporting terminals, said tie member constituting a measurement means equivalent to the thickness of a plasterboard plus the thickness of the engaged flanged stud elements.

1,296,937. APPARATUS FOR EXTINGUISHING FIRE. FRANK A. EPPS, Philadelphia, Pa., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 9, 1917. Serial No. 141,374. 5 Claims. (Cl. 169—11.)



1. As a means for extinguishing fires by the foam-extinguishing process and wherein the component solutions are normally maintained separate and are brought into commixing relation substantially at the point of application and under fire conditions, a delivery system including independent lines for the several component solutions, said lines having their discharge ports substantially at the point of application, with the ports adapted to deliver the solutions in stream formation, and means for controlling the commixture of the solutions, said means including restraining means for the discharge ports, and a releasing structure rendered active under fire conditions and adapted to concurrently release the streams, said discharge ports being relatively positioned to cause stream discharge in substantially opposite and intersecting directions to produce forcible break-down of the stream formations and substantially overcome the stream pressures, whereby reaction of the component solution elements of the commixed and broken-down streams will be rapidly developed.

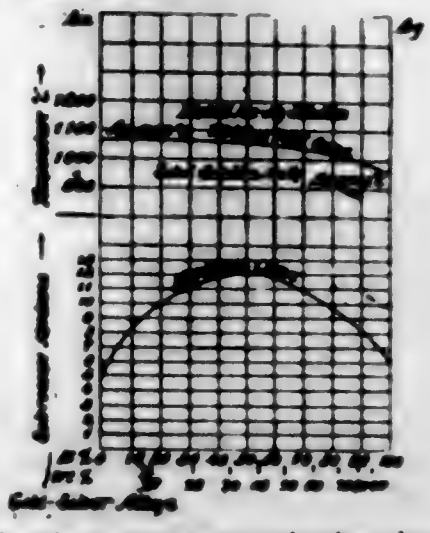
2. Apparatus of the class described, and in combination, sources of supply of different solutions, pipes each conducting one solution, the outlet ends of said pipes being disposed in opposition to each other, closure means for the outlet ends of said pipes, a toggle for retaining the closure means to prevent the flow of said solutions, and means for automatically releasing the solutions for their commixture to produce a foam and generate a gas non-supporting to combustion.

3. Apparatus of the class described, and in combination, sources of supply of different solutions, pipes each conducting one solution, the outlet ends of said pipes being disposed in opposition to each other, closure means for the outlet ends of said pipes, a toggle for retaining the closure means to temporarily prevent the flow of said solutions, and means associated with the toggle for automatically releasing the solutions for their commixture to produce a foam and generate a gas non-supporting to combustion.

1,296,938. COMPOSITION OF MATTER FOR PLATINUM SUBSTITUTE. FRANK A. FAHRENWALD, Cleveland, Ohio, assignor to The Rhotanium Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 13, 1916. Serial No. 108,991. 10 Claims. (Cl. 75—1.)

1. A platinum substitute containing palladium together with silver and one at least of the other noble metals immediately surrounding palladium in the periodic table, all of the constituent metals having atomic weights between one hundred and two hundred times that of hydrogen, the palladium constituting not less than ten atomic per cent. of the whole.

5. A composition of matter containing at least 10 atomic per cent. and not over 40 atomic per cent. of palladium, at least 10 atomic per cent., and not over eighty atomic per cent. of silver, the remainder being a metal or metals of the gold series in the periodic table having an atomic weight between one hundred and two hundred times that of hydrogen.



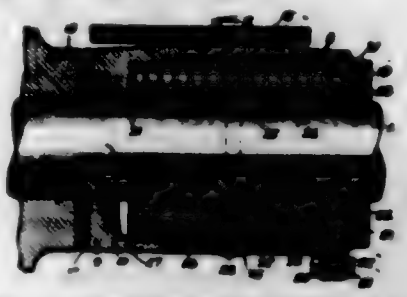
10. An electric current communicating element formed of an alloy containing palladium and silver together with one or more of the other noble metals immediately surrounding palladium in the periodic table, all of the constituent metals having atomic weights between one hundred and two hundred times that of hydrogen and the palladium constituting not less than about ten atomic per cent. of the whole.

1,296,939. SHOE-HEEL. DAVID H. FINNEGAN, St. Louis, Mo. Filed Jan. 10, 1919. Serial No. 270,504. 2 Claims. (Cl. 36—40.)



1. A one-piece heel provided with a socket leading from the tread of the heel, said socket having sloping bounding walls converging inwardly and upwardly, a plug deposited in the socket and having its bottom flush with the bottom of the heel, a central fastening member securing the plug to the roof of the socket, a lift engaging the bottom of the plug and the portions of the heel bottom surrounding the plug, and nails driven through the lift against the sloping walls of the socket and against the roof of the socket whereby the same are clenched over the top of the plug and hold the lift securely to the plug and to the bottom of the heel.

1,296,940. CAR-AXLE BOX. JAMES R. FLEMING, Scranton, Pa. Filed May 25, 1918. Serial No. 236,541. 5 Claims. (Cl. 64—62.)



1. An article as characterized comprising a cylindrical box member having a contracted and an enlarged opening at opposite ends thereof, said member having annular grooves, one disposed in the contracted opening and the other intermediate the ends of said member; a cover for the enlarged opening of said member, said cover having a lubricant-collecting groove at the inner face thereof, said groove being concentric with said opening; means

communicating between said collecting groove and said groove intermediate the ends of said member; a cylindrical casing fitting the interior of said box member; a friction-reducing bearing mounted within said casing and having rolling members in contact with said casing; and means for distributing lubricant to said rolling members through said casing intermediate the ends thereof.

1,296,941. BRUSH-CONNECTOR FOR ELECTROPLATING-GENERATORS. JOHN J. FLYNN, Irvington, N. J., assignor to Connecticut Dynamo and Motor Company, a Corporation of New York. Filed Jan. 29, 1916. Serial No. 75,065. 3 Claims. (Cl. 200—26.)



1. In a generator for heavy current of low voltage, the combination of a revoluble shaft, an armature and commutator bars carried by said shaft, a brush holder stud of one sign located upon one side of said shaft, a brush holder stud of a different sign located upon the side of said shaft opposite the first-mentioned stud, a yoke mounted on the first-mentioned stud and in direct conductive connection therewith, said yoke curving in the proximate form of a semi-circle past said shaft and supported by the said second-mentioned stud in insulated relation thereto, and terminal sockets for lead cables one upon said second-mentioned stud and the other upon said yoke at a point adjacent said second-mentioned stud.

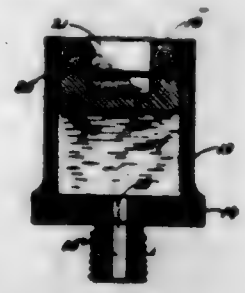
1,296,942. TROUSERS STRETCHER AND HANGER. SHELLEY W. FORD, Chicago, Ill., assignor of one-half to Richard A. Sundvahl, Chicago, Ill. Filed Sept. 4, 1917. Serial No. 189,453. 5 Claims. (Cl. 223—19.)



1. A trousers stretcher comprising a longitudinal bar, a transverse clamp at the upper end of said longitudinal bar for gripping the lower ends of the trousers legs, a pair of stretcher bars having clamps at their outer ends for gripping the upper portions of the trousers, and a combined pivotally and longitudinally adjustable connection between the inner ends of both of said stretcher bars and the lower end of said longitudinal bar, said connection having means for clamping both of said stretcher bars in different angular and longitudinally adjusted positions with respect to said longitudinal bar, substantially as described.

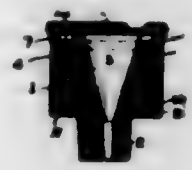
4. A trousers stretcher and hanger comprising a longitudinal bar, a transverse clamp at the upper end of said longitudinal bar for gripping the lower ends of the trousers legs, a pair of stretcher bars having clamps at their outer ends for gripping the upper portion of the trousers, said bars being formed of thin, flat strips and said longitudinal bar having a slot in its lower end extending lengthwise thereof, and a clamping pivot-bolt extending through the inner end of said stretcher bars and said slot, substantially as described.

1,296,943. GREASE-CUP. GEORGE FRASER, Topeka, Kans. Filed May 4, 1918. Serial No. 232,483. 9 Claims. (Cl. 184—88.)



5. In combination, a cup having an internally threaded portion, and a cylindrical plug threadedly engaging said cup, a second plug threadedly engaging said cup above said first-named plug, one of said plugs having an integrally formed projection located at one side of the center thereof upon which the other plug is adapted to ride when the two plugs are brought together within said cup, said first-named plug having a non-circular recess in the upper part thereof, and said second-named plug having a non-circular aperture of similar form adapted to register with said recess.

1,296,944. GREASE-CUP. HENRY N. FRICK, Philadelphia, Pa. Filed Dec. 6, 1917. Serial No. 205,807. 7 Claims. (Cl. 184—88.)



7. The combination, in a grease cup, of a chambered body having a groove in its outer wall, a cup telescopically fitting the chambered body and having a groove in its inner wall, and a spring ring carried by one of said members and contacting with the groove of the other when the cup is forced into place and locking said members together; said spring ring having a lapped joint with the meeting faces of the lapping parts in the plane of contact with the engaging wall.

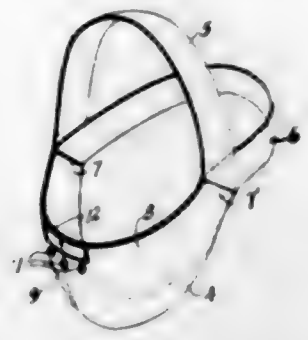
1,296,945. CORE-FORMING APPLIANCE FOR PATTERNS. FRED GAISLER, St. Louis, Mo., assignor of one-half to Fred Graf, Jr., St. Louis, Mo. Filed Sept. 10, 1917. Serial No. 100,486. 3 Claims. (Cl. 22—158.)



1. A car wheel pattern provided with a central core-receiving opening, a sheet metal web closing the top of said core-receiving opening, a core-forming sleeve arranged in said opening and extending from said sheet metal web to the bottom of the opening, the internal

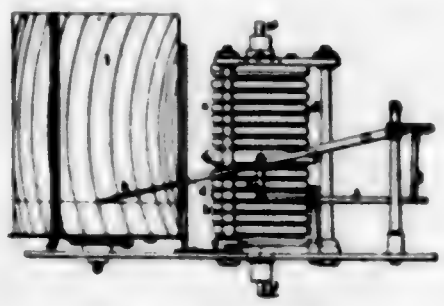
diameter of said core-forming sleeve being uniform approximately throughout the length of the sleeve and said sleeve being split longitudinally so that it can be readily removed from the core, said core-forming sleeve being removably fitted to the pattern and the parts being so formed that the pattern can be readily lifted from said sleeve.

1,296,946. APPARATUS FOR CONTROLLING RESPIRATION. ERNEST V. GALIARDO, New York, N. Y. Filed Apr. 4, 1918. Serial No. 226,580. 3 Claims. (Cl. 128—187.)



1. Apparatus for controlling respiration and teaching breathing through the nose comprising the combination of a mask adapted to press upward on the lower jaw, head straps passing around the head of the wearer and adapted to exert a yielding upward pressure on said mask sufficient to gently hold said lower jaw closed but permitting said jaw to be easily opened when desired, retaining means carried by said mask for positioning a medicinal substance in the path of the breath inhaled through the nose and a medicinal substance in said retaining means adapted to clear the air passages through the nose and head and encourage breathing therethrough.

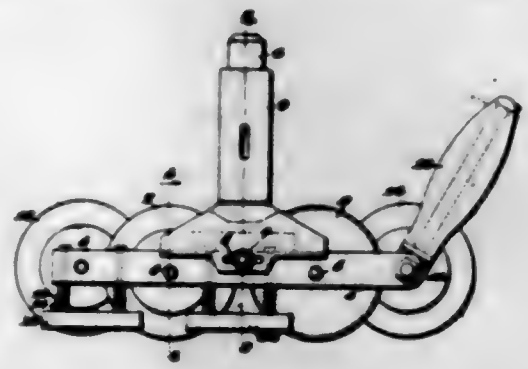
1,296,947. INDICATING OR RECORDING APPARATUS PARTICULARLY APPLICABLE TO MARINE LOGS. PAUL GEORGES BLOT-GARNIER and GABRIEL PIERRE CHEVALIER, Paris, France. Filed May 5, 1915. Serial No. 25,882. 5 Claims. (Cl. 73—110.)



1. In an apparatus of the character described the combination of two chambers of variable capacity, a wall for said chambers, a spring with one end secured to one of the faces of said wall and the other end secured to the bottom of the accompanying chamber, a second spring with one end secured to the other face of said wall and with its other end secured to the bottom of the accompanying chamber, the said springs tending to maintain the wall in its initial position, means to actuate said wall by a liquid whose differential pressure is to be measured, an indicating needle in the apparatus and means for transmitting the movements of said wall to said indicating needle.

1,296,948. OAKUM SEAM-CALKING TOOL. JAMES E. GILMORE, Prince Rupert, British Columbia, Canada. Filed July 3, 1917. Serial No. 178,450. 8 Claims. (Cl. 114—224.)

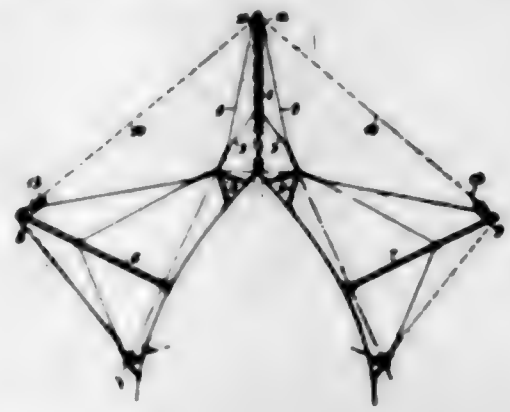
1. A tool for calking the seams between the boards of the hull or the deck of a vessel, said tool comprising a disk, a frame in which said disk is rotatably mounted, a stem shiftably connected to said frame, whereby the position of said stem along said frame may be changed to vary the force of impact with relation to the axis of the disk.



3. A tool of the class described, said tool comprising in combination, a pair of wheels rotatably mounted tandem-wise in a frame, the edges of which wheels are in cross section shaped to effect the layering and calking of a seam, a stem member adapted to receive the blows of a power hammer secured on the upper side of the frame to be adjustable between the axles of the wheels, and means downwardly projecting from the frame on each side of each wheel for resiliently retaining the calking material in the plane of the wheels.

7. A tool of the class described, said tool comprising in combination a pair of disk wheels rotatably mounted tandem-wise in a frame, a stem member straddling the wheels and secured to each side of the frame between the wheel axles, said stem member adapted to receive the blows of a power hammer, a fence below the frame on each side of each wheel, said fence having pins upwardly projecting from it to pass through apertures in the frame, springs holding said fences at the lower limit of their movement and toward the middle line, a handle pivotally connected to the end of the frame to be angularly adjustable in relation thereto, and a handle sleeve on the stem.

1,296,949. MEANS FOR PROTECTING VESSELS FROM MINES. GERRIT LOUIS GOUDHART, The Hague, Netherlands. Filed Feb. 11, 1918. Serial No. 216,536. 4 Claims. (Cl. 114—240.)

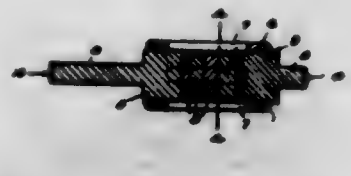


1. The combination with a vessel, of a system of booms pivotally connected to the vessel, a single rope stretched under the water by said booms from a point in front of the vessel to points at both sides thereof, a tool connected to said rope and adapted to engage the cable of an anchor mine or detach it from its anchor and means for moving said rope to bring the tool to proper position.

1,296,950. COMBINED PIN-AND-DISK GAGE. GORDON B. GRACE, Seattle, Wash. Filed Mar. 14, 1918. Serial No. 222,488. 1 Claim. (Cl. 33—143.)

A gage of the class described, comprising a plurality of disks of various measured thicknesses and a plurality of

pins of various measured lengths each of said pins being screw-threaded on one end and an internally screw-threaded cylindrical coupling having eight slots formed therein said coupling being adapted to have a plurality of said disks placed therein and to have one of said pins



screwed into each end of said coupling so that said disks are firmly held between the ends of said pins and the length between the outer ends of said pins is equal to the combined length of said pins and the thickness of said disks.

1,296,951. COMPOSITION OF MATTER FOR TEMPERING STEEL. EDWIN ARCHIE HALSETH, Clearbrook, Minn., assignor of one-half to Edd Boe, Clearbrook, Minn. Filed July 24, 1918. Serial No. 246,543. 1 Claim. (Cl. 148—23.)

A tempering mixture comprising alum, ammonium chlorid, vinegar, oil, lemon juice, and water, in proportions substantially as specified.

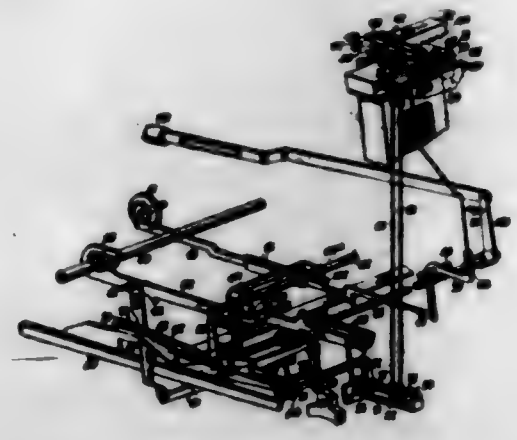
1,296,952. ELECTRIC CONDUIT. WILLIAM HANDLEY, Providence, R. I., assignor to Tubular Woven Fabric Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Jan. 13, 1915. Serial No. 2,055. 6 Claims. (Cl. 173—264.)



1. A conduit for electric conductors comprising a tubular body open from end to end and adapted to contain removably such a conductor, constructed of interengaged strands, one or more of such strands being a conductor of electricity adapted to be connected in an electrical circuit, and the other strands being of non-conducting material enveloping and insulating said conducting strand or strands.

4. The combination with a conduit constructed of a plurality of interconnected elements, one of which is an electrical conductor extending throughout the length of the conduit and exposed at the ends thereof, and others of which are non-conductors respectively on each side of, and interwoven with, said conductor and insulating the same, of a wire or other conductor of electricity contained movably within said conduit and connected in the same circuit with the said conductive element of the conduit structure.

1,296,953. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 14, 1915. Serial No. 39,751. 11 Claims. (Cl. 235—60.)



1. In a combined typewriting and computing machine, the combination with typewriter numeral keys and a traveling carriage, of a device in which numbers are temporarily registered as they are printed, a column stop rack bar for said carriage, column stops settable on said rack bar, means associated with said column stops for selecting the denominations in which the numbers shall be registered, and for determining whether they shall be added or subtracted, and a power device also under the control of said stops for causing the temporarily registered numbers to be permanently registered.

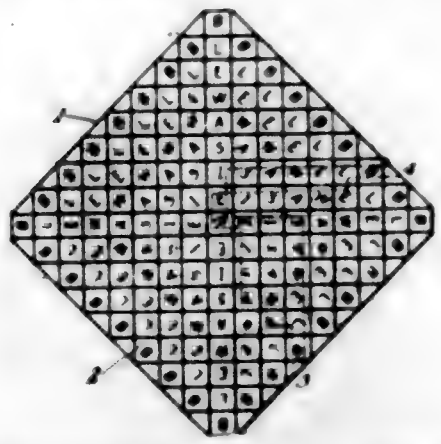
9. The combination with a traveling carriage, of a bar on said carriage, computation-indexing mechanism, denomination-selecting means therefor, addition and subtraction means, and a compound tabulator stop on said bar constructed and arranged to coöperate with each of the aforesaid means so as to control the same.

1,296,954. JOINT FOR DRILL-BITS AND OTHER PURPOSES. HENRY HAUS, Pope Valley, Cal. Filed Aug. 30, 1918. Serial No. 252,093. 1 Claim. (Cl. 287—103.)



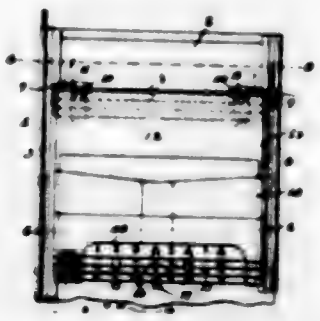
A joint for uniting two members, including a head central on one member, and tapering lips at opposite sides of said head, the side surfaces of said head tapering in two directions and the top surface of said head tapering lengthwise of the head, the other of said members having a central slot presenting walls tapering to correspond with the said head, said head, furthermore, at the rear or inner end thereof, presenting lateral protuberances projecting beyond the shank and adapted to be upset.

1,296,955. PUZZLE. ALFRED JASPER HENDERSON, Dallas, Tex. Filed Sept. 18, 1918. Serial No. 254,618. 2 Claims. (Cl. 46—41.)



1. A puzzle including a surface on which are provided intersecting columns, there being an arrangement of letters in the spaces formed by the intersecting columns whereby the same phrase will be spelled by following a column or columns from one selected marginal point to any other selected marginal point.

1,296,956. CARD-FILING SYSTEM. JAMES R. HENDRY, Chicago, Ill., assignor to Acme Card System Company, Chicago, Ill., a Corporation of South Dakota. Filed Apr. 26, 1917. Serial No. 164,614. 3 Claims. (Cl. 129—16.)



1. In a card filing system, the combination with a main frame, of a plurality of overlapping holders mounted therein, each holder having at its lower end a pocket provided with a cut-away unincloesd portion, one or more cards detachably seated in said pocket and having an identifying portion exposed in the cut-away portion of the pocket.

2. In a card filing system, the combination with a frame having a plurality of overlapping holders mounted therein, each of said holders having a pocket provided with a cut-away portion at its lower end and a plurality of cards mounted in said pocket, and each provided with predetermined designating spaces and a tab adjustably mounted on any given one of said spaces and exposed through the cut-away portion of the pocket.

3. In a card filing system, the combination with a main frame, of a plurality of overlapping holders mounted therein, each holder having at its lower end a pocket provided with a cut-away portion, one or more cards detachably seated in said pocket and having a portion exposed in the cut-away portion of the pocket.

1,296,957. TYPE-WRITING MACHINE. FREDERIC W HILLARD, Tottenville, N. Y., assignor of one-half to Mary R. Hillard, Middlebury, Conn. Filed June 15, 1916. Serial No. 103,758. 21 Claims. (Cl. 197—60.)

1. In a typewriting machine, in combination, a carriage support at the rear of the machine, a carriage structure pivotally mounted thereon and supported at the front on a guide rail, and a locking means to prevent an endwise movement of the carriage under the influence of the motor spring, said locking means being ineffective when the carriage structure is in normal operating position on the guide rail and becoming effective as the carriage is raised therefrom.



2. In a typewriting machine, in combination, with a carriage structure of the visible type, a truck at the rear of the machine to form a traveling support for the carriage, a pivotal connection intermediate the truck and the carriage whereby the carriage may be pivotally swung upward about the truck, and locking means to prevent an endwise movement of the carriage under the influence of the motor spring when the said carriage is being swung upward.

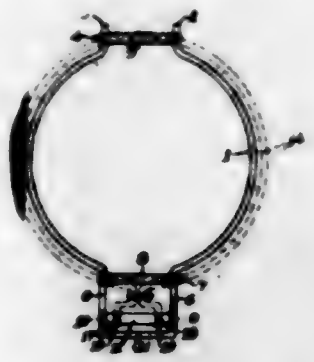
20. In a typewriting machine, in combination, a carriage, carriage propelling power means and an escapement to normally control the carriage, said carriage being adapted to be lifted to an elevated position and when so lifted to be released from the escapement, and locking means brought into operation by the lifting of the carriage to control the carriage against movement under the influence of the propelling power while the carriage is out of control of the escapement.

1,296,958. METHOD OF MAKING STEERING-WHEELS. KARL HODGE, Sidney, Ohio. Filed Aug. 29, 1913, Serial No. 787,258. Renewed Aug. 15, 1918. Serial No. 250,078. 4 Claims. (Cl. 18—59.)

1. The method of forming steering wheels which consists in molding fibrous material to either side of the spider arms, molding other material to the first-applied material, and then hardening such material.

4. The method of forming steering wheels which consists in molding thin strips of wood pulp to either side of the spider arms, molding other strips of wood pulp to the first-applied pulp under pressure, hardening such wood pulp, and then trimming the hardened rim to the desired size and shape.

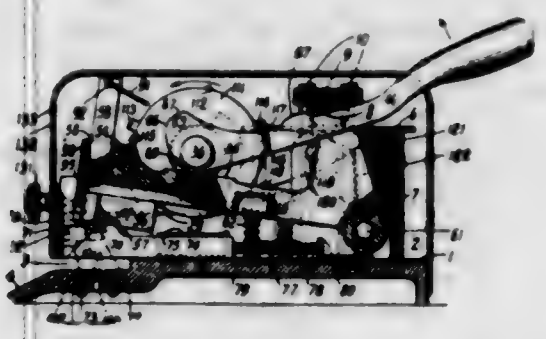
1,296,959. COVER-HOLDER FOR JARS. ARTHUR J. HOLDSWORTH, Detroit, Mich., assignor of one-half to Christian Schneider, Detroit, Mich. Filed Dec. 13, 1915. Serial No. 66,450. 3 Claims. (Cl. 215—90.)



2. A device of the character described comprising a member formed of a single piece of wire shaped to engage about the neck or body of a jar or vessel, a binding screw for securing the same in place, said body member

being bent to form an outwardly extending part with parallel sides, said sides being apertured contiguous to the body of said member, a bolt in the apertures, a spacer on the bolt between the sides limiting the extent to which the said sides may be drawn together by the bolt, a hinge member pivotally supported by the sides, a cover holder member formed of a single piece of wire, means for binding the member about the cover, said member having depending parallel ends and the hinge member having spaced apertures to receive the said ends, said ends also being of a length to allow the cover member and body member to be vertically spaced to conform to the height of the neck of the jar and cover, and releasable means for securing said ends in place, the outwardly extending portion of the body member providing a rest for the cover member when turned to open position.

1,296,900. STAPLE FORMING AND SETTING MACHINE. MILLER REESE HUTCHISON, West Orange, N. J. Filed Feb. 19, 1916. Serial No. 79,241. 13 Claims. (Cl. 1—2.)



1. In apparatus of the class described, the combination with wire feeding means, staple forming means, and staple setting means, of a unitary operating mechanism therefor, including an operating lever, a pair of cams, a shaft carrying said cams one of which is integral with said lever and controls the said staple forming and staple setting means, and the other controlling the wire feeding means, whereby upon the operation of said lever the said means are actuated in a given sequence.

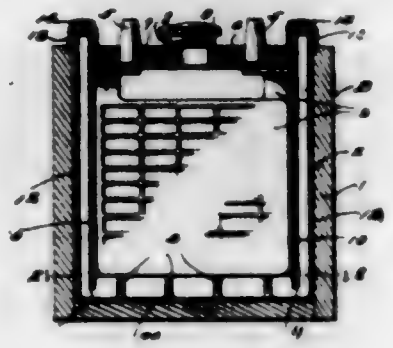
3. In apparatus of the character described, the combination of a pivoted arm, a staple-forming head carried thereby, a staple-setting member carried by said head, a shaft, a cam lever mounted thereon, the cam thereof being adapted to cause said arm to swing about its pivot so as to move said head and cause it to form a staple, and a projection extending from said lever for moving said staple-setting member relatively to said head to cause it to set said staple when formed.

5. In apparatus of the class described, the combination of means for supporting a section of staple forming wire, a forming head for bending said wire into the form of a staple and for holding and guiding said staple during the setting operation, a staple setting member carried by said forming head, but movable relatively thereto, and means for moving said forming head to form said staple, actuating said setting member to set the staple and holding said forming head in its actuated position while said setting member is actuated, said means including a cam, having an active surface for actuating the forming head to operative position, and an inactive surface for maintaining the head in operative position.

7. In apparatus of the character described, the combination of a pivoted arm, a staple-forming head carried thereby, a staple-setting plunger slidably mounted on said head, and an operating member having a cam surface engaging said arm to swing the same about its pivot and cause said head to move to form a staple and also having a surface thereon adapted to engage said plunger and move the same relatively to said head to set the staple formed thereby.

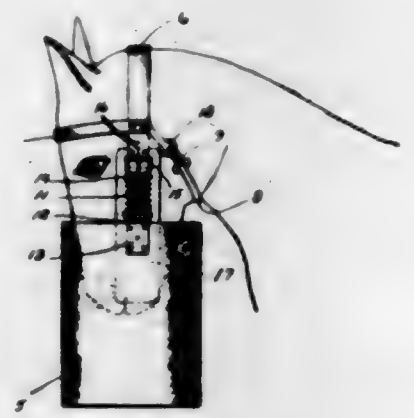
13. In stapling mechanism, the combination of wire feeding and cutting mechanisms, staple forming and staple setting mechanisms, an operating lever for actuating said mechanisms by a continuous movement in one direction, and means for preventing only a partial movement of said lever in a direction to operate said mechanisms, and to prevent only a partial return of said lever toward initial position.

1,296,961. BATTERY-MUD-EXTRACTING DEVICE. SAMUEL D. IRWIN, Floydada, Tex. Filed July 1, 1918. Serial No. 242,798. 1 Claim. (Cl. 204—29.)



In a battery, a container, upright tubes secured in the ends of the container, said tubes being closed at their upper ends and provided with removable closure members and communicating at their lower ends with the interior of the container a short distance from the bottom thereof, and bridge members extending transversely of the bottom of the container, and provided with spaced openings, and a plurality of electrode plates mounted within the container and supported by said bridge members.

1,296,962. NOSE-BAG. FRANK ISELE, Chicago, Ill. Filed Sept. 21, 1918. Serial 255,100. 1 Claim. (Cl. 119—65.)



A device of the character described comprising a bag, a head engaging strap, a pair of springs connected with the upper edge of said bag at diametrically opposite points, and a flap secured at each end of said strap and disposed against the inner side of the associated spring, said flaps being of a length equal to the length of said springs when said springs are extended to their maximum length, the lower ends of said straps being free and slidable with respect to the bag whereby they will remain interposed between the spring and the head of the animal to which the bag is applied irrespective of the degree of extension or retraction of said springs.

1,296,963. SPARK-COIL. GEORGE A. JACOBS, Cleveland, Ohio. Filed Jan. 31, 1917. Serial No. 145,598. 5 Claims. (Cl. 175—359.)



1. A spark coil having an iron core and also having a secondary coil of iron wire surrounding said core and disconnected therefrom, the turns of the secondary winding being insulated electrically and disconnected magnetically from each other.

1,296,964. EAR-CLOSING DEVICE. GABINO JAUREGUI, Bridgeport, Conn. Filed Feb. 13, 1917. Serial No. 148,379. 1 Claim. (Cl. 128—152.)



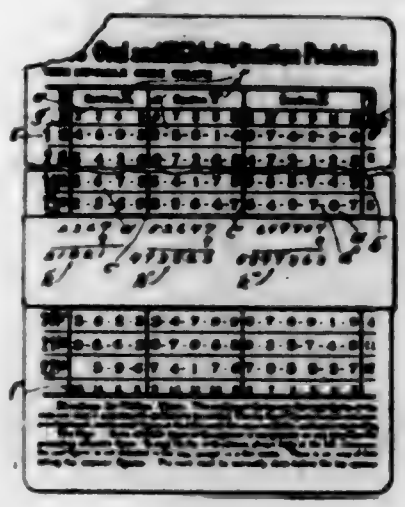
An ear closing device adapted for attachment to the head of the user, comprising a U shaped strip having its terminals provided with adjustable ear plugs, the said frame intermediate its ends being provided with a vertically adjustable screw threaded stud having supporting fingers depending therefrom for engagement with the top of the head of the user, the said fingers being extended into the space embraced by the said U-shaped frame, and a finger nut mounted upon the said screw threaded stud above the said frame and adapted to be moved to bind against the said frame for maintaining the said stud in adjusted position.

1,296,965. INHERENTLY-KEYED GRAPHIC DRILL-PROBLEM DEVICE. FREDERICK D. JONES, Alhambra, Cal. Filed July 8, 1918. Serial No. 243,975. 24 Claims. (Cl. 35—2.)

1. A keyed educational device provided with a graphical problem the elements of which inherently involve an answer containing elements arranged in a predetermined order and calculated to be made visible by the correct written answer for the purpose of enabling inspectors to properly visé a student's work without reading a separate answer.

10. An educational device, provided with a problem, the elements of which inherently involve an answer containing elements arranged in an order which is determinable from said answer when written.

18. A drill problem sheet provided with a plurality of sections containing problem columns of numbers arranged in superposed lines; the numbers in said lines being horizontally alined with each other; graduations to indicate cutting off definite problems; the elements of which problems involve answers the digits of which answers increase in regular order along the answer in alternation



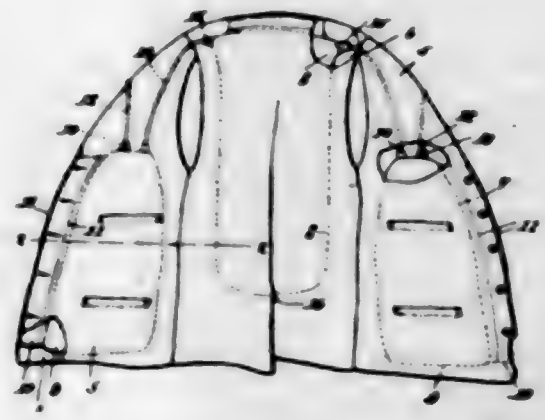
with the other digits; and the other digits likewise arranged to increase along the numbers by a certain increment.

1,296,966. COMBINED SLEEVE AND MITTEN FOR GARMENTS. HARRY A. KAUFMAN, New York, N. Y. Filed Dec. 12, 1918. Serial No. 266,368. 5 Claims. (Cl. 2—94.)



1. A garment comprising a sleeve and a mitten connected with said sleeve at its lower end on a portion of its circumference, said mitten being adapted to be folded back inside the sleeve when not in use, and means located within the sleeve for retaining the mitten in such folded-back position.

1,296,967. LIFE-SAVING DEVICE. ALBERT A. KENT, Baltimore, Md., assignor of one-half to James J. Pycha, Baltimore, Md. Filed May 14, 1918. Serial No. 234,476. 1 Claim. (Cl. 9—20.)



The combination with a body garment composed of inner and outer layers of material which lap and are stitched together at their edges; of inflatable bags positioned between said layers and provided with inflating means, said bags having projecting flaps at the side seating between the lapping edge portions of the layers and secured therebetween by the stitching.

1,296,968. METHOD OF SUPPLYING AIR TO INTERIORS. ALBERT R. KLEIN, New York, N. Y. Filed Aug. 2, 1915. Serial No. 43,197. 6 Claims. (Cl. 237—46.)

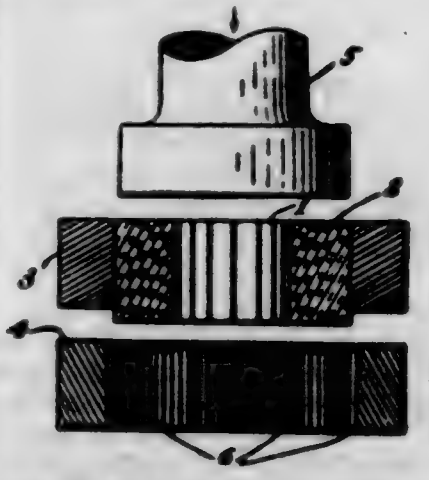


1. The method of supplying air to interiors and of effecting circulation of such air through the zone of occupancy, which comprises withdrawing air from the interior into a suitable conduit, combining therewith a current of fresh air and discharging the resulting mixture into the interior, the current of fresh air being caused to effect the withdrawal of the air from the interior and to induce the circulation thereof through the conduit and into the interior, and the air being withdrawn and introduced at different levels so that circulation thereof is effected through the zone of occupancy.

4. The method of supplying air to interiors and of effecting circulation of such air through the zone of occupancy, which comprises withdrawing air from the interior at a plurality of different places into a series of conduits, combining therewith in each of the conduits a current of fresh air and discharging the resulting mixtures into the interior at a corresponding number of different places, the currents of fresh air introduced into the conduits being caused to effect the withdrawal of the air from the interior and to induce the circulation thereof through the conduits and into the interior at a plurality of different places, and the air being withdrawn and reintroduced at different levels so that circulation thereof is effected through the zone of occupancy at a plurality of different places in the interior.

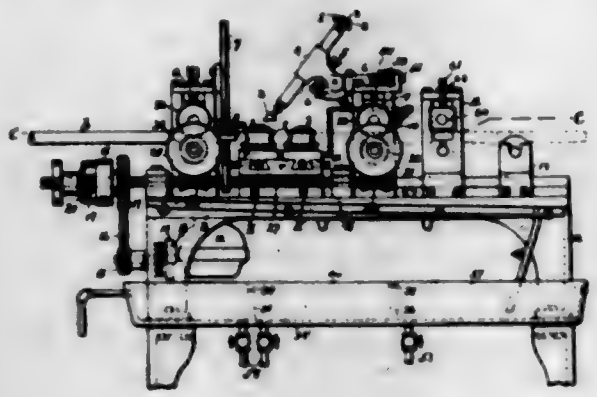
6. The method of supplying air to interiors by the blast system, which consists in subjecting fresh air to directed movement to a point just prior to entry into the interior, at that point mixing the fresh air with a comparatively large volume of air from the interior, discharging the mixture of fresh air and air from the interior into the interior in a substantially horizontal direction, and supplying the air from the interior required for the mixture by air withdrawn from the interior at a point on the side of the zone of occupancy opposite that at which the mixture is discharged into the interior, and substantially in vertical alinement therewith, thereby causing a continuous circulation of the air in a vertical direction through the zone of occupancy of the interior.

1,296,969. COMMUTATOR. HERMANN JOSEF GUSTAV KORACH, Boston, Mass. Filed Feb. 2, 1918. Serial No. 215,148. 4 Claims. (Cl. 29—84.)



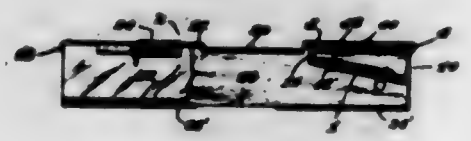
1. That step in the method of assembling a plurality of elements, which consists in transferring the assembled elements from a preliminary holder to another holder having an internal annular series of grooves into which the material at the periphery of the assembled elements may expand.

1,296,970. TUBE-WELDING MACHINE. FRANK KRITE, Detroit, Mich., assignor to Michigan Steel Tube Products Co., Detroit, Mich., a Corporation of Michigan. Filed Sept. 10, 1917. Serial No. 190,433. 13 Claims. (Cl. 78—88.)



1. In a tube welding machine, the combination of guiding means in the form of a mandrel supported by a fin separating the edges of a completely formed split tube and holding the tubing from twisting as it is guided to the heating zone, means for causing the separated edges to meet, and means for heating the meeting edges to weld the same.

1,296,971. PENCIL-SHARPENER. BUNTARO KUMAGAI, Seattle, Wash. Filed July 28, 1917. Serial No. 182,260. 2 Claims. (Cl. 120—93.)



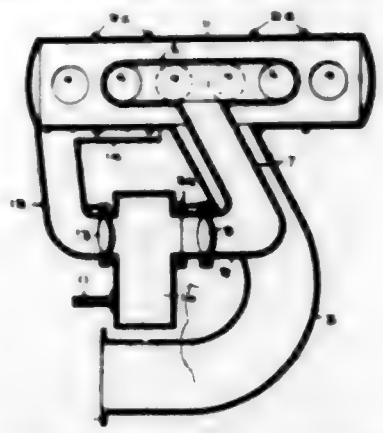
1. In an article of manufacture, a U-shaped knife having cutting edges on the opposite sides of each of its two arms

2. In a pencil sharpener, in combination, a casing, a flange on said casing having guideways disposed on each face thereof, a U-shaped cutting knife adapted to be positioned in said guideways, and means carried by said casing to guide the article to be sharpened.

1,296,972. KEROSENE-VAPORIZER FOR INTERNAL-COMBUSTION ENGINES. ALEXIS L. LAMAR, Pittsburg, Kans., assignor, by direct and mesne assignments, of six thirty-seconds to Joseph B. Hinkle, seven thirty-seconds to O. L. Stamm, two thirty-seconds to Geo. H. Stuessi, one thirty-second to H. Degen, Sr., four thirty-seconds to Joseph M. Bournonville, and eight thirty-seconds to Samuel John Pole, Pittsburg, Kans., one-sixteenth to James Jepsen and Peter Fischer, and one-sixteenth to P. T. Ellis. Filed Apr. 21, 1916. Serial No. 92,766. 3 Claims. (Cl. 257—241.)

1. In an internal combustion engine, the combination with an exhaust manifold having a depending exhaust pipe upon its lower side and middle portion, of an intake pipe, a part of which is wholly within said exhaust pipe, while the remaining part of said intake pipe has on its receiving end a lateral extension fitted to the under side

of the exhaust manifold and provided with a receiving opening immediately adjacent the exhaust pipe of said

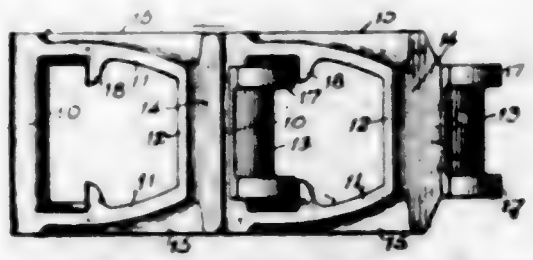


manifold, whereby initially heated air from the exhaust pipe will enter said intake.

1,296,973. METHOD FOR REDUCING IRON OXIDS. HORACE W. LASH, San Francisco, Cal. Filed Sept. 4, 1917. Serial No. 189,477. 3 Claims. (Cl. 75—48.)

1. The method of reducing iron oxids which consists in providing a mixture of iron oxid and carbonaceous material in finely divided condition and thoroughly mixed, within a bundle of scrap ferrous material and in heating the said bundle.

1,296,974. DETACHABLE-LINK CHAIN. JAMES CLARKSON LAW, Carbondale, Pa. Filed July 1, 1918. Serial No. 242,791. 1 Claim. (Cl. 74—43.)



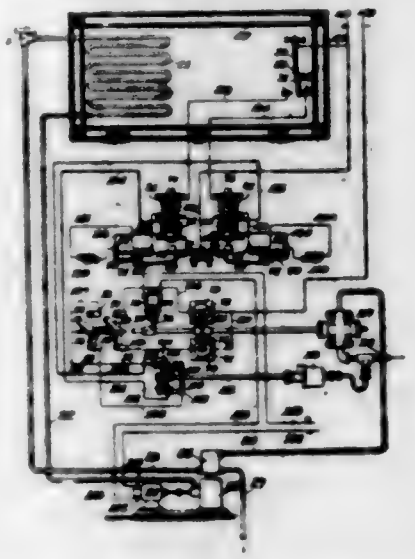
A chain comprising a series of links, each having side bars and opposite end bars, one of said end bars being cylindrical and the other end bar being formed with a hook projecting therefrom, the face of the last named end bar being inclined and merging into the hook to provide an opening between the bill of the hook and the face of the end bar extending at an angle to the plane of the link, the extremity of the hook being spaced from said inclined face a distance slightly greater than the diameter of the cylindrical end bar of a coacting link, the hook having marginal outwardly extending flanges and the side bars being formed with inwardly projecting lugs spaced from the cylindrical end bar a distance slightly greater than the depth of the flanges, the lugs extending over the outer faces of said flanges to thereby prevent the detachment of one link from another until the lugs of one link are disposed beyond the extremity of the hook of the engaged link.

1,296,975. RECORDER AND REPRODUCER FOR TALKING-MACHINES. LORING L. LEEDS, Short Hills, N. J., assignor to Frank M. Needham, Chicago, Ill. Filed Jan. 31, 1916. Serial No. 75,271. 2 Claims. (Cl. 274—35.)



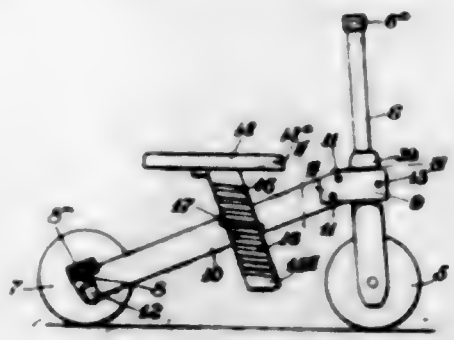
2. A sound-box for talking machines, comprising a body, spaced alining members carried by said body, a stylus-support extending between said members, and elastic cups, slitted at their peripheries, interposed between the inner ends of said alining members and the adjacent faces of the stylus-support.

1,296,976. ELECTRICALLY-CONTROLLED APPARATUS. GEORGE I. LEONARD, Chicago, Ill., assignor to Leonard Pump and Motor Co., Chicago, Ill., a Corporation of Maine. Filed Jan. 29, 1917. Serial No. 145,111. 11 Claims. (Cl. 171—97.)



1. The combination of an electrical circuit, a circuit-making-and-breaking device in said circuit, a relay-operated switch device in said circuit, an electrically-controlled element in said circuit, a second circuit in which said element and a part only of the resistance in said first-named circuit are interposed, means actuated by the energization of said switch device to break said first-named circuit and cut out said circuit-making-and-breaking device and a portion of the resistance in said last-referred-to circuit, said electrically controlled element being constructed and arranged to be non-operative by the current traversing said first-named circuit with the full resistance interposed therein and be operative when the said portion of the resistance is cut out, and means operated by the actuation of said electrically-controlled element for breaking said second-named circuit.

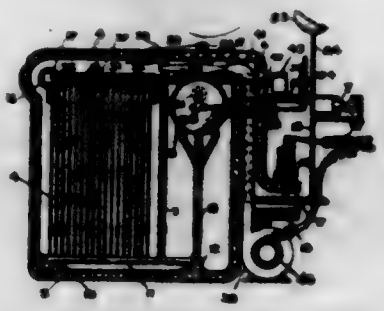
1,296,977. TOY VEHICLE. WILLIAM F. LEONARD, Columbus, Ohio. Filed May 13, 1918. Serial No. 234,090. 2 Claims. (Cl. 208—165.)



1. A child's toy vehicle comprising, in combination, rear supporting wheels and axle, a front steering wheel and steering post therefor, a reach or seat support extending from above the front wheel to the axle of the rear wheels, a seat having a stem affixed thereto and extending downwardly and forwardly therefrom at an acute angle to the plane of the seat and at an acute angle to the line of the steering post and means adjustably con-

necting said stem to the reach permitting the raising and lowering of the seat with reference to the reach and causing said seat to approach the steering post when lowered and recede from said steering post when raised.

1,296,978. STEAM-BOILER. JOHN ERNEST LEWIS, Pasadena, Cal. Filed Apr. 24, 1917. Serial No. 164,096. 6 Claims. (Cl. 122—232.)



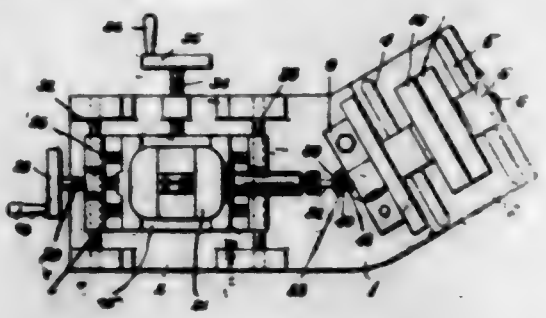
1. A vapor generator embodying a housing providing a first chamber and a second chamber, a boiler having a preheater in the first chamber and a vaporizer in the second chamber, and a heated gas supply adjacent the top of the second chamber for acting upon the upper portion of the vaporizer, said first chamber having a heated gas outlet adjacent its top, and adjacent its bottom communication with the bottom of the second chamber, said preheater including a reserve reservoir in the first chamber disposed at a height near the top of the second chamber, ducts leading downwardly from the reservoir and into said second chamber, said vaporizer having top manifolds and riser ducts extending from the preheater ducts to said top manifolds.

3. A vapor generator embodying a housing providing a chamber, a boiler located in said chamber, said boiler including a plurality of parallel series of riser ducts, and manifolds to which said ducts deliver, means providing a heated gas supply to the upper portion of said housing adjacent the manifolds, and a downwardly open shield over the upper manifolds for tempering the action of the heated gas.

4. A vapor generator embodying a housing providing first and second chambers, said chambers having in the lower portion thereof a heated gas communication passage, said second chamber having therein a plurality of lower manifolds, riser ducts from said manifolds, and upper manifolds to which the risers extend, and a preheating reservoir in said first chamber having a plurality of ducts extending to the lower manifolds, said reservoir being further provided with a duct communicating with an upper manifold, and a burner providing heated gas supply in the upper portion of the second chamber to travel downwardly therefrom about the riser ducts in the second chamber through the communication passage and thence to pass upwardly in the first chamber about the reservoir.

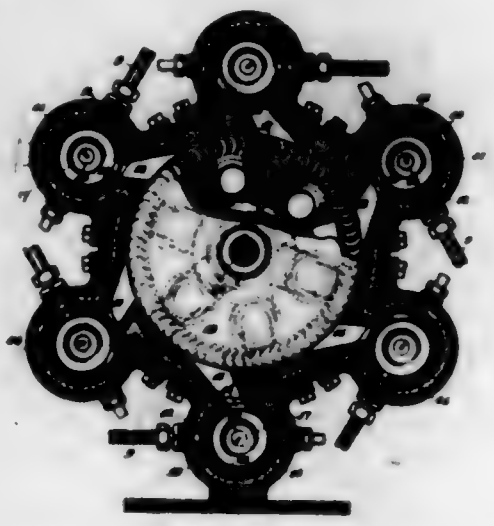
6. A vapor generator embodying a housing, a partition in said housing providing a first chamber and a second chamber communicating with each other below said partition, a reserve liquid reservoir in the first chamber, a plurality of ducts extending from said reservoir downwardly in the first chamber over into the second chamber, and riser ducts leading from the extensions of said downwardly extending ducts and in the second chamber, manifolds to which said risers extend, and a header connecting said manifolds in the upper portion of the second chamber, a refractory shield over said manifolds, and a burner for supplying heated gases to the second chamber adjacent said shield, the second chamber providing a passage downward for these heated gases about the riser tubes, thence into the first chamber and upward about the reservoir in a direction counter to the direction of liquid flow from the reservoir.

1,296,979. KNIFE-GRINDING MACHINE. FRED H. LINDSAY, Campello, Mass., assignor of one-half to Ellery C. Wright, doing business under the firm-name and style of Woodward & Wright Last Company, Brockton, Mass. Filed Nov. 28, 1917. Serial No. 203,505. 2 Claims. (Cl. 51—7.)



1. A grinding machine of the kind described, adapted to operate on the curved cutting edge of a tool, a support having two arms extending at a predetermined angle with each other, a rotatable work holding member carried on one of said arms, an electric motor operating a rotatable spindle carried on the other of said arms, said work holder and spindle having the same predetermined fixed angle relatively with each other as the angle of said arms on the support, means on the work holder to hold the knife to be ground, and means to move the grinding medium longitudinally and laterally toward and from said knife while maintaining the grinding medium at the same fixed relative angle.

1,296,980. INTERNAL-COMBUSTION TURBINE-ENGINE. FRANCISCO LOBO, Brooklyn, N. Y. Filed Nov. 14, 1918. Serial No. 262,502. 8 Claims. (Cl. 60—41.)



1. An engine as characterized comprising a rotary shaft; a rotor fixedly mounted thereon, said rotor having a plurality of curved laterally extended bucket members, said bucket members being arranged to form a series of curved passages; a casing for said rotor, said casing inclosing said rotor and having a plurality of inlet passages, said inlet passages being substantially tangential to said rotor, the inclination of all of said passages being in a direction corresponding with the rotation of said rotor; a cover for said casing for inclosing said rotor, said cover forming in conjunction with said casing, a channel for said bucket members, said cover having a series of exhaust passages, each coöperatively related with one of said inlet passages, said exhaust passages being advanced in the direction of rotation of said rotor with relation to the inlet passages with which it is related; a plurality of cylinders having explosion chambers rigidly mounted on said casing, each of said chambers having an exhaust port communicating with one of said delivery passages, and an intake port communicat-

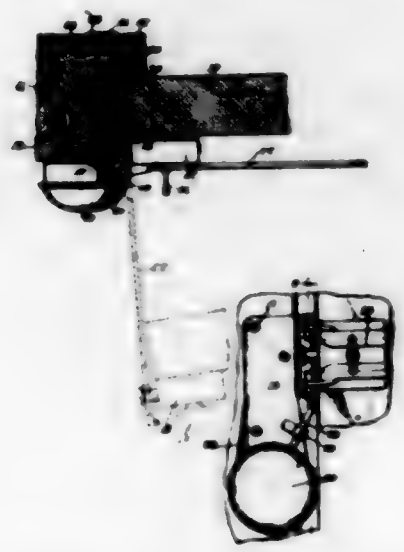
ing with an explosive fuel supply; means for closing said ports alternately and simultaneously; and means for igniting the charge in each of said chambers during the period when said ports are both closed.

1,296,981. TRACTION DEVICE FOR MOTOR-VEHICLES. HENRY H. LOHMEYER, Ambrose, N. D. Filed Apr. 19, 1918. Serial No. 229,598. 19 Claims. (Cl. 180—8.)



3. In a traction device of the class described, the combination of an actuator, a propelling member connected to the actuator at one end, the other end thereof being rotatable from contacting position with respect to the ground about the axis of said actuator and over said axis into contacting relation again, and means for swinging the propelling member across the longitudinal axis of said actuator during the rotation of said propelling member over the axis as aforesaid.

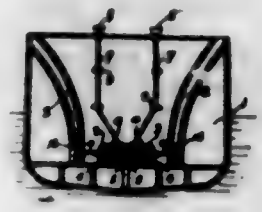
1,296,982. BURGLAR-ALARM LOCK AND DOOR-BELL. LOUIS F. LOHRENS, Chicago, Ill. Filed Apr. 1, 1916, Serial No. 88,196. Renewed July 22, 1918. Serial No. 246,233. 5 Claims. (Cl. 116—44.)



3. The combination with a door and its casing of a door guard comprising a hasp carried by the casing, a latch on the door for association with the hasp to lock the door in either closed or partially open position, a support for the hasp having an opening therein, a pivot pin carried by the hasp and engaging the said opening, the pin being smaller than the opening to permit relative movement therein, a signal, and means actuated by the bodily movement of the pin within the opening to initiate the signal.

5. The combination in a door guard comprising a slotted hasp for attachment to a door casing and a latch for attachment to a door, of a pivotal mounting for said hasp permitting free pivotal movement when not engaged by the latch and a slight limited bodily movement in a plane substantially perpendicular to the plane occupied by the door when closed, and means actuated by the bodily movement of the hasp to initiate a signal.

1,296,983. APPARATUS FOR SALVAGING SUNKEN VESSELS. CHARLES E. LONDON, Steveston, British Columbia, Canada. Filed Oct. 15, 1918. Serial No. 258,214. 7 Claims. (Cl. 114—51.)



1. Apparatus for raising sunken vessels, comprising lifting cables secured to the vessel and means for enabling the free end of each cable to be raised to the surface after sinking, said means being adapted to permit travel of the secured end of the cable from its normal point of attachment to a predetermined lifting point.

1,296,984. METHOD OF MAKING SHINGLE-SIMULATING ROOFING-STRIPS. OWEN D. MCFARLAND, Chicago, Ill. Filed Nov. 8, 1917. Serial No. 200,856. 4 Claims. (Cl. 91—67.9.)



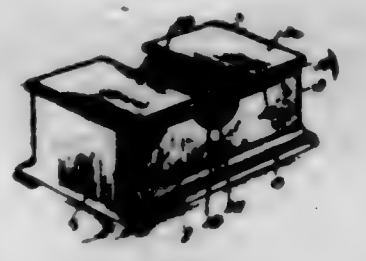
1. The method of making shingle simulating stripe which consists in covering a long sheet with an asphaltic material, continuously coating the entire surface of said sheet with a layer of granular or flaky mineral to provide a substantially contrasting color to said asphaltic material, continuously removing part of said mineral material to expose the contrasting asphaltic material therebelow in a plurality of continuous and unbroken stripes longitudinally disposed on said sheet, continuously moving said sheet while the mineral is applied and removed, and cutting said sheet transversely across said stripes into strips in imitation of shingles.

1,296,985. POLISHING-WHEEL. DANIEL FREDRICK MCGOVERN, Montpelier, Vt. Filed Nov. 26, 1918. Serial No. 264,230. 2 Claims. (Cl. 51—1.)



1. A polishing wheel comprising a plate having on its working face duplicate sets of symmetrically arranged segmental flanges disposed on opposite sides of a plane passing transversely across the plate, the rear end of the outermost flange of each set extending beyond said plane and overlapping the forward end of the next inner flange of the opposite set and constituting a choker effective to prevent the abrasive spilling out.

1,296,986. SINGLE-DELIVERY TOOTHPICK-HOLDER. WALTER GORDON MCKAY, Casper, Wyo. Filed July 22, 1918. Serial No. 246,186. 5 Claims. (Cl. 206—28.)



4. A device of the class described comprising a substantially rectangular receptacle having its opposite side walls provided with longitudinally disposed discharge slots and having thumb openings formed in said walls and communicating with the slots, the walls of the discharge slots and thumb openings being inclined downwardly, a cover having its opposite longitudinal edges overhanging the adjacent discharge slots and provided with a transverse finger opening extending entirely across the cover and disposed in alinement with the thumb openings, there being a filling opening formed in one wall of the receptacle, and a closure for said filling opening.

1,296,987. AUTOMOBILE-LOCK. EDWARD S. MCKEAN, Yonkers, N. Y., assignor of one-half to Anthony G. Jackson, Washington, D. C. Filed Mar. 5, 1918. Serial No. 220,517. 6 Claims. (Cl. 70—90.)



1. A locking device of the class described comprising a steering rod, gripping jaws adapted to engage the same, a supporting casing for said gripping jaws, a sleeve slidably mounted within said supporting casing, said jaws provided with inwardly extending flanges, arms pivotally mounted within said casing and provided with outwardly bulged portions, the lower ends of said arm engaging said flange portion of said jaws, the lower end of said sleeve engaging said bulged portions of said arms for forcing said arms together and consequently causing said jaws to be firmly bound in engagement with said steering rod, and means for locking said sleeve in a set position within said supporting member.

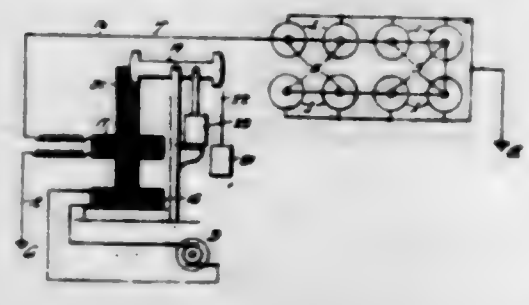
2. A locking device of the class described comprising a steering rod, gripping jaws adapted to engage the same, a supporting casing for said gripping jaws, a sleeve slidably mounted within said supporting casing, said jaws provided with inwardly extending flanges, arms pivotally mounted within said casing and provided with outwardly bulged portions, the lower ends of said arms engaging said flange portion of said jaws, the lower end of said sleeve engaging said bulged portions of said arms for forcing said arms together and consequently causing said jaws to be firmly bound in engagement with said steering rod, a series of teeth formed upon the inner face of said supporting member, and a latching means carried by said sleeve and engaging said teeth for holding said sleeve in a set position within said supporting member.

3. A locking device of the class described comprising a steering rod, gripping jaws adapted to engage the same, a supporting casing for said gripping jaws, a sleeve slidably mounted within said supporting casing, said jaws provided with inwardly extending flanges, arms pivotally mounted within said casing and provided with outwardly bulged portions, the lower ends of said arms engaging said flange portion of said jaws, the lower end of said sleeve engaging said bulged portions of said arms for forcing said arms together and consequently causing said jaws to be firmly bound in engagement with said steering rod, a series of teeth formed upon said supporting member, a latching casing carried by said sleeve, a sliding bolt carried by said latching casing, a lock for controlling the operation of said sliding bolt, an eccentric wheel carried by said sliding bolt, a spring for normally urging said sliding bolt in an extended position, said eccentric wheel adapted to withdraw said latching bolt within said casing, and means projecting beyond said supporting member for facilitating the moving of said sleeve downwardly.

4. A locking device of the class described comprising a steering rod, gripping jaws adapted to engage the steering rod, a supporting casing for said gripping jaws, said jaws provided with inwardly extending flanges, arms pivotally mounted within said casing and provided with outwardly bulged portions, the lower ends of said arms engaging said flange portion of said jaws, means engaging said bulged portions of said arms for forcing said arms together and consequently causing said jaws to be firmly bound into engagement with said steering rod, and means for locking said arm gripping means in a set position within said supporting member.

5. A locking device of the class described comprising a steering rod, gripping jaws adapted to engage the same, a supporting member for said gripping jaws, arms pivotally mounted within said supporting member and provided with outwardly bulged portions, the lower ends of said arms engaging said jaws, the lower ends of said arms being inwardly bowed, means adapted to slide over said arms for forcing the same together whereby said jaws will be forced apart, and means for locking said arm engaging means in a set position against movement upon said arms thereby preventing the spreading of said arms after the same have once been forced to a set position.

1,296,988. METHOD OF OPERATION FOR THE SEPARATION OF LIQUIDS. CHARLES W. MCKIBBEN, Houston, Tex. Filed Aug. 17, 1918. Serial No. 250,346. 4 Claims. (Cl. 204—25.)

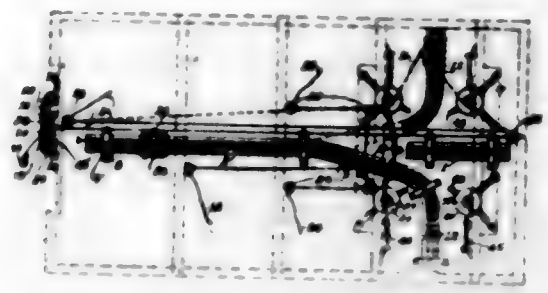


3. Improvements in the art of separating liquids associated in emulsions which consists in providing a plurality of separators each containing a pair of electrodes; passing emulsified liquid into the said separators; agitating the liquid while in the separators by its own movement or otherwise; connecting the said separators in parallel electric circuit; automatically dividing the electric current, of predetermined value, between said separators and automatically controlling the electric current by the condition of the liquid in said separators, as a whole, to prevent its increase above a predetermined value, while maintained at sufficient strength to produce the results desired.

1,296,989. COMBINED TRACK AND SWITCH MECHANISM. MILO SIMPSON MCMEEKEN, Mansfield, Ohio. Filed Sept. 24, 1918. Serial No. 255,499. 6 Claims. (Cl. 104—91.)

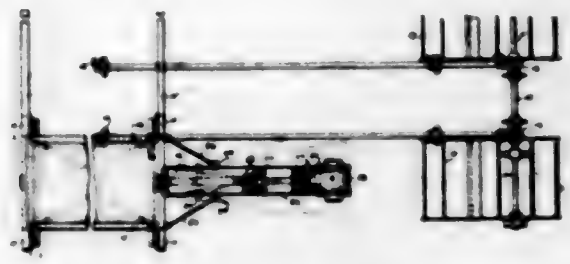
1. A trackway having a main track section, branch track sections, a switch for connecting the main track

section to any one of the branch track sections, said switch being pivotally connected to the main track section, a hanger for the pivoted end of the switch comprising a



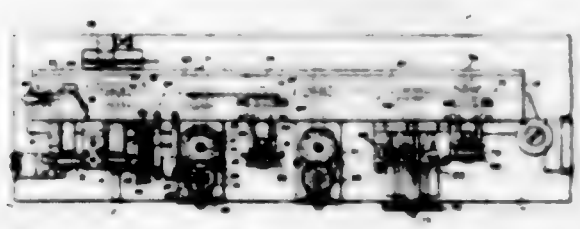
portion pivotally connected to a support, and a hanger for the free end of the switch including a track-bar secured to a support, and a hanger-bar connected to the switch and adapted to travel on said track-bar.

1,296,990. BEAD CEMENTING AND REELING MACHINE. GEORGE MCNEILL, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Aug. 10, 1916. Serial No. 114,150. 4 Claims. (Cl. 91—26.)



1. A bead cementing and reeling machine comprising a reel for the bead, a trough for cementing the bead, and a pivot on which the trough is free to swing to permit the bead to pass to the reel with minimum bending.

1,296,991. BEAD-WRAPPING APPARATUS. GEORGE MCNEILL, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Aug. 10, 1916. Serial No. 114,152. 7 Claims. (Cl. 154—9.)

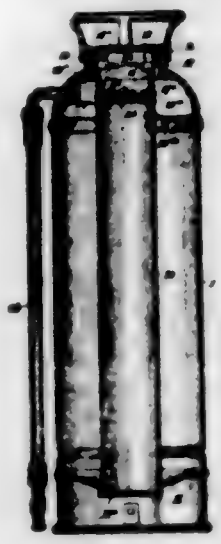


6. Bead wrapping apparatus, comprising feeding means, means for wrapping a strip of fabric about the bead, means for cutting off surplus fabric at the meeting edges of the strip, and means automatically operated by the bead to stop the feeding means and the wrapping means when the end of the bead passes through the feed means.

1,296,992. MANUFACTURE OF A HYDROGEN-NITROGEN MIXTURE. EDWARD BRADFORD MAXTED, Walsall, England. Filed Nov. 16, 1917. Serial No. 202,350. 3 Claims. (Cl. 23—10.)

2. The process for the manufacture of a hydrogen-nitrogen mixture which consists in subjecting at a low temperature a gas mixture containing hydrogen and carbon monoxid to the analyzing action of a current of liquid nitrogen, dissolving the carbon-monoxid in the liquid nitrogen and evaporating a portion of the nitrogen to mix with the gaseous hydrogen.

1,296,993. FIRE-EXTINGUISHING APPARATUS. CHARLES H. MAICH, Philadelphia, Pa., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 11, 1918. Serial No. 211,350. 11 Claims. (Cl. 169—7.)



1. In portable fire extinguishers adapted for the production and discharge of foam-extinguishing compounds, the combination with a casing having a neck and a bottom, a discharging element for the extinguishing medium, and a cap, of a removable receptacle therein having a closure and a cage for the closure, said cage including a plurality of straps, and a seat for the cage carried by the casing neck, said seat acting to support the receptacle in position and coöperating with the straps to prevent rotative movement of the receptacle on its axis, said closure being normally free to shift to permit discharge of receptacle contents.

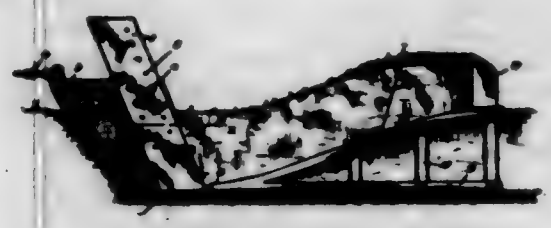
2. In portable fire extinguishers adapted for the production and discharge of foam-extinguishing compounds, the combination with a casing having a neck and a bottom, a discharging element for the extinguishing medium, and a cap, of a removable receptacle therein having a closure and a cage for the closure, said cage including a plurality of straps and an annulus connecting the outer ends of the straps, and a seat for the cage carried by the casing neck, said cap and seat coöperating to clamp the said annulus to support the receptacle in position, said seat and straps coöperating to prevent rotative movement of the receptacle on its axis, said closure being normally free to shift to permit discharge of receptacle contents.

3. In fire extinguishers, a casing having a bottom, a removable receptacle therein, said casing and receptacle having openings at corresponding ends, a member carried by the casing within its opening, said member being provided with spaced recesses, a cage structure carried by the receptacle and projecting beyond its opening and adapted to coöperate with the recesses in said member to prevent rotation of the receptacle, and a gravity closure freely movable within the cage.

1,296,994. DITCH-DIGGER. EDWIN B. MILLER, Stockton, Cal. Filed June 4, 1918. Serial No. 238,972. 1 Claim. (Cl. 97—12.)

A ditch digger comprising a draft sled adapted to run on the surface of the ground, a vertical cutting blade adjustably secured on each side and at the rear end thereof and depending downwardly therefrom, a horizontal blade extending between the vertical blades at the bottom

thereof and integral therewith having its cutting edge formed diagonally from side to side, and a runner-sup-



ported inclined plane linked to the horizontal blade at the rear thereof and sloping therefrom, the top of the inclined plane being on a level with the draft sled.

1,296,995. MEANS FOR FORMING CONCRETE PILES. MAX MILLER, New York, N. Y. Filed May 10, 1916. Serial No. 96,547. 7 Claims. (Cl. 61—23.)



1. Means for forming concrete piles comprising a casing to be driven into the earth, said casing having at its lower end an expansible portion normally of the diameter of the casing adapted to be expanded after it is driven to the desired depth, said portion after being expanded presenting a continuous surface to positively exclude the entrance of earth through the sides thereof.

2. Means for forming a concrete pile with an expanded footing or pedestal, the same comprising a casing including a portion comprising a plurality of vertical overlapping segments, means connecting the upper ends of said segments and constituting a solid non-expansible crown, the segments below said crown being movable radially of the casing to expanded form.

7. Means for forming a concrete pile with an expanded footing or pedestal, the same comprising a casing having an expansible section comprising a plurality of vertical segments, means connecting the upper ends of said segments and constituting a non-expansible crown, the segments below said crown being expansible radially of the casing to provide an enlarged hole of definite predetermined size and form, and means to prevent the collapse of the expansible section during the driving of the casing.

1,296,996. BOOT-LAST. HENRY MCLLER, Waterbury, Conn., assignor to The Shoe Hardware Company, a Corporation of Connecticut. Filed Aug. 1, 1918. Serial No. 247,705. 7 Claims. (Cl. 12—135.)

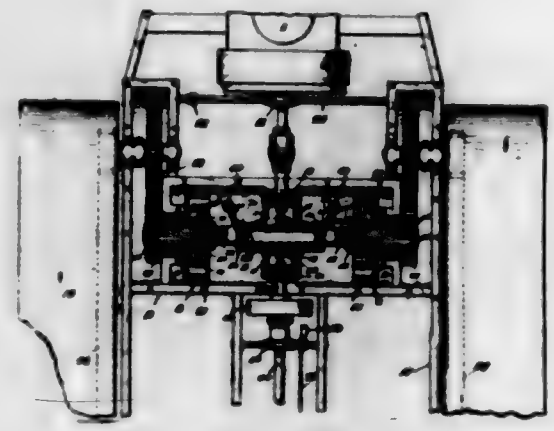
1. A boot last comprising a leg part, a detachable forepart, and a catch for securing said parts against relative vertical movement said catch embodying two yielding members one of said members being secured to the forepart and the other of said members being secured to the leg part.

7. A boot last comprising a leg part, a detachable forepart, and a catch for securing said parts against relative vertical movement, said catch embodying two yielding members, one of said members being secured to the forepart and the other of said members being secured to



the leg part, each of said members being provided with two oppositely inclined offset faces, one of the offset faces on one member being disposed to lockingly engage one of the offset faces on the other member when the parts of the last are in assembled position.

1,296,997. TRACTOR-DRIVE. EMORY S. MILLS, Muncie, Ind., assignor to Muncie Wheel Company, Muncie, Ind., a Corporation of Indiana. Filed Aug. 10, 1916. Serial No. 114,088. 2 Claims. (Cl. 180—17.)

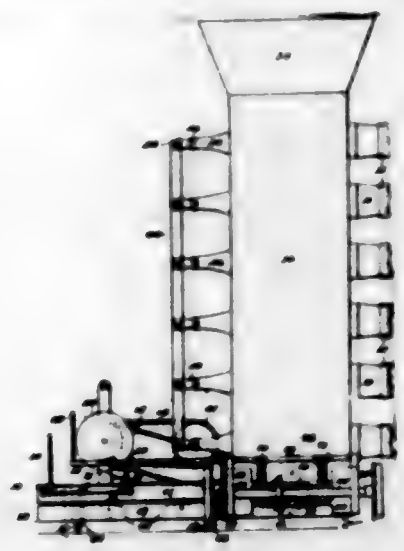


2. In a tractor, the combination with a main body, two independent traction wheels and a motor mounted on the main body, of a hollow jack shaft journaled within two clutch members journaled on the main body, mating clutch members mounted on the jack shaft and cooperating with said first-mentioned clutch members, said mating clutch members comprising friction shoes carried by threaded shafts, each provided with a driving pinion, a rack pin mounted within the jack shaft at each end and operatively engaging the adjacent friction shoe pin, means for shifting said rack pins independently, a pair of bevel gears journaled upon the jack shaft, a driving pinion connected to the motor and meshing with both of said bevel gears, a clutch splined upon the jack shaft and adapted to engage either of said gears, and means for shifting said last mentioned clutch.

1,296,998. ORE-CHARGING MACHINE FOR RETORTS. JOSEPH NIEZNALSKI and JAN BELCZYNSKI, Detroit, Mich. Filed Apr. 20, 1918. Serial No. 229,777. 9 Claims. (Cl. 214—18.)

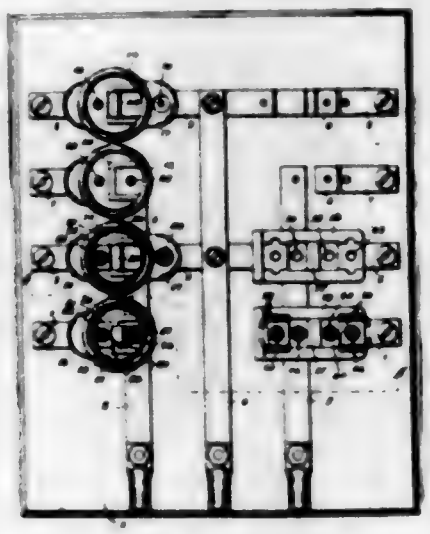
1. An ore-charging device comprising a hopper, ore-feeding tubes extending therethrough with a discharge end projecting outwardly of the hopper and having ore-receiving openings within the hopper, manually controlled slides for said openings, ejecting pistons for the ore reciprocatingly mounted within said tubes, rods car-

ried by the pistons, positioning disks upon said rods within the tubes, simultaneously operable crank-shafts



journaled upon the hopper, and operating connections between the cranks of said shafts and said piston rods.

1,296,999. PANEL-BOARD CONSTRUCTION. EDWIN A. OLLEY, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 6, 1915. Serial No. 43,966. 8 Claims. (Cl. 247—13.)

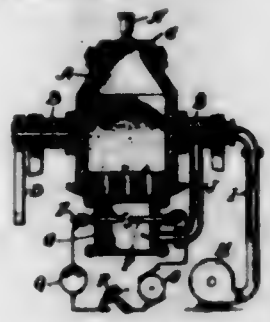


1. A panel board including a base, bus bars supported on the base, one of the bus bars having a bar section extending laterally therefrom, and terminating near another bus bar, load circuit bars terminating near the latter bus bar and said bar section, and electrical appliances for carrying fuses including insulating bases mounted directly on one load circuit bar and one bus bar and on the other load circuit bar and said bar section, and having terminals in connection therewith, substantially as and for the purpose described.

7. An electrical appliance for panel boards comprising a base of insulation having recesses in its lower side opening through opposite lateral sides of the base, the tops of the recesses being arranged at different levels, the base being also provided with a passage extending laterally above the deeper recess and opening through a lateral side of the base, terminals mounted on the base, one of the terminals extending into the last-mentioned passage, and electrically connected means associated with the terminals and extending through the base, substantially as and for the purpose specified.

8. In a panel board, the combination of a base, three bus bars mounted on the base, the bus bars being spaced apart from the base, load circuit bar sections extending laterally from the intermediate bus bar toward the outside bus bars and having their end portions superposed above, and spaced apart from, said outside bus bars, pairs of load circuit bars mounted on the base and extending in a direction transversely of the bus bars, one of each pair being alined with one of the load circuit bar sections, and the other bar of each pair terminating below and near one of the outside bus bars, electrical appliances each including a base having a recess in its underside and opening through a lateral side of the base for receiving one of the load circuit bars of each pair, and also having a second recess in its under side through which one of the outside bus bars extends, and terminals on the base of the appliance electrically connected to the underlying load circuit bar and outside bus bar, and additional appliances, each including a base having a recess in its lower side for receiving the other load circuit bar of one pair, and a recess in its lower side through which one of the outside bus bars passes, and a laterally extending boss formed with a passage for receiving one of the load circuit bar sections, terminals on the base of the latter appliance, and connected to the load circuit bar and the bar section on which said appliance is mounted, substantially as and for the purpose set forth.

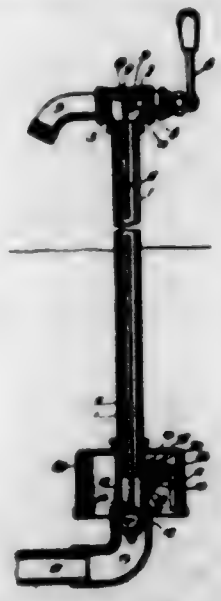
1,297,000. PROCESS OF MAKING DUCTILE BODIES OF REFRACTORY MATERIALS. PETER ORANCE, New York, N. Y. Filed Feb. 5, 1917. Serial No. 146,778. 4 Claims. (Cl. 204—63.)



1. In the process of making ductile bodies of refractory materials, the step which consists in admixing an auxiliary binding material to the refractory oxid by the aid of a blast of air, substantially as described.

4. In the process of making ductile bodies of refractory materials, the step which consists in admixing an auxiliary binding material to the refractory oxid powder in the gaseous form, the said auxiliary gas being produced by the volatilization of suitable electrodes in an electric arc, substantially as described.

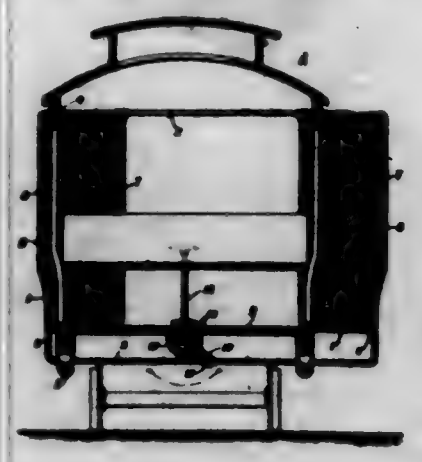
1,297,001. NON-FREEZING HYDRANT. HENRY T. O'SHIELDS, Atlanta, Ga. Filed July 10, 1916. Serial No. 108,445. 2 Claims. (Cl. 137—18.)



1. In a hydrant, the combination with a stock including an upwardly and outwardly projecting tubular ex-

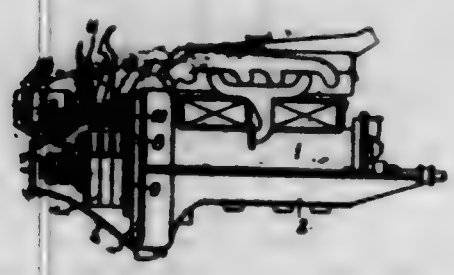
tension; of a plug closing the outer end of said extension, said plug having therein a valve chamber communicating at its upper extremity with an outlet orifice, a guide plug closing the inner end of said chamber and having therein a passage establishing a communication between said chamber and stock, and a ball valve situated in said chamber and operable to a position closing said orifice by the supply pressure, substantially as and for the purpose set forth.

1,297,002. PASSENGER'S SIDE PLATFORM FOR CARS. HENRY J. PALMER, Brooklyn, N. Y. Filed Aug. 14, 1918. Serial No. 249,889. 4 Claims. (Cl. 105—425.)



4. The combination of a car body and side structures extending along the body and movable laterally relatively to the body, said structures having outer walls substantially parallel with the car body, transverse connections uniting said structures to constrain the same to move in unison, and means to shift said structures to dispose either one in a projected position laterally of the car body and dispose the other adjacent to the body; together with platforms for the respective structures.

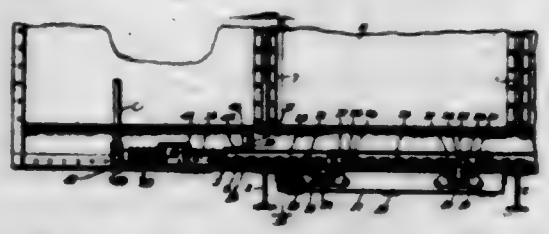
1,297,003. AUTOMOBILE-STARTER. GEORGE K. PARSONS, Detroit, Mich. Filed Feb. 21, 1916. Serial No. 79,707. 2 Claims. (Cl. 74—7.)



1. The combination with a power plant for a vehicle, including an explosive engine crank case and gear case forming a unitary structure and having a view opening on the gear casing, of a base plate adapted to be removably secured over the opening, a starting motor mounted on the base plate, a transmission mechanism connected to the motor, including a gear and a gear on the explosive engine with which the first gear is held in operative meshing relation when the base plate is secured on the opening, the base plate having means for holding the meshing gears in alinement.

1,297,004. CAR CONSTRUCTION. JOHN PEARSON, Chicago, Ill. Filed Feb. 5, 1915. Serial No. 6,287. 23 Claims. (Cl. 105—238.)

1. In a dump car, a door hinged at one edge thereof to the car, and means for controlling the raising and locking and the lowering of the opposite edge of the door, comprising a flexible member secured to the door edge and slidably supported intermediate its ends, a slidable bar, means for securing said flexible member to said bar, and means in threaded engagement with said bar, and in threaded engagement with a portion of the car structure for controlling the movement thereof.

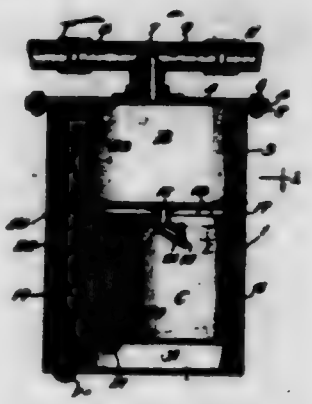


7. In a dump car and in combination, dump door controlling mechanism comprising a slidable bar operatively connected with the dump doors, and means for controlling said bar, comprising a rotatable member threaded to engage a suitable part carried by the car, and movable lengthwise said slidable bar, said member internally threaded, a threaded member arranged to engage the internal thread of said first mentioned member and operatively connected with said member.

11. In a car, dump controlling mechanism including a slidable bar, flexible means operatively connected with the dump doors and bar, and means carried by said bar for positively locking the doors in closed position independently of said flexible means after a predetermined movement of the bar in a direction to close the doors.

23. A dump-car of the kind described, a series of dump doors, door-controlling mechanism, comprising a drum provided with an internal screw-thread and secured to the body of the car, a tubular rotatable mandrel having an external and internal screw-thread, said hollow rotatable mandrel internally threaded in opposite direction from the external thread, a sliding non-rotatable bar operatively connected with the dump doors and having a threaded portion arranged to telescope within said rotatable mandrel, whereby movement of said hollow rotatable mandrel controls the releasing and positively supports the series of dump doors at any desired position.

1,297,005. AUTOMATIC CONTROL FOR VACUUM-PUMPS OR THE LIKE. FRANK R. PERRY, Chicago, Ill. Filed Oct. 30, 1917. Serial No. 199,250. 9 Claims. (Cl. 103—52.)

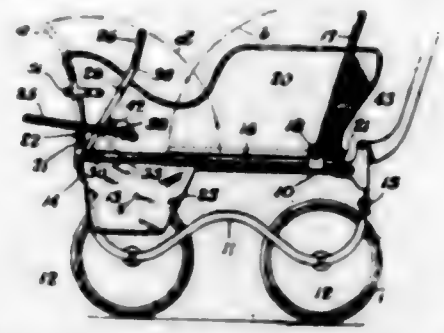


2. A fluid containing receptacle having two chambers therein, piping connected with and extending to and from one of said chambers, one chamber having a discharge outlet into the second chamber, a check valve arranged at said outlet, means for conducting fluid from adjacent the bottom of the second mentioned chamber to the first chamber, said second chamber provided with a vent near the upper part thereof to the exterior of the receptacle, and means arranged between the said outlet and the entrance end of said conducting means for receiving the contents of the first mentioned receptacle discharged through said outlet and thereafter automatically discharging the same after a predetermined interval into the second chamber.

8. In a device of the kind described and in combination, a receptacle substantially constructed with three chambers, a port connecting the first and second chambers provided with a gravity valve normally closing said

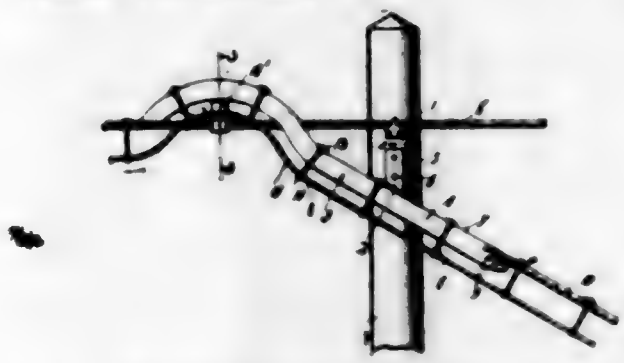
port and opening into the second chamber, piping means extending to and from said first chamber, a siphon connecting the second chamber with the third chamber, and a pipe connecting the third chamber with the first chamber, said third chamber having a vent opening adjacent the top connecting the interior with the exterior of the receptacle.

1,297,006. BABY-CARRIAGE. FRITHIOF PETERSON and DAVID R. COLLIER, Gardner, Mass., assignors to Collier Keyworth Company, a Corporation of Massachusetts. Filed Mar. 31, 1917. Serial No. 158,835. 5 Claims. (Cl. 21—12.)



1. A baby-carriage body having a hinged dash-supporting frame arranged to swing about a transverse axis, a panel affixed to said frame in a position remote from said axis, a movable panel arranged in said frame between said fixed panel and said axis, said movable panel and said frame having hinge connection with each other to enable the said panel to tilt relatively to the frame, said frame and said movable panel being movable to arrange the latter and the first said panel in the relation of a seat and back-rest, respectively, and means arranged to sustain said movable panel and said frame in seat-forming relation.

1,297,007. CLIP-PASSER. JOHN W. PLENCNER, Warren, Minn. Filed Feb. 12, 1917. Serial No. 148,293. 5 Claims. (Cl. 247—23.)



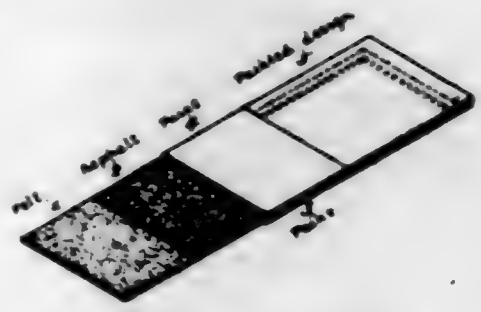
2. A clip-passer comprising a guide bracket formed from an elongated arm having a portion of its length disposed at an angle, means attached to the angularly disposed portion for supporting the arm, a curved portion formed at the upper end of the said arm, a standard formed on and depending from the said curved portion for elevating the same and holding the same in elevated position, the edge of the said arm being rounded to provide a longitudinal trackway extending over the curved portion.

1,297,008. SHEATH FOR KNIVES. ERNESTO J. POMMER, Buenos Aires, Argentina. Filed Mar. 6, 1918. Serial No. 220,867. 5 Claims. (Cl. 224—2.)



1. A container for a cutting implement, comprising a receptacle, and a sharpening element secured to said receptacle adjacent a marginal portion of the same and accessible from the outside of the receptacle.

1,297,009. PROCESS OF MAKING FLOOR-COVERINGS. GEORGE PRIFOLD, Linwood, Pa., assignor to The Congoleum Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 12, 1917. Serial No. 206,824. 2 Claims. (Cl. 91—68.)



1. The process herein described of making a floor covering, said process consisting in passing a strip of felt through a semi-solid bituminous solution while the solution is hot so as to thoroughly impregnate the felt, then applying directly to one surface of the felt a preparation of linseed oil, naphtha and a pigment, heating the material so as to evaporate the naphtha, cooling the same and then applying to the opposite surface of the felt a similar coating and allowing it to cool, and then applying a printed design of paint to one of said surfaces.

1,297,010. PROCESS OF MAKING COVER-PLATES. THEODORE C. PROUTY, Elgin, Ill., assignor, by mesne assignments, to The Van Sicklen Company, a Corporation of Illinois. Original application filed Feb. 9, 1915, Serial No. 7,189. Divided and this application filed Jan. 2, 1917. Serial No. 140,197. 4 Claims. (Cl. 91—68.)



1. A process of making cover plates for speedometers or the like consisting in first placing the desired indicia on a plate of glass, then applying one or more coats of celluloid enamel or the like in liquid condition, then applying a coat of gloss lacquer or the like and allowing the same to dry, and then moistening said coats previously applied and cutting out desired sight openings while said coating is still in a moist condition.

1,297,011. MUSIC-LEAF TURNER. WILLIAM J. RIGTH, Valley City, N. D. Filed Nov. 20, 1916. Serial No. 132,385. 2 Claims. (Cl. 84—17.)

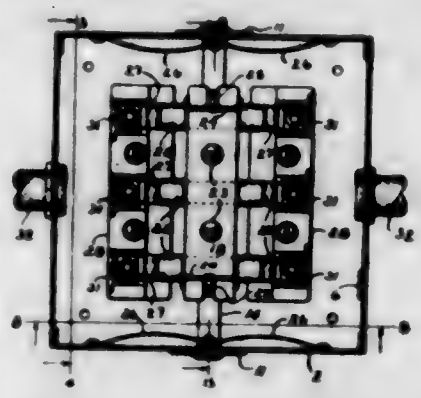
2. A music leaf turner comprising a stand, a drum rotatable thereon, a bar pivoted intermediate its ends to said stand and swung about its pivot by the rotation of said drum, an arm pivoted to one end of said bar and engageable with a portion of a sheet of music, a lever pivoted to said stand, a rocker element pivoted to the other end of said bar, a resilient connection between said rocker element and lever, a connection between said rocker element and said arm for swinging same about its pivot when the rocker element is actuated, means engaging said rocker element for normally preventing actuation thereof, means carried by the stand and operable upon the

last named means to release the same when said bar is swung about its pivot, and means carried by the stand



and engageable by said lever, when said bar is swung about its pivot, to actuate said rocker element.

1,297,012. ELECTRIC SWITCH. JOSEPH SACHS, Hartford, Conn. Filed Oct. 14, 1915. Serial No. 55,764. 15 Claims. (Cl. 175—292.)

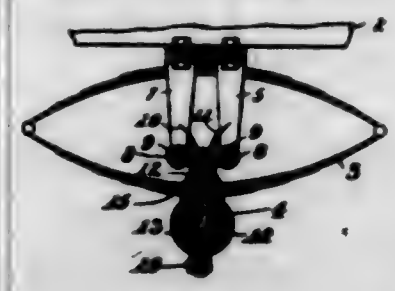


1. In an appliance of the character described, a box, a cover for said box, a switch in said box, supported independently of the cover, reciprocating actuating means for the switch, accessible exteriorly of the box and comprising means to prevent opening of the cover sufficiently to give access to the switch when the switch is closed and movable in the direction of opening movement of the cover to free the cover.

1,297,013. PROCESS OF MAKING BEER. BALDWIN F. SCHIRMER, New York, N. Y. Filed Sept. 5, 1917. Serial No. 189,747. 7 Claims. (Cl. 195—1.)

2. The process of making beer, which consists in making fifty per cent. of the beverage as a heavy gravity beer, and then preparing and adding to this fifty per cent. another fifty per cent. of a lighter gravity beer.

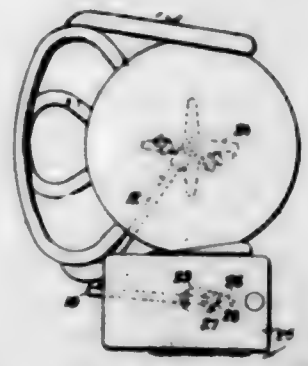
1,297,014. SHOCK-ABSORBER. BALDWIN F. SCHIRMER, New York, N. Y. Filed July 30, 1918. Serial No. 247,399. 12 Claims. (Cl. 267—2.)



1. A single shock absorber comprising a pair of supporting means, one adapted for attachment to the body

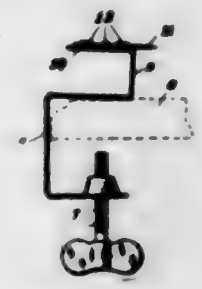
of a vehicle and the other to the axle thereof one directly above the other, one carrying a pair of upright semi-elliptic springs, and the other rollers for engaging the same, the springs and rollers being located in juxtaposition whereby both springs are located at one and the same side of the vehicle body.

1,297,015. BOOK-REST. FREDERICK A. SCHLANGER, Brooklyn, N. Y. Filed Dec. 28, 1915. Serial No. 69,012. 1 Claim. (Cl. 45—82.)



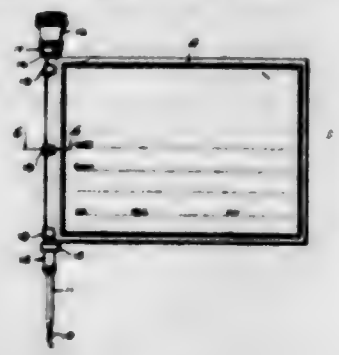
In a book rest, the combination of a substantially U-shaped frame comprising two horizontal and a vertical rod, a pivot securing the end of one horizontal member to the underside of the bottom of a chair seat, means at the pivot for permitting the swing of the pivoted member within predetermined limits, and a rest carried at the end of the other horizontal member and adapted to maintain a tangential relation with the seat of the chair as the frame is swung on the pivot.

1,297,016. CLOTH-HOLDING DEVICE. FRANK A. SCHOENL, Cleveland, Ohio, assignor of one-half to Hudson K. De Lloyd, Cleveland, Ohio. Filed June 24, 1918. Serial No. 241,513. 2 Claims. (Cl. 24—85.)



1. A device of the character described, comprising a clamp having upper and lower arms, the former having a vertical standard thereon, a head at the top of the standard, projecting horizontally therefrom, and a pin engageable with the head and adapted to fasten a piece of work thereto.

1,297,017. CARD-HOLDING ATTACHMENT FOR PENCILS. ALONZO B. SCOTT, Fairmont, W. Va. Filed Oct. 18, 1918. Serial No. 258,735. 2 Claims. (Cl. 120—84.)



1. In a card holding means of the class described, a cylindrical element on which the card may be rolled, a lon-

gitudinal rib thereon, and an arcuate clip adapted to be sprung onto said element or removed therefrom to clamp or release the iner edge of the card, said clip being adapted to embrace said element for more than half its circumference and being turnable on the cylindrical surface of said element in either direction relatively to said rib, said rib being adapted to obstruct the turning of said clip on said element.

1,297,018. PERAMBULATOR AND CRADLE. JAMES H. SCOTT, Los Angeles, Cal., assignor of one-half to Nora E. Jewett, Los Angeles, Cal. Filed Apr. 4, 1918. Serial No. 226,771. 2 Claims. (Cl. 155—44.)



2. A perambulator comprising a base, a vertical standard rigidly secured in said base, a horizontal bar rotatably attached to said standard and having an off-set portion the end of which is formed in a loop, a carrier in said loop, a fulcrum wheel intermediate said horizontal bar, a spring on said standard exerting tension against said horizontal bar and means for adjusting the tension of said spring.

1,297,019. RELEASING MECHANISM. SAMUEL SECKENDORF, New York, N. Y., assignor to Johnston & Seckendorf, New York, N. Y., a Copartnership. Filed May 10, 1917. Serial No. 167,672. 11 Claims. (Cl. 88—41.)



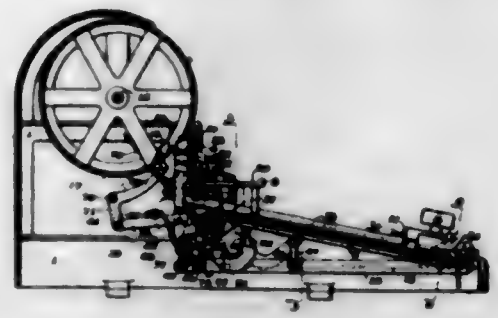
1. A folding lorgnette or other spectacle, comprising a sheath, a spring pressed plunger mounted in said sheath, eye-glass settings adapted to fold into said sheath, and coöperating means on the settings and said plunger for automatically interlocking said sheath and settings in folded relation.

5. A lorgnette, comprising settings foldable upon each other, a sheath to which said settings are pivoted and into which they may be folded and a supporting spring-pressed plunger provided with means coöperating with said settings for automatically interlocking said settings in said sheath by the folding operation of the lorgnette.

10. A lorgnette comprising a setting, a second setting pivotally connected to and adapted to be folded upon the first mentioned setting, a sheath to which the first mentioned setting is pivoted, and into which the settings are adapted to be folded, the said pivots lying substantially in the same plane, whereby the second mentioned setting in the folded position of the lorgnette is located between the first mentioned setting and the sheath.

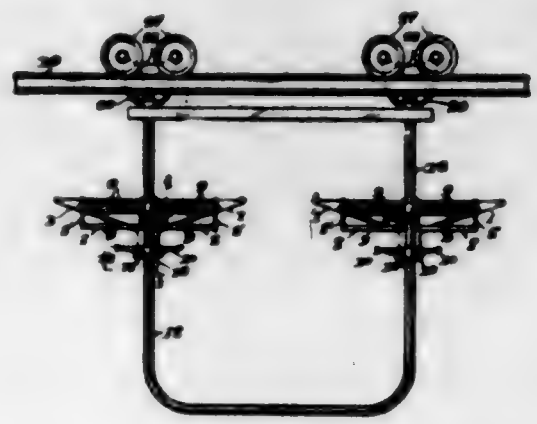
1,297,020. TYPE-WRITER. YUSAKU SHINOZAWA, Tokyo Fu, Japan. Filed June 19, 1918. Serial No. 240,760. 11 Claims. (Cl. 197—44.)

1. A typewriter consisting of a revolubly mounted type drum, on the surface of which are engraved a large number of characters, a paper drum carriage which moves near the surface, and parallel to the axis, of the said type drum, and is provided with a printing mechanism; a paper-drum mounted on the said paper-drum carriage parallel to the axis of the said type-drum, and which independently moves right and left on the carriage; a character index board; a sliding piece which can be moved over the character index board to any desired point; a mechanism which connects the said sliding piece with the type-drum in such a way that by backward or forward motion of the sliding piece in the direction at right angles with the axis



of the type-drum, the type-drum is turned one way or other; and a device by which the motion of the sliding piece parallel to the axis of the type-drum causes the paper-drum carriage together with the paper-drum and the printing mechanism to move parallel to the axis of the paper-drum, substantially as and for the purposes hereinbefore set forth.

1,297,021. HARNESS-SUPPORT. JOHN G. SWENSON, Fort Atkinson, Wis., assignor to James Manufacturing Company, Fort Atkinson, Wis., a Corporation of Wisconsin. Filed Aug. 30, 1916. Serial No. 117,011. 8 Claims. (Cl. 248—19.)

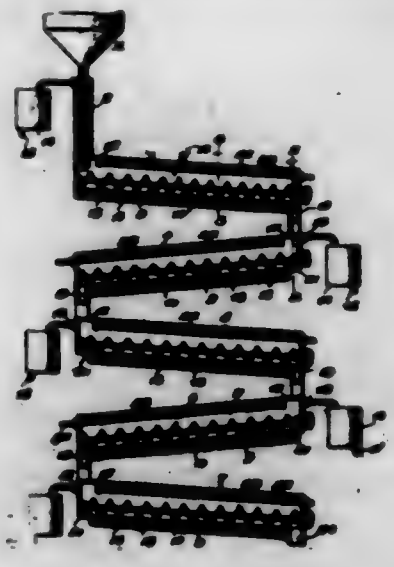


2. A harness support, including the combination of a vertical support, a bracket projecting laterally therefrom and having apertures therein, and a pair of harness supporting members conforming generally to the curve of the back of the animal which the harness is intended to fit, adapted to spread a harness hung thereon, said members having fingers adapted to project through the apertures and hold the members in position.

1,297,022. OBTAINING OIL FROM SHALE. FREDERICK G. SHREVES, Denver, Colo. Filed Feb. 25, 1918. Serial No. 219,082. 3 Claims. (Cl. 196—19.)

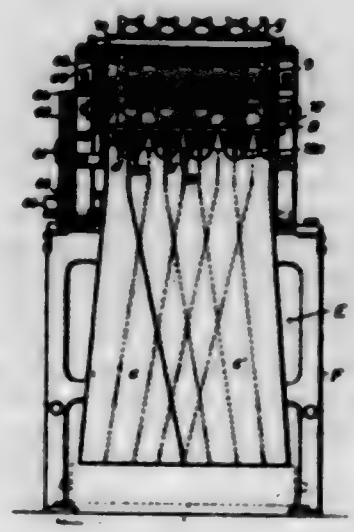
1. In a retort, the combination with a plurality of chambers, a conveyer in each chamber, a vapor dome above each conveyer, a condenser connected with each vapor dome, heating means individual to each chamber, and

means connecting certain of said chambers permitting passage of matter from an upper to a lower chamber but pre-



venting passage of matter from a lower to an upper chamber.

1,297,023. MILK-BOTTLE-CAP-MAKING MACHINE. PAUL RAYMOND SIMMONS, Huntington, Ind., assignor to The Simmons Manufacturing Company, Huntington, Ind. Filed Mar. 14, 1918. Serial No. 223,823. 9 Claims. (Cl. 164—28.)



1. A bottle cap making machine comprising coacting cutting elements between which a strip of stock passes to cut caps therefrom, means on the discharge side of the cutting elements for maintaining the caps in the plane of the strip, a pair of rolls between which the strip and caps pass, another pair of rolls spaced from the first-mentioned rolls a less distance than the diameter of the caps, whereby a portion of the caps feed from the first to the second set of rolls, and means for directing the residue of the strip out of its normal path before reaching the second set of rolls.

3. In a machine of the class described, the combination of separate means for feeding disks in alternate rows, separate groups of chutes arranged one in front of the other and coacting rolls arranged at the chutes, said rolls having means for directing alternate rows of disks into the first chutes, and additional means on the rolls for delivering the remaining disks into the second group of chutes.

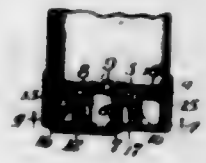
7. The combination of means for cutting a plurality of rows of disks in a traveling strip, the edges of adjacent rows overlapping, means for maintaining the disks in the plane of the strip upon leaving the cutting means, means for deflecting the strip and feeding the disks forwardly in separated condition from the strip, a set of chutes for the disks of alternate rows, another set of chutes for the disks of the remaining rows, and means for conducting the disks to the proper chutes.

9. The combination of means for cutting rows of disks in a strip of material, the edges of the rows overlapping, means for causing the disks and cut strip to move in different paths, a pair of rolls for feeding the disks forwardly, a set of chutes, means adjacent the chutes for directing the disks of alternate rows into the same, means for conducting the disks over the said chutes, and a second set of chutes for receiving the last-mentioned disks.

1,297,024. HOLDER FOR PORTABLE FIRE-EXTINGUISHERS. DAVID B. SMITH, Cape Girardeau, Mo. Filed Oct. 28, 1918. Serial No. 260,049. 8 Claims. (Cl. 169—16.)

1. A supporting device having means for releasably holding a hand fire extinguisher thereon, a conducting pipe attached to said device and having a discharge nozzle, and means for effecting a releasable communicative connection between the outlet of said extinguisher and said pipe.

1,297,025. LOCKING MECHANISM FOR POCKET SAVINGS-BANKS. FRANK A. SMITH, Chicago, Ill., assignor to American Badge Company, Chicago, Ill., a Corporation of Illinois. Filed May 8, 1916. Serial No. 96,027. 8 Claims. (Cl. 70—27.)



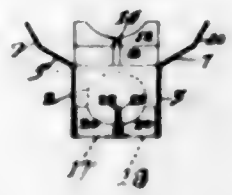
1. The combination of a coin casing, a head or cap member for the same, locking mechanism carried by said head or cap member, said head or cap member being provided with apertures, and a key adapted to enter said apertures, said key and locking mechanism being constructed to coöperate with one another so as to unlock said locking mechanism when said key is inserted in said aperture and turned, said key being provided with notches or recesses adapted to receive an edge portion of the material of said cap or head member whereby said key may also be used to withdraw said cap member and separate it from said casing.

2. The combination of a coin casing, a head or cap member covering an end portion of said casing and containing locking mechanism comprising sliding members arranged to enter apertures formed in a portion of said casing covered by said head or cap member, a post carrying a transverse plate which latter is provided with slide-

ways, slides mounted in said slideways and arranged to enter apertures formed in the end portion of said casing covered by said cap member, said slides being provided with lateral projections, a spring acting against said projections and tending to force said slides outwardly into engagement with said casing apertures, said projections having inclined cam faces which may be engaged by the prongs of a key inserted through apertures in said cap member.

3. The combination of a coin casing, a head or cap member covering an end portion of said casing and containing locking mechanism comprising sliding members arranged to enter apertures formed in a portion of said casing covered by said head or cap member, a post carrying a transverse plate which latter is provided with slideways, slides mounted in said slideways and arranged to enter apertures formed in the end portion of said casing covered by said cap member, said slides being provided with lateral projections, a spring acting against said projections and tending to force said slides outwardly into engagement with said casing apertures, said projections having inclined cam faces which may be engaged by the prongs of a key inserted through apertures in said cap member, and a washer also held in place by said post and located on the side of said plate member opposite said locking mechanism chamber.

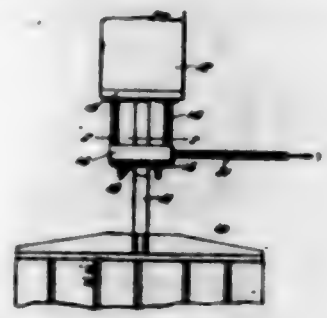
1,297,026. CONTAINER FOR FRAGILE ARTICLES. JOHN C. SMITH, Monaca, Pa., assignor to Solar Electric Company, a Corporation of Illinois. Filed July 12, 1915. Serial No. 39,214. 1 Claim. (Cl. 229—39.)



In a container for fragile articles, a member having extensions forming four side walls, fold-over portions forming continuations of the side walls, and adapted to constitute an end wall or cover and extensions constituting the extremities of the fold-over portions, each of said extensions having parts of their edges curved, two opposed fold-over portions and their extensions being provided with slots, the member from which the side walls extend comprising the bottom of the container having overlapped portions, extensions formed on the overlapped portions, the said overlapping portions having slots whereby when folded the upper and lower part of the container are similarly constructed, the last mentioned fold-over portions being bent to overlie the bottom of the container and the extensions thereof being bent to project vertically and at right angles to the fold-over portions and inserted in registering slots of the fold-over portions and the said extensions constituting inwardly projecting supports for an article and the first mentioned extensions projecting inwardly through the top opposite to the second mentioned extensions whereby the said extensions constitute a seat or holder for said article.

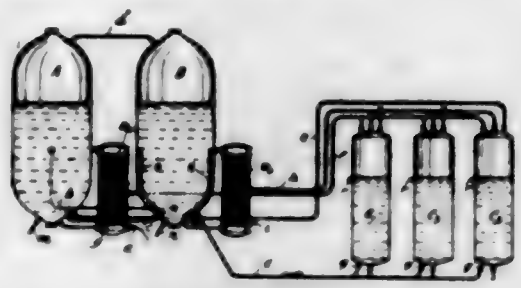
1,297,027. ATTACHMENT FOR STEAM COTTON-TRAMPERS. WILLIAM E. SMITH, Scotland Neck, N. C. Filed Nov. 23, 1917. Serial No. 203,621. 1 Claim. (Cl. 100—19.)

An attachment for steam cotton trampers of that character having an upper piston cylinder and a lower press box into the latter of which a piston rod depends directly from the piston cylinder, said attachment consisting of a stationary member between the cylinder and the press box, and connected to and supported by said cylinder, said member having a stuffing box through which the piston rod projects, and provided with a water collecting chamber in its upper face opposing the cylinder,



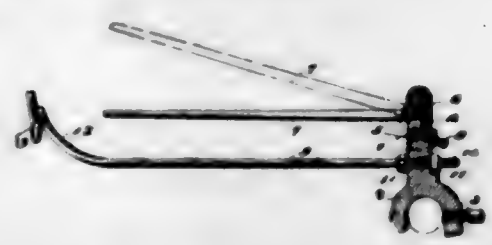
and a discharge pipe leading from said chamber to discharge collections from piston rod above the member.

1,297,028. METHOD OF PRECIPITATING LIGNIN FROM WASTE SULFITE LIQUOR. INGVAR SÖRAAS, Aalvik, Ovam, Norway. Filed Sept. 24, 1917. Serial No. 193,001. 7 Claims. (Cl. 252.)



1. The process of precipitating the lignin substances from the waste liquor from the sulfite cellulose process, which comprises heating the liquor in a suitable vessel by indirect heating to a temperature somewhat below the precipitation temperature of the lignin substance, transferring the heated liquor to a second vessel, and raising the temperature of the liquor in the second vessel, to effect precipitation of the lignin substance, by direct heating.

1,297,029. BOBBIN-HOLDER. FRANCIS L. SOULE, Welland, Ontario, Canada. Filed Apr. 9, 1918. Serial No. 227,526. 3 Claims. (Cl. 242—130.)

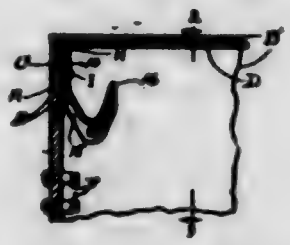


1. A bobbin holder comprising a bracket, a block pivoted in the end of the bracket, a spindle secured rigidly in and projecting laterally from said block, a stop adjustably mounted in the bracket to engage the end of the block and hold the same in a set position, and a guide arm secured rigidly to and projecting laterally from the bracket below the spindle and provided with an eye beyond the end of the spindle.

1,297,030. DRAINING ATTACHMENT FOR THE DASH-BOARDS OF MOTOR-VEHICLES. PETER SPINK, Cleveland, Ohio. Filed Oct. 21, 1918. Serial No. 258,972. 6 Claims. (Cl. 180—60.)

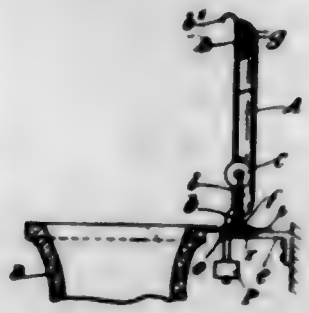
1. The combination, with the dash-board of a motor-vehicle, and a hood straddling and extending forwardly from the dash-board, of two bars arranged transversely of the outer side of the dash-board at opposite sides re-

spectively of a point centrally between the side edges of the dash-board, a trough extending longitudinally of said bars and having the upper part of its inner side portion arranged opposite the outer sides of and extending above



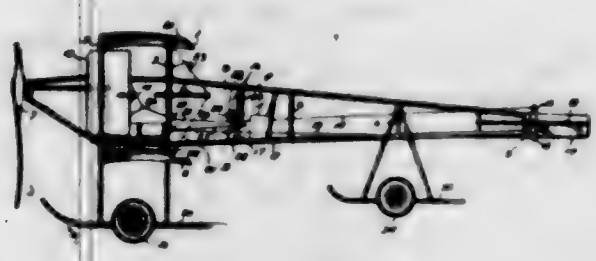
said bars, said bars and the trough being supported from the dash-board, and the recess formed at the top of each bar between the trough and the dash-board being occupied by cement.

1,297,081. APPARATUS FOR STERILIZING WATER-CLOSET SEATS. JUAN NICOLAS STABLE, Geneva, Switzerland. Filed Sept. 21, 1918. Serial No. 255,082. 7 Claims. (Cl. 4—18.)



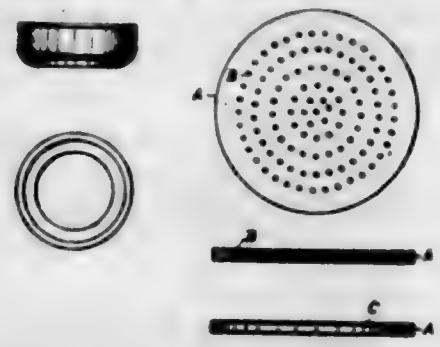
1. In a sterilising apparatus and in combination, a fixed heating element, a member to be sterilized and adapted to be moved into and out of contact with the heating element, and means for heating the said heating element for a predetermined period each time the movable element is brought into contact therewith.

1,297,082. AEROPLANE. FRANK S. STIRTON, Springfield, Ontario, Canada. Filed July 28, 1915. Serial No. 42,463. 4 Claims. (Cl. 244—29.)



2. In an aeroplane, a frame having upper and lower main planes, vertically swinging ailerons supported between said main planes and projecting beyond the rear edges thereof, vertically swinging elevating planes at the other end of said frame, a vertical plane between the elevating planes, horizontally movable jibs in said frame between the main planes, forwardly of and at the inner ends of the ailerons, and projected beyond the front ends of said main planes, and mechanism for operating the ailerons, elevating planes, and jibs independently of each other.

1,297,033. CUP FOR PUMPS, &c. DANIEL J. STOLTS, Montpelier, Ind. Filed Mar. 23, 1918. Serial No. 224,160. 1 Claim. (Cl. 103—62.)



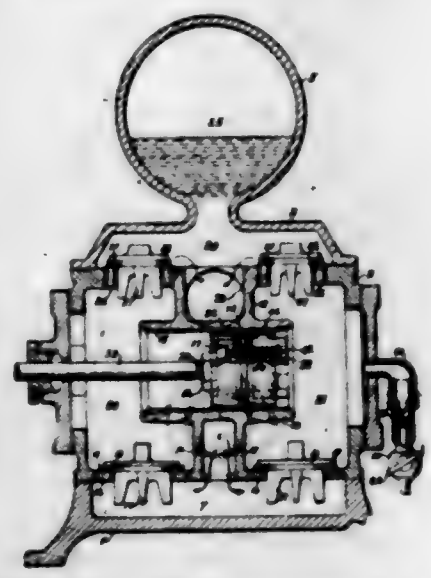
A cup packing for pumps composed of a leather disk having numerous punctures in one of its surfaces, a coating of thickened boiled shellac extending over the punctured surface of the disk, and a canvas sheet attached to the disk, with the shellac coating lying therebetween, the blank thus formed of the disk coating, and sheet being shaped into the form of a cup and trimmed to the desired size.

1,297,034. FLEXIBLE SHAFTING. NELS A. STRAND, Chicago, Ill. Filed Nov. 11, 1918. Serial No. 261,952. 5 Claims. (Cl. 64—30.)



1. The combination in a flexible shaft of a series of sections, each having one of its ends bifurcated and the other provided with a bearing terminal, intermediate members between the bifurcated terminals and the cylindrical terminals of adjacent sections having driving surfaces to engage the adjacent ends of the sections, and means to hold the intermediate members and sections in connected relation.

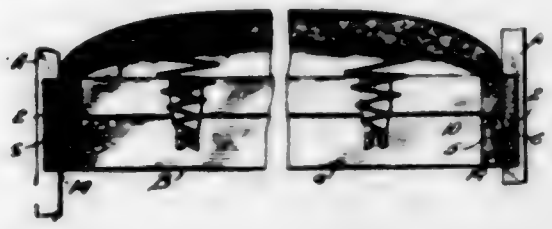
1,297,035. PUMP. JAMES M. STRATTON, Salem, Ohio, assignor to The Deming Company, Salem, Ohio, a Corporation of Ohio. Filed Apr. 1, 1918. Serial No. 225,892. 11 Claims. (Cl. 103—61.)



1. In a force pump, the combination of a cylinder, a casing having chambers in communication with each end

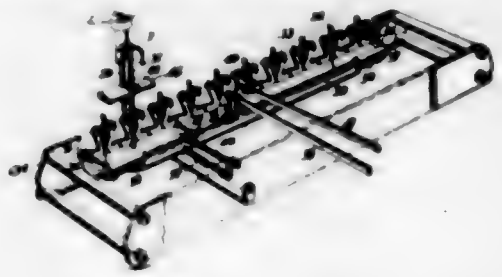
of the cylinder, an air inlet to one of said chambers, a piston reciprocating in said cylinder, a single passage through said piston, adapted to permit the escape of an appreciable amount of air or very small amount of water, and a freely opening valve in said passage closing during movement of the piston in the direction toward said air inlet.

1,297,036. FURNITURE. MAURICE TAUBER and JOHN SCHENKER, Chicago, Ill., assignors to The Maurice Tauber Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1918. Serial No. 267,765. 4 Claims. (Cl. 155—8.)



1. An article of knock-down furniture having, in combination, two side frames, a seat section and a back section, each side frame having secured to its inner side a bar extending from the forward portion of the side frame to the rear portion thereof, a groove being provided between said bar and the adjacent portion of the side frame, said seat section consisting of a front bar, a rear bar and two side bars, said side bars being tapered to fit within said grooves, dowel pins for connecting the lower edge of the back section to the rear edge of the seat section, perforated lugs on the upper portion of the side frames, against which lugs the upper portion of the back section is arranged to rest, and screws extending through said perforated lugs into the rear side of the back section.

1,297,037. COMBINED TYPE-WRITING AND COMPUTING MACHINE. EDWARD THOMAS, New York, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed June 12, 1914. Serial No. 844,834. 22 Claims. (Cl. 235—26.)



1. In a computing machine including numeral keys and a traveling carriage, the combination with dogs, of keys adapted to engage said dogs whenever depressed, means associated with said dogs for blocking them to prevent simultaneous depression of the keys, while leaving each key free for operation singly, and means dependent on the travel of said carriage, for determining whether said blocking means shall be effective or not.

8. In a computing machine, the combination with a comma lock comprising a shaft and a locking lug connected to said shaft, of key-locking dogs normally ineffective, and sleeves on said shaft having lugs thereon for making said dogs effective independently of said comma lock.

13. In a computing machine, the combination with a traveling carriage and a series of denominational members, of keys, normally ineffective dogs for preventing the simultaneous operation of two keys, while leaving each key free for operation singly, and a bar universal to said denominational members for making said dogs effective.

14. In a computing machine, the combination with a traveling carriage and a series of denominational members, of keys, normally ineffective dogs for preventing the simultaneous operation of two keys, while leaving each key free for operation singly, a bar universal to all of said denominational members for making said dogs effective, a comma lock to coöperate with said dogs for preventing the operation of any of said keys, and a separate bar for said comma lock operated by only a portion of said denominational members.

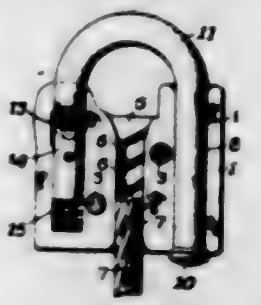
15. In a computing machine, the combination with numeral keys and dogs for preventing their simultaneous operation, of a device whereby said dogs may be made effective, a spring normally holding said device ineffective, a comma lock also coöperating with said dogs, and a separate spring holding said comma lock ineffective.

1,297,038. STEERING-WHEEL LOCK. ERNEST TIMMERHOFF, Elkhart, Ind. Filed Dec. 2, 1918. Serial No. 264,941. 3 Claims. (Cl. 70—129.)



1. In a steering head for an automobile the combination with a steering post immovable longitudinally, a housing mounted relatively to said post, a planetary gearing in said housing, of a stud shaft adapted to carry a steering wheel, a pinion fixed to said stud shaft said shaft being longitudinally movable relative to the steering post, whereby the said pinion may be moved into and out of mesh with the said planetary gearing, a collar on said shaft and movable therewith, a movable member mounted in said steering head and adapted to have its inner end normally arranged in the path of movement of said collar in the endwise movement of said shaft, lock controlled means for preventing movement of said movable member from the path of movement of said shaft collar, and means separate from said lock controlled means and operative from the exterior of the steering head for moving said movable member out of the path of movement of said shaft collar when said lock controlled means is disengaged.

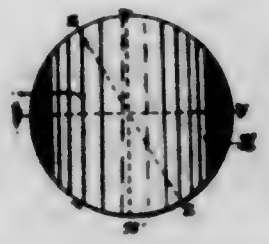
1,297,039. WIRE-ROPE-CLAMPING DEVICE. REINHARD T. TORKELSON, Worcester, Mass., assignor to Frederic I. Johnson, Fitchburg, Mass. Filed Jan. 23, 1919. Serial No. 272,685. 4 Claims. (Cl. 24—132.)



4. In a device of the character described, a pair of clamping members recessed to receive a wire rope, a rotatable loop member held in said clamping members and capable of a sliding movement therein, a hook carried by said loop member and engaging the clamping members to hold the loop member from rotation, and a spring actuated

plunger bearing against said hook, said hook having a rounded surface contacting with said plunger by which said plunger is depressed as the hook is swung into position.

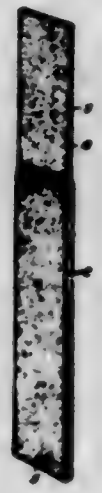
1,297,040. LENS. EDWARD A. TRAPP, deceased, New York, N. Y., by Susanna B. Trapp, executrix, Philadelphia, Pa. Filed Oct. 14, 1916. Serial No. 125,756. 6 Claims. (Cl. 88—57.)



1. A lens with two curved faces having the characteristics of a parabolic lens, the curved surfaces of each of the faces being surfaces generated by the movement of the parabola in such direction that the axis of the parabola travels in a plane at right angles to the plane in which the parabola is inscribed and the point of intersection of the axis of the parabola with the curve of the parabola travels in a right line at right angles to the said plane in which the parabola is inscribed.

3. A lens having two curved faces and the characteristics of a parabolic lens of which the curved surfaces of each of the faces are surfaces generated by the movement of the parabola in such direction that the axis of the parabola travels in a plane at right angles to the plane in which the parabola is inscribed and the point of intersection of the axis of the parabola with the curve of the parabola travels in a right line at right angles with the said plane in which the said parabola is inscribed, the two faces so arranged that the loci of the vertices of the generating parabolas lie in lines perpendicular to each other and that aforesaid planes generated by the movement of the axes of the parabolas intersect each other at right angles.

1,297,041. DEVICE FOR RESURFACING CUE-TIPS. THEODORE R. TREUSCH, Chicago, Ill., assignor to the Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Aug. 17, 1918. Serial No. 250,272. 5 claims. (Cl. 46—6.)



1. A device for resurfacing cue tips comprising a rigid member and a strip of abrading material secured to said member and adapted to be wrapped around a cue tip or folded upon said member.

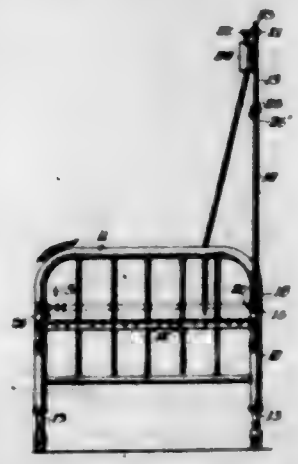
1,297,042. AUTOMOBILE-CURTAIN WINDOW. THOMAS J. TRESCHEL, San Francisco, Cal. Filed Nov. 27, 1917. Serial No. 204,256. 2 Claims. (Cl. 21—230.)

2. In combination with a curtain having inner and outer fabric members with a window opening in each, a sectional frame, the inner fabric member extending over the outer face and inner edge and across the inner face of the inner section, and the outer fabric member being superimposed upon that part of the inner fabric member which engages the inner face of the inner section, a window glass seated on said superimposed portions of the fabric members, the outer section being also seated upon said superimposed



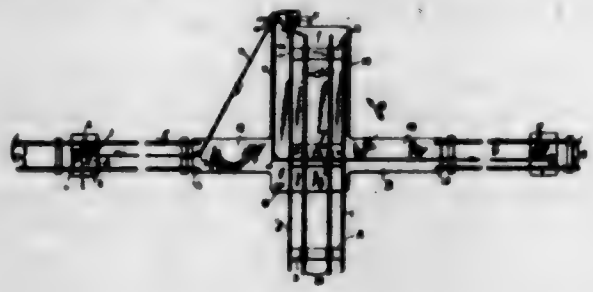
portions of the fabric members and having a cut-out on its inner circumference to receive the glass and having a marginal lip extending outwardly from the inner face thereof, said lip engaging the outer fabric member and forming an angular part in the latter, which angular part embraces the periphery of the inner section.

1,297,043. HOSPITAL-BED. DON CARLOS TRAVIS, Kenosha, Wis., assignor to Simmons Company, Kenosha, Wis., a Corporation of Delaware. Filed Feb. 1, 1918. Serial No. 214,883. 6 Claims. (Cl. 5—41.)



1. In a receptacle-supporting device for a bed frame, a standard, an alining-block mounted on the frame and provided with a vertical groove and a horizontal groove, a contact-block provided with a groove, a bolt traversing the contact-block, the standard and alining block and having a threaded connection with the frame, said bolt being adapted to be rotated for pressing the standard in the vertical groove of the alining-block for sustaining the standard in an upright position when the receptacle engages the standard, and adapted to be rotated for pressing the standard in the horizontal groove of said alining-block for sustaining the standard in a horizontal position when the receptacle has been removed therefrom.

1,297,044. DRAWBRIDGE. JOHN C. TURNER, Dayton, Ohio, assignor to The John C. Turner Novelty Co., Dayton, Ohio, a Corporation of Ohio. Filed June 7, 1917. Serial No. 173,823. 3 Claims. (Cl. 104—42.)

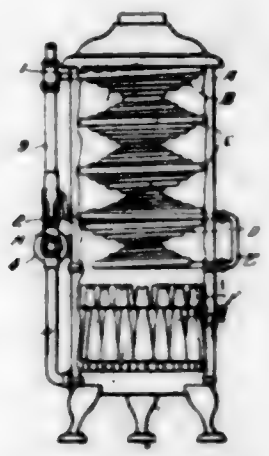


1. A toy comprising a draw-bridge base and track sections; a drawbridge pivotally mounted on said base and

spring-pressed into registry with said track sections; a latch adapted to retain said drawbridge in an open position; and means for enabling an approaching car to operate said latch to release said drawbridge and permit it to swing into its closed position.

3. A toy combining a first track section; a second track section spaced away therefrom; a pivoted drawbridge occupying an intervening position and normally spring pressed into its closed position; latch means for retaining the drawbridge in its open position; an automatic trip mechanism arranged in conjunction with each of said spaced track sections whereby a car approaching in either direction will operate said latch to release said drawbridge.

1,297,045. WATER-HEATER. FRANK L. O. WADSWORTH, Pittsburgh, Pa. Original application filed Oct. 3, 1911, Serial No. 652,576. Divided and this application filed Nov. 21, 1917. Serial No. 203,122. 12 Claims. (Cl. 126—351.)



1. In combination in a water heater, a conduit for water, a burner for heating the water passing through the conduit, a gas valve controlling the flow of gas to the burner, a cylinder, a piston mounted for movement in the cylinder, yielding means normally holding the piston in one position, means whereby the opening of the outlet from the heater unbalances the pressure on opposite sides of the piston causing it to move from said position and open the gas valve, a passage through the piston, a yieldingly closed valve for the passage, and thermostatic means controlling said last valve adapted to open such valve and permit of equalization of pressure on the two sides of the piston when the heater water rises above a predetermined temperature.

5. In combination in a water heater, a conduit for water, a burner for heating the water passing through the conduit, a gas valve controlling the flow of water to the burner, a cylinder, a movable member dividing the cylinder into two chambers, and yieldingly held in one position, a fixed division member in one chamber, an inlet to one of the chambers, an outlet from the other chamber in advance of said division member leading to a portion of the heater having a pressure less than that in the said inlet when the outlet from the heater is open, connecting means whereby the movement of said movable member opens the gas valve, a sleeve extending through the piston and the said division chamber and held against movement in the cylinder, a pair of valves for closing the ends of said sleeve, said valves being connected and arranged so that when one valve is open the other is closed, a passage leading through the sleeve to the space between said movable member and the division member, means for yieldingly holding the valve on the inlet end of the sleeve closed, and thermostatic means adapted to open said last valve and close the valve at the other end of the sleeve when the temperature of the heater water rises above a predetermined point.

7. In a water heater, the combination with a conduit for water and a gas valve, of a chamber adapted to receive water from said conduit, a piston positioned therein to divide the chamber into two parts, a fixed member provided with a passage connecting the two parts of said chamber, a controlling element for said gas valve movable with the piston upon admission of water into said chamber whereby to operate said gas valve, a valve and a valve carrying member in said passage, a spring intermediate the latter member and the piston and thermostatic means for actuating said last mentioned valve.

1,297,046. RECOVERY OF DYE FROM SOLUTION. EDWARD J. WALL, Syracuse, N. Y., assignor to Kalmus, Comstock & Wescott, Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed May 18, 1917. Serial No. 169,465. 4 Claims. (Cl. 8—5.)

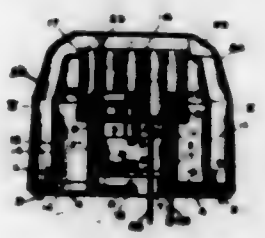
3. The method of recovering the dye from an aqueous dye solution comprising agitating a volatile hydrocarbon in the dye solution, thereby dissolving out the dye at least in part, separating the hydrocarbon and dissolved dye from the solution, and evaporating the volatile hydrocarbon from the dye.

1,297,047. MEANS AND METHOD FOR UNITING THE MARGINS OF FLEXIBLE MATERIALS. JOHN W. WALLACE, Rutherford, N. J. Filed July 20, 1918. Serial No. 245,806. 8 Claims. (Cl. 24—248.)



2. Uniting means for fabric or other similarly flexible material, such means comprising a channel strip having its flanges turned over, a flat locking strip extending longitudinally within the channel strip and held in place by the turned over flanges of the channel strip, and opposed marginal edges of flexible material folded respectively over the inturned edges of the said flanges and also folded reversely over the opposite edges of the locking strip and extending at both sides of the locking strip and gripped between the locking strip and the channel strip and also gripped between the turned over flanges of the channel strip and the locking strip.

1,297,048. BURNER. FRANK H. WARNER, Toledo, Ohio, assignor of one-half to William H. Warner, Toledo, Ohio. Filed Jan. 14, 1918. Serial No. 211,720. 5 Claims. (Cl. 158—65.)

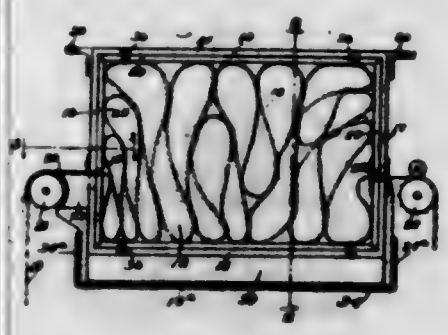


1. A burner embodying a jet, a funnel into which the jet is directed, a baffle in the path of flow from the funnel, a vaporizer carried by the baffle extending thereacross and connected to supply the jet, a supply for the vaporizer, and a housing providing an annular upwardly extending perforate wall for mixed fuel flow inward from under the baffle to adjacent the vaporizer.

1,297,049. FILM-MAGAZINE FOR MOTION-PICTURE MACHINES. CARL S. WEBSTER, Haverhill, Mass. Filed Mar. 29, 1918. Serial No. 225,555. 8 Claims. (Cl. 88—18.7.)

1. A film magazine formed internally to store and guide an elongated motion picture film in loose bights, and having slots constituting a film inlet and a film outlet, respectively, spaced apart film guides associated with said slots and adapted to contact with the edge portions of opposite

sides of the film, and maintain the intermediate portions of the film sides out of contact with the sides of the slots, and spaced apart tracks within the magazine adapted to contact with the edge portions of one side of the film and maintain the intermediate portion of said side out of contact with the magazine.



7. A film magazine formed internally to store and guide an elongated motion picture film in loose bights, and having a wall provided with a film slot, and a reservoir communicating with the magazine and adapted to contain a volatile oil to supply a lubricating vapor to the film.

8. A film magazine formed internally to store and guide an elongated motion picture film in loose bights, and provided with film slots, said magazine having an external guard for a portion of the film.

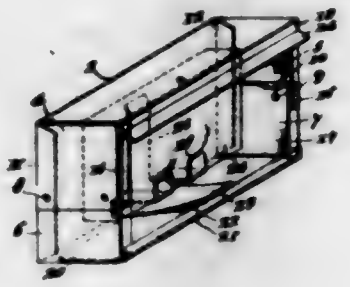
1,297,050. GAS-LIGHTER. SACHARY SIEGFRIED WERSCHANSKY, New York, N. Y. Filed Oct. 26, 1918. Serial No. 259,742. 6 Claims. (Cl. 67—6.1.)



1. A gas lighter comprising a bifurcated holder having a movable arm, a pyrophoric pin or flint carried by said arm, a friction surface carried by and arranged at an acute angle to the other arm of said holder, said friction surface extending in a slanting position relative to the path of said pin the part of the arm carrying said flint being bent toward one end of said friction surface, the two arms being each folded upon themselves and connected together by a coil, for the purpose specified.

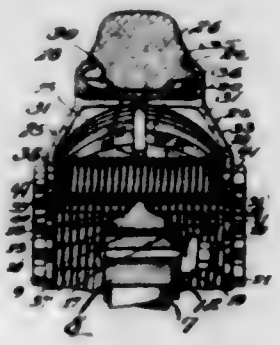
1,297,051. FIRST-AID BOX. ABRAHAM E. ALADALO, Lead, S. D. Filed Aug. 23, 1918. Serial No. 251,146. 7 Claims. (Cl. 206—63.2.)

8. In a device of the character described, a box, means whereby the box may be held on a support, said box adapted to hold a first aid package, a glass cover for the front of the box, lateral guideways for slidably receiving the side edges of said glass cover, means for confining the upper edge of the glass cover, the lower front portion of the box being adapted to admit the cover to said guideways, a slide passing within the box at the lower front part thereof and adapted to engage beneath the lower edge of the glass cover to hold same in place,



and means for locking said slide in place and adapted to prevent its removal without breaking the glass cover, substantially as described.

1,297,052. VEHICLE-WHEEL. WILLIAM N. ALLAN, San Antonio, Tex. Filed Aug. 13, 1917. Serial No. 186,022. 8 Claims. (Cl. 152—8.)



1. A tire comprising a removable rim, yielding tread-holding means embodying a spring band, a tread device in the said tread-holding means resting on the outer side of said band, and a plurality of transversely arranged springs located inwardly a distance from the spring band and connected to the side portions of the tread-holding means and also to the said removable rim.

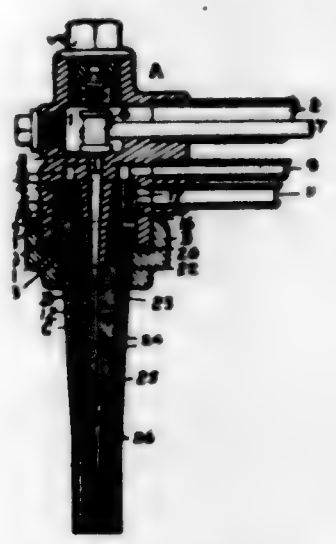
3. A tire comprising a removable rim, tread-holding means embodying a spring band and a plurality of movable tread device engaging members, a plurality of transversely extending springs individually connecting the inner extremities of opposing members, and a tread device supported on the band and held by the outer extremities of said members.

8. A tire comprising a removable rim, tread-holding means, and a solid tread device in said means, the tread-holding means embodying a continuous resilient device against which the tread device has bearing and counteracting resilient means associated with said continuous resilient device to operatively retain the tread and resilient devices in place and laterally yield and move when the continuous resilient device is subjected to pressure tending to flatten the same and contribute to the sensitive flexibility of the tire as a whole.

1,297,053. CUTTING-TORCH. JAMES B. ANDERSON, Shaler township, Allegheny county, Pa. Filed Aug. 27, 1918. Serial No. 251,633. 1 Claim. (Cl. 158—27.4.)

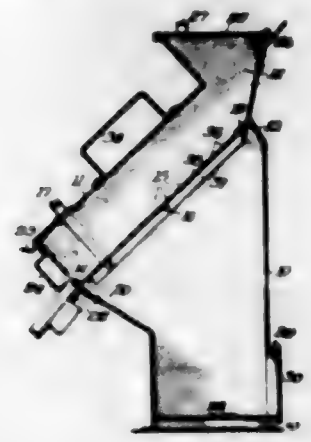
In a cutting torch, a head and tip structure provided with an annular low pressure oxygen inlet chamber, a combustible gas inlet chamber, an annular mixing chamber intersected by baffling means, an annular series of passages connecting said inlet chambers with said mixing chamber, a second annular series of passages connecting said mixing chamber with the outer end of the

tip, a high pressure oxygen inlet chamber, and a passage, axial of said annular chambers and annular series



of passages, connecting said high pressure oxygen inlet chamber with the outer end of the tip.

1,297,054. ASH-SIFTER. ABE ARENSON, Chicago, Ill., assignor of one-half to Jacob Jay Cohen, Chicago, Ill. Filed Mar. 1, 1917, Serial No. 151,663. Renewed Jan. 21, 1919. Serial No. 272,877. 1 Claim. (Cl. 82—60.)



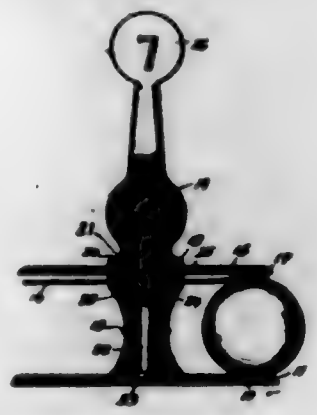
In an ash sifter, the combination of a housing, an inclined screen within said housing dividing it into a downwardly inclined run-way section and a lower ash receiving section, said screen being pivoted to the sides of said housing to be oscillated to agitate the material to be screened, closure flanges projecting from said housing to engage the screen at its opposite ends respectively, and a bar extending from one end of said screen upwardly to the exterior of the housing whereby the screen may be readily oscillated.

1,297,055. GOLF-CUP. FRANK F. AUSTIN, Chicago, Ill. Filed Apr. 4, 1918. Serial No. 226,635. 6 Claims. (Cl. 46—4.)

1. In a golf cup of the class described, the combination of a vertically yieldable trap disk, and means normally maintaining the same spaced from the surface of the putting area with its outer edge portion in position to be engaged by the upper surface of a golf ball.

2. In a golf cup, the combination of a horizontally disposed, substantially flat circular yielding trap sheet, and means normally and centrally maintaining said trap sheet spaced apart from the surface of the putting area in position to engage the upper surface of a moving golf ball.

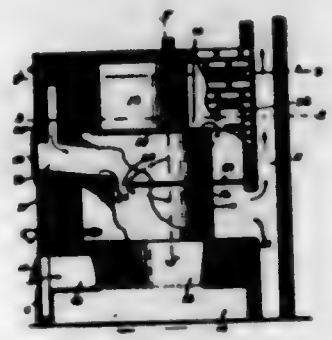
3. In a golf cup of the class described, the combination of a base, a central standard, and a substantially flat circular trap sheet carried centrally by said standard and spaced apart from the surface of the putting area in position to engage the top of a moving golf ball, the arrangement being such that the trap sheet is capable of yielding with reference to the base in order to admit a golf ball between said parts.



4. In a golf cup, the combination of a circular base plate, a central standard secured to the top of said base plate, and a circular trap sheet horizontally and centrally mounted on said support, the spacing and the arrangement being such that a moving golf ball will enter between the said parts and its upper surface will be frictionally engaged by the under surface of the said trap sheet.

5. In a golf cup, the combination of a circular base plate, a central standard secured to the top of said base plate, a circular trap sheet horizontally and centrally mounted on said support, the spacing and the arrangement being such that a moving golf ball will enter between the said parts and its upper surface will be frictionally engaged by the under surface of the said trap sheet, and means resiliently maintaining the trap sheet and base plate in spaced apart relation.

1,297,056. FURNACE. VIRGIL BALLOU, Oskaloosa, Iowa. Filed Sept. 17, 1917. Serial No. 191,883. 2 Claims. (Cl. 110—75.)

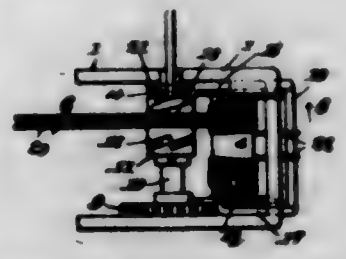


1. In a furnace, a fire box, a double walled boiler having a central portion forming a discharge chamber for the fire box, said furnace having a comparatively thick wall, a passage in said wall leading downward from the upper portion thereof, provided with an air inlet and spaced from the boiler, a passage communicating with said passage and leading directly through the boiler wall substantially on a horizontal line and adapted to supply air to the upper portion of the fuel, and a third passage leading through the wall of the furnace to the fire box for supplying air to the fire box just above the lower part thereof.

2. In a furnace, a fire box, a double walled boiler having a central portion forming a discharge chamber for the fire box, said furnace having a comparatively thick wall, a passage in said wall leading downward from the upper portion thereof, provided with an air inlet and spaced from the boiler, a passage communicating with said passage and leading directly through the boiler wall substantially on a horizontal line and adapted to supply air to the upper portion of the fuel, a third passage leading through the wall of the furnace to the fire box for supply-

ing air to the fire box just above the lower part thereof, doors for controlling the admission of air to said first and last described passages, a pressure motor device adapted to simultaneously control said doors, and adapted to open the lower door last and to close it first.

1,297,057. TOWING ATTACHMENT FOR TRACTORS. CHARLES F. BARKUS, Ponca, Nebr. Filed May 8, 1918. Serial No. 232,365. 1 Claim. (Cl. 254—106.)



A towing device for tractors and the like including flexible trailer engaging means, a winding element therefor, drive mechanism, means including relatively movable clutch members for coupling the drive mechanism to the winding element to take up the flexible element, means for preventing unwinding of said flexible element, and means operated by the trailer for uncoupling the drive mechanism from the winding element, said means including a trailer actuated member, yielding means for holding said member normally in one position relative to the spool and means carried by said member and movable therewith when actuated by the trailer, to shift one of the clutch members.

1,297,058. SELF-CLEANING SPARK-PLUG. JOEL BARKUM, Irvine, Ky. Filed Apr. 30, 1918. Serial No. 231,654. 1 Claim. (Cl. 123—169.)



A spark plug of the character described comprising a cylindrical casing designed for attachment to the cylinder of an internal combustion engine and formed with air inlet and exhaust openings, an annular shoulder formed on the inner surface of the casing near the lower edge thereof, a pole supporting body formed of insulating material mounted on the upper edge of the casing, a pole supporting stem integral with the insulating body and depending therefrom, a piston shaped cleaning element slidably mounted on the stem and limited in its upward movement by the lower edge of the body and its downward movement by the shoulder, a packing ring mounted on the outer surface of the piston shaped cleaning element, a collar depending from the element, a packing ring associated with the collar and bearing against the stem and a tubular jam nut connected to the collar for supporting the last mentioned ring.

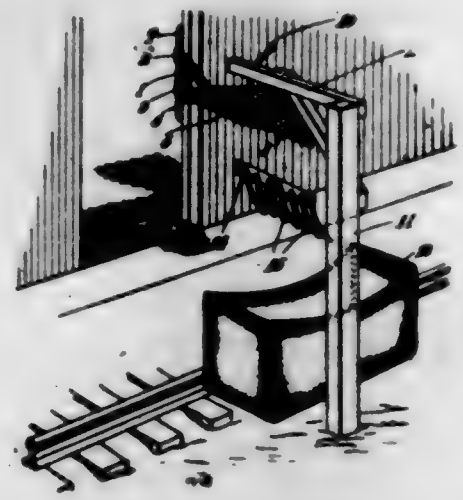
1,297,069. LEG FOR MULTIFORM CHAIRS. CHARLES E. BARNES, New York, N. Y., assignor of one-half to Theodore G. Strater, Brookline, Mass. Filed Apr. 18, 1918. Serial No. 229,229. 1 Claim. (Cl. 155—6.)

In a device of the class described, a frame having a recess in the face thereof, a leg lying within said recess when in closed position, a pivotal connection at one end of the leg with the side walls of said recess, a resilient locking plate having its body portion extending along the bottom of the recess beneath the leg and concealed thereby when in closed position, one end of said plate being secured to the frame and the free end of said plate extending over the end of said leg and offset to project



through said recess to the front of the recess, and interengaging means upon said leg and plate operable to lock the leg either in closed position within said recess or in extended position perpendicular to the frame and recess, whereby the locking plate is substantially concealed when the leg is in closed position but is accessible for convenient operation by means of the offset projecting end.

1,297,060. MAIL-BAG CATCHING AND DELIVERING APPARATUS. CLAUD R. BAUCOM, Apex, N. C. Filed Jan. 24, 1917. Serial No. 144,254. 3 Claims. (Cl. 258—19.)



1. A mail bag delivering apparatus comprising a bracket arm provided with bearings, a hinge pin mounted in conjunction with a car and having the bracket arm mounted thereon to be capable of swinging movement into the car and to project laterally from the car, a shaft mounted in the bearings of said bracket arm provided with a plurality of rods extending therefrom to form a mail bag delivering rack, means to normally hold said shaft resiliently in such a position that the rack portion is positioned to support mail bags, and a trip arm formed in conjunction with said shaft to be engaged by a ground device located adjacent to the path of travel of the car to cause turning of the shaft to incline the delivering rack portion and to thus cause discharge of the mail bags therefrom.

2. A mail bag delivering apparatus comprising a bracket arm provided with bearings, a hinge pin to be mounted in conjunction with a supporting device having the bracket arm mounted thereon to be capable of swinging movement into and out of the position for use, a shaft mounted in the bearings of said bracket arms provided with a plurality of rods extending therefrom

to form a mail bag delivering rack, a side portion acting with the rack portion to provide a basket, means to normally hold said shaft resiliently in such a position that the rack portion is positioned to hold mail bags, and a trip arm formed in conjunction with said shaft to be engaged by an arm mounted in a position opposed to the mounting of the hinge pin to cause turning of the shaft to incline the rack portion and to thus cause discharge of the mail bags therefrom.

3. A mail bag delivering apparatus comprising a bracket arm provided with bearings, a hinge pin to be mounted in conjunction with a supporting device having the bracket arm mounted thereon to be capable of swinging movement into and out of the position for use, a shaft mounted in the bearings of said bracket arms provided with a plurality of rods extending therefrom to form a mail bag delivering rack, a side portion acting with the rack portion to provide a basket, means to normally hold said shaft resiliently in such a position that the rack portion is positioned to hold mail bags, a trip arm formed in conjunction with said shaft to be engaged by an arm mounted in a position opposed to the mounting of the hinge pin to cause turning of the shaft to incline the rack portion and to thus cause discharge of the mail bags therefrom, and means mounted in conjunction with the car below the disposition of the side receiving rack when the bracket arm is swung to the laterally disposed position to cause deflection of the mail bags from the car.

1,297,061. SOLE AND HEEL OF BOOTS AND SHOES. GEORGE WILLIAM BELDAM, Ealing, and ALBERT URIAH BENJAMIN RYALL, Brentford, England. Filed Nov. 9, 1918. Serial No. 261,827. 1 Claim. (Cl. 36—73.)



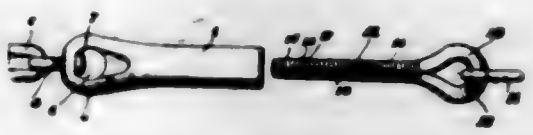
A sole or heel comprising a vulcanized base of textile fabric and rubber, formed with openings, an inner layer on which the base is attached, and metal studs having integral extensions which pass through the inner layer, the studs being located in the openings in the base and of such proportions as to be entirely free of the walls of the openings, the outer faces of the studs being substantially on a plane with the outer surface of the base.

1,297,062. SHOE-PROTECTOR. JOSEPH BELLVILLE, Detroit, Mich. Filed Aug. 20, 1917. Serial No. 187,210. 2 Claims. (Cl. 36—59.)



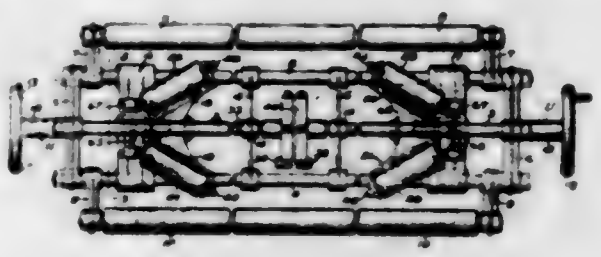
2. A shoe protector including a pair of continuous bands uniformly spaced apart and conforming to the curvature of the shoe sole and instep and secured thereto, and a plurality of spurs secured to the instep portion of tread bands, said spurs varying in length so that their lower ends lie in a plane passing through the tread surfaces of the heel and sole.

1,297,663. FASTENER FOR AUTOMOBILE-CHAINS. FURLONG M. BENNETT, Bluefield, W. Va., and HARLAN S. BENNETT, Blairsville, Pa. Filed July 6, 1918. Serial No. 243,611. 1 Claim. (Cl. 24—241.)



The herein described separable fastener comprising a female member consisting of an internally threaded barrel open at one end and closed at its other end, an enlarged head adjacent said closed end and provided with a transverse recess and an axial hole, and a swivel rotatably mounted in said hole with its head in said recess; and a male member consisting of a hook having a half-round shank, a keeper pivoted to tip of the hook-bill and also having a half-round shank and a completely round enlargement beyond the end of the shank, the enlargement and the half-round portions being externally threaded to fit within said barrel for the purpose set forth.

1,297,064. CLOTH GUIDING AND FEEDING APPARATUS. SYDNEY BIRCH, Newton, Mass. Filed Dec. 8, 1915. Serial No. 65,802. 41 Claims. (Cl. 26—18.)



1. Sheet guiding mechanism comprising in combination two pairs of rolls obliquely mounted with respect to the same longitudinal edge of the sheet and with respect to each other, means tending to bring said two pairs of rolls alternately into nipping contact with the sheet, and movable means adapted to engage an edge of the sheet and to be moved thereby to prevent nipping contact of one or the other of said pairs of rolls with the sheet.

6. Sheet guiding mechanism comprising in combination, a plurality of sets of oppositely inclined sheet guiding members and coöperating means to impart unison rocking movement to said guiding members in directions toward and from the sheet.

10. Sheet guiding mechanism comprising in combination, a plurality of sets of oppositely inclined sheet guiding members, means to impart unison rocking movement thereto toward and from the sheet, a sensitive member to engage the sheet, and coöperating means between said sensitive member and said guiding members.

20. Sheet guiding mechanism comprising in combination, a plurality of guiding members, and means yieldingly to impart rocking movement to said members.

40. Sheet guiding mechanism comprising in combination, a sensitive member to engage the sheet, a rocking support therefor, a pair of coöperating oppositely inclined guide rolls, and means extending from said rocking support to vibrate said guide rolls on the support.

1,297,065. PICK. THOMAS F. BIRD, Wilkes-Barre, Pa. Filed Oct. 16, 1918. Serial No. 258,447. 4 Claims. (Cl. 287—42.)

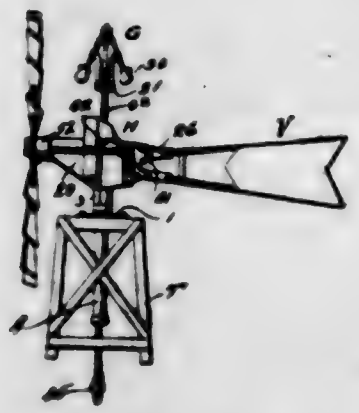
1. In a mine pick structure, the combination, of a handle, a head carried by the handle and provided with a transverse bore, a blade extending through said bore, a pair of wedge members extending through said bore in opposed relation to each other, one of said wedge members engaging the inner edge of said blade and provided with a plurality of spaced recesses, the other of said wedge members engaging the outer face of said first

named wedge member, an ear formed upon said last mentioned wedge member, a locking pawl pivotally carried



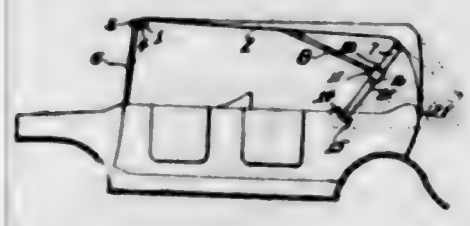
by said ear and adapted for engagement with one of said recesses.

1,297,066. WIND-MOTOR. GEORGE O. BLAIR, Harrisburg, Colo. Filed June 18, 1918. Serial No. 240,567. 7 Claims. (Cl. 170—47.)



1. In a wind motor, the combination with a head, a horizontal main shaft journaled in the head, a pulley fast on the main shaft, and a wind wheel carried thereby; of a governor actuated by the rotation of said shaft, a vane hinged to the head, a pivoted lever having one arm connected with said governor, connections between its other arm and said vane, and a brake for said pulley pivoted at one end to the head, its other end being connected with said lever, for the purpose set forth.

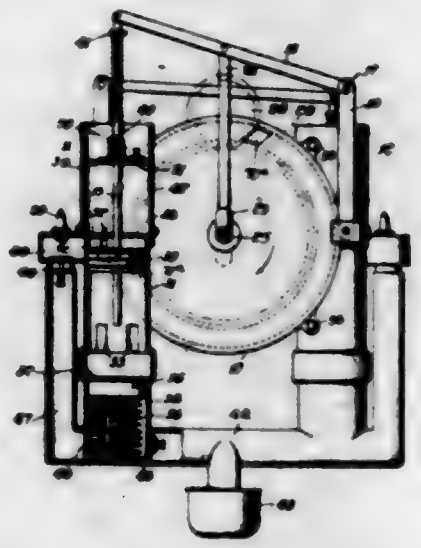
1,297,067. SUNSHADE FOR AUTOMOBILES. FRED V. BLOSS M, Denver, Colo. Filed Apr. 29, 1918. Serial No. 231,323. 2 Claims. (Cl. 21—62.)



1. A sunshade for automobiles, comprising a removable brace frame for attachment to the rear portion of an automobile, a covering attachable to the rear of said automobile and passing over the frame forwardly toward the wind shield of the automobile, and a take-up device including a spring roller to which the covering is secured and a roller-supporting frame having forwardly extending hooks engageable over the upper edge of the windshield.

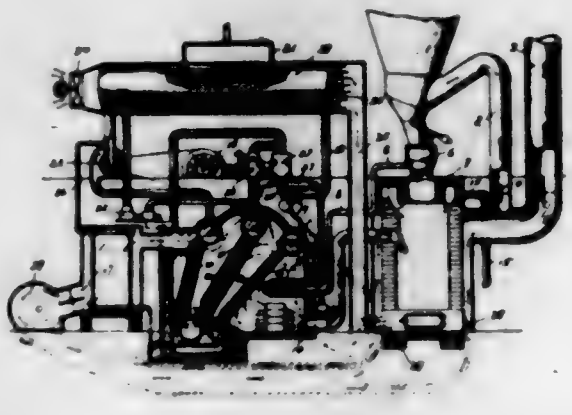
1,297,068. INTERNAL-COMBUSTION ENGINE. ALLEN W. BOSELL, Wilmette, Ill. Filed Feb. 25, 1918. Serial No. 218,880. 14 Claims. (Cl. 60—15.)

1. In an internal combustion engine, the combination of a rotary portion comprising a casing and rotary element, a reciprocating portion comprising a working cylinder and a wokring piston, a port connecting said casing and cylinder to simultaneously communicate driving effort to said element and the piston, said element having two grooves formed therein, one of said grooves being relatively wide and short, and the other of said grooves communicating with said first groove being relatively long and narrower, two movable dogs carried by said casing, one of said dogs being of a width equal to the narrower groove, and the combined width of said dogs



being equal to the wider groove, and means for firing a charge and communicating the gases of combustion to said working piston and to said casing between the end of said grooves and said dogs, said rotary element and working piston being timed relatively to each other so that both of said dogs are operative during the initial portion of the power stroke of said working piston and only one of said dogs is operative during the remaining portion of said power stroke.

1,297,069. REGENERATIVE POWER SYSTEM. GEORGE Y. BONUS, Chicago, Ill. Filed July 20, 1917. Serial No. 181,732. 5 Claims. (Cl. 60—39.)

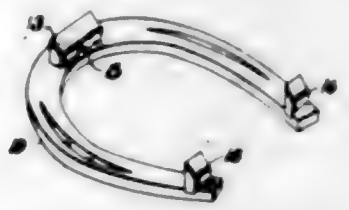


3. In combination, a producer for generating water-gas, a steam boiler heated by the burning of said gas, a common air supply for both the boiler and the producer, a power appliance utilizing steam from the boiler expansively, a condenser for the exhaust steam, and means associated with the condenser for utilizing a part of the heat of the exhaust steam in warming the said air supply.

1,297,070. HORSESHOE-CALK. SETH BOURNE, Ariel, Pa. Filed May 31, 1916. Serial No. 100,856. 1 Claim. (Cl. 168—41.)

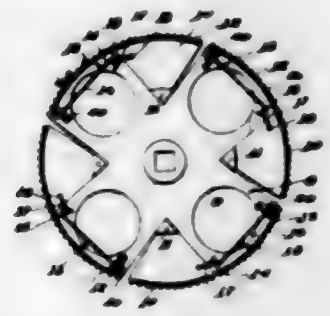
A horseshoe having each heel part provided with a transverse groove on its ground face, said groove being slightly inclined with respect to the end of the heel and extending from edge to edge of the heel and being located

an appreciable distance from the end of the heel, each heel part having a vertical opening communicating with the groove, and a calk having a stud engaging the opening



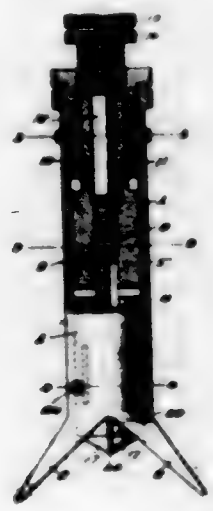
and a body part of rectangular form and of the same width as the heel part and fitting snugly in the groove with its side walls engaging the side walls of the groove.

1,297,071. WASHING-MACHINE. JOHN BOTTS, Lane, Kans. Filed June 28, 1918. Serial No. 242,428. 8 Claims. (Cl. 68—23.)



1. In a washing machine, a rotary rubber provided with a plurality of segments pivotally connected to the main body of the rotary rubber, and means for holding said pivoted sections in adjusted positions for gripping articles to be washed.

1,297,072. TOOL. ARTHUR G. BOULBY, Boston, Mass. Filed May 20, 1918. Serial No. 235,647. 5 Claims. (Cl. 81—9.5.)

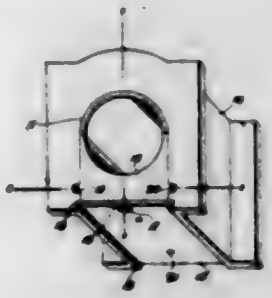


1. A tool for cutting through the covering of a cable or the like, comprising a tubular casing, cable centering projections diverging from one end of the casing, a cutting bit holder mounted for movement longitudinally and partial rotation within said casing, means for adjusting said bit holder in the direction of its length to obtain greater or less projection thereof into the angle between said cable centering projections, means for maintaining said adjustment, and means for holding said holder against rotative movement.

3. A tool for cutting through the covering of a cable or the like, comprising a tubular casing, cable centering projections diverging from one end of the casing, a cutting bit adjustable longitudinally within said casing and projecting into the angle between said centering projections, means for adjusting said cutting bit longitudinally to vary the depth of cut thereof, said bit holder being partially rotatable in the casing, and means for limiting such rotative movement of the bit holder.

5. A tool for cutting through the covering of a cable or the like, comprising a tubular casing, cable centering projections diverging from one end of the casing, a cutting bit adjustable longitudinally within said casing and projecting into the angle between said centering projections, screw-threaded means for adjusting said cutting bit longitudinally to vary the depth of cut thereof, said bit holder comprising bit clamping portions between which a cutting bit is adapted to be clamped, and fastening means for said clamping portions.

1,297,073. JOURNAL-BEARING. THOMAS H. BOWER, Richmond, Va. Filed May 25, 1918. Serial No. 236,575. 2 Claims. (Cl. 64—24.)



1. A bearing comprising an upper bearing section provided with end and bottom grooves, an end plate slidable in the end groove, a bottom plate slidable in the bottom groove and engageable under the end plate to hold the latter in position, a second end plate, means whereby the last mentioned plate may be secured to the bearing section and interlocking means between the bottom plate and the said second end plate.

1,297,074. SCYTHE. JOHN BRADLEY, Pawhuska, Okla. Filed May 14, 1918. Serial No. 234,489. 4 Claims. (Cl. 56—27.)

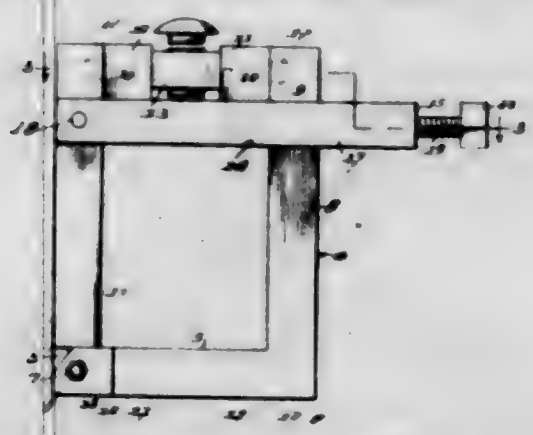


1. A scythe comprising a handle made of angle iron and thereby provided with a web and a rear flange, and a blade having its inner end secured on the web and bearing against the said flange.

1,297,075. BOLT-CUTTER. WILBUR G. BRALEY, Towanda, Kans. Filed Aug. 3, 1917, Serial No. 184,831. Renewed Oct. 9, 1918. Serial No. 257,531. 1 Claim. (Cl. 81—201.)

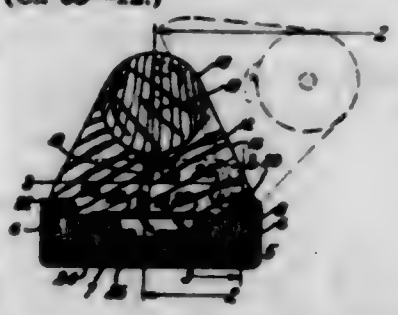
In a device as described, in combination, a stationary and a movable jaw, the stationary jaw being a straight bar while the movable jaw is an L-shaped bar, one arm of said movable jaw being pivotally connected to the inner

end of the fixed jaw, a guide member having a pair of side arms secured at one end to said fixed jaw short of its outer end, a cross-partition formed between the side arms of said guide member, a screw-shank threaded into said guide member and into said partition, the other arm of said L-shaped jaw projecting between the side arms of



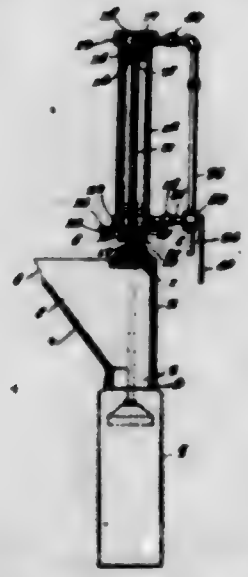
said guide member immediately in front of said partition, the free end of the threaded shank adapted to engage said L-shaped jaw in order to force the same toward the fixed jaw, and cutter members each consisting of a stub and a V-shaped blade; each of said jaws at their outer ends being provided with a recess in which the stubs of said cutter members are received.

1,297,076. GRIDDLE-GREASER. JOSEPH BRANDENBURG, Denver, Colo. Filed Sept. 3, 1918. Serial No. 252,890. 8 Claims. (Cl. 65—12.)



1. A griddle greaser comprising a receptacle, an absorbent pad mounted on the receptacle and engaging the bottom thereof exteriorly, means for feeding grease to the pad from the receptacle and a pad-retaining plate hingedly connected with the receptacle at proper points for release of the pad.

1,297,077. PACKER FOR STOCK FEED. SAMUEL CLAUD BRAUD, New Orleans, La. Filed Apr. 19, 1918. Serial No. 229,585. 1 Claim. (Cl. 100—57.)

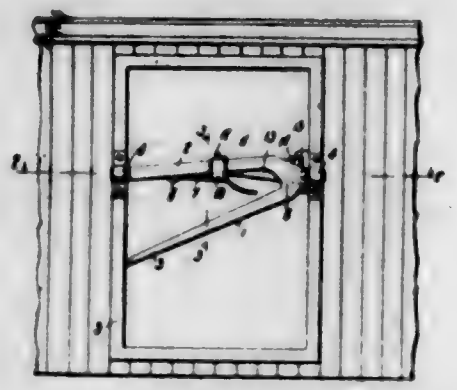


In an apparatus having a casing, means whereby a receptacle to be filled may be supported with its mouth beneath the casing, and means traveling through the casing for driving material therein into the receptacle, the combination of a hopper formed by extending the side walls of said casing, the hopper bottom being inclined whereby to direct the material into the casing and through the delivery end of the latter, said hopper having a portion thereof cut away to enable the operater to look beneath said material driving means when the latter is in a retracted position, substantially s described.

1,297,078. PROCESS OF PRODUCING POTASSIUM COMPOUNDS. HARRY B. BROOKBY, Evanston, Ill. Filed Oct. 7, 1918. Serial No. 257,289. 5 Claims. (Cl. 23—22.)

1. The process of obtaining a soluble potassium compound from hydrous potassium-containing silicates which consists in comminuting the silicate and mixing it with non-volatile alkali and a metallic chlorid, heating the mixture to a temperature sufficient to dehydrate the silicate and insufficient to produce sintering, and maintaining this temperature for a period from 30 to 60 minutes, and subsequently leaching out the resulting soluble potassium compound.

1,297,079. MAIL-BAG CATCHER. CHARLES C. BROWN, Horse Cave, Ky. Filed Oct. 28, 1918. Serial No. 260,043. 1 Claim. (Cl. 269—22.)



A mail bag catcher of the class described, comprising a rock shaft mounted in bearings, extending across the door of a mail car and provided with a crane arm extending outwardly and longitudinally therefrom, said rock shaft having an inwardly extending stop stud, a spring detent secured at one end to the rock shaft, extending therefrom toward the crane arm and provided with an inwardly extending arm, and a supporting arm pivotally mounted in one side of a doorway and arranged to bear on the stop stud of the rock shaft when the crane is in set position, said detent and its arm serving to disengage said supporting arm from the stop stud when the detent is engaged by a mail bag caught on the crane arm.

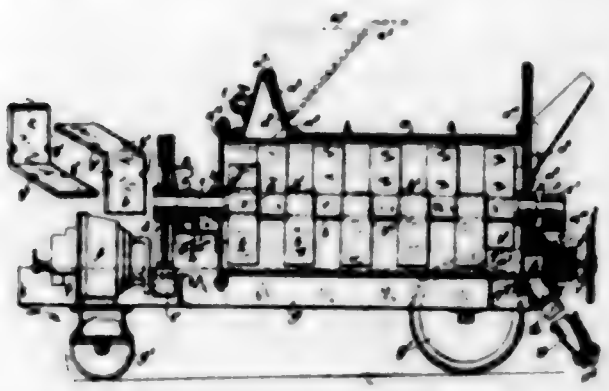
1,297,080. METHOD OF MIXING CONCRETE AND SIMILAR CEMENTITIOUS MATERIALS. HAROLD P. BROWN, New York, N. Y. Filed Dec. 24, 1914. Serial No. 878,849. 2 Claims. (Cl. 82—73.)



1. The method of mixing concrete and similar cementitious material which consists in applying superheated steam to the ingredients during mixing.

2. The method of mixing concrete and similar cementitious material which consists in submitting the ingredients to be mixed to pressure and applying superheated steam to said ingredients during the mixing operation.

1,297,081. METHOD OF AND APPARATUS FOR MIXING CONCRETE. HAROLD P. BROWN, New York, N. Y. Filed Dec. 24, 1914. Serial No. 878,850. 17 Claims. (Cl. 83—73.)



1. Mixing the constituents of a cementitious mixture including water, applying independent pressure to said constituents while being mixed, discharging the mixed material in mass, granulating the discharged mass by means of a fluid blast independent of said mixing pressure and impelling the material in such granulated condition from the mass.

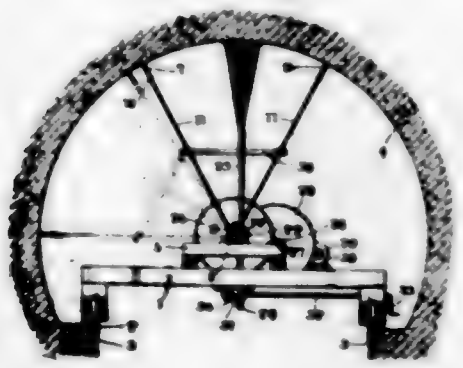
2. Mixing under steam pressure the constituents of a cementitious mixture including water, discharging the mixed material in mass, granulating the discharged mass by means of a fluid blast and impelling the material in such granulated condition away from the mass.

3. Mixing under superheated steam pressure the constituents of a cementitious mixture including water, discharging the mixed material in mass, granulating the discharged mass by means of a fluid blast and impelling the material in such granulated condition away from the mass.

4. Mixing under pressure the constituents of a cementitious mixture including water, discharging the mixed material in mass, granulating the discharged mass by means of a superheated steam blast and impelling the material in such granulated condition away from the mass.

5. Mixing under heat and pressure the constituents of a cementitious mixture including water, discharging the mixed material in mass, granulating the discharged mass by means of a fluid blast and impelling the material in such granulated condition away from the mass.

1,297,082. APPARATUS FOR LEVELING THE SURFACE OF PLASTIC WALLS. HAROLD P. BROWN, New York, N. Y. Filed Apr. 21, 1917. Serial No. 163,612. 7 Claims. (Cl. 72—130.)



1. A trowel consisting of a cylindrical spiral wire coil.

2. A trowel consisting of a cylindrical spiral wire coil and a core within the coil.

3. A trowel consisting of a cylindrical spiral wire coil with a core within the coil and curved spiral wire coils forming extensions of the ends of the cylindrical coil.

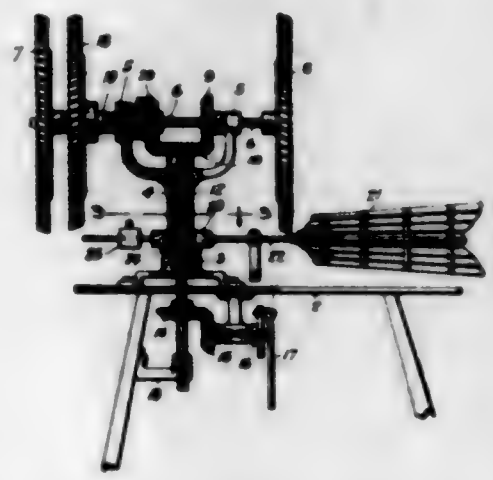
6. The combination with extensible and contractible arms, of a trowel consisting of a spiral wire coil connected with the ends of the arms and means for holding the arms in operative position.

1,297,083. RAIL-CLAMP FOR TRAVELING BRIDGES. RAYMOND E. BROWN, Bellevue, Pa., assignor to Heyl & Patterson, Inc., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 11, 1915. Serial No. 45,023. 13 Claims. (Cl. 188—48.)



2. In a traveling bridge, the combination of a motor, pivotally mounted clamping-arms, a wedge-block adapted to engage said arms, means for raising said wedge-blocks, and means operated by the movement of said wedge-blocks for permitting the closing of the circuit to said motor.

1,297,084. WINDMILL. WILLIAM C. BROWNELL, Pueblo, Colo. Filed Oct. 22, 1917. Serial No. 197,952. 3 Claims. (Cl. 170—39.)

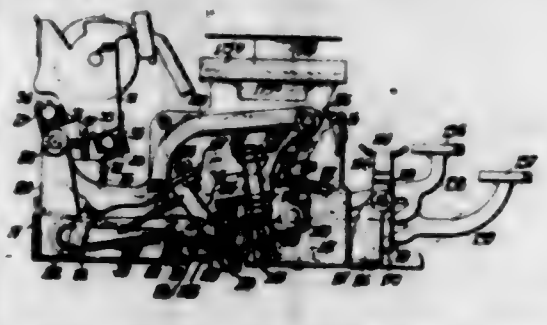


1. In a wind mill, a driving shaft, wind wheels affixed to the ends of said shaft, a driven shaft disposed at right angles to the driving shaft inwardly from the ends of the latter, a gear on said driven shaft, a gear on said driving shaft in mesh with the said driven shaft gear, an auxiliary wind wheel on said driving shaft and rotatable independently of the latter, and a gear carried by said auxiliary wind wheel and in mesh with the said driven shaft gear.

1,297,085. TYPE-WRITING MACHINE. LAN S. BURRIDGE, deceased, New York, N. Y.; by Francis O. Burridge, executor, New York, N. Y., assignor, by mesne assignments, to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 25, 1915. Serial No. 52,504. 20 Claims. (Cl. 197—72.)

2. In a typewriting machine, a main frame, a carriage-track frame having forward side-extensions and shiftable

between three case-positions on the main frame, and stops at both sides of the main frame to engage said extensions for determining said case-positions, the stops for upper and lower case-positions being fixed, and the stops for intermediate case-position connected to shift together from ineffective to effective position.



5. In a typewriting machine, a main frame, a carriage-track frame shiftable between case-positions on the main frame, lugs on the carriage-track frame, posts on the sides of the main frame and each having a nut threaded thereon to be set in adjusted position thereon, said nuts projecting into the paths of said lugs, whereby when the carriage-track frame is shifted the lugs will strike the nuts and the carriage-track frame be thereby accurately arrested at both sides thereof in desired case-position, and means for shifting the carriage-track frame from one to another case-position.

8. In a typewriting machine, a main frame, a platen frame shiftable between case-positions on the main frame, a key-lever for shifting the platen frame, a rock-shaft, an arm fast to the rock-shaft, means for rocking said arm and shaft from the key-lever when the latter is operated to shift the platen frame, a second arm on said shaft having a stop thereon movable by the rock-shaft from ineffective to effective position to determine one case-position of the platen frame when the key-lever is operated, a second key-lever for shifting the platen frame, and a second stop for determining another case-position of the platen frame when said second key-lever is operated.

12. In combination, a shiftable carriage-track frame comprising a rear plate, a portion whereof forms a carriage-track, side plates fixed at their rear portions to said rear plate, said side plates having forward extensions to carry ribbon-spools, a rigid connection between said side plates between their front and rear portions, said connection comprising a carriage-track, and links whereon said frame is guided up and down, said links pivoted to said side plates.

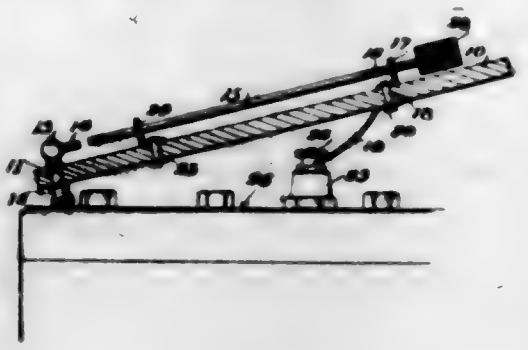
18. In combination, a shiftable frame comprising a rear plate, a portion whereof forms a carriage-track, forwardly-extending side plates, a connection between said side plates forming a companion track, said plates being extended forwardly and upwardly in front of said companion carriage-track to carry ribbon spools, and means for guiding said shiftable frame up and down.

1,297,086. PLOW-LINE HOLDER. JOHN W. BURT, Cascilla, Miss. Filed July 17, 1918. Serial No. 245,394. 2 Claims. (Cl. 54—78.)



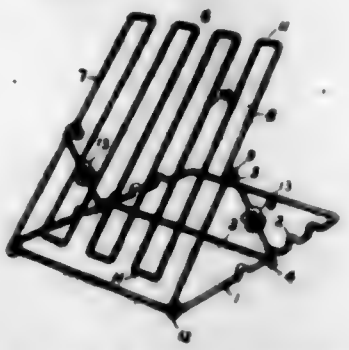
2. In a device of the class described, an annular split leather band having laterally offset loops on its outer face near its opposite ends, a metal reinforce inserted in said loops and composed of a piece of heavy wire folded midway its ends with the side members thereof arranged parallel and spaced apart, said ends being extended beyond the ends of said band, the folded end forming a loop and the other end having an outwardly extending open loop with a hook at its free end for engagement in said loop and a hook carried by one of them for engaging the other.

1,297,087. SPARK-PLUG TESTER. JAMES WILLIAM BURTON, Welch, W. Va. Filed Sept. 30, 1916. Serial No. 123,142. 1 Claim. (Cl. 175—183.)



A spark plug tester including a flat base formed of insulating material, a stationary terminal on one end thereof, brackets immovably mounted on the base, one of said brackets being formed with a screw threaded bore, an adjustable terminal comprising a rod having a screw threaded portion rotatably supported by said bracket, the screw threaded portion thereof engaging in the screw threaded bore of one of the brackets, an insulating handle piece engaged with one end of the rod, the free end of the rod being adapted for arrangement in proximity to the stationary terminal, a contact member engaged with the stationary terminal and extending for a distance beyond the opposite side of the base, and a curved spring arm having a bifurcated free end secured to the base and connected to the adjustable terminal.

1,297,088. ADJUSTABLE BACK-REST. HENRY E. BUTLER, Schenectady, N. Y. Filed Sept. 21, 1917. Serial No. 192,448. 3 Claims. (Cl. 5—43.)

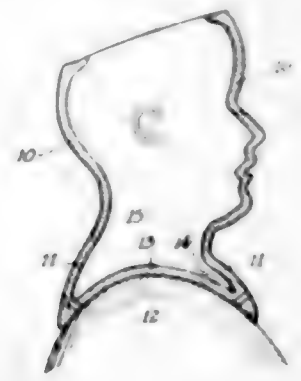


1. A device of the character described comprising a base portion having notched side members and a prop arranged to engage the notches, in combination with an adjustable back portion held by the prop and having side members which are hinged to the front of the base and intermediate members which are alternately connected to each other at the top and bottom only to form an open elastic grid, the end members of said grid being united to the side members so that the members of the grid can yield individually under pressure.

1,297,089. DOLL-HEAD. ROMEO CACCIALANZA, Los Angeles, Cal., assignor to Western Doll and Toy Mfg. Co., Los Angeles, Cal., a Corporation of California. Filed July 30, 1918. Serial No. 247,377. 3 Claims. (Cl. 46—40.)

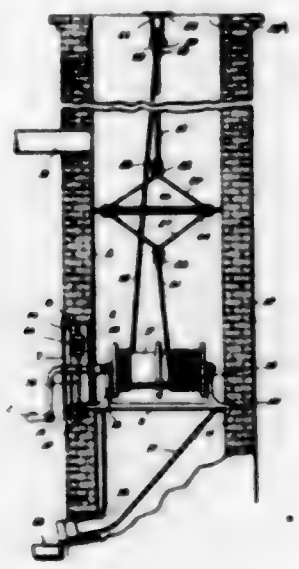
1. In a doll head, head walls forming a hollow head, and a wall for the shoulder extending across the neck

opening of the hollow head so as to form a closed bottomed shoulder.



3. In a doll head, head and shoulder walls forming a hollow head and hollow shoulder construction, and a reinforcing shoulder plate wall joined with the shoulders at their outer edges and forming a complete bottom closure for the hollow shoulders and neck, a hollow space being left between the shoulder walls and said shoulder plate wall.

1,297,090. CHIMNEY-SWEEPER. CHARLES CAMPBELL and JOHN ANGUS CAMERON, Metropolis, Ill. Filed July 9, 1917. Serial No. 179,468. 1 Claim. (Cl. 15—41.)

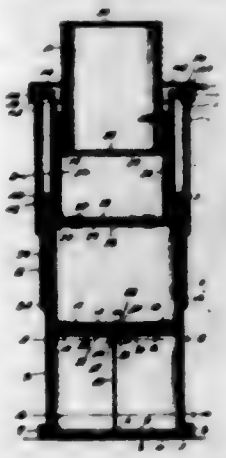


A device of the class described embodying inner and outer closure plates each provided with an opening and adapted to be mounted in an opening of a flue, a drum adapted to be mounted in the flue in alinement with the openings, a support therefor extending into said first named opening, a brush head, flexible operating members carried by the drum and connected terminally with said brush head, a pulley over which one of said members passes, means located between said closure plates for clamping said support in place, and operating means for said drum journaled in the openings of the closure plates.

1,297,091. FLUID-PRESSURE-OPERATED JACK. WILLIAM G. CANFIELD, St. Louis, Mo. Filed May 15, 1918. Serial No. 234,747. 4 Claims. (Cl. 138—9.)

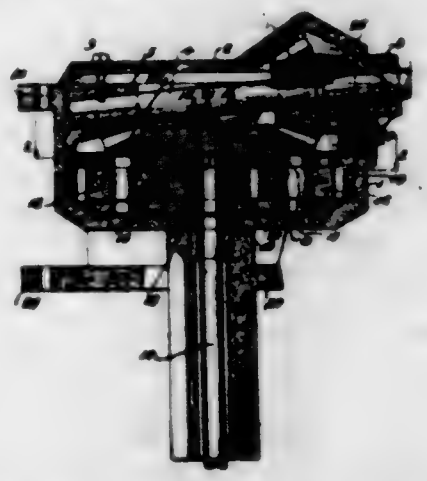
1. In a fluid pressure operated jack, a lower section, an intermediate section, and an upper section telescopically related, means to supply motor fluid to the lower section and means controlled by the movement of the intermediate section to supply motor fluid from the lower section to the intermediate section when the latter is raised, and thereby cause the upper section to be also raised.

4. In a jack of the class described, a plurality of telescopically related cylindrical sections, certain of which



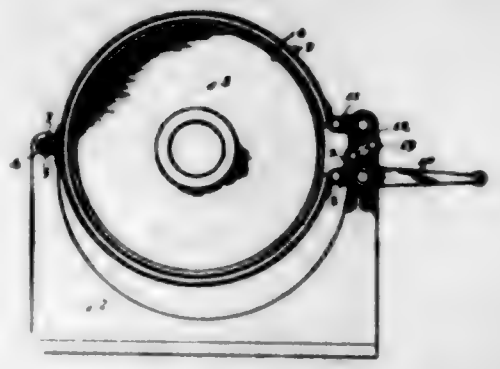
are provided with exteriorly arranged casing members, and a prop having means to engage under said casing members for the purpose set forth.

1,297,092. GEARING. ALFRED CARLSON, Klamath Falls, Oreg. Filed Mar. 28, 1918. Serial No. 225,257. 5 Claims. (Cl. 74—34.)



1. In power transmission mechanism of the class described, the combination of a casing for containing lubricant, a drive shaft extending thereinto and inclining downwardly, a drive pinion on said shaft, a driven shaft, gearing operatively connected to the shafts, and a projection on the drive pinion for picking up lubricant from the casing to convey the same to the drive shaft bearings.

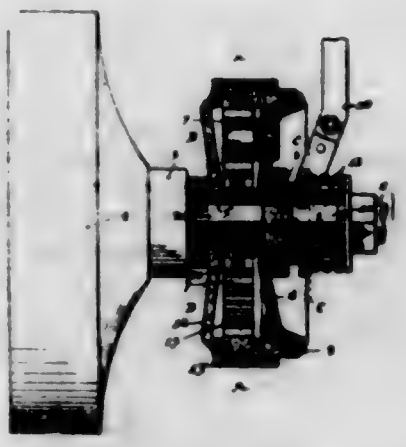
1,297,093. VEHICLE-BRAKE. WILLIAM C. CARR, Buffalo, N. Y. Filed July 23, 1917. Serial No. 182,284. 2 Claims. (Cl. 74—87.)



2. In a brake of the type described, the combination with a brake-drum, a brake-band and a support, of two bell-crank levers, the corresponding members of which are of equal length, pivoted to said support and pivoted respectively to said brake-band, a link connecting the

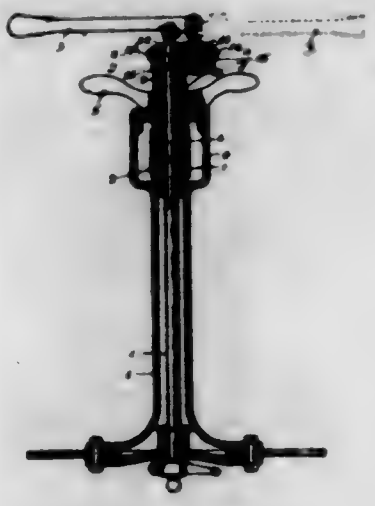
other arms of said bell-crank levers, an arm for actuating one of said bell-crank levers, a lug on said brake-band diametrically opposite its free ends having a slot adapted to engage a pin on said support, a pin on said support engaging in said support, whereby said brake-band is held against movement in rotation but permitted to move radially and whereby the free ends of said brake-band are acted upon equally.

1,297,094. CHANGE-SPEED MECHANISM. WILLIAM C. CARR, Buffalo, N. Y. Filed Oct. 26, 1917. Serial No. 198,603. 2 Claims. (Cl. 74—34.)



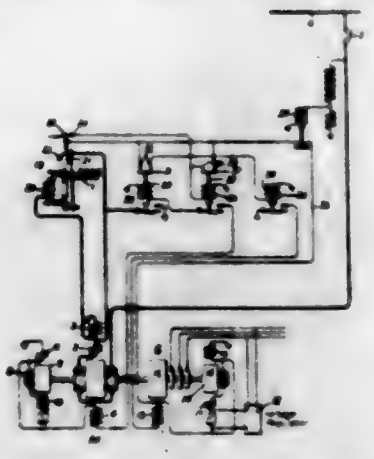
1. The combination with a driving and a driven shaft, of a clutch member slidable over but held in rotation with said driving shaft, a second clutch member mounted freely over said driven shaft, a spur-gear rigid with said driven shaft, gears in mesh therewith and pivoted to said first-mentioned clutch member, an internal gear on said second-mentioned clutch member in mesh with said gears, spring means for normally holding said clutch members in clutch engagement, lever means for disengaging them and means for holding said second-mentioned clutch member against rotation when out of clutch engagement.

1,297,095. STEERING APPARATUS FOR MOTOR-TRUCKS. WILLIAM C. CARR, Buffalo, N. Y. Filed Oct. 26, 1917. Serial No. 198,604. 3 Claims. (Cl. 74—79.)



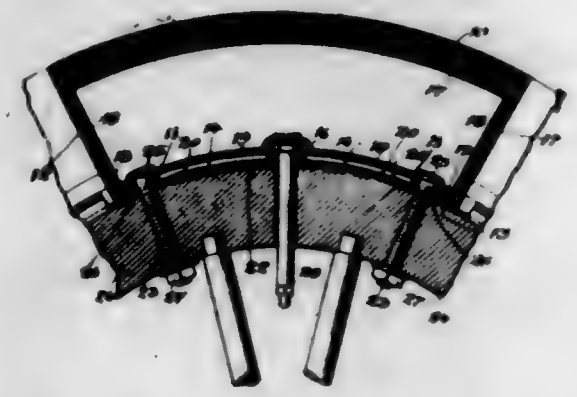
1. In a steering apparatus of the type described, the combination with a steering post of a steering lever adapted to being thrown from one side to the other to steer the vehicle in either direction of travel and interposed means for causing said lever to rotate said steering post with it when in one position and in reverse direction to it when in the other position.

1,297,096. STARTING DIRECT-CURRENT MOTORS. HENRY W. CHADBOURNE and ARTHUR F. KNIGHT, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Apr. 11, 1917. Serial No. 161,316. 4 Claims. (Cl. 172—286.)



1. The combination with a motor, adapted to be started as a series motor, having an armature, a series field winding and a field winding adapted to be separately excited, means for completing a circuit through said armature and series winding to start said motor and automatic means for completing a circuit through said second mentioned winding and then short circuiting said series winding.

1,297,097. SECTIONAL PNEUMATIC TIRE. CHESTER C. CHANDLER, Kingsville, Tex. Filed May 8, 1918. Serial No. 233,220. 3 Claims. (Cl. 152—32.)

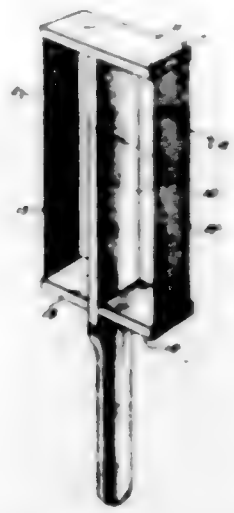


3. The combination with a vehicle wheel including a felly and rim, of a plurality of segmental casing sections arranged around the felly and each closed except for a longitudinally directed slot in its bottom wall, inner clamping plates disposed within the casing sections and forming closures for the slots thereof, outer clamping members interposed between the rim of the wheel and the lower walls of the casing sections, inflatable tube sections disposed within the casing sections and provided with valve stems extending through the slots of said sections and through the felly of the wheel, threaded bolts extending through the inner and outer clamping members and through the felly of the wheel, nuts engaging the threads on the bolts for clamping the casing sections between the inner and outer clamping members and other nuts threaded on the bolts at the inner face of the felly for holding the casing sections in position on the rim of the wheel.

1,297,098. COMB-CLEANER. ULYSSES CHAUFFEPIED, Shreveport, La. Filed Sept. 5, 1917. Serial No. 189,868. 1 Claim. (Cl. 132—17.)

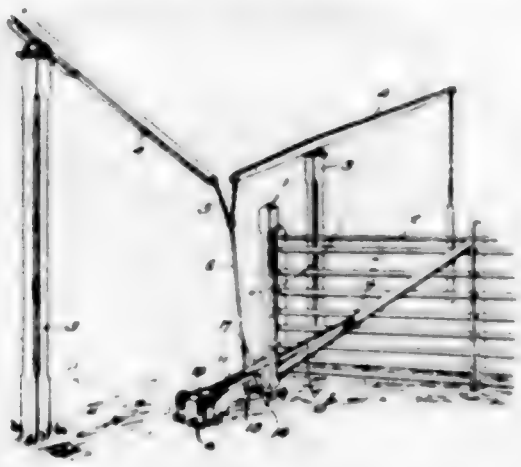
A comb cleaning device comprising an elongated member forming a handle, a cross piece secured at one end of said member, blocks secured to the opposite side of

said member in spaced relation to said cross piece in alinement with each other, spaced parallel strands of fine material secured to one of said blocks and the adjacent extremity of said cross piece, strands of relatively thick material secured to the other of said blocks and to the



other end of said cross piece and pins extending from the cross piece and block for spacing and securing the strands and whereby the said strands may be tightened, said relatively thick strands being spaced apart a greater distance than said relatively thin strands.

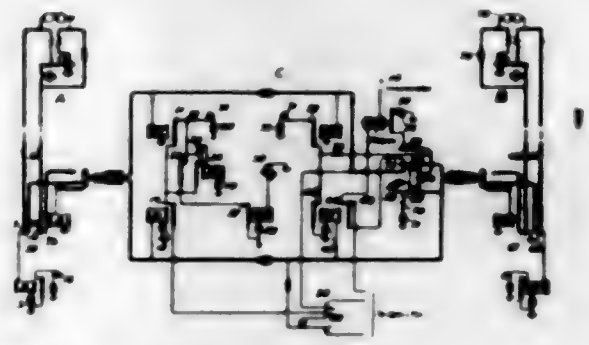
1,297,099. GATE. JAMES R. CLARK, Lexington, Ky., assignor to Clark Gate Co., Lexington, Ky. Filed Jan. 27, 1919. Serial No. 273,340. 2 Claims. (Cl. 39—59.)



1. The combination with a swinging gate, of pivotally connected links, means for anchoring one of the links for swinging movement, a pivotal connection between the other link and the gate, the last named link having an extension constituting a weight adapted to lap the anchored link, a fork connected to and depending from the anchored link, an operating lever, a rod connected to the operating lever, and a stem upon the rod and insertible into either side of the fork when the rod is out of normal or upstanding position, there being a lug at the free end of the stem and constituting a retaining foot.

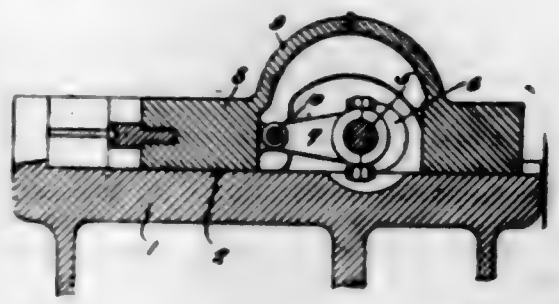
1,297,100. TELEPHONE-EXCHANGE SYSTEM. HENRY PETER CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 18, 1915. Serial No. 15,358. 7 Claims. (Cl. 179—73.)

1. In a telephone exchange system, calling and called subscribers' lines, a link circuit for interconnecting said lines, flashing signaling means associated with the answering end of said link circuit, a central source of current, and two relays coöperating when energized to start and continue the operation of said flashing signaling means to present a signal, one of said relays being energized from said source upon the connection of said link



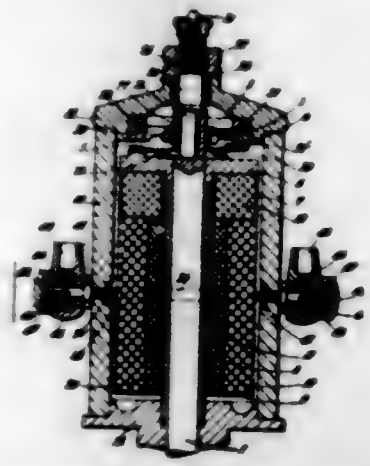
with said calling line over a path including a portion of a talking strand of said link circuit, the other of said relays being energized from said source over a path including a portion of said link and the calling line.

1,297,101. HEADING-SLIDE FOR FORGING-MACHINES. WILLIAM L. CLOUSE, Tiffin, Ohio, assignor to The National Machinery Co., Tiffin, Ohio. Filed Oct. 14, 1918. Serial No. 257,964. 2 Claims. (Cl. 74—14.)



1. In a bolt heading and forging machine a heading slide having an intermediate offset portion, an operating shaft extending transversely of the slide and past the offset portion, and means housed by said offset portion for transmitting motion from the shaft to the slide.

1,297,102. IGNITION DEVICE FOR INTERNAL-COMBUSTION ENGINES. MORTIMER ARTHUR CODD, Lambeth, England. Filed Sept. 7, 1916. Serial No. 118,864. 11 Claims. (Cl. 123—148.)



1. A coil ignition device of the kind hereinbefore referred to comprising a rotatory spindle, a coil secured to said spindle, and a single bearing for said spindle partly surrounded by said coil.

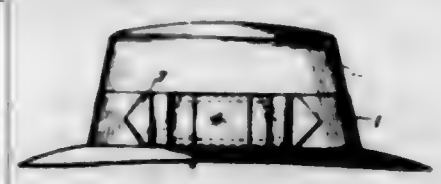
3. A coil ignition device substantially such as hereinbefore described, comprising a rotatory spindle and a coil, a distributer and a condenser, the said coil, the rotatory part of the said distributer, and the said condenser being all carried by the said spindle.

3. A coil ignition device substantially such as hereinbefore described, comprising a rotatory spindle and a coil, a distributer and a low tension contact breaker, the said coil, the rotatory part of the said distributer and the said low tension contact breaker being all carried by the said spindle.

4. A coil ignition device of the kind hereinbefore referred to comprising a rotatory spindle, a coil secured to said spindle, a single bearing for said spindle partly surrounded by the coil, and a condenser secured to said spindle.

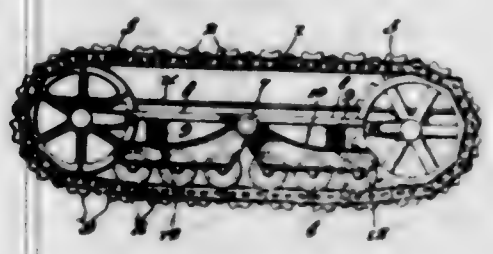
5. A coil ignition device of the kind hereinbefore referred to comprising a rotatory spindle, a coil secured to said spindle, a single bearing for said spindle partly surrounded by the coil, and a low tension contact breaker secured to said spindle.

1,297,102. HATBAND. MITCHELL COHEN, Chicago, Ill., assignor to De Leon Bandeau Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 7, 1918. Serial No. 215,790. 2 Claims. (Cl. 2—109.)



1. As an article of manufacture, a hatband, comprising an inelastic body portion having its ends hemmed upon themselves and spaced apart, a pair of spaced elastic members secured at their opposite ends to the hemmed spaced ends of the body portion and with their outer edges extending to the extreme longitudinal marginal edges of the body portion, to thereby exert tension on the extreme marginal edges thereof, and stiffening stays secured to the edges of the spaced ends on the inside of the body portion and extending to the marginal edges of the body portion and overlying and concealing the hem and the ends of the elastic members, to thereby distribute the tension of said elastic members throughout the entire body portion of the band.

1,297,104. TRACTOR-ENGINE. CHARLES COLAHAN, Stockton, Cal. Filed Oct. 4, 1917. Serial No. 194,788. 8 Claims. (Cl. 21—150.)



1. In a traction engine, in combination, a traction belt, sprockets over which said belt is carried and by which it is driven, rollers, a pair of frames on which said rollers are mounted, a common pivot for said frames, and springs between said frames, whereby when one frame yields to an obstruction, the effect is transmitted to and compensated for by the companion frame and the rollers thereon.

1,297,105. TRANSMISSION MECHANISM FOR AUTOMOBILES. LAWRENCE E. CONNER, Jackson, Mich. Filed Apr. 10, 1917. Serial No. 161,055. 11 Claims. (Cl. 192—1.)

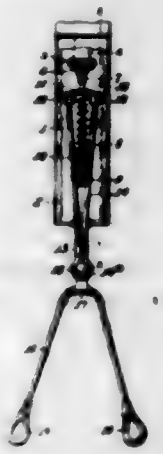
1. In a transmission mechanism, a driving shaft, a fly wheel carried thereby, a driven shaft, a plurality of radially and resiliently mounted devices carried by the fly wheel, a plurality of disks on the driven shaft, and means for throwing the disks into an eccentric position with reference to said shaft last named, and into positions opposite to each other with reference to the longitudinal axis of the shaft, said resiliently mounted devices being under different degrees of compression.



2. In a transmission mechanism, a driving shaft, a fly wheel carried thereby, a driven shaft, a plurality of series of radially and resiliently mounted devices carried by the fly wheel and extending toward said driven shaft, anti-friction devices carried by the radially mounted devices, disks carried by the driven shaft, and adapted to be thrown from a concentric to an eccentric position, and positioned to alternately and positively engage those resiliently mounted devices in the respective series located on a given side of the shaft.

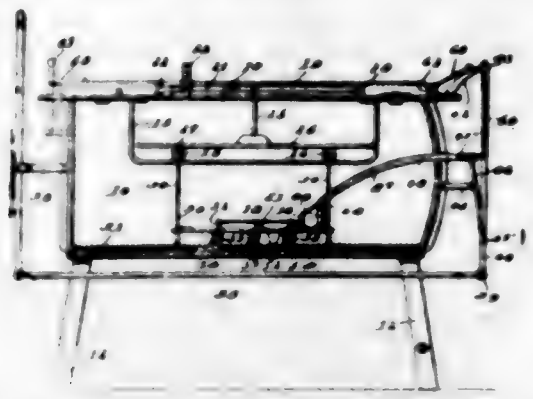
5. In a transmission mechanism, a driving shaft, a driven shaft, a fly wheel carried by the driving shaft, a plurality of series of radially mounted resilient devices carried by the fly wheel, a plurality of disks carried by the driven shaft, means movable longitudinally of the shaft and mounted to force the disks into positions eccentric with the driving shaft but oppositely located with reference thereto, said disks coöperating with said resiliently mounted devices.

1,297,106. ELASTIC CONNECTION FOR GARMENT-SUPPORTERS. WAITMAN DREVER CORDER, Philippi, W. Va. Filed Dec. 21, 1918. Serial No. 267,828. 5 Claims. (Cl. 241—21.)



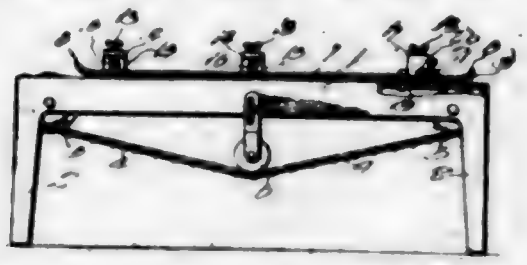
1. An elastic connection of the character described, comprising a pocket, a member suspended vertically within said pocket, a coil compression spring carried in encircling relation to said member and supported at its lower end adjacent to the lower end of said member, a supporting element resting upon said spring, a cord having its opposite ends attached to said element at opposite sides of the spring-carrying member and depending from said element in loop form with its loop-end projecting outward from the lower end of said pocket.

1,297,107. WASHING-MACHINE. CLARENCE E. CROW, Chesapeake, Ohio. Filed Aug. 30, 1918. Serial No. 252,062. 4 Claims. (Cl. 68—20.)



1. In a device of the class described, a receptacle, a stationary rubbing member therein, a reciprocable rubbing member including a plurality of stationary and a plurality of coöperating clamping elements, means for imparting movement to the reciprocable member, and means connected with said means for imparting movement for operating the movable clamping members.

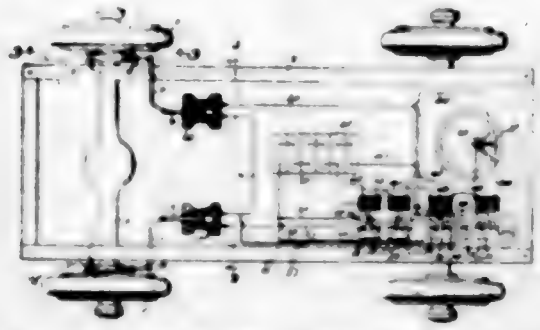
1,297,108. LEATHER-CUTTING MACHINE. JOHN J. CUNNINGHAM, Manchester, N. H. Filed Feb. 9, 1918. Serial No. 216,376. 2 Claims. (Cl. 164—38.)



1. A leather cutting machine comprising a table having a longitudinal slot, an endless feed chain whose upper reach travels in said slot, a longitudinal presser bar above said slot, springs attached to said bar and rising therefrom, set screws connected to the upper ends of said springs, horizontal transverse arms supporting said set screws and having downturned ends secured to said table at points spaced laterally from said slot, one of said arms having a vertically extending lug on its free end, said table having an opening below said lug, and a leather cutting blade secured at its upper end to said lug and extending at its lower end through said opening.

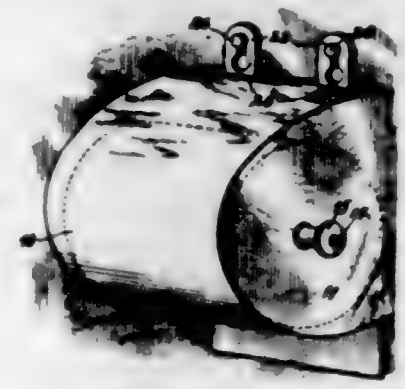
2. In a leather cutting machine, a knife, means for feeding the leather to said knife consisting of a feed chain and a presser bar parallel thereto, heads having necks secured to the side of said bar opposite said chain, set screws alined with said heads and having other heads joined by necks to their free ends, coiled springs having their endmost convolutions coiled around said necks, and supporting means for said screws.

1,279,109. ELECTRIC BRAKE FOR AUTOS. CHARLES W. CUNNINGHAM, Decatur, Ill. Filed Aug. 8, 1918. Serial No. 248,904. 5 Claims. (Cl. 188—89.)



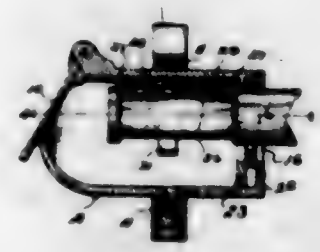
2. In a vehicle brake of the kind described, the combination with the brake bands of an auto vehicle, of solenoids mounted on the vehicle chassis, plungers movable into and out of the solenoids, energizing means for the solenoids, means for connecting the solenoids in series or in parallel across the said energizing means, and manually controlled means for mounting on the steering wheel of the vehicle whereby the aforesaid means may be rendered operative.

1,297,110. SANITARY TOILET-PAPER HOLDER AND DELIVERER. CILVIA DAVIS, New York, N. Y. Filed Feb. 26, 1917. Serial No. 151,091. 3 Claims. (Cl. 211—31.)



2. A paper roll holder and deliverer comprising a curved member having openings in its upper portion and a tongue in its lower portion, and a removable back plate for closing the rear side of said curved member, said back plate including upstanding ears engaged through the openings of said curved member for removable engagement with suspending members, said back plate having a turned extension for locking engagement with said tongue, said extension being also provided with a paper discharge slot, the ends of said body member being also adapted for interlocking engagement with said back plate.

1,297,111. JOURNAL-BOX. LUTHER L. DAVIS, Kingsville, Tex., assignor of one-half to Geo. L. Spivey, Corpus Christi, Tex. Filed Apr. 2, 1918. Serial No. 226,209. 6 Claims. (Cl. 64—10.)

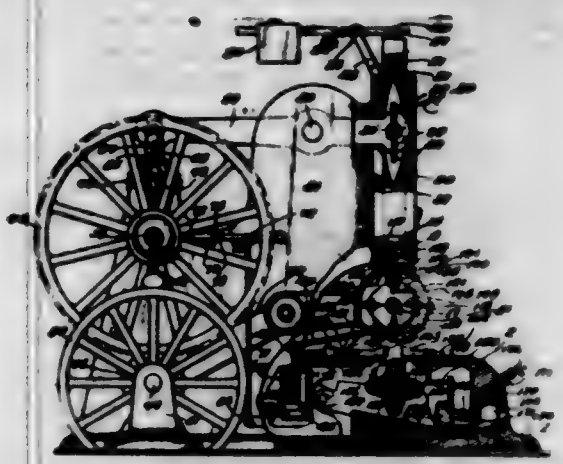


1. In a journal box of the character described, a removable door section at one side of the box for permitting the introduction and removal of the journal into and from the box, and means for securing the door section in place.

1,297,112. RAIL SAWING AND PUNCHING MACHINE. JAMES S. DAYTON, Cumberland, Md. Filed Apr. 24, 1918. Serial No. 230,525. 15 Claims. (Cl. 29—34.)

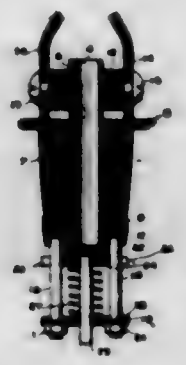
15. In a rail sawing and punching machine, the combination of rail supporting means, a rail cutting saw, a rail punch, means for advancing the rail supporting means and rail to the action of said saw and punch, a die block located on the opposite side of the work from the punch, an annular series of dies carried by said block, a shaft on which said block is journaled, manually operable means for turning said block, a bearing frame in

which said shaft is journaled, means for locking and releasing said die block, and means for automatically



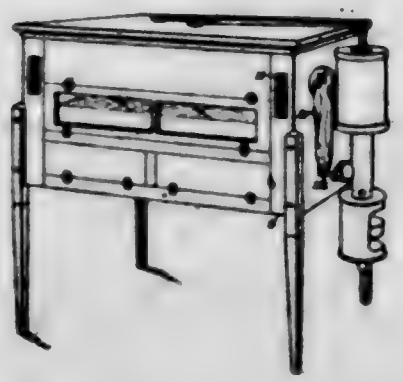
shifting said bearing frame toward and away from the punch.

1,297,113. BARREL-TESTER. DEIANA DOMENICO, San Francisco, Cal. Filed Dec. 30, 1918. Serial No. 268,918. 4 Claims. (Cl. 73—51.)



1. In a barrel testing device the combination of an apertured stopper of suitable form and size to be inserted in the bung hole of a barrel and comprising a rubber bushing or jacket and a tube extending axially therethrough, the outer end of which is arranged to communicate with an end of a pressure fluid tube to conduct pressure fluid into the barrel, guiding means extending inwardly into the barrel and supported by the inner end of the tube, and spring-actuated means, guided by said guiding means, for closing the inner end of the tube.

1,297,114. INCUBATOR ATTACHMENT. GEORGE WARD DOWNS, Osceola, S. D. Filed Jan. 21, 1918. Serial No. 212,925. 3 Claims. (Cl. 119—35.)



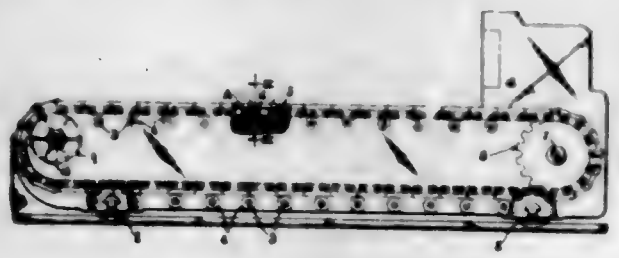
1. An attachment for incubators, comprising a gate for a hand hole in the incubator, an outwardly flaring ring at the hole, and a member of substantially air tight flexible material secured to the ring.

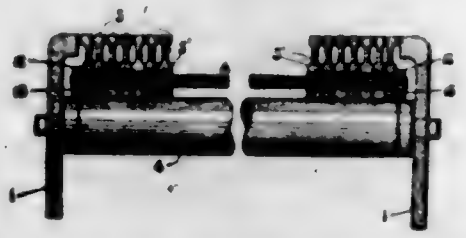
1,297,115. SANITARY HIGH-CHAIR TRAY. ROSETTA E. DULAC, San Francisco, Cal. Filed Dec. 4, 1916. Serial No. 134,928. 1 Claim. (Cl. 155—12.)



The combination with the tray of a high chair, of a removable tray therefor including a peripherally flanged plate disposed on the chair tray, a ring secured in one side of said flange, a hook secured in the opposite side of the flange, a chain carried by the ring and passed beneath the chair tray and having its outer end links interchangeably engageable with said hook, said chain having a coil interposed therein.

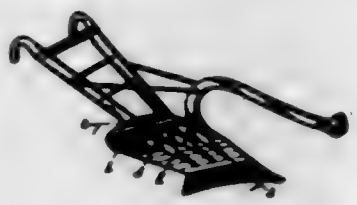
1,297,116. FURNACE-GRATE. WILLIAM M. DUNCAN, Alton, Ill. Filed Dec. 10, 1918. Serial No. 266,130. 4 Claims. (Cl. 110—40.)





1. A chain grate comprising rows of grate links having pivot-receiving openings, and flexible pivot members passing through said openings and pivotally connecting the grate links.

1,297,117. PULVERIZING-PLOW. RAYMOND R. DUPLER, Monroe, Mich. Filed Apr. 27, 1918. Serial No. 231,099. 9 Claims. (Cl. 97—18.)

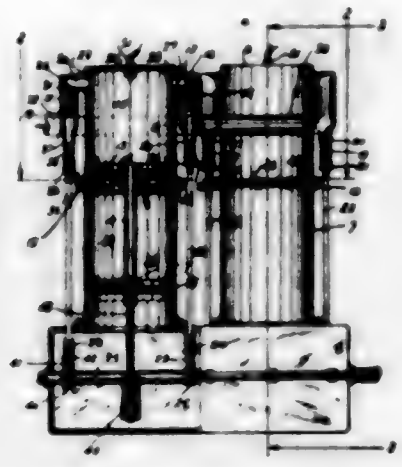


5. The combination with a plow mold-board having a plurality of longitudinally extending slots therein, of furrow-slice cutting blades pivoted at their forward ends to the inner side of the mold-board at the forward end portions of said slots and projecting outward through respective slots, and means carried at the inner side of the mold-board and forming spring-seats for the blades to resist an inward movement thereof relative to the mold-board.

1,297,118. INTERNAL-COMBUSTION ENGINE. ALMOND D. DURHAM, Denver, Colo. Filed Feb. 20, 1918. Serial No. 218,182. 8 Claims. (Cl. 123—53.)

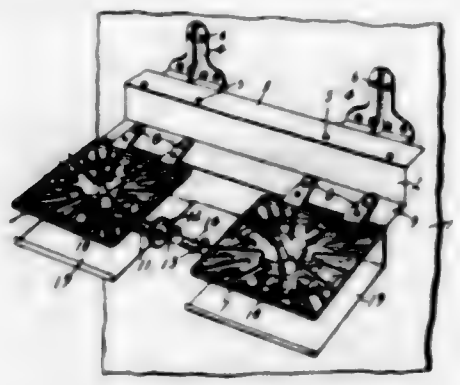
1. An engine including a cylinder closed at one end and provided with an abutment intermediate its extremities, and a piston reciprocable therein and including spaced heads arranged on opposite sides of the cylinder abutment, the structure having a permanently open pas-

sage connecting the space between the closed end of the cylinder and one head of the piston with the space be-



tween the opposite head of the piston and the abutment of the cylinder, each of said spaces constituting a combustion chamber.

1,297,119. GAS-STOVE. JOHN VAN DYKE, Kalamazoo, Mich. Filed Sept. 13, 1917. Serial No. 191,172. 10 Claims. (Cl. 126—39.)



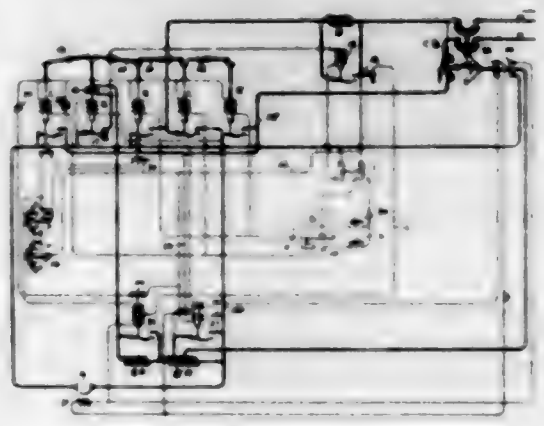
1. In a gas stove, the combination of a stepped body and wall shield member having spaced pan portions projecting from its lower edge, wall attaching brackets secured to the top portion of said body member, a pair of grid members provided with attaching brackets secured to an intermediate portion of said body member so that said grid members are supported in a spaced relation above said pan members, a pair of burners secured on the under side of said grid members and having opposed burner tubes, a T-coupling connecting the adjacent ends of said burner tubes, and a rearwardly inclined gas delivery pipe disposed between said pan members and connected to said T-coupling, said delivery pipe being provided with a T-coupling for a gas supply pipe connection and with a wall attaching plate at its lower end so that when mounted on the wall the gas delivery pipe constitutes a supporting brace.

6. In a gas stove, the combination of a sheet metal body and wall shield member having spaced pan portions projecting from its lower edge, and provided with wall attaching means, grid members secured to an intermediate portion of said body member so that said grid members are supported in a spaced relation above said pan members, burners secured on the under side of said grid members, and a gas delivery connection for the burners disposed between said pan members.

8. In a gas stove, the combination of a stepped body member, a wall attaching bracket secured to the top portion of said body member, a grid member provided with an attaching bracket secured to an intermediate portion of said body member, a burner secured on the under side of said grid member, and a gas delivery pipe connected to said burner and constituting a supporting brace.

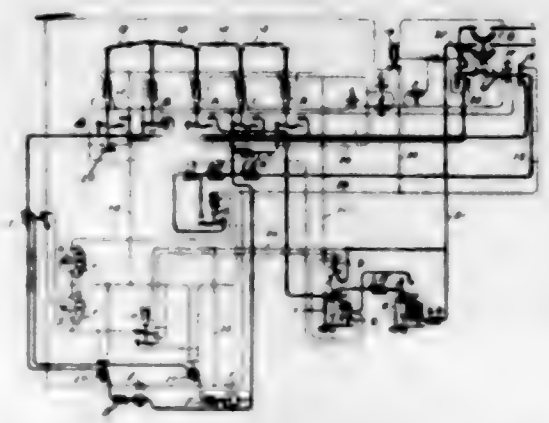
10. In a gas stove, the combination of a stepped sheet metal body and wall shield member provided with a support attaching means, a grid member mounted on said body member, a burner secured on the under side of said grid member, and a gas delivery pipe connected to said burner and constituting a supporting brace.

1,297,120. MOTOR-CONTROL SYSTEM. JOHN EATON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 7, 1914. Serial No. 817,365. 23 Claims. (Cl. 172—240.)



1. The combination with an electric motor, reversing mechanism therefor, a brake resistance for dynamically braking the motor when the reversing mechanism is operated, and means for causing the initial dynamic braking resistance to be greater when the motor is reversed from one direction of rotation than when it is reversed from the other direction of rotation.

1,297,121. MOTOR CONTROL. JOHN EATON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1916. Serial No. 130,470. Renewed Jan. 25, 1919. Serial No. 273,170. 9 Claims. (Cl. 172—240.)

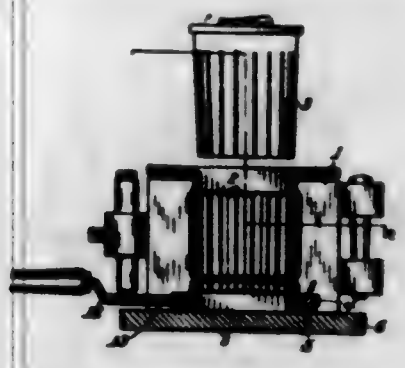


1. The combination with a plurality of coöperating electric motors connected to separate loads, of means for automatically bringing the motors to rest simultaneously comprising a dynamic braking circuit supplied with current from both motor armatures.

1,297,122. APPARATUS FOR THE MANUFACTURE OF PRISM-PENDANTS. PHILLIP EBELING, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Feb. 14, 1918. Serial No. 217,278. 3 Claims. (Cl. 49—66.)

1. In apparatus for forming prism pendants, a base, a sectional press mold mounted on said base, said mold having pendant-molding spaces formed in the interior walls thereof and having an internal annular channel in

its extreme lower end in open communication with said molding spaces, a metal ring removably mounted on said base, said mold sections being laterally movable into and out of embracing relation to said ring, in which relation said ring is seated in said channel, said ring having sockets in its upper face, said sockets being adapted for



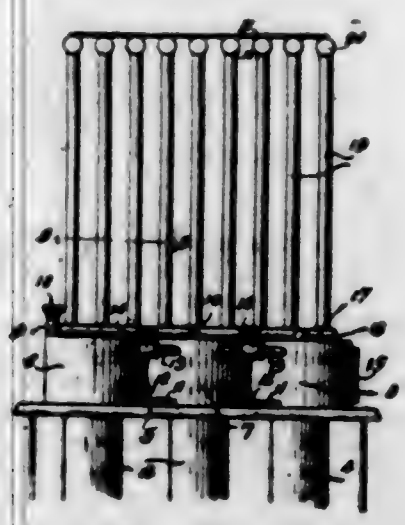
receiving pins in seated position therein and being arranged to correspond with the disposition of said molding spaces, said ring carrying means thereon whereby it may be supported by hand during introduction and removal and whereby, when the mold is closed over said ring, the latter is accurately positioned with such pins in centrally alined relation to said molding spaces.

1,297,123. DISK HARROW. DOSSEY MALCOM ECKLEBERRY, Lockwood, Saskatchewan, Canada. Filed Feb. 21, 1918. Serial No. 218,526. 1 Claim. (Cl. 55—30.)



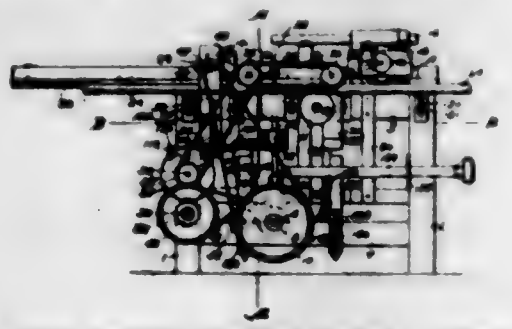
In a disk harrow, a main beam, a draft connecting means carried by one end of the main beam, a cross beam also carried by the main beam adjacent to the draft connecting means and dividing such main beam into a long and short arm, gangs of disks located beneath the cross beam and on which the cross beam is mounted, and a seat carried on the extreme end of the long arm of the main beam remote from the disks whereby a downward draw is given to the disks by the weight of the occupant of the seat as the disks engage the soil.

1,297,124. HEATER. HERMAN E. EICHORST, Waldorf, Minn. Filed Mar. 14, 1918. Serial No. 222,448. 2 Claims. (Cl. 237—17.)



1. A radiator of the class described having a plurality of boilers to rest on a stove, water inlet means for the boilers, means to permit the water to flow from one boiler to another, means to permit steam to flow from one boiler to another disposed above the last mentioned means, a manifold resting on and securing said boilers together, a single steam outlet pipe leading from one of the boilers to the manifold, radiator pipes rising from the manifold, header pipes joining the radiator pipes, and means joining the header pipes to hold the structure rigid.

1,297,125. WOODWORKING-MACHINE. WILLIE MCG. ELKS and SAMUEL J. DIXON, Weldon, N. C. Filed Apr. 28, 1917. Serial No. 165,151. 12 Claims. (Cl. 144—3.)



1. In a wood working machine having a frame and a driven shaft carried thereby, of means for cutting a tenon on the end of a rail or stile comprising ways, brackets carried by the machine frame supporting the ways, a carriage movable on the ways provided with means for holding a rail or stile in vertical position, a milled cutter head arranged to be driven by the driven shaft in the path of movement of the rail or stile, and means for cutting a mold on the rail or stile comprising a guide way carried by the machine frame within the brackets supporting the carriage ways, and a milled cutter head on the same shaft with the cutter head for the end tenon arranged in position to operate on the under edge of a rail or stile on the guide way.

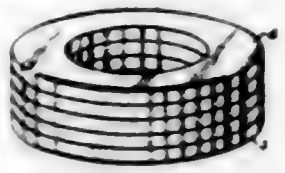
6. In a wood working machine having a frame and a driven shaft carried thereby, of means for cutting a tenon on the end of a rail or stile comprising ways, brackets carried by the machine frame supporting ways, a carriage movable on the ways provided with means for holding a rail or stile in vertical position, a milled cutter head arranged to be driven by the driven shaft in the path of movement of the rail or stile and means for cutting a mold on the rail or stile comprising a guide way carried by the machine within the brackets supporting the carriage ways a milled head cutter on the same shaft with the cutter head for the end tenon arranged in position to operate on the under edge of a rail or stile on the guide way, and means for feeding the rail or stile to the cutter head, a cutter head mounted on a vertical shaft arranged to operate on the side of the rail or stile on the guide way, a cutter head arranged to operate on the upper edge of the rail or stile on the guide way, means for feeding the rail or stile along the guide way and means for vertically adjusting the feeding means.

12. In a wood working machine, the combination with a frame of a vertical shaft and means for rotating it, a saw carried by the vertical shaft on its upper end, a bed plate carried by the frame having an opening therein for the saw and a slot leading to the opening, guides carried by the bed plate a carriage comprising oppositely arranged parts movable on the guides and adapted to receive the work between them and means for locking the work in the carriage comprising headed bolts, and a swinging arm adapted to engage beneath the heads of the bolts and having a cam recess formed therein and a fixed pin carried by the bed plate adapted to coöperate with the cam recess to swing the arm into and out of locking position.

1,297,126. MAGNET-CORE. GUSTAF W. ELMEN, Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1918. Serial No. 226,283. 8 Claims. (Cl. 175—21.)

1. A magnet core composed of finely divided and intermixed magnetic materials differing substantially in their

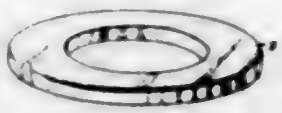
magnetic characteristics, and insulating material separating the particles of magnetic material.



3. A magnet core composed of insulated particles of unannealed electrolytic iron and insulated particles of annealed electrolytic iron intermixed and united into a solid body.

8. A magnet core composed of insulated particles of unannealed electrolytic iron and insulated particles of annealed electrolytic iron intermixed and united into a solid body having a specific gravity of approximately 7.

1,297,127. MAGNET-CORE. GUSTAF W. ELMEN, Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1918. Serial No. 226,284. 7 Claims. (Cl. 175—21.)

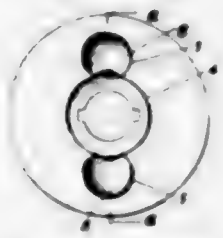


1. A magnet core composed of insulated particles of silicon iron alloy and a binder therefor of insulated particles of relatively soft iron.

4. A magnet core composed of finely divided ferro-silicon, finely divided relatively soft iron intermixed therewith, and insulating material separating the particles of magnetic material.

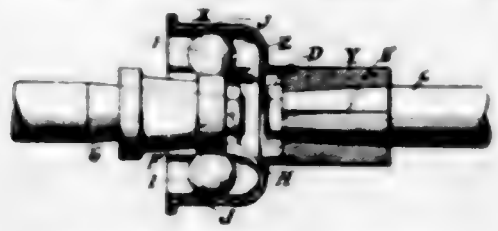
7. A magnet core composed of finely divided ferro-silicon, finely divided relatively soft iron intermixed therewith and insulating material separating the particles of magnetic material, said compound having a specific gravity of approximately 7.

1,297,128. MACHINE ELEMENT. VICTOR LEE EMERSON, Alexandria, Va. Filed Feb. 10, 1916. Serial No. 77,528. 9 Claims. (Cl. 64—91.)



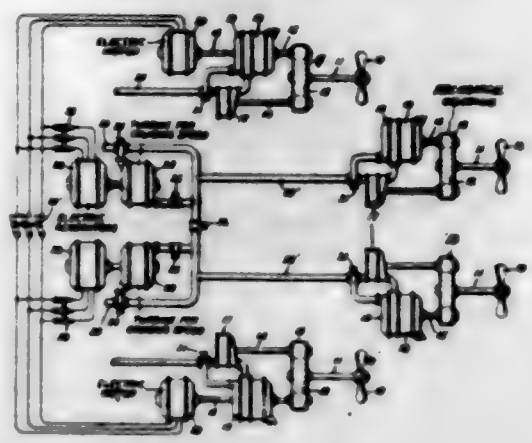
1. As an article of manufacture, a member of a universal coupling comprising a steel shell having a disk shaped rim portion, a cylindrical body portion extending from said rim portion, a pair of chambers one on each side of said body portion, and a soft steel shank integral with the end of said body portion.

1,297,129. METHOD OF PRODUCING MACHINE ELEMENTS. VICTOR LEE EMERSON, Philadelphia, Pa. Original application filed Feb. 10, 1916, Serial No. 77,528. Divided and this application filed Mar. 31, 1917. Serial No. 159,384. 8 Claims. (Cl. 29—148.)



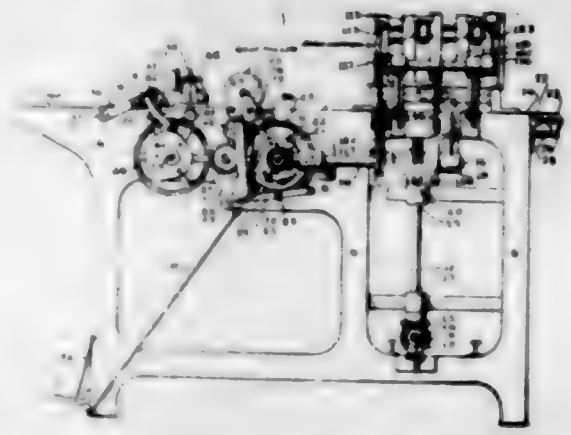
8. The method of producing a universal joint body member which comprises the fitting of a hardened steel shell to a part of soft steel adapted for subsequent machining, and welding the said parts together by depositing molten metal at their juncture.

1,297,130. SYSTEM OF SHIP PROPULSION. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1916. Serial No. 136,431. 4 Claims. (Cl. 172—8.)



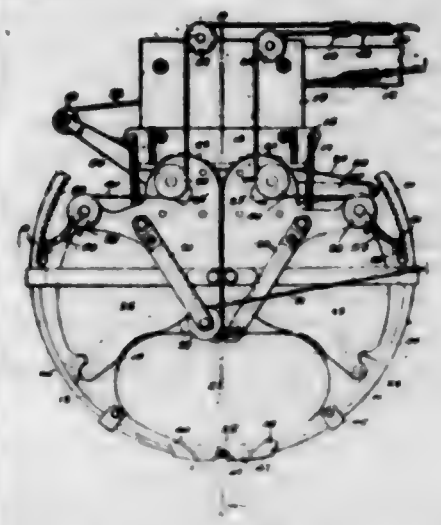
1. A system of ship propulsion comprising in combination, a plurality of main elastic fluid turbines, a propeller coupled to each of said turbines and adapted to be mechanically driven thereby when the ship is to be propelled at her higher speeds, an auxiliary elastic fluid turbine having its exhaust arranged to communicate with the admission of certain of said main turbines, an electric motor operatively arranged to electrically drive each of the propellers whose main turbines are not arranged to communicate with the exhaust of said auxiliary turbine, an electric generator coupled to said auxiliary turbine and adapted to deliver electric energy to said motors, and means whereby the propellers provided with the aforementioned electric motor drive are electrically driven and the other propellers are mechanically driven when the ship is to be propelled at relatively low speeds.

1,297,131. BOOK-COVERING MACHINE. THEODORE S. ETHERIDGE, Grand Rapids, Mich. Filed Mar. 31, 1917. Serial No. 158,987. 18 Claims. (Cl. 11—4.)



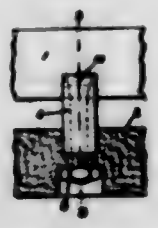
1. In a book covering machine, the combination of a holder for containing a plurality of uncovered books bound together at their backs, the books being located in the holder with the backs down, means to force the foremost book from the holder by successive steps, pressure jaws between which the books pass, one of said jaws being movable with respect to the other, means to successively move said movable jaw toward the other jaw between successive movements of the book from the holder, mechanism for carrying a cover to a point underneath the jaws and a cover breaker into which the back of the book and the cover may be forced to conform the cover to the back of the book.

1,297,122. SCOOP. FRED FANDREI, Sturgeon Bay, Wis. Filed May 25, 1918. Serial No. 236,608. 3 Claims. (Cl. 37—30.)



1. A device of the character described comprising a support, bucket elements pivoted thereon having curved intermediate portions, and side portions, said side portions having open portions at their inner parts, whereby when the bucket elements are in closed position a clear way is formed through the device, gates pivoted on the sides concentrically with said intermediate portion the adjacent gates on opposed elements being movable into position for coengagement when the bucket elements are in closed position to close said clearway through the device, means to operate the bucket elements and means to operate the gates.

1,297,133. CLAMP, BINDING-POST, OR THE LIKE. CHARLES D. FILKINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 24, 1918. Serial No. 251,236. 5 Claims. (Cl. 175—360.)



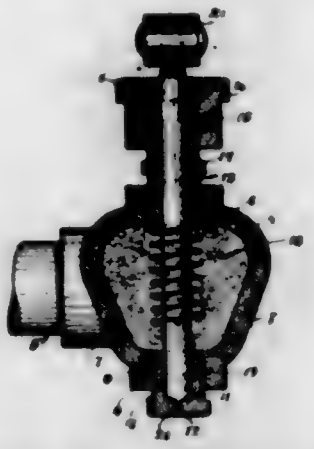
4. The combination with a member to be supported, of a supporting device therefor comprising a hollow post provided with a kerf in one end thereof, a stud slidable therein and provided with a half-head having an axial flat face and a transverse groove therein, said member to be supported received in the kerf in said post and engaged by the axial flat face of the stud head, a projection on said member engaging said groove, said post and stud head having coöperating tapered surfaces, and means for moving said stud into fixed position in said post to clamp said member.

1,297,134. FLUE-TOP. WILLIAM G. FISCHER, Cincinnati, Ohio. Filed Apr. 4, 1917. Serial No. 159,721. 2 Claims. (Cl. 98—22.)



1. In a stationary top or cap for smoke-flues of vehicles, a vertical mounting pipe-section, a horizontal pipe-section or cap-proper extending in opposite directions from the top of the said vertical mounting pipe-section, semicircular substantially equal flaring wings or flanges extending from the opposite ends of said horizontal pipe-section, and a vertical valve-plate having an opening in its upper end and pivotally supported just below said opening but centrally within said cap-proper and with its lower end of greater extended length than its said upper end whereby it projects downwardly into the said vertical pipe-section and is adapted for closing contact or engagement with the inner face thereof when swung in either direction from a normally perpendicular position.

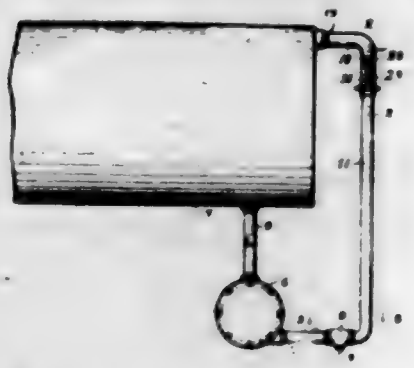
1,297,135. DISCHARGE MECHANISM FOR BITUMINOUS DISTRIBUTERS. ANTHONY FRICKER, Cleveland, Ohio. Filed June 6, 1917. Serial No. 173,255. 3 Claims. (Cl. 137—63.)



1. In a bituminous distributer, the combination of a manifold adapted to retain material therein under pressure and provided with a plurality of nozzles for discharging the material directly onto the road, of a reciprocating valve for each nozzle and movable in line therewith for controlling the passage of material therethrough, said valve being movable to a position within said nozzle to shut off the passage of material from the manifold, means for positively guiding each valve in its movement with respect to the nozzle which it controls, and means for operating said valves.

3. In a bituminous distributer, the combination of a manifold adapted to retain material therein under pressure and provided with discharge nozzles, each including a bore communicating directly with the bottom of the manifold and a discharge orifice at the outer end of the bore, said manifold having guide openings in its upper portion in line with said bores, valve rods extending from without the manifold through said guide openings and reciprocable therein to bring their lower ends to a position within said bores to shut off the passage of material from the manifold, and means connected to those portions of the rods without the manifold for operating said valve rods.

1,297,136. BITUMINOUS DISTRIBUTER. ANTHONY FRICKER, Cleveland, Ohio. Filed Sept. 27, 1917. Serial No. 193,447. 4 Claims. (Cl. 137—63.)

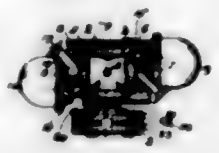


2. In a bituminous distributer, the combination with the supply tank thereof, of a discharge manifold, means

for introducing material from the tank into the intermediate portion of the manifold and for conducting the material from the ends of the manifold back to the supply tank.

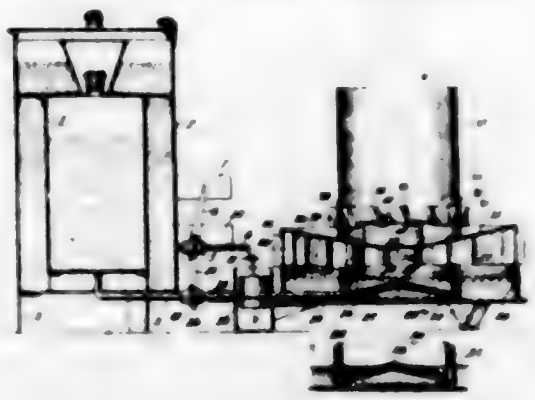
4. In a bituminous distributer, the combination, with the supply tank, of a discharge manifold provided with outlets, means for delivering the material from the tank to the manifold under pressure, a by-pass leading from the manifold to the tank, a valve in said by-pass for regulating the pressure of the material within the manifold, and means for permitting drainage of the material from the valve.

1,297,137. OIL-BURNER. PERLEY H. FULLER, Auburn, Me. Filed Oct. 11, 1918. Serial No. 257,705. 11 Claims. (Cl. 158—55.)



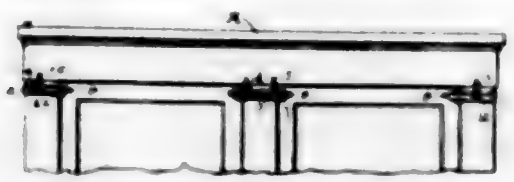
1. An oil burner having a pair of vaporizing chambers adjacent to each other, a vapor discharge nozzle connected with each of said vaporizing chambers, and a baffling plate for deflecting the flame from each nozzle into heating contact with the opposite vaporizing chamber.

1,297,138. LIQUID-FUEL BURNER. LEE GARDNER, Concord, N. C., assignor of forty-five one-hundredths to Joseph F. Cannon, Gowan Dusenbery, and Morrison H. Caldwell, Concord, N. C.; Joseph F. Cannon executor of said Lee Gardner, deceased. Filed June 6, 1917. Serial No. 173,187. 9 Claims. (Cl. 158—92.)



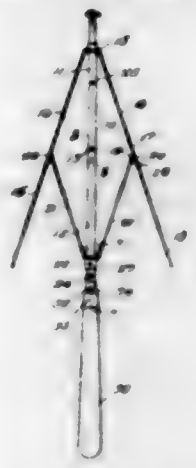
1. A liquid fuel burner comprising a pair of nested cups having their sides and bottoms spaced apart to provide a fuel chamber, a water pan in which said cups are immersed, and a tube or nipple passing through the cup bottoms, whereby water is admitted to the inside of the inner cup.

1,297,139. WINDOW-BLIND AND LACE-CURTAIN HOLDER. THOMAS W. GARNETT, Salina, Kans., assignor of one-third to Leonard G. Elder, Colwich, Kans., and one-third to Fred E. Torgler, Topeka, Kans. Filed June 29, 1918. Serial No. 242,588. 2 Claims. (Cl. 156—24.)



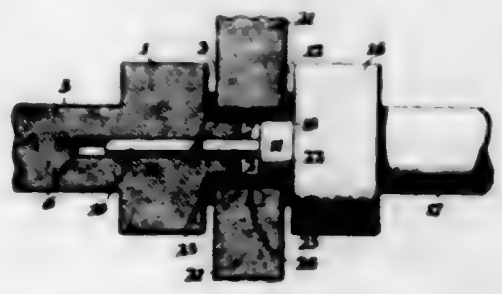
1. A device of the character described including an elongated plate adapted to fit against the front of a window casing and provided at its upper and lower edges with forwardly returned guide flanges, integral wings projecting rearwardly from the ends of the plate and adapted to embrace the window casing, an L-shaped clamping jaw having one arm thereof fitted slidably against the back of the plate and provided at its edges with returned portions extending around and slidably engaging the returned guide flanges of the plate, a clamping screw threaded in one of the wings and engaging the other arm of the jaw, a slide mounted upon the front of the plate between the guide flanges, and a bracket arm projecting from the slide and carried thereby, the position of the bracket arm being adjustable by moving the slide.

1,297,140. FOLDING UMBRELLA. JOEL HOWARD GARRETSON, Forsyth, Mont. Filed Sept. 28, 1918. Serial No. 256,058. 1 Claim. (Cl. 135—25.)



A folding umbrella comprising a sectional rod, ribs of inner and outer sections hingedly secured to one of the rod sections, stretchers pivotally secured to said ribs, spaced ears located at the extremity of the inner sections of said ribs and spaced from the hinged connection of the stretchers, said ears being provided with inclined wedge surfaces, means for hingedly connecting the outer rib section between said ears, and a sleeve slidably mounted between the hinged connection of the stretchers and ears for frictional engagement over the ends of the outer rib sections.

1,297,141. UPSETTING-DIE. WILLIAM J. GIBBONS, Philadelphia, Pa. Filed July 5, 1918. Serial No. 243,278. 4 Claims. (Cl. 153—79.)



1. The combination of two up-setting dies, one of which is provided with a central boss and a central centering opening and the other one of which is provided with a corresponding coöperating boss having a centering pin which projects from the center thereof and which is adapted to enter the said centering opening, the said bosses being adapted to enter the opposite ends of a section of tube to up-set the opposite ends thereof.

1,297,142. BUSHING-BLANK AND PROCESS OF MAKING BUSHINGS. WILLIAM J. GIBBONS, Philadelphia, Pa. Filed July 19, 1918. Serial No. 245,704. 5 Claims. (Cl. 29—148.)

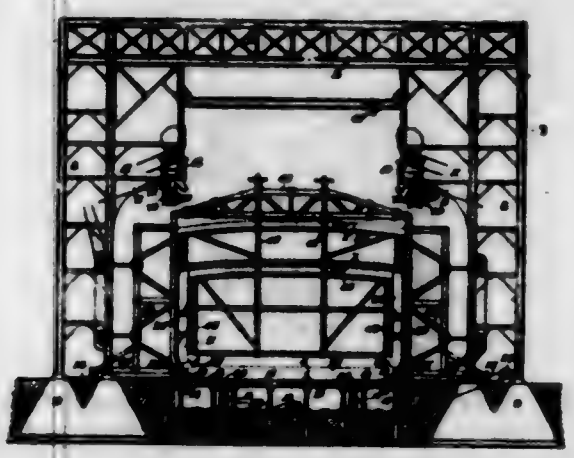
1. A bushing blank, provided at one end with a crown having projections thereon constituting additional metal

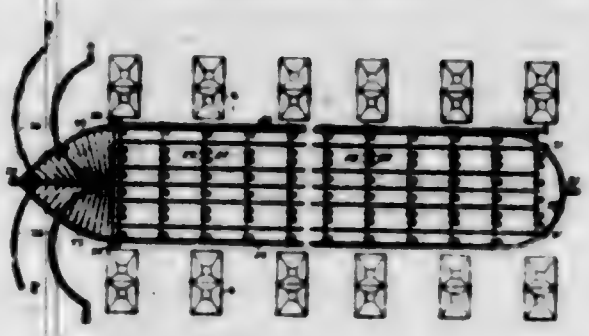
which is adapted to be forced into the said crown upon the completion of the bushing.



5. The process of making a metal bushing or hollow rivet which consists in first forming a tubular portion terminating in a crown at one end, forming upon said crown a projection constituting an excess of metal and thereafter applying opposing pressure to the opposite ends of said tubular portion and forcing the said excess of metal into and merging the same with the pre-formed crown, substantially as described.

1,297,142. CONCRETE-SHIP MOLD. SECONDO GILETTI, San Francisco, Cal. Filed July 9, 1918. Serial No. 244,086. 12 Claims. (Cl. 25—130.)

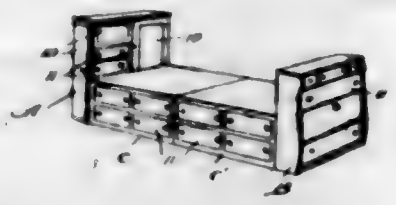




7. A concrete ship mold comprising an exterior bottom mold consisting of a central section and a pair of exterior sections, power operated screw jacks adapted to raise and lower said bottom mold sections vertically in unison, track ways arranged on each side of the bottom molds, trucks movable to and from each other mounted upon said track ways, frames carried by said trucks, exterior side mold sections secured to said frames, power operated screw jacks for moving the trucks, the molds and the supporting frames, a bow and stern mold section hingedly secured to each side mold, means for securing said bow and mold sections together, a plurality of transverse truss frames adapted to be supported by the side mold frames, an interior mold frame supported by the transverse truss frames and vertically adjustable thereon, side molds carried by said frame and deck molds also supported by said frame.

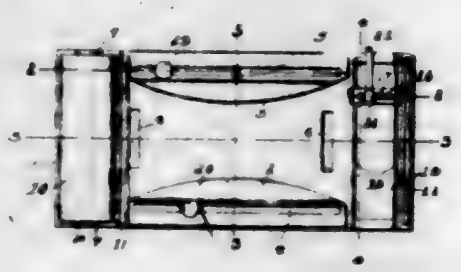
12. In a concrete ship mold, a main frame, a bottom mold vertically adjustable in said frame, a pair of side molds movable to and away from each other in said frame, a bow and stern mold section carried by each side mold, an interior mold, a vertically adjustable frame supporting the interior mold, and power operated means carried by the main frame for transmitting power to adjust the position of the bottom and side molds.

1,297,144. FURNITURE. ANTHONY GIORDANO, San Antonio, Tex. Filed May 4, 1918. Serial No. 232,429. 1 Claim. (Cl. 5—4.)



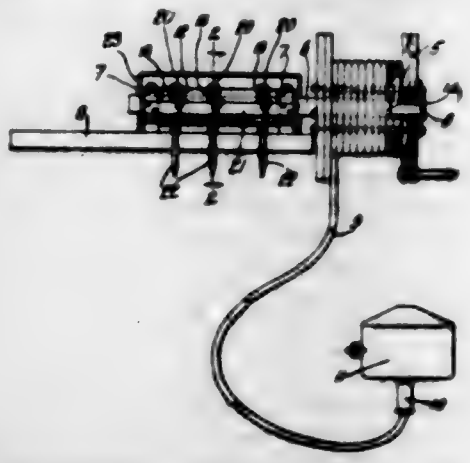
In a bed of the character described, the combination of an upstanding cabinet unit in form to constitute the head section, an upstanding cabinet unit in form to constitute the foot section, and a plurality of cabinet units occupying positions adjacent to one another and interposed between the head and foot sections to constitute the mattress section, the units composing the mattress section being in form to be superposed one upon the other to constitute in themselves a complete article of furniture, and the head and foot sections being in form to each independently constitute a complete article of furniture, substantially as described.

1,297,145. TRANSFER-HOLDER. EDWARD GIRTH, Alton, Ill. Filed Aug. 23, 1918. Serial No. 251,195. 2 Claims. (Cl. 164—111.)



1. A transfer holder comprising a plate having transfer roll carrying means at one end, a tearoff slot near the opposite end, overhanging flanges at opposite sides, and punching means adjustably mounted on said plate, said plate and flanges having coincident longitudinal slots and said punching means being mounted on said flanges and arranged for movement between said flanges and plate and along said slots.

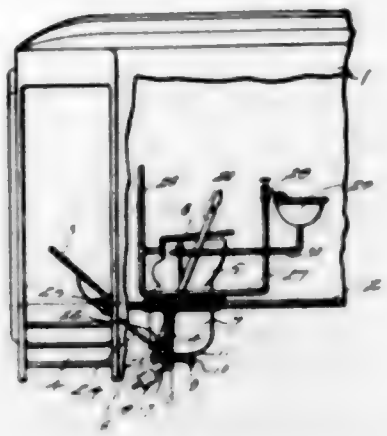
1,297,146. CONTINUOUS-CONTACT REEL. JOHN L. GLEASON, Boston, Mass. Filed Oct. 19, 1917. Serial No. 197,490. 2 Claims. (Cl. 173—36.7.)



1. In combination, a reel, an insulating drum adapted to rotate with said reel, a hollow shaft upon which said reel and said drum are mounted and with which they are adapted to rotate, annular contact rings fast to said insulating drum, a stationary electric supply terminal, an electric cable wound upon said reel, one end of said electric cable being connected to said electric supply terminal and

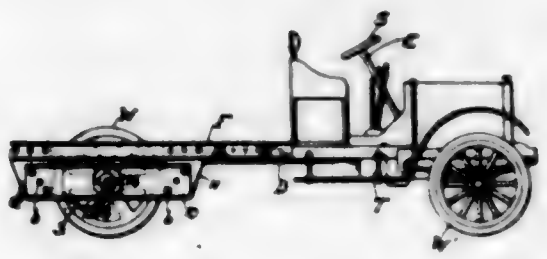
the other end connected through said hollow shaft to said contact rings, brushes engaging said contact rings, and electrical connections from said brushes to an electrically operated member.

1,297,147. TOILET FOR RAILWAY-CARS. HENRY P. GONSOULAND, Oakland, Cal. Filed Jan. 19, 1918. Serial No. 212,656. 4 Claims. (Cl. 4—17.)



3. In a device as set forth, the combination, of a water closet bowl, a refuse receptacle for receiving material from said bowl, a pair of valve members pivotally connected to the interior of said receptacle and normally closing the communicating opening between said bowl and refuse receptacle, a curved bar rockably supported within said receptacle, a rod connected to said rockable bar and to the seat of said closet bowl, whereby the rod will be moved downwardly under the weight of a person sitting upon the closet bowl to rock said rockable bar, and means connecting said bar and said valve members for moving the valve members into an open position upon downward movement of said rod.

1,297,148. DRIVING-GEAR FOR VEHICLES. JAMES G. GRACEY, St. Louis, Mo., assignor of one-half to Emil C. Ganahl, St. Louis, Mo. Filed Nov. 19, 1917. Serial No. 202,786. 8 Claims. (Cl. 180—70.)

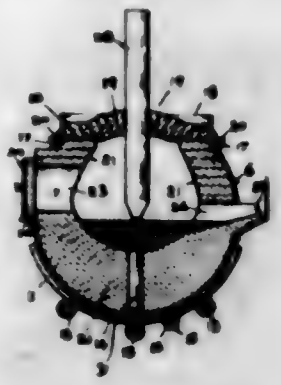


1. In a vehicle of the character described, a suitable frame, running wheels therefor disposed on opposite sides of the frame and rotatable about a common axis disposed transversely of the frame, an axle mounted rearward of and parallel and eccentrically to the axis of rotation of the wheels, the axis of the axle being disposed substantially in the same horizontal plane with the axis of the wheels, a longitudinally disposed propeller shaft for imparting rotation to the axle, a rotor member at each end of the axle, a series of formations on said member spaced angularly apart, and a corresponding series of diametrically disposed raceways formed on the inner faces of the running wheels and traversed by said formations upon the rotation of the rotor member, whereby rotation is imported to the wheels.

2. In a vehicle of the character described, a suitable frame, running wheels therefor disposed on opposite sides of the frame and rotatable about a common axis, suitable members detachably secured to the vehicle frame, spindles for the wheels, suitable cup-bearings for receiving said spindles secured to the detachable members aforesaid, diametrically disposed raceways formed on the inner faces of the wheels, a propeller shaft disposed longitudinally of the vehicle frame, an axle disposed parallel to and rearward of, the rotation axis of the wheels and with its axis in the same horizontal plane with the rotation axis of the wheels, an axle housing, disks secured to the axle and interposed between the axle housing and the raceways of the running wheels, and rollers mounted on the disks and traversing the raceways whereby upon rotation of the axle and disks, rotation is imparted to the wheels.

3. In a tractor, a wheel provided with diametrically disposed open-ended raceways, means for imparting rotation to the wheel, and blades coupled to said means and traversing said raceways and adapted to be periodically projected outside the ends of the raceways beyond the periphery of the wheel for digging into the soil and securing a firm purchase for the wheel.

1,297,149. ELECTRIC FURNACE. ALBERT E. GREENE, Seattle, Wash. Filed Oct. 12, 1917, Serial No. 196,318. Renewed Aug. 9, 1918. Serial No. 249,200. 14 Claims. (Cl. 204—64.)



1. An electric furnace comprising a cylindrical steel shell, a dished and flanged steel head riveted to each end of said shell, an opening in the top of the cylindrical shell, a refractory lining within the shell conforming to the inside thereof and inclosing a furnace chamber, an arched roof covering said chamber and a suitable opening for the charge or discharge of material into or from said chamber, suitable electrodes for forming an arc or arcs within said chamber; a track adapted to support the weight of the furnace and means of rolling the shell over on said track to the desired degree.

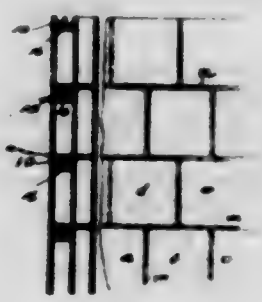
1,297,150. LOADING-MACHINE. ROBERT P. GREENLEAF, Cleveland, Ohio, assignor to Frank Billings, Cleveland, Ohio. Filed Apr. 27, 1918. Serial No. 231,072. 10 Claims. (Cl. 214—134.)



2. In a loading machine, a frame, a shovel, means for actuating said shovel so that it can be moved forwardly and then retracted and swung over the machine to dump the material at the rear thereof, said means comprising a forwardly and rearwardly moving device carried by the frame, a shovel supporting arm pivotally connected to said device, a pivoted tilting member supported by the frame, said pivoted tilting member being normally stationary and serving as an abutment adapted to be engaged by a portion of said arm to swing the arm and the shovel during the retraction of said device.

9. In a loading machine, a frame, a shovel, means for actuating the shovel so that it will have a forward filling movement and will then be retracted and swung over the machine to dumping position, said means comprising a forwardly and rearwardly moving ram carried by the frame, an arm connected to the shovel and pivotally connected to the ram, said arm having an extension constituting a tilting lever, a pivoted tilting arm carried by the frame in position to be engaged by said extension when the ram is retracted to a given point so that during the further retraction of the ram the arm and shovel will be swung upwardly and rearwardly over the machine, and means carried by the ram for racking said tilting arm out of engagement with said extension.

1,297,151. BUILDING-BLOCK. WILLIAM W. GRIFFIN, Atlanta, Ga. Filed May 3, 1916. Serial No. 95,157. 2 Claims. (Cl. 72—30.)



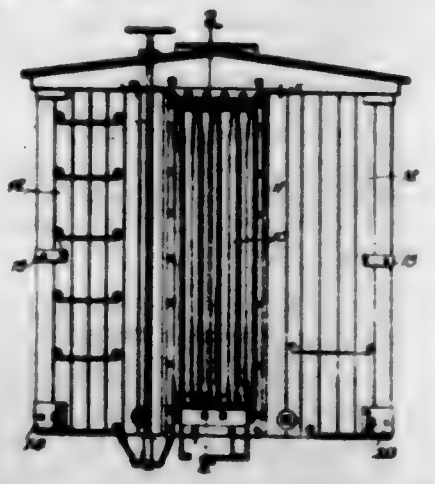
1. A hollow building block having its side walls notched at the edges to receive a course of reinforcing rods, and a means for providing a transverse bottom to support a layer of bonding material about the inserted reinforce, and comprising a plate inserted into the respective chamber of the block to a position below the bottom of the notches and having upturned edges by which it is frictionally held in position between the walls of the block and thereby forming a pocket to receive a cement embedding the reinforce.

1,297,152. INSULATED OR NON-CONDUCTING CONTAINER. FAY S. HACKNEY, Topeka, Kans. Filed Aug. 14, 1916. Serial No. 114,815. 1 Claim. (Cl. 229—12.)



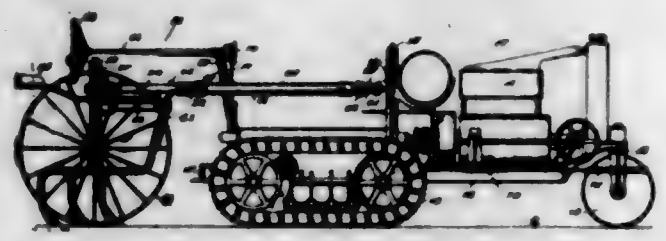
A container comprising a body made up of permanently connected layers of corrugated paper, said layers being of different lengths and nested one within the other, the shortest layer being inside and the several layers being arranged to form steps at the ends of the body and within the body; a bottom end member made up of superimposed and permanently connected disks of corrugated paper, of different diameters, and having a step-like edge to rest in and against and break joints with the similarly-shaped lower end of the body; and an upper end member made up of superimposed and permanently connected disks, of corrugated paper and of different diameters, and having a step-like edge to rest in and against and break joints with the similarly-shaped upper end of the body.

1,297,153. COMPOSITE CAR END. KARL M. HAMILTON, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1918. Serial No. 252,823. 6 Claims. (Cl. 105—410.)



1. In a car-end, in combination: metallic plate paneling forming a vertical section of the car end, to resist the center thrust of the load; and wood paneling forming the remaining body sections of the car-end on either side of said metallic section; substantially as specified.

1,297,154. TRACTOR. ELMER CLYDE HAMMOND, Crawfordsville, Ind., and CARL F. NELSON, Minneapolis, Minn. Filed Dec. 16, 1916. Serial No. 137,404. 6 Claims. (Cl. 21—187.)



1. In a tractor, the combination of a propelling unit, a dirigible trailing unit connected to said propelling unit, a seat carried by said trailing unit, and means operable from the seat for guiding the propelling unit, and other means also operable from the seat for guiding the trailing unit.

2. In a tractor, the combination of a self-propelled unit having a steering wheel, an axle, and pair of wheels arranged at the rear of said self-propelled unit, an adjustable connection between said axle and wheels and the self-propelled unit, a seat carried by said axle, means for steering said wheels, and means operable from the seat for actuating the steering wheel of the self-propelled unit.

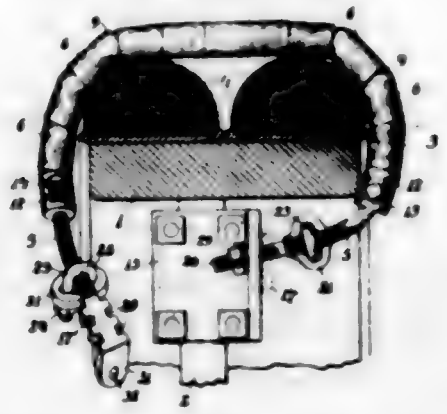
3. In a tractor, the combination of a propelling unit, with a unit extending at the rear of the propelling unit and connected thereto by means of adjustable arms, one end of said arms being connected to the unit by a universal joint, means for raising and lowering the joint connection, said arms being pivotally supported at their other ends by an adjustable cross member, wheels on which said cross member is adjustably mounted, and means for steering said wheels.

4. The combination with a self-propelled vehicle having a vertical support, of a bracket adjustably mounted in said support, two adjustable arms connected to said bracket by a universal joint, a longitudinally adjustable axle pivotally connected to the outer ends of said arms, vertically adjustable steering knuckles carried by the outer ends of said axle, wheels mounted on said knuckles, a seat carried by said axle, a foot lever, connections between said lever and said knuckles for steering the wheels, a steering post pivotally connected to the rear end of said self-propelled unit, a steering wheel at the outer end of said post, positioned to be conveniently

reached from the seat, and steering mechanism from the post to the self-propelled vehicle, for steering the vehicle.

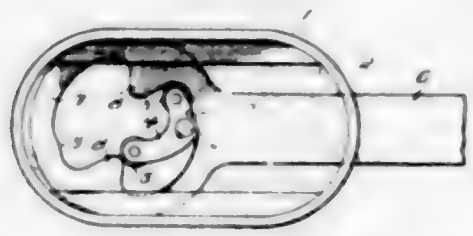
5. In an apparatus of the character set forth, the combination of a self-propelled vehicle with a dirigible trailing unit pivotally attached thereto, means for attaching implements to said trailing unit, means for steering the wheels of the trailing unit, and means operable from the trailing unit for steering the vehicle.

1,297,155. ANTISKID FOR WHEELS. ALBERT H. HARRINGTON, Fall River, Mass., assignor to Non Skid Company of America, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 23, 1916. Serial No. 127,098. 5 Claims. (Cl. 152—2.)



1. An antiskid for wheels comprising a flexible member transversely disposed over the tire of the wheel for which it is designed, and a plurality of rotatively independent wear-resisting members loosely inclosing the flexible member.

1,297,156. MECHANICAL MOVEMENT. EBENEZER D. HARRIS, Jr., Lander, Wyo. Filed June 22, 1918. Serial No. 241,340. 4 Claims. (Cl. 74—14.)

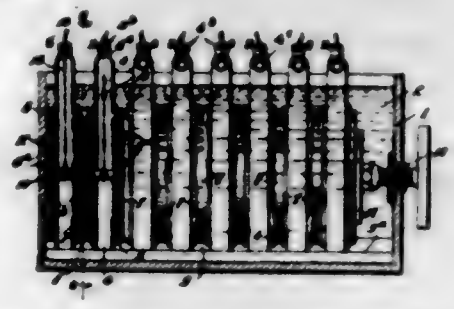


1. A mechanical movement comprising a frame, a journaled shaft disposed transversely of the frame, a bar having a head guided in the frame, said head having an opening, the head being provided at the opposite sides of its opening with inwardly disposed arm portions and at opposite sides of its opening with inwardly disposed humps, the said humps being spaced from the arm portion, there being one hump located in the vicinity of each arm portion, and an angle member mounted upon the shaft and having one long end portion and one short end portion, the short end portion adapted to operate upon the humps and the long end portion adapted to operate upon the arm portions of the head.

2. A mechanical movement comprising a frame, a bar mounted for movement and having a head guided in the frame, said head having an opening, the head being provided at the opposite sides of the opening with inwardly disposed arm portions, the head being provided at the opposite sides of the opening with inwardly disposed humps, the humps being spaced from the arm portions, there being one hump located in the vicinity of each arm portion, a journaled shaft disposed transversely with relation to the frame, an angle member mounted upon the shaft, the angle member being provided with one long arm portion and one short arm portion, the short arm portion being provided at its edge with a recess adapted to receive the humps.

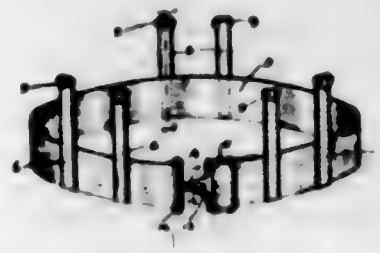
3. A mechanical movement comprising a rocker member provided at its edge with spaced arms and humps, angle members journaled for rotation adjacent the rocker member, means for rotating the angle members, said angle members having relatively long and short arms, and means carried by the arms of the angle members for encountering the arms and humps of the rocker member.

1,297,157. ELECTROLYTIC CELL. JOHN HARRIS, Lakewood, Ohio, assignor of one-half to James E. Rose. Filed Sept. 29, 1917. Serial No. 193,873. 10 Claims. (Cl. 204—5.)



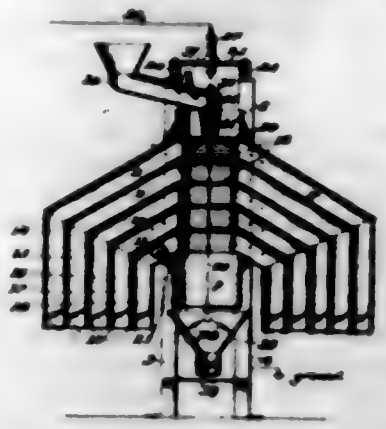
1. In an electrolytic cell, the combination of a tank, a plurality of cell units within said tank, each of said units having openings in opposed walls thereof, electrodes within said openings, a bar of conducting material interposed between the electrodes in each unit, and means mounted in one of the walls of the tank and coöperating with the side of the unit adjacent thereto for exerting pressure upon such electrodes thereby to hold said units in assembled position.

1,297,158. BELT. NORMENT D. HAWKINS, Jr., Pittsburgh, Pa., assignor to Hawkins Invisible Belt Company, Pittsburgh, Pa., a Corporation of West Virginia. Continuation of application Serial No. 44,207, filed Aug. 7, 1915. This application filed Oct. 9, 1916. Serial No. 124,490. 4 Claims. (Cl. 241—9.)



3. A garment supporter comprising a belt, a plurality of upwardly-extending stay members secured to said belt, and a rigid attaching member hingedly associated with each of said stay members.

1,297,159. ELECTRIC SEPARATOR. CARL WM. J. HEDBERG, New Britain, Conn., assignor to Research Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 7, 1918. Serial No. 215,882. 8 Claims. (Cl. 83—49.)

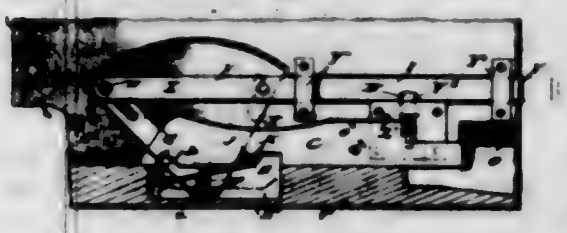


3. An apparatus for sifting material comprising means for defining a vertical passage, means for producing an

electric stress in said passage and transversely thereof, and a plurality of vertically arranged receiving chambers contiguous to and communicating with the said passage.

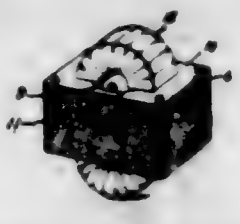
8. Apparatus for sifting material comprising electrode means constructed and arranged to define a vertical passage, a discharge electrode extending into and centrally of said passage, a plurality of vertically arranged receiving chambers surrounding the passage and means for separately collecting the contents of said chambers.

1,297,160. GRAPHOPHONE AND DISK RECORD HOLDER. JOHN HEITMAN, Nome, Alaska, assignor of One-half to Ralph Lomen, Nome, Alaska. Filed Aug. 17, 1917. Serial No. 186,814. 5 Claims. (Cl. 211—16.)



1. In a phonograph disk record holder, a casing provided with a series of vertically disposed stalls, a slidable carrier disposed in each of said stalls, the upper portion of the carrier being curved to receive the record disk, each of said carriers being provided with a forwardly extending guide portion, a common guide member carried by the casing for guiding the forwardly extending portion of the carrier, a spring for each carrier normally pressing against the carrier, a trigger for each carrier having a beveled abutment arranged to engage the forwardly extending portion, an escapement common to all of said carriers, and means carried on each carrier for operating said common escapement to lock the other carriers in position on movement of any of said carriers; and means by a lever attachment and operating arm attached to the supporting rod of said escapement to hold said escapement in a normal position or to lower said escapement and facilitate the removal of one or all records according to one's desire.

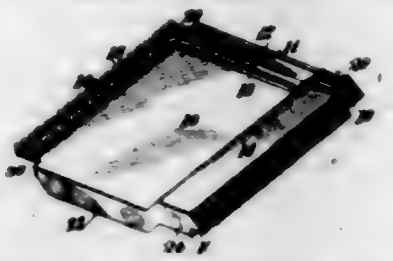
1,297,161. TRANSFORMER. ALLAN B. HENDRICKS, Jr., Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 20, 1914. Serial No. 839,890. 2 Claims. (Cl. 175—356.)



1. Two transformer core lamination sections adapted to be assembled together with abutting edges, an abutting edge of one section having a projection offset from its center and the complemental abutting edge of the other section being provided with a notch to receive the projection, the notch and projection being so located as to require the assembly of the sections in such a manner that the irregularities of the edges caused by the punching fit into each other.

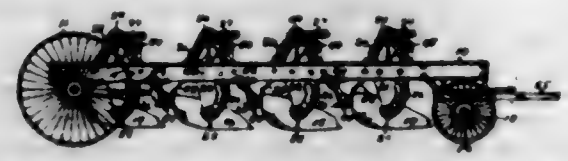
1,297,162. ROOFING-TILE. MIGUEL HENRY, Manila, Philippine Islands. Filed Jan. 10, 1918. Serial No. 211,197. 2 Claims. (Cl. 108—10.)

1. An interlocking tile comprising a substantially rectangular flat body having an upwardly arched flange along one side and an upstanding wall along the opposite side to engage in an overlying arched flange of a laterally adjacent tile, a transverse upstanding rib on one end of the arched flange, and a countersink in the under face of the diagonally opposite corner of the tile adapted to re-



ceive the transverse rib of a second adjacent tile and provided with a shallow rib to interlock with said transverse rib.

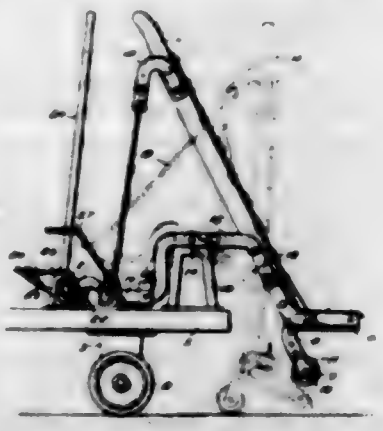
1,297,163. TRUCK-SCOOP. ELMER A. HENSAL, Panora, Iowa. Filed Aug. 8, 1917. Serial No. 185,178. 2 Claims. (Cl. 37—33.)



1. In a machine of the class described, a truck frame, brackets arranged in transverse pairs spaced longitudinally of said frame, a skip mounted between each pair of brackets, said brackets being formed with vertical slots curved rearwardly at their lower ends, said skips being formed with trunnions pivoted in and also vertically adjustable of said slots, a crank shaft journaled in the frame behind each of said skips and formed with swivel rings, handles on and projecting rearwardly from said skips and adapted to engage loosely within said swivel rings, whereby the inclination of the skips may be separately adjusted, and means for adjusting said skips vertically by movement of said trunnions through said slots.

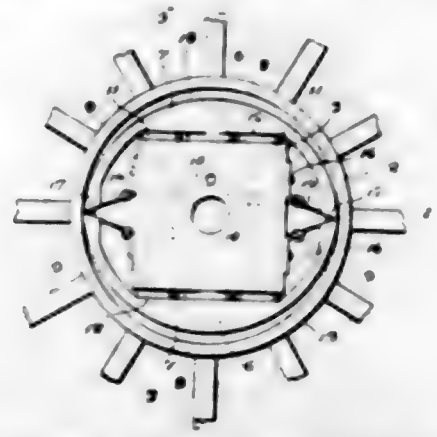
2. In a machine of the class described, a support, a skip mounted for oscillation and for vertical adjustment in said support, said skip being formed with rearwardly projecting handles, a crank shaft journaled in said support and provided with swiveled rings adapted to loosely receive said handles, and means for adjusting the elevation of said skip, crank shaft being adapted for oscillation to adjust the inclination of the skip irrespective of its vertical elevation.

1,297,164. TRUCK. JAMES C. HICKEY and OLIVER J. CANTRELLE, New Orleans, La. Filed Sept. 17, 1918. Serial No. 254,477. 4 Claims. (Cl. 21—65.)



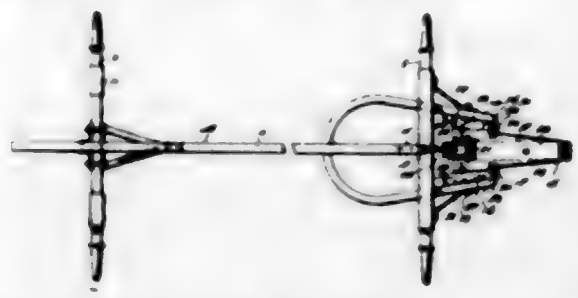
4. In combination with a truck, of an attachment comprising spaced rigidly connected handle members having angular portions at the lower ends for supporting a pile of packaged material, levers pivoted to the truck and connected to the handle members, and a latch for preventing swinging movement of the levers and manually operated means for releasing the latch.

1,297,165. AIR-BRAKE FOR AUTOMOBILES. GEORGE C. HIGBEE, Tekoa, Wash. Filed Sept. 21, 1918. Serial No. 255,145. 2 Claims. (Cl. 188—8.)



1. The combination with one of the carrying wheels of a motor vehicle, of a rotary brake drum fixedly secured to and revolving with said wheel, a non-rotary air chest housed within said drum and having oppositely extending guiding studs, arcuate brake shoes slidably mounted on said studs and movable toward and away from said chest and the working face of said drum, compressed air cylinders formed in said chest at opposite sides of each of said studs, the chest being formed with an air passage having branches leading to said cylinders, pistons mounted for sliding movement in said cylinders and working in engagement with the adjacent brake shoe at opposite sides of the adjacent guiding stud, and flexible means connecting the opposite extremities of each brake shoe with said chest.

1,297,166. RUNNING-GEAR FOR VEHICLES. JAMES F. HILL, Billings, Mont. Filed Oct. 13, 1917. Serial No. 196,451. 4 Claims. (Cl. 21—36.)

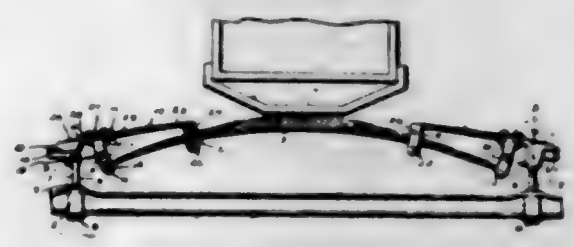


1. In a running gear attachment, an open ended tongue holder, a rod upon which said tongue holder is mounted, a yoke swingingly connected with said rod and a bolt adjustably secured to said yoke and adapted to be engaged by the king bolt.

4. The combination with the hounds in the running gear of a vehicle, of an open ended trough like body interposed between said hounds and extending beyond the forward ends thereof, a plate on said body extending beyond the sides thereof for a greater portion of their length, supplemental plates interposed between said hounds and the trough like body having slots therein, bolts passing through said slots and the first mentioned plate, angle irons on the supplemental plates, and a rod passing through said trough like body, the angle irons and hounds.

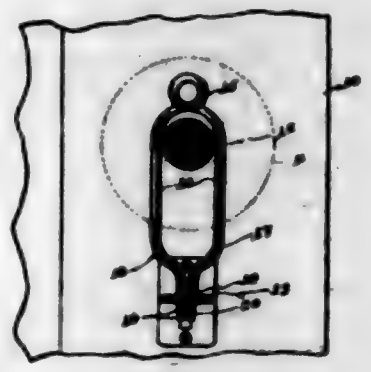
1,297,167. AUXILIARY LEAF-SPRING FOR MOTOR-VEHICLES. HARRY D. F. HILLIARD, Kansas City, Kans., assignor to F. N. Winslow, Carmen, Okla. Filed Oct. 7, 1916. Serial No. 124,296. Renewed Jan. 28, 1919. Serial No. 274,179. 1 Claim. (Cl. 267—27.)

The combination with an axle, perches extending upwardly from the axle adjacent opposite ends thereof, a bowed main spring positioned directly over the axle, and arms extending outwardly from the perches toward the ends of the axle, of auxiliary springs each comprising a main leaf, ears formed on the main leaf of each auxiliary spring and extending downwardly therefrom, pivots connecting the ears to the perches, ears extending downwardly from each auxiliary spring near the end opposite that which is pivotally connected to the perches, a



roller mounted between the last mentioned ears and bearing on the upper side of the main spring, and an extension on each auxiliary spring for coöperation with the arm on its respective perch to retard the rebound.

1,297,168. KEY-RETAINER. HENRY R. HIXSON, Detroit, Mich. Filed Aug. 9, 1918. Serial No. 249,187. 1 Claim. (Cl. 70—65.)



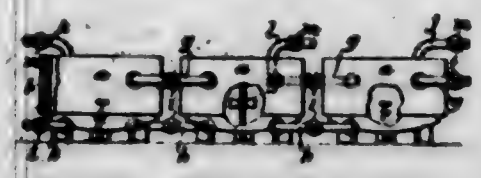
A key retainer formed of a single strand of spring wire bent centrally of its ends to form a spring eye, substantially parallel arms curved inwardly at their extremities to form an elongated normally closed loop for engagement over the shank of a door knob and key engaging legs, said legs being in contacting engagement at their extremities and gradually spaced apart to form a wedge shaped element for entrance into the eye of a key.

1,297,169. FENCE-POST. FRANK X. HOMEY, Tiffin, Ohio. Filed Nov. 30, 1917, Serial No. 204,741. Renewed Jan. 28, 1919. Serial No. 273,689. 2 Claims. (Cl. 256—52.)



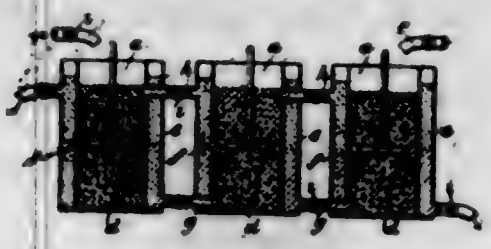
1. A fence post of the class described formed from a blank sheet of material, said post comprising a body, substantially circular in cross section, said body provided with an inwardly extending longitudinally formed flange of the same width as the diameter of said body, and means for clamping the wire strands of a wire fence in engagement with the front edge of said flange.

1,297,170. NITRATION PROCESS. ALFRED EWART HOLLEY, Oldbury, and OWEN EDWIN MOTT, Woolwich, England, assignors to themselves, and Chance and Hunt, Limited, Oldbury, England. Filed Dec. 5, 1917. Serial No. 205,873. 6 Claims. (Cl. 52—8.)



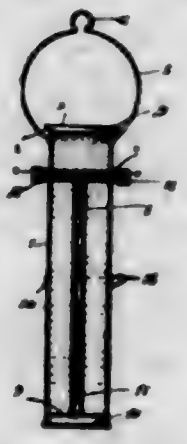
1. A continuous nitration process in which a current of the organic matter to be nitrated and a current of the acid proceed in opposite directions, the nearly finished product coming into contact with fresh acid while the nearly spent acid comes into contact with the primary material to be nitrated, continuous stirring and continuous separation of the liquids taking place.

1,297,171. APPARATUS FOR THE TREATMENT OF ONE LIQUID WITH ANOTHER. ALFRED EWART HOLLEY, Oldbury, and OWEN EDWIN MOTT, Woolwich, England, assignors to themselves, and Chance and Hunt, Limited, Oldbury, England. Filed Dec. 5, 1917. Serial No. 205,874. 2 Claims. (Cl. 23—8.)



1. Apparatus for the treatment of one liquid with another, comprising a series of agitators all at the same level, a series of separators at the same level as the agitators, the bottom of a separator being connected to the bottom of an agitator in one direction and a top of a separator to the top of an agitator in the other direction, and each separator being in direct communication with the agitator at a point situated between the other connections.

1,297,172. SELF-OPERATING FIRE-EXTINGUISHER. JOHN W. HUGHES, Cambria, Pa. Filed Sept. 5, 1917. Serial No. 189,700. 2 Claims. (Cl. 169—14.)



1. A fire extinguisher comprising a casing having oppositely disposed openings, a T-shaped tube located within the casing and having its arm portions disposed in said openings, an explosive cartridge located within the casing, a fire extinguishing chemical located within said casing, and a fuse located within said T-shaped tube and connected with the explosive cartridge and extending through the horizontal arm portions to be ignited by the flames of a fire to explode the cartridge and disperse the chemical.

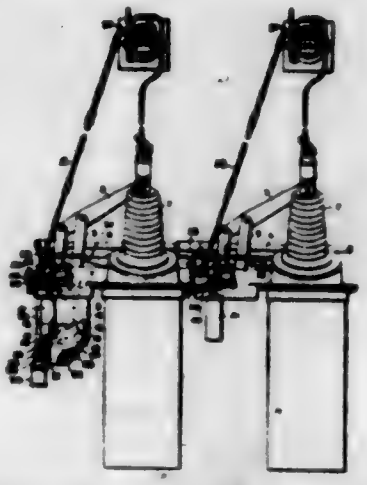
2. A self operating fire extinguisher comprising a casing, an explosive cartridge therein resting on the bottom of said casing, a bail for supporting said casing, a T-shaped tube located within said casing and having horizontal arm portions, a fire extinguishing chemical located within said casing, a fuse located within the T-shaped tube and connected with the explosive cartridge and extending through the horizontal arm portions, and ignitable caps normally closing the ends of the horizontal arm portions to protect the ends of the fuse.

1,297,173. CORNSTALK-TURNER. WALTER A. HUNNICUTT, near Greensfork, Ind. Filed Oct. 18, 1918. Serial No. 258,068. 3 Claims. (Cl. 97—33.)



1. A corn stalk turner comprising side bars, a bow connecting the forward ends of the side bars, a body bar connecting the rear ends of the side bar, means carried by the body bar for permitting an animal to be hitched thereto, which animal may be located between the side bars, a stempost extending rearward and upward from the bow, braces connecting the upper portion of the stempost with the side bars, sheet metal connected to and extending over the stempost, the bow, and the braces, and means for adjustably and detachably suspending the forward portion of the device from the hames of an animal.

1,297,174. ELECTRIC SWITCH MECHANISM. HARVEY H. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 29, 1915. Serial No. 24,782. 23 Claims. (Cl. 175—270.)

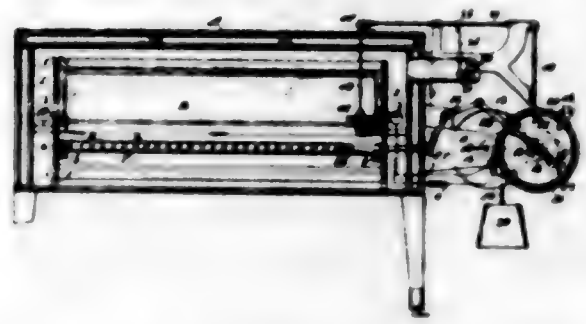


2. An electric switch comprising an operating mechanism adapted to be automatically tripped, an actuator arm for moving said operating mechanism into tripping position, a relay responsive to current through said switch for controlling said actuator arm, current adjusting means connected intermediate said actuator arm and said relay for holding said relay unresponsive to current through the switch below a predetermined amount, time adjusting means connected intermediate said actuator arm and said operating mechanism for causing said actuator arm to move with a delayed action, and means whereby said current and time adjusting means can be adjusted while the switch is closed.

1,297,175. EGG-TURNER. WILLIAM F. JEANS, Santa Rosa, Cal. Filed Dec. 18, 1917. Serial No. 207,652. 6 Claims. (Cl. 119—44.)

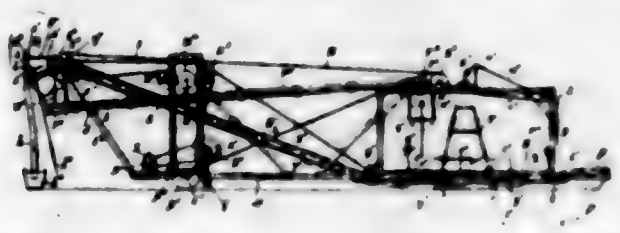
2. The combination with the egg supporting tray in an incubator, of a frame slidably mounted thereon, means

on said frame for turning the eggs, a driving member, means connected with the driving member for transmitting a reciprocal movement to the sliding frame, and



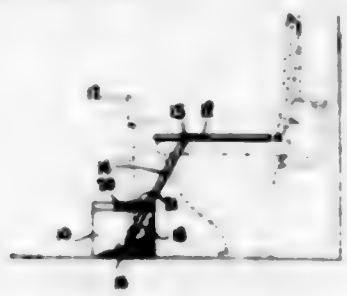
means actuated by temperature variations within the incubator for interrupting the movement of the driving member.

1,297,176. CONVEYER AND SEPARATOR. DETLEF LOUIS JOHNCK, Rocky Ford, Colo. Filed Dec. 28, 1918. Serial No. 268,723. 21 Claims. (Cl. 130—32.)



1. Apparatus of the character described comprising a dumping platform, an endless conveyer passing beneath said platform, an inclined grid at the delivery end of said conveyer, a hopper having an inverted V-shaped bottom beneath said grid, means for deflecting the foreign matter dropping through said grid to one side or the other of said hopper, as desired, a second hopper mounted above the dumping platform, and endless conveyers located at each side of the first mentioned hopper for carrying away the material screened through said grid and returning same to the second hopper, substantially as described.

1,297,177. CHILD'S SEAT. DALE B. JOHNSON, Iola, Kans. Filed Nov. 7, 1917. Serial No. 200,770. 3 Claims. (Cl. 155—22.)



1. The combination with a closet bowl, of a seat mounted thereon, a step adapted to be placed on the floor near the bowl, means connecting the step and seat and providing for adjustment between the elements last named for bowls of various heights, said means including a plurality of arms pivotally connected at one end with the seat permitting outward movement of the step along the floor, the arms being provided with slots at their opposite ends, and means for securing the slotted portions to the step.

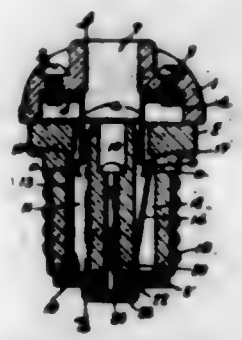
3. In a device of the class described, a seat portion, a step comprising a box-like member, a plurality of arms pivoted to the seat, said arms being slotted at their lower ends, and adjustable devices passing through the slots for connecting the arms with the step and permitting the positive engagement of the arms.

1,297,178. METAL ROOF CONSTRUCTION. JAMES D. JONES, Dunnville, Ky. Filed Nov. 8, 1917. Serial No. 200,182. 1 Claim. (Cl. 108—22.)



As a new article of manufacture, a roof construction comprising a plate formed from a rectangular sheet of metal and ribbed at spaced intervals in a longitudinal direction, two of the end portions being cut in an inward diverging direction to form a plurality of tongues, certain of said tongues being bent inwardly and under so as to lie parallel to the under surface of the plate while the remaining tongues are bent upwardly, thence inwardly and over so as to lie parallel to the upper surface of the plate, the formation of the tongues providing oppositely arranged V-shaped corner portions, the said corner portions upon the assemblage of plate adapted to overlie one another and establish a seal tight joint.

1,297,179. SEPARABLE PLUG. JOHN J. KENNEY, Pittsburgh, Pa., assignor to Best Electric Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Aug. 7, 1916. Serial No. 113,508. 8 Claims. (Cl. 173—343.)



1. An attachment plug having a separable cap and base, terminals carried by one of said members, said terminals having a curved end tongue, contacts carried by the other member, said contacts having a notch in the end thereof, and an inclined end, whereby said terminals and contacts engage and disengage by relative movement to lock the cap and base together.

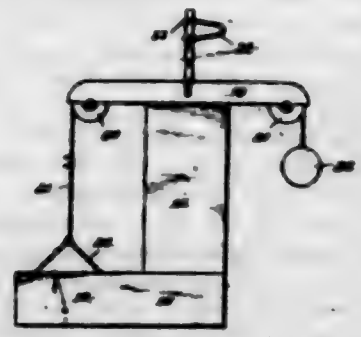
2. An attachment plug having a separable cap and base, terminals carried by the cap and contacts carried by the base, said terminals being formed of resilient metal and having a hump in the end thereof, said contacts being formed of resilient material and having a slotted offset portion at the end thereof adapted to engage said hump, whereby the terminal and contact members engage to lock the cap and base together.

3. An attachment plug having a separable cap and base, terminals carried by the cap and contact members carried by the base, said terminal members being formed with raised tongues in the ends thereof, and said contact members being formed with inclined slotted ends and an offset portion at the end of the slot, adapted to engage said humps on the terminal members, whereby to lock the cap and base by engagement of the conducting members.

1,297,180. EGG-BOILING TIMER. ARTHUR F. KILBOURNE, Rochester, Minn. Filed July 31, 1917. Serial No. 183,794. 3 Claims. (Cl. 161—16.)

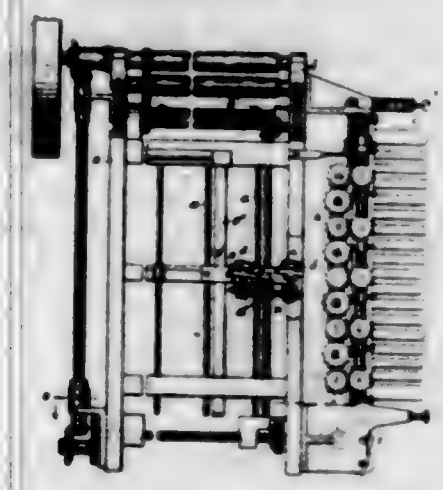
1. An apparatus of the class described comprising a reservoir, a weight operated member mounted for movement across said reservoir, a container carried by said member, a receptacle positioned to receive said container, an adjustable float operated element and a pivoted element having one end secured to the float operated element and its opposite end removably engaged with the

weight operated member, whereby said member may be adjustably held against movement.



3. An apparatus of the class described comprising a reservoir, a weight operated member mounted for movement across said reservoir, a container carried by said member, a receptacle positioned to receive said container, a pivoted locking element provided with a notch and located in the path of movement of the movable member and a tapered stop carried by said member whereby said member may be engaged in said notch and engageable with said locking element to automatically set the apparatus and hold the weight operated member against movement.

1,297,181. **PAPER-CONVEYING MECHANISM.** ROBERT E. KIMBALL, Cleveland, Ohio, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 12, 1914. Serial No. 824,238. 15 Claims. (Cl. 270—68.)



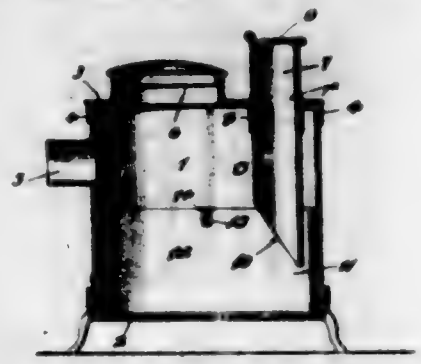
1. In paper-conveying mechanism, the combination with a guide having a continuous supporting face adapted to receive the edge of the folded sheet, of paired engaging rolls positioned intermediately of the guide, the axes of which are set at an angle with said guide, and means for driving said rolls to seat and advance the paper longitudinally of the guide, substantially as set forth.

1,297,182. **STALK-CUTTER.** FRED S. KING, Checotah, Okla. Filed Aug. 14, 1918. Serial No. 249,845. 1 Claim. (Cl. 55—61.)



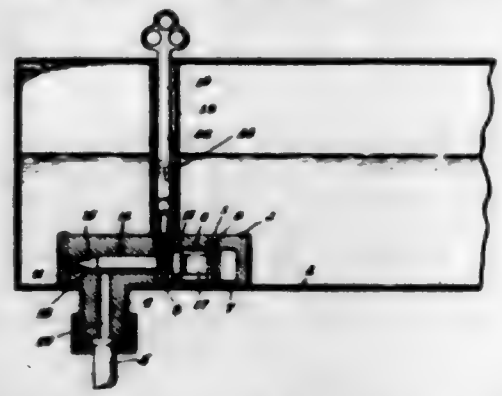
A stalk cutter for plows, comprising a rectangular frame having its inner end split and provided at the edges of the said split portion with parallel longitudinally extending arms designed to be arranged upon the opposite sides of a plow beam and to be secured thereto, standards hingedly connected to the forward end of the frame between the sides thereof, a cutter, a shaft therefor journaled in the lower ends of the standards, arched brackets secured to the sides at the forward end of the frame, each of said brackets having a series of concentrically arranged openings therethrough, each of the standards having a single opening designed to register with the openings in the said brackets, and a removable element passing through one of the openings in each of the brackets and through the openings in the standards for adjustably sustaining the standards and cutter with respect to the frame.

1,297,183. **STOVE.** CHARLES STEPHEN KINNEY, Paso Robles, Cal., assignor of one-half to Percy A. Lyle, Paso Robles, Cal. Filed Aug. 23, 1917. Serial No. 187,823. 1 Claim. (Cl. 126—65.)



In an airtight stove, a sheet metal casing whose side wall is straight throughout its height, a smoke outlet in said casing near its upper end, a removable sheet metal lining for said wall to shield the same against fire, the upper end of said lining being disposed immediately below said smoke outlet, a bottom secured to the lower end of said lining and forming therewith a fire and ash pan removable for emptying the ashes, said bottom resting throughout its area on the casing bottom, a removable cover for said casing having a fuel inlet and an opening spaced from said inlet, a one-piece vertical sheet metal draft inlet pipe slidable through said opening to permit raising of said pipe as the ashes accumulate, and a damper on the outer end of said pipe, the lower end of the latter being beveled in one direction to permit the entrance of air, even though the lower extremity of said pipe may rest on or extend into the ashes, said cover with its fuel inlet and said draft inlet pipe being removable bodily and said pipe having an external bead to rest on said cover and prevent said pipe from falling through the opening through which it extends.

1,297,184. **FLUID-CONTROL LOCK FOR TANKS.** ROBERT S. KLOPPENSTEIN and SOLON C. BAIRD, Wichita, Kans., assignors to The National Lock-in-Tank Company, Wichita, Kans., a Corporation. Filed Dec. 8, 1917. Serial No. 206,341. 2 Claims. (Cl. 137—27.)



1. A gasolene tank, a lock comprising a casing arranged in the bottom of the tank and provided with a

fuel inlet channel, a fuel outlet channel extending from and at an angle to the inlet channel, and also provided with a chamber, a needle valve arranged for movement in the fuel inlet channel and across the outlet channel, one end of said needle valve extending into said chamber and being provided with a head, a spring bearing against the head to normally hold the valve in closed position, a stud in said chamber and a key insertible in said chamber and on said stud to engage the head of the valve and move the latter to open position, said chamber communicating with the interior of the tank to admit gasolene thereto and prevent a key impression from being taken.

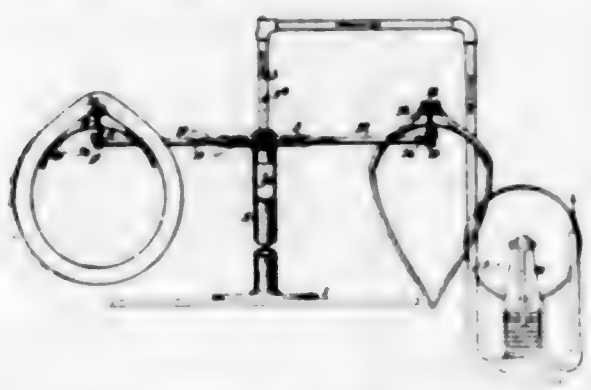
1,297,185. ELECTRIC STORAGE BATTERY. WILLIAM KNOBLOCK, Philadelphia, Pa., assignor of one-fourth to Carola Knoblock, one-third to William J. Graham, and one-third to John Lamon, Philadelphia, Pa. Filed May 18, 1918. Serial No. 235,225. 9 Claims. (Cl. 204—29.)



6. The combination with a pillar strap casing having a chamber and provided with a single terminal, of electrodes extending into said chamber, wedges positioned on opposite sides of said electrodes within said chamber, and each being provided on one side with a rack, and on its opposite side with a cutting edge, pinions engaging juxtaposed racks, and means to actuate said pinions.

8. The combination with a pillar strap casing having a chamber and provided with spaced apertures in its bottom and conical lugs surrounding said aperture, electrodes adapted to pass through said apertures and having a surrounding flange forming a seat for said lugs, and means within said casing to lock said electrodes with respect to it.

1,297,186. DEFLATING-MACHINE. HENRY P. KRAFT, Ridgewood, N. J. Filed Dec. 21, 1917. Serial No. 208,336. 18 Claims. (Cl. 154—8.)



1. A deflating machine for pneumatinc tires comprising a connection which receives a hollow valve housing, a suction pipe communicating with the tire through said connection, and instrumentalities arranged in the connection acting automatically to open the tire valve when the valve housing is applied.

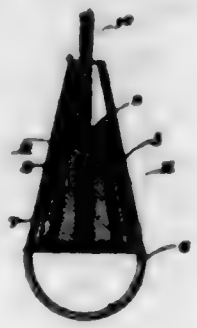
8. A deflating machine for pneumatic tires comprising a connection which receives a hollow valve housing, a suction pipe communicating with the tire through the connection, instrumentalities arranged in the connection acting automatically to open the tire valve when the valve housing is inserted, and a spreading device which engages the tire on opposite sides of the valve housing and separates its walls at the innermost end of the valve housing until all the air is substantially exhausted.

9. A deflating machine for pneumatic tires comprising a hollow support which receives a hollow valve housing, suction means communicating with the tire through said hollow support, and a spreading device comprising a pair of arms which are connected for simultaneous movement toward or from each other and are engageable with the tire on opposite sides of the valve housing acting to separate the walls of the tire at the innermost end of the valve housing until all the air is substantially exhausted.

14. A deflating machine for pneumatic tires comprising a hollow support which receives a hollow valve housing, suction means communicating with the tire through said hollow support, a spreading device comprising a pair of arms which are connected for simultaneous movement toward or from each other and are engageable with the tire on opposite sides of the valve housing acting to separate the walls of the tire at the innermost end of the valve housing until all the air is substantially exhausted, and a locking member coöperating with said arms and acting to hold them engaged with the tire while the air-exhausting operation takes place.

17. A deflating machine for pneumatic tires comprising a hollow support which receives a hollow valve housing, suction means communicating with the tire through said hollow support, a removable container having engagement with the support and embodying a barrel provided with lateral openings, a valve seat removably secured to the barrel, a reciprocatory valve arranged within said barrel and coöperating with the seat, a projection on the valve which engages said valve housing when the latter is inserted and moves away from its seat, and a spring housed within the barrel acting to seat said valve.

1,297,187. CABLE-SOCKET. HOMER M. LAMB, West Frankfort, Ill. Filed Aug. 19, 1918. Serial No. 250,533. 2 Claims. (Cl. 24—126.)

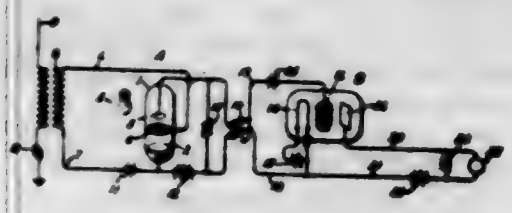


2. In a connecting socket for wire cables, ropes or the like, the combination of an outer casing of a hollow frusto-conical formation having at its widened end a bail, a sleeve of a frusto-conical formation received in the casing, a core formed of soft metal and also of a frusto-conical formation, and having a central opening therein to receive the wire or cable, the strands of the latter being divided and arranged around the bottom and over the sides of the core and directed over the sides of the sleeve, whereby if an outward pull is exerted on the cable the said strand will be forced into contacting engagement with the inner surface of the sleeve.

1,297,188. SYSTEM FOR AMPLIFYING VARIABLE CURRENTS. IRVING LANGMUIR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 29, 1913, Serial No. 797,965. Divided and this application filed Mar. 2, 1915. Serial No. 11,512. 3 Claims. (Cl. 179—171.)

1. The combination in an amplifying system of an electron discharge device having grid and plate circuits, means for supplying currents to be amplified to the grid

circuit, a second electron discharge device having plate and grid circuits and a non-inductive resistance which is



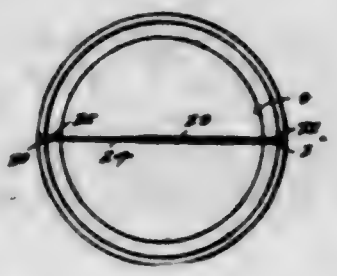
included in the plate circuit of the first device and the grid circuit of the second device.

1,297,189. DOOR-CHECK. MILES J. LAWLER, Denver, Colo. Filed Aug. 16, 1918. Serial No. 250,108. 8 Claims. (Cl. 16—62.)



1. A door check comprising a spring-controlled link adapted to be pivotally connected at one end with the door, a wedge movably connected with the other end of the link and a spring controlling the connection between the wedge and the link.

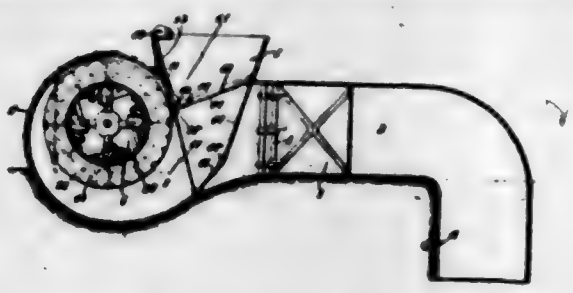
1,297,190. PIE-PLATE. JASPER C. LAWSON, Calexico, Cal., assignor of two-fifths to George Holloway, Calexico, Cal. Filed Apr. 3, 1917. Serial No. 159,461. 1 Claim. (Cl. 53—6.)



In a pan, a detachable wall for dividing the pan into sections, said wall including a pair of sections, one of said sections being bent back upon itself along its central longitudinal axis to form a pair of spaced side members, the other section being arranged to be slidably received between the side walls, and means formed on the opposite ends of the sections for engaging the pan to prevent accidental displacement thereof.

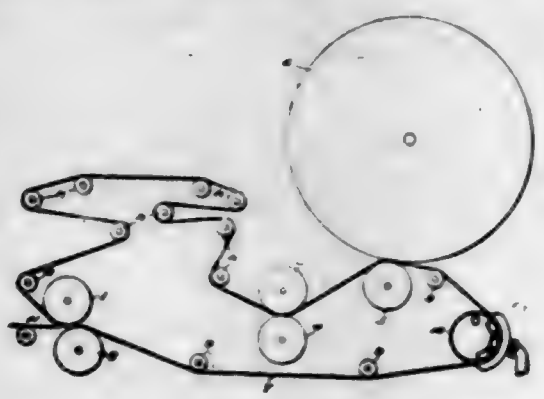
1,297,191. VENTILATING APPARATUS FOR MINES. DANIEL F. LEPLEY, Connellsville, Pa. Filed Sept. 19, 1917. Serial No. 192,164. 4 Claims. (Cl. 98—33.)

4. The combination with a fan casing having an end outlet and a top outlet, of front and back cleats upon the sides of the top outlet and converging downwardly, a curved deflector between the cleats at each side of the outlet, a sectional door adapted to close the end outlet, means for shifting the door to open the end outlet, said door, during such movement being partly folded, being drawn at its free end against the deflectors, and brought to position against the front and back cleats, a sealing strip upon one of the walls of the top outlet forming a pocket



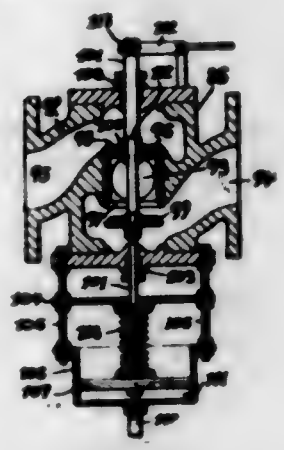
for the reception of the free end of the door when raised against the cleats, and sealing blocks insertible between the deflectors and the angle portion of the raised door.

1,297,192. PAPER-MAKING MACHINE. JAMES H. LE ROY and RAY G. REPMAN, Shawano, Wis. Filed Sept. 18, 1918. Serial No. 254,690. 1 Claim. (Cl. 92—49.)



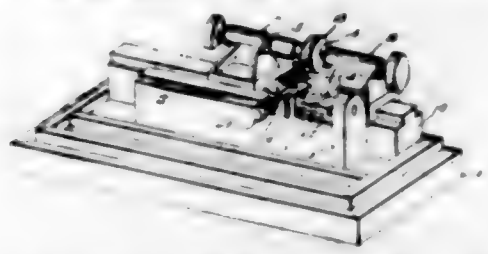
In a paper making machine of the class described, the combination of upper and lower couch rolls, upper and lower press rolls, a drier, a pressure roll below the drier, a suction roll, and a single endless felt, said endless felt passing between the couch rolls, the press rolls, between the pressure roll and drier, and also engaging the suction roll.

1,297,193. STEAM-REGULATING VALVE. CLAUS LEVINSEN, Brooklyn, N. Y. Filed Jan. 9, 1917, Serial No. 141,489. Renewed Feb. 6, 1919. Serial No. 275,458. 1 Claim. (Cl. 277—20.)



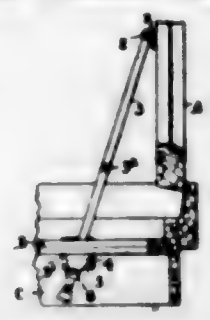
A valve mechanism comprising a casing having a steam inlet and two outlets, a valve stem, a valve fixed to the latter for controlling the communication between said inlet and one of said outlets, a second valve slidably mounted on said valve stem for controlling the communication between said inlet and said other outlet, pressure regulated means for operating said valve stem to close the said first named valve and permit the said slidably mounted valve to be opened by the steam passing through said steam inlet and means on said valve stem for closing said slidably mounted valve.

1,297,194. THREAD-LEAD INDICATOR. FRANK G. LINDGREN, Dayton, Ohio, assignor to The Sheffield Machine & Tool Company, Dayton, Ohio, a Corporation of Ohio. Filed May 9, 1918. Serial No. 233,570. 4 Claims. (Cl. 33—199.)



1. In a thread lead indicator, the combination with a slide support of a carriage slidingly movable on the latter, an indicating device slidingly movable on the carriage, a lever arm located on said carriage for operating said indicating device, having an end portion adapted to rest against the corresponding sides of the threads of the screw to be tested, a stop on said support, and measuring blocks adapted to be placed upon the latter between said stop and said carriage, to coöperate with the latter in testing the accuracy of the thread leads of said screw.

1,297,195. FASTENER FOR HINGED STRUCTURES. ROY ALSTAN LIPPINCOTT and EDWARD FIELDER BILLSON, Melbourne, Victoria, Australia. Filed Oct. 1, 1918. Serial No. 256,411. 2 Claims. (Cl. 268—15.)



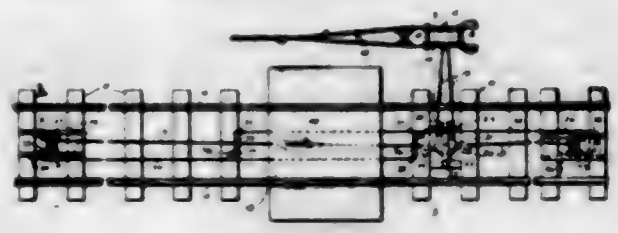
1. Controlling means for swinging closures, comprising in combination a swinging closure and its casing, a rod pivoted to the closure and provided with a notch, a casting pivotally mounted on the casing, said casting having a cylindrical body and an extension projecting therefrom, the casting having a rod receiving opening extending therethrough and a notch which communicates with the opening, an eye mounted in the extension and provided with a threaded stem, the eye being seated in the notch in the extension and adapted to engage the notch in the rod and the threaded stem passing through the extension, and a lock nut engaging the threaded extension.

1,297,196. ANTISKIDDING DEVICE. JULIAN CEDAS LOPEZ, Habana, Cuba. Filed June 8, 1918. Serial No. 238,920. 1 Claim. (Cl. 291—34.)



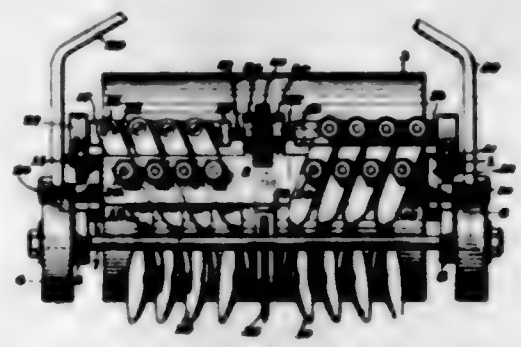
In combination with a vehicle and its running wheels, a sand receptacle secured to the vehicle frame, a discharging pipe for said receptacle, a plurality of branch pipes communicating with said discharging pipe and provided with nozzles at their free ends, a valve controlling the communication between said discharging pipe and said receptacle, said valve comprising a plate reciprocatingly fitted within the valve casing, a coil spring encompassing approximately one half of the valve casing and connected to the valve, a lever, and means for transmitting movement of said lever to said valve plate.

1,297,197. RAILROAD-GATE. ARTHUR C. LOUTHAN, Arcola, Ill. Filed Mar. 15, 1918. Serial No. 222,798. 2 Claims. (Cl. 246—300.)



1. In a railway gate structure, the combination with the normally open gate, a winding drum mounted between the rails at a point on the track remote from the gate, a cable connecting the drum and gate for closing the latter when the drum is turned, pawl-and-ratchet mechanism for holding the drum against retrograde movement, a trip located near the gate, and connections between it and said pawl; of a band rotatably mounted on the drum and having a rubber tire adapted to be struck by a shoe on an approaching car, and pawl-and-ratchet mechanism between the band and drum whereby movement of the former toward the trip will turn the drum, as described.

1,297,198. LAWN-RENOVATOR AND METHOD OF TREATING LAWNS. EDWARD C. LYDON, San Mateo, Cal. Filed Apr. 30, 1917. Serial No. 165,394. 5 Claims. (Cl. 97—28.)



1. In a lawn renovator, a frame, standards pivoted on said frame on horizontal pivots; disks on the lower ends of said standards; a bar connecting the upper ends of said standards and means on the frame for synchronously swinging said standards to adjust the disks laterally on the frame.

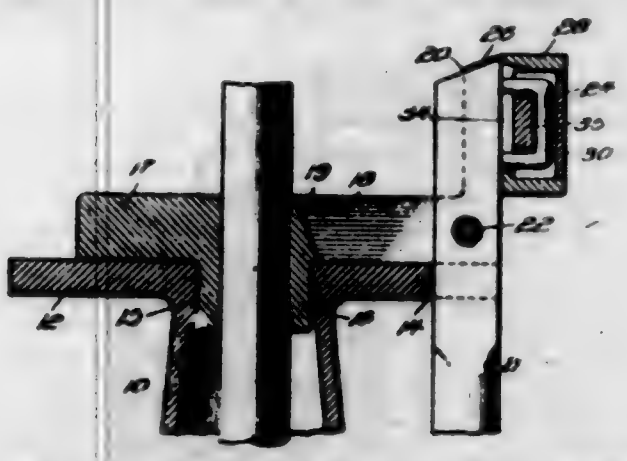
1,297,199. ATTACHING MEANS FOR REMOVABLE DENTURES. JOSEPH A. MCAULEY, West New York, N. J. Filed Mar. 4, 1918. Serial No. 220,886. 5 Claims. (Cl. 32—12.)



5. Supporting means for removable dentures comprising a base and an outstanding headed supporting rail carried thereby, a tubular attaching member engageable over said

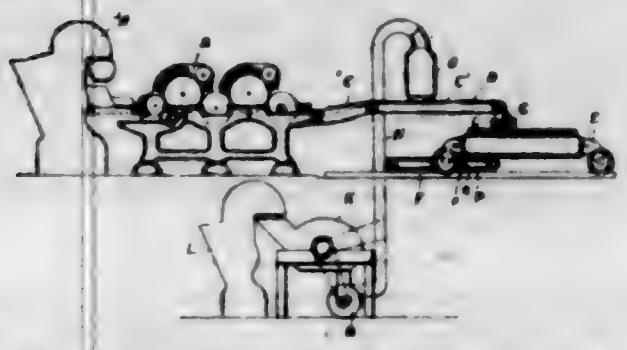
headed rail and open along one side thereof, and relatively narrow and stiff laterally outstanding flanges extending along the edges of said opening in the side of the tubular member to provide means by which the tubular member may be gripped for the purpose of adjusting said member and to reinforce said member for maintaining it in such adjusted condition.

1,297,200. SWITCH-LOCKING DEVICE. WILLIAM C. MCCORMICK, Granbury, Tex. Filed May 15, 1918. Serial No. 234,740. 2 Claims. (Cl. 246—414.)



1. In a device of the class described, the combination with a switch stand, a rotatable member supported thereby, an arm pivotally mounted and adapted to rotate said member when in a given position, and means for locking the arm, said means last named including a hasp carried by the arm, a resiliently mounted locking bolt engaging the hasp, and means for retaining the locking bolt at times in inoperative position.

1,297,201. BATTING AND METHOD OF AND APPARATUS FOR MAKING SAME. GEORGE POWER MCENTIRE, Topeka, Kans. Filed June 25, 1915. Serial No. 36,826. 7 Claims. (Cl. 19—10.)



2. Batting composed of a plurality of superposed single webs of carded cotton fibers and a thin layer of loose fibrous material evenly distributed between each of said carded webs.

4. Method of making batting which consists in carding fibrous material to form a thin fleece of felt-like character, disaggregating fibrous material and conducting the disaggregated material in suspension in air and depositing the same on the web in a thin, evenly distributed layer, and then lapping the fleece to form a bat.

6. Apparatus for manufacturing batting comprising a carding machine, a movable apron to receive the carded web from the carding machine, means for distributing loose fibrous material upon the web on the apron, and a lapping machine which receives the web from the apron and builds the same to a bat.

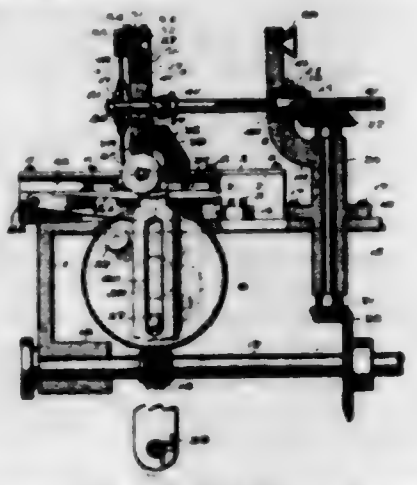
1,297,202. SAFETY NON-SLIPPABLE PEDAL PLATE OR CAP. PATRICK H. MCGINNAN, New York, N. Y. Filed Jan. 25, 1916. Serial No. 74,173. 5 Claims. (Cl. 74—561.)

1. A safety non-slippable pedal cap consisting of a plate having an upper anti-slipping surface and provided at the the front with a projecting portion for engaging the front of a foot pedal, said plate being also provided at opposite sides with lugs or enlargements forming projecting for engaging the side edges of said pedal, a clip bar or mem-



ber having terminal portions arranged opposite the lugs or enlargements and fastening devices connecting the clip bar or member to the lugs or enlargements.

1,297,203. TUBE-CUTTING MACHINE. SYLVESTER B. MCGUNIGAL, Washington, D. C., assignor to The Stone Straw Company, Washington, D. C., a Corporation of New Jersey. Filed July 13, 1917. Serial No. 180,303. 2 Claims. (Cl. 164—61.)



2. The combination with two frames, a main frame, a bearing block, a flexible shaft rotatably supported in the main frame and the bearing block and reciprocable in said main frame, a cutter disk on said flexible shaft, a roller carried by each movable frame, of a wheel having means thereon and operated thereby to cause the rollers on the two movable frames to be engaged at predetermined intervals to cause said frames to move in their prescribed paths.

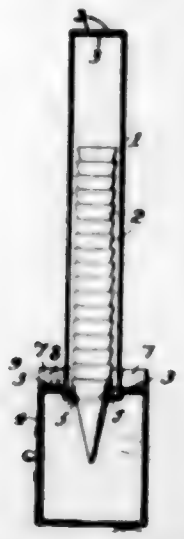
1,297,204. PROCESS FOR PREPARING DRIED SWEET CORN. JOHN W. MCLANE, Washington, D. C. Filed Apr. 2, 1918. Serial No. 226,301. 1 Claim. (Cl. 99—11.)

A process for preparing dried sweet corn for table use consisting in boiling sweet corn on the cob, removing the whole grains of corn from the cob, drying the grains of corn so removed, grinding the shelled corn, and subjecting the ground material to the action of air current for effecting the removal of the coating or outer layer of the corn.

1,297,205. ICE-CREAM-CONE DISPENSER. ALEXANDER MCLAREN, Dayton, Ohio. Filed July 22, 1915. Serial No. 41,391. 3 Claims. (Cl. 211—8.)
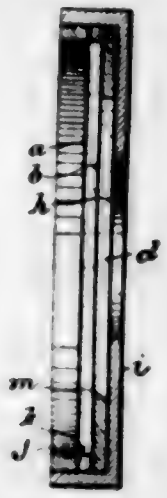
3. An apparatus for dispensing articles of the character referred to comprising a stand or support having an aperture formed in its top and provided with a plurality of upwardly extending studs, a carton or case having its lower end open and communicating with the aperture in the stand top, and having laterally extending flaps at said open end, said flaps being separated one from another to straddle the said studs, a block surrounding the lower

end of the carton and engaging said studs, and clamping said flaps close against the top of the stand, and means



arranged to support a series of nested articles within the carton and permit the successive withdrawal thereof through the aperture in the stand top.

1,297,206. MEANS FOR DETECTING SOUNDS. DUNCAN MCLENNAN, Croydon, England. Filed Oct. 13, 1917. Serial No. 196,548. 6 Claims. (Cl. 181—32.)



1. A sound transmitting or receiving compound diaphragm comprising diaphragms arranged parallel to each other, means for connecting the peripheral portions of said diaphragms and liquid inclosed within the space formed by said diaphragms the portion of the diaphragms exposed to the liquid being of different effective area.

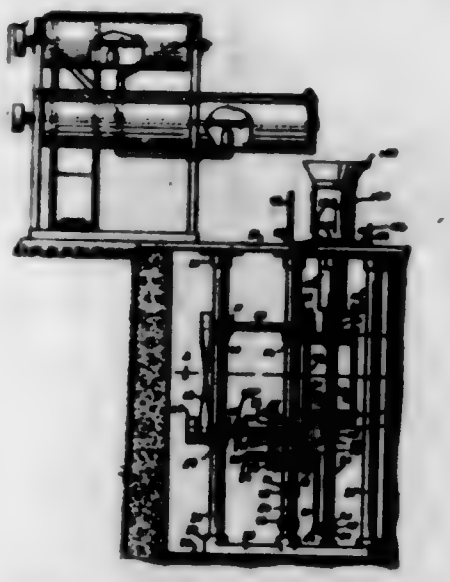
1,297,207. NIPPLE. MARGARET H. MCMANN, New York, N. Y. Filed Jan. 2, 1918. Serial No. 209,999. 3 Claims. (Cl. 128—18.)



1. A nipple provided with a continuous annular skirt, a breast portion merging into the skirt, the said skirt having walls which increase in thickness from its base toward the breast and which are provided with substantially alined lateral portions arranged interiorly and exteriorly respectively of the nipple at the juncture of the skirt with the breast.

2. A nipple provided with an internal portion adapted to engage beneath the mouth of a nursing bottle, an external bead arranged approximately in the same line with said internal portion and extending at an outward and upward angle to the vertical axis of the nipple, and a continuous annular flared skirt lying below said internal portion and merging directly thereinto.

1,297,208. PIPE-MAKING MACHINE. THOMAS A. MCMURTRIE, Los Angeles, Cal., assignor of two-thirds to John A. Fiskive, Los Angeles, Cal. Filed Mar. 26, 1917. Serial No. 157,499. 8 Claims. (Cl. 25—38.)



1. A pipe forming machine comprising a stationary structure; a frame mounted in said structure to slide vertically; a shaft revolubly mounted at its lower end in said frame, vertically thereof, to move therewith; a core mounted on the upper end of said shaft; a packer head detachably mounted on said core; tampers on said packer head; a mold mounted on said stationary structure concentric with said core; means to rotate said shaft and core; and means to impart a vertical reciprocative movement to said frame, said tampers being adapted, during each upward movement of said core, to draw a portion of plastic material beneath the same, and upon the down movement of the core to tamp said material, whereby said core is caused to advance into said mold in a series of step-by-step movements.

1,297,209. HOLDBACK DEVICE FOR VEHICLE-POLES. HARRY MCTAVISH, Eldon, Prince Edward Island, Canada. Filed Apr. 15, 1918. Serial No. 228,759. 2 Claims. (Cl. 21—92.)

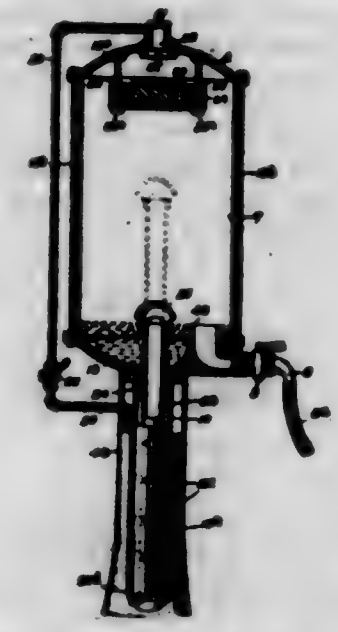


1. In a hold-back device for neck yokes on vehicle poles and tongues, a metal strip or frame plate perforated along its body and having near each end a screw hole, a second metal plate having screw holes registering with those in the frame plate, and screws through said holes for securing the two plates together and to the under side of a pole, said second plate having its body offset downwardly near the screws and spaced in parallel relation to the frame plate below the same, said body provided with a slot along its middle, a block guided to slide between said two plates and in said slot and having near its rear end a fixed hook projecting down through the-

slot, and near its front end inserted a vertically slidable spring-pressed pin with a finger catch on it and arranged to interlock with the different perforations in the frame plate.

2. The structure specified in claim 1, and a spring arm secured to the block forward of its hook and normally bearing with its free end against the inner side of the point of the hook, so as to positively prevent escape of the neck yoke ring from the hook and also prevent damage to the spring arm from bending it too much.

1,297,210. LIQUID-MEASURING APPARATUS. GEORGE W. MACKENZIE, Jr., Rochester, Pa., assignor to Guarantee Liquid Measure Company, Rochester, Pa., a Corporation of Delaware. Filed Oct. 10, 1916, Serial No. 124,823. Renewed Mar. 18, 1918. Serial No. 223,251. 8 Claims. (Cl. 221—100.)



1. In combination, a measuring tank, a pipe leading from a source of supply to the measuring tank, a vertically movable conduit extending from the measuring tank into said first named pipe and having a sliding connection with the upper end thereof and providing by its upper end a level-defining delivery and return terminal, means for locating said conduit at any predetermined position, means for exhausting the air from the measuring tank, and means for drawing off its contents.

3. In combination, a measuring tank, a main reservoir, a telescopically adjustable two-piece conduit providing for supply and return flow between the main reservoir and the measuring tank, and a splash coping on said conduit.

5. In combination, a measuring tank, means for producing a vacuum therein, a main reservoir, a conduit vertically adjustable relative to said tank providing for supply and return flow between the main reservoir and the measuring tank, and means for adjusting and locating said conduit at various heights.

6. In combination, a measuring tank having a discharge conduit, a main reservoir, a conduit between the tank and reservoir, said conduit comprising a stationary tubular member between the tank and reservoir and a vertically adjustable tubular member within the stationary member providing for supply and return flow between the main reservoir and the measuring tank, means for effecting a flow of liquid upwardly through said conduit into the measuring tank, and means for adjusting and locating said conduit at various heights.

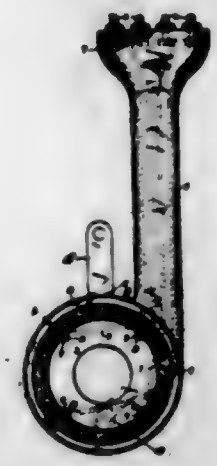
1,297,211. ELECTRIC-LIGHT BRACKET. GEORGE C. MAGINNIS, Sardis, La. Filed Jan. 10, 1918. Serial No. 211,212. 2 Claims. (Cl. 240—67.)

1. A device of the character described including a universally mounted tube, a disk formed on the outer end of the tube and provided with an arcuate slot, another tube telescoped within the first tube, a disk connected to the second tube, a peripheral flange on the last mentioned disk for embracing the first mentioned disk, fastening means carried by the last mentioned disk and operating in the slot so as to coöperate with the slot in limiting partial rotatable movement of the tubes with respect to each other, and a lamp bulb connected to the outer end of the second tube.



2. A device of the character described including a pair of telescopically engageable tubes partially rotatable with respect to each other and one of which is universally mounted, a yoke carried by the outer end of the other tube, radially serrated ears formed at the terminals of the yoke, a reflector formed with a head, oppositely disposed and radially serrated bosses formed on opposite points of the head, trunnions projecting centrally from the bosses for engagement through the ears for swingingly supporting the head in the yoke, the resiliency of the yoke assuring of the yielding engagement of the ears with the bosses whereby the head may be maintained in different positions of angular adjustment with respect to the yoke, a lamp bulb mounted in the head, and conducting wires oppositely arranged in the head and through the tubes.

1,297,212. TIMING DEVICE FOR EXPLOSIVE-ENGINES. JOSEPH H. MALHOIT, West Haven, and ALFRED O. POIRIER, New Haven, Conn. Filed July 26, 1917. Serial No. 182,852. 2 Claims. (Cl. 123—167.)

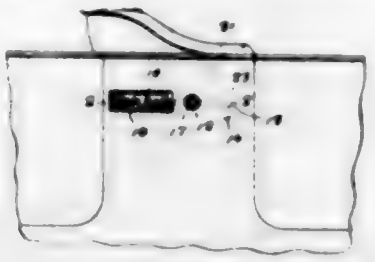


2. A timing device of the class described comprising a casing, a block of insulating material mounted in the said casing, contacts mounted horizontally in said block, a timing ring mounted entirely within the said casing, a ring of insulating material fixed to said timing ring, shoes mounted on the inside of the insulating ring in the timing ring, and adapted to have their edges engage with said contacts in the block, and means for moving said timing ring.

1,297,213. EXPLOSIVE. ALEXANDER JOSEPH MARIN, Stockholm, Sweden. Filed May 29, 1918. Serial No. 237,237. 2 Claims. (Cl. 52—1.)

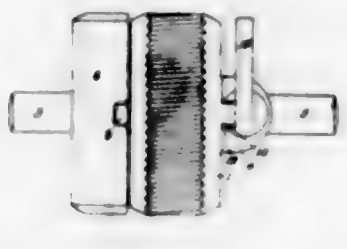
1. A process for preparation of compressed solid safety explosives, detonating freely in the open air with the detonation of a No. 6 detonator, consisting in mixing in a damp state 28 to 34 parts by weight of a nitronaphthalene with 72 to 66 parts by weight of an oxydising mixture composed of 47 parts by weight of ammonium perchlorate and 34 parts by weight of sodium nitrate, the mixture thus prepared being compressed to form any desired shape and in such a manner that its specific gravity is between 1.3 and 1.62 after drying.

1,297,214. AUTOMOBILE LOCK AND SIGNAL. JAMES E. MARSHALL and THEODOR J. VOLZ, Caney, Kans. Filed Dec. 29, 1917. Serial No. 209,513. 3 Claims. (Cl. 40—67.)



1. A combined signal and circuit breaker for automobiles having a slot in the body thereof, a pivoted element disposed in the space between the metal paneling and lining of the car, a signal registering with said slot and indicative of the owner's absence from the car, key actuated means for locking said element normally in a position to complete the circuit, and to conceal the signal from view, said element gravitating to a position to break said circuit and expose the signal, and said element being returned to active position through the instrumentality of the key.

1,297,215. SECTIONAL COAL-AUGER NUT. JULIUS HARWOOD MASON, Duncan Falls, Ohio, assignor of one-half to Spencer M. Garrett, Muskingum county, Ohio. Filed July 22, 1918. Serial No 246,251. 3 Claims. (Cl. 255—46.)

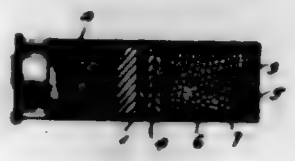


1. In a sectional coal-auger nut, the combination with one of the nut sections provided with a lock having a key-hole and a slot communicating with said key-hole, and also having a key provided with a head having a slot adapted to register with said lock slot, of the other nut section provided with a lug adapted, in closing said nut sections, to pass into said registering slots and clear through said key-head slot and into said key-hole, and to be locked therein by means of said key-head, substantially as described.

2. In a sectional coal-auger nut, the combination with one of the nut sections provided with a lock having a key-hole and a slot communicating with said key-hole, and also having a key provided with a head having a slot adapted to register with said lock slot; and also having means in combination with said key adapted to adjust it longitudinally in said key hole, of the other nut section provided with a lug adapted, in closing said nut sections, to pass into said registering slots and clear through said key-head slot and into said key-hole, and to be locked therein by means of said key-head, substantially as described.

3. In a sectional coal-auger nut, the combination with one of the nut sections provided with a lock in combination with a key, said lock having communicating key-holes and a resultant annular shoulder, the upper key-hole communicating with a slot; and said key having a head adapted to enter and longitudinally to be adjusted in the upper key-hole, and also provided with a slot adapted to register with the slot in said upper key-hole, the shank of said key being adapted to pass through and to extend beyond said lower key-hole, said extended end being provided with screw threads, and being combined with a nut adapted to adjust said key, longitudinally, in said key holes; and a spiral spring being combined with said annular shoulder and key head, and adapted to support said key-head in locking position, of the other nut section provided with a lug adapted, in closing said nut sections, to pass into said registering slots and clear through said key-head slot and into said upper key-hole, and to be locked therein by means of said key-head, substantially as described.

1,297,216. SHELL. AUGUST E. MATTSUS, Gilby, Alberta, Canada. Filed Sept. 6, 1918. Serial No. 252,908. 2 Claims. (Cl. 102—15.)



1. A composite missile comprising a casing, a weight added to the casing to govern its flight and shot or bullets inclosed within the casing and adapted to gradually leave the same when the missile is in flight.

1,297,217. RULING DEVICE. GRANT E. MENDELL, Chicago, Ill. Filed Mar. 16, 1918. Serial No. 222,890. 1 Claim. (Cl. 120—43.)



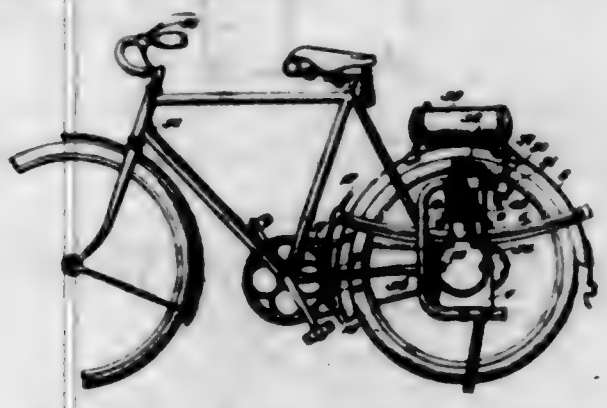
A device of the character described including a holder, spaced arms provided on one end thereof, a rotatably mounted marking element between the arms, a guide projecting from one of the arms, an arcuate pad support seated between the arms, a pad mounted in the support and arranged in proximity to the outer edge of the marking element for applying ink thereto, a screw carried by one side of the support and extending through the opposite side and removably engaged in the adjacent arm, and an adjustable element for engagement with the outer end of the screw for coöperating with the adjacent arm in retaining the pad and the support in position.

1,297,218. MOTOR-WHEEL. JOSEPH F. MERKEL, Flushing, N. Y. Filed Sept. 28, 1916. Serial No. 122,607. 18 Claims. (Cl. 180—33.)

1. A motor-wheel for bicycles comprising a rigid frame pivotally attached to the rear forks of the bicycle, resilient means for limiting the pivotal motion of said frame about the rear forks, a road-wheel partly between the rear forks of the bicycle and rotatably mounted upon said frame at a point rearward of the point at which the frame is pivoted to the forks, and a motor carried by said frame and driving said road-wheel.

2. An attachment for bicycles comprising a frame pivotally attached to the forks of the bicycle, resilient means

limiting the pivotal motion of said frame with relation to said forks, and a road-wheel mounted upon said frame at a point spaced apart from the point at which said frame is pivoted to said forks.

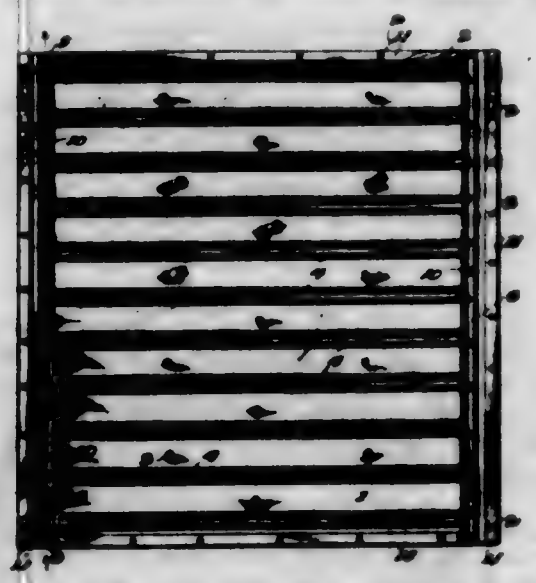


3. An attachment for bicycles comprising a frame pivotally attached to the forks of the bicycle, a road-wheel mounted upon said frame at a point spaced apart from the point at which said frame is pivoted to said forks, frame sides rigidly secured to said frame, and resilient means connecting said frame sides to the frame of the bicycle.

4. An attachment for bicycles comprising a frame pivotally attached to the rear forks of the bicycle, a road-wheel partly within said forks rotatably mounted upon said frame at a point spaced apart from the point at which said frame is pivoted to said forks, frame sides rigidly connected to said frame and surrounding said road-wheel, and resilient means connecting said side frame with the frame of the bicycle.

5. An attachment for bicycles comprising a frame pivotally attached to the rear forks of the bicycle, a road-wheel partly within said forks rotatably mounted upon said frames at a point spaced apart from the point at which said frame is pivoted to said forks, frame sides rigidly attached to said frame, surrounding said road-wheel and lying within said forks, and resilient means connecting said frame sides with the frame of the bicycle.

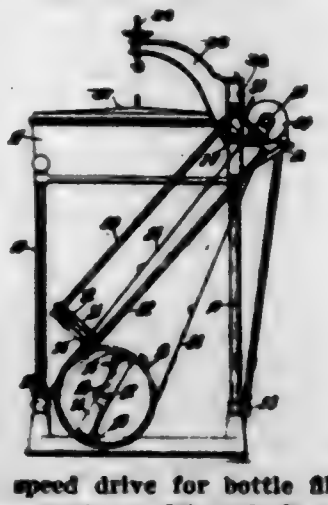
1,297,219. HOT PLATE OR PLATEN FOR PRESSES. LOUIS G. MURRITT, Lockport, N. Y. Filed Mar. 13, 1918. Serial No. 222,165. 12 Claims. (Cl. 144—281.)



1. A platen comprising opposite face plates and interposed plate separating and heating pipes having thick walls to sustain said plates against the pressure of the press.

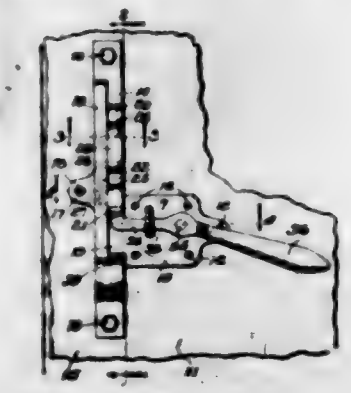
1,297,220. VARIABLE-SPEED DRIVE. GEORGE J. MEYER, Milwaukee, Wis. Filed Nov. 22, 1915. Serial No. 62,707. 2 Claims. (Cl. 74—31.)

1. A variable speed drive for bottle filling machines and the like, comprising a driving shaft, a cone-faced pulley thereon, a motor driven cone-faced pulley, a belt connecting the pulleys, suitably mounted supporting brackets a rock shaft journaled therein, belt hooks fixed on the rock shaft and embracing the belt at positions where the belt approaches the pulleys, and a hand screw having engagement with one of the belt hooks and one of the brackets respectively.



2. A variable speed drive for bottle filling machines, comprising corner posts, a drive shaft, a supplemental frame consisting of a bracket adapted for conection with the upper end of one of the corner posts and inclined brace rods connected with the bracket and having clamps at their ends for connection with the lower ends of adjacent corner posts, a cone-faced pulley on the drive shaft, an electric motor on the bracket, a cone-faced pulley driven thereby, a belt connecting the pulleys, arms on the supplemental frame, a shaft loosely mounted in the arms, belt hooks adjustably mounted on the shaft and engaging the belt at points where the belt approaches the pulleys, and a hand screw connected with one of the belt hooks and one of the arms for turning the shaft to shift both belt hooks simultaneously.

1,297,221. DOOR-CATCH. EDWARD MIKKELSEN, Chicago, Ill. Filed Mar. 28, 1918. Serial No. 225,314. 10 Claims. (Cl. 70—42.)



1. A door catch comprising door and frame members, a spring actuated latch for connecting said members, and a manually operable releasing trip for said latch, said parts having cam faces for forcing the door toward its jamb when said latch is operative and for forcing the door open when said trip is actuated.

2. A door catch comprising door and frame members, a latch for connecting said members, and a manually operable releasing trip for said latch mounted on said door member and having means coöperating with a part on said frame member for forcing the door away from its jamb and in a direction transverse to the plane of the door.

3. A door catch comprising a plate adapted to be secured to the outer face of the door and having a lug adapted to project beyond the outer edge of the door, a frame member adapted to be secured to the outer face of the door jamb and having a vertically disposed rib, said rib and the main body of said frame member forming an angular seat, a vertically movable, spring actuated latch bolt slidably mounted in said seat with its inner edge

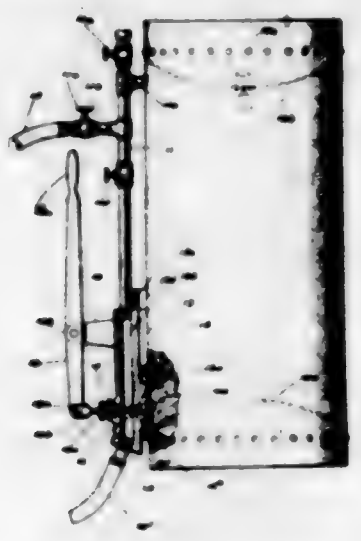
substantially in alinement with the inner edge of said frame member, said bolt having a nose at its lower end arranged to hook over said projecting lug, a handle pivoted on said door plate to swing parallel to the face of the door and having a projecting trip arm arranged to engage and release said latch bolt, substantially as described.

1,297,222. CAPSTAN-SCREW. GEORGE A. MOORE, Medford, Mass. Filed July 11, 1917. Serial No. 179,889. 1 Claim. (Cl. 85—9.)



A steel capstan screw comprising a threaded portion, a head, and three radially disposed wings joining the head and threaded portion, the wings making angles of approximately 120° with respect to each other, and holes being formed through the wings at their intersections, said angles permitting said holes to be drilled by means of drills ground for efficient work in steel.

1,297,223. SAND-BLAST APPARATUS. WILLIAM P. MOTT, Chicago, Ill. Filed May 12, 1915. Serial No. 27,546. 4 Claims. (Cl. 51—12.)



1. In a device of the class described, a shell for containing sand provided with an aperture in the side thereof, a ring member attached to said shell around said aperture, a casing member having a bossed portion constructed and arranged for attachment to said ring and further provided with an aperture arranged to communicate with the aperture in said shell, said casing being further provided with a duct communicating with the aperture therein, means operable at will to close or open said communication of said duct with said aperture, said means comprising a plug valve, a stem attached thereto, said casing being provided with a stuffing box, said stem being slidably mounted in said stuffing box, and a lever operatively attached to said stem.

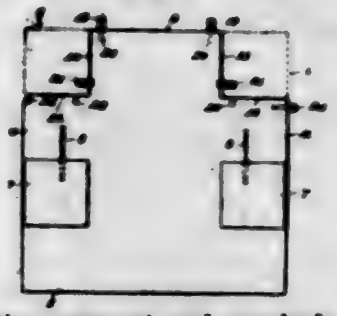
1,297,224. COMBINED CABINET AND AUTOMOBILE-REPAIR TRUNDLE-PLATFORM. FREDERICK A. MUELLER, Indianapolis, Ind. Filed Apr. 12, 1917. Serial No. 161,680. 1 Claim. (Cl. 45—37.)

A combined cabinet and trundle platform for automobile repair work comprising a hollow cabinet body, a detachable door forming a closure therefor having inner and outer plane surfaces from end to end, said door being provided with rolling supports on the inner surface thereof, having short supporting members, said rolling supports being adapted to be received within the hollow cabinet body when the door is closed, the rolling supports being adapted to carry the door on the floor to constitute a



trundle platform for repair work under an automobile body.

1,297,225. COMBINATION-GARMENT. BERTHA B. MYRES, Los Angeles, Cal. Filed Feb. 19, 1916. Serial No. 218,075. 3 Claims. (Cl. 2—60.)

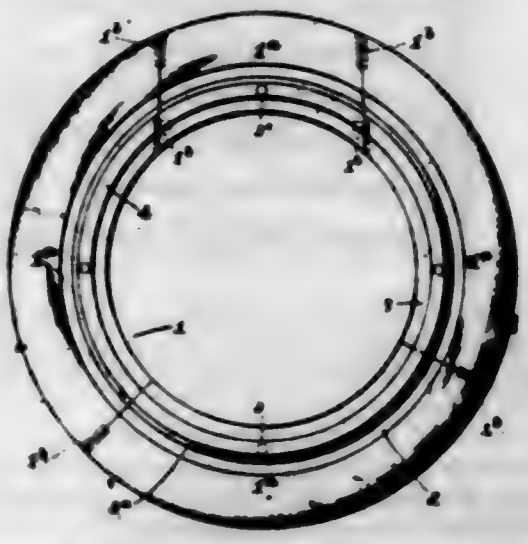


1. A combination garment and sunshade comprising a fabric sheet having rectangular back, top and side portions, the top portion being secured to the upper edges of the side portions to adapt it to extend at right angles to said back and side portions.

2. A combination garment and sunshade comprising a fabric sheet having rectangular back, top and side portions, the top portion being secured to the upper edges of the side portions to adapt it to extend at right angles to said back and side portions, said side portions formed with arm receiving slits, and pockets on said side portions.

3. A combination garment and sunshade comprising a rectangular back portion the ends of which form side portions, a rectangular top portion formed on the back portion in continuation thereof having its end edges secured to the upper edges of the side portions whereby the garment is fashioned with a box like end adapted to extend over and conform to a rectangular frame to serve as a sunshade and adapted on connecting the side portions around the person to form the shoulder and collar portions of a garment.

1,297,226. SEPARABLE CORE. JAMES H. NESBITT and JOHN C. LAURITSEN, Akron, Ohio, assignors, by direct and mesne assignments, of one-third to said Lauritsen and two-thirds to The Williams Foundry and Machine Company, Akron, Ohio, a Corporation of Ohio, (organized in 1917.) Filed Mar. 6, 1918. Serial No. 782,404. 9 Claims. (Cl. 18—48.)



1. A core of the character described comprising a plurality of separable sections having inwardly extending

portions provided with grooves, which, in the assembled condition of the sections, provide an annular channel and an annular locking ring adapted to be forced into and out of said channel by a substantially direct axial movement and to be retained in locking position by frictional engagement.

1,297,227. MAIL-BOX. IGNATIUS A. OSIWALA, Detroit, Mich. Filed Apr. 29, 1918. Serial No. 231,842. 1 Claim. (Cl. 232—43.)



In a mail box of the character described, having a vertical base plate, and a substantially rectangular hollow receptacle secured thereon, a hinged bottom for said receptacle, having rounded front and rear edges, an eye attached to the inner front end of said bottom, a block at the inner wall of said base plate, an eye secured to the lower face of said block, and an elastic element fastened with one end to said first named eye and with its other end to the eye in said block, a flat strip ending in an outwardly extending hook-like element providing a grip for lowering said bottom against the tension of said elastic element, substantially as described and for the purpose set forth.

1,297,228. STRUCTURAL MEMBER. RUSSELL A. OSMUN, New York, N. Y. Filed May 4, 1917. Serial No. 166,262. 7 Claims. (Cl. 189—34.)



1. Structural elements comprising a plurality of building members, a plurality of holding members, said building members provided with registering apertures, said apertures provided with securing lugs formed in the sides thereof, and said holding members provided with apertured tongues fitting over said lugs and firmly securing said building members together.

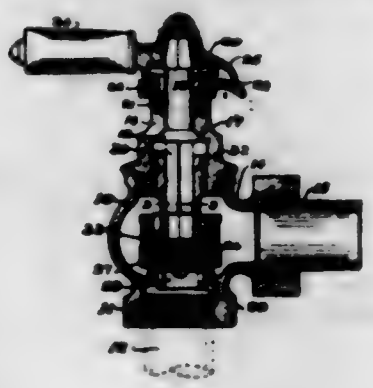
2. Structural elements comprising a plurality of building members provided with overlapping ends and having registering apertures formed therein, holding members provided with slotted ends fitting in said apertures of said building members, lugs formed in one side of each aperture and formed to fit in the slots formed in said slotted ends of said holding members for firmly locking said building members together and holding said holding members against accidental displacement therefrom.

3. Structural elements comprising a plurality of building elements provided with overlapping ends and having registering apertures formed therein, lugs formed upon the periphery of said apertures, holding members provided with projecting ends adapted to fit in said apertures and cooperate with said lugs for holding said building members in assembled relation and preventing the accidental displacement of said holding members therefrom.

4. Structural elements comprising a plurality of building members provided with overlapping ends, said overlapping ends provided with registering apertures formed therein, said registering apertures provided with lugs formed in the sides thereof, a holding member, said holding member provided with overhanging clip portions adapted to extend over the upper edges of said building members, said holding members also provided with laterally extending fingers fitting in said apertures for holding said holding members in proper alinement, said laterally extending fingers provided with elongated apertures formed therein adapted to fit over said lugs whereby said holding members will be held against accidental displacement from said building members.

5. Structural elements comprising a plurality of building members provided with overlapping ends and having a plurality of registering apertures formed therein, holding members carried by said building members, said holding members provided with laterally extending spring fingers being gradually curved to constitute a frictional engaging portion, said spring fingers fitting within said apertures, and means carried by said holding members for overhanging the upper edges of said building members and facilitating the holding of said building and holding members in assembled relation.

1,297,229. SUPPLY-VALVE FOR VAPOR, VACUUM, AND STEAM HEATING SYSTEMS. LEWIS F. OSTRANDER, St. Louis, Mo., assignor of one-half to J. F. EMPERSON, Indianapolis, Ind. Filed Nov. 20, 1916. Serial No. 132,979. 1 Claim. (Cl. 251—151.)

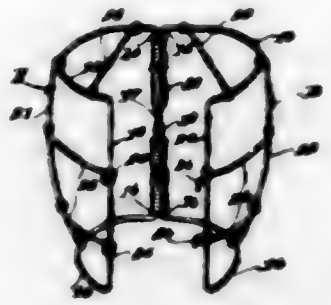


The combination with a supply valve housing having a vertically disposed cylindrical portion at its upper end, of a disk mounted on said cylindrical portion near the upper end of the latter and capable of being moved vertically or rotated upon the cylindrical portion of said housing so as to be adjusted in position, a set screw passing through said disk and adapted to engage the cylindrical portion of the housing for locking said disk in its adjusted position, the outer portion of which disk is curved gradually downward, the top of said disk being provided with guiding marks, a valve operating handle arranged above and close to said disk, and a short guide finger formed integral with the inner end of said handle, which guide finger is curved gradually downward so that its lower outer end travels in a path directly above the guiding marks on the top of the disk, but leaves said marks always exposed.

1,297,230. HEATING ATTACHMENT FOR GAS-LAMPS. BERT M. PADDISON and CLOYD G. EARLENBAUGH, Akron, Ohio. Filed Oct. 16, 1917. Serial No. 196,928. 1 Claim. (Cl. 126—262.)

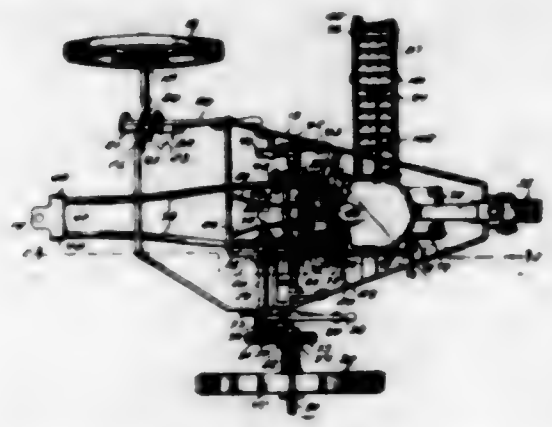
A heating vessel support for a gas lamp including a pair of vertically disposed and outwardly bowed frames, each of the frames having a horizontal transverse bar on

the upper end thereof, the rear of the frames being formed with vertical bars, means for connecting the



front portions of the frames, and wire members coiled around the said rear bars to form a hinge whereby the frames are movably connected together.

1,297,231. BEET-HARVESTER. ELTON J. PAGE, Franklin, Nebr. Filed Aug. 14, 1917. Serial No. 186,173. 2 Claims. (Cl. 55—108.)



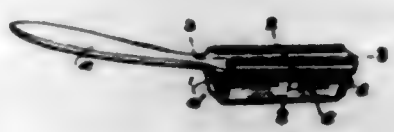
1. A wheeled carrying frame, a pair of digger carrying beams, a platform connected with and extending rearwardly from the beams, said platform having a longitudinal slot extending rearwardly from the front edge thereof, idle sprockets supported at the front end of the platform adjacent to the sides of the slot, vertical shafts supported on the platform adjacent to the rear end of the slot, said shafts having intermeshing gears, means for driving one of said shafts, a star wheel on one of said shafts below the platform, a ledger plate at the rear end of the slot coöperating with the star wheel to form a cutting apparatus, sprocket wheels on the vertical shafts and chains trained over said sprocket wheels and over the side sprockets at the front end of the platform.

1,297,232. OPHTHALMIC MOUNTING. HAROLD K. PARSONS, Southbridge, Mass. Filed Nov. 30, 1917. Serial No. 204,650. 11 Claims. (Cl. 88—50.)



1. A fingerpiece lever having an aperture formed therethrough and having an integral pivot reinforcing portion drawn up therefrom and surrounding the aperture, said wall having an upwardly tapering outer face.

1,297,233. GUARD FOR BRUSHES, VINCENT PASTORE, New London, Conn. Filed May 10, 1918. Serial No. 233,636. 1 Claim. (Cl. 15—13.)



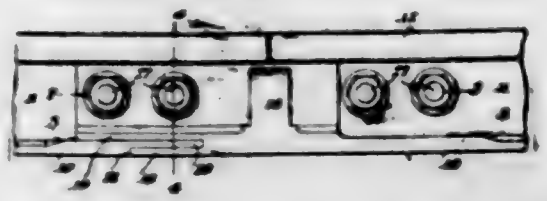
A brush shield and guide consisting of a shell of non-resilient material adapted to inclose the brush end and formed with a slotted opening and with guide ribs *g*—*h*; the end portions of the said shield being bent diagonally outward.

1,297,234. TATTING-SHUTTLE. CHARLES E. PATRICK, Colorado Springs, Colo., assignor of one-half to Allietta A. Craig and Thomas P. Craig. Filed June 5, 1917. Serial No. 172,976. 1 Claim. (Cl. 66—10.)



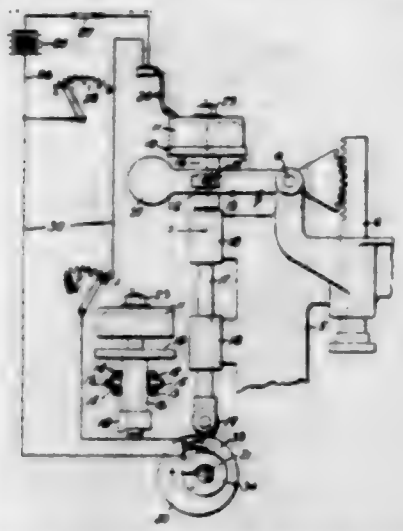
A shuttle comprising a plurality of side members deflected toward each other, in a gradual curve from the central portion thereof toward each end of the respective members, a spool supporting device comprising a tubular member having an unobstructed end portion, said tubular member being carried by one side member and provided with walls extending at right angles with each other, certain of said walls oppositely located being longer than others of said walls also oppositely located with reference to each other, the walls last mentioned being provided with engaging means and the walls first mentioned with flanged securing means, engaging devices on the other side member of the shuttle coöperating with the engaging means on the walls of the spool supporting device and a spool comprising a tubular portion, rectangular in cross section, and flanges connected with the tubular portion, said flanges being spaced slightly from the ends of said tubular portion, the edges of the flanges engaging the deflected side members of the shuttle and the ends of the tubular portion also engaging the side members, whereby the side members are braced at a plurality of points and the curvature of the deflected portions is maintained.

1,297,235. RAIL-JOINT. CHARLES A. PATTON, Pendleton, Oreg. Filed Oct. 29, 1918. Serial No. 260,119. 2 Claims. (Cl. 239—8.)



1. A rail joint embodying identically formed rail ends, each of said ends comprising a longitudinally extending offset from the web of the rail for engagement within the fishing space of the adjacent rail end, a horizontally disposed slot extending through one-half of the base flange of the rail, the opposite half of the base flange being cut away and a tongue extending from the end of the last mentioned half of the base flange for engagement in the horizontal slot of the adjacent rail end.

1,297,286. MAGNETIC-CLUTCH-CONTROLLING METHOD AND APPARATUS. KARL B. PFEILER, Hartford, Conn., assignor to Hartford Fairmont Company, Canajoharie, N. Y., a Corporation of New York. Filed Dec. 16, 1915. Serial No. 67,103. 19 Claims. (Cl. 172—239.)



1. The method of regulating the strength of a magnetic clutch, which consists in varying the electrical energy supplied to the magnet in timed relation to the work of the clutch.

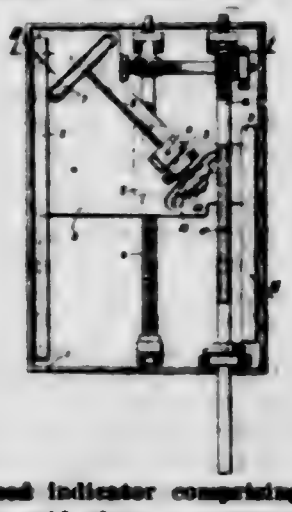
4. The combination with an electro-magnetic clutch, of means for varying the electrical energy supplied to the clutch magnet in timed relation to the operations of the clutch.

6. The combination, with an electro-magnetic clutch, of means for automatically varying the electrical energy supplied to the magnet for the periods at which the magnet engages and releases its armature.

13. The combination with an electro-magnetic clutch, of a cam imparting a succession of movements to one of the members of the clutch, and means for varying the magnetic strength of the clutch during said movements, including an electrical circuit connected with the magnet member, a rheostat in the said circuit, an auxiliary circuit shunting the said rheostat, a second rheostat in the auxiliary circuit, and automatic means operating in timed relation to the said cam for opening and closing said auxiliary circuit.

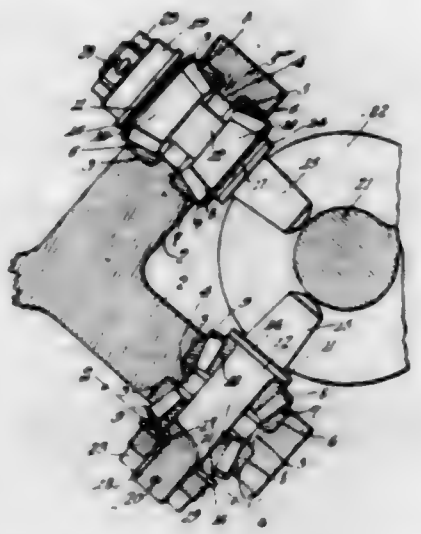
15. The combination, with a magnet and its armature, of means for moving one of these members toward and from the other, and means timed with the said movements for regulating the holding power of the magnet, giving it initial strength for seizing the armature, and then changing the power of the magnet to a predetermined releasing strength, whereby the magnet and the armature are separated upon meeting a predetermined resistance to their united movement.

1,297,237. SPEED-INDICATING DEVICE. HENRI PETIT, Ermont, France. Filed Aug. 25, 1917. Serial No. 188,240. 2 Claims. (Cl. 235—61.)



1. A mean speed indicator comprising a plate, means for imparting, to said plate, a movement of translation proportional to the speed of a rotating body, the mean speed of which it is desired to ascertain, a rotatable shaft, a finger carried by the shaft and moving in a straight line calculated from a given point of time, a pivoted member having a rectilinear groove therein in which said finger slides, the pivot point of said member coinciding with the position of the finger at zero time point, and an indicator of the mean speed associated with and operated by said finger.

1,297,238. ROLLING TOOTH FOR WORM-WHEELS. WILLIAM Q. PFAHLER, Toledo, Ohio. Filed Sept. 24, 1918. Serial No. 255,455. 2 Claims. (Cl. 74—36.)



1. In a device of the class described, a wormwheel having a laterally extended flange provided on its opposite sides with recesses, and having an internal shoulder separating the recesses; anti-friction bearings in the recesses and engaged with the shoulder; a rotatable tooth extended through the bearings and having a flange engaging one bearing; a washer on the tooth and engaging the other bearing, the washer having a tongue, and the tooth having a slot receiving the tongue; a castle nut threaded on the tooth and coöperating with the washer; and a pin in the tooth, the pin engaging the castle nut.

1,297,239. TIRE-INFLATION VALVE. JOHN W. POTTER, Ardmore, Okla. Filed Oct. 31, 1917. Serial No. 199,508. 1 Claim. (Cl. 116—1.)



A tire inflation valve, comprising a body provided with a longitudinal passage having an air inlet at one end and an air outlet at the other end for connection with the tire, a valve chamber extending laterally from the body intermediate its ends and having an air outlet, and also provided with a passageway opening into the aforesaid passage, a partition in the valve chamber dividing the same into two sections one of which communicates with the longitudinal passage through the aforesaid passageway, and the air escape port of said chamber leading from the other section thereof, a valve in said last-mentioned section, a spring engageable with said valve for opening the same, and a valve in the second-mentioned chamber adapted to cut off the last-mentioned valve from the pressure in the chamber.

1,297,240. AUTOMATIC MACHINE-GUN. WILLIAM H. PHITCHETT, Cartersville, Ga. Filed Dec. 22, 1916. Serial No. 138,525. 18 Claims. (Cl. 42—3.)

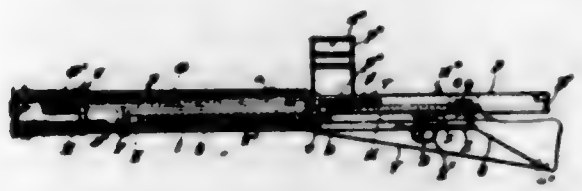
1. In an automatic gun, the combination with a receiver, of a reciprocating breech bolt comprising a single

piece slidably mounted therein adapted to be forced rearward by the powder gases, a main spring mounted in said receiver directly in rear of said breech bolt for returning said breech bolt to the closed position, a firing pin slidably mounted in said breech bolt, means for lock-



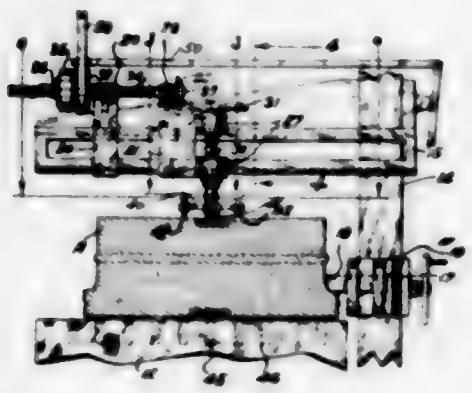
ing said firing pin to said breech bolt during the reciprocating movement of said bolt, and means for automatically releasing said firing pin and allowing it to fly forward under its own inertia when the breech bolt reaches the closed position, substantially as described.

1,297,241. AUTOMATIC RIFLE. WILLIAM H. PRITCHETT, U. S. Marine Corps. Filed July 17, 1917. Serial No. 181,133. 19 Claims. (Cl. 42—3.)



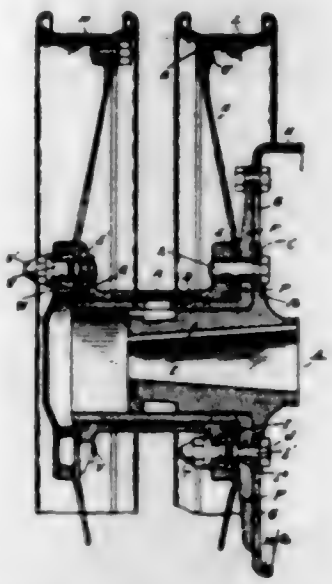
2. In an automatic gun, the combination with a barrel and receiver connected thereto, provided with locking notches on each side thereof, of a breech bolt mounted to reciprocate in said receiver, and provided with a locking block hinged thereto, adapted to engage in said notches when the breech bolt is in the firing position, a spring-impressed firing pin slidably mounted in said breech bolt, a gas cylinder with a gas vent connecting said cylinder to the interior of said barrel, a motor piston mounted in said cylinder and provided with a piston rod and return spring, a slide connected to said piston rod adapted to reciprocate in said receiver, and means including the said block operated by the said slide for reciprocating said breech bolt, and for cocking and releasing said firing pin, substantially as described.

1,297,242. PLANER ATTACHMENT. WILLIAM J. PROSSER, Denver, Colo. Filed July 1, 1918. Serial No. 242,754. 5 Claims. (Cl. 29—30.)



4. The combination with a planer having a bed and an overhanging vertically adjustable frame, of a journal block adjustably mounted on said frame, a vertical power driven shaft mounted in said block, a live stock on the lower end of the shaft, and means on the planer bed in alinement with said shaft and upon which a block to be operated upon is adapted to rotate.

1,297,243. CONVERTIBLE DUAL-WHEEL CONSTRUCTION. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 28, 1918. Serial No. 219,564. 7 Claims. (Cl. 21—69.)



1. The combination with a hub for a single wheel having a radially-extending flange, of a sleeve member attachable to said hub and projecting beyond the same, the inner end of said sleeve having a radially-extending annular flange lying adjacent to the flange of the hub, a pair of disk wheel members engageable with said sleeve, a spacer-sleeve intermediate said disks having radially-extending flanges at its opposite ends, clamping means for securing the inner flange to the flanges of said hub and sleeve, and clamping means for securing the outer disk.

2. The combination with a hub member for a single wheel having a radially-extending annular flange, of a sleeve member attachable to said hub and projecting beyond the same, said sleeve member having a radial annular flange lying adjacent to the flange on said hub and projecting beyond the same, a brake-drum having an inwardly-extending flange secured to the projecting portion of the flange on said sleeve and in the plane of the flange on said hub, a pair of disk wheels engageable with said sleeve at opposite ends thereof, a spacer sleeve engageable with said first-mentioned sleeve and having flanges at its opposite ends adjacent to said disk wheels, a series of coöperating studs and nuts for clamping the inner flange of said spacer sleeve to the flange of the hub to secure the inner disk wheel, a clamping member for the outer disk wheel forming a cap for the end of said hub and sleeve, and a series of coöperating studs and nuts for securing said clamping member to the outer flange of said spacer sleeve.

3. The combination with a hub member for a single wood-spoke wheel having an integral radially-extending annular spoke-clamping flange, of a sleeve for engaging the outer cylindrical surface of said hub and projecting beyond the same, the inner end of said sleeve having a radially extending annular flange of a greater width than the flange of said hub, a brake-drum having an inwardly-extending flange secured to the projecting portion of the flange of said sleeve and lying in the plane of the flange of said hub, a series of studs secured to the hub flange projecting through registering apertures in the sleeve flange, a disk wheel fitting said sleeve, lying adjacent to the sleeve flange and apertured for engagement with said studs, a spacer sleeve member having a flange at its inner end for engagement with said studs and a flange at its outer end forming a seat for an outer disk wheel, a series of studs projecting outward from said outer flange, a wheel disk apertured for engagement with said studs, a cap and clamping member also engageable with said studs, and coöperating nut members for the studs of the inner and the outer flanges to clamp said wheel disks to the hub.

1,297,244. DISPENSING DEVICE. CHARLES H. RAUEN, Seattle, Wash. Filed July 26, 1915. Serial No. 41,876. 8 Claims. (Cl. 221—86.)



1. A dispensing vessel having a cap, a discharge tube passing through the cap with its receiving opening facing toward the body of the vessel, and a measuring cup within the vessel having its opening facing away from the body of the vessel and surrounding the receiving end of the discharge tube, said measuring cup and the discharge tube being relatively adjustable to vary the separation of the bottom of the cup and the receiving opening of the tube.

4. A dispensing vessel having a measuring cup therein, the edges of the cup being spaced from the top of the vessel and the sides of the cup being spaced from the sides of said vessel, means within the vessel for supporting the cup, and a tube extending through one wall of the vessel and its lower end terminating within and below the upper edge of the cup, and spaced from the sides of the cup.

6. A dispensing vessel having therein a measuring cup spaced from the top and sides of the vessel, a ring engaging the upper open end of the cup, and on which the cup may be vertically adjusted, means for supporting the ring on the inside of the vessel, a tube extending through the top of the vessel and terminating in the cup below the upper edge thereof, the lower end of said tube being spaced from the sides of the cup.

1,297,245. ATTACHMENT FOR BLOW-TORCHES. JOHN REDDICLIFFE, Hamilton, Ontario, Canada. Filed Aug. 5, 1918. Serial No. 248,428. 1 Claim. (Cl. 113—105.)

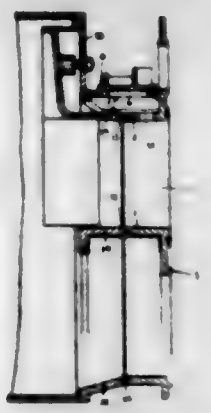


The combination with a blow torch having a nozzle support upon which is mounted a laterally extending nozzle, of a member including a collar having a bayonet slot, said collar designed to be received on the nozzle and to be turned to bring the nozzle support in the lateral passage of the bayonet slot, integrally formed longitudinally extending arms on the opposite edges of the collar at the end thereof opposite that through which the longitudinal passage of the bayonet slot passes, a soldering point designed to be received between the outer ends of said arms, and pivotal compressing means between the arms and the point.

1,297,246. PROCESS OF MAKING CALCIUM OR OTHER METAL NITROCARBID. JAMES HENRY REID, Newark, N. J., assignor to International Nitrogen Company, a Corporation of Delaware. Filed June 28, 1915. Serial No. 36,659. 8 Claims. (Cl. 23—13.)

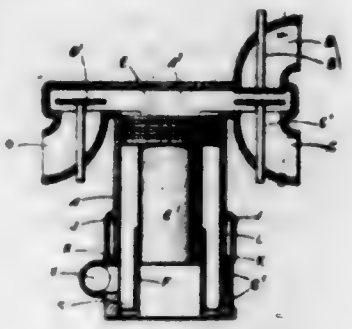
1. The process of making metal nitro-carbid which comprises introducing a molten metal carbid into an atmosphere of nitrogen, which is under super-atmospheric pressure, and maintaining the association of the ingredients until nitrogen has combined therewith.

1,297,247. FURNACE-FRONT. JOHN REID, New York, N. Y. Filed Dec. 16, 1918. Serial No. 266,958. 2 Claims. (Cl. 110—172.)



1. A furnace front comprising a front plate having integral walls extending rearwardly therefrom forming sections of the fuel passage and ash pit, a back plate approximately the same size as the said front plate and parallel therewith and having integral walls extending forwardly therefrom to the aforesaid integral walls and forming therewith the fuel passage and ash pit passage, packing introduced between the opposing end surfaces of said integral walls, and bolts securing said front and rear parts together.

1,297,248. INTERNAL-COMBUSTION ENGINE. HARRY RALPH RICARDO, London, England. Filed Sept. 4, 1917. Serial No. 189,644. 13 Claims. (Cl. 123—59.)

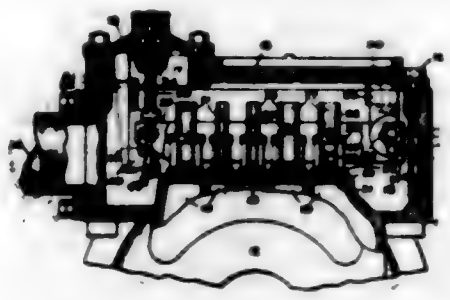


1. In an internal combustion engine operating on the four-stroke cycle the combination of a plurality of cylinders not less than three in number, a piston in each cylinder, a valve-controlled inlet port adjacent to the head of each cylinder, ports in the wall of each cylinder positioned where they will be uncovered by the piston toward the end of its outstroke, a source of supply of compressed air, means for delivering compressed air from this source of supply to the piston controlled ports of each cylinder, and means for delivering compressed air from the source of supply to the valve-controlled inlet port of each cylinder as set forth.

1,297,249. VALVE-GEAR. RICHARD H. RICE, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 29, 1917. Serial No. 177,840. 4 Claims. (Cl. 137—158.)

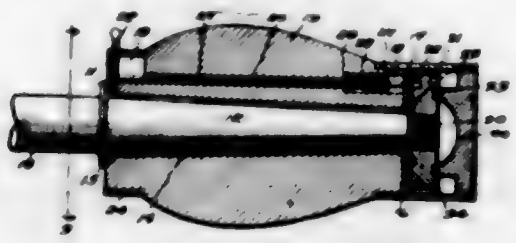
1. In a turbine having a rotor with buckets thereon, the combination of an elastic fluid chest, passages leading from the chest to the turbine buckets, a series of valves located in the chest for said passages, a lever also located in the chest for successively engaging and lifting said

valves, a frictionless pivot for one end of said lever, a rod extending through a wall of the chest for lifting the



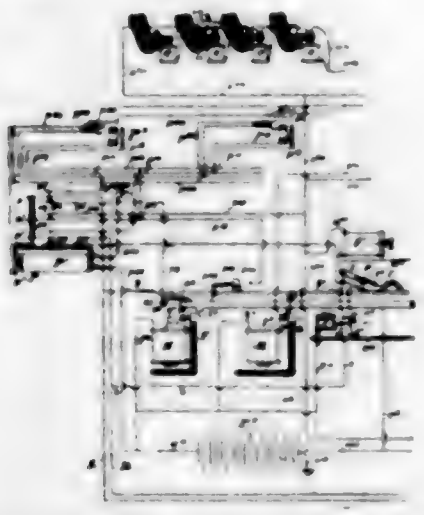
lever, and a frictionless pivot connecting said rod to the other end of said lever.

1,297,250. VEHICLE-HUB. EMMA HART RIORDAN, South Rutland, N. Y. Filed Dec. 31, 1917. Serial No. 209,752. 1 Claim. (Cl. 21—30.)



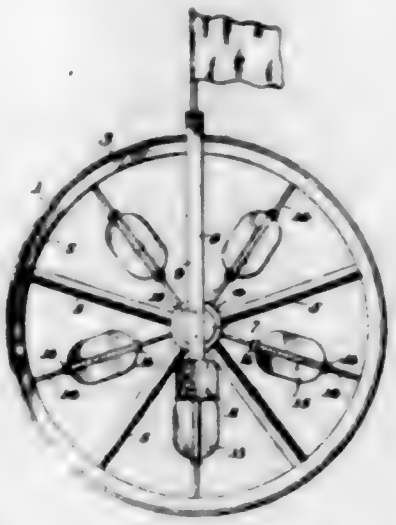
In combination an axle provided with a spindle, a hub rotatably mounted upon said spindle, said hub being provided at one end thereof with an opening, an annular band mounted upon one end of said hub and provided therein with an opening, a plurality of tongues carried by said band and protruding into the second named opening, a spring member carried by said band and arranged within the second named opening in proximity to said tongues, a plate disposed upon one end of said hub, a nut carried by said spindle and provided therein with an aperture, a boxing ring carried by said nut and adapted to engage said plate, a reciprocatory rod carried by said hub, said rod being bent at one end to form a handle, said handle being confined within the first named opening and projected through the opening of said ring and adapted to be retained in position by said spring, and a coil spring carried by said rod, said coil spring being adapted to normally retain said rod in engagement with the aperture carried by said nut.

1,297,251. TELEPHONE SYSTEM. HOMER J. ROBERTS, Evanston, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed June 3, 1901. Serial No. 62,941. 151 Claims. (Cl. 179—27.)



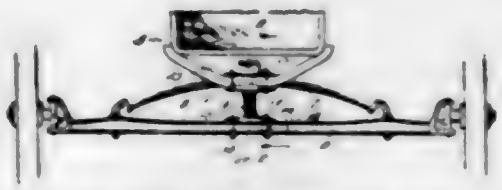
1. In a telephone system, the combination with a plurality of exchange stations interconnected by one or more trunk lines and a plurality of subscribers' stations connected with each exchange, of means for automatically selecting and establishing connections between said subscribers and any given one of said exchange stations comprising independently moving trunk elements forming trunk terminals, independently movable selector elements individual to and forming terminals of the subscribers' lines, a plurality of normally disconnected directing relays, and means controlled by said directing relays for automatically establishing circuit connections between the selector elements and the trunk elements.

1,297,252. COASTING-WHEEL. JOHN A. RUDSILL, Lewistown, Mont. Filed July 12, 1918. Serial No. 244,619. 1 Claim. (Cl. 46—48.)



A coasting wheel of the class described having radially arranged spoke rods and also having vanes mounted for rotation on the spoke rods.

1,297,253. SHOCK-ABSORBER. HENRY FLOYD SANDERS and EDWARD C. DISBENNETT, Caruthersville, Mo. Filed Mar. 29, 1918. Serial No. 225,442. 1 Claim. (Cl. 267—19.)

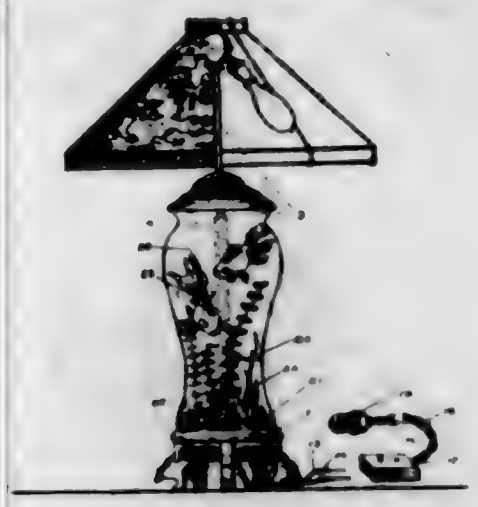


In an automobile spring suspension, an axle, an angle-iron supporting member, a leaf spring having an intermediate portion thereof confined between the flanges of said angle-iron supporting member, a plate secured to said angle-iron supporting member, said angle-iron supporting member and plate completely inclosing that portion of the spring confined between the flanges of said angle-iron supporting member, a pair of flanges carried by said plate, said flanges being spaced from each other and having engagement with opposite sides of said angle-iron supporting member, a post carried by said plate, a second plate secured to said axle, the second named plate being provided with flanges having engagement with opposite sides of said axle, a post carried by the second named plate, the second named post having its axis coincident with the axis of the first named post, and a spring having engagement with said plates and retained in position with respect to the same by said posts.

1,297,254. ILLUMINATED AQUARIUM. NATSUO SATO, San Francisco, Cal. Filed June 14, 1918. Serial No. 239,980. 1 Claim. (Cl. 119—5.)

An ornamental aquarium comprising a glass bowl having at the center a glass tube extending upwardly from the bottom of the bowl to a height above the level of the

water therein, said tube having a watertight connection with the bottom of the bowl, a stand for supporting the bowl, a pipe extending through the glass tube, its lower end being removably secured in a hole in said stand, a

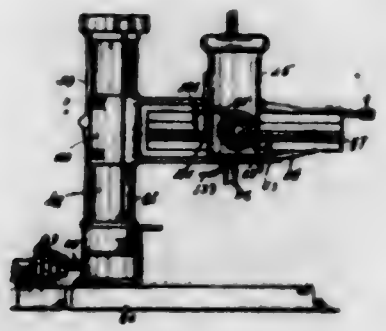


hollow support for electric lamps secured upon the top of said pipe, a lamp shade supported by said support, and a lamp cord extending through the pipe into said hollow support for connection with the lamp sockets.

1,297,256. TANNING PROCESS. SIGMOND SAXE, New York, N. Y. Continuation in part of application Serial No. 48,879, filed Sept. 3, 1915. This application filed Mar. 4, 1918. Serial No. 220,287. 4 Claims. (Cl. 144—4.)

1. The process of making relatively heavy leather, such as sole leather and the like, which comprises partially tanning hide in relatively weak vegetable tan liquor until it is struck through, and then filling the partially tanned hide by treatment in the drum with a stronger liquor comprising osage orange wood extract.

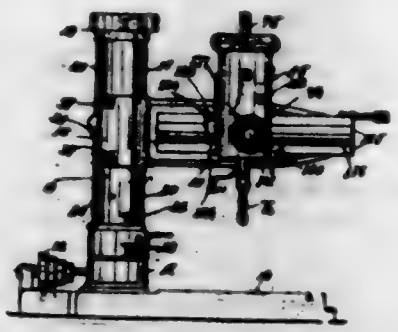
1,297,258. DRILLING-MACHINE. HERMAN W. SCHATZ, Norwood, and AUGUSTUS M. SOSA, Cincinnati, Ohio, assignors to The American Tool Works Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 10, 1917. Serial No. 190,653. 20 Claims. (Cl. 74—58.)



1. In a drilling machine, the combination of a drill-spindle, an internal gear and an external gear about said drill-spindle, and variable speed gearing arranged for operative connection with said drill-spindle through said internal gear and said external gear respectively for selectively causing low-gear ratio effect and high-gear ratio effect upon said drill-spindle.

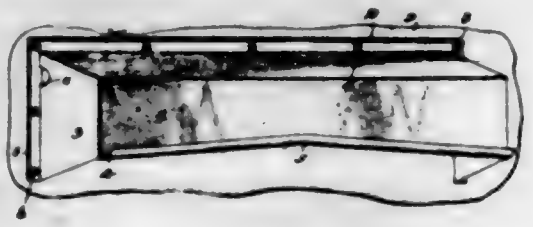
1,297,287. DRILLING-MACHINE. HERMAN W. SCHATZ, Norwood, Ohio, assignor to The American Tool Works Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 22, 1917. Serial No. 197,903. 15 Claims. (Cl. 77—32.)

1. In a drilling machine, the combination of a drill-spindle, an internal gear and an external gear about said drill-spindle for rotating the same, driving means, means selectively operatively connecting said driving means with said internal gear and said external gear, said last-named means including a shiftable member, a control member for causing reversals of rotation in said driving means, and



a shiftable member with which said last-named shiftable member has operative connection whereby to reverse the control effect of said control-member in said reversals of rotation in said driving means.

1,297,258. MOTOR-SHIELD. LORENZ C. SCHULZ, Detroit, Mich. Filed Aug. 16, 1918. Serial No. 250,178. 2 Claims. (Cl. 180—90.)



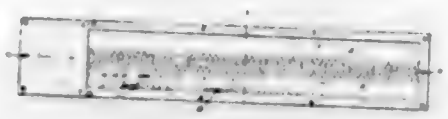
1. The combination with the dash of a motor vehicle, of a protector fastened to the front of the dash and comprising an imperforate forwardly sloping top wall, a substantially vertical front wall, end walls, and a central crowned gutter projecting forwardly from the bottom of said front wall and sloping in opposite directions toward the ends of the protector.

1,297,259. TRACTION-WHEEL. HERMAN SCHUT, Brandt, S. D. Filed Mar. 30, 1917, Serial No. 158,660. Renewed Jan. 14, 1919. Serial No. 271,160. 4 Claims. (Cl. 21—209.)



1. A traction wheel comprising a rim, a circular row of spurs mounted on the inner side of said rim and adapted to be projected outwardly through openings therein, a bell crank lever adjacent each spur and each lever pivoted at one end to a spur, a bearing for each lever fixed on the rim, an annular rod or bar adjacent the row of spurs and within said rim, connections between the free ends of the bell crank levers and said bar and means for moving said bar circumferentially to rock the bell crank levers and project and retract the spurs.

1,297,260. **PHOTOMETER.** CLAYTON H. SHARP, White Plains, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 26, 1916. Serial No. 116,965. 2 Claims. (Cl. 88—23.)



1. A photometer comprising a casing having an elongated comparison aperture, a comparison lamp in said casing adjacent one end of said aperture, and a photometric element mounted in said casing to be exposed through said aperture and to be illuminated from one end by said lamp and colored to cause the light reflected from said element to have the same color value as the light transmitted through the comparison aperture.

1,297,261. **CURTAIN AND SHADE HOLDER.** WILLIAM A. SHEARER and CHARLES V. BRUCH, Gas City, Ind. Filed Oct. 2, 1918. Serial No. 256,554. 2 Claims. (Cl. 156—22.)



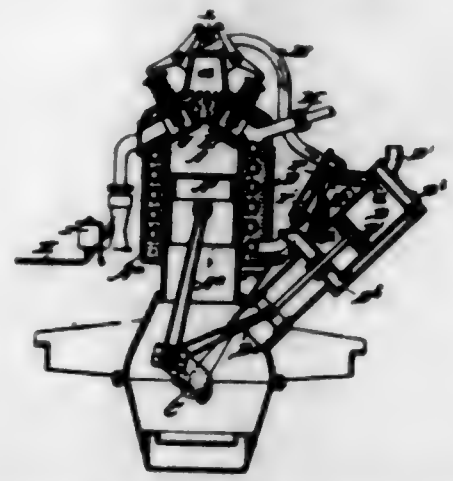
1. As a new article of manufacture, a combination curtain and shade bracket comprising a body provided with an outwardly extending shade supporting spring arm projecting at right angles from said body, said body provided with a socket formed thereon for receiving a curtain supporting means, a thumb screw supporting plate carried by said body and extending substantially parallel with said spring arm, a thumb screw threaded through said thumb screw supporting plate, guiding means for said thumb screw, and lock nuts mounted upon opposite sides of said thumb screw supporting plates for locking said thumb screw in a set adjusted position.

1,297,262. **UNDERGARMENT.** FRANCIS M. SHIPLEY, Piqua, Ohio. Filed June 4, 1915. Serial No. 32,075. 2 Claims. (Cl. 2—144.)



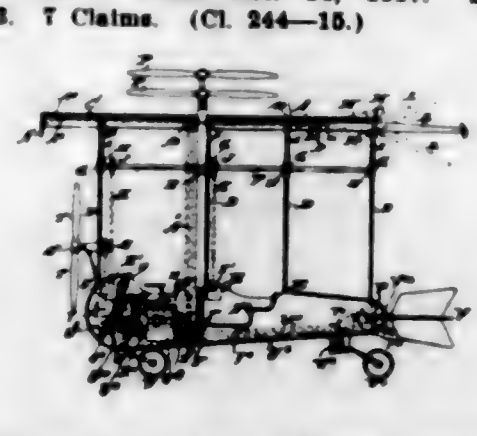
1. In a union garment, leg portions and a body portion, with opening in the rear to a point near the waist line, and two overlapping flaps to close the rear opening, each secured at the top and along one side edge to its respective side edge of the rear opening, and each flap provided with an extension piece for the lower end of the flap, said extension piece having narrow ends, one end forming a gusset for the leg seam and the other end carried beyond the median line of the crotch portion to provide a closed crotch, and having the free edge of the flap secured to the leg seam at the last mentioned end of the gusset, with the wales of the extension pieces running transverse the garment body to provide elasticity therefor lengthwise.

1,297,263. **MOTOR.** JOSEPH A. SIMMS, Detroit, Mich., assignor of one-half to James H. Gregg and George A. Gregg and one-fourth to Anthony Laszlo, Detroit, Mich. Filed Nov. 22, 1917. Serial No. 203,337. 5 Claims. (Cl. 60—14.)



1. A prime mover unit including an internal combustion engine, a steam engine having a cylinder arranged at an acute angle to the cylinder of the combustion engine with its inner end contiguous to the inner end of the same, a water jacket adjacent to the cylinder of the internal combustion engine, a steam chamber communicating with the water jacket, a coil housed in said jacket and surrounding the cylinder of the combustion engine and adapted to receive the exhaust gases from the combustion chamber, a jacket arranged adjacent the cylinder of the steam engine and connected with the said coil, and means for delivering steam from the steam chamber to the steam engine to operate the latter.

1,297,264. **AEROPLANE.** JOSEPH A. SIMMS, Detroit, Mich., assignor of one-half to James H. Gregg and George A. Gregg and one-fourth to Anthony Laszlo, Detroit, Mich. Filed Dec. 14, 1917. Serial No. 207,173. 7 Claims. (Cl. 244—15.)



2. In an aeroplane, a body, a folding sustaining surface of a length substantially the length of the body, means for adjusting the angularity of each portion of said sustaining surface, relatively narrow transversely disposed ailerons hinged to each portion of the sustaining surface, and means for manually adjusting said ailerons to effect equilibrium.

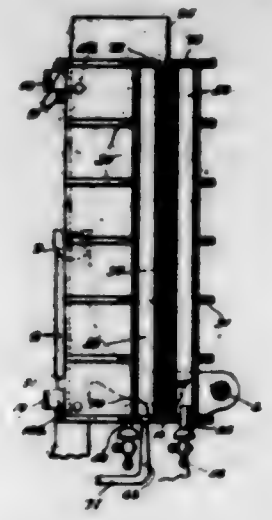
4. In an aeroplane, a longitudinally hinged sustaining surface, a plurality of vertically arranged rack-bars, a vertically adjustable shaft fitted with pinions in mesh with the respective rack-bars, suitable castings, in which said shaft is journaled, sleeved upon the rack-bars and adapted to maintain the pinion in meshed relation with said rack-bars, rods connecting said castings with the sustaining surface, and means for manually rotating the shaft, whereby the respective portions of the sustaining surface may be adjusted with reference to each other.

1,297,265. PROCESS OF FINISHING GALVANIZED SHEETS AND PLATES. ROBERT SKEMP, Scottdale, Pa., assignor to American Sheet and Tin Plate Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 26, 1918. Serial No. 255,802. 2 Claims. (Cl. 91—50.1.)



1. The method of galvanizing flux finished sheets and plates which consists in applying the coating metal by passing the sheets and plates through a bath of molten spelter, applying the flux to the spelter coating as the sheets and plates emerge from the bath of molten spelter, washing the sheets and plates to remove the flux from the surfaces thereof while heated above the temperature at which the flux sets and delaying the washing operation after applying the flux until the sheets and plates are cooled below that temperature at which the sheets and plates will distort in the washing operation.

1,297,266. MACHINE FOR MAKING METALLIC PRINTING-PLATES. CHRISTIAN N. SMITH, Elgin, Ill. Filed May 24, 1917. Serial No. 170,669. 8 Claims. (Cl. 22—4.)



1. In a mechanism of the class described, the combination of a mold forming a mold chamber adapted to contain a metallic electrotype shell, a flexible barrier plate removably mounted in the mold chamber in position to engage and cover the entire back surface of the electrotype shell when such shell is in position in the chamber, means for removably holding the flexible barrier plate in the chamber and in engagement with the electrotype shell, and in position to enable molten metal to be introduced into said chamber and in contact with the flexible barrier plate, and means for heating the mold chamber.

2. In a mechanism of the class described, the combination of a plurality of mold members adapted to form a mold chamber, a flexible barrier sheet removably mounted in the mold chamber in position to engage and cover the back surface of an electrotype shell to be contained in such chamber, means for removably holding the flexible barrier sheet in the chamber in position to engage and cover the back surface of such electrotype shell and adapted to enable molten metal to be introduced into said chamber and in contact with the flexible barrier sheet, means for operatively connecting the mold members, and means for heating the mold chamber.

4. In a mechanism of the class described, the combination of a plurality of relatively movable mold members forming a mold chamber adapted to contain an electrotype shell, each of said mold members being provided with means for heating a wall of such mold chamber, a frame upon which said mold members are pivotally mounted, a flexible metallic barrier sheet removably mounted in the mold chamber in position to engage and cover the back surface of such electrotype shell to be contained in the chamber, means for removably holding said flexible metallic barrier sheet in the chamber and in position to engage and cover the back surface of such electrotype shell, and adapted to permit the introduction of molten metal into the mold chamber in position to engage and press there movable barrier sheet against the surface of such electrotype shell, and means for operatively connecting said relatively movable mold members.

6. In a mechanism of the class described, the combination of a plurality of relatively movable mold members forming a mold chamber having curved walls and adapted to contain a curved electrotype shell, a curved flexible metallic sheet adapted to be removably mounted in the mold chamber in position to engage and cover the back surface of such electrotype shell to be contained in said chamber, gage bars removably mounted in position to form marginal walls of said chamber and adapted to hold such curved flexible metallic sheet removably in position to engage and cover the back surface of such electrotype shell, and adapted to admit molten metal into said chamber in contact with the flexible metallic sheet, means for operatively connecting said relatively movable mold members, and means for heating the mold chamber.

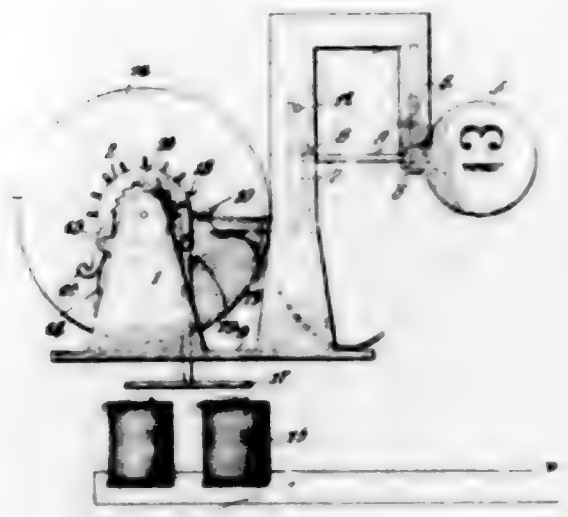
8. In a mechanism of the class described, the combination of a pair of mold members comprising an upper and lower mold member forming a semi-cylindrical mold chamber adapted to contain a curved electrotype shell, a supporting frame upon which said lower mold member is pivotally mounted, means for operatively connecting said upper and lower mold members, a flexible metallic barrier sheet bent into curved form and removably mounted in the mold chamber in position to engage and cover the back surface of said electrotype shell, marginal gage bars removably mounted in position to form marginal walls of the mold chamber and adapted to engage the margins of the flexible barrier sheet, for removably holding said flexible sheet in operative position in the mold chamber and in removable engagement with the electrotype shell, means for heating the mold chamber, said heating means being adapted to permit the movement of the connected upper and lower mold members to raised and lowered positions alternately, and means for cooling the mold chamber.

1,297,267. FLYCATCHER. GUSTAV SPRENGEL, Wheaton, Ill. Filed Aug. 30, 1917. Serial No. 188,967. 2 Claims. (Cl. 43—22.)



1. A fly paper holder of the class described including an upright handle, a supporting base therefor, a pair of loop shaped clamping members on the upper end of said handle adapted to receive a piece of fly paper therebetween, and a trough carried between said clamping members and disposed beneath the lower edge of the fly paper to receive the fluid dripping therefrom.

1,297,268. FIRE-ALARM INDICATOR. FRED M. STACY and WILLIAM F. WOODS, Portsmouth, N. H. Filed May 18, 1917. Serial No. 169,526. 1 Claim. (Cl. 177—328.)



In a device of the class described, the combination of a frame including an inverted U-shaped superstructure, a drum dog consisting of a normally horizontal and a normally vertical portion, thus causing the dog to be substantially L-shaped, means passing through the dog adjacent the angle thereof and carried by one side of the U-shaped superstructure for pivotally supporting the dog, a heel formed on the vertical portion of the dog, a bar carried by said superstructure in the path of movement of the dog whereby the movement of the dog in one direction will be limited, a spring secured to the horizontal portion of the dog and bearing upon said frame, thus yieldably holding the dog in engagement with said bar, signaling means carried by the remaining side of said superstructure and being normally engaged by the heel of said dog, thus causing the signaling means to be normally held in a set position, and means for engaging the horizontal portion of the dog for swinging the same downwardly, thus moving the vertical portion of the dog to one side from engagement with said stop bar, whereby said heel will disengage the signaling means to free the signaling means and allow the same to operate.

1,297,269. CAR-DOOR BRACE. AMBROSE E. STARK, Aurora, Ind. Filed Apr. 11, 1918. Serial No. 227,950. 1 Claim. (Cl. 70—102.)



A car door brace comprising a block secured to the car, said block being provided with a longitudinally disposed groove, said groove being formed to provide diverging walls within said block, a brace bar having one end pivoted within said block, the other end of said bar being provided with a shoulder and a flange, said shoulder being arranged angularly with respect to said brace bar, said flange being arranged angularly with respect to said shoulder, a web provided with an opening, said web being connected to said flange, shoulder and brace bar, a supporting element adapted to be secured to the door of the box car, said supporting element comprising a face plate provided with a lip having an opening therein and having an angularly bent portion, said angularly bent portion being adapted to engage the vertical edge of said door, said lip being adapted to engage said web and having its opening arranged to register with the opening of said web, said openings being adapted to receive a seal.

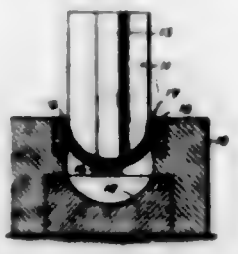
1,297,270. LIFE-PRESERVER. FRANK STEBBINS, Chicago, Ill. Filed June 18, 1918. Serial No. 240,604. 2 Claims. (Cl. 9—20.)



1. A life preserver comprising a continuous collar of substantially frusto-conical shape forming an upper air compartment, front and rear aprons of V shape depended from the front and rear of said collar, each apron having front and rear walls connected together at their edges to form an air compartment which is in communication with the upper compartment, attaching means at the lower ends of the aprons, webbing connecting the central portions of the interior walls of each of said aprons together and an inflation tube carried by the collar.

2. A life preserver comprising a continuous collar forming an upper air compartment, front and rear aprons of V shape depending from the front and rear of said collar, each apron having front and rear parts connected together at their edges to form air compartments which are in communication with the upper air compartment, webbing connecting the central parts of the front and rear interior walls of each apron together, and each apron having the edge portions of the front and rear interior walls connected together immediately below said collar and an inflation tube carried by said collar.

1,297,271. METHOD OF MANUFACTURING CYLINDRICAL MAGNET-FRAMES AND THE LIKE. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1917. Serial No. 196,290. 6 Claims. (Cl. 29—148.)



2. The method of manufacturing a cylindrical magnet frame which comprises forming two half cylinders from two strips of material which are initially of less width than half the circumference of the frame, the material along the longitudinal edges of the strips being caused to flow to bring the material to the necessary width, and welding the edges of them together to form a complete cylinder.

1,297,272. BRUSH. LOUISE B. STRANG and CHARLES C. POLLOCK, Seattle, Wash. Filed Dec. 1, 1917. Serial No. 204,916. 4 Claims. (Cl. 15—36.)

1. In a brush, the combination of a head having a convex upper side, a concave cap superimposed upon said head, a scraping band interposed between and depending from the head and the cap, and means for clamping the cap on the head and against the band.

2. In a brush of the class described, a brush head, an elastic scraping band on the brush head extending below the same, and a cap into which said brush head fits engaging said scraping band.

2. In a brush of the class described, a brush head, a soap chamber therein, an elastic scraping band into which said brush head extends, said band extending below said head, a cap in which said brush head is received engaging said scraping band, a stem on said brush head extending through said cap, and a handle mounted to turn on said stem and bearing against said cap.



4. In a brush, the combination of a head convex at its upper side, bristles carried by and depending from said head, a soap holder of foraminous character carried in the head and open at its upper end, a concave cap positioned on the head and closing the upper end of the receptacle, a scraping band interposed and secured between the head and the cap, a stem extending through the head and cap, and combined handle, and clamping means mounted on said stem above the cap.

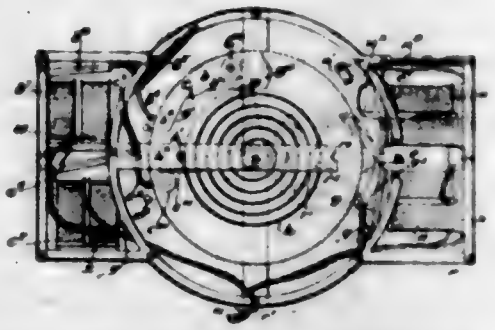
1,297,272. AERIAL TORPEDO OR MINE. OSCAR I. STRAUB and MEADE WILDRICK, U. S. Army. Filed Apr. 11, 1917. Serial No. 161,265. 5 Claims. (Cl. 102—2.)



1. In a projectile adapted to be dropped from aircraft, the combination with a shell containing high explosive, of firing mechanism comprising a plunger and a percussion primer adapted to explode said high explosive, means for normally holding said firing mechanism in the safety position, and means automatically controlled by the air pressure induced by the flight of the projectile through the air for arming said firing mechanism, said last mentioned means comprising a tail piece provided with an air pressure chamber therein, means for directing compressed air into said chamber as the projectile travels through the air, a piston mounted in said chamber, and means controlled by said piston for moving said primer toward said plunger.

4. In a projectile adapted to be dropped from aircraft, the combination with a shell containing high explosives, a percussion primer mounted in said shell, a plunger adapted to explode said primer, means for normally holding said plunger and primer apart and in the safety position, and a spring impressed piston automatically controlled by the air pressure induced by the flight of the projectile through the air for bringing said primer in the path of said plunger.

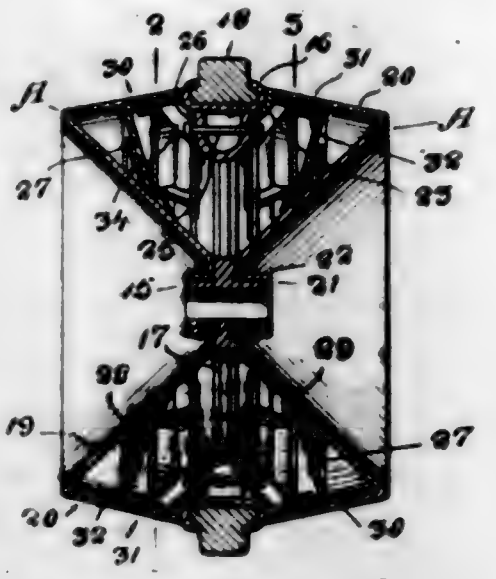
1,297,274. FARE-REGISTER. ERNEST H. THOMPSON, New York, N. Y. Filed Apr. 8, 1914. Serial No. 830,884. Renewed June 15, 1917. Serial No. 175,040. 14 Claims. (Cl. 235—45.)



5. The combination with a dial indicator and its actuating ratchet and pawl, a brake pawl acting normally to prevent reverse rotation of the ratchet, an electromagnet acting when energized to move said brake pawl into operative engagement with the ratchet, a supplemental electromagnet operating when energized to release said pawl from such engagement, substantially as described.

12. The combination of the dial indicator, an actuating ratchet and pawl for moving the indicator step by step, means for resetting the indicator when desired, a stop pin secured to said ratchet, a loose pivoted arm normally located to the rear of said stop pin during the first revolution of said ratchet, a fixed stop pin arranged to engage said arm after said arm has completed approximately one revolution about its axis, substantially as described.

1,297,275. AUTO-WHEEL. HERMAN EDWARD TREDUP, Sebewaing, Mich. Filed Jan. 26, 1918. Serial No. 213,987. Renewed Dec. 16, 1918. Serial No. 267,016. 7 Claims. (Cl. 21—69.)

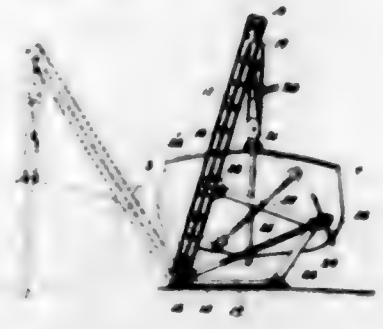


1. A wheel for automobiles and the like, comprising a hub, rim, spokes and tire, in combination with extension members or tread members mounted on opposite sides thereof each of said tread members comprising a funnel-shape disk having an outwardly tapered flange and a central aperture surrounded by a flange, the latter fitting on the hub of the wheel and the first-mentioned flange being supported adjacent to the rim thereof.

1,297,276. SHIP-DAVIT. JAMES FRANKLIN WADDINGTON, Beverly, N. J. Filed Jan. 12, 1918. Serial No. 211,594. 4 Claims. (Cl. 9—22.)

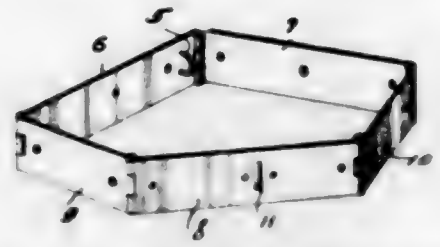
1. In a device of the character described, the combination with a base, of uprights mounted to swing on the base and normally inclined toward an inward position, said uprights being adapted to support a boat therebe-

tween, tie rods for said uprights to swing therewith to hold said uprights inclined toward said boat, a revoluble screw, an operating wheel therefor, an element in threaded engagement with the screw to be advanced or retreated thereon, and links, having pivotal connection with said element, one of said links connecting with one of the uprights and the other link with the base, whereby when said screw is operated, said upright will be swung from its normal inwardly inclined position to an outwardly inclined position, or vice versa.



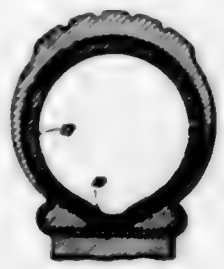
4. In a ship's davits, the combination with a boat-supporting swinging upright normally supporting the boat above the deck of the ship, with said upright normally inclined inwardly toward the ship, and inclined toward the boat to permit of the boat always swinging clear of the upright, a tie rod mounted to swing with the upright and hold the said upright inclined toward the said boat, and means for swinging the upright outwardly into an inclined position to carry the boat adjacent to and clear of the side of the ship, or vice versa.

1,297,277. MAIL-BAG FASTENING. JAMES M. WATSON, Binghamton, N. Y. Filed Sept. 23, 1918. Serial No. 255,322. 1 Claim. (Cl. 150—19.)



A bag, or like container, having one of its sides extended to form a closing flap which is reinforced along its edge, and in which, at approximately a central point, is formed an opening, a collapsible frame disposed within the mouth of the bag and secured thereto and comprising a rear member formed of two sections of equal length and a front member comprising a middle section and end sections of equal length, the middle section having an opening about midway of its ends and a staple on a rear section and adapted to pass through the openings of the closing flap and front middle sections.

1,297,278. ARMORED INNER TUBE. HERBERT N. WAYNE, Los Angeles, Cal., assignor to Armorcord Tire & Rubber Co., a Corporation of Delaware. Filed Oct. 29, 1917. Serial No. 199,098. 6 Claims. (Cl. 152—13.)

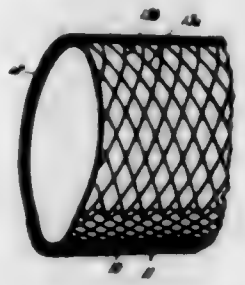


1. A tire tube comprising a wall of elastic material, and a reinforcing layer associated with the elastic wall comprising a series of substantially parallel cords extending throughout a certain circumferential part of the elastic wall, the remaining circumferential part of the elastic wall being free from association with said cords, whereby the first mentioned part is allowed elastic expansion in a direction transverse of the cords but is limited in expansion longitudinal of the cords and the second mentioned part is allowed elastic expansion in the direction in which expansion is limited in the first mentioned part.

3. A tire tube comprising a wall of elastic material, and a reinforcing layer associated with the elastic wall comprising a series of transversely extending cords around the outer circumferential part of the tube, and another series of longitudinally extending cords around the inner circumferential part of the tube; whereby the outer circumferential part of the tube is allowed elastic longitudinal expansion but is limited in lateral expansion and the inner circumferential part of the tube is allowed elastic lateral expansion but is limited in longitudinal expansion.

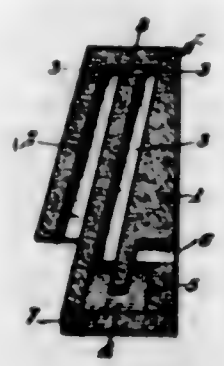
5. A tire tube comprising a wall of elastic material, and a reinforcing layer associated with the elastic wall comprising a series of longitudinally extending cords extending around the inner circumferential portion of the tube, the outer circumferential portion of the tube being free from association with said longitudinal cords; so that the inner circumferential part of the tube is allowed elastic lateral expansion but limited in longitudinal expansion.

1,297,279. INNER TUBE FOR PNEUMATIC TIRES. HERBERT N. WAYNE, Los Angeles, Cal., assignor to Armorcord Tire & Rubber Co., a Corporation of Delaware. Filed Apr. 15, 1918. Serial No. 228,602. 15 Claims. (Cl. 152—13.)



2. A tube comprising an elastic wall, and cords arranged diagonally of the length of the tube to cause longitudinal contraction of the tube when the tube expands laterally.

1,297,280. SIPHON CONSTRUCTION. THOMAS I. WESTON, Columbia, S. C. Filed Feb. 4, 1915. Serial No. 6,174. 1 Claim. (Cl. 137—106.)



A concrete siphon for sewage disposal systems and the like, comprising a vertically arranged block of concrete having therein the inlet passage 2, the outlet passage 3, and the water seal passage 5, the upper ends of the passages 2 and 3 being connected by a transverse passage, the lower ends of the passages 2, 3 and 5 being open for the withdrawal of cores after casting, the lower end of the passage 5 communicating with the lower end of the passage 3, and the upper end of the passage 5 serving as an

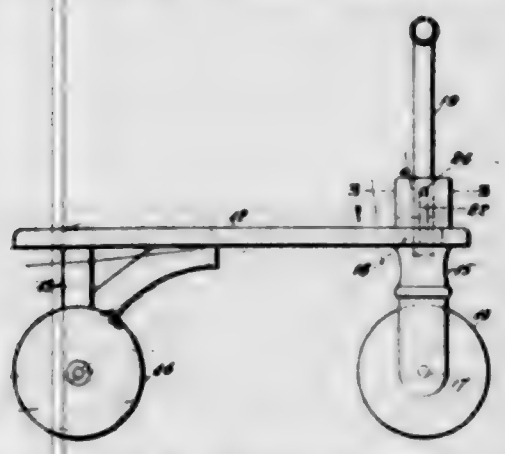
outlet, in combination with a base member serving as a closure for the lower ends of the passages 3 and 5 when the siphon block is in operative position.

1,297,281. HEATING DEVICE. MARY WHEELER and EDITH MAY BATES, Los Angeles, Cal. Filed June 18, 1918. Serial No. 240,617. 3 Claims. (Cl. 219—35.)



1. An electric cooker comprising a casing, a horizontally disposed heating frame therein, said frame further serving as a support, a plurality of pans disposed upon said frame and filling the upper portion of the casing, a plurality of vertically disposed frames depending below said horizontal frame and carrying heating wires, a removable tray arranged horizontally within the casing below said second named frames, and a plurality of supporting members carried by said tray between said second named frames.

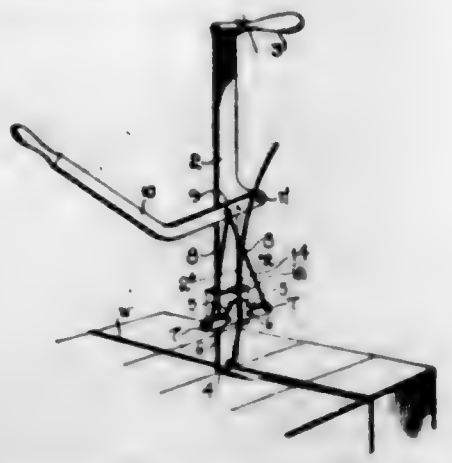
1,297,282. CHILD'S VEHICLE. JOSEPH F. WHITE, Brookline, Mass.; Mary Files White, administratrix of said Joseph F. White, deceased. Filed Apr. 18, 1918. Serial No. 228,468. 2 Claims. (Cl. 208—165.)



1. A vehicle of the character stated, comprising an elongated body member having traveling supporting means at its rear portion, and a bearing at its forward portion, and dirigible traveling supporting means engaged with the forward portion of the body member, said dirigible means including an upright steering post having a journal portion in said bearing, and a rod which is movably engaged with the post and is adjustable relatively thereto, to permit the use of the rod as a steering member, either coaxial with the post, or inclined rearward to constitute a tiller, or forward to constitute a tongue, means being provided for imparting a turning movement from the rod to the post, when the rod is in any position to which it may be adjusted, said means including a slot-and-pin connection between the post and rod adapted to impart a turning movement from the rod to the post when the rod and post are coaxial, and permitting independent swinging and limited endwise movements of the rod, and reciprocal bearing faces on the post and rod, whereby a turning movement may be imparted from the rod to the post when the rod is inclined.

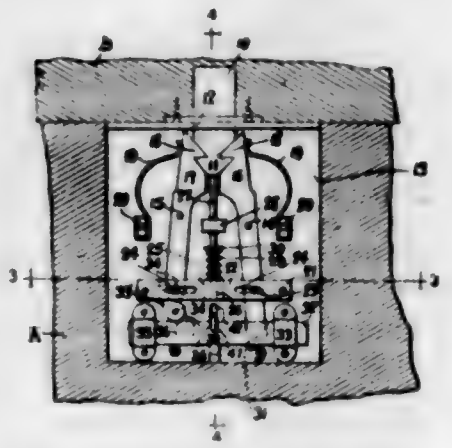
1,297,283. BOX-STRAPPING DEVICE. JOHN JAMES WILSON, Columbia, Tenn. Filed July 8, 1918. Serial No. 243,218. 6 Claims. (Cl. 254—77.)

1. A box banding tool comprising a beam having one end notched and adapted to bear upon a box element and straddle a wire having an eye in its end; a lever pivoted on the beam; a slide mounted on the beam between the lever and the beam point; gripping jaws on the slide; and link connections between the jaws and the lever whereby the jaws are opened and closed by the lever to draw a part of the wire through said eye.



5. A box banding tool comprising a beam having one end bifurcated and adapted to bear upon a box element and straddle a wire; a lever pivoted on the beam; a slide mounted on the beam between the lever and the beam point; gripping jaws on the slide, connections between the jaws and the lever whereby the jaws are opened and closed by the lever, and means for holding the slide in different positions along the beam, said holding means comprising a spring brake reacting between the slide and beam.

1,297,284. LOCK. FRANK WISNICWSKI, Washington, Pa. Filed June 8, 1918. Serial No. 238,871. 3 Claims. (Cl. 70—27.)

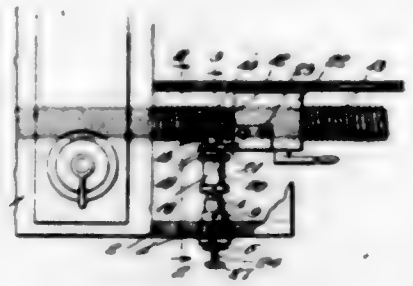


3. A lock comprising a pair of oppositely disposed pivoted spring actuated latches, a tongue adapted to extend within the lock for engagement with one end of said latches, a transversely movable operating bar engageable with the opposite end of one of said latches and a pivoted dog engageable with the locking bar and the adjacent end of the other latch, whereby movement of said bar will swing the adjacent ends of the latches inwardly and release the tongue.

1,297,285. ATTACHMENT FOR SCREW-CUTTING LATHES. LOUIS E. WOOD, Farrell, Pa. Filed July 20, 1918. Serial No. 245,892. 3 Claims. (Cl. 82—23.)

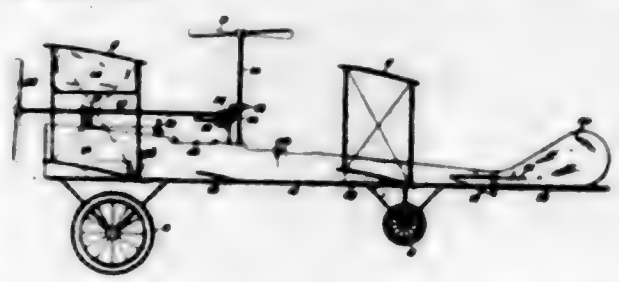
3. An attachment for screw-cutting lathes comprising a stub shaft and means at one end thereof for rigidly mounting it on the apron of a lathe carriage, the other end of said shaft being reduced in diameter, a worm gear for mesh with the lead screw of the lathe, said gear having a tubular hub rotatable on said reduced end of the shaft with its periphery flush with the periphery of said shaft, a sleeve slidable on said shaft and hub and rotatable bodily with the latter, said sleeve having a plurality of differently

notched flanges for controlling the closing of the carriage feed nut, said shaft having a longitudinal slot over which one end of said sleeve slides and also having a longitudinal bore communicating with said slot, the inner side of said sleeve end being provided with a circumferential groove adjacent said slot, a sleeve-shifting rod slidable in said



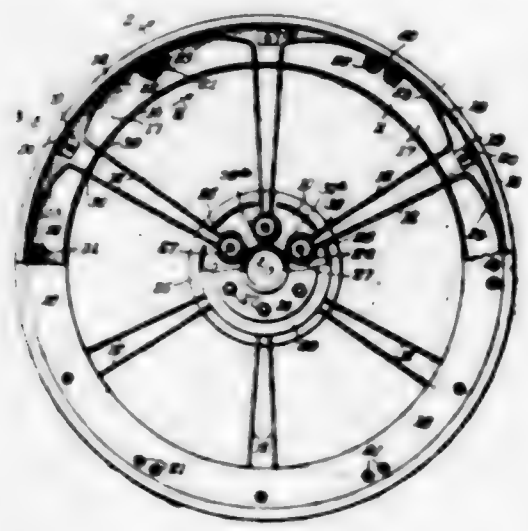
bore and having a lateral projection on its inner end passing slidably through said slot and received in said groove, said rod having longitudinally spaced sockets, and a spring-pressed detent mounted in said shaft for engagement with said sockets to hold said rod in different adjusted positions.

1,297,286. AEROPLANE. MAX WORHATCH, Pittsburgh, Pa. Filed Oct. 22, 1918. Serial No. 259,201. 2 Claims. (Cl. 244—15.)



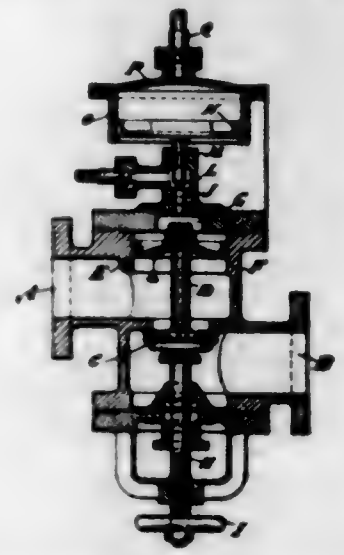
1. In a device of the class described, a body portion, a plurality of forward planes mounted thereon, a plurality of planes at the rear of the body, guiding means, a forward propeller, a propeller rotating on a vertical axis, means for throwing the propellers into operation separately, and gas containers located below the ends of the upper forward plane and a gas container located near the lower rear plane and centrally thereof.

1,297,287. SPRING-WHEEL. OTTO G. WORSLEY, Chicago, Ill. Filed Oct. 10, 1918. Serial No. 257,561. 2 Claims. (Cl. 152—50.)



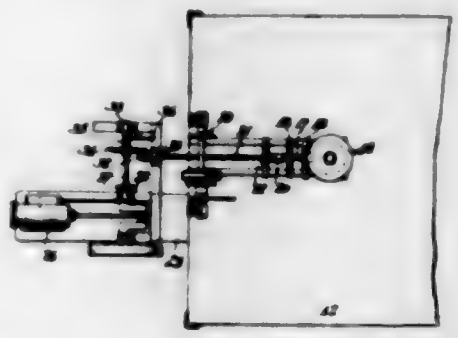
1. In a spring wheel a hub, a hollow felly, and a plurality of members fixed to said hub and extending into said felly, each of said members comprising resilient arms extending in opposite direction in said felly and having tubular shaped ends, and means rotatably connecting said ends with said felly, said means comprising a sleeve passing through each of said tubular ends, said sleeve having conical ends, and the side walls of said felly having conical holes to receive said conical ends, and a bolt passing through said side walls' holes and through said sleeve.

1,297,288. SAFETY DEVICE FOR OIL-FIRED BOILERS. HAROLD E. YARROW, Glasgow, Scotland. Filed Oct. 30, 1917. Serial No. 199,312. 3 Claims. (Cl. 158—36.)



1. An automatically operating device for preventing the passage of flame from the furnaces of an oil fuel boiler to the stokehold, comprising an oil fuel valve, a seat therefor, a stem carrying the valve, a cylinder, a piston movable in said cylinder and secured to said valve stem, means for the admission of oil fuel to the cylinder, means for the passage of the fuel from said cylinder to the furnaces when the oil fuel valve is open, a chamber connected with the cylinder at the end farther from the oil fuel valve, said piston having an opening communicating with said chamber, a passage from said chamber, a controlling valve adapted to close the passage, a second stem connected to said controlling valve, and a member connected with said last named stem for operating said controlling valve, said member being exposed on one side to the pressure of the air in the stokehold and on the other side to the normal atmospheric pressure.

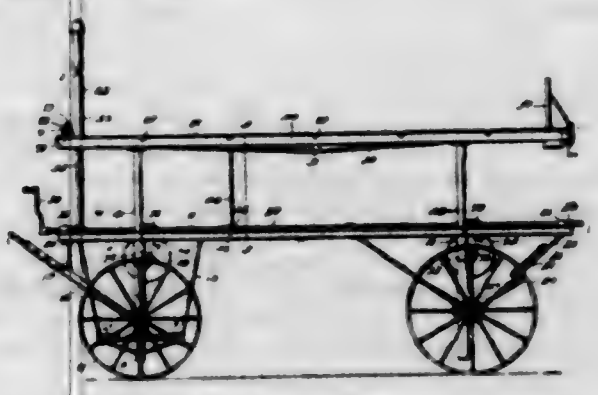
1,297,289. OIL-WELL-DRILLING DRIVE. VICTOR YORK, Brea, Cal. Filed Apr. 11, 1917. Serial No. 161,363. 2 Claims. (Cl. 74—7.)



1. A drive for the rotary pipe used in oil well drilling comprising a derrick floor, a table turning in suitable bearings and located at or near the center of the derrick floor; a driven bevel gear formed on said table; a driving bevel pinion meshing with said bevel gear; a drive shaft on which said driving bevel pinion is secured, said drive shaft extending across and off the derrick floor; an engine block located at one side of said derrick floor; an engine located on said engine block; a driving bevel gear secured

on the shaft of said engine; and a driven bevel pinion meshing with said driving bevel gear and secured on the outboard end of said drive shaft.

1,297,290. TRUCK. GEORGE F. ZAUN, San Bernardino, Cal. Filed May 26, 1918. Serial No. 235,514. 9 Claims. (Cl. 254—6.)



1. In combination, a truck, a platform on the bed thereof, elevating means therefor, a flexible element adjustably connected with said platform, and locking means influenced by said flexible element for locking the elevating means when the platform is elevated.

2. In combination, a truck, a platform on the bed thereof, a dash on one end of the platform, removable stakes on the other end of the platform, telescopic members between the platform and the truck, certain of which inter-engage with the dash, means for elevating the truck, and means for automatically locking said first mentioned means when the platform is elevated.

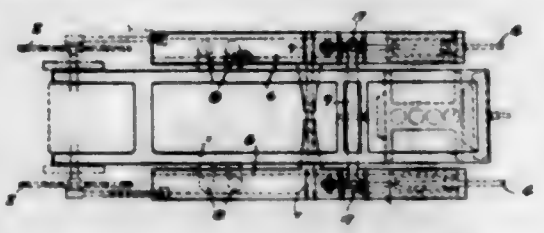
7. In combination, a wheeled truck, sockets depending from the bed thereof, a platform on said bed, rack bars on said platform received in said sockets, a shaft on the bed, toothed elements on said shaft, a series of toothed elements co-acting with the toothed elements on the shaft and engaging with the rack bars whereby when the shaft is turned to raise or lower said platform, an element on the shaft, a pivoted dog on the bed, a flexible element on the platform connected with said dog and designed, when the platform is elevated to swing the dog in locking position with the last mentioned element on the shaft, and longitudinally and transversely arranged anti-frictional rollers on the bed.

9. In combination, a wheeled truck, a platform on the bed thereof, telescopic elements between the platform and the bed, means engaging with certain of said telescopic elements designed to move the same vertically of the platform, when said means is actuated, to raise or lower the platform, means for locking said elevating means, a series of longitudinal and transverse rollers journaled on shafts on the upper face of the platform, notched arrester bars disposed longitudinally adjacent to the edges of the platform and journaled in bearings thereon, said arrester bars having their notches normally receiving the shafts of the transverse rollers, means for simultaneously turning said arrester bars, whereby to move the same over the referred to shafts and elevate the bars above the platform.

1,297,291. TRACTOR. JOSEPH R. BOWLING, St. Louis, Mo. Filed Apr. 23, 1918. Serial No. 230,227. 4 Claims. (Cl. 21—150.)

1. In a tractor, the combination of a rigid main frame, a hinged supporting frame therefor, the latter having bearings, longitudinally disposed rods in said bearings, a transom mounted on said rods and having universal movement relative thereto, and springs interposed between said rods and transom whereby said transom has a free sliding motion on said rods and is capable of a pivotal movement relative thereto.

2. In a tractor, the combination of a main supporting frame, hinged frames arranged thereunder and capable of independent movement, rods supported by the forward set of said hinged frames, a transom slidingly mounted on said rods and having universal movement relative thereto, and a hinged connection between said transom and said main frame, said hinged connection comprising a flattened sleeve ball attachment arranged within suitable bearings carried by one of the parts.



3. In a tractor, the combination of a main supporting frame, hinged frames arranged thereunder and capable of independent movement, rods supported by the forward set of said hinged frames, a transom having bearings at its ends for engaging said rods, said bearings being arranged for vertical movement in said housings, and springs cooperating with said bearings and housings.

4. In a tractor, the combination of a main supporting frame, hinged frames arranged thereunder and capable of independent movement, rods supported by the forward set of said hinged frames, a transom, bearings having vertical movement relative to said transom, said bearings being slidingly mounted on said rods, and springs coöperating with said bearings for supporting said transom and absorbing the recoil thereof.

1,297,292. APPARATUS FOR COOLING OIL. LEON CAMMEN, New York, N. Y. Filed Dec. 18, 1917. Serial No. 207,750. 3 Claims. (Cl. 257—242.)



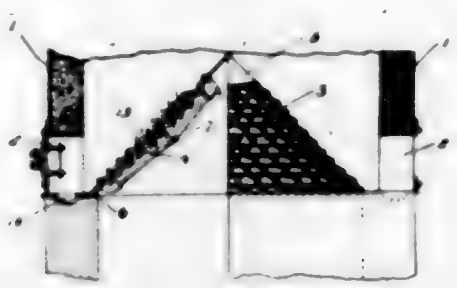
2. An apparatus for cooling oil comprising a plurality of pairs of members, the members of each pair spaced in parallelism for the passage of oil in sheet like form, each pair of members having a succession of angles to provide impingement steps in the path of the oil flow, and said pairs of members being separated by channels for the passage of cooling liquid, a casing having an inlet and an outlet for cooling liquid, baffles in said casing to provide a multiple flow of the cooling liquid through said channels in contact with said pairs of members, and means for directing the liquid flow to said baffles.

1,297,293. GRATE. THOMAS CRANEY, Bay City, Mich. Filed Mar. 16, 1917. Serial No. 155,295. 5 Claims. (Cl. 110—74.)

1. A pyramidal grate for refuse burning furnaces, comprising a marginal base, a cap member located above the plane of the base, inclined bearing bars secured at their ends to the marginal base and cap member and radiating from the latter and provided at intervals with seats and separate grate bars extending across the spaces between the bearing bars and progressively decreasing in length toward the center of the grate and having their terminals removably arranged upon the said seats.

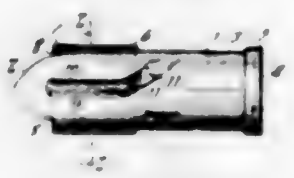
5. A pyramidal grate for refuse burning furnaces comprising a base composed of marginal plates connected to-

gether at their ends and provided with depressions and having grooves extending inwardly from the depressions, a cap member located above the plane of the said plates, inclined bearing bars radiating from the cap member and secured to the same and to the said plates, and separate



transversely disposed grate bars arranged upon the bearing bars and progressively decreasing in length from the marginal plates to the cap member, said grooves terminating below the lowermost grate bars and said depressions being located between the grate bars and the margin of the grate to afford access to the said depressions.

1,297,294. PROJECTILE. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed Jan. 24, 1916. Serial No. 73,868. 8 Claims. (Cl. 102—32.)



1. A projectile comprising a body portion and having one end portion heavier than the other end portion thereof, the heavier end portion of the projectile being provided with a plurality of longitudinally extending open ended grooves formed on the exterior of said body portion, said grooves being covered for a part at least of their length and being spaced circumferentially of the projectile, substantially as described.

3. A cylindrical projectile having a head end portion which is heavier than its rear end portion, the projectile being provided with a plurality of longitudinally extending open-ended grooves, a portion of each of said grooves being substantially parallel to the axis of the projectile and another portion thereof extending from said first portion at an angle thereto, the portions of the grooves which are substantially parallel to the axis of the projectile being nearer the head end of the projectile, and the other portions of the grooves extending rearwardly therefrom and decreasing in depth until they merge in the surface of the body portion of the projectile, substantially as described.

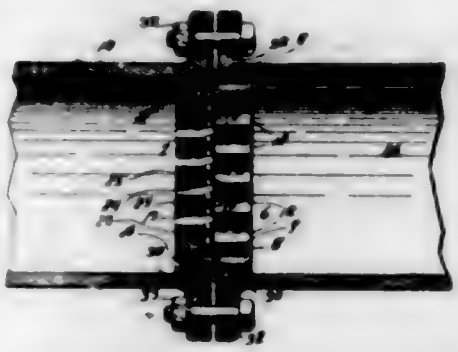
5. A projectile comprising a cylindrical body portion and a reduced portion, said body portion having an extension projecting over said reduced portion and providing an annular space between such extension and reduced portion, the projectile being provided with a plurality of longitudinally extending open-ended grooves communicating with said space, substantially as described.

9. A cylindrical projectile having a head end portion which is heavier than its rear end portion, the projectile being provided with a plurality of longitudinally extending open ended grooves, a portion of each of said grooves being substantially parallel to the axis of the projectile and another portion thereof extending from said first portion at an angle thereto, the portions of the grooves which are substantially parallel to the axis of the projectile being nearer the head end of the projectile than the angular portions of the grooves, a part of said angular portions being uncovered, and a collar covering the remainder of said grooves, substantially as described.

1,297,295. PROCESS FOR BUILDING FLUID-BAGS. WARREN F. FERRIS, Springfield, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed Nov. 5, 1918. Serial No. 261,230. 4 Claims. (Cl. 154—14.)

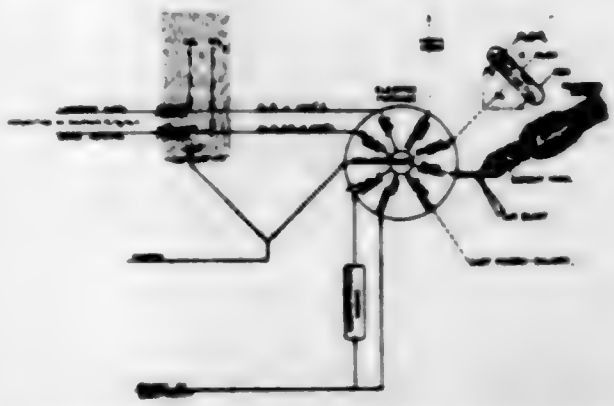
1. In the process of making an annular fluid bag having a formed base and a base ring originally separate from a wall-layer lying exteriorly of the ring in the finished bag; using a cylinder of suitable diameter and having a circumferential groove therein of cross-sectional conformation corresponding to the desired base-shape of said bag and of a bottom width to closely receive the base ring, placing a strip of bag-forming material, designed to lie exteriorly of said ring in the finished bag circumferentially about said cylinder, of sufficient width to fit said groove and extend to each side thereof sufficiently to be used in forming the body of said bag, and fitting said material into said groove, fitting the base ring into said groove, applying another strip of bag-forming material of dimensions similar to those of the first strip, and finally picking up the edges of said strips and joining them to form the bag; substantially as described.

1,297,296. CHECK-VALVE. HENRY O. JACKSON, Denver, Colo., assignor to The Jackson Compressor Company, Denver, Colo., a Corporation of Colorado. Filed May 18, 1916. Serial No. 98,296. 4 Claims. (Cl. 277—60.)



1. A check valve composed of a casing having a series of coöperating inlet and exit passages arranged in staggered relation, and relatively long, flat, thin valve pieces mounted to move bodily and substantially uniformly throughout their entire length, toward and away from the exit extremities of the inlet passages, the inner faces of the casing partitions between the exit passages having shallow recesses, and ports in communication with these recesses.

1,297,297. CEMENT-MAKING PROCESS. WOOLSEY McA. JOHNSON, Hartford, Conn. Filed Feb. 2, 1915. Serial No. 5,787. 16 Claims. (Cl. 204—64.)



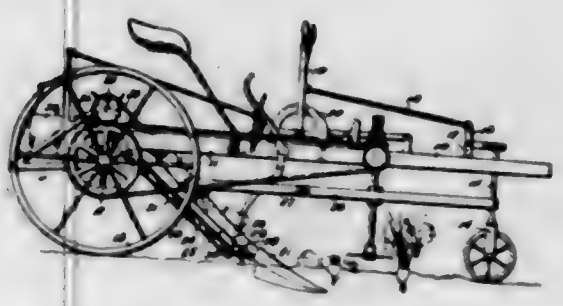
1. A cement-making process of the nature disclosed, comprising highly heating lime and aluminum silicate separately; bringing together said constituents while in a state of incandescence, whereby they may chemically combine to form a fused slag; and then transforming said slag into a pulverulent cementitious material.

7. A process for obtaining magnesium and cement by subjecting lime and shale, containing magnesium, to an intense heat under reducing conditions yielding volatilized magnesium and a fused bath of the cementitious compound; collecting and condensing the volatilized magnesium; and withdrawing portions of said bath converting the same into a pulverulent form.

8. A process of obtaining magnesium and ferro-silicon by subjecting a material containing iron, silicon and magnesium to an intense heat under conditions adapted to reduce and volatilize the magnesium and to form fused ferro-silicon; collecting and condensing the volatilized magnesium; and withdrawing and permitting to cool the fused ferro-silicon.

16. A process of the nature disclosed which comprehends separately heating an acid and a basic mineral to incandescence by heat derived from the combustion of fuel; then introducing said incandescent minerals into an electric furnace and therein further elevating the temperature to cause them to combine to form a slag; then blowing said slag into a wool; and then pulverizing said wool.

1,297,298. BEET-HARVESTER. ANDREW ALOIS MATHISON, Ventress, Tex. Filed Mar. 22, 1917. Serial No. 156,685. Renewed Oct. 3, 1918. Serial No. 256,760. 3 Claims. (Cl. 55—51.)



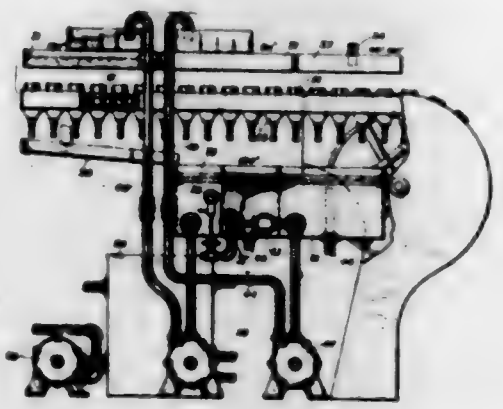
1. In a beet harvesting machine a frame, a driving shaft, a driven shaft, shovel supporting arms having their upper end portions mounted upon said driving shaft, a lower shaft carried by and extending between the lower end portions of said supporting arms, sprocket wheels carried by the driven shaft and lower shaft, a sprocket chain passing about the sprocket wheels, a supporting strip positioned beneath the lower flight of the sprocket chain, engaging forks pivotally connected with the sprocket chain and resting upon and held in an inoperative position by the supporting strip when moving downwardly and swinging to an operative position when moving upwardly for engaging beets and conveying the same upwardly, and means for transmitting rotary movement from the driving shaft to the driven shaft.

1,297,299. TEMPERATURE-CONTROLLER FOR BOTTLE-WASHING MACHINES. GEORGE J. MEYER, Milwaukee, Wis. Filed July 11, 1917. Serial No. 179,905. 4 Claims. (Cl. 141—7.)

1. In a bottle washing machine, means for delivering hot water to the bottle cleaning brushes, and successively operating water spraying means for spraying bottles with water which is cooler with each succeeding spraying means, and means for collecting the water from each spraying means and delivering it to the preceding spraying means.

2. In a bottle washing machine, means for delivering hot water to the bottle cleaning brushes, means for rinsing the interior of the bottles with cooler water, and water spraying means for successively operating on the outside of the bottles with progressively cooler water.

3. A bottle washing machine, comprising a bottle conveyer for conducting bottles in an inverted position, brushes operating on the bottles for cleaning them interiorly and exteriorly, means for supplying the brushes with hot water, means for rinsing the bottles interiorly with cooler water, and successively operating water spraying means for spraying water on the bottles, the water of each water spraying means being cooler than the water of the preceding water spraying means, and means for collecting the water from each water spraying means and advancing it to the preceding water spraying means.



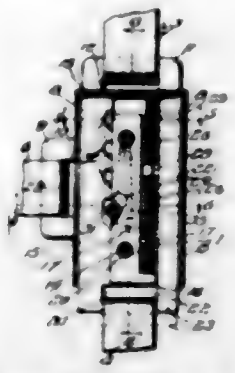
4. In a bottle washing machine, a bottle conveyer, brushes for cleaning the bottles, means for delivering hot water to the brushes, water spray pans encountered by the bottles after leaving the brushes, means for delivering cold water to the last water spray pan, a tank collecting the water therefrom, a pump for drawing water from said tank and delivering it to the next water spray pan, a second tank for collecting the water from the second spray pan, means for heating the water in the second tank, valve control means for connecting the second tank with said pump, a second pump for drawing water from the second tank and delivering it to the third spray pan, and means for draining the water from the third spray pan to the second tank.

1,297,300. SELF-RELEASING DAVIT-BLOCK HOOK FOR LIFE-BOATS. CHRIST B. PREISLER, Portland, Oreg. Filed July 3, 1918. Serial No. 243,220. 6 Claims. (Cl. 9—23.)



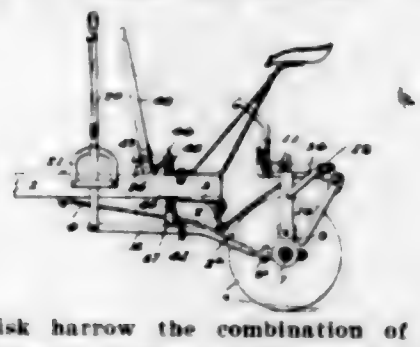
1. A hook of the character described comprising a main piece, a pendent member hinged thereto at one end, a latch bar hinged to the opposite end of said pendent member, the hinged end of said latch bar being adapted to have a link secured thereon, the pendent member having a releasing lug overlying said hinged end of the latch bar, and said main piece and the free end of said latch bar being provided with latching means adapted for being disengaged by the lifting of the latch-bar.

1,297,301. MUZZLE. GEORGE W. SPAHR, Chicago, Ill. Filed Apr. 3, 1918. Serial No. 226,359. 9 Claims. (Cl. 119—130.



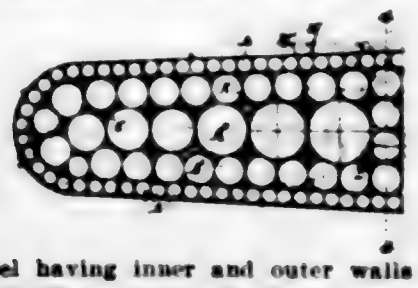
1. In an animal securing device of the kind described and in combination, a band arranged to encircle the muzzle of the animal, said band including an expansible part, and means for automatically locking said part against expansion when the animal's head is in raised position.

1,297,302. DISK HARROW. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Feb. 20, 1911. Serial No. 609,713. 3 Claims. (Cl. 55—81.)



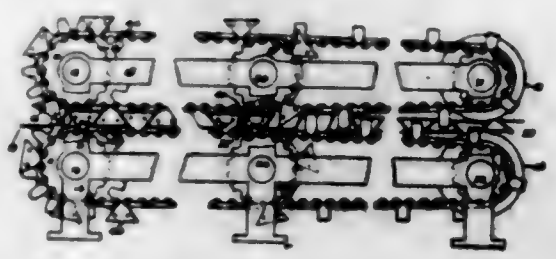
1. In a disk harrow the combination of the draft frame, two opposed gangs of disks pressing inward in opposite directions, spring actuated pressure devices bearing upon the inner ends of the gangs and permitting them to rise and fall independently or simultaneously, connecting devices between the frames and the gangs which permit the latter to move freely longitudinally of their axes and permit their inner ends to vibrate vertically and also to be adjusted horizontally forward and backward, independently of each other, and relatively enlarged concavo-convex abutment bosses adapted to bear against each other when the gangs are under pressure longitudinally and vertically, each abutment being a boss which is radially widely expanded in vertical planes, with an operative surface the edge of which is positioned close to the convex surface of the innermost disk of its gang and the central part of which is relatively thin in axial directions and approximately flat, whereby said bosses can slip vertically under the action of the spring-actuated pressure devices, can slip horizontally while forced longitudinally together, and, while having rolling contact with each other at all times can hold the disks out of contact with each other during all shiftings of positions of the gangs within the working limits of the gang movements.

1,297,303. SHIP'S CONSTRUCTION. GIULIO BADIALI ZONCA, Glens Falls, N. Y. Filed Jan. 16, 1918. Serial No. 212,068. 5 Claims. (Cl. 114—68.)



4. A vessel having inner and outer walls and a plurality of vertically arranged contiguous watertight cylindrical compartments between and along said walls.

1,297,304. MACHINE FOR MAKING LATH-BOARD. SILAS M. FORD, St. Paul, Minn. Filed Mar. 9, 1918. Serial No. 221,560. 4 Claims. (Cl. 154—30.)

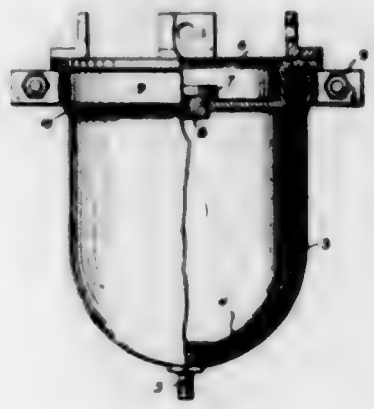


1. In a machine for making lath board the combination with other forming means adapted to form material into lath board having a series of lath-like faces and intermediate depressions, of means adapted to form a lath-like face of a width substantially double that of the other lath-like faces formed.

2. In a machine for making lath board the combination of means for forming paper into lath board having a series of lath-like faces and intermediate depressions and having one of said lath-like faces of greater width than the remainder, and cutting means for cutting said lath board across said wider lath-like face.

4. In a machine for making lath board an endless belt comprised of a series of transverse forming cleats each of said forming cleats being composed of multiple punchings placed side by side and strung onto a transverse rod, multiple connecting links connecting said cleats in hinged relation thereby forming a substantially solid metal belt having cleats extending transversely thereof.

1,297,305. TANK. SHELDON P. THACHER, Weehawken, N. J., assignor to New York Belting & Packing Company, a Corporation of New York. Filed June 27, 1917. Serial No. 177,161. 2 Claims. (Cl. 154—43.)



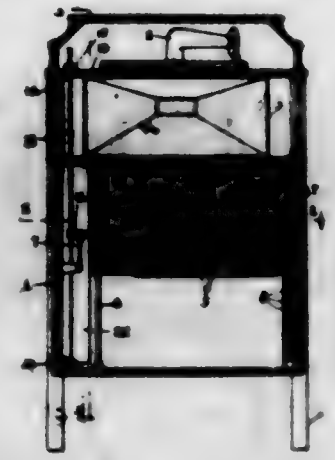
1. A tank comprising an inner wall of vulcanized rubber held under compression, a protective coating of shellac covering the exposed inner surface of said wall, and a relatively inexpansible outer wall for supporting the inner wall.

2. A tank having a wall composed of a layer of rubber and a layer of relatively inexpansible material vulcanized to the rubber, the rubber being normally under a state of gradually increasing compression toward one of its faces characteristic of rubber flexed in that direction after vulcanization.

1,297,306. FILING AND DELIVERING APPARATUS FOR PHONOGRAPH-RECORDS. ALFRED A. DU MANS, Cleveland, Ohio. Filed Jan. 12, 1918. Serial No. 211,490. 4 Claims. (Cl. 211—16.)

1. In a device of the character described, the combination of a cabinet provided with means for slidably storing a plurality of disk phonograph records or like ar-

ticles, said cabinet also having a door; and a member movable into operative relation with any selected record



adapted to displace the same, said door being adapted to actuate said member.

1,297,307. [WITHDRAWN.]

REISSUES.

14,606. STAY-BOLT HEADING ATTACHMENT FOR PNEUMATIC HAMMERS, &c. WALTER H. DIFFENDALL, Hagerstown, Md., assignor, by mesne assignments, to The Liberty Tool Company, a Corporation of Maryland. Filed July 17, 1918. Serial No. 245,425. Original No. 1,233,560, dated July 17, 1917, Serial No. 154,209, filed Mar. 12, 1917. 13 Claims. (Cl. 121—20.)

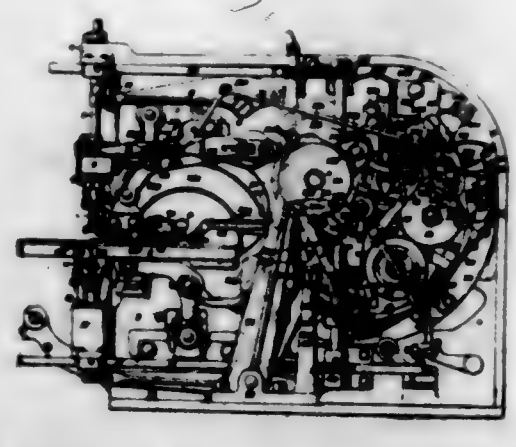


2. A stay-bolt heading attachment for pneumatic hammers comprising a one-piece tubular body provided with means for attaching the same removably to the barrel of the hammer, said body carrying a ram slidably with means for limiting the movement of the ram in both directions in relation to the body and maintaining said ram in connection with the body to be handled therewith as one unit, said limiting means including a transverse partition arranged at an intermediate point in the length of said body, a constriction at the lower end of the body and a flange on the ram located between the partition and the constriction, substantially as described.

14,607. EDIBLE OIL PRODUCT. CARLETON ELLIS, Montclair, N. J., assignor to Hydrogenated Oil Company, a Corporation of New York. Filed Jan. 17, 1916. Serial No. 72,450. Original No. 1,037,881, dated Sept. 10, 1912, Serial No. 700,234, filed May 28, 1912. 19 Claims. (Cl. 99—18.)

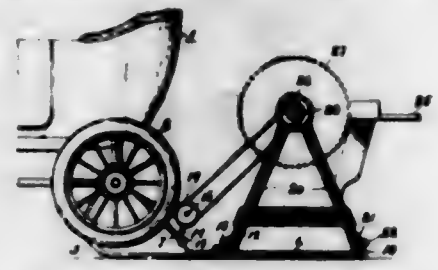
2. An edible oil composition comprising hydrogenated cotton seed oil and another oil containing vesiculated air.

14,608. BUTTONHOLE-SEWING MACHINE. JAMES G. GRAHAM, Elizabeth, and LOUIS F. A. BUCHNER, deceased, Elizabeth, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 3, 1918. Serial No. 248,214. Original No. 1,208,950, dated Dec. 19, 1916, Serial No. 684,125, filed Mar. 16, 1912. 45 Claims. (Cl. 112—68.)



1. In a buttonhole sewing machine, in combination, a work-clamp, stitch-forming and feeding mechanism, a stop-motion device, driving connections between said stop-motion device and said stitch-forming and feeding mechanisms, constantly running power means, and automatically controlled connections actuated by said power means independently of said driving connections for the stitch-forming and feeding mechanisms for opening and closing the work-clamp.

14,609. POWER-FRAME. WILLIAM W. PARMENTER, Redford, Mich. Filed Nov. 1, 1918. Serial No. 260,754. Original No. 1,269,736, dated June 18, 1918, Serial No. 182,270, filed July 23, 1917. 15 Claims. (Cl. 74—106.)



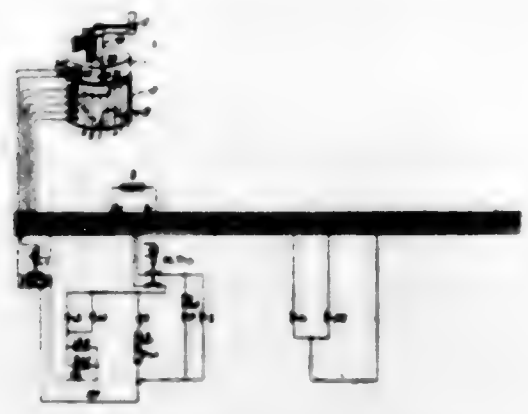
2. A power frame of the class described, comprising a plurality of rails, said rails provided with upwardly curved ends, cradle-portions supported upon the ends of said rails and adapted to fit under the axle of a motor vehicle whereby the axle of a motor vehicle will be lifted as said frame is swung upon said curved ends, a power shaft, friction drive wheels carried by said power shaft and adapted to frictionally engage the drive wheels of a motor vehicle.

15. Apparatus of the class described, comprising a frame rockable on the ground and provided with a place to carry an axle of a vehicle, and power transmitting devices carried on said frame for transmitting power from the rear axle of a vehicle, the said frame and the axle carrying place thereon being arranged with respect to the fulcrum point on which the frame will rock in beginning to rise so that when the frame is prone on the ground and the axle raised the frame will hold the load elevated without any other aid.

14,610. CONTROL SYSTEM. KARL A. SIMMON, Edgewood Park, and HUBB T. MORRIS, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 31, 1919. Serial No. 274,375. Original No. 1,289,284, dated Dec. 31, 1918, Serial No. 59,833, filed Nov. 5, 1915. 14 Claims. (Cl. 172—179.)

1. In a system of control, the combination with a dynamo-electric machine, a plurality of switching devices

for governing the operation thereof, controlling means for said switching devices, and an auxiliary circuit associated with said means, of circuit-closing means associated with



said controlling means for closing said auxiliary circuit to effect the opening of certain of said switching devices under predetermined operating conditions of said controlling means.

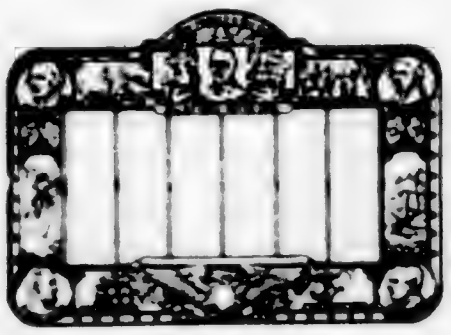
DESIGNS.

53,060. RUBBER HEEL. IRVING R. BAILEY, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Nov. 2, 1914. Serial No. 869,986. Term of patent 14 years.



The ornamental design for a rubber heel, as shown.

53,061. ARTICLE OF MANUFACTURE. COLIN DOUGLAS BARRETT, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Dec. 6, 1918. Serial No. 265,649. Term of patent 14 years.



The ornamental design for an article of manufacture, as shown.

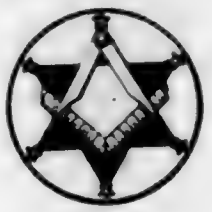
53,062. FINGER-RING OR SIMILAR ARTICLE OF JEWELRY. SAMUEL BUCHSBAUM, Chicago, Ill. Filed Apr. 4, 1918. Serial No. 226,750. Term of patent 3½ years.





The ornamental design for a finger ring or similar article of jewelry, substantially as shown.

53,063. EMBLEM, BROOCH, BUTTON, FOB, CHARM, STICK-PIN, OR SIMILAR ARTICLE. JOHN V. BUCKLE, Salt Lake City, Utah. Filed Oct. 22, 1918. Serial No. 259,284. Term of patent 14 years.



The ornamental design for an emblem, brooch, button, fob, charm, stick-pin, or similar article as shown.

53,064. FLAG, BANNER, PENNANT, PIN, BUTTON, EMBLEM, OR OTHER SIMILAR ARTICLE. FRANCIS J. BUCKLEY, New York, N. Y. Filed Dec. 11, 1918. Serial No. 266,846. Term of patent 3½ years.



The ornamental design for a flag, banner, pennant, pin, button, emblem or other similar article as shown.

53,065. HAT. WILLIAM DELMAN, Bridgeport, Ohio. Filed May 20, 1918. Serial No. 235,741. Term of patent 14 years.



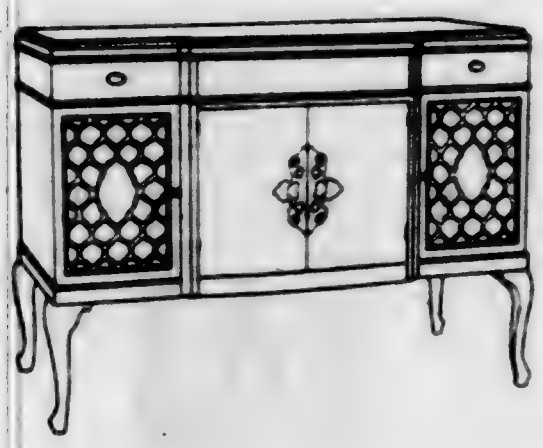
The ornamental design for a hat, as shown.

53,066. TIRE-CASING. FREDRICK S. DICKINSON, New York, N. Y. Filed Dec. 31, 1918. Serial No. 269,156. Term of patent 14 years.



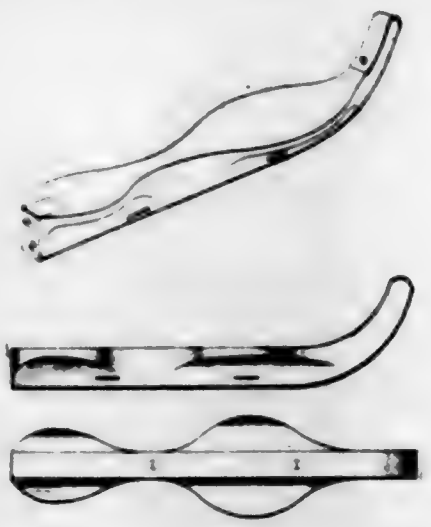
The ornamental design for a tire casing, as shown and described.

53,067. CASING FOR AUTOMATIC SOUND-PRODUCING INSTRUMENTS. WILLIAM H. EGGEBRECHT, Grand Rapids, Mich., assignor to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1918. Serial No. 260,616. Term of patent 7 years.



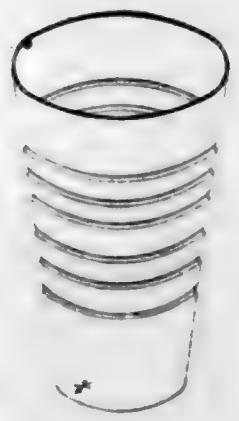
The ornamental design for a casing for automatic sound producing instruments, substantially as shown.

53,068. SNOW-SKATE. WILLIAM A. ERICKSEN, Brooklyn, N. Y. Filed Sept. 6, 1918. Serial No. 252,975. Term of patent 14 years.



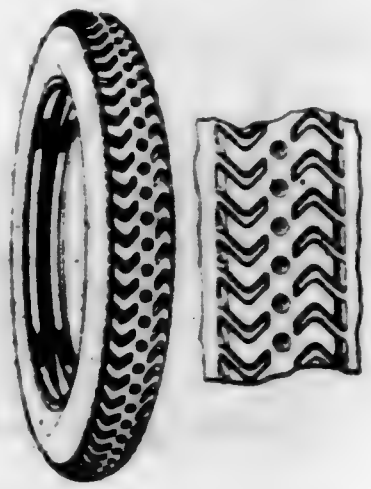
The ornamental design for a snow skate, as shown.

53,069. LIQUID-MEASURE MIXER. IRVIN D. FOX, Austin, Minn. Filed Dec. 10, 1917. Serial No. 206,551. Term of patent 14 years.



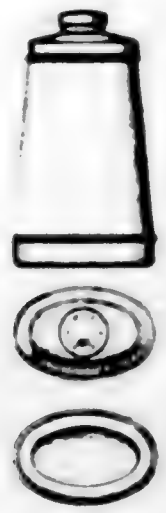
The ornamental design for a liquid measure-mixer, as shown.

53,070. PNEUMATIC TIRE. RICHARD T. GRIFFITHS, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Apr. 8, 1918. Serial No. 227,880. Term of patent 14 years.



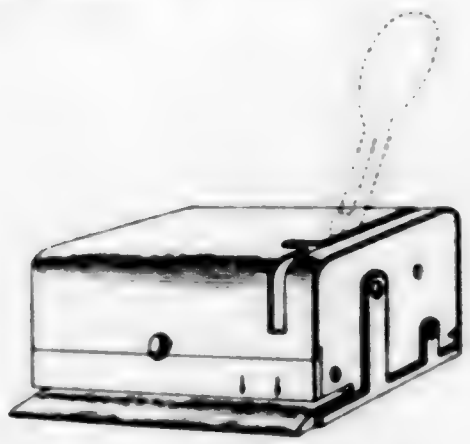
The ornamental design for a pneumatic tire as shown.

53,071. TALCUM-POWDER BOX. EDMUND HOFFMAN, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 11, 1916. Serial No. 125,125. Term of patent 14 years.



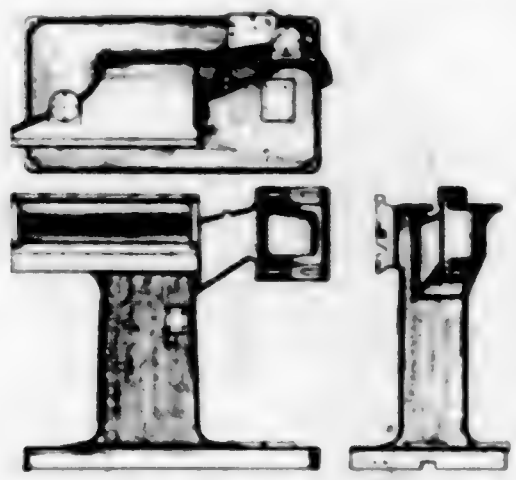
The new, original and ornamental design for a talcum powder box as shown.

53,072. CASING FOR STAPLING AND FASTENING MACHINES. MILLER REESE HUTCHISON, West Orange, N. J. Filed Feb. 2, 1917. Serial No. 146,292. Term of patent 7 years.



The ornamental design for a casing for stapling and fastening machines, as shown.

53,073. STANDARD FOR DIE-SINKING MACHINES. JOSEPH F. KELLER, New York, N. Y. Filed Nov. 30, 1917. Serial No. 204,778. Term of patent 7 years.



The ornamental design for a standard for die sinking machines, as shown.

53,074. SPOON, FORK, OR SIMILAR ARTICLE. ALFRED G. KINTS, Wallingford, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Jan. 9, 1919. Serial No. 270,431. Term of patent 7 years.



The ornamental design for a spoon, fork, or similar article, as shown.

53,075. SPOON, FORK, OR SIMILAR ARTICLE. JOHN LEECH, Bridgeport, Conn., assignor to International Silver Company, Bridgeport, Conn., a Corporation of New Jersey. Filed Jan. 10, 1919. Serial No. 270,594. Term of patent 7 years.



The ornamental design for a spoon, fork, or similar article, substantially as shown.

53,076. BADGE. LOUIS MARKOWITZ, New York, N. Y. Filed Nov. 14, 1918. Serial No. 262,608. Term of patent 7 years.



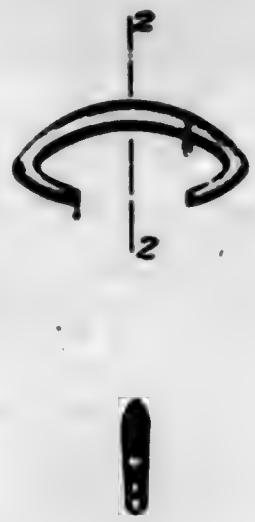
The ornamental design for a badge substantially as shown.

53,077. CANDLE. CHARLES J. MEEGAN, Syracuse, N. Y. Filed Apr. 5, 1918. Serial No. 226,959. Term of patent 7 years.



The ornamental design for a candle as shown.

53,078. WATCH-BOW. JEREMIAH MCGREVY, Brooklyn, N. Y., assignor to Solidarity Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 18, 1918. Serial No. 218,012. Term of patent 14 years.



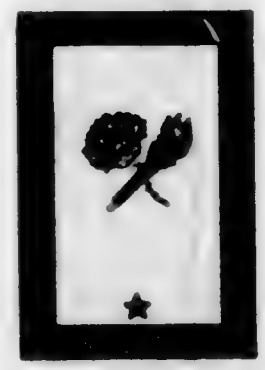
The ornamental design for a watch bow, as shown.

53,079. FLAG OR BANNER. MOINA MICHAEL, New York, N. Y., assignor of one-half to Lee Keedick, New York, N. Y., and one-half to Otho L. Ferris, Portland, Oreg. Filed Dec. 26, 1918. Serial No. 268,392. Term of patent 3½ years.



The ornamental design for a flag or banner, as shown.

53,080. FLAG OR BANNER. MOINA MICHAEL, New York, N. Y., assignor of one-half to Lee Keedick, New York, N. Y., and one-half to Otho L. Ferris, Portland, Oreg. Filed Dec. 26, 1918. Serial No. 268,393. Term of patent 14 years.



The ornamental design for a flag or banner, as shown.

53,081. BADGE. MOINA MICHAEL, New York, N. Y., assignor of one-half to Lee Keedick, New York, N. Y., and one-half to Otho L. Ferris, Portland, Oreg. Filed Dec. 26, 1918. Serial No. 268,394. Term of patent 3½ years.



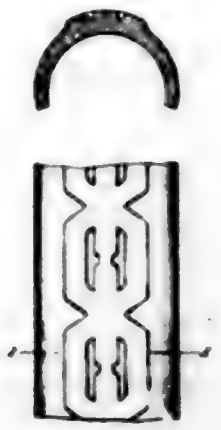
The ornamental design for a badge, as shown.

53,082. BADGE. MOINA MICHAEL, New York, N. Y., assignor of one-half to Lee Keedick, New York, N. Y., and one-half to Otho L. Ferris, Portland, Oreg. Filed Dec. 26, 1918. Serial No. 268,396. Term of patent 3½ years.



The ornamental design for a badge, as shown.

53,083. TIRE. HAROLD D. MITCHELL, Norwalk, Conn., assignor to Norwalk Tire and Rubber Company, Norwalk, Conn., a Corporation of Connecticut. Filed June 27, 1918. Serial No. 242,299. Term of patent 14 years.



The new, original and ornamental design for a tire as shown.

53,084. DOLL. ALBERT B. NORWALK, New York, N. Y. Filed Nov. 15, 1918. Serial No. 262,726. Term of patent 14 years.



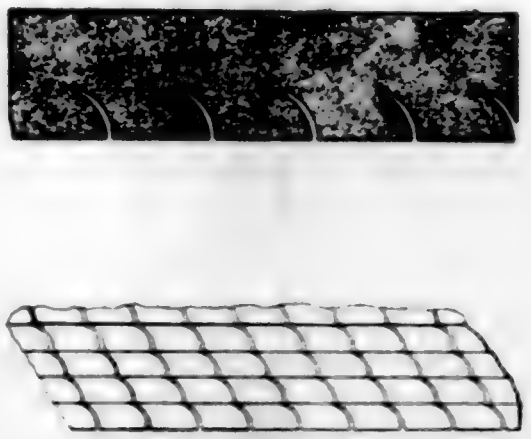
The ornamental design for a doll, as shown.

53,085. DOLL. ALBERT B. NORWALK, New York, N. Y. Filed Nov. 15, 1918. Serial No. 262,727. Term of patent 14 years.



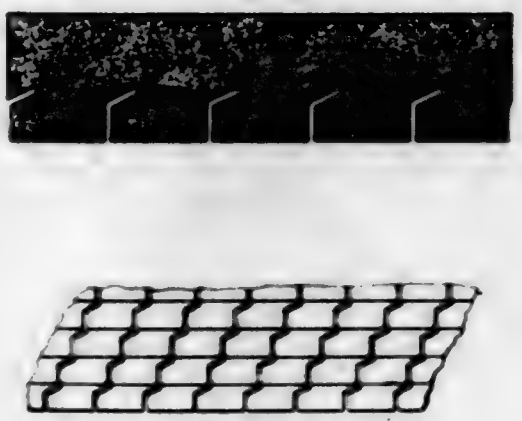
The ornamental design for a doll, as shown

53,086. ROOFING ELEMENT. FREDERICK C. OVERBURY, Hilledale, N. J. Filed Aug. 12, 1915. Serial No. 45,251. Term of patent 14 years.



The ornamental design for a roofing element, as shown.

53,087. ROOFING ELEMENT. FREDERICK C. OVERBURY, Hilledale, N. J. Filed Aug. 12, 1915. Serial No. 45,252. Term of patent 14 years.



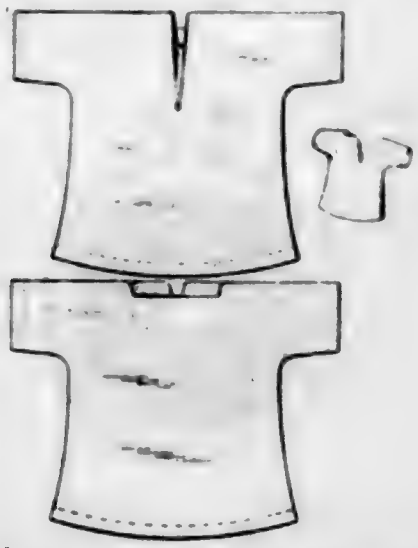
The ornamental design for a roofing element, as shown.

53,088. PHOTOGRAPHIC MOUNT, MAT, OR SIMILAR ARTICLE. EUGENE P. PLATT, Providence, R. I., assignor to The Inlaid Company, Inc., Providence, R. I., a Corporation of Rhode Island. Filed Jan. 8, 1919. Serial No. 270,217. Term of patent 7 years.



The ornamental design for a photographic mount, mat, or similar article, as shown.

53,089. SHIRT. MARGARET A. SELSOR, New York, N. Y. Filed Feb. 18, 1918. Serial No. 218,004. Term of patent 3½ years.



The ornamental design for a shirt, as shown.

53,090. SOUND-TRANSMITTER. LOUIS STEINBERGER, Brooklyn, N. Y. Filed June 17, 1915. Serial No. 34,750. Term of patent 14 years.



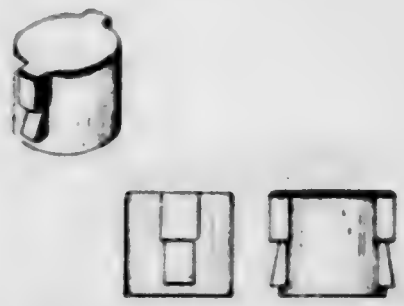
The ornamental design for a sound transmitter, as shown.

53,091. SOUND-TRANSMITTER. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Aug. 31, 1915. Serial No. 48,368. Term of patent 14 years.



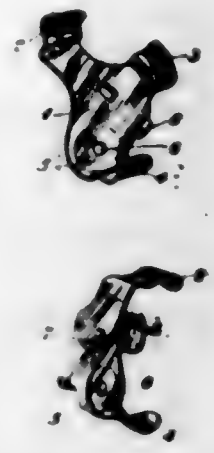
The ornamental design for a sound transmitter as shown and described.

53,092. BOTTLE-CAP. SWAN SWANSON, Seattle, Wash. Filed Apr. 25, 1917. Serial No. 164,572. Term of patent 7 years.



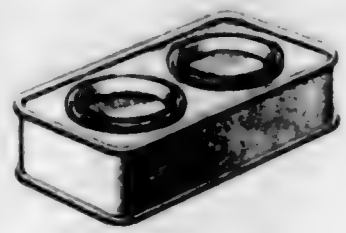
The ornamental design for a bottle cap as shown.

53,093. TELEPHONE-RECEIVER HOLDER. GEORGE K. THOMPSON, Maplewood, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Nov. 6, 1917. Serial No. 200,642. Term of patent 14 years.



The ornamental design for a telephone receiver holder as shown and described.

53,094. CAN. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Sept. 25, 1917. Serial No. 193,202. Term of patent 14 years.



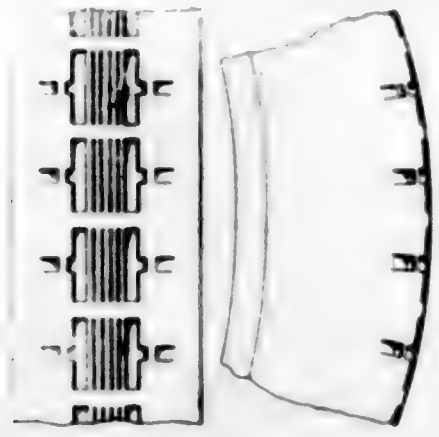
The ornamental design for a can, as shown.

53,095. UNDERGARMENT. HARRY J. WINSTEN, Reading, Pa., assignor to Schuylkill Silk Mills, Reading, Pa., a Corporation of Pennsylvania. Filed Nov. 14, 1917. Serial No. 202,062. Term of patent 14 years.



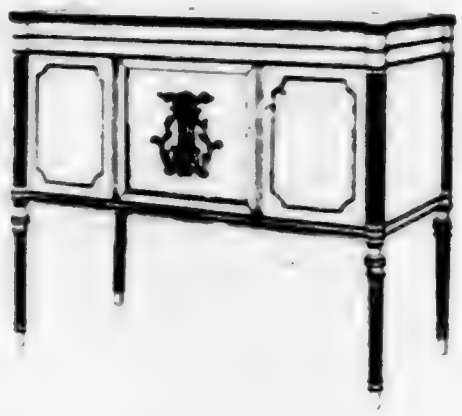
The ornamental design for an undergarment as shown and described.

53,096. TIRE. GEORGE H. WITHAMAN, Dayton, Ohio, assignor to The Dayton Rubber Manufacturing Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 28, 1918. Serial No. 268,775. Term of patent 14 years.



The ornamental design for a tire, substantially as shown.

53,097. PHONOGRAPH-CABINET. JOSEPH WOLFF, Brooklyn, N. Y., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed Oct. 10, 1918. Serial No. 257,667. Term of patent 14 years.



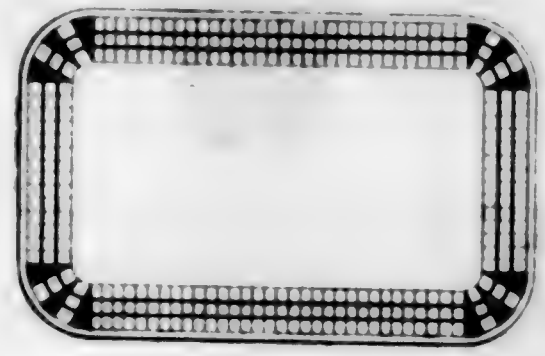
The ornamental design for a phonograph cabinet, substantially as shown.

53,098. SHEET-METAL HOT-WATER BOTTLE. ALBERT E. WOODEN, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Sept. 6, 1917. Serial No. 190,087. Term of patent 14 years.



The ornamental design for a sheet metal hot water bottle as shown.

53,099. GAME-BOARD. JOHN YILLING, Akron, Ohio. Filed July 13, 1917. Serial No. 180,454. Term of patent 7 years.



The ornamental design for a game board, as shown.

TRADE-MARKS

OFFICIAL GAZETTE, MARCH 11, 1919.

[PUBLISHED APRIL 4, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 98,724. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PHILADELPHIA SPECIALTY CO., Philadelphia, Pa. Filed July 21, 1916.



No claim being made to the word "Shineasy" apart from the mark as shown.

Particular description of goods.—Silver-Polish.

Claims use since Jan. 1, 1910.

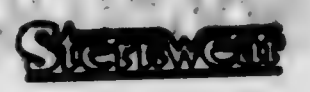
Ser. No. 103,612. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ROCKWELL MANUFACTURING COMPANY, Camden, Ark., Filed May 7, 1917.

KASEMENT

Particular description of goods.—Hardware and Fittings for Doors, Consisting of Hinges, Springs, and Pulls.

Claims use since December, 1914.

Ser. No. 104,384. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) STEARNS TIRE & TUBE COMPANY, St. Louis, Mo. Filed June 11, 1917.



Particular description of goods.—Inner Tubes for Pneumatic Tires.

Claims use since Sept. 18, 1916.

Ser. No. 106,185. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALFRED WRIGHT, INC., Philadelphia, Pa. Filed Sept. 11, 1917.

PRISCILLA

Particular description of goods.—Perfumes, Toilet Water; Face-Powder; Talcum Powder; Bath-Powder; Sachet-Powder; Toilet Cerate; Dry Cream; Cold-Cream; Toilet Liquid Cream; Smelling-Salts; Headache-Cologne; Almond-Meal; Rouge and Dentifrices.

Claims use: The trade-mark has been continuously used in the business of said corporation and its predecessors on perfume since Jan. 10, 1898, and by said corporation on the other goods above specified since July 20, 1917.

Ser. No. 107,200. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NORMAN AUGUSTUS LANE, Birmingham, England. Filed Nov. 6, 1917.

LANDIKA

Particular description of goods.—Cardboard Working Models for Clutches, Gear-Boxes, Differential Gears, Engines, Carbureters, and All Parts of Internal-Combustion Engines.

Claims use since October, 1916.

Ser. No. 107,246. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed Nov. 8, 1917.



Particular description of goods.—Imitation Leather.

Claims use since Jan. 1, 1916.

Ser. No. 107,670. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ANCHOR LEATHER CO., Chicago, Ill. Filed Nov. 30, 1917.

ANCHOR

Particular description of goods.—Tanned Leather Hides for Shoe-Uppers.

Claims use since July 1, 1917.

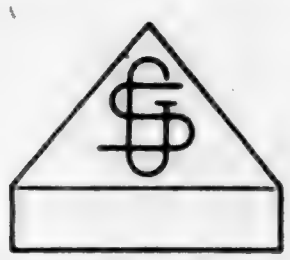
Ser. No. 107,671. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ANCHOR LEATHER CO., Chicago, Ill. Filed Nov. 30, 1917.

HICKORY

Particular description of goods.—Tanned Leather Hides for Shoe-Uppers.

Claims use since Feb. 11, 1915.

Ser. No. 107,921. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) STEINER & GROSSE MFG. CO., New York, N. Y. Filed Dec. 12, 1917.



Particular description of goods.—Bone-Operating Sets, Portable Power-Operated Bandage-Cutting Apparatus for Plaster Casts and other Bandages, Cranial-Operating Instruments, Bone-Drills, Dilators, Urethrotomes.

Claims use since the 15th of September, 1917.

Ser. No. 108,082. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE BOYE NEEDLE COMPANY, Chicago, Ill. Filed Dec. 21, 1917.

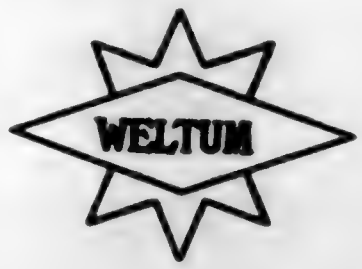


No claim is made to the mere illustration or representation of a crochet-needle. The picture of the lady employed in the trade-mark is a fanciful one and is not the portrait of an individual.

Particular description of goods.—Crochet-Needles for Hand Use.

Claims use since on or about Jan. 24, 1917.

Ser. No. 108,375. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) JOSEPH DEJOND, London, England. Filed Jan. 9, 1918.



No claim being made to the word "Weltum" apart from the mark as shown.

Particular description of goods.—Imitation Leather for Use in Making Boots and Shoes.

Claims use since the 21st day of June, 1916.

Ser. No. 108,511. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) SONORA PHONOGRAPH SALES COMPANY, INC., New York, N. Y. Filed Jan. 17, 1918.



Particular description of goods.—Talking-Machines, Phonographs, Gramophones, Graphophones, Music-Boxes, Tone-Arms, Sound-Boxes, Horns, and Amplifiers for Phonographs.

Claims use since on or about Nov. 1, 1917.

Ser. No. 110,886. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. W. HAMPSHIRE & CO. LTD., Derby, England. Filed May 14, 1918.

SNOWFIRE

Particular description of goods.—Emollient Tablets for Treatment of the Skin.

Claims use since Dec. 6, 1916.

Ser. No. 111,605. (CLASS 37. PAPER AND STATIONERY.) BOGALUSA PAPER COMPANY, INC., Bogalusa, La. Filed June 17, 1918.

BOGALUSA

The word "Bogalusa."

Particular description of goods.—Paper for Container-Liner.

Claims use since on or about the 1st day of July, 1917.

Ser. No. 112,056. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSUMERS FRUIT COMPANY OF AMERICA, Chicago, Ill. Filed July 11, 1918.



Particular description of goods.—Fresh Fruits—Namely, Apples, Oranges, Lemons, Peaches, Pears, and Plums.
Claims use since the 21st day of March, 1918.

Ser. No. 112,309. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) LOOVA A. RANIVILLE, Grand Rapids, Mich. Filed July 24, 1918.

Strait-Jacket

Particular description of goods.—Leather Belting.
Claims use since on or about the 1st day of April, 1918.

Ser. No. 112,412. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ROCKFIELD PRODUCTS COMPANY, Milwaukee, Wis. Filed July 29, 1918.



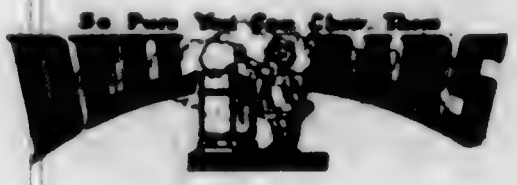
Particular description of goods.—Limestone-Rock Chicken Feed.
Claims use since July 6, 1918.

Ser. No. 113,241. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM D. CHRYSOS, Chicago, Ill. Filed Sept. 19, 1918.

HELPIS

Particular description of goods.—A Remedy for Piles.
Claims use since 1913.

Ser. No. 113,859. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DELBARK MANUFACTURING CO., Chicago, Ill. Filed Oct. 23, 1918.



The words "So Pure You Can Chew Them" are disclaimed apart from the mark shown in the drawing.
Particular description of goods.—Washing-Tablets and Washing Compound.
Claims use since Sept. 28, 1918.

Ser. No. 113,895. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BERTRAM J. GOODMAN, Brooklyn, N. Y. Filed Oct. 26, 1918.



Particular description of goods.—Dressed and Dyed Furs.
Claims use since Sept. 25, 1918.

Ser. No. 114,570. (CLASS 5. ADHESIVES.) ROBIN & CO., Philadelphia, Pa. Filed Dec. 9, 1918.

LACTAC

Particular description of goods.—Glue in Liquid and Powdered Form.
Claims use since about Apr. 12, 1918.

Ser. No. 114,596. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHAIN BELT COMPANY, Milwaukee, Wis. Filed Dec. 11, 1918.

REX

Particular description of goods.—Elevator-Boots, Elevator-Buckets, Sprocket-Wheels, Pulleys, Shafting and Gearing, Shaft-Hangers and Shaft-Bearings, Clutches for Machinery and Parts Thereof, Shaft-Couplings, Machinery for Mixing and for Conveying and Distributing Concrete, Traveling Water-Screens, Screens for Sand, Gravel, and other Solid Material, Wire and Rod Cutters, Traction-Wheels, and Bracket Wheels or Rollers.
Claims use since about January, 1918.

Ser. No. 114,675. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE A. H. KUHLMANN CO., Baltimore, Md. Filed Dec. 16, 1918.

DIXIE

Particular description of goods.—Oleomargarin.
Claims use since July 1, 1918.

Ser. No. 114,867. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BERNARD SIMON, Norfolk, Va. Filed Dec. 28, 1918.

UNITED

Particular description of goods.—Shoe-Stitching Machines.
Claims use since Sept. 28, 1918.

Ser. No. 114,890. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BENJAMIN C. WINELAND, Great Bend, Kans. Filed Dec. 30, 1918.



The trade-mark consists of the portrait of the applicant.
Particular description of goods.—A Liniment Used in the Treatment of Toothache, Rheumatism, La Grippe, and Pneumonia.
Claims use since Dec. 10, 1918.

Ser. No. 114,892. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK C. YOUNG, New Haven, Conn. Filed Dec. 30, 1918.

PALFY

Particular description of goods.—A Liniment for Rheumatism, Headache, Toothache, Abscesses, Bunions; Soft Bunches, Such as Cartilage Tissue, Small Tumors, and Wens, and Varicose Veins.
Claims use since Dec. 5, 1918.

Ser. No. 114,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. J. BADENOCH CO., Chicago, Ill. Filed Jan. 4, 1919.

GIV-M-ALL

Particular description of goods.—Stock and Poultry Feed.
Claims use since Dec. 4, 1918.

Ser. No. 115,037. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUSTUS A. WARP, Philadelphia, Pa. Filed Jan. 7, 1919.

Softex

Particular description of goods.—A Shampoo.
Claims use since Nov. 22, 1918.

Ser. No. 115,049. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH HENRY KARP, New York, N. Y. Filed Jan. 8, 1919.

PRAKLENE

Particular description of goods.—A Disinfectant.
Claims use since Dec. 15, 1918.

Ser. No. 115,051. (CLASS 39. CLOTHING.) FRANCIS T. SIMMONS & Co., Chicago, Ill. Filed Jan. 8, 1919.

FUTURIST

Particular description of goods.—Men's, Women's, and Children's Underwear—Namely, Union-Suits Made of Textile Material.
Claims use since Dec. 26, 1918.

Ser. No. 115,125. (CLASS 39. CLOTHING.) NOLL-HAUWORTH COMPANY, Quincy, Ill. Filed Jan. 11, 1919.

INDUSTRI-ALLS

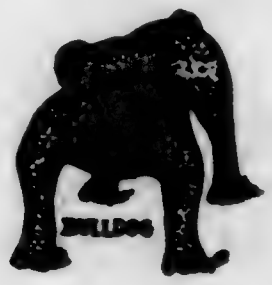
Particular description of goods.—Men's, Women's, Boys', Girls', and Children's One-Piece Work-Suits Made of Denims, Khaki, and other Cotton Fabrics.
Claims use since Dec. 2, 1918.

Ser. No. 115,147. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HEBBIG-ELLIS DRUG CO., Memphis, Tenn. Filed Jan. 13, 1919.

Qban

Particular description of goods.—Hair-Color Restorer, Depilatory, Liquid Shampoo, and Hair-Tonic.
Claims use since Oct. 7, 1900.

Ser. No. 115,187. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUGENE SUTER & COMPANY, New York, N. Y. Filed Jan. 14, 1919.



Particular description of goods.—Dyes.
Claims use since Jan. 2, 1919.

Ser. No. 115,241. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DAVID BERNSTERN, Cleveland, Ohio. Filed Jan. 17, 1919.

Paramount

Particular description of goods.—A Metal-Cleanser in Powdered or Crystalline Form.
Claims use since September, 1917.

Ser. No. 115,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. J. BRACH & SONS, Chicago, Ill. Filed Jan. 22, 1919.

RASTUS
7 11

Particular description of goods.—Chocolate-Covered Marshmallow Bars.
Claims use since Sept. 1, 1918.

Ser. No. 115,376. (CLASS 38. PRINTS AND PUBLICATIONS.) GENERAL APPRAISAL COMPANY, Seattle, Wash. Filed Jan. 22, 1919.

VALUATIONS

Particular description of goods.—A Periodical Published Monthly.
Claims use since Jan. 11, 1919.

Ser. No. 115,522. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSOLIDATED CREAMERIES, INC., New York, N. Y. Filed Jan. 30, 1919.

OVER THE TOP

Particular description of goods.—Canned Condensed Milk.
Claims use since Mar. 23, 1918.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 11, 1919.

124,648. CERTAIN NAMED PNEUMATIC-TIRE ACCESSORIES. AJAX RUBBER COMPANY, INC., Millbrook, N. Y.
Filed June 1, 1918. Serial No. 111,293. PUBLISHED NOVEMBER 26, 1918.

124,649. MEDICINAL PREPARATION USED IN THE TREATMENT OF AFFECTED RESPIRATORY ORGANS. ALL-AMERICAN MEDICINE CORPORATION, New York, N. Y.
Filed October 23, 1918. Serial No. 113,856. PUBLISHED DECEMBER 3, 1918.

124,650. CERTAIN NAMED CHEMICALS, MEDICINES, PHARMACEUTICAL PREPARATIONS. AMERICAN CYANAMID COMPANY, New York, N. Y.
Filed August 29, 1918. Serial No. 112,926. PUBLISHED OCTOBER 22, 1918.

124,651. EGG SUBSTITUTE. AMERICAN ECONOMY PRODUCTS CO., INC., Boston, Mass.
Filed May 6, 1918. Serial No. 110,606. PUBLISHED DECEMBER 3, 1918.

124,652. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. AMERICAN INSULATING MACHINERY COMPANY, Philadelphia, Pa.
Filed July 22, 1918. Serial No. 112,245. PUBLISHED NOVEMBER 26, 1918.

124,653. COTTON CAMISOLE-LACES. THE AMERICAN LACE MFG. CO., Elyria, Ohio.
Filed August 19, 1918. Serial No. 112,777. PUBLISHED NOVEMBER 12, 1918.

124,654. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. AMERICAN PAINT PRODUCTS CO., Chicago, Ill.
Filed July 26, 1918. Serial No. 112,331. PUBLISHED NOVEMBER 12, 1918.

124,655. WASHING COMPOUNDS OR MIXTURES. AMERICAN SOAP & WASHOLINE CO., Cohoes, N. Y.
Filed September 24, 1918. Serial No. 113,323. PUBLISHED NOVEMBER 19, 1918.

124,656. CANNED SALMON. ANNETTE ISLAND PACKING CO., Seattle, Wash.
Filed September 25, 1918. Serial No. 113,338. PUBLISHED NOVEMBER 26, 1918.

124,657. KNITTED SWEATERS, LEGGINGS, CAPS, GLOVES, CHILDREN'S OUTER COATS, CHILDREN'S PANTS, AND CHILDREN'S SWEATERS. SIMON ASCHER & CO., INC., New York, N. Y.
Filed September 25, 1918. Serial No. 113,343. PUBLISHED NOVEMBER 12, 1918.

124,658. CANDY. D. AUERBACH & SONS, New York, N. Y.
Filed September 20, 1918. Serial No. 113,275. PUBLISHED NOVEMBER 5, 1918.

124,659. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. FRED AUWERTER, Rapid City, S. D.
Filed September 30, 1918. Serial No. 113,485. PUBLISHED DECEMBER 3, 1918.

124,660. SASH-PUTTIES. WILLIAM T. BAKER INC., Jersey City, N. J.
Filed May 1, 1918. Serial No. 110,581. PUBLISHED DECEMBER 3, 1918.

124,661. STEEL IN THE FORMS OF RODS, BARS, SHEETS, INGOTS, PLATES, AND WIRE. ARTHUR BALFOUR & COMPANY LIMITED, Sheffield, England.
Filed October 11, 1916. Serial No. 96,554. PUBLISHED NOVEMBER 26, 1918.

124,662. NON-ALCOHOLIC BEVERAGE MADE OF UNFERMENTED FRUIT-JUICE—NAMELY, FIZZ. BECKER BROS. INC., San Francisco, Los Angeles, and San Diego, Cal.
Filed September 4, 1918. Serial No. 113,007. PUBLISHED DECEMBER 3, 1918.

124,663. WRITING AND PRINTING PAPERS. BEEKMAN PAPER AND CARD COMPANY, INC., New York, N. Y.
Filed September 9, 1918. Serial No. 113,073. PUBLISHED DECEMBER 3, 1918.

124,664. HAIR SWITCHES, WIGS, AND FALSE-HAIR TRIMMINGS—NAMELY, MARCEL WAVES, ROLLS, AND PUFFS. ARTHUR BIANCHI, Washington, D. C.
Filed August 22, 1918. Serial No. 112,826. PUBLISHED DECEMBER 3, 1918.

124,665. OINTMENT FOR ECZEMA, SUNBURN, CHAPPED HANDS, CUTS, OPEN WOUNDS, AND ALL SKIN ERUPTIONS. THE BICKMORE COMPANY, Old Town, Me.
Filed September 18, 1918. Serial No. 113,223. PUBLISHED DECEMBER 3, 1918.

124,666. CIGARS. Bonnow Bros., Philadelphia, Pa.
Filed April 27, 1918. Serial No. 110,466. PUBLISHED DECEMBER 3, 1918.

124,667. CANNED SARDINES. BOOTH FISHERIES COMPANY, Chicago, Ill., and Eastport, Me.
Filed September 3, 1918. Serial No. 112,970. PUBLISHED DECEMBER 3, 1918.

124,668. PLEASURE-VEHICLES — NAMELY, BROUGHAMS, VICTORIAS, BUGGIES, AND TOP-WAGONS—AUTOMOBILES, AND AUTOMOBILE-CHASSIS. BREWSTER & CO., Long Island City and New York, N. Y.
Filed July 19, 1917. Serial No. 105,107. PUBLISHED NOVEMBER 26, 1918.

124,669. LAUNDRY SOAP. WILBUR S. BURNS, Grand Rapids, Mich.
Filed August 27, 1918. Serial No. 112,885. PUBLISHED NOVEMBER 19, 1918.

124,670. LUBRICANTS CONSISTING OF OILS AND GREASES. AUGUSTUS CRANE BURBY, Philadelphia, Pa., assignor to Keystone Lubricating Company, Philadelphia, Pa., a Corporation of Pennsylvania.
Filed December 13, 1916. Serial No. 99,884. PUBLISHED FEBRUARY 20, 1917.

124,671. LIQUID COMPOUNDS FOR CERTAIN NAMED MEDICINAL PURPOSES. CAMO CHEMICAL CO., Laporte, Ind.
Filed March 11, 1918. Serial No. 109,497. PUBLISHED DECEMBER 3, 1918.

124,672. COTTON YARNS. THE CARDINAL MILLS, West Point, Miss.
Filed July 29, 1918. Serial No. 112,381. PUBLISHED NOVEMBER 12, 1918.

124,673. AMPULS MADE OF GLASS. G. W. CARNRICK CO., New York, N. Y.
Filed June 18, 1918. Serial No. 111,647. PUBLISHED NOVEMBER 12, 1918.

124,674. CERTAIN NAMED CLOTHING FOR MEN. THE CELLULAR CLOTHING CO. LD., London, England.
Filed June 5, 1918. Serial No. 111,374. PUBLISHED NOVEMBER 12, 1918.

124,675. ANTISEPTIC TOOTH-PASTE. CHEMISTS CO. OF NEW YORK, INC., New York, N. Y.
Filed September 9, 1918. Serial No. 113,074. PUBLISHED DECEMBER 3, 1918.

124,676. BICYCLES. CHICAGO CYCLE SUPPLY COMPANY, Chicago, Ill.
Filed January 29, 1918. Serial No. 108,682. PUBLISHED NOVEMBER 12, 1918.

124,677. AIR-DRILLS. CHICAGO PNEUMATIC TOOL COMPANY, Chicago, Ill.
Filed August 20, 1918. Serial No. 112,797. PUBLISHED DECEMBER 3, 1918.

124,678. RADIATOR AND ENGINE COVERS. THE CINCINNATI AUTO SPECIALTY CO., Cincinnati, Ohio.
Filed August 9, 1917. Serial No. 105,555. PUBLISHED NOVEMBER 12, 1918.

124,679. CANNED SARDINES. COAST FISHING CO., Wilmington, Cal.
Filed July 11, 1918. Serial No. 112,057. PUBLISHED DECEMBER 3, 1918.

124,680. CERTAIN NAMED SPARK-INTENSIFYING DEVICES. GUY E. COLBY, Morrison, Ill.
Filed June 1, 1918. Serial No. 111,305. PUBLISHED NOVEMBER 26, 1918.

124,681. BITS FOR LATHES FOR CUTTING METAL. COLONIAL STEEL COMPANY, Pittsburgh, Pa.
Filed July 24, 1917. Serial No. 105,222. PUBLISHED DECEMBER 3, 1918.

124,682. WHEAT-FLOUR. COLORADO MILLING & ELEVATOR CO., Denver, Colo., and Caldwell, Idaho.
Filed August 1, 1918. Serial No. 112,457. PUBLISHED DECEMBER 3, 1918.

124,683. FARM-TRACTORS. THE COLUMBUS TRACTOR CO., Columbus, Ohio.
Filed August 17, 1918. Serial No. 112,764. PUBLISHED NOVEMBER 5, 1918.

124,684. ELECTRIC SWITCHES. CONNECTICUT TELEPHONE & ELECTRIC CO. INC., Meriden, Conn.
Filed April 15, 1918. Serial No. 110,199. PUBLISHED JULY 9, 1918.

124,685. SILK YARNS, PRINCIPALLY ORGANZIN AND TRAM. CRANE BROS. INC., Kingston, Pa.
Filed August 8, 1918. Serial No. 112,625. PUBLISHED NOVEMBER 19, 1918.

124,686. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. THE CUTAWAY HARROW CO., Higganum, Conn.
Filed September 24, 1918. Serial No. 113,325. PUBLISHED NOVEMBER 26, 1918.

124,687. PETROLEUM, KEROSENE, MOTOR-BENZIN, AUTOMOBILE-BENZIN, NAPHTHA, GASOLENE. DE BATAAFSCHE PETROLEUM MAATSCHAPPIJ, The Hague, Netherlands.
Filed June 21, 1917. Serial No. 104,573. PUBLISHED NOVEMBER 12, 1918.

124,688. MARGARIN AND LARD COMPOUND. DE BRUYN, LIMITED, London, England.
Filed August 5, 1918. Serial No. 112,517. PUBLISHED DECEMBER 3, 1918.

124,689. LOOMS. ELNA M. DE NEERGAARD, New York, N. Y.
Filed August 17, 1918. Serial No. 112,823. PUBLISHED NOVEMBER 5, 1918.

124,690. COTTON PIECE GOODS. DENNER & NATHAN, New York, N. Y.
Filed May 25, 1918. Serial No. 111,194. PUBLISHED NOVEMBER 19, 1918.

124,691. FLAGS. JOHN C. DETTRA & COMPANY, INC., Oaks, Pa.
Filed August 10, 1918. Serial No. 112,656. PUBLISHED NOVEMBER 26, 1918.

124,692. CHILDREN'S SHOES OF LEATHER AND COMBINATIONS OF LEATHER AND FABRIC. DEVINE AND HOFFNER, Philadelphia, Pa.
Filed May 24, 1918. Serial No. 111,170. PUBLISHED DECEMBER 3, 1918.

124,693. DRILLS, DRILL-HANDLES, DRILL-POINTS, AND DRILL-BITS. DIAMOND EXPANSION BOLT CO., New York, N. Y.
Filed June 4, 1918. Serial No. 111,356. PUBLISHED NOVEMBER 5, 1918.

124,694. DRILLS, DRILL-HANDLES, AND DRILL-POINTS. DIAMOND EXPANSION BOLT CO., New York, N. Y.
Filed June 4, 1918. Serial No. 111,357. PUBLISHED NOVEMBER 5, 1918.

124,695. SEWING-MACHINES. DOMESTIC SEWING MACHINE COMPANY, INC., Buffalo, N. Y.
Filed September 25, 1918. Serial No. 113,346. PUBLISHED OCTOBER 29, 1918.

124,696. SEWING-MACHINES. DOMESTIC SEWING MACHINE COMPANY, INC., Buffalo, N. Y.
Filed September 25, 1918. Serial No. 113,347. PUBLISHED OCTOBER 29, 1918.

124,697. CORNMEAL. THE ECLIPSE MILLING COMPANY, INC., Graham, Va.
Filed April 27, 1918. Serial No. 110,473. PUBLISHED DECEMBER 3, 1918.

124,698. ELECTRIC MAIL-INDICATORS. REC-MI MANUFACTURING CO., Bloomfield, Nebr.
Filed September 7, 1918. Serial No. 113,056. PUBLISHED NOVEMBER 19, 1918.

124,699. AUTOMOBILE STEERING-GEARS. C. A. S. ENGINEERING CO., Detroit, Mich.
Filed July 19, 1918. Serial No. 112,217. PUBLISHED NOVEMBER 26, 1918.

124,700. WATERPROOF COMPOUND FOR LEATHER. ERWA CHEMICAL MANUFACTURING COMPANY, Needham, Mass.
Filed June 28, 1918. Serial No. 111,866. PUBLISHED DECEMBER 3, 1918.

124,701. CONCRETE BARREL MIXER. FAIRBANKS, MORSE & CO., Chicago, Ill.
Filed August 19, 1918. Serial No 112,783. PUBLISHED NOVEMBER 5, 1918.

124,702. INTERNAL-COMBUSTION ENGINES. FALLS MOTORS CORPORATION, Sheboygan Falls, Wis.
Filed September 30, 1916. Serial No. 96,330. PUBLISHED DECEMBER 4, 1917.

124,703. AUTOMOBILE AND FURNITURE POLISH. HARRY L. FRASER, New York, N. Y.
Filed August 27, 1918. Serial No. 112,887. PUBLISHED OCTOBER 29, 1918.

124,704. SNAP-FASTENERS AND PLACKET-FASTENERS. FEDERAL SNAP FASTENER CORPORATION, New York, N. Y.
Filed August 7, 1918. Serial No. 112,602. PUBLISHED DECEMBER 3, 1918.

124,705. CHOCOLATE CANDY. S. FISHER & CO., INC., Hoboken, N. J.
Filed September 25, 1918. Serial No. 113,350. PUBLISHED NOVEMBER 26, 1918.

124,706. PREPARED JELLIES AND JELLIED DESSERTS. FOOD PRODUCTS INC., Wilmington, Del., and New York, N. Y.
Filed May 25, 1918. Serial No. 111,355. PUBLISHED DECEMBER 3, 1918.

124,707. AUTOMOBILE-POLISH. ELMER A. FORD, New York, N. Y.
Filed August 28, 1918. Serial No. 112,849. PUBLISHED NOVEMBER 12, 1918.

124,708. INSULATION FOR SPARK-PLUGS. FRENCHTOWN PORCELAIN COMPANY, Trenton, N. J.
Filed August 6, 1918. Serial No. 112,566. PUBLISHED NOVEMBER 5, 1918.

124,709. STOMACH-TONIC AND ALTERATIVE USED IN TREATING CERTAIN NAMED DISORDERS. DAVID H. FULTON & BRO., Detroit, Mich.
Filed May 11, 1918. Serial No. 110,838. PUBLISHED DECEMBER 3, 1918.

124,710. HAIR-DYES. FRANK A. GRAY, New York, N. Y.
Filed June 15, 1918. Serial No. 111,598. PUBLISHED DECEMBER 3, 1918.

124,711. CONVEYER-BELTS MADE OF RUBBER REINFORCED WITH FABRIC. THE B. F. GOODRICH COMPANY, New York, N. Y.
Filed May 27, 1918. Serial No. 111,213. PUBLISHED NOVEMBER 26, 1918.

124,712. POWER-DRIVEN SYSTEMS FOR PUMPING WATER. THE GOULDS MANUFACTURING COMPANY, Seneca Falls, N. Y.
Filed September 11, 1918. Serial No. 113,126. PUBLISHED DECEMBER 3, 1918.

124,713. LEATHER, CLOTH, AND RUBBER BOOTS, SHOES, AND SLIPPERS. HANAN & SON, Brooklyn, N. Y.
Filed July 31, 1918. Serial No. 112,488. PUBLISHED NOVEMBER 19, 1918.

124,714. BICYCLES. HARLEY-DAVIDSON MOTOR CO., Milwaukee, Wis.
Filed December 26, 1916. Serial No. 100,168. PUBLISHED NOVEMBER 26, 1918.

124,715. HATS. HARRIS-POLK HAT CO., St. Louis, Mo.
Filed November 30, 1917. Serial No. 107,680. PUBLISHED FEBRUARY 5, 1918.

124,716. STOVEPIPE-ELBOWS AND WOOD, COAL, GAS, OIL, AND VAPOR STOVES. HEMP & CO. (CORP.), St. Louis, Mo.
Filed September 22, 1917. Serial No. 106,886. PUBLISHED NOVEMBER 26, 1918.

124,717. COTTON LININGS. DANIEL W. HERRMAN, New York, N. Y.
Filed August 22, 1918. Serial No. 112,832. PUBLISHED NOVEMBER 19, 1918.

124,718. VELVETS, VELVETEENS, AND WOOLEN PIECE GOODS. DANIEL W. HERRMAN, New York, N. Y.
Filed August 22, 1918. Serial No. 112,831. PUBLISHED NOVEMBER 19, 1918.

124,719. INFANTS' HOSIERY. HICKORY HOSIERY MILLS, INC., Hickory, N. C.
Filed September 19, 1918. Serial No. 113,247. PUBLISHED NOVEMBER 12, 1918.

124,720. MEN'S GARTERS. JOHN HORAN, Ottawa, Ill.
Filed May 11, 1918. Serial No. 110,842. PUBLISHED NOVEMBER 19, 1918.

124,721. SEEDS, BULBS, AND PLANTS. THE HOLMES-LETHERMAN SEED COMPANY, Canton, Ohio.
Filed February 8, 1918. Serial No. 106,886. PUBLISHED NOVEMBER 19, 1918.

124,722. MILLINERY, GOWNS, AND FURS. PEGGY HOYT, INC., New York, N. Y.
Filed April 23, 1918. Serial No. 110,897. PUBLISHED SEPTEMBER 3, 1918.

124,723. COTTON-MESH UNDERWEAR FOR MEN, WOMEN, AND CHILDREN — NAMELY, UNDERSHIRTS, DRAWERS, AND UNION-SUITS. IDEAL LINEN MESH COMPANY, Poughkeepsie, N. Y.
Filed July 25, 1918. Serial No. 112,320. PUBLISHED NOVEMBER 19, 1918.

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124,724. OPTICAL GOODS, EYEGLASSES AND FITTINGS, SPECTACLES AND EYEGLASSES, FRAMES AND MOUNTINGS. INTER-STATE OPTICAL CORPORATION, Brooklyn, N. Y.
Filed June 5, 1918. Serial No. 111,377. PUBLISHED NOVEMBER 12, 1918.

124,725. TEA. IRWIN-HARRISONS & CROSFIELD, INC., New York, N. Y.; Boston, Mass.; Philadelphia, Pa.; Chicago, Ill.; and San Francisco, Cal.
Filed September 25, 1918. Serial No. 113,359. PUBLISHED NOVEMBER 26, 1918.

124,726. CHEWING-GUM. ROBERT L. JOHNSTONE, New York, N. Y.
Filed September 25, 1918. Serial No. 113,360. PUBLISHED NOVEMBER 26, 1918.

124,727. COFFEE. JOHN E. KING COFFEE CO., Detroit, Mich.
Filed October 5, 1918. Serial No. 113,589. PUBLISHED NOVEMBER 26, 1918.

124,728. METALLIC PISTON-RINGS, PACKING-RINGS, AND COMPRESSION-RINGS FOR ENGINES, ALL OF SAID RINGS BEING OF A METALLIC NATURE. HILLARD W. KOEHLER, Coronado, Cal.
Filed September 4, 1918. Serial No. 113,019. PUBLISHED NOVEMBER 19, 1918.

124,729. COTTON PIECE GOODS COMPRISING SHEETINGS AND SHIRTINGS. B. B. & R. KNIGHT, Providence, R. I.
Filed July 10, 1918. Serial No. 112,024. PUBLISHED NOVEMBER 19, 1918.

124,730. COTTON PIECE GOODS COMPRISING SHEETINGS AND SHIRTINGS. B. B. & R. KNIGHT, Providence, R. I.
Filed July 10, 1918. Serial No. 112,025. PUBLISHED NOVEMBER 19, 1918.

124,731. COTTON PIECE GOODS COMPRISING SHEETINGS AND SHIRTINGS. B. B. & R. KNIGHT, Providence, R. I.
Filed July 10, 1918. Serial No. 112,026. PUBLISHED NOVEMBER 19, 1918.

124,732. COTTON PIECE GOODS COMPRISING SHEETINGS AND SHIRTINGS. B. B. & R. KNIGHT, Providence, R. I.
Filed July 10, 1918. Serial No. 112,027. PUBLISHED NOVEMBER 19, 1918.

124,733. COTTON PIECE GOODS COMPRISING SHEETINGS AND SHIRTINGS. B. B. & R. KNIGHT, Providence, R. I.
Filed July 10, 1918. Serial No. 112,028. PUBLISHED NOVEMBER 19, 1918.

124,734. CERTAIN NAMED PREPARATIONS FOR NOURISHING THE SKIN. LA FORD CHEMICAL CO., Indianapolis, Ind.
Filed December 10, 1917. Serial No. 107,876. PUBLISHED DECEMBER 3, 1918.

124,735. BAKING-POWDER AND BAKING-SODA. LAYTON PURE FOOD COMPANY, St. Louis, Mo., and East St. Louis, Ill.
Filed October 21, 1918. Serial No. 113,831. PUBLISHED DECEMBER 3, 1918.

124,736. ALTERATIVE, CATHARTIC, LAXATIVE, AND ELIMINANT MEDICINES. THE LEFO CHEMICAL COMPANY, INC., Vineburg, Cal.
Filed January 24, 1918. Serial No. 108,696. PUBLISHED DECEMBER 3, 1918.

124,737. CANNED SARDINES IN OIL. LEMARCHAND FRÈRES & CIE., Treboul, France.
Filed May 17, 1918. Serial No. 110,958. PUBLISHED DECEMBER 3, 1918.

124,738. CERTAIN NAMED SHEET AND TIN MILL PRODUCTS. THE LIBERTY STEEL COMPANY, Warren, Ohio.
Filed August 23, 1918. Serial No. 112,851. PUBLISHED NOVEMBER 12, 1918.

124,739. SAFETY-PAPER. E. E. LLOYD PAPER CO., Chicago, Ill.
Filed October 11, 1918. Serial No. 113,695. PUBLISHED DECEMBER 3, 1918.

124,740. SAFETY-PAPER. E. E. LLOYD PAPER CO., Chicago, Ill.
Filed October 11, 1918. Serial No. 113,694. PUBLISHED DECEMBER 3, 1918.

124,741. AUTOMOBILE-RADIATORS. LOBBE ART BRASS & SPECIALTY CO., Toledo, Ohio.
Filed June 12, 1918. Serial No. 111,523. PUBLISHED NOVEMBER 19, 1918.

124,742. DRESSES FOR GIRLS AND WOMEN. THE LURIE CO., INC., New York, N. Y.
Filed September 7, 1918. Serial No. 113,061. PUBLISHED NOVEMBER 19, 1918.

124,743. LUBRICATING-OILS. MCCORMICK & CO., Baltimore, Md.
Filed August 22, 1918. Serial No. 112,833. PUBLISHED NOVEMBER 26, 1918.

124,744. SHOES FOR MEN AND WOMEN. WILLIAM W. MCCOY, Cincinnati, Ohio.
Filed June 10, 1918. Serial No. 111,458. PUBLISHED NOVEMBER 19, 1918.

124,745. COAL PREPARED FOR USE AS A FUEL. MCLAUGHLIN COAL REDUCTION COMPANY, Decatur, Ill.
Filed August 30, 1918. Serial No. 112,945. PUBLISHED NOVEMBER 26, 1918.

124,746. BLOOD-PURIFIER AND RELIEF FOR RHEUMATISM. MCNEIL DRUG CO., INC., Jacksonville, Fla.
Filed March 6, 1917. Serial No. 101,935. PUBLISHED DECEMBER 3, 1918.

124,747. WRAPPING-PAPER. LOUIS K. MALLINCKRODT, Baltimore, Md.
Filed September 30, 1918. Serial No. 113,469. PUBLISHED DECEMBER 3, 1918.

124,748. SILK PIECE GOODS. LARRY J. MAROULIES, New York, N. Y.
Filed April 20, 1918. Serial No. 110,350. PUBLISHED NOVEMBER 12, 1918.

124,749. HAND-OPERATED VACUUM-CLEANERS. THE MARVEL COMPANY, Cleveland, Ohio.
Filed July 17, 1918. Serial No. 112,188. PUBLISHED NOVEMBER 5, 1918.

124,750. SWEET CHOCOLATE. MASSACHUSETTS CHOCOLATE COMPANY, Boston, Mass.
Filed October 3, 1918. Serial No. 113,565. PUBLISHED NOVEMBER 26, 1918.

124,751. ELECTRIC FOOT-WARMERS. MERIT ELECTRIC MFG. CO., New York, N. Y.
Filed July 29, 1918. Serial No. 112,398. PUBLISHED NOVEMBER 12, 1918.

124,752. SEMIPASTE PAINT REDUCED WITH OIL AND TURPENTINE. JOHN WHITBECK MERRIMAN, Seattle, Wash.
Filed October 10, 1918. Serial No. 113,656. PUBLISHED DECEMBER 3, 1918.

124,753. VETERINARY MEDICINES FOR EXTERNAL USE. THE MIROLENE CO., Alsen, N. D.
Filed March 30, 1918. Serial No. 109,890. PUBLISHED DECEMBER 3, 1918.

124,754. MONTHLY MAGAZINE. THE NATIONAL DRUG CLERK, INC., Chicago, Ill.
Filed July 29, 1918. Serial No. 112,400. PUBLISHED NOVEMBER 19, 1918.

124,755. PRINTING AND WRITING PAPER. NATIONAL PAPETERIE COMPANY, Springfield, Mass.
Filed February 25, 1918. Serial No. 109,204. PUBLISHED NOVEMBER 19, 1918.

124,756. RUBBER TIRES. THE NATIONAL TIRE & RUBBER COMPANY, East Palestine, Ohio.
Filed April 18, 1918. Serial No. 110,904. PUBLISHED NOVEMBER 19, 1918.

124,757. WOVEN COTTON PIECE GOODS. NEUSS, HESSLEIN & CO., New York, N. Y.
Filed August 7, 1918. Serial No. 112,611. PUBLISHED NOVEMBER 19, 1918.

124,758. CERTAIN NAMED METAL-WORKING MACHINES, PARTS THEREOF, AND ACCESSORIES THEREFOR. NILES-BEMENT-POND COMPANY, New York, N. Y.
Filed August 16, 1918. Serial No. 112,751. PUBLISHED NOVEMBER 5, 1918.

124,759. HAIR-STAIN. ELLEN C. O'BRIEN, Milwaukee, Wis.
Filed September 20, 1918. Serial No. 113,264. PUBLISHED NOVEMBER 19, 1918.

124,760. MOTION-PICTURE MACHINES. CHRISTEN J. PETERSON, Chicago, Ill.
Filed June 11, 1918. Serial No. 111,507. PUBLISHED NOVEMBER 5, 1918.

124,761. INDEX-TABS. J. H. RAND CORP'N, North Tonawanda, N. Y.
Filed June 4, 1917. Serial No. 104,268. PUBLISHED NOVEMBER 19, 1918.

124,762. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. RICH-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed June 24, 1918. Serial No. 111,788. PUBLISHED NOVEMBER 19, 1918.

124,763. SOAP AND SCOURING AND CLEANING COMPOUNDS. SARRETON MFG. CO., Tampa, Fla.
Filed September 5, 1918. Serial No. 113,087. PUBLISHED NOVEMBER 19, 1918.

124,764. CERTAIN NAMED CLOTHING FOR CHILDREN. SACKMAN BROTHERS COMPANY, New York, N. Y.
Filed May 14, 1918. Serial No. 110,894. PUBLISHED SEPTEMBER 24, 1918.

124,765. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed August 3, 1918. Serial No. 112,508. PUBLISHED NOVEMBER 19, 1918.

124,766. VARNISH AND VARNISH REDUCER. SEALWOOD COMPANY, St. Louis, Mo.
Filed August 3, 1918. Serial No. 112,512. PUBLISHED SEPTEMBER 17, 1918.

124,767. FLEXIBLE KNITTING-NEEDLES FOR HAND USE. FRANK L. SESSIONS, Lakewood, Ohio.
Filed March 1, 1918. Serial No. 109,304. PUBLISHED NOVEMBER 19, 1918.

124,768. WHEAT-FLOUR. SHANE BROS. & WILSON CO., Philadelphia and Millbourne, Pa., and Minneapolis, Minn.
Filed August 5, 1918. Serial No. 112,541. PUBLISHED DECEMBER 3, 1918.

124,769. ROASTED COFFEE. THE SHEAR COMPANY, Waco, Tex.
Filed September 30, 1918. Serial No. 113,501. PUBLISHED NOVEMBER 26, 1918.

124,770. CORSETS. SHEPARD NORWELL COMPANY, Boston, Mass.
Filed June 14, 1918. Serial No. 111,583. PUBLISHED NOVEMBER 19, 1918.

124,771. CHEMICAL IRON-RUST AND STAIN REMOVING CREAM. RICHD. G. SIP, Jersey City, N. J.
Filed August 28, 1918. Serial No. 112,921. PUBLISHED DECEMBER 3, 1918.

124,772. CERTAIN NAMED LEATHER-SOFTENING COMPOUND, LEATHER-DRESSING, LEATHER-CLEANING DETERGENT. ALFRED A. SMITH, South Braintree, Mass.
Filed October 18, 1917. Serial No. 106,347. PUBLISHED NOVEMBER 19, 1918.

124,773. FFOT-BALM. Dr. R. M. SMITH, Manzanola, Colo.
Filed October 22, 1918. Serial No. 113,880. PUBLISHED DECEMBER 3, 1918.

124,774. CHURNS AND BUTTER-WORKERS. SMITH'S INVENTIONS, INC., Minneapolis, Minn.
Filed September 14, 1918. Serial No. 113,172. PUBLISHED NOVEMBER 5, 1918.

124,775. PREPARATION FOR TUBERCULOSIS, ASTHMA, BRONCHITIS, AND CATARRH. Mrs. AMANDA C. SNIDER, Dallas, Tex.
Filed October 22, 1918. Serial No. 113,851. PUBLISHED DECEMBER 3, 1918.

124,776. ELECTRIC MOTORS, ELECTRIC GENERATORS, AND ELECTRIC TRANSFORMERS. THE STAMFORD ELECTRIC & MANUFACTURING COMPANY, Stamford, Conn.
Filed February 8, 1918. Serial No. 106,896. PUBLISHED JUNE 18, 1918.

124,777. ENAMEL PAINTS, VARNISH-STAINS, VARNISHES, OIL-PAINTS, VARNISH-REMOVERS, FLOOR-LACQUERS. STANDARD COOPER-BELL CO., Chicago, Ill.
Filed July 17, 1918. Serial No. 112,195. PUBLISHED NOVEMBER 12, 1918.

124,778. SULFURET OF ANTIMONY AND ZINC OXID. STATES METALS COMPANY, New York, N. Y.
Filed July 24, 1918. Serial No. 112,310. PUBLISHED DECEMBER 3, 1918.

124,779. IMITATION PEARLS. JOHN H. STONE, Providence, R. I.
Filed April 22, 1918. Serial No. 110,579. PUBLISHED DECEMBER 3, 1918.

124,780. CERTAIN NAMED HEATING AND LIGHTING APPARATUS. WILLIAM SUCKLING & SONS, Birmingham, England.
Filed March 25, 1918. Serial No. 109,778. PUBLISHED NOVEMBER 12, 1918.

124,781. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. WILLIAM SUCKLING & SONS, Birmingham, England.
Filed May 27, 1918. Serial No. 111,227. PUBLISHED NOVEMBER 5, 1918.

124,782. COTTON PIECE GOODS. ROBERT A. SUFFERN, New York, N. Y.
Filed August 21, 1918. Serial No. 112,820. PUBLISHED NOVEMBER 12, 1918.

124,783. COTTON PIECE GOODS. ROBERT A. SUFFERN, New York, N. Y.
Filed August 21, 1918. Serial No. 112,819. PUBLISHED NOVEMBER 12, 1918.

124,784. SHOE-POLISH. WALTER SURDACKI, Depew, N. Y.
Filed April 19, 1918. Serial No. 110,338. PUBLISHED DECEMBER 3, 1918.

124,785. RUBBER HEELS. TAUNTON RUBBER CO. INC., Taunton, Mass.
Filed September 24, 1918. Serial No. 113,336. PUBLISHED NOVEMBER 12, 1918.

124,786. CERTAIN NAMED BUTTONS FOR OUTER CLOTHING. THALHEIMER BROTHERS, New York, N. Y.
Filed October 4, 1918. Serial No. 113,561. PUBLISHED NOVEMBER 12, 1918.

124,787. CORSETS. ANNA A. TOOMEY, Northampton, Mass.
Filed July 25, 1917. Serial No. 106,281. PUBLISHED NOVEMBER 12, 1918.

124,788. COTTON PIECE GOODS. TOOTAL BROADHURST LEE CO. LIMD., Manchester, England.
Filed September 4, 1918. Serial No. 113,024. PUBLISHED NOVEMBER 12, 1918.

124,789. COTTON PIECE GOODS. TOOTAL BROADHURST LEE CO. LIM'D, Manchester, England.
Filed September 4, 1918. Serial No. 113,025. PUBLISHED NOVEMBER 12, 1918.

124,790. SHIP-RIVETS. TOWNSEND COMPANY, New Brighton, Pa.
Filed September 27, 1918. Serial No. 113,459. PUBLISHED DECEMBER 3, 1918.

124,791. LEATHER BELTING. J. S. TURNER MANUFACTURING CO., Lowell, Mass.
Filed September 25, 1918. Serial No. 113,418. PUBLISHED NOVEMBER 26, 1918.

124,792. LEATHER BELTING. J. S. TURNER MANUFACTURING CO., Lowell, Mass.
Filed September 25, 1918. Serial No. 113,419. PUBLISHED NOVEMBER 26, 1918.

124,793. LEATHER BELTING. J. S. TURNER MANUFACTURING CO., Lowell, Mass.
Filed September 25, 1918. Serial No. 113,417. PUBLISHED NOVEMBER 26, 1918.

124,794. SEWING-MACHINES AND PARTS THEREOF. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed September 25, 1918. Serial No. 113,408. PUBLISHED DECEMBER 3, 1918.

124,795. WHITE METALS, SOLDER METALS, PATTERN METALS, WHITE-METAL ALLOYS, BABBITT METALS. UNION SMELTING & REFINING COMPANY, INC., New York, N. Y.
Filed November 1, 1917. Serial No. 107,092. PUBLISHED NOVEMBER 5, 1918.

124,796. NAILS AND TACKS. UNITED SHOE MACHINERY CORPORATION, Paterson, N. J., and Boston, Mass.
Filed September 12, 1918. Serial No. 113,152. PUBLISHED OCTOBER 29, 1918.

124,797. CANDIED POPCORN. THE UNITED STATES CORN CONFECTION COMPANY, Battle Creek, Mich.
Filed August 22, 1918. Serial No. 112,843. PUBLISHED DECEMBER 3, 1918.

124,798. JAR-RINGS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed August 7, 1917. Serial No. 105,529. PUBLISHED OCTOBER 15, 1918.

124,799. LUBRICATING-OILS. VACUUM OIL COMPANY, New York, N. Y.
Filed October 31, 1917. Serial No. 107,080. PUBLISHED NOVEMBER 5, 1918.

124,800. VISES. VELOX VISE CO., INC., Lowville, N. Y.
Filed September 28, 1918. Serial No. 113,479. PUBLISHED NOVEMBER 19, 1918.

124,801. HOSIERY. A. V. VICTORIUS & CO., INC., New York, N. Y.
Filed January 31, 1918. Serial No. 108,730. PUBLISHED NOVEMBER 19, 1918.

124,802. FUR COATS, FUR COATEES, FUR WRAPS, FUR CAPES, FUR SCARFS, AND FUR MUFFS. A. H. VOGEL & CO., INC., New York, N. Y.
Filed March 18, 1918. Serial No. 109,639. PUBLISHED DECEMBER 3, 1918.

124,803. AIR-COMPRESSING ENGINES. JOHN WANAMAKER, NEW YORK, New York, N. Y.
Filed August 4, 1917. Serial No. 105,481. PUBLISHED DECEMBER 3, 1918.

124,804. CERTAIN NAMED VEHICLE-DUMPING DEVICES. HERMAN WERNER, St. Louis, Mo.
Filed August 23, 1918. Serial No. 112,856. PUBLISHED NOVEMBER 26, 1918.

124,805. WRITING-PAPER AND ENVELOPS. CHARLES E. WEYAND & CO., INC., New York, N. Y.
Filed October 12, 1918. Serial No. 113,712. PUBLISHED NOVEMBER 19, 1918.

124,806. WATCHES, WATCH-MOVEMENTS, AND PARTS THEREOF, AND WATCHCASES. A. WITTNAUER CO., New York, N. Y.
Filed March 22, 1918. Serial No. 109,735. PUBLISHED OCTOBER 22, 1918.

124,807. PERFUMES. YARDLEY & CO., LIMITED, London, England.
Filed July 10, 1918. Serial No. 112,041. PUBLISHED DECEMBER 3, 1918.

124,808. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. L. A. YOUNG INDUSTRIES, INC., Detroit, Mich.
Filed June 5, 1918. Serial No. 111,386. PUBLISHED OCTOBER 29, 1918.

LABELS

REGISTERED MARCH 11, 1919.

21,168.—*Title:* "VALU GAGE FIFLD FENCING, NUMBER 9 SERIES." (For Woven-Wire Field-Fencing.) JULIAN ARMSTRONG, Chicago, Ill. Filed December 7, 1918.

21,169.—*Title:* "VALU GAGE FIELD FENCING, NUMBER 11 SERIES." (For Woven-Wire Field-Fencing.) JULIAN ARMSTRONG, Chicago, Ill. Filed December 7, 1918.

21,170.—*Title:* "VALU GAGE FIELD FENCING, NUMBER 12 SERIES." (For Woven-Wire Field-Fencing.) JULIAN ARMSTRONG, Chicago, Ill. Filed December 7, 1918.

21,171.—*Title:* "DUE FRATI." (For Domestic Macaroni.) C. MASPERO, New York, N. Y. Filed January 15, 1919.

21,172.—*Title:* "DRUM BRAND." (For Coffee.) WM. A. STEWART, Chicago, Ill. Filed January 30, 1919.

PRINTS

REGISTERED MARCH 11, 1919.

5,070.—*Title:* "SAY, WHAT A TRICK YOU'LL TURN FOR YOUR TONGUE." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed January 27, 1919.

5,071.—*Title:* "YOU JUST GET-PUT WITH A JIMMY PIPE BRIMFUL OF PRINCE ALBERT." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed January 27, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE McKINNEY.

Decided January 11, 1922.

PATENTABILITY—INVENTION—HANDLES ON PARTS OF A BURIAL-CASKET.

The provision of handles wherever they are needed is so common that the provision of handles on the parts of a separable burial-casket involves no invention.

APPEAL from Examiners-in-Chief.

BURIAL-CASE.

Messrs. Alexander & Dowell for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 12, 14, and 16, which are as follows:

12. A burial casket comprising a base; a casing closed at top and sides but open at bottom and adapted to be seated upon the base to protect and cover a body laid upon the base; handles attached to the sides of the casing whereby it may be moved independently of the base; and handles attached to the sides of the base whereby it may be moved either independently of the casing or together with the casing when the latter is placed thereon.

14. A burial casket comprising a base provided with a channel adjacent its edge; a casing closed at top and sides but open at bottom and adapted to be placed upon the base member and have its lower edge sealed within the channel in said base; longitudinally disposed handles attached to the sides of said casing whereby it may be moved independently of the base; and longitudinally disposed handles connected with the base for carrying same independently of the casing or together with the casing when the latter is placed thereon, substantially as described.

16. A burial casket comprising a base provided with a channel; a casing closed at top and sides but open at bottom and adapted to be placed upon the base member and have its lower edge sealed within the channel in said base member; a removable pneumatic tube adapted to be positioned within said channel beneath the edges of said casing to cushion shocks and prevent rupture of said casket during shipment or transportation prior to sealing of the casing of the base; handle bars attached to the casing; and handle bars attached to the base, substantially as described.

The references cited are: McLean, 253,545, February 14, 1882; Leech, 809,573, January 9, 1906; Blake, 813,942, February 27, 1906; Montross, 878,985, February 11, 1908; Waldie *et al.*, 900,968, October 13, 1908; Miller, 1,189,156, June 27, 1916.

The appealed claims cover a burial-casket having a base separable from the main body of the casket, so that the corpse may be laid upon the base and the main body of the casket conveniently placed thereover. Both the base and the main body have handles. One of the appealed claims specifies the feature of the pneumatic tube 6, which may be temporarily placed between the body of the coffin and the base to form a pneumatic seal during, say, transportation of the corpse from one place to another, and afterward, when the coffin is finally placed in the grave, the tube may be conveniently removed and the joint between the body portion and the base conveniently sealed.

The main reference relied upon by the Examiners-in-Chief was the patent to Miller; but applicant has called attention to the fact that his application was filed incomplete in the Office before the filing of the application on which the Miller patent issued, (see paper accompanying paper No. 6,) and applicant stated at the hearing that he could furnish an affidavit under Rule 75 satisfactorily overcoming the Miller patent, if I thought the claims patentable over the other references.

I think the Miller patent meets the appealed claims 12 and 14, and the Miller and Montross patents meet claim 16 in the way pointed out by the Examiners-in-Chief.

I further hold that the other references also meet claims 12 and 14. Leech, for example, shows a casket comprising a base, with a main body portion 6, closed at the top and open at the bottom and adapted to seat on a base. It is true Leech has no handles on his body portion; but it is so common to put handles wherever they are needed that I do not believe this change is sufficient to sustain a claim. Nor is it believed that the limitation in claim 14—

longitudinally disposed handles attached to the sides of said casing—

is sufficient to carry this claim over what is shown in Miller, especially since the longitudinally-disposed handles on burial-caskets are quite common.

Claim 16 is fairly met in Leech and Montross, there being no invention in using the tube 18 of Montross temporarily in Leech's groove or channel 7, if so desired.

Applicant's allowed claims in this case seem to amply protect his invention, and the decision of the Examiners-in-Chief is affirmed.

EX PARTE SCHOLL MANUFACTURING COMPANY, INC.

Decided March 7, 1919.

TRADE-MARKS—DESCRIPTIVENESS—PICTORIAL REPRESENTATION OF GOODS.

A mark consisting of the perspective view of the under side of a foot supported on a mechanical arch

held by a hand *Held* not registrable as a trade-mark for instep-arch supports, as it is descriptive of the goods with which it is used.

ON APPEAL.

TRADE-MARK FOR INSTEP-ARCH SUPPORTS.

Messrs. Force, Bain & May for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from a refusal to register, as a trade-mark for instep-arch supports, a device which consists in a perspective view of the under side of a foot supported on a mechanical arch, held in its turn by a hand. The ground is that this device is descriptive of the goods.

The applicant has "disclaimed" the representation of the mechanical-arch support; but this disclaimer is of no effect, since the picture of the arch-support is still there and the whole device is a perfectly clear description of an arch-support for the instep. If the picture of the arch were removed, the device would either be meaningless or else it would still inform the beholder that the goods so marked were supports for the instep. There is not suggested any conceivable reason for using this device as a mere mark of origin. It does not look like a trade-mark, and it is quite obvious that it is a picture of the goods—*i. e.*, the most natural way to describe the goods. Others would have an equal right with the applicant to so describe, and the applicant therefore may not monopolize the use of this device. The affidavits filed to show extensive use, etc., do not tend to negative the evidence of descriptiveness; nor does it make any difference that several traders have not heard of the device being used by others. Others must nevertheless be left free to describe such goods by illustrating them or illustrating their function and character.

The ruling of the Examiner is affirmed.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Eighth Circuit.

W. S. TYLER CO. *v.* LUDLOW-SAYLOR WIRE CO.

Decided November 18, 1918.

[254 Fed. Rep., 436.]

PATENTABILITY—SUBSTITUTION OF MATERIAL.

Where it was old to form an ore-screen of soft wire, with the weft-wires larger than and spaced farther apart than the warp-wires, *Held* that there was no invention in making the smaller wire of harder material than the larger, so as to give to the screen greater durability.

APPEAL from the District Court of the United States for the Eastern District of Missouri; David P. Dyer, judge.

Suit by the W. S. Tyler Company against the Ludlow-Saylor Wire Company. From a decree dismissing the bill, plaintiff appeals. Affirmed.

The following is the opinion of the court below:

I have listened with a great deal of interest to all that was said, and have given attention to all the testimony that was offered. I do not think that a further discussion of this matter will enable the court to do more than it is now able to do from all the testimony in the case. I have specially examined the exhibits that were filed, and I am satisfied, from those exhibits and from the evidence in the case, that there is neither novelty nor invention in this patent, and the result is that the bill will be dismissed.

Mr. Frederick P. Fish (*Mr. James Negley Cooke* and *Mr. W. K. Richardson* on the brief) for the appellant.

Mr. William E. Garvin (*Mr. James P. Dawson* on the brief) for the appellee.

Before HOOK and CARLAND, Circuit Judges, and AMIDON, District Judge.

AMIDON, *Dis. J.:*

(1) This suit is brought to restrain infringement of Patent No. 966,599, applied for May 27, 1907, and issued August 9, 1910, for woven-wire screens. The answer sets up numerous defenses. The only one to which we shall refer is want of patentable invention. The bill was dismissed, and plaintiff appeals.

The patented article is for a woven-wire fabric principally used for screening ore. The screen is made of rolled, woven wire. Its meshes are oblong. The weft-wires are larger, made of softer metal and spaced farther apart, than the warp-wires. By the rolling the warp-wire is pressed into the weft-wire, so that it is interlocked with it, and thus the wires are held in place and prevented from sliding upon each other. These screens are fitted into a frame which revolves rapidly. The pulverized metal by centrifugal force is thrown against the sides. Particles smaller than the meshes pass through; larger particles are returned to the rolls for further pulverizing. The desideratum was to produce a screen whose meshes would remain uniform during the life of the screen, would not clog, and would provide the largest amount of air-space for the passage of the ore to be screened.

The principal competitor of the woven-wire screen was the perforated slot-screen made of plates containing perforations. It is conceded that plaintiff had manufactured, advertised, and sold a wire screen identical in form and size of wire, and serving the same purpose as the patented article, for at least two years prior to the invention. In that screen, however, both the weft and warp wires were of soft metal. The result was that the smaller wire wore out more quickly that the larger one. This impaired the durability of the screen to such an extent as to greatly restrict its sale. The patent calls for a screen in which the small warp-wire is of harder metal than the weft-wire. All that skilful argument can do to convince us that this change from a soft to a hard wire produced a new structure, having new functions, has been done; but it has failed to convince. It is urged that the substitution of the harder wire gave to the new screen resiliency, and imparted to it, what we must think for purposes of mystery, is spoken of as "the breathing of the screen." The screen, when in operation, is subjected to varying pressure, and it is claimed that, if it is made wholly of the soft metal, it is bent and remains permanently out of form, and thus becomes subject to greater wear; whereas the harder wire gives to the screen a springy or resilient power, so that after the pres-

sure is withdrawn it returns promptly to its original shape. After the most careful study that we can give to the evidence, we are compelled to regard this as simply a "talking point." It is something that never occurred to the patentee. What he claims in his patent and likewise in his testimony, is that the substitution of the harder wire gave to his screen greater durability. That is the only added merit which is claimed, and we believe it is the only one which the screen possesses.

(2) This brings us to the real point in the case. Did the substitution of a hard warp-wire in place of a soft one constitute patentable invention? We think it quite obvious that that question should receive a negative answer. The substitution of a different material in a structure has sometimes been held to be patentable. As a rule such substitution has produced difference in structure and in function. (*Smith* v. *Dental Vulcanite Co.*, 93 U. S., 486; 23 L. Ed., 952; *Potts* v. *Creager*, 155 U. S., 597; 15 Sup. Ct., 194; 39 L. Ed., 275; *Edison, etc., Co.* v. *Electric Lighting Co.*, 52 Fed., 300; 3 C. C. A., 83.) The general principle has been from the early case of *Hotchkiss* v. *Greenwood* (11 How., 248; 13 L. Ed., 683) that to substitute a superior for an inferior material in one of the parts of a machine does not involve patentable invention. Here, however, the patentee does not do even that much. All he does is to substitute a harder metallic wire, where he had been using a soft one of the same metal. He did this for the simple and obvious purpose of making the two parts of his screens which for functional reasons were of different sizes, equally durable. He found from experience in the three years that he had made and sold the screen prior to his alleged invention that the smaller wires, being made of iron of the same degree of hardness as the larger wires, wore out faster. So, for the purpose of producing a screen whose two wires, while varying in size, should possess equal durability, he made the smaller wire of harder metal. After this change plaintiff's screen worked precisely as it had worked before. In so far as his invention has merit, its important elements were all embraced in the structure which plaintiff began making and selling in 1902. Consciously or unconsciously, what eminent counsel are trying to do is to bring forward all those elements and embody them with the patented improvement. That cannot be done. The sale of the old structure caused all its elements to pass to the public beyond plaintiff's power to recall.

We do not consider that this case lies close to the line; on the contrary, it lies well back in that field of non-patentability whose boundary was first marked in *Hotchkiss* v. *Greenwood* (11 How., 248; 13 L. Ed., 683) and has since been illustrated and more clearly defined in *Hicks* v. *Kelsey*, (18 Wall., 670; 21 L. Ed., 862;) *Union Hardware Co.* v. *Belchow*, (C. C., 112 Fed., 1006;) *George Frost Co.* v. *Cohn*, (C. C., 112 Fed., 1009;) *Drake Castle Pressed Steel Co.* v. *Brownell*, (123 Fed., 86; 59 C. C. A., 216;) *Columbia Metal Box Co.* v. *Harper*, (220 Fed., 912; 136 C. C. A., 478.)

The decree is affirmed.

Applications Made to the Federal Trade Commission for License Under Enemy-Controlled Patents and Trade-Marks Pursuant to the "Trading with the Enemy Act."

Patent No. 1,116,398, dated November 10, 1914, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Dihydrochlorid of diaminodioxyarsenobenzene." License applied for by Massachusetts State Department of Health, Boston, Mass.

Patent No. 986,148, dated March 7, 1911, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Derivative of oxyarylarsinic acids and process of making same." License applied for by Massachusetts State Department of Health, Boston, Mass.

Patent No. 1,061,897, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by Massachusetts State Department of Health, Boston, Mass.

Patent No. 1,061,592, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by Massachusetts State Department of Health, Boston, Mass.

Patent No. 1,013,181, dated January 2, 1912, to August Klages and Hermann Vollberg, of Salbke, Germany, for "Process of making chlorosulfonic acid." License applied for by Atlas Powder Company, Wilmington, Del.

Changes in Classification.

(ORDER No. 2,463.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1919.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 27, Undertaking, (Division XX,) abolish subclass—

Burial apparatus—
5. Grave-fillers.

The patents formerly contained in this subclass have been placed for the most part in class 214, Material or Article Handling.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(ORDER No. 2,464.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1919.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 105, Railway Rolling-Stock, (Division XXXIV,) establish the following subclass and definition:

Special car-bodies—
392.5. Shock-absorbing.

392.5. SPECIAL CAR-BODIES, SHOCK-ABSORBING. Car-bodies modified to take up the shock of collisions or severe bumps.

Note.—For car-buffers *per se* search class 213, RAILWAY DRAFT APPLIANCES, subclass 39, Buffers.

The patents contained in this subclass have been taken from class 213, Railway Draft Appliances, subclass 39, Buffers.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(ORDER No. 2,465.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1919.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 56, Harvesters, (Division V,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions:

56.—HARVESTERS.
1. Miscellaneous.
2. Convertible—
3. Cutter and detachable conveyer—
Rake—
4. Verticle axis.
5. Cutter and detachable catcher.
6. Gang—
7. Rotating cutting-reel.
8. Marine—
9. With conveyer.
10. Motor—
11. Cotton—
12. Pneumatic—
13. Individually directed.
14. Pickers.
15. Cornstalk type—
16. Cutters with choppers and catchers.
17. Cutters with strippers or toppers.
18. Pickers or huskers.
19. Seed gatherers or strippers.
Cutting, conveying, and threshing.
20. Reciprocating cutter—
21. Central swath, coaxial wheels.
22. Cutting, conveying, and binding.
23. Cutting and conveying—
24. Rotating cutting-reel.
25. Cutting only—
26. Rotating cutting-reel.
27. Gathering.
28. Cotton—
29. Flail or whip.
30. Pneumatic—
31. Individually directed.
32. Nozzles.
33. Strippers—
34. Comb—
35. Moving.
36. Pickers—
37. Individually directed—
38. Endless belt—
39. Manually operated.
40. Rotary or oscillating—
41. Spindle—
42. Belt-carried—
43. Cam-track guide.
44. Rotary carrier—
45. Flexible spindle.
46. Reciprocating.
47. Cam-track guide.
48. Drum.
49. Endless belt.
50. Spindles.
51. Cornstalk type—
52. Stalk breakers.
53. Cutters—
54. Broom-corn—
55. Reel-gatherer.
56. Toppers with catchers—
57. Reel-gatherer—
58. Horizontal axis.
59. Endless-chain gatherer.
60. With choppers—
61. With catchers.
62. With strippers.
63. With toppers.
64. With pickers or huskers—
65. Reel-gatherer.
66. Endless-chain gatherer.
67. Self-binders—
68. Upright binder—
69. Endless-chain gatherer—
70. Binder position adjustable.

56.—HARVESTERS—Continued.
Cornstalk type—
Cutters—
71. With dischargers—
72. Crane type—
73. With gatherers—
74. Reel.
75. Endless chain.
76. Endless apron—
77. Reel-gatherer.
78. Endless-chain gatherer.
79. Horizontally moving and tilting—
80. With gatherers—
81. Reel.
82. Endless chain.
83. Tilting—
84. With gatherers—
85. Spiral.
86. Reel—
87. Horizontal axis.
88. Endless chain.
89. Fixed.
90. Retracting support—
91. Reel-gatherer.
92. Reel-gatherer.
93. Endless-chain gatherer.
94. With gatherers—
95. Spiral.
96. Reel—
97. Horizontal axis.
98. Endless chain.
99. Fixed—
100. Fixed cutter.
101. Fixed cutter.
102. Cutting members.
103. Pickers or huskers—
104. Roller—
105. Plurality of rows—
106. With endless-chain gatherers only.
107. Auxiliary ear-detacher—
108. With endless-chain gatherers only.
109. Movable gatherer—
110. Spiral.
111. Endless chain only—
112. Adjustable roller-frame.
113. Fixed snapper—
114. Comb—
115. With knife.
116. Moving comb.
117. Moving knife—
118. On endless chain.
119. Gatherers or guides.
120. Sheaf-loaders.
121. Sheaf-carriers.
122. Cutting, conveying, and threshing—
123. Reciprocating cutter—
124. Central swath, coaxial wheels.
125. Longitudinally-hinged cutter-frame.
126. Seed gatherers or strippers—
127. Fixed comb—
128. Rotary beater—
129. Central swath, coaxial wheels.
130. Moving comb.
131. Cutting, conveying, and binding—
132. Wire-twister type.
133. Straw-band type.
134. Folding platform.
135. High outside binder—
136. Folding binder-frame.

56.—HARVESTERS—Continued.
Cutting, conveying, and binding—
High outside binder—
137. Binder position adjustable—
138. Knotting.
139. Knotting.
140. Upright binder.
141. Endwise delivery—
142. Knotting.
143. Low down—
144. Curved path—
145. Knotting.
146. Inside delivery—
147. Knotting.
148. Outside delivery—
149. Through bull-wheel.
150. Knotting.
151. Knotting.
152. Knotting.
153. Cutting and conveying—
154. Endless cutter.
155. Oscillating cutter.
156. Rotary cutting-reel.
157. Rotary cutting-disk.
158. Reciprocating-cutter type—
159. Folding platform.
160. With binder's platform—
161. Self-raking mechanism—
162. Belt-carried endless path.
163. Hand-raking mechanism—
164. Self-raking mechanism—
165. Gaveling-tongs.
166. Dumping-catcher.
167. Rotating—
168. Reciprocating head.
169. Vertical axis—
170. Switch—
171. Automatic control—
172. Auxiliary manual control.
173. Reciprocating—
174. Belt-actuated—
175. Reciprocating belt.
176. Vertical circuit—
177. Belt-carried.
178. Horizontal circuit—
179. Belt-carried.
180. Rake heads and arms.
181. Endless carrier—
182. Deflected course.
183. Intermittent.
184. With discharging-catcher.
185. Elevated delivery.
186. Central cutter, coaxial wheels—
187. Tilting platform—
188. Pivoted tongue.
189. Swathing attachments.
190. Wind-shields.
191. Binders' platforms.
192. Cutting and windrowing.
193. Cutting and raking.
194. Cutting and catching—
195. Side cutter—
196. Rear.
197. Front.
198. Rotating cutting-reel—
199. Catchers—
200. Discharging.
201. Manually propelled.
202. Catchers—
203. Discharging—
204. Revolving.

56.—HARVESTERS—Continued.
- Cutting and catching—
  - Catchers—
    - Discharging—
      - 205. Upwardly-swinging rear gate,
      - 206. Rearwardly-dropping member.
    - 207. Shelled-grain catchers.
  - 208. Platform adjustments—
  - 209. Sidehill,
  - 210. Main frame—
    - 211. Traction-operated,
    - 212. Vertically and longitudinally tilting—
      - 213. Simultaneous vertical adjustment,
    - 214. Vertical—
      - 215. Segment rack and pinion—
        - 216. Simultaneous,
        - 217. Simultaneous.
  - 218. Tongue adjustments and supports.
  - 219. Standing-grain gatherers—
    - 220. Rotating reel, horizontal axis—
      - 221. Adjustable position—
        - 222. With driving means—
          - 223. Sliding angular gear,
          - 224. Belt with adjustable tension,
          - 225. Concentric,
          - 226. Supplementary bat movement,
        - 227. Adjustable bats.
  - 228. Transporting attachments.
  - 229. Cutting—
    - 230. Railroad—
      - 231. Rotating cutting-reel,
      - 232. Reciprocating cutter,
    - 233. Hedge or plant-row trimmers—
      - 234. Plurality of cutters—
        - 235. All rotary disk,
        - 236. All reciprocating,
      - 237. Single cutter for top or side,
      - 238. Successive cuts at different heights,
    - 239. Hand-operated cutter—
      - 240. Oscillating—
        - 241. Single pair of shears,
      - 242. Reciprocating—
        - 243. Hand-crank,
      - 244. Endless cutter—
        - 245. Side cut,
      - 246. Oscillating cutter—
        - 247. Vertical cut,
        - 248. Side cut,
      - 249. Rotating-cutting-reel type—
        - 250. Sharpening,
        - 251. Auxiliary cutter,
        - 252. Cutter in front of wheel-tread,
        - 253. Coaxial wheels, central cut—
          - 254. Internal gear, single pinion,
        - 255. Rotating-cutting-disk type—
          - 256. Vertical cut,
        - 257. Reciprocating central cutter—
          - 258. Coaxial wheels—
            - 259. Double sickle,
            - 260. Pitman-drive—
              - 261. With lever,
            - 262. Cam-drive—
              - 263. With lever.
        - 264. Reciprocating side cutter—
          - 265. Through-wheel drive,
          - 266. Reversible,
          - 267. Horizontally folding,
          - 268. Rear cut—
            - 269. Coaxial wheels—
              - 270. Cam or lever drive.
          - 271. Front cut—
            - 272. Coaxial wheels—
              - 273. Power-operated lift,
              - 274. Automatic clutch-shipper,
              - 275. Double sickle,
              - 276. Lifting and rocking cutter-bar—
                - 277. With foot-lever—
                - 278. Gag-lever—
                - 279. Cutter-bar mountings only,
                - 280. Reciprocating side cutter—
                - 281. Gag-lever,
                - 282. Cutter-bar mountings only,
                - 283. Lifting cutter-bar—
                - 284. Cutter-bar mountings only—
                - 285. With foot-lever,
                - 286. Gag-lever,
                - 287. Cutter-bar mountings only,
              - 288. Alinements,
              - 289. Cutter members—
                - 290. Endless—
                - 291. Horizontal orbit—
                - 292. With tension adjustment,
                - 293. Oscillating,
                - 294. Rotating cutting-reel,
                - 295. Rotating cutting-disk,
                - 296. Reciprocating—
                - 297. Double sickle,
                - 298. Sickles and guard fingers and bars,
                - 299. Sickles—
                - 300. Detachable sections—
                - 301. Detachable from end of bar,
                - 302. Auxiliary locking-bar,
                - 303. Shoes and knife-heads,
                - 304. Antifriction devices,
                - 305. Guiding-clips,
                - 306. Shock-absorbers,
                - 307. Guard fingers and bars—
                - 308. Modified finger—
                - 309. With ledger-plate,
                - 310. Fingers only—
                - 311. With ledger-plate,
                - 312. Supplemental lifting-fingers—
                - 313. Socket for guard-finger point,
              - 314. Track-clearers and dividers—
                - 315. Supplemental vertical cutter—
                - 316. Reciprocating,
                - 317. Driven,
                - 318. With shoe-point socket,
                - 319. Foldable,
                - 320. Supplemental clearer.
              - 321. Anti-side-draft devices.
              - 322. Grain wheels and casters.
              - 323. Seats.
              - 324. Grain-cradles.
              - 325. Scythes—
                - 326. Blades.
              - 327. Vegetable-gatherers.
              - 328. Fruit-gatherers—
                - 329. Catchers,
                - 330. Berry-strippers,
                - 331. Berry-clippers,
                - 332. Pole-supported—
                - 333. Pivoted jaw—
                - 334. Chute,
                - 335. Pivoted knife—
                - 336. Chute,
                - 337. Sliding jaw,
                - 338. Sliding knife,
                - 339. Fixed detaching member—
                - 340. Chute.
              - 341. Raking and bundling—
                - 342. Hand,
                - 343. Cord-knotter type.
              - 344. Raking and loading—
                - 345. Endless carrier—
                - 346. Intermittent discharge—
                - 347. With movable feeder—
                - 348. Stationary rake-teeth,
                - 349. Stationary rake-teeth,
                - 350. Rear delivery—
                - 351. With movable feeder—
                - 352. Stationary rake-teeth,
              - 353. Stationary rake-teeth,
              - 354. Side delivery—
                - 355. With movable feeder—
                - 356. Stationary rake-teeth,
                - 357. Stationary rake-teeth,
                - 358. With movable feeder—
                - 359. Stationary rake-teeth,
                - 360. Stationary rake-teeth,
              - 361. Intermittent discharge,
              - 362. Walking-rake—
                - 363. Auxiliary rake,
              - 364. Lifting-reels.
              - 365. Combined rakes and tedders—
                - 366. Side-delivery rake,
                - 367. Revolving rake,
                - 368. Draft dumping-rake,
                - 369. Transverse tedder crank-shaft.
              - 370. Tedders—
                - 371. Mower attachment,
                - 372. Rotary, transverse axis,
                - 373. Transverse crank-shaft,
                - 374. Tedder-forks.
              - 375. Horse-rakes—
                - 376. Side delivery—
                - 377. Rotary,
                - 378. Rear delivery—
                - 379. Revolving—
                - 380. Wheel-supported,
                - 381. Fixed rake-axis,
                - 382. Rake-tooth-engaging stop,
                - 383. Rake-tooth-engaging stop,
                - 384. Wheel-supported—
                - 385. Contractible,
                - 386. Draft-dumpers—
                - 387. Direct draft,
                - 388. Frictional,
                - 389. Spur-gear,
                - 390. Sliding bolt or bar,
                - 391. Pawl and ratchet—
                - 392. Transverse torsion-rod,
                - 393. Hand-lever pulled back to dump,
                - 394. Hand-lever concentric with rake-head,
                - 395. Clearers,
                - 396. Wheel-supported—
                - 397. With lifting means—
                - 398. Draft-operated,
                - 399. Fenders,
                - 400. Rake-teeth and fastenings.
              - 401. Sheckers—
                - 402. Automatic feed—
                - 403. Self-binding—
                - 404. Vertical position—
                - 405. Automatic shock-delivery trip—
                - 406. Oscillating sheaf-delivery member,
                - 407. Sheaf turned end for end,
                - 408. Forwardly-tilting shock—
                - 409. Automatic shock-delivery trip,
                - 410. Vertical position—
                - 411. Rotary, vertical axis—
                - 412. Automatic shock-delivery trip—
                - 413. Oscillating sheaf-delivery member,
                - 414. Automatic shock-delivery trip—
                - 415. Alternating sheaf delivery,
                - 416. Alternating sheaf delivery,
                - 417. Sheaf turned end for end—
                - 418. Automatic shock-delivery trip,
                - 419. Forwardly-tilting shock—
                - 420. Automatic shock-delivery trip—
                - 421. Number,
                - 422. Feed stopped during shock delivery,
                - 423. Rearwardly-opening former,
                - 424. Shock turned end for end,

56.—HARVESTERS—Continued.
Shockers—
425. Vertical position—
426. Rotary, vertical axis,
427. Direct drop,
428. Divided former,
429. Self-binding,
430. With compressor,
431. Props.
432. Compressing and binding—
433. Cord-knotter type—
434. Adjustable position—
435. Knotting,
436. Pressure-tripped—
437. Upstanding compressor control—
438. Packing—
439. Knotting,
440. Packing—
441. Knotting,
442. Knotting,
443. Packing—
444. Knotting,

56.—HARVESTERS—Continued.
Compressing and binding—
Cord-knotter type—
445. Knotting,
446. Packers,
447. Auxiliary manual trip,
448. Needle cleaners and guards,
449. Ejectors and discharge-gates,
450. Tension and take-up devices,
451. Wire-twister type—
452. Single wire—
453. Curved binder-arm—
454. Laterally mounted,
455. Forked end,
456. Twister on binder-arm,
457. Twisters,
458. Band-tucker type—
459. Straw band—
460. Band-forming—
461. Rotating bundle,

56.—HARVESTERS—Continued.
Compressing and binding—
Band-tucker type—
Straw band—
462. Band-formers,
463. Prepared band,
464. Cord band and clip—
465. Flat-metal clip,
466. Grain-adjusters—
467. On deck—
468. Head or butt evener—
469. Oscillating,
470. Endless apron,
471. Feeders,
472. Retarding-arms,
473. Longitudinally-moving straightening-finger,
474. Sheaf-carriers—
475. Automatic discharge—
476. Directly tilting,
477. Endless carrier,
478. Folding tines,
479. Opening bottom,
480. Directly tilting.

J. T. NEWTON, *Commissioner*.

Changes in Classification.

(ORDER No. 2,466.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 6, 1919.

It is hereby directed that class 115, Marine Propulsion, be transferred from Division IX to Division XLIV, to take effect immediately.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(ORDER No. 2,467.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 6, 1919.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 228, Ladders, (Division XXIX,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions:

228.—LADDERS.
1. Miscellaneous.
2. Convertible—
3. Shutter or window-guard,
4. Ironing-board or wash-bench.
5. Wheeled—
6. Truck—
7. Separable truck-sections,
8. Power-operated,
9. Hoisting—
10. Spring-power,
11. Cable and windlass,
12. Gearing—
13. Screw,
14. Turn-tables,
15. Propped—
16. Hand-truck.
17. With platforms.
18. Extension—
19. Operating mechanisms—
20. Cable and windlass,
21. Propped—
22. Trestle type,

228.—LADDERS—Continued.
Extension—
23. Hinged sections—
24. Propped,
25. Separable sections—
26. Propped.
27. Propped—
28. Group,
29. Step-ladder type—
30. Storage-frame prop,
31. Laterally-movable props,
32. Tripod,
33. Spreaders and ties.
34. Staple stile—
35. Flexible.
36. Collapsible—
37. Propped,
38. Slidable rungs or units.
39. Telescopic.
40. Flexible—
41. Upwardly extensible,
42. Receptacles,
43. Reels,
44. Jointed units.

228.—LADDERS—Continued.
45. Attached—
46. Independent rungs—
47. Bracket type,
48. Pivotally,
49. Railway-car,
50. Trap-door operated.
51. Scaling.
52. Trolley—
53. Store-service.
54. Ship's-ladder type.
55. Tubular.
56. Metallic.
57. Knockdown.
58. Structural details—
59. Reinforcing.
60. Attachments—
61. Terminals and feet—
62. Pads,
63. Extensible,
64. Stands,
65. Stops—
66. Hook type,
67. Guards,
68. Hinges.

J. T. NEWTON, *Commissioner*.

Patents Nos. 1,297,308 to 1,297,321.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 260—No. 3. TUESDAY, MARCH 18, 1919. Price—$5 per year.

[PUBLISHED APRIL 11, 1919.]

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Labels	5—Nos.	21,173 to No.	21,177, inclusive.
Reissues	6—Nos.	14,811 to No.	14,816, inclusive.
Total	822		

WATCH THE STOCK PEDDLERS.

Get the names and addresses of all persons and companies offering you speculative or doubtful stocks and securities in exchange for your Liberty Bonds or War Savings Stamps, with copies of their "literature." Mail them promptly for investigation to the

FEDERAL TRADE COMMISSION,
Washington, D. C.

HELP THE VICTORY LIBERTY LOAN.

Notice—Marking Drawings for Identification.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 14, 1919.

The attention of the attorneys is called to Rule 52, paragraph (g), which reads in part as follows:

* * * "The title should be written with pencil on the back of the sheet."

A compliance with this suggestion will avoid trouble in identifying the application to which the drawing belongs, especially in design cases, where more than one application is filed by the same inventor.

Whenever a substitute or additional drawing is filed, the serial number of the application should be written on the back of the drawing.

J. T. NEWTON,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1919.

Jesse B. Pitt, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Peninsular Chemical Company, corner of Brooklyn avenue and Lafayette Boulevard west, Detroit, Mich., for registration of a trade-mark and trade-mark registered May 30, 1882, No. 23,148, to Jesse B. Pitt, of Kansas City, Mo., and a notice of such declaration sent by registered mail to said Jesse B. Pitt at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jesse B. Pitt, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 15, 1919.

Jones & Dudley, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered July 30, 1889, No. 16,882, to Jones & Dudley, of 140 Monticello avenue, Jersey City, N. J., and a notice of such declaration sent by registered mail to said Jones & Dudley at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jones & Dudley, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 15, 1919.

Thomas J. Duffy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered April 18, 1915, No. 102,841, to Thomas J. Duffy, of 1204 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Thomas J. Duffy at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Thomas J. Duffy, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 14, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Feb. 5	Feb. 6	178
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Oct. 11	Dec. 2	332
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Feb. 7	Nov. 13	172
234	4. Conveyors; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Sept. 16	Jan. 26	345
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Nov. 11	Oct. 24	175
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Nov. 4	Jan. 6	376
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Jan. 16	Jan. 14	226
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 6	Jan. 16	115
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Aug. 13	Nov. 23	257
235	10. Carriages and Wagons; Motor Vehicles	Jan. 10	Feb. 3	488
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 3	Feb. 26	166
322	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Sept. 9	Aug. 27	1033
229	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 11	Feb. 6	308
323	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 9	Dec. 21	189
238	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 2	416
113	16. Radiant Energy; Telegraphy; Telephony	Oct. 21	Nov. 4	348
207	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 9	Jan. 14	98
229	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 2	Oct. 19	289
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Jan. 17	Jan. 18	228
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 18	Feb. 14	188
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Aug. 19	Dec. 18	341
249	22. Aeronautics; Firearms; Ordnance	Dec. 24	Jan. 20	276
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Dec. 28	Jan. 2	177
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 4	294
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 23	Jan. 31	130
106	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Sept. 16	Nov. 1	327
314	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Dec. 5	Dec. 2	417
225	28. Internal-Combustion Engines	Sept. 16	Nov. 13	384
147	29. Boring and Drilling; Chucks or Sockets; Coopering, Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Nov. 18	Dec. 7	481
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Dec. 19	Mar. 8	282
173	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 26	Dec. 12	240
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Aug. 12	Nov. 21	713
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads and Pavements; Roofs.	Nov. 21	Nov. 18	220
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Oct. 20	Jan. 2	227
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Feb. 8	Dec. 16	268
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Feb. 12	Jan. 23	372
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Aug. 12	Sept. 9	468
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice-Harvesting; Stationery; Stone-Working; Wells.	Jan. 24	Jan. 25	139
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Oct. 7	Nov. 6	420
272	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 21	Jan. 18	268
126	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 21	Dec. 21	297
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Oct. 3	Oct. 9	441
262	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Beverage; Surgery; Water Purification.	Feb. 6	Oct. 2	114
273	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Sept. 4	Nov 25	139
279	45. Clutches; Lubrication; Motors; Railway Brakes	Nov. 26	Nov. 9	230

Oldest new case, Aug. 12; oldest amended, Aug. 23.
Total number of applications awaiting action 16,000

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 11	Feb. 28	623
	Designs	Feb. 3	Feb. 20	175
	Labels and Prints	Feb. 10	Feb. 24	98

PATENTS

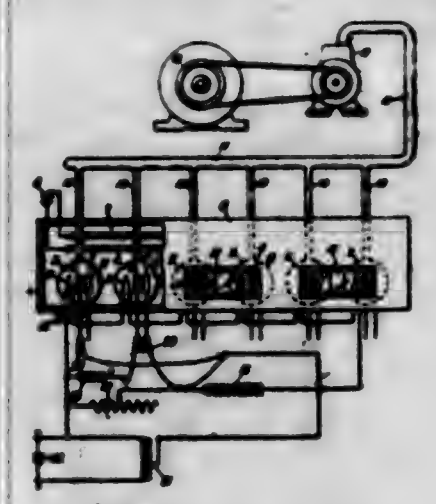
GRANTED MARCH 18, 1919.

1,297,305. SANITARY FOLDING BED. TILLMAN O. ARMFIELD, Elwood, Ind. Filed June 15, 1916. Serial No. 103,839. 2 Claims. (Cl. 5—87.)



1. In a folding bed, a pair of vertical posts, a cross-bar connecting them near their lower ends, said bar having a crank-arm, a bed-frame pivoted to said cross-bar and foldable toward the posts, a canopy-frame pivoted to the tops of the posts and foldable downwardly toward the latter, legs pivoted to the bed-frame having a cross-bar remote from the pivots, and a connecting rod from the cross-bar to the crank-arm, said crank-arm when said parts are folded engaging the canopy-frame to lock said parts in their folded relation to each other.

1,297,309. MANUFACTURE OF VACUUM-TUBE DEVICES. HAROLD D. ARNOLD, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 18, 1915. Serial No. 62,260. 4 Claims. (Cl. 250—27.)



1. The method of producing a high vacuum in a thermionic discharge tube containing three electrodes, which comprises heating one of said electrodes and establishing an electron discharge between said heated electrode and a second one of said electrodes, whereby said second electrode is heated during the process of evacuation, and in assisting the passage of said discharge by means of a potential difference applied between the source of said discharge and the third electrode.

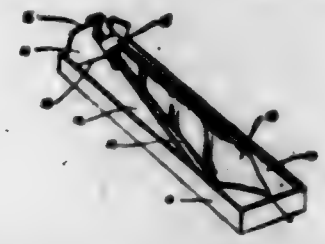
1,297,310. FIRE-EXTINGUISHER. JOSEPH AUGUST, Boston, Mass. Filed Jan. 24, 1918. Serial No. 213,550. 2 Claims. (Cl. 169—12.)



1. Tetra-chlorid of carbon and nitrogen in direct contact in a fire extinguisher, the nitrogen being introduced and stored therein under pressure and serving as an expelling agent for the tetra-chlorid of carbon.

2. A fire extinguisher including a conventional tank and discharge tube extending to the lowermost part of said tank, the lower portion of the tank being filled with tetra-chlorid of carbon and an expelling agent located above such tetra-chlorid of carbon and being in direct contact therewith such expelling agent being nitrogen gas.

1,297,311. DISPLAY DEVICE. DAVID BACHER, New York, N. Y. Filed June 8, 1918. Serial No. 238,818. 1 Claim. (Cl. 211—28.)

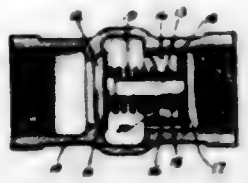


A display device comprising an integral blank consisting of a plane body portion adapted to lie horizontally in operative position, a flap movably connected to one end of said body portion, said flap having a notch at its free end and extending at an obtuse angle from the body portion when in operative position, an intermediate movable section connected to the opposite end of said body portion and extending at right angles to said body portion when in operative position and a tapering tongue connected to said intermediate section, said tapering tongue being adapted for insertion in the notch of said flap and extending at an obtuse angle to said intermediate section when in operative position.

1,297,312. CHECK-VALVE. CHARLES L. BARKER, Norwalk, Conn. Filed Apr. 20, 1918. Serial No. 229,705. 4 Claims. (Cl. 251—144.)

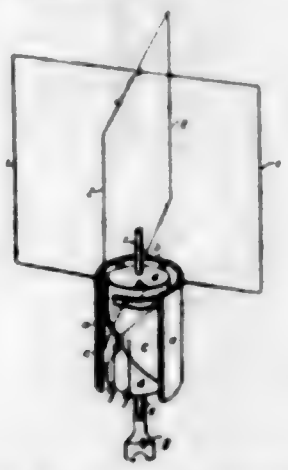
1. A check valve of the character described comprising a body having a valve seat, a guide having radiating

arms slidably engaging the wall of said body, and also having a hub extended beyond the wings to provide an elongated guide, a valve coöperating with said seat and



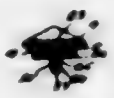
having a stem passed through and slidably engaging said hub, an expansible abutment ring against which one end of said guide bears, and a spring interposed between said valve and the other end of said guide.

1,297,313. APPARATUS FOR DIRECTED WIRELESS TELEGRAPHY AND TELEPHONY. ETTORE BELLINI, Enghien les Bains, France. Original application filed June 19, 1915, Serial No. 35,103. Divided and this application filed Oct. 19, 1916. Serial No. 126,562. 3 Claims. (Cl. 250—11.)



1. An apparatus for wireless telegraphy or telephony, comprising in combination aerials for the reception or transmission of directed waves, fixed conductive plates arranged about an axis, so as to lie upon a cylindrical surface diametrically opposite each other in pairs, the number of pairs being equal to the number of directed aerials, and the two plates of each pair being connected to one of the aerials, a rotary system of conductive plates mechanically connected together bent so as to lie upon a cylindrical surface coaxial to that of fixed plates and adapted to rotate about the axis common to the two cylinders, and a high frequency apparatus, to which the rotary system of conductive plates is connected substantially as described and for the purpose set forth.

1,297,314. VELOCIPEDE. CLIFTON BENEALIN, Condon, Oreg. Filed July 9, 1918. Serial No. 244,031. 2 Claims. (Cl. 208—113.)



1. In a velocipede, the combination with a velocipede frame having parallel side bars spaced from each other to form a slot, of a seat having a downwardly extending rib or flange engaging said slot, the under surfaces of the side bar of the frame having semicircular recesses, and a pin removably fixed in the rib or flange and engaging said recesses to retain the seat on the frame.

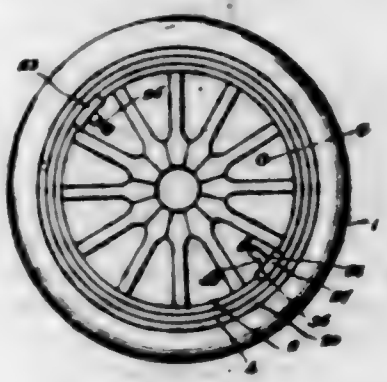
1,297,315. MOLD. JOHN V. BOLAND, St. Louis, Mo. Filed Oct. 1, 1917. Serial No. 194,157. 6 Claims. (Cl. 25—134.)

3. A mold made up of a central tapering section of flexible sheet metal; a series of sections of flexible sheet metal each of which is of uniform width from end to end, at each side of the central section; a tapering section of flexible sheet metal at the outer end of each of said series of sections; a series of sections of flexible sheet metal each of which is of uniform width throughout its length at the outer edge of each of the last-named tapering sections, the two end sections of which are adapted to



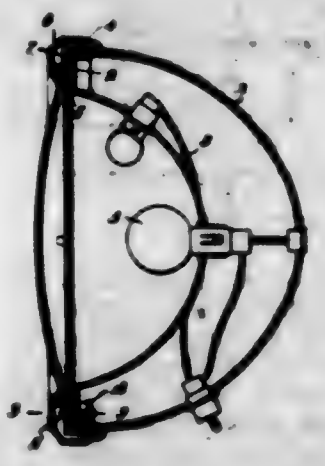
overlap when the mold is in annular form; whereby a tapering annular mold is formed, said last-named sections being removable one at a time, leaving an annular mold of the same taper as the mold was before the section was removed; plates overlapping and securing together the adjacent edges of all of the sections, respectively; and means for securing together the overlapping edges of the last-named series of sections.

1,297,316. DEMOUNTABLE RIM FOR AUTOMOBILE-WHEELS. JOHN ARCHIE BOSLAND, St. Paul, Minn. Filed Oct. 25, 1917. Serial No. 198,860. 4 Claims. (Cl. 152—21.)



3. In a wheel a fixed rim having a series of spacing lugs every alternate one of which has a smooth surface and the other alternate ones being provided with grooves and a demountable rim having coacting lugs every alternate one of which is provided with a tongue to engage with said grooves to lock the demountable rim against lateral movement.

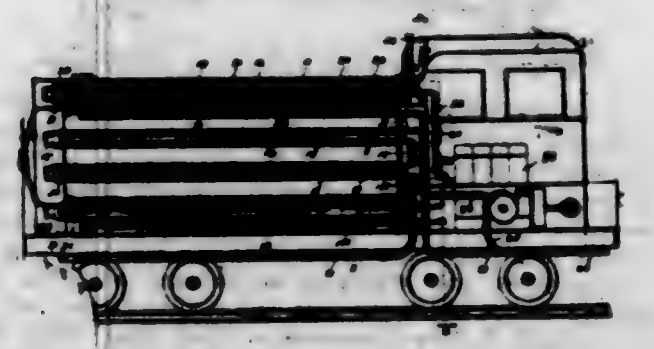
1,297,317. AUTOMOBILE-LAMP. JOHN W. BROWN, Columbus, Ohio, assignor to The John W. Brown Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Sept. 11, 1918. Serial No. 253,498. 6 Claims. (Cl. 240—41.)



1. In a headlight, a lamp body, a reflector therein, means carried by said body to limit the inward movement

of said reflector, a lens ring, a resilient hook structure carried by said means and free of permanent attachment therewith, and means carried by said ring for coöperation with said hook structure.

1,297,318. APPARATUS FOR TRANSPORTING PERISHABLE ARTICLES. SAMUEL H. BRUBAKER, Indianapolis, Ind.; Charity H. Brubaker, administratrix of said Samuel H. Brubaker, deceased, assignor of one-fourth to John V. Dittemore, Indianapolis, Ind. Filed Oct. 31, 1906, Serial No. 341,456. Renewed Apr. 4, 1914. Serial No. 829,709. 13 Claims. (Cl. 62—117.)



1. In a portable refrigerator plant, a car comprising a container for a circulating temperature-affecting medium, a condenser, means for circulating a temperature-changing medium in either direction through the condenser and circulating medium.

4. In a portable refrigerating plant, the combination with a vehicle, of a substantially cylindrical tank mounted thereon, an internal shell mounted therein to form an interior chamber and a surrounding annular chamber, two circulating coils mounted in each of said chambers, a compressor, intermediate connections between said compressor and one coil of each set, and means for causing a circulation through each of the other two coils.

11. In a portable refrigerating plant, the combination with a vehicle, of a substantially cylindrical tank mounted thereon, an internal shell mounted therein and consisting in part of heat-insulating material to form an interior chamber and a surrounding annular chamber, a circulating coil extending through the interior chamber, a circulating coil extending through said coil, a circulating coil extending through the annular chamber, a circulating coil extending through said last mentioned coil, a compressor, intermediate connections between said compressor and one coil of each set, means for reversing the directing of circulation from the compressor through said last mentioned coils, and means for causing a circulation through each of the other two coils.

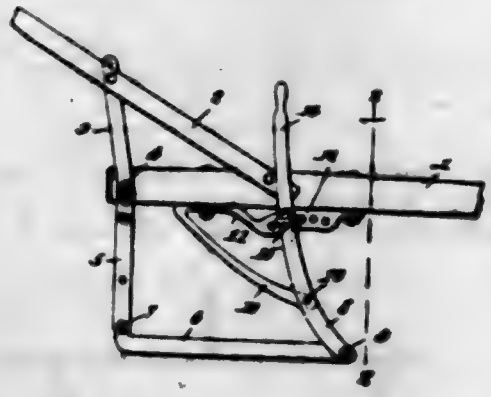
18. In a portable refrigerating plant, the combination with a vehicle of a substantially cylindrical horizontal tank mounted thereon, an internal horizontal shell mounted therein and consisting in part of heat-insulating material to form an interior chamber and a surrounding annular chamber, a circulating coil extending through the interior chamber, a circulating coil extending through said coil and connected to the interior of the shell, a circulating coil extending through the annular chamber, a circulating coil extending through said last mentioned coil, protecting pipes extended through the annular chamber and each surrounding a composite member of the composite circulating coil which extends through said annular chamber, and means for circulating fluids through said coils.

1,297,319. STALK-PULLER. OTTO B. BULLARD, Spalding, Nebr. Filed Sept. 11, 1918. Serial No. 253,600. 2 Claims. (Cl. 55—148.)



1. A stalk puller comprising a handle, a stationary jaw attached to the outer end of the handle, a jaw opposite the stationary jaw and having a laterally extending lever arm at its inner end crossing the shank of the stationary jaw and pivoted thereto, an operating rod connected to the lever arm, a looped hand grip slidably connected to the handle and connected to the rear end of the rod, and a guard plate inside the hand grip.

1,297,320. PLOW. CHARLES J. CADDELL, Maxton, N. C. Filed Mar. 6, 1918. Serial No. 220,794. 1 Claim. (Cl. 97—26.)



The combination with a plow beam, of a bar secured to the bottom of the beam and having an arcuate flattened portion, a downwardly extending arm integral with the bar and arcuate portion, a standard pivotally mounted, between its ends, upon the lower end of the arm, a fastening device extending through the standard, there being a series of apertures within said arcuate portion of the bar and concentric with the pivot of the standard any one of said apertures being adapted to receive the fastening means, a lever constituting an extension of the standard and projecting above the beam, a hanger pivotally connected to the rear portion of the beam, and a runner pivotally connected at its end to the hanger and to the lower end of the standard respectively.

1,297,321. BUTTON-FASTENER. WALTER BROOKS CARRUTHERS, Toronto, Ontario, Canada. Filed Aug. 10, 1918. Serial No. 249,307. 1 Claim. (Cl. 24—94.)

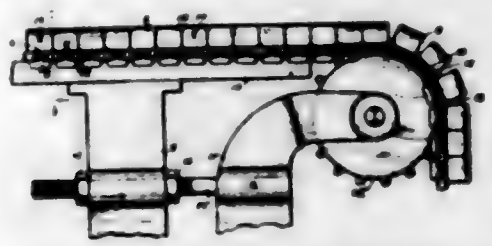


The combination with a button having a loop or eye adapted to bear against one face of a cloth portion, a plate adapted to bear against the opposite face of the cloth portion, a separate flexible wire attached at one end to the plate and adapted to be threaded through the cloth and button eye and again through the cloth, and an eye projecting from the inner face of the plate and through which the wire is adapted to pass and be wound when it is drawn home with the plate and button close pressed to the cloth at each side.

1,297,322. CONVEYER FOR BOOK-STITCHING MACHINES. MARTIN CHRISTENSEN, Racine, Wis., assignor to Christensen Machine Company, Racine, Wis., a Corporation of Wisconsin. Filed Apr. 6, 1917. Serial No. 160,171. 8 Claims. (Cl. 198—8.)

1. In a signature conveyer, the combination of a plurality of signature supporting elements having inverted V-shaped signature supporting surfaces and lengthwise extending shouldered portions below said supporting surfaces, and means for securing said elements together in abutting relation to form a smooth continuous supporting

surface for the groups of signatures and for preventing sagging of the conveyer, comprising an endless chain to



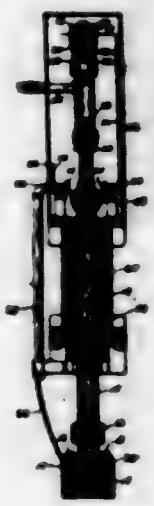
which each of said elements are secured intermediate their ends and having links abutting against said shouldered portions.

1,297,323. ROOFING-CLIP. ROBERT CLOUGH CLARK, Winnipeg, Manitoba, Canada. Filed Nov. 21, 1917. Serial No. 203,162. 1 Claim. (Cl. 108—7.)



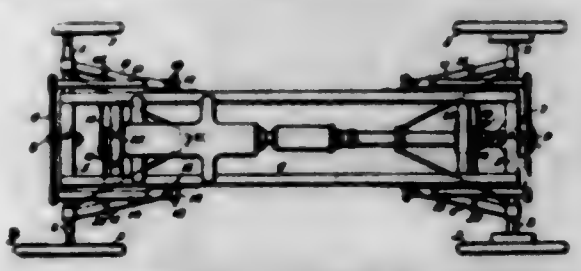
A roofing clip comprising a length of wire fitted throughout its length with spaced loops and having the loops all turned in the same direction and having the extremities thereof terminating in coiled ends.

1,297,324. ELECTRIC CONTACT DEVICE FOR RAILWAY-VEHICLES. THOMAS E. CLARK, Detroit, Mich., and MARK H. HOVEY, Madison, Wis., assignors to Harry W. Beggs, Vincennes, Ind. Original application filed May 27, 1916. Renewed Jan. 20, 1919, Serial No. 271,908. Divided and this application filed June 26, 1916. Serial No. 105,945. Renewed Dec. 9, 1918. Serial No. 265,972. 7 Claims. (Cl. 246—182.)



3. In a contact device for railway vehicles, the combination of a support, a tubular stem mounted therein, a contact shoe at the lower end of the stem adapted to engage a conductor, a pair of contacts adjacent said stem, a cylinder adjacent thereto, a piston in said cylinder, circuit closing means connected to the piston, a casing into which said stem extends and to which the cylinder is connected, a connection between said casing and a source of air under pressure whereby pressure is applied to said piston to hold closed said circuit, said connection being of less capacity than the passage in the stem, and means to move said piston to open said circuit when the pressure fails in the cylinder.

1,297,325. VEHICLE SUSPENSION. STEPHEN LEONARD CHAUNCEY COLEMAN, Fredericton, New Brunswick, Canada, assignor of forty-nine one-hundredths to Charles W. Whelpley, Fredericton, New Brunswick, Canada. Filed Nov. 22, 1917. Serial No. 203,497. 13 Claims. (Cl. 21—105.)



1. A vehicle suspension including in combination with a frame and axles therefor a transversely disposed equalizing member pivotally connected intermediate its ends with the frame, and leaf springs at opposite sides of the frame each spring being connected with one of the axles and with said equalizing member at one side of its pivotal connection, and stabilizer mechanism including an equalizing device connected with the vehicle frame, and a pair of struts flexibly connected at their lower ends respectively with opposite springs, and flexibly connected at their upper ends with the equalizing device.

1,297,326. ELECTRIC AND THERMOSTATIC INDICATOR AND ALARM. LARS J. DAHL and ALBERT R. ALLEN, Alpha, Minn. Filed Mar. 29, 1917. Serial No. 158,295. 1 Claim. (Cl. 200—31.)



The combination with a plate, of a pointer pivoted on the plate, said plate having an arcuate dial and an adjoining arcuate slot curved concentric with each other and concentric with the pivot of the pointer, and over which dial the pointer may sweep, the opposite edges of the arcuate slot having opposing registering arcuate scallops, abutment contacts in the slot and between which said pointer is adapted to play, whereby it may engage either one of said contacts to close an electric circuit to actuate an annunciator and sound an alarm, each contact having a pair of extensions of different diameters, the one larger in diameter extending axially from the abutment and adapted to engage any two opposed scallops which are concentric with the extension of larger diameter, the extension of smaller diameter extending axially from the extension of larger diameter, and adapted, when the abutment is pulled outwardly to slide the length of the slot whereby the abutment may be adjusted at different locations, a nut threaded on the extension of smaller diameter for regulating tension of a spring to hold the larger extension in engagement with any two opposing scallops, and a coil spring surrounding the smaller extension and being interposed between the nut and the rear face of the plate to hold the larger extension in engagement with the scallops and adapted to be compressed when the abutment is pulled outwardly for its adjustment longitudinally of the slot.

1,297,327. SHUTTER-OPERATING DEVICE. HOWARD W. DAKIN and ERNEST R. UNDERWOOD, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 15, 1917. Serial No. 196,611. 2 Claims. (Cl. 64—30.)

1. In a shutter release, the combination with an outer flexible tubular casing and an inner flexible cable, both terminating at one end in finger-pieces, one member being incompressible and adapted to act as a thrust mem-

ber against a shutter part and the other inextensible to take the reaction therefrom as the finger-pieces are moved relatively, of a tip at the other end of the casing member comprising a threaded inner tube having a continuous



inner surface affording a smooth guideway for the cable and an outer sleeve fixed thereto and constituting a finger grip from which the threaded portion of the tube projects to take attachment to a shutter casing.

1,297,228. RESIN AND PROCESS FOR MANUFACTURING THE SAME FROM CRUDE SOLVENT NAPHTHA. MARC DARRIS, Wilkinsburg, Pa., assignor to H. Koppers Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 6, 1918. Serial No. 252,966. 11 Claims. (Cl. 134—26.)

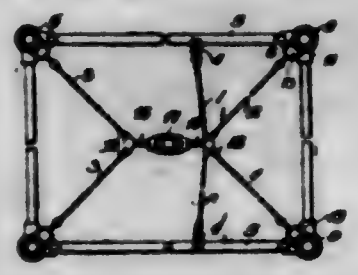
7. The herein described process of producing resin from a liquid containing compounds of the coumarone-indene group, comprising the steps of subjecting the mixture to an initial treatment with a solution of sulfuric acid of sufficient strength to polymerize the dark resin-forming constituents without an appreciable polymerization of the coumarone-indene compounds, distilling the treated mixture for removal of dark resins, subjecting the distillate to a treatment with a stronger solution of sulfuric acid for the purpose of polymerization of the coumarone-indene bodies, neutralizing any excess of acid, redistilling, and blowing a gaseous fluid through the resulting light colored resin to remove volatile oils from the polymerized resin.

1,297,230. ENLARGING-CAMERA. HUGH DAVIS, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,523. 1 Claim. (Cl. 88—24.)



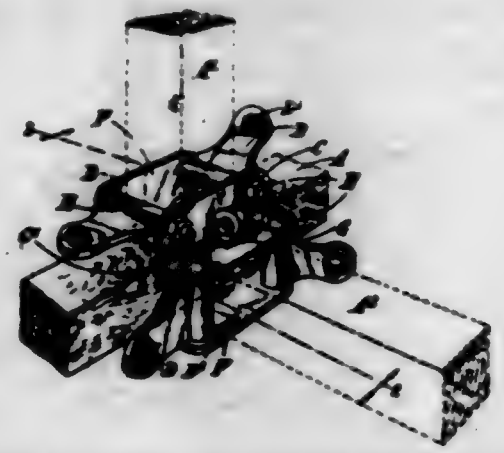
In an enlarging camera, the combination with a main frame or base having a plurality of supporting legs, of a rigid extension support, supported by and adjustable on the legs beneath the main frame, and above a supporting surface on which the legs rest and carrying a copyholder, a carriage on top of the base movable in alinement with the copyholder and adapted to be projected beyond the base in one direction while the extension support is similarly projected in the other direction, and a projecting camera and lamp house therefor mounted on the carriage, said camera embodying a focusing front independently adjustable on the carriage.

1,297,230. FURNITURE-BRACE. CARL M. DEADWYLER, Dayton, Ohio. Filed Oct. 4, 1918. Serial No. 256,243. 8 Claims. (Cl. 5—42.)



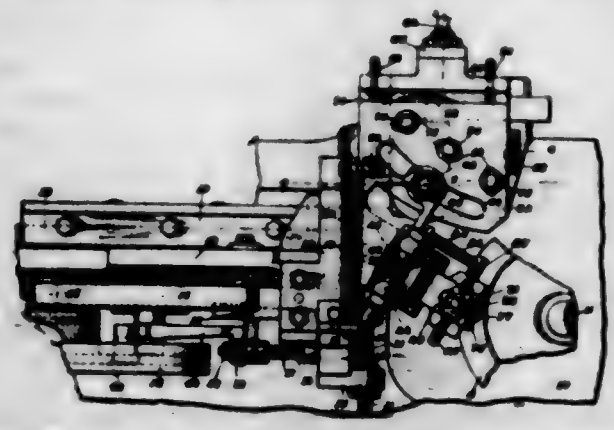
1. A tightening yoke for furniture braces comprising a head formed with a wire-receiving groove having diverging portions lying in one plane, and portions connecting the diverging portions and lying to one side of the plane of said diverging portions.

1,297,231. MEANS TO RECEIVE STRUT ENDS IN AEROPLANES AND OTHER STRUCTURES. SIDNEY VINCENT DE BOLOTOFF, London, England. Filed Feb. 1, 1918. Serial No. 214,866. 5 Claims. (Cl. 244—31.)



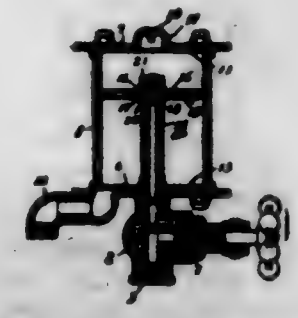
1. A device to receive and connect strut-ends comprising two angle-plates nested one into the other with their angle-edges parallel to one another but held so that each side in one is spaced from the corresponding side in the other by a gap equal to the thickness of a strut-end, in combination with two tie-pins for each pair of opposed sides thus provided, the said tie-pins being so spaced from one another as to hold a strut-end when inserted in the said gap against displacement along the gap.

1,297,232. GEAR-CUTTING MACHINE. CHARLES E. DUNN, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1914. Serial No. 841,232. Renewed Jan. 13, 1918. Serial No. 270,946. 7 Claims. (Cl. 90—6.)



1. In a gear cutting machine, the combination with blank holding mechanism, of a tool carrier and tool, means for operating the carrier to cause the tool to travel in a generally oblique path across the face of the blank, said means being adjustable to change the degree of obliquity of said path, and means for adjusting the tool to vary the angle of its cutting face relative to its path of travel.

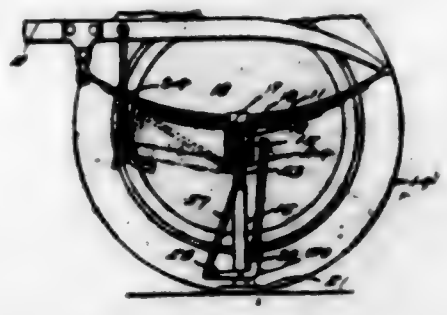
1,297,383. DISPENSING DEVICE FOR CARBONATED BEVERAGES. CHARLES M. EARL, Detroit, Mich. Filed Apr. 1, 1918. Serial No. 225,906. 5 Claims. (Cl. 225—30.)



1. A beverage dispensing device comprising a gas separating chamber having separate gas and liquid outlets,

and a liquid discharge member rotatively mounted therein for uniformly spreading the liquid upon the wall of said chamber.

1,297,334. AUTOMOBILE-JACK. FERNANDO ROQUE ELIZONDO, Mexico, Mexico. Filed Nov. 23, 1917. Serial No. 203,570. 1 Claim. (Cl. 254—86.)



In combination with a vehicle, a lifting jack, comprising a casing, a foot at the lower end of said casing, a vertically reciprocating bar within said casing, a link at the upper end of said bar, a head of peculiar shape pivotally secured with its stem to said link, a rod pivotally secured to said link a double-forked shank pivotally connected with the end of said rod and intermediate its ends with the casing, an operating cup at the outer ends of said shank, means for adjusting the vertically reciprocating bar to any size of cars, and means for locking the jack in its elevated operative position.

1,297,335. PROTECTOR FOR GAS MANTLES AND LAMPS. JAMES ARTHUR EVERETT, McLouth, Kans. Filed July 31, 1918. Serial No. 247,545. 1 Claim. (Cl. 240—102.)



The combination with a wire fabric tubular cylinder in concentric surrounding relation with and inclosing a burner and its mantle, means comprising a sleeve and depending arms to suspend the cylinder on a tube to the burner, said cylinder being closed at both ends, and hingedly connected means carried by the lower end of the cylinder whereby the lower end may be opened.

1,297,336. [WITHDRAWN.]

1,297,337. INHALER AND DUST-PROTECTOR. THOMAS F. FELTNER, Boise, Idaho. Filed Jan. 4, 1916. Serial No. 70,244. 1 Claim. (Cl. 128—148.)



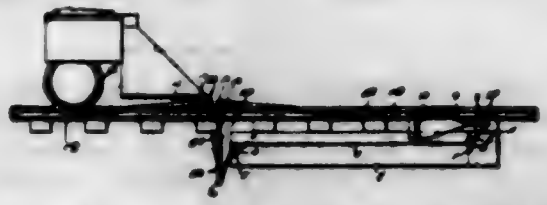
In an inhaler and dust collector, the combination of a perforated body portion, said body portion being longitudinally channeled and being deepest at its center and tapering toward its ends, the edges of the body portion being rolled over to form, a longitudinally curved rim, a bar extending transversely of said body adjacent the rim thereof, a washer resting upon said rim, said washer being curved throughout its entire length to conform to the contour of the rim, said washer being provided with openings, said bar reinforcing said washer, intermediate its ends, and retaining means connected to said body portion.

1,297,338. DEMOUNTABLE WHEEL-RIM. GEORGE B. FILMER, Moose Jaw, Saskatchewan, Canada. Filed Apr. 17, 1914, Serial No. 832,595. Renewed Oct. 9, 1918. Serial No. 257,534. 1 Claim. (Cl. 152—21.)



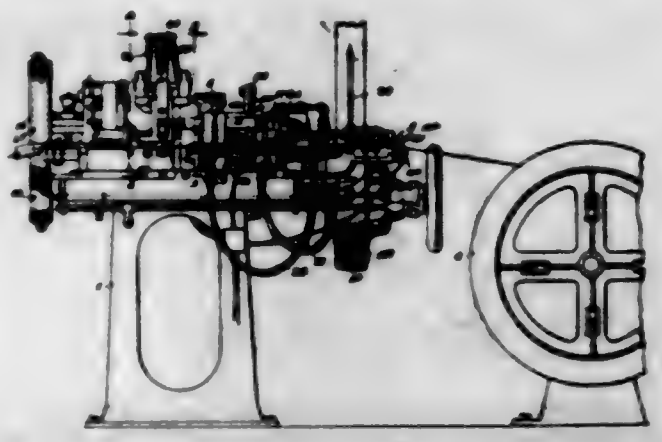
A sectional demountable wheel rim, comprising two endless bands of sheet metal and of uniform thickness throughout provided with interfitting tenons and mortises along their inner margins all arranged in longitudinal alinement, the inner edges of the tenons being bent inwardly to provide two series of locking lips in spaced and staggered relation to each other, and a detachable spring metal locking band lying between the said series of locking lips flatwise against the inner faces of said tenons and edgewise between said bent locking lips, portions of both edges of said band being exposed at all of the intervals between said lips, and the extremities of the locking band being notched to fit the valve tube of a tire.

1,297,339. CROSSING-SIGNAL. RICHARD G. FLEMER, Williamstown, N. J. Filed Oct. 4, 1918. Serial No. 256,860. 1 Claim. (Cl. 246—293.)



In a railroad crossing signal, the combination with a member under the ties of the railroad, of pulleys mounted on said member, levers pivoted to one of the rails and extending toward each other and having their adjacent ends positioned a slight distance above the surface of the rail, links pivotally united depending from the adjacent ends of said levers, a signal arm pivotally mounted on one end of one of the ties and provided with a signal blade, and a cable passing over the pulleys and connecting between one end of the signal arm and one of said links, which extends downwardly below one of the pulleys, whereby as the levers are depressed the signal arm will be moved to a vertical position.

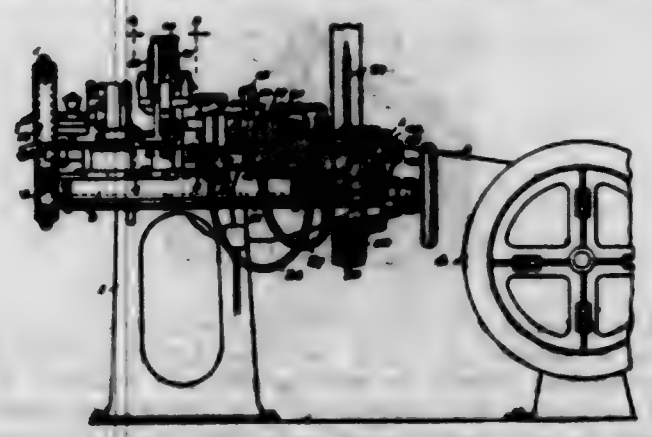
1,297,340. EDGE-BAND MACHINE. JOHN F. GAIL, Kenosha, Wis., assignor, by mesne assignments, to Simmons Company, Kenosha, Wis., a Corporation of Delaware. Filed Feb. 7, 1916. Serial No. 76,577. 25 Claims. (Cl. 140—1.)



1. In a machine for making edge bands the combination with means for forming an elongated flat edge band, of

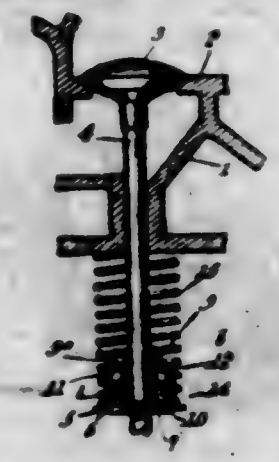
means for forming a series of spaced apertures throughout the length of the band and means associated therewith for automatically securing fabric links to said bands.

1,297,341. ROLLING AND PUNCHING MECHANISM. JOHN F. GAIL, Kenosha, Wis., assignor to Simmons Company, Kenosha, Wis., a Corporation of Delaware. Original application filed Feb. 7, 1916, Serial No. 76,577. Divided and this application filed Feb. 8, 1917. Serial No. 146,374. 5 Claims. (Cl. 164—117.)



1. In a machine for making edge bands, the combination with a main frame, of a main carriage having a horizontally reciprocatory movement thereon, an auxiliary carriage slidably mounted on the main carriage, of means for reciprocating the auxiliary carriage an additional distance at predetermined intervals in the operation of the machine.

1,297,342. SELF-GRINDING VALVE. JOHN GARLICK, Paterson, N. J. Filed July 2, 1918. Serial No. 243,010. 1 Claim. (Cl. 123—188.)



In an internal combustion engine, a frame having a seat; a poppet valve cooperating with the seat; a stem assembled with the valve and slidable in the frame; a holder mounted on the stem and including a neck, the holder having a notch in its outer end, there being a ball-race in the holder, about the neck; a pin inserted through the stem and engaged with the notch of the holder to maintain the holder against rotation with respect to the stem; a cup inverted over the ball race and including a side wall surrounding the holder, the side wall engaging the ends of the pin to hold the same in place; means carried by the neck and cooperating with the cap to retain the cap in place, the cap being provided at its outer end with a laterally extended flange; a spring supported at one end on the flange and inclosing the cap, the other end of the spring cooperating with the frame; and balls in the ball-race, the balls supporting the cap.

1,297,343. CIRCUIT-BREAKER. GEORGE W. GRELACH, Cumberland, Iowa. Original application filed May 26, 1917, Serial No. 171,217. Divided and this application filed Dec. 31, 1917. Serial No. 209,668. 10 Claims. (Cl. 246—189.)

1. A circuit breaker including a pair of resilient contacts having opposed free ends constantly urged toward each other, a switch blade pivoted for swinging movement in a plane with the free ends of said contacts and normally engaged thereby to complete a circuit between the contacts.



2. A trip operated circuit breaker including a pair of resilient contacts having opposed free ends constantly urged toward each other, a switch blade pivoted for swinging movement in a plane with the free ends of said contacts and normally engaged thereby to complete a circuit between the contacts, and means for limiting the movement of the free ends of the contacts toward each other.

3. A trip operated circuit breaker including a pair of resilient contacts having opposed free ends constantly urged toward each other, a switch blade pivoted for swinging movement in a plane with the free ends of said contacts and normally engaged thereby to complete a circuit between the contacts, and means for limiting the movement of the free ends of the contacts toward each other, the free ends of the contacts being out of alinement with each other.

4. A trip operated circuit breaker including a pair of resilient contacts having opposed free ends constantly urged toward each other, and a switch blade pivoted for swinging movement in a plane with the free ends of said contacts and normally engaged at spaced points by the ends thereof to complete a circuit between the contacts, the contact engaging the blade nearest its pivot point being disposed at the side of the blade opposite to that normally engaged by a trip.

5. A circuit breaker including a pair of resilient contacts having opposed free ends constantly urged toward each other, means for tensioning the said contacts, and a switch blade pivoted for swinging movement in a plane with the free ends of said contacts and normally engaged thereby to complete a circuit between the contacts.

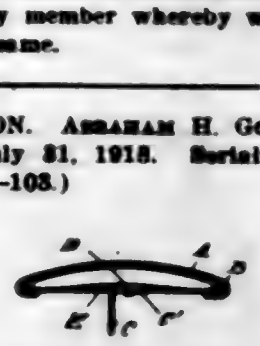
1,297,344. FISH-SPEAR. CHRISTOPHER C. GLASS, Bessemer, Ala. Filed Nov. 27, 1918. Serial No. 264,374. 1 Claim. (Cl. 43—6.)



A fish spear comprising a body member, a spring actuated spearing rod slidably mounted and guided therein, adjusting means whereby the speed of the spearing rod may be increased or diminished, a trigger engaging the upper end of the spearing rod whereby the spearing rod

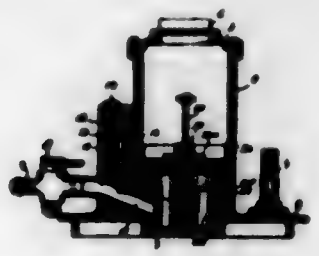
may be locked and released as desired and a packing at the bottom of the body member whereby water is prevented from entering the same.

1,297,345. BUTTON. ABRAHAM H. GOLDEN, New York, N. Y. Filed July 31, 1918. Serial No. 247,515. 1 Claim. (Cl. 24—103.)



A button-head comprising a cap and a flat plate, the latter having a part struck up to form a spring integral with said plate and being provided with a pair of bearing recesses, in combination with means for attachment to a fabric, said means including a latch having an angularly bent tail piece provided with a pair of trunnions arranged to be mounted pivotally in said recesses, said spring operating to hold said latch in either one of two positions.

1,297,346. MILKING APPARATUS. EMMA E. GOOD, Minneapolis, Minn. Filed Jan. 8, 1918. Serial No. 210,817. 17 Claims. (Cl. 31—90.)



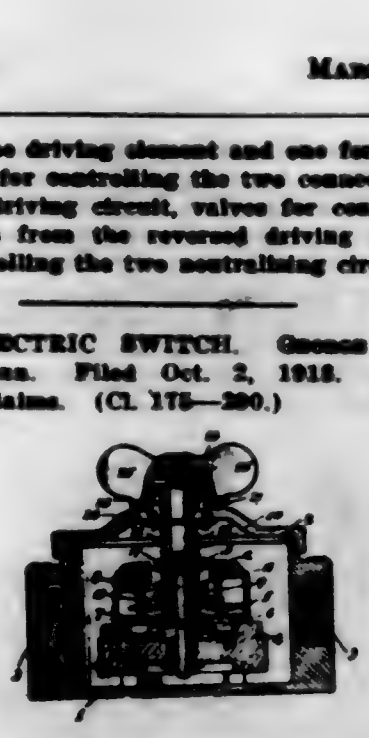
1. In a milking apparatus, the combination with a closed milk receptacle, of a differential cylinder and a differential piston working therein, said cylinder having its small end in communication with said receptacle, a reverse valve and coöperating ports for alternately connecting the larger end of said cylinder to said milk receptacle and to the atmosphere, piston actuated connections for moving said reverse valve, a milk delivery conduit connected to the smaller end of said cylinder, and an air relief port extending from said milk delivery conduit to the atmosphere and including a port that is arranged to be opened and closed by said differential piston.

1,297,347. FLUID TRANSMISSION MECHANISM. SAMUEL S. GREENFIELD, Fairport, N. Y. Filed July 29, 1918. Serial No. 247,324. 10 Claims. (Cl. 60—53.)



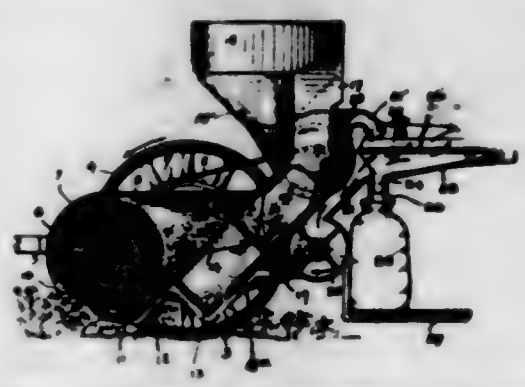
1. A fluid transmission mechanism comprising two separated casings, a fluid driving element arranged in one casing, a fluid driven element arranged in the other casing, two connections between the casings providing a direct driving fluid circuit, two connections between the casings providing a reverse driving fluid circuit, a by-pass for each casing providing two neutralizing fluid circuits, one for the driving element and one for the driven element, valves for controlling the two connections forming the direct driving circuit, valves for controlling the two connections from the reversed driving circuit, and valves for controlling the two neutralizing circuits.

1,297,348. ELECTRIC SWITCH. GEORGE H. HART, Hartford, Conn. Filed Oct. 2, 1918. Serial No. 256,528. 3 Claims. (Cl. 175—290.)



2. In a rotary snap switch having a stop-plate, a catch-plate, a spindle actuating said catch-plate, a switch plate bushing carried by said spindle and rotating the said catch-plate, the combination of a spring-plate rigidly secured to said spindle, said spring-plate having ratchet teeth, a casing for said mechanism, a cover therefor, a shaft carried by said cover, an axially movable ratchet member engaging said ratchet teeth and carried by said shaft, a spring interposed between said cover and said ratchet member and holding said ratchet member normally in engagement with the teeth on said spring-plate, and a handle for turning said shaft, said ratchet member and said spring-plate constituting separable clutch members.

1,297,349. SEED HARVESTER AND CLEANER. JOHN HERR, near Lebanon, Ind. Filed Jan. 30, 1917. Serial No. 145,509. 6 Claims. (Cl. 56—29.)

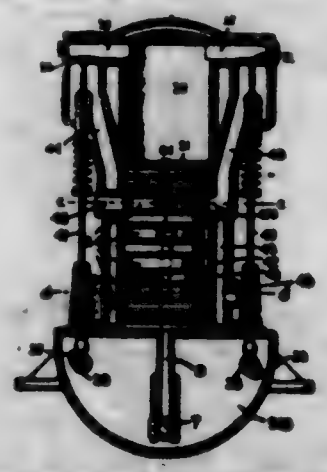


1. A combined clover seed harvesting and separating machine comprising a revoluble means for detaching the hulls containing the seeds from the stalks and having movement of rotation in a direction of a suction creating element for drawing the freed hulls therein and for discharging same into a dust collector, an open top dust collector interposed between the suction creating element and seed huller for the removal of the lighter particles of the hulls and having its discharge end discharging upon a seed-huller, a seed-huller for separating the hulls from the seeds and discharging them upon a screen, and a vibratory screen for removing the hulls from the loose seeds.

1,297,350. INTERNAL-COMBUSTION ENGINE. GEORGE H. HINCHLIFFE, Boston, Mass. Filed Jan. 11, 1918. Serial No. 1,509. 6 Claims. (Cl. 123—122.)

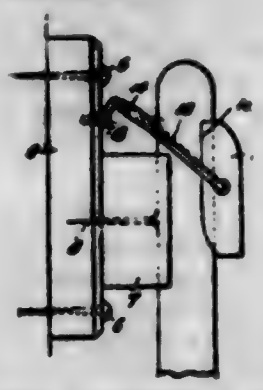
2. In an internal combustion engine, the combination with a cylinder having inlet and exhaust ports, of a chamber surrounding the lower end of the cylinder and communicating with the exhaust port, said chamber having an outlet port whereby the exhaust gases from the cylinder are delivered into and pass through said chamber thereby heating the lower end of the cylinder, a piston

in the cylinder provided with peripheral pockets or chambers, means to deliver the combustible fuel to said pockets or chambers whereby on the back stroke of the piston the fuel contained in said chambers is carried into contact with the heated walls of the working end of the cylinder and on the forward stroke said fuel is carried by the piston into contact with the heated walls of the lower end of the cylinder, and means providing for the transfer of the fuel from the chambers of the pistons to the inlet port of the cylinder.



4. In an internal combustion engine, the combination with a cylinder having an inlet port, of a piston in the cylinder, and means whereby on the back stroke of the piston fuel mixture is carried thereby into contact with the heated walls of the working end of the cylinder, and means providing for delivering said fuel mixture to the inlet port of the cylinder.

1,297,251. BROOM-HOLDER. FLOYD HAROLD HORTON, Atlanta, Ind. Filed Jan. 16, 1918. Serial No. 212,070. 3 Claims. (Cl. 24—240.)



2. A broom holder comprising a supporting plate, a jaw fixedly secured to said plate, parallel clamping arms secured together at one end to form a loop and hingedly connected with said supporting plate above said jaw and a second jaw releasably clamped between the free ends of said arms and coöperating with said first mentioned jaw.

1,297,252. DENTAL TOOL. CLAUDE B. HOSTETLER, Ostrander, Ohio. Filed Jan. 25, 1919. Serial No. 273,088. 4 Claims. (Cl. 32—10.)



1. A dental instrument, consisting of a handle, a collar having an angular interior adapted to be received upon said handle, a rod having an angular portion to operate in the collar, and a tip for the rod, said tip adapted to be expanded when the handle of the device is rotated.

1,297,253. FRUIT CHUTE OR CONVEYER. SAMUEL G. HULL, Apopka, Fla. Filed Aug. 6, 1918. Serial No. 248,538. 2 Claims. (Cl. 193—29.)



1. In a chute used when gathering fruit, the combination with an elongated strip, of a stationary fabric jaw extending longitudinally of the strip, U-shaped supporting and stiffening members arranged at intervals along the strip to support the stationary fabric jaw, a flexible fabric jaw coöperating with and overlapping the stationary jaw, yieldable loops connecting between the strip and the flexible movable jaw at intervals along the strip.

1,297,254. WIGGLING FISH-LURE. JAMES WILLIAM JAY, Baltimore, Md. Filed Mar. 19, 1917. Serial No. 155,800. 6 Claims. (Cl. 43—30.)



1. A device of the character described including a shank and a deflector mounted thereon having pitchless blades, the deflector having a relatively large aperture through which the shank passes, the aperture being of such size relative to the shank as to permit the deflector to take an eccentric position relative to the shank and permit the deflector to rock upon the shank in the plane of the length thereof, the wall of the aperture preventing the angular movement of shank to a position wherein the blades are disposed at a very acute angle to the shank.

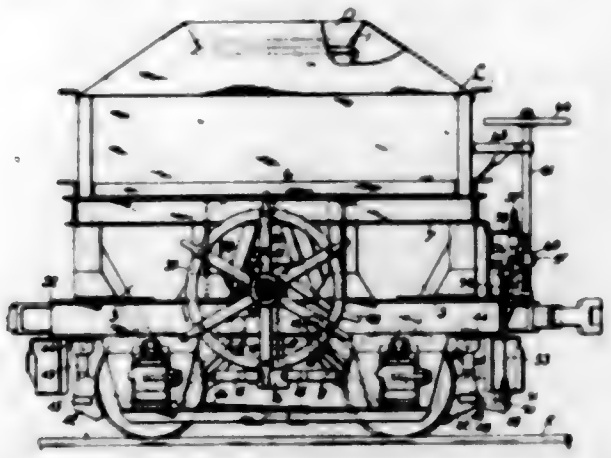
1,297,255. AUTOMOBILE-WHEEL. EDWARD A. JESS, Annapolis, Md. Filed Aug. 23, 1918. Serial No. 251,148. 4 Claims. (Cl. 152—29.)



1. A vehicle wheel comprising a hub and a rim, a plurality of spaced annular series of spaced resilient members between the hub and rim spaced from the hub and rim and concentric therewith, flexible connections be-

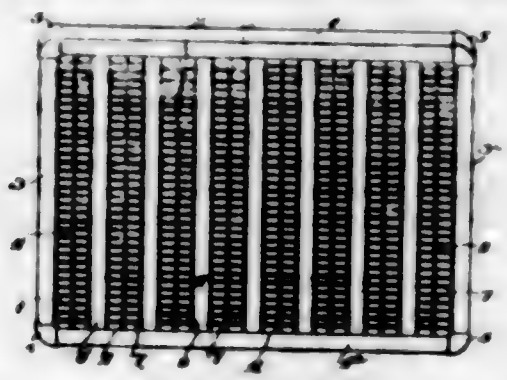
tween the hub and the adjacent series, flexible connections betwen the members of successive series of resilient members and connections between the outermost series of resilient members and the rim.

1,297,356. DUMP-CAR. ERNEST JUNGHANNS, Anaconda, Mont. Filed Aug. 19, 1918. Serial No. 250,520. 15 Claims. (Cl. 105—249.)



2. In a dump car, a car-body provided with two bottom-discharge hoppers disposed on opposite sides of a vertical plane through the body, the discharge openings of the hoppers facing said plane and with the edges of the openings disposed in intersecting planes inclined upwardly toward said vertical plane, a vertically reciprocating member mounted to operate along said vertical plane opposite the discharge openings, dump-doors hinged in proximity to the discharge openings for closing said openings, toggle links disposed opposite one another and connecting the reciprocating member with the respective doors, and a resilient member coöperating with the links to permit the latter to swing past the straight line of the links in either direction.

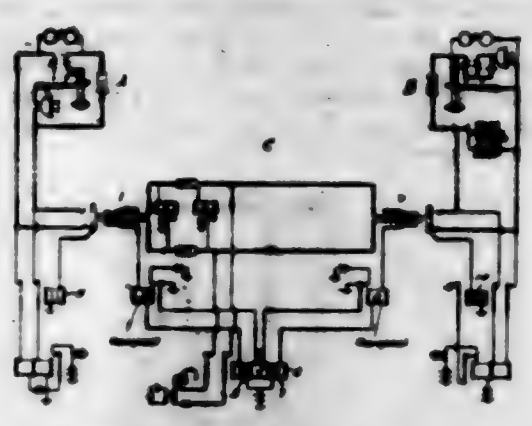
1,297,357. OPHTHALMIC TEST-LENS TRAY. EDMUND KANDLER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed May 27, 1918. Serial No. 236,883. 4 Claims. (Cl. 211—28.)



1. An ophthalmic test lens tray comprising a frame, a pair of channel partitions, a plurality of partition plates movably supported on said channel partitions and forming a series of lens cells, a base partition plate also supported on said channel partitions and having flanges with inclined edges, whereby said partition plates are inclined at an angle to the face of the frame, and means for supporting lenses in said cells.

1,297,358. TELEPHONE-EXCHANGE SYSTEM. CHARLES W. ECKLER, Newark, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1918. Serial No. 209,972. 10 Claims. (Cl. 179—51.)

1. A telephone exchange system comprising a plurality of common battery and local battery telephone lines, a link circuit for interconnecting the lines indiscriminately, an operator's telephone set, a differential relay having a winding associated with each end of the link circuit and operating when one end thereof is connected with a calling line of either character to connect the telephone set therewith, a compensating winding for the relay, and



means in each end of the link circuit for rendering the compensating winding effective while the link circuit interconnects the lines of different characters, thereby releasing the relay to disconnect the telephone set.

1,297,359. INSOLE. FREDERICK R. KEITH, Randolph, Mass. Filed May 8, 1917. Serial No. 166,569. 1 Claim. (Cl. 36—22.)



An insole of the type comprising a body member channeled to form an upturned lip and a reinforcing layer of canvas applied to the channeled face thereof and embracing and secured to the lip, in which the body member is made of leather-board which is saturated with a compound comprising tallow, pitch and wax in such proportions as to render it both water-proof and sufficiently tough so that it will not readily tear or split in a plane parallel to the face thereof.

1,297,360. HOPPER-DOOR FOR REFUSE-INCINERATORS. THEODORE KERNER, Milwaukee, Wis. Continuation in part of application Serial No. 864,233, filed Sept. 30, 1914. This application filed Aug. 1, 1917. Serial No. 183,994. 8 Claims. (Cl. 198—32.)



1. A hopper door for refuse incinerators comprising a frame adapted to be set in and to line a lateral opening into a chimney flue and having an outwardly and downwardly inclined door seat, and a hopper pivoted to said frame adjacent to the lower outstanding side of said seat and having a front wall forming a door which closes in an upwardly and inwardly inclined plane against said seat,

and side and back walls forming with the front wall an open top receptacle when the door is open, and an inwardly and downwardly inclined chute into the chimney flue when the door is closed, the back wall, which is of greater length than the front wall transversely to the pivot axis of the hopper, mating against the top wall of the frame and closing the opening into the chimney flue when the hopper is tipped forward into receiving position.

1,297,361. SAND-SPREADER. THEODORE KERNER, Milwaukee, Wis. Filed Dec. 21, 1918. Serial No. 267,760. 11 Claims. (Cl. 91—67.)



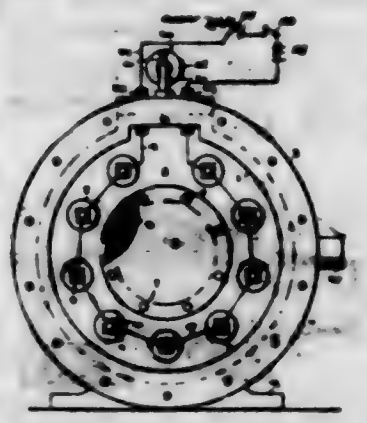
1. A sand spreader comprising a receptacle having closed ends and back, a discharge slot along the lower side of the front and a flexible flap below the slot.

1,297,362. SHADE-HOLDER FOR PORCELAIN WORK. GEORGE P. KNAPP, Bridgeport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed July 22, 1918. Serial No. 245,078. 7 Claims. (Cl. 240—114.)



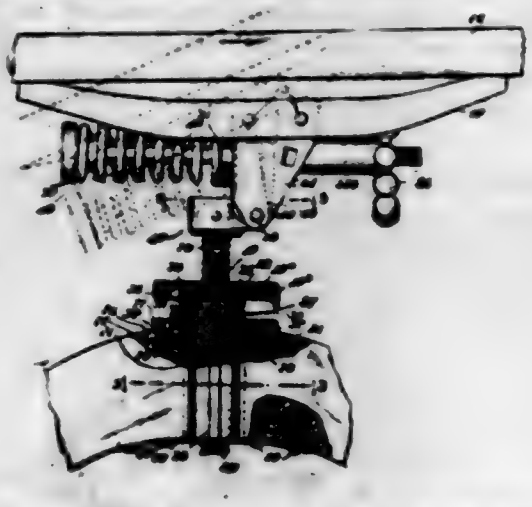
4. A shade holder of the character described comprising a spring shade holding ring having an outwardly turned supporting flange, an attaching collar, arms connecting said ring and collar, and shade locking tongues having central outwardly projecting engaging portions adapted to spring over a shade flange when the shade flange is engaged by the supporting flange, the lower ends of said tongues being concave curves, and the edges of the lower ends of the tongues providing stops which extend below the edge of the shade flange, limit the outward movement of the tongues, and thus prevent rattling.

1,297,363. HEAT AND POWER PRODUCING APPARATUS. JOHN D. KNEEDLER, Sioux City, Iowa, assignor of one-half to Buel Couch, Sioux City, Iowa. Filed Mar. 8, 1917. Serial No. 152,397. 3 Claims. (Cl. 60—39.)



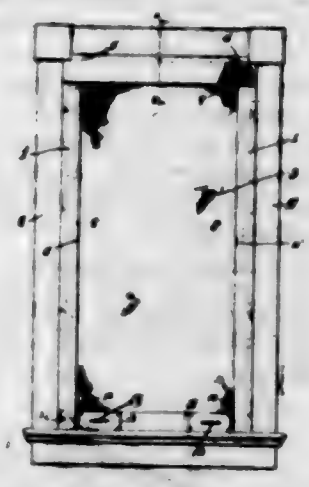
1. A heat and power producing apparatus of the class described comprising an expansion chamber, a core mounted within the expansion chamber, variable heating means positioned around and within said expansion chamber, means for supplying compressed air to said expansion chamber for contact with said heating means for the purpose set forth, and means for refrigerating said compressed air prior to its admission to said expansion chamber.

1,297,364. SWIVELED AND TILTING CHAIR. OLAUS O. KRABOL, Chicago, Ill. Filed Apr. 1, 1918. Serial No. 226,035. 8 Claims. (Cl. 155—41.)



1. In a support for a swiveled chair, in combination, a vertically apertured block having an upstanding annularly channeled flange, a threaded rod journaled within the block aperture and having a longitudinal channel, a nut threaded upon the rod and having a stud engaged with the flange channel, and a retractable element carried by the nut and engageable with the rod channel.

1,297,365. ROLLER-SCREEN. FRANCIS S. KROENUNG, St. Louis, Mo. Filed Jan. 4, 1918. Serial No. 210,832. 1 Claim. (Cl. 156—39.)



A window screen comprising upright supporting members attached to the window casing and each provided with a longitudinal groove adapted to receive the window screen, the edge of each support between the said groove and the front face of the support being provided with a plurality of longitudinally spaced depressions, a clamp plate fixed to the lower edge of the screen at each side thereof, and provided with a sliding locking bolt carrying a roller adapted for reception in any one of the corresponding depressions in the adjacent upright support, whereby the said screen may be held in adjusted position, the said locking bolt being spring pressed to urge the said rollers into the depression.

1,297,902. CUFF-BUTTON. LOUIS E. LADD, Providence, R. I. Filed Mar. 6, 1918. Serial No. 220,709. 1 Claim. (Cl. 24—102.)

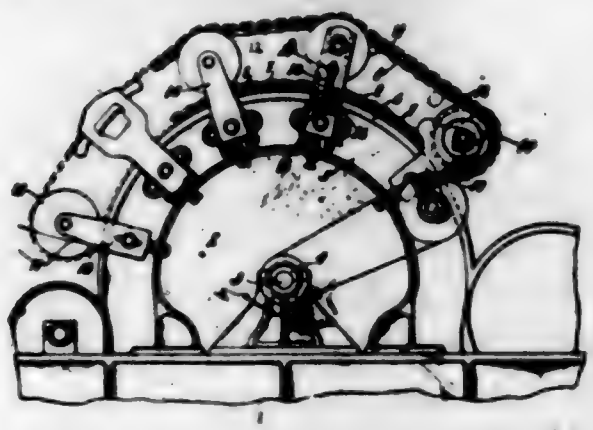
A cuff button comprising two spaced apart heads connected by a link bar, a tubular eye member attached to

the back of one of said button heads, said link bar being forked at its ends and turned to enter opposite ends of said eye with a spring pressure to serve as trunnions on which the button may rotate the edges of said eye



tube being notched to engage the arms of the link and retain said head either at right angles to or parallel with said link bar, and a locking tongue engaging said eye to firmly but releasably lock its head against movement.

1,297,367. TRAVELING-FLAT CARDING-MACHINE. CHESTER C. LAMB, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Sept. 6, 1917. Serial No. 189,930. 1 Claim. (Cl. 19—23.)



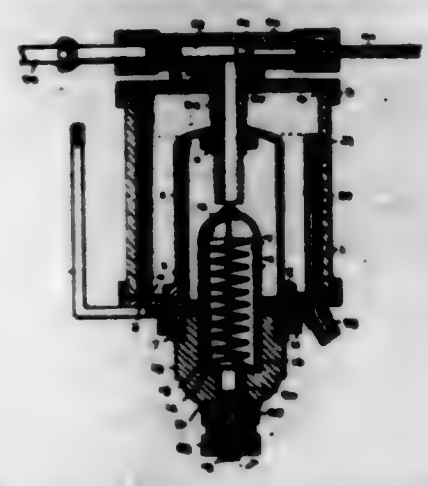
In a traveling flat carding machine comprising a driving shaft having a carding cylinder thereon, traveling flats, a chain connecting the traveling flats, power transmitting means between the driving shaft and the chain, a cylinder arch, a flexible bend adjustably mounted on the arch, circular carriers supporting the returning line of flats, supporting stands for the carriers, one of the carriers mounted on a journal integral with a holding stand slidably adjustable on an extension stand, said extension stand being slidably mounted on a bracket fixed to the card arch.

1,297,368. BUCKLE. ALBERT LEIGHTON, Latrobe, Pa. Filed Oct. 28, 1918. Serial No. 259,960. 1 Claim. (Cl. 24—168.)



A take-up buckle adapted for use on the textile web of a suspender strap or the like, comprising a resilient one-piece member having a straight or bearing portion, and bent beyond said straight portion outwardly and then inwardly to form a separating space of approximately the thickness of the web, and having its ends bent outwardly at approximately a right angle to said bearing portion, said ends terminating in piercing prongs or points adapted to project through the web adjacent an end thereof, and a clamping member swingingly mounted on the upper straight or bearing portion of said device, said clamping member having a serrated edge adapted to coact with the web when the same is passed between said bearing portion and said bent ends, whereby said parts are held in their adjusted positions on the web.

1,297,369. ELECTRICAL PRIMING-VAPORIZER. JOHN HARRY LEFFEL, Mason City, Iowa. Filed July 23, 1917. Serial No. 183,254. 6 Claims. (Cl. 219—38.)



1. A fuel vaporizer comprising a reservoir, an outlet pipe leading from the upper end of said reservoir, a vaporizing chamber extending into said reservoir from the bottom thereof, said chamber having an aperture adjacent its lower end establishing communication with the reservoir, electrical vaporizing means projecting into said vaporizing chamber, and an inlet pipe connected to the lower end of the reservoir.

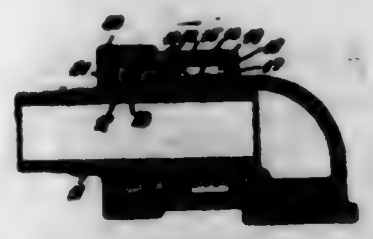
2. A fuel vaporizer comprising a reservoir, a vaporizing chamber projecting into said reservoir from the bottom thereof, and provided with an aperture adjacent the reservoir bottom establishing communication with the reservoir, a vaporizing medium projecting into said vaporizing chamber from the bottom thereof, a fuel feed pipe for said reservoir, and an outlet pipe extending through the reservoir and into said vaporizing chamber.

4. A fuel vaporizer comprising a reservoir, a vaporizing chamber projecting upwardly into said reservoir and provided with an aperture adjacent its lower end and establishing communication with said reservoir, a vaporizing medium projecting upwardly into said vaporizing chamber, a fuel feed pipe connected to the reservoir, and an outlet pipe extending through the reservoir and top of the vaporizing chamber.

5. A fuel vaporizer comprising a reservoir, a vaporizing chamber projecting upwardly into the reservoir and having an aperture adjacent its lower end establishing communication with said reservoir, a stand pipe extending upwardly from the bottom of the reservoir, a fuel feed pipe connected to said stand pipe, a heating medium projecting into said vaporizing chamber, and an outlet pipe extending through the top of the reservoir and vaporizing chamber.

6. A fuel vaporizer comprising a reservoir, a vaporizing chamber removably positioned within and through the bottom of the reservoir, said chamber having an aperture adjacent its lower end communicating with the reservoir, a vaporizing medium removably positioned within said vaporizing chamber, a fuel feed pipe for said reservoir, and a valve controlled outlet pipe extending through the reservoir and into said vaporizing chamber.

1,297,870. SWING-JOINT. EVARTS G. LOOMIS, Newark, N. J. Filed Feb. 20, 1917. Serial No. 149,841. 2 Claims. (Cl. 285—96.)



1. A non-universal swing joint comprising a socket member having a fluid passage enlarged into an inner

socket at one end, and a removable collar having an inwardly extending flange provided with a spherically curved interior lateral surface of large radius, a plug member extending through the enlargement and fitted loosely into said inner socket to hold the parts of the joint substantially in alinement but permitting a slight lateral movement of the plug member, an annular projection on the plug member having a spherically curved lateral outer surface opposed to the spherically curved surface of the collar flange, packing around the extension of the plug within the socket, tending to hold the parts of the joint in alinement, a spring pressing the packing against the annular projection of the plug member and pressing said opposed spherically curved surfaces toward each other, and a metal washer between the opposed spherically curved surfaces to prevent cutting without permitting material longitudinal movement of the parts.

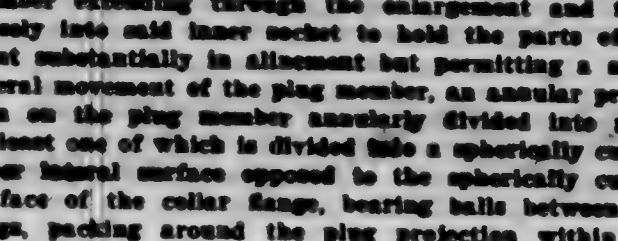
2. A neo-universal swing joint comprising a socket member having a fluid passage enlarged into an inner socket at one end, and a removable collar having an inwardly extending flange provided with a spherically curved interior lateral surface of large radius, a plug member extending through the enlargement and fitted loosely into said inner socket to hold the parts of the joint substantially in alinement but permitting a slight lateral movement of the plug member, an annular projection on the plug member annularly divided into rings at least one of which is divided into a spherically curved outer lateral surface opposed to the spherically curved surface of the collar flange, bearing balls between the rings, packing around the plug projection within the socket tending to hold the parts of the joint in alinement, and a spring pressing the packing against the annular spring of the plug member and pressing the opposed spherically curved surfaces toward each other.

1,297,271. PROCESS OF PURIFYING ZIRCONIUM ORES. WILLIAM R. LOVEDAY, Lakewood, Ohio, assignor, by mesne assignments, to National Carbon Company, Inc., a Corporation of New York. Filed Sept. 1, 1915. Serial No. 48,539. 2 Claims. (Cl. 23—18.)

1. The process of purifying crude zirconium and titanium ores, which consists in treating the same with an excess of hot concentrated sulfuric acid and evaporating to substantial dryness, crushing the dried mass, dissolving out the soluble constituents with dilute sulfuric acid solution, treating said solution with sodium thiosulfate while maintaining the temperature at substantially 100° C. to precipitate hydrated oxid of zirconium, and filtering and calcining the precipitate.

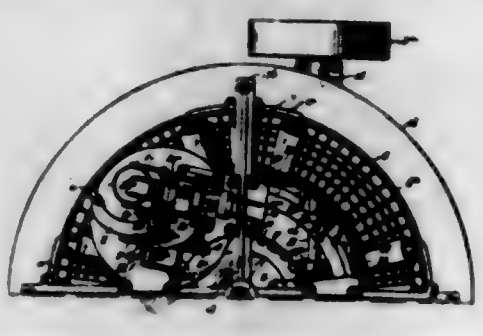
2. That step of the process of purifying zirconium-containing material, which consists in dissolving it in a weak sulfuric acid solution, adding sodium thio-sulfate to said solution while maintaining the temperature at substantially 100° C. to precipitate hydrated oxid of zirconium, filtering and calcining the precipitate to drive off the water of constitution and to volatilize adhering sulfur.

1,297,272. MINERAL-SEPARATING APPARATUS. ALLISON S. ROSENTHAL, Birmingham, and EMMETT C. NUNNELLEY, Ashland, Ala. Filed Aug. 17, 1918. Serial No. 250,402. 4 Claims. (Cl. 82—61.)



1. In a mineral separating apparatus, a narrow elongated fluid containing tank having at one end an overflow port and being tilted upwardly to expose at its other end a portion of its bottom above the level of fluid therein, a screw conveyer working lengthwise through said tank to elevate and discharge the tailings, means to introduce the crushed ore at an intermediate point into the tank, and a plurality of jets and sprays to agitate the fluid in the tank, said screw conveyer being set close to one side and the bottom of the track and adapted to leave between it and the more remote side of the tank a narrow water way for the back flow of drainage water, and said jets being disposed divergently at different angles transversely of the tank while the sprays are sharply inclined toward the overflow end of the tank.

1,297,873. CUBING-MACHINE. WILLIAM M. LUTHER, Walla Walla, Wash. Filed July 17, 1918. Serial No. 245,289. 17 Claims. (Cl. 17—18.)



1. An apparatus of the kind stated comprising a rotatable shaping cutter having crossed knives, a slicer discharging on the cutter, and means for forcing the sliced product through the spaces between the knives of the cutter.

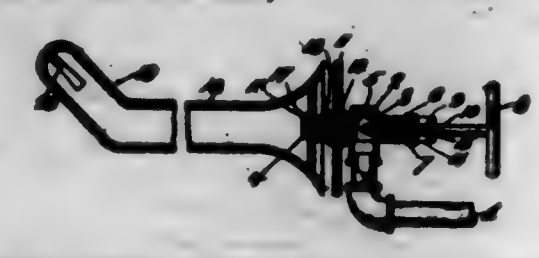
2. An apparatus of the kind stated comprising a shaping cutter having crossed knives, a slicer discharging on the cutter, and rollers for forcing the sliced product through the spaces between the knives of the cutter.

3. An apparatus of the kind stated comprising a rotatable shaping cutter having crossed knives, a slicer discharging on the cutter, and rollers for forcing the sliced product through the spaces between the knives of the cutter.

4. An apparatus of the kind stated comprising a rotatable shaping cutter having crossed knives, a slicer discharging on the cutter, and rollers for forcing the sliced product through the spaces between the knives of the cutter, said rollers being stationary relative to the cutter, and the latter traveling past the rollers in proximity thereto.

5. An apparatus of the kind stated comprising a shaping cutter member having crossed knives, a slicer discharging on said member, and a forcing member located in proximity to the cutter member, one of said members being rotatable with respect to the other member for forcing the sliced product through the spaces between the knives of the cutter member.

1,297,276. GAS-BURNING APPLIANCE. ELMER T. LOTZ, Kansas City, Mo. Filed Feb. 17, 1917. Serial No. 149,696. Renewed Oct. 3, 1918. Serial No. 256,762. 1 Claim. (Cl. 158—100.)



In a gas burner, a casing having a gas-receiving chamber, an alined bore and nozzle communicating respectively at their front and rear ends with said chamber, the nozzle having a valve seat at its rear end, a needle valve adjustable in said bore and adapted for engagement with said valve seat to close or control the passage of the nozzle, a mixing tube communicating with the nozzle and

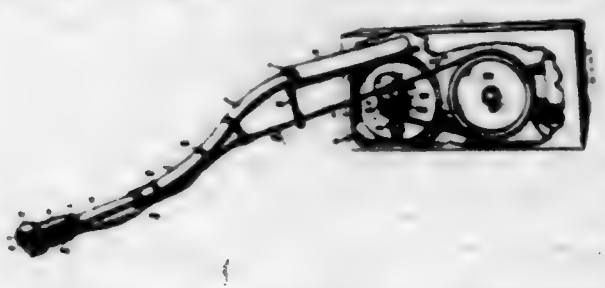
provided with a burner head, a damper, a frame secured to the damper and engaging the needle valve, and means attached to the latter to engage the frame and impart forward or rearward movement thereto accordingly as the needle valve is advanced or withdrawn with respect to the valve seat.

1,297,375. COMPRESSOR FOR BUNDLED EXPLOSIVE MATERIAL. WILLIAM HERBERT MCCANDLISH, London, and ALFRED BERNARD ROBSON, county of Hertford, England, assignors to Sabulite (Great Britain) Limited, London, England. Filed Jan. 3, 1917. Serial No. 140,460. 3 Claims. (Cl. 100—57.)



1. In apparatus for compressing bundled material, the combination of a supporting frame, a contractible circular clamp secured thereto, and a tensioning member operatively connected to said clamp to contract the same when tension is applied to said member, said clamp having spring means whereby it will automatically expand when the tension is removed, substantially as described.

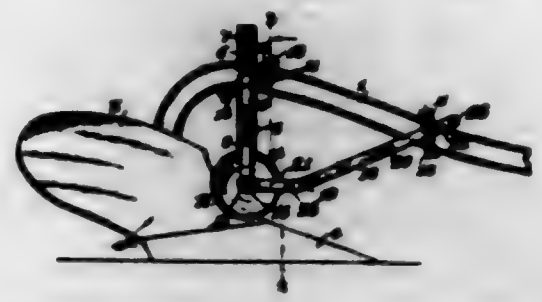
1,297,376. COTTON-PICKER. SAMUEL D. MCEACHERN, Jayton, Tex. Filed Apr. 19, 1917. Serial No. 163,245. 1 Claim. (Cl. 56—117.)



In a portable cotton picker of the class described, a suction blower having inlet and outlet pipes and embodying a driving shaft, a vertical bearing bracket mounted on one side of the suction blower having its intermediate portion enlarged to provide a bearing for the suction blower shaft, a driving pulley fixed on the suction blower shaft between said bearing bracket and the suction blower casing, a pinion fixed on the outer end of said driving shaft and adjacent the bearing bracket, a driven shaft having one end journaled in the upper end of said bearing bracket and its other end supported from the suction blower inlet pipe, and a gear fixed on said driven shaft and meshing with said pinion whereby the driven shaft may be driven directly from the suction blower shaft.

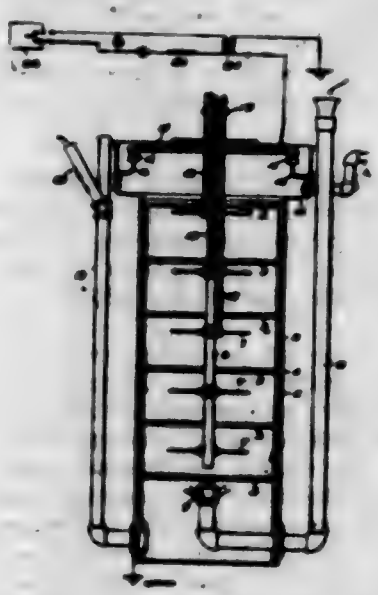
1,297,377. PLOW. PATRICK A. MCGUIRE, De Kalb, Ill. Filed Apr. 24, 1918. Serial No. 230,517. 4 Claims. (Cl. 97—43.)

1. The combination of a plow, a series of cutters arranged closely adjacent to the moldboard of the plow, and above the share, said cutters being spaced to cut the furrow in slices as the furrow falls away from the moldboard after being turned thereby, and means for holding the cutters in a fixed position with relation to the moldboard.



4. The combination of a plow, a series of rotatable cutters, said cutters being in the form of disks having concaved faces, said faces being turned toward the furrow side of the plow, the curvature of the peripheries of the cutters conforming to the curvature of the moldboard, said cutters being adapted to cooperate with the moldboard to turn the furrow over and at the same time, to cut the furrow as it falls away from the moldboard, and means adjustably holding the cutters to the plow beam.

1,297,378. APPARATUS FOR DEHYDRATING OIL. FRED W. MCNEAR, Menlo Park, and PHILIP E. BOWLES, Jr., Reward, Calif. Filed Oct. 2, 1916. Serial No. 123,244. 11 Claims. (Cl. 204—24.)



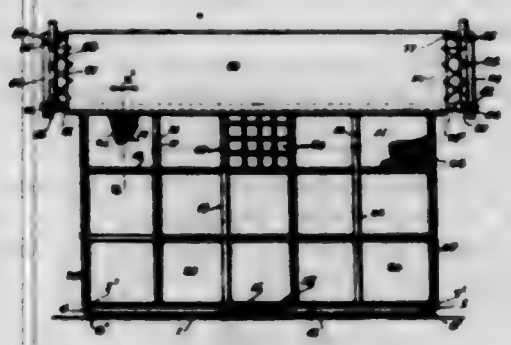
1. In an apparatus of the character described, a tank having a conducting inner surface, a plurality of axially spaced annular electrodes in said tank connected to one side of a source of potential and electrically connected to said conducting surface, and a plurality of disk electrodes connected to the other side of the source of potential and arranged between and spaced axially from the successive annular electrodes, the spaces between the annular electrodes being otherwise clear to permit the free flow of liquid through the successive annular electrodes and around the successive disks.

7. In an apparatus of the character described, a tank, spaced electrodes of opposite sign arranged in said tank and lying closer together at the top of the tank than at the bottom.

1,297,379. PORTABLE HOUSE. NORMAN JOHN MACDONALD, Winnipeg, Manitoba, Canada. Filed July 28, 1916. Serial No. 111,928. 5 Claims. (Cl. 20—2.)

1. In a portable house the combination with side and end walls, of a roof structure embodying wall plates detachably secured to the tops of the side and end walls, said wall plates presenting overhanging top strips, a ridge pole located at the peaks of the gables, a covering

applied over the ridge pole and the gables, roof poles secured to the sides of the covering and located normally underneath the overhanging portions of the side wall plates and means for retaining the roof poles in position beneath the top stripe of the side wall plates.



2. In a portable house the combination with side and end walls, of a roof structure embodying wall plates detachably secured to the tops of the side and end walls, said wall plates presenting overhanging top stripe, a ridge pole located at the peaks of the gables, a covering applied over the ridge pole and the gables, roof poles secured to the sides of the covering and located normally underneath the overhanging portions of the side wall plates and stretchers connecting the projected ends of the roof poles.

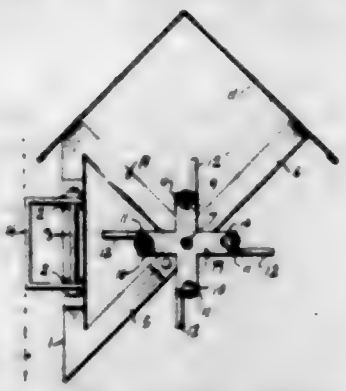
3. In a portable house the combination with side and end walls, of a roof structure embodying wall plates detachably secured to the tops of the side and end walls, said wall plates presenting overhanging top stripe, a ridge pole located at the peaks of the gables, a covering applied over the ridge pole and the gables, roof poles secured to the sides of the covering and located normally underneath the overhanging portions of the side wall plates, stretchers interposed between the projected ends of the roof poles and straps carried by the ends of the stretchers and receiving the projected ends of the roof poles.

4. In a portable house the combination with side and end walls, of a roof structure embodying wall plates detachably secured to the tops of the side and end walls, said wall plates presenting overhanging top stripe, a ridge pole located at the peaks of the gables, a covering applied over the ridge pole and the gables, roof poles secured to the sides of the covering and located normally underneath the overhanging portions of the side wall plates, stretchers connecting the projected ends of the roof poles, peak rails extending between the projected ends of the roof poles and the ridge pole and a lacing connecting the peak rails with the ends of the covering.

5. In a portable house the combination with side and end walls, of a roof structure embodying wall plates detachably secured to the tops of the side and end walls, said wall plates presenting overhanging top stripe, a ridge pole located at the peaks of the gables, a covering applied over the ridge pole and the gables, roof poles secured to the sides of the covering and located normally underneath the overhanging portions of the side wall plates, stretchers connecting the projected ends of the roof poles, end posts detachably secured centrally to the stretchers and having the upper portions thereof connected to the projected ends of the ridge pole, peak rails detachable secured to the projected ends of the roof poles and to the end posts and a lacing connecting the ends of the covering with the peak rails.

1,297,880. REEL. JAMES L. MARRIOTT, Oskaloosa, Iowa. Filed Dec. 7, 1918. Serial No. 265,762. 8 Claims. (Cl. 242—86.)

8. A device of the character described comprising, in combination, side frames, spaced members connecting the side frames, a pin disposed through said members at substantially their longitudinal centers, a bracket engaged with the opposite end portions of the pins whereby the



connected frames have swinging movement about the pin, and a reel supported by the frames.

1,297,881. RAIL-BOND AND METHOD OF MANUFACTURING IT. GEORGE A. MEAD, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed June 2, 1916. Serial No. 101,419. 15 Claims. (Cl. 173—278.)



11. A rail bond for attachment by welding consisting of a body having one end encircled by a sleeve with a projection extending around the sleeve.

1,297,882. RAIL-BOND. GEORGE A. MEAD, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed June 21, 1916. Serial No. 104,854. 52 Claims. (Cl. 173—278.)



52. A rail bond, adapted for welding to the rail by oxy-acetylene or other gaseous flame process, and consisting of a flexible body portion incased by a sleeve adjacent to its end, said sleeve being provided with an external ledge adapted to catch, retain and support the fused filling metal used in making the weld so that said filling metal can be built up with an enlarged section and welded to the end of the bond in overlapping relation thereto.

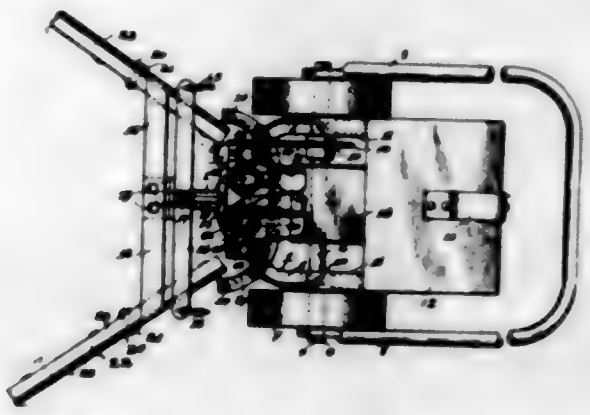
1,297,883. RAIL-BOND. GEORGE A. MEAD, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Original application filed June 2, 1916, Serial No. 101,419. Divided and this application filed Oct. 2, 1916. Serial No. 123,245. 11 Claims. (Cl. 173—278.)



1. A rail bond adapted to be welded to a rail consisting of a body and terminals of dissimilar metals, the terminals comprising a sleeve and a shelf member detachably connected to the sleeve and extending in a plane transverse thereto, the sleeve being compressed onto the body and the extreme end of the body being exposed.

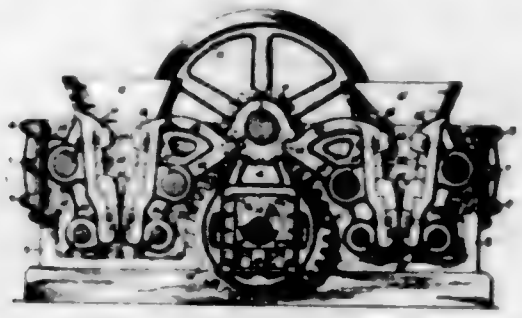
5. A rail bond adapted to be attached to a rail by welding consisting of a body having its ends encircled by sleeves and the sleeves provided with detachable shelves which extend in a plane other than parallel to the sleeves and body.

1,297,384. CLEANING APPARATUS. GEORGE W. METZNER, Chicago, Ill., assignor to Building Equipments Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1916, Serial No. 138,777. Renewed Jan. 16, 1919. Serial No. 271,552. 3 Claims. (Cl. 15—14.)



3. In a cleaning apparatus, the combination with a main frame, driving wheels therefor, a pair of squeegee members supported by said main frame and diverging outwardly therefrom and spaced apart at their rear ends, a third squeegee member mounted in the rear of the former, a pump for removing water from the floor adjacent the squeegee members, a tank carried by said main frame and adapted to receive water from the pump, and connections between the driving wheels and pump for operating the latter.

1,297,385. ROCK CRUSHER AND PULVERIZER. CHARLES O. MICHAELSEN, Minneapolis, Minn., assignor, by mesne assignments, to Michaelsen Machinery Company, a Corporation of Nevada. Filed June 25, 1917. Serial No. 176,840. 6 Claims. (Cl. 74—14.)

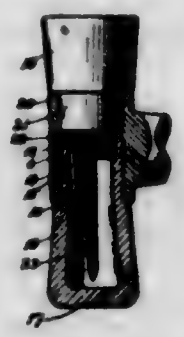


1. In a machine of the class described, a pivotally mounted oscillating member having a part extending radially of the pivotal axis and provided with involute faces, a pivoted rocking-lever having involute faces engageable with the faces of said part of the oscillating member to roll thereon during simultaneous pivotal movement of the lever and said member, means for actuating the rocking-lever, and adjusting means for varying the spacing between centers of the oscillating member and rocking-lever.

2. In a machine of the class described, pivoted oscillating members, a pivoted rocking-lever disposed intermediate said members, means for oscillating said rocking-lever about its pivotal axis, and curvilinear surfaces on said rocking-lever and on parts of said members, said surfaces adapted to engage and roll upon each other during simultaneous pivotal movement of the rocking-lever and members about their respective axes.

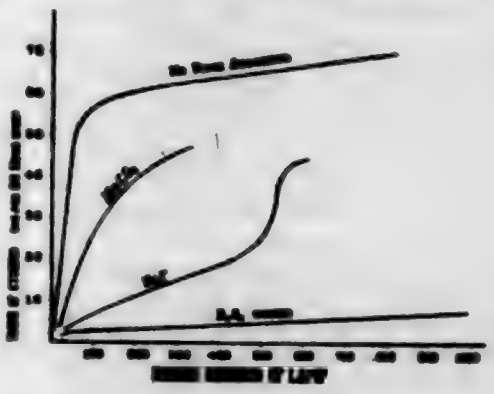
6. The combination in a machine of the class described having pivoted members movable about parallel axes and each coacting with another member to crush materials between them during movement in one direction, of actuating means disposed intermediate said pivoted members for oscillating the same about their pivotal axes and imparting crushing movement thereto alternately, said actuating means comprising a drive-shaft, an eccentric-shaft, gearing connecting said shafts, a rocking-lever pivoted on the driving-shaft and actuated by the eccentric-shaft, and means on the pivoted members engaging parts of said rocking-lever, said means and said parts of the rocking-lever having curvilinear engaging surfaces adapted to roll upon each other during pivotal movements of the members.

1,297,386. COMBINATION-TOOL FOR SHOEMAKERS. JOSEPH MICHEL, Terre Haute, Ind. Filed May 24, 1918. Serial No. 236,421. 2 Claims. (Cl. 145—29.)



1. A tool for shoemakers comprising, in combination, a handle formed at one end with a transversely extending tubular holding head, a striking head removably engaged with one end of said holding head, and a second striking head removably engaged with the opposite end thereof and provided with a reduced portion removably engaged with said first striking head.

1,297,387. FUME-ABSORBER FOR ELECTRIC LAMPS. WILLIAM ROY MOTT, Lakewood, Ohio, assignor, by mesne assignments, to National Carbon Company, Inc., a Corporation of New York. Filed Jan. 27, 1917. Serial No. 144,865. 5 Claims. (Cl. 176—53.)



1. In electric arc lamps, electrodes adapted to form an arc containing glass-etching fluorids and a fume absorber containing a material adapted to combine with said fluorids to produce complex fluorids inactive toward glass.

2. In electric arc lamps, electrodes adapted to form an arc containing glass-etching fluorids and a fume absorber containing a material adapted to combine with said fluorids to produce complex acid fluorids inactive toward glass.

3. In electric arc lamps, electrodes adapted to form an arc containing glass-etching fluorids and a fume absorber containing boron compounds adapted to combine with said fluorids to form complex fluorids inactive toward glass.

4. In electric arc lamps, electrodes adapted to form an arc containing glass-etching fluorids and a fume absorber containing boric oxid adapted to combine with said fluorids to form complex boro-fluorids inactive toward glass.

5. In electric arc lamps, electrodes adapted to form an arc containing glass-etching fluorids and a fume absorber containing fused boric oxid adapted to combine with said fluorids to form hydro-fluo-boric acid.

1,297,388. MOTOR-FUEL. CURT L. E. MUELLER, Joliet, Ill. Filed Oct. 21, 1918. Serial No. 258,056. 10 Claims. (Cl. 44—8.)

1. A fuel oil comprising a mixture of solutions of anthracene oils in the light oils derived from the fractional distillation of coal tar with the products of the distillation of crude petroleum up and to a temperature of 250 degrees centigrade.

1,297,389. TONSIL-REMOVER. VINCENT MUELLER, Chicago, Ill., assignor to V. Mueller & Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1918. Serial No. 218,040. 4 Claims. (Cl. 128—309.)



2. A surgical instrument characterized by a handle and frame member having a fenestrum at its forward end and a homeostatic blade member slidably mounted thereon, said blade member having a thumb rest disposed adjacent to the handle and also having a lever pivoted in front of said rest, said frame member having a medially disposed and forwardly facing shoulder, and said lever having a short arm disposed to react against said shoulder for forcing the blade member forward, and a long arm having a thumb rest adjacent to and swingable away from the first-mentioned rest.

1,297,390. SWITCH. WILLIAM V. MUELLER, Millstadt, Ill. Filed Aug. 16, 1918. Serial No. 250,224. 9 Claims. (Cl. 175—306.)

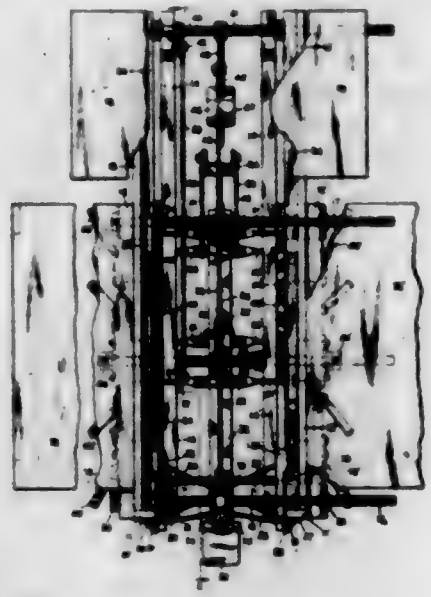


5. An attachment for automobiles and other motor vehicles comprising a switch, a pivotally mounted foot lever operable to close said switch, and a rotatable foot supporting member positioned in proximity to the free end of said lever to facilitate actuation thereof.

1,297,391. MACHINE FOR BOX-MAKING. LEON J. NELSON, Omaha, Nebr. Filed July 11, 1916. Serial No. 108,728. 5 Claims. (Cl. 144—25.)

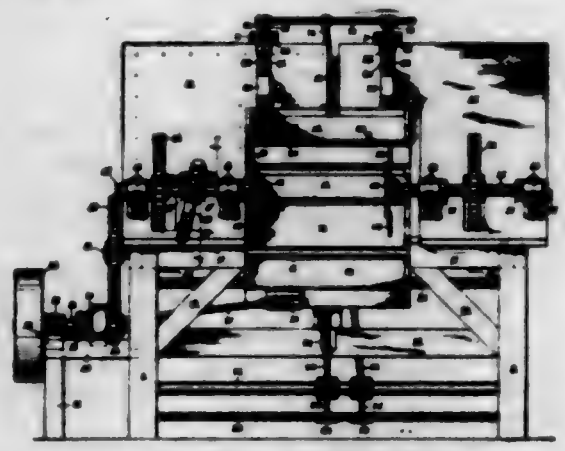
1. In a machine of the class described, in combination; a frame having parallel side-portions and transversely extending connecting means therebetween variable to move said side-portions toward and away from each other; box-end supporting and clamping devices carried on each of said frame side-portions; band-iron supporting, feeding, guiding and tensioning means carried on each of said frame side-portions; means for actuating said clamping devices to release box-ends held thereby; and means connecting said actuating means and the band-iron feeding means so that the latter is actuated simultaneously with the release of the clamping means.

4. In a machine of the class described, the combination with releasable clamping means for holding two box-ends in parallel transversely spaced and alined relation to each other, of revolubly mounted reels, coils of band-iron reinforcing-strips carried on said reels, means for guiding strips from the reels to points alined with the



edges of box-ends in the clamping means, and means for revolving said reels to wind parts of the band-iron strips thereon and place under tension the parts of said strips adjoining the edges of the box-ends.

1,297,392. BOX-ASSEMBLING MACHINE. LEON J. NELSON, Omaha, Nebr. Filed June 20, 1917. Serial No. 175,833. 6 Claims. (Cl. 144—25.)



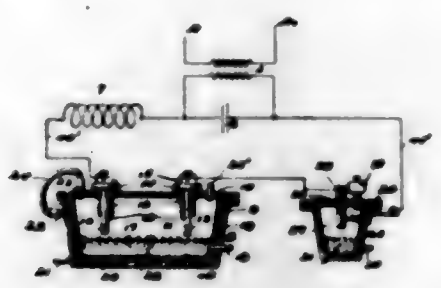
1. In a box-assembling machine, rotary box-end-holding heads axially alined and spaced and adapted to hold box-ends independently in position for receiving side-pieces thereon, means for rotating said heads simultaneously, and strap-tensioning and supporting means alined in the planes of rotation of said heads.

2. In a box-assembling machine, rotary heads axially alined and adapted to fit within paneled box-ends to support the same independently in parallel spaced relation suitable for the attachment of box-sides thereto, controlled actuating means for rotating said heads simultaneously, a reel and strap-tensioning means alined in the respective plane of rotation of each head, and a magazine for containing and feeding box side-pieces into proximity to the rotary heads at a position intermediate the same and the strap-tensioning means.

6. In a box-assembling machine, rotary heads axially spaced and alined and adapted to support paneled box-ends in spaced parallel relation, actuating means connecting said heads and adapted to drive the same synchronously, a clutch controlling said actuating means, supporting and tensioning means for a flexible binding element arranged in the plane of rotation of the box-end carried by each head, means for varying the spacing of the heads longitudinally of the axis of rotation thereof,

a magazine-chute for containing box side-pieces, a follower movable in said chute to eject the side-pieces therefrom at a position substantially intermediate the rotary heads and adjoining the tensioned binding elements, and levers for controlling said clutch and actuating said follower.

1,297,393. PRODUCTION OF CHEMICAL CHANGES BY OSCILLATORY DISCHARGE. EDWIN F. NORTHRUP, Princeton, N. J., assignor to The Ajax Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 13, 1917. Serial No. 180,286. 36 Claims. (Cl. 204—31.)



1. The combination of an oscillatory discharge comprising the main agent for producing chemical change, a container within which the discharge is located and different materials within the container and in proximity to the discharge adapted to be chemically changed by reason of the discharge.

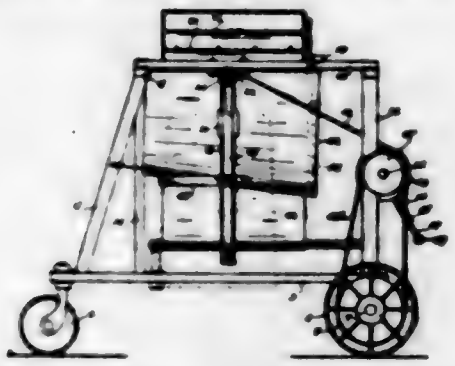
10. The process of fixation of nitrogen which consists in discharging an oscillatory current across a gap between a solid electrode and mercury in the presence of air.

20. The process of production of nitric acid which consists in passing oscillatory electric current between mercury and a solid electrode in the presence of air to produce nitrate of mercury and subsequently treating the resultant compound to produce nitric oxid and nitric acid, successively and to recover the mercury.

30. The process of producing chemical synthesis which consists in passing an oscillatory current across a gap in the presence of a plurality of gases adapted to enter into chemical combination, thereby bringing about the combination.

36. The process of producing chemical change which consists in exposing a chemical combination to the effect of an oscillation current discharge comprising the main agent for producing chemical change, for the purpose of breaking the combination up into other combinations or its constituent parts.

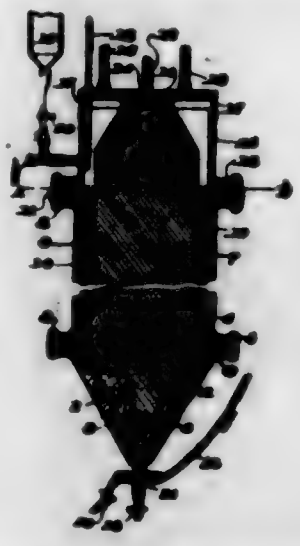
1,297,394. SHOCKING-MACHINE. CHRISTIAN NYGAARD, Moose Jaw, Saskatchewan, Canada. Filed Mar. 30, 1918. Serial No. 225,804. 5 Claims. (Cl. 56—121.)



1. A shocking machine comprising in combination a framework, a pair of vertically disposed side hangers having their upper ends pivotally secured to the framework, a sheaf receiving and shock forming pivoted basket contained within the framework and slidably mounted on the hangers, releasable means holding the basket in the sheaf receiving position at the upper end of the hangers, means for up-ending the basket when released to slide downwardly on the hangers and means for returning the basket to normal position after dumping the stock.

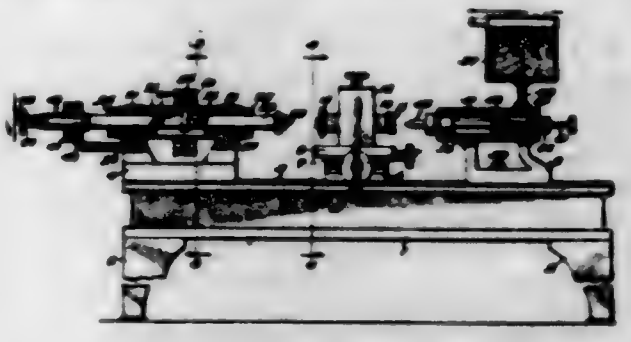
2. A shocking machine comprising in combination a framework, a pair of opposing vertically disposed guide shafts having their upper ends pivotally secured to the framework, a pivoted sheaf receiving and shock forming basket slidably mounted on the guide shafts, releasable means normally holding the basket in an elevated position on the guide shafts and in the sheaf receiving position, means for upsetting the basket to deposit the contained stook and coincident with the dropping of the basket on the guide shafts and means for returning the basket to the elevated sheaf receiving position after dumping.

1,297,395. APPARATUS FOR MANUFACTURING CHLORATES BY AN ELECTROLYTIC PROCESS. TAKEO OIWA, Tuyotama Gun, Tokyo Fu, Japan. Filed July 23, 1918. Serial No. 246,308. 10 Claims. (Cl. 204—5.)



10. An apparatus for manufacturing chlorates by electrolysis, consisting of a number of cells, each of which having one electrode arranged on the inner surface of the tubular or cylindrical body of the cell; the other electrode in the form of a cylinder, solid or hollow, placed within the said body of the cell concentric therewith; and in which the electrolyte is made to flow upward from below the electrodes in each cell, the whole being so connected that the electrolyte overflowing from an upper part of a cell is introduced into the next cell from below; the terminals of the electrodes are connected by conductor in the parallel system; and the whole can be connected successively with one and then another of several series of crystallisers, substantially as and for the purposes hereinbefore set forth.

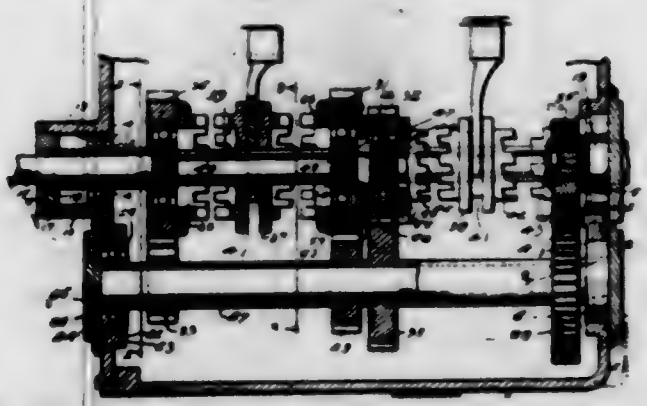
1,297,396. GRINDING-MACHINE. CARL G. OLSON, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a Corporation of Illinois. Filed Aug. 29, 1918. Serial No. 251,889. 7 Claims. (Cl. 51—4.)



1. A machine tool having a spindle which is both rotatable and slidable in its bearings, a sleeve loosely sur-

rounding the spindle, a screw for causing the spindle to advance as it rotates, means for rotating the sleeve, and a dog for transmitting the rotary movement of the sleeve to the spindle.

1,297,397. TRANSMISSION MECHANISM. EDWARD J. OSTER, Cold Spring, Minn. Filed May 29, 1918. Serial No. 237,262. 1 Claim. (Cl. 74—30.)



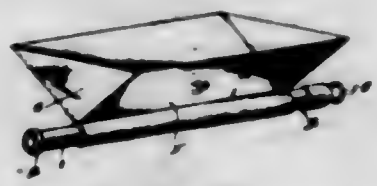
A transmission mechanism including a casing, a drive shaft journaled in said casing, a driven shaft journaled in said casing, a jack shaft journaled in said casing, means establishing driving connection between the drive shaft and the jack shaft, speed changing gears secured to the jack shaft, anti-friction bearings mounted upon the driven shaft, floating gears mounted upon said anti-friction bearings, a thrust bearing interposed between a pair of floating gears and journaled upon the driven shaft, and means locking any one of the floating gears to the driven shaft.

1,297,398. STOCK FOR NECKWEAR. JAMES K. P. PINS, Lansingburg, N. Y., assignor to United Shirt and Collar Company, Troy, N. Y., a Corporation of New York. Filed Aug. 7, 1917. Serial No. 184,827. 3 Claims. (Cl. 2—69.)



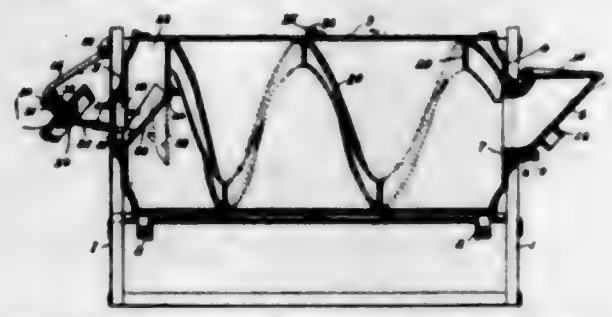
1. A stock for neckwear adjustable to varying sizes of neck, having means for attaching its central-front portion to the front of the neck-band of a garment, narrow fastening tapes attached to its ends, and a hole near one end through which the tape attached to the other end is passed when the stock is attached to the wearer's garment, the tapes being designed to be drawn up and tied in front independent of a neck-tie or cravat.

1,297,399. ATTACHMENT FOR DRINKING-FOUNTAINS. GEORGE R. PRATT, Williston, N. D. Filed Oct. 16, 1917. Serial No. 196,932. 3 Claims. (Cl. 137—109.)



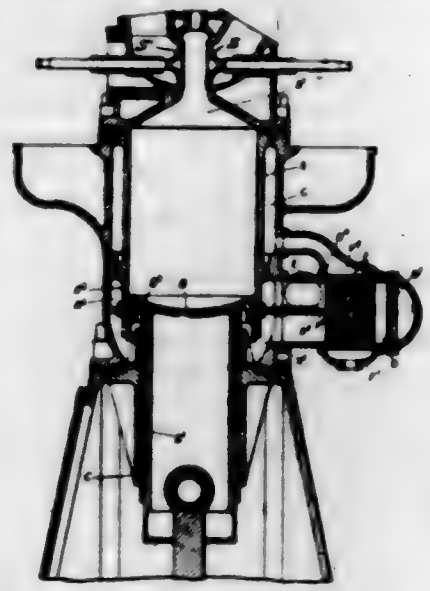
3. An attachment for drinking fountains, comprising in combination, a tube having a nozzle at one end and a longitudinal slot formed in its length, side members for a cup structure pivotally secured along the edges of the slot, end pieces connecting the side members, and a valve located in the tube between the nozzle and the forward end of the slot, for regulating the flow of water from the cup through the nozzle.

1,297,400. TUMBLING-BARREL. NATHAN RANSOHOFF, Cincinnati, Ohio. Filed Jan. 9, 1919. Serial No. 270,896. 7 Claims. (Cl. 51—14.)



1. In a tumbling machine, a horizontally disposed rotatable cylindrical casing, with inlet and discharge openings at opposite ends at the axis of rotation of the casing, a fixed hopper, with connection therefor with the inlet opening for the reception of material while the casing is rotated, and a door for the discharge opening, with means for delivering the material to said opening when the door is opened.

1,297,401. INTERNAL-COMBUSTION ENGINE. HARRY RALPH RICARDO, London, England. Filed Aug. 13, 1917. Serial No. 186,082. 12 Claims. (Cl. 123—74.)

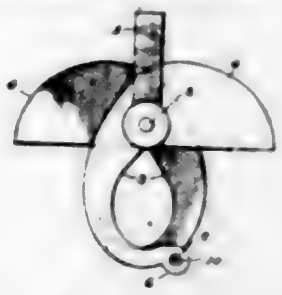


1. In an internal combustion engine, the combination of a cylinder provided with inlet and exhaust ports at one end and formed as a pump chamber at its other end, a piston in the cylinder adapted to compress gases in the pump chamber to form super-charges, the cylinder being provided with auxiliary ports adapted to be uncovered by the piston toward the end of its out stroke, a valve controlling the supply of gas to the pump chamber, a passage connecting the pump chamber with said auxiliary ports, whereby gases compressed in the pump chamber will be admitted to the combustion chamber of the cylinder as a super-charge when the auxiliary ports are uncovered on the outstroke of the piston, and means for cooling the gases in their passage from the pump chamber to the piston controlled ports of the cylinder.

1,297,402. RELEASING-HOOK. WILLIAM RICHARDSON, Toronto, Ontario, Canada. Filed Jan. 24, 1918. Serial No. 213,562. 1 Claim. (Cl. 57—128.)

A device of the character described including a frame, a pivot pin upon the frame, a pair of opposed and co-operating hook members pendent from the pivot pin and adapted to have the hooked ends thereof swung toward each other and brought into an overlaping relation when in operative position, the overlapping portions of the hook members being provided with corresponding openings, and one of the openings having a threaded portion, a spring actuated plunger slidably mounted within the

said opening and adapted to engage the opening of the other hook member to lock the hook members in a closed position, the locking plunger being formed with a threaded portion which is adapted to engage the threaded portion



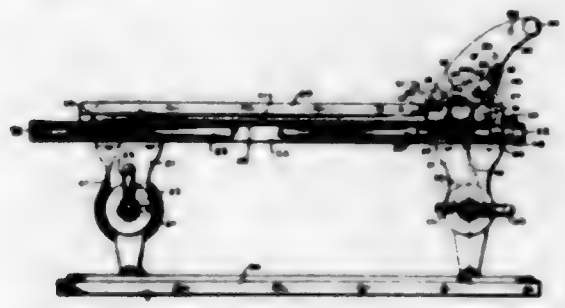
of the opening to hold the plunger against movement, and weighted extensions projecting laterally from the hook members for swinging them into an open position as soon as released.

1,297,403. CLOSURE FOR HOLLOW BODIES. ADOLPH RYDQUIST, Rochester, N. Y. Filed May 6, 1918. Serial No. 232,742. 2 Claims. (Cl. 220—74.)



1. A closure for hollow bodies comprising a cap piece formed with an annular portion for engagement with the mouth of a hollow body having a depressed central portion extending well within said mouth and provided with a lip depending from the annular portion to embrace the exterior side wall of the body, and a plate secured to the bottom of the depressed central portion having a plurality of resilient arms formed to engage interior projections in the mouth of the hollow body substantially in the plane of the bottom of said central depressed portion.

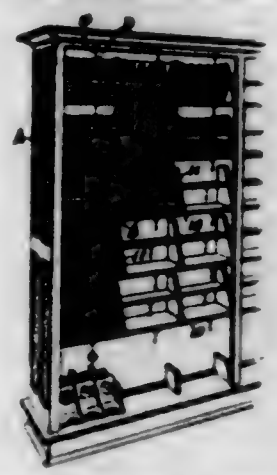
1,297,404. DUPLICATOR. ALOIS BENJAMIN SALIGER, New York, N. Y., assignor, by mesne assignments, to The Beck Duplicator Company, a Corporation of New York. Filed Apr. 20, 1915. Serial No. 22,561. 41 Claims. (Cl. 101—133.)



4. In a duplicator, the combination with a frame having a bed, and a duplicating film thereon; of a carriage slidably mounted on said frame and provided with a stop rigidly secured thereto and adapted to limit the longitudinal movement of a sheet of paper, and with means adapted to depress such sheet of paper on to said duplicating film; and an adjustable stop on said frame adapted to limit the movement of said carriage.

1,297,405. PRICE-TAGGING MEAL CLARENCE SAUNDERS, Memphis, Tenn., assignor to Wiggly Corporation, Memphis, Tenn., a Corpora of Delaware. Filed Feb. 5, 1918. Serial No. 215,508. 9 Claims. (Cl. 40—20.)

1. Means for indicating the price of packaged goods offered for sale and arranged in separate compartments of a display cabinet the several packages in each compartment being of the same value, which consists of a hanger suspended to swing freely in front of the compartment, and a tag detachably secured to the lower end of said hanger at a position in front of the compartment and



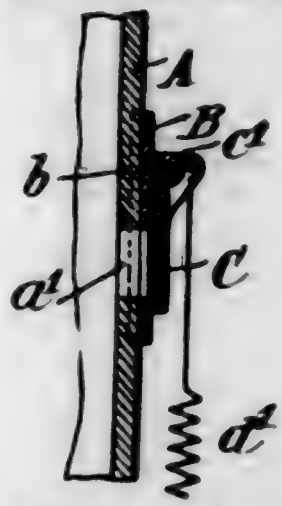
the packages therein whereby a customer may observe both the goods and the price thereof at a single glance, substantially as set forth.

1,297,406. ADHESIVE SURFACE AND METHOD OF PREPARING SAME. CHARLES E. SCHOOM, New York, N. Y., assignor to American Lithographic Company, New York, N. Y., a Corporation of New York. Filed Dec. 9, 1918. Serial No. 264,915. 5 Claims. (Cl. 91—68.)



1. The combination on a sheet of material of an anhydrous sizing, and a coating of powdered adhesive, soluble in water, on said sizing.

1,297,407. ENGINE-VALVE. EMILE JOSEPH AUGUSTE SCHULTE, Paria, France. Filed Sept. 24, 1918. Serial No. 255,515. 2 Claims. (Cl. 123—44.)



1. In a rotary cylinder internal combustion engine, the cylinder having a port in its wall in position to be uncovered by the piston toward the end of its stroke, a valve adapted to close the port, and means adapted to oppose the action of centrifugal force on the valve until a certain speed is attained by the engine.

1,297,408. ARMORED INNER TUBE. HARRY H. SCHUSTER, Chicago, Ill. Filed May 5, 1917. Serial No. 166,535. 4 Claims. (Cl. 152—18.)



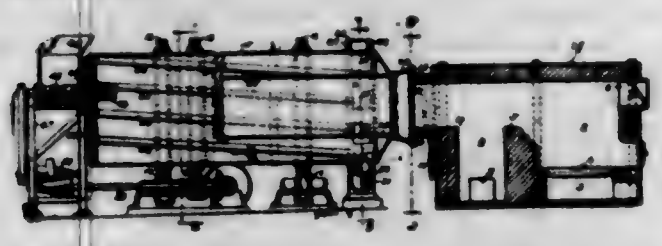
1. In an inner tube of the class described, a rubber investment, a layer of fabric embedded in said rubber investment to reinforce the same, having the sides over-

lapped on the tread and a reinforcing armor mesh disposed between the overlapped sides on the tread.

2. In an armored inner tube a fabric mesh having the margins overlapped, a metallic mesh between said overlapped margins and a rubber investment for said mesh having a thin wall in each side of the overlapped margins and a wall on each side of the single layer of mesh gradually increasing in thickness from one edge of the overlapped mesh to the other edge.

4. In an inner tube for vehicle tires of the class described comprising a reinforcing knit fabric disposed completely around the tube with the margins thereof overlapping one another in the outer half of the tube and with the edges of said margins disposed diametrically opposite one another, a reinforcing armor mesh disposed between the overlapping margins of said fabric with the edges thereof disposed adjacent the edges of said fabric margins, and a coating of rubber completely embedding said fabric and armor mesh to form an elastic inner tube of uniform thickness.

1,297,409. DRIER. GEORGE E. SHATTO, Cleveland, Ohio. Filed Aug. 21, 1915. Serial No. 46,644. 9 Claims. (Cl. 34—6.)



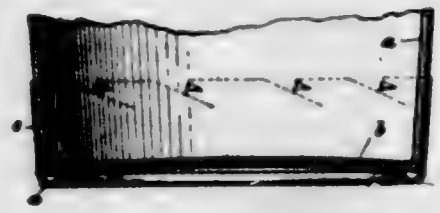
1. In a drier, in combination, an elongated cylindrical shell mounted for rotation about a nearly horizontal axis, means for introducing material to be dried into one end of said shell, a plurality of shelves projecting inwardly from the wall of said shell and extending substantially from end to end thereof, the inclination of said shell and shelves being so arranged that the material will progress therealong as the shell is rotated, means for discharging the dried material from the opposite end of said shell, a hollow imperforate axial tube projecting into said shell from its discharge end, means for withdrawing gases from the end of said shell opposite said tube, and means for delivering heated drying gases to said tube.

1,297,410. SANITARY DRINKING APPARATUS. FRANK DANIEL SILVER, Germantown, Calif. Filed Dec. 4, 1917. Serial No. 205,373. 7 Claims. (Cl. 103—61.)



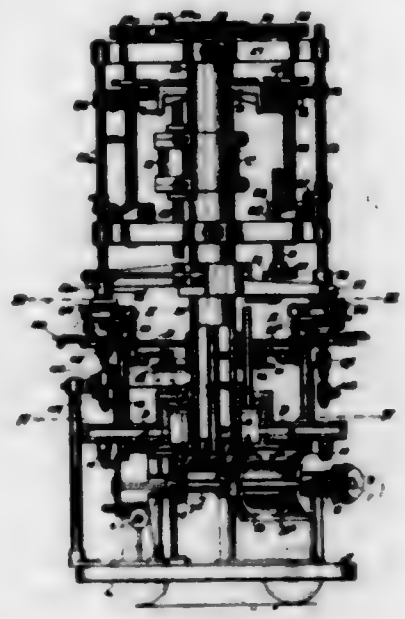
7. A sanitary drinking attachment for pumps, comprising a tank or reservoir, means including a feed pipe connecting the tank to and supporting it on the pump, and a cover for the tank, said tank and cover having coacting lost-motion fastening means permitting the lifting of the cover and the overflow of water on an excess thereof entering the tank through the feed pipe.

1,297,411. PAIL-BOTTOM FASTENER. HARRISON L. STALEY, Martinsville, Ind., and WALTER B. SIMMONS, Richmond, Va., assignors to Wilts Veneer Company, Richmond, Va., a Corporation of North Carolina. Filed Oct. 7, 1916. Serial No. 124,309. 5 Claims. (Cl. 217—76.)



1. The combination with a cylindrical shipping vessel having a grooved bottom fitting up against its lower edge, of a metal band fitted around the bottom of the vessel and having its upper edge anchored thereto and its lower edge depending below the bottom and bent inwardly and upwardly, the upwardly-bent edge being pressed against the under surface of the bottom and forcibly into said groove, to thereby clamp the bottom against the lower edge of the pail and support the bottom entirely upon the said edge, said edge serving to hold said bottom against lateral displacement.

1,297,412. MANUFACTURE OF ARTICLES OF GLASS. THOMAS STENHOUSE, Washington, Pa., assignor to Hazel-Atlas Glass Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Nov. 12, 1914. Serial No. 871,659. 6 Claims. (Cl. 49—10.)



1. In mechanism for making articles of glass a mold carrier having a plurality of molds mounted thereon, severing, pressing, blowing and unscrewing mechanisms, each being operated by a cam mounted on a shaft, and a master gear adapted to drive said shafts in timed relation.

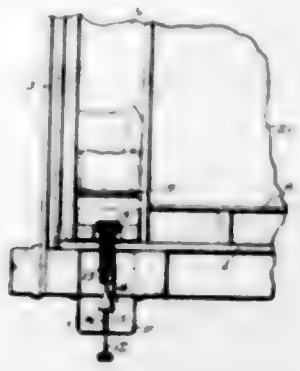
1,297,413. HAIR-CUTTER. BENJAMIN F. STEPHENSON, U. S. Navy. Filed Apr. 30, 1918. Serial No. 231,612. 6 Claims. (Cl. 30—12.)



1. A hair cutter, including in combination a comb, a U-shaped plate received on said comb and provided on

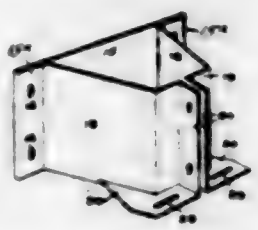
one side with a longitudinally extending raised portion, a blade engaged with said plate beneath said raised portion, and a clamp to hold said blade in engagement with said plate.

1,297,414. DRAIN-CLEANER FOR REFRIGERATOR-CARS. EDWARD CURTIS STERLING, Chicago, Ill. Filed Oct. 28, 1918. Serial No. 259,977. 8 Claims. (Cl. 182—13.)



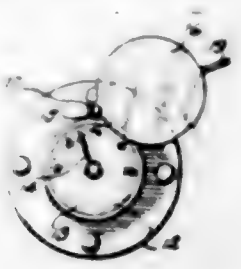
1. A device of the character described, including in combination, a drain tube for a refrigerator car, an agitating or cleaning member extending through the drain tube and means for resiliently supporting the agitating or cleaning member from the car, so that movement of the car will cause movement of the agitating and cleaning member.

1,297,415. DEVICE FOR ATTACHING TABLE-LEGS. GEORGE W. STOLL, Indianapolis, Ind., assignor of one-half to George H. Dreschel, Indianapolis, Ind. Filed Dec. 28, 1917. Serial No. 209,261. 2 Claims. (Cl. 45—48.)



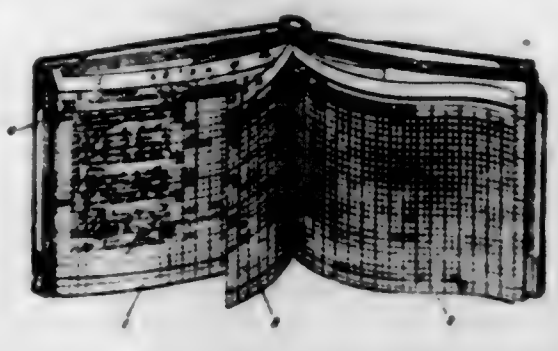
2. A device for detachably securing table legs comprising a plate, a pair of resilient members extending laterally on converging planes from said plate, the outer extremities of said plate being bent toward each other and then outwardly in parallel planes, means for clamping the resilient members against the outer surfaces of the tenon of the table leg, a pair of horizontal ears formed at the outer extremities of the members, means for securing said ears to the table top, and means for securing the device in operative position.

1,297,416. GAGE-GLASS CLEANER. ETHEL SUMMERTON, Sheridan, N. Y. Filed Mar. 5, 1918. Serial No. 220,545. 3 Claims. (Cl. 73—151.)



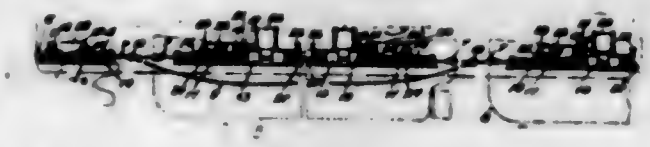
1. In combination with a dial glass for fuel tank gages, a covering plate therefor mounted for movement in a plane parallel to the glass to expose the dial, and a wiping means for said glass.

1,297,417. CASH-BOOK. EDGAR W. SWANK, Liberty, Mo. Filed Dec. 2, 1916. Serial No. 134,584. 1 Claim. (Cl. 283—66.)



In a church cash book for keeping account of receipts and expenditures, the combination with a primary record page having an expense column, an explanation column, a receipts and expenditures column adjacent to the expense column and a plurality of disbursement columns continuing therefrom, and a secondary record page having a plurality of disbursement columns thereon, an intermediate fly sheet of relatively lesser width than the said primary and secondary pages and having disbursement columns on one face corresponding to and continuous with those on the primary page when the said sheet is folded to overlie the secondary page, and on its opposite face having a receipts and expenditures column adjacent to its free edge and a plurality of disbursement columns continuing therefrom corresponding with those of the secondary page; the width of the intermediate sheet being such that when overlying the primary page the receipts and expenditures column thereon lies next adjacent to the receipts and expenditures column on the first sheet for the purpose set forth.

1,297,418. TOWING APPARATUS. WILLIAM P. TARRANT, St. Louis, Mo.; Frieda Tarrant administratrix of said William P. Tarrant, deceased. Filed July 22, 1918. Serial No. 246,179. 4 Claims. (Cl. 114—235.)



1. In a towing apparatus, a towed vessel; a shaft longitudinally and slidably mounted thereon, and of approximately the same length as said vessel; a piston head mounted on said shaft; and a fluid-filled cylinder wherein the said piston head is mounted.

4. In a towing apparatus, the combination of a traction vessel; a traction element secured to said traction vessel and comprising a fluid-containing cylinder, a piston slidably mounted in said cylinder, and a traction bar mounted in said piston; a series of towed vessels; a shaft of approximately the same length as that of the towed vessel, longitudinally and yieldingly mounted upon each of said towed vessels; couplers mounted upon the extremities of each of said shafts; a main towline connecting the series of towed vessels with each other and with the traction vessel; and a plurality of auxiliary towlines, each mounted on the main towline at points beyond the extremities of one of the towed vessels; and means for disconnecting either of said towed vessels from the said main towline.

1,297,419. HOOP. GEORGE E. THACKRAY, Westmont borough, Pa. Filed Aug. 25, 1916. Serial No. 116,764. Renewed Dec. 20, 1918. Serial No. 267,732. 8 Claims. (Cl. 217—61.)

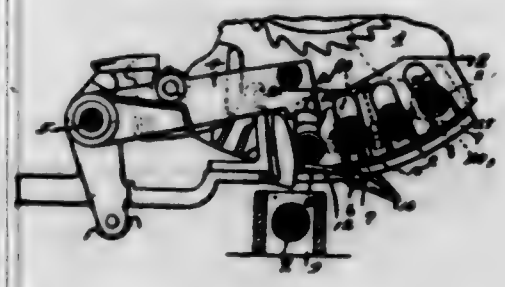
1. A thin band hoop provided with an integral hollow bead formed by bending the edge thereof outwardly and an abutment formed on the body of the hoop adapted to contact with the edge portion of said bead.

3. A thin band hoop having an integral hollow bead formed by bending the edge thereof outwardly, and a con-



tinuous integral outwardly extending projection formed on the body of the hoop adapted to contact with and support said bead.

1,297,420. BOBBIN-SUPPORTER FOR LOOMS. RALPH FRANKLIN THACKSTON, Anderson, S. C. Filed Apr. 19, 1918. Serial No. 229,548. 3 Claims. (Cl. 139—85.)



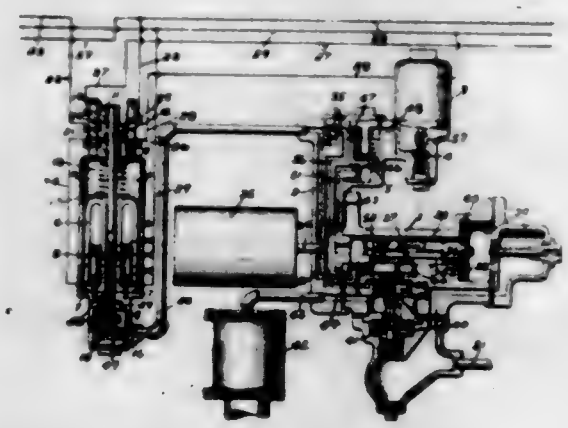
2. The combination with a bobbin supporter, of a forked arm carried by the frame of the loom, said supporter having a pair of arms, one for supporting the bobbin, and the other having a yielding connection with the forked arm, and means carried by said connection to contact with the forked arm to limit the bobbin supporting arm of the supporter in its downward movement, said yielding connection comprising a rod passing through the fork of said arm, one end of the rod having a loose connection with one of the arms of the supporter, a cushioning spring between one of the arms of the supporter and the forked arm, said rod having a head, a casing on the rod adjacent the head, a second casing telescoping the first tubular casing, means carried by the first tubular casing for holding the second in different relative adjusted positions, and a coil spring telescoping the second casing and interposed between the second casing and the forked arm.

1,297,421. STEERING-GEAR. HORACE T. THOMAS, Lansing, Mich. Filed Oct. 10, 1917. Serial No. 195,704. 5 Claims. (Cl. 74—79.)



1. In a steering gear, a pivoted arbor having an operating lever arm thereon, a toothed segment on said arbor having internal gear teeth, a pinion engaging said gear teeth, said pinion being located with its axis between the axis of said arbor and the teeth of said segment, said pinion being pivoted upon an arbor, said arbor having an eccentric portion resting in a bearing and being adapted to be turned to adjust the engagement of said pinion with the teeth of said segment.

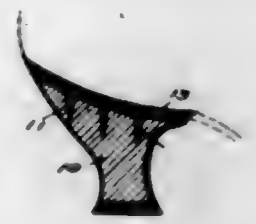
1,297,422. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 29, 1917. Serial No. 158,185. 16 Claims. (Cl. 188—4.)



1. In an electro-pneumatic brake, the combination with an electric generator and means actuated by fluid under pressure for operating said generator, of a valve device for effecting an application of the brakes and adapted to supply fluid under pressure to said means upon applying the brakes and means operated by current from said generator for effecting the operation of said valve device.

3. In an electro-pneumatic brake, the combination with a brake pipe, of an electric generator operated by fluid under pressure, means operated upon a reduction in brake pipe pressure for supplying fluid under pressure to said electric generator, and means operated by current from said generator for effecting a serial reduction in brake pipe pressure throughout the train.

1,297,423. SHOE-HEEL FASTENER. HARRY VARWIG and FRANK CALDWELL, Cincinnati, Ohio. Filed Apr. 30, 1918. Serial No. 231,732. 1 Claim. (Cl. 36—34.)

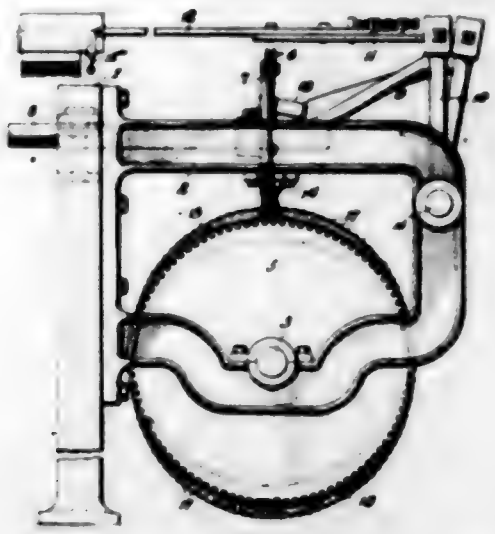


In combination with a shoe having a sole and a heel, means for securing the heel to the sole, said means comprising a plate of approximately the size of the top of the heel and having means for securing the same to the heel, the plate having lugs, the sole having openings through which the lugs extend and the said lugs being adapted to be bent down upon the upper face of the sole, said lugs being near the edges of the plate to provide at widely separated points attachment for the heel.

1,297,424. ATTACHMENT FOR FAST-WARP KNITTING-MACHINES. WILLIAM J. WEEPER, Fonda, N. Y. Filed Dec. 12, 1917. Serial No. 206,767. 4 Claims. (Cl. 66—33.)

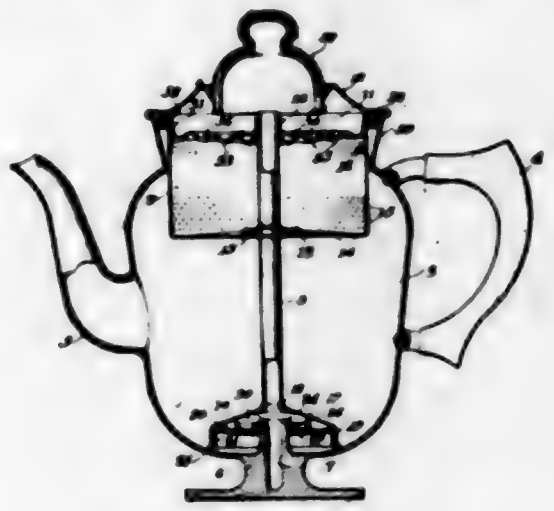
1. In a knitting machine of the type described, the combination with the guide bars of the machine, of eccentrically arranged pattern wheels, rockable pattern

arms connected to the guide bars, and push rods for transmitting motion from the pattern wheels to the pat-



tern arms and mounted to travel in paths radial to the axis of roation of the pattern wheels.

1,297,425. PERCOLATOR. ROBERT H. WENTORF, West Bend, Wis., assignor to West Bend Aluminum Company, West Bend, Wis., a Corporation of Wisconsin. Filed Mar. 16, 1916. Serial No. 84,581. 2 Claims. (Cl. 53—5.)

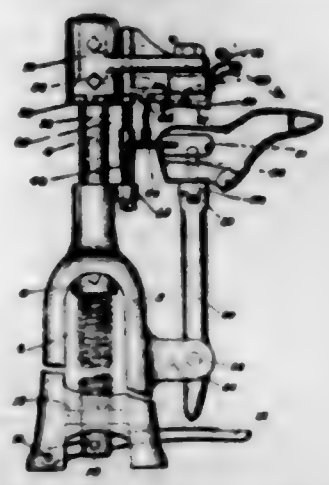


1. In a percolator, the combination with a fountain tube and a drip cup mounted thereon, of a spreader plate disposed within said drip cup and having its bottom tapering downwardly from its outer edge to its center, said bottom provided with a plurality of concentrically disposed channels and a plurality of apertures in the bottoms of said channels.

1,297,426. MACHINE FOR PREPARING AND SHAPING THE BOTTOMS OF LASTED SHOES. SAMUEL J. WENTWORTH, Newport, Ky., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed May 27, 1916. Serial No. 100,311. 16 Claims. (Cl. 12—51.)

1. A machine for operating upon shoes having, in combination, a die constructed and arranged to act upon the finished surface of the overlasted portion of a shoe upper on the bottom of the shoe, means for heating the tool to a temperature sufficient to cause searing of the finished surface of the overlasted portion of the upper, and means for relatively guiding the shoe and the tool into operative relation.

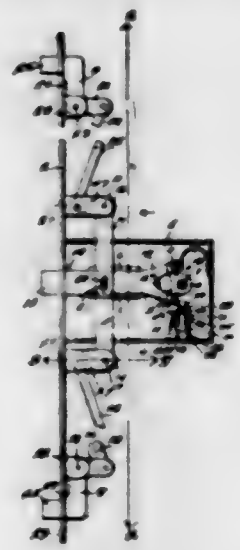
3. In a machine for operating upon shoes, the combination, with means for supporting a lasted shoe, of a heated tool adapted to sear the outer surface of the overlasted portion of the leather at the heel seat of the shoe to render it pervious to cement, and means for effecting a relative movement between said supporting means and said tool in a direction substantially perpendicular to the bottom of the shoe.



7. A machine for operating upon shoes having, in combination, means for supporting a lasted shoe, a tool having an acting face shaped to conform the heel seat of the shoe to the contour of the heel seat of the last, means for heating the tool, and means for effecting a relative movement between the shoe and the tool for causing the heel seat of the shoe to be subjected to a shaping and conforming action by said tool.

10. A machine for operating upon shoes having, in combination, a tool constructed and arranged to act upon the finished surface of the overlasted portion of the shoe upper at the heel seat, means for heating the tool to a temperature sufficient to render the surface of the upper acted upon pervious to cement, means for presenting the shoe in position to be acted upon by the tool, and means for moving the tool into operating relation on the shoe.

1,297,427. LOCK. WILLIAM S. WIGHTMAN, Norwich, N. Y. Filed Aug. 13, 1917. Serial No. 186,000. Renewed Sept. 12, 1918. Serial No. 253,802. 2 Claims. (Cl. 70—74.)



1. A lock comprising apertures near its upper and lower ends and at an intermediate point, a locking bar adapted for reciprocating movement through the intermediate aperture, the locking bar having a wedge-shaped nose, a casing inclosing and supporting said bar, bell-crank levers pivotally supported on the plate and having over-lapping arms provided with elongated slots at the overlapping point, a pin secured to the locking bar and engaging the slots of the bell-crank levers, Z-shaped locking bars pivotally connected to the plate and having wedge-shaped noses, said noses being movable through the end apertures of the plate, links connecting the

Z-shaped bars to the bell-crank levers, and means for reciprocating the locking bar, whereby the locking bars and Z-shaped bars may be moved simultaneously.

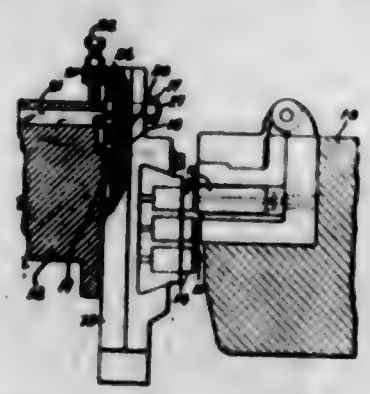
2. A lock comprising apertures near its upper and lower ends and at an intermediate point, a locking bar adapted for reciprocating movement through the intermediate aperture, the locking bar having a wedge-shaped nose, a casing inclosing and supporting said bar, bell-crank levers pivotally supported on the plate and having over-lapping arms provided with elongated slots at the overlapping point, a pin secured to the locking bar and engaging the slots of the bell-crank levers, Z-shaped locking bars pivotally connected to the plate and having wedge-shaped noses, said noses being movable through the end apertures of the plate, links connecting the Z-shaped bars to the bell-crank levers, and means for reciprocating the locking bar, whereby the locking bars and Z-shaped bars may be moved simultaneously, and means comprising a spring retaining key actuated bolt for locking the first means.

1,297,428. SPRING-BEARD NEEDLE. FRANK WILCOMS, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed Sept. 9, 1916. Serial No. 119,269. 15 Claims. (Cl. 66—5.)



1. A spring beard needle having flexion in a long arc in its stem back of the beard, in the beard itself, and having an inflexible nose of equivalent cross-sectional area to its adjoining parts, said nose being thinner than the stem and beard and with its major axis parallel to the needle stem, substantially as described.

1,297,429. HEADING-MACHINE. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 28, 1918. Serial No. 237,121. 4 Claims. (Cl. 10—12.)



1. In a machine of the class described, a pair of relatively movable members comprising a support and a slide mounted thereon and adapted to be moved longitudinally into any one of three positions, a longitudinally movable bolt having beveled faces and mounted on one of the members, a locking member attached to the other of the members and having a recess adapted to be engaged by the bolt when the slide is in its middle position, the locking member also having beveled faces at either end adapted to be engaged by the beveled faces of the bolt when the slide is in either of its extreme positions, adjustable means to limit the longitudinal motion of the slide in either direction and adjusting means for the locking member whereby the position of the recess may be altered in the direction of motion of the slide.

4. In a machine of the class described, a pair of relatively movable members, comprising a support, and a slide mounted thereon and adapted to be moved into a plurality of positions, a bolt mounted on one of the members, a locking member connected with the other member, and having means therein to receive the bolt when the slide is in one of its positions, and contact therewith when in both of the extreme positions, adjustable means to limit the motion of the slide in either direction and adjusting means for the locking member whereby its relative position within the slide may be varied, without affecting the engagement of the locking member therewith.

1,297,430. ROAD-SCRAPER. DAVID HERBERT WINSLOW, Raleigh, N. C. Filed Jan. 14, 1919. Serial No. 271,187. 1 Claim. (Cl. 37—5.)



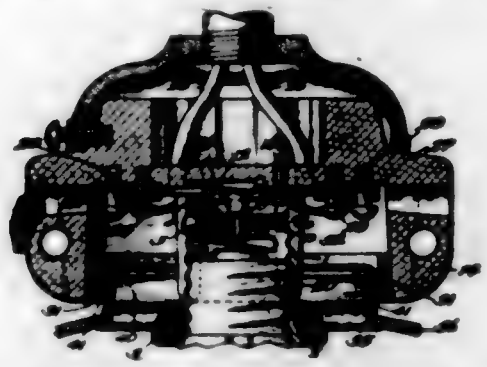
A road scraper including beams, spikes carried by the beams and projecting therebelow for loosening the surface material of a road, another beam back of the spike carrying beams, a scraping blade upon the front face thereof, connections between the beams, all of said beams being extended transversely of their path of movement and coöperating to limit the downward movement of the spikes into the surface material of the road, connected packing strips back of the beams and arranged in lapped relation, said strips being inclined upwardly and forwardly and movable laterally and vertically relative to the beams, and flexible connections between said strips and the beams.

1,297,431. CHAIR. WILLIAM E. ANDREW, Atlantic Highlands, N. J. Filed Dec. 17, 1914. Serial No. 877,789. 1 Claim. (Cl. 155—26.)



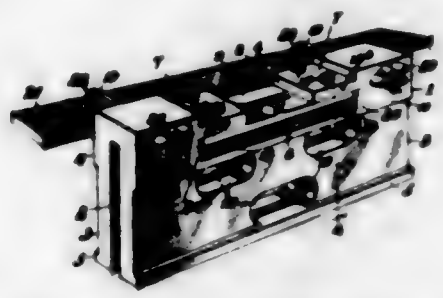
In an article of furniture having upright members; a seat disposed on the upright members; cross members secured to the upright members, certain of said cross members having a cut-away portion on a surface thereof; a strip secured to the cut-away portion of each cross member and extending to a point short of the edge of said cross member to constitute a supporting ledge; a cane receiving element, provided with an elongated groove, disposed on the supporting ledge of each cross member; and a cane member disposed in the elongated groove of each cane-receiving element, and in spaced relation to the seat to constitute an article support.

1,297,432. FILM-SOCKET. HERMAN H. ASHENEAU, South Bend, Ind., assignor to George Cutter Company, South Bend, Ind., a Corporation of Indiana. Filed Feb. 25, 1918. Serial No. 219,102. 5 Claims. (Cl. 173—344.)



1. A film socket having a pair of terminals adapted to receive the film between them, said terminals normally tending to spring apart to thereby afford free access for replacing the film, and self locking means for holding the terminals in closed position upon being brought to closed position.

1,297,433. SAW GAGE AND JOINTER. LYMAN A. AVERY, Green Lake, N. Y. Filed Apr. 17, 1918. Serial No. 229,111. 3 Claims. (Cl. 76—46.)



1. A saw gage comprising a metallic body member having a central longitudinal, vertically-disposed slot extending from its bottom to near its top, for receiving a saw for gaging, the upper wall of the slot adapted to rest upon the saw teeth, said body member having a central recess formed in its upper side and intersecting the said slot, arms formed integrally with the body member and extending into the recess toward the center thereof, a gage plate loosely mounted for upward and downward movement in the recess between the bottom thereof and the said arms, and substantially coextensive with the length and width of said recess, screws traversing the arms and rotating therein and having threaded engagement with the plate, said plate having a central slot for receiving a raker tooth of a saw for gaging the same, and having its ends moving in juxtaposition with the opposite end walls of said recess, and graduations on said end walls to determine the adjustment of said plate.

1,297,434. HEEL-PROTECTOR. GEORGE BECHERER, St. Louis, Mo. Filed May 20, 1918. Serial No. 235,649. 1 Claim. (Cl. 36—74.)



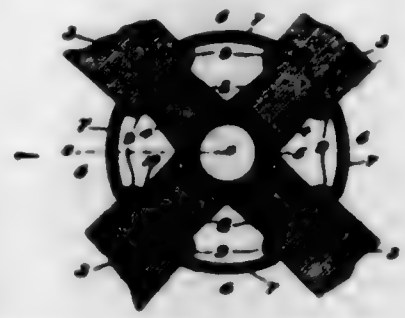
A heel protector comprising a driving body portion and wearing plate semi-elliptical in form, a pair of prongs formed integrally with the plate and located at the forward margin thereof, each of the prongs being provided with a driving point, a straight rear edge, a shoulder on its front edge above the driving point, and an upwardly and forwardly inclined edge above the shoulder, the said shoulder serving to oppose the force applied to the rear edge of the protector plate, and a third prong integrally formed with the plate and within the margin thereof, and in rear of and between the aforesaid pair of prongs.

1,297,435. HOLDER FOR OIL-CANS OR THE LIKE. CHARLES W. BECK, Detroit, Mich., assignor to The Beck-Frost Corporation, Detroit, Mich., a Corporation of Michigan. Filed July 12, 1915. Serial No. 39,467. 8 Claims. (Cl. 248—30.)



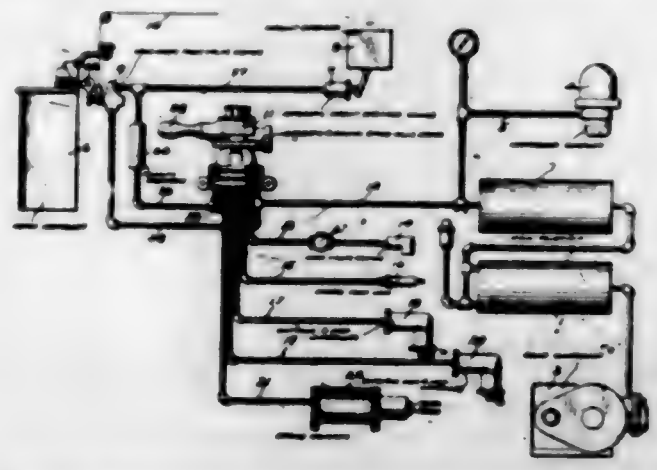
1. A holder for cans or the like, comprising a vertically-arranged attaching plate, a laterally-extending supporting plate, there being a resilient lug struck out from the attaching plate, retaining means at the outer end of the supporting plate, and a spring-pressed member carried by the supporting plate for engaging the bottom of the can.

1,297,436. CHAIR-IRON. HARRY W. BOLENS, Port Washington, Wis. Filed Dec. 6, 1918. Serial No. 265,588. 6 Claims. (Cl. 155—40.)



1. A chair-hub, comprising a central sleeve, a top-plate connected thereto, and a series of hollow sections secured about the sleeve and combining to form intermediate leg-receiving sockets, said sections having their outer portions closing the spaces between said leg-receiving sockets.

1,297,437. STRAIGHT-AIR ONE-MAN EQUIPMENT. JOSEPH M. BOSENBURY, Peoria, Ill., assignor of one-half to Charles O. Birney, Mount Healthy, Ohio. Filed Nov. 23, 1915. Serial No. 62,986. 17 Claims. (Cl. 188—1.)

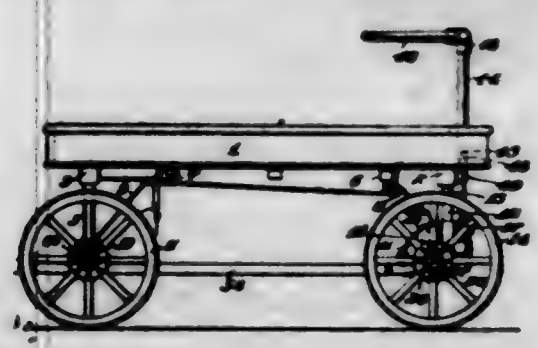


12. The combination with a brake valve device normally operated manually to effect an application of the brakes, of means operated in an emergency by fluid under pressure for effecting the automatic operation of said brake valve device and a penalty reservoir connected to said means, a restricted outlet being provided for the escape of fluid from said reservoir and said means to thereby

prevent release movement of the brake valve device until a predetermined period of time has elapsed.

17. The combination with devices controlled by fluid under pressure for operating a car entrance door, an exit door, and a door adapted to be employed only in an emergency, of a manually operated valve device having ports for varying the fluid pressure on said devices and having one position for opening the entrance and exit doors, another position for closing both doors, other positions for closing one door and opening the other and still another position in which the brakes are applied and the entrance and exit doors opened and said emergency door released.

1,297,438. WAGON. HARRISON BUCKLIN, Rochester, N. Y. Filed June 27, 1916. Serial No. 106,142. 9 Claims. (Cl. 21—191.)



1. A wagon provided with a steering mechanism and a draft member revolubly connected therewith to be movable thereon to a position beneath the wagon.

3. In a wagon, the combination of a bolster, steering mechanism journaled thereon, a draft member revolubly connected with said steering mechanism and movable independently thereof, and means for locking the steering mechanism to the draft member.

4. In a wagon, the combination of a bolster, a bearing member revolubly supported thereon, a steering post in said bearing member, wheels on which said bolster is supported, means operatively connecting said steering post with the wheels, and a draft member mounted on said bearing member.

7. In a wagon, the combination of a bolster, an axle pivotally mounted at each end thereof, a rod connecting said axles to move them in unison, a steering rod operatively connected to said connecting rod, a bearing member rotatably supported on the bolster and in which the steering rod has a bearing, a draft member mounted on the bearing member and means for locking the steering rod to the bearing member.

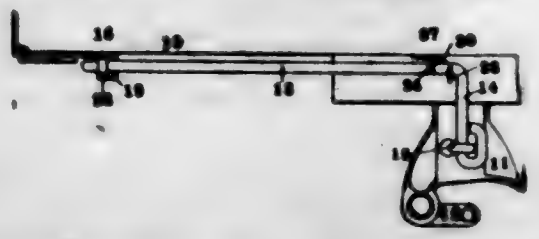
1,297,439. DIFFERENTIAL GEARING. CLARENCE E. BUCHER, Brookston, Ind., assignor, by mesne assignments, to Auto Speed Gear Manufacturing Co. Filed Oct. 12, 1917. Serial No. 196,306. 5 Claims. (Cl. 74—84.)



1. The combination with aligned shafts, of means for clutching the shafts together at will, a support journaled on the shafts, a train of gears connecting one shaft to the other and carried in the support, and a device operable at will for holding the support from rotation; said means for clutching comprising a clutch member permanently splined on one of the shafts and co-axial therewith and a companion clutch member fixed upon the other shaft, and said train comprising an axially elongated gear fixed on said splined clutch member.

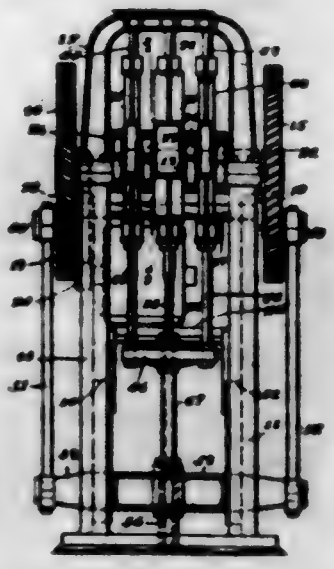
2. In combination, a pair of spaced aligned bearings, a power shaft in one bearing, a drive shaft in the other, a clutch member fixed on the power shaft, a complementary clutch member permanently splined on the drive shaft, a drum centrally journaled on said power and drive shafts, said shafts extending into the drum, a transmission shaft within the drum spaced from and paralleling the power and drive shafts, a power pinion fixed on the power shaft within the drum, a drive gear fixed on said splined clutch member, a transmission gear fixed on the transmission shaft and meshing with the power pinion, a transmission pinion fixed on the transmission shaft and meshing with said drive gear, and means for shifting said splined clutch member into engagement with the fixed clutch member, said pinions and gears being constantly in mesh.

1,297,440. BRACKET FOR UNCOUPLING-RODS. STERLING H. CAMPBELL, St. Louis, Mo. Filed Aug. 20, 1917. Serial No. 187,135. 6 Claims. (Cl. 213—69.)



1. The combination with an uncoupling rod of a bracket for supporting the inner end thereof, said bracket comprising retaining surfaces embracing more than one half of the circumference of the rod when the rod is in its operating position, the rod retaining surfaces of the bracket being positioned to permit the rod to extend through the bracket at an angle to its operating position and to form an opening for the removal of the rod from the bracket when in such position by movement of the rod in a direction at right angles to its length.

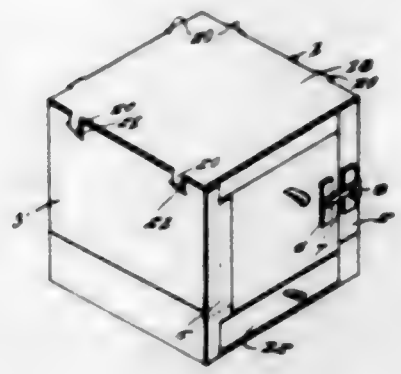
1,297,441. PUMP. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed July 8, 1914. Serial No. 849,646. 1 Claim. (Cl. 103—82.)



In a pump, the combination of a shaft, two arms fixed upon said shaft and extending therefrom, a wrist pin mounted in the ends of said arms and adapted to be revolved about said shaft, two other arms mounted upon

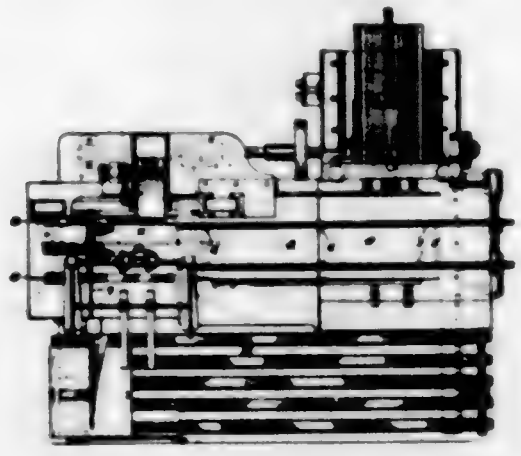
said shaft and extending therefrom at an angle of approximately 120 degrees from said first-named arms, a second wrist pin mounted in the ends of said second-named arms and adapted to be revolved about said shaft, a slide-block journaled upon each of said pins, slide-boxes in which said slide-blocks are adapted to be reciprocated, each of said slide-boxes being parted at an intermediate point for passing said shaft, a plunger rod connected to each of said slide-boxes, a crank-arm mounted on one end of said shaft and extending therefrom at approximately 120 degrees from said first and second-named arms, and a plunger rod connected to said crank-arm.

1,297,442. HAT-BOX. CHARLES R. CHENEY, Buffalo, N. Y. Filed Mar. 23, 1917. Serial No. 157,036. 1 Claim. (Cl. 229—44.)



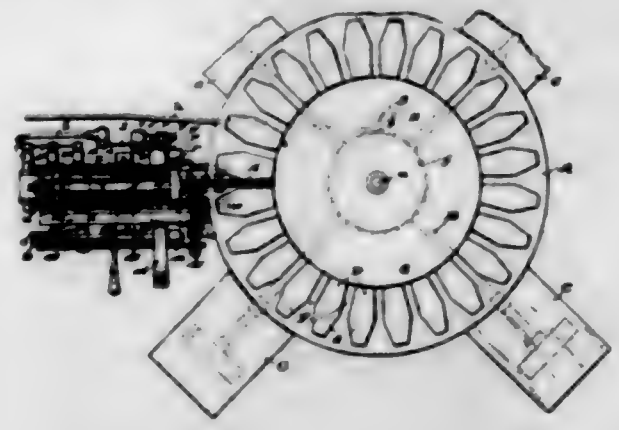
A folding hat box comprising side, front and rear and bottom and top walls, each consisting of upper and lower sections, the lower sections of the walls being permanently secured together, means for hinging the upper sections of the walls to the lower sections, said front wall having a door way, a hinged door closing said door way, means for hinging the top wall to the upper edge of the front wall, said side and rear walls having slots adjacent their upper edges, and tabs formed upon the side and rear edges of the top wall adapted to be inserted in the slots to detachably secure the top wall to the rear and side walls.

1,297,443. ADDRESSING-MACHINE. CAREY A. CHESHIRE, Chicago, Ill.; Milton F. Cheshire, administrator of said Carey A. Cheshire, deceased, assignor to Thomas A. Cheshire, Des Moines, Iowa. Original application filed Jan. 19, 1917, Serial No. 143,350. Divided and this application filed June 19, 1917. Serial No. 175,561. 2 Claims. (Cl. 271—45.)



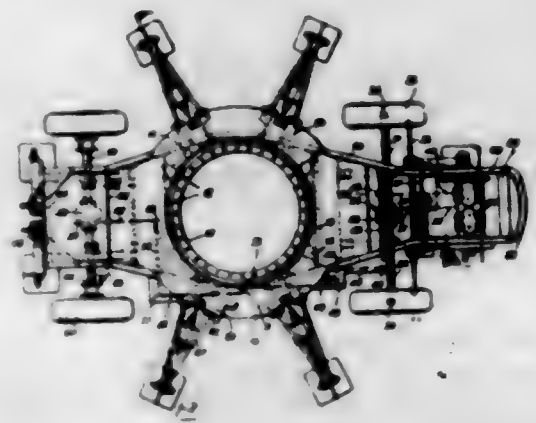
1. The combination with a positively operating conveyer, of a frictionally operating conveyer codperating therewith and operating at faster speed; and a stop co-operating with said frictionally operating conveyer to stop and position articles carried thereby, substantially as described.

1,297,444. SIGNATURE-HANDLING DEVICE. MARTIN CHRISTENSEN, Racine, Wis., assignor to Christensen Machine Company, Racine, Wis., a Corporation of Wisconsin. Filed Aug. 29, 1917. Serial No. 188,712. 10 Claims. (Cl. 193—1.)



7. In a signature handling mechanism, the combination of a revoluble flat table provided with a plurality of radially-disposed pockets having open outer ends and back stops for receiving groups of signatures, means for moving the table, means distinct from said pockets for successively gaging the sides of the groups of signatures, and means for successively removing the gaged groups from the table.

1,297,445. MOTOR-DRIVEN GUN-CARRIAGE. WALTER CHRISTIE, Weehawken, N. J. Filed Nov. 21, 1917. Serial No. 203,206. 10 Claims. (Cl. 89—40.)

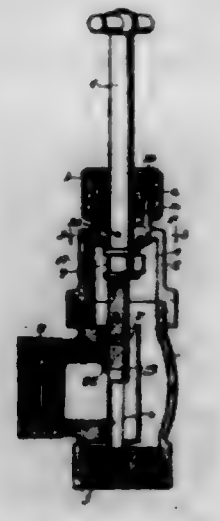


1. In a motor driven gun carriage, a vehicle frame having raised front and rear portions, vehicle wheels upon said portions, a motor transmission mechanism connecting said motor with all of said wheels, and a lower intermediate section wider than said front and rear portions, adapted to receive a gun mounting, the transmission mechanism to the wheels near the end opposite the engine being extended transversely at said wider intermediate section.

1,297,446. VALVE. FRANK F. COLLINS, Danville, Ill. Filed Aug. 22, 1918. Serial No. 250,927. 3 Claims. (Cl. 251—56.)

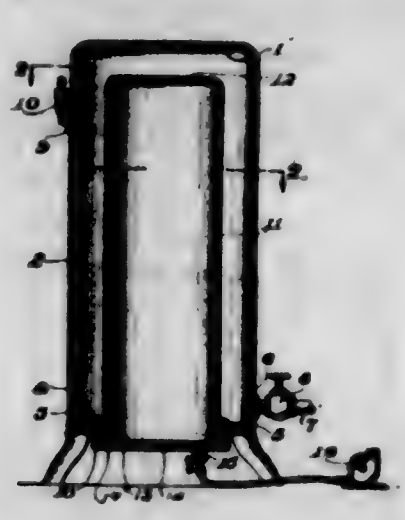
1. A valve of the character described including in combination, a body, having a passage therethrough, a valve member slidably mounted therein and having a restricted opening therethrough for bleeding, means mounted in

said body located at an intermediate point in said passage adapted to engage the face of said valve to remove any



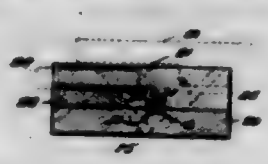
accumulated material from the mouth of the aperture, when the valve is moved.

1,297,447. RADIATOR. JAMES H. COLLINS, Harrisburg, Pa. Filed Feb. 23, 1918. Serial No. 218,690. 3 Claims. (Cl. 257—250.)



2. A radiator unit, comprising a shell having a fluid inlet and an outlet, a cell supported within said shell by one of the walls of the latter and extending through said supporting wall, means to seal said cell, and means to permit the vacuating of said cell.

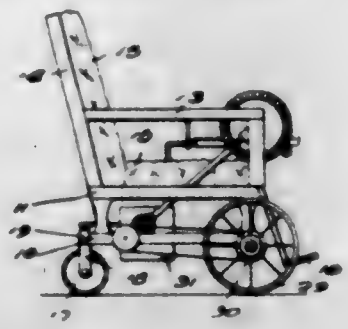
1,297,448. MOLD FOR MAKING ARTIFICIAL TEETH. WALTER W. CRATE, Camden, N. J. Filed Apr. 2, 1918. Serial No. 226,276. 10 Claims. (Cl. 18—42.)



3. In a mold the combination of a base section and a plurality of superposed sections, said sections having cavities at their meeting portions forming when assembled the cavity of the mold, the superposed sections having in their cavities projections inclining toward the cavity of the base section, and the said superposed sections being adapted for movement toward and from the base section in the longitudinal planes of their respective projections.

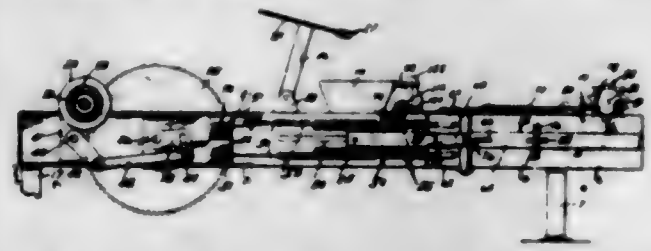
8. A mold for artificial teeth comprising a base section having a cavity therein, a pair of superposed sections adapted to interfit upon the base section and provided with cavities in their meeting portions adapted to register over the cavity of the base section, inclined guides rising at an angle from the base section and adapted to engage said superposed sections for guiding the same when moved toward and from each other and the base section, the superposed sections provided with projections in the cavities thereof extending substantially in parallelism to the guides of the respective section to mold at least two undercut grooves in the teeth with one groove at an angle to another groove and to admit the withdrawal of the projections longitudinally from the grooves.

1,297,449. SELF-PROPELLING INVALID-CHAIR. JAKÓB CZECHOWICZ, Terre Haute, Ind. Filed July 15, 1918. Serial No. 244,997. 2 Claims. (Cl. 180—1.)



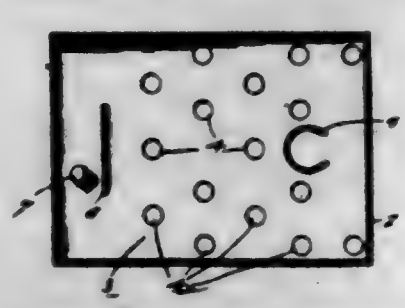
1. A self-propelled invalid chair, comprising a bottom frame, a seat frame, a back arranged upon the seat, a foot rest at the forward portion of the seat, said bottom frame projecting rearwardly of the seat frame, arms for the seat frame, a steering wheel carried by the rearwardly projecting portion of the bottom frame, operating means carried by the frame for turning the steering wheel, a motor carried by the bottom frame, means for winding said motor, transporting wheels at the forward portion of the frame, and drive connections between the motor and the transporting wheels.

1,297,450. HAY-PRESS. CHARLES HENRY DAVIS, Reynolds, N. D. Filed Apr. 2, 1917. Serial No. 159,076. 9 Claims. (Cl. 100—20.)



1. In a press of the kind described, the combination with a frame having a compression chamber, of a plunger mounted in said chamber, driving connections for reciprocating the plunger, including a variable throw-crank that shortens under the compression stroke, and positive means for lengthening said crank under the return stroke.

1,297,451. MINE-FIELD PUZZLE. AMBROSE S. DOYLE, Sharon, Mass. Filed Jan. 23, 1917. Serial No. 143,901. 1 Claim. (Cl. 46—41.)



A puzzle or game comprising, a rectangular box, the side walls of said box representing the shores of a body

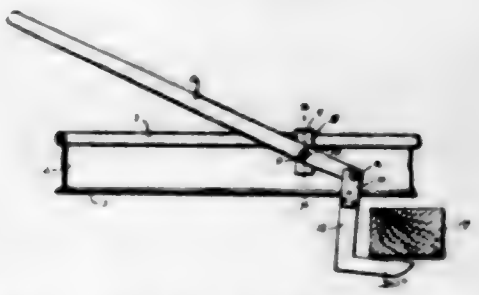
of water; a false bottom arranged within said box and in spaced relation to the bottom of said box; said false bottom having a plurality of apertures therein representing mines; a U-shaped member secured to the false bottom and disposed adjacent one end wall of the box; said U-shaped member having its free ends directed toward the adjacent end wall; and a transverse strip secured to the false bottom adjacent the opposite end wall of the box and adapted to form a safety zone to receive a ball.

1,297,452. FRANGIBLE SEAL. MARTIN ELMER, Hastings, Mich. Filed Mar. 27, 1918. Serial No. 225,100. 10 Claims. (Cl. 70—99.)



1. A sealing device comprising a casing, a key, and a flat sealing strap; the casing having an aperture in which the key fits for longitudinal thrust thereinto with clearance at opposite sides for the flat strap, the key having an aperture whose edge is angular, one end of the strap being inserted through the aperture, the casing aperture being adequate only to accommodate the key and the strap when the latter is folded close against the opposite sides of the key, and means for engaging the key with the casing when the key is thrust in the casing far enough to carry the fold of the strap on the edge of the key aperture into the casing.

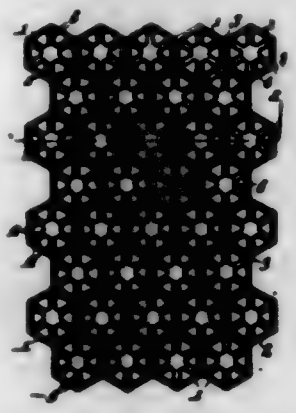
1,297,453. TIE LIFTER AND HOLDER. EDGAR B. EMMONS and EDWIN T. JOHNSON, Davenport, Iowa. Filed July 15, 1918. Serial No. 244,920. 4 Claims. (Cl. 254—121.)



1. A device of the class described, comprising a bearing member, provided with means of engagement with one edge of a rail; a support depending from said bearing at the opposite side from said engaging means, and provided at its lower end with a flange adapted to engage the web of such rail; and a hand-lever pivotally connected with said support, midway the points of engagement of said parts on the rail and web, and provided at its short end with tie-engaging mechanism.

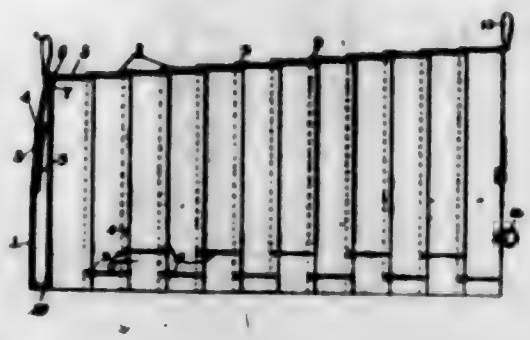
1,297,454. RADIATOR. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Mar. 11, 1919. Serial No. 221,628. 3 Claims. (Cl. 257—128.)

1. A radiator comprising a plurality of tubes arranged side by side and each tube having enlarged ends which engage with the enlarged ends of adjacent tubes and having its intermediate part reduced whereby the same is spaced from the reduced intermediate parts of adjacent tubes and forms passages between the several tubes, and radiating members arranged in each tube comprising a sheet of metal which is corrugated to form a plurality of longitudinal plaits, the outer edges of the plies of some plaits being connected with each other and the inner edge of each ply of one plait being connected with the inner



edge of a ply of an adjacent plait, the outer edges of the plies of each plait having their end portions projecting laterally into engagement with the enlarged ends of the respective tube and the intermediate outer edge portions of the plies of each plait receding inwardly relative to the companion end portions and engaging with the contracted part of the respective tube.

1,297,455. SHIELD. GIOVANNI FIMIANI, Cleveland, Ohio. Filed Feb. 25, 1918. Serial No. 218,941. 3 Claims. (Cl. 89—36.)



1. In a shield, the combination of an apertured semicircular vertical front section, a sheet of metal firmly attached to the circular edge of said section, a series of telescoping sheets attached to said first sheet and adapted to telescope over the same in a direction at right angles to said front section, and means for maintaining the device in its closed position.

1,297,456. TUBE-COMPRESSOR. AUGUST JOSEPH FRAY, Brooklyn, N. Y., assignor to Brass Goods M'f'g Co., Brooklyn, N. Y., a Corporation of New York. Filed Jan. 6, 1919. Serial No. 269,765. 3 Claims. (Cl. 251—5.)



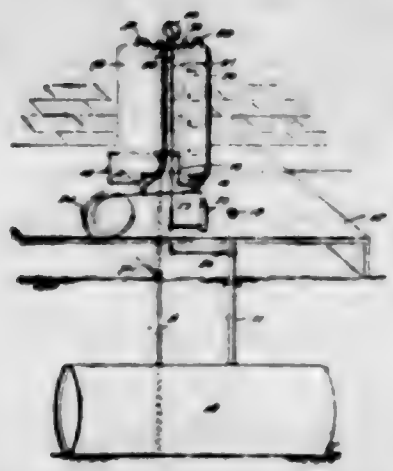
1. In a compression clamp of the character described, the combination with the sheet metal cam and sheet metal operating arm formed in one piece therewith, of a sheet metal strut connecting the cam and arm and consisting of a sheet metal tongue cut out of the portion of sheet metal blank forming one of said members and bent to extend from one to the other.

1,297,457. TUBE-FLANGING IMPLEMENT. FREDERICK M. FURBER, Revere, Mass. Filed Feb. 2, 1918. Serial No. 215,036. 3 Claims. (Cl. 153—81.)



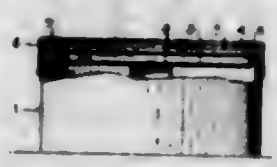
1. A tube flanging implement having, in combination, a tool having a tapered point constructed and arranged to enter the end of a tube, said point being provided with ribs or ridges to engage the end of the tube at separated points, whereby said tool point is operative through rotative movement to expand the end of the tube, a tube clamp capable of holding a variety of sizes of tubes for the operation thereon of said tool, and means for holding said tool and said clamping means in coöperative relationship to each other.

1,297,458. PREDETERMINED-BULK LIQUID-DISPENSER. EDWARD GARVEY, Farmington, Minn. Filed Mar. 12, 1917. Serial No. 154,309. 5 Claims. (Cl. 221—99.)



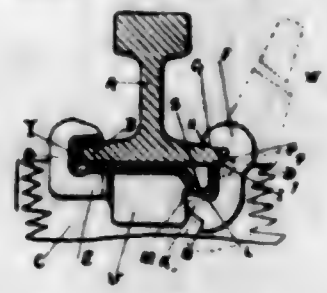
1. A pre-determined bulk liquid dispenser comprising a storage tank, a measuring vessel, a conduit between the tank and said vessel at the bottom portion of the latter, a valve in said connection adjacent the bottom of the vessel to permit the discharge into the latter of the liquid from the tank or to cut off communication between the tank and the vessel to permit the discharge of the liquid from the vessel, and a vent valve associated with the top portion of the vessel, said valve comprising a flange formed on the vessel, a cap detachably secured to said flange, a float within said flange and cap, said cap having an opening therein forming a valve seat, a valve carried by the float coöperating with said seat, said vessel adjacent to said flange being provided with an inwardly extending portion, a ring supported thereon and having a central opening, a sack supported by said ring adjacent to said central opening and a closure for said opening, said sack being designed to receive solids to vary the liquid capacity of said vessel.

1,297,459. DIAL-PLATE CONSTRUCTION. PHILO M. GELATT, La Crosse, Wis. Filed July 16, 1917. Serial No. 180,710. 4 Claims. (Cl. 116—49.)



1. In a gage, a casing, a dial-supporting means in the casing, a dial-plate secured on said means and provided with an expansible flange, a shield resting on the outer face-edge of said flange and a collar engaging over the casing adapted to force the shield against the flange and expand the same.

1,297,460. RAIL-ANCHOR. HORATIO G. GILLMOR, Washington, D. C. Filed Nov. 7, 1916. Serial No. 130,050. 46 Claims. (Cl. 238—4.)



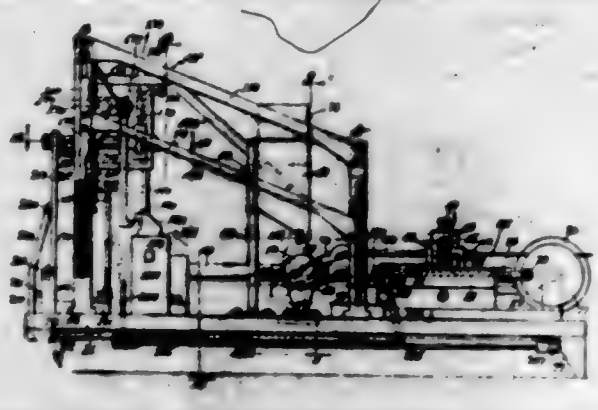
5. An anticreeper for rails, comprising a rail gripping element, one end of which is trough shaped on the upper side thereof and is provided with a retaining catch and the other end thereof is constructed with rail base engaging means, and a rail engaging device for drawing the trough shaped portion into contact with the rail bottom and the retaining catch into engagement with the rail base edge.

10. An anticreeper, comprising a transversely extending part engaging the top and the bottom of the rail foot flange at one side of the rail and the bottom of the rail at the other side of the rail, and a vertically extending part so engaging the rail base above and said transversely extending part below the rail as to permit angular movement of said vertically extending part about a longitudinal axis above the rail to force said vertically extending part into position and to permit angular movement of said vertically extending part about a transverse axis below the rail when in position.

40. A device for preventing the creeping of rails, comprising a rail embracing and gripping part and a rail engaging pressure producing device constructed from a flat bar which is so connected to said part as to be rotatable about longitudinal axes lying above the rail base and about an axis transversely disposed in relation to the rail lying below the rail base.

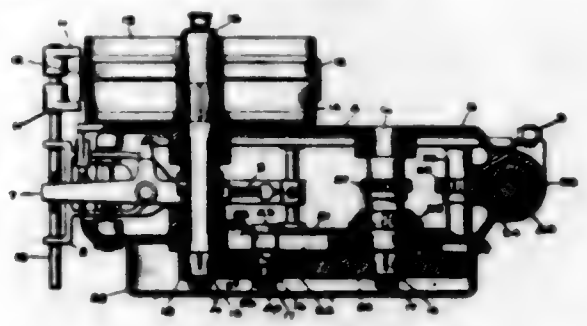
43. An anticreeper, comprising a rail gripping element embracing the base flange at one side of the rail and provided with catch projections adapted to engage the base flange at the other side of the rail, a rail engaging device engaging said element and engaging rotatably the upper surface of the rail base for drawing said catch projections into contact with the edge of the rail base flange, and means for giving one of said elements a fixed position in the roadbed.

1,297,461. WIRE-WORKING MACHINE. FRANK C. A. GOETZ, Chicago, Ill. Filed Jan. 9, 1918. Serial No. 211,010. 10 Claims. (Cl. 140—102.)



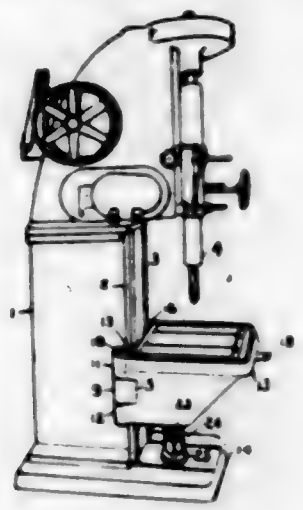
1. Wire looping mechanism, comprising opposed wire feeding rolls, driving connections for the rolls whereby they feed forwardly a wire positioned between them and are periodically reversed, parts for periodically separating the rolls, and an element for holding in fixed position the free end of a wire fed from the rolls.

1,297,462. VARIABLE-SPEED GEARING. GEORGE E. HALLENBECK, Toledo, Ohio, assignor to Baker Brothers, Toledo, Ohio, a Firm. Filed Feb. 18, 1918. Serial No. 217,752. 10 Claims. (Cl. 74—7.)



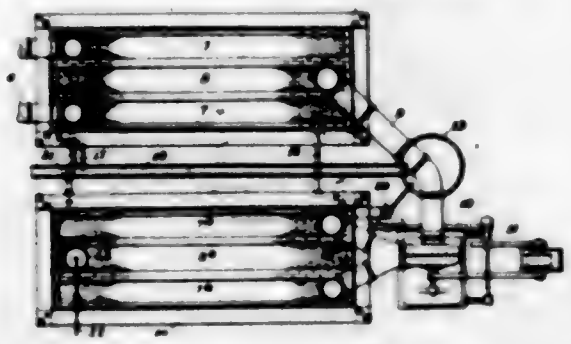
1. A train of toothed gearing comprising a pair of power transmitting gears with fixed axes, an intermediate gear in mesh with said transmitting gears, holding means for maintaining the intermediate gear in a line between the axes of the transmitting gears, and mounting means rendering said gears mutually substitutive.

1,297,463. MACHINE-TOOL STRUCTURE. GEORGE E. HALLENBECK, Toledo, Ohio, assignor to Baker Brothers, Toledo, Ohio, a Firm. Filed May 15, 1918. Serial No. 234,636. 2 Claims. (Cl. 77—63.)



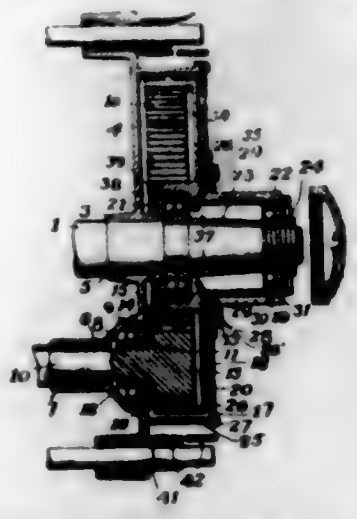
1. A machine tool comprising a frame having vertical ways, a slide mounted upon said ways, a work table hinged upon said slide to swing in a horizontal plane and means on the work table to engage the ways to hold the table in operative position.

1,297,464. RECOVERY PROCESS FOR WASTE GASES. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Chemical Construction Company, Charlotte, N. C., a Corporation of North Carolina. Filed Oct. 26, 1918. Serial No. 259,780. 4 Claims. (Cl. 23—1.)



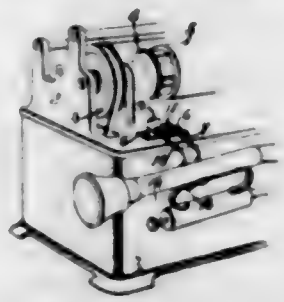
1. The method of producing fluoric acids, consisting in passing waste gases containing a fluoric compound through a body of liquid holding a hydrosilicic acid in solution.

1,297,465. MOTOR-VEHICLE DRIVING MECHANISM. ARTHUR O. HIGINBOTHAM, Worcester, Mass., assignor to Charles B. Foster and Company, Worcester, Mass., a Copartnership consisting of Charles B. Foster, Arthur O. Higinbotham, and Jerome R. George. Filed Feb. 8, 1917. Serial No. 147,821. 3 Claims. (Cl. 74—7.)



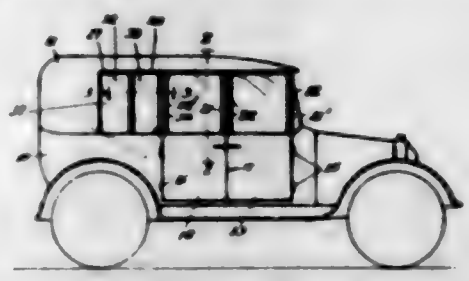
1. In a motor vehicle, a dead axle, a rotatable hub structure providing an outer portion for the detachable and interchangeable attachment thereto of a driving wheel, a nonrotatable housing, mechanism for rotating said hub structure inclosed in said housing, and an annular plate carried by said hub structure, coöperating with a driving wheel attached to the hub structure and with the nonrotatable housing to make a dust-tight running joint.

1,297,466. SPEAKING-TUBE SUPPORT FOR PHONOGRAPHS. NEWMAN H. HOLLAND, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed July 13, 1914. Serial No. 850,604. 9 Claims. (Cl. 274—17.)



1. In a phonograph, driving mechanism, including means for controlling the operation of the same, a movable support for a speaking tube and means engaging said controlling means and support whereby said controlling means may be actuated by said support, said engaging means being movable out of engagement with said controlling means, substantially as described.

1,297,467. AUTOMOBILE-BODY. WALTER W. HOOPS, Chicago, Ill. Filed Jan. 29, 1917. Serial No. 145,107. 3 Claims. (Cl. 21—62.)



1. A vehicle body comprising, in combination, a body, two doors on one side thereof and hinged thereto, guide

bars attached to adjacent edges of said doors, windows movably secured to said doors, said guide bars serving as guides and supports for said windows when in raised position and the doors opened and closing the margin between said windows when the doors are closed.

1,297,468. ANIMAL-CATCHER. ROBERT D. B. HOLT, Rushville, Ind. Filed June 20, 1918. Serial No. 240,959. 4 Claims. (Cl. 119—153.)



2. An animal catching device, comprising a staff, a loop forming wire coöperating with the staff, a frame slidable on said staff to which the loop forming wire is attached, a sheave on said frame, a cable coöperating with said sheave to move the same longitudinally on the staff, a cross head to which one end of the cable is anchored, and means to adjust the cross head on the staff whereby the size of the loop formed by said wire may be determined.

1,297,469. UMBRELLA. FRANK W. HOWARD, New York, N. Y. Filed May 29, 1914. Serial No. 841,749. 8 Claims. (Cl. 135—28.)



1. In an umbrella, the combination of a stick, a crown on said stick having a circumferential socket groove on its outer side, a plurality of ribs extending radially from said crown, each of said ribs having a coil the side whereof bears against the bottom of said socket groove and rocks therein so as to operate as a pivot for its corresponding rib when the ribs are raised or lowered, means for retaining said coils in said groove, and means for maintaining said ribs substantially equidistant from each other circumferentially around the stick.

1,297,470. UMBRELLA RIB AND RUNNER. FRANK W. HOWARD, New York, and FRANCIS D. AMMEN, Flushing, N. Y. Filed Oct. 5, 1914. Serial No. 865,188. 8 Claims. (Cl. 135—38.)



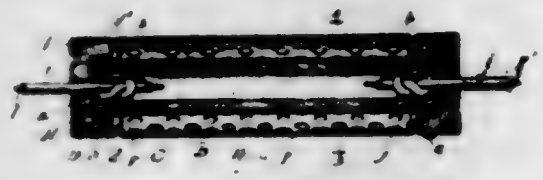
1. In an umbrella, in combination, a stick, a rib of resilient material having a reduced part adjacent said stick adapted to flex freely to permit an outward and inward movement of the rib in opening and closing the umbrella, said rib having an integral coil adapted to engage said stick to retain the rib thereupon.

1,297,471. UMBRELLA. FRANK W. HOWARD, New York, N. Y. Filed May 4, 1915. Serial No. 25,669. 5 Claims. (Cl. 135—20.)



1. The method herein described of making an umbrella which consists in attaching ribs to the stick together with a crown sleeve having an enlarged end disposed toward the handle end of the stick, making an umbrella cover with eyelets in its edges corresponding to the umbrella ribs and with a central crown opening, tying the edge of the central opening to the sleeve adjacent the enlarged end thereof with the umbrella cover wrong side out, then turning the umbrella cover right side out, and bending the ends of the ribs outwardly to form eyes engaging the eyelets at the edge of the cover.

1,297,472. RESISTANCE UNIT. LEE P. HYNDS, Chicago, Ill., assignor to Thermo Electric Regulator Co., Chicago, Ill., a Corporation of Illinois. Filed May 7, 1915. Serial No. 26,682. 3 Claims. (Cl. 219—68.)



1. A resistance unit comprising a resistance element, insulating heads for the opposite ends of the resistance element, connections extending through said heads to the resistance, and a foraminous cage having means to hold said heads in place, said cage being spaced from said element, said element comprising a breakable tube, and means for cushioning the ends of said tube in the heads, said cage preventing both inward and outward displacement of said heads.

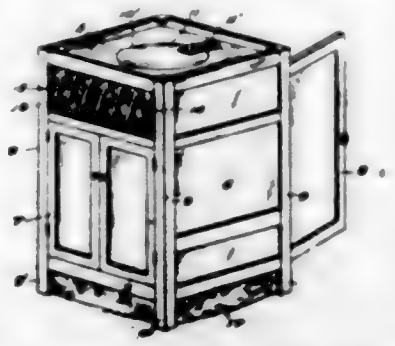
2. A resistance unit comprising a tubular resistance element, heads for the resistance element, means to connect said heads, and means to cushion the ends of said element in said heads, said cushioning means comprising cup-shaped washers on the ends of said element, said heads being cup-shaped to hold said washers, and conductors extending through said washers and connected with adjacent ends of said element.

3. A resistance unit comprising oppositely arranged cup-shaped heads of insulation, a tubular resistance-element having its ends disposed in said cup-shaped heads, said element involving an outer coil and an inner tube of heat-resisting insulation, said heads having means to cushion the ends of said tube therein, insulated conductors extending centrally through said heads and into the ends of said tube, each conductor being connected with the adjacent end of said coil, and a cylinder cage having openings in the sides thereof and provided with ened portions which extend beyond said heads, these end portions of the cage having integral means to hold the heads

against both inward and outward displacement, and to render removal of said heads impossible except by forcibly bending the metal of the cage at the extreme ends thereof

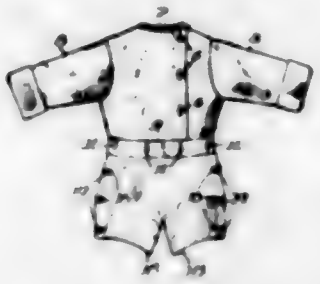
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1,297,473. THEATRICAL DEVICE. WILLIAM S. JOHNSON and LOUISE E. JOHNSON, Joliet, Ill. Filed Oct. 14, 1918. Serial No. 258,034. 4 Claims. (Cl. 46—70.)



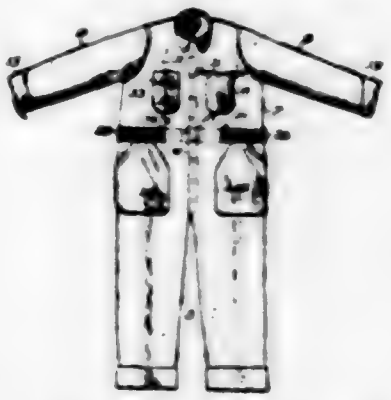
2. A theatrical device constructed in imitation of a phonograph cabinet having an open bottom, and an opening in its top through which a person's head may be protruded, and a removable closure for said top opening.

1,297,474. ROMPERS. ALBERT LEE JONES, Dubuque, Iowa, assignor to Jones Bros. Overall Co., Dubuque, Iowa, a Corporation of Iowa. Filed Aug. 28, 1916. Serial No. 117,124. 1 Claim. (Cl. 2—144.)



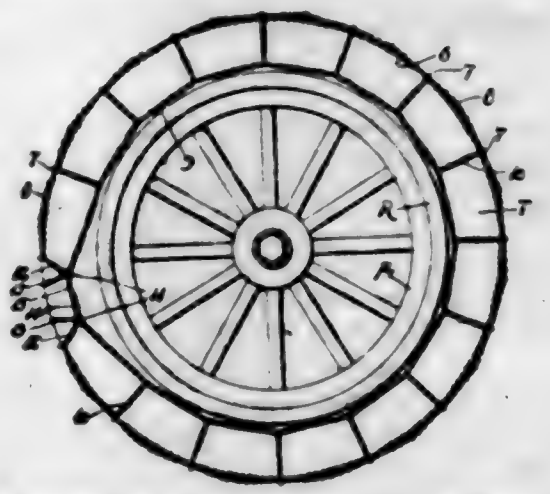
Rompers, comprising an upper garment member or waist and a lower garment member including a pair of leg members terminating at their lower ends in knee openings, the length of the lower garment from top to bottom along the middle thereof being greater than the length along the outer side of each leg portion, each leg member being open from top to bottom throughout its outer longitudinal side, fastenings for the edges of the openings in the outer sides of the leg members, and other detachable fastenings between the upper and lower garment members along the tops of the front and back portions of the lower garment member.

1,297,475. ONE-PIECE OUTER GARMENT. ALBERT LEE JONES, Dubuque, Iowa, assignor to Jones Bros. Overall Co., Dubuque, Iowa, a Corporation of Iowa. Filed Feb. 23, 1917. Serial No. 150,370. 5 Claims. (Cl. 2—144.)



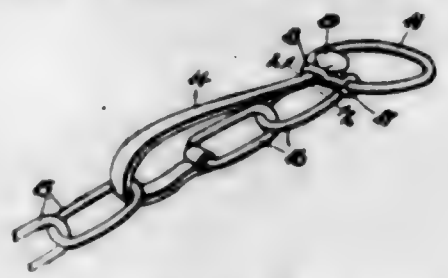
1. A garment having a drop seat provided with belt members extending from opposite sides thereof, the body of the garment being provided with belt slits in the front thereof through which the ends of the belt members may be passed, whereby the connected end portions of the belt members are covered by the front of the garment between the slits and the belt is prevented from sagging at the front of the garment.

1,297,476. ANTISKID-CHAIN. GEORGE I. KESNER, Weston, W. Va. Filed May 8, 1918. Serial No. 233,211. 2 Claims. (Cl. 152—14.)



2. An anti-skid chain comprising a mat having a pair of longitudinal chain sections, cross chain sections connecting the ends thereof and intermediate points at intervals, and diagonal chain sections connected to the junctures of said chain sections; a pair of side retaining chain sections having their terminals extending beyond the ends of the mat; stays connecting the last named chain sections and the longitudinal chain sections at their junctures, with the others; diverging stays connected to the ends of the mat at the junctures of the respective chain sections thereof and extending inwardly and connected to the terminals of the retaining chain sections; and coupling means connected to the junctures of the last named stays and terminals for drawing them toward one another.

1,297,477. FASTENING OR COUPLING. GEORGE I. KESNER, Weston, W. Va. Filed Oct. 10, 1918. Serial No. 258,282. 2 Claims. (Cl. 24—241.)

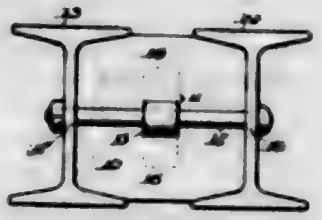


2. A coupling embodying a lever having a pivot portion, a loop and a knob at its free terminal, a ring, a link connection between said ring and pivot portion, and a latch of loop form having eyes at its ends pivotally embracing said ring adjacent to said link connection to maintain the latch and link connection in relative position, said latch being swingable over said knob, and having an opening for the passage of said knob when moved toward said ring and having a reduced portion in which the lever is seatable away from said ring and through which the knob cannot move.

1,297,478. SEPARATOR-PLATE. JOHN W. KETLER, Chicago, Ill. Filed May 11, 1918. Serial No. 233,847. 6 Claims. (Cl. 189—37.)

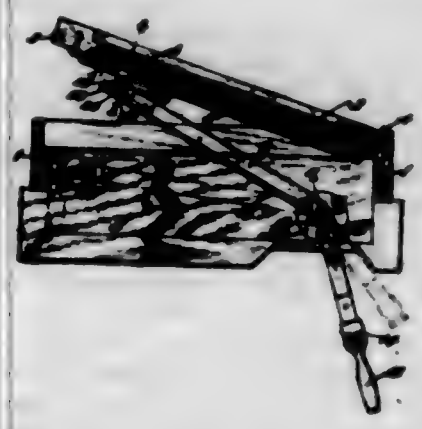
1. A separator plate comprising in combination, an apertured plate and a clip constructed to be passed through the aperture, said clip having steps to engage

the plate to prevent its movement in one direction, the portion of the clip which is passed through the aperture



being formed to receive a bolt and the bolt and the stops provided upon the clip coöperating to prevent the separation of the plate and clip.

1,297,479. WINDOW ADJUSTER AND LOCK. JAMES A. LANE, Los Angeles, Calif. Filed Sept. 20, 1918. Serial No. 254,902. 11 Claims. (Cl. 268—13.)



1. The combination with a window frame having a sash or the like hinged thereto at one side of an adjuster therefor comprising a horizontal guide-rod mounted on said sash, a lever pivotally mounted on the bottom portion of said frame, one arm of said lever being slidably connected to said guide-rod so as to be slidable thereon and the other arm of said lever having a handle extending inside of said frame for manipulating said lever, and a locking arm associated with said lever and operable to clamp the connection between said lever and said guide-rod.

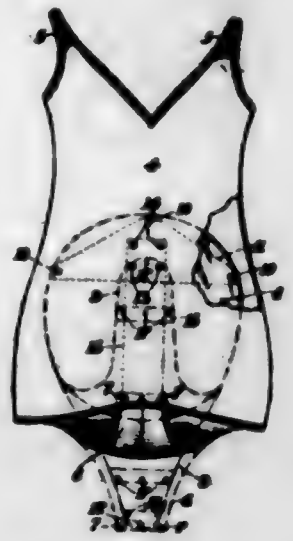
1,297,480. ART OF MAKING CEMENT-FIBER BOARD. JAMES E. LAPPEN, Winona, Minn. Filed Aug. 5, 1916. Serial No. 113,236. 4 Claims. (Cl. 25—1.)

1. The herein described process of producing cement-fiber board which consists in first disintegrating mineral fibrous material in water, then separating the disintegrated fibers out from the water and collecting them into a thin wet film, then sprinkling the surface of the film with dry cement powder, and then wrapping the film upon itself under pressure until a sheet of the desired thickness is formed.

1,297,481. WOMAN'S UNDERGARMENT. MAX LUBOVITZ, Brooklyn, N. Y. Filed May 3, 1917. Serial No. 166,267. 3 Claims. (Cl. 128—284.)

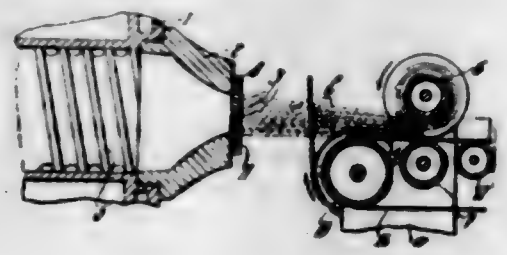
1. The combination with a chemise having a projecting portion at the bottom of the back adapted to extend between the legs of the wearer to be detachably secured to the front of the chemise, of a catamenial apron to form a lining for a part of the lower portion of the back of the chemise and conforming to the projecting portion of the back, and means to removably secure the apron thereto; said portion of the apron secured to the projecting portion of the back being adapted to be detachably secured with said portion to the front of the chemise, substantially as and for the purpose specified.

2. The combination with a chemise having a projecting portion at the bottom of the back to extend between the legs of the wearer to be detachably secured to the front of the chemise, of a catamenial apron comprising releasably connected sections, one section to form a lining for a part of the lower portion of the back and removably secured thereto, and another section conforming to



the projecting portion of the back, said section being adapted to be detachably secured to said projecting portion of the back and with said portion to the front of the chemise, and to be detached therefrom and removably secured to the front of the chemise independent of the projecting portion of the back, substantially as and for the purpose specified.

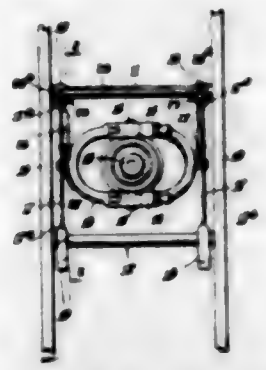
1,297,482. PROCESS AND APPARATUS FOR THE TREATMENT OF PLASTIC SUBSTANCES. THOMAS P. LITTLE, Chicopee Falls, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed May 27, 1918. Serial No. 236,814. 7 Claims. (Cl. 154—1.)



1. In the art of making laminated bodies from a mass of plastic material, the method which consists in subjecting the mass to pressure whereby the fluids contained in pockets therein are compressed sufficiently to break their way through the layers of material formed thereafter, when said layers are subjected to a lower external pressure, dividing and separating the said mass into a plurality of layers while the fluid pressure previously created in the mass is still present, maintaining the separation thus brought about and at the same time passing the said plurality of layers into a region of pressure lower than the previously-created fluid pressure to permit the fluid in pockets in the layers to escape by virtue of the previously created pressure, and then pressing the layers together to form the laminated body and with a pressure independent of said previously created fluid pressure; substantially as described.

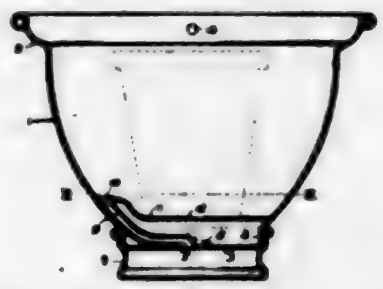
7. In an apparatus of the character indicated, in combination, an outletted container for the material to be operated upon, a laminating and separating means arranged at the outlet of said container, and means exterior of said container for squeezing the laminations together, substantially as described.

1,297,483. SUPPORTING MEANS FOR HOSE-CLAMPS. WILLIAM J. LORCH, Cornwall-on-the-Hudson, N. Y. Filed Feb. 21, 1917. Serial No. 150,073. 2 Claims. (Cl. 248—28.)



2. In supporting means for hose clamps, the combination with a pair of oppositely disposed parallel bars each having a bearing intermediate its ends, of a hose clamp having oppositely projecting pins revoluble in said bearings whereby said clamp is revolubly supported by said bars, a fork at one end of each bar and a hook at the opposite end thereof, and means for releasably locking said hooks to a rung of a ladder, comprising alined perforations in the members or legs of said hooks, one of said perforations having a rectangular slot connected therewith, and a locking pin having thereon an angular leg adapted to be passed through said slot when said pin is in a given position in relation to said hook.

1,297,484. PLANT-RECEPTACLE. ALBERT E. LUTEY, Detroit, Mich. Filed Aug. 9, 1918. Serial No. 249,091. 5 Claims. (Cl. 47—19.)



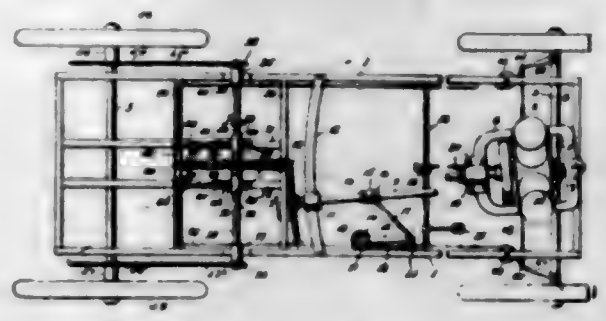
1. A receptacle of the character described comprising a container having the bottom thereof provided with an opening, pot supporting means in said container, a drain tube having one end thereof mounted in the opening of said container and the opposite end thereof extending above said pot supporting means, and a drip pan detachably connected to the bottom of said container.

2. A receptacle of the character described, comprising a container, a drain tube in said container and open at the bottom thereof, and a false bottom plate in said container having a guard for said drain tube.

1,297,485. FRICTION DRIVE MECHANISM FOR AUTOMOBILES. EDDY T. MCKAIG, Waukegan, Ill. Filed Nov. 12, 1917. Serial No. 201,597. 9 Claims. (Cl. 180—18.)

1. A frictional power transmission in which is combined a driving shaft, a friction gear mounted thereon, independent driven shafts arranged in axial alinement, friction gears in close proximity to each other upon the meeting ends of said shafts, and means for bringing the gears upon said driving and driven shafts into operative contact with each other to permit said friction-gear to engage both of said driven gears at adjacent contact-points upon the same side of its axis to drive them in a corresponding direction.

3. A frictional gear transmission mechanism in which is combined a driving shaft, a driving friction gear mounted thereon, means for moving said shaft laterally, independent driven shafts arranged in axial alinement, friction driven gears mounted upon the meeting ends of said shafts, means for bringing said driving and driven gears into operative contact with each other at adjacent points upon the same side of the driving-shaft and means for balancing the effective pressure of said driven gears against the face of said driving gear.

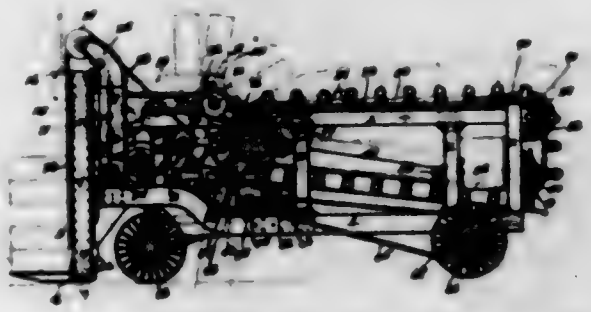


5. A friction gear transmission mechanism in which is combined a driving shaft, a driving friction gear mounted thereon, independent driven shafts arranged in axial alinement, driven friction gears mounted upon the meeting ends of said shafts in close proximity to each other, means for bringing said driving and driven gears into operative contact with each other, means for permitting the meeting ends of said shafts to be moved laterally in a common plane, a compensating bar pivoted at its middle to a stationary point and means for connecting the ends of said bar to said shafts respectively whereby the pressure of said driven gears against said driving gear may be equalized.

7. A friction gear transmission mechanism for vehicles in which is combined a driving shaft, a driving friction gear mounted thereon, independent driven shafts arranged in axial alinement, friction gears mounted upon the meeting ends of said shafts with their peripheries in operative proximity to the face of said driving gear, and pivoted means for moving the meeting ends of said shafts, in opposite directions to cause a balanced pressure of said driven friction gears against the face of said driving gear.

9. A friction gear transmission mechanism for vehicles, in which is combined a driving shaft, a driving friction gear mounted thereon, independent driven shafts arranged in axial alinement, means for operatively connecting each of said shafts to a traction wheel, friction gears mounted upon the meeting ends of said driven shafts with their peripheries in operative proximity to the face of said driving gear, means for moving the meeting ends of said alined shafts in opposite directions and means for actuating said shaft moving-means.

1,297,486. CASTING-SEPARATING MACHINE. MONTFORD B. MURRAY, Albion, Mich. Filed Nov. 16, 1917. Serial No. 202,423. 9 Claims. (Cl. 83—56.)



1. A machine for separating castings and packing from annealing pots comprising a pick-up device consisting of a frame having a table adapted to be introduced beneath a stack of pots, a transfer device carried by the frame in fixed relation with the table, and means for raising the frame and transfer device and turning the same to a

position whereby the stack of pots rests upon the transfer device, the transfer device being inoperative in the pick-up position, operating means for the transfer device with which the said transfer device is brought to operative relation upon the raising of the frame, and transfer device, a shaker onto which the pots are discharged by the transfer device, a receiver for the castings and packing, and means for separating the castings and packing.

2. In a machine for separating castings and packing from the annealing pots, consisting of a shaker device movable longitudinally of the machine and having parts movable rapidly in a vertical plane during the longitudinal movement, and means for picking up a stack of pots, the said means consisting of a frame adapted to be turned from vertical to horizontal position, means for turning the frame, and transfer apparatus carried by the frame brought into operation upon turning the frame to horizontal position, the transfer device discharging the pots onto the shaker.

3. In a machine adapted to separate castings from the annealing pots and packing, a pick-up device adapted to pick-up filled annealing pots, a shaker device, a transfer device adapted to receive the pots from the pick-up device and transfer the same to the shaker device, means for operating the shaker device to discharge the contents of the pots and finally separately discharge the empty pots, a receiver onto which the contents of the pots fall, the receiver consisting of a series of inclined spaced bars, the spacing allowing the packing to pass therethrough and the bars retaining the castings, means for operating the bars and agitate the castings, the agitation tending to roll the castings down the inclined bars and discharge the packing therebetween, and a receiving table onto which the castings pass from the bars.

5. In a machine of the character described, a pick-up device adapted to pick up a stack of filled annealing pots, a table on which the pots are received, a frame connected with the table and extending at a right angle to the plane of the table, a transfer device consisting of a pair of chains and bars connecting the same and shafts for the chains, means for raising the framework and receiving table and turning the same with the transfer device lying in a horizontal plane, means operable at will for driving the said chains to discharge the pots in sequence from the transfer device, a shaker device onto which the pots are discharged open side downward, the shaker device being adapted to rapidly shake the pots in a vertical plane, a receiver for the packing and castings shaken from the pots consisting of a series of spaced inclined bars reciprocable in alternate relation, the bars being spaced allowing the packing to pass therebetween and retaining the castings, movement of the bars tending to discharge the castings at the lower end thereof, and a receiver for the castings at the lower end of the bars.

9. A machine for separating castings and packing from the annealing pots comprising means for picking up a vertical stack of filled pots, means for turning the pick-up means and pots thereon to horizontal position, a transfer device brought into operation by the horizontal positioning of the pick-up device adapted to transfer the filled pots to the shaker device, said shaker device being adapted to discharge the empty pots from the machine, a receiver for the castings and packing, and means for separately discharging the castings and packing from the machine.

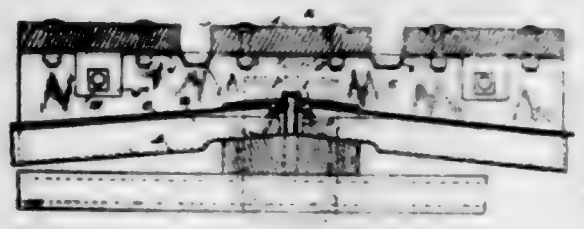
1,297,487. GALVANIC BATTERY. CHARLES W. NORTON, West Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 25, 1916. Serial No. 121,939. 12 Claims. (Cl. 204—29.)

8. In a battery cell, a container having a stuffing box, a battery element extending through said stuffing box, said stuffing box comprising a pair of members movable toward each other to form a tight joint with said element, and devices disposed at opposite sides of said element for forcing said members toward each other, and a device applied to said element just above the stuffing box for supporting said element entirely from the top of the container and for eliminating any buckling which may have occurred in the upper one of said members upon



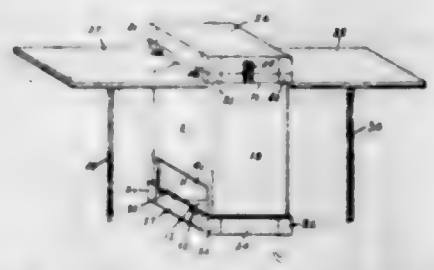
forcing such members toward each other, substantially as described.

1,297,488. CAR-ROOF. KARL FRITJOF NYSTROM, Montreal, Quebec, Canada. Filed Jan. 26, 1918. Serial No. 214,020. 7 Claims. (Cl. 105—457.)



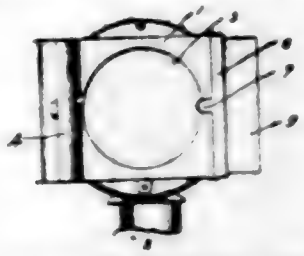
1. In a car roof, the combination with a wooden saddle, of a sheet metal saddle thereupon, ears struck out from said sheet metal saddle and extending downwardly to embrace said wooden saddle, means for securing said ears to said wooden saddle, and a running board secured upon sheet metal sadddle.

1,297,489. COMBINED BUFFET AND DINING-TABLE. RUEL K. ORNE, Everett, Wash. Filed Dec. 12, 1917. Serial No. 206,843. 1 Claim. (Cl. 190—12.)



A portable buffet of the class described, comprising a box having vertical side and end walls of sheet metal provided with flanged lower end portions, a bottom wall resting on said flanged lower end portions, strips fastened to the outer sides of said side and end walls adjacent the upper and lower portions thereof, a table board hinged to each of the strips on the upper portions of opposite ones of said vertical walls and adapted to be swung upwardly from a vertical plane to a horizontal plane, removable props for supporting said table boards in a horizontal plane, a cover adapted to be disposed over the top edges of said vertical walls to cover said buffet, means to releasably fasten said table boards in their normal vertical positions, and a horizontal partition disposed within said box spaced from said bottom wall to provide a lower compartment, one of said vertical side walls having an opening through the lower portion thereof leading into said lower compartment, one of said table boards being arranged to close said opening when in its normal vertical position.

1,297,490. TELEPHONE-MOUTHPIECE ATTACHMENT. HOWARD A. POST, Winfield, Kans. Filed Feb. 28, 1918. Serial No. 219,649. 1 Claim. (Cl. 179—185.)



The herein described attachment for telephone mouth pieces, the same comprising an upright plate having a hole coincident with that of the mouth piece, tangs on said plate for securing it to the mouth piece, a drum at one edge of the plate for containing a roll of sterilized paper, and a long upright clip at the other edge of the plate and under which the paper passes, the clip having a thumb piece, the whole for use substantially as described.

1,297,491. PROCESS FOR TREATING WOOD. WILLIAM POWELL, London, England, assignor to Powell Wood Process (North America) Incorporated, New York, N. Y. Filed June 17, 1916. Serial No. 104,316. 9 Claims. (Cl. 99—313.)

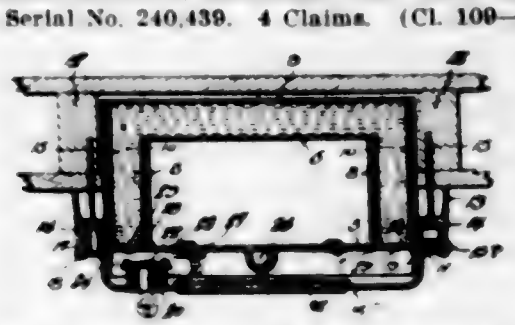
1. The herein described process for the treatment of timber which consists in impregnating it with a solution containing sugar and dextrin.

2. The herein described process for the treatment of timber which consists in impregnating it with a solution containing sugar, dextrin and gum.

8. The herein described process for the treatment of timber consisting in immersing it in a solution containing sugar, dextrin and gum at a temperature of between 120° and 140° Fahrenheit, raising the temperature to the boiling point, allowing the liquid and immersed wood to cool to a temperature of between 180° and 110° Fahrenheit, submitting the wood to the action of moist air in a drying chamber, gradually raising the temperature of the chamber to between 100° and 220° Fahrenheit and then allowing the chamber to cool gradually.

9. The herein described process for the treatment of timber consisting in immersing the timber in a sugary solution having a specified specific gravity, together with 5% of dextrin, ½% of gum tragacanth and 3% of arsenic.

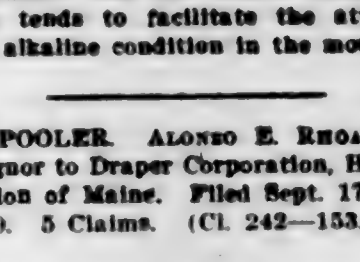
1,297,492. FIREPROOF WALL-SAFE. JOHN RAUWALD and JOSEPH RAUWALD, Milwaukee, Wis. Filed June 17, 1918. Serial No. 240,439. 4 Claims. (Cl. 109—2.)



1. A safe comprising a main compartment, a jacket surrounding said compartment, an inner door for the main compartment, an outer door forming a front compartment between it and the main compartment, passages connecting the jacket and said front compartment, fusible means closing said passages, and fire proofing fluid in the jacket.

1,297,493. TRACTION-WHEEL. GEORGE HARSHAW REID, Orangeville, Ontario, Canada, assignor of one-half to David Bent Brown, Orangeville, Ontario, Canada. Filed May 3, 1918. Serial No. 232,329. 1 Claim. (Cl. 21—330.)

The combination with a wheel rim, of a tread plate having bar members extending longitudinally thereof and spaced apart so as to allow the wheel rim to enter and fit therebetween, bearing members extending upwardly from each corner of the plate, links pivoted between each of the bearing members and the longitudinal bars forming the channel, and bearing members carried by the wheel

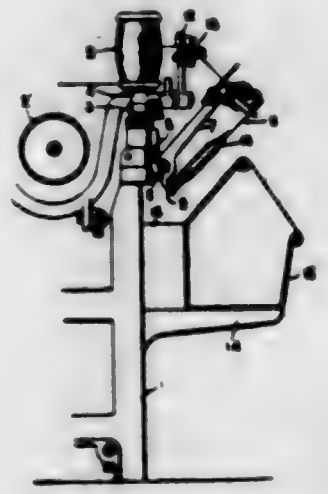


rim on its interior face adjacent to each end of the tread plate carried so as to extend upwardly at each side of the wheel rim in criss-cross form, whereby a free revolving forward or backward movement of the wheel from end to end of the plate when in position on the surface of the ground is allowed.

1,297,494. DENTIFRICE. MEYER L. RHEIN, New York, N. Y., assignor to Lisbeth E. Van Wyck Rhein, New York, N. Y. Filed Mar. 8, 1918. Serial No. 220,512. 11 Claims. (Cl. 167—9.)

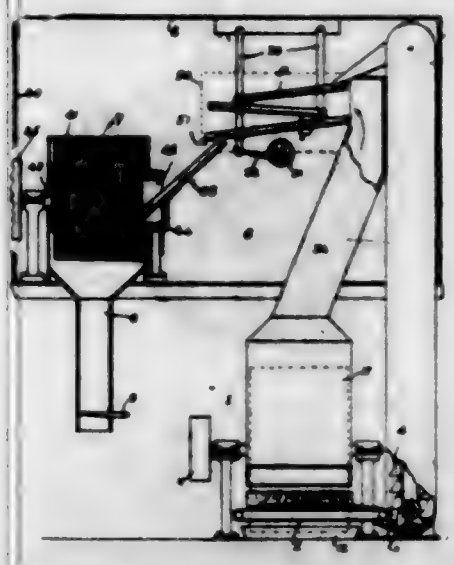
10. A composition for a dentifrice in paste form comprising potassium bitartrate, bicarbonate of soda, calcium carbonate, sodium oleate, a suitable flavoring, and a neutral water-free agent such as glycerin in substantially the proportions specified, said acid ingredient being mutually reactive with the specified basic ingredients in the presence of moisture to the end that the solution of the acid ingredient produces an initially weak acid solution adapted to flocculate the mucin adhesions upon the enamel surface, whereas the decomposition of the specified basic ingredients results in an effervescent gas which contributes to the dislodgment of such mucin adhesions, shortens the period of activity of the acid solution in contact with the enamel surface, and by its disappearance tends to facilitate the attainment of a final reactive alkaline condition in the mouth.

1,297,495. SPOOLER. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Sept. 17, 1917. Serial No. 191,670. 5 Claims. (Cl. 242—153.)



2. In a spooler, a traversing yarn guide, a bobbin support, a tension device located between said guide and said support and acting to place a uniform tension on the yarn as it passes to the spool regardless of the amount of, or variation in, the tension of the yarn as it comes from the bobbin, and a preliminary tension device located between the main tension device and the bobbin support.

1,297,496. APPARATUS FOR AND METHOD OF DESICCATING FLUIDS. CHARLES E. ROCHER, Detroit, Mich. Filed May 8, 1915. Serial No. 26,712. 5 Claims. (Cl. 127—9.)

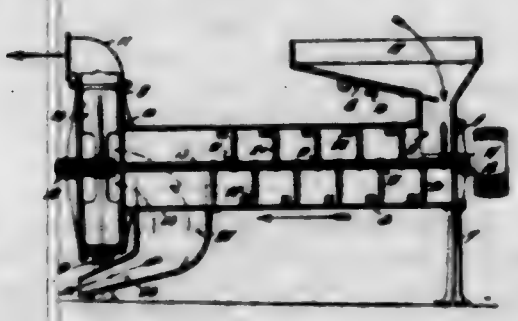


1. The herein described method of desiccating fluids containing solids consisting in coating a heated surface with a thin film of liquid, subjecting the film thereon to a current of heated air for a period sufficient to remove the greater part of its moisture, removing the partially dried film from the surface, and agitating and breaking up the removed film to the desired final form while in the current of air passing from the said surface.

3. The herein described method of desiccating milk or other fluids consisting in first—concentrating the fluid by heating at a temperature not greater than 140 to 145 degrees F., second—coating a traveling surface with the condensed fluid to form a film thereon and subjecting the same to a current of air having a temperature not greater than 145 degrees F. to remove the greater percentage of moisture, third—removing the film from the surface and subjecting the partially dried material while being agitated to the same current of air as it passes from the surface, and while under the influence of said air current reducing the material to the desired granular form.

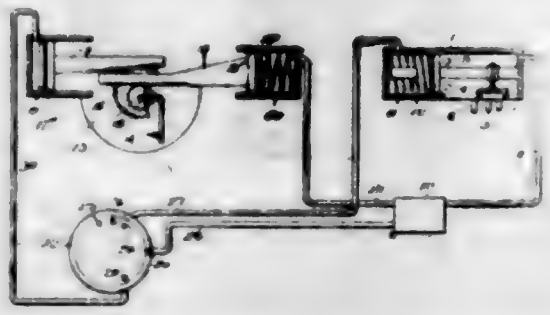
5. The herein described method of desiccating fluids consisting in continuously coating the surface of a roll with a film of the fluid, subjecting the film to a current of heated air while on the roll to remove a greater part of the moisture, removing the partially dried film from the surface of the roll in a manner to break up and disintegrate the same, then subjecting the broken film to the heated air as it passes from the roll and maintaining the material therein until the required state of dryness is attained, and finally, delivering the dried film into a tumbler provided with a screen of the desired mesh through which the material may be discharged.

1,297,497. NUT-HUSKING MACHINE. AUGUST ROSENTHAL, West Allis, Wis. Filed Sept. 25, 1918. Serial No. 255,049. 5 Claims. (Cl. 83—30.)



4. A nut husking machine including a cylindrical concave, a shaft extending axially through said concave, projections on the inner periphery of the concave, and beater chain sections carried by the shaft.

1,297,498. CAR-CONTROL DEVICE. HAROLD ROWNTREE, Kenilworth, Ill., assignor, by mesne assignments, to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 15, 1916. Serial No. 131,450. 15 Claims. (Cl. 188—1.)



1. In a car, the combination with a fluid pressure actuated door operating engine and a car motor controller of a common valve for controlling said door engine and said car motor controller.

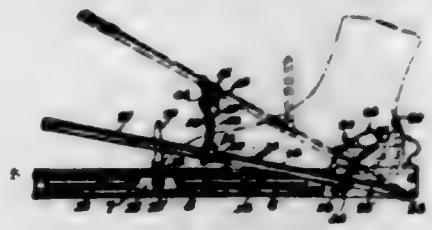
10. In a car, the combination with a fluid pressure actuated door operating engine, and a car controller, of a common manually operated means for controlling said engine and said controller and means for automatically operating said controlling means to turn said controller to its "off" position and to operate said engine to open the door when the manual control of said controlling means is released.

1,297,499. EXPLOSIVE SHELL. SAMUEL W. RUSHMORE, Plainfield, N. J. Filed June 15, 1918. Serial No. 240,121. 9 Claims. (Cl. 102—39.)



1. An ordnance shell having a projection secured to the forward end thereof extending axially, and formed with a longitudinal bore in combination with a contact fuse having a detonating charge in alinement with the bore of said projection; and, at the rear end a similar detonating charge in operative relation to the booster charge of the shell, and communicating with and in alinement with the said passage.

1,297,500. FOOT-MEASURE. WILLIAM SCHARUN, Sr., Milwaukee, Wis. Filed Sept. 20, 1918. Serial No. 254,941. 6 Claims. (Cl. 33—3.)



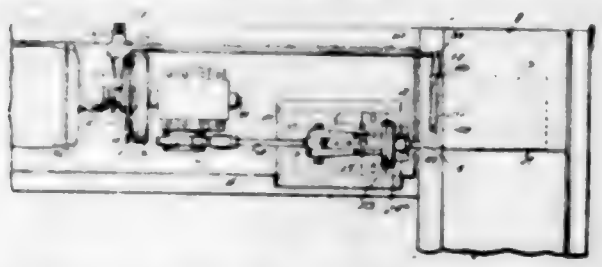
2. In a foot measure, the combination, with a support of a rule pivotally secured thereto, a protractor coöperating with said rule for measuring the inclination with respect to the base, a rule slidably mounted on the first named rule and extending at an angle thereto and adapted to engage the foot, and a member slidably mounted with respect to the second named rule and adapted to engage the foot.

1,297,501. PROTECTIVE BINDING FOR COLLARS. JAMES SCHEVENELL, New York, N. Y. Filed Aug. 31, 1918. Serial No. 252,237. 5 Claims. (Cl. 2—67.)



5. A blank for a protective collar binding, having a substantially rectangular body portion and an extension, said body portion being foldable to form inside and outside flanges, and said extension being foldable to form an inner flange, an edge of the extension being in alinement with the folding line of the body portion.

1,297,502. SCRAPING DEVICE. HENRY J. SCHNEIDER, Rochester, N. Y. Filed Aug. 22, 1918. Serial No. 251,001. 14 Claims. (Cl. 90—25.)



1. A machine for scraping lugs of battery plates embodying supporting means for the battery plates, scraping devices adapted to operate simultaneously on longitudinally-extending faces of a lug of a battery plate in the direction of the length of such lug, mechanism for reciprocating said devices in the direction of the length of the lug, and mechanism for automatically separating said devices at a certain point in their movement to permit the lug to be introduced between them.

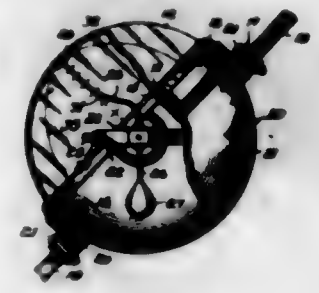
1,297,503. SPRING-MOTOR AUTOMOBILE. NELSON SHIELDS, Minneapolis, Minn., assignor of one-fourth to Harley J. Gunderson, Minneapolis, Minn., one-fourth to John A. Nelson, Minneapolis, Minn., and one-fourth to Frank W. Adsit, St. Paul, Minn. Filed Dec. 17, 1917. Serial No. 207,618. 1 Claim. (Cl. 208—163.)

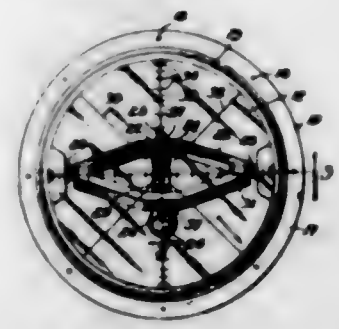


In a child's automobile the combination of a spring motor, a crank positioned at the front end of the automobile and adapted to wind said spring motor, a power shaft extending from said spring motor, and connected to the drive wheels of the automobile, a brake co-acting with said power shaft, and a foot pedal carried by the automobile and controlling means for contracting or releasing said braking means.

1,297,504. INCLINOMETER. RAYMOND SKULINA, Chicago, Ill. Filed Jan. 29, 1918. Serial No. 214,878. 5 Claims. (Cl. 33—215.)

1. A device of the character described, comprising a casing having a transparent cover with a scale thereon, an open frame member pivoted in said casing at diametrically opposed points and having a width less than its length, a bar extending transversely across the opening in said frame member and pivoted at its ends thereto, the pivotal axis of said bar being at right-angles to that of the frame, a rod projecting upward from said bar and provided with a pointer for said scale, and a weighted member depending from said bar.

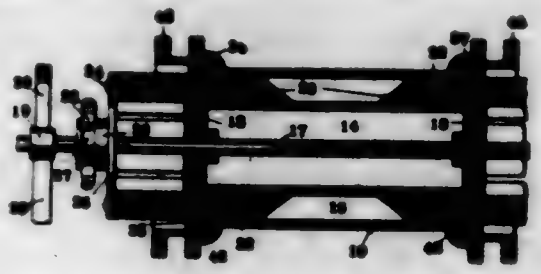




2. A device of the character described, comprising a casing having a transparent cover with intersecting scale lines thereon, a pointer having cross-arms adapted to register with said scale lines at the place of intersection thereof, and means for connecting said pointer with said casing so that the latter may have movement relatively to said pointer and means for holding said pointer in a relatively fixed position during any movement of said casing with respect to said pointer.

3. A device of the character described, comprising a casing having a transparent cover with intersecting scale lines thereon, a member pivoted in said casing at diametrically opposed points, a bar arranged transversely to said member and being pivoted thereto, a rod projecting upward from said bar and being provided at its upper end with cross-arms adapted to register with said scale lines at the point of intersection thereof, and a weighted member depending from said bar.

1,297,505. FEEDING DEVICE. CHESLEY T. SMALL, St. Louis, Mo. Filed Nov. 6, 1916. Serial No. 129,698. 7 Claims. (Cl. 221—107.)

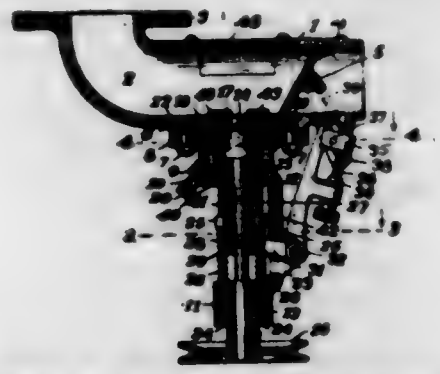


1. In a feeding device, the combination with a rotary member provided with pockets for material to be fed, a pair of fingers arranged in each of said pockets, and means for adjusting said fingers toward and away from each other to vary the size of the pockets.

1,297,506. CARBURETER. EDWIN G. STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Oct. 10, 1914. Serial No. 866,152. 4 Claims. (Cl. 261—37.)

1. In a device of the character described, an air passage constituting a mixing chamber, means for controlling

the flow of air through said passage, a rotating member for the segregation of successive charges of fuel proportional in volume to the flow of air through said passage, and reciprocating injecting means for projecting said charges successively into said passage.

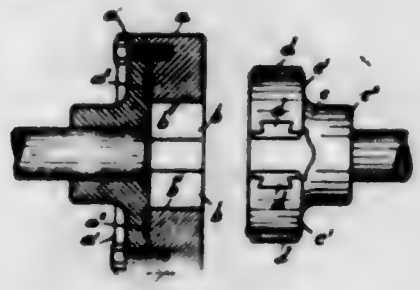


2. In a device of the character described, an air passage constituting a mixing chamber, means for controlling the flow of air through said passage, a rotating member providing chambers for successive charges of fuel to be admitted to said passage, and means for varying the volume of charges admitted to said chambers in proportion to the flow of air through said passage.

3. In a device of the character described, an air passage constituting a mixing chamber, means for controlling the flow of air through said passage, a rotating member providing chambers for successive charges of fuel to be admitted to said passage, means for varying the volume of charges admitted to said chambers in proportion to the flow of air through said passage, and reciprocating means for successively projecting the charges from said chambers into said passage.

4. In a device of the character described, an air passage constituting a mixing chamber, means for controlling the flow of air through said passage, a rotating member providing chambers for successive charges of liquid fuel, and means, operable by the rotation of said member, for projecting said charges under constant pressure into said passage.

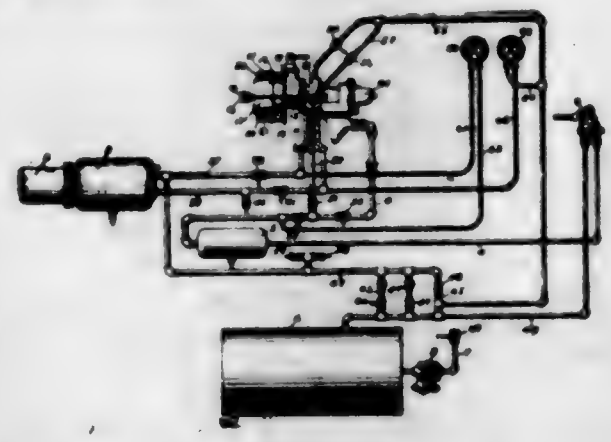
1,297,507. FLEXIBLE COUPLING FOR TRANSMISSION OF POWER. HENRY STYRAS, Sheffield, England. Filed Nov. 8, 1917. Serial No. 200,857. 3 Claims. (Cl. 64—26.)



1. A shaft coupling comprising coupling members, one of said members being formed at intervals with radially disposed tenons, cushioning blocks secured to the confronting sides of said tenons, and having portions thereof disposed upon the peripheries of said tenons, the second coupling member being formed at intervals with radially disposed pockets corresponding in contour and adapted to receive said tenons and blocks, whereby said blocks will be interposed between the confronting faces of said tenons and the walls of said pockets.

1,297,508. TRIPLE-VALVE TEST-RACK. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 19, 1916. Serial No. 72,941. 8 Claims. (Cl. 73—51.)

1. The method of testing triple valves to determine leakage past the triple valve piston packing ring which consists in subjecting the triple valve to pressures analogous to auxiliary reservoir and brake pipe pressures effecting the movement of the triple valve to and holding same in service lap position, in then reducing the auxiliary reservoir pressure, and finally noting the drop in brake pipe pressure.



2. The method of testing triple valves to determine leakage past the triple valve piston packing ring which consists in subjecting the triple valve to pressures analogous to auxiliary reservoir and brake pipe pressures effecting the movement of the triple valve to and maintaining same in service lap position, in then reducing the auxiliary reservoir pressure at a predetermined slow rate, and finally noting the drop in brake pipe pressure.

4. The method of testing triple valves for leakage past the triple valve piston packing ring which consists in subjecting the triple valve piston to the opposing pressures of a pipe analogous to the brake pipe and a reservoir analogous to the auxiliary reservoir but of relatively large volume, then reducing the brake pipe pressure to effect the movement of the triple valve piston to service lap position, then maintaining same in said position, then reducing the auxiliary reservoir pressure at a predetermined rate until the differential between the auxiliary reservoir and brake pipe pressures exceeds a predetermined differential fixed upon as necessary to effect the movement of the piston to release position in service, and finally noting the drop in brake pipe pressure.

6. In a triple valve testing apparatus, the combination with a brake pipe and auxiliary reservoir, of a stop device for preventing movement of the triple valve piston to release position upon reducing the auxiliary reservoir pressure to test the triple valve piston packing ring for leakage with the triple valve piston in service lap position.

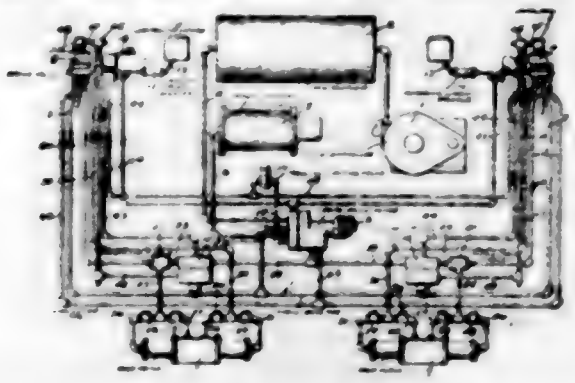
8. In a triple valve testing apparatus, the combination with an auxiliary reservoir and a supply reservoir, of a piston normally subject on opposite sides to auxiliary reservoir pressure, a stop carried by said piston for engaging the moving parts of the triple valve, and means for supplying fluid from the supply reservoir to one side of said piston to operate said stop.

1,297,509. AUTOMATIC CUT-OUT VALVE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 26, 1916. Serial No. 99,966. 16 Claims. (Cl. 188—1.)

1. The combination with fluid operated motors each controlling a car door, of means for controlling the fluid pressure on said motors and a removable device adapted to be applied at either end of the car for establishing communication from said means to one of said motors.

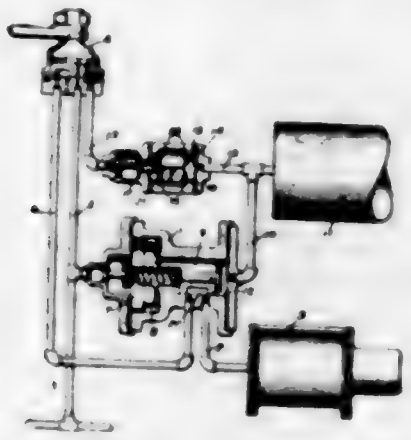
6. In a double ended safety car equipment, the combination with a fluid operated motor at each end of the car for operating a corresponding car door, a brake pipe, and an emergency valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes and for supplying fluid to said motors for opening the car doors, of a normally closed valve at each end of the car for controlling communication from

said valve device to the motors, a brake valve device at each end of the car, and a removable brake valve han-



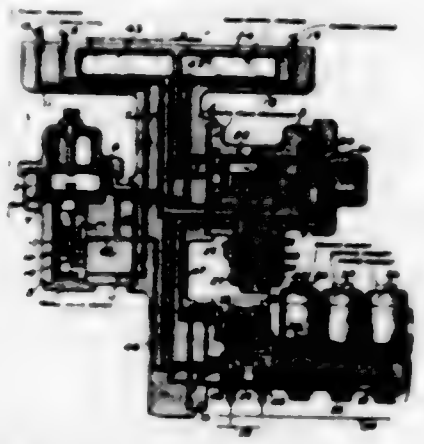
dle adapted upon application to the brake valve device at the operating end of the car for opening the corresponding valve.

1,297,510. CUT-OFF-VALVE DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1917. Serial No. 161,591. 5 Claims. (Cl. 188—1.)



4. In a fluid pressure brake, the combination with a brake valve device, a source of fluid under pressure, and a supply pipe connecting said source to the brake valve device, of a check valve normally providing communication through said pipe and operated upon a sudden reduction in pressure in said pipe for closing said communication and having a restricted port for permitting flow of fluid through said pipe in the closed position of the check valve.

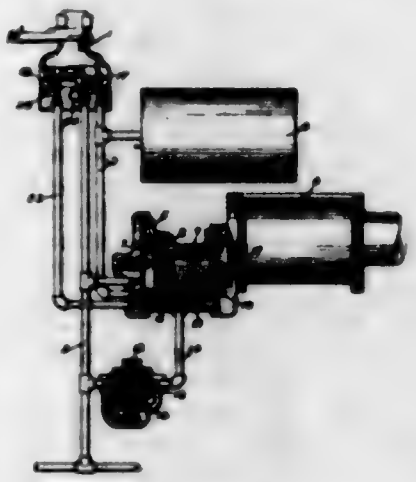
1,297,511. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1917. Serial No. 162,677. 2 Claims. (Cl. 188—4.)



1. In an electro-pneumatic brake, the combination with a brake pipe, a valve for venting fluid from the brake pipe, and a piston operated upon an increase in fluid pressure on one side for opening said valve and having means for equalizing the fluid pressures on opposite sides thereof, of a magnet controlled valve for venting fluid from the brake pipe to said piston to effect an emergency application of the brakes.

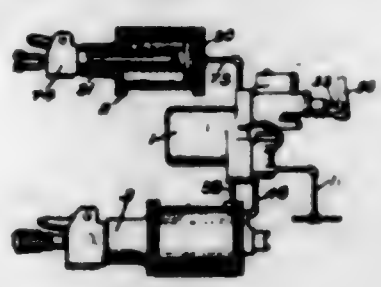
2. In an electro-pneumatic brake, the combination with a brake pipe, a valve for venting fluid from the brake pipe, and a piston operated upon an increase in fluid pressure for opening said valve, of a valve for venting fluid from the brake pipe to said piston, a magnet for operating said valve, a switch for controlling the circuit of said magnet, and a piston operated by fluid vented from the brake pipe for operating said switch.

1,297,512. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1917. Serial No. 162,679. 4 Claims. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a source of fluid under pressure and a brake pipe, of a valve device subject to the opposing pressures of said source and the brake pipe and operated upon a predetermined increase in brake pipe pressure for supplying fluid from said source to the brake pipe.

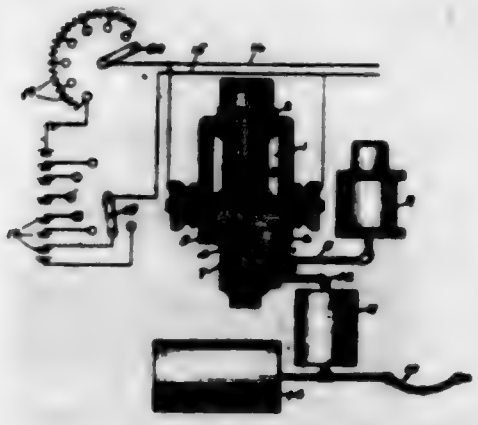
1,297,513. LOAD BRAKE APPARATUS. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 17, 1917. Serial No. 169,208. 9 Claims. (Cl. 188—11.)



1. In an empty and load brake, the combination with a brake cylinder for taking up the slack in the brake rigging and a brake cylinder for applying the brakes with force, of an additional brake cylinder for applying the brakes with greater force.

9. In an empty and load brake, the combination with a main brake cylinder, a load brake cylinder, and means operated at a predetermined pressure in the main brake cylinder for cutting in the load brake cylinder, of a supply reservoir, a valve device, and a valve operated by said means for varying the pressure on said valve device to operate same and thereby open communication for supplying fluid from said reservoir to the brake cylinders.

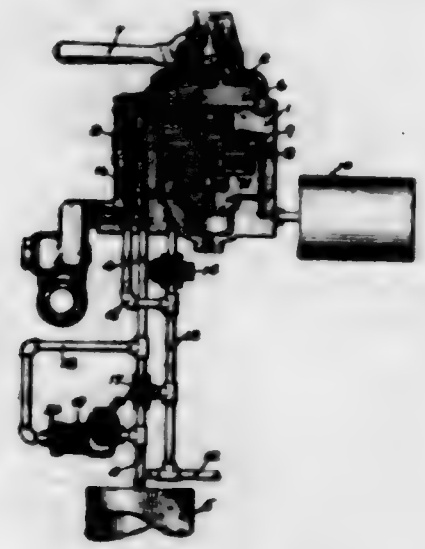
1,297,514. ELECTROFLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Sept. 27, 1917. Serial No. 193,595. 2 Claims. (Cl. 188—4.)



1. In an electro-pneumatic brake, the combination with a brake cylinder, of a magnet, means operated according to the opposing forces of the magnet and brake cylinder pressure for supplying fluid to the brake cylinder, battery units, a switch for connecting one or more battery units in circuit with said magnet, resistance units, and a switch for connecting one or more resistance units in circuit with said magnet.

2. In an electro-pneumatic brake, the combination with a brake cylinder, of a magnet, means operated according to the opposing forces of the magnet and brake cylinder pressure for supplying fluid to the brake cylinder, a train line circuit to which said magnet is connected in parallel, battery units, resistance units, and manually operated switches for connecting one or more battery and resistance units into the train line circuit.

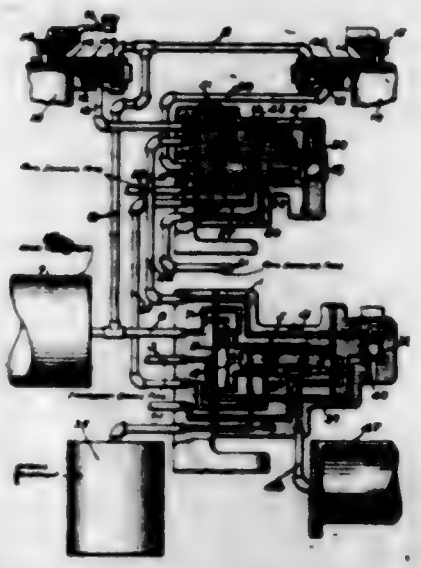
1,297,515. LOCOMOTIVE-BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 16, 1917. Serial No. 196,930. 5 Claims. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a brake pipe and a brake valve having a valve chamber containing a rotary controlling valve and a handle for operating said valve, of means for supplying fluid from the brake pipe to said chamber.

5. In a fluid pressure brake, the combination with a brake pipe, a main reservoir, and a brake valve having a valve chamber containing a controlling valve, and having an always open brake pipe connection leading to the seat of the controlling valve, of means for charging the main reservoir from the brake pipe through a restricted port and said valve chamber through a larger port.

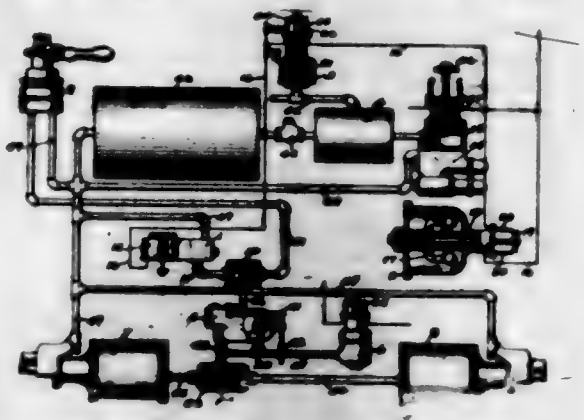
1,297,516. RAIL-SANDING DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 7, 1917. Serial No. 200,822. 4 Claims. (Cl. 188—1.)



1. The combination with a controller handle and a pilot valve operated upon release of the controller handle for venting fluid to effect an application of the brakes, of a valve device controlled by the operation of said pilot valve for supplying fluid to effect sanding of the rails.

4. The combination with a controller handle and a double beat valve operated upon release of the controller handle for venting fluid from a pipe to effect an application of the brakes and adapted upon depressing the handle to supply fluid under pressure to said pipe, of a double piston device operated in one direction by fluid supplied from said pilot valve for establishing connection through which fluid is supplied to effect the sanding of the rails at one end of the car.

1,297,517. FLUID-PRESSURE BRAKE EQUIPMENT. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1918. Serial No. 211,958. 13 Claims. (Cl. 188—1.)



2. The combination with a device for regulating the braking power according as the car is empty or loaded, of means operated by gravity upon movement of the car to dump the contents for adjusting said device for empty car braking.

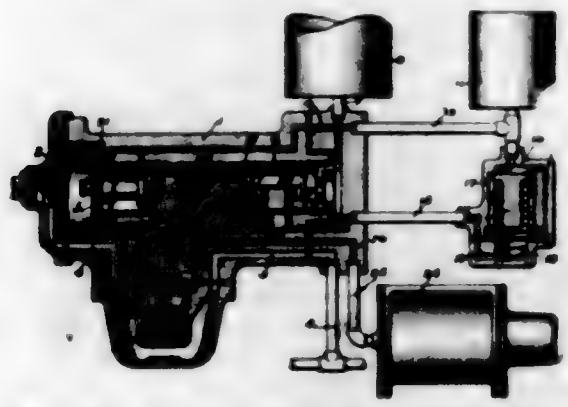
3. The combination with a device for regulating the braking power according as the car is empty or loaded, of means located along the track for adjusting said device for loaded car braking.

8. The combination with a fluid pressure brake system having a reservoir into which fluid is compressed, and an electric compressor governor for cutting the compressor into and out of action, of a safety reservoir adapted to be connected to an exhaust port in the cut in position of the governor and means operated upon a

predetermined reduction in pressure in the safety reservoir for effecting an application of the brakes.

10. The combination with a fluid pressure brake system having a main reservoir, of an electric compressor governor, a safety reservoir through which fluid is supplied to the main reservoir and adapted to be connected to an exhaust port in the cut-in position of the governor, means operated upon a predetermined reduction in pressure in the safety reservoir for effecting an application of the brakes, and a check valve for preventing back flow from the main reservoir to the safety reservoir.

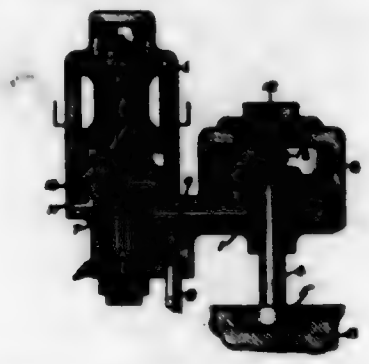
1,297,518. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1918. Serial No. 216,957. 6 Claims. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with an auxiliary reservoir and a supplemental reservoir, of a triple valve device having a port for connecting the supplemental reservoir with the auxiliary reservoir and an additional port through which fluid is supplied from the supplemental reservoir to the auxiliary reservoir.

6. In a fluid pressure brake, the combination with an auxiliary reservoir and a supplemental reservoir, of a triple valve device having a main valve provided with a port for establishing connection in release position from the supplemental reservoir to the auxiliary reservoir and a cut out valve device operated upon movement of the triple valve device from application to release position for cutting off the supply of fluid from the supplemental reservoir to the auxiliary reservoir.

1,297,519. CAR-DOOR-CONTROLLING DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Feb. 20, 1918. Serial No. 218,358. 5 Claims. (Cl. 105—265.)

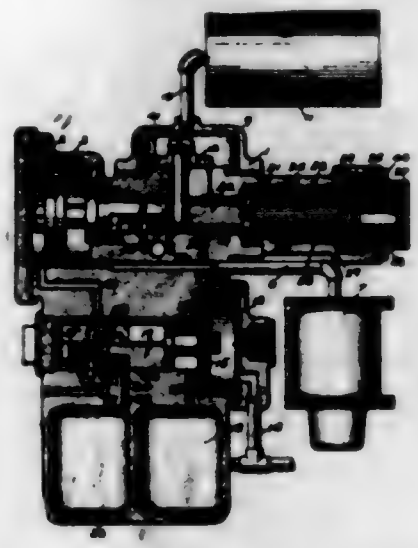


1. The combination with a car door, of an electrically controlled device for normally locking the door and a contact device at a station for controlling the circuit of said door locking device.

3. The combination with a car door, of a fluid operated piston device for normally locking the door, a magnet controlled valve device for varying the fluid pressure of said piston, and a contact device at a station for controlling the circuit of said magnet controlled valve device.

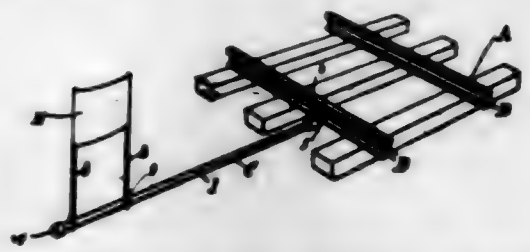
5. The combination with a car door, of an electrically controlled device adapted to lock the door when its electric circuit is open, a contact device at a station for closing said circuit, and a normally open manually operated switch for closing the circuit in an emergency.

1,297,520. FLUID-PRESSURE BRAKE DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1918. Serial No. 227,179. 4 Claims. (Cl. 188—1.)



4. In a fluid pressure brake, the combination with a brake cylinder, of a valve device having a piston subject to the opposing pressures of the brake cylinder and an application chamber for controlling the application of the brakes, a piston subject to the opposing pressures of the brake cylinder and a spring and adapted upon a relative movement of said piston to oppose a further movement thereof, and a piston subject to the opposing pressures of the brake cylinder and a spring for assisting the release movement of said piston.

1,297,521. TRAIN-FLAGGING DEVICE. ELMER L. VAN DERSAR, St. Paul, Minn. Filed Nov. 20, 1918. Serial No. 263,412. 6 Claims. (Cl. 246—477.)



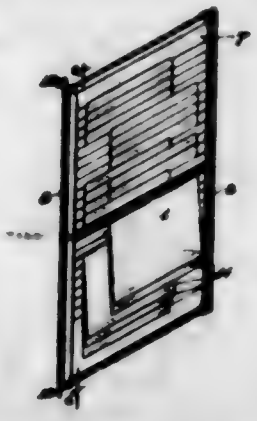
1. In a device of the class described, the combination with a rail, of a horizontal member detachably secured at one end to the base of the rail, and projecting outwardly away from the latter and a target removably supported on and above the outer end of said horizontal member, said horizontal member comprising a tube closed at its inner end and having a removable closure at the other end, for the purpose specified.

1,297,522. CARD-INDEX HOLDER. JOE W. WIRT, Chicago, Ill. Filed Sept. 17, 1917. Serial No. 191,685. 8 Claims. (Cl. 129—16.)

1. A card index holder, comprising a rack formed of a plurality of partition cards superposed and projecting successively one beyond the other, means securing said cards together in said superposed projecting relation, and a frame having laterally disposed grooves at the sides thereof spaced apart substantially the length of said cards and adapted to receive the lateral edges thereof for the purpose of supporting said rack in position to permit record cards to be filed between said partition cards.

8. A card index holder, comprising a plurality of partition cards superposed and projecting successively one beyond the other, and a record card for use with said

holder having overlapped parts hingedly connected together, one of said parts being adapted to be inserted be-



tween adjacent partition cards so as to support the other part exposed on said holder.

1,297,523. FASTENING DEVICE FOR WALL-BOARDS. JULIUS H. B. WITH, Port Townsend, Wash., assignor of one-half to Samuel V. Peach, Port Townsend, Wash. Filed Feb. 21, 1917. Serial No. 150,137. 2 Claims. (Cl. 72—116.)



1. A blind fastener for wall boards to be placed between the wall board and the stud to which the wall board is to be fastened, consisting of a thin, flat, metal plate having an opening therein to receive a fastening means to secure the plate to a stud and provided on the side toward the wall board with struck up prongs having pointed ends and so bent that they will enter the wall board and spread laterally to engage and retain it when the wall board is forced against the fastener.

1,297,524. PROCESS OF PURIFYING NITRO-AROMATIC COMPOUNDS. HARRY L. WOLLENBERG and CHARLES A. BIGELOW, New York, N. Y., assignors to Aetna Explosives Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 9, 1917. Serial No. 185,334. 15 Claims. (Cl. 23—24.)

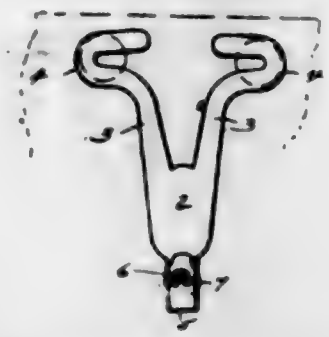
1. The process of treating nitro-aromatic compounds with a solution of an alkaline sulfite.

1,297,525. APPARATUS FOR STERILIZING LIQUIDS. LORENA M. WOOD, Spokane, Wash., assignor of one-half to Joseph E. Gumm, Kelso, Wash. Filed Dec. 19, 1917. Serial No. 207,989. 11 Claims. (Cl. 99—2.)



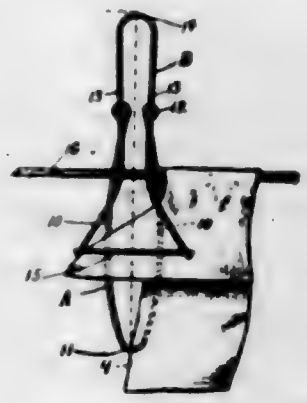
11. In a sterilizing apparatus the combination with a rotatable spindle carrying a housing, of a revoluble crank arm carried by the housing and movable relative to the housing, and an ultraviolet lamp carried by said crank arm.

1,297,526. GARMENT-SUPPORTER. LEONARD WOODS, St. Louis, Mo. Filed May 17, 1917. Serial No. 169,246. 2 Claims. (Cl. 241—25.)



1. An article of the character described comprising a body portion, with arms rigidly connected thereto and extending upward like a V and terminating at the top in U-shaped bows, horizontally disposed, constituting shoulders adapted to engage buttons on the inside of the waistband of trousers, and fastening means located below said bows on said body portion, adapted to be temporarily secured to a portion of the adjacent shirt of the wearer, to form a point of support for the device,—said point of support being below said points of engagement to said trousers.

1,297,527. CLOTHES-PIN. BEN WRIGHT, Blackshear, Ga. Filed Sept. 25, 1916. Serial No. 122,025. 1 Claim. (Cl. 24—263.)

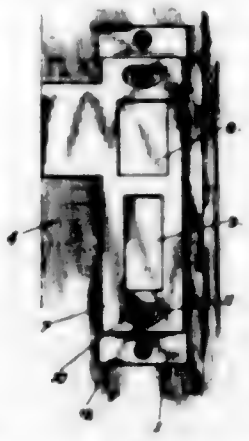


A clothes pin comprising a longitudinally bowed member including spaced arms having a connecting bight portion at one end and having eyes at their opposite ends, and a second correspondingly bowed member including spaced arms slidably and frictionally engaged through said eyes and having a connecting bight portion at one end, the opposite end portions of the last named arms extending away from the eyes between and beyond the arms of the first member, and a transverse bar connecting the extremities of said last-named arms and slidably and frictionally engaged by the arms of the first member in clamping relation thereto.

1,297,528. ADJUSTABLE STRIKING-PLATE. FENTON E. WRIGHT, Lodi, Calif. Filed Aug. 26, 1918. Serial No. 251,396. 2 Claims. (Cl. 70—15.)

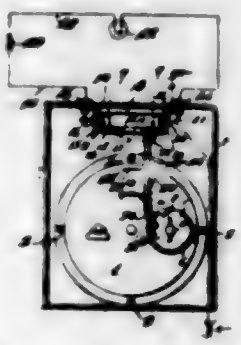
1. A striking plate for door locks comprising a plate rigidly secured to the door casing, said plate being provided with a longitudinal rectangular orifice therein and vertical slots above and below said orifice, and a plate slidable on the outer face of the first named plate provided with rectangular orifices therein to receive the door catch and lock therethrough, and horizontal slots above and below said orifices substantially in alinement with

the first named slots whereby the two plates may be bolted together, the last named plate being capable of horizontal



and vertical adjustment with regard to the first named plate.

1,297,529. TIME-CONTROLLED CIRCUIT-BREAKER. SAMUEL E. WRIGHT, Augusta, Kans. Filed Dec. 20, 1917. Serial No. 208,063. 1 Claim. (Cl. 161—27.)



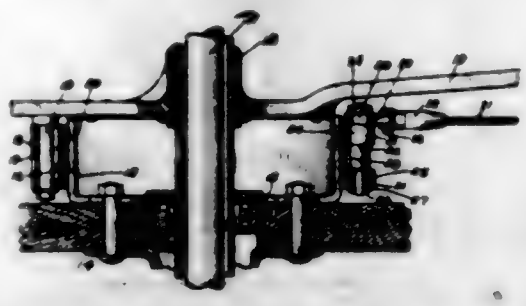
The combination with an electric circuit, of a switch member in said circuit normally closed, a stationary limiting abutment for said member, a switch actuating device, pivotally suspended from the member and being spring tensioned, a predetermined actuated shaft, a disk fixed on the shaft and having an annular flange on its marginal edge, the inner circumference of said flange having a projection provided with an abrupt shoulder, the lower end of the switch actuating device being curved and overlying the marginal edge of the flange of the disk, said curved end having a lateral lug engaging the inner surface of the flange in the path of said projection, whereby, upon revoluble movement of the shaft at a predetermined time, said projections will contact with the lug and open the switch member.

1,297,530. HOSIERY. CONRAD G. YOUNG, Twin, Wash., assignor of one-half to George W. Kuppler, Seattle, Wash. Filed Jan. 10, 1918. Serial No. 211,724. 1 Claim. (Cl. 2—22.)



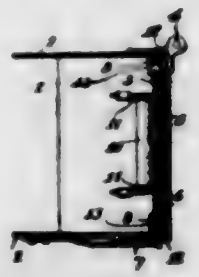
A hose of the class described comprising a foot portion having a leg portion formed in prolongation thereof, and a plurality of gussets in the hose at the point of connection of the foot portion with the leg portion whereby a heel pocket is provided in any position in which the hose is worn and the hose snugly and smoothly fits the foot without wrinkling or folding at the instep.

1,297,531. BAND-BRAKE. AXEL G. AHLGREN, Bridgeport, Conn. Filed June 10, 1918. Serial No. 239,246. 2 Claims. (Cl. 74—37.)



1. A brake comprising a band having interlocking eyes at its ends, a shaft mounted to oscillate in the eyes on one end of the band and having an eccentric lying in an eye on the other end of the band, one end of said shaft being reduced for the purpose set forth, a bushing on said reduced end which engages the corresponding eye, and a brake lever engaging the shaft.

1,297,532. FILM-GUIDE FOR MOTION-PICTURE CAMERAS. CARL E. AKELEY, New York, N. Y., assignor to Akeley Camera, Inc., New York, N. Y., a Corporation of New York. Original application filed Apr. 27, 1916, Serial No. 93,929. Divided and this application filed Oct. 12, 1916. Serial No. 125,195. 3 Claims. (Cl. 88—17.)



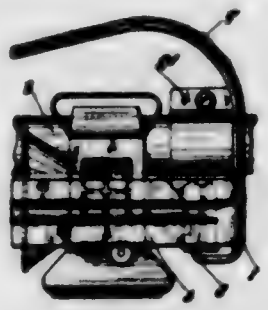
1. In a motion picture camera, the combination with the film and on opposite sides of the field of exposure, of guides between which the edges of the film pass, said guides forming curved paths to impart a corresponding curvature to the edges only of the film while causing the intermediate portions to be projected in a plane away from the lens.

2. In a motion picture camera, the combination with the film and on opposite sides of the field of exposure, of guides between which the edges of the film pass, said guides forming curved paths which impart a corresponding curvature to the edges only of the film while projecting the intermediate portion in a plane away from the lens, anti-friction rollers disposed in front of the film and adapted to receive any contact on that side from the film, and springs for maintaining said rollers in position.

1,297,533. BRACKET FOR SUPPORTING LAMPS AND THE LIKE. PERCY B. BENNETT, Sydenham, London, England. Filed Oct. 14, 1918. Serial No. 258,068. 3 Claims. (Cl. 240—58.)

3. A bracket for supporting lamps and the like comprising a 4-armed plate, attaching means on one arm of said plate adapted to secure it upon the object on which the bracket is to be mounted, another arm of said plate being bent to a U-shape and adapted to carry a lamp, a third arm of said plate extending laterally thereof being bent at an angle so as to extend forwardly of said plate to a distance sufficient to provide a lateral stiff protecting

member for a lamp carried by said bracket, and a fourth arm of said plate extending upwardly from the same be-



ing bent to provide an overhanging protector extending over the space where a lamp is intended to be accommodated on the bracket.

1,297,534. CONSTRUCTION OF METAL DOORS. REME A. BRAUNSDORF, New York, N. Y., assignor to Standard Varnish Works, Elm Park, Port Richmond, Staten Island, N. Y., a Corporation of New York. Filed July 15, 1914. Serial No. 851,121. 3 Claims. (Cl. 189—46.)



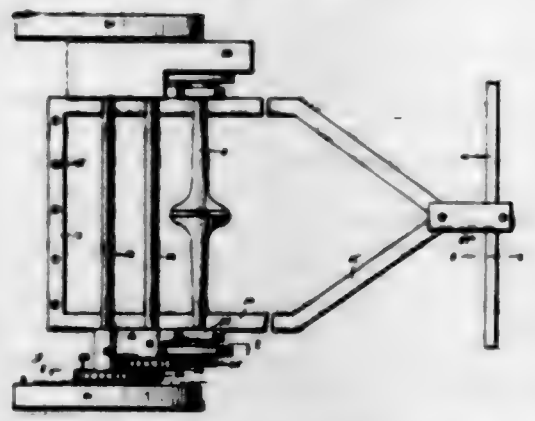
1. A metal door comprising channel bars having the flanges of the adjacent bars oppositely disposed, said flanges being provided with longitudinal recesses, horizontally and vertically arranged asbestos lining strips supported in said recesses, and a sheet metal shell covering and securing said bars and strips together.

1,297,535. PNEUMATIC TRIGGER-PULL FOR FIREARMS. ALEXANDER BOYNTON, U. S. National Army. Filed July 16, 1918. Serial No. 245,189. 6 Claims. (Cl. 42—69.)



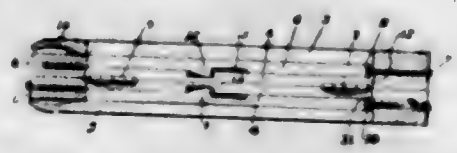
1. A firearm containing firing mechanism with a manual trigger, and having pneumatically actuated means operatively connected with the firing mechanism and set with the trigger, to normally actuate said firing mechanism independently of the trigger, leaving said trigger unobstructed for the free application of the finger for manual operation of the firearm at times when a pneumatic impulse cannot be conveniently applied to said firing mechanism by said means.

1,297,536. TRACTOR DEVICE. CHAUNCEY L. BROWN, Northfield, Minn. Filed Oct. 16, 1917. Serial No. 196,960. 6 Claims. (Cl. 180—16.)



1. In a device of the class described, a frame, an axle thereon, traction wheels on said axle, a countershaft on said frame, gearing devices designed to be mounted on the axle of an automobile after the removal of the rear wheels therefrom, means for operatively connecting said gearing devices with said tractor wheels, means for detachably attaching said frame to the front and rear axles of an automobile, whereby said first gearing devices in different sizes may be mounted on the automobile axle, and properly connected with the tractor wheels for securing different gear ratios between the automobile axle and said tractor wheels, said means including reversible bearing blocks for the automobile axle having journal openings off center vertically.

1,297,537. LEG-REST. JOHN CONRAD BRUNSARD, Callister, Wyo. Filed Aug. 9, 1918. Serial No. 249,180. 5 Claims. (Cl. 155—9.)



1. A device of the character specified comprising two portions, each consisting of a central and end sections, the end sections being hinged to the ends of the central section and the adjacent faces of one end section and the central section being rabbeted to receive the other end section to permit the sections to fold smoothly upon each other, the central sections of the two portions being hinged together to permit the folded portions to fold upon each other, one end section having on its under face and intermediate its ends a transverse rib and a groove below the rib for engaging the foot rest of a car chair, the other end section having on its under face and at its end a transverse recess for engaging the edge of a seat of a railway car, the central sections of the two portions being transversely recessed to receive the ribs.

1,297,538. CUFF. RICHARD BRUSSEL, New York, N. Y. Filed Feb. 19, 1918. Serial No. 218,169. 2 Claims. (Cl. 2—79.)



1. The combination of a sleeve, a foldable cuff attached to the sleeve, and a flap secured within the sleeve and cuff and having a free portion extending toward the outer end of the cuff to receive therebetween the free portion of

the cuff when the latter is folded inwardly, said cuff having button holes located outwardly beyond the flap, the adjacent edges of the flaps being spaced from said button holes to not interfere with the latter, the mid portion of the flap being sufficiently wide to retain the folded portion of the cuff when the latter is between the flap and the inner portion of the cuff.

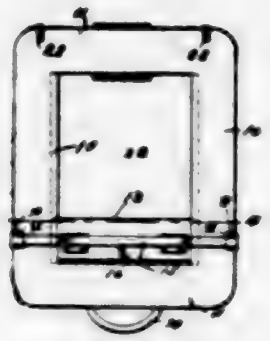
2. The combination of a sleeve, with a cuff secured along one edge of the sleeve and adapted to be folded inwardly and outwardly beyond the sleeve, with a flap extending along the inner surface of the cuff and secured at its inner portion and free from the cuff at its outer portion to receive therebetween the outer edge portion of the cuff when the latter is folded inwardly, said cuff having button holes, the outer corner edge portions of the flap receding from the outer edges of the cuff, said outer corners of the flap being spaced from said button holes to not interfere with the latter.

1,297,539. CAM-CLAMP. ADRIAN P. BULL, Ravenna, Ohio. Filed May 23, 1918. Serial No. 236,156. 2 Claims. (Cl. 144—289.)



1. A work clamp comprising a base, a standard extending from said base and having a longitudinal slot, a jaw slidable on said standard, a cam for forcing said jaw toward said base, said cam having a fulcrum positioned slidably in said slot, and a set screw threaded in the outer end of said standard and projecting into said slot with its inner end bearing against said fulcrum, whereby to adjust the latter in said slot according to the thickness of the work.

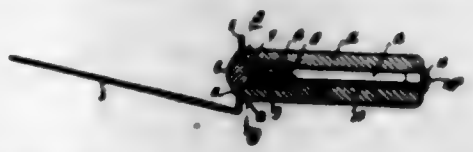
1,297,540. PORTABLE WINDOW-SEAT. JOHN H. F. BULLWINKEL, Weehawken, N. J. Filed Apr. 16, 1917. Serial No. 162,353. 1 Claim. (Cl. 20—87.)



A window seat of the character described comprising a frame having an open center, the opposite edges of said open center being formed with guideways, a foldable leg member having slidable connection with the guideways, a seat body carried by the frame and means for detachably securing the frame to a window sill.

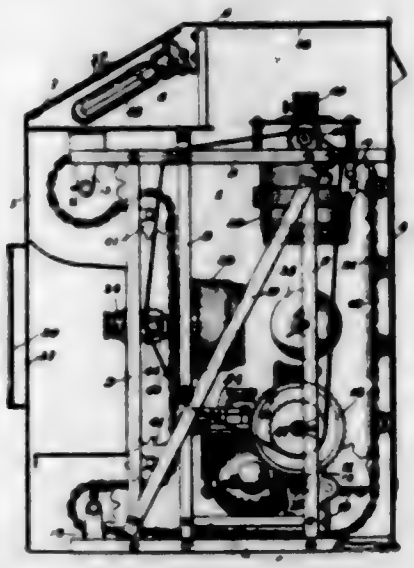
1,297,541. STUCCO-TOOL. EMMETT N. CAMPBELL, Moline, Ill. Filed Mar. 26, 1918. Serial No. 224,826. 1 Claim. (Cl. 72—136.)

In a device of the class described, the combination of a comparatively broad blade having a wall at one end, said wall having a squared opening formed therethrough at its central portion and in alinement with the central portion of said blade, a shank consisting of a squared body having a head on one end, said squared shank extending through the opening of said wall, thus keying said wall upon said shank, said shank having a threaded socket extending therein to form its inner end, a handle having a squared socket extending therethrough from one end, said handle also having a bore extending therethrough from the remaining end and communicating with the inner end of said last mentioned socket, and a headed retaining



bolt extending through said bore and being screwed into the socket of said shank, thus holding said handle upon said shank, whereby pressure may be applied to said handle thence to the said blade through the medium of said shank, without twisting of the blade as pressure is applied adjacent either side edge of said blade.

1,297,542. DISPLAY APPARATUS. CHARLES H. CARTER, Brooklyn, N. Y., assignor to Montaigu M. Sterling, New York, N. Y. Filed Apr. 5, 1918. Serial No. 226,883. 11 Claims. (Cl. 88—38.)



1. In a display apparatus, in combination, a casing having an exposed screen, a lens system therefor, a source of illumination, means for conveying slides successively past said screen and lens system, for projection upon said screen; a fixed transparency, a separate source of illumination therefor, and means for energizing said sources of illumination separately in succession, whereby a slide and the fixed transparency are alternately illuminated.

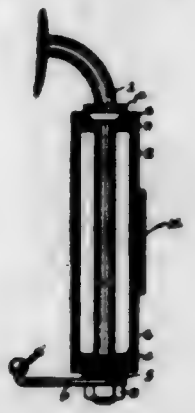
7. In a display apparatus having a casing, a main compartment thereof, with exposure screens, and containing a series of slides to be displayed successively, for predetermined periods, on said screens, a lamp therefor, a separate compartment exposing a transparency, a lamp therefor, means for alternately illuminating said lamps during determined periods, and means for coördinating the display periods of said slides with the illuminatory periods of their respective lamps.

9. In a display apparatus having a carrier composed of parallel sprocket chains, and means for moving said chains, the combination of slide holding frames each having a pair of oppositely and laterally extending lugs, with holes therein, a link of each chain having studs to enter the holes in said lugs to connect the frame and carrier, said studs having opposed recesses, and spring members, mounted on said lugs, to releasably enter said recesses to lock the frames in position.

10. In a slide holding device, in combination, a frame, lateral guide ways thereon for the reception of a slide, and spring strips secured to said frame, said strips terminating at their free ends in coiled portions capable of

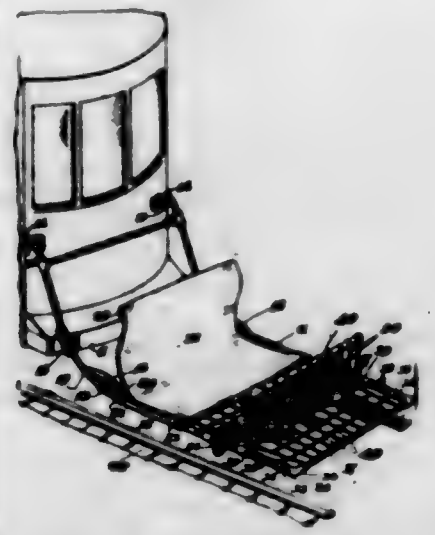
tentionally and releasably snapping over the frame edge, at its entrance, to lodge upon the slide outer edge and thus retain the slide lengthwise within the frame.

1,297,543. AUTOMATIC SPOT-LIGHT APPARATUS. MARTINUS CRICK, San Diego, Calif. Filed Apr. 1, 1918. Serial No. 225,987. 3 Claims. (Cl. 240—62.)



1. In an apparatus of the class described, the combination with a spot light, of a shaft revolubly mounted in ball bearings, supporting said spot light, a cylindrical member in each end of which the said ball bearings are mounted, an inverted U bar, rigidly secured to the front frame of the vehicle to which said cylindrical member is secured, an arm adjustably secured to the lower end of said shaft, a connecting rod connected to said arm, a bell crank pivotally mounted on the frame of the vehicle to which the other end of said connecting rod is connected, another connecting rod secured to the other member of said bell crank and a lever secured to the steering lever of the vehicle to which the opposite end of said connecting rod is connected.

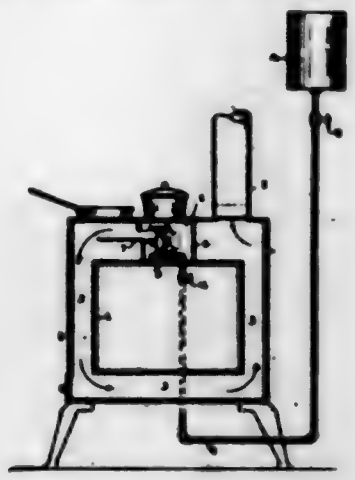
1,297,544. VEHICLE-FENDER. JOSEPH CHVOJKA, Philadelphia, Pa. Filed Nov. 6, 1918. Serial No. 261,231. 7 Claims. (Cl. 293—38.)



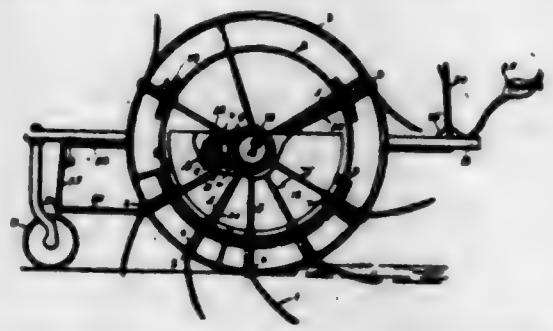
1. A fender structure including a main support; a cradle rack the upper portion of which curves forwardly; and a guard fender located adjacent the forward end of said main support and automatically movable into an upright position to provide a retaining pocket between it and the cradle rack, substantially as described.

1,297,545. COOKING-STOVE. CHARLES F. COOK, Houston Heights, Tex. Filed Feb. 26, 1917. Serial No. 150,993. 1 Claim. (Cl. 126—44.)

A stove whose walls are formed of sheet metal, an oven formed of top, bottom, front and rear walls extending from end to end of the stove but spaced from the corresponding walls forming a flue around the oven, a transverse partition between the top of said oven and the top of the stove, a smoke outlet communicating with the flue on one side of said partition, a combustion chamber on the other side of said partition, the top of the oven forming the bottom wall of the combustion chamber and an apron arranged in front of the combustion chamber and forming the front wall thereof provided to restrict the flue and deflect the blaze up against the top of the stove.



1,297,546. AGRICULTURAL IMPLEMENT. DAVID S. COOK, Salt Lake City, Utah. Filed May 19, 1917. Serial No. 169,793. 5 Claims. (Cl. 97—38.)



1. An agricultural implement comprising a wheel supported frame; an axle in said wheels; a plurality of pairs of fork handles pivoted on said axle; a bar connecting each pair of said handles; a plurality of tines carried in bars parallel with and carried by the bars first mentioned; and means to hold said tines in a rigid position while they are forced into the soil by the weight of the implement as it is drawn over the tines while in the soil.

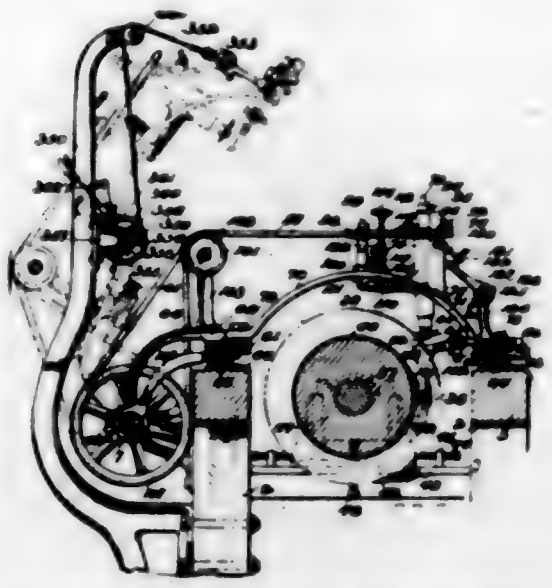
3. An agricultural implement comprising a wheel supported axle; a plurality of fork handles pivoted thereon; a transverse bar connecting the said handles in pairs; another bar parallel thereto; a plurality of curved tines secured in one of said bars; and means to move said bars and their connections in an orbit around the axle from the rear of the machine to the front.

5. An agricultural implement comprising a wheel supported axle; a plurality of fork handles pivoted thereon; transverse bars one of which connects the said handles; a plurality of curved tines secured in one of said bars; means to move said bars and their connections in an orbit around the axle, said means consisting of radially disposed arms adapted to be engaged by one of said bars; eccentric cams on which said arms are mounted to move said arms longitudinally; and sprocket wheels and chains to impart motion to said arms.

1,297,547. SAW-FILING MACHINE. REUBEN BENJAMIN CREASY, Ballinger, Tex. Filed Jan. 16, 1918. Serial No. 212,118. 104 Claims. (Cl. 76—40.)
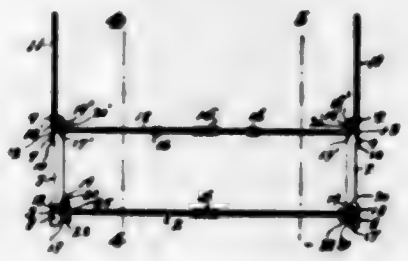
1. In a machine of the class described, means for rotating a plurality of saws, a series of abrading elements, means for imparting motion thereto, means for rotating all of said elements in unison, the said abrading elements being designed to work upon a plurality of series of saws

into which the entire number of saws is theoretically divided, means for simultaneously intermittently moving the abrading elements into and out of working relation each to any saw of the respective series to successively



act upon its teeth in the rotation of the saws, and means operating automatically, after all of the teeth of one saw of each series have been acted upon, to simultaneously shift the abrading elements into position each for action upon another saw of the respective series.

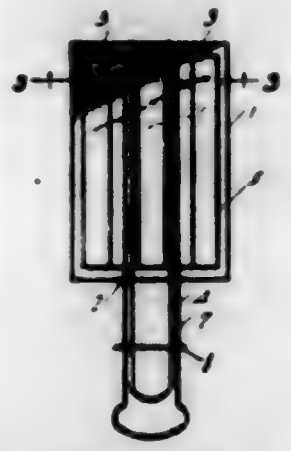
1,297,548. COLLAPSIBLE RACK. LEVI I. DARBY, Newark, N. J. Filed Mar. 6, 1918. Serial No. 220,683. 5 Claims. (Cl. 53—1.)



1. A folding carrier comprising corner pieces, means interconnecting laterally opposite corner pieces, upwardly extending handle loops secured to and between laterally opposite corner pieces, a jar supporting bottom frame member pivotally connected to said corner pieces, a jar embracing top frame member pivotally connected to said corner pieces in vertically spaced relation to said bottom member, one pair of laterally opposite corner pieces having inwardly extending stop members adapted to engage the under side of said bottom member to limit the unfolding movement of said carrier, the opposite pair of laterally opposite corner pieces having inwardly extending tongues, and a slide bar associated with said bottom member and said tongues to prevent folding movement of said carrier.

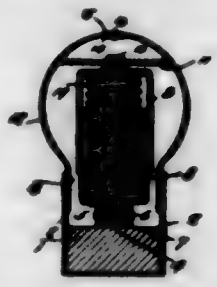
2. In a folding carrier normally vertical corner pieces of flat stock, a jar supporting bottom member, a jar embracing top member spaced above said bottom member, the ends of said members having portions serving as journals, the inwardly presented marginal edges of said corner pieces being cut away to provide semi-circular bearing seats, and free tongues formed in the marginal edges of said corner pieces having reverse semi-circular seat portions above said bearing seats, said tongues being adapted to be bent out of the respective planes of said corner pieces to provide gaps admitting said journal portions of said bottom and top members into said bearing seats and then bent back into alinement with the latter to cause their reverse seat portions to straddle said journal portions to prevent displacement of said journal portions from said seats.

1,297,549. TOASTER AND WARMER. MELVILLE L. DE WITT, Holliston, Mass. Filed Apr. 10, 1918. Serial No. 227,734. 1 Claim. (Cl. 53—5.)



A toaster and warmer, including a casing having an open face, hooks extending inwardly from one end of the casing, wires extending across the casing and constituting food supporting means, said wires projecting beyond the casing to form a handle, a grid extending across the hooks and within the casing, a handle at one end of the grid, and legs upon the other end of the grid and movable into engagement with one wall of the casing, when the grid is swung toward the wires, thereby to press one end of the grid into engagement with the hooks.

1,297,550. AUTOMOBILE-TIRE. ROBERT E. ESSE, Huttig, Ark. Filed Sept. 30, 1918. Serial No. 256,261. 1 Claim. (Cl. 152—8.)



In a device of the class described, a felly having side plates; a resilient tread comprising separable parts having flanges received slidably between the side plates; transverse rods uniting the parts of the tread; casing disposed in pairs, the casings of each pair being inclined toward each other circumferentially of the felly, each casing including telescoped inner and outer tubular members, the outer tubular members being pivotally supported on the rods; means for pivotally connecting the inner members of the casings with the felly; and springs within the casings, the ends of the springs abutting against the inner and outer tubular members.

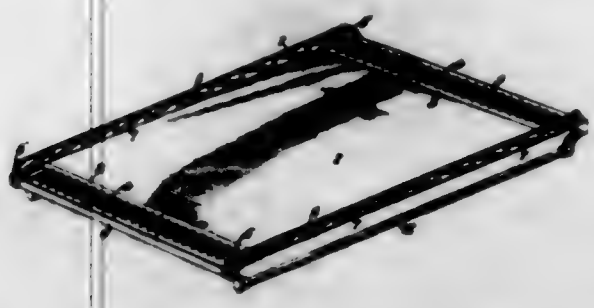
1,297,551. MEANS FOR HOLDING COVERS ON BEDS AND THE LIKE. JOHN S. EDDY, Los Angeles, Calif. Filed Aug. 5, 1918. Serial No. 249,560. 4 Claims. (Cl. 5—22.)



1. In a bed clothes holder, the combination with a mattress, of attaching members secured to the opposite

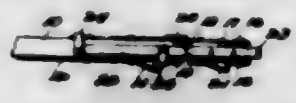
edges of said mattress near one end, a rigid bar extending across the end of said mattress and adapted to lie between the upper and lower edges thereof, and means on the ends of said bar and adapted to be secured to said attaching members, for frictionally holding said bar in position on the mattress.

1,297,552. SPRING-MATTRESS. BENJAMIN B. ENGLANDER, Brooklyn, N. Y., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Filed Sept. 23, 1915. Serial No. 52,143. 21 Claims. (Cl. 5—39.)



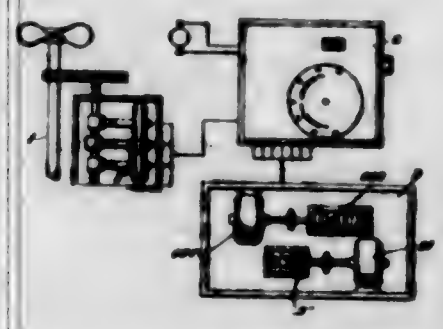
1. A spring mattress comprising a stretched bottom and an upright side guard extending along each longitudinal edge of said bottom and comprising a lengthwise extending cable, and a series of short upwardly extending helical springs, each having its opposite ends connected to said cable and bottom and forming the sole support for the cable between the ends thereof, said helical springs being located at different angles relatively to the bottom and cable.

1,297,553. DRAFT-TONGUE EXTENSION. ALVAN FIELD, Aline, Okla. Filed May 2, 1918. Serial No. 232,106. 5 Claims. (Cl. 21—36.)



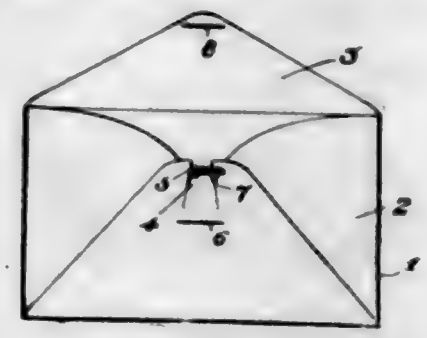
3. An attachment for draft tongues comprising a supplemental tongue of substantially the same size transversely as the main tongue and adapted to be disposed in advance of the main tongue, said supplemental tongue being freely separable from the main tongue and provided with a depending neck yoke step and spaced longitudinal arms adapted to embrace the main draft tongue.

1,297,554. SPEEDOMETER. HANNIBAL C. FORD, New York, N. Y., assignor, by mesne assignments, to Ford Instrument Company, Inc., a Corporation of New York. Filed Jan. 15, 1916. Serial No. 72,216. 35 Claims. (Cl. 235—61.)



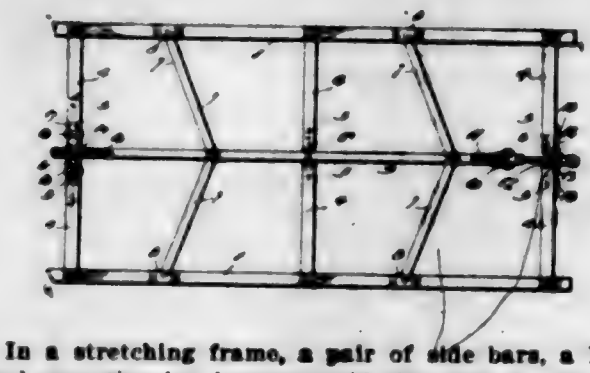
17. In a speedometer, a part adapted to be constantly rotated, speed indicating mechanism having a speed indicating part adapted to indicate unit changes in speed by unit changes in angular displacement, means for periodically establishing a driving connection between said parts whereby said speed indicating part is angularly displaced directly proportional to the speed of the constantly rotating part and additional means for automatically displacing said speed indicating part an additional angular distance which varies with the speed of the constantly rotating part.

1,297,555. ENVELOP. SYLVESTER FRESCHI, Keansburg, N. J. Filed Mar. 23, 1916. Serial No. 86,227. 1 Claim. (Cl. 229—84.)



As a new article of manufacture, a one piece envelop comprising a body having bottom, top and end flaps, said bottom and end flaps being folded together to form a pocket structure, said top flap having a slit formed therein, said bottom flap having a pair of inwardly extending slits, thus forming a tongue integral with the bottom flap and within the contour of the edge of the bottom flap, whereby before the envelop is used, said tongue will fit closely within the bottom flap to be shielded from injury, said tongue having adhesive material upon its inner surface when in a normal position, said bottom flap having a slit formed therein below the base of the tongue, so that when the top flap is folded over the said tongue is passed through the slit thereof for holding the top flap in a closed position, and said tongue then is passed into the slit of the bottom flap, whereupon the adhesive surface thereof will adhere to the inner surface of the bottom flap for firmly holding the tongue against displacement and also preventing the adhesive material from engaging the contents of the envelop.

1,297,556. STRETCHING-FRAME. SAMUEL FRIEDLANDER, New York, N. Y. Filed Aug. 26, 1918. Serial No. 251,463. 3 Claims. (Cl. 45—24.)

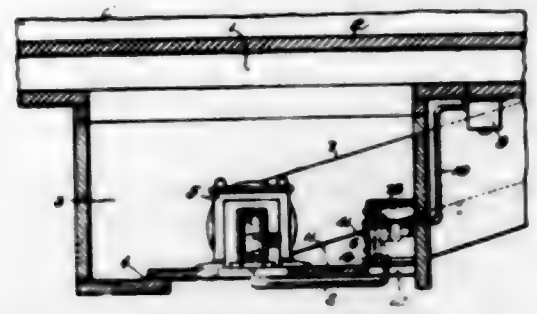


1. In a stretching frame, a pair of side bars, a longitudinal operating bar between said side bars, toggle links extending from said side bars to said operating bar, a screw for shifting said operating bar longitudinally, a transversely disposed elongated plate on which said screw is mounted, guides in which the ends of said plate are slidably received and transverse bars extending toward each other from said side bars and carrying said guides.

1,297,557. GOVERNOR FOR CONTROLLING THE SUPPLY OF LIQUID FUEL TO STOVES OR HEATERS. JOHN F. GOODWIN and GEORGE W. CAULKINS, Boston, Mass. Filed Jan. 10, 1918. Serial No. 211,284. 12 Claims. (Cl. 236—6.)

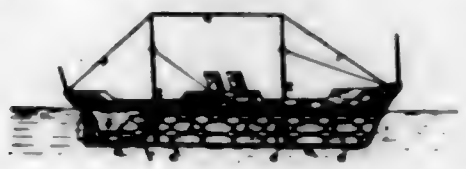
1. In a governor to control the flow of liquid fuel to a stove or heater, a base support, with a circular, horizontal opening therethrough; a sheet metal governing

receptacle having an exteriorly spherical convex face and an interior circular plane surface, and designed to contain a suitable expansible liquid; means to hold said receptacle in operative position in relation to said circular opening through said base support; and a ventilating and protecting ring having its inner edge resting



upon the convex surface of the receptacle, and its outer edge contacting the base support; and means to secure said ring and receptacle in operative position, thus permitting air to pass through said support, and come into contact with the circumferential edge portions of the spherical surface of the receptacle.

1,297,558. SKELETON HULL FOR SEA-GOING VESSELS. THOMAS FRANCIS GRAY, Peekskill, N. Y. Filed Nov. 22, 1917. Serial No. 203,818. 2 Claims. (Cl. 114—68.)



1. An unsinkable vessel comprising a normal above-water body, a downward extension of the stern end of said body between the water line and the hull, an under-water skeleton hull comprising a multiplicity of small air-tight tanks the tanks connected by air-tight tubes the tubes and tanks constituting the frame of the under-water hull, the tanks arranged in rows one above the other between the above-water hull and the keel, masts erected from the keel and braces connecting the tops of the masts and connecting the tops of the masts with the stern and the bow of the vessel, and means for flooding part of the tanks.

1,297,559. FIRE-EXTINGUISHER. WILLIAM GRIMSHAW, Glenellyn, Ill. Filed Apr. 15, 1918. Serial No. 228,606. 3 Claims. (Cl. 169—26.)



1. A fusible member comprising plates soldered together in overlapped position, said plates comprising portions in their overlapping ends which are inclined at a small angle to the plane of the connected sides thereof, the ends of said inclined portions forming projections on opposite sides of said plates, each of which is provided with a recess on the reverse side of said plate, said projections on and recesses in the connected sides of said plates forming interlocking shoulders, said shoulders being inclined to the plane of the connected sides of said plates at angles slightly less than right angles, the relation being such that when said fusible member is subjected to endwise stress in opposition to said shoulders, said shoulders will produce components of force tending to effect disengagement of said shoulders and separation of the plates forming said fusible member, substantially as described.

1,297,560. TERMINAL CLIP FOR ELECTRIC WIRES. ARNOLD G. GROSSBERGER, Elyria, Ohio. Filed July 13, 1917. Serial No. 180,406. 1 Claim. (Cl. 24—259.)



A terminal clip for electric conductors including a straight base portion, a pair of spaced resilient jaws extending at right angles from the ends of the base portion in substantially parallel relation, a pair of outwardly bowed resilient arcuate jaws, offset portions extending from the outer ends of the straight jaws inwardly therebetween and connecting the inner ends of the arcuate jaws therewith, a sleeve, and an arm connecting the sleeve with the base portion and supporting the said sleeve spaced at its inner end from the said portion whereby a conductor wire may be fitted through the sleeve and connected with the base portion through the space between the sleeve and the said base portion.

1,297,561. ATTACHING MEANS FOR DENTURES. FRANK GEORGE GUNTNER, White Plains, N. Y., assignor to Samuel G. Supplee & Co., New York, N. Y., a Corporation of New York. Filed Mar. 16, 1918. Serial No. 222,819. 9 Claims. (Cl. 32—12.)



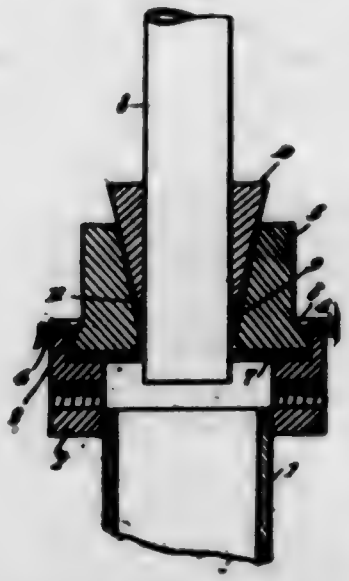
1. The combination with a denture and a support therefor, of a base member secured to one of said parts and a tubular attaching member secured to the other of said parts and adapted to fit over a part of the base member, said tubular attaching member having a spring section free from the balance of said member and yieldingly engaging the base member.

2. The combination with a denture and a support therefor, of a base member secured to one of said parts and a tubular attaching member secured to the other of said parts and slidingly engageable over the base member, said tubular attaching member having a segmental portion separated from the balance thereof and sprung inwardly to form a spring holding tongue yieldingly engaging the base member.

5. Denture attaching means comprising, a base member having an outstanding headed rail and a tubular attaching member open along one side to slidably engage over said headed rail, said tubular member having segmental portions at opposite sides of the opening therein, detached from the balance of the member and sprung inwardly to form spring fingers yieldingly engaging the headed rail at opposite sides thereof.

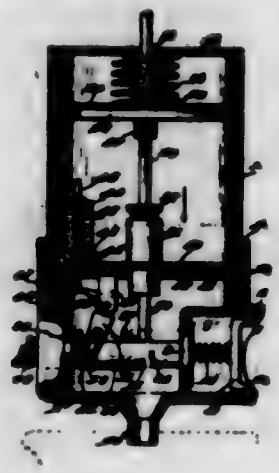
8. Denture supporting means comprising, a base member and a tubular member engageable thereover, said tubular member having a portion of the side wall thereof cut away to expose a section of the base member therewithin, and a separately formed spring gripping member partially encircling the tubular member and extending in through the opening in the side of the tubular member to yieldingly engage the base member.

1,297,562. COMBINATION TUBING-RING AND CASING-HEAD. OLIVER A. HANBY, Cleveland, Okla. Filed Oct. 10, 1918. Serial No. 258,856. 2 Claims. (Cl. 166—14.)



1. The combination with a well casing, and a casing head having an upstanding annular flange, and setscrews threaded through the flange; of a ring seatable on the head within the flange, the ring formed with a flaring lower end, the said ring cored, the walls of the core converging downwardly, a packing ring adapted to fit within the core, and wedges insertible in the core and to rest upon the packing ring.

1,297,563. AUTOMATIC SELF-CLOSING FLUSH-VALVE FOR TOILETS. HOMER L. HARDY, Spokane, Wash., assignor of one-half to H. G. Duerfeldt, Spokane, Wash. Filed July 2, 1917. Serial No. 178,257. 7 Claims. (Cl. 137—68.)



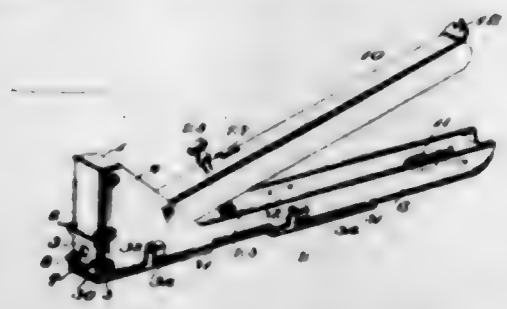
1. In an automatic self-closing valve for toilets, a valve body for connection with a pressure main and including a valve seat and a manually operable main valve closure structure for said seat, said valve body having a toilet flush outlet for discharge into the toilet bowl, a timing reservoir having restricted timing and direct communication with said body for timing pressure inflow into said reservoir from said body, a spring controlled piston in said reservoir actuated by reservoir pressure and being operatively connected with said closure structure to hold the same open after it is manually opened and releasing said closure structure upon actuation of said piston by timing pressure in said reservoir, an independently movable drain valve delivering directly from said reservoir into said body independently of said timing communication and being spring controlled to close against pressure in said body, and means actuated by closing movement of said closure structure for opening said drain valve against the action of said spring to drain the contents of said reservoir directly into said body, substantially as described.

1,297,564. COLLAPSIBLE CRATE. EBENEZER D. HARRIS, Jr., Lander, Wyo. Filed July 22, 1918. Serial No. 246,155. 4 Claims. (Cl. 217—44.)



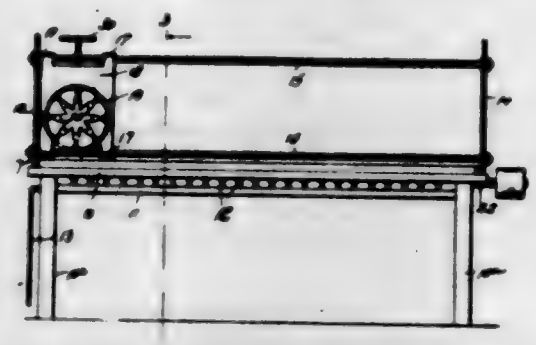
2. The herein described collapsible cylindrical container, the body thereof being made up of a series of sections growing narrower consecutively from one end of the series to the other, and hinges connecting the sections edge to edge, for the purpose set forth.

1,297,565. SAW SETTING AND FILING TOOL. HENRY HILTON, Victoria, British Columbia, Canada. Filed Sept. 7, 1918. Serial No. 253,087. 6 Claims. (Cl. 76—69.)



1. A tool for the purpose set forth comprising a body having an opening therethrough and provided upon its outer face with a rest immediately below the said opening, a saw tooth retainer upon the body above the opening, a setting pin slidably mounted in the opening, a handle member projecting from the body, and a setting lever fulcrumed upon the handle and provided with a setting head bearing upon the setting pin.

1,297,566. GLASS-MOLDING APPARATUS. EMIL G. JOHANSON, Chicago, Ill. Filed July 26, 1917. Serial No. 182,975. 4 Claims. (Cl. 49—34.)



1. A glass molding apparatus, comprising a bed, a mold plate supported on said bed and having a design on its upper surface, a feed screw extending in the direction of the length of the bed, longitudinal guides above the bed, a slide mounted on the guides and having a feed nut engageable with the feed screw, and a vertically adjustable presser roller carried by the slide and positioned above the mold plate.

1,297,567. AUTOMOBILE-WASHER. JAMES PIERSON JOHNSON, Toronto, Ontario, Canada. Filed July 18, 1918. Serial No. 244,755. 4 Claims. (Cl. 15—51.)

1. An automobile washer comprising a tubular handle member, to one end of which a water supply is adapted to

be connected, a cross head carried by the opposite end, and cleaning members extending from each end of the



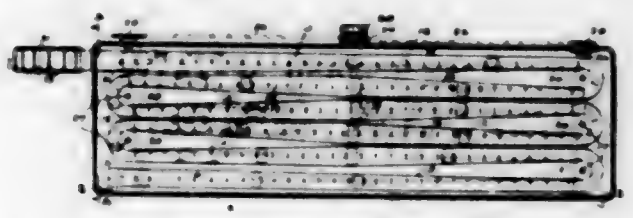
cross head in a direction parallel to and at each side of the longitudinal axis of the tubular member with a space between permitting the embracing of parts to be cleaned.

1,297,568. SANITARY RAZOR-STROP CABINET. JOHN RILEY JOHNSON, New Brighton, Pa. Filed Nov. 18, 1918. Serial No. 263,037. 7 Claims. (Cl. 45—135.)



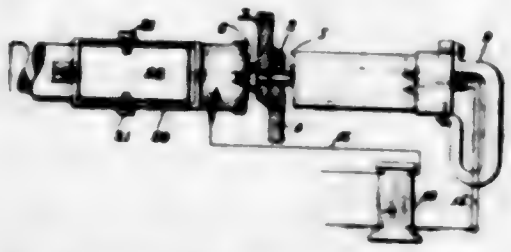
1. A razor strop cabinet comprising a casing having a slot, a razor strop normally confined in said casing and adapted to be withdrawn through said slot, a strop wiper in said casing, and means for automatically forcing said wiper against said strop as the latter is withdrawn from the casing.

1,297,569. CONVEYER. WARREN JOHNSON, Seattle, Wash. Filed Sept. 3, 1918. Serial No. 252,479. 4 Claims. (Cl. 193—8.)



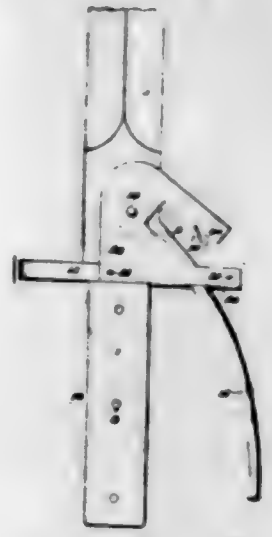
1. A conveyer of the class described comprising a plurality of tiers of trackways disposed in parallel planes, certain of said trackways being twisted through one-fourth of one complete turn and an endless link belt conveyer movable continuously throughout the entire length of all of said trackways the said twisted trackways permitting the link belt conveyer to pass from one to the other of the tiers of said trackways.

1,297,570. APPARATUS FOR HOT RIVETING. GEORGE A. E. JONES, Beverley, Mass. Filed Mar. 13, 1918. Serial No. 222,172. 2 Claims. (Cl. 219—2.)



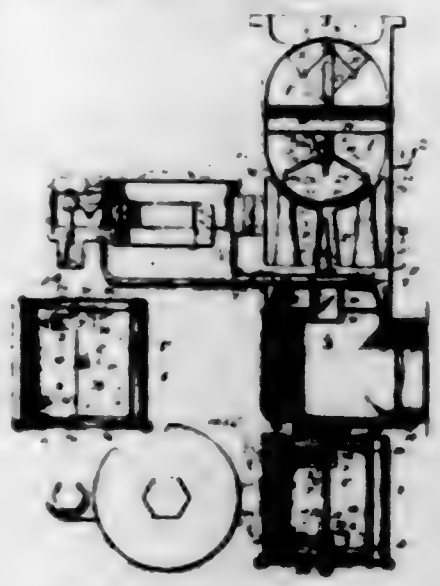
1. A freely movable implement for heating rivets comprising an electrode having a contact surface to be placed in contact with the exposed end of the rivet to be heated, and an inclosing covering of insulating material, inclosing said electrode except at the end thereof which is to be placed in contact with the rivet, and a protecting shield inclosing said insulating covering, said electrode being connected by a flexible conductor with a source of electricity and the inclosing shield being insulated therefrom, the said tool being adapted to be held by the hand and presented by the operator to the rivet to be heated substantially as and for the purpose described.

1,297,571. COMBINED BAYONET AND WIRE-CUTTER. MIKE KACZMARYK, Glen Carbon, Pa. Filed Nov. 16, 1918. Serial No. 262,834. 3 Claims. (Cl. 42—90.)



1. In combination with a bayonet provided with a handle, a blade, and a pommel, said blade having a lateral extension upon one edge thereof adjacent the pommel forming an outwardly and rearwardly inclined cutting edge, a cutter member pivoted to said blade forwardly of said pommel and having a handle extended through said pommel to a point adjacent the handle of the bayonet, a cutting edge upon the pivoted cutting member outwardly of said inclined cutting edge and a one-piece sheet metal guard member bent to embrace the pommel, the bayonet blade and the pivoted cutter member to shield the latter and retain the same against lateral movement relative to the bayonet blade.

1,297,572. CARBURETER. JOHN J. KARTHEISER, Chicago, Ill., assignor, by direct and mesne assignments, to Karbuab Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 14, 1914. Serial No. 861,528. 12 Claims. (Cl. 261—41.)



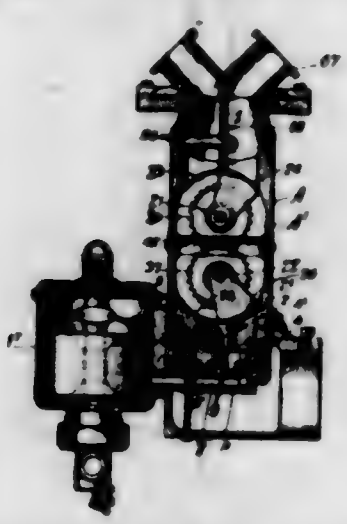
1. In a carburetor, the combination of a casing provided with a mixing chamber, a plurality of air admission pas-

sageways and with a discharge opening, nozzles in said air admission passageways which communicate with a source of hydrocarbon supply, and a valve for controlling said air admission passageways comprising sections which are movable toward and from each other and which cooperate to open and close said air admission passageways and to expose the hydrocarbon nozzles positioned therein, respectively, in succession, whereby the quantities of air and of hydrocarbon may be varied in pre-determined fixed proportions, substantially as described.

2. In a carbureter, the combination of a casing provided with a mixing chamber, a plurality of air admission passageways and with a discharge opening, nozzles in said air admission passageways which communicate with a source of hydrocarbon supply, and a valve for controlling said air admission passageways constructed and arranged for opening said passageways in succession beginning with a centrally located passageway and for closing them in reverse order, whereby the quantities of air and of hydrocarbon may be varied in pre-determined fixed proportions, substantially as described.

4. In a carbureter, the combination of a casing provided with a mixing chamber, a plurality of air admission passageways and with a discharge opening, nozzles in said air passageways which communicate with a source of hydrocarbon supply, a valve for controlling said air admission passageways comprising sections which are movable toward and from each other, constructed and arranged for opening and closing said air admission passageways in succession, and a baffle which extends across the mixing chamber of said carbureter casing between the air admission passageways and the discharge opening thereof, substantially as described.

1,297,573. **CARBURETER.** JOHN J. KARTUSINSKI, Chicago, Ill., assignor, by direct and mesne assignments, to Karbnab Company, Chicago, Ill., a Corporation of Illinois. Filed June 1, 1915. Serial No. 31,444. 17 Claims. (Cl. 261—41.)



1. In a carbureter, the combination of a casing provided with a mixing chamber, a plurality of air admission passageways and a discharge opening, nozzles in said air admission passageways which communicate with a source of hydrocarbon supply, a valve which controls said air admission passageways, and means for varying the suction exerted on the exposed nozzles with the suction of the motor remaining uniform, said means comprising a separate valve which controls one of said air admission passageways, substantially as described.

7. In a carbureter, the combination of a casing provided with a mixing chamber, a plurality of air admission passageways and a discharge opening, nozzles in said air admission passageways which communicate with a source of hydrocarbon supply, a pair of shutter valves which control said air admission passageways, and means for imparting pivotal movement to said valves, toward and from each other, said valves being constructed and arranged to open and close said air admission passageways in succession, substantially as described.

13. The combination with a main carbureter of an auxiliary carbureter comprising a passageway provided with an air admission opening and which communicates directly with the discharge opening from said main carbureter, a nozzle in said passageway which communicates with a source of hydrocarbon supply, a valve which controls said passageway, and means for operating said valve, said means comprising a spring applied to said valve for closing the same, and means for opening said valve controlled by movement of the throttle lever of the main carbureter to close the throttle valve thereof, substantially as described.

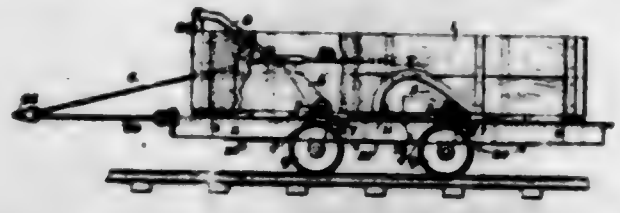
1,297,574. **ADJUSTABLE SHADE-ROLLER AND CURTAIN-HOLDER.** JOHN L. KINIKIN, Garden City, Kans. Filed May 9, 1918. Serial No. 233,476. 2 Claims. (Cl. 156—24.)



1. The combination with a pair of opposite supporting brackets, means for clamping them to opposite sides of the window frame, a pair of opposite shade roller brackets provided with elongated slots and supported on the first brackets, a pair of opposite upright rods passing through the first and second brackets respectively, the slots receiving said rods, means threaded on the rods above and below the first and second brackets respectively for clamping the second brackets and the rods in different adjusted positions, the rods vertically and the second brackets laterally, the second brackets having means to receive the shade roller pintles, and the rods having means to receive and support a certain pole.

2. The combination with a vertically supported base bracket having a lateral part, of an angular shade roller bracket on the lateral part and provided with an elongated slot and adapted to be adjusted transversely of said part, a vertical rod passing through the slot and loosely through the lateral part, means threaded on the rod above the slotted shade roller bracket and below and adjacent the under face of the lateral part for holding the shade roller bracket and the rod in different adjusted positions, the shade roller bracketed transversely and the rod vertically, the upper end of the rod having an angular end to be engaged by a curtain pole.

1,297,575. **SAFETY-STOP FOR MINE-CARS.** JOSEPH KLANSNIC, Black Diamond, Wash. Filed Jan. 31, 1918. Serial No. 214,618. 6 Claims. (Cl. 188—76.)



1. The combination with a car body having a narrow compartment extending centrally lengthwise thereof, axles journaled upon the body, arms secured to the ends of the axles, wheels mounted on said arms, arms secured to the axles and extending upward in said central compartment, a haulage connection directly with the car and a supplementary haulage connection with said latter arms.

2. The combination with a car body of axles journaled thereon, lever arms secured to said axles, car wheels

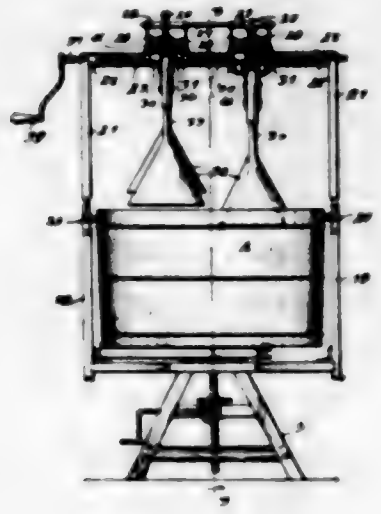
journaled on said lever arms, controlling arms centrally secured to the axles and extending upward, longitudinal vertical partitions forming a narrow compartment inclosing said controlling arms, a member connecting said controlling arms with the car haulage connection, and means for locking said arms in position to maintain the car body in raised position.

3. The combination with a car body of axles journaled thereon, lever arms secured to said axles, car wheels journaled on said lever arms, controlling arms centrally secured to the axles and extending upward, longitudinal vertical partitions forming a narrow compartment inclosing said controlling arms, a member connecting said controlling arms with the car haulage connection, a dog or hooked link pivoted in said central compartment and adapted to engage the controlling arms to hold the car body in raised position.

4. In a car, in combination, a car body having a floor sill at each side, axles journaled above said sills, arms fixed to said axles and extending downwardly, the sills being recessed to accommodate said arms and permit their swinging to a horizontal position in one direction, one end wall of said recesses being located to act as a stop for the arms to prevent their swinging beyond a vertical in the other direction, and a car-haulage means acting through said axles to swing said arms toward a vertical position.

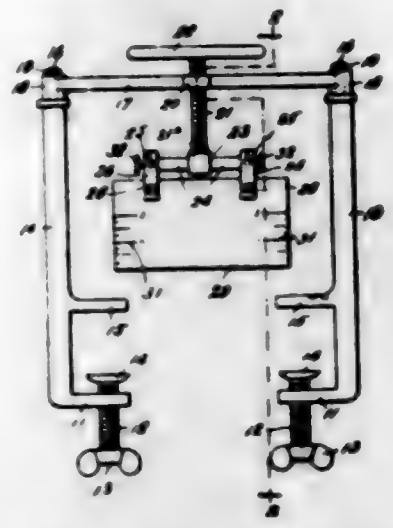
6. A car for operation on inclines comprising a body having means on its lower side for positive engagement with the track structure when lowered thereon, axles journaled on the body, arms fixed on the ends of said axles, wheels journaled on said arms, a lever secured centrally on each axle and extending upwardly, means connecting said levers of different axles to secure uniformity of position thereof, the car body having a longitudinally extending compartment inclosing said levers, and means connecting said levers with the haulage means to maintain the wheels in lowered position, and stops limiting the swing of said levers.

1,297,576. **OPERATING MECHANISM FOR WASHING-MACHINES.** OLLIE L. LAPPERION and NELSON A. LAPPERION, Argyle, Minn. Filed Oct. 20, 1915. Serial No. 56,884. 2 Claims. (Cl. 74—5.)



1. A washing machine including spaced uprights, a shaft mounted in the uprights, a pair of arms carried by the shaft in spaced relation and extending upwardly therefrom, a second shaft mounted in the arms above the first shaft, sleeves mounted on the first shaft between the arms for rocking motion on the shaft, lateral levers carried by the sleeves for movement therewith, plungers connected with the levers for vertical movement thereby when the sleeves are rocked, a sleeve mounted on the second shaft between the arms, links loosely connected with the just mentioned sleeve and with the plungers and means for rocking the first mentioned sleeve.

1,297,577. **MORTISE-CUTTING TOOL.** LAWRENCE H. LAIRD, Yreka, Calif. Filed June 1, 1918. Serial No. 237,807. 2 Claims. (Cl. 144—76.)



1. A mortise cutting tool comprising a pair of upright posts having independent clamping devices at the lower end and studs rising from the upper end, a connecting bar pivotally mounted on said studs, a screw stem threaded through the connecting bar and having a hand wheel at its upper end and a head at its lower end, a pair of chisels carried by said head, and means for adjusting them toward and from each other.

1,297,578. **COLLAPSIBLE FLAGPOLE.** FRED LINDSTADT, Fairmont, Minn. Filed July 6, 1917. Serial No. 178,935. 1 Claim. (Cl. 189—26.)

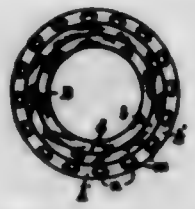


A collapsible flag pole comprising hollow pole sections adapted to be loosely assembled one within the other when the pole is in inoperative position, the meeting ends of the pole sections being each provided with sleeve portions fitting snugly together whereby the said pole sections may be rigidly held in either operative or inoperative position, and means mounted on the two sleeve portions of the pole sections to maintain them in either upright position when extended or in assembled position when in inoperative position.

1,297,579. **BALL-CAGE FOR ROLLER-BEARINGS.** CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Division, United Motors Corporation, Harrison, N. J., a Corporation of New York. Original application filed Jan. 11, 1918, Serial No. 244,352. Divided and this application filed Nov. 15, 1918. Serial No. 262,648. 4 Claims. (Cl. 64—32.)

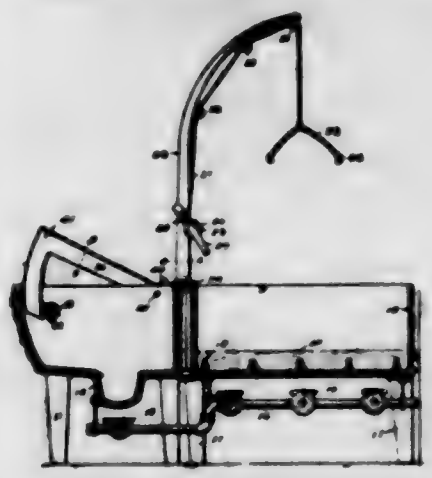
1. In a roller bearing, the combination, with a hub having a concave annular ballrace, of a sheet-metal an-

nular cage having a series of holes in its periphery one to receive the outer segment of each ball, and a slit extended from the edge of the cage into each hole to permit



the springing of the intermediate tongues over the balls when located in the ballrace, the cage being thus adapted to hold the balls in the ballrace, and to retain them movably upon the hub.

1,297,580. MACHINE FOR CLEANING AND REPAIRING RADIATORS. DELBERT I. MCMAHAN, Des Moines, Iowa, assignor of one-fourth to Minnie G. Ives, Des Moines, Iowa. Filed June 17, 1918. Serial No. 240,489. 3 Claims. (Cl. 113—59.)



1. In a device of the class described, a receptacle, a frame pivoted thereon immediately above said receptacle, a stop device on said frame, and means for raising and lowering said frame and holding it in different positions of its movement for holding the radiator in a variety of positions for repairing said radiator, and whereby solder passing through the frame will drop into said receptacle.

1,297,581. ELECTRIC PRIMING-COCK. GEORGE T. MCMILLAN, Brookings, S. D. Filed Mar. 14, 1918. Serial No. 222,890. 9 Claims. (Cl. 219—38.)

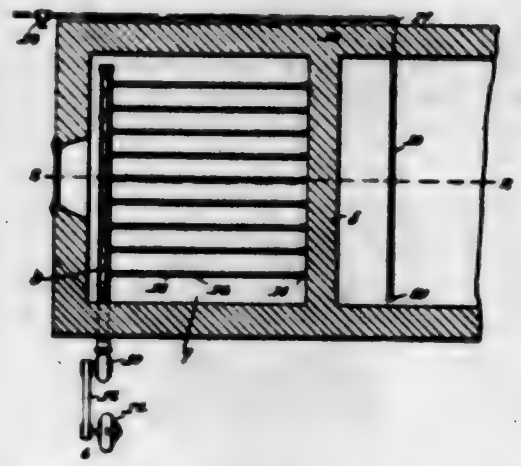


1. A device of the character described including a body, a bowl carried thereby, a valve mounted upon the body and controlling the outlet from the bowl, a heating element carried by the bowl for heating the contents of the bowl when filled and means for controlling admission of air into the bowl.

3. A device of the character described including a body, a bowl carried thereby, a valve mounted upon the body and controlling the outlet from the bowl, a heating element mounted within the bowl, and a switch member mounted upon the bowl and normally spaced from the body, said switch member being manually operable to engage with the body for closing a circuit through the heating element.

8. A device of the character described including a metallic body, a bowl of insulating material mounted upon the body, a valve controlling the outlet from the body, a heating element supported within the bowl and insulated thereby with respect to the body, and means for closing a circuit through the said element.

1,297,582. FORCED-DRAFT SYSTEM AND SMOKE-CONSUMER. FREEMAN P. MILLER, Baldwinsville, N. Y. Filed Apr. 6, 1918. Serial No. 227,027. 2 Claims. (Cl. 110—69.)



1. In a steam boiler furnace, having a grate and fire box, an air feeding pipe, a plurality of perforated pipes in communication therewith and extending under the grate, said perforated pipes having their inner ends closed, means for supplying air to the first mentioned pipe, and a perforated pipe extending transversely of the furnace back of the fire box, and means for supplying steam thereto.

2. In a steam boiler furnace having a grate and fire box, an air feeding pipe, a plurality of perforated pipes in communication therewith and extending under the grate, said perforated pipes having their inner ends closed, means for supplying air to the first mentioned pipe, a blower on the first mentioned pipe, means for operating the blower, a perforated pipe extending transversely of the furnace back of the fire box, and means for supplying steam thereto.

1,297,583. HEAT-INSULATOR. HUGO MOCK, New Brighton, N. Y. Filed Apr. 19, 1917. Serial No. 163,210. 5 Claims. (Cl. 106—18.)

1. A heat insulator comprising cellular sulfur.

1,297,584. PICTURE-HANGER. HUGO MOCK, New York, N. Y. Filed Dec. 5, 1918. Serial No. 265,413. 2 Claims. (Cl. 24—67.)



1. A device for fastening a picture frame to a wall, comprising a plate having pins on opposite sides thereof, one of said pins being thrust at an angle to said plate into the frame and the other pin downwardly and obliquely to be forced into a wall so as to hang the picture perpendicularly against said wall.

1,297,585. MUSICAL INSTRUMENT. ALBERT T. NEWMAN, Emporia, Kans. Filed May 28, 1918. Serial No. 237,062. 3 Claims. (Cl. 84—74.)



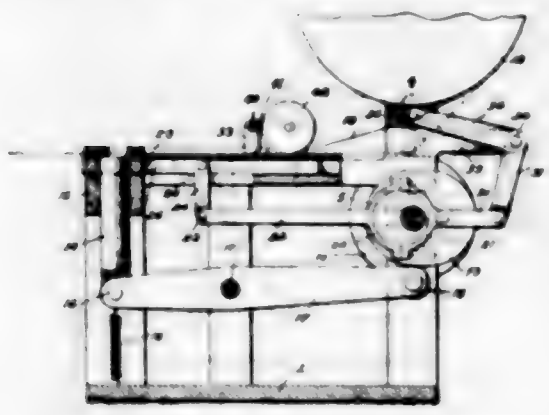
1. A musical instrument comprising a frame and a membranous head, a neck of the general contour of a violin, said neck having a shoulder at its inner end constituting a seat, a bridge support resting on the seat, means supported by the head for holding the bridge support free of the head, strings for the instrument, and a bridge interposed between the strings and the bridge support.

1,297,586. TROUGH. GEORGE B. NORDMANN, New Haven, Conn. Filed Aug. 20, 1917. Serial No. 187,042. 7 Claims. (Cl. 119—61.)



1. A trough having a flanged edge and a stiffening crimp therefor, the latter forming a reservoir; and a wick protruding from said reservoir.

1,297,587. WEB-FEEDING MECHANISM. ELOF NORDSTROM, Newark, N. J., assignor to American Dan Stopper Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 6, 1916. Serial No. 89,362. 8 Claims. (Cl. 273.)



3. In web-feeding mechanism, a web-supply, forward and backward web-feeding means, slack-feeding means interposed between said web supply and web feeding means and operated during the backward movement of said web-feeding means, for securing slack in said web to facilitate the forward feeding movement, means cooperatively connecting said web-feeding means and said slack-feeding means, and means for holding the web against retrograde movement during the action of said slack feeding means, said web-feeding means, slack-feeding means, and holding means being arranged to operate upon said web in substantially a common plane of action.

5. In web-feeding mechanism, a web supply, a rotary shaft, means operated by said shaft for intermittently feeding said web, means for holding said web against retrograde movement, and means disposed between said web supply and web-feeding means and operated by said shaft transversely to said web, for drawing slack from said web supply.

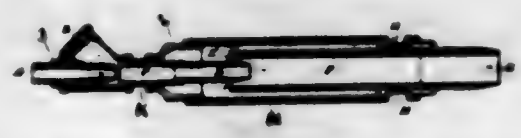
8. In web-feeding mechanism, a table over which the web is to be fed, a web supply adjacent to said table, means for clamping said web to said table against retrograde movement, said clamping means releasing said web during a forward movement of said web, slack-take-up means for engaging said web between the web supply and said clamping means for drawing web from said web supply during the intervals between successive forward movements of said web, means reciprocable in substantially the plane of said table and engaging said web during the forward feeding movements, a rotary shaft provided with an eccentric, an eccentric strap journaled on said eccentric, means for connecting said strap to said slack take-up means, and means for connecting said strap to said reciprocable web-feeding means.

1,297,588. COAL-OIL TORCH. MANUEL ROCHA PAVON, Oakland, Calif. Filed July 11, 1918. Serial No. 244,390. 4 Claims. (Cl. 158—73.)



1. In a torch, a housing having end openings and having an extension forming a joint connected to said housing at the front opening of said end openings, a jet positioned in said housing and pointing to said extension, a casing having end openings and having the rear opening of said end openings connected to said joint, a jet positioned in said casing and pointing forwardly in proximity to the front opening of said casing, a reducer before the front opening of said casing, means connecting said reducer with the front opening of said casing, a head having a mouth in connection with said reducer, a pipe having a valve connected to the rear opening of said housing and a T having its stem pointing rearwardly connected to the side opening of said housing; a valve casing having end openings and a side opening, the front opening of the end openings of said valve casing being connected to said stem, and a valve in said valve casing.

1,297,589. FUEL-OIL-FURNACE BURNER. MANUEL ROCHA PAVON, Oakland, Calif. Filed July 11, 1918. Serial No. 244,391. 4 Claims. (Cl. 158—73.)

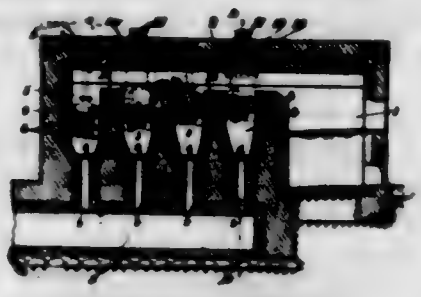


2. An oil burner having a plurality of rear passages converging forwardly to a single passage, tubing extending forwardly from the point of convergence of said passages, a barrel extending forwardly from said tubing and having a front opening, a tube in said barrel but out of contact therewith rearwardly from said front opening whereby a channel is formed open to said opening, the rear end of said tube being centrally penetrated by said tubing for delivering a mixture therein and forming a channel between said tubing and said barrel and the rear end of said tube being spaced from the rear end of said barrel to form a chamber between the same.

1,297,590. DISTILLING APPARATUS. JOSEPH PIETTE, St.-Gilles, Brussels, Belgium. Filed Apr. 7, 1917. Serial No. 160,496. 2 Claims. (Cl. 196—1.)

1. Apparatus for distilling tar, mineral, vegetable and other oils, comprising in combination, a series of nests of tubes arranged in cascade, separate chambers containing said nests of tubes, a furnace for supplying hot gas

to each of said chambers, means for admitting steam and oil to the first of said nests of tubes, means for ad-



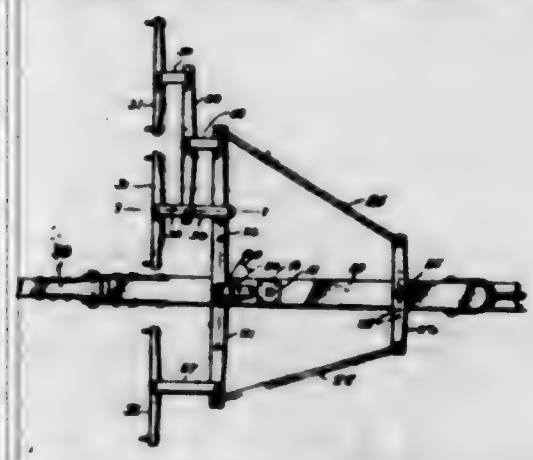
mitting steam to each of the successive nests of tubes, and means for collecting the volatilized components of the oil evolved in said nests of tubes.

1,297,591. SNAP-LOCK. ARTHUR W. PRESCOTT, Binghamton, N. Y. Filed Apr 18, 1917. Serial No. 162,888. 1 Claim. (Cl. 285—185.)



In sheet metal work, a self-locking seam, one of the edges of the seam having a gutter for receiving the other edge, and the said other edge having struck-up lugs adapted to enter the gutter with the edge, the gutter having an inturned flange at one wall thereof for engagement by the lugs to lock the edges together, said lugs being bent outwardly a sufficient distance to spring beneath the flange when they have passed the flange in moving into the gutter.

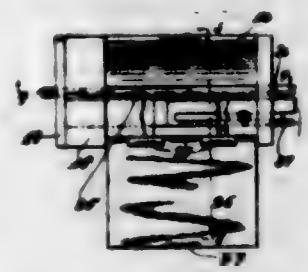
1,297,592. DRAFT-EQUALIZER. LUKASZ PROKOPCZUK, Arran, Saskatchewan, Canada. Filed July 20, 1918. Serial No. 245,884. 1 Claim. (Cl. 21—78.)



In combination, a draft beam, a spair of arms having their inner ends pivotally connected to the draft beam, an equaliser lever, means to adjustably connect the equaliser lever to the draft beam, links connecting the ends of said lever with the outer ends of said arms, a swingletree linked to the outer end of one arm, a double tree linked to the outer end of the other arm, swingletrees linked to the ends of the double tree, a hook having vertically swinging connection with the inner end of the double tree and engageable behind the arm to which the double-tree is linked, a barb on the lower end of the hook engageable beneath said arm, and a removable pin passing through the shank of the hook and said arm to hold the barb from disengagement with said arm.

1,297,593. MATCH-BOX. WINCENTAS RAMANAUSKAS, Hartford, Conn. Filed Sept. 14, 1917, Serial No. 191,326. Renewed Jan. 29, 1919. Serial No. 273,882. 3 Claims. (Cl. 206—27.)

1. In a match box, the combination with a body member having an opening adapted to contain matches, a cover for said opening, the said body member having an aperture therein for the passage of a match, a plunger slidable on the end of the body for forcing a match through the said opening from the interior to the exterior of the said body, said plunger comprising a mem-



ber having slots, means extending through one of the slots and anchored to the body member for guiding the plunger, and a plate having a flanged portion extending into the other slot of the plunger and constituting a guide for the match engaging portion of the plunger.

1,297,594. PLOW. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Aug. 11, 1913. Serial No. 784,113. 19 Claims. (Cl. 97—21.)



1. A plow comprising a frog having its landside side provided with a forwardly open undercut recess, a landside engaging the landside side of the frog and provided at its front end with a forwardly open undercut recess alined with the recess in the frog, and a share having a portion which bears against the forward end of the landside and is provided with a rearward projection which is received by the recesses in both the frog and landside.

3. A plow comprising a frog having a recessed portion at its forward end and a nose projecting forwardly of said recessed portion, a landside having a recessed portion at its forward end which laterally alines with the recessed portion of the frog, and a share having a rearwardly projecting lug at its lower rear portion which is complementally engaged within the recess of the landside and frog said frog having a cavity in its underside inwardly of the lug into which the nose of the frog projects.

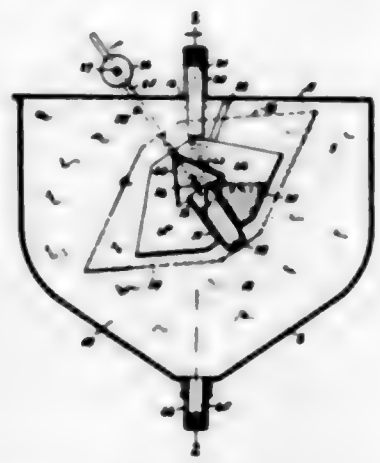
7. A plow comprising a frog having its landside side provided with a forwardly open undercut recess, a landside engaging the landside side of the frog and provided at its front end with a forwardly open undercut recess alined with the recess in the frog, the frog having a nose projecting forwardly beyond said recesses, and a share having a rearwardly projecting lug at its lower rear portion which enters the recesses of the frog and landside, the share also having a cavity in its underside, inwardly of said lug, to receive the nose of the frog.

12. In a plow, the combination with a frog having a front edge, a wing and a nose at the bottom of the frog projecting forward of said edge, of a share having a shin which extends to the top of the frog and a wing which conforms to and rests upon the wing of the frog, the share also having a rearwardly facing abutment which is engaged by the forward edge of the frog, lugs at the top and bottom of said abutment, said lugs respectively engaging the top and bottom of the frog, the bottom lug

being spaced from the wing of the share to admit the nose of the frog between said lug and wing, the share also having its wing formed with a lug which engages the wing of the frog.

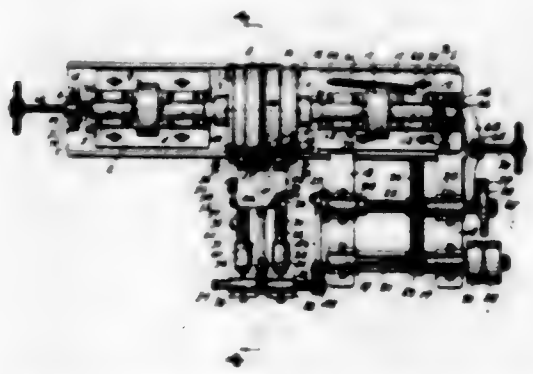
16. A share for plows comprising a soil turning wing a landside face and a shin, the said shin being complementally formed by upward extensions of the landside face and the soil turning wing, the rear edge of the landside face and of that part of the shin which constitutes an extension thereof lying substantially at right angles to the landside face to constitute a rearwardly facing abutment and that part of the shin formed by the extension of the soil turning wing projecting rearwardly beyond said abutment and lugs projecting rearwardly from the top and bottom of the abutment.

1,297,595. MEASURING APPARATUS. CHAMPLAIN L. RILEY, North Plainfield township, Somerset county, N. J. Filed Feb. 19, 1918. Serial No. 218,038. 6 Claims. (Cl. 221—96.)



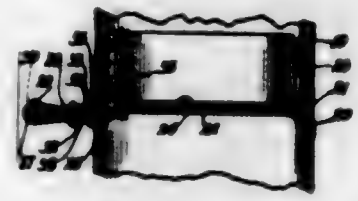
6. A spill bucket provided with a fixed outflow member, an adjustable telescopic member to vary the depth of the bucket, the said fixed and adjustable members dividing the bucket into two compartments, overflow means therefor and a gable roof substantially as and for the purpose described.

1,297,596. GRINDING AND POLISHING MACHINE. CARL H. ROTH, Newark, N. J. Filed Sept. 18, 1918. Serial No. 253,855. 17 Claims. (Cl. 51—7.)



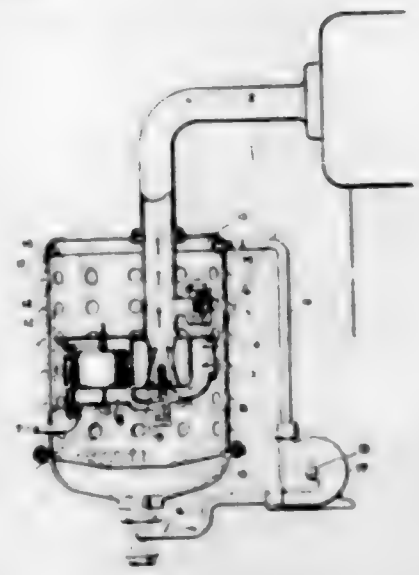
1. In a machine of the kind described, a pair of abrading wheels disposed to mutually oppose their operative faces, means for rotatably mounting one of said abrading wheels in a fixed position, means for rotatably mounting the other of said abrading wheels for axial reciprocable movement toward and away from said fixed abrading wheel to mutually separate said wheels for the reception of work therebetween, a lever means interconnected at one end with the mounting of said movable wheel, a cam-wheel for operatively engaging the opposite end of said lever means for oscillating the same to govern the reciprocable movement of said movable wheel, spring means for moving and holding said movable wheel in operative relation to said fixed wheel as governed by the operation of said lever means, transmission means from which said cam-wheel is driven, a reciprocable work supporting means adapted to carry the work between and in operative relation to said abrading wheels, and means for reciprocating said work supporting means in timed relation to the separating movement of said abrading wheels.

1,297,597. ASH-SIFTER. WALTER SADOSKI, Detroit, Mich. Filed Apr. 17, 1918. Serial No. 229,027. 1 Claim. (Cl. 83—60.)



In an ash sifter of the character described, the combination with a cylindrical vessel having a horizontal slot intermediate its ends, of a shaker pivoted therein at a point beyond its periphery, a spindle attached to said shaker opposite to said pivotal point, and extending through said horizontal slot, a collar on said spindle, a curved plate adapted to cover said horizontal slot at all times, a spring between the collar and said plate, pins on the inner end of said spindle, engaging appropriate openings in the wall of the can and pins on both sides of said plate engaging with one end said plate and at the other said handle, substantially as described, and for the purpose set forth.

1,297,598. HUMIDIFIER FOR INTERNAL-COMBUSTION ENGINES. WALTER S. SHAWVAN, New York, N. Y., assignor, by mesne assignments, to The Beta Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1917. Serial No. 188,904. Renewed Oct. 26, 1918. Serial No. 259,853. 8 Claims. (Cl. 261—118.)

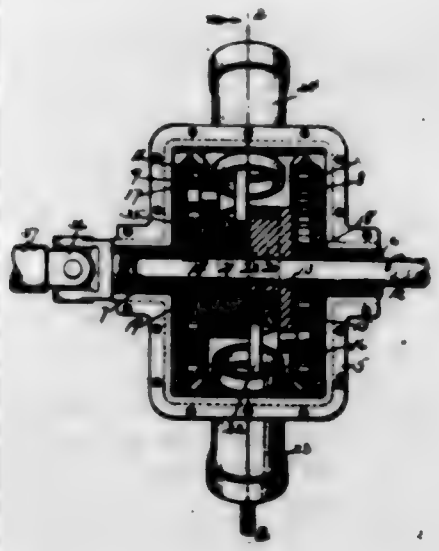


1. In a device of the kind described, an internal combustion engine, a fuel mixing device having an air inlet connected to said engine, and means for causing the air admitted to said air inlet to pass through a curtain of water in a finely divided state.

1,297,599. VARIABLE AND REVERSE SPEED MECHANISM. WILBUR L. SHEPARD, West Hartford, Conn., assignor to The World Gas Engine Company, Hartford, Conn., a Corporation of Maine. Filed May 5, 1917. Serial No. 166,763. 18 Claims. (Cl. 74—34.)

1. A driving shaft, a driven shaft, a cylinder, a piston located therein, a driven member having a driving con-

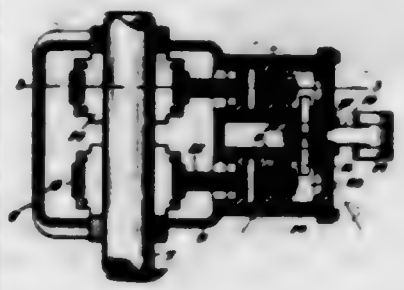
nection with the driven shaft and a separate connection with the driving shaft, a connection between the driven member and said piston, said parts acting to cause movement of said driven member when resistance to movement of the piston exists, and means for causing resistance to movement of the piston.



2. A driving shaft, a driven shaft, a cylinder, a piston located therein, a driven gear having driving connection with the driven shaft and a separate connection with the driving shaft, a geared connection between said driven gear and the piston, said parts acting to effect movement of the driven gear when resistance to movement of the piston exists, and means for causing resistance to the movement of the piston.

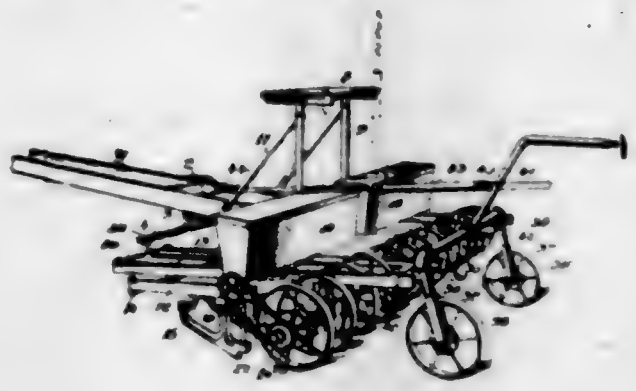
3. A driving shaft, a driven shaft, a cylinder, a piston located therein, a driven gear in driving connection with the driven shaft and in separate driving connection with the driving shaft, an eccentric loosely mounted on the driving shaft and operatively connected with said piston, a geared connection between said eccentric and said driven gear and said parts acting to effect movement of the latter when resistance to movement of the eccentric exists, and means for causing resistance to movement of the piston and consequently to said eccentric.

1,297,600. BRAKE MECHANISM. WILBUR L. SHEPARD, West Hartford, Conn., assignor to The World Gas Engine Company, Hartford, Conn., a Corporation of Maine. Filed May 5, 1917. Serial No. 166,764. 9 Claims. (188—5.)



1. A brake mechanism for a vehicle including a case supported by the vehicle, a brake mechanism inclosed within said case and including a plural number of cylinders, pistons mounted in said cylinders, connections with said pistons to impart reciprocatory movement thereto, a channel for flow of fluid between the cylinders, means for retarding the flow of fluid through said channel, in combination with an axle, and means connected with said axle and said connections whereby rotative movement of the axle will impart reciprocating movement to said pistons.

1,297,601. PRESS-DRILL. FRANK SHERWIN, Brookings, S. D. Filed Apr. 16, 1918. Serial No. 228,884. 8 Claims. (Cl. 111—53.)



2. The combination of a rigid tongue frame, planter frames mounted on the under side of the tongue frame for independent oscillation transversely of the tongue frame, and a transporting frame mounted on the rear ends of the planter frames for oscillating movement longitudinally thereof, said transporting frame having a wheel adapted to run on the ground.

1,297,602. FOUNTAIN-PEN. JOSEPH F. SIMONSKI, Thorp, Wis. Filed Oct. 23, 1918. Serial No. 259,234. 2 Claims. (Cl. 120—49.)

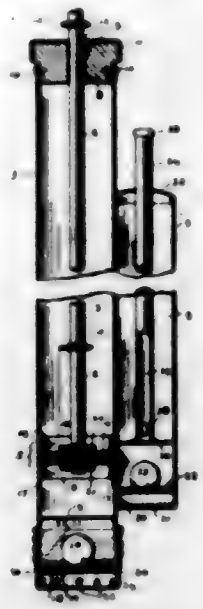


1. A fountain pen comprising a hollow barrel having an inwardly tapering lower end, a tapered pen-point-securing member within the lower end of the barrel and removable from the latter only through the upper end thereof, a closure plug for the upper end of said barrel, and a rod rigidly connected to said closure plug arranged axially of said barrel and having its lower end swiveled to the upper end of said pen-point-securing member whereby removal of said plug will cause removal of the pen-point-securing member, substantially as described.

1,297,603. STRAINER AND VALVE BOX FOR PUMPS OR THE LIKE. DE WARE B. SMITH, Utica, N. Y. Filed Nov. 7, 1917. Serial No. 200,652. 5 Claims. (Cl. 103—84.)

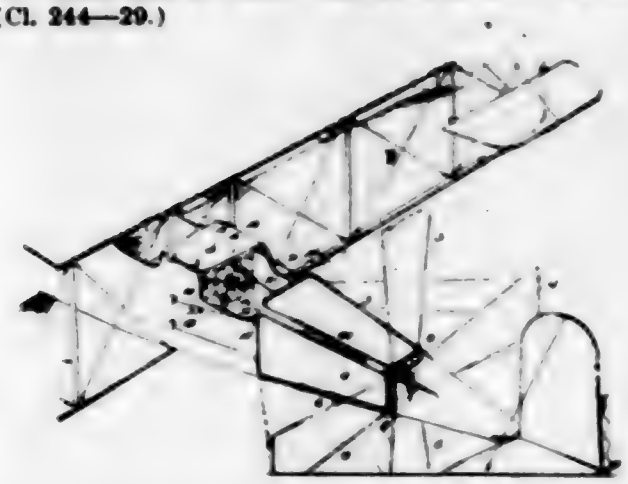
1. A removable strainer and valve box for the inlet of a pump or the like comprising an inlet extension on the pump, a cap detachably secured at its inner end onto said inlet extension and provided therebeyond with inlet ports, an inwardly extending shoulder within said cap intermediate its ends, a valve seat member located and held in place between the bottom of the pump ex-

tension and the shoulder of the said cap and a check valve member seating upon said valve seat member



whereby the valve seat and valve member may be removed upon the removal of said cap.

1,297,604. AEROPLANE. THOMAS B. SMITH, Cheriton, Va. Filed May 21, 1918. Serial No. 235,849. 5 Claims. (Cl. 244—29.)



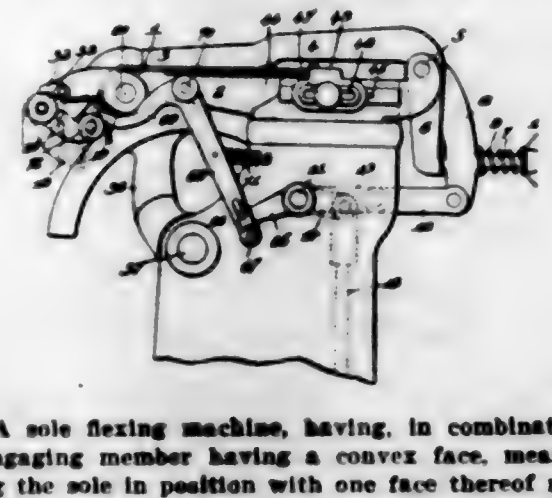
2. The combination with a fuselage, of a plurality of brake wings hingedly mounted thereon, a plurality of drums each operatively connected with one of the brake wings, means for normally holding the drums against movement, a central controlling shaft, and means for selectively connecting said shaft with the drums.

1,297,605. SOLE-FLEXING MACHINE. WILLIAM C. STEWART, Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 26, 1913. Serial No. 781,292. 17 Claims. (Cl. 12—17.)

1. A sole flexing machine, having, in combination, means for supporting a sole, and sole bending devices for repeatedly turning or bending a portion of the sole at an angle to another portion thereof acting to decrease progressively the angle between the said portions of the sole as the operation progresses whereby the extent to which the sole is bent is progressively increased.

6. A sole flexing machine, having, in combination, relatively movable sole bending devices, means for relatively moving said devices successively to bend the sole repeatedly, means for causing a variation in the relative movement of said devices as the flexing operation progresses to increase progressively the extent to which the sole is bent, and means to arrest the operation of the machine when a predetermined degree of flexibility has been imparted to the sole.

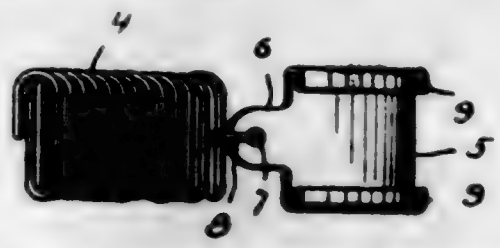
12. A sole flexing machine, having, in combination, relatively movable sole engaging devices, means for relatively moving said devices to bend the sole, a spring arranged to permit one of said devices to yield to the resistance of the sole during the relative movement of said devices, and means whereby the tension of the spring may be adjusted.



13. A sole flexing machine, having, in combination, a sole engaging member having a convex face, means for holding the sole in position with one face thereof resting on said member, and with a portion thereof projecting freely beyond said member, a device for engaging the portion of the sole beyond said member, and means for moving said device successively with relation to said member to bend the free projecting portion of the sole repeatedly about the convex face of said member.

17. A sole flexing machine, having in combination, a sole engaging member having a convex face, means for holding the sole in position with one face thereof resting on said member and with a portion thereof projecting freely beyond said member, a device for engaging the portion of the sole projecting beyond said member pivoted to swing about the convex face of said member, means for swinging said device successively about the convex face of said member to bend the sole repeatedly, a spring arranged to permit said device to yield to the resistance of the sole during its sole bending movement, a tripping member mounted to move with said device, a trip lever arranged to be actuated by said tripping member when a predetermined degree of flexibility has been imparted to the sole, and means controlled by the trip lever for arresting the operation of the machine when the trip lever is actuated by the tripping member.

1,297,606. PROTECTOR FOR REELS. OTIS E. STULTZ, Henry, W. Va. Filed Apr. 21, 1917. Serial No. 163,787. 2 Claims. (Cl. 200—53.)

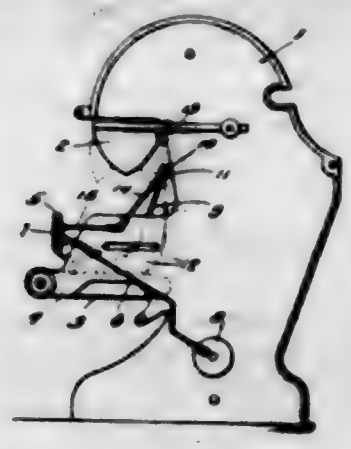


1. In combination with a reel having side flanges, a film guard comprising a coil spring adapted to surround the outer strip of the film, said coils being flattened so as to engage with the side flanges, to prevent lateral movement of the guard, and means connecting the ends of the coil spring together.

1,297,607. CARDING-MACHINE FEEDER. THOMAS TEMPLE, Fort Plain, N. Y. Filed Apr. 29, 1918. Serial No. 231,456. 6 Claims. (Cl. 19—7.)

2. In a feeder for carding machines, the combination with the horizontal feed table, the pivotally mounted packer above the outer portion of said table, a vertical arm extending from said packer, a pitman connected to said arm for operating the same to actuate said packer, and an automatic weighing device above said table for

depositing the carding thereon; of a pusher for feeding the carding along said feed table toward said packer, and



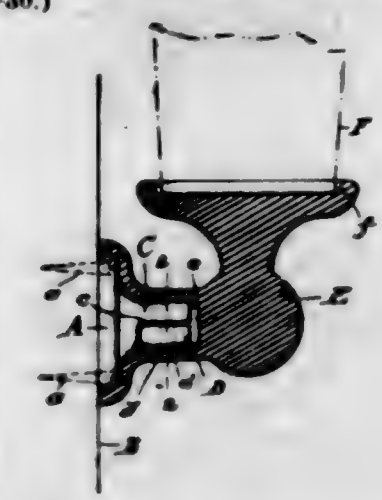
a second pitman connecting said pusher with said vertical arm to operate the former from the latter.

1,297,608. GUARD FOR ELECTRIC-LIGHT CONNECTIONS. AUBREY J. TIDBALL, Duluth, Minn. Filed July 20, 1918. Serial No. 245,947. 4 Claims. (Cl. 173—269.)



3. A guard for portable electric light sockets composed of a single piece of spirally wound wire formed into a rigid tapered body portion by the coils of wire being wound closely together and a resilient body portion resulting from the coils of wire being spaced apart, the outer end of the latter portion being of a size to snugly fit the wires leading to the light socket and the outer end of the former portion being of a size to snugly fit over the socket.

1,297,609. INVISIBLE SUPPORT FOR BRACKETS AND THE LIKE. THEODOTT TECHUDIS, Brooklyn, N. Y. Filed Apr. 18, 1917. Serial No. 162,831. 7 Claims. (Cl. 248—30.)



1. A device of the class described embodying a supporting member adapted to be fixedly mounted, a stem on the supporting member, one side of which stem is cut away, and a filler piece positioned within said cut-away portion, in combination with a supported member provided with a socket to receive the stem of the supporting member, and means for imparting bodily movement to the filler piece radially of the stem to cause the binding of the stem and filler piece within the socket of the supported member.

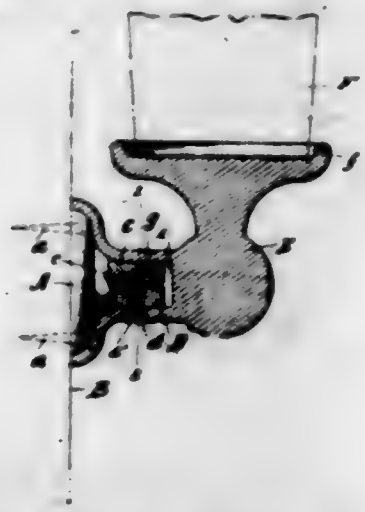
2. A device of the class described embodying a supporting member adapted to be fixedly mounted, a stem on the supporting member, one side of which stem is cut away, and a filler piece positioned within said cut-away portion, in combination with a supported member provided with a socket to receive the entire supporting member and filler piece, whereby said supporting member is concealed by the supported member, and means for imparting bodily movement to the filler piece radially of the stem to cause the binding of the stem and filler piece within the socket of the supported member.

3. A device of the class described embodying a supporting member adapted to be rigidly mounted and having a substantially semi-cylindrical stem portion, and a substantially semi-cylindrical filler piece adapted to coöperate with the stem portion and collectively form, with the semi-cylindrical stem portion, a substantially cylindrical stem, in combination with a supported member provided with a socket for receiving said stem, and means for bodily moving the filler piece radially away from the semi-cylindrical stem portion to cause binding of the stem within the socket for the purpose of mounting the supported member upon the supporting member.

4. A device of the class described embodying a supporting member adapted to be rigidly mounted and having a substantially semi-cylindrical stem portion, and a substantially semi-cylindrical filler piece adapted to coöperate with the stem portion and collectively form, with the semi-cylindrical stem portion, a substantially cylindrical stem, in combination with a supported member provided with a socket for receiving said stem, and a set-screw threaded through the filler piece for bodily moving the same radially away from the semi-cylindrical stem portion to cause binding of the stem within the socket for the purpose of mounting the supported member upon the supporting member.

5. A device of the class described embodying a supporting member adapted to be rigidly mounted and having a substantially semi-cylindrical stem portion, and a substantially semi-cylindrical filler piece adapted to coöperate with the stem portion and collectively form, with the semi-cylindrical stem portion, a substantially cylindrical stem, in combination with a supported member provided with a socket for receiving said stem, and a set-screw, threaded through the filler piece and accessible through an aperture in the wall of the supported member for bodily moving said filler piece radially away from the semi-cylindrical stem portion to cause binding of the stem within the socket for the purpose of mounting the supported member upon the supporting member.

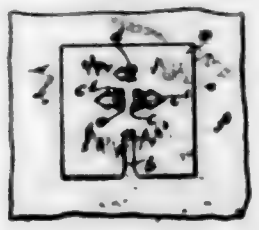
1,297,610. INVISIBLE SUPPORT FOR BRACKETS AND THE LIKE. THEODOTT TECHUDIS, Brooklyn, N. Y. Filed Mar. 25, 1918. Serial No. 224,414. 5 Claims. (Cl. 248—20.)



5. In a device of the class described, the combination of supporting and supported members, the supporting

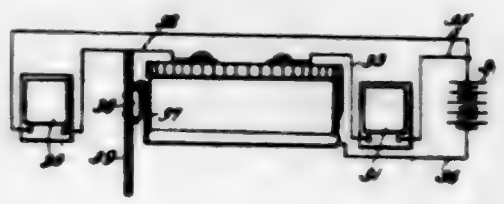
member being provided with a stem having an expansible portion, and the supported member having a socket to receive said stem, and means for adjustably and automatically positioning said member, being adjustable longitudinally and transversely of the socket.

1,297,611. FASTENING DEVICE FOR WALL-BOARD, &c. CHARLES A. UPSON, Lockport, N. Y. Filed Dec. 16, 1918. Serial No. 266,847. 3 Claims. (Cl. 85—11.)



3. A blind fastener for wallboard, etc., to be placed between the wallboard and the studding to which the wallboard is to be fastened, consisting of a thin, flat, metal plate having an opening therein to receive a fastening means to secure the plate to a studding and provided on the side toward the wallboard with struck-up prongs having pointed ends and so bent that they will enter the wallboard and spread laterally to engage and retain it when the wallboard is forced against the fastener, the plate also having a perpendicular prong to enter the wallboard and prevent lateral slip of the same.

1,297,612. DIRECTION-INDICATOR. JOSEPH VALCAUDA, Seattle, Wash. Filed May 9, 1918. Serial No. 233,597. 2 Claims. (Cl. 33—222.)



1. A direction indicator comprising a cylindrical casing, a magnetic needle mounted therein, a cover mounted for rotary adjustment upon the casing and having a slot struck on an arc around its center, a pair of contacts adjustably mounted within said slot and adapted to be placed at opposite sides of the normal position of the needle, a source of electricity, two signals, leads connecting them respectively with said contacts, and a wire leading from the signals through said source of electricity to said needle.

1,297,613. BASIN-PROTECTOR. CHARLES L. VAN DUNKER, San Antonio, Tex. Filed Jan. 23, 1917. Serial No. 144,022. 1 Claim. (Cl. 4—1.)



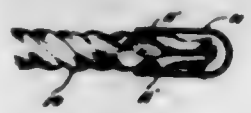
A temporary lining for wash bowls comprising a body of flexible material adapted to conform to the inner surface of the bowl and having a drain opening in its bottom, said lining including an upwardly deflectable valve for said drain opening.

1,297,614. PROCESS FOR JOINING UP ELECTRIC AND OTHER WIRES. JACOB HENDRIK VAN VIERSEN, The Hague, Netherlands. Filed Sept. 11, 1917. Serial No. 190,821. 10 Claims. (Cl. 173—263.)



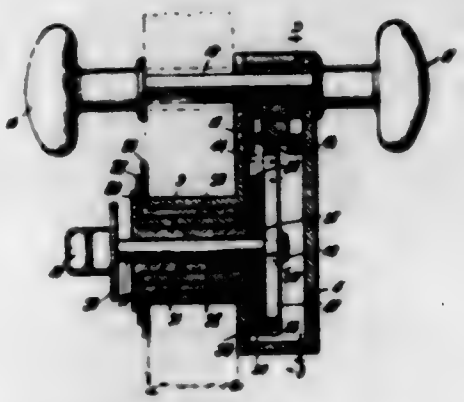
1. A process for joining up wires which consists in passing the wire ends through holes provided in the bottom of a metal junction tube (twisting the wires together to secure them in the tube) and soldering said wire ends, substantially as described.

1,297,615. DEVICE FOR SECURING ROPE ENDS. OTTO H. VOSS and HENRY E. LICHTENHAN, New York, N. Y. Filed May 10, 1915. Serial No. 27,144. 1 Claim. (Cl. 16—158.)



A cap for the end of a rope consisting of a cylindrical body portion having one open end provided with teeth that extend from the edge of said open end convergingly into and lie wholly within the inclosure of the body portion for movement toward each other under the influence of withdrawal strain upon a rope end within the body portion and with which the teeth may be engaged.

1,297,616. DOOR-LOCK. GUSTAV WEGNER, Baudette, Minn. Filed Mar. 24, 1917. Serial No. 157,171. 3 Claims. (Cl. 70—53.)



1. A door lock comprising a casing, a bolt carried thereby, a locking spring adapted to engage and lock the same, a sleeve carried by said casing, a plurality of permutation disk supporting sleeves mounted therein, dials carried by said sleeves, disks supported upon the inner ends of said sleeves, said disks provided with notches formed therein, a releasing bar, a spindle carrying said bar and passing through said sleeves, said bar provided with a bit adapted to fit in said notches and engage said spring for forcing the same out of engagement with said bolt.

1,297,617. ARTIFICIAL BAIT. HENRY S. WELLS, New York, N. Y. Filed Sept. 18, 1918. Serial No. 254,579. 9 Claims. (Cl. 43—30.)

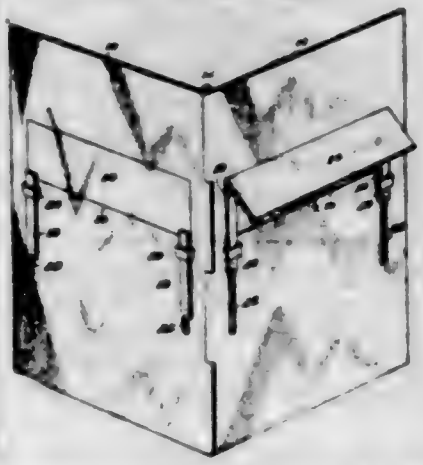
1. A substantially plane horizontally disposed plate adapted to be separably attached to the line-eye of a bait, and having means for the attachment of a line, whereby

said plate is caused to assume an angular position relatively to the draft of such line and thereby induce an



ascending or descending movement of such bait when drawn through the water.

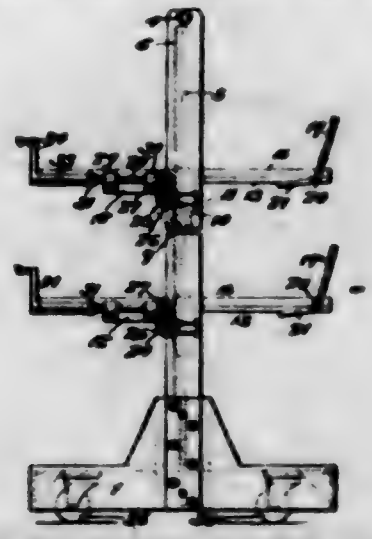
1,297,618. SOLDIER'S PROTECTOR. SAM WEBBOWSKI, Chicago, Ill. Filed Aug. 14, 1918. Serial No. 249,847. 4 Claims. (Cl. 89—36.)



1. A protector comprising a plurality of armor plates hingedly connected together and having firing ports therein, a panel swingingly mounted in each port, clips rearwardly carried by the plates overlying the ends of said ports adapted for engagement by the panels when closed within the ports, struts slidably mounted forwardly of the plates having paths of movement transversely of said ports, operating means for the struts positioned rearwardly of the plates, and adjustment-retaining means for said operating means.

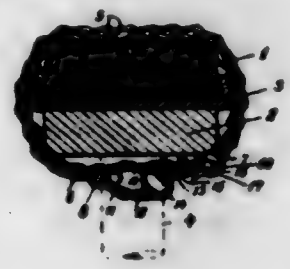
4. A protector for soldiers comprising an armor plate having a firing port therethrough, a rod carried by the plate traversing the port, a panel swingingly mounted upon said rod within said port adapted for closing and opening the same, retaining struts for the panel slidably carried upon one side of the plate, and adjustment-retaining operating means for the struts at the opposite side of the plate from the struts.

1,297,619. RACK FOR BOOK-COVERS AND THE LIKE. ALFRED C. WEBSMANN, New York, N. Y. Filed Dec. 29, 1915. Serial No. 69,204. 3 Claims. (Cl. 187—9.)



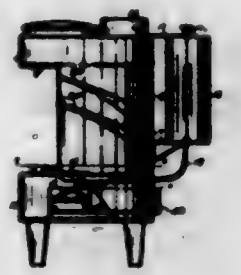
1. A device of the character described comprising a truck having a base, a T shaped upright mounted centrally on each of two opposite sides of said base, said uprights having their longitudinal webs inwardly disposed, a rack secured to each of said webs, a series of frames mounted to slide vertically between the webs, arms extending laterally from said frames, a shaft having pinions fixed thereon carried by the frames in position for the pinions to coact with the racks, trays carried by the arms on the frames and a manually operated means for independently rotating each shaft and its pinions to raise or lower its frame and tray.

1,297,620. UNIT NON-SKID CHAIN DEVICE. BISHOP WHITE, West Hartford, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Jan. 15, 1918. Serial No. 211,942. 8 Claims. (Cl. 152—2.)



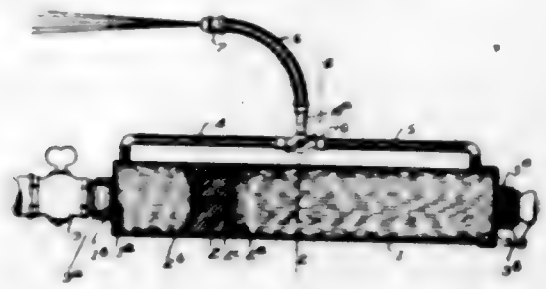
1. The unit non-skid chain device comprising a tread chain and a securing chain and spoke chain permanently connected thereto, an annular loop member on the end of said spoke chain, a securing ring and securing hook on the end of said securing chain and adapted to pass through said loop member and be carried around a spoke and be disengageably hooked into one of the links of said tread chain to hold the same around the tire and rim of the wheel, said securing hook being formed with a substantially parallel constricted admission passage and a parallel sided hook locking link loosely embracing the shank of said hook and connected to said securing ring to be drawn into and substantially block said admission passage when there is substantial tension on said hook.

1,297,621. STOVE. RICHARD ESAU WHITE, Houston Heights, Tex. Filed Apr. 9, 1917. Serial No. 160,592. 1 Claim. (Cl. 126—93.)



A stove including an upper and a lower chamber spaced apart, and a flue arcuate in cross section connecting said chambers, spiraled baffles in the flue arranged in staggered relation, an inclosure in the front part of the lower chamber composed of four walls extending from the top to the bottom of said chamber, the rear wall and the rear portion of the chamber having alined transverse openings therethrough, a removable draft-pan inserted through said openings and extending up to the front wall of the inclosure, said pan having an opening in the top thereof and a draft inlet in the rear end thereof, a removable conical shaped burner mounted on the pan above the opening in the top thereof, said burner being perforated, and its upper side being provided with upwardly extending flanges to retard the flow of oil thereover, the walls of said inclosure having outlet orifices on each side above said burner, a fuel receptacle, a feed pipe leading therefrom and extending into the lower chamber and the inclosure therein and discharging on said burner, the top of the lower chamber having an opening to permit access to the burner and a removable covering for said openings.

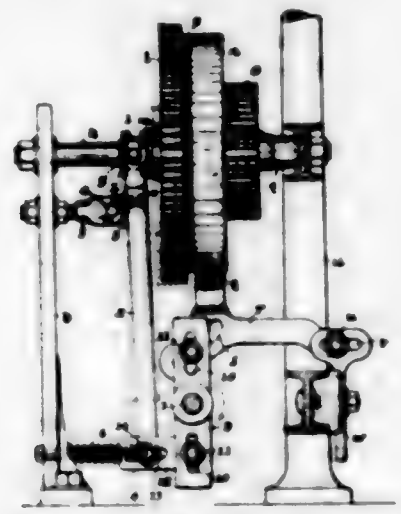
1,297,622. SPRAYING APPARATUS. ARTHUR WHITTAKER, San Diego, Calif. Filed June 16, 1917. Serial No. 175,189. 3 Claims. (Cl. 137—67.)



1. In an apparatus of the class described, a cylinder provided with an outlet orifice at each end, a rodless plunger reciprocally mounted in said cylinder, outlet conducting pipes communicating with said outlet orifices respectively a three-way valve connecting the extended ends of said outlet conducting pipes, a flexible conducting means connected with an outlet to said three-way valve, a spray nozzle secured to the extended end of said conducting means, a conducting means adapted to be secured to said cylinder at either end and a plug adapted to close the other end.

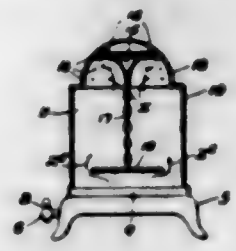
2. In a spraying device the combination of a cylinder provided with outlet orifices at its opposite ends, a plunger reciprocally mounted within said cylinder, a conducting means adapted to be secured to either end of said cylinder for conducting water from a water main to the one end of said cylinder, a plug adapted to close the opposite end of said cylinder and means for regulating the proportionate quantities of liquid passing from said outlet orifices on the respective sides of said plunger in said cylinder.

1,297,623. DRIVING MECHANISM FOR LOOMS. ADOLPH WIDMER, Paterson, N. J. Filed June 15, 1918. Serial No. 240,209. 1 Claim. (Cl. 74—46.)



In combination, a support, driving and driven clutch members journaled in said support side by side and one being shiftable toward and from the other into and out of power-transmitting engagement with the latter, and a controlling train of parts for said members including a brake arranged below the driven member and movable up and down into and out of engagement therewith, an upright lever fulcrumed in said support at the side of the shiftable clutch member opposite to the other clutch member, and operatively engaged with said shifable member and adapted to move the same into and out of engagement with the other member, said lever having the part thereof affording its fulcrum projecting away from the shiftable member, and means, including a rocker, to couple said brake and lever together, whereby the brake and lever are both normally impelled by gravity the former downward out of engagement with the driven member and the latter into position to preserve engagement of the shiftable member with said other member.

1,297,624. HEAT-RADIATING APPARATUS. JAMES G. WILKIE, Brooklyn, N. Y. Filed Dec. 16, 1918. Serial No. 266,951. 3 Claims. (Cl. 126—83.)



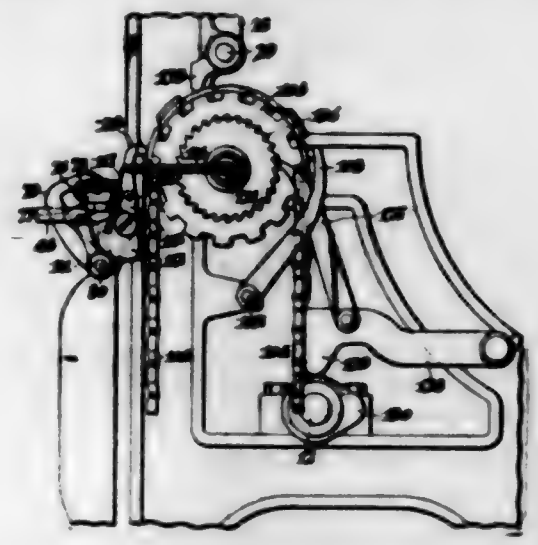
1. A heat radiating apparatus for use in connection with gas stoves of the class described, comprising a hollow body portion having a reduced head portion, the walls of the head portion being provided with a plurality of apertures and a V-shaped rib construction arranged centrally and longitudinally of the inner face of said head portion.

1,297,625. WELL-BORING APPARATUS. ARTHUR G. WILLARD and WILLIAM W. WILSON, Los Angeles, and CHARLES R. WILCOX, East Bakersfield, Calif., assignors to said Arthur G. Willard and William W. Wilson. Filed Nov. 18, 1914. Serial No. 872,748. 4 Claims. (Cl. 255—23.)



4. In an apparatus for well boring, the combination of a base, a table rotatably mounted upon the base and formed with a central opening, means for rotating the table, a drive bushing divided longitudinally into complemental sections adapted to be applied to the drilling stem from opposite sides thereof, and fastening means rigidly connecting the complemental sections into a unitary drive bushing which is seated removably within the central opening of the table and has an interlocking connection therewith so as to rotate with the table.

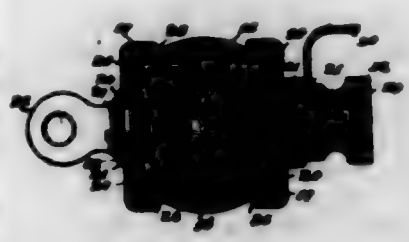
1,297,626. FLAT-KNITTING MACHINE. WALLACE WILSON, Philadelphia, Pa. Filed July 22, 1915. Serial No. 41,216. 4 Claims. (Cl. 66—12.)



1. In a machine of the class described, a bar mounted with capacity for endwise reciprocation, stops for limiting the extent of the reciprocatory motion, means for impart-

ing reciprocation to said bar, a yielding connection interposed between said means and the bar, whereby the extent of said reciprocation is limited according to the position of the aforementioned stops, a rocking rod mounted on said bar, a series of thread carriers set upon said rod, a bank of needles in such relation to said thread carriers that reciprocation of the thread carrier determines the number of consecutive needles to which the thread is fed, while rotation of said rod causes the carriers to pass from one side of the bank of needles to the other.

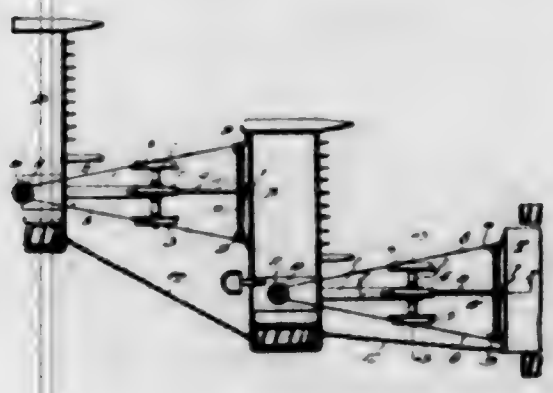
1,297,627. SPARK-GAP. JOHN F. WING, Maywood, Ill. Filed Sept. 1, 1916. Serial No. 117,979. 6 Claims. (Cl. 175—183.)



1. In a spark gap, a body portion of insulating material, caps at the ends of said body portion, said body portion having notches adapted to receive portions of the caps for securing the caps against displacement, nipples formed integral with said caps, and terminal clips connected to said nipples.

6. In a device of the class described, a cylindrical glass body part having an opening therethrough, flange portions at either end of said body part, indents being formed in said flange portions adjacent said body part, cup shaped caps for said flange portions, said cup shaped caps having the extreme ends of their flanges adapted for bending inwardly so that the bent metal thereof may enter the indents in the body portion, internal nipples formed integral with said caps, said nipples adapted to project into the opening in the body part, one of said caps having a depression adjacent said nipple at one end of said body part, a compressible washer for said depressed portion, cushions of air tight material between said caps and said body part, and terminal plugs threaded into the nipples at either end, and terminal clips connected to said plugs.

1,297,628. IMPLEMENT DRAFT AND STEERING MEANS. WILLIAM A. WODHAM, Moorhead, Minn. Filed June 24, 1918. Serial No. 241,622. 3 Claims. (Cl. 21—137.)



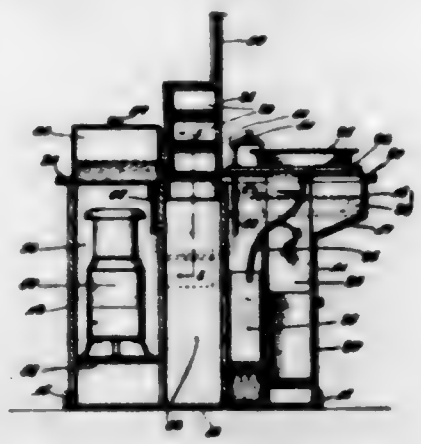
3. The combination with a front and a rear wheeled machine, a steering truck pivoted to said rear machine, and a pull member offset from the truck and connecting said machines; of a longitudinal tube secured to said truck, a tongue whose rear end is slidable in said tube, and means for connecting the front end of said tongue to said front machine and for swinging it laterally with respect thereto.

1,297,629. CONTINUOUS FURNACE AND PROCESS OF REGULATING ATMOSPHERIC CONDITIONS IN FURNACES. CHARLES P. WOOD, New York, N. Y. Filed Sept. 19, 1917. Serial No. 192,081. 7 Claims. (Cl. 263—28.)



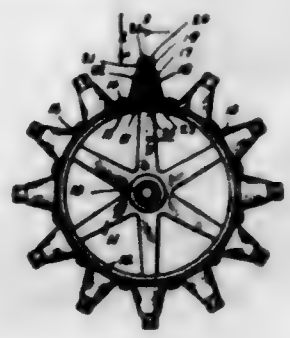
7. A furnace provided with a combustion zone, a cooling zone, means for admitting gas to the cooling zone and for maintaining it there as a gaseous body or prism, means for supporting combustion of the advance end of the gaseous body in the combustion zone air locks at the entry and exit parts of the furnace which prevent access of air when the furnace is opened to admit or discharge the material about to be, or which has been, treated, thereby preventing access of air to the gaseous body in the cooling zone, and means for effecting any desired gaseous condition in the air lock at the exit portion of the furnace to regulate conditions therein.

1,297,630. COLLAPSIBLE WASHSTAND. JOHN ZAWISZA, Windsor, Ontario, Canada. Filed Sept. 6, 1918. Serial No. 252,815. 1 Claim. (Cl. 45—119.)



In a collapsible wash-stand, the combination with a hollow cabinet containing interior compartments and a pair of water tanks arranged on said cabinet, of means for heating one of said tanks, a basin, a mirror, a plurality of drawers, means for raising and lowering said basin, the mirror and drawers being adapted to be raised and lowered by hand, flexible connections between said water tanks and said basin, means for controlling said connections, and means for receiving water from said basin.

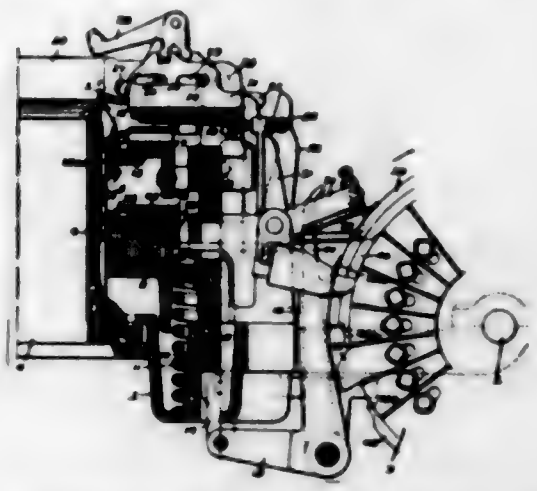
1,297,631. TRACTOR-WHEEL. SHERMAN T. ALLEN, Los Angeles, Calif. Filed Oct. 4, 1918. Serial No. 256,823. 1 Claim. (Cl. 21—212.)



A tractor wheel comprising a hub, a rigid frame extending outwardly therefrom, grouters extending radially from

the frame, each grouter comprising a tubular member, a plunger slidably mounted therein and normally spaced a slight distance from the outer end of said tubular member, thereby forming a cup shaped recess therewith, said tubular member having a discharge orifice, a contractile spring operatively connected to said plunger said spring tending to move the same into normal position and allowing the same to be moved toward the frame on encountering resistance on the road.

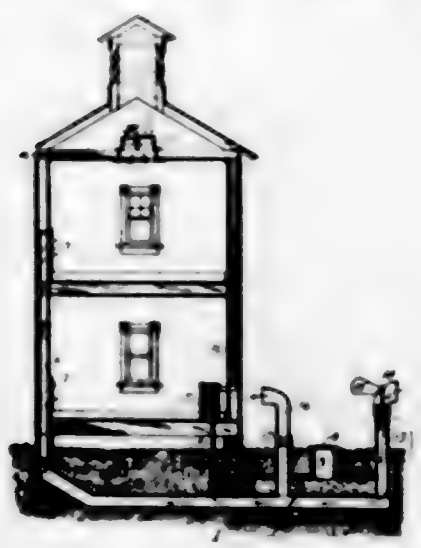
1,297,632. TRANSFER MECHANISM FOR KNITTING-MACHINES. ELMER U. AMES, Philadelphia, Pa., assignor to H. Brinton Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 29, 1915. Serial No. 69,260. 12 Claims. (Cl. 66—12.)



3. The combination with a circular knitting machine having a pivotally mounted latch ring and at least one yarn guide movably carried by said ring, of a cam-controlled lever for governing the position of said yarn guide; and means for giving said lever an abnormal movement at a predetermined time to cause it to turn the latch ring on its pivot.

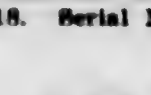
9. The combination in a circular knitting machine having a rotary needle cylinder, of needles having projecting butts and operative on said cylinder; a cam movable toward and from the cylinder into and out of engagement with the needle butts; a gap-closer; means for moving said gap-closer to a raised position when the cam is withdrawn; and means for locking the gap-closer in its raised position.

1,297,633. COOLING AND VENTILATING METHOD. CHARLES S. ASHLEY, Toledo, Ohio. Filed Nov. 7, 1917. Serial No. 200,660. 1 Claim. (Cl. 62—172.)



The cooling method herein described which consists in supplying a subterranean chamber with a suitable body of water, then by passing through such body of water natural currents of air of freezing temperature, and then,—while the ice thus formed in said chamber remains in place,—passing a current of air through suitable conduits invested in such ice into the place to be cooled.

1,297,634. GARMENT-FASTENER. PERRY P. AU BUCHON, St. Louis, Mo. Filed Jan. 8, 1918. Serial No. 270,151. 2 Claims. (Cl. 24—216.)



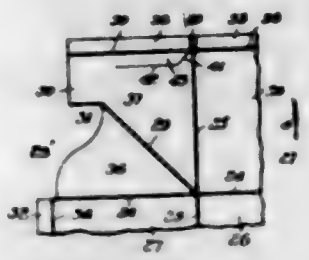
1. In a garment fastener of the character described, an eyelet consisting of a strip of springy material having flat end portions aligned to each other in the same plane and a middle portion projecting from and parallel to the end portions, and having a central opening therethrough, the said middle portion being split along its longitudinal center between its ends and the said opening, and having its divided portions divergent from the said ends to their junction with the said flat end portions.

1,297,635. PROCESS FOR REFINING LIQUIDS. EUGENE E. AYRES, Jr., Chester, Pa., assignor to Sharples Specialty Company, West Chester, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1917. Serial No. 194,482. 4 Claims. (Cl. 210—1.)

1. The process of refining liquid which consists in adding to the same an inert substance capable of carrying down matter suspended in said liquid and separating the mixture into layers by centrifugation.

4. The process of refining liquid containing solids to be removed therefrom, which consists in heating and adding to the same an inert substance adapted for combining with said solids and separating the product into layers by centrifugal action.

1,297,636. BOX. SIGMUND BACHMANN, Chicago, Ill. Filed Nov. 29, 1918. Serial No. 264,859. 2 Claims. (Cl. 229—31.)

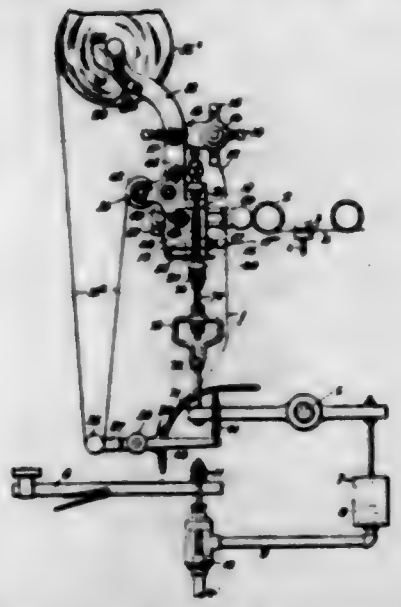


1. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and each formed of sections connected together along a diagonally-disposed line and lying in flatwise opposed relation and extending flatwise relative to adjacent box-walls, and members cut from the material of those sections of the corner-extensions which directly oppose said box-walls to points below the upper edges of said last-referred-to sections for overlappingly engaging the other sections of said extensions.

1,297,637. RECORDING MECHANISM. MORITZ BRYON, New York, N. Y., assignor to Emil Ekstrom, Gothenburg, Sweden. Filed July 23, 1917. Serial No. 183,223. 60 Claims. (Cl. 164—69.)

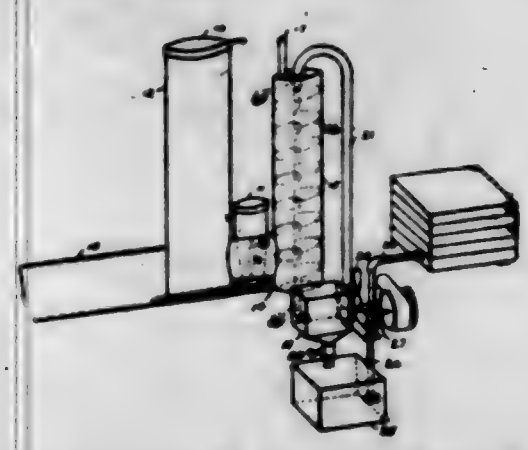
1. In recording mechanism, the combination of recording means, driven feeding means for impelling a record

sheet past said recording means and including a member engagable with feed apertures in said sheet, and means



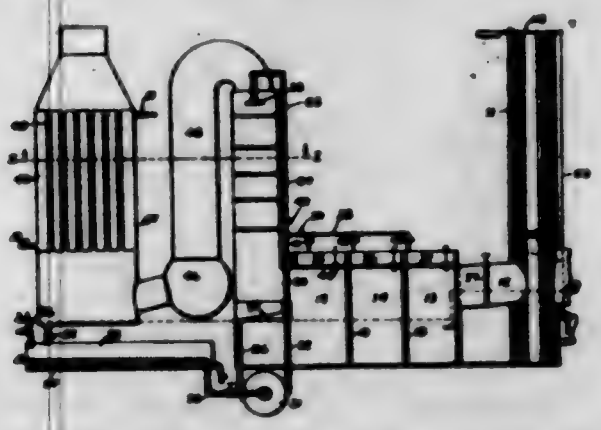
actuated simultaneously with said recording means, operable to produce said feed apertures in said sheet.

1,297,638. PROCESS OF PRODUCING POTASSIUM SULFATE. HENRY BLUMENBERG, Jr., Los Angeles, Calif. Filed Jan. 2, 1918. Serial No. 209,979. 4 Claims. (Cl. 23—22.)



1. A process of producing potassium sulfate from waste gases containing potassium compounds in suspension and carbon dioxid, comprising contacting said gases with an aqueous mixture containing a sulfate of an alkaline earth metal, thereby forming potassium sulfate, and separating the potassium sulfate from the mixture.

1,297,639. APPARATUS FOR RECOVERING POTASSIUM COMPOUNDS FROM CEMENT-KILN GASES. HENRY BLUMENBERG, Jr., Oro Grande, Calif. Filed Mar. 15, 1918. Serial No. 222,765. 2 Claims. (Cl. 23—22.)

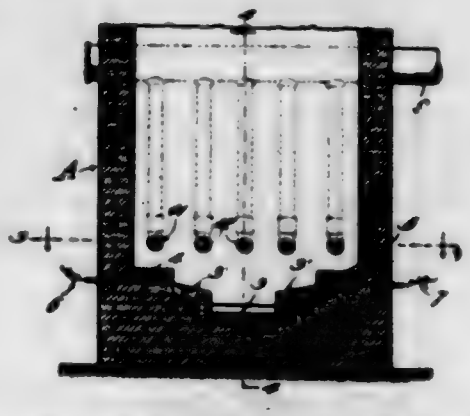


1. An apparatus for recovering potassium compounds from hot gases containing the same in suspension, comprising a dust precipitating chamber, a precipitating tower, means for circulating an aqueous mixture through said tower for precipitating the cement dust and potassium compounds, a condenser connected with said tower, vertical tubes open at both ends arranged in said condenser, means for circulating a cooling medium about said tubes, means for collecting the aqueous mixture of cement dust and potassium compounds precipitated in said condenser, and means for concentrating said aqueous mixture.

1,297,640. PROCESS OF MAKING POTASSIUM NITRATE. HENRY BLUMENBERG, Jr., Oro Grande, Calif., assignor to Chemical Construction Company, Los Angeles, Calif., a Corporation of California. Filed July 8, 1918. Serial No. 243,953. 5 Claims. (Cl. 23—22.)

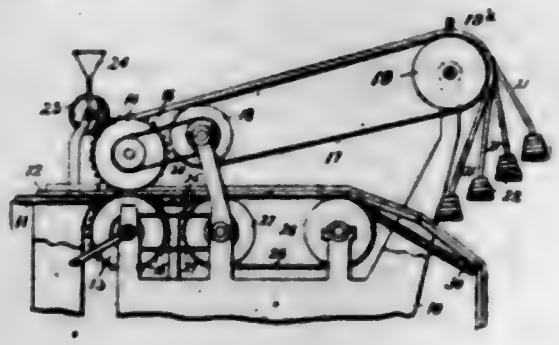
3. A process of making potassium nitrate, comprising heating a mineral containing potassium in an insoluble form with a metal nitrate to a point below where nitric oxid fumes are liberated until fusion takes place and potassium nitrate is formed and separating the potassium nitrate from the fused mass.

1,297,641. ELECTRIC FURNACE FOR SMELTING ORES. ALBERT E. BOOKWALTER, Coeur d'Alene, Idaho. Filed Apr. 26, 1917. Serial No. 164,778. 1 Claim. (Cl. 204—64.)



In a smelting furnace, a furnace shell having a rectangular bottom and a polysided wall rising therefrom, said bottom having along its central portion a relatively narrow well provided with a molten metal outlet, a pair of one piece electrodes extending from one side to the opposite side of the furnace and lying on said bottom on opposite sides of and parallel to said well, said electrodes abutting the remaining two opposite sides of said wall and being spaced from said well, said bottom of the furnace inclining downwardly from said electrodes to said well and forming means for supporting the ore to be melted by the electric current passing between said electrodes.

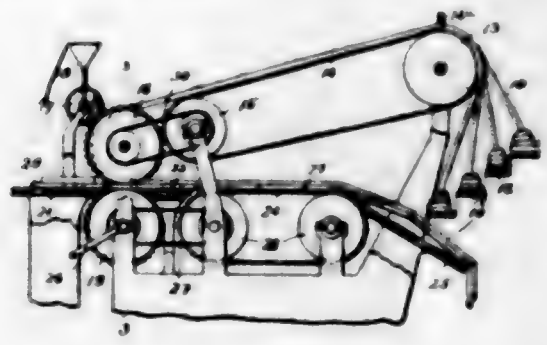
1,297,642. APPARATUS FOR APPLYING RIBS TO STORAGE-BATTERY SEPARATORS. HARRY L. BOYER, Trenton, N. J. Filed July 6, 1915. Serial No. 38,064. 5 Claims. (Cl. 154—1.)



1. In a machine for applying ribs to storage battery separators, a pair of pressure devices between which flat

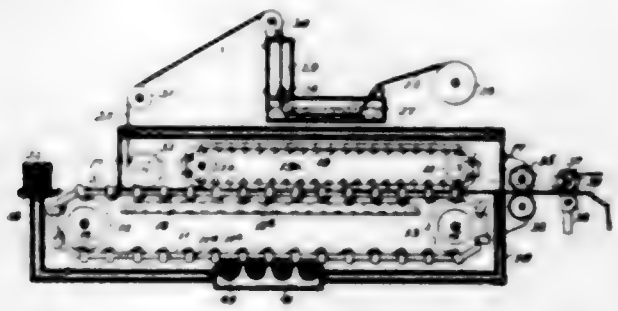
storage battery separators are adapted to be moved, means for supplying rib-forming material between said pressure devices, said material being in the form of separated parallel strips, and means for applying a substance to said rib-forming material to render the same adhesive before it engages the separators.

1,297,643. METHOD OF APPLYING RIBS TO STORAGE-BATTERY SEPARATORS. HARRY L. BOYER, Trenton, N. J. Filed July 6, 1915. Serial No. 38,065. 12 Claims. (Cl. 154—2.)



1. The method of applying ribs to separators, which comprises attaching rib material in the form of strips onto a series of separators, and severing the strips between the separators.

1,297,644. APPARATUS FOR FORMING STORAGE-BATTERY SEPARATORS. HARRY L. BOYER, Trenton, N. J., assignor to Joseph Stokes Rubber Company, Trenton, N. J., a Corporation of New Jersey. Filed May 5, 1917. Serial No. 166,727. 8 Claims. (Cl. 18—17.)



1. In an apparatus for ribbing storage battery separators, an endless conveyer on which separator plates are adapted to be placed, means for applying rib forming material to said plates, and means moving with said conveyer for pressing the rib material onto said plates.

1,297,645. PROCESS OF FORMING STORAGE-BATTERY SEPARATORS. HARRY L. BOYER, Trenton, N. J., assignor to Joseph Stokes Rubber Company, Trenton, N. J., a Corporation of New Jersey. Filed May 5, 1917. Serial No. 166,728. 17 Claims. (Cl. 18—55.)

1. The process of making ribbed separators for storage batteries which comprises simultaneously pressing rib forming material onto separator plates and deforming the plates.

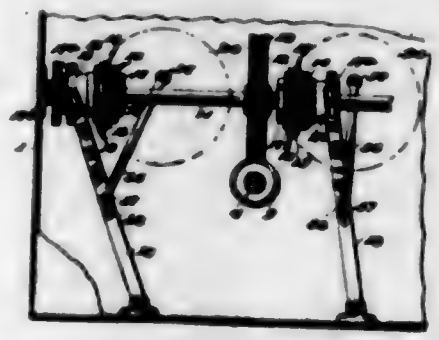
1,297,646. CHIMNEY-SUPPORT FOR OIL-LAMPS. LALLIE TAIT BRAGG, Camden, Ala. Filed Dec. 19, 1918. Serial No. 267,420. 4 Claims. (Cl. 240—90.)

1. A burner for oil-lamps having an annular plate and an upwardly projecting marginal flange with threads at the upper portion thereof terminating a distance above the plate, in combination with a chimney having corresponding threads at its lower end and a cylindrical portion above the threads on a vertical plane with the base of said threads, the width of the threaded portion of the chimney corresponding approximately with the width of



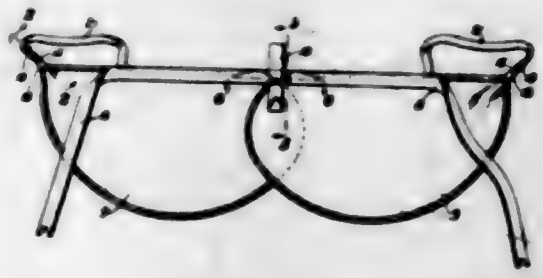
the space between the annular plate and threaded portion of the burner to fit within said space, substantially as shown and for the purpose set forth.

1,297,647. DRIVE-GEARING FOR MINING-MACHINES. JAMES A. BRANTLEY, Sand Springs, Okla. Original application filed Feb. 3, 1917, Serial No. 146,414. Divided and this application filed Feb. 12, 1918. Serial No. 216,717. 2 Claims. (Cl. 74—41.)



1. The combination with a rotatable shaft; of a compound gear carried by said shaft, said gear comprising a hub feathered upon the shaft, a metallic disk pivoted upon the hub and provided upon its periphery with radially extending teeth, fibrous friction members arranged upon the hub upon opposite sides of the metallic disk and having their peripheries substantially flush with the periphery of the metallic disk, and means to bind the friction members to the metallic disk; means to shift the gear longitudinally of the shaft; and a driven disk arranged at substantially a right angle to said gear and having a substantially flat face, said face being provided with a plurality of concentric annular sets of depressions for coaction with the radial teeth of said gear.

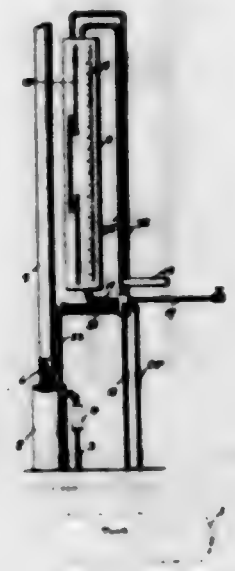
1,297,648. SWIMMING DEVICE. REGINA N. BRESSLER, New York, N. Y. Filed Dec. 1, 1915. Serial No. 64,421. 3 Claims. (Cl. 9—17.)



1. A swimming device, comprising a flexible band adapted to extend about the waist of the user, two inflatable members carried by said band and spaced apart, a flexible towing member one end of which is secured to

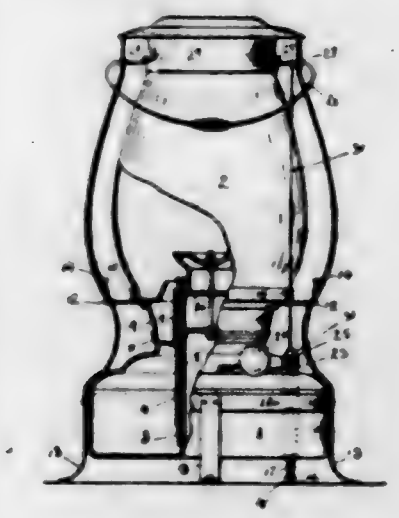
said band at a point between said inflatable members, and means for holding said flexible towing member secured in a folded condition against the band.

1,297,649. MEASURING DEVICE. WILLIAM J. BRITTAIN, Holdenville, Okla. Filed June 22, 1917. Serial No. 176,356. 2 Claims. (Cl. 221—103.)



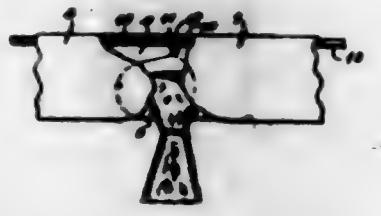
1. A device of the character specified, comprising a measuring chamber, a reservoir for fluid under pressure having a vent pipe, and a safety valve in the vent pipe, a storage tank, a valve casing, and a valve in the casing, said valve and casing having coöperating ports for simultaneously connecting the reservoir with the storage tank and the storage tank with the measuring chamber, and the measuring chamber with the vent pipe, or for simultaneously connecting the measuring chamber with a discharge, and the reservoir with the measuring chamber to drive out the liquid.

1,297,650. SAFETY FLUID LAMP AND HEATER. GEORGE W. BROWN, Portland, Me., assignor to Susan J. Dodge, New Castle, Me. Filed June 3, 1918. Serial No. 237,860. 4 Claims. (Cl. 67—77.)



3. In a device of the character described, a fluid tank, a wick, a wick carrier, a light extinguisher, a rotating rod provided with ratchets adapted to operate the wick carrier and wick, a cup-shaped hand wheel on the end of said rod, a spring, one end attached to the bearing and the other to said wheel, arranged to be set under tension by the turning of the rod to raise the wick carrier, a ratchet fixed on said rod, a spring attached to the tank and carrying a pawl adapted normally to engage said ratchet and lock said rod against rotation, a vertically reciprocating rod extending through the tank, a lug on the top of the rod in the path of said first mentioned spring, and a coil spring inserted between the bottom of the tank and a nut on said rod, the tension of the spring on said rod, when free, tending normally to hold the rod down to cause said lug to release said pawl from the ratchet on the wick operating rod.

1,297,651. COLLAR ATTACHMENT. OSCAR BROWN, Homer, Ga. Filed Aug. 24, 1914. Serial No. 858,346. 1 Claim. (Cl. 2—70.)



A device of the class described adapted for use between the folds of a turned down collar for providing a tie space, said device including a pair of substantially arcuate sections, a resilient spring having each end secured to one end of each section for adjustably connecting the sections together, the free end of each section provided with a hook for engagement with the vertical edges of the inner fold of the collar to retain the device in the collar, and the spring permitting the arcuate sections to conform to collars of various sizes.

1,297,652. CONCRETE FLUE-VENT. JAY D. BRUNNER, Los Angeles, Calif. Filed June 20, 1918. Serial No. 241,034. 1 Claim. (Cl. 72—92.)

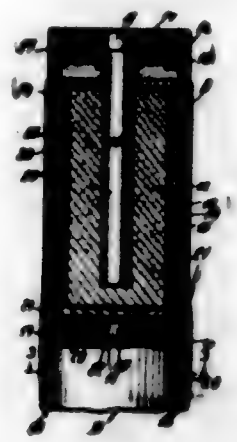


A section of concrete flue vent comprising two concrete pipes mounted end to end; the meeting end of one pipe having an end face extending at right angles to the outer side face and about one-third of the way across, a second end face extending at right angles to the inner side face about one-third of the way across, and a third end face connecting the inner ends of the first and second end faces at an angle of about 30°; the meeting end of the other pipe having an end face extending at right angles to the outer side face and about one-third of the way across, a second end face extending at right angles to the inner side face about one-third of the way across, and a third end face connecting the inner ends of the first and second end faces at an angle of about 30°; one meeting end being male and the other meeting end being female; the inclined face of one meeting end fitting and tightening up upon the inclined face of the other meeting end to make a half-lap; and the parts being proportioned, so that the inclined faces will come tight together and hold the flat faces from coming together.

1,297,653. DRY BATTERY. CHARLES F. BURGESS, Madison, Wis., assignor to Burgess Battery Company, a Corporation of Wisconsin. Filed May 21, 1917. Serial No. 169,868. 9 Claims. (Cl. 204—38.)

3. A battery comprising a plurality of dry cells, one of which carries a metal collar insulated from both its zinc

and its carbon elements and another of which has a metal cap fitting over and insulated from its zinc element but connected to its carbon element, said cells being joined in rigid relation and in series connection with the zinc ele-



ment of one cell in contact with and soldered to the metal cap of the next adjacent cell and the zinc element of the last cell electrically connected with the said collar; substantially as described.

1,297,654. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor to Burgess Battery Company, a Corporation of Wisconsin. Filed May 21, 1917. Serial No. 169,869. 10 Claims. (Cl. 240—8.5.)



1. In combination, a plurality of dry cells, means connecting said cells end to end in rigid relation and in series connection, a collar embracing the sides and top of the topmost cell and insulated therefrom, a conductor leading from the lowermost cell to said collar, an insulating wrapping for said rigidly connected cells and said conductor, a casing slipped over said collar, a reflector secured to said casing, and a lamp carried by said reflector, substantially as described.

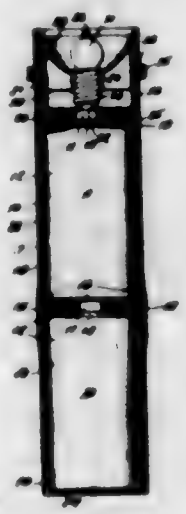
1,297,655. HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor to Burgess Battery Company, a Corporation of Wisconsin. Filed May 21, 1917. Serial No. 169,870. 10 Claims. (Cl. 240—8.5.)

1. In combination, a battery comprising a plurality of dry cells electrically connected in series and having a central terminal of one polarity and an adjacent terminal of opposite polarity, a metal casing contacting with said adjacent terminal, a lamp, and a support for said lamp electrically connected with said casing and adapted to move



said lamp with respect to said casing into and out of engagement with said central terminal.

1,297,656. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor to Burgess Battery Company, a Corporation of Wisconsin. Filed May 21, 1917, Serial No. 169,871. Renewed Dec. 5, 1918. Serial No. 265,454. 11 Claims. (Cl. 240—8.5.)



1. A battery hand lamp comprising, in combination, a battery having a central terminal of one polarity and an outer terminal of opposite polarity, a casing adapted to be detachably secured to said battery in contact with said outer terminal, a lamp and a support therefor mounted within said casing and adapted when said casing occupies one position to cause one terminal of the lamp to engage the said central terminal of the battery and when the casing occupies a reversed position on the end of the battery to cause the lamp to be inverted and out of contact with the end of the battery.

1,297,657. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor to Burgess Battery Company, a Corporation of Wisconsin. Filed May 26, 1917. Serial No. 171,110. 7 Claims. (Cl. 240—8.5.)

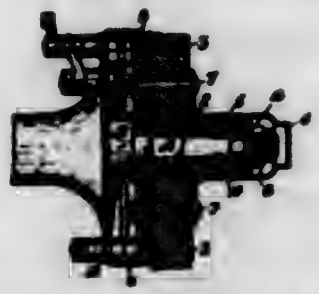
1. A battery hand lamp comprising in combination, a casing, a cylindrical battery of dry cells housed therein in series connection, said battery having permanently at-

tached terminals adjacent to one another at the top of the battery, an insulating plug closing one end of the casing,



a lamp socket therein, and switch mechanism for connecting one battery terminal to said socket when desired.

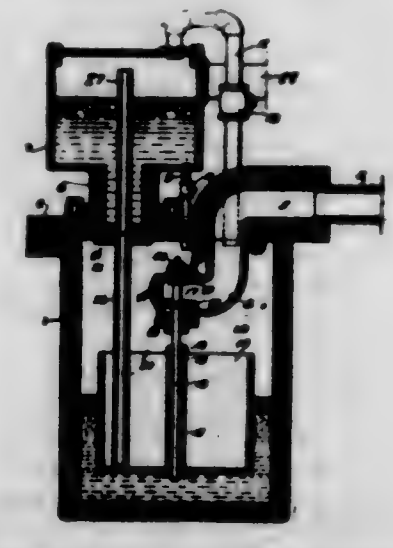
1,297,658. SHIM. EDWIN B. CANTRELL and GEORGE E. MILLER, San Francisco, Calif. Filed May 7, 1918. Serial No. 233,144. 2 Claims. (Cl. 64—10.)



1. A cone-shaped split shim and an inwardly turned annular flange on one end of the shim.

2. The combination with an axle having a tapered end, a keyway formed in said end and a wheel hub adapted to be received on said axle and secured against turning thereon by the insertion of a key, of a shim adapted to be interposed between the tapered axle and the wheel hub, said shim being split to permit insertion of the key and a flange on the shim adapted to secure it against endwise movement on the tapered axle when the hub is driven into place.

1,297,659. STEAM-TRAP. THOMAS A. CHALMERS, Camden, N. J. Filed July 18, 1918. Serial No. 245,549. 5 Claims. (Cl. 137—103.)



4. The combination of a casing, a float box therein; a valved inlet for water of condensation and arranged to discharge into the float box; a reservoir above the casing; a pipe forming a communication between the float box and the reservoir; and a pipe leading from the reservoir and arranged to discharge water from the reservoir into the float box to open the valve.

1,297,660. LENS AND METHOD OF PRODUCING THE SAME. GEORGE A. COLLINS, Los Angeles, Calif., assignor of one-half to Siegfried G. Marshuta, Los Angeles, Calif. Filed June 12, 1916. Serial 103,587. 7 Claims. (Cl. 88—54.)



1. The method substantially set forth of continuously applying and superposing layers of one or more pigments containing metallic material upon the periphery of a lens so that the layers form a homogeneous rim integral with the lens; and baking the lens until the rim assumes the proper consistency.

3. The method substantially set forth of continuously applying and superposing layers of enamel containing metallic material upon the periphery of a lens so that the layers form a homogeneous rim integral with the lens; and baking the lens until the rim assumes the proper consistency.

6. The method substantially set forth of making a rim integral with a lens, consisting of revolving the lens peripherally in a lathe, applying continuous heat to the edge of the lens, applying liquid enamel or metallic salts to said edge in a continuous even flow, the speed of the lathe being so graduated that each peripheral application of the enamel is dried before the next is applied, thus building up rapidly, continuously and accurately a rim of any desired body or form; and baking the lens to vitrify the rim.

1,297,661. HANDLE FOR SHOVELS AND THE LIKE. WILLIAM COOPER, Syracuse, N. Y. Filed Aug. 13, 1918. Serial No. 249,667. 2 Claims. (Cl. 55—116.)

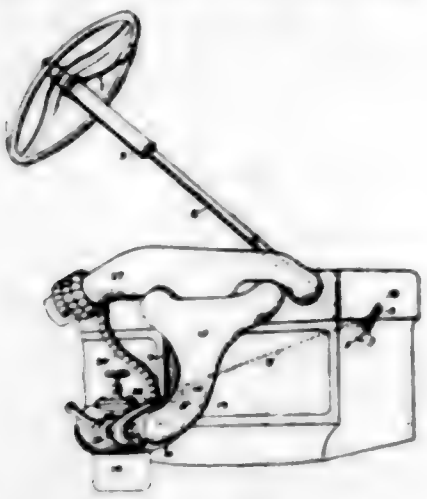


1. A handle for shovels and similar implements having a relatively short enlargement projecting from its under side near its free end, and a protective shield clamped upon the main handle and abutting against the opposite ends of the enlargement.

1,297,662. CARBURETER ATTACHMENT. EMERSON CURRIE, Palo Alto, Calif., assignor of one-half to Walter C. Hones, Los Angeles, Calif. Filed Aug. 12, 1918. Serial No. 249,389. 4 Claims. (Cl. 123—99.)

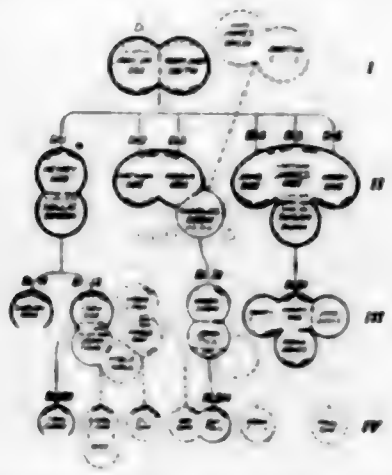
1. In means for mixing a fluid with the combustible mixture flowing from the carbureter to the inlet manifold of an internal combustion engine and simultaneously

rendering said mixture more homogeneous, a plate interposed between the outlet end of the outlet conduit of the carbureter and the inlet end of the inlet conduit of the inlet manifold having therethrough a plurality of small holes adapted to register with said outlet and inlet con-



duits, also having therein a passage leading from its periphery and communicating with a plurality of said holes through their walls and a passage leading from said periphery to said first named passage, a slide valve in said first passage to vary the size of the opening between said passages.

1,297,663. GENEALOGICAL CHART. HERMAN S. DAVIS, Pittsburgh, Pa. Filed Dec. 17, 1918. Serial No. 267,105. 6 Claims. (Cl. 283—1.)

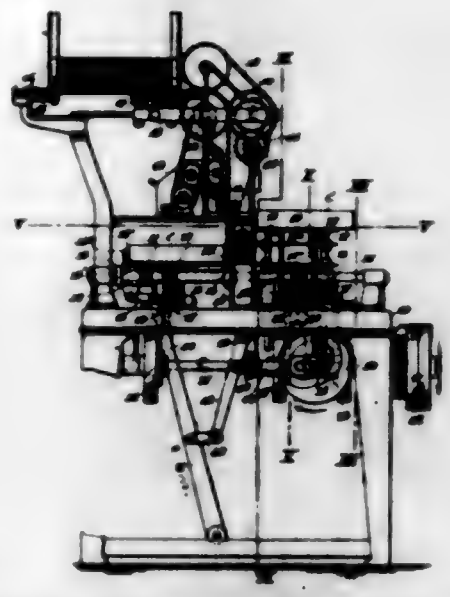


1. A genealogical chart comprising a series of figures, each representing an individual, the figures corresponding to individuals of the same generation being of uniform dimensions, arranged in substantially the same horizontal line and of a size different from the figures representing individuals in earlier or later generations; with a series of bonds uniting appropriate figures in different generation groups and representing lines of descent.

1,297,664. LABELING-MACHINE. HILARION DE ESCOBALES, New York, N. Y. Filed Oct. 26, 1917. Serial No. 198,724. 57 Claims. (Cl. 216—57.)

1. In machines for labeling containers or the like, a receiving station, a container-advancing instrumentality having clamping members, said instrumentality being adjustable to accommodate containers of different lengths, label feeding mechanism operative to deliver a label end into said station at a predetermined delivery speed, said mechanism having means for varying the delivery speed of the label, label applying means in the path of the advancing instrumentality, and a carrier movable transversely to the travel path of the instrumentality, said carrier being adjustable to accommodate containers varying as to depth.

4. In machines for applying labels and adapted to apply a label to the top and an end of a container or the like, a container-receiving station, a container-advancing instrumentality movable from said station in the direction of label application, means for locating a label end in relative position to a positioned container end to which it is to be applied in advance of instrumentality activity, and means for completing label application to said container end and the top of the container during such instrumentality advance.



13. In labeling machines, a receiving station for the article to be labeled, means for locating an end of the label in said station in advance of the positioned article, a pair of clamping members normally positioned at opposite ends of the article and spaced therefrom in the receiving station, a pair of sleeves for supporting said members, means for imparting a reciprocating movement of constant length to one of said sleeves, and operative connections between said sleeves to control the length of movement of the other sleeve.

19. In machines for applying labels and adapted to apply a label to the top and an end of a container or the like, a container-receiving station, mechanism for gripping containers individually in said station and for advancing the gripped containers to apply the label, and means for feeding labels to locate a label advance end in relative position to the container advance end, said mechanism including gripping elements movable relatively to each other to provide distance decrease therebetween during the gripping operation, said label feeding means locating the label end between the container end and opposed gripping element, and an adjustable stop device operative to limit the length of such relative movement.

40. In machines for applying labels to the top and opposite ends of a container or the like, a container receiving station, a container advancing instrumentality movable in the direction of label application, means for locating a label end in said station in advance of the container with the label extending angular to the direction of advance of the instrumentality, a vertically reciprocating carrier in the path of an advancing container, and label applying means between said carrier and the receiving station for completing the label application, said means including a plurality of wiping brushes positioned above the travel path of the instrumentality, one of said brushes being adapted to serve as a guide for the label during instrumentality advance, a second brush being adapted to wipe the rear end of the label on to the corresponding end of the container.

1,297,665. LIFE-BUOY. SAMUEL P. EDMONDS, Catonsville, Md. Filed July 5, 1917. Serial No. 178,704. 3 Claims. (Cl. 9—17.)

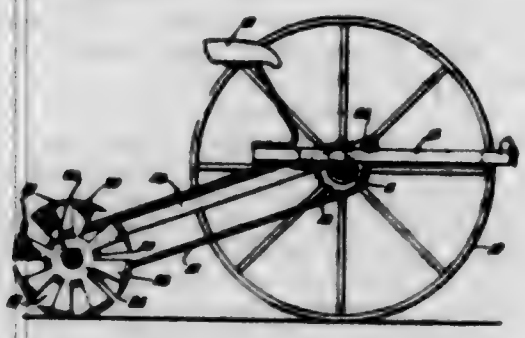
1. A life buoy, comprising a soft pliable buoyant filling material, an envelop or casing therefor consisting of a

single sheet of fabric material having a pliable stiffening water-proof coating upon the inner side thereof enmeshed with the fibers of the material and filling all of the interstices thereof, thereby rendering the fabric water-resistant and sufficiently stiff to maintain the normal shape of the buoy, and said sheet having an outer preservative coating of water resistant pliant material completely enveloping the finished casing.



3. A life buoy, comprising a soft pliable buoyant filling material, and an envelop or casing therefor consisting of a single sheet of fabric material having a pliable stiffening water-proof coating upon one side thereof, said coating being enmeshed with the fibers of the material and pressed into the interstices thereof, thereby rendering the fabric water-resistant and sufficiently stiff to maintain the normal shape of the buoy.

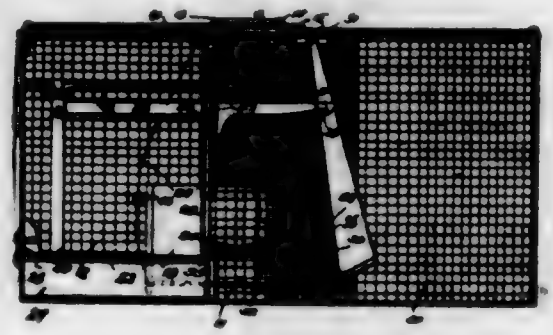
1,297,666. BEET-TOPPER. JOHN ELLES, Warren, Ohio. Filed Mar. 21, 1918. Serial No. 223,753. 2 Claims. (Cl. 55—107.)



1. In a beet topper, the combination with a wheeled truck, an axle, and means for attaching draft animals to said truck, of a pair of parallel rails pivotally engaged with the axle of said truck, and extending rearwardly thereof, a second axle journaled at the rear ends of said rails, means for communicating rotary motion from the first named axle to the second named axle, a plurality of cutter heads at spaced intervals rigidly engaged upon said second axle and of lesser diameter than the truck wheels, said cutter heads consisting of disks rectangularly notched in a direction radial to said axles, and a curved blade formed at the peripheries of said disks integrally therewith, said cutter blades extending as flanges laterally outward from the sides of said disks and over the side edges thereof to form sharp points and arranged circularly thereabout, and beveled, knife-like front edges formed with said blades.

1,297,667. ANIMAL-TRAP. THOMAS J. ELLISON, Terrill, Ky. Filed Dec. 10, 1918. Serial No. 266,074. 4 Claims. (Cl. 43—26.)

1. An animal trap comprising a cage having separate entrance and victim chambers and a passageway between said chambers, a swinging door for the entrance of the first mentioned chamber, a pair of successively operable swinging barriers in the passageway, the first barrier having a connection with the door to swing simultaneously therewith, a tiltable platform in front of the first barrier, a projecting rod carried by the platform and having stops for holding said barrier in lowered and raised positions, said rod being engageable by the first barrier to depress the platform when said barrier swings from lowered to raised position, a latch for holding the

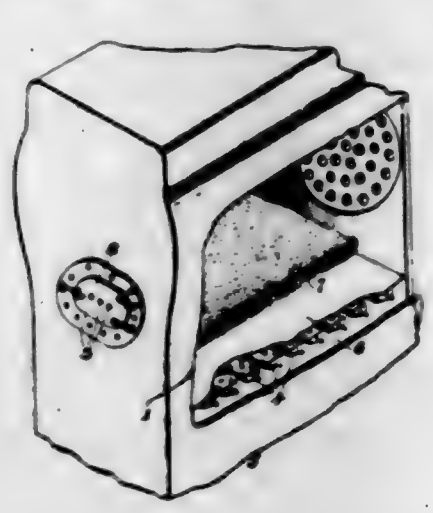


second barrier closed, and a connection between the platform and the latch for releasing the latter when the platform is depressed.

1,297,668. PROCESS FOR THE MANUFACTURE OF ARTIFICIAL MILK. KNUD EXALEV, Nijmegen, Netherlands. Filed Jan. 3, 1918. Serial No. 209,527. 6 Claims. (Cl. 99—11.)

3. A process for preparing artificial milk which comprises successively subjecting a comminuted vegetable material containing protein, fatty substances, sugars and lecithin, to two successive extractions, viz. firstly with a fat-extracting solvent in such a way that substantially all of the fat is removed, and secondly with a solvent of lecithin and sugars; thereafter extracting the residue with an alkaline liquid to dissolve protein, and to produce an alkaline solution containing protein derivatives; purifying the alcohol-extract to remove bitter principles therefrom, and adding the residue thereof, containing lecithin and sugars to said alkaline solution; purifying at least a part of the fatty material to remove substances having disagreeable flavors, and adding at least a part of the so purified fat to the mixture of alkaline liquid and purified alcohol-extract.

1,297,669. METHOD FOR PREVENTING THE LOSS OF FUEL IN STARTING FURNACE-FIRES. JOSEPH P. EVANS, Birmingham, Ala., assignor, by direct and mesne assignments, to Evans Fuel Saving Company, a Corporation of Alabama. Filed Apr. 23, 1918. Serial No. 230,208. 1 Claim. (Cl. 44—2.)

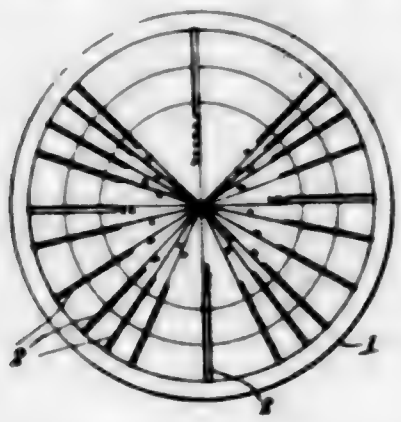


The hereindescribed method of preventing the loss of fuel in starting fires on boiler grates having a top draft, which consists in substantially covering the grate surface with a sheet of combustible material adapted to prevent the fine coal falling therethrough, laying the initial bed of coal on this sheet and causing the bed of coal to burn from the top downwardly toward said sheet.

1,297,670. PROCESS OF EXTRACTING COPPER FROM ORES, &c. NEWTON EVANS, Los Angeles, Calif., assignor of one-third to Carl F. Schader and one-third to William H. Heady, Los Angeles, Calif. Filed Sept. 11, 1918. Serial No. 253,643. 4 Claims. (Cl. 75—18.)

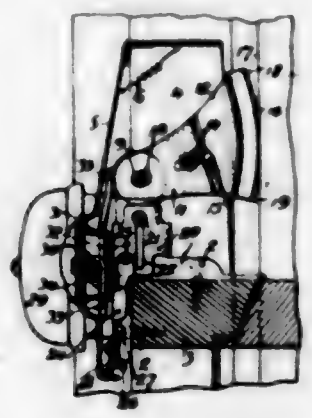
3. A process of treating copper ores and the like comprising subjecting the same to an aqueous solution of niter cake, the strength of the solution being in the proportion of one pound of niter cake to two pounds of copper, thereby forming copper sulfate in solution and recovering the copper from the solution.

1,297,671. PASTRY-CUTTING GUIDE. WILLIAM G. FAIRBANK, Middletown, Conn. Filed Mar. 19, 1918. Serial No. 223,391. 1 Claim. (Cl. 107—20.)



A device adapted for use in guiding a knife to cut circular pastry, comprising a circular disk having a central opening formed therein and provided with a plurality of radially extending slots terminating in close proximity to the marginal edge of the disk, and suitably circumferentially spaced apart to form equally spaced segmental divisions in the pastry when the knife is received in certain of the said slots, the said disk having its surface provided with indicia marked thereon to identify the said slots.

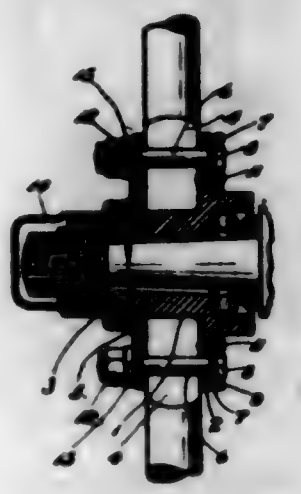
1,297,672. WINDOW-LOCK AND ALARM. ISIDORE FINK, Brooklyn, N. Y., assignor of one-half to Himan Fire, Paterson, N. J. Filed Oct. 23, 1917. Serial No. 198,039. 6 Claims. (Cl. 177—314.)



1. A device of the class described comprising means adapted to be attached to one of a pair of window sashes, a member thereon pivoted to rock and adapted to move laterally on its pivot, said rocking member being arranged to engage another of said pair of sashes and to be rocked and to be moved laterally by movement of a sash and an alarm device adapted to be actuated by said rocking member.

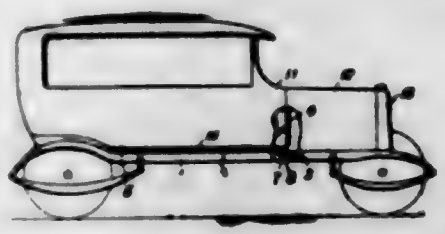
1,297,673. DEMOUNTABLE-WHEEL CONSTRUCTION. FRED W. FRENCH, Grandville, Mich. Filed Aug. 7, 1917. Serial No. 184,839. 4 Claims. (Cl. 21—31.)

1. In combination, a wheel hub, an annular flange on the hub, a wheel on the hub, the inner ends of the spokes thereof bearing against said flange, a plurality of bolts passed through said flange and wheel, a collar on each bolt bearing against the outer side of the flange, a head to each bolt extending from said collar, a ring, means permanently securing the same to the flange, said ring being provided with a plurality of openings to receive the heads of the bolts, said heads on the bolts and openings in the ring being formed so as to preclude rotative movement of the bolts with respect to the ring, a second flange located against the opposite side of the wheel, said bolts passing therethrough, and nuts on the outer ends of the bolts to bind said hub, wheel and second flange firmly but detachably together.



4. A construction as claimed in claim 3 in which said means attached to the flange comprises a ring of sheet metal provided with a plurality of openings, one for each bolt, in which the heads of the bolts enter, the collars on the bolts being disposed between the flange and ring, substantially as described.

1,297,674. AUTOMOBILE-BODY. WALTER L. FRY, Detroit, Mich., assignor, by mesne assignments, to Finance & Trading Corporation of New York, a Corporation of Virginia. Filed Feb. 3, 1917. Serial No. 146,322. 6 Claims. (Cl. 21—182.)



6. In a device of the kind described, a chassis frame having side members and a cross member connecting said side members adjacent the front end of the frame, and a body supporting frame connected at one point to each of said side members intermediate the front and rear wheels, and at one point to the cross member.

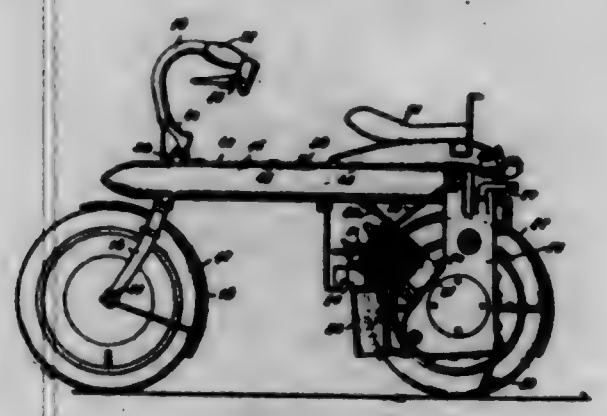
1,297,675. BRUSH. CHRISTOPHER A. GARVEY, Clayton, Mo. Filed Oct. 8, 1917. Serial No. 195,300. 2 Claims. (Cl. 15—49.)



1. A fountain brush comprising a discharge device provided with an unrestricted outlet having an internal screw

thread, and a yielding brush tip in the form of a cylindrical rod of fibrous absorbent material, said rod being closely fitted to said internal screw thread and being movable longitudinally of said screw thread so that it may be rotated and adjusted into or out of said outlet.

1,297,676. MOTOR-VEHICLE. ARTHUR HUGO CECIL GIBSON, New York, N. Y., assignor, by mesne assignments, to Gibson Mon-Auto Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 27, 1916. Serial No. 138,162. 19 Claims. (Cl. 180—82.)



1. A motor vehicle comprising a driven wheel, a driving shaft, an interposed transmission means for connecting the wheel to the shaft, a throttle, and a single control means for the throttle and connected by a lost motion connection to the transmission means.

2. A motor vehicle comprising a driven wheel, a driving shaft, interposed transmission means for connecting the wheel to the shaft, means for interrupting said connection, a throttle, and a control lever connected to the throttle and a lost motion connection between said lever and the transmission means said lever being arranged to selectively control the transmission means and the throttle.

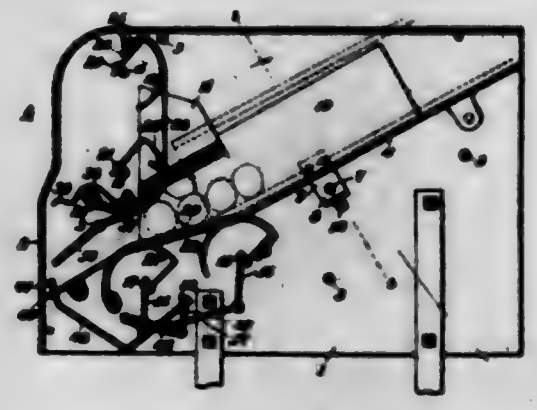
3. A motor vehicle comprising a driven wheel, a driving shaft, an interposed transmission means for connecting the wheel to the shaft, a throttle, a brake, and a single control means connected with the throttle, and a lost motion connection between said control means and the transmission means and brake, whereby said control means is arranged to govern the throttle, the transmission means and the brake, as desired.

4. The combination with a driven wheel, a driving shaft, a controllable connection between the shaft and the wheel, a driving motor, a throttle, and a single control means connected with the throttle, and a lost motion connection between said control means and the transmission means whereby said control means is arranged to govern either or both the transmission connection and the throttle.

5. The combination with a driven wheel, a brake, a driving shaft, a motor, a throttle, and a single means connected directly with the throttle and by a lost motion connection with the brake for controlling the throttle and the brake.

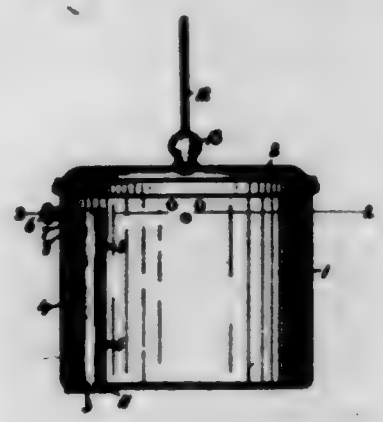
1,297,677. VENDING MECHANISM. GEORGE W. GOSMAN, Conyngham, Pa., assignor to Standard Automatic Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Nov. 9, 1917. Serial No. 201,129. 7 Claims. (Cl. 211—8.)

7. A vending machine for cigars and the like provided with a portion along which the cigars may gravitate to the delivery end of the machine, reciprocatory stop means movable into and out of the path of the cigars approaching the discharge end of the machine, reciprocatory holding means movable into and out of the path of a cigar approaching the stop means, the holding means engaging the cigar when the stop means are withdrawn from such path, agitating means for the cigars for delivering them one at a time to the holding means, and operating means having connections to the agitating, stop and holding



means for causing the operation of said means in timed relation to deliver the cigars one at a time.

1,297,678. KETTLE. THOMAS T. GRASER, Syracuse, N. Y. Filed June 10, 1918. Serial No. 239,132. 2 Claims. (Cl. 53—1.)



1. A covered kettle having an outlet in its bottom, a vent tube wholly within the kettle and normally seated in the outlet to prevent the escape of liquid and permit the escape of steam and vapor, and means for lifting the tube from the outlet to permit the escape of the liquid without removing the cover or tilting the kettle.

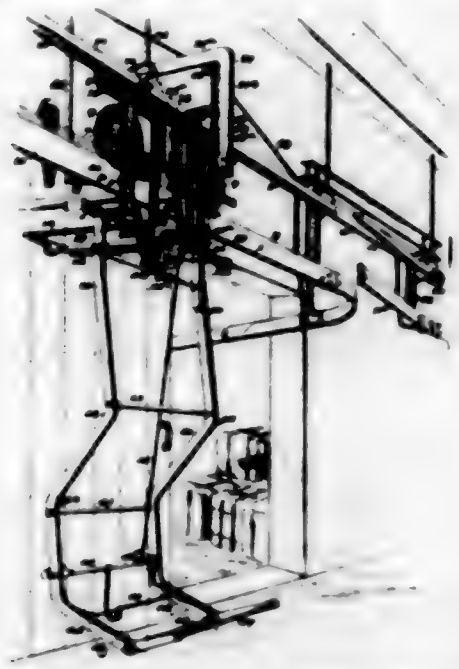
2. A covered kettle having an outlet in its bottom, a vent-tube having its lower end normally seated in the outlet to form a liquid tight joint with the seat and its upper end extended above the liquid level, and means operable at will for lifting the tube from its seat.

1,297,679. PNEUMATIC TOOL. CHARLES H. HASSELER, Philadelphia, Pa. Filed Mar. 11, 1916. Serial No. 83,470. 6 Claims. (Cl. 121—20.)



1. In a pneumatic tool, a handle having a sleeve forming a tapered socket, a cylinder having a tapered end to frictionally engage said socket and having exhaust passages extending in proximity to the rear end of the cylinder, and means engaging the handle and interlocking with the walls of said passages to maintain the handle and cylinder in assembled position.

1,297,680. CONVEYER SYSTEM. EDWARD HANAK, Houston, Tex. Filed Feb. 25, 1918. Serial No. 219,092. 33 Claims. (Cl. 104—18.)



1. In a trolley system, a main trackway, branch trackways from said main trackway, ingoing switches between the main and branch ways, outgoing switches between said branch and main ways, carriages running on said ways, a power cable to move said carriages, switch moving devices, selective means on the carriage for actuating predetermined ingoing switch moving devices to open the switch, means engaged by the carriage on entering the branch way to close the main way switch, means operated by an outgoing carriage on a branch way for opening the respective outgoing switch and effecting a stoppage of an approaching carriage on the main way until the outgoing carriage has passed onto the main way.

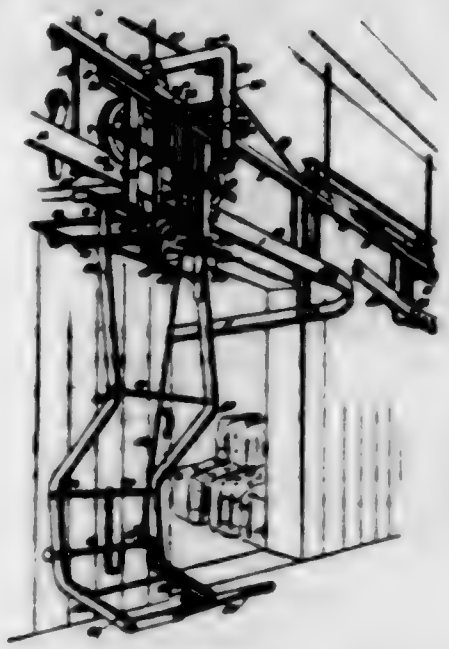
6. In a trolley system, a main trackway and branch trackways, ingoing switch mechanism between the main way and the branch way, outgoing switches between the branch and the main ways, a draft cable along the main way, carriages traveling on the ways and having cable grips, means governed by an approaching carriage for throwing the switch from the main to the branch way, means for releasing the cable grip to permit the carriage to travel under momentum onto the branch way and reclose the main line switch.

17. In a trolley system of the character stated, an endless main track rail, a plurality of cross over rails, ingoing and outgoing switch mechanisms coöperative with each cross over rail and the main track rail, a trolley carriage adapted for traveling along the track rails, a live cable paralleling the main track rail, a grip mechanism mounted on the carriage, a throwing means for the ingoing switch mechanism, a cable grip mechanism controlling device arranged for being actuated by the movement of the outgoing trolley carriage, whereby to release the grip mechanism from the cable and actuate the said switch throwing mechanism to shift the ingoing switch for bringing the cross over rail in line with the main rail to pass the carriage onto the cross over and reshifting the said switch mechanism to close the main line track, a switch throwing mechanism for each outgoing switch operable by the moving trolley for opening and closing the outgoing switch, means actuated by the moving carriage after it has passed from the cross over track on to the return portion of the main track for shifting the cable mechanism into a cable gripping position, and means controlled by a trolley carriage and located in advance of the outgoing switch to which the crossing over carriage is advancing for blocking another carriage traveling toward the outgoing switch to which the cross over carriage is passing, whereby to avoid collision of two carriages at the outgoing switch.

18. In an overhead trolley system, in which is included a single track main and single lateral trolley rails, a switch mechanism coöperative with each main and lateral rail and a tripper for each switch mechanism, a trolley adapted to travel along the main and lateral rails, and an adjustable member on the trolley adapted to be set to engage a selected switch tripper as the trolley moves along the track rails.

33. In a continuous rail trolley system which includes a plurality of cross over rails and switch mechanisms controlled by the passing trolleys that join the cross over rails with the outgoing and return portions of the continuous rail, a live cable in parallelism with the continuous trolley rail, a plurality of trolleys, a cable grip mechanism on each trolley, means coöperative with the continuous rail and the trolleys for shifting the grip mechanism into and out of cable gripping condition at times, and means on one trolley adapted for tripping its cable gripping mechanism whereby to release the cable when the said trolley collides with another trolley.

1,297,681. CABLE-GRIPPING MECHANISM FOR OVERHEAD CONVEYER SYSTEMS. EDWARD HANAK, Houston, Tex. Original application filed Feb. 25, 1918, Serial No. 219,092. Divided and this application filed May 27, 1918. Serial No. 236,799. 16 Claims. (Cl. 104—206.)



1. In a trolley system, a track including a curved section, a power cable above the track, guides for said cable including vertical sheaves along the straight way and horizontal sheaves at the turns, carriages traveling on the track beneath the cable, cable grip devices on the carriage, means on the track to release the grip devices on approaching a curve to permit the cariage to pass under its own momentum around the curve and under the cable and its sustaining sheave and other means on the truck for restoring the cable grip after the carriage has passed the curve.

4. In a trolley system, an overhead live cable, cable supporting sheaves, a trolley equipped with a cable grip and with means whereby the cable supporting sheaves are deflected by the passing trolley to permit the passage of the cable grip.

12. In a load conveying and discharging system in which is included a trackway and an overhead live cable: a trolley adapted to travel on the trackway, a cable grip mechanism mounted on the trolley and including a carriage vertically shiftable with respect to the cable and opposing cable gripping jaws, connections joining the vertically shiftable carriage and the jaws adapted to close the jaws onto the cable as the carriage with the jaws is elevated and for opening the jaws to disengage the cable as the carriage is lowered and means manually and automatically operable for raising and lowering the gripper jaws and the carriage and further means for holding the said carriage locked at either of its shifted movements.

15. In a load conveying and discharging system in which is included a live overhead cable and a trackway paralleling the said cable; a load carrying trolley, vertical guideways on the frame thereof, a cable gripping mechanism mounted on the trolley frame and comprising a carriage vertically slidable in the guideways on the trolley frame, a pair of coöperating pivoted gripper jaws mounted on and movable with the said carriage, toggle links connecting the lower end of the jaws, means on the trolley frame for moving the jaw holding carriage to and from the cable, the said means comprising a rotary disk having a rotating member attached thereto, a link connection that joins the disk and the carriage stops on the trolley frame, and a toggle link spreader device coöperative with the stops for closing the gripper jaws onto the cable when the cable carriage is forced upwardly.

18. In a load conveying and discharging system in which is included a live overhead cable and a trackway paralleling the said cable; a load carrying trolley, vertical guideways on the frame thereof, a cable gripping mechanism mounted on the trolley frame and comprising a carriage vertically slidable in the guideways on the trolley frame, a pair of coöperating pivoted gripper jaws mounted on and movable with the said carriage, toggle links connecting the lower ends of the jaws, means on the trolley frame for moving the jaw holding carriage to and from the cable, the said means comprisnig a rotary disk having a rotating member attached thereto, a link connection that joins the disk and the carriage stops on the trolley frame, and a toggle link spreader device cooperative with the stops for closing the gripper jaws onto the cable when the cable carriage is forced upwardly, means tending to hold the gripping jaws normally open, devices tending to rotate the disk to pull the grip holding carriage down from the cable and other means connected with the disk and extended in the path of a projection on the trackway and adapted when engaging the projection to turn the disk to move the gripper jaws to the cable release position.

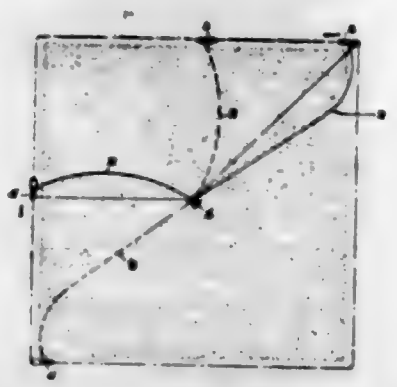
1,297,682. [WITHDRAWN.]

1,297,683. COMBINATION CHAIR AND BED. EDWARD HANSEN, Seattle, Wash. Filed Oct. 18, 1917. Serial No. 197,302. 1 Claim. (Cl. 155—16.)



In a chair of the class described the combination of a central chair section including legs, a bottom and vertical side members extending up from the bottom, the rear edges of the side members inclining upwardly and outwardly, a back section hinged to the bottom, the sides of the back section being cut away to form overhanging flanges, the cutaway portions engaging the upwardly inclined edges of the side members and the flanges engaging over the top edges of said members, a bar depending from the back section, a foot rest hinged at its upper end to the front of the bottom, a link pivoted at one end to the foot rest, a spring hinge connecting the opposite end of the link and the lower end of the bar, a pair of curved slotted guides on the sides of the central chair section, a rod extending through the slotted guides and the link, lock nuts for clamping the rod to the guides, and folding legs pivoted near the upper portion of the back, whereby when the back is thrown down the link connection will elevate the foot rest and a bed will be formed, the back being supported by the legs.

1,297,684. PROCESS FOR TREATING STANDING GRAIN. JOHANNES HANSON, Montevideo, Minn. Filed July 30, 1917. Serial No. 183,410. 6 Claims. (Cl. 47—30.)



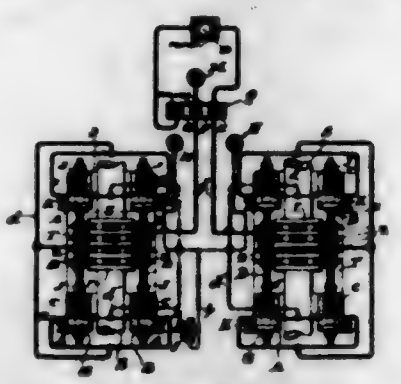
1. The process of treating standing grain which consists of removing moisture from the grain by agitating the stalks in a grain field, said agitation being produced along an extended line made to move progressively over said field transversely of said line, so as to cover rapidly the field to be treated before the moisture on the stalks has had time to cause serious damage.

2. The process of treating standing grain which consists of artificially removing moisture from the grain at times when conditions are suitable for the development of plant rust.

1,297,685. PROCESS OF MANUFACTURING N-METHYL P-AMINO PHENOL. ROLLA N. HARGER, Washington, D. C. Filed Dec. 10, 1918. Serial No. 266,117. 6 Claims. (Cl. 23—24.) (Dedicated to the public.)

1. The process of manufacturing N-methyl p-amino phenol by heating together hydro-quinone and methylamin at a temperature of 150 degrees for a period of five hours.

1,297,686. THRUST-METER. SHUZO HASHIMOTO, Kobe, Japan, assignor to Nippon Yusen Kwaisha Ltd., Tokyo, Japan, A Corporation of Japan. Filed Mar. 29, 1918. Serial No. 225,503. 11 Claims. (Cl. 265—1.)

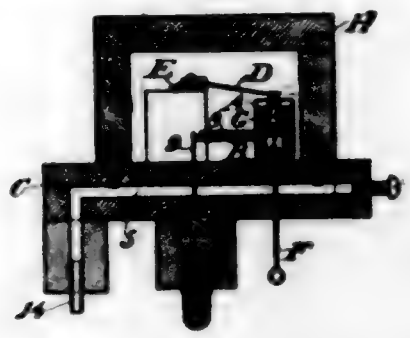


1. A thrust meter comprising the combination with thrust indicating means, of fluid pressure means operatively connected to said indicating means, and means adapted to operatively connect said fluid pressure means to a rotatable member, the thrust of which is to be measured.

1,297,687. PNEUMATIC SWITCH. WILLIAM E. HASKELL, Brattleboro, Vt., assignor to Estey Organ Company, Brattleboro, Vt., a Corporation of Vermont. Original application filed Jan. 22, 1917, Serial No. 143,750. Divided and this application filed June 24, 1918. Serial No. 241,526. 8 Claims. (Cl. 200—27.)

8. A pneumatic switch mechanism having a resilient terminal and a piston, in combination with a cup sliding

upon said piston and adapted when moved to contact with the free yielding end of said resilient terminal, and means



for admitting air into the interior of the cup above the piston.

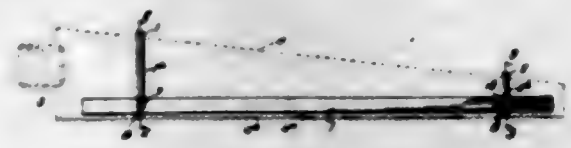
1,297,688. ROLLER-TOWEL CABINET. FOSCOLO O. HENDRICK, East Orange, N. J., assignor to Pullclean Manufacturing Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 11, 1916. Serial No. 90,330. 5 Claims. (Cl. 194—61.)



1. In a roller towel cabinet, and in combination, a roller for engaging the towel and controlling its delivery from the cabinet, a rotary member geared to said roller, a detent pin on said rotary member, a pivoted detent lever provided with an abutment for engagement with said detent pin to normally lock said roller against towel delivery movement, a trip lever movable relative to said detent lever and adapted when depressed to engage said detent lever and release the abutment thereon from said detent pin to permit rotation of the roller, and means for depressing said lever.

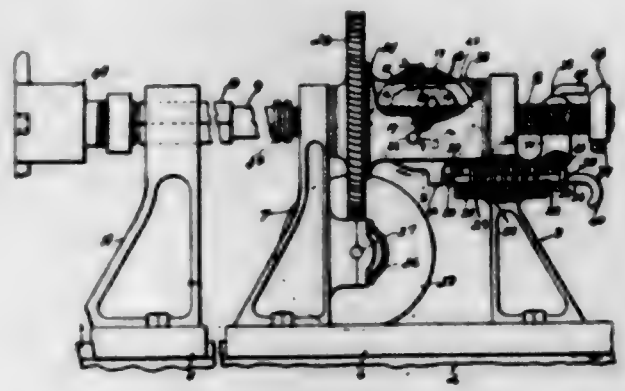
5. In a roller towel cabinet, the combination with a roller for engaging the towel and controlling its delivery from the cabinet, of a coin-controlled mechanism for regulating the delivery movement of said roller, comprising a rotary member geared to said roller, a detent normally engaging said rotary member to lock it and the connected roller against delivery movement, a trip lever movable relative to and adapted to coöperate with said detent, a bell-crank lever having one end adapted to engage said trip lever, a pair of normally disconnected levers for operating said trip device, a connection between the other arm of said crank lever and one of said last mentioned levers, a chute for guiding a coin between said disconnected levers whereby to operatively connect the same, a push rod for operating said levers when so connected to actuate the trip device, means for returning said disconnected levers and handle to normal position, and means operated from said roller when rotated by the delivery of the towel from the cabinet for restoring the detent to locking position.

1,297,689. SAW-GAGE. MATHEW E. HINKLE, Winters, Tex. Filed Feb. 14, 1918. Serial No. 217,094. 1 Claim. (Cl. 145—35.)



In saw gages, U-clamps adapted to fit about the saw blade, leaf springs secured to one arm of each of said clamps adjacent the upper end thereof and extending transversely of the clamps, a gage strip secured to said spring adjacent the lower end thereof by rivets, said rivets being counter-sunk in the springs and having their outer end bent to provide bearing surfaces, and clamping screws threaded through the arms of the clamps to which the leaf springs are secured and engaging the outer end of said rivets so as to force the gage strip toward the other arm of the clamps for the purpose of frictionally gripping a saw between said strip and said other arm.

1,297,690. AUTOMATIC FEED FOR LATHES. SAMUEL HOUGH, Atco, N. J. Filed Mar. 25, 1918. Serial No. 224,587. 7 Claims. (Cl. 77—57.)



1. An automatic feed comprising pedestals, a boring bar having a threaded portion, slidably mounted in said pedestals, a worm gear revolving about the boring bar, a bracket carried by the worm gear, a housing rotatably journaled in said bracket, said housing having angular or inclined slots, a split feed nut within the housing adapted to engage the threaded portion of the boring bar, lugs carried by the parts of the feed nut registering with the slots and means for rotating the housing to open or close the feed nut.

4. An automatic feed comprising a threaded boring bar, a gear journaled to revolve about the boring bar, a bracket carried by the gear, a feed nut housing rotatably journaled in the bracket and revolving therewith, said housing having inclined slots and a two part feed nut coacting with the threaded portion of the boring bar, each part of said feed nut carrying means registering with the inclined slots whereby the rotation of the rotation of the housing will move the feed nut parts toward or away from the boring bar.

7. In a boring bar feed, a boring bar, a split feed nut, a rotatable feed nut housing provided with means coacting with suitable means on the feed nut whereby the latter may be opened and closed, a projection on said feed nut housing, a spring housing open at one end and closed at the other, said closed end having a hole therethrough, a cap provided with a hole, mounted in the open end, a bar slidably mounted in said holes, the inner end of said bar being beveled and adapted to coact with the projection for rotating the feed nut housing in one direction, the outer end of said bar having a hand hold, a collar on the bar located within the spring housing, a spring engaging said collar and the housing cap for normally projecting the inner end of the bar into the path of travel of the projection, another collar carried by the bar located out-

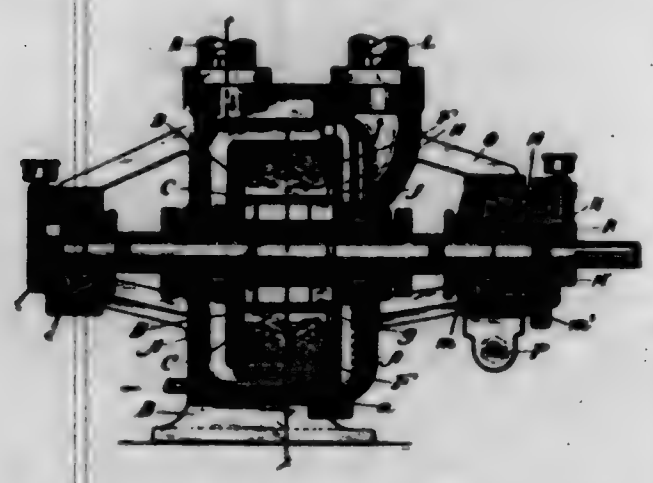
side of the spring housing, a barrel formed with the spring housing, a latch slidably mounted in said barrel and adapted to engage the last named collar for holding the bar withdrawn, a spring within the barrel for normally forcing the latch toward the bar, a finger on the latch and an adjustable dog on the boring bar adapted to engage the finger when the boring bar has traveled a predetermined distance to withdraw the latch from engagement with the bar and permit the action of the spring to force the bar into the path of travel of the projection on the housing.

1,297,691. CANE-CRUSHING APPARATUS. HENRY HUNTER, St. Louis, Mo., assignor to Fulton Iron Works Company, St. Louis, Mo., a Corporation of Delaware. Filed Aug. 19, 1918. Serial No. 250,595. 6 Claims. (Cl. 100—47.)



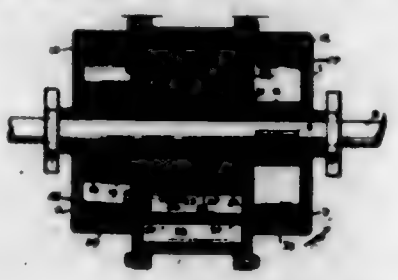
1. In a cane crushing apparatus, two pairs of crushing rolls, one pair being in advance of the other, a chute mounted between the pairs of rolls to direct the cane from the lower roll of one pair to the lower roll of the other pair, the bottom wall of said chute being adjustable vertically to enable its lower end to occupy different positions relative to the adjacent roll, and adjustable supporting means for said chute.

1,297,692. ROTARY COMPRESSOR. IRVING C. JENNINGS, South Norwalk, Conn., assignor to Nash Engineering Company, South Norwalk, Conn., a Corporation of New York. Filed Jan. 17, 1918. Serial No. 212,289. 6 Claims. (Cl. 230—22.)



1. In a rotary, liquid piston, pump or compressor, the combination with a body provided with suitable inlet and outlet passages, a roter mounted in the body and having ports adapted to communicate with said passages as it rotates, a shaft adapted to turn the roter and extending through opposite walls of the body, bearings for said shaft carried by bracket arms projecting from the body, said bearings being adjustable with the shaft in said bracket arms to vary the relation of the rotor to the walls of the chamber in the body within which it is arranged, and means for retaining the shaft and rotor in adjusted position.

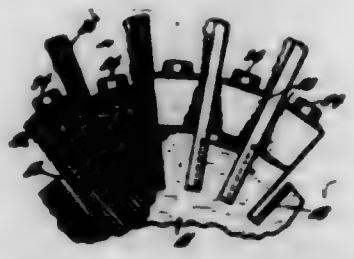
1,297,693. ROTARY FLUID-PRESSURE DEVICE. OTTO W. JOHNSON, San Francisco, Calif. Filed Apr. 10, 1917. Serial No. 160,922. 3 Claims. (Cl. 103—44.)



1. The combination of a casing having inlet and outlet passages and end casings, a rotor rotating in said central casing and having extensions into said end casings, said extensions forming pressure chambers on their inner sides, vanes forming with said rotor and casing, central pressure chambers, and said rotor having conduits leading from each of the latter pressure chambers to a corresponding one of the former chambers.

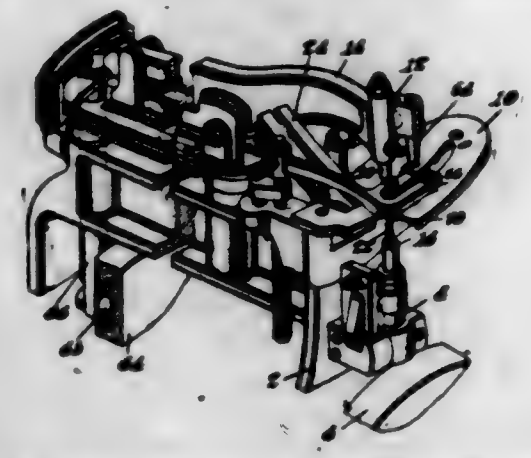
3. The combination of a shaft, a casing eccentrically surrounding said shaft, a rotor within said casing and concentrically surrounding said shaft, a bearing for the shaft having a cylindrical extension eccentrically surrounding said shaft, a bushing around said extension, and rings around the bushing and having vanes extending through holes in the rotor and contacting at their outer edges with said casing, one of said rings being secured to the bushing.

1,297,694. SQUEEGEE-ROLLER. LOUIS KINDLING, Milwaukee, Wis. Filed Nov. 9, 1916. Serial No. 130,314. 5 Claims. (Cl. 15—37.)



1. A squeegee roller, comprising a support, a series of fixed strips spaced apart thereon, said support being provided with slots on either side of the fixed strips, wedge strips between the fixed strips, and rubber blades fitting in the slots and clamped between the wedge strips and the fixed strips.

1,297,695. MACHINE FOR SETTING EYELETS. RALPH FRANK KNIGHT, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 7, 1917. Serial No. 179,243. 36 Claims. (Cl. 218—15.)



1. In an eyeleting machine an expansible upsetting die comprising a plurality of relatively movable resilient sections constructed and arranged to be maintained normally in contracted condition irrespective of the action of grav-

ity and means within the upsetting die for positively separating the sections.

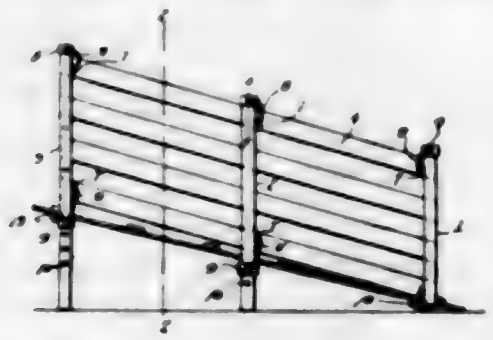
7. In an eyeleting machine an expansible upsetting die, a die expanding member carried by the die, yielding means to hold the expanding member in inoperative position, and means for moving the expanding member positively to expand the die.

15. In an eyeleting machine an upsetting die comprising expansible sections, and a guard for protecting the ends of the sections during the movement of the die.

22. In an eyeleting machine an expansible upsetting die, a die expanding member carried by the die, and a work feeding member arranged to force the die expanding member into position to expand the upsetting die.

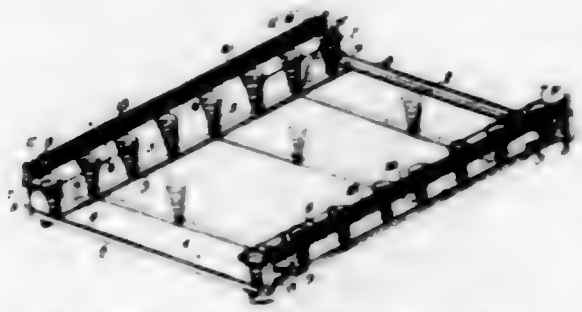
28. In an eyeleting machine an upsetting die comprising expansible sections and a combined guard and die expanding member constructed and arranged to support the expanded sections of the die.

1,297,696. CHUTE FOR LIVE STOCK. GEORGE WILLIAM KRAHMER, Cylinder, Iowa. Filed Jan. 4, 1918. Serial No. 210,316. 2 Claims. (Cl. 119—82.)



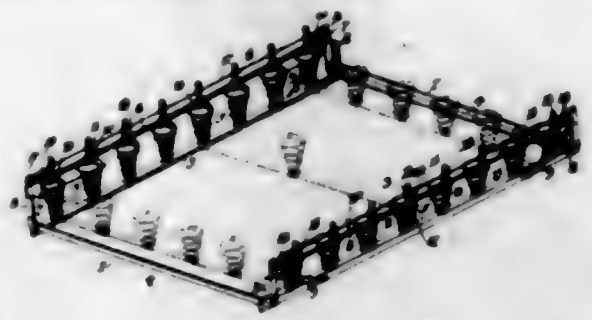
1. A device of the character described comprising a plurality of standards, said standards including a pair of end standards and a pair of opposite end standards, said first mentioned standards being of a greater length than said second mentioned standards, a pair of intermediate standards connecting bars disposed at the top of each pair of said standards and connecting their ends together, lower connecting bars connecting the lower portions of the standards together, a yoke carried by each end of said connecting bars and provided with an end aperture, a locking pin flexibly connected to each of said standards and adapted to be extended through said aperture and into a recess formed in the end of each standard, a runway mounted on the lower connecting bars and adapted to be adjusted vertically with the lower connecting bars.

1,297,697. BED-SPRING. AUGUST J. KREUZKAMP, Brooklyn, N. Y., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Filed Oct. 20, 1914. Serial No. 867,370. 6 Claims. (Cl. 5—39.)



1. A bed spring comprising supporting means, a series of spiral springs carried thereby, brackets at each side extending above said springs, a guard member connected to said brackets for preventing a stuffed mattress from flattening, spreading and sagging over the lengthwise edge of the spring, and means connecting said guard member with the outer row of springs, said means consisting of a longitudinally extending wire tied to said springs and a longitudinally extending wire connected with the bottom of said guard member, and means connecting said wires.

1,297,698. BED-SPRING. PAUL W. KREUZKAMP, Brooklyn, N. Y., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Filed Oct. 31, 1914. Serial No. 869,516. 5 Claims. (Cl. 5—29.)



1. A bed spring comprising supporting means, spiral springs carried thereby, and a side-guard located along and supported by each outer longitudinal row of spiral springs to project above the same for preventing a stuffed mattress from flattening, spreading or sagging over the edge of the spring, and consisting of a plurality of upright members located between the ends of the bed spring, and a connecting member or members between said upright members, each of said upstanding members consisting of a part bent upon itself to form one or more eyes at each side thereof.

1,297,699. ANTI-AIRCRAFT GUN. THEODORE R. KRZYZANOWSKI, Philadelphia, Pa., assignor of ten one-hundredths to Frank Gliwski, Chicopee, Mass., and one-half to S. S. Pinder, Wall, Pa. Filed July 25, 1917, Serial No. 182,674. Renewed Jan. 24, 1919. Serial No. 272,966. 3 Claims. (Cl. 89—37.)

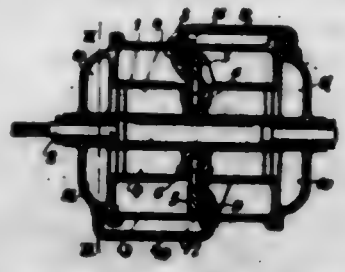


1. A gun having an axial bore and an arcuate passage having a rear-end base, and a ledge also at said end for engagement with the cartridge-base, said passage intersecting the said bore with a chamber arranged rearwardly of the passage, a belt having pockets and shiftably arranged through the said passage, cartridges within the said pockets adapted for successive positioning in firing position in alinement with the said bore and with the bases of the cartridges adjacent the said chamber, means for shifting the said belt, and firing means for the cartridges arranged within the said chamber.

1,297,700. ROTARY PUMP OR ENGINE. SVEN LARSSON, Stockholm, Sweden, assignor, by mesne assignments, to Ludwigsbergs Verkstads Aktiebolag, Stockholm, Sweden. Filed Sept. 12, 1917. Serial No. 191,051. 4 Claims. (Cl. 103—44.)

1. In a rotary pump or engine the combination with a rotary drum, a plurality of pistons movable in the said drum, an oblique disk surrounding the said drum and means connecting the pistons with the said disk, of a

device so constructed, that the pressure of the pistons upon the said disk is counterbalanced fully or partially



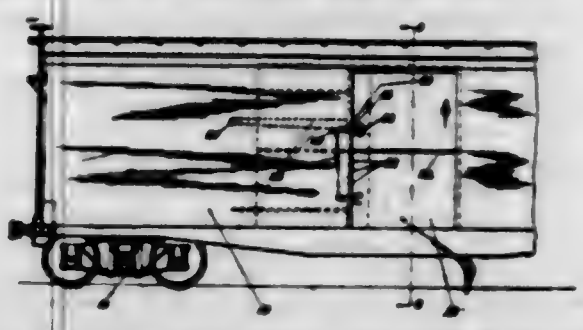
by a hydraulic pressure, acting upon the disk opposite to the pistons passing the pressure chamber of the pump.

1,297,701. ANTISLIPPING DEVICE FOR HEELS. SANDOR LASZLO and BENJAMIN KOVACS, New York, N. Y. Filed Apr. 25, 1918. Serial No. 230,632. 1 Claim. (Cl. 36—66.)



In an anti-slipping device for shoe heels, a metal plate permanently applied to said heel, a recessed portion in the upper surface of said permanent plate, a leather heel-piece covering said permanent plate, a detachable metal plate a crosspiece applied to said detachable plate in such a way as to automatically withdraw into said permanent plate, means to push said crosspiece through said permanent plate and lock same in this position, a circular hole in said permanent plate with an elongated extension, a fixed washer on said detachable plate adapted to enter said hole and lock said detachable plate to said permanent plate through said extension, and a plurality of spiked points or calks on the lower surface of said detachable plate, substantially as and for the purpose set forth.

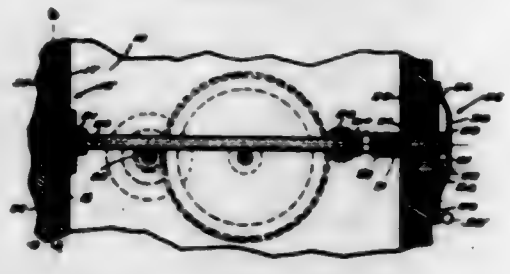
1,297,702. DOOR-OPERATING DEVICE. MIKE LENKO, Minburn, Alberta, Canada. Filed July 19, 1918. Serial No. 245,626. 2 Claims. (Cl. 268—6.)



1. In a door operating means, the combination with a sliding door, and a frame in which said door is engaged, of a cable secured to the inner edge of said door, a pulley over which the bight of said cable runs, a second pulley near the edge of said door, a horizontal bar having a handle extending through a slot formed in the frame of said door, a locking element slidably engaged upon said bar, means for pressing said locking element outwardly, and a plurality of depressions formed in the frame of said door in which said locking element is adapted to engage, whereby said cable is held in different positions, corresponding with the position of the door.

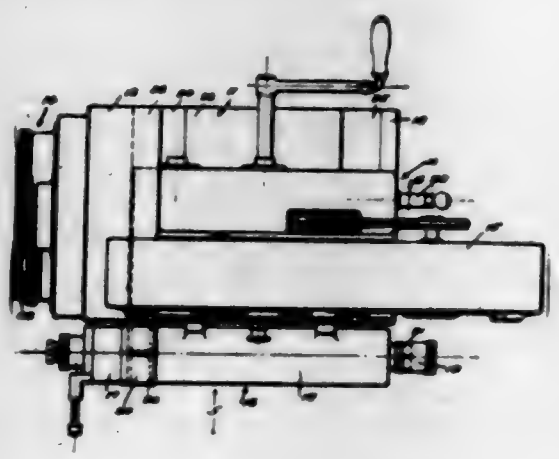
1,297,703. SHUTTER-DISSOLVE FOR MOTION-PICTURE CAMERAS. JOHN E. LEONARD, Los Angeles, Calif. Filed Apr. 20, 1917, Serial No. 163,500. Renewed Feb. 12, 1919. Serial No. 276,605. 3 Claims. (Cl. 88—19.3.)

2. In a shutter construction for cameras, a sleeve rotatably mounted, a shaft extending through the sleeve and rotatably mounted in the sleeve, a shutter member fixed upon one end of the sleeve and having an exposure aperture, a second shutter member fixed upon the corresponding end of the shaft and adapted to cover and uncover the exposure aperture, a pinion upon the opposite end of the sleeve from the shutter member, a second pinion upon the shaft beside the first pinion, an internal



gear rotatably mounted and concentric to the pinions, an idler connecting the first pinion to the internal gear, an idler connecting the second pinion to the internal gear, a lever pivotally mounted upon the shaft; the shaft of one of the idlers being fixed in the lever; and a handle upon the lever; so that by manipulating the handle the idlers may be moved to and from each other to enlarge or reduce the exposure aperture.

1,297,704. FINDER IN COMBINATION WITH CAMERA-SHIFTING MECHANISMS FOR FOCUSING. JOHN E. LEONARD, Los Angeles, Calif. Filed Apr. 20, 1917, Serial No. 163,490. Renewed Feb. 12, 1919. Serial No. 276,604. 9 Claims. (Cl. 95—44.)

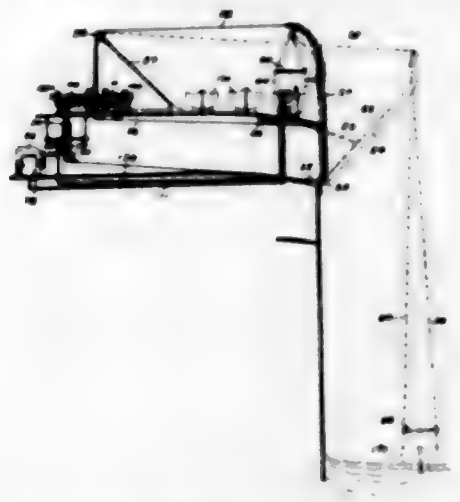


1. In a shifting mechanism for cameras, the combination with a camera case, of a base upon which said case is mounted, a photographic lens positioned upon said base, a finder lens mounted upon the base beside the photographic lens, a finder tube secured along one side of the case, and mechanically operated means for shifting the finder tube and case into register with the photographic lens and thereafter shifting it out of register with the photographic lens and shifting the case to its normal position.

1,297,705. SAFETY APPARATUS FOR LAUNCHING LIFE-BOATS. LUDGER L'HEUREUX, Montreal, Quebec, Canada, assignor to Montreal Patents Promoting Co. Limited, Montreal, Quebec, Canada. Filed Nov. 9, 1917. Serial No. 201,173. Renewed Feb. 8, 1919. Serial No. 275,730. 16 Claims. (Cl. 9—22.)

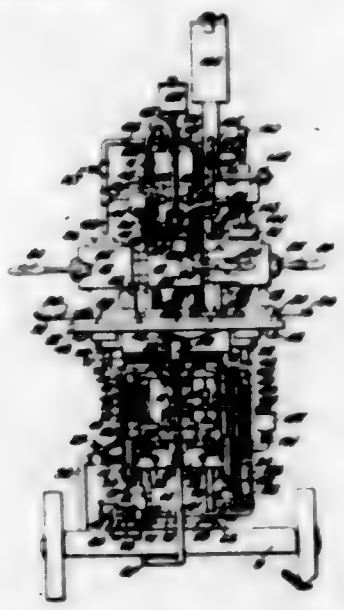
1. An apparatus for launching ships' boats comprising an up and down moving davit, cables secured to said davit, pusher rods pivotally secured to said davit, cables secured to said pusher rods, a davit cable winding and unwinding mechanism, means whereby the pusher rod

cables will be wound simultaneously with the unwinding of said davit cables, boat cables running over the ends of



said davit, and a boat cable winding and unwinding mechanism mounted on the ship substantially as described.

1,297,706. GLASS-BLOWING MACHINE. JAMES W. LYNCH, East St. Louis, Ill., assignor to Obear-Nester Glass Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 28, 1916. Serial No. 122,058. 55 Claims. (Cl. 49—5.)



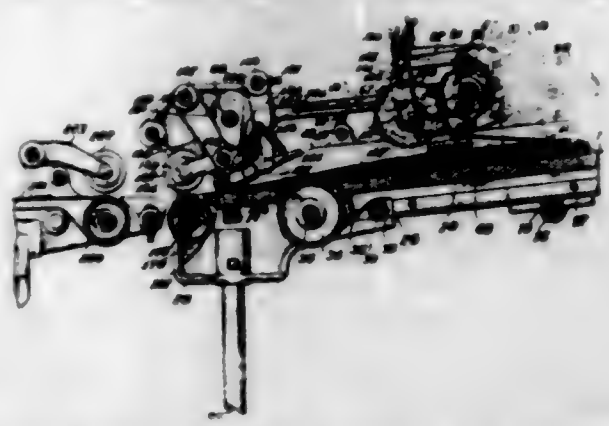
3. In a glass blowing machine, a mold, a combined blow head and shearing element located opposite the bottom forming end thereof, means for sliding said element into and out of active position, and means for closing the blow head when in inactive position, said means constituting a support for the blow head.

1,297,707. SHEET-FEEDING MACHINE. WILLIAM M. MCCAIN, Chicago, Ill. Filed Sept. 28, 1917. Serial No. 193,669. 16 Claims. (Cl. 271—37.)

6. In a sheet feeding machine, the combination with a feed table, combing wheel and combing wheel actuating mechanism, of a retarding foot having toes extending on opposite sides of the plane of the combing wheel for engagement with the paper on the table, and means for elevating and depressing said foot in timed relation with the movements of said combing wheel.

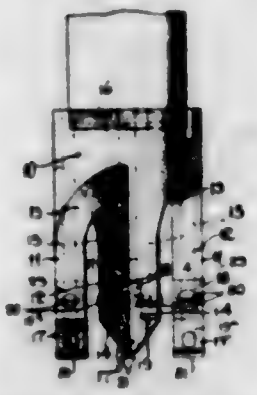
9. A sheet feeding machine including a feed table adapted to hold a bank of sheets, a combing wheel for combing out the sheets, a foot for engaging the bank of sheets, means movable to and fro in the general direction of travel of the sheets to engage the foremost sheet and to advance it from engagement with said foot, and mechanism for operating said wheel, foot and means in timed relation so as first to comb out the sheets and then advance the foremost sheet while holding the bank.

14. A sheet feeding machine including a feed table adapted to hold a feathered bank of sheets, a combing wheel for combing out the sheets as they are fed along said table, a foot for engaging said bank of sheets, advancing members movable forward and back and operative on their forward stroke to engage the foremost sheet to advance it, coöperating drum and drop rolls for engaging



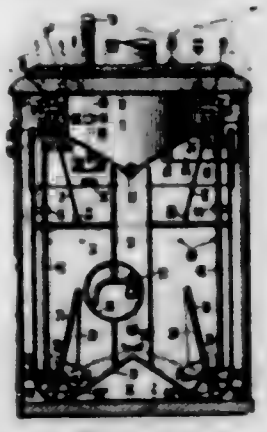
the sheet delivered by said members and operative to still further advance said sheet, and mechanism for raising and lowering said wheel and foot in timed relation, for moving said advancing members forward at the time said wheel is raised and said foot is resting on the bank of sheets, and for subsequently bringing said rolls into action.

1,297,708. WELL-DRILLING TOOL. JOHN MAIER, Detroit, Mich. Filed Mar. 11, 1918. Serial No. 221,752. 2 Claims. (Cl. 255—72.)



1. A drilling tool comprising an annular body formed with downwardly extending blades, and cutting knives detachably mounted upon the lower ends of the blades, the tool being formed with longitudinally extending air channels, each extending downward through a corresponding blade, each opening at its upper end to the upper end of the body and each cutting knife having an air passage registering with the air passage in the blade and opening upon the under face of the cutter.

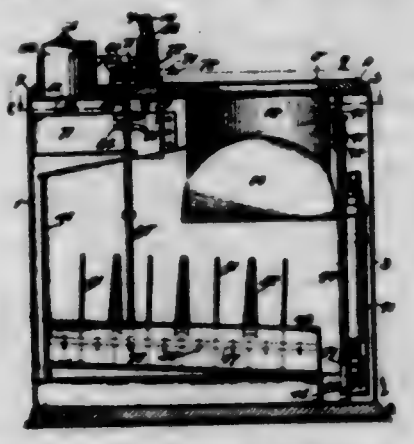
1,297,709. SANITARY CLOSET. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed June 10, 1914. Serial No. 844,206. 3 Claims. (Cl. 4—20.)



1. A sanitary closet having a receptacle divided into separate chambers for the feces and urine, a seat, an

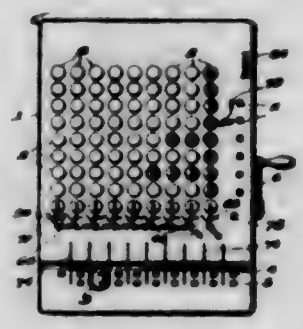
agitator having radially disposed prongs and a disintegrator having radially disposed beaters, said agitator and disintegrator being located within the feces chamber and operated by the seat.

1,297,710. SANITARY CLOSET. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed June 10, 1914. Serial No. 844,207. 12 Claims. (Cl. 4—20.)



3. A sanitary closet receptacle having a well therein, a ridged and inclined bottom leading to said well, an outlet for said well, a valve for opening and closing said outlet, and means within the receptacle for disintegrating and agitating the deposits for the passage thereof through said outlet.

1,297,711. QUOTIENT-REGISTERING MECHANISM FOR CALCULATING-MACHINES. JAMES F. MAYS, Birmingham, Ala., assignor to Mays Accounting Machine Company, Lexington, N. C., a Corporation of North Carolina. Filed Apr. 20, 1917. Serial No. 165,413. 12 Claims. (Cl. 235—75.)



1. In a calculating machine, the combination with a series of movable decimal pointers, a series of quotient registering dials, mechanism for selecting one of said dials at a time for operation, and mechanism automatically acting upon the movement of one of said decimal pointers to point off a decimal place and adapted to actuate said selecting mechanism to render operative that one of said dials corresponding to the decimal pointer operated.

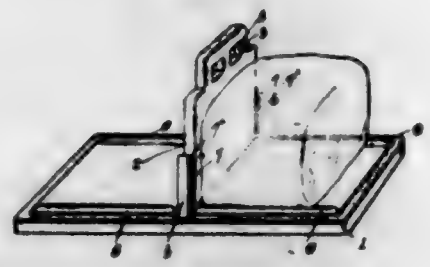
3. A calculating machine comprising a movable decimal pointer, dial selecting mechanism, dial operating mechanism, and means common to both said decimal pointer and selecting mechanism for operating the same.

5. A calculating machine comprising a series of quotient registering dials, a rotary dial selecting member provided with means individual to the respective dials for operating the same one at a time, and mechanism operative on said member to rotate the same to effect said selection.

6. A calculating machine comprising a series of quotient registering dials, a rotary dial selecting member provided with means individual to the respective dials for operating the same one at a time, and mechanism operative on said member to rotate the same always in the same direction to effect said selection.

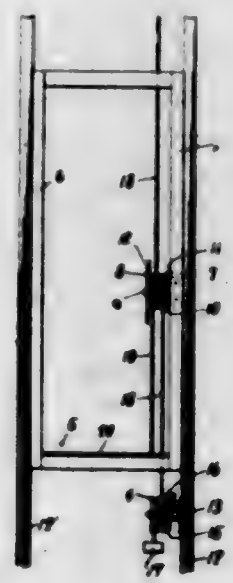
12. A calculating machine comprising a series of quotient registering dials, means to select individual ones of said dials for operation, means to operate said dials selected, an auxiliary or dial indicating dial, and mechanism to impart rotary motion to said last named dial each time one of said quotient dials is selected for operation.

1,297,712. BREAD-BOARD. EDWARD BELDEN MERRILL, Toronto, Ontario, Canada. Filed June 21, 1918. Serial No. 241,243. 2 Claims. (Cl. 146—12.)



1. In a bread board, the combination with the bread board, of a stationary partition wall extending upwardly therefrom secured to the center of the board and designed to form a carrying handle, and a double face beneath it to protect the two faces of the divided loaf, which are designed to abut each side to prevent a stale crust forming.

1,297,713. MAN-LIFT. WILLIAM D. MERRILL and JAMES E. WOOD, Portland, Oreg. Filed July 30, 1918. Serial No. 247,390. 2 Claims. (Cl. 187—17.)

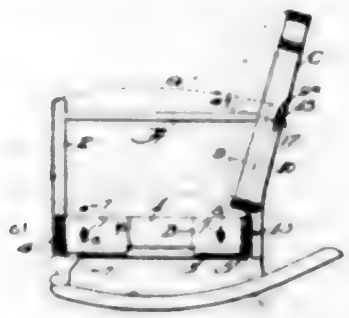


2. The combination with an elevator, of a rotatable drum supported by said elevator, a rotatable drum stationarily supported beneath the elevator, a hoisting rope wound around said drums, stretching means engaging the free end of said rope, means controlling the movement of said drums in one direction, and manipulating means on one of said drums.

1,297,714. KNOCKDOWN FURNITURE. CHARLES T. METZGER, Chicago, Ill., assignor to The Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 16, 1918. Serial No. 266,880. 6 Claims. (Cl. 155—3.)

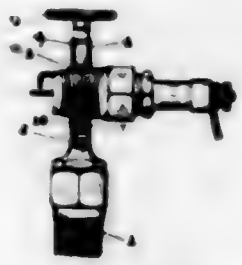
1. A knock-down article of furniture comprising in combination, end members and a seat member, the seat member being in the form of a four-sided box, the end members having each a vertically flat fore-and-aft bar, and the box having outwardly-facing vertically-extending surfaces positioned for facing the fore-and-aft-extending bars of the end members respectively, one of the two

facing parts at each end having anchored bolts, and the other having holes for said bolts, and clamp-nuts on the



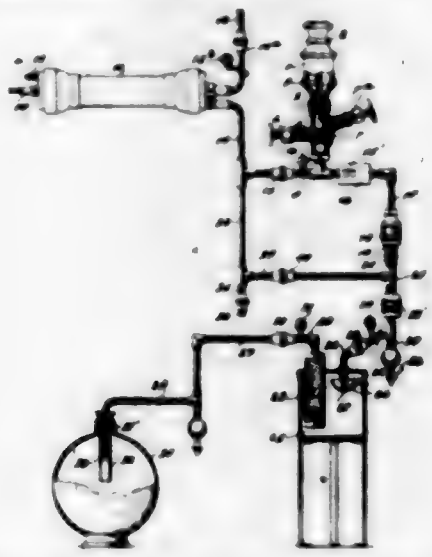
ends of the bolts for clamping the two facing bars together.

1,297,715. TESTING DEVICE FOR THE IGNITION SYSTEMS OF INTERNAL-COMBUSTION MOTORS. HENRY C. MINNS, Toronto, Ontario, Canada. Filed Jan. 23, 1919. Serial No. 272,701. 7 Claims. (Cl. 175—183.)



1. A holder adapted to receive and hold a spark plug and provided with a stem adapted to fit the spark plug opening of the cylinder of an internal combustion motor.

1,297,716. PROCESS OF OZONIZING SUBSTANCES. ALFRED J. MOISANT, New York, N. Y., assignor, by mesne assignments, to General Research Laboratories, a Corporation of New York. Filed Aug. 4, 1916. Serial No. 113,068. Renewed June 7, 1918. Serial No. 238,772. 22 Claims. (Cl. 167—3.)



1. The process of ozonizing substances, which comprises forming a mixture of the substance to be ozonized with a gaseous ozone-containing body under pressure, then dividing the mixture thus produced into minute particles and permitting such particles to expand.

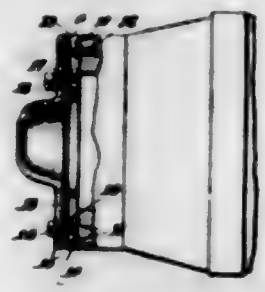
6. The process of ozonizing substances which comprises introducing the liquid substance to be ozonized in finely divided state into a stream of ozone containing gas under pressure and thereafter forcing the mixture thus produced through an apparatus which breaks it up into finely divided particles, and then permitting the expansion of the particles as they are discharged from such apparatus.

9. The process of ozonizing substances which comprises introducing a quantity of the substance to be ozonized into an ozone-containing gaseous body under pressure, then reducing the pressure of the mixture and mixing it with a second gaseous body containing ozone, and finally in further reducing the pressure of the mixture thus produced.

12. The process of ozonizing substances which comprises forming a mixture of the substance to be ozonized and an ozone-containing gaseous body under pressure, and then permitting the expansion of the mixture thus produced in a closed chamber to a pressure greater than atmospheric, then further mixing the substance and the gaseous body and finally permitting it to expand to atmospheric pressure.

21. The process of ozonizing substances which comprises forming a mixture of the substance to be ozonized and the ozone-containing gas forcing said mixture through an apparatus which agitates said mixture by changing the pressure of said mixture.

1,297,717. AUTOMATIC OILING DEVICE FOR VEHICLE-WHEELS. CHARLES NELSON MORGAN, Hildreth, Nebr. Filed Nov. 23, 1917. Serial No. 203,644. 3 Claims. (Cl. 64—26.)



1. In a vehicle wheel, a hub, a ring having an annular recess in its inner face, packing in said recess, means for securing the ring to the hub, said ring having apertures therein, a face plate having apertures therein registering with the apertures in the ring, members passing through said plate and anchored in the ring for holding the plate in place, said face plate having a port therein, and a plug for closing the port.

2. In a vehicle wheel, in combination with a hub, a ring secured to the end of the hub, packing interposed between the end of the hub and the ring, a face plate, packing interposed between the face plate and the ring, and means for the admission of lubricant to the journal without removing the wheel from the axle.

3. In a vehicle wheel, the combination with a hub, of a leak-proof member secured to the end of the hub, a leak-proof face plate removably secured to said leak-proof member, said face plate having a port, the port having a removable plug for the admission of lubricant to the bearings without removing the wheel.

1,297,718. ROCKING-CHAIR. FREDERICK H. MUELLER, Grand Rapids, Mich. Filed Aug. 2, 1915. Serial No. 43,312. 2 Claims. (Cl. 155—18.)



2. In a rocking chair, a chair body having under side frame members, bolts extending downwardly through said

frame members, a rocker for each side of the chair comprised of a curved member having spaced apart front and rear upwardly extending portions the upper edges of which lie in substantially the same plane, a plate on said portions bridging the space therebetween, said plate being provided with slots above said space between the upwardly extending portions of the rocker and through which the lower ends of said bolts extend and nuts on the bolts, substantially as described.

1,297,719. PUMP-COUPLING OR THE LIKE. EUGENE V. MYERS, East Orange, N. J., assignor to A. SCHRADER'S SON, INC., Brooklyn, N. Y., a Corporation of New York. Filed Mar. 21, 1916. Serial No. 85,632. 12 Claims. (Cl. 285—174.)



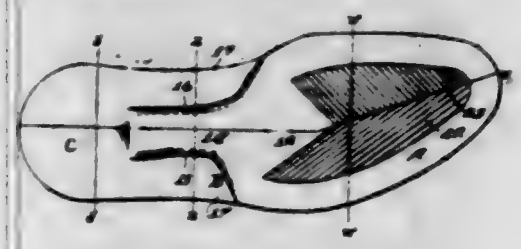
1. A device of the character described comprising a part to be pressed against a threaded member to make a tight joint therewith, a wedge member, and an arm member having a plurality of movable threaded arms, said wedge member being the stationary member and said arm member being the movable member, and the threaded ends of said arms being adapted to coact with the wedge member to engage said thread member when the arm member is moved relatively to the wedge member.

4. A device of the character described comprising a part to be pressed against a threaded member to make a tight joint therewith, a wedge member connected to said part, and a rotary arm member having a plurality of movable screw threaded arms the threaded ends of which are adapted to coact with the wedge member to engage said threaded part when the arm member is moved relatively to the wedge member.

5. A device of the character described comprising a part to be pressed against a threaded member, a wedge member connected with said part to effect the pressing action, and means for forcing said wedge member downwardly along said threaded member.

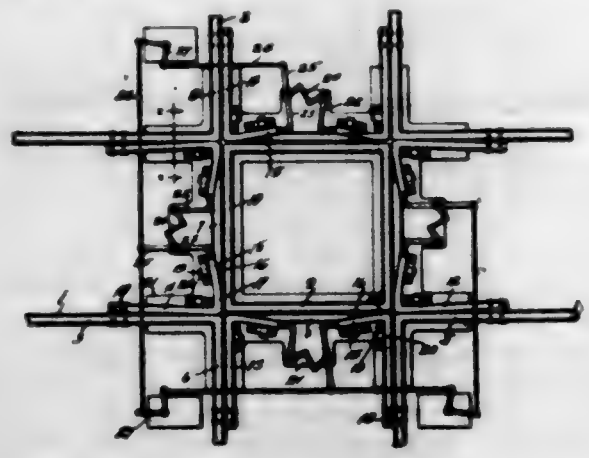
7. A device of the character described comprising a part to be pressed against a threaded member, a wedge member connected with said part, and means for forcing said wedge member downwardly along said threaded member, said means comprising a plurality of movable threaded arms having threaded portions adapted to engage the threaded member, and said arms being adapted to coact with the wedge member to engage said threaded member when said arms are moved relatively to the wedge member.

1,297,720. SHOE-SOLE. FRANCIS A. NOLAN, St. Paul, Minn. Filed Nov. 18, 1916. Serial No. 132,199. 2 Claims. (Cl. 36—32.)



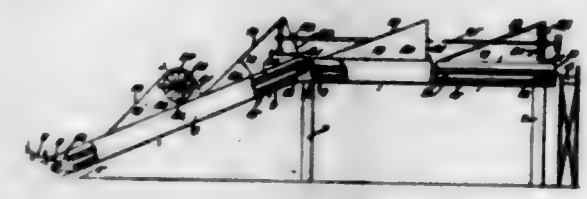
2. A resilient sole to be attached to footwear having a body formed with a flat upper surface and with a fore part, shank and heel, the heel and fore part being of different thickness and the shank having one portion corresponding in thickness with the fore part and the remaining portion of less thickness, said body having its marginal portion extending upwardly.

1,297,721. RAILROAD-CROSSING. THOMAS J. O'CONNOR, Dallas, and WARREN W. CULBERTSON, Boyce, Tex. Filed Feb. 18, 1918. Serial No. 217,822. 3 Claims. (Cl. 246—273.)



1. In a railroad crossing, traffic rails crossing each other at an angle, each rail comprising approaching sections with an intermediate section therebetween having chamfered ends and gaps between the ends of the intermediate section and the approaching sections, angular guard members each having one wing between one of the approaching rail sections and the correlated chambered end of its intermediate section, said member being movable from its approaching rail section to provide a wheel flange gap therebetween for the crossing rail, the other wing of each member constituting a guard rail along the approaching section of the crossing rail, and a central guard rail parallel with each intermediate rail section and projecting beyond the chamfered ends of the same and opposite the wings of the movable guard members at the ends of said intermediate rail section, the central guard rails having their ends joined together, all of the rails sections, guard rails and movable guard members being formed of standard T-shaped rails, one of the lines of traffic being constantly open for the flanges of the wheels passing thereover.

1,297,722. DRIER. GEORGE D. PARKER, Riverside, Calif. Filed Mar. 20, 1917. Serial No. 156,152. 2 Claims. (Cl. 34—12.)

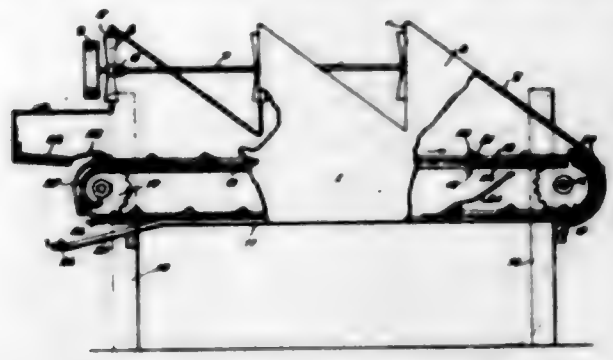


1. A fruit drying apparatus comprising side frame members, tracks carried thereby, certain thereof providing a downwardly inclined portion and certain others providing a horizontal portion, an endless conveyer operating on each of said portions of said tracks between said side frame members and movable longitudinally of said tracks for conveying fruit to be dried, a hood over said longitudinal portion, a hood over said inclined portion of said track, and a fan within each of said hoods and adapted for forcing air downwardly onto the fruit as conveyed and through the conveyers carrying the same.

1,297,723. CONVEYER FOR FRUIT-DRYING APPARATUS. GEORGE D. PARKER, Riverside, Calif. Filed June 12, 1918. Serial No. 239,613. 2 Claims. (Cl. 198—8.)

1. A fruit drier comprising a casing formed with a plurality of superimposed runways for supporting the fruit

during the conveying and drying thereof, an endless traveling conveyer within the casing and arranged with successive flights operating one above each of said runways for conveying the fruit in opposite directions longitudinally of successive runways, said conveyer including a plurality of spaced pivoted conveyer bars extending trans-



versely of said runways, and formed with adjacent edges angularly disposed relatively to each other to provide substantially flat surfaces for alternately resting on successive runways during the passage of the bars thereover, and a surface upwardly and rearwardly disposed relatively to the direction of travel of said conveyer.

1,297,724. SILICA GEL AND PROCESS OF MAKING SAME. WALTER A. PATRICK, Baltimore, Md. Filed Dec. 7, 1918. Serial No. 265,761. 30 Claims. (Cl. 252.)

4. A porous, glassy silica gel, the pores being ultramicroscopic.

28. A process of preparing a hard, transparent, porous silica gel having high adsorptive properties comprising adding a solution of HCl to a solution of sodium silicate in quantity sufficient to set free all of the SiO_2 of the silicate, thoroughly stirring the substances at the moment of mixing, allowing the gel thus formed to set, washing said gel to remove acid and salt, drying the gel in a current of air heated to 75°–120° C., and then subjecting the gel to a vacuum.

1,297,725. QUICK-DETACHABLE DUST-CAP FOR TIRE-VALVES. MOSES F. PATTON, Tuscaloosa, Ala., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Sept. 8, 1915. Serial No. 49,615. Renewed June 14, 1917. Serial No. 174,792. 12 Claims. (Cl. 152—12.)



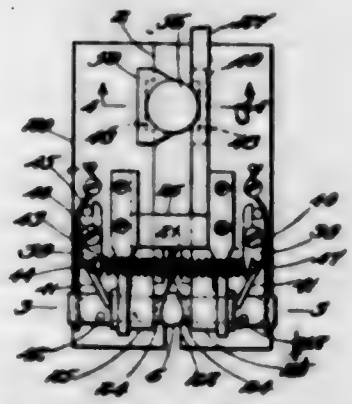
1. A dust cap having movable arms, and means for moving said arms, comprising a base portion which receives said arms and has a wedging surface adapted to be engaged by the arms to contract them, and spring means engaging the arms and adapted to expand them.

3. A dust cap comprising a tubular cap portion reduced at an intermediate point to form a shoulder, longitudinal slots in the cap portion below said shoulder which divide the cap into spring arms, thread engaging means on the inner face of each arm, and a tubular base portion which receives the slotted end of the cap portion and has its outer end swaged to engage the reduced portion of the cap and to engage the said shoulder to prevent the disengagement of said parts, and wedge means at the lower end of said base portion adapted to retract the spring arms of the cap portion when the latter is pressed inwardly.

9. In a dust cap, a cap portion having at an intermediate point an annular groove formed therein and having below said groove a plurality of longitudinal slots subdividing the cap end into flexible arms, said split end of the cap having its open end contracted to reduce its internal diameter, a flat band spring mounted within the split end of the cap above its contracted portion, a tubular base adapted to receive the split end of the cap and having its upper end swaged against the bottom wall of said groove, said groove being wide enough to provide a limited longitudinal movement of the cap within the base portion, means within the base portion to contract the split end of the cap portion when the latter is forced inwardly, and means in the split end of the cap to grip a threaded valve stem, substantially as described.

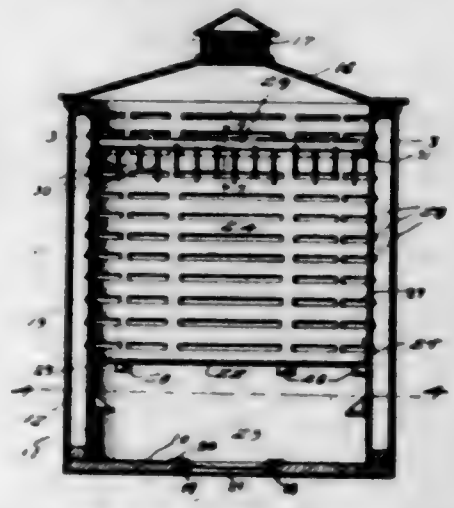
11. The combination with a part having movable arms provided with screw threads, means for moving said movable arms inwardly and spring means independent of the arms for moving said arms outwardly.

1,297,726. BUTTON-FASTENING MACHINE. GEORGE W. PERKINS, Boston, Mass., assignor to Heaton Peninsular Button Fastener Company, Grand Rapids, Mich., a Corporation of Maine. Filed Dec. 8, 1916. Serial No. 135,884. 5 Claims. (Cl. 218—12.)



3. In combination with a button raceway, two button carrying fingers adapted to embrace a button on opposite sides thereof, said fingers being formed with their proximate ends concaved on their upper edges, the horns formed by the concave ends on the entrance side being nearer together than the horns formed on the exit side.

1,297,727. DRIER. WILLIAM E. PRITT, Storm Lake, Iowa. Filed July 12, 1918. Serial No. 244,593. 3 Claims. (Cl. 34—19.)



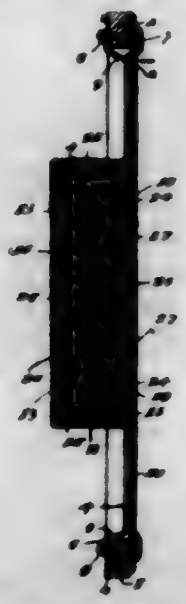
1. A drier provided with walls consisting of inner and outer shells forming an intervening flue, a central top ventilator, the interior being divided by a horizontal de-

flector to form an upper storage compartment and a lower heating compartment in communication at the periphery of said deflector, and said flue being provided in its outer wall near the bottom with screened air inlet openings and in its inner wall being in communication with said storage compartment with openings for circulation of air induced by the upward draft from the heating compartment.

2. A drier having its side walls consisting of separated inner and outer shells forming an intermediate air flue provided at its lower end with screened inlet openings, said drier also being provided in its bottom with a central screened inlet opening and at the center of its top with a ventilator, a horizontal deflector plate being disposed interiorly of the drier to form an upper storage compartment and a lower heating compartment in communication by a peripheral separation of said deflector plate from the inner surface of the inner shell, and said inner shell above the deflector plate being provided with openings or slots establishing communication between said compartment and the flue.

3. The herein described drier having a base or floor provided with a central screened door, a wall consisting of inner and outer spaced shells of which the latter is provided near its bottom with screened air inlet openings, a top having a central ventilator, a horizontal deflector plate dividing the interior into an upper storage compartment and a lower heating compartment, said plate being peripherally spaced from the inner shell to form an air circulating passage and a portion of the wall being hingedly mounted to form an entrance door, and supporting racks removably mounted in the storage compartment, the inner shell above the deflector plate being provided with horizontally disposed slots establishing communication between said compartment and the flue and being covered by inclined exterior shields or deflectors.

1,297,728. **FLY-TRAP.** WILLIAM E. PETTY, Storm Lake, Iowa. Filed Aug. 14, 1918. Serial No. 249,872. 3 Claims. (Cl. 43—22.)



1. In a trap structure, the combination with a screen door including a frame, of a pair of rods having their ends connected and shaped to form loops, bolts carried by the door frame, wing nuts mounted upon said bolts and engaging said loops for attaching said wires to the screen frame, a plurality of substantially U-shaped rods connected to said first named rods and forming braces for the body of said trap, transversely extending rods connected to said first named rods at the ends of the trap structure, said last named rods being bent inwardly and outwardly for extending into the body of the trap for forming bait sponge supporting arms.

1,297,729. **ARBOR-INDICATOR.** STANISLAS PICARD, Providence, R. I. Filed Oct. 30, 1918. Serial No. 260,305. 10 Claims. (Cl. 33—169.)

8. An arbor indicator comprising a spindle and a flexible tool-carrying centering member carried thereby consisting of a pair of axially arranged parts connected together by a ball and socket joint, one part being hollow, a screw



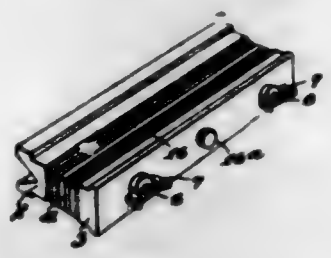
arranged within the last part and passing axially therethrough into the companion part, and a spring within the hollow part for holding the ball within its socket.

1,297,730. **RUNNING-BOARD BRACE FOR AUTOMOBILES.** LOUIS ARTHUR PRINCE, Sumter, S. C. Filed Oct. 4, 1917. Serial No. 194,689. 3 Claims. (Cl. 21—55.)



1. In an automobile, the combination with a running board and apron, of a combined brace and luggage carrier comprising a member having a plurality of spaced strap slots and adapted to overlie and conform to the contour of the apron and upper surface of the running board, with said slots located above said apron and running board, and means for attaching the brace to the running board.

1,297,731. **MATRIX-BLOCK.** JAMES BROWN PRINGLE, Montreal, Quebec, Canada. Filed Aug. 7, 1918. Serial No. 248,799. 11 Claims. (Cl. 199—63.)



5. In a matrix holder for use in casting printing slugs, the combination of two block portions adapted to be spaced apart to permit the ready insertion of a composite matrix forming element between them; a composite matrix forming element comprising a filler block, retaining strips and a matrix slide inserted between the two block portions; and means for moving the block portions toward each other and holding same in closed position upon the matrix forming element.

1,297,732. **COIN-RECEIVING BOX FOR VENDING-MACHINES.** WILLIAM ISAAC RAVERT, Hazleton, Pa., assignor to Standard Automatic Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Aug. 24, 1917. Serial No. 188,012. 4 Claims. (Cl. 232—12.)

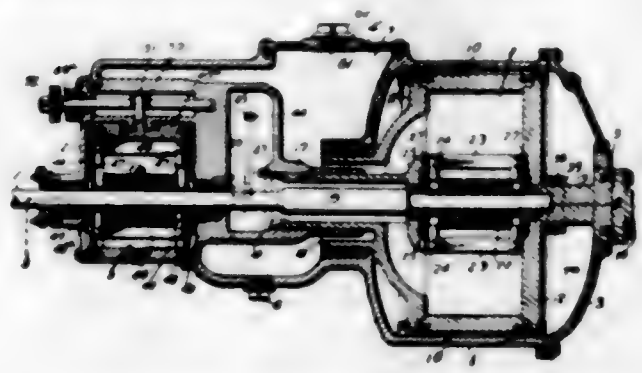
1. A coin receiving box for vending machines having an elongated portion for insertion into and removal from the machine and provided with an upstanding end at

substantially right angles thereto and arranged to be located exterior to the machine, said end having a trans-



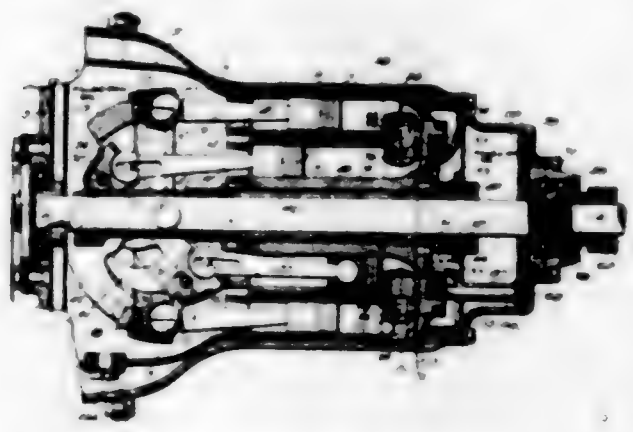
parent pane or winodw for inspection of the interior of the upstanding portion.

1,297,733. TRANSMISSION. ELWYN METTS RAYBURN and ALDEN GRANVILLE RAYBURN, Sausalito, Calif. Filed Nov. 22, 1916. Serial No. 132,882. 7 Claims. (Cl. 60—53.)



6. A transmission mechanism comprising in combination with the driving and driven shafts, a plurality of fluid controlled clutches, one of the said clutches being a booster clutch and being secured to the driven shaft and the other being arranged between the driving and the driven shafts for connecting the said shafts, and means for alternately operating the said clutches.

1,297,734. TRANSMISSION. ELWYN METTS RAYBURN and ALDEN GRANVILLE RAYBURN, Sausalito, Calif., assignors of one-third to Eddy S. Rayburn, Sausalito, Calif. Filed July 16, 1917. Serial No. 180,843. 8 Claims. (Cl. 60—53.)



1. A transmission mechanism, comprising in combination with the alined driving shaft and driven shaft, a fixed casing, a casing rotatable in the fixed casing and secured to the driving shaft, each casing carrying an annular series of cylinders parallel and concentric with the shafts, pistons in the cylinders, a ring for each series, connecting rods connecting the pistons with the respective rings, an annular guide for each ring and abutting the ring, and against which the ring moves, said guides being connected to the driven shaft and rotating therewith, ports connecting the series of cylinders, a valve for controlling the said ports, the casings being adapted to contain oil, and the valve having ports for constraining the oil to move in a direction to drive the driven shaft forwardly or in the reverse direction, means for constraining the guides to move in opposite directions to vary the inclination of the rings with respect to the shafts, manually operated means controlling said constraining means for moving the guides to neutral position, a spring for moving the guides to high speed position, fluid-controlled means for controlling the action of the spring, means in connection with the said means for locking the spring from action, and a common means for operating the valve and the said last named means.

8. A transmission mechanism comprising combination with the alined driving and driven shafts, a series of pumps carried by the driving shaft, a series of fixed pumps, both series encircling the driven shaft, a ring for each series of pumps connected to the reciprocating portions of the series, and means connected with the driven shaft and rotating therewith for simultaneously swinging the rings in opposite directions, said pumps delivering to each other.

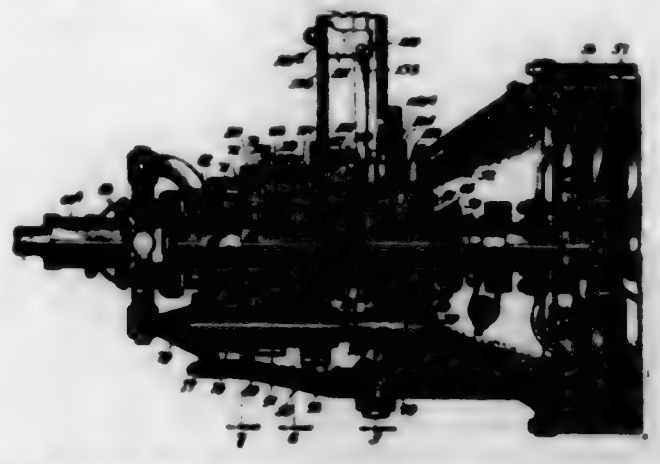
1,297,735. ANTISEPTIC COMPOUND. FRED H. RELYEA, Newark, N. J. Filed Dec. 4, 1917. Serial No. 205,829. 3 Claims. (Cl. 167—9.)

1. A composition of matter for treating wounds and the like, comprising a perborate in combination with an acid sodium salt, in such proportion that the solution in water is feebly alkaline, the alkalinity of the said solution being less than the solution of the sodium perborate alone, a reduction of the perborate in the said solution taking place with the ultimate liberation of oxygen in minute bubbles, the alkalinity of the said sodium perborate being so reduced that the growth of tissue is not prevented.

2. A stable and non-irritant antiseptic and germicide consisting of the combination of 50 parts of sodium perborate, and an activating agent composed of 40 parts of acid sodium carbonate and 10 parts of sodium phosphate.

3. A non-irritant antiseptic and germicide containing from 25 to 150 parts of water, and one part of a mixture composed of fifty per cent. of sodium perborate and an activating agent comprising forty per cent. of acid sodium carbonate and ten per cent. of disodium phosphate.

1,297,736. TRANSMISSION MECHANISM. FREDERICK P. ROSBACK, Benton Harbor, Mich. Filed Apr. 9, 1917. Serial No. 160,789. 10 Claims. (Cl. 74—59.)



1. In gear transmission, the combination of a shaft, a gear thereon, a second shaft, clutch-members rotatable with said second shaft and relatively movable lengthwise thereof, and a gear member rotatable on one of said clutch-members and constantly in mesh with said gear, said clutch-members adapting said gear member to be clutched to one thereof in one position of the said parts.

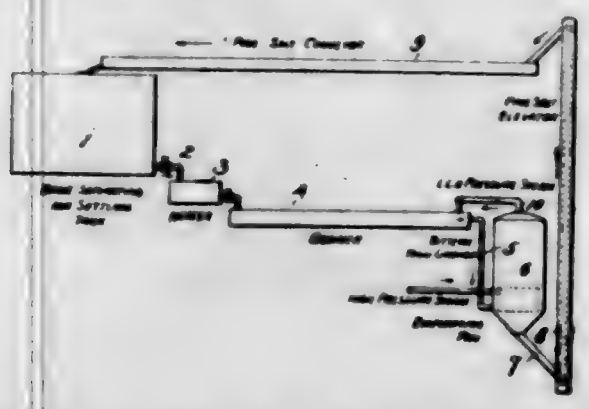
6. In gear transmission, the combination of a shaft, clutch-members rotatable therewith, a gear member rotatable on one of said clutch-members and provided with

clutch-teeth for interlocking with the teeth on another of said clutch-members, the clutch-member on which said gear member is rotatable being adapted for interlocking engagement with the teeth on another of said clutch members, and means for shifting said gear member and the clutch member on which it is journaled, together along said shaft, toward and away from the other clutch-members for the purpose set forth.

8. In gear transmission, the combination of a drive-member provided with a clutch, a gear rotatably mounted thereon and adapted to be slid along the shaft into and out of interlocking engagement with said clutch, a counter-shaft, gears on said counter-shaft and rotatable therewith, one of said gears meshing with the gear on said drive-shaft, a driven shaft, a series of clutch-members surrounding said driven shaft and rotatable with the latter and movable along this shaft, gears surrounding said driven shaft and rotatable relative thereto, certain of said gears surrounding and having bearing on certain of the clutch-members on said driven shaft, certain of said gears on said driven shaft meshing with certain of the gears on said counter-shaft, an idler gear interposed between and meshing with the other gears on said counter and driven shafts, one of said clutch-members on said driven shaft being adapted to be moved into and out of engagement with the clutch-member on said drive-shaft, gears on said driven shaft being provided with portions adapted to coöperate with the adjacent portions of adjacent ones of said clutch-members when said gears and said clutch-members on said driven shaft are moved into certain positions along said shaft, and means for shifting said clutch-members and the shiftable ones of said gears on said driven shaft, along the latter, for the purpose set forth.

10. In gear transmission, the combination of a plurality of slidably supported members arranged in superposed relation to each other and provided with portions which extended into substantially the same plane, said portions of said members containing recesses which in one position of the mechanism extend in substantial alinement with each other, and a slide-shifting member adjustable into any one of the said recesses and adapted to selectively actuate said first-named members.

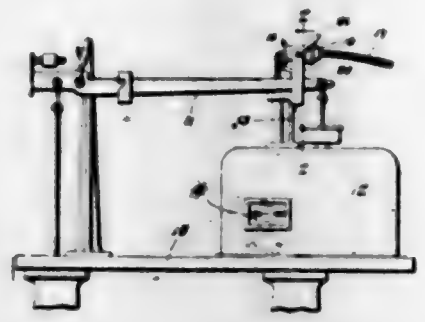
1,297,737. PROCESS OF EXTRACTING SALT FROM NATURAL BRINES. ARTHUR E. SCHAEFER, Saginaw, Mich. Filed Mar. 3, 1916. Serial No. 81,853. 6 Claims. (Cl. 127—16.)



1. The process of extracting salt from brine which consists in adding salt to the brine until the brine is in a substantially saturated condition, then in successively evaporating the said brine at different rates to produce salt of different fineness.

6. The process of extracting salt from unsaturated brines, which comprises adding a fine grain salt to the brine until the brine is substantially saturated, then in slowly partially evaporating the saturated solution, thereby producing a coarse grain salt, draining off the solution left after the coarse grain salt is produced, and rapidly evaporating said solution until a fine grain salt is deposited and then draining off the solution from the fine grain salt.

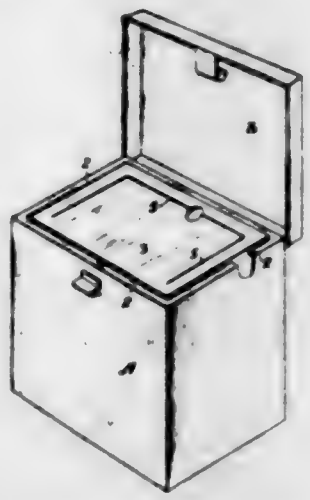
1,297,738. SCALE-BEAM LOCK AND SWITCH-OPERATING DEVICE. HENRY C. SCHAPER, St. Louis, Mo., assignor to The General Automatic Scale Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 9, 1918. Serial No. 216,205. 9 Claims. (Cl. 73—151.)



1. The combination with a scale beam and an electric switch located adjacent to said beam, which switch includes a key, of means for locking the scale beam against movement and simultaneously turning the key of the electric switch.

9. The combination with a scale beam, of an adjustable support adjacent to said scale beam, an electric switch on said support, a manually operable member pivotally mounted on said support, said member having a part adapted to engage the scale beam to lock the same against movement and also having a part adapted to engage the key of the electric switch, and an adjustable member on said support and disposed below the beam for limiting the downward movement of said beam.

1,297,739. CONTAINER. WILLIAM E. SCHENDEL, San Francisco, Calif., assignor to Independent Cracker & Biscuit Co., San Francisco, Calif., a Corporation of California. Filed Dec. 14, 1917. Serial No. 207,051. 1 Claim. (Cl. 220—9.)



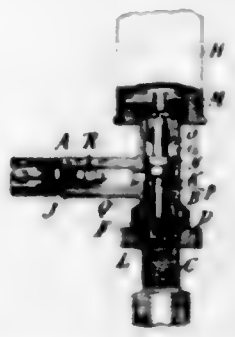
A container for cartons of the type discarded after being emptied composed of a metal case having its upper end bent to form a continuous and uninterrupted inwardly extending flange which projects within the interior of the case throughout the top thereof, a paper carton insertible in the case and having its bottom seated on the bottom of the metal case and having its upper end projecting above and engaged with the flange of the case so as to be held with its periphery spaced from the inner face of the case whereby to provide an air space between the case and carton and to prevent crushing of the carton sides by the case sides and a cover for the case formed to receive and engage over the said projecting upper end of the carton, said carton having a filling opening in a side thereof lying opposite to a side of the metal case and having its top provided with scored portions so as to provide an inlet to enable access to the carton contents from points at the top of the carton.

1,297,740. BORING-TOOL. CARL H. SCHMIDGALL, Peoria, Ill. Filed July 16, 1917. Serial No. 181,443. 2 Claims. (Cl. 145—122.)



1. A boring tool comprising, in combination, a body including a bore terminating in a recess, a drive shaft in said bore, a gear on said shaft within the recess, a part extending into the recess spaced from the walls thereof, a series of shafts having their bearings in the body and said part, a gear on each shaft of the series between the walls of the recess and the said part and in mesh with the first named gear, and a cutter on each shaft outside the body.

1,297,741. PUMP-COUPLING. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J. Filed Oct. 26, 1915. Serial No. 57,943. 13 Claims. (Cl. 284—17.)



1. A pump coupling having means for connection with a tire valve, means for connection with a pressure gage, and means independent of the pressure gage and adapted to be operated by it for depressing the deflating pin of the tire valve.

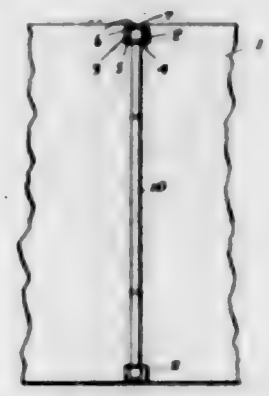
2. A pump coupling having a part adapted to be connected with a tire valve, a part adapted to be connected with a pressure gage, and a plunger independent of the pressure gage and adapted to be operated by it to force down the deflating pin of the tire valve.

6. A pump coupling having three branches, the first being adapted for connection with a tire valve, the second being in axial alinement therewith and being adapted for connection with a pressure gage, and the third being adapted for connection with a source of air supply, and a plunger passing through the first two branches adapted to be operated by the pressure gage to press down the deflating pin of the tire valve, and a valve carried by said plunger adapted to close the passage through said second branch when the gage is not in use.

12. As a new article of manufacture, a pump coupling having means for connection with the tire valve and means for depressing the deflating pin of the tire valve, together with means for temporary connection with a separate pressure gage, the means for depressing the deflating pin being adapted to coöperate with the pressure gage when the latter is applied, whereby the act of applying the gage also opens the tire valve.

13. As a new article of manufacture, a pump coupling having means for connection with the tire valve and means for depressing the deflating pin of the tire valve, together with means for temporary connection with a separate pressure gage, the means for depressing the deflating pin being adapted to coöperate with the pressure gage when the latter is applied, whereby the act of applying the gage also opens the tire valve, and a valve operated by the movement of said depressing means adapted to open communication between the tire valve and the pressure gage when the latter is applied.

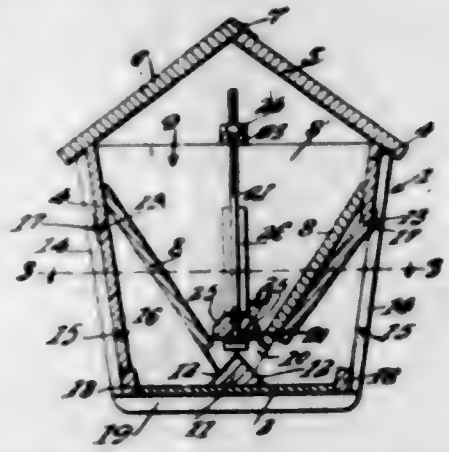
1,297,742. CORSET-STAY. ARTHUR SHORROCK, North Adams, Mass. Filed Nov. 14, 1917. Serial No. 201,895. 2 Claims. (Cl. 2—76.)



1. A soft rubber tip having a pocket adapted to receive therein the end of a corset stay, and a woven fabric flange vulcanized thereon and extending beyond the edges thereof.

2. A soft rubber tip having a pocket adapted to receive therein the end of a corset stay, a woven fabric flange vulcanized upon one side of said tip and extending beyond the edges thereof both laterally and longitudinally.

1,297,743. STOCK-FEEDER. ALLEN R. SIMMONS, Stanberry, Mo. Filed Apr. 27, 1917. Serial No. 165,019. 3 Claims. (Cl. 119—53.)



1. A stock feeder comprising a casing having inclined sides which are open, inclined upwardly diverging jambs secured to said sides upon the exterior thereof and providing feed openings therebetween, inclined upwardly diverging partitions within the casing having their upper edges secured thereto above the said openings, a division bar upon the bottom of the casing for directing the material toward opposite sides from the lower edges of said partitions, the sides having strips projecting upwardly below said openings and forming feed troughs with said division bar, and doors hinged at their upper ends to the sides of the casing at the upper ends of said openings and adapted to swing downwardly and outwardly by gravity against said jambs above said strips for closing the openings, and limited in their inward movement by said partitions.

1,297,744. RESISTANCE MATERIAL. GEORGE T. SOUTHGATE, Brooklyn, N. Y. Filed Apr. 19, 1917. Serial No. 163,102. 4 Claims. (Cl. 219—76.)



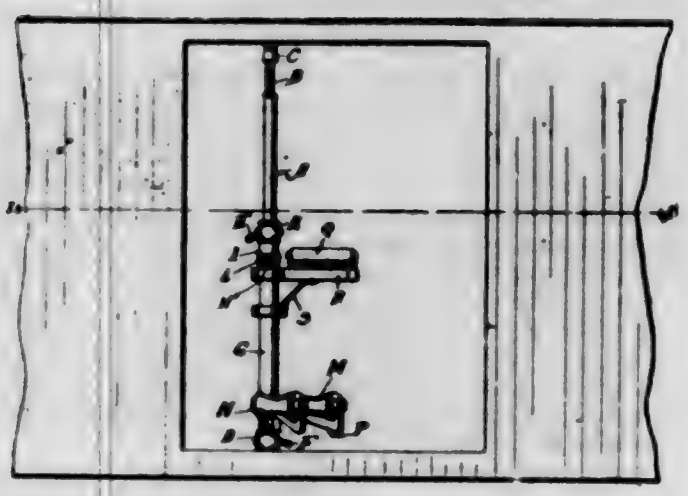
1. A resistance element composed of cuprous sulfid having the formula Cu_2S.

2. A resistance element composed of cuprous sulfid and provided with metallic terminals.

3. A resistance element composed of cuprous sulfid having the formula Cu_2S and provided with metallic terminals formed from the body of the cuprous sulfid.

4. A resistance element composed of a metallic compound and provided with metallic terminals formed from the body of said compound.

1,297,745. APPLIANCE FOR HANDLING TIMBER, &c. GEORGE H. SPENCER, Chicago, Ill. Filed Apr. 16, 1918. Serial No. 228,918. 7 Claims. (Cl. 193—56.)



1. A device for the purpose described comprising an upright or standard, a sleeve rotatably surrounding the standard and provided with means for supporting a substantially horizontally arranged roller, a collar secured to the standard beyond one end of the sleeve, and means connecting the sleeve and clamp to lock the sleeve against movement about the standard.

4. A device for the purpose described comprising an upright or standard and two rollers supported to turn together about the standard and extending laterally therefrom in substantially the same horizontal plane and parallel to each other, the axes of said rollers being in vertical planes on opposite sides of and substantially equi-distant from a vertical plane including the axis of the standard.

7. A device for the purpose described comprising an upright or standard, a sleeve rotatably surrounding the standard and supporting a substantially horizontally arranged roller, one end of the sleeve being provided with a plurality of teeth, a collar secured to the standard beyond the toothed end of the sleeve by means permitting it to be adjusted longitudinally of the standard and provided with a notch or recess in its end adjacent the sleeve, a second sleeve surrounding the standard and having teeth engaging the teeth on the roller carrying sleeve, and a recess or socket in alinement with the notch or recess in the collar, and a detachable key engaging the alined recesses in the last said sleeve and collar.

1,297,746. [WITHDRAWN.]

1,297,747. MOTOR-DRIVEN VEHICLE. HERMAN J. STARR, Osage, Iowa, assignor to A. O. Smith Corporation, Milwaukee, Wis., a Corporation of New York. Filed Dec. 7, 1916. Serial No. 135,520. 12 Claims. (Cl. 180—11.)



1. A motor driven and motor carrying traction wheel provided with a manually operable crank on one side of the wheel, means for supporting the wheel above the roadway when the crank is in use, a motor supporting frame and motor on the other side of the wheel, and a connecting arm in front of the wheel and a coupling at the front end of said arm adapted to connect the same with a vehicle in pushing relation thereto, said coupling being provided with means for allowing said wheel to swing freely in a vertical plane and to normally hold the wheel in a position to exert direct forward pressure.

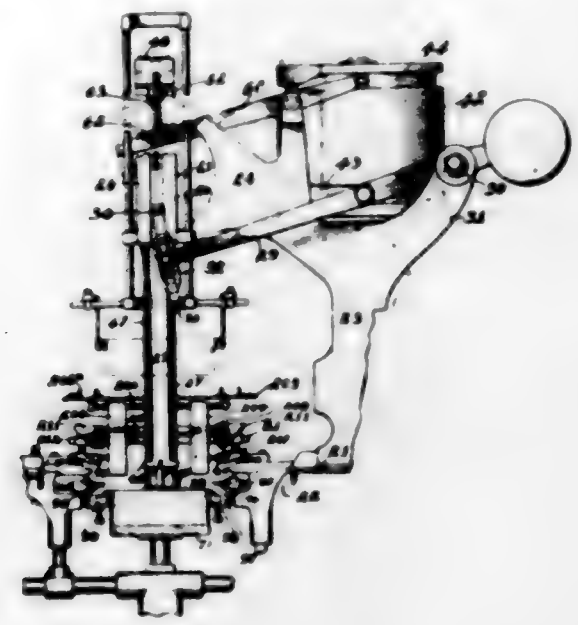
3. The combination with a vehicle, of a motor driven, motor carrying, traction wheel provided with a projecting crank on one side and a motor on the other side in permanent driving relation with the wheel, said motor having its frame arranged to support the wheel and provided with a forwardly projecting arm coupled to the vehicle and adapted to swing in a vertical plane, and means for supporting said arm in a raised position with the traction wheel out of contact with the ground and in a position beyond the body of the vehicle to facilitate motor starting operations of said crank.

7. The combination with a vehicle, of an auxiliary motor carrying traction wheel operatively connected to actuate the vehicle, means connected with the vehicle for lifting the traction wheel above the ground adapted as a motor starting means, and means for locking the traction wheel in the raised position.

9. The combination with a vehicle having a main frame, a rear axle and a pair of supporting wheels thereon, of a motor carrying traction wheel, a motor supporting frame carried thereby and flexibly connected with the rear axle between said rear wheels; said motor and traction wheel being adapted to drive the vehicle through the medium of said connection, a lever pivoted to the main frame and a flexible connection between the lever and the motor carrying traction wheel, adapted, when the lever is swung in on direction, to lift the wheel from the ground.

12. The combination with a vehicle having a main frame, a rear axle and a pair of supporting wheels thereon, of a motor carrying traction wheel, a motor supporting frame carried thereby and flexibly connected with the rear axle between said rear wheels; said motor and traction wheel being adapted to drive the vehicle through the medium of said connection, a lever pivoted to the main frame, a flexible connection between the lever and the motor carrying traction wheel adapted, when the lever is swung in one direction, to lift the wheel from the ground, and means for locking said lever in a position to support the motor wheel above the ground.

1,297,748. MANUFACTURE OF CONTAINER STRUCTURES. WILLIAM HENRY STREEPER, Philadelphia, Pa., assignor to Stokes & Smith Company, Summerdale, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1918. Serial No. 228,089. 21 Claims. (Cl. 93—51.)



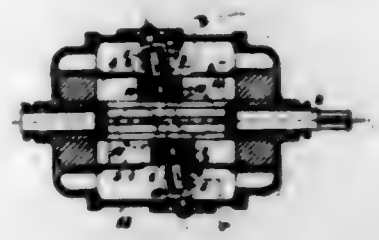
1. In an organized machine for folding blanks into container structures having marginal laps and wherein the laps are infolded into contact with interior faces of the structure walls, folding instrumentalities operative to fold a blank into structure formation, said instrumentalities including means for temporarily supporting the inner faces of the free edges of the structure walls during inturning of the marginal laps.

8. In an organized machine for folding blanks into container structures having marginal laps and wherein the laps are infolded into contact with interior faces of the structure walls, folding instrumentalities operative to fold a blank into structure formation, said instrumentalities including a three-member form having its members in superposed relation, one of the outer members being operative to locate a lap in contact with its wall, the intermediate member being positionable to form a temporary support for the inner face of the free edge of such wall during inturning of the lap.

13. In an organized machine of the character described, a form comprising three superposed members movable relatively to each other, the intermediate member being supported by and having a lost-motion operation with respect to one of the other members to permit relative movement therebetween, the remaining member being operative to control such relative movements.

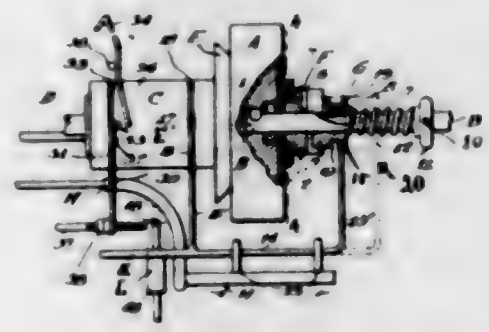
18. In an organized machine for folding blanks into container structures having marginal laps and wherein the laps are infolded into contact with interior faces of the structure walls, folding instrumentalities operative to fold a blank into structure formation, said instrumentalities including a multi-member form, devices for turning in upstanding marginal laps, external pressure-applying means, and means for correlating the operations of the form, devices, and said pressure-applying means to provide the following cycle of operations: apply a clamping action to the structure walls at the free edges of said walls, inturn the laps from the upstanding position, release the clamping action and expose the inner faces of the wall free edges, infold the inturned laps into contact with such exposed faces, and apply a setting pressure to the infolded laps, said pressure-applying means being active both in the clamping and the setting pressure actions, the movements of said latter means being controlled to provide a light pressure during the clamping action and a heavy pressure during the setting action.

1,297,749. ROTARY PUMP OR ENGINE. JOHAN ALBERT SVENSSON, Stockholm, Sweden, assignor, by mesne assignments, to Ludwigsbergs Verkstads Aktiebolag, Stockholm, Sweden. Filed Sept. 12, 1917. Serial No. 191,052. 2 Claims. (Cl. 121—63.)



1. In a rotary pump or engine the combination with a rotary drum, pistons movable longitudinally in said drum, and an oblique disk surrounding the drum, of a joint between the said pistons respectively and the said disk, in which one part is located in the piston with a play transversely of the same.

1,297,750. ENGINE STARTING MECHANISM. JAMES A. TAYLOR, New York, N. Y. Original application filed July 14, 1911, Serial No. 638,572. Divided and this application filed Dec. 16, 1914. Serial No. 877,536. 12 Claims. (Cl. 123—179.)



2. In a device of the class described, a motor-starting device comprising a clutching-mechanism having a clutch-member carried by the main or crank-shaft rotating therewith and reciprocating thereon; a second clutch-member supported by the main or crank-shaft adjacent to the reciprocating-member in which such shaft is free to rotate; mechanism controlled by the driver for reciprocating the reciprocating member into and out of clutch; and power means for causing actuation of the second clutch-member vibratorily upon the main or crank-shaft, in such manner as to give an initial motor starting movement to the main or crank-shaft.

5. In a device of the class described, a motor having a main or crank-shaft; a clutch-member carried by such crank-shaft rotating therewith and reciprocating thereon; a second coacting clutch-member supported upon such shaft vibratorily mounted thereon, in which such shaft is free to rotate; means controlled by the driver for bringing such clutch-members into and out of operative engagement; means for vibrating the non-reciprocating clutch-member when in clutch with the coacting clutch-member in such manner as to give an initial motor starting rotative movement to the main or crank-shaft of the motor; and a spring for returning the vibrating motor-starting-clutch member to its initial normal position.

7. In a device of the class described, a rotating non-reciprocating clutch-member; a coacting moving clutch-member adapted to be brought into and out of clutch with the rotating clutch-member; a motor; means or mechanism for giving the initial starting movement to the motor; and means or mechanism for automatically disengaging the starting mechanism from the motor-shaft, upon throwing the first clutch into mesh.

10. In a device of the class described, a motor starting mechanism comprising two clutch-members adapted to be

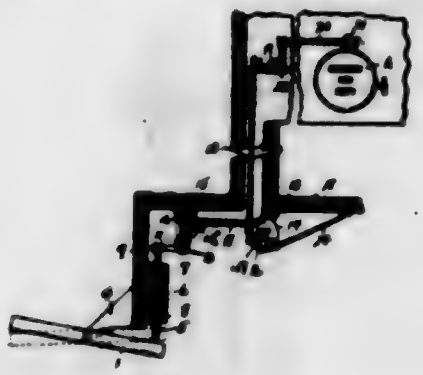
brought into and out of clutch so as to initially start the motor, and release the motor from the initial starting mechanism automatically upon its operation; power means for operating the motor-starter; a drive-clutch for bringing the motor into and out of connection with the driving mechanism of the vehicle; means for preventing mechanical interference of the drive-clutch and motor-starter, in such manner that the motor-starter cannot be operated when the drive-clutch is in; and mechanism controlled by the driver controlling or actuating all such mechanisms.

1,297,751. SECTION-BEAM HEAD. RAY THORNTON, Dartmouth, Mass. Filed July 21, 1917. Serial No. 182,051. 4 Claims. (Cl. 139—56.)



1. The combination with a section-beam of a peripherally grooved head comprising in its construction a plurality of layers of wood, each layer formed of a plurality of bands permanently united at their meeting edges, means for binding said layers together comprising a series of nails passing through said layers near their outer edges, and a friction cord engaging said peripheral groove.

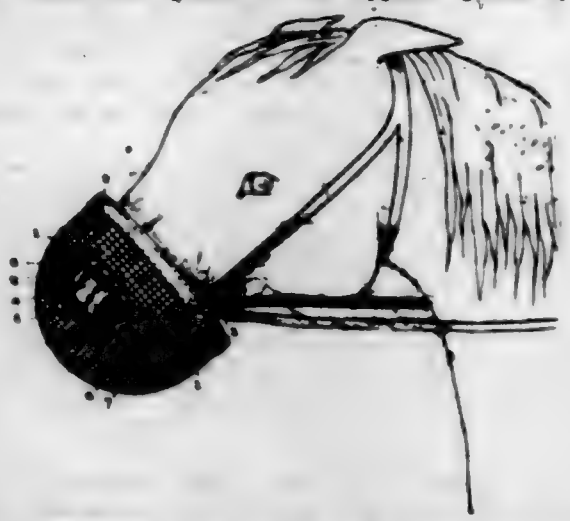
1,297,752. AUTOMATIC REGISTER. WILLIAM A. TROY, Archbald, Pa. Filed May 22, 1918. Serial No. 235,958. 3 Claims. (Cl. 235—99.)



1. In an apparatus of the class described, a movable part, a plunger operated thereby, a bell crank operated by the piston, a thrust-bar actuated by the bell crank, a cam adapted to be rotated by movement of the thrust-bar in one direction, a registering mechanism, means actuated by the cam for operating the registering mechanism, means for returning the thrust-bar and its operating parts to starting position independently of the cam and the mechanism actuated thereby, and additional means for returning the cam to starting position after each actuation by the thrust-bar and independently of the thrust-bar movement.

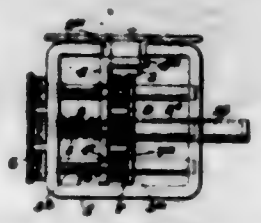
1,297,753. NOSE-GUARD. EDWARD R. TWITCHELL, Fargo, N. D. Filed Oct. 19, 1917. Serial No. 197,489. 3 Claims. (Cl. 54—30.)

1. A nose guard having a closed body formed of continuous wire fabric and provided in its side with a breather opening disposed to expose the nostrils of the animal when the guard is in applied position, and



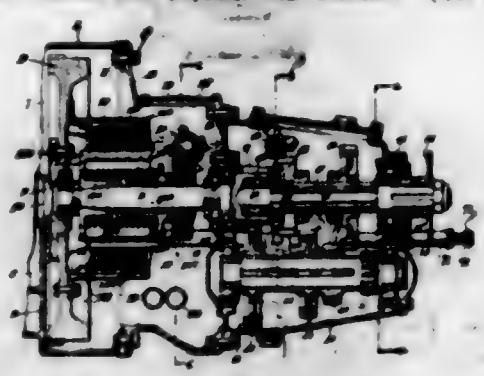
dangiers attached at one end to said guard each having a free end depending over said breather opening.

1,297,754. LOCK. ANGELO VILLANI, Wilmington, Del. Filed Nov. 16, 1918. Serial No. 262,830. 4 Claims. Cl. 70—18.)



1. In combination, a casing having an opening in one wall, a keeper having an eye adapted to enter said opening, a spring pressed bar mounted to move transversely of said opening and having a portion adapted to engage the eye of the keeper, a plurality of parallel shafts journaled in the casing and having heads on the outside of the casing bearing permutation characters, said shafts passing through openings in said slidable member, disks loosely mounted on said shafts, means for holding the disks against rotation, means for holding said disks against longitudinal movement on the shafts except when the latter are in a predetermined position and means for moving the disks bodily when in such position.

1,297,755. MOTOR-VEHICLE. JESSE G. VINCENT, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 31, 1916. Serial No. 75,414. 12 Claims. (Cl. 74—58.)



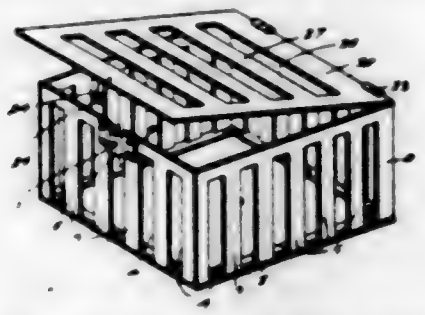
1. In a motor vehicle, in combination, a motor crank case having a flywheel inclosing part, said part having an open flanged end, a clutch casing having an open front end secured to said flanged end and having a bearing supporting rear end, a gear casing having an open front end secured to the rear end of the clutch casing and having a bearing supporting rear end, a flywheel in said crank case inclosing part, a clutch mounted on the flywheel and housed within said clutch casing, gears in said gear casing and connected to be operated by said clutch, and bearings in said bearing supporting ends of said casings for said clutch and gears.

7. In a motor vehicle, the combination of a casing, gears therein, a rock shaft connected for controlling the operation of said gears, a bearing member detachably secured to said casing and extending laterally therefrom, said rock shaft being mounted to turn in said bearing member, and a pair of pedal levers mounted to turn on the outside of said bearing member.

8. In a motor vehicle, a casing provided with alined bearings in two of its opposite walls, a rock shaft mounted in said bearings, one of said bearings having an axial extension outside of the casing, and a pedal lever rotatively mounted on said extension independently of the rock shaft.

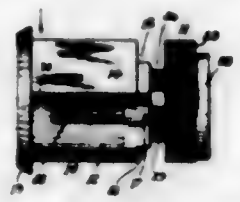
11. In an apparatus of the class described, in combination, transmission mechanism, a casing surrounding said mechanism, and a wire conduit extending through said casing and having its ends open and secured to the opposite side walls of the casing.

1,297,756. METALLIC EGG AND CHICKEN CRATE. JOHN VOEGTLIN, Fort Wayne, Ind. Filed Feb. 7, 1917. Serial No. 147,096. 1 Claim. (Cl. 220—111.)



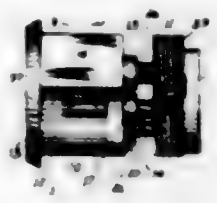
A device of the character set forth including a crate having a hinge cover, a cylindrical receptacle having its lower end closed and its upper end open, laterally projecting flanges formed on said receptacle and secured to the crate to position the open upper end of receptacle at the upper edge of the crate, a pin formed on the receptacle and projecting laterally thereof, and a hasp secured to the cover and receiving the pin for securing the cover to the crate so as to close the upper end of the receptacle by said cover.

1,297,757. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 10, 1917. Serial No. 201,279. 17 Claims. (Cl. 70—46.)



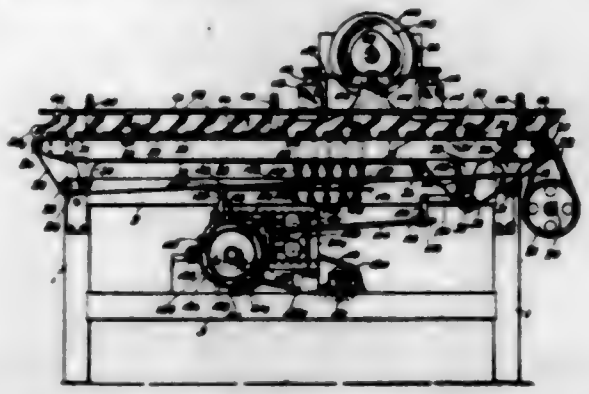
1. An extensible cylinder lock comprising a main part and an extension adjustably connected thereto, a guide pin rigidly secured to said extension, and a pin-receiving lug formed rigidly upon the main part of the lock, said lug being positioned to extend beyond the main part of said lock into the extension.

1,297,758. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 10, 1917. Serial No. 201,280. 9 Claims. (Cl. 70—46.)



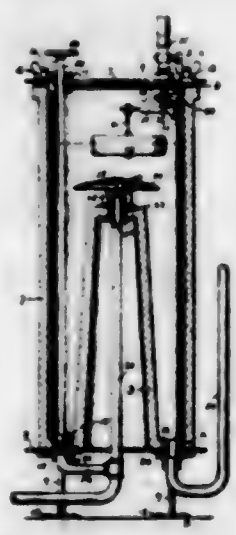
1. An extensible cylinder lock comprising a main part and an extension adjustably connected therete, said main part having an integral lug for supporting said extension, said lug having a cylindrical end projecting beyond the end of said main part of the lock into a socket of the extension.

1,297,759. TAB-CUTTING MACHINE FOR INDEX-CARD GUIDES. ISAAC WAGNMAKER, Grand Rapids, Mich. Original application filed Oct. 25, 1915, Serial No. 57,742. (Patent No. 1,245,645, dated Nov. 6, 1917.) Divided and this application filed Sept. 7, 1917. Serial No. 190,235. 24 Claims. (Cl. 164—50.)



1. In a mechanism of the character described, a feeding mechanism for delivering rectangular shaped cards therefrom one at a time, a carrying means on to which the cards are delivered, a cutting mechanism to which the cards are carried, said cutting mechanism including means to cut each card at one edge and leave a projecting tab at such edge, means to operate the cutting mechanism and feeding mechanism in synchronism whereby a card is delivered from the feeding mechanism for each operation of the cutting mechanism, and a series of stops, and means to automatically operate the same in succession into the paths of movement of the successive cards to stop said cards at the cutting mechanism for operation thereon and thereby cut successive cards differently, substantially as described.

1,297,760. COOLER FOR LIQUIDS. JOHN J. WALTERS, Buffalo, N. Y. Filed Mar. 27, 1916. Serial No. 86,850. 3 Claims. (Cl. 62—142.)



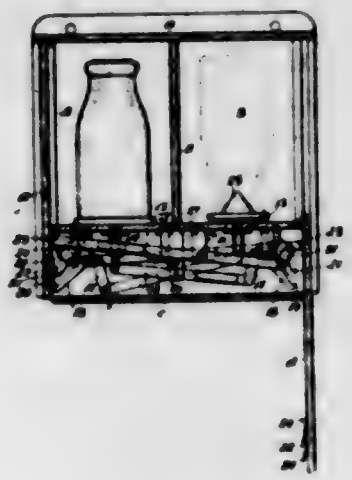
1. In a cooler for liquids, the combination of two hollow members of vitreous material, one within the other, the inner member being frusto-conical of less height than the outer and having a closed upper end provided with an inlet opening, a bottom joining the lower ends of the two members and having an outlet opening, said members and bottom being integral, a feed pipe connecting into the upper end of the inner member at the inlet opening, a discharge pipe connecting to said bottom at the outlet opening, a cover for the outer member, an alarm mounted on said cover and operable by the gases within the cooler, and means within the outer member to control the alarm.

2. In a cooler for liquids, the combination of two hollow members of vitreous material, one within the other, the

inner member being of less height than the outer and having a closed upper end provided with an inlet opening, a bottom joining the lower ends of the two members and having an outlet opening, said members and bottom being integral, a feed pipe connecting into the upper end of the inner member at the inlet opening, a discharge pipe connecting to said bottom at the outlet opening independently of the feed pipe, a second discharge pipe connecting to said bottom and to said feed pipe, a valve to control the flow of liquid from said second discharge pipe, and a cover for the outer member.

3. In a cooler for liquids under pressure, the combination of a body of vitreous material consisting of concentric inner and outer members and a bottom connecting their lower ends, the inner member having a closed upper end and being of less height than the outer, said members being so formed that the space between them decreases downwardly, a feed pipe passing up within the inner member and connecting into the top thereof, a discharge pipe connecting into said bottom, a cover for said outer member, a whistle mounted on said cover and operable by the gases within the cooler, and a float valve mounted on said cover to control said whistle, the float of said valve causing the valve to open when the liquid in the cooler falls below a predetermined level.

1,297,761. EXCHANGE-RECEPTACLE FOR MERCHANDISE. EDWARD SAMUEL WARREN, San Francisco, Calif. Filed Oct. 29, 1917. Serial No. 198,910. 6 Claims. (Cl. 232—41.)

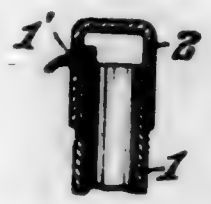


1. An exchange receptacle for packages comprising duplex compartments, a door in each of said compartments, a pair of latch devices for each of the doors, means in each compartment requiring the presence of a package to release one of the latches of the other compartment, and means effected by the movement of the door of the other compartment to release the second latch device of the filled compartment.

2. An exchange receptacle for packages comprising duplex compartments, a door for each compartment, separately operated latch devices for each of the doors, means requiring the presence of a package in one of the compartments to release one of the latches of the other compartment, and means requiring the closing of the door of the other compartment to release the second latch of the compartment within which the package is contained.

6. An exchange receptacle for packages comprising duplicate inclosing compartments, a door upon each compartment and by which the package is concealed, latch means for holding the doors in their closed position, gravity operating means whereby the presence of a package in one compartment will release the door in the opposite compartment and the absence of a package in said opposite compartment will cause the locking of the door in the first-named compartment, and complementary releasing means actuated by the closing of one of the doors to complete the release of the other of said doors.

1,297,762. POCKET SAFETY-RAZOR. JOHN M. WELCH, Saratoga Springs, N. Y., assignor to Edith Charlotte Welch, Saratoga Springs, N. Y. Filed Apr. 6, 1918. Serial No. 227,084. 5 Claims. (Cl. 30—12.)



1. A razor comprising a body, a clamping cap, said body being telescopic with said cap, a slot in said cap, a shaving head in said slot and held therein by engagement with the body and cap, substantially as described.

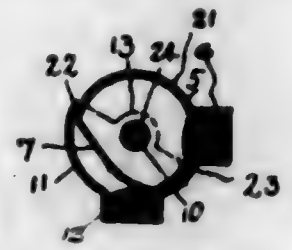
2. A razor comprising a body, a clamping cap on one end, a slot in said cap, a shaving head in said slot and held therein when in use by engagement with the body and cap, said body and cap being provided with coöperating threaded portions whereby the screwing of one onto the other causes the clamping of the head in the slot, substantially as described.

3. A razor comprising a body, a head, a clamping cap on one end of the body and a transverse slot in the said cap in which the head is clamped by engagement with the body and cap, substantially as described.

4. A razor comprising a body, a head, a clamping cap on one end of the body and a transverse slot in the said cap in which the head is clamped by engagement with the body and cap, the said slot having its lower edge lying in a plane perpendicular to the axis of the body and its upper edge lying in a plane at an angle to the perpendicular plane to the axis of the body, substantially as described.

5. In combination with a razor head, a guard member having holes therein, a clamping bar having projections fitting in said holes and a blade clamped therebetween in advance of the projections, substantially as described.

1,297,763. BALL-AND-SOCKET JOINT FOR ELECTRIC FIXTURES. ARTHUR WESTLEY WELLINGTON, Waterbury, Conn., assignor to Waterbury M'f'g. Co., Waterbury, Conn., a Corporation. Filed Oct. 22, 1918. Serial No. 259,194. 2 Claims. (Cl. 285—91.)

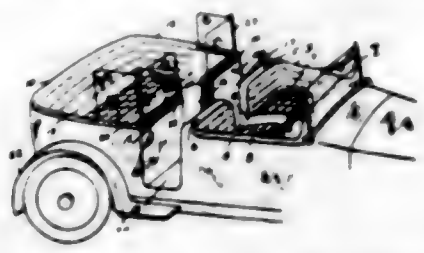


2. In a sheet-metal ball-and-socket joint for electric fixtures, the combination with a substantially spherical ball-member having a spiled and threaded outlet and an elongated clearance-opening one end of which is located opposite the said outlet, of a substantially hemi-spherical cup-member having a spiled and threaded outlet to one side of its center, a binding-screw passing through the said cap and ball-members at a right angle to their outlets, means applied to the screw for the operation thereof in binding the two members frictionally together, and a sleeve located within the ball-member, receiving the said binding-screw and adapted in length to prevent the fixture from being crushed by the action of the said screw.

1,297,764. AUTOMOBILE-BODY. MICHAEL FRANCIS WILDAU, Los Angeles, Calif. Filed Sept. 6, 1918. Serial No. 252,957. 4 Claims. (Cl. 21—148.)

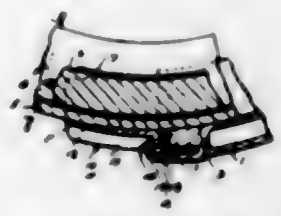
4. In an automobile body, a floor; a rear seat mounted above the rear end of the floor; side walls extending forwardly from the rear seat; transverse walls extending in-

wardly from the forward ends of the side walls and having channels opening inwardly and upwardly; supporting brackets fixed in the channels; folding wind shields con-



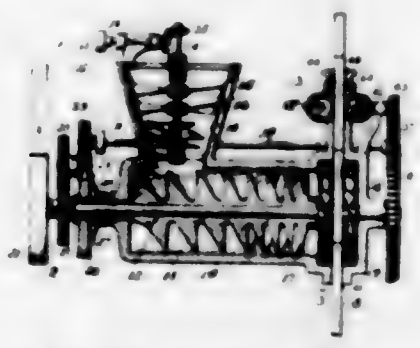
nected to the supporting brackets and adapted to fold and swing downwardly into the channels and swing upwardly and unfold to protect the occupants of the rear seat.

1,297,765. RETREAD-VULCANIZER. PAUL H. WILKINSON, San Bernardino, Calif. Filed Aug. 21, 1918. Serial No. 250,778. 1 Claim. (Cl. 18—18.)



A cooling end for a retread vulcanizer comprising, a shell forming an extension cavity; radiating ribs extending from the shell; an attaching flange extending from the shell and to fit the end of a mold; ears extending from the flange; a pad of nonheat conducting material fitting against the flange and ears; and cap screws inserted through the flange and pad, and adapted to be screwed into the end of the mold.

1,297,766. GRID-PASTING MACHINE. THEODORE A. WILLARD, Cleveland, Ohio, assignor to Willard Storage Battery Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Mar. 24, 1913. Serial No. 756,422. 14 Claims. (Cl. 149—56.)



1. In a grid pasting machine, the combination with a feeding chamber, means for continuously feeding paste to the said chamber, means adjacent the end of said chamber for receiving a grid, and means located at one side of the grid receiving part adapted to force the paste from the feeding chamber into the interstices of the grid from one side thereof only.

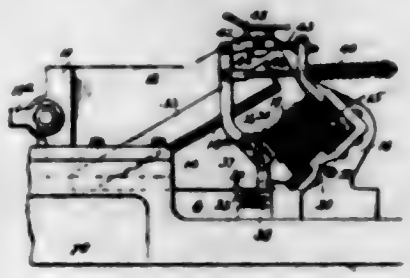
3. In a grid pasting machine, means for receiving a grid, means for feeding paste to and forcing the same into the openings in the grid from one side only, and means upon the opposite side of the grid adapted to assist in the compression of the paste in the spaces of the grid, and to remove the excess material from the surface of the grid.

7. In a grid pasting machine, a feeding chamber, feeding mechanism in said chamber for feeding material through the chamber in one direction only, means for supporting a grid adjacent one end of said chamber, a compressor adapted to force the material from the feed chamber into the openings in said grid, and a compressor upon the opposite side of said grid adapted to assist in the compression of the material within the openings in the grid.

10. In a grid pasting machine, the combination with a feeding chamber closed at one end, means adjacent the closed end of the chamber for receiving a grid, and means for forcing paste into the interstices of a grid from one side only thereof.

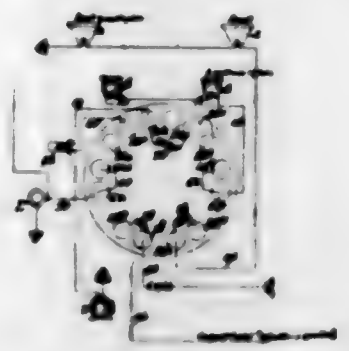
14. In a grid pasting machine, the combination with a feeding chamber closed at one end, means at one end of the chamber for receiving a grid; means for feeding paste to, and forcing the same into the openings in said grid from one side only, and means upon the opposite side of the grid adapted to assist in the compression of the paste in the grid and to remove the excess material from the surface of the grid.

1,297,767. SEPARATOR-SLICING MACHINE. THEODORE A. WILLARD, Cleveland, Ohio. Filed June 9, 1915. Serial No. 32,994. 23 Claims. (Cl. 164—48.)



1. In a slicing machine, a cutter, means for operating the same, means for intermittently feeding a yieldable body at right angles to the cutting plane, and means for producing between the feeding operations a clamping pressure at substantially all points about said body in a plane adjacent the plane of the cutter.

1,297,768. ELECTRIC-LIGHTING SYSTEM FOR AUTOMOBILES. JOHN HART WILSON, U. S. Army. Filed Feb. 13, 1918. Serial No. 216,882. 5 Claims. (Cl. 171—97.)

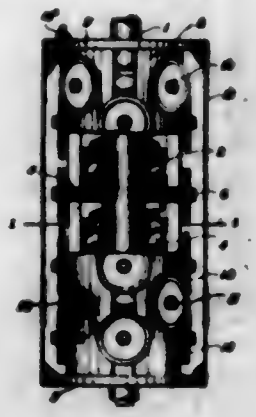


1. In an electrical distributing system, the combination of the head, side and tail lights, a source of alternating electrical current for operating the head and tail lights together, a separate source of electrical current for operating the side and tail lights together, and a master switch for controlling the distribution of the electrical current from either source to the corresponding sets of lights.

1,297,769. THRUST-BEARING. OSCAR P. WOODRUFF, Memphis, Tenn., assignor to Layne & Bowler Company, Memphis, Tenn., a Corporation of Texas. Filed June 6, 1918. Serial No. 238,974. 3 Claims. (Cl. 64—25.)

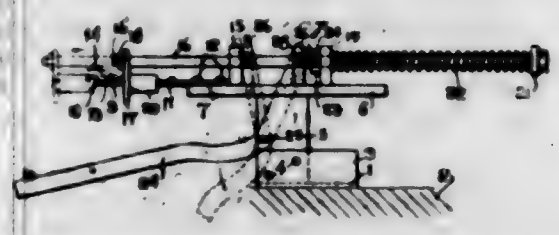
1. In an apparatus for receiving thrust loads having a rotating shaft and a plurality of bearings therefor, the combination of a movable support for each bearing, a frame cooperating therewith and flexible means fixed to the frame and adapted to yieldingly carry the movable supports for the bearings whereby the load is distributed among all the bearings.

3. An apparatus for receiving thrust loads comprising in combination a frame, a rotating shaft, a plurality of bearings for the shaft, movable supporting members for the bearings, a plurality of supporting points on the frame, and flexible means for carrying the supporting members, said flexible means extending alternately from a supporting point on the frame to a point on a supporting member, whereby the load is distributed among the bearings.



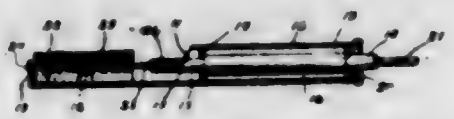
5. In a thrust bearing having a shaft and a plurality of bearings therefor, equalizing means comprising in combination a frame, sheaves on the frame arranged in sets longitudinally thereof, a bearing plate beneath each bearing adapted to move longitudinally of the frame, a set of sheaves on each plate corresponding in number to those on the frame, the sets on the plates being arranged in alternate relation with those on the frame, and a cable alternately threaded from a sheave of one set to a sheave of the other set and having its ends fastened to the frame, substantially as and for the purpose set forth.

1,297,770. BELT-MAKING MACHINE. DENVER M. WRIGHT, Atlanta, Ga. Filed May 15, 1918. Serial No. 234,820. 7 Claims. (Cl. 59—1.)



1. In a machine for making belts or straps composed of flexible links, the combination, with two rigid hook-carrying members, of two coöperating resilient hook-carrying members disposed over said first-mentioned members, and mechanism for flexing said resilient members toward said rigid members, including a reciprocable rod.

1,297,771. ROTARY TOOTH-BRUSH. CHARLES ABEL, Fort Sam Houston, Tex. Filed Oct. 8, 1918. Serial No. 257,356. 2 Claims. (Cl. 15—37.)



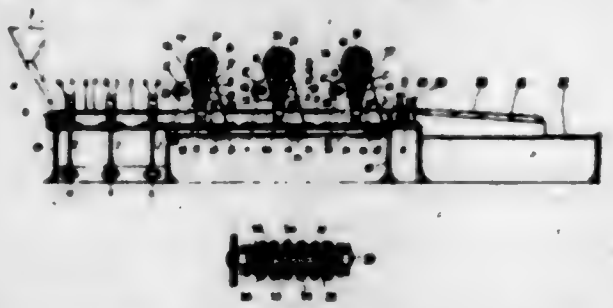
2. A rotary tooth brush comprising a cylindrical casing serving as a handle and provided adjacent one end with a cut out portion, the free end of said casing adjacent said cut out portion being formed as a bearing plate, a drive shaft journaled in said casing and having its end adjacent said cut out portion provided with a central hole and lateral slots communicating therewith, a brush head having its spindle journaled at one end in said bearing plate, and a wing member on the other end of said spindle conformingly engaging within the hole and slot in said driving shaft, and means to permit longitudinal movement of said drive shaft whereby to effect disengagement thereof from said wing member.

1,297,772. CONCEALED-TERMINAL RECEPTACLE. HARRY C. ADAM, St. Louis, Mo., assignor to The Reflectolyte Company, St. Louis, Mo., a Corporation of Missouri. Filed July 27, 1917. Serial No. 183,124. 1 Claim. (Cl. 173—342.)



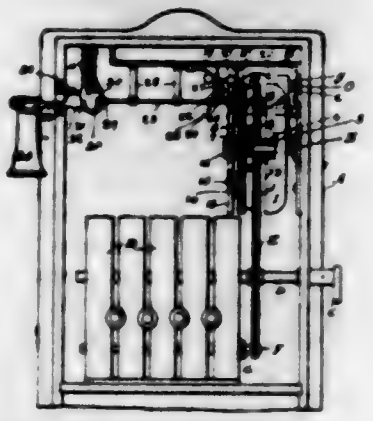
An electrical receptacle, comprising a one-piece insulator provided with a cylindrical portion and a top portion integrally connected together, said top portion projecting laterally beyond said cylindrical portion so as to form a protecting flange, laterally projecting ears on said top portion through which screws or connecting devices can be passed, the cylindrical portion of the insulator being provided in its sides just below said flange with openings that extend clear through same, contacts carried by said insulator and provided with terminals arranged in said opening in such a manner that the binding screws on the terminals will lie within the marginal limits of the cylindrical portion of the insulator, and wire receiving grooves extending tangentially from said openings.

1,297,773. PRODUCTION OF MOLDED OR SHAPED MATERIAL OR ARTICLES BY ROLLING. JOSEPH ADAMS, Northfleet, England. Filed May 3, 1918. Serial No. 232,206. 9 Claims. (Cl. 25—21.)



1. Apparatus for use in the production of molded or shaped material or articles by rolling in which the operating rolls are formed with alternately fixed and rotatable sections so that when two rolls are arranged for coöperation the loosely mounted sections of one roll coincide with the fixed section of the co-acting roll.

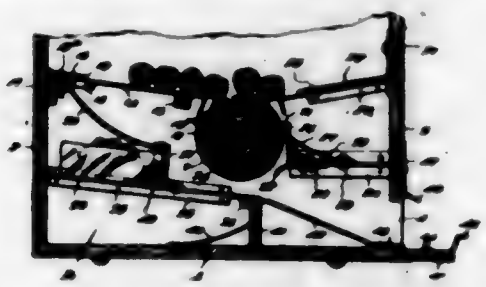
1,297,774. TELEPHONE ATTACHMENT. MOSES TAIT ALLAN, Neville, Saskatchewan, Canada. Filed Apr. 12, 1918. Serial No. 228,261. 6 Claims. (Cl. 179—28.)



1. In a telephone, the combination with a generator; the gearing therefor; the receiver hook; a spring displaced by said receiver hook, and the receiver supported by said hook, of an attachment comprising a gear-wheel in mesh with the gearing of said generator; supporting means on which said gear-wheel freely revolves; a spring-motor; a

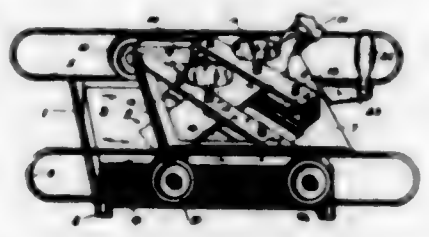
friction clutch connected to said spring-motor and whereby said motor is associated with said gear-wheel so as to be wound up thereby; a notched disk; means mounted on said supporting means to which the inner end of said spring motor is connected and whereby said notched disk receives movement at certain times from said spring-motor; a belt; a hammer tracking on the notched edge of said disk in such a manner as to strike said bell, and means associated with said spring whereby when the receiver is removed from said receiver hook, said notched disk will be unlocked to permit said spring motor to turn the same the major portion of a revolution, and whereby, when the receiver is replaced on said receiver hook the said notched disk will complete its revolution and then be brought to rest.

1,297,775. CIGAR-VENDING MACHINE. DAVID ALLEN, New York, N. Y. Filed Dec. 13, 1916. Serial No. 136,731. 8 Claims. (Cl. 211—8.)



8. In a vending machine of the character described, a casing having side and end walls, a top and bottom wall, a discharge opening being provided in one end wall, a well disposed adjacent to said opening at the bottom thereof, means for obtaining access to the casing, a hopper in said casing, said hopper comprising inclined plates, one of said plates being slidable and adapted to be agitated, a drum rotatable in the casing and having a receiving groove, means for rotating the drum, means for engaging said drum to limit the rotation thereof upon the supply of cigars or the like being exhausted, means for holding said slidable plate toward the drum, and means carried by the drum for displacing said plate and agitating the same, upon the drum being rotated to receive and discharge a cigar or the like.

1,297,776. SHARPENING DEVICE. MEIER AXLER, Toronto, Ontario, Canada. Filed July 15, 1918. Serial No. 245,089. 4 Claims. (Cl. 51—7.)



1. In a sharpening member, a base, a sharpening member supported on said base, loop trackways set on edge and secured one along each side of said base and projecting therebeyond at each end thereof, a tool carriage mounted above said sharpening member and having its wheels operating within said trackways provided with a central opening, a tool vise in substantially oblique position above said opening adjacent to the rear end thereof and a tool vise supported in said opening in advance of the aforesaid vise.

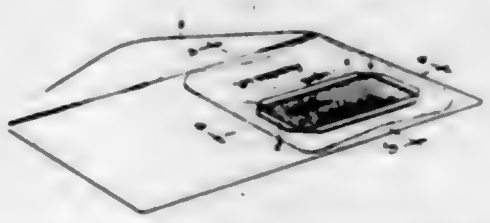
1,297,777. TOY. CHARLES E. BANKS, Wilkinsburg, Pittsburgh, Pa., assignor of one-half to Samuel R. Davis, Pittsburgh, Pa. Filed June 27, 1918. Serial No. 242,248. 5 Claims. (Cl. 46—37.)

1. A toy of the class specified comprising a holder with air passages therein, a tube connected to the holder having an outlet vent and also communicating with the air passages, a plunger in the tube provided with a connector movably extending through one end of the tube, figure and emblem devices secured to the connector exterior of



the tube, and a bladed wheel held by the tube in operative relation to the air vent and serving to rotate the figure and emblem devices.

1,297,778. ENVELOP. GEORGE LEON BANKS and OTTO BERNARD KIRKPATRICK, Los Angeles, Calif. Filed Aug. 28, 1917. Serial No. 188,616. 4 Claims. (Cl. 229—72.)



1. In combination with an envelop having a closing flap and a cut-out in the front section, a pocket secured within the envelop having also a cut-out in register with the cut-out in the front section, and a card removable from said pocket and adapted to present an edge to the closing flap of the envelop at the fold of said closing flap.

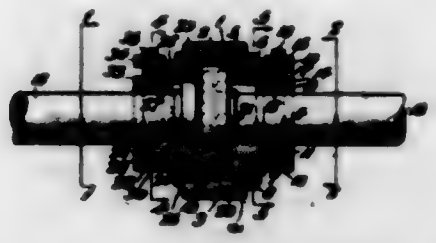
2. An envelop having a closing flap and a cut-out in the front section near the bottom edge of the envelop, a pocket secured with one side thereof to the inner side of the front section of the envelop, said pocket extending from the bottom edge to the closing flap of the envelop and having a cut-out in register with the cut-out in the front section of the envelop, said pocket being open at the closing flap, the nonsecured side of the pocket having the upper edge thereof cut to conform with the upper edge of the rear section of the envelop as to facilitate the entrance into the pocket, and an address card adapted to enter the pocket and be retained therein by the closing flap of the envelop.

3. An envelop having a closing flap and a cut-out in the front section near the bottom edge of the envelop, a pocket in said envelop extending from the bottom edge to the closing flap, said pocket being secured with one side to the inner face of the front section, said pocket having a cut-out, the borders of the pocket at the cut-out being folded back on to the outer surface of the front section of the envelop through the cut-out in said front section to reinforce the envelop at the cut-out, and an address card adapted to extend through the entire depth of the pocket, said card being adapted to be retained in the pocket by the closing flap of the envelop.

4. An envelop having a closing flap and a pocket to one side of the envelop extending from the bottom edge to the closing flap of the envelop and accessible from the inside of the envelop at the edge where the closing flap is formed, said envelop having a cut-out in the front thereof which leads into the pocket, and an address card having shallow V-shaped top and bottom edges and rounded corners for facilitating the entrance of the card into

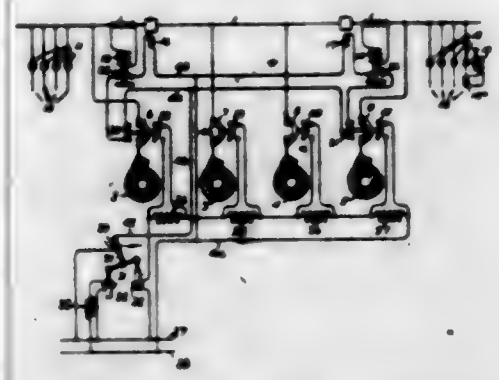
the pocket and prevent the sticking of same in the pocket, said card being adapted to extend through the entire depth of the pocket, said closing flap of the envelop retaining said card in the pocket.

1,297,779. SHAFT-BEARING. FRANK BARNES, Philadelphia, Pa. Filed Nov. 18, 1918. Serial No. 262,285. 4 Claims. (Cl. 64—24.)



1. In a bearing of the character stated, a body portion having a main lubricant receiving chamber and provided with an end chamber separated therefrom and having at its lower end, ports communicating with said main lubricant receiving chamber, a removable end portion detachably connected to said body portion and contributing with said body portion to form the main lubricant receiving chamber, said end portion having an end chamber separated from the lubricant chamber of the body portion and provided with ports at its bottom communicating with such chamber, said body portion and end portion having an aperture therethrough to receive a shaft, packing in said end chambers, and an antifriction device carried by said shaft and located within said body portion.

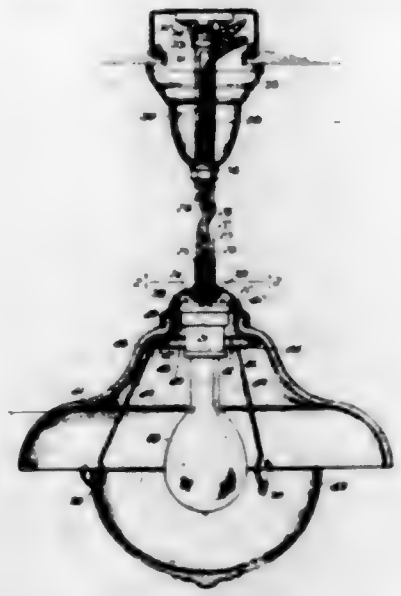
1,297,780. SYSTEM OF DISTRIBUTION. DAVID BASCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 3, 1917. Serial No. 166,159. 14 Claims. (Cl. 175—294.)



2. In combination with a supply conductor, a plurality of generators supplying said conductor, a plurality of feeders, switches connecting said feeders to said supply conductor, and a common means responsive to abnormal condition on any of said feeders for preventing a portion of said generators from supplying said feeders and causing that switch corresponding to the faulty feeder to open under the capacity of only a portion of said generators.

1,297,781. LIGHTING-FIXTURE. GEORGE M. BEARDSLEE, Chicago, Ill., assignor to Beardslee Chandelier Manufacturing Company, a Corporation of Delaware. Filed Aug. 28, 1917. Serial No. 188,568. 12 Claims. (Cl. 240—78.)

1. In a lighting fixture, an electric lamp-socket holding member or stem provided with an opening extending transversely through the upper end thereof and an attaching flange at the lower end, while the outer surface of said stem intermediate of said opening and the flange is screw-threaded, internally threaded means adapted to encircle said member or stem and screw lengthwise thereof, and a shell or holder provided with an opening in its top for the passage of said stem or member, the holder and said means being provided with interlocking surfaces



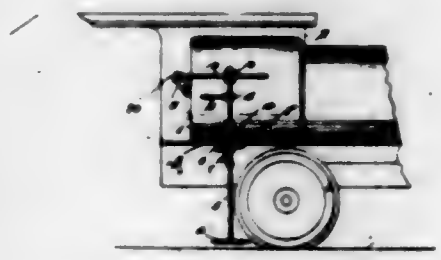
whereby rotation of the one will be imparted to the other and adjustment of the holder lengthwise of said member or stem obtained.

1,297,782. CLOTHES-LINE FASTENER. ELMER A. BENNETT, Cliftondale, Mass. Filed Nov. 22, 1918. Serial No. 263,734. 2 Claims. (Cl. 254—190.)



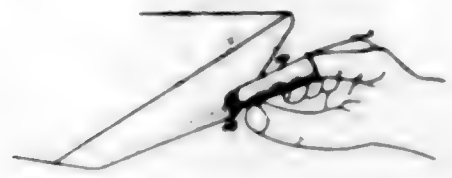
1. Clothes line fastening and adjusting means, comprising a bracket having a base plate adapted to be secured to a supporting member, jaws projecting from said base plate, a cleat transversely disposed relative to and spanning said jaws connecting same together, and a pulley journaled between said jaws, substantially as described.

1,297,783. AUTOMATIC CONTROLLING APPLIANCE FOR RAILWAY-TRAINS. EUGENE S. BIDDLE, Muncy, Pa. Filed Apr. 20, 1918. Serial No. 229,721. 6 Claims. (Cl. 246—184.)



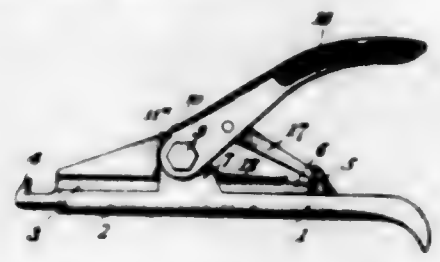
1. A device of the type described including means positioned alongside a track-rail, means carried by a moving body adapted to coöperate with the aforesaid means, an engineer's lever having a tubular extension, and air-brake controlling means comprising a valve, the stem of which is adapted for the application thereto of said tubular extension of the engineer's lever, said air-brake valve having connected thereto a rack, intergeared with the means coöperating with the means positioned along the track-rail, said air-brake lever having a pendent stud laterally engaging said engineer's lever.

1,297,784. ENVELOP-MOISTENER. SAMUEL BIRNBAUM, New York, N. Y. Filed Dec. 6, 1918. Serial No. 265,568. 3 Claims. (Cl. 91—54.4.)



1. A moistening device comprising an elastic stall-like member provided at one end with a compartment for the reception of an absorbent body, and a flexible partition within the member against which pressure of the finger may be advanced against the absorbent body.

1,297,785. COTTER-PIN REMOVER. JULES D. BIBCAYART, Atlanta, Ga. Filed Mar. 21, 1917, Serial No. 156,392. Renewed Aug. 27, 1918. Serial No. 251,694. 2 Claims. (Cl. 29—86.2.)



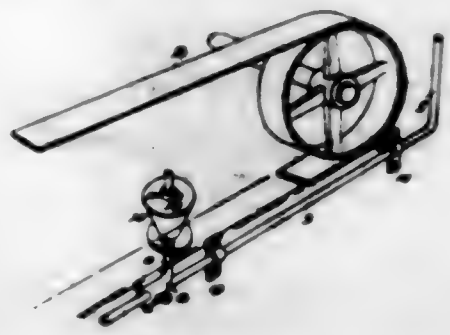
1. A device for removing cotter pins comprising a grooved bar having oppositely disposed ears projecting from its edges, a pivotal pin mounted in apertures in said ears, a U shaped jaw mounted upon said pivot between said ears, the opposite walls of the jaw having shoulders in the edges thereof, a sliding extractor member movable within the grooved bar and having serrations upon the outer edge, a spring pressed handle U shaped in cross section and pivotally mounted upon said pin, a portion of said handle adjacent to its pivot end being adapted to connect with said shoulders to limit the outer swinging movement of the handle, and a spring pressed pawl mounted upon the handle and engaging said serrations, as set forth.

1,297,786. VENTILATING WINDOW, LOUVER, DOOR, AND THE LIKE. CARL H. BOLLER, Kansas City, Mo. Filed Jan. 16, 1917. Serial No. 142,757. 1 Claim. (Cl. 156—14.)



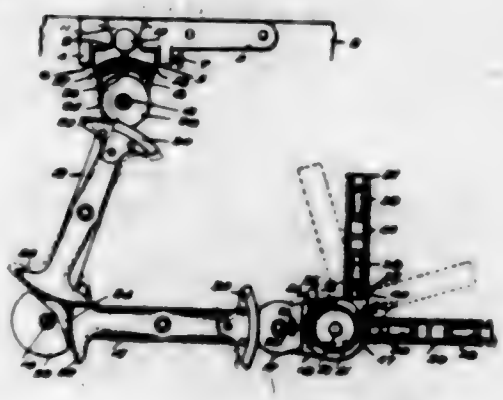
A ventilating structure, comprising a suitable frame forming an opening and having an inwardly facing shoulder, a sash frame secured in said opening and against said shoulder and provided with rabbets in its opposite ends and faces, a rock shaft extending across said sash frame and journaled thereon, imperforate sash sections projecting from said rock shaft in opposite directions and adapted respectively to engage the rabbets in the opposite faces of said sash frame, and screen members secured to the sash frame at opposite sides of said rock shaft and bearing insect and weather-proof relations at their inner ends to said rock shaft.

1,297,787. BELT-SHIFTER. DANIEL M. BRANNON, Williston, N. D. Filed Feb. 17, 1917. Serial No. 149,201. 2 Claims. (Cl. 64—4.)



1. A belt shifter including an operating shaft, an arm carried by the operating shaft, a roller mounted on said arm and arranged at substantially right angles to the shaft, said roller being tapered and having its tapered end formed with an enlarged annular beveled flange whereby to maintain the same in engagement with the belt during movement thereof.

1,297,788. DRAFTING-MACHINE. HERMAN J. BUCK, Ellwood City, Pa. Filed Oct. 1, 1917. Serial No. 194,250. 10 Claims. (Cl. 33—79.)



1. A drafting machine comprising a base plate, a drawing board whereon said base plate is mounted, drafting rulers mounted at right angles to said base plate, a toothed wheel gearing mechanism connecting said plate with said board and mounted for oscillation on said board for maintaining parallel relation of the rulers lines in different positions of the rulers on the board.

3. A drafting machine comprising an adjustable gear having means for mounting it on a drafting board, a base plate, an idle gear fastened thereto, a toothed gear train connection between said adjustable and idle gears, and drafting rulers mounted on said base plate for movement therewith.

7. In a drafting machine, a base plate, an idle gear connected thereto, means for adjustment between said base plate and idle gear, an adjustable gear having means for mounting it on a drafting board, a toothed gear train mechanism between said idle and adjustable gears, and drafting rulers mounted on said base plate.

9. In a drafting machine, a base plate, a protractor plate mounted thereon and a plate carried by said protractor plate and having means for attaching drafting rulers or a triangular scale thereto, said means including lugs and a clamping screw coöperating therewith.

10. A drafting machine comprising an adjustable gear having means for mounting it on a drawing board, a bar having a pivotal connection with said means, a second bar pivoted on said first named bar, a base plate, an idle

gear connected thereto, a gear train mechanism on said bars between said idle gear and said adjustable gear, and drafting rulers mounted on said base plate.

1,297,789. COMB-CLEANER. WALTER W. BUSSE, Los Angeles, Calif. Filed Dec. 28, 1917. Serial No. 208,925. 1 Claim. (Cl. 132—17.)



A comb cleaner comprising looped end pieces having looped fingers formed in the adjacent sides thereof, the inner portions of said looped fingers abutting whereby to close the inner ends of said looped fingers, and a single strand arranged adjacent the end pieces and engaged with said looped fingers to provide a plurality of juxtaposed cleaning elements.

1,297,790. RESILIENT WHEEL. DUNCAN CAMERON, Detroit, Mich. Filed May 31, 1918. Serial No. 237,491. 5 Claims. (Cl. 152—51.)



1. In a wheel, curved resilient spokes extending between the hub and the felly, each spoke comprising superposed spring leaves one of which is attached at one end to the hub and at its other end to the felly, and the other leaf being connected to the first-mentioned leaf at one end only and having its other end free and located adjacent to the corresponding end of the first-mentioned leaf to slide relatively thereto, and a member on the wheel for attachment of that end of the first-mentioned leaf which is located adjacent to the free end of the other leaf, said member having means for guiding said free end.

1,297,791. RESILIENT WHEEL. DUNCAN CAMERON, Detroit, Mich. Filed Jan. 24, 1919. Serial No. 272,920. 3 Claims. (Cl. 152—50.)

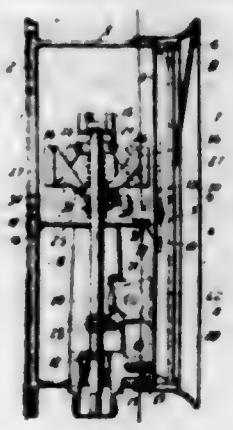


1. In a wheel, curved resilient spokes extending between the hub and the felly, the hub comprising a body having an outstanding flange provided with a laterally presented marginal flange having slots, a plate seating on the hub body and abutting against the marginal flange and spaced thereby from the first-mentioned flange, means for fastening the plate, a block seating on the hub body between the first-mentioned flange and the plate, said block being inside the second-mentioned flange and spaced therefrom, means for anchoring the inner ends of the spokes to the block, said spokes passing through the aforesaid slots, and cushion blocks between those portions of the spokes which are located between the first-mentioned block and the marginal flange.

1,297,792. PREPARATION OF LEAD ACETATE. EDMOND CAMUS, RENÉ DUCHEMIN, and GASTON CRIQUEBOEUF, Paris, France. Filed Oct. 30, 1917. Serial No. 199,357. 1 Claim. (Cl. 23—24.)

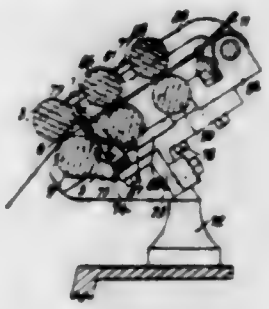
The method of preparing lead acetate consisting in subjecting ethyl acetate in presence of water to the action of lead oxid while heating the mixture to start the reaction.

1,297,793. COMBINED TACHOMETER AND REVOLUTION-COUNTER. CLARENCE CARSON, New Rochelle, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Sept. 24, 1918. Serial No. 255,526. 3 Claims. (Cl. 235—103.)



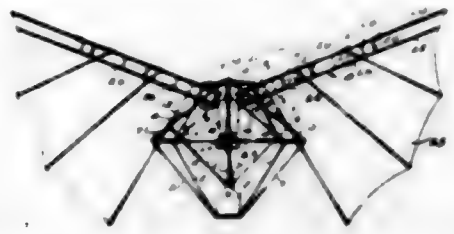
2. The tachometer and counting mechanism described in claim 1 combined with a cylindrical casing having a back provided with perforations registering with the rearwardly extending lugs on the main frame, a dial face having an opening registering with the aperture in the counter supporting plate, a glass cover for the casing, spacing means between the dial and glass cover, and a retaining ring for holding these parts assembled, together with an index hand mounted on the tachometer pointer shaft and located between the dial and the glass cover plate.

1,297,794. SPINNING-FRAME. FERNANDO CASABLANCAS, Sabadell, Spain. Filed Mar. 1, 1915. Serial No. 11,303. 2 Claims. (Cl. 19—28.)



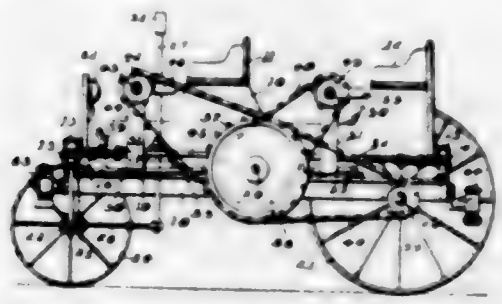
1. In a spinning frame provided with a drawing mechanism for the roving, consisting of a pair of feeding endless belts and a pair of drawing rollers, the provision of a pair of supplementary feeding rollers, said feeding rollers being positioned before the feeding belts and rotating at a peripheral speed smaller than the speed of said belts in order that between said feeding belts and supplementary feeding rollers a certain drawing be produced sufficient to reduce or annul the twist of the roving.

1,297,795. FLYING-MACHINE. CHARLES R. CAVANAGH, Boston, Mass. Filed Dec. 20, 1917. Serial No. 207,997. 5 Claims. (Cl. 244—17.)



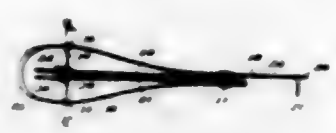
1. A flying machine, comprising in combination a frame, a pair of wing supporting members pivoted to either side of said frame, a pair of wings each having its upper edge pivotally connected to the upper edge of one of said members respectively, means for limiting the movement of each wing with respect to its supporting member, and a motor for oscillating said wing supporting members with respect to said sustaining plane.

1,297,796. HAND-PROPELLED VEHICLE. REUBEN W. CHEEK, Buford, Ga. Filed July 24, 1918. Serial No. 246,488. 2 Claims. (Cl. 208—32.)



2. A vehicle of the class described comprising a frame, supporting wheels carried thereby, driving mechanism mounted upon said frame, steering mechanism also mounted upon said frame, steering levers included in the steering mechanism, a spring supported body mounted upon the frame and having openings therethrough for the passage of the driving and steering mechanism, and inverted U shaped brackets carried by the frame and extending through openings in the spring supported body to provide a guide for the latter and a pivotal mounting for the steering levers.

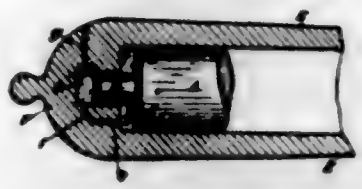
1,297,797. CAN-OPENER. PETER CHESELKA, Fairbank, Pa. Filed Aug. 8, 1918. Serial No. 248,902. 2 Claims. (Cl. 7—16.)



1. A tool comprising a metallic strip bent in loop formation, a pivot bolt extending through the end portions of the strip adjacent one end of the device, a plate rigidly secured transversely within the loop and having spaced L-shaped slots in one edge thereof forming a headed T-shaped post therebetween, and a pair of laterally yieldable tools journaled upon said bolt, said tools being adapted for engaging beneath the head of said post within said slots to be releasably retained in their inoperative closed positions within the loop.

1,297,798. FIREARM. DINO CHIARAVIGLIO, Rome, Italy. Filed Oct. 17, 1916. Serial No. 126,072. 4 Claims. (Cl. 89—8.)

2. In combination, a gun having the inner end of the bore formed with a recess, the walls of said recess being disposed at right angles to the inner end of the bore, a projectile snugly fitting within the bore of said gun, and an extension formed at the base of said projectile and



snugly fitting within said recess, said projectile and said extension being normally spaced from the inner end of said bore and said recess to provide firing chambers.

1,297,799. SHOCK-ABSORBER. EMERY H. CORDILL, Iantha, Mo. Filed Nov. 1, 1918. Serial No. 260,686. 4 Claims. (Cl. 267—19.)

1. In combination with a vehicle frame and one end of a leaf spring below the same, a longitudinal extension on said end of the spring, a link pivoted to and rising from the outer end of said extension, a bell crank lever fulcrumed to the upper end of said link and having one end pivoted to said frame, and spring means connected to the other end of said lever for yieldably controlling its movement.

1,297,800. BABY-WALKER. HENRY L. CRAWFORD, Washington, D. C. Filed Feb. 23, 1918. Serial No. 218,789. 3 Claims. (Cl. 155—45o)



2. A device of the class described embodying a supporting standard, a radially disposed extensible arm mounted for rotation thereon and comprising an outer section and an inner section telescopically mounted within the outer section, anti-friction rollers carried by one section for contact with the opposite section, a roller mounted for movement over the arm, a seat suspended from the roller and a stop located at the outer extremity of the inner arm and a lug also carried by said arm to provide a seat for the roller, whereby the inner arm may be moved longitudinally through the medium of the suspended seat.

1,297,801. CONTROLLING MECHANISM FOR LIQUID-DISPENSING APPARATUS. RAYMOND CROWDER, Edgewood, Pa., assignor to Guarantee Liquid Measure Company, Rochester, Pa., a Corporation of Delaware. Filed Nov. 12, 1917. Serial No. 201,668. 7 Claims. (Cl. 221—100.)

1. A liquid measuring apparatus provided with a measuring vessel, a suction pump having a conduit connected therewith and provided with a valve-controlled

atmospheric inlet, a motor for the pump, and means controlling the operation of the motor having a connection



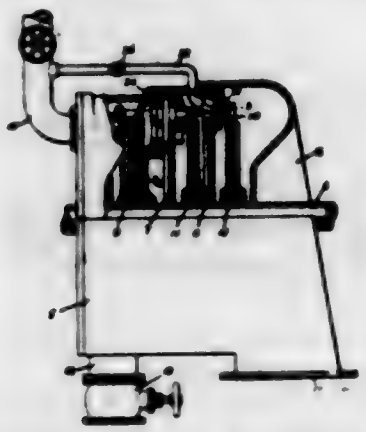
adapted to close the atmospheric inlet prior to and in connection with the starting of the motor.

1,297,802. TURNING CAKE-STAND. WILLIAM H. DAMSAUCH, Milwaukee, Wis. Filed May 3, 1918. Serial No. 232,274. 1 Claim. (Cl. 211—20.)



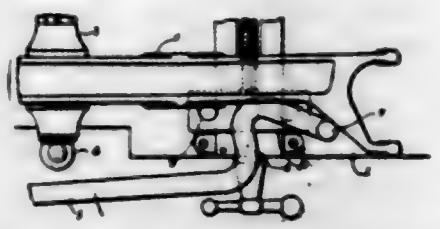
The combination with a pedestal forming a central post having a concave base and also provided with a central vertical bore merging into a larger socket at the upper end of said post, a spindle correspondingly shaped to the bore and socket, a rest engaged with the upper end of the spindle and detachably fastened thereon, and a fastener detachably securing the spindle in the post.

1,297,803. ELASTIC-FLUID TURBINE. HARVEY N. DAVIS, Cambridge, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 19, 1918. Serial No. 254,749. (Cl. 60—43.)



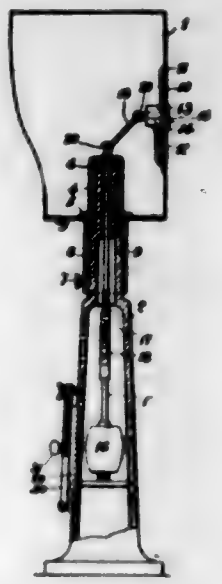
1. The combination with an elastic-fluid turbine having an exhaust conduit leading from an intermediate stage through which the turbine may exhaust when operating non-condensing, of nozzle means for supplying elastic fluid to the buckets of a stage of the machine lower than that from which said exhaust conduit leads, such elastic fluid after exhausting from said buckets circulating through the lower stages of the machine to cool the same.

1,297,804. AXLE-BENDING DEVICE. BURT W. DECATUR, Springfield, Mass. Filed Aug. 24, 1918. Serial No. 251,285. 2 Claims. (Cl. 153—39.)



1. A device of the class described comprising a supporting bench, axle holding means thereon, a sliding member on the bench, a screw shaft connected to said member for moving the same, a member connected with the bench and having a screw threaded opening therein for receiving the shaft, an axle engaging means on said sliding member and means for permitting the adjustment of the axle engaging means at right angles to the plane of movement of the sliding member.

1,297,805. VISUAL WEATHER-SCREEN. SAMUEL AUGUSTINE DE NORMANVILLE, Ealing, and LESLIE HARCOURT KENT, Stanmore, England. Filed May 8, 1917. Serial No. 167,881. 4 Claims. (Cl. 21—148.)



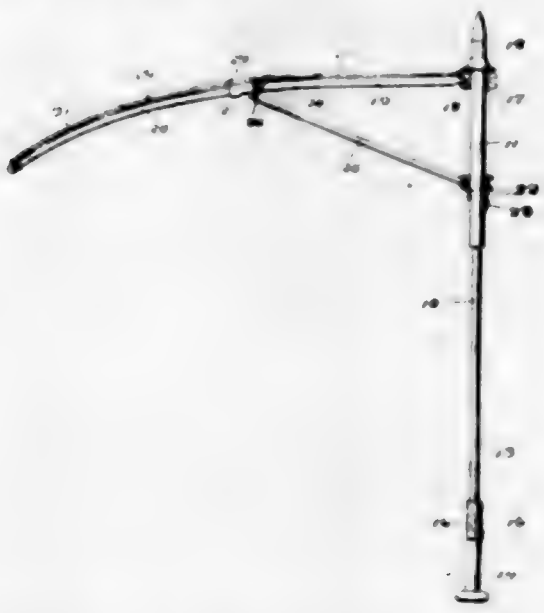
1. In look-out apparatus, a hollow substantially vertical pedestal having its upper end screw threaded, a sleeve rotatable upon the upper portion of the pedestal and having screw threaded engagement therewith to be raised and lowered upon the rotation of the sleeve, means to lock the sleeve to the pedestal against rotation with relation thereto, a hood rigidly secured to the sleeve and having a forward side provided with an opening, a rotatable transparent element spanning the opening, a substantially vertical shaft arranged within the upper portion of the hollow pedestal, means to gear the upper end of the shaft with the rotatable transparent element, a motor arranged in the lower portion of the hollow pedestal, and self adjusting extensible connecting means between the motor and said shaft.

2. In look-out apparatus, a hollow substantially vertical pedestal, a sleeve rotatably mounted upon the upper portion of the pedestal, a hood rigidly secured to the sleeve and having a forward side provided with an opening, a bearing arranged substantially centrally of the opening and having an arm secured to the hood and entirely supported thereby, a spindle rotatable within the bearing, a transparent element spanning said opening and secured to the spindle to be rotated thereby, a drive shaft extending longitudinally within and through the substantially vertical hollow spindle, and driving connecting means between the upper end of the drive shaft and the spindle.

3. In look-out apparatus, a hollow substantially vertical pedestal, a sleeve rotatably mounted upon the upper portion of the pedestal, a hood provided in its bottom with an opening to receive the sleeve and having its forward side provided with a look-out opening, means to clamp said bottom to the sleeve, a drive shaft extending longitudinally through the hollow pedestal and sleeve, a ring arranged within the look-out opening and secured to the forward side of the hood, a radially disposed arm rigidly secured to the ring and projecting inwardly therefrom with its inner end disposed near the center of the look-out opening, a bearing carried by the inner end of said arm, a spindle journaled within the bearing, a rotatable transparent element operating within the ring and secured to the spindle, and driving connecting means between the spindle and the upper end of the drive shaft.

4. In look-out apparatus, a hollow substantially vertical pedestal, a sleeve rotatably mounted upon the upper portion of the pedestal, a hood rigidly secured to the sleeve and having a forward side provided with an opening, the walls of which is beveled outwardly, a bearing arranged substantially centrally of the opening and having an arm secured to the hood and entirely supported thereby, a spindle rotatable within the bearing, a frame carrying a transparent element spanning said opening and secured to the spindle to be rotated thereby, the frame being beveled on its outer edge to correspond with the beveled wall of the opening, a drive shaft extending longitudinally within and through the substantially vertical hollow spindle, and driving connecting means between the upper end of the drive shaft and the spindle.

1,297,806. FOLDING UMBRELLA. JULIA DE WAELE, St. Louis, Mo. Filed Oct. 29, 1918. Serial No. 260,205. 1 Claim. (Cl. 135—26.)

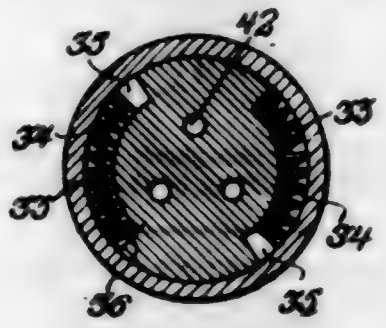


A folding umbrella comprising a folding handle, a runner slidable thereon, rib sections pivoted upon said handle, other rib sections slidably connected with said first named rib sections, ring members on the free ends of said first named rib sections embracing said second named rib sections, stretchers pivotally connected with said runner and with the inner ends of said second named section, a fabric covering said first named rib section and projecting beyond the outer ends thereof, a second fabric covering said second named rib sections and secured at its outer edge to the outer ends thereof, elastic members secured to the inner edge of said second named fabric covering and connected to the inner ends of said second named rib sections beneath the outer edge of said first named fabric, said second named fabric covering being slidable beneath said first named fabric covering when said second named rib sections are telescoped with respect to said first named rib sections and elastic members secured to the outer ends of said second named rib sections and to the outer edge of said first named fabric covering.

1,297,807. PROCESS OF TREATING COATED METALS. BRADLEY DEWEY, Pittsburgh, Pa., assignor to American Sheet & Tin Plate Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 12, 1912. Serial No. 736,302. 5 Claims. (Cl. 91—70.1.)

1. The process of treating galvanized materials to tight coat the same, which consists in heating the coated materials to a temperature ranging from 410 to 600 degrees Fahrenheit, maintaining the materials at a temperature within said range for a time interval of from ten minutes to six hours, the time interval varying inversely with the temperature at which the materials are maintained, and then permitting the materials to cool.

1,297,808. CAR-COUPLING. JOHN M. DIVIESE, South Bethlehem, Pa. Filed July 3, 1917. Serial No. 178,426. 1 Claim. (Cl. 213—40.)



In a car coupling, a draw bar, an enlarged cylindrical head carried by the outer end of the said draw bar, an annular flange surrounding the draw bar and spaced from the inner end of said head to provide an annular groove, a coupling member rotatable upon said head, engaging hooks projecting from said coupling member for engagement with the opposite coupling, a reduced sleeve projecting from the opposite end of the coupling member for rotatable engagement with the annular groove, said sleeve terminating short of the annular flange, diametrically located extensions formed upon each side of the draw bar within the annular groove to provide oppositely located recesses, diametrically located lugs extending from the end of the sleeve within the recesses, circumferentially disposed springs located upon opposite sides of the draw bar within each of the recesses and operating between said lugs and shoulders formed by the extensions upon each side of the draw bar for yieldingly maintaining the hooks in position for engagement with the hooks of the opposite coupling member and a ring surrounding the annular flange and extending over the end of the sleeve to provide a housing for the springs and lugs.

1,297,809. EXPANSIBLE MANDREL. LEWIS M. DIXON and HAROLD W. A. DIXON, New York, N. Y. Filed July 31, 1918. Serial No. 247,000. 7 Claims. (Cl. 242—72.)

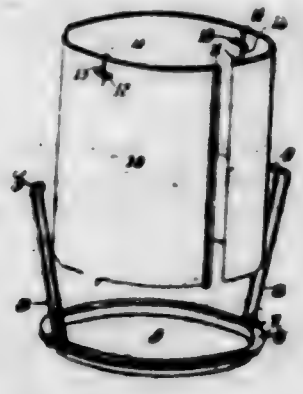


6. In an expansible mandrel, a relatively rigid sustaining member, an expansible member comprising an inflatable receiver and controlling valve confined within said sustaining member, and gripping faces yieldably and extensibly moved by action of said expansible member.

1,297,810. PROPAGATION POT OR CAN. NELLIE DUNN, Escanaba, Mich. Filed Dec. 16, 1918. Serial No. 266,924. 1 Claim. (Cl. 47—34.)

In a device for the purpose set forth, a body comprising a flat sheet of bendable material having the confronting edges thereof provided with oppositely disposed lips designed to interengage to hold the body in a cylindrical

form; said body having transverse slots therethrough, a flanged base designed to receive the body when the same is set up as a cylinder, pivoted catch members on the base, lips on the ends of said catch members designed to be re-



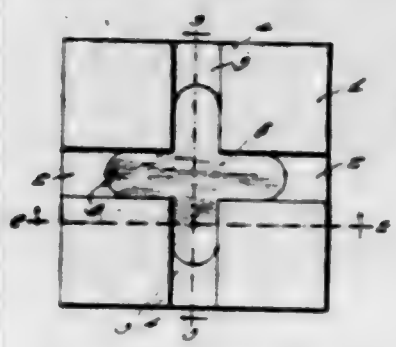
ceived in the referred to slots in the body, and removable elements supported on the upper edge of the body passing through the lips for holding the latch members connected to the body.

1,297,811. BIRD-CAGE PERCH. JOHN L. EBBELS, New York, N. Y. Filed Sept. 19, 1918. Serial No. 254,748. 2 Claims. (Cl. 119—26.)



1. A bird cage perch comprising an abradant bird support having a smooth portion directly under the feet of a bird standing on the perch and an abradant surface in contact with the claws.

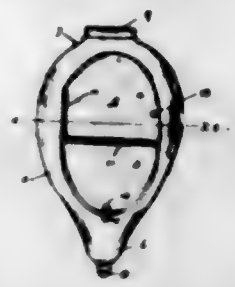
1,297,812. RAILWAY-CROSSOVER. FREDERICK H. EMERY, Scranton, Pa. Filed Aug. 29, 1918. Serial No. 251,901. 2 Claims. (Cl. 246—457.)



1. In a railway cross-over, the combination with a cross-over body having intersecting channels at angles to each other, with the bottom walls of the channels parallel to the upper sides of the tread portions and flange-spaces between said tread portions, and also having a cruciform seat in the bottom walls of the channels, the end walls of said seat being perpendicular to the bottom wall thereof and concave horizontally; of a bridge, of cruciform configuration and size to snugly occupy the seat in the cross-over body, disposed in said seat, with its upper side throughout flush with the bottom walls of the channels and parallel to the upper sides of the tread portions of the body.

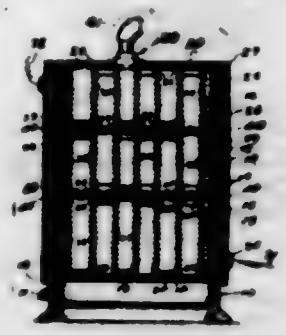
1,297,813. BED-PAN. MARIA E. HEA, Los Angeles, Calif. Filed June 6, 1918. Serial No. 238,589. 4 Claims. (Cl. 4—10.)

1. A bed pan including an elongated receptacle having a maximum depth at an intermediate point in its length, the side and end walls being curved inwardly at the top thereof and defining an opening, a cover for closing the opening, said cover being formed in hingedly connected sections one of which is adapted to be swung back upon



the other section to partially uncover the opening, and a hinge connection between the said other section of the cover and an edge of the opening.

1,297,814. HEATER ELEMENT FOR HEAT-ENGINE PLANTS AND EXPANSION-FLUID MOTORS. GUSTAF ENGELBREKT, Superior, Wis. Filed Oct. 4, 1917. Serial No. 194,771. 1 Claim. (Cl. 219—38.)



A heater of the character described comprising a casing element, one or more foraminate plates dividing the casing, means to admit air at one side of the plates, means to conduct air from the casing at the opposite side of the plates, a heating wire threaded through the foramens of the plate, said foramens and wire being of such relative size as to provide an extremely small passage, whereby air passing therethrough will be formed into an extremely thin film between the sides of the foramens and wire in intimate contact with the heating wire; and exterior electrical terminals for the heating wire.

1,297,815. POOL-TABLE. HENRY ENGLEHART, Elmer, N. J. Filed June 20, 1916. Serial No. 104,757. 1 Claim. (Cl. 46—12.)

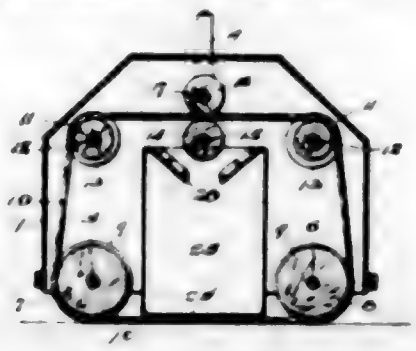


A pool table having reflectors under the cushion and between the pockets.

1,297,816. MOPPING-MACHINE. FRANKLIN A. ESPELAND, Oakes, N. D. Filed Oct. 29, 1918. Serial No. 260,135. 2 Claims. (Cl. 15—14.)

1. In a mopping machine, the combination with the open bottom housing, the actuating wheels and axles supported

in the housing and actuating rollers on said axles, and an endless mopping belt passing under said actuating rollers, and idle rollers for the belt, of a detachable reservoir supported in the housing and a wringing device acting on the



belt above said reservoir, said reservoir having a plane bottom face to hold the mopping belt on the surface to be cleansed as the belt passes under the reservoir, and means for supporting the reservoir in contact with the mopping belt.

1,297,817. STUMP-PULLER. ROBERT L. ETTER, Pawnee City, Nebr. Filed Oct. 11, 1918. Serial No. 257,741. 2 Claims. (Cl. 254—180.)



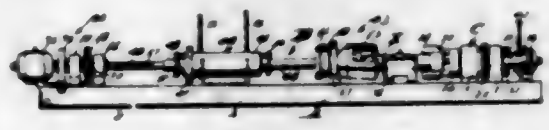
1. In a device of the class described, the combination of a pair of side bars converging and connected together at their rear ends and adjacently spaced apart and terminating in parallel forward portions, a drum interposed between the pair of forward portions having stub axles passing through said portions, a pinion carried by the drum, a journal bar fixed to the rear end of one of said side bars and extending upwardly from the said side bar, said journal bar having a flat notched inner surface, a shaft rotatably mounted in the forward end of the journal bar, a flat disk keyed upon said shaft and fitting upon the flat notched portion of the journal bar and projecting above the upper portions of said side bars, a spiral rim formed upon said disk and engaging said pinion, and means for rotating said shaft.

1,297,818. GARDEN-SPRINKLER. WILBERT C. FAWKES, Portland, Oreg., assignor of one-half to William R. R. Beier, one-fourth to Bernard Metzger, and one-fourth to Albert Meyer, Portland, Oreg. Filed Apr. 6, 1917. Serial No. 160,294. 4 Claims. (Cl. 137—155.)



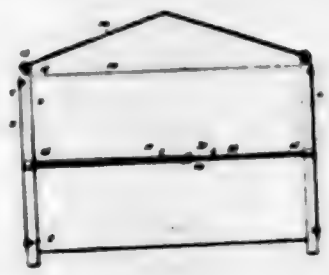
4. A sprinkler comprising a supporting standard terminating in a fork at its upper end, a crown wheel supported by said fork, an arm having an annular supporting base rotatably mounted on the standard, a water wheel rotatable in a vertical plane at the extremity of the arm, a shaft journaled in said arm, a worm-and-gear element transmitting motion from the water wheel to said shaft, a pinion on the shaft in mesh with said crown wheel, and a nozzle rotatably supported on said arm to impinge on said water wheel.

1,297,819. NOSE-FORMING MACHINE. WALTER FERRIER, Wilmington, Del. Filed Dec. 21, 1917. Serial No. 208,320. 17 Claims. (Cl. 113—52.)



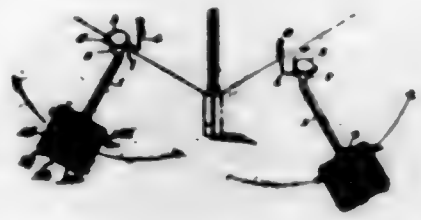
1. In a machine of the character described, a bed, a nose forming head mounted thereon, a chuck member also mounted on the bed, means for moving the nose forming head toward the chuck member, and a hydraulic work ejecting medium connected with the chuck member.

1,297,820. SUPPORT. RICHARD FITZGERALD, Pontiac, Mich. Filed Sept. 7, 1918. Serial No. 253,103. 2 Claims. (Cl. 40—125.)



1. In a device for the purpose set forth, two cross sectionally U-shaped members designed to receive a sheet there between, clips for compressing the members and holding the sheet therein, telescopic elements one removably connected with each of said members, and means for holding said elements adjusted.

1,297,821. POULTRY-EXERCISING FEEDER. JOHN FLEMING, Houghton, Mich. Filed Sept. 6, 1918. Serial No. 252,936. 6 Claims. (Cl. 119—70.)

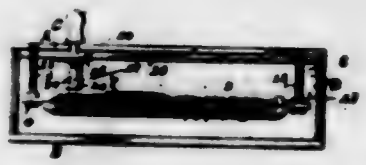


1. A poultry feeder comprising a food tube, a feeding tray attached to and receiving from the tube, a screen covering the tray, and means for anchoring the tube so as to permit movement of the feeder in a feeding operation.

1,297,822. DIMMING DEVICE. OTIS RAYMOND FORD, Pittsburgh, Pa. Filed May 4, 1918. Serial No. 232,522. 2 Claims. (Cl. 219—62.)

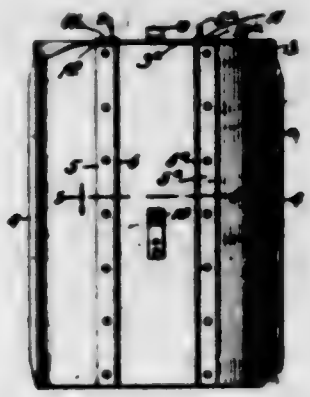
1. A device of the class described comprising a casing, a coil within said casing, a metallic plate secured in the upper portion of said casing, a contact including a cross-plate slidably mounted on said plate and in engagement

with said coil, said contact comprising a hand grip portion extending out through a slot in said casing, and a spring pressed member mounted in said grip portion and engaging said coil.



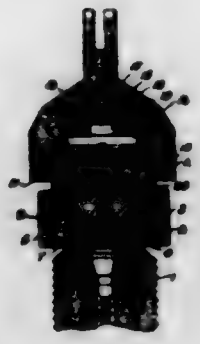
2. A device of the class described comprising a casing, a coil within said casing, a metallic open frame plate secured in the upper portion of said casing, a contact including a plate for engaging with said coil extending across the open portion of said frame plate and being slidably mounted on said frame-plate by means of slotted ends, said contact having a hand grip portion extending out through a slot in said casing, and a spring pressed member mounted in said grip portion and engaging said coil.

1,297,823. GARBAGE-RECEPTACLE. FRANK A. FREDERICK, West Hoboken, N. J. Filed Feb. 16, 1918. Serial No. 217,480. 4 Claims. (Cl. 220—115.)



1. A garbage receptacle embodying a barrel body substantially cylindrical in cross-section provided with a round bottom and a flattened portion extending from a point above said bottom to the rim thereof, a cover substantially round in conformation having a flattened portion registering with the flattened portion of the body, and a plurality of butt hinges connecting said cover and body located at said flattened portions.

1,297,824. VALVE-CAP. HERMAN FUCHS, St. Louis, Mo. Filed Feb. 18, 1916. Serial No. 79,185. 1 Claim. (Cl. 152—12.)



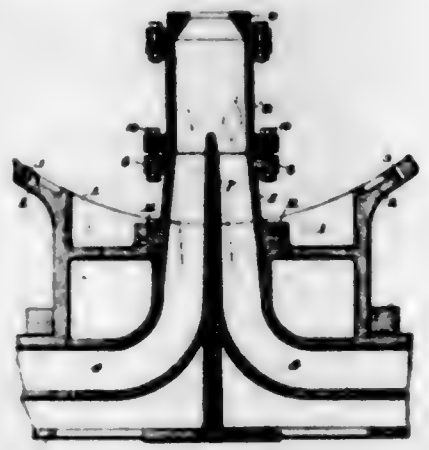
The combination of a threaded valve stem, a portion carried by said stem and projecting laterally therefrom and having a recess in its outer side, packing disposed in said recess, a cap threaded on the stem and having a portion to bear against said packing and also having a recessed lateral portion opposed to the edge of the outer wall of the recess in the stem portion, and packing in the recess of said lateral portion of the cap and positioned to be engaged by said wall edge.

1,297,825. METAL-DRAWING DIE. CARL T. FULLER, Nutley, N. J., assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1916. Serial No. 129,478. 2 Claims. (Cl. 205—29.)



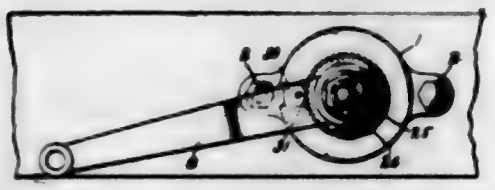
2. A metal die for wire drawing consisting of an alloy of iron and tungsten containing substantially ten per cent. of iron.

1,297,826. LOCOMOTIVE-SADDLE. CHARLES E. FULLER, Omaha, Nebr., assignor of one-half to George J. Hats, Omaha, Nebr. Filed Sept. 14, 1916. Serial No. 120,153. 3 Claims. (Cl. 121—96.)



1. A locomotive saddle formed with a tubular extension forming a continuation of the cylinder exhaust ports, and provided with a boss at the junction of said extension with the saddle proper, said boss being capable of being formed into an exhaust pipe connection after the removal of said tubular extension.

1,297,827. SHOCK-ABSORBER. ELMER L. FULLER, Arlington, and PERCY E. DE ROCHEMONT, Medford, Mass. Filed July 24, 1917. Serial No. 182,522. 2 Claims. (Cl. 21—105.)



1. A shock absorber, having, in combination, an oscillating shaft responsive to the throw of the car body under road inequalities; a set of disks comprising a plurality of non-rotatable disks and a plurality of friction disks on the shaft engaged with the other disks, said disks coöperating to resist movement of the shaft responsive to the throw of the car body, a second set of disks comprising a non-rotatable disk and a disk on the shaft coöperating to press the first set of disks together with a variable pressure during the oscillating movement of the shaft; and an adjustable plug bearing upon one of the disks of the second set for initially regulating the pressure on the disks of the first set.

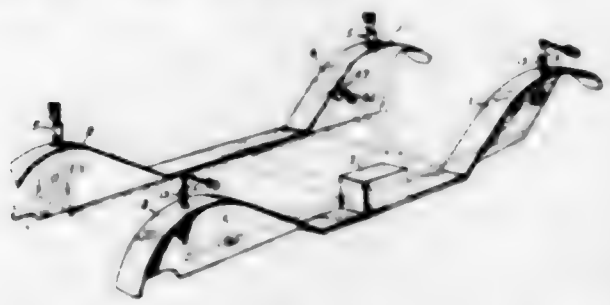
2. A shock absorber, having, in combination, an oscillating shaft responsive to the throw of a carbody having a grooved portion, a housing therefor provided with bearings for the shaft and with internal grooves therein, a plurality of disks mounted to alternately engage the grooves in the shaft and housing and relatively movable in engagement to resist the oscillating movement of the shaft, a second set of disks mounted to engage the grooves on the shaft and housing, respectively, a plug adjustable on the housing to engage one of the disks of the second set to regulate the initial pressure on the first set of disks, and a plurality of engaged cam surfaces on the second set of disks for wedging the first set of disks together during the oscillating movement of the shaft.

1,297,828. RAILROAD-TIE. IRA A. GARBER, Towson, Md. Filed Dec. 5, 1918. Serial No. 265,343. 3 Claims. (Cl. 238—3.)



1. A railroad tie comprising a metal casing covered with concrete, a fibrous filler for said casing, and plates extending across said casing and having apertures for the spikes or other holding means.

1,297,829. SIGNAL FOR VEHICLES. JOSEPH A. GERWER, Stapleton, N. Y. Filed May 20, 1916. Serial No. 98,823. 1 Claim. (Cl. 177—329.)



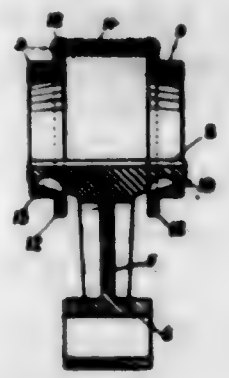
A signaling apparatus for vehicles, comprising a plurality of independently operable elements, consisting of sets of lazy-tongs mounted at the sides of the car, indicators mounted on the lazy-tongs, electric lamps centrally located on the indicators, contact members mounted on the indicators, conductor wires connecting the contacts and the lamps, conductor wires carried on the lazy-tongs, in communication with the source of electrical energy, brush contact members at the ends of the conductor wires for frictional engagement with the contacts on the indicators when said indicators are projected, said indicators designed when projected to separately indicate the intention of the driver to change direction or simultaneously to indicate intention to stop, and means for operating the indicators, the same embodying independently operable members.

1,297,830. CONNECTING-ROD CONSTRUCTION. ARTHUR H. GIBSON, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 18, 1917. Serial No. 162,879. 10 Claims. (Cl. 74—17.)

1. In a multiple cylinder reciprocating engine, a crank pin, a plurality of connecting rods engaging said crank pin and means yieldingly engaging said connecting rods to retain them in engagement with the crank pin.

3. In a reciprocating engine, a crank pin, a connecting rod having a bearing surface engaging the crank pin and spring pressed retaining means engaging the connecting rod to hold the connecting rod and crank pin together.

10. In an engine construction, a plurality of connecting rods operating upon a crank, said connecting rods at their crank ends having bearing portions engaging said crank and provided with oppositely disposed inclined portions



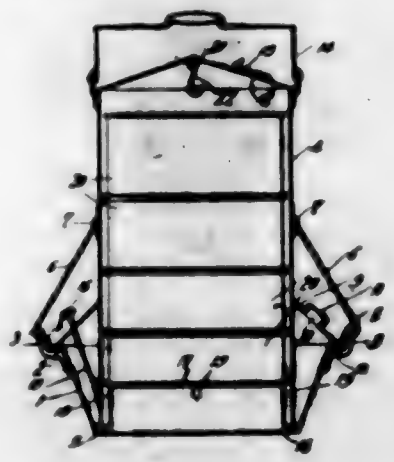
on the outer surface of said ends, a pair of rings surrounding said inclined portions, and a plurality of spiral springs extending between said rings to hold them in position upon the inclined portions of said connecting rods.

1,297,831. COMBINED CIGARETTE AND MATCH BOX. ARTHUR GILBERT, Terre Haute, Ind., assignor of one-third to Harry Jemane and one-third to Hiram E. Roots, Greenup, Ill. Filed July 9, 1917. Serial No. 179,540. 1 Claim. (Cl. 206—41.)



In a device of the class described, a tray comprising a body portion, flaps formed at the edges of said body portion, panels formed on one of said flaps, said panels being of less length than the flap to which they are secured and being located at one end of the said flap to provide a match receptacle in one corner of the tray with a space beneath and at the side of the match receptacle, one panel of the receptacle having an inwardly curved transversely extending recess in its upper edge and panels formed on and extending entirely across opposite flaps to provide closures for the tray.

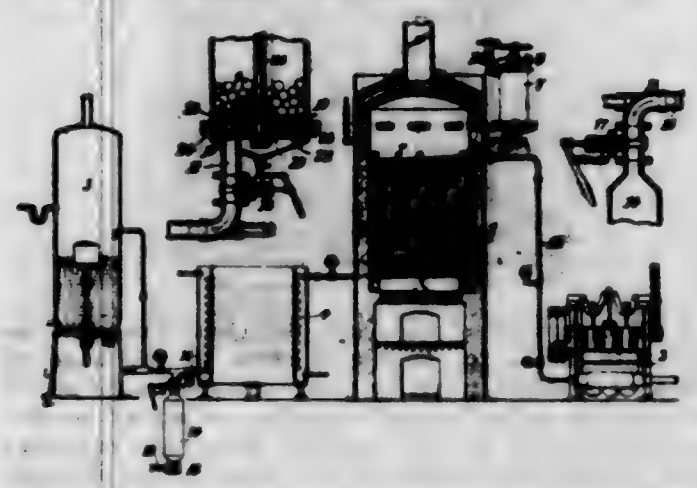
1,297,832. STEAM-COOKER. TERRY J. GOOCH, Lewisburg, N. C. Filed Sept. 11, 1917. Serial No. 190,803. 1 Claim. (Cl. 53—2.)



A steam cooker comprising a pan having an annular flange, opposed handles extending therefrom, an inverted pan-shaped base upon the bottom of the pan and having

an apertured wall, a casing having an open bottom and a closed top, said casing being removably seated in the pan between the inverted pan-shaped base and the wall of the pan, a downwardly flared apron upon the casing and adapted to rest upon the flange, opposed latches upon the casing for engaging the handles to hold the casing and pan assembled, said apron having a filling opening, and a vent tube connected to the lower portion of the casing and extending through the apron.

1,297,833. APPARATUS FOR THE HEAT TREATMENT OF CHEMICAL COMPOUNDS AND METHOD FOR THE OPERATION THEREOF. FRANCIS X. GOVERS, New York, N. Y. Filed July 18, 1918. Serial No. 245,444. 14 Claims. (Cl. 23—36.)



1. In apparatus for heat treatment of chemical compounds, a continuous tube furnace, means for introducing balls into the path of flow of the material under treatment prior to its entrance into the heating zone, means for withdrawing the balls from the path of flow of the material under treatment after a passage through the heating zone and means for forcing the material under treatment through the tube.

1,297,834. SOLE FOR BOOTS AND SHOES. JAMES E. GROSSMAN, Lima, Ohio, assignor, by direct and mesne assignments, of one-fourth to Leon F. Montgomery, Fort Recovery, Ohio, and one-fourth to Frank L. Maire, Lima, Ohio. Filed June 26, 1918. Serial No. 242,074. 3 Claims. (Cl. 36—30.)

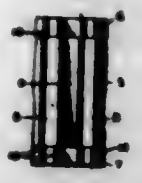


1. A composite sole for boots or shoes having a base composed of layers of rubber arranged face to face and parallel independent strands of fibrous material disposed at somewhat close intervals and stretched tightly between the layers of rubber and a composite tread portion secured to said base, said sole being vulcanized throughout.

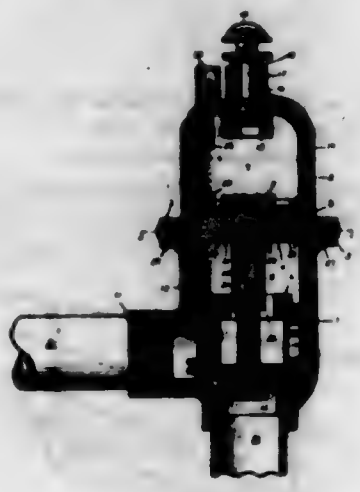
2. A composite sole for boots or shoes having a base composed of companion sheets laid one on the other and each consisting of layers of rubber arranged face to face and parallel independent strands of fibrous material disposed at somewhat close intervals and stretched tightly between the layers of rubber, the strands of one sheet being disposed transversely of the sole and the strands of the other sheet being disposed longitudinally of the sole, and a composite tread portion secured to said base, said sole being vulcanized throughout.

1,297,835. GEAR-WHEEL. EMILE J. GUAY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 16, 1916. Serial No. 137,291. 2 Claims. (Cl. 74—28.)

1. A gear wheel comprising a compressible element formed entirely of non-metallic material and held between metallic plates, a small amount of the radial edges of said plates along the teeth being removed so that such edges are not flush with the surfaces of the main portions of the teeth, the amount removed being less than that which the compressible element will flex when under abnormal load.



1,297,836. FLUSHING-VALVE. DAVID E. GULICK, San Francisco, Calif. Filed Mar. 16, 1918. Serial No. 222,898. 10 Claims. (Cl. 137—93.)



1. A flushing device comprising a casing having an initiating valve and a passage in the wall of the casing connecting said valve with the outlet of the casing, a partition fixed within the casing and dividing the casing into two chambers one of which is connected with the inlet of the casing by a wall passage, said partition having water ducts, and a valve supported by the partition for opening and closing the ducts.

3. In a flushing device, a two-part casing, a partition dividing the casing into two piston chambers one of which has an initiating valve opening, a piston seat in the other chamber, said casing parts having a pair of alined channels, one channel of each pair forming a fluid passage extending from under the seat to the valve opening, and the other channel of each pair forming a fluid passage extending from above the seat into the valved chamber below the valve, and means for connecting the casing parts.

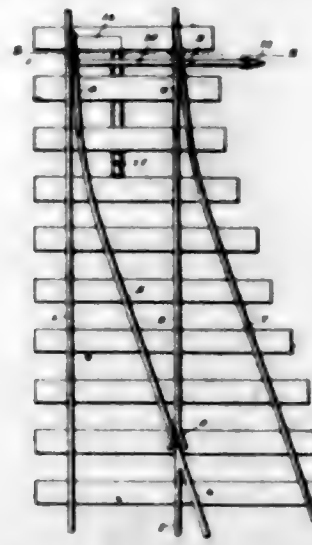
9. In a flushing device, a chamber, a partition fixed in the chamber, and a motor on each side of the partition and adapted to alternately force liquid from one side to the other of the partition in a flushing operation.

10. In a flushing device, a casing, a partition dividing the casing into a lower chamber and an upper chamber provided with an initiating valve, a member movable in the upper chamber by fluid pressure and forming a sub-chamber, a check valve operated in the sub-chamber, and a member movable in the lower chamber and forming a sub-chamber under the partition, said valves and said members coöperating under fluid pressure in a flushing operation.

1,297,837. AUTOMATIC RAILROAD-SWITCH. JANOS GYÖRI, Reed, Pa. Filed Nov. 20, 1918. Serial No. 263,341. 3 Claims. (Cl. 246—230.)

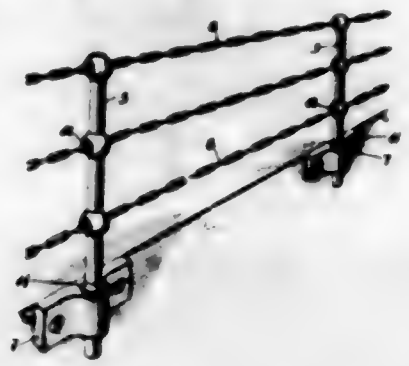
1. The combination in a switch installation, of swinging switch points, a transversely movable bar connected and movable with said points, a spring for moving the said bar endwise in one direction, manual means for moving the bar, a vertically swinging retainer adapted to en-

gage and hold one of the points, and a vertically movable lever adapted to be engaged by a tappet on a car and hav-



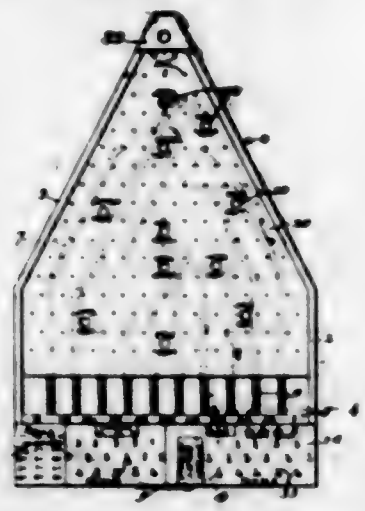
ing one of its arms disposed under the retainer to move said retainer when the lever is moved.

1,297,838. TAKE-DOWN STANCHION. KENDALL S. HAINES, Jacksonville, Fla. Filed Oct. 8, 1918. Serial No. 256,664. 4 Claims. (Cl. 189—28.)



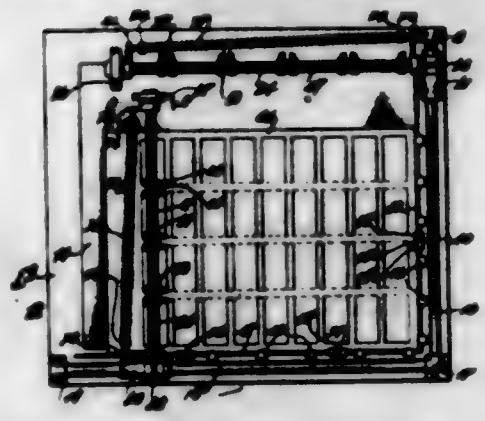
1. A stanchion and its base, one having a socket for the reception of a portion of the other, and one having a groove and the other a lug to move in said groove when the stanchion is removed from the base, the stanchion having a diametrical opening for the passage of a chain or other railing or fencing member so as to prevent the stanchion from turning, said lug being arranged to lock the stanchion to the base when it is turned to bring said opening to normal position with said lug out of alinement with said groove.

1,297,839. BASE-BALL GAME-BOARD. WILBUR J. HAMMER, Kansas City, Mo. Filed Oct. 29, 1918. Serial No. 260,167. 5 Claims. (Cl. 46—61.)



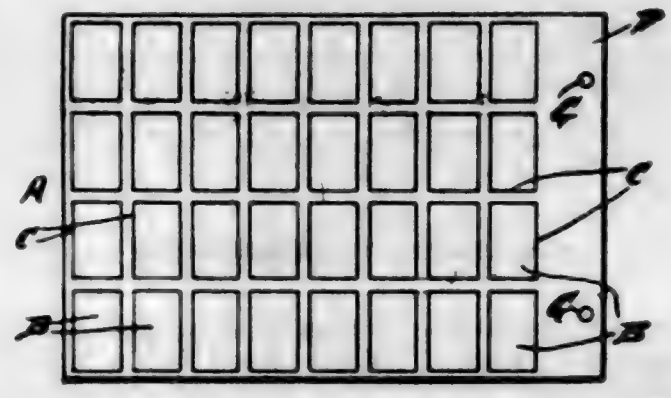
1. A game board of the character described including a body portion, a plate arranged on the body portion, a series of pockets in said body portion communicating with one end of said plate, a compartment for receiving playing pieces when not in use adjacent said pockets, and a transversely disposed movable stop arranged between said pockets and said compartment.

1,297,840. LINING APPARATUS. HARRY H. HANCOCK, Swampscott, Mass., assignor of one-half to Arthur S. Webster, Halifax, Mass. Filed Mar. 5, 1918. Serial No. 220,490. 32 Claims. (Cl. 33—32.)



2. In apparatus of the class described, the combination with means for holding a sheet at two adjacent edges, of separate traveling means adapted to be moved relatively to said sheet, and a flexible smoothing member mounted on each of said traveling means and extending for a considerable distance in the same general direction as said held edges, said members being adapted to press along that surface of said sheet which is presented toward them.

1,297,841. ART OF PRINTING. HARRY H. HANCOCK, Swampscott, Mass., assignor of one-half to Arthur S. Webster, Halifax, Mass. Filed May 24, 1918. Serial No. 236,274. 3 Claims. (Cl. 282—45.)



1. In the art of printing, the method herein described which consists in providing a sheet which is to represent on a reduced scale the sheet to be printed from multiples of type, plate or lithographic forms, providing a surface of said sheet with spaced rectangular outlines of similar dimensions and discontinuing the lines of said outlines at the spaces between said outlines, providing said sheet with separation indicating lines extending along said spaces perpendicularly to and intersecting other separating indicating lines extending along said spaces, so that each of said rectangular outlines is surrounded by rectangularly arranged separation indicating lines spaced symmetrically around said outlines, and placing inscriptions on said surface for specifically indicating; within said outlines, the type measure to set the type and the length to make up the pages; between said rectangular outlines, the back and front margins and the head and tail margins; and the dimensions of the margins for both gripper and side gages.

2. In the art of printing, the method herein described which consists in providing a sheet which is to repro-

sent on a reduced scale the sheet to be printed from multiples of type, plate or lithographic forms, providing a surface of said sheet with rectangular outlines of similar dimensions and equidistantly spaced and discontinuing the lines at the spaces between said outlines, providing said sheet with lines of weakness extending along said spaces perpendicularly to and intersecting other lines of weakness extending along said spaces, so that each of said rectangular outlines is surrounded by rectangularly arranged lines of weakness spaced symmetrically around said outlines, and placing inscriptions on said surface for specifically indicating; within said outlines, the type measure to set the type and the length to make up the pages; between said rectangular outlines, the back and front margins and the head and tail margins; and the dimensions of the margins for both gripper and side gages, and associating said sheet with the printed copy of which it is a miniature.

3. In the art of printing, the method herein described which consists in providing a sheet which is to represent on a reduced scale the sheet to be printed from multiples of type, plate or lithographic forms, providing a surface of said sheet with spaced rectangular outlines of similar dimensions and discontinuing the lines at the spaces between said outlines, providing said sheet with lines of weakness extending perpendicularly to and intersecting other lines of weakness extending along said spaces, so that each of said rectangular outlines is surrounded by rectangularly arranged lines of weakness spaced symmetrically around said outlines, tearing out a portion of said sheet along said lines of weakness in multiples of two units, and placing inscriptions on the removed portion of said sheet so as to indicate dimensions for the printed copy of which said portion is a miniature.

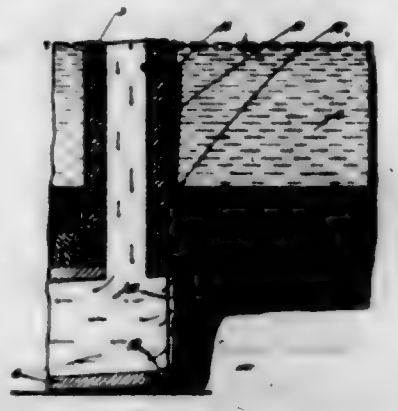
1,297,843. MOUTH-GUARD FOR CHILDREN AND INFANTS. ELLA S. HAMLINE, Tampa, Fla. Filed Apr. 30, 1918. Serial No. 231,718. 2 Claims. (Cl. 2—116.)



1. A device of the character described, including a frame formed from a single piece of wire embodying a cheek engaging portion, a nose bridge formed intermediate the ends of the cheek engaging portion, an arcuate jaw engaging portion having its respective ends joined with the terminals of the cheek engaging portion, a wire gauze body carried by the frame and adapted to surround the mouth and nose of the wearer, a binding covering the cheek engaging and the jaw engaging portions and the nose bridge of the frame for preventing the action of the metal wire on the face of the wearer, a protecting pad secured to the inner surface of the nose bridge and the adjacent portion of the cheek engaging portion, cheek pads secured to the inner surface of the body at the juncture of the cheek and jaw engaging portions with the frame, and means for removably attaching and retaining the frame in position.

1,297,842. SILT-GATE. WILLIAM HARRIS, Silver City, N. Mex. Filed Feb. 7, 1918. Serial No. 215,852. 3 Claims. (Cl. 61—22.)

3. A silt gate of the character described comprising means forming a passageway from the upstream side of the dam to the downstream side of the dam, a wedge-shaped gate normally closing said passageway, said gate having the small end at the bottom whereby when the gate is raised vertically there will be left a space between the gate and the silt previously resting against the



gate so that water may pass and start to wash said silt through said passageway, and means for raising and lowering said gate.

1,297,844. ENDLESS TRACK. HUBERT AVERY HATFIELD, London, England, assignor to H. A. H. Tractors Limited, Birmingham, England. Filed June 18, 1918. Serial No. 239,837. 5 Claims. (Cl. 21—150.)



1. A link for endless tracks for motor-driven vehicles comprising a sole plate having a downwardly projecting tread on each side and a relatively elevated intermediate tread.

1,297,845. NUT-LOCK. NIKYFOR HAWRYLASZ, Southington, Conn., assignor of one-half to Nykola Jurach, Southington, Conn. Filed Dec. 4, 1918. Serial No. 265,247. 2 Claims. (Cl. 151—7.)

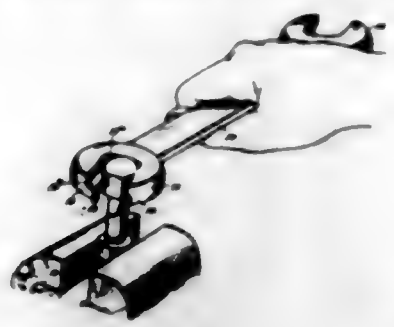


1. In a nut lock, a washer comprising a pair of spaced metallic plates of shell-like formation having under cut grooves in the adjacent faces thereof and provided with inwardly extending rigid lugs, and a compressible layer between said washer members extending into the under cut grooves of the latter, one of said members being provided with an outer ratchet face, substantially as described.

1,297,846. NUT AND BOLT-HEAD WRENCH. CHARLES HERRMAN, New York, N. Y. Filed Dec. 28, 1917. Serial No. 209,852. 15 Claims. (Cl. 81—119.)

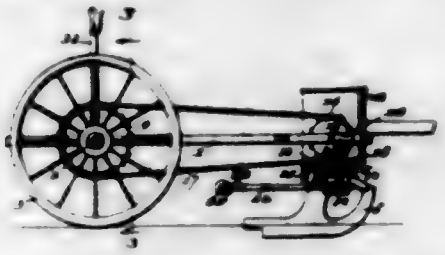
1. In a nut and bolt-head wrench, spaced jaws having parallel stepped faces and having the corresponding steps

of the opposite jaws offset to different extents to accommodate as many different sizes of nuts and bolt-



heads as the number of sets of corresponding steps plus one.

1,297,847. ATTACHMENT FOR CORN-PLANTERS. WILLIAM E. HIBLER, Honolulu, Hawaii. Filed May 10, 1918. Serial No. 233,795. 3 Claims. (Cl. 111—16.)



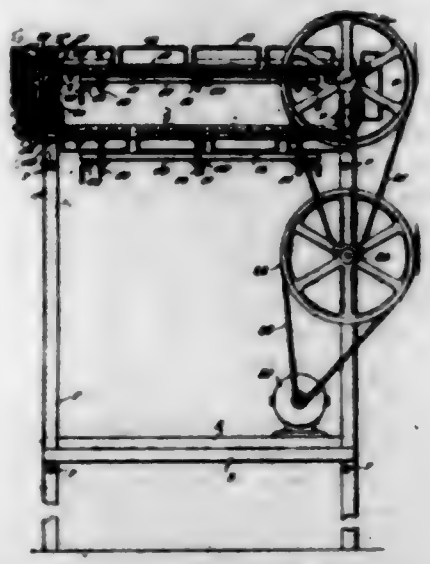
1. The combination with a corn planter having seed boxes and a rock shaft for operating the valves of said seed boxes, of a clutch controlled means for operating the rock shaft, L-shaped brackets carried by the rock shaft, the L-shaped brackets having right angled extensions at the ends of their shorter legs, rod members pivotedly connected to the L-shaped brackets adjacent their juncture with the extensions, the rock members having forked ends, rolls rotatably mounted in said forked ends, and a spring compressed between the rod members and the longer legs of the L-shaped brackets.

3. The combination with a corn planter having seed boxes and a rock shaft for operating the valves of said seed boxes, of a clutch member connecting with one of the planter wheels, a sprocket wheel journaled on the planter axle and provided with a clutch member for engaging the aforesaid clutch member, a sprocket journaled on the planter, a chain connecting the two sprocket wheels, an arm attached to the rock shaft, an arm attached to the second sprocket wheel and adapted to engage the aforesaid arm, a collar loosely mounted on the planter axle, the collar having a slot in its circular surface, a pin fixed in the axle and engaging the slot, a toothed sector connecting with the collar, a hand lever pivotally mounted on the collar, a latch carried by the hand lever and engaging the toothed sector, the first said sprocket wheel being provided with a peripheral flange on its hub which flange carries ratchet teeth, an arm pivotally connected to the hand lever and having a forked end which straddles the flange transversely and engages the ratchet teeth, spring bearing upon said arm, and a spring in surrounding relation to the axle and having one end attached thereto and the other end attached to said collar.

1,297,848. BREAD-TOASTER. ARTHUR A. HILL, deceased, New York, N. Y., by Agnes Blanche Hill, executrix, New York, N. Y. Filed Dec. 4, 1917. Serial No. 205,346. 8 Claims. (Cl. 126—41.)

1. In a bread toaster, the combination of carriers for slices of bread each comprising a perforated cage, having two opposite sides open for the introduction and removal of the slices of bread, the other sides being closed to protect the edges of the slices of bread from burning, and means to move said carriers relativley to a source of heat.

2. A carrier for supporting slices of bread comprising a perforated cage having two opposite sides open for the introduction and removal of the slices of bread, the other sides being closed to protect the edges of the slices of bread from burning.

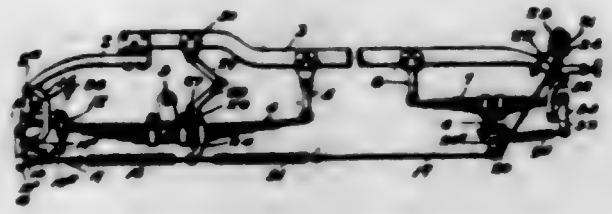


3. In a bread toaster, the combination with an endless conveyer and a plurality of carriers attached thereto, of electrically heated plates arranged beneath the upper and lower stretches of the conveyer, means for feeding slices of bread to the carriers comprising a feed hopper, a pusher arm in said hopper, and means actuated by the conveyer for operating the pusher arm.

4. In a bread toaster, an endless conveyer having open ended carriers for the slices of bread and a guide arranged adjacent one side of the conveyer adapted to engage the slices of bread projecting beyond the ends of the open ended carriers.

5. In a bread toaster, an endless conveyer having a plurality of open ended carriers for the slices of bread, means for revolving the conveyer, means actuated by the conveyer for automatically feeding the slices of bread to said carriers through the open ends thereof while said conveyer is in motion, and a guide arranged adjacent one side of the conveyer adapted to engage and reposition slices of bread projecting beyond the ends of the carriers.

1,297,849. SHOCK-ABSORBER MECHANISM. JOSEF HOFMANN, Baumaroche, Switzerland. Filed Aug. 31, 1917. Serial No. 189,135. 9 Claims. (Cl. 267—4.)

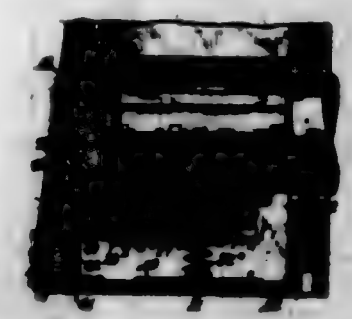


1. The combination with a vehicle frame and a main spring; of a lever having an extending arm between its ends, said lever pivotally connected at one end to the end of the main spring, a coil spring under tension connected to and having influence only on the other end of said lever, and a link pivoted at one end to a frame member and at its other end to said arm.

7. The combination with a vehicle frame, a main spring and front axle; of a lever having three points of connection, one of said points being pivotally connected to the end of said main spring, one end of a coil spring connected to the other end of said lever, a link pivotally connected to a frame member and pivotally connected intermediate the ends of said lever, a bell crank lever pivotally mounted between the ends of said main spring and having an arm connected to said spring, a link pivotally connected to the other arm of said bell crank lever and to said frame, a

flexible connecting element between said bell crank lever passing under the front axle and connected to the frame, and a coil spring interposed in said connecting element.

1,297,850. LUBRICATOR. THOMAS J. HOLMES, Chicago, Ill. Filed Apr. 6, 1918. Serial No. 227,006. 4 Claims. (Cl. 64—25.)



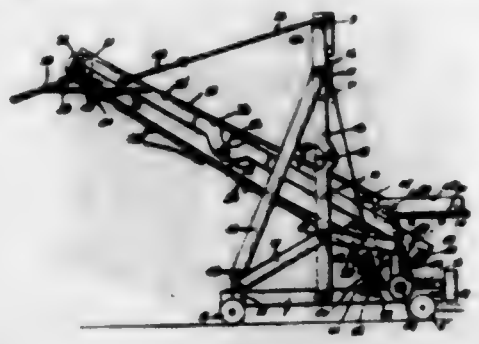
1. In a lubricating device for a bearing, the combination of a friction piece having a friction surface thereon substantially conforming to the bearing surface of the bearing to be lubricated, means for yieldingly forcing said friction piece normally toward said bearing whereby said friction surface is maintained against the bearing surface of the bearing when the device is normally in use, said friction piece having an opening surrounded by said friction surface, a reservoir for grease carried by said friction piece and extending normally forward longitudinally of the bearing, said reservoir being in communication with said opening, and a spring-pressed piston in said reservoir for forcing grease therein toward said opening.

1,297,851. INDICATING-VALVE. GLENN ARNOLD HOWE, Portland, Oreg. Filed Aug. 8, 1917. Serial No. 185,054. 3 Claims. (Cl. 152—12.)



3. A self-registering inflation valve comprising a hollow stem, a tubular member slidably interfitting the outer portion of the hollow of said stem and having an external scale coöperating with the outer end of the stem, an air valve within said tubular member, a hollow base pin detachably connected with the inner portion of the stem and having its inner end opposing the inner end of the tubular member, said base pin and said tubular member having their said opposing ends counter-bored and internally threaded, a flexible sleeve having its opposite ends extending into said counter-bores, and hollow screws threaded into the adjacent ends of the tubular member and the base pin to lock the said ends of the said sleeve in the counter-bores.

1,297,852. PORTABLE GRAIN ELEVATOR AND STACKER. FELIX J. HUBARSKI, Dartes Center, N. Y. Filed Aug. 20, 1918. Serial No. 250,734. 1 Claim. (Cl. 198—15.)



A stacker comprising a frame having relatively short uprights rigidly fixed thereto at the ends of the frame, an upright supporting member attached to each side of the frame approximately intermediate the ends thereof, and comprising hingedly connected upper and lower sections, removable brace elements attached to the said rigid uprights and adapted to be releasably engaged with the lowermost of the said sections whereby the latter may be held normally vertically while the said removable brace elements are in position, a relatively long brace element pivoted to one of the said uprights and adapted to be releasably connected to the uppermost of the said sections at each side of the upright supporting member, the latter having a cable trained over its top, a conveyer comprising two hingedly connected sections, one of the sections being mounted for swinging movement on one of the said rigid uprights at one end of the frame the outermost section being connected to the said cable, the said hingedly connected sections having abutting faces normally in engagement whereby a tug on the cable will raise the said longitudinally alined sections at an angle with respect to the said frame, and a conveyer trained over the said sections of the conveyer frame.

1,297,853. FORCING-BED. WALTER D. IWSKO, Anselmo, Nebr. Filed July 6, 1918. Serial No. 243,545. 1 Claim. (Cl. 47—27.)

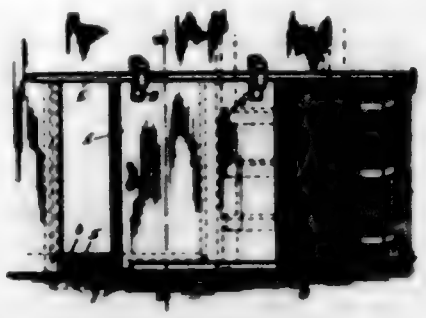


A forcing bed comprising double end and side walls having a bank of clay or the like therearound excepting at the center of one end thereof, a pit at the last mentioned end communicating with the bed and projecting beyond the bank, a transverse wall in the pit, a door regulated draft opening therein, a trap door between the top of the wall and the end of the bed, a heater in the pit, perforated tubes arranged horizontally in the bed, a heat outlet flue at the end of the bed opposite that provided with the pit, a damper controlling the same, ventilating flues to the opposite sides of the heat outlet flue also communicating with the bed, and regulating dampers therefor.

1,297,854. CAR-DOOR CONSTRUCTION. ROBERT B. IRWIN, Rochester, N. Y. Filed Feb. 12, 1918. Serial No. 216,891. 1 Claim. (Cl. 20—22.)

The combination of a car having a door opening in the side thereof, a sill provided at the bottom of said car with a slot cut into it below said door opening, said sill having a channel forming a continuation of said slot also cut therein with a horizontal slot leading out of the chan-

nel to the outside of said sill, a car door, having a series of triangular grooves cut into the lower end and on the outside thereof, suspended on the inside of said car and



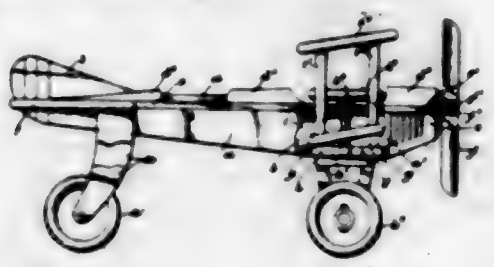
projecting into the slot and channel in said sill, the triangular grooves in said door projecting slightly above said sill to keep the slot in said sill partially open when said door is suspended therein.

1,297,855. VACUUM-DISTRIBUTER FOR INTERNAL-COMBUSTION ENGINES. SAMUEL D. IRWIN, Floydada, Tex. Filed Aug. 28, 1918. Serial No. 251,776. 17 Claims. (Cl. 123—155.)



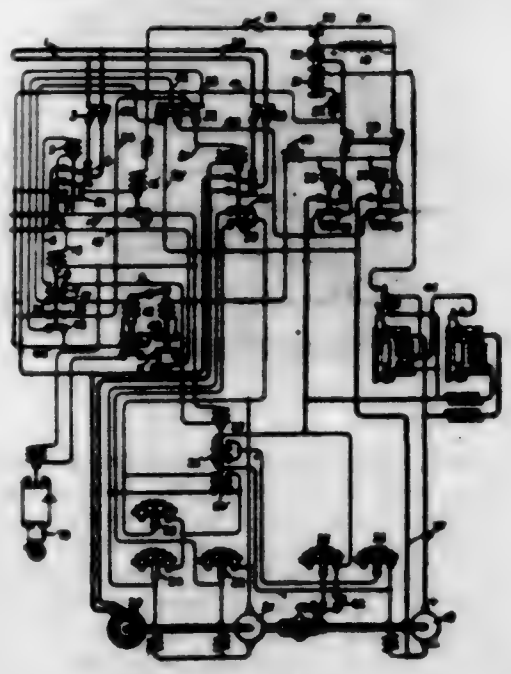
1. In an internal-combustion engine, the combination, with vacuum-energized sparking-plugs, of mechanism communicating with said spark-plugs and controlled by the engine-shaft for automatically establishing a vacuum in said spark-plugs, successively.

1,297,856. VEHICLE. CHARLES STANLEY JACOB, Elizabeth, N. J. Filed Dec. 30, 1918. Serial No. 268,900. 3 Claims. (Cl. 296—166.)



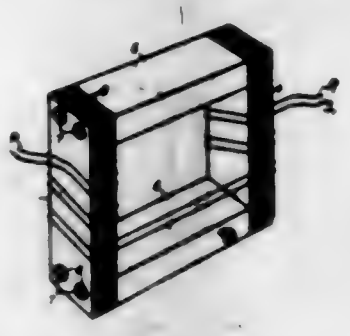
1. A vehicle embodying therein a body portion composed of rearwardly converging side planks, short side planks joined thereto and converging forwardly thereof, a top plank closing the space between said side planks, a laterally extended seat, a closure plate for the forward end of said body, a propeller having a shaft idly mounted in said plate, said side planks each having a recess in the bottom thereof, a cross plank having a circular opening therethrough seated in said recesses, a disk bearing upon said side planks and rotatably mounted in said opening, wheels carried by and movable with said disk, a single wheel mounted in fixed brackets adjacent the rear of said body, laterally extending lower vanes secured to opposite sides of said body above said cross plank, an upper vane extending parallel therewith and supported therefrom, a steering shaft carried by said disk, and terminated between said vanes, and a steering wheel carried thereby.

1,297,857. EMERGENCY POWER EQUIPMENT FOR ALTERNATING-CURRENT SYSTEMS. HARRY M. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 17, 1915. Serial No. 51,376. 16 Claims. (Cl. 171—313.)



3. The combination with a load circuit, of a supply circuit normally connected thereto, a storage battery, a rotary transformer, and automatic means operable, upon the failure of supply circuit voltage, to disconnect the load circuit from the supply circuit and to connect the rotary transformer to the storage battery, whereupon the rotary transformer is started and operated from the storage battery, and subsequently to connect the rotary transformer to the load circuit to supply current thereto.

1,297,858. ELECTROMAGNETIC COIL. KENNETH S. JOHNSON, Jersey City, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 10, 1917. Serial No. 206,476. 5 Claims. (Cl. 175—356.)



1. An electromagnetic coil comprising a plurality of cores, yoke pieces composed of a material having high hysteresis and eddy current losses mechanically separating and magnetically connecting said cores, and a plurality of windings on each core, like windings on the different cores being connected together in series opposing.

1,297,859. TRIGGER MECHANISM FOR FIREARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Jan. 9, 1919. Serial No. 270,894. 4 Claims. (Cl. 42—69.)

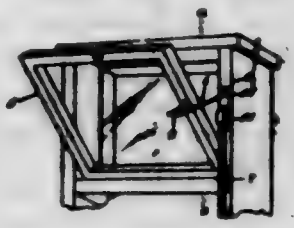
2. In a firearm, a trigger formed at the rear of its pivot with an upwardly opening hole leading into a semi-circular transverse trigger-step recess, a helical trigger-spring located in said hole, and a transversely arranged

stop-pin mounted in the gun and extending above the trigger in position to form an abutment for the upper end



of said spring and to co-act with the said transverse trigger-stop recess to limit the upward movement of the rear end of the trigger.

1,297,860. TRANSOM-OPERATING MECHANISM. CLARENCE VICTOR JONES, Toronto, Ontario, Canada. Filed Oct. 14, 1918. Serial No. 257,951. 2 Claims. (Cl. 292—21.)



1. In transom operating mechanism, in combination, a transom provided with a bracket having its end projecting over the frame thereof, guide mechanism mounted in said frame adjacent to said bracket, said guide mechanism consisting of a pair of spools positioned one above the other, the uppermost of said spools being countersunk in said frame and the lowermost spool being adapted to project a considerable distance beyond the face of said frame, a chain secured to said bracket and operating over said spools, a housing for said guide mechanism and a catch mounted on said frame below said guide mechanism for locking said chain.

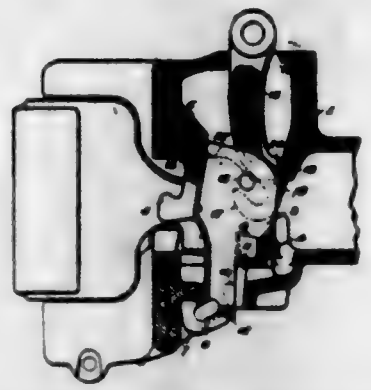
1,297,861. INSULATED HANDLE. EDMUND J. KAHL, Wallingford, Conn. Filed Mar. 23, 1918. Serial No. 224,103. 3 Claims. (Cl. 16—178.)



1. A device of the class described comprising an insulating member, a stem passing through said member and provided with right and left-hand screw threads on its ends, sockets for receiving said stem and having parts permanently attached to the handle and vessel, said parts having holes therein of greater diameter than the stem and other parts for receiving said stem and means for insulating the stem engaging part of each socket from the other part and from the handle or the vessel.

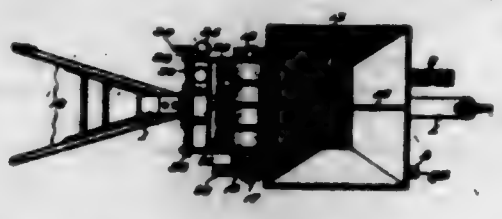
1,297,862. CAR-COUPLING. WILLIAM KELSO, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 25, 1916. Serial No. 111,175. 8 Claims. (Cl. 213—10.)

4. A car coupler having a head, a knuckle, a lock, a knuckle-opening device, said lock being insertible and removable through the mouth in the head through which the tail of the knuckle enters and being supported by said knuckle-opening device when the parts are in locked position, said head being provided with means for preventing



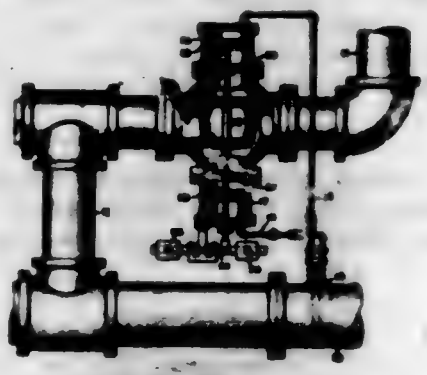
the lock from tilting forwardly when in said locked position, and means operative upon the removal of the knuckle-opening device for maintaining the operative relation of the lock and the means for preventing tilting thereof.

1,297,863. SEED-PLANTER. JAMES G. KING, Troy, Ala. Filed Sept. 6, 1918. Serial No. 252,916. 4 Claims. (Cl. 221—185.)



1. In a seed planter the combination of a supporting means, a drive wheel, a receptacle fixed upon the supporting means and having a curved bottom and also having a longitudinal central partition curved in conformity to said bottom, a hopper carried by the upper forward portion of said receptacle and having compartments in communication with the receptacle at opposite sides of the partition thereof, a drum mounted in the receptacle and having a circumferential channel receiving the receptacle partition, cups carried by the drum at opposite sides of the said channel, a driving connection intermediate the said drive wheel and the drum, and means positioned to receive seed discharged by the cups and to deliver the same.

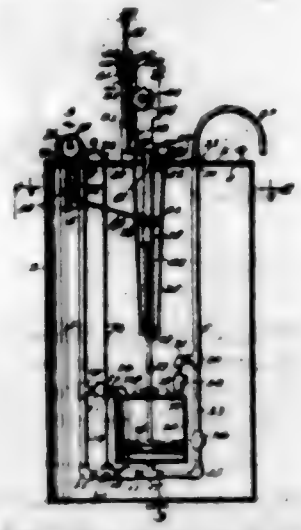
1,297,864. ELASTIC-FLUID TURBINE. WILLIAM L. KING, Cincinnati, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Sept. 21, 1918. Serial No. 255,150. 4 Claims. (Cl. 60—43.)



1. The combination with an elastic fluid turbine having a high pressure packing and a low pressure packing, of conduit means connecting the high pressure packing in parallel to the low pressure packing and to a point of lower pressure in the turbine, and means responsive to the

volume of flow to the low pressure packing for regulating the flow from the high pressure packing to the low pressure packing and the intermediate point in the turbine.

1,297,865. COMBINATION MEASURING AND TRANSFER TANK-PUMP. ABRAHAM L. KIRKWOOD, Blocker, Tex. Filed Mar. 8, 1918. Serial No. 221,180. 11 Claims. (Cl. 221—102.)

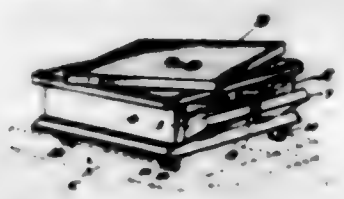


1. In a device of the kind set forth, a tank, a cover plate therefor, a pump, inlet and outlet pipes attached to and passing through the cover plate, said pipes supporting the pump and connecting with each end thereof, check valves in said pipes at each end of the pump, a three-way valve in the inlet pipe, an inlet elbow connected with the three-way valve adjacent the bottom of the tank, a handle on top of the cover plate, and a rod connecting the handle with the three-way valve whereby the pump may be rendered double acting to fill the tank and single acting to empty the same.

2. In a device of the kind set forth, a tank, a cover plate therefor, a pump, inlet and outlet pipes attached to and passing through the cover plate, said pipes supporting the pump and connecting with each end thereof, check valves in said pipes at each end of the pump, a three-way valve in the inlet pipe, an inlet elbow connecting with the three-way valve adjacent the bottom of the tank, means carried by the cover plate and connecting with the three-way valve whereby the latter may be operated, and devices for regulating the stroke of the pump whereby the latter may supply the tank with a liquid and then remove the said liquid therefrom in prescribed quantities.

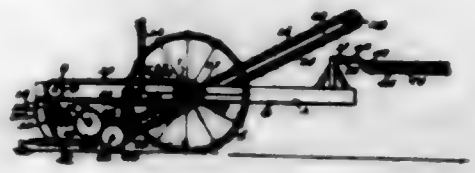
3. In a device of the kind set forth, a tank, a cover plate therefor, a pump, inlet and outlet pipes attached to and passing through the cover plates, said pipes supporting the pump and connecting with each end thereof, check valves in said pipes at each end of the pump, a three-way valve in the inlet pipe, an inlet elbow connecting with the three-way valve adjacent the bottom of the tank, means for operating the three-way valve, a register, connections between the pump and the register, and a device for adjusting the length of the stroke of the pump, whereby the pump may be regulated to take in a liquid in various prescribed quantities which are recorded on the register through the instrumentality of the connections conjoined therewith.

1,297,866. STAND FOR WRITING-MACHINES. SAMUEL A. KITCHENER, Los Angeles, Calif. Filed Oct. 30, 1917. Serial No. 199,238. 1 Claim. (Cl. 65—52.)



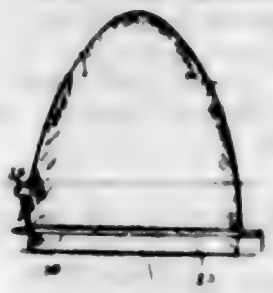
A portable stand for writing machines or the like comprising in combination a base, and a supporting table journaled thereon, characterized by the base having fixedly secured thereto a plurality of spaced abutments arranged to engage the inside of drawers of various sizes when placed therein and to rest upon the top edges thereof.

1,297,867. BEAN-HARVESTER. WILLIAM L. KNIGHT, Flint, Mich. Filed Mar. 28, 1918. Serial No. 225,222. 2 Claims. (Cl. 56—1.)



2. In a bean harvester, a main supporting frame, cutting means operably mounted thereon, elevating and conveying mechanism mounted on the frame and operably connected with the cutting means, a bracket secured to the rear end of the frame beneath the upper end of the elevating and conveying mechanism, a pintle mounted through the bracket, a sleeve disposed about the pintle, a receiver connected to the sleeve, a catch formed on the bracket, a resilient trip finger extending from the sleeve and normally engageable beneath the catch and self-releasing when the receiver has become loaded, and a spring member disposed beneath the receiver and connected to the pintle and to the bracket and exerting a tension on the receiver for automatically returning the receiver to a load receiving position subsequent to the dumping action.

1,297,868. STACK-SECURING APPARATUS. PETER JOSEPH KNIPP, Ellinwood, Kans. Filed Aug. 9, 1918. Serial No. 249,140. 2 Claims. (Cl. 24—1.5.)



1. A stack anchoring device comprising a flexible tie member, and means secured to one end of said tie member and adjustably connected with the other end thereof whereby said tie member may be tightened so as to exert binding pressure upon the stack.

1,297,869. ANTISKID TIRE DEVICE. STEPHEN J. KOSHT and JOHN A. PETRILLA, Pittsburgh, Pa. Filed Mar. 15, 1918. Serial No. 222,800. Renewed Feb. 7, 1919. Serial No. 275,690. 1 Claim. (Cl. 152—4.)



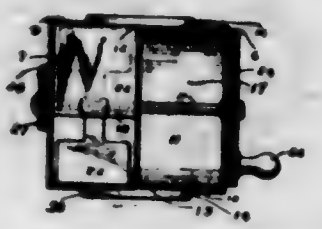
An anti-skid device for tires comprising circular bands for engagement with the periphery of a tire, clips extending transversely across the bands and having their ends turned down to engage the sides of the tire, cams arranged on the clips, and securing elements passing through the cams, clips and bands, each of said clips having its intermediate portion bent to embrace the bands and thereby preventing movement of the bands when in place.

1,297,890. ADJUSTABLE SPIKE AND NAIL PULLER. PAUL KOVACHICH, Ranshaw, Pa. Filed Dec. 10, 1918. Serial No. 266,068. 1 Claim. (Cl. 254—34.)



The combination in a spike or nail puller, of a handle bar, having a housing at its forward end, said housing being tapered or reduced in width downwardly and being provided with convex forward ends on its side walls and being also provided with a downwardly and rearwardly inclined top wall in the lower portion of which is a longitudinally disposed aperture, a spring strip extending longitudinally through said aperture and secured adjacent to one end to the upper side of the handle bar, jaws arranged side by side and having convex forward ends and inner sides shaped to receive a spike or nail head between them and merging at their rear end into body portions, said body portions having concave rear sides movable against the convex forward ends of the housing walls, and merging, in turn, into side by side shanks, said shanks having inclined outer sides snugly fitting the side walls of the housing and also having a play space between their rear portions and further having their rear ends rounded, a transverse pintle pivotally connecting the jaw shanks with the housing, and a stop carried by the body portion of each jaw and disposed transversely above and in disconnected relation to the body portion of the other jaw.

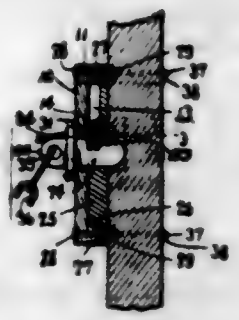
1,297,871. DRAFT-PRODUCER FOR STOVES. JAMES G. LEGG, Chattanooga, Tenn. Filed Mar. 20, 1918. Serial No. 223,731. 3 Claims. (Cl. 110—162.)



2. A device of the character described comprising a casing provided in its top and bottom walls with openings surrounded by flanges adapted for engagement within the adjacent ends of spaced stove pipe sections, a vertical longitudinal partition plate dividing said casing into two compartments, said partition plate extending across the centers of said openings, a vertical transverse plate extending from one side of said casing to said partition and subdividing one of said compartments into a fan chamber and a chamber arranged between said openings, said partition being provided with an opening establishing communication between the fan chamber and the other of said compartments, said transverse plate being spaced from the bottom wall to provide an opening establishing communication between said fan chamber and said last named chamber, a fan journaled within said fan chamber, means for rotating said fan, and means for selectively cutting off communication between said fan chamber and said last named chamber or between the last named chamber and the associated half of the lowermost one of said first named openings.

1,297,872. LOCK. JOHN LARSON, Wattina, Colo. Filed Dec. 7, 1918. Serial No. 265,802. 3 Claims. (Cl. 292—46.)

1. In a device for the purpose set forth, a flanged casing, said casing having slots in the side flanges thereof, a transversely arranged latch bolt pivotally secured in one of the slots and passing through the other slot, spring means for influencing the bolt in one direction, a rest plate for the bolt secured to the inner face of the casing and having a shoulder upon its inner face designed to receive



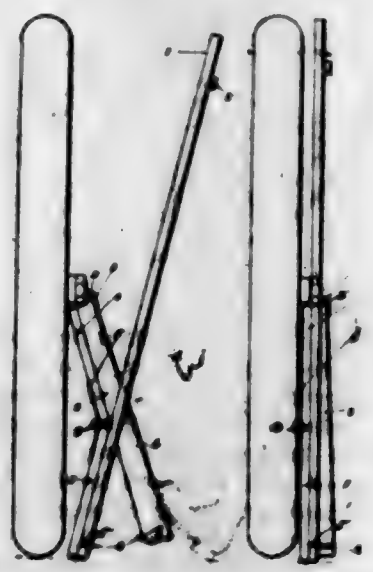
one of the edges of the bolt, said plate having an opening therethrough, the casing having an opening alining with the opening in the rest plate, and a notched bit adapted to be passed through the openings and to be engaged by the bolt.

1,297,878. PROJECTILE. JOHN STAFFORD LAURIE, Fort Totten, N. Y. Filed Oct. 15, 1918. Serial No. 258,156. 1 Claim. (Cl. 102—29.)



A projectile containing an explosive charge, a fuse, and a plurality of rectangular strips nested in close relation with their longitudinal axis in alinement with the longitudinal axis of the projectile.

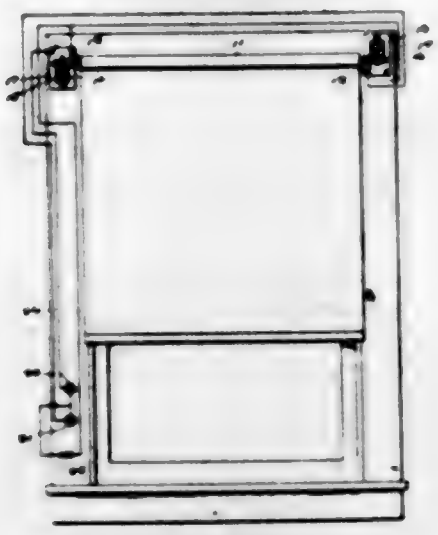
1,297,874. AUTOMOBILE-JACK. JOHN W. LAWRIE, Horton, Kans., assignor to Alma G. Lawrie. Filed Aug. 21, 1918. Serial No. 250,220. 1 Claim. (Cl. 254—123.)



A lifting jack, consisting of two plates hinged together, bars fastened to the face of the lower of said plates adja-

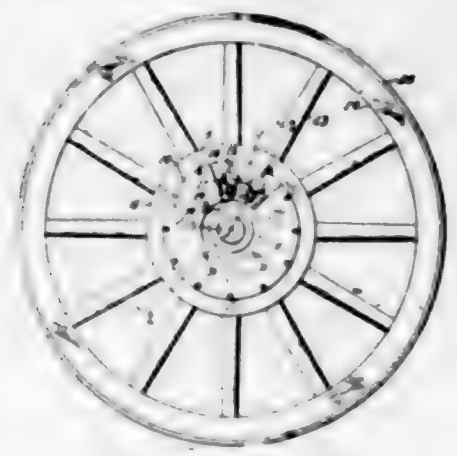
cent to the opposite marginal edges thereof and projecting beyond the hinged connection between the plates, an operating lever fastened to the face of the upper of said plates and positioned between said bars and extending nearly the length of the lower plate, and having the inner corner at its free end rounded, said lever having a shoulder at its upper end and against which the nut upon an axle is adapted to bear.

1,297,875. WINDOW-SHADE-OPERATING LEVER. WILLIAM LEE, Galveston, Tex. Filed Jan. 7, 1919. Serial No. 270,080. 1 Claim. (Cl. 156—28.)



A shade roller operating mechanism having roller carried spindles, a monocoil motor arranged at each end of said roller, said motors including U-shaped brackets reversely disposed relatively, the magnets of said motors being carried by the cross pieces of the brackets, and the armatures secured to said spindles and operating between the limbs of said brackets, switches in circuit with the windings of said magnets, and a source of electrical energy.

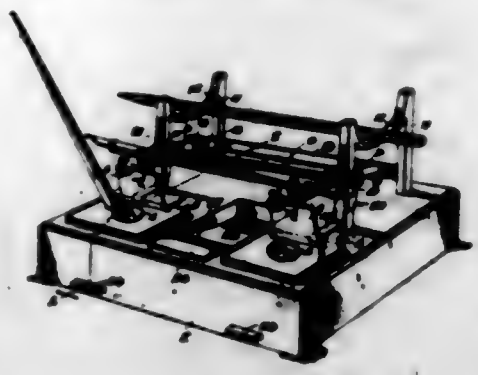
1,297,876. WHEEL. DAVID LEVINSON, New York, N. Y. Filed June 7, 1918. Serial No. 238,798. 2 Claims. (Cl. 152—42.)



1. In a wheel hub, the combination with an annular axle carrying inner member, of a spoke carrying ring-shaped outer member capable of movement in the plane of the wheel relative to said inner member, a resilient body interposed between said two members, and lugs pivoted to one of said members having ball-shaped free ends, the other member having recesses in which the ball-shaped ends of said lugs are seated.

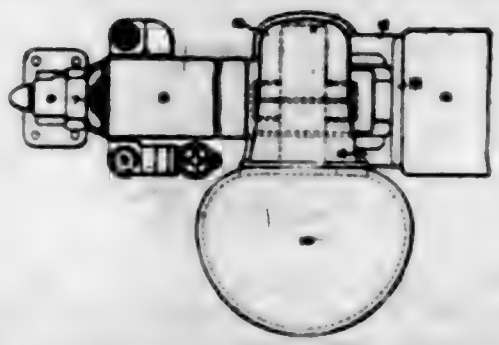
2. In a wheel hub, the combination with an annular axle carrying inner member, of a spoke carrying ring-shaped outer member capable of movement in the plane of the wheel relative to said inner member, a resilient body interposed between said two members, and lugs pivoted to one of said members having ball-shaped free ends, the other member having recesses in which the ball-shaped ends of said lugs are seated, the length of each recess being greater than the diameter of the ball-shaped end of a lug.

1,297,877. INKSTAND. OLAF N. LINDE and ANDREW LINDEE, Lindberg, Wash. Filed June 6, 1917. Serial No. 173,204. 2 Claims. (Cl. 120—5.)



2. The combination, in an ink-stand, of a base having a well; a lid hinged to cover and uncover the well: a pair of substantially horizontal, parallel levers pivoted intermediate their ends on a rock shaft, the front arms of the levers concaved to mutually support a penholder; slidable means on one of the arms for overbalancing the front arms; and a link connected at one end to an adjacent arm and at the other to the lid so that it will be closed by the weight of a penholder applied to the front arms, the lever being rigidly connected to act in unison.

1,297,878. ELASTIC-FLUID TURBINE. WILLIAM J. A. LONDON, Springfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 6, 1918. Serial No. 216,573. 4 Claims. (Cl. 253—60.)

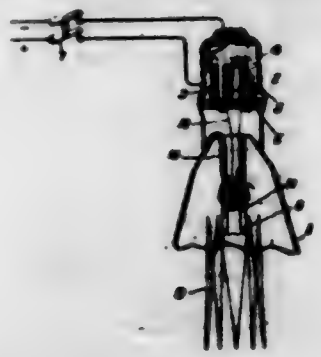


1. In a turbine driven set, the combination of a turbine casing, a driven machine having a casing, girder members connecting said casings together, and an exhaust housing comprising a main part which surrounds the low pressure end of said turbine casing and is fastened thereto, and an end portion, said end portion being formed of wall members carried by said girder members and fastened to the main portion of the exhaust housing.

1,297,879. ELECTRICAL CONTROLLING DEVICE. CHARLES F. LORENZ, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Apr. 12, 1917. Serial No. 161,431. 5 Claims. (Cl. 171—97.)

1. In a control system, an electrical device to be controlled embodying a conductor of a high positive temperature coefficient, a resistor in series with the conductor and an electromagnet adapted to short circuit said resistor when the circuit is first closed and to retain the short circuit during the continued operation of the device, the power of said electromagnet being insufficient to short circuit the resistor when the temperature of the conductor is high.

2. In a control system an electrical device to be controlled embodying a conductor of a high temperature coefficient, a resistor in series with the conductor, and an electromagnet in series therewith which has sufficient power to short circuit said resistor under the cold conditions of the device, the power being insufficient to short circuit the resistor under higher temperature conditions.

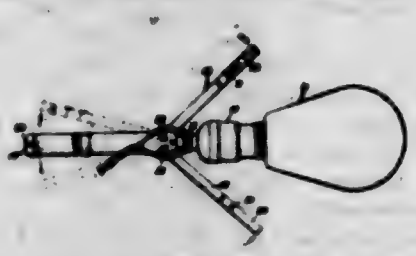


3. In a control system a metallic filament incandescent lamp, a resistor in series with the filament and an electromagnet adapted to short circuit said resistor when the circuit is first closed and retain the short circuit during the continued burning of the lamp, the power of said magnet being insufficient to short circuit the resistor under the influence of the low current under the high temperature condition of the filament.

4. In a control system a tungsten filament incandescent lamp, a resistor in series with the lamp, and an electromagnet in series therewith adapted to short circuit the resistor when the circuit is first closed, the power of said electromagnet being sufficient to retain the short circuit during the continued burning of the lamp, but insufficient to operate the short circuit under the low current and high temperature conditions of the filament.

5. An adapter for insertion in the circuit of a metallic filament lamp embodying a resistor and an electromagnet adapted to short circuit said resistor when the circuit is first closed and retain the short circuit during the continued closure of the circuit, the power of said magnet being insufficient to short circuit the resistor under the low current and high temperature conditions of the filament.

1,297,880. PORTABLE LAMP. WILFRID LUMLEY, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1915. Serial No. 59,546. 3 Claims. (Cl. 240—52.)



3. In a portable lamp, the combination of an incandescent lamp socket having attached thereto a longitudinally extending reflector, and a supporting means hinged to said socket comprising a plurality of legs having transverse end portions, said legs being pivoted together so that they may be telescoped and the aforesaid parts being so mounted that said legs may be extended with their transverse end portions extending away from said socket or may be telescoped and folded over with the said end portions extending into said reflector.

1,297,881. SPRING-WHEEL. JOHN MCBRARTY, Dickey, Me. Filed Jan. 14, 1918. Serial No. 211,875. 2 Claims. (Cl. 152—29.)

2. In a resilient wheel, a one-piece spring metal rim formed with apertures therethrough, a plurality of resiliently mounted spoke elements each having a screw-threaded aperture in its outer end, a plurality of collars each united with one of said spokes at a slight distance from the outer end of the latter, a plurality of rim-supporting bars each having a central aperture therethrough and having a radially extending ear united with one end and having an aperture through its other end, a plurality of ears each having a stud which normally extends through the apertured end of one of said bars and removably secures the last said ear thereto in a radial



position, each of said bars receiving the outer end of one of said spoke elements and being seated on one of said collars, said rim being seated on said plurality of bars, a plurality of headed screws extending through the apertures of said rim and engaging the threaded apertures of said spoke elements and thus uniting the latter with said rim and rim supporting bars, and a tire on said rim, the said ears normally extending across the joint where the tire is seated on the rim.

1,297,882. ATTACHMENT FOR AIRCRAFT TO RENDER SAME INVISIBLE. WILLIAM D. MCCORMACK, Nashville, Tenn. Filed Aug. 20, 1917. Serial No. 187,308. 5 Claims. (Cl. 244—31.)



1. A sheathing for air-craft comprising a series of stripe of flexible translucent material colored to suit weather conditions, with means for detachably connecting said sheathing to the air-craft, substantially as and for the purpose described.

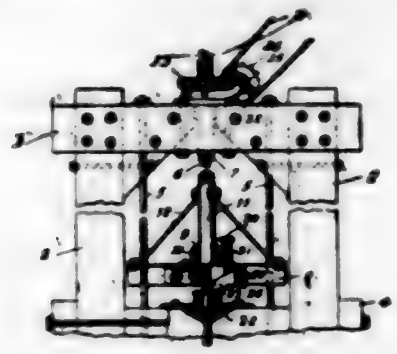
4. A sheathing for air-craft comprising a series of stripe of flexible translucent material colored to suit weather conditions, each strip being provided with a silvered backing adjacent to the part of the air-craft to be screened, with a series of metal straps hinged together in pairs for detachably connecting said sheathing to the air-craft, substantially as and for the purpose described.

5. An aeroplane having the wings, rudders and part of the body portion thereof made of transparent material and the stanchions and remainder of the body portion sheathed with strips of flexible translucent material colored to suit weather conditions, substantiall as described.

1,297,883. MEANS FOR RAISING CONCRETE-MOLDS. FINLAY R. MCQUEEN, Minneapolis, Minn. Filed July 13, 1918. Serial No. 244,769. 4 Claims. (Cl. 25—131.)

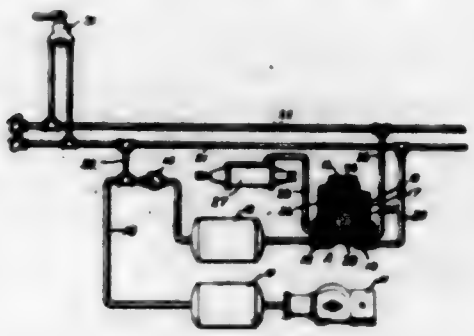
4. The combination, with a mold frame, of a reinforcing rod, a hollow screw mounted to slide on said rod and means for holding said screw against rotary move-

ment, a clamp mounted to engage said rod, a worm wheel having its hub journaled for rotary movement and internally threaded to engage said screw, a worm shaft



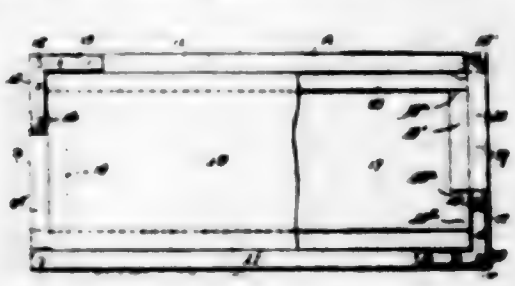
meshing with said worm wheel and having a driving connection and means supporting said shaft for rotary movement on a vertical axis around said worm wheel, for the purpose specified.

1,297,884. AIR-BRAKE SYSTEM. GEORGE MACLOSKIE, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed July 25, 1918. Serial No. 246,626. 2 Claims. (Cl. 188—1.)



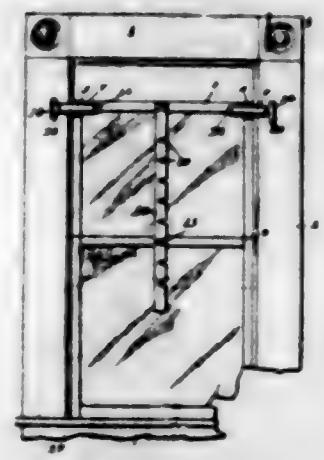
1. The combination with a braking system comprising a train line normally connected to a source of fluid pressure, a second train line normally connected to the brake cylinder and means for connecting the two train lines, of a second source of fluid pressure connected to said first source, a check valve for permitting pressure to pass from the second source to the first source in the one direction only and a restricted passage connecting said second source of fluid pressure to the first train line.

1,297,885. BOX OR CRATE. CASIMIR MARCINKIEWICH, Detroit, Mich. Filed May 27, 1916. Serial No. 100,284. 3 Claims. (Cl. 217—46.)



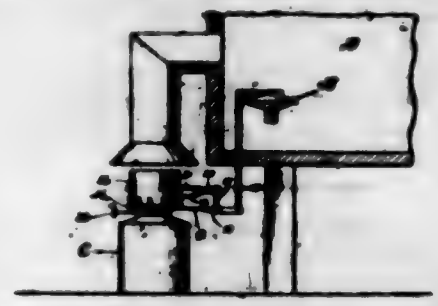
1. A knockdown crate comprising end walls each made up of long and short sections pivotally connected, side walls each secured at one end at right angles to the short section of one end wall and pivoted at its other end to the long section of the other end wall, cleats secured inside both side walls and adapted to abut at their ends against said long sections when the crate is opened, other cleats secured inside said long sections and adapted to abut at their ends against the sides of the first named cleats when the crate is opened, and a horizontal panel removably supported upon the cleats.

1,297,886. SHADE AND CURTAIN HOLDER. HENRY F. MATES, Girvin, Tex. Filed Oct. 21, 1918. Serial No. 258,948. 1 Claim. (Cl. 156—34.)



A device of the class described comprising a pair of supporting members, each member consisting of a tubular base having flanges on its lower end adapted to be secured to the upper sash, a T shaped member of tubular form having its stem entering said base, said stem and base having holes therein and a pin engaging the said holes for adjustably securing said stem in said base, a bracket consisting of the flat part having openings therein to receive the shade roller and curtain pole and a tubular part entering the upper arm of the T shaped member, said tubular part and upper arm having holes therein and a pin engaging said holes for adjustably securing said bracket in said member.

1,297,887. AUTOMATIC FLAME-REGULATOR. HENRY MICHEL, Sublette, Ill. Filed July 20, 1918. Serial No. 245,871. 2 Claims. (Cl. 67—72.)

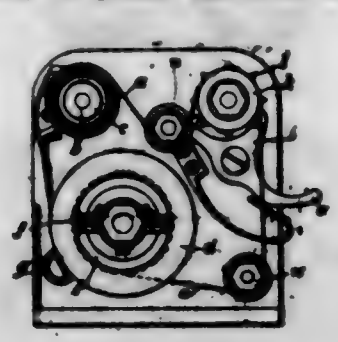


1. In combination with a lamp burner including a platform and a wick sleeve extending vertically therefrom, a cylindrical collar disposed upon and rising from said platform, a horizontally disposed supporting member disposed upon said wick sleeve in encircling relation thereto, an inverted U-shaped hood slidable upon said supporting member, said collar being provided with an opening conforming to the cross sectional configuration of said hood member, said hood member having one end projecting through said opening, a guide bracket secured externally upon said collar and having a horizontally extending portion disposed immediately below said opening and serving as a support for the projecting end of said hood member, and means for sliding said hood member whereby said hood member may be disposed in an obstructing position in relation to the wick of the burner.

1,297,888. INDICATOR. HARVEY JAMES HILLS, Bushbenham, England. Filed Dec. 4, 1916. Serial No. 135,237. 1 Claim. (Cl. 40—91.)

A calendar or calendar clock comprising in combination a casing, clockwork mechanism in said casing, a support secured within the casing, a plurality of spindles each secured by one of its ends of said support, a feed roll rotatably mounted on one of said spindles, a spring, actuated barrel mounted on another of the spindles, a drum removably mounted on said spring barrel

and rotated by the latter, a rolled strip of material which bears the dates removably located on one of the spindles, guide rollers mounted on certain of the other spindles and over which the strip passes, said strip passing over the feed roll and winding on the drum under the action of the spring barrel, the feed roll having teeth which engage perforations in the strip to prevent slipping of the latter, an escapement wheel rotatable with the feed roll, a spring-pressed pivoted escapement lever having two lugs which coöperate with the teeth on the escapement wheel, said escapement lever having an extension adapted to be periodically tripped by the clockwork mechanism, to permit the feed roll, the spring



barrel and the drum on the latter to feed the strip the distance between two teeth on the escapement wheel, a ratchet wheel rotatable with the spring barrel, a spring-pressed pivoted pawl engaging said ratchet wheel, and a fly nut for turning the spring barrel in one direction on its respective spindle and winding the spring therein, the coöperation of the teeth on the feed roll with the perforations in the strip, and of the escapement wheel insuring that the strip is moved an exact and equal amount at each operation of the apparatus.

1,297,889. CORE-DRILL. FRANK MUSSER, New York, N. Y. Filed Apr. 12, 1917. Serial No. 161,512. 9 Claims. (Cl. 255—72.)



1. In a core drill, a hollow drill bit comprising inner and outer concentric tubes and means for supplying abrading material between said tubes to the cutting edge of said bit.

2. In a core drill, a core barrel, a tubing surrounding said core barrel and providing a passage between said outer tubing and core barrel, a cutting tool on said core barrel and outer tubing adapted to use abrading material and means for supplying abrading material from the surface to said cutting tool as the cutting progresses through the passage within the drill and outside of said core barrel.

9. In a core drill, tubes forming a double drill bit having a core barrel, means coöperating with said drill bit for supplying abrading material between the tubes forming said double drill bit, comprising a central hollow drill rod, a hollow coupling connecting said drill bit and hollow drill rod, said parts forming a passage for normally supplying abrading material through said hollow drill rod, a valve contained within said coupling, said valve adapted to be opened under heavy pressure to open a passage from the hollow drill rod to the core barrel.

1,297,890. DETACHABLE FASTENER. HELEN G. MONSON, Riverside, Ill. Filed June 20, 1918. Serial No. 241,028. 1 Claim. (Cl. 24—108.)



A device of the character described consisting of a button proper, a shank projecting therefrom and having the outer end reduced to form an annular shoulder, the reduced portion being provided with an annular groove to form a head, a socket member consisting of a plate like body, a central circular socket formed in the body and having opposed slots in the walls thereof, a spring member seated in the plate like body, arms formed at the terminals of the spring member and seated in the slots and projecting partially within the socket for engagement with the groove of the reduced portion upon the insertion of the head in the socket for maintaining the annular shoulder against the adjacent face of the body, the shoulder acting as a means for preventing swinging of the head in the socket when the button is subjected to lateral strains subsequently as described.

1,297,891. EXTENSION PISTOL-BARREL. EDWARD NORTON MOON, Oakland, Calif., assignor to Combination Police Club and Extension Pistol Barrel Corporation, a Corporation of California. Filed Nov. 16, 1916. Serial No. 131,788. Renewed Aug. 3, 1918. Serial No. 248,211. 6 Claims. (Cl. 42—77.)



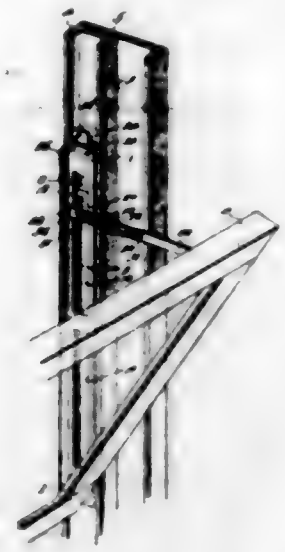
2. An extension barrel for pistols comprising a sleeve having means for detachably engaging a pistol barrel, an extension barrel, a tube inclosing said barrel and adjustably engaging said sleeve, and a lock nut working on said tube and abutting one end of said sleeve.

3. An extension barrel for pistols comprising a sleeve having means for detachably engaging a pistol barrel, an extension barrel, a tube inclosing said barrel and adjustably engaging said sleeve, a collar attached to said sleeve, and a knob attached to said collar.

1,297,892. WINDOW. HENRY MUTCHNIK and HYMAN RUBOW, Baltimore, Md. Filed Mar. 30, 1918. Serial No. 225,746. 2 Claims. (Cl. 20—40.)

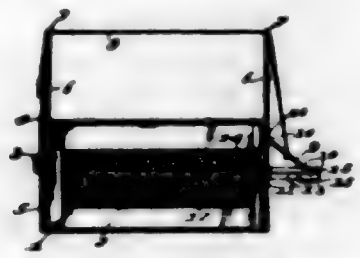
1. In a window of the class described, a casing, a hanging stile arranged for vertical sliding movement in the

casing and provided with a chamber in the side next the casing, a drum carried by the stile and mounted for rotation, a spring to turn the drum in one direction and a



cord having one end connected to the drum and winding thereon by the action of the spring, the other end of the cord being fastened to the casing.

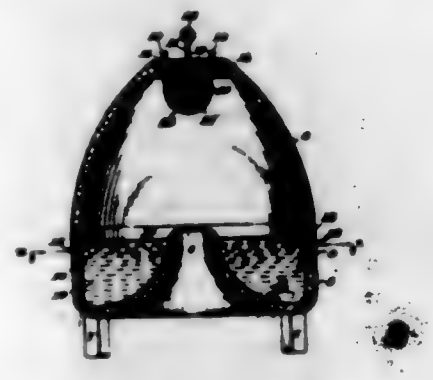
1,297,893. TRAP. CHARLES H. NASH, Ravenna, Ohio. Filed Apr. 30, 1918. Serial No. 231,640. 1 Claim. (Cl. 43—19.)



A trap comprising a cage having an opening at one end, a slidably mounted door for said opening, a trip lever carried in that end of the cage remote from the opening, the said trip lever being partly interior and partly exterior to the cage and being mounted both for swinging and rotating movement, the exterior portion of the trip lever being provided with a plurality of notches arranged in the form of a spiral therearound, uprights mounted on the cage adjacent the door and the trip lever respectively, a cable having one end attached to the door and passing slidably over the upper ends of the uprights, and a bar to which the remaining end of the cable is connected, the upright adjacent the trip lever having a notch formed therein, the bar having one end engaging in the last said notch and the other end in any one of the notches formed on the trip lever, whereby the extent to which the door may be made to uncover the opening may be varied by rotating the trip lever to bring a particular notch thereon into position for engagement with the bar, the swinging movement of which the trip lever is capable permitting the bar to be disengaged and the door thereafter to be lowered by gravity.

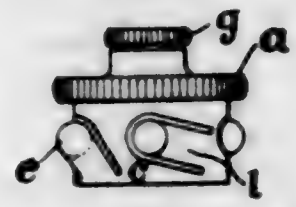
1,297,894. FLY-TRAP. STANLEY NAVROT, Hellwood, Pa. Filed Oct. 17, 1918. Serial No. 258,610. 3 Claims. (Cl. 43—22.)

1. A fly trap including in combination with a base member in the form of an annular trough provided with an inwardly extending central entrance member, an inverted cup-shaped member detachably connected thereto having a central circular opening in the top thereof, a bushing removably secured within said opening, a depending cage rigidly suspended from said bushing, a plug removably positioned within said bushing, and a bait



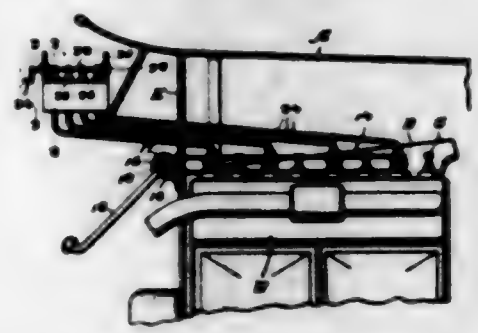
holding means carried by said plug arranged for reception within said cage when operatively disposed.

1,297,895. PIPE FOR REGULATING THE SMOKING OF TOBACCO. WILLIAM HENRY NEAL, London, England. Filed July 11, 1914. Serial No. 850,428. 1 Claim. (Cl. 131—12.)



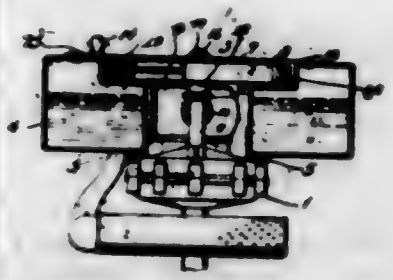
A cover for tobacco pipes consisting of two parts, one of which comprises a horizontal flange adapted to rest upon and close the bowl of the pipe and having an aperture therein, an upwardly extending wall surrounding said aperture and a downwardly extending ring portion having strips cut therein, said strips being provided with outwardly projecting studs, the other part comprising a bowl-shaped valve member having a lateral orifice and being adapted to operate in said walled aperture whereby the supply of air may be regulated as set forth.

1,297,896. ENGINE-PRIMER. FRANK NEMVO, Jr., Geyserville, Calif. Filed Aug. 23, 1918. Serial No. 251,177. 2 Claims. (Cl. 123—187.5.)



1. A device of the character described comprising in combination with an internal combustion engine, a plurality of valve priming cups communicating with the cylinders of the engine, sprockets on the valve stems of the priming cups, a stationary bracket, a shaft journaled through said brackets, means for holding said shaft normally in one position, the treadle secured to said shaft, a sprocket secured upon said shaft, a chain trained about all of said sprockets, movement of said treadle moving the valves of said priming cups to open position, a fuel tank, a plurality of pipes communicating with said tank and with said priming cups, and valve controlled means whereby fuel may be admitted to said pipe.

1,297,897. INTERNAL-COMBUSTION ENGINE. RICHARD B. OWEN, Washington, D. C. Filed Oct. 8, 1915. Serial No. 54,842. 14 Claims. (Cl. 123—179.)



1. In combination with an internal combustion engine having the fly wheel thereof adapted for use in starting the engine, a fuel tank mounted adjacent the fly wheel and shaped to cover the same at the rim edge thereof and to leave the outer face exposed for manual manipulation in the starting of the engine, and a cover hingedly mounted on the fuel tank to be closed over the fly wheel.

1,297,898. ROCKET. HENRY J. PAIN, New York, N. Y. Filed July 15, 1918. Serial No. 244,833. 5 Claims. (Cl. 102—28.)

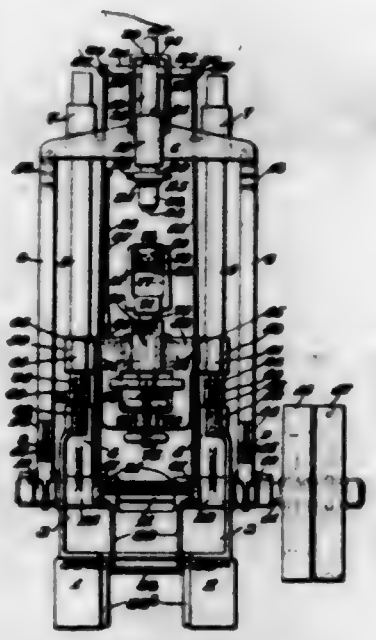


1. A signal rocket comprising a case, a transverse partition wall therein, an elevating charge extending between the transverse wall and an open end of the case, a signal light in the other end of the case, and means associated with the signal light and fired by the elevating charge for ejecting the signal light from said case and directly and simultaneously igniting the same in a plurality of its parts distant from each other.

5. A signal rocket comprising a case, an elevating charge therein, a signal light also in the said case, an ejecting charge ignited from the elevating charge for expelling the signal light from the rocket case, and a fuse extending beyond the ends of the signal light and folded over the same so that when lighted from the ejecting charge, both ends of the signal light are ignited thereby substantially simultaneously when the signal light is ejected from the rocket case.

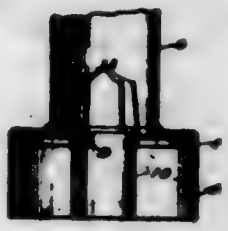
1,297,899. MACHINE FOR CUTTING BLANKS FROM LEATHER. DENNIS PARKS, St. Louis, Mo. Filed June 26, 1916. Serial No. 105,773. 18 Claims. (Cl. 164—25.)

1. In a machine of the class described, a work-support, a reciprocatory member, an independently-movable member carrying a die, means for automatically effecting an engagement between said reciprocatory member and said independently-movable member when the latter is moved a predetermined distance, whereby the die is driven into the work, and means for automatically releasing such



engagement after a single operation of said independently-movable member in this relation.

1,297,900. BISCUIT-CUTTER. SARAH S. PATTON, Acworth, Ga. Filed Nov. 20, 1918. Serial No. 263,267. 2 Claims. (Cl. 107—51.)

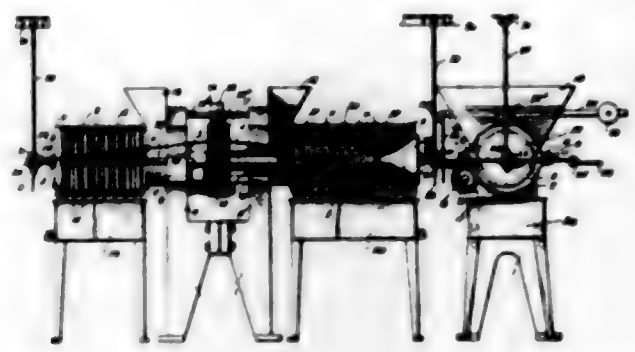


1. A device of the character described comprising a cylindrical cup member, a reduced cylindrical extension formed on the top of said cup member and communicating therewith serving as a handle, a disk disposed within said cup portion against the top wall thereof and provided with a central hole, a flange extending from one side of said disk in encircling relation to said hole, and a plurality of prongs extending from the other side of said disk in circular series in relation to said central hole, said extension and said prongs being of substantially the same length as the sides of said cup member, and said disks being reversible within said cup member whereby said flange or said prongs may be positioned operatively for coöperation with said cup member.

1,297,901. COMPOUND PRESS. JAMES M. PEERSON, Florence, Ala. Continuation of application Serial No. 90,289, filed Apr. 10, 1916. This application filed May 7, 1917. Serial No. 166,880. 22 Claims. (Cl. 100—48.)

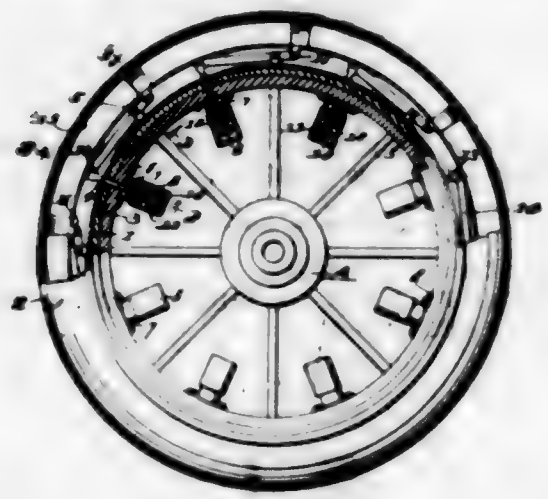
1. In a press of the character described, two corresponding aligning barrels, a rotatable shaft having a right hand expressing screw working in one barrel and a left hand expressing screw working in the other barrel of the press, a center drive for the rotatable shaft, a

bearing means which supports the barrel and shaft ends in overhung position, and means to control the discharge



of stock from the free ends of the barrels, substantially as described.

1,297,902. RESILIENT TIRE. NICHOLAS C. PELLISSERO, Scammon, Kans., assignor of one-fifth to Al Luckey, Columbus, Kans. Filed Apr. 24, 1918. Serial No. 230,462. 5 Claims. (Cl. 152—8.)

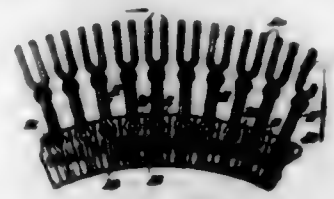


1. The combination with a wheel having a clencher rim and a tire casing engaged and held on by said rim, of a plurality of overlapping plates conforming both in transverse and longitudinal outline with the tire casing, said plates being carried within the casing, a lever pivotally connected with each plate and fulcrumed upon the wheel, and a spring connected with each lever, so that the spring and plate connected with each lever may be joined with the longer and shorter arm thereof respectively.

4. The combination with a wheel having a clencher rim and a tire casing engaged and held on by said rim, of a plurality of overlapping plates conforming in transverse and longitudinal outline with the tire casing, said plates being carried within the casing, a supplemental rim carried by the wheel and between the flanges of the clencher rim, a lever pivotally connected with each plate and fulcrumed upon the supplemental rim, rod members passing radially through the supplemental rim and through the felly of the wheel, and each having pivotal connection with one of the levers, a nut threaded upon the inner end of each rod member, and a spiral spring in surrounding relation to each rod member and compressed between the inner face of the felly of the wheel and the nut.

1,297,903. COMMUTATOR-TERMINAL AND METHOD OF MOUNTING SAME. HENRY HARRISON PHILLIPS, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Apr. 17, 1914. Serial No. 832,463. 5 Claims. (Cl. 200—12.)

1. In combination, a commutator segment having a groove at one end, a wall of said groove being provided with a recess, a commutator terminal carried in said groove, said terminal being provided with a projecting portion fitting into said recess, said segment having a projecting portion engaging the side of said terminal to hold same against edgewise movement.



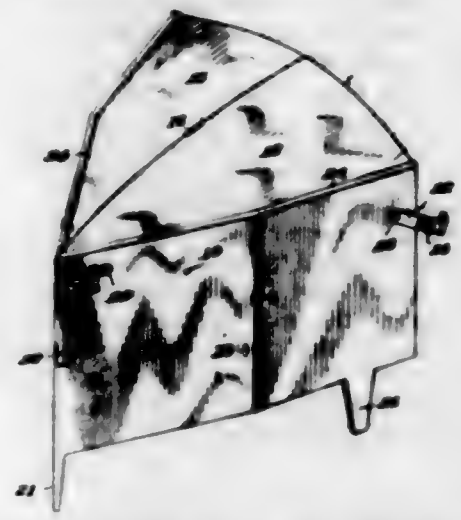
2. In combination, a commutator segment having a groove in one end, a commutator terminal carried in said groove, said terminal being provided with means to prevent longitudinal movement in said groove, said groove being deeper than the width of said terminal, whereby the walls of said groove may be flanged over to engage the side of said terminal to hold same against edgewise movement permitting the ready securing of the terminal after the commutator is assembled.

3. The method of securing together a commutator segment and a terminal which consists of providing a groove in said segment of a depth greater than the width of said terminal, inserting said terminal into said groove and burring over the walls of said groove to engage the side of said terminal, whereby said terminal may be readily secured in said segment at any time.

4. The method of securing together a commutator segment and a terminal which consists of providing a groove in said segment of a depth greater than the width of said terminal, inserting said terminal into said groove and striking the end of said segment at places adjacent said groove to throw an overhanging flange along said terminal whereby said terminal may be readily secured in said segment at any time.

5. The method of joining a terminal having a pair of shanks to a commutator segment having a groove in its end, said groove having a pair of recesses communicating therewith which consists of inserting said shanks in said groove, expanding portions of said shanks into said recesses and burring over the walls of said groove to engage the side of said terminal.

1,297,904. PORTABLE TRENCH. JAN PIETRUSZKIEWICZ, Kulpmont, Pa. Filed Nov. 12, 1918. Serial No. 262,220. 4 Claims. (Cl. 89—36.)



1. A trench comprising side walls hingedly connected together adjacent their forward ends having inwardly extending top flanges, top sections hinged together and to said side walls, arranged in dome-shaped form between said walls when the trench is set up for use with said flanges overlying the marginal portions of said sections in close contact therewith and retaining springs pivoted to the side walls contacting interiorly of said top sections when the trench is unfolded.

1,297,905. TELEPHONE-TRANSMITTER. ARTHUR P. PINKERS, Ridgefield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 10, 1916. Serial No. 96,497. 4 Claims. (Cl. 179—127.)



1. A telephone transmitter comprising a vibratory diaphragm adapted to be actuated by sound waves impinging upon one side thereof, a plurality of pockets therein, the total wall surface of said pockets located on the side of said diaphragm on which sound waves are designed to impinge being greater than the geometrical projections of said pockets on the plane of said diaphragm, comminuted material in said pockets, and an electrode opposite the open side of said pockets and sufficiently close thereto to retain said comminuted material therein.

1,297,906. WALL CONSTRUCTION. CHARLES E. QUASS, Canton, Ohio, assignor to John F. O'Dea, Canton, Ohio. Filed Mar. 11, 1916. Serial No. 83,696. 1 Claim. (Cl. 72—25.)



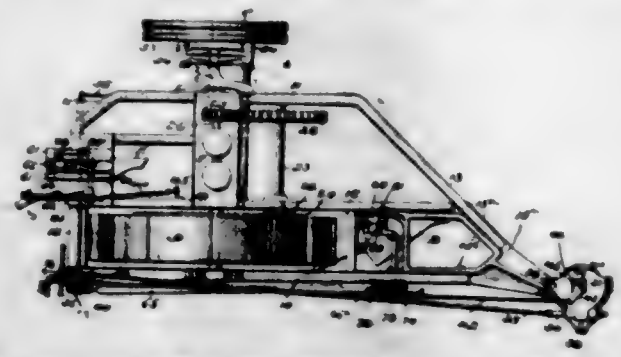
A fireproof panel adapted to be used for forming or covering the walls or ceilings of a building, comprising a flat rectangular metal casing having its edges bent at right angles to the body and then inwardly substantially parallel with the body and doubly bent outwardly substantially parallel with the body to form a narrow groove near the center of the edge and then at right angles to the body and again inwardly substantially parallel with the body, and a filling of fireproof material solidified within said casing.

1,297,907. RAKE-TOOTH. CHARLES A. A. RAND, Chicago, Ill., assignor, by mesne assignments, to International Harvester Company, a Corporation of New Jersey. Filed Nov. 19, 1917. Serial No. 202,781. 4 Claims. (Cl. 56—69.)



1. A resilient rake tooth formed of a continuous strand of wire one portion of which is coiled into a spiral having its successive convolutions increasing in radius, said tooth having an intermediate portion inclined outwardly and toward the longitudinal axis of the spiral, the opposite end of said strand of wire being extended in alinement with the longitudinal axis of the spiral.

1,297,908. MOTOR-PLOW. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Sept. 3, 1915. Serial No. 48,813. 41 Claims. (Cl. 97—30.)



1. A plowing implement comprising, in combination, a single front wheel to guide the implement and support the front end of the frame, said wheel being arranged to traverse a furrow made in the previous travel of the implement; guiding connections to said wheel including elements which are relatively adjustable to release the wheel and permit the same to caster, a large traction wheel disposed rearward of the front end of the frame and set in from the line of the front wheel and at one side of the longitudinal axis of the implement, an idle land wheel arranged rearward of the front end of the frame and at the other side of the longitudinal axis of the implement, a braking means for the land wheel, and furrow forming means carried by the frame and arranged in advance of and in line with the large traction wheel, the said front wheel, traction wheel and land wheel supporting the implement and the traction wheel traversing the furrow made by the furrow forming means in the same travel of the implement.

31. A plowing implement, comprising a frame and frame-supporting wheels, one of said supporting wheels being arranged to travel in a furrow and mounted to constitute an independently movable convertible guiding and castering wheel, said wheel having an approximately vertical pivot provided with a gear, a cap housing the gear and shiftable bodily on the frame relatively to the gear, and a second gear carried by the cap and movable thereby out of mesh with the first mentioned gear to free the wheel to follow the furrow.

39. In a motor plow, the combination of a frame, a traction wheel, means for driving the traction wheel and furrow forming members respectively arranged forward and rearward of the traction wheel and yieldable upwardly to an obstruction and to cause the tractional effect of the wheel upon the land to be maintained if a soft spot or depression is encountered.

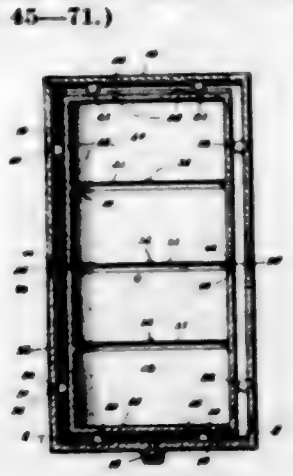
1,297,909. PLOW. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Original application filed Sept. 3, 1915, Serial No. 48,813. Divided and this application filed Jan. 2, 1918. Serial No. 209,996. 14 Claims. (Cl. 97—36.)



1. In a plowing implement, the combination of a frame, a supporting wheel and furrow forming members respectively arranged forward and rearward of the axis of the supporting wheel, said furrow forming members being

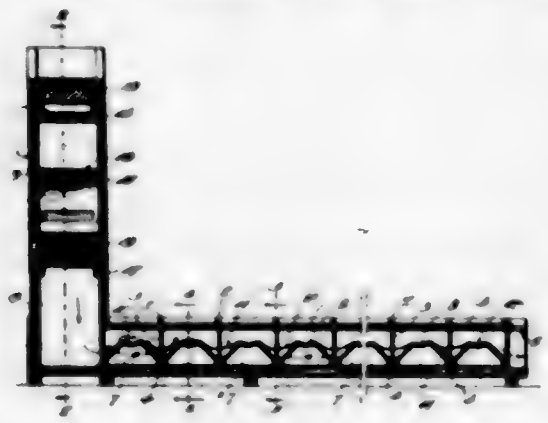
connected with the frame and tending to support the same and being yieldable upwardly to cause the tractional effect of the wheel upon the land to be maintained, substantially as described.

1,297,910. REFRIGERATOR. JAMES W. RHEA, Kingsport, Tenn. Filed June 15, 1917. Serial No. 174,941. 2 Claims. (Cl. 45—71.)



1. In a refrigerator, an outer casing comprising a plurality of integrally formed members including side walls and end portions, spacing means carried by the inner walls of said casing, an inner receptacle formed of a plurality of sections having end walls and integrally formed sides, said sections being provided with edges constructed to inter-engage one another, and said inner receptacle and outer casing each being provided with an opening, the walls of the inner receptacle extending about the edges of the opening of the outer receptacle to form an air-tight connection and a substantially continuous insulated wall of uniform thickness about said opening, a door for closing said opening, and means permitting the exhaustion of air from a space between the outer casing and inner receptacle.

1,297,911. PRECIOUS-METAL SEPARATOR. JOHN JAMES ROBERSON, Springville, Utah, assignor of one-half to James I. Rounds, Colton, Utah. Filed Aug. 15, 1918. Serial No. 250,040. 6 Claims. (Cl. 83—82.)



1. A precious metal separator comprising a sluice, a plurality of collecting boxes disposed transversely in said sluice and having open tops, a plurality of transverse partitions in said sluice between said boxes and spaced upwardly from the bottom of the former, and a longitudinal screen in said sluice extending over said boxes and under said partitions.

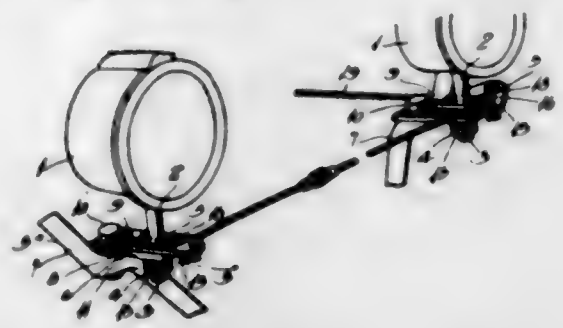
1,297,912. DEAD-FACE SWITCHBOARD. ALBERT N. ROGERS, Irwin, and WILLIAM F. O'NEILL, Wilkinsburg, Pa., assignors to Penn Electrical & Manufacturing Company, Irwin, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1914. Serial No. 832,485. 3 Claims. (Cl. 173—298.)

1. In a dead face switch board, a vertical panel of insulating material provided with an aperture extending therethrough, a double throw double pole switch directly mounted on the rear of said panel, a bell crank lever also mounted directly on the rear of said panel and adjacent said aperture, a link connecting one arm of said lever to



the swinging portion of said switch, an operating lever mounted on the front of said panel and a link extending through said aperture and connecting said bell crank lever and said operating lever.

1,297,913. DIRIGIBLE HEADLIGHT FOR AUTOMOBILES. LOUIS ROTHFUCHS, Three Oaks, Mich., assignor of one-half to Gustave Rothfuchs, Three Oaks, Mich. Filed Oct. 29, 1917. Serial No. 199,108. 3 Claims. (Cl. 240—61.)



1. An attachment for automobiles comprising a horizontal supporting plate and a bolt for attaching it fixedly to one of the lamp post seats of the automobile, the front end of said plate having a vertical opening, a horizontally swinging plate resting on said supporting plate and having an opening alined with said first named opening, said alined openings being adapted to loosely receive the threaded lower end of a lamp post, a spring to be interposed between said supporting plate and the nut of said threaded post end, whereby said swinging plate is pivoted to said supporting plate and held yieldably against the same to prevent rattling, said swinging plate having a shoulder for engagement with the foot at the lower end of the lamp post to cause said post to turn with said swinging plate, and means for swinging said plate.

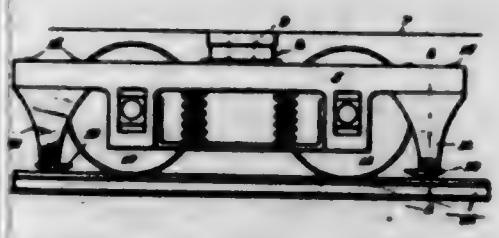
1,297,914. LEVEL. DAVID A. RUFFIN and EDGAR H. PRICHARD, Albuquerque, N. Mex. Filed May 24, 1918. Serial No. 236,381. 1 Claim. (Cl. 33—215.)



A level comprising a body having an opening with communicating recesses, a supporting structure within said opening, an indicator pivoted to said supporting structure, a weight secured to one end of the indicator, transparent

panels located within said recesses and having graduations thereon for coöperation with the indicater, screw threaded rings secured in said recesses, and rings threaded to the first named rings and overlying the peripheries of the panels.

1,297,915. CAR-BRAKE. SANTIS SABALALA, Cleveland, Ohio. Filed May 23, 1917, Serial No. 170,482. Renewed Feb. 10, 1919. Serial No. 276,265. 1 Claim. (Cl. 188—47.)



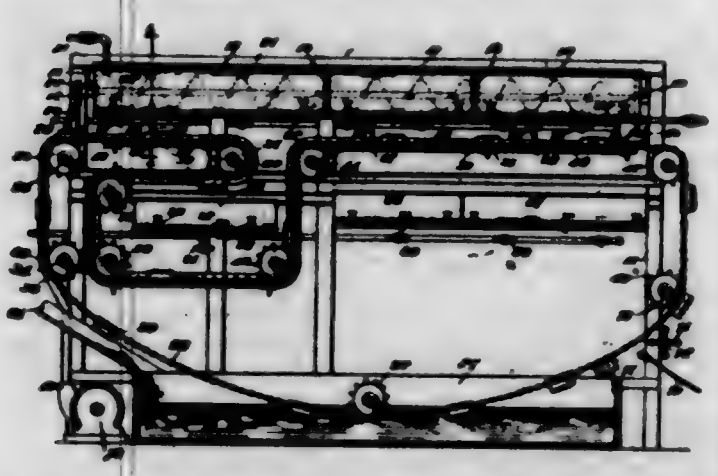
The combination with a railway truck, of supports depending therefrom in substantial alinement with the rails to a track, a rock shaft mounted in said supports and extending transversely across the track and having bearings in said supports near the upper ends thereof, arms secured to and rotatable with said rock shaft adjacent the supports, links pivotally secured to the supports near the lower ends thereof, brake shoes pivotally connected to the free ends of the links between the latter and said supports, links connecting the brake shoes and the arms, and fluid pressure means connected to the rock shaft for moving the shoes into engagement with the track rails.

1,297,916. SUPPORTING DEVICE FOR AUTOMOBILES. EDWIN H. SADLER and ERNEST L. HALL, Huntington Park, Calif. Filed Sept. 21, 1918. Serial No. 255,155. 5 Claims. (Cl. 254—88.)



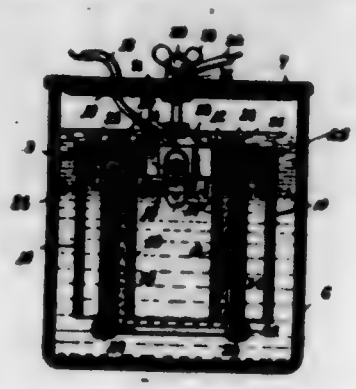
1. A device of the class described, comprising a pair of front and rear blocks having their upper edges inclined both forwardly and rearwardly, axle engaging members slidingly engaging said blocks, a member located between the front blocks and having a part thereon adapted to be struck by the front axle, means permitting the said part to be depressed to permit the automobile to pass down the forwardly inclined edges of the blocks, means for connecting said member with the axle engaging members of the rear blocks, and means for moving said rear blocks vertically.

1,297,917. CONFECTION-MOLDING MACHINE. JOHN C. SCHMITT, Chicago, Ill. Filed Jan. 2, 1917. Serial No. 140,087. 7 Claims. (Cl. 107—1.)



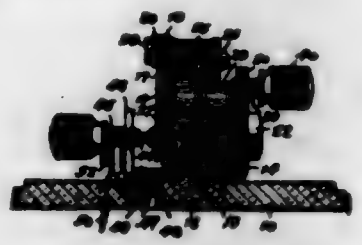
1. A machine of the class described, comprising an oil chamber, plastic material and confection-holding receptacles provided with valved outlets, a pair of endless members arranged in parallel relation and adapted to travel through said oil chamber and in proximity to the valved outlets of said receptacles, a plurality of sectional molds arranged in juxtaposition on both endless members, means whereby the mold-sections are maintained in registering relation throughout the major portion of travel along said race-way, means carried by one portion of the mold sections whereby the valved outlets of the receptacles are controlled when the molds reach predetermined points in their travel so as to receive the material discharged from said receptacles, means whereby the respective mold-sections are moved into separated relation with each other, and means whereby the separated mold sections are vibrated and the molded material discharged therefrom.

1,297,918. PRIMARY BATTERY. CHARLES B. SCHOENMEHL and MARTIN L. MARCUS, Waterbury, Conn., assignors to The Waterbury Battery Company, Waterbury, Conn., a Corporation of Connecticut. Filed Feb. 9, 1917. Serial No. 147,697. 10 Claims. (Cl. 204—38.)



3. An insulative battery element support comprising an annular insulative supporting member having an opening therethrough, a bridge extending across the support, a supporting means attached to the bridge, a series of extensions formed upon the outer sides of the annular supporting member and having downwardly projecting tapered ribs formed upon the under side.

1,297,919. ELECTROMAGNET. EDWARD SCHWARTZ, New York, N. Y., assignor to Manhattan Electrical Supply Company, Jersey City, N. J., a Corporation of Massachusetts. Filed Aug. 31, 1918. Serial No. 252,162. 8 Claims. (Cl. 177—7.)

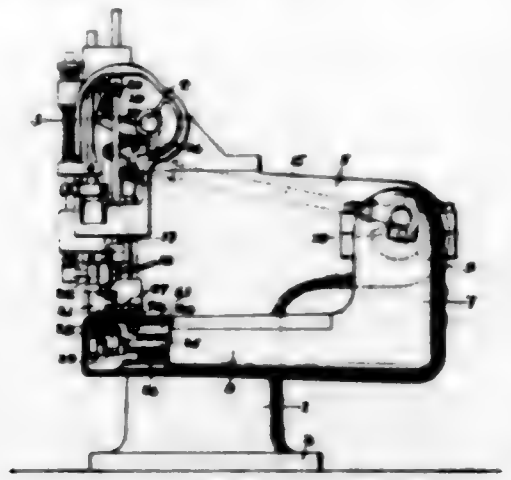


6. In an electromagnetic buzzer, a spring metal armature having a supporting head, and a bar spaced therefrom and integral spring arms connecting said head and bar.

1,297,920. FEEDING MECHANISM FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 10, 1916. Serial No. 83,298. 10 Claims. (Cl. 112—8.)

1. A sewing machine including in combination stitch forming mechanism, a standard, an overhanging arm, a horizontal arm carried by the standard, a main shaft located in said horizontal arm, a work supporting arm carried by said horizontal arm, a feeding device carried by said work supporting arm, means for positively actuating said feeding device from the main shaft in the horizontal

arm and driving connections between the main shaft and the stitch forming mechanism.



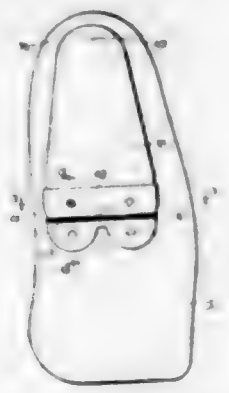
7. A sewing machine including in combination a standard, a horizontal arm carried by said standard, a depending post carried by said horizontal arm, a work supporting arm mounted at the lower end of said post, a main shaft in said horizontal arm, a main feed dog in the work supporting arm, a feed bar extending lengthwise of said work supporting arm and carrying said main feed dog, a cross shaft, means operated by the main shaft for oscillating said cross shaft, a link connecting said cross shaft to the main feed bar for moving the same back and forth, and means for raising and lowering the feed bar.

1,297,921. DEVICE FOR INDICATING THE VERTICAL. JAMES R. SHEAN, Los Angeles, Calif. Filed Sept. 5, 1918. Serial No. 252,730. 5 Claims. (Cl. 33—215.)



1. A device of the character described comprising a frame, a shaft journaled therein and canted with respect to the base of the frame, and an indicator fixed to said shaft with its center of gravity offset from the axis of said shaft.

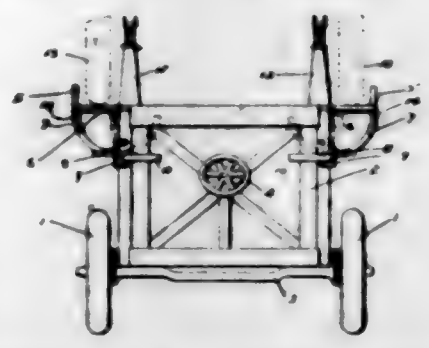
1,297,922. ARCH-SUPPORT. CLYDE L. SKINNER and PURNEY A. TUCKER, Chicago, Ill. Filed Apr. 13, 1917. Serial No. 161,696. 6 Claims. (Cl. 36—37.)



1. In a device of the kind described, an arch supporter, a bracket secured to the bottom face thereof, a cushioning member, coöperating parts on the latter and the bracket for removably securing the cushioning member in place, said several parts being relatively yieldable to permit the easy attachment and detachment of said cushioning member.

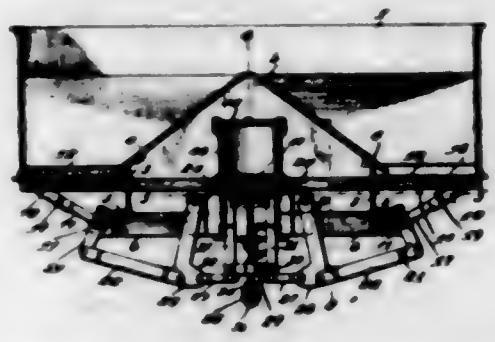
6. In combination, an arch supporter, a bracket on the bottom face thereof provided with an offset shoulder and a gripping flange, a projection on the inner face of said flange, a cushioning member insertible beneath said flange and having an opening to accommodate the projection, and guide members on the sides of said flange.

1,297,923. AUTOMOBILE-LOADING DEVICE. CARL CLYDE SMITH, Oakland, Calif. Filed May 8, 1918, Serial No. 233,367. Renewed Feb. 8, 1919. Serial No. 274,806. 3 Claims. (Cl. 254—2.)



2. A loading device for automobiles, comprising a truck with four wheels, a steering handle attached to the axle at each end, a frame mounted on the said truck, a jack of suitable design mounted on top of each of the four corners of the said frame, a track or runway extending along the outside of the said frame on both sides thereof and fastened thereto by suitable hinges; the said tracks or runways being supported at their outer edges by adjustable arms or braces; the said braces being notched at their lower ends so as to engage with corresponding notches in a supporting bar, slidably mounted along the sides of the said frame, as shown.

1,297,924. AIR-DUMPING BALLAST-CAR. THOMAS N. SOLOMON and HARRY D. SOLOMON, Detroit, Mich. Filed July 25, 1918. Serial No. 246,788. 9 Claims. (Cl. 105—248.)



1. A dumping car of the class described comprising a body, a centrally located inclined rib carried by said body, a door mounted upon said body upon each side of said rib, transversely extending angle bars secured to said door and projecting under said rib for counterbalancing said door, lever means engaging said door for swinging the same, means for swinging said lever means, and means for locking said lever means against swinging movement.

2. A dumping car of the class described comprising a body, a centrally located rib carried by said body, a door mounted upon each side of said body adjacent the lower edge of said rib, transversely extending angle bars connected to said door and projecting under said rib, means for swinging said doors, side plates supporting said doors, and said side plates provided with apertures for receiving said transversely extending bars.

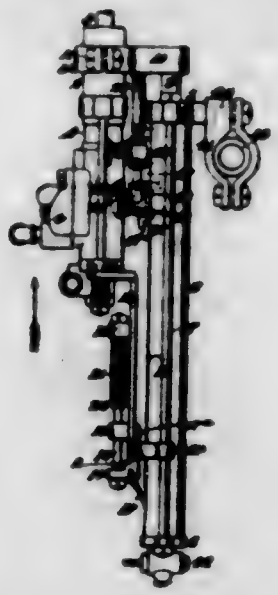
3. A car of the class described comprising a body, dumping doors hingedly secured thereto, a door controlling shaft, arms connected to said shaft and engaging said doors for swinging said doors as said shaft is rotated.

link means connected to said shaft, a hanger arm carried by said body, and means for locking said hanger arm against swinging movement.

4. A car of the class described comprising a body, dumping doors hingedly secured thereto, a door controlling shaft, arms connected to said shaft and engaging said doors for swinging said doors as said shaft is rotated, link means connected to said shaft, a hanger arm carried by said body, a vertically movable operating head, and a link connected to said vertically movable head and to said hanger arm for swinging said doors to a closed position as said head is moved vertically.

5. A car of the class described comprising a body, dumping doors hingedly secured thereto, a door controlling shaft, arms connected to said shaft and engaging said doors for swinging said doors as said shaft is rotated, link means connected to said shaft, a hanger arm carried by said body, a vertically movable operating head, and a link connected to said vertically movable head and to said hanger arm for swinging said doors to a closed position as said head is moved vertically, and means for locking said head against vertical movement.

1,297,925. AUTOMATIC PNEUMATIC FEED. HAROLD I. STAGG, Soulsbyville, Calif. Filed Feb. 27, 1917. Serial No. 151,290. 11 Claims. (Cl. 121—10.)



1. The combination with a pneumatic hammer and drill and a carriage upon which they are slidably mounted, of pneumatically actuated means for holding the hammer and drill against the work when operating, and a resilient member coöperatively connecting the drill and carriage permitting the recoil of the hammer while operating, said member also adapted to feed the hammer and drill in a forward direction on the carriage.

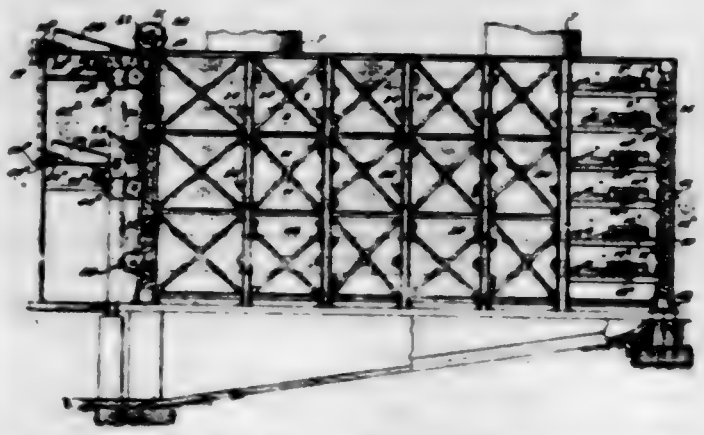
2. The combination with a pneumatic hammer and drill and a carriage upon which they are slidably mounted, of pneumatic actuated means for holding the hammer and drill against the work when operating, and a resilient stop member coöperatively connecting the drill and carriage and coöperating with the pneumatic means to feed the drill in a forward direction.

3. The combination with a pneumatic hammer and drill and a carriage upon which they are slidably mounted, of pneumatic actuated means for holding the hammer and drill against the work when operating, and a spring cushioned stop member mounted on the drill adapted to lock the hammer and drill against return movement on the carriage but permitting recoil of the same, said stop member being effected by the recoil of the hammer and drill and coöperating with a toothed rack bar to feed the hammer and drill in a forward direction on the carriage.

4. The combination with a pneumatic hammer and a cylinder in which the hammer is mounted, of a carriage upon which the cylinder and hammer are slidably mounted, pneumatically actuated means for holding the cylinder and hammer against the work when operating, resilient means coöperatively connecting the drill and carriage securing the hammer and cylinder against rearward movement on the carriage but permitting recoil of the cylinder, and means for transmitting the recoil movement of the cylinder to feed the cylinder and hammer in a forward direction on the carriage.

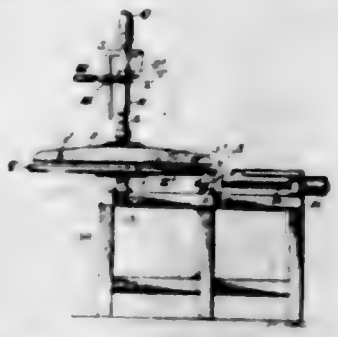
5. The combination with a pneumatic hammer and drill and a carriage on which they are slidably mounted, of pneumatic means for holding the hammer and drill against the work when operating, and resilient means coöperatively connecting the drill and carriage actuated by a recoil produced in the hammer when the hammer is operating for automatically feeding the hammer and drill in a forward direction upon the carriage.

1,297,926. DRYING-MACHINE. ALDEN B. STARR, Brooklyn, N. Y. Filed Nov. 7, 1916. Serial No. 129,917. 3 Claims. (Cl. 34—12.)



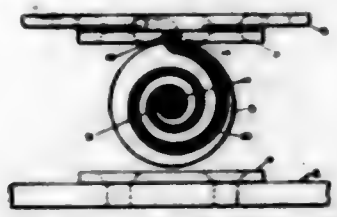
3. A cocoanut meat drying machine comprising a drying chamber having a perforated bottom, means for delivering preheated air to the bottom, a plurality of endless conveyers in the chamber disposed one above the other, and arranged in two sets, each conveyer except the lowermost of each set being arranged to deliver its contents to the conveyer immediately below, two chutes, one arranged to receive the contents from each lowermost conveyer, and impelling means for the conveyers arranged to drive one set at one rate and the other set at another rate.

1,297,927. CLAMPING DEVICE FOR HEADING-MACHINES. CHARLES F. STEWART and ERNEST N. DICKERSON, Kinston, N. C. Filed Feb. 12, 1918. Serial No. 216,810. 1 Claim. (Cl. 147—36.)



A machine for cutting the entire head of a hogshead, comprising a rocking frame and support therefor, a table pivotally mounted upon said rocking frame, a depending tubular shell having oppositely disposed slots therein, a shaft telescoping within said shell, beams secured to the lower end of said shaft and spaced apart, a collar fixed to the shell, an angle lever passing through said slots, and a link pivotally connecting one end of the lever with said collar, a link connecting the upper end of the shaft to the portion of the lever within the shell, a laterally extending bar secured to said shell and having notches in the under edge thereof, and a pin secured to the lever engaging said notches.

1,297,928. ROLLER SIDE BEARING. ARNOLD STUCKI, Pittsburgh, Pa. Filed May 28, 1918. Serial No. 236,998. 8 Claims. (Cl. 64—64.)



1. In an anti-friction side bearing, the combination with plain flat upper and lower bearing members, of an interposed roller, and a spring at each end of the roller, each spring being rigidly secured at one end to one of the bearing members and having its opposite end operatively connected to the roller and arranged to guide said roller, center the same, and hold it constantly against said bearing member.

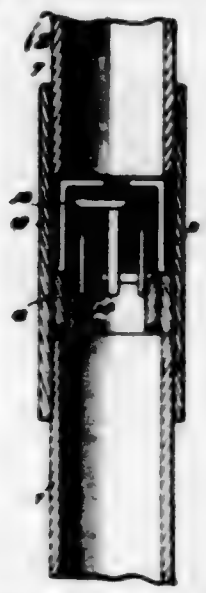
2. In an anti-friction side bearing, the combination with plain flat upper and lower bearing members, of an interposed roller provided with an axle, and a spring at each end of the roller, each spring being rigidly secured at one end to one of the bearing members and having its opposite end connected to the roller axle and serving to guide said roller, center the same, and hold it constantly against said bearing member.

1,297,929. DIFFERENTIALLY-CONNECTED EXPLORING-COILS. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 28, 1915. Serial No. 53,120. 9 Claims. (Cl. 175—183.)



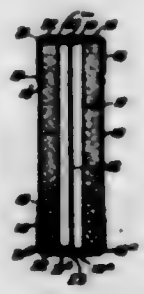
8. The method of locating a fault in a conductor which consists in supplying a suitable inducing current to said conductor and carrying along the length of the cable a pair of induction coils which are separated from each other by a substantial distance and so connected to a current responding device that when both coils are between the fault and the source of current substantially no current will flow in the current responding device, and when the coils are on opposite sides of the fault an appreciable current will flow in the current responding device.

1,297,930. PUMPING APPARATUS. RUSSELL R. TEMPLE, Santa Paula, Calif., assignor of one-half to Robert C. Hansen, Los Angeles, Calif. Filed Apr. 30, 1917. Serial No. 165,368. 2 Claims. (Cl. 103—66.)



1. The combination of a pair of pipe sections having threaded ends, a threaded coupling arranged to engage the threaded ends of the pipe sections for connecting them together, a cage having a threaded portion arranged to engage the threads of the couplings on the interior thereof, a valve seat threaded externally and arranged to engage internal threads on the cage for holding the valve seat in position, and a valve disposed within the cage and arranged to engage the valve seat.

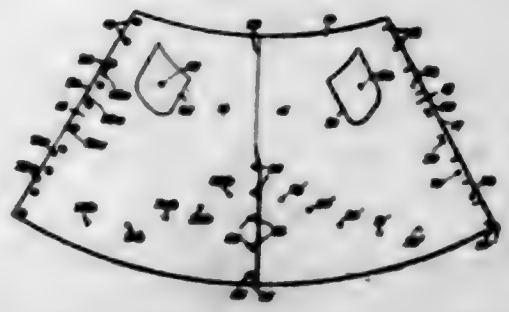
1,297,931. ELECTRIC FUSE. FRANCIS IGNATIUS THIBAUT, San Francisco, Calif. Filed Apr. 13, 1918. Serial No. 228,461. 3 Claims. (Cl. 175—273.)



1. A fuse of the class described including a body having a throughbore, a fuse wire disposed axially therein, the diameter of said bore being materially greater than that of the wire, detachable caps on the ends of said body each presenting a rim fitting the exterior of the body, the rims of the caps and the body adjacent to the end having coengaging means to prevent displacement of the caps, radially depressed seats in the ends of the caps, the cap at one end having a central hole for the passage of the wire, said hole being materially smaller than the bore of the body and concentric with said bore, the opposite cap having a hole therein in register with and approximately the same diameter as said bore, the last-mentioned cap having a radially depressed seat for the wire and having a tongue at the inner end of the seat extending radially at a side of the bore and terminating adjacent to the center of the bore, the last-mentioned seat being continued through said tongue, and covers on said caps movable over said seats or away from the same, the ends of the wire being bent and accommodated in said seats beneath the covers.

3. A fuse holder of the class described including a body having a throughbore, and caps removably fitting the ends of the body, one cap having a central hole therein of smaller diameter than the bore, the opposite cap having a hole approximately the same diameter as the bore, and a tongue extending from the cap at a side of the bore to the approximate center of the latter, the ends of said caps having radial seats therein adapted to receive the ends of a fuse wire, the seat in the first-mentioned cap extending to the central hole thereof, and the seat in the opposite cap extending radially inward through the said projection; together with means to hold the wire on said seats.

1,297,932. CONVERTIBLE SKIRT AND BREECHES. CORALLIE D. THOMA, New York, N. Y. Filed July 24, 1918. Serial No. 246,541. 3 Claims. (Cl. 2—42.)



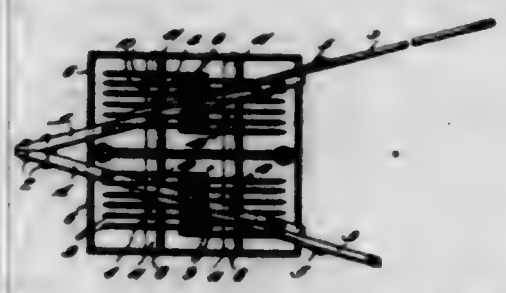
1. The herein described convertible skirt and breeches, the same comprising right and left side portions permanently connected adjacent to the waistline by a vertical

seam, the two side portions being detachably closed from said seam down to the lower edge and along another portion of the garment remote from said seam, means to utilize a portion of the attachment means aforesaid to secure one side portion to a diagonally opposite part of the other side portion when worn as breeches, and auxiliary fastening devices to adjust the lower portion of each side portion as a breeches leg.

2. The herein described convertible garment comprising skirt portions, means to detachably connect said portions in skirt formation, said attachment devices being separated when converted from skirt to breeches, means to utilize a portion of said fastening devices to adjust the breeches legs and produce a military hip design, and auxiliary fastening devices to complete the adjustment with the breeches legs.

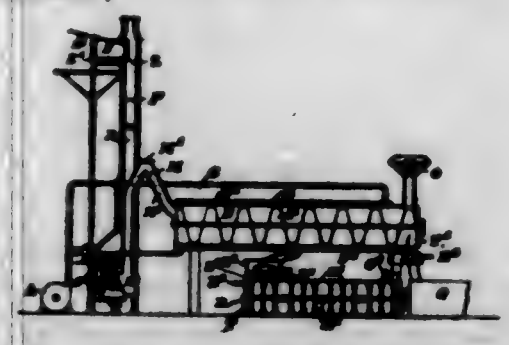
3. The herein described convertible garment adapted to be worn either as a skirt or as breeches, the same comprising right and left side portions, means to attach said side portions together in skirt formation, pockets formed on the side portions, auxiliary fastening means beneath said pockets, the first mentioned attaching means being separated in the conversion of the garment into breeches and a portion of said attachment means coöperating with the fastening means beneath the pockets as a part of the means to adjust the breeches legs, and auxiliary separable fasteners serving to complete the leg adjustments along the insides of the legs.

1,297,933. BOLL-WEEVIL-DESTROYING PLOW. NATHANAEL THOMAS, Keo, Ark. Filed Apr. 6, 1918. Serial No. 227,082. 1 Claim. (Cl. 55—30.)



In a plow for the purpose described, the combination of rearwardly diverging members, connected to each other adjacent their forward ends and forming a frame; said frame having handles connected to the said members and further being braced by struts, a pair of rectangular sub-frames arranged below the said members and connected to each other adjacent their forward and rear ends, hangers for connection of the sub-frames to the rearwardly, diverging members; said hangers comprising an intermediate portion disposed under and connected to one rearwardly diverging member, and further having depending portions at the ends of the intermediate end portion fixedly connected to end bars of the sub-frames, shafts mounted in the side bars of the sub-frames, and earth working elements carried by the sub-frame.

1,297,934. PROCESS OF MANUFACTURING CERTAIN LEAD PRODUCTS. WILLIAM P. THOMPSON, Liverpool, England. Filed Feb. 6, 1915, Serial No. 6,607. Renewed Feb. 5, 1918. Serial No. 275,199. 8 Claims. (Cl. 134—67.)



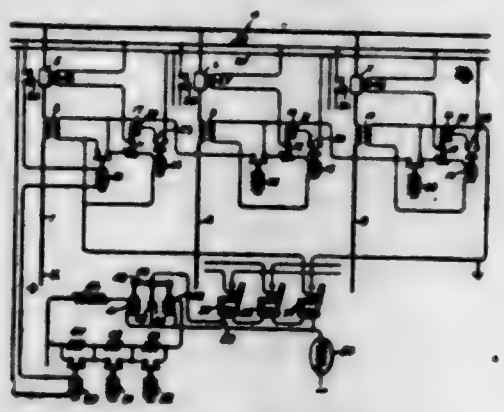
1. The process of making white lead, which consists in heating the lead to a degree considerably above its melting point; aspirating it through fine passages of uniform size with highly-heated air, the lead and air being brought into contact under a considerable pressure and the air being sufficient to fully oxidize the lead to monoxid; cooling the oxidized dust thus formed; treating it at from 90° to 140° F. with carbonic acid and the fumes of acetic acid having sufficient vapor of water to cause the compound to be converted into hydrated white lead; and at the same time agitating the dust.

1,297,935. PROTECTION OF PARALLEL FEEDERS. OLIVER C. TRAVER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,297. 14 Claims. (Cl. 175—294.)



2. In combination with a plurality of feeders, a loop circuit inductively related to all of said feeders for balancing out the effect of load currents induced therein, electroresponsive means for controlling the circuit of each feeder selectively operative in response to unbalanced currents in said loop circuit, said electroresponsive means for each feeder being connected in shunt to the other electroresponsive means in series whereby that means corresponding to a feeder at fault receives the greatest current.

1,297,936. PROTECTION OF PARALLEL FEEDERS. OLIVER C. TRAVER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,298. 9 Claims. (Cl. 175—294.)



1. In combination with a plurality of parallel feeders, transformers operatively related to said feeders, a loop circuit including the secondaries of said transformers in series, a separate shunt circuit to each of said secondaries, fault responsive means in each of said shunt circuits selectively operative in response to current therein of a predetermined amount and in a predetermined direction, each of said fault responsive means comprising two separate electroresponsive devices in series, and a trip circuit controlled by each of said fault responsive means adapted to be energized when its respective electroresponsive devices are both in circuit closing position.

1,297,937. COLLAR. JOHN M. VAN HEUSEN, Boston, Mass. Filed Aug. 1, 1917. Serial No. 183,829. 10 Claims. (Cl. 2—67.)

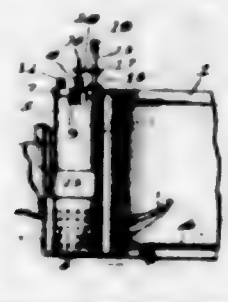
10. A soft folding or turn down collar made up of a neck band portion and a folding or turn down portion,

both of said portions being of multiply fabric and having curvilinear edges corresponding to the fold line of the



collar, and both of said fabrics having integral thin edges projecting therefrom and secured together near the fold line of the collar.

1,297,938. COOKING UTENSIL. DANA P. VARNER, Baltimore, Md. Filed Aug. 30, 1918. Serial No. 252,079. 1 Claim. (Cl. 200—34.)



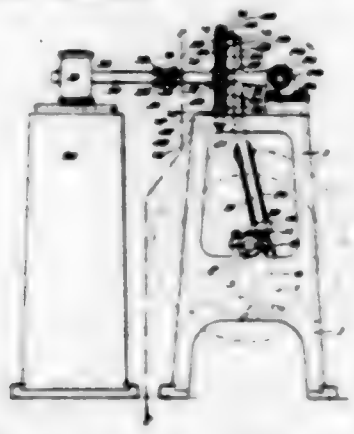
A device of the class described comprising a float casing, a float therein, a rod connected with the float, contact means closed by said rod, a split collar engaging said casing, and a clamping spring having hooked portions secured to said collar.

1,297,939. AUTOMOBILE LAND-TORPEDO. CARL VENDER, Kenosha, Wis. Filed Aug. 30, 1918. Serial No. 252,049. 1 Claim. (Cl. 102—2.)



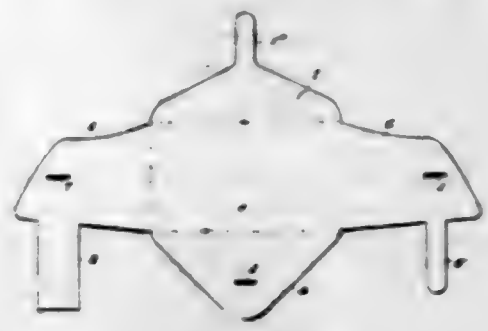
In a device of the class described, means carried by a motor vehicle for containing an explosive charge, and a firing device including a firing pin, a tubular member, means for adjustably supporting the latter for varying the inclination thereof, and an element freely movable through the tubular member upon the impact of the vehicle with an obstruction, said freely movable element contracting with the firing pin.

1,297,940. TRIP-HAMMER. ANTONIO VINCENT, Oakland, Calif. Filed Jan. 31, 1917. Serial No. 145,744. 6 Claims. (Cl. 78—26.)



1. A gold beating machine comprising an anvil, a shaft, actuator members one of which is slidably mounted upon the other, means carried by the shaft for actuating said slidable member, a pivoted hammer mounted to coöperate with said anvil, and operative connections between said hammer and said slidable member.

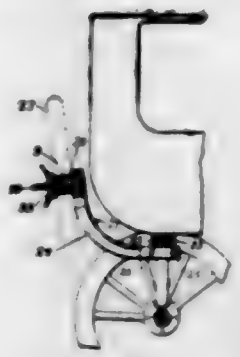
1,297,941. ENVELOP. JOSEPH WAGNER, Buffalo, N. Y. Filed May 20, 1918. Serial No. 235,628. 2 Claims. (Cl. 229—82.)



1. An envelop formed from a single blank of material having a front side, and top, bottom and end flaps; the top flap having a tongue and the bottom and end flaps having slots positioned to register, and the end flaps being provided with lateral strips, one of the said lateral strips being positioned to pass outwardly through the registered slots in the end and bottom flaps, and the other strip being comparatively wide and being adapted to be connected adjacent to its free end to the inner sides of the end flaps and to lie between the front and rear walls of the envelop and opposite the said slots.

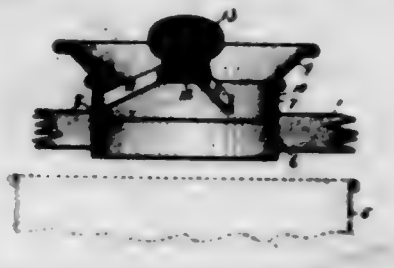
2. An envelop comprising a front side, and top, bottom and end flaps, the top flap being provided with a tongue bearing adhesive at its inner side and the bottom and end flaps being connected together by adhesive and provided with registered slots, and one end flap having a comparatively broad lateral strip positioned between the front side, on the one hand and the bottom and end flaps, on the other, and connected adjacent to its free end to the inner sides of the end flaps, and the other end flap having a lateral strip that extends outwardly through the registered slots in the end flaps and the bottom flap and has its inner portion disposed between the end flap by which it is carried and the comparatively broad strip.

1,297,942. WHEEL-CARRIER FOR DEMOUNTABLE WHEELS. WILLIAM FREDRICK WARRENBURGH, New York, N. Y. Filed Sept. 17, 1918. Serial No. 254,439. 2 Claims. (Cl. 224—29.)



1. A wheel carrier comprising a standard having two side members, each constructed from angle iron, a spacing plate structurally connected with said members at the free ends thereof, and means for securing said members in service relation, said means embodying perforations formed in the outer flanges of said members, said perforations being arranged to aline with for receiving the threaded ends of the spring clips of an automobile for holding the platform spring for supporting the body of the automobile.

1,297,943. DISH-CLEANER. WILLARD R. WALKER, Syracuse, N. Y., assignor to Walker Brothers Company, Syracuse, N. Y., a Corporation of New York. Filed July 28, 1916, Serial No. 111,931. Renewed Aug. 2, 1918. Serial No. 248,075. 4 Claims. (Cl. 220—115.)



1. In a device for removing refuse from dishes, the combination of a tubular chute, an underlying receptacle and an elastic buffer centrally supported in the chute and of considerably less diameter than that of the interior of said chute.

2. In a device of the character described, a chute, a resilient pad of less diameter than and alined with the opening in the chute and spaced apart from the walls of said chute to form a passage between the outer walls of the pad and chute, and supporting means for the pad.

3. In a device of the character described, the combination of a hopper, a socketed hub centrally supported in the hopper, and a pad supported in the socketed member.

4. In a device of the character described, the combination of a hopper having inwardly projecting arms in spaced relation circumferentially, a socketed member supported by the arms, and a resilient anvil supported in the socketed member.

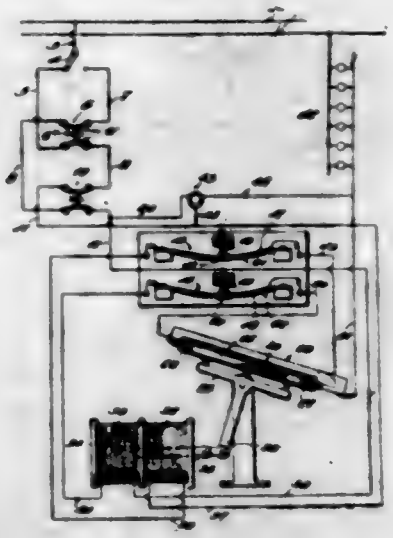
1,297,944. SHAVING-BRUSH. FRANK W. WALLACE, Chattanooga, Tenn. Filed Mar. 25, 1918. Serial No. 224,573. 1 Claim. (Cl. 15—38.)



In a shaving brush, a one-piece core provided with a reduced center, a tuft of bristles whose rear end surrounds said core, a bristle holder formed of a split sleeve receiving said rear ends of said bristles and closed around the same, one end of said sleeve having integral inwardly extending teeth embedded in said bristles opposite the contracted center of said core, a ring secured around this end of said sleeve to prevent expansion thereof, the other end of the sleeve having ventilating notches, a closing plate secured to said last named end of the sleeve to prevent expansion of such end, and a handle having a socket receiving said sleeve, said ring acting to limit the insertion of said sleeve into said socket.

1,297,945. AUTOMATICALLY-EXTINGUISHING ELECTRIC-LIGHTING SYSTEM. JOHN R. WARDEN and HOWARD C. WARDEN, Jr., Paducah, Ky. Filed July 23, 1917. Serial No. 182,829. 4 Claims. (Cl. 171—97.)

1. The combination of a double-throw switch, a thermatic relay, a three-point switch, a plurality of conductors in circuit with said double-throw switch and thermatic relay and three-point switch, main conductors one of which is in circuit with said double-throw switch, a branch conductor including a medium of work and being in circuit with another one of said main conductors and in circuit with the said plurality of conductors, a pair of shunt conductors in circuit with said thermatic relay and the first said conductors, and means operable by the current on said shunt conductors and controllable by said thermatic relay for shifting said three-point switch alternately from point to point within a predetermined time after the said double-throw switch has been shifted.

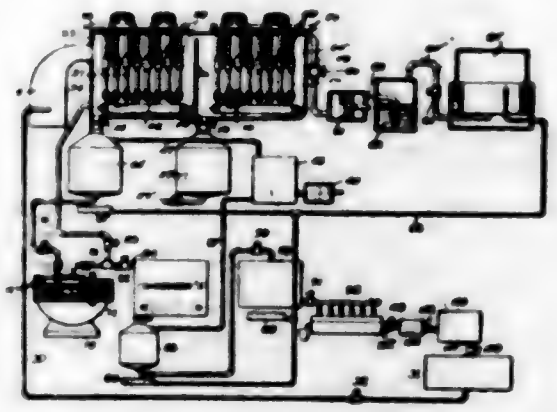


2. The combination of a double-throw switch, a thermatic relay, a three-point switch, a plurality of conductors in circuit with said double-throw switch and thermatic relay and three-point switch, main conductors one of which is in circuit with said double-throw switch, a branch conductor including a medium of work and being in circuit with another one of said main conductors and in circuit with the said plurality of conductors, a pair of shunt conductors each including a magnet and being in circuit with the first said conductors and the said thermatic relay, and means operable by one of said magnets for shifting said three-point switch in one direction, said means being operable by the other of said magnets for shifting said three-point switch in the opposite direction, said magnets being controllable by said thermatic relay so as to effect an alternate energizing of the magnets.

3. In an electric lighting system, a plurality of main conductors, a double-throw switch in circuit with one of said main conductors, a thermatic relay, a three-point switch, a branch conductor including lamps and being in circuit with another of said main conductors, intermediate conductors in circuit with said double-throw switch and relay and three-point switch and branch conductors, a pair of shunt conductors in circuit with said intermediate conductors and thermatic relay, and means operable by said shunt conductors for shifting said three-point switch alternately from one to the other of its points, said means being controllable by said thermatic relay, the latter being controllable by said double-throw switch so as to alternately increase the energy of said shunt conductors.

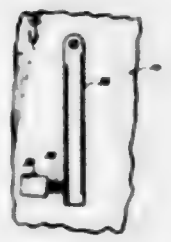
4. In an electric current controlling system, a pair of electric conductors, a double-throw switch connected with said pair of conductors so as to switch the current from one to the other of said conductors, a second pair of conductors, a pair of thermostatic circuit breakers each operable to connect a conductor of the first said pair with a conductor of said second pair, a third pair of conductors, a branch conductor including a source of work to be accomplished, said third pair of conductors being in circuit with said branch conductor, a three-way switch operable to electrically connect one of the second said conductors with one of the third said conductors and to afterward connect the other one of the second said conductors with the other one of the third said conductors, a pair of shunt conductors each including an electro-magnet, each of said shunt conductors being electrically connected to one of the first said conductors and to one of said thermostatic circuit breakers, and means coöperative with said electro-magnets for operating said three-way switch.

1,297,946. PROCESS FOR SECURING METALS FROM THEIR COMPOUNDS. VICTOR M. WEAVER, Harrisburg, Pa., assignor to Weaver Company, a Corporation of Wisconsin. Original application filed Aug. 22, 1914, Serial No. 858,001. Divided and this application filed Jan. 11, 1915. Serial No. 1,559. 25 Claims. (Cl. 204—20.)



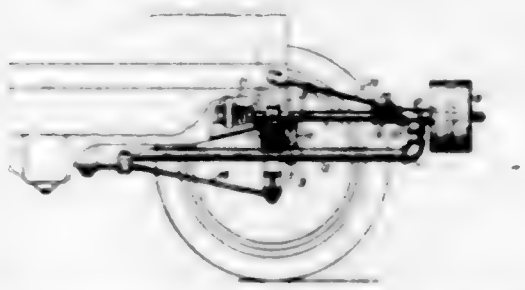
1. The process of securing a metal from its chlorid which comprises feeding the chlorid to a static electrolytic bath of sodium chlorid, and then independently and simultaneously collecting the free chlorin and the metal leaving the electrolytic bath of sodium chlorid.

1,297,947. VEHICLE-SEAT. CHARLES M. WEBB, Los Angeles, Calif. Filed Aug. 13, 1918. Serial No. 249,674. 12 Claims. (Cl. 155—25.)



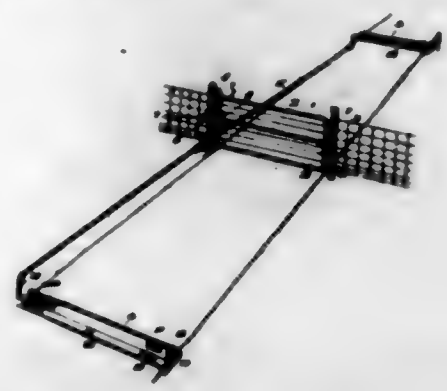
2. In a vehicle seat, the combination of a seat comprising a back connected so as to move in unison therewith, a supporting frame, and universal guide means connecting said seat to said frame so as to permit up and down, forward and backward movement, and lateral tipping.

1,297,948. BELT ATTACHMENT FOR MOTOR-VEHICLES. FRANK R. WEISGERBER, Salina, Kans. Filed May 31, 1918. Serial No. 237,430. 5 Claims. (Cl. 180—53.)



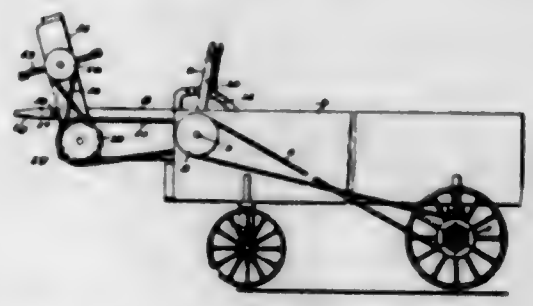
1. A belt attachment for motor vehicles comprising a frame adapted to be secured to the vehicle so that a part of said frame will extend forward of the vehicle, a shaft revolubly and slidably mounted on said frame, a coupling member constrained to move with the shaft for coupling the shaft to the crank shaft of the vehicle, a spring movable on said shaft, means for positioning said spring on the shaft so that it will either maintain the coupling member in engagement with the crank shaft or maintain the coupling member disengaged from the crank shaft, and a pulley constrained to move with said shaft.

1,297,949. GATE. JOHN WEBBAR, St. Julien, Saskatchewan, Canada. Filed Nov. 4, 1918. Serial No. 261,050 8 Claims. (Cl. 39—57.)



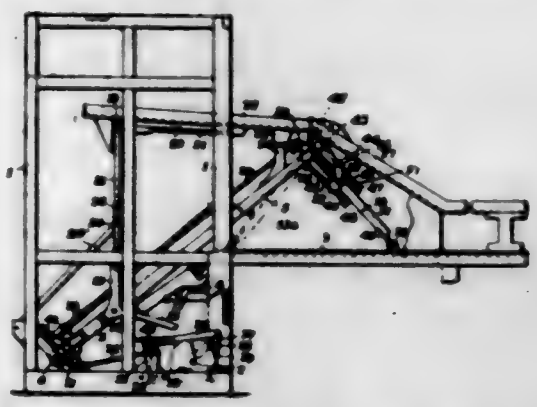
1. A device of the class described comprising a gate post, a gate hinged thereto, a movable member on the gate post, springs connecting said member with said gate, a cranked rod having one end engaging with said movable member, a pivoted member on each side of the gate and adapted to be struck by a vehicle and rods connecting said members with the cranked rod.

1,297,950. HEADER. JAMES A. WHEELER, Mangum, Okla. Filed Nov. 13, 1918. Serial No. 262,811. 1 Claim. (Cl. 56—131.)



A header comprising a support, a shaft journaled thereon, means for rotating the shaft, a sleeve mounted on the shaft, a frame mounted on the sleeve, rollers journaled at the ends of the frame, means for rotating the rollers from the shaft, a belt trained around the rollers, means for swinging the frame and for securing the same at an adjusted position, a cutting apparatus located at the forward edge of the frame, means for operating the cutting apparatus from the shaft, and a reel located at the forward end of the frame and means for rotating the reel from one of the rollers.

1,297,951. AUTOMATIC TENPIN-SETTER. WALTER O. WHEELER, Worcester, Mass. Filed Apr. 7, 1917. Serial No. 160,467. 33 Claims. (Cl. 46—54.)

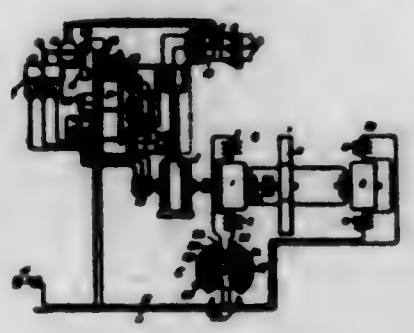


10. In a machine of the class described, a member providing an inclined surface for the gravity descent of balls and pins, said surface having a transversely inclined trough for deflecting the balls.

1,297,862. ARSENICAL MEDICAL PRODUCT AND PROCESS OF PRODUCING SAME. JOHN MCILROY WHITE, Meridian, Miss. Filed May 4, 1918. Serial No. 232,000. 4 Claims. (Cl. 23—24.)

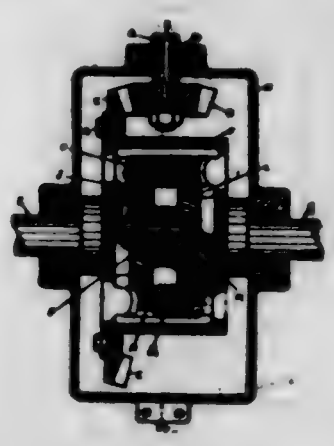
1. As new products, the herein described arsenic compounds constituting the reaction products of an alkali metal benzoate and an alkali metal methyl arsenid, such products being white solids, freely soluble in hot and cold water, and in alcohol, ether and glycerin, the neutral and alkaline solutions in these solvents being stable in the air, said products being powerful antisyphilitics, and the sodium dimethyl compound melting at about 280° F.

1,297,953. SYSTEM OF TRANSMISSION. MAX A. WEINIG, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 18, 1917. Serial No. 174,604. 8 Claims. (Cl. 172—274.)



4. The combination with a supply circuit, of a load circuit, a motor-generator set, comprising an induction motor, interposed therebetween and adapted to transfer electrical energy from the supply circuit to the load circuit or from the load circuit to the supply circuit, and means, operable only during the motoring operation of said induction motor, for varying the slip thereof.

1,297,954. DIFFERENTIAL GEARING. ALFRED OWEN WILLIAMS, South Bend, Ind. Filed June 25, 1917. Serial No. 176,722. 2 Claims. (Cl. 74—99.)



1. In a differential gearing, the combination of a casing, a pair of axially alined driven axle sections, gear wheels fixed to the adjacent inner ends of said driven axle sections, a plurality of pairs of intermeshing detent wheels rotatably journaled within said casing in positions of axial obliquity with respect to the axes of said driven axle sections, the members of each pair being in engagement with one or the other of said driven axle gear wheels, and a driving shaft operatively connected with said casing.

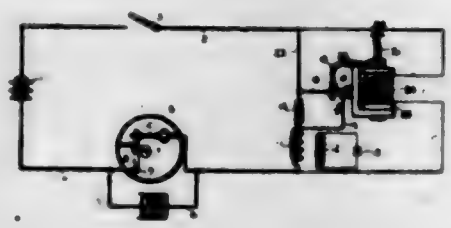
1,297,955. HARROW-DUMP. HENRY W. WIRTH, Hennessey, Okla. Filed Dec. 14, 1918. Serial No. 266,724. 3 Claims. (Cl. 55—84.)

2. In a device of the class described, a harrow; a rearwardly extended support carried thereby; an eccentric shoe journaled on the support; a keeper on the support; a latch on the shoe and coöperating with the keeper; and



a combined means for disengaging the latch from the keeper and operating the shoe.

1,297,956. IGNITION APPARATUS FOR INTERNAL-COMBUSTION ENGINES. LIONEL WOLFBORN, (now by judicial change of name Lionel M. Woolson,) Hoboken, N. J., assignor, by mesne assignments, to Bijur Motor Appliance Company, a Corporation of Delaware. Filed Mar. 9, 1915. Serial No. 13,096. 10 Claims. (Cl. 123—148.)



1. In ignition apparatus for internal combustion engines, in combination, a source of current, an interrupter and a coil connected with said source of current, means adapted to oppose by ohmic resistance the rise of current in said coil, means adapted to render said opposing means operative subsequent to the closing of the circuit through said coil, and means adapted to adjust the period between the closing of said circuit and the rendering operative of said opposing means.

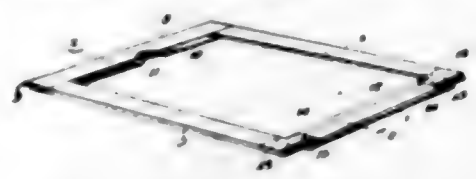
2. In ignition apparatus for internal combustion engines, in combination, a source of current, an interrupter and a coil connected with said source of current, electromagnetically actuated means adapted to oppose the rise of current in said coil, and means adapted to render said opposing means operative subsequent to the closing of the circuit through said coil, said opposing means being connected with said source of current independently of said coil.

3. In ignition apparatus for internal combustion engines, in combination, a source of current, an interrupter and a coil connected with said source of current, electromagnetically actuated means adapted to oppose the rise of current in said coil, and means adapted to render said opposing means operative subsequent to the closing of the circuit through said coil, said electro-magnetic means being voltage controlled.

4. In ignition apparatus for internal combustion engines, in combination, a source of current, an interrupter and a coil connected with said source of current, means adapted to limit the value which the current in said coil attains as the frequency of action of said interrupter decreases, and means to adjust said limiting means.

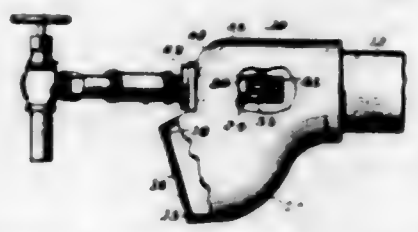
5. In ignition apparatus for internal combustion engines, in combination, a source of current, an interrupter and a coil connected with said source of current, electromagnetically actuated means adapted to limit the value which the current in said coil attains as the frequency of action of said interrupter decreases, said limiting means being voltage controlled.

1,297,957. KIT FOR PLATE-HOLDERS. FRED EDWIN WOOD, Sanger, Calif. Filed May 28, 1918. Serial No. 236,973. 1 Claim. (Cl. 95—68.)



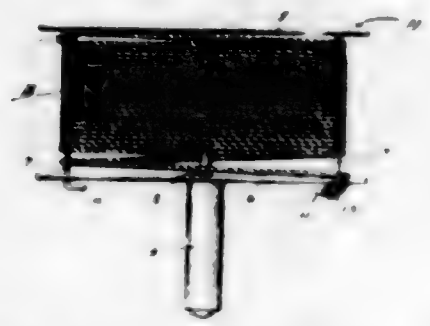
A kit for plate holders comprising a frame having one end thereof slidably connected with the body of the frame to be pressed toward the other end, said slidable end and the other end of the kit frame having their inner edges beveled to engage over the plates.

1,297,958. GAS AND AIR MIXING DEVICE. EDWARD C. WULFECK, Cincinnati, Ohio. Filed Nov. 4, 1918. Serial No. 261,025. 2 Claims. (Cl. 158—119.)



1. In a device of the class described, a casing provided with an outlet and with an inlet located opposite said outlet, a tubular gas feeding device projecting through the opening last named and adjustable with reference to the outlet, said feeding device including an end member provided with a plurality of apertures and a centrally located bore constituting a valve seat, a valve and a stem therefor, said stem extending through said tubular member, means for controlling said stem, an air inlet for the casing, and a gate valve closing said inlet, said valve last named being opened under atmospheric pressure and closed by gravity.

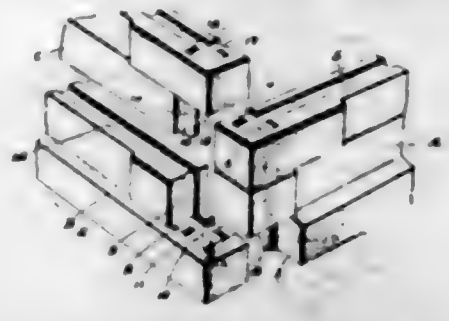
1,297,959. CHALK-LINE REEL. FRANK S. YOUNG, Riverside, Calif. Filed Sept. 7, 1918. Serial No. 253,036. 2 Claims. (Cl. 242—96.)



1. A device of the character described comprising a rectangular frame including spaced longitudinal members, transverse members secured to said longitudinal members at points spaced from the ends thereof, a shank disposed transversely of the frame at the center thereof and secured to said longitudinal members, a handle revolubly connected with said shank, and a hook formed on the inner end of each of said transverse members and directed toward said handle, in combination with a line wound longitudinally upon said frame and secured thereto at one end and having its other end provided with a loop engageable upon said hook.

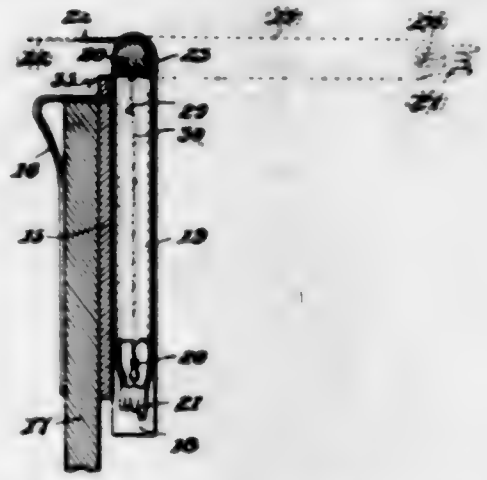
1,297,960. WALL CONSTRUCTION. RALPH F. YOURTEE, St. Louis, Mo. Filed June 26, 1916, Serial No. 106,022. Renewed July 29, 1918. Serial No. 247,249. 1 Claim. (Cl. 72—39.)

A wall construction comprising a slab having one end cut away to form a horizontal extension and a vertical shoulder, the inner edge of said extension and said shoulder being provided with alined grooves or ridges, the inner edge of said extension being further provided with a transverse horizontal groove or ridge and the inner side of the extension being provided with a vertical groove or ridge alining with said transverse groove or ridge, and a second slab of greater height than said first slab disposed at an angle thereto and cut away to provide an extension and shoulder engageable with the shoulder and extension of said first named slab and having the inner edge of its extension and its shoulder provided with alined ridges or



grooves engageable with said third and fourth named grooves or ridges, respectively, and having the inner edge of its extension further provided with a transverse ridge or groove engageable with said first named groove or ridge, and the inner side of said second named slab being provided opposite its cut away portion with a vertical ridge or groove of the same length as and engageable with said second named groove or ridge and further provided with a groove or ridge alining with said last named ridge or groove and extending to the edge of the slab.

1,297,961. AUTOMOBILE SIGNALING DEVICE. FRANK ZAIKOWSKI, Bessemer, Pa. Filed Sept. 19, 1917. Serial No. 192,093. 3 Claims. (Cl. 116—31.)

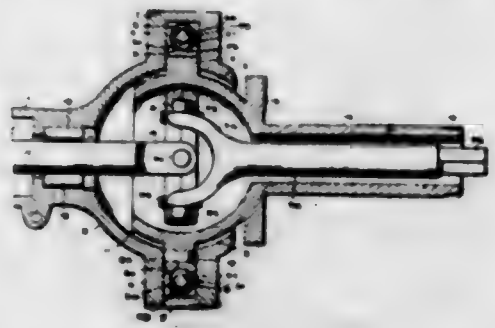


3. A direction indicator comprising a board, an attaching spring upon the back of said board arranged to clamp the board flatly against the side of a vehicle body, opposite spaced parallel plates carried by the front of said board, an upwardly swingable indicating arm normally vertically arranged downwardly between said plates and having its upper end pivotally attached to said plates adjacent the upper ends thereof, an adjusting drum, and a cord attached at one end to said drum and having its other end attached to the outer side of the upper end of the arm.

1,297,962. STEERING MECHANISM FOR FOUR-WHEEL-DRIVE VEHICLES. WILLIAM AUGUST BESSERDICH, Clintonville, Wis. Filed Jan. 31, 1917. Serial No. 145,688. 7 Claims. (Cl. 74—103.)

1. A spherical housing for a universal joint comprising an outer casing having bosses, an inner casing having trunnions disposed within said bosses, tubular extensions upon said casings, and rotatable members disposed within said bosses at a right angle to the vertical axes of said

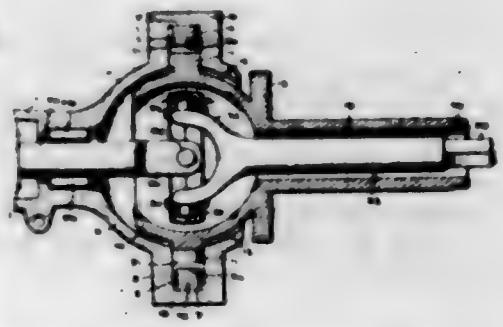
trunnions and operatively connected therewith for maintaining said casings out of contact with each other.



2. A spherical housing for a universal joint comprising an outer casing having bosses, an inner casing having trunnions disposed within said bosses, tubular extensions upon said casings, rotatable members disposed within said bosses at a right angle to the vertical axes of said trunnions and operatively connected therewith for maintaining said casings out of contact with each other, and non-circular heads provided upon said rotatable members to operate the same.

7. A spherical housing for a universal joint comprising an outer casing having bosses provided with transverse openings therein, an inner casing having trunnions disposed within said bosses, shafts rotatably mounted within the openings of said bosses and provided with threaded stems at each end, cam means disposed on said shafts, means for rotating said shafts, and lock nuts disposed upon the opposite ends of said shafts for retaining them in adjusted position.

1,297,963. STEERING MECHANISM FOR VEHICLES. WILLIAM AUGUST BERGERDICH, Clintonville, Wis. Filed Jan. 31, 1917. Serial No. 145,689. 5 Claims. (Cl. 74—103.)

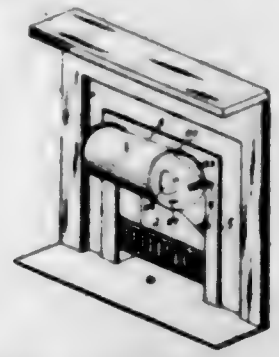


1. A spherical housing for a universal joint comprising an outer casing provided with oppositely disposed bosses having transverse openings therethrough, an inner casing having oppositely disposed trunnions disposed within said bosses, slidable members disposed within the openings of each of said bosses for maintaining said casings in spaced relation, and means for adjusting and retaining said members in adjusted position.

2. A spherical housing for a universal joint comprising an outer casing provided with oppositely disposed bosses having transverse openings therethrough, an inner casing having oppositely disposed trunnions disposed within said bosses, slidable members disposed within the openings of each of said bosses for maintaining said casings in spaced relation, threaded stems at the opposite ends of said slidable members, bearing plates at the opposite ends of the transverse openings through said bosses, and means upon said stems for adjusting the same relative to said plates.

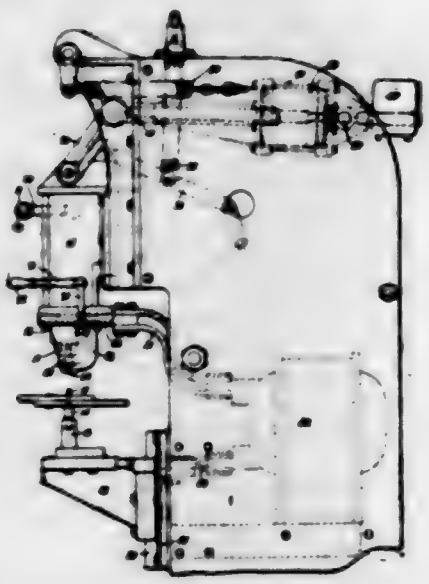
5. A spherical housing for a universal joint comprising oppositely disposed bosses having transverse openings therethrough provided with an inclined outer wall, an inner casing provided with oppositely disposed trunnions disposed within said bosses, slidable members having a tapering wall engaging the cooperating tapering wall of the opening through said bosses, means for adjusting said members lengthwise of said openings, threaded stems from the opposite ends of said slidable members, bearing plates at the opposite ends of the openings through said bosses, and adjusting and locking nuts mounted upon said threaded stems to engage said plates.

1,297,964. RADIATOR FOR FIREPLACES. JESSE P. HIGGINS, Louisville, Ky., assignor of one-third to Leopold Stoesser and one-third to John Sullivan, Louisville, Ky. Filed Dec. 24, 1917. Serial No. 208,580. 3 Claims. (Cl. 126—120.)



1. A drum adapted to be positioned at the top of a fireplace, an apron depending therefrom and adapted to cover the throat of the chimney, and having an opening communicating therewith, there being a passage leading from the fireplace to the interior of the drum, and a flue leading from the interior of the drum across said passage and through said opening, said flue being adapted to be entered into the throat of the chimney.

1,297,965. ELECTRIC RIVETING APPARATUS. NEIL MACNEALE, Cincinnati, Ohio, assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Aug. 25, 1916. Serial No. 116,788. 11 Claims. (Cl. 219—2.)



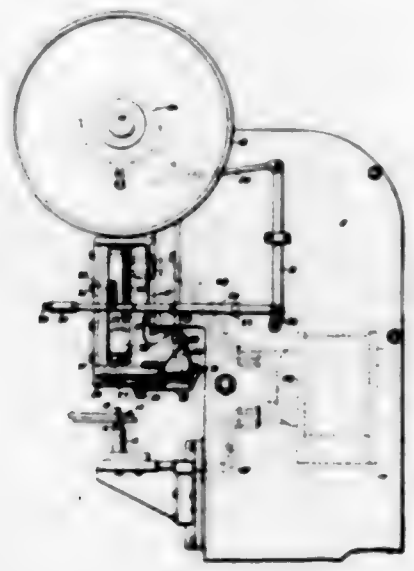
1. In an electric riveter, an electrode anvil to receive the head of a rivet, an opposed member movable to or from the anvil, an electrode carried by said member, a riveting die also carried by said member, one of said two elements that are carried by said member being displaceable laterally relatively to the member so as to throw it in or out of alinement with said anvil, whereby either said element may be brought into engagement with the rivet, and means to supply an electric current through said electrodes and an interposed rivet.

6. In an electric riveter, an electrode anvil to receive the head of a rivet, an opposed member movable to or from the anvil, an electrode and a riveting die carried by said member and adapted to be applied alternately to a

rivet on the anvil, a fluid pressure motor for said member, a high pressure fluid source, a low pressure fluid source, and means to connect either source to said motor.

11. In an electric riveter, an electrode anvil to receive the head of the rivet, an electrode and a riveting die adapted to be applied alternatively to a rivet on said anvil, fluid pressure means for said riveting die, a valve to control the same, a handle for said valve, means to send an electric current through said electrode and said anvil and an interposed rivet to heat the latter, and a control switch for said current in the handle of said valve.

1,297,966. ELECTRIC RIVETING APPARATUS. NEIL MACNEALE, Cincinnati, Ohio, assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Sept. 26, 1916. Serial No. 122,188. 14 Claims. (Cl. 219—2.)



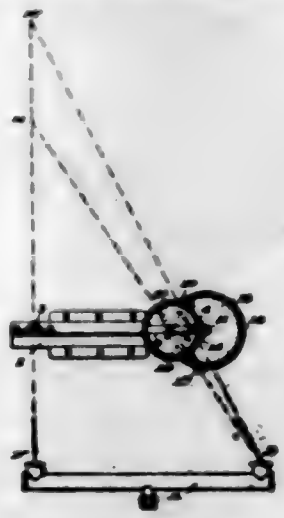
1. In an electric riveter, an electrode anvil to receive the head of a rivet, an opposed member movable to or from the anvil, an electrode movable to or from the anvil in alinement therewith, a riveting die mounted on said member and adapted to be displaced laterally relatively to said member and in one position to be brought between said anvil and said electrode, and means to supply an electric current through said electrodes and an interposed rivet.

7. In an electric riveter, an electrode anvil to receive the head of a rivet, an opposed member movable to or from the anvil, an electrode movable to or from the anvil in alinement therewith, a riveting die mounted on said member and adapted to be displaced laterally relatively to said member and in one position to be brought between said anvil and said electrode, means to supply an electric current through said electrodes and an interposed rivet, a lever adapted to control the movement both of said opposed member carrying the die and of said movable electrode, a handle on said lever and a control switch for the electric current in said handle.

14. In an electric riveter an electrode anvil to receive the head of the rivet, an electrode and a riveting die adapted interchangeably to engage the rivet on said anvil, a hand lever, means controlled by one movement of said lever to apply said electrode to the rivet and by another movement of said lever to apply said riveting die thereto, means to send an electric current through said anvil and electrode and an interposed rivet to heat the latter, and a control switch in said hand lever.

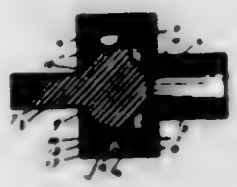
1,297,967. APPARATUS FOR TRAINING RANGE-FINDER OPERATORS. WADIM MAKAROFF, Washington, D. C. Filed Nov. 22, 1917. Serial No. 203,430. 11 Claims. (Cl. 35—12.)

6. Apparatus for use with range finders, comprising a pair of spaced objects adapted to be placed in front of the range finder in a position to be viewed by the operator of the range finder, means for varying the distance between said objects and indicating mechanism associated



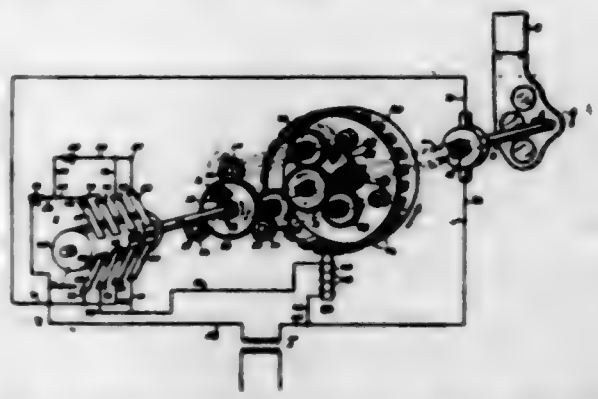
with said objects and operable upon a variation in the distance between said objects to give a direct reading in terms of range.

1,297,968. UNIVERSAL JOINT. FRED H. RHAM, Kansas City, Mo., assignor to R-S Manufacturing Company, Kansas City, Mo. Filed July 1, 1918. Serial No. 242,733. 1 Claim. (Cl. 64—91.)



A universal joint, comprising a cup shaped member, a flexible member movably mounted in said cup member, said flexible member comprising a shaft having a spherical body portion within the cup member and provided with a plurality of radially extending concentric cogs having convexed sides, a plurality of concentrically formed segments interlocked with said cup member and provided on their inner sides with cone shaped rollers in engagement with the cogs on the flexible member, and a concentrically formed locking ring interlocked with said segments and adapted to hold the body portion of the flexible member in said cup member.

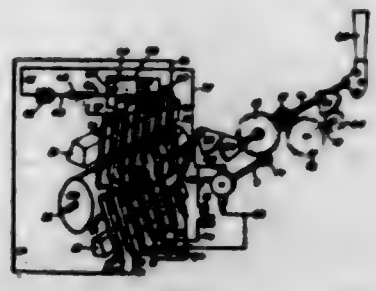
1,297,969. SEMAPHORE-SIGNAL MECHANISM. GILBERT REKERS, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Continuation of application Serial No. 762,570, filed Apr. 21, 1913, now Patent No. 1,272,090, July 9, 1918. This application filed July 20, 1916. Serial No. 110,312. 15 Claims. (Cl. 246—244.)



1. In an electric signal mechanism, in combination: a semaphore having an operated position and a biased position; power operated means for actuating the said semaphore to its operated position; and means including re-

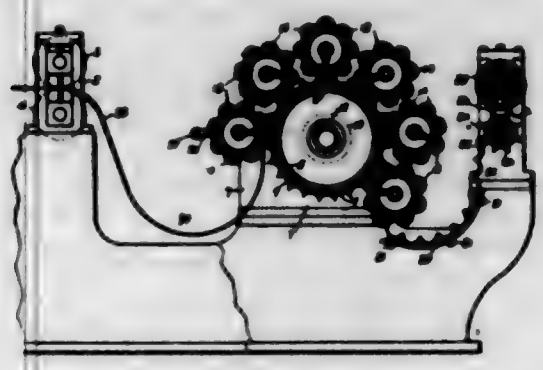
duction gearing for operatively connecting said semaphore and said power operated means upon energization of the latter to move the semaphore to its operated position, said means acting upon movement of the semaphore to its biased position to render the reduction gearing ineffective and to directly connect the semaphore and said power operating means.

1,297,970. SEMAPHORE-SIGNAL MECHANISM. GILBERT RENEHAN, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Continuation in part of application Serial No. 762,570, filed Apr. 21, 1913. This application filed July 20, 1916. Serial No. 110,313. 17 Claims. (Cl. 246—244.)



1. In combination, a signal biased to one position of indication, a motor operatively connected at all times with the signal to move the latter to another position and to move with the signal while the latter is returning in response to its bias, and means for energizing the motor to retard the signal during a portion of said return movement.

1,297,971. MACHINE FOR MAKING PAPER FORMS. ANDREW P. TUCKER, Cincinnati, Ohio, assignor of one-half to Maxmillian Zimmerman, Cincinnati, Ohio. Filed June 2, 1916. Serial No. 101,327. 2 Claims. (Cl. 154—30.)

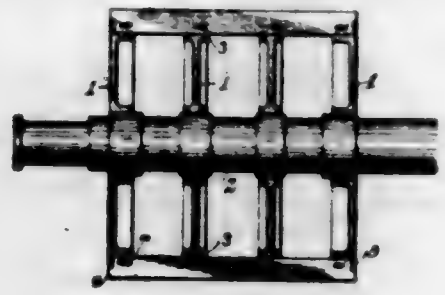


1. In a machine for making paper forms, a rotary forming roll, provided with continuous depressions, a series of forming rolls each provided with a continuous set of formers on their periphery, the formers on the latter rolls fitting into the depressions of the forming roll, one of said series of forming rolls provided with means for raising and lowering the same in order to thread said rolls with the material, and means for revolving all said rolls.

2. In a machine for making paper forms, a large, single, heated female forming roll and a series of male heated forming rolls surrounding said female forming roll at its periphery and disposed around the upper half of said forming roll, all coacting together to press a paper form between them, and means for rotating all said rolls.

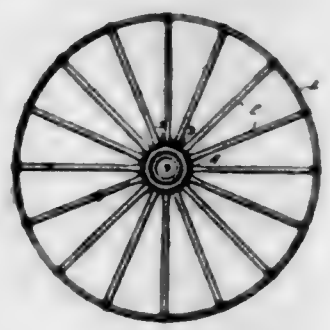
1,297,972. ROLL FOR BEATING-MACHINES. CLARENCE P. FOLSOM, Dayton, Ohio, assignor to Dayton Beater & Hoist Company, Dayton, Ohio. Filed May 7, 1918. Serial No. 233,140. 4 Claims. (Cl. 92—22.)

1. A series of annular frames mounted upon a shaft, fly-bars mounted in said frames, the whole constituting a beating roll, said fly-bar having openings therein, clamping members having openings therein and shoulders thereon, said clamping members engaging one or more



fly-bars through the openings in said fly-bars, and bolts penetrating the openings in said clamping members and tightening the same against the fly-bars.

1,297,973. COMPOSITE METAL WHEEL. HENRY L. LITCHFIELD and CLARENCE E. SHIPLET, Waterloo, Iowa, assignors to The Litchfield Manufacturing Company, Waterloo, Iowa, a Corporation of Iowa. Filed July 27, 1917. Serial No. 183,054. 9 Claims. (Cl. 21—60.)



1. In a wheel, spokes, and a hub cast about the inner ends of the spokes, the said inner end of each spoke having a part gradually merged into a thin web portion united to the metal of the hub by fusion.

4. In a wheel, spokes, and a hub cast about the inner ends of the spokes, each spoke having its said inner end gradually reduced to a perforated portion sufficiently thin to have become fused by the molten hub metal passing through the perforated portion.

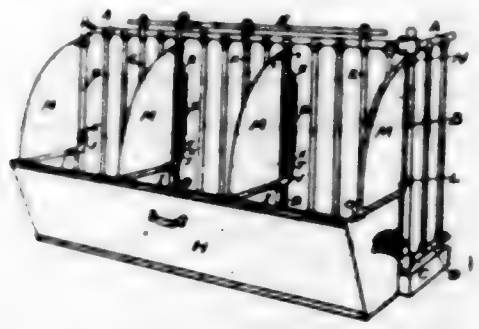
9. In a wheel, spokes each of which is flattened in proximity to its inner end to produce a thin web portion and adjacent portions of thicker metal having a combined cross-sectional area equal to that of the spoke, each web being perforated, a hub cast about and through the inner ends of the spokes and the flattened portions thereof, and each spoke having an enlargement or bulge at the point where it meets the hub.

1,297,974. MANGER FOR ANIMAL PENS AND STALLS. WILLIAM LOUDEN, Fairfield, Iowa. Filed Jan. 2, 1914, Serial No. 809,907. Renewed Feb. 8, 1919. Serial No. 275,852. 8 Claims. (Cl. 119—27.)

2. In animal pens and stalls having a series of upright posts, and a manger hinged thereto, angular shaped hinged pieces having attaching eyes approximately in their angular centers, secured at one end to the upper edge of the manger, the other ends of the hinged pieces being pivoted to adjacent posts, tension-springs having their lower ends connected to the attaching eyes of the hinged pieces, and their upper ends connected to the upper ends of the posts, and holders made in two parts adjustably bolted to the posts as a means for connecting the springs under proper tension to said posts.

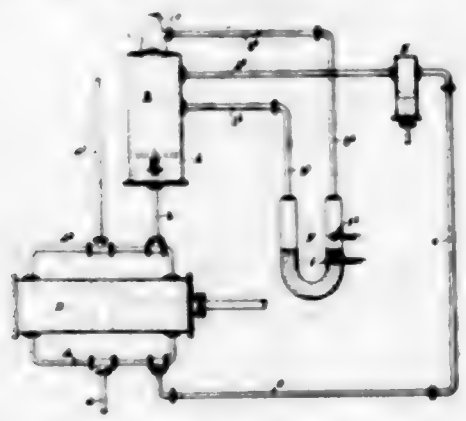
4. In animal pens and stalls having a series of upright posts, a manger having a series of partitions hinged

to the posts and dividing the manger into compartments, stationary shields having their upper ends secured to the upper ends of the posts by clamps and their lower ends secured by castings, one side of which forms pivots for the hinges of the manger.



8. In animal pens and stalls having a series of posts, a manger having ends made of slidably-connected members, castings secured in pairs to certain of said posts, one casting secured to one member of the manger end to rigidly secure it in place, and the other casting of the pair forming a pivot, a hinge secured to the other member of the end of the manger and mounted to turn on said pivot, and keepers secured to one of said members and slidably embracing the edge of the other.

1,297,973. SAFETY DEVICE FOR REFRIGERATING-MACHINES. FRANK AINSWORTH WILLCOX, Dartford, England. Filed Dec. 20, 1917. Serial No. 208,145. 5 Claims. (Cl. 137—53.)



1. In connection with the safety devices of refrigerating machines, a casing constituting a vessel normally closed to the surrounding atmosphere and adapted to receive gases, or vapors, which may pass the safety device, and means, distinct from the main compressor of the machine, for removing such gases, or vapors, from the said casing.

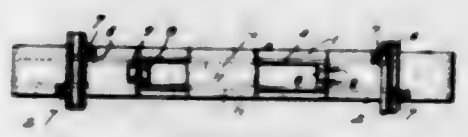
2. In connection with the safety devices of refrigerating machines, a casing constituting a vessel normally closed to the surrounding atmosphere and adapted to receive gases, or vapors, which may pass the safety device, and means, distinct from the main compressor of the machine, for removing said gases, or vapors, from the said casing, the said vessel being provided with an opening normally closed by a diaphragm adapted to break on the attainment of a predetermined pressure in the casing.

3. In connection with the safety devices of refrigerating machines, a casing constituting a vessel normally closed to the surrounding atmosphere and adapted to receive gases, or vapors, which may pass the safety device, and means, distinct from the main compressor of the machine, for removing such gases, or vapors, from the said casing, and comprising a small compressor, or pump connected at its suction side with the interior of the casing and at its delivery side with the suction side of the main compressor of the refrigerating machine.

4. In connection with the safety devices of refrigerating machines, a casing constituting a vessel normally closed to the surrounding atmosphere and adapted to receive gases, or vapors, which may pass the safety device, and means distinct from the main compressor of the machine for removing such gases, or vapors, from the said casing, and comprising a small compressor or pump connected at its suction side with the interior of the casing, and at its delivery side with the suction side of the main compressor of the refrigerating machine, and a motor for the said small compressor or pump, and means for starting it, and means for making an electric contact by pressure from the interior of the casing of the valve, or valvular arrangement.

5. In connection with the safety devices of refrigerating machines, a casing constituting a vessel normally closed to the surrounding atmosphere and adapted to receive gases, or vapors, which may pass the safety device, and means distinct from the main compressor of the machine for removing such gases, or vapors, from the said casing, and a mercurial device subject to pressure from the interior of the casing surrounding the valve, or valvular arrangement, and adapted to make electrical contact, for the purposes described.

1,297,976. RAILROAD-TIE. FLOYD W. WOOLEVER and GEORGE M. STAINS, Akron, Ohio. Filed Apr. 24, 1918. Serial No. 230,458. 3 Claims. (Cl. 238—5.)

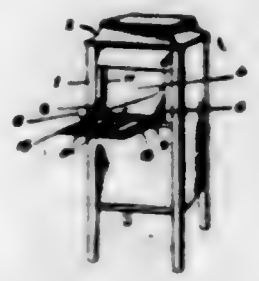


1. A metallic railroad tie constructed of a single blank of rolled metal having the ends thereof bent upwardly to provide end walls and then inwardly toward each other to provide top walls, longitudinally extending reinforcing ribs formed on the inner surface of the plate, resilient blocks fitted in between the upper and lower walls of the plate, as and for the purpose specified.

2. A metallic railroad tie comprising an elongated plate having the ends thereof bent upwardly to provide end walls, and then inwardly toward each other to provide top walls, resilient blocks fitted between the upper and lower walls, supports interposed between the ends of the top walls and the lower walls, and ribs formed on the plate and engaging the sides of the resilient blocks to prevent relative lateral movement thereof.

3. A metallic railroad tie comprising an elongated plate having spaced longitudinally extending upstanding ribs formed thereon, the ends of the plate being bent upwardly at right angles and then inwardly toward each other, blocks fitted under the bent ends, supports for the free ends of the bent ends of the plate and a detachable plate interposed between the free ends of the plate and engaging said supports, as and for the purpose specified.

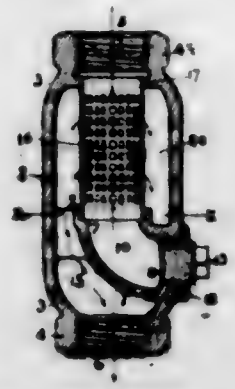
1,297,977. PHONOGRAPH-CABINET. FRANCIS LINCOLN YOUNG, New York, N. Y., assignor to The Aeolian Company, a Corporation of Connecticut. Filed Jan. 6, 1916. Serial No. 70,648. 2 Claims. (Cl. 45—52.)



1. A phonograph cabinet having a horn opening therein, a door having a grating and a perforate structure extending across the spaces of the grating and capable of

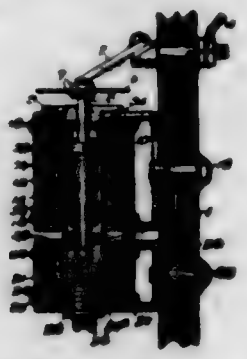
permitting sound to pass therethrough, said door being pivoted at its lower edge to the lower edge of the horn opening and capable of swinging downwardly into a horizontal position to receive and support a disk record thereon, the grating acting to protect said perforate structure from injury by the record, and stop means for limiting the downward swing of the door and for supporting the door in its horizontal record-supporting position.

1,297,978. STEAM-STRAINER. GEORGE A. TEBLING, Worcester, Mass., assignor to Carling Turbine Blower Co., Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 10, 1918. Serial No. 266,128. 3 Claims. (Cl. 210—16.)



1. A steam strainer consisting of a hollow cylindrical body having an inlet and outlet in its ends respectively in axial alinement, said body provided internally with an integral pocket having a concentric upper opening and seat, its lower end extending through the side of the body and closed by a removable stopper, and an interior perforated tubular screen extending from the inlet-opening to the top of said pocket, with an annular space within said body surrounding said screen and communicating with the outlet opening.

1,297,979. MAGNETICALLY-CONTROLLED SWITCH. HERMON L. VAN VALKENBURG, Milwaukee, Wis., assignor to Industrial Controller Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 7, 1916. Serial No. 89,684. 15 Claims. (Cl. 175—281.)

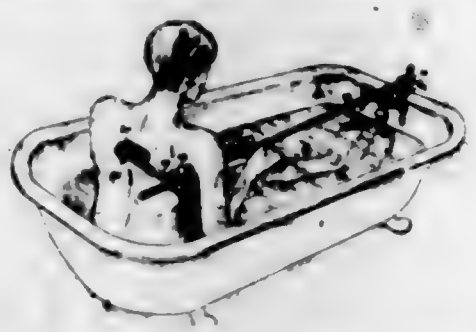


1. An electro-magnetically operated switch having a movable switch element, two magnetic plungers mechanically connected thereto, and a separate coil for each plunger adapted, when energized, to pull in opposite directions, the plunger of one coil, when the other predominates, moving away from its own coil and toward and into the magnetic field of the other coil.

12. In combination, a normally open switch, a spring for closing said switch, a movable core, an operating coil, which, when energized, moves said core to a position to strain said spring and thereby urge the switch toward closed position, a holding coil having a movable core mechanically connected to said switch, said holding coil when energized above a predetermined point holding its core in position to hold the switch open in opposition to the force of the spring, said holding coil when energized below said predetermined point exerting insufficient influence upon its core to resist the force of the spring, a stop for limiting the extent to which the holding core can enter the holding coil and a stationary core at one end of the holding coil, said stationary core being adjustable toward and from the movable holding core to thereby vary the air gap between them and regulate the conditions under which the movable holding core will be released.

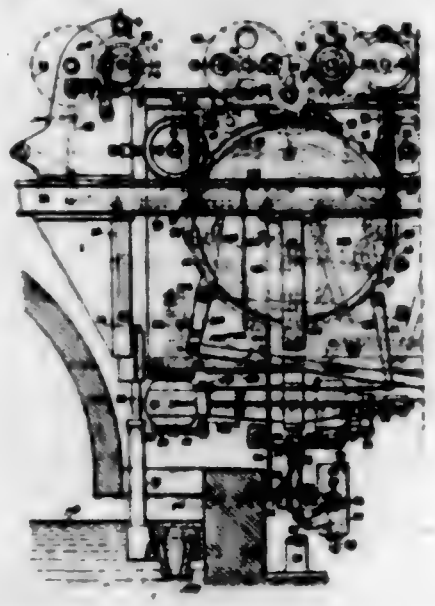
15. In a switch unit, a contactor, an operating coil having a core for urging said contactor toward closed position, a separate holding coil in series with the operating coil and having a movable core connected to said contactor for holding said contactor open when said holding coil is energized above a predetermined point and for releasing said holding core when said holding coil is energized below said predetermined point, said coils being arranged endwise whereby said holding core moves into the field of the operating coil when released by said holding coil, the holding coil being mechanically limited in its movement away from said operating coil, said holding coil also having a stationary core at one end of the holding core, and the stationary core being adjustable toward and from the holding core to vary the air gap between them and thus vary the releasing point of the holding coil.

1,297,980. BATH-TUB ATTACHMENT. MARCUS WEINBERGER, San Francisco, Calif., assignor of one-third to Otto Bonaker, San Francisco, Calif. Filed Nov. 12, 1918. Serial No. 262,142. 1 Claim. (Cl. 4—2.)



A bathtub attachment comprising a support provided with means for removably securing it to a bathtub, a rod pivotally connected to said support about a horizontal axis transverse to the tub, a handle adapted to be grasped by a bather, means for securing said handle at any one of spaced points on said rod, an arm, a brush longitudinally adjustable upon said arm, and means for securing an end of said arm at any one of spaced points on the rod.

1,297,981. AUTOMATIC GLASS GATHERING AND BLOWING MACHINE. ARTHUR WILZIN, St. Ouen, France. Filed Feb. 25, 1915. Serial No. 10,585. 16 Claims. (Cl. 49—5.)



4. In a machine for the manufacture of hollow glass articles, a neck mold adapted to move in a fixed path of

travel, a plurality of ports located along said path of travel to register with said neck mold, and to supply thereto compressed air under different pressures, means for moving said neck mold in said path of travel, and causing the same to stop when in register with each of said air ports, and adjustable mechanism adapted to vary the duration of each stoppage period.

12. An automatic glass gathering and blowing machine comprising means for operating upon the glass, actuating cams for said means located thereabove, driving means for said cams located above the same, and supporting rails, the entire structure being suspended below and horizontally movable on said rails.

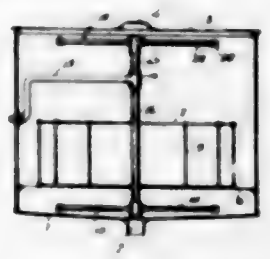
REISSUES.

14,611. PROCESS OF PREPARING SOLES. REINHARD E. BARTELS, Winchester, Mass. Filed Jan. 5, 1918. Serial No. 210,569. Original No. 1,237,152, dated Aug. 14, 1917, Serial No. 161,128, filed Apr. 11, 1917. 8 Claims. (Cl. 12—146.)



1. The herein described process which consists of assembling a sole and a sheet metal shank stiffener and then simultaneously molding the sole and shank stiffener to the desired longitudinal and transverse curvature prior to their being assembled in the shoe, the shank stiffener being rendered rigid and unyielding by such molding.

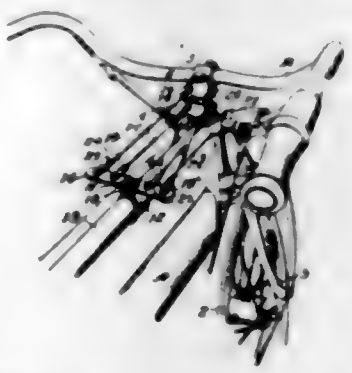
14,612. MACHINE FOR WASHING DISHES. ERNEST M. BENEDICT, Cincinnati, Ohio. Filed Aug. 26, 1916. Serial No. 117,120. Original No. 1,176,125, dated Mar. 21, 1916, Serial No. 815,306, filed Jan. 29, 1914. 3 Claims. (Cl. 141—9.)



1. In a dish washing machine, the combination of a casing and a suitable support therein for the articles to be washed, a pair of vertically alined pipes and means for supplying water under pressure thereto, one of said pipes extending above and the other below the support, a revoluble coupling for the outer end of each of said pipes, with vertical axes therefor, said couplings provided with internally extending arms closed at the ends, with a double series of perforations along each arm, with the openings of one series directed toward the support and of the other series at an angle thereto, whereby a direct discharge of water toward the supports may be obtained simultaneously with the rotation of the arms by the discharge of water from the angularly disposed openings.

14,613. STEERING-WHEEL CONTROL. JOHN PAUL HANDY, Long Prairie, Minn. Filed Aug 7, 1915. Serial No. 44,321. Original No. 1,132,771, dated Mar. 23, 1915, Serial No. 740,756, filed Jan. 8, 1913. 11 Claims. (Cl. 208—14.)

1. In a machine of the class described, comprising a frame, a steering wheel and handle bar, means for controlling the steering wheel from the handle bar, comprising independent rotatable supports for the steering wheel and handle bar in alinement with each other, a leverage connection between the handle bar and steering wheel supports, and intermediate anchorage for said connection upon the frame of the machine back of the handle bar.



2. In combination with a machine of the class described, comprising a frame, steering wheel, and handle bar, means for controlling the steering wheel from the handle bar, comprising independent rotatable supports for the steering wheel and handle bar, an equalizing cross bar supported by the frame, and leverage connections between said cross bar and said handle bar and steering wheel supports.

3. In combination with a machine of the class described, comprising a frame, a steering wheel, and handle bar, means for controlling the steering wheel from the handle bar, comprising independent rotatable supports for the wheel and handle bar, a cross bar fulcrumed upon the frame, and relatively offset connections between said cross bar and steering wheel and handle bar supports.

4. In combination with a machine of the class described, comprising a frame, a steering wheel, and handle bar, independent rotatable supports for said steering wheel and handle bar, a cross bar fulcrumed upon the frame at the rear of the handle bar, connections between the outer ends of the cross bar and handle bar support, and connections between said cross bar and steering wheel support inwardly offset from said first mentioned connections.

5. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, said steering wheel and handle bar being mounted for rotatable movement about substantially the same vertical axis, and means for controlling the steering wheel from the handle bar comprising levers projecting rearwardly from these members, means for connecting the levers for simultaneous movement, and said connection offering substantially no obstruction forwardly beyond the frame of the machine.

6. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, and means for controlling the steering wheel from the handle bar comprising independent rotatable supports for the steering wheel and handle bar in alinement with each other, a leverage connection between the handle bar and steering wheel supports, an intermediate anchorage for said connection arranged at a point rearwardly of the handle bar.

7. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, said steering wheel and handle bar being adapted to rotate about a common axis, an equalizing bar disposed rearwardly of the handle bar, and leverage connection between said equalizing bar and said handle bar and steering wheel.

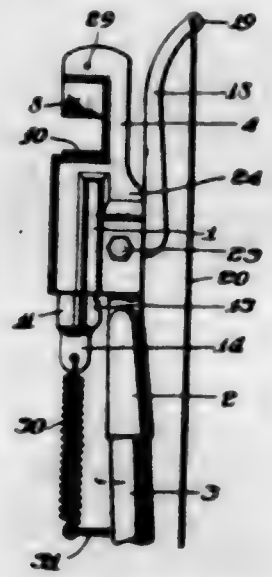
8. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, said steering wheel and handle bar being supported whereby to rotate about a common axis, levers projecting rearwardly from both the handle bar and steering wheel supports, and a movable connection between said levers and the frame of the machine.

9. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, supports for the steering wheel and handle bar permitting these parts to rotate relative to one another about a substantially common axis, rods extending rearwardly from the handle bar support and from the steering wheel support, and a connecting bar to which said rods are adjustably connected.

10. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, supports for the steering wheel and handle bar permitting these parts to rotate relative to one another, a differential connection between said supports, said connection including lengthwise adjustable operatively connected lever bars.

11. In a machine of the character described, the combination of a frame, a steering wheel, a handle bar, said steering wheel and handle bar being supported whereby to rotate about a common axis, and adjustably connected means interposed between the handle bar and steering wheel whereby a movement of one of these parts will result in a differential movement of the other part, said means being adjustable.

14,614. PRUNING-SHEARS. EMERSON MCKENNEY, Bangor, Me., assignor, by direct and mesne assignments, to McKenney-Carr Company, a Corporation of Maine. Filed June 30, 1917. Serial No. 178,037. Original No. 1,173,527, dated Feb. 29, 1916, Serial No. 52,207, filed Sept. 23, 1915. 8 Claims. (Cl. 30—11.)



5. In a pruning device, the combination of oppositely acting cutting knives each having a gradually tapering formation from approximately the base to the cutting edge thereof, and means whereby a knife is moved with increasing power toward the meeting point where the maximum resistance to the cutting operation is presented by the object operated upon.

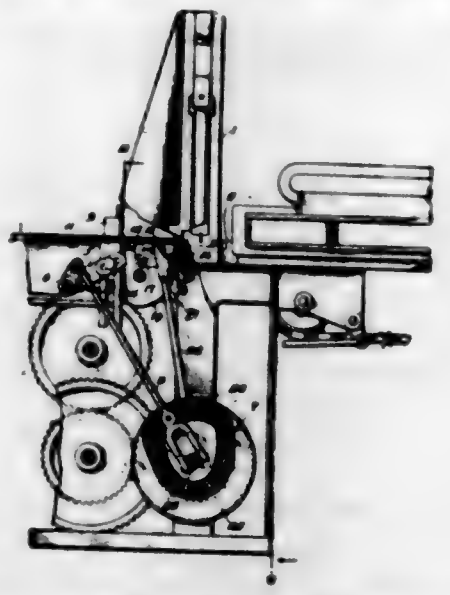
14,615. HACKSAW-BLADE. ANDREW RASMUSSEN, Racine Junction, Wis. Filed Feb. 5, 1919. Serial No. 275,256. Original No. 1,214,589, dated Feb. 6, 1917, Serial No. 88,424, filed Apr. 8, 1916. 2 Claims. (Cl. 29—95.)



1. A hack saw blade for the purpose set forth provided throughout the principal portion of its length with coarse teeth, and provided at its end with a short length of fine teeth, said latter teeth being so fine as to prevent breakage thereof when brought into contact with the work or against relatively sharp or angular surfaces, but sufficiently long as to present a coarse file-like cutting surface.

14,616. BOOK-PAD ADJUSTER FOR AUTOMATIC BOOK-TRIMMING MACHINES. JAMES ROWE, Chicago, Ill. Filed Jan. 21, 1919. Serial No. 272,383. Original No. 1,213,266, dated Jan. 23, 1917, Serial No. 29,933, filed May 22, 1915. 10 Claims. (Cl. 164—59.)

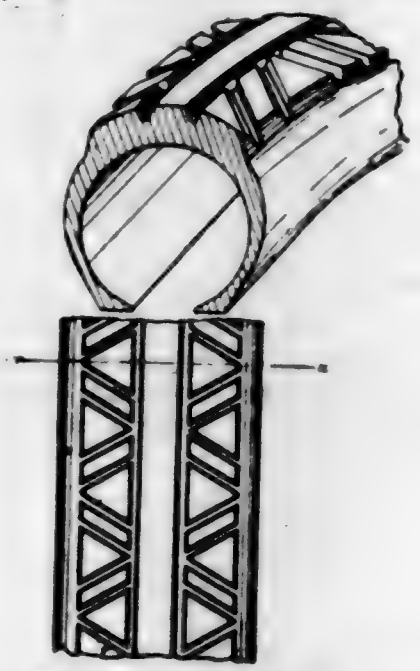
1. In a book trimming machine, in combination: gages for determining the position of a book pile to be trimmed relatively to a trimming plane, a book supporting surface over which the book pile is adapted to slide into said position, means for sliding the pile of books against the



gages, and means for correcting lag of an individual book in the pile to effect uniform registration against said gages of all the books in the pile.

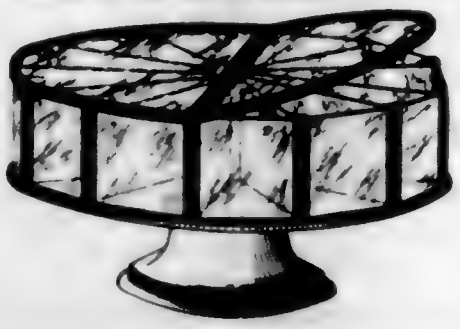
DESIGNS.

53,100. TIRE. ALFRED E. BRADEN, Tacoma, Wash. Filed Sept. 28, 1918. Serial No. 255,870. Term of patent 7 years.



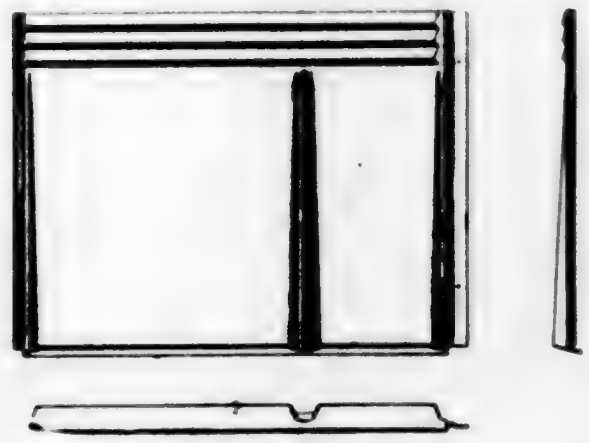
The ornamental design for a tire, as shown and described.

53,101. GUM AND MINT CASE. LLOYD W. BUCHBNAU, Stockton, Calif. Filed Oct. 24, 1918. Serial No. 259,588. Term of patent 14 years.



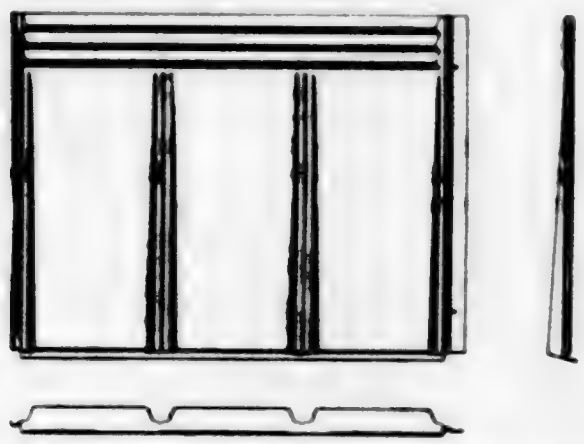
The ornamental design for a gum and mint case, as shown.

53,102. METAL SHINGLE. DAVID F. CREIGHTON, Avalon, Pa. Filed Nov. 13, 1916. Serial No. 131,147. Term of patent 14 years.



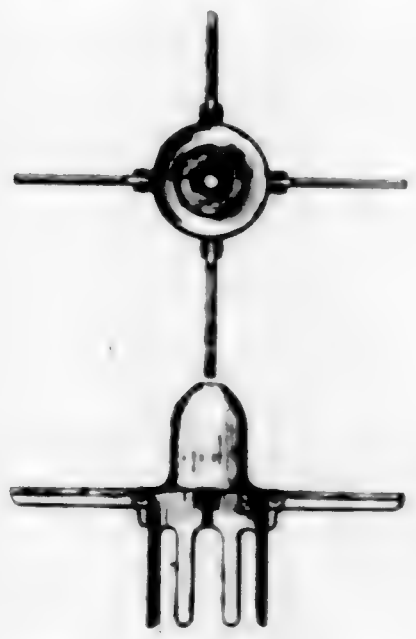
The ornamental design for a metal shingle, as shown.

53,103. METAL SHINGLE. DAVID F. CREIGHTON, Avalon, Pa. Filed Nov. 13, 1916. Serial No. 131,148. Term of patent 14 years.



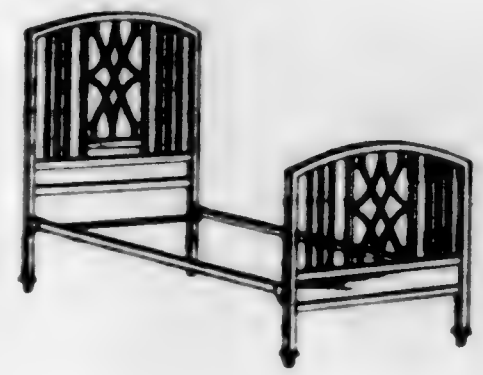
The ornamental design for a metal shingle, as shown.

53,104. WIRE-ENTANGLEMENT CUTTER. OTTO PERGL, Cleveland, Ohio. Filed Dec. 17, 1917. Serial No. 208,086. Term of patent 3½ years.



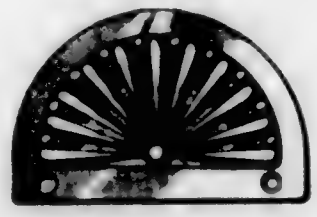
The ornamental design for a wire entanglement cutter, as shown.

53,105. BEDSTEAD. LOUIS ROSENBERG, Cleveland, Ohio, assignor to Simmons Company, Kenosha, Wis., a Corporation of Delaware. Filed Jan. 25, 1919. Serial No. 273,175. Term of patent 14 years.



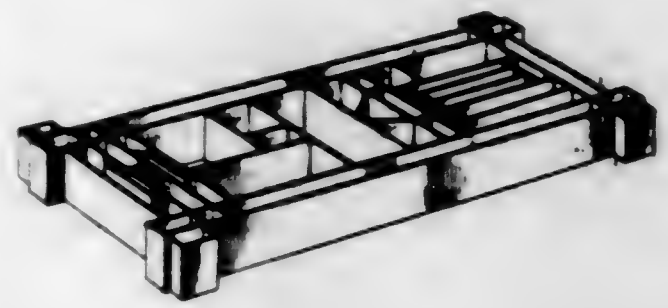
The ornamental design for a bedstead as shown.

53,106. ATTACHMENT FOR BABY-CARRIAGES. HUGH L. SIMPSON, Fort Dodge, Kans. Filed Jan. 10, 1919. Serial No. 270,597. Term of patent 3½ years.



The ornamental design for an attachment for baby carriages, as shown.

53,107. AUTOMOBILE BOLT AND NUT BOX. ADOLPH J. SOMMER, Ritzville, Wash. Filed Jan. 10, 1917. Serial No. 143,391. Term of patent 7 years.



The ornamental design for an ideal automobile bolt and nut box, as shown.

TRADE-MARKS

OFFICIAL GAZETTE, MARCH 18, 1919.

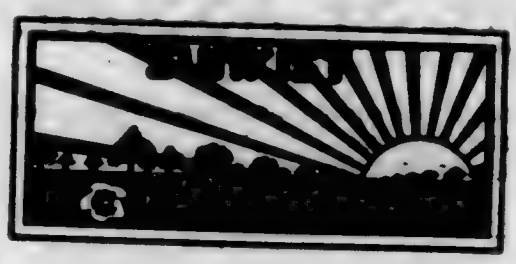
[PUBLISHED APRIL 11, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 99,266. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMIL SPITZER, Los Angeles, Cal. Filed Nov. 8, 1916.



Particular description of goods.—Candies, Candy Fruit, and Fruit Candies.

Claims use since July 20, 1916.

Ser. No. 100,444. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MILTON BRADLEY CO., Springfield, Mass. Filed Jan. 8, 1917.

SIEGE

Particular description of goods.—Outfits of Toy Soldiers and Pistols and Games Played by Means of Such Outfits.

Claims use since 1911.

Ser. No. 102,360. (CLASS 38. PRINTS AND PUBLICATIONS.) ALEXANDER HAMILTON INSTITUTE, New York, N. Y. Filed Mar. 29, 1917.

Modern Business



The symbol is a portrait of Alexander Hamilton, the great Revolutionary hero, publicist, &c.

Particular description of goods.—Publications—i. e., Pamphlets Issued from Time to Time, Magazines Issued from Time to Time, Monthly Periodicals.

Claims use since on or about Apr. 1, 1916.

Ser. No. 104,205. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNION TWIST DRILL CO., Athol, Mass. Filed June 1, 1917.

UNION

Particular description of goods.—Cutters—viz., Angular, Circular-Cornering, Concave, Convex, Formed, Gear, Gear-Roughing, Keyway, Milling, Screw-Slotting, Sprocket, Step-Stocking, Tap and Reamer, T-Slot, and Twist-Drill; Mills—viz., Face, End, Shell, Side, Hollow, and Inserted Tooth; Hobs—viz., Worm, Generating, and Ground; Keys and Keyways for Machine-Tools, Saws, Slitting-Disks, Cutting-Off Machines; Machines for Grinding and Machines for Sharpening Cutters, Reamers, Hobs, and Mills; Reamers and Reamer Sets, Drills and Drill Sets, Screw-Slotters, Collets, Collet-Blanks, Countersinks, Bits and Bit-Stock Sets, Sleeves and Sockets for Drills and Reamers, Lathe-Sockets; Arbors, Mandrels, Jigs, and Bushings.

Claims use since 1905.

Ser. No. 104,223. (CLASS 39. CLOTHING.) D L. MARX CO., Cairo, Ill. Filed June 2, 1917.

Iron Clad

Particular description of goods.—Men's and Women's Overalls, Work Pants and Shirts.

Claims use since May 1, 1910.

Ser. No. 107,151. (CLASS 15. OILS AND GREASES.) WILLIAM R. BLEECKER, Albany, N. Y. Filed Nov. 5, 1917.

LARD-XOL

No claim being made to the word "Lard" apart from the mark shown in the drawing.

Particular description of goods.—Lubricating Oils and Greases.

Claims use since the 2d day of November, 1917.

Ser. No. 111,168. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARTHUR N. CHRISTY & Co., Newark, N. Y. Filed May 24, 1918.

CRIS-T-OLA

Particular description of goods.—Substitute for Eggs.
Claims use since Dec. 1, 1917.

Ser. No. 111,912. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SYRACUSE MILLING COMPANY, Syracuse, N. Y. Filed July 1, 1918.



The lining represents the colors red and blue.
Particular description of goods.—Stock Food.
Claims use since Aug. 1, 1917.

Ser. No. 112,091. (CLASS 12. CONSTRUCTION MATERIALS.) THE SHINGLE AGENCY OF BRITISH COLUMBIA, Vancouver, British Columbia, Canada. Filed July 12, 1918.



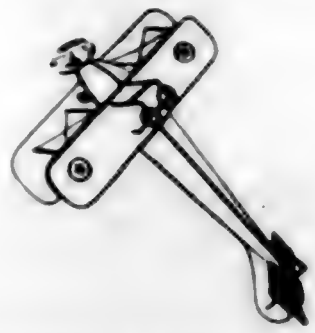
The representation of a bundle of shingles is hereby disclaimed.
Particular description of goods.—Shingles.
Claims use since Apr. 30, 1918.

Ser. No. 112,099. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ALUMINUM WARE MANUFACTURING CO., INC., Elmira, N. Y. Filed July 13, 1918.

COOK-RITE

Particular description of goods.—For Aluminum Utensils—Namely, Tea-Kettles, Coffee-Pots, Teapots, Preserving-Kettles, Saucepans, Double Boilers, Combination-Cookers, Pudding-Pans, Mixing-Bowls, Frying-Pans, Covered Buckets, Dairy-Pails, Pie-Plates, Cake-Pans, Funnels, Dippers, Percolators, Strainer-Kettles, and Bread-Pans.
Claims use since January, 1918.

Ser. No. 112,158. (CLASS 39. CLOTHING.) THE ACE WAIST CO. INC., New York, N. Y. Filed July 16, 1918.



Particular description of goods.—Ladies' Waists.
Claims use since the 18th day of May, 1918.

Ser. No. 112,239. (CLASS 39. CLOTHING.) E. ROSENFELD & COMPANY, Baltimore, Md. Filed July 20, 1918.

REST ASSURED

Particular description of goods.—Night-Shirts, Nightgowns, and Pajamas.
Claims use since June 20, 1918.

Ser. No. 112,755. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PRATT & WHITNEY COMPANY, New York, N. Y. Filed Aug. 16, 1918. Under ten-year proviso.

PRATT & WHITNEY

Particular description of goods.—Precision-Machines for Measuring Dimensions for Gages—Namely, Screw-Pitch Gages, Thread-Gages, Screw-Gages, Cylindrical Plug and Templet Gages, Oil-Well-Casing Gages, Snap-Gages, Limit-Gages, Circumference-Gages, Coupler-Gages, Car-Wheel-Flange Gages, Locomotive-Wheel Center and Tire Gages, Wheel Reference and Check Gages, Wheel and Axle Gages, Decimal-Gages, End-Measures, Taper-Gages, Star-Gages, and Special Gages—and for Ball-Points for Micrometers, Dial-Test Indicators, Centering Devices, Measuring-Points and Extension-Rods, and Tapers.
Claims use since about the year 1870.

Ser. No. 113,110. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE W. PELL, Denver, Colo. Filed Sept. 10, 1918.



The picture of the chef and also of the waiter in the trade-mark are fanciful sketches. No claim is made to the representation of fishes, the crab, and the lobster apart from the trade-mark as shown in the drawing.
Particular description of goods.—Fresh-Caught Sea or Salt Water and Fresh-Water Fish, Oysters, and other Sea Foods—Namely, Lobsters, Crabs, Clams, Shrimps, and Mussels; also, Smoked or Dried Fish—Namely, Finnan Haddie, Codfish, and Herring.
Claims use since about Sept. 1, 1914.

Ser. No. 113,219. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SENECA FALLS MFG. CO. INC., Seneca Falls, N. Y. Filed Sept. 17, 1918.

STAR

Particular description of goods.—Lathes and Parts Thereof.
Claims use since about Jan. 1, 1887.

Ser. No. 113,373. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NELSON, BAKER & Co., Detroit, Mich. Filed Sept. 25, 1918.

IODOSYL

Particular description of goods.—Antiseptic Dusting-Powders, Capsules Containing Antiseptics, Catarrhal Nasal Points, Hemorrhoidal Compound Suppositories, Urethral Compound Pencils, Aseptic Ointments, Hemorrhoidal Compound Ointments, Ophthalmic Ointments, Urethral Ointments.
Claims use since Feb. 14, 1901.

Ser. No. 113,377. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. G. PRINCE & Co., Oakland, Cal. Filed Sept. 25, 1918.

FALCHION

Particular description of goods.—Canned Fruits and Canned Berries.
Claims use since June 15, 1918.

Ser. No. 113,382. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PURITAN CHOCOLATE CO., Cincinnati, Ohio. Filed Sept. 25, 1918.

Preference

Particular description of goods.—Chocolate Candy.
Claims use since 1911.

Ser. No. 113,586. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & Co. INC., New York, N. Y. Filed Oct. 5, 1918. Under ten-year proviso.





Particular description of goods.—Face-Powder.
Claims use since Jan. 3, 1879.

Ser. No. 113,592. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHARMACEUTISCHE EN CHEMISCHE HANDELSVEREENIGING "ROTTERDAM," Rotterdam, Netherlands. Filed Oct. 5, 1918.

DOLORINE

Particular description of goods.—Medicinal Wadding for Treatment of Rheumatism.
Claims use since Nov. 11, 1916.

Ser. No. 113,724. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES). ALBERT F. SIBERT, Dayton, Ohio. Filed Oct. 14, 1918.

Sibert

The mark is a facsimile of the user's surname as written by himself.
Particular description of goods.—Spark-Plugs.
Claims use since about the 1st day of June, 1918.

Ser. No. 113,780. (CLASS 39. CLOTHING.) A. PRIBSMEYER SHOE COMPANY, Jefferson City, Mo. Filed Oct. 17, 1918.

HYLO

Particular description of goods.—Gaiters or Spats.
Claims use since Aug. 23, 1915.

Ser. No. 113,849. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN ROSS, Glasgow, Scotland. Filed Oct. 22, 1918.

BLIGHTY

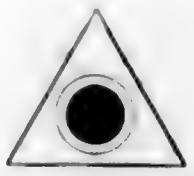
Particular description of goods.—Woolen Piece Goods.
Claims use since February, 1917.

Ser. No. 114,086. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAM SMITH, Tonbridge, England. Filed Nov. 7, 1918.

WENO

My trade-mark consists of the word "Weno."
Particular description of goods.—A Certain Composition of Fatty Substances Used as a Base for Toilet Cream.
Claims use since May 4, 1914.

Ser. No. 114,240. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THERMOKEPT PRODUCTS CORPORATION, New York, N. Y. Filed Nov. 19, 1918.



Particular description of goods.—Tea, Coffee, Dried Vegetables, Dried Prunes, Canned Peas, Canned Peaches, Canned Soup, Cheese, Powdered Milk, Condensed Milk, Creamery-Butter, Oleomargarin, Powdered Eggs, Peanut-Butter, Wet Cocoanut, Desiccated Cocoanut, Cocoanut-Butter, Candy, Sugar, Molasses, Catchup, Vanilla Extract for Flavoring Food, Crackers, Rolled Oats, Blackberry Jam, Mustard, Mackerel in Brine, Smoked Fish, Shredded Codfish, Canned Salmon, Olive-Oil, Macaroni, Olives, and Preserved Walnuts.
Claims use since February, 1916.

Ser. No. 114,292. (CLASS 39. CLOTHING.) OTIS CO., Ware, Mass. Filed Nov. 22, 1918. Under ten-year proviso.

OTIS

Particular description of goods.—Knit and Woven Underwear for Men, Consisting of Shirts, Drawers, and Union-Suits.
Claims use since 1866.

Ser. No. 114,493. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HYMAN & ACKERMAN, Lima, Ohio. Filed Dec. 5, 1918.

LAYMORE

Particular description of goods.—Poultry Feed.
Claims use since Jan. 16, 1912.

Ser. No. 114,561. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MEYER EISENBERG, Atlanta, Ga. Filed Dec. 9, 1918.



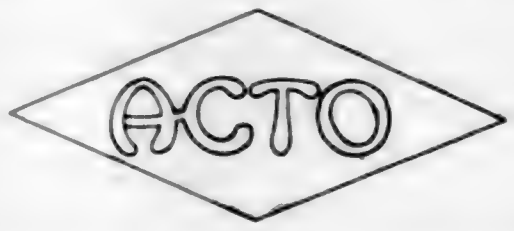
Particular description of goods.—A Non-Alcoholic Maltless Beverage Not of a Cereal Nature and Sold as a Soft Drink.
Claims use since June 15, 1916.

Ser. No. 114,656. (CLASS 39. CLOTHING.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed Dec. 16, 1918.

SUBERSOL

Particular description of goods.—Composition Soles for Boots and Shoes.
Claims use since Dec. 10, 1918.

Ser. No. 114,706. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Dec. 16, 1918.



Particular description of goods.—White Mineral Oil for Use by Confectioners as a Slab-Oil to Prevent Adhesion of Candy to the Mixing-Slab.
Claims use since Oct. 19, 1918.

Ser. No. 114,750. (CLASS 39. CLOTHING.) HAZEL ROCK, Salt Lake City, Utah. Filed Dec. 20, 1918.

KIDDIES KICKERS

Particular description of goods.—Children's Underwear, Dresses, and Nightgowns and Pajamas.
Claims use since the 8th day of May, 1917.

Ser. No. 116,776. (CLASS 39. CLOTHING.) ABRAHAM BAUMAN, New York, N. Y. Filed Dec. 28, 1918.

Wearpledge

The lining on the drawing is for shading only.

Particular description of goods.—Men's, Boys', and Children's Outer Wearing-Apparel, Consisting of Coats, Vests, and Trousers.

Claims use since Oct. 1, 1918.

Ser. No. 114,868. (CLASS 12. CONSTRUCTION MATERIALS.) RICHARDS & CO. INCORPORATED, Boston, Mass. Filed Dec. 28, 1918.

RICO

Particular description of goods.—Mineral-Surface Asphalt Shingles.

Claims use since May 31, 1916.

Ser. No. 114,917. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. MEADOWS, Hoffman, Okla. Filed Dec. 31, 1918.

Meadows

The trade-mark consisting of a facsimile of applicant's signature.

Particular description of goods.—A Medicine Used as a Blood-Purifier.

Claims use since Dec. 1, 1918.

Ser. No. 115,068. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JOHN R. BLANTON, Oklahoma, Okla. Filed Jan. 8, 1919.

BLANTON'S BEARCAT

No claim is made to the name "Blanton's" nor to the tire apart from the mark shown in the drawing.

Particular description of goods.—Patches for Pneumatic Tires.

Claims use since one o'clock p. m. on the 4th day of January, 1919.

Ser. No. 115,075. (CLASS 39. CLOTHING.) ADOLPH RUPP, New York, N. Y. Filed Jan. 9, 1919.



The word "Skirts" is hereby disclaimed as forming no part of the trade-mark.

Particular description of goods.—Women's and Misses' Dress-Skirts.

Claims use since July 1, 1917.

Ser. No. 115,078. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOURAINE COMPANY, Boston, Mass. Filed Jan. 9, 1919.

Touraines

Particular description of goods.—Candies.

Claims use since the 1st day of January, 1906.

Ser. No. 115,113. (CLASS 39. CLOTHING.) APPAREL MANUFACTURING COMPANY, Chicago, Ill. Filed Jan. 11, 1919.

AJAX

Particular description of goods.—Men's and Boys' Athletic Union-Suits Made of Nainsooks, Madras, and Fancy-Weaved Material, (Not Knitted.)

Claims use since February, 1918.

Ser. No. 115,124. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MERRELL MILLING COMPANY, Toledo, Ohio. Filed Jan. 11, 1919.

DOUGHBOY

Particular description of goods.—Wheat-Flour.

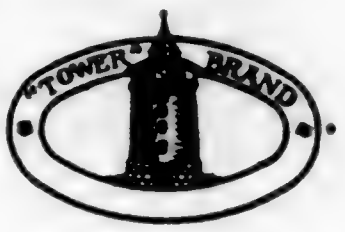
Claims use since Dec. 5, 1918.

Ser. No. 115,127. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTAWA MILLING COMPANY, Kansas City, Mo., and Ottawa, Kans. Filed Jan. 11, 1919.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 2, 1918.

Ser. No. 115,182. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FRITZ W. OETTINGER, New Rochelle and New York, N. Y. Filed Jan. 14, 1919.



No claim of right to the exclusive use of the word "Brand" except as shown in the accompanying drawing being made.

Particular description of goods.—Electric Push-Buttons, Electric Switches, Electric Fuses, and Electric Incandescent Lamps.
Claims use since July, 1917.

Ser. No. 115,214. (CLASS 12. CONSTRUCTION MATERIALS.) THE STANDARD PAINT COMPANY, Boundbrook, N. J., and New York, N. Y. Filed Jan. 15, 1919.

S-P-C

Consisting of the initials "S. P. C."

Particular description of goods.—Waterproofed Fabrics for Roofing, Flooring, Heat and Cold Insulation, Building and Sheathing Purposes.
Claims use since January, 1902.

Ser. No. 115,215. (CLASS 12. CONSTRUCTION MATERIALS.) THE STANDARD PAINT COMPANY, Boundbrook, N. J., and New York, N. Y. Filed Jan. 15, 1919.



Consisting of letters "S P C" forming a triangle within a circle.

Particular description of goods.—Waterproofed Fabrics for Roofing, Flooring, Heat and Cold Insulation, Building and Sheathing Purposes.
Claims use since Dec. 27, 1918.

Ser. No. 115,235. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE AGRA COMPANY, Detroit, Mich. Filed Jan. 17, 1919.

NYSIS

Particular description of goods.—Talcum Powder.
Claims use since July 1, 1918.

Ser. No. 115,280. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BALDWIN PERFUMERY COMPANY, Chicago, Ill. Filed Jan. 18, 1919. Under ten-year proviso.

Wild Plum Blossom

Particular description of goods.—Perfumery, Toilet Water, and Sachet-Powder.
Claims use since the year 1892.

Ser. No. 115,341. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EYE BRAND CONFECTIONERY, INC., Brooklyn, N. Y. Filed Jan. 21, 1919.

TROUBADOURS

Particular description of goods.—Candies.
Claims use since May 2, 1914.

Ser. No. 115,360. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Jan. 21, 1919.



Particular description of goods.—Dress-Shields.
Claims use since January, 1917.

Ser. No. 115,390. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) INTERNATIONAL COTTON MILLS, Boston, Mass. Filed Jan. 23, 1919.

STARPEL

Particular description of goods.—Duck.
Claims use since Dec. 6, 1918.

Ser. No. 115,400. (CLASS 15. OILS AND GREASES.) FISKE BROTHERS REFINING CO., New York, N. Y. Filed Jan. 24, 1919.

TRIDENT

Consisting of the word "Trident."
Particular description of goods.—Launching-Grease.
Claims use since Jan. 14, 1919.

Ser. No. 115,401. (CLASS 15. OILS AND GREASES.) FISKE BROTHERS REFINING CO., New York, N. Y. Filed Jan. 24, 1919.

FERROL

Consisting of the word "Terrol."
Particular description of goods.—Lubricating Oils and Greases.
Claims use since Jan. 14, 1919.

Ser. No. 115,451. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELPIS CONFECTIONERY CO., New York, N. Y. Filed Jan. 27, 1919.

ELPIS

Consisting of the word "Elpis."
Particular description of goods.—Candy.
Claims use since the year 1912.

Ser. No. 115,477. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BOSTON WOVEN HOSE & RUBBER CO., Cambridge, Mass. Filed Jan. 28, 1919.

RUBLATA

The word "Rublata."
Particular description of goods.—Rubber Belting.
Claims use since Sept. 1, 1918.

Ser. No. 115,500. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 29, 1919.

Wonderspun

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,501. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 29, 1919.

Chinette

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,542½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTHONY RUBINO, New York, N. Y. Filed Jan. 30, 1919.



Particular description of goods.—Olive-Oil.
Claims use since Oct. 8, 1914.

Ser. No. 115,546. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 31, 1919.

Chateau

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,547. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 31, 1919.

Mellowspun

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,564. (CLASS 39. CLOTHING.) RACINE AUTO TIRE COMPANY, Racine, Wis. Filed Jan. 31, 1919.

HORSESHOE

Particular description of goods.—Rubber Heels or Lifts for Footwear.
Claims use since the 2th day of January, 1919.

Ser. No. 115,564. (CLASS 39. CLOTHING.) J. BAKER & SONS INC., Evansville, Ind. Filed Feb. 1, 1919.

REDHEAD



The picture being fanciful.
Particular description of goods.—Work-Clothes for Men, Boys, and Children—Namely, Overalls, Jumpers, Coats, and Trousers.
Claims use since Jan. 10, 1919.

Ser. No. 115,580. (CLASS 38. PRINTS AND PUBLICATIONS.) WEINSTOCK-NICHOLS CO., San Francisco, Oakland, and Los Angeles, Cal. Filed Feb. 1, 1919.

ACCELERATOR

Particular description of goods.—A Publication Issued Monthly, Known as a House Organ.
Claims use since May 20, 1918.

Ser. No. 115,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. GAMBRILL MANUF'G COMPANY, Baltimore, Md. Filed Feb. 4, 1919.

PANTEX

Particular description of goods.—Self-Rising Pancake-Flour.
Claims use since Dec. 24, 1918.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 18, 1919.

124,809. RUBBER COMPOSITION—NAMELY, RUBBERIZED OR FRICTIONED FABRIC. AJAX RUBBER COMPANY, INC., Millbrook, N. Y.
Filed September 7, 1918. Serial No. 113,054. PUBLISHED DECEMBER 3, 1918.

124,810. CANDY. AMERICAN CANDY CO., Milwaukee, Wis.
Filed September 28, 1917. Serial No. 106,469. PUBLISHED DECEMBER 3, 1918.

124,811. ROPE MANUFACTURED FROM VEGETABLE FIBER. AMERICAN MANUFACTURING COMPANY, Boston, Mass., and Brooklyn, N. Y.
Filed September 24, 1917. Serial No. 106,400. PUBLISHED NOVEMBER 19, 1918.

124,812. TEA, COFFEE, RICE. BERDAN AND COMPANY, Toledo, Ohio, assignor to The Berdan Company, Toledo, Ohio, a Corporation of Ohio.
Filed May 8, 1915. Serial No. 86,470. PUBLISHED DECEMBER 3, 1918.

124,813. CANNED SARDINES IN TOMATO SAUCE. BOOTH FISHERIES SARDINE CO., Chicago, Ill., and Eastport, Me.
Filed September 19, 1918. Serial No. 113,236. PUBLISHED DECEMBER 10, 1918.

124,814. BITUMINOUS COMPOSITIONS. BRIGGS BITUMINOUS COMPOSITION CO., New York, N. Y.
Filed March 2, 1918. Serial No. 109,817. PUBLISHED DECEMBER 3, 1918.

124,815. CERTAIN NAMED VEHICLES, NOT INCLUDING ENGINES. THE BRITISH MANNESMANN TUBE COMPANY LTD., London, England.
Filed June 1, 1918. Serial No. 111,202. PUBLISHED DECEMBER 3, 1918.

124,816. CYLINDERS AND BOTTLES MADE OF METAL TO CONTAIN LIQUID OR ELASTIC FLUIDS UNDER PRESSURE. THE BRITISH MANNESMANN TUBE COMPANY LTD., London, England.
Filed June 1, 1918. Serial No. 111,200. PUBLISHED DECEMBER 10, 1918.

124,817. MACARONI. BROOKLYN MACARONI MFG. CO. INC., Brooklyn, N. Y.
Filed October 7, 1918. Serial No. 113,601. PUBLISHED DECEMBER 3, 1918.

124,818. FRESH DECIDUOUS FRUITS CONSISTING OF PEACHES, PLUMS, AND GRAPES. CALIFORNIA FRUIT EXCHANGE, Sacramento, Cal.
Filed August 28, 1918. Serial No. 112,909. PUBLISHED DECEMBER 3, 1918.

124,819. POTATO-FLOUR. CALIFORNIA PACKING CORPORATION, San Francisco, Cal.
Filed September 17, 1918. Serial No. 113,206. PUBLISHED DECEMBER 3, 1918.

124,820. BRISTLES. CHESNUTT, COOPER & CO., London, England.
Filed October 22, 1918. Serial No. 113,845. PUBLISHED DECEMBER 3, 1918.

124,821. DRESS-FASTENERS. COLUMBIA FASTENER COMPANY, Chicago, Ill.
Filed October 11, 1917. Serial No. 106,715. PUBLISHED APRIL 9, 1918.

124,822. CERTAIN NAMED GARMENTS FOR CHILDREN. Mrs. BILLIE DEYTER, South Pasadena, Cal.
Filed October 21, 1918. Serial No. 113,823. PUBLISHED DECEMBER 3, 1918.

124,823. MATCHES. THE DIAMOND MATCH CO., Chicago, Ill.
Filed July 29, 1914. Serial No. 89,181. PUBLISHED DECEMBER 10, 1918.

124,824. COFFEE. THE DONALD COMPANY, Grand Island, Nebr.
Filed September 29, 1917. Serial No. 106,502. PUBLISHED JANUARY 8, 1918.

124,825. HAIR-SHAMPOO AND HAIR-TONIC. EDNA GARFIELD DUNCAN, New York, N. Y.
Filed August 16, 1918. Serial No. 112,744. PUBLISHED DECEMBER 10, 1918.

124,826. SLUSHING COMPOUND FOR PROTECTING THE SURFACES OF FINISHED METAL ARTICLES. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed March 4, 1918. Serial No. 109,859. PUBLISHED NOVEMBER 19, 1918.

124,827. STOCK FEED. FISHER FLOURING MILLS COMPANY, Seattle, Wash.
Filed September 23, 1918. Serial No. 113,862. PUBLISHED DECEMBER 3, 1918.

124,828. PHARMACEUTICAL PREPARATIONS FOR TREATMENT OF CERTAIN NAMED DISEASES. JAMES W. GILLESPIE, Chattanooga, Tenn.
Filed July 30, 1917. Serial No. 106,885. PUBLISHED NOVEMBER 5, 1918.

124,829. CANNED VEGETABLES. LYMAN P. HAVILAND, Camden, N. Y.
Filed August 5, 1918. Serial No. 112,522. PUBLISHED DECEMBER 10, 1918.

124,830. CANNED VEGETABLES. LYMAN P. HAVILAND, Camden, N. Y.
Filed August 5, 1918. Serial No. 112,521. PUBLISHED SEPTEMBER 10, 1918.

124,831. TALKING-MACHINES, PHONOGRAPHS, GRAPHOPHONES, AND GRAMOPHONES. OTTO HEINEMAN PHONOGRAPH SUPPLY CO., INC., New York, N. Y.
Filed October 4, 1918. Serial No. 113,574. PUBLISHED NOVEMBER 19, 1918.

124,832. OVERALLS AND WORK-CLOTHES IN ONE AND TWO PIECE GARMENTS. BLOCH-HEINEMANN CO., San Francisco, Cal.
Filed September 4, 1918. Serial No. 113,015. PUBLISHED DECEMBER 3, 1918.

124,833. MINERAL DYES. L. B. HOLLIDAY & CO. LIMITED, Huddersfield, England.
Filed September 25, 1918. Serial No. 113,357. PUBLISHED DECEMBER 3, 1918.

124,834. MANILA ROPE. THE HOOVEN & ALLISON COMPANY, Xenia, Ohio.
Filed August 26, 1918. Serial No. 112,877. PUBLISHED DECEMBER 3, 1918.

124,835. CANNED TOMATOES WITH PURÉE FROM TRIMMINGS. G. W. HUMS COMPANY, San Francisco, Cal.
Filed September 19, 1918. Serial No. 113,249. PUBLISHED DECEMBER 3, 1918.

124,836. WHEAT-FLOUR. EMPIRE MILLING COMPANY, Minneapolis, Minn.
Filed February 26, 1917. Serial No. 101,682. PUBLISHED DECEMBER 10, 1918.

124,837. CARDIGAN JACKETS. ESKIMO KNITTING MILLS, Philadelphia, Pa.
Filed March 31, 1917. Serial No. 102,618. PUBLISHED DECEMBER 3, 1918.

124,838. PERIODICAL FINANCIAL PUBLICATIONS. H. EVAN TAYLOR, INC., Philadelphia, Pa.
Filed May 8, 1916. Serial No. 95,006. PUBLISHED DECEMBER 3, 1918.

124,839. ARTIFICIAL LIMBS AND PARTS THEREOF. E-Z-FIT ARTIFICIAL LIMB CO., INC., New York, N. Y.
Filed October 4, 1918. Serial No. 113,578. PUBLISHED DECEMBER 3, 1918.

124,840. MATERIALS ADAPTED UPON ADMIXTURE TO FORM A SO-CALLED "PORCELAIN" FILLING FOR TEETH. GARHART DENTAL SPECIALTY COMPANY, Cambridge, Mass.
Filed August 15, 1918. Serial No. 112,727. PUBLISHED DECEMBER 10, 1918.

124,841. CERTAIN NAMED BEVERAGES, NON-ALCOHOLIC. GARRETT AND COMPANY, INCORPORATED, Penn Yan, N. Y.
Filed October 21, 1918. Serial No. 113,824. PUBLISHED DECEMBER 3, 1918.

124,842. HOG FEED. GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill.
Filed November 1, 1918. Serial No. 113,997. PUBLISHED DECEMBER 10, 1918.

124,843. DAIRY FEED. GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill.
Filed November 1, 1918. Serial No. 113,996. PUBLISHED DECEMBER 10, 1918.

124,844. HORSE AND MULE FEED. GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill.
Filed November 1, 1918. Serial No. 113,995. PUBLISHED DECEMBER 10, 1918.

124,845. DRESSED POULTRY. S. H. GRINSTEAD CO. INC., Lebanon, Ky.
Filed September 21, 1918. Serial No. 113,291. PUBLISHED NOVEMBER 5, 1918.

124,846. MALTLESS NON-ALCOHOLIC NON-INTOXICATING CEREAL BEVERAGE SOLD AS A SOFT DRINK. HAGEMEISTER BREWING COMPANY, Green Bay, Wis.
Filed September 5, 1917. Serial No. 106,070. PUBLISHED JANUARY 29, 1918.

124,847. LOCKS FOR CONTROL-LEVERS FOR AUTOMOBILES. H-R MANUFACTURING COMPANY, Chicago, Ill.
Filed October 12, 1916. Serial No. 98,594. PUBLISHED NOVEMBER 19, 1918.

124,848. COOLERS AND ICE-CREAM FREEZERS. JENSEN CREAMERY MACHINERY COMPANY, Long Island City, N. Y.
Filed October 17, 1916. Serial No. 98,785. PUBLISHED DECEMBER 10, 1918.

124,849. TRUNKS AND CASES FOR CONTAINING AND DISPLAYING MERCHANDISE. THE KAYNEE COMPANY, Cleveland, Ohio.
Filed January 10, 1918. Serial No. 108,402. PUBLISHED NOVEMBER 19, 1918.

124,850. CARBON-PAPER. KEE LOX MANUFACTURING COMPANY, Rochester, N. Y.
Filed September 20, 1918. Serial No. 113,281. PUBLISHED NOVEMBER 19, 1918.

124,851. PHONOGRAPHS. W. W. KIMBALL COMPANY, Chicago, Ill.
Filed February 5, 1918. Serial No. 108,828. PUBLISHED DECEMBER 3, 1918.

124,852. CANNED CONDENSED MILK. LAKE MILLS MILK COMPANY, Lakemills, Wis.
Filed October 10, 1918. Serial No. 113,653. PUBLISHED DECEMBER 3, 1918.

124,853. ELECTRICALLY-HEATED PADS FOR THERAPEUTIC USE. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed May 17, 1918. Serial No. 110,957. PUBLISHED DECEMBER 10, 1918.

124,854. CORNMEAL. LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind.
Filed August 20, 1918. Serial No. 112,806. PUBLISHED DECEMBER 10, 1918.

124,855. WATCH-CRYSTALS. EVARTS G. LOOMIS, Newark, N. J.
Filed October 9, 1918. Serial No. 113,633. PUBLISHED DECEMBER 3, 1918.

124,856. WATCH-CRYSTALS. EVARTS G. LOOMIS, Newark, N. J.
Filed October 9, 1918. Serial No. 113,632. PUBLISHED DECEMBER 3, 1918.

124,857. SHAVING-BRUSHES. THE JAMES LOWE ERSKINE CO., New York, N. Y.
Filed September 28, 1918. Serial No. 113,470. PUBLISHED DECEMBER 10, 1918.

124,858. INTERNAL-COMBUSTION-ENGINE-DRIVEN ELECTRICITY-GENERATING SETS. SCOTT J. MATTHEWS, Port Clinton, Ohio.
Filed September 6, 1917. Serial No. 106,097. PUBLISHED NOVEMBER 12, 1918.

124,859. OPTICAL-CHART CABINETS. MERRY OPTICAL COMPANY, Kansas City, Mo.
Filed July 15, 1918. Serial No. 112,150. PUBLISHED NOVEMBER 12, 1918.

124,860. PUBLICATION ISSUED BIMONTHLY. MOTHER NATURE PUBLISHING COMPANY, New York, N. Y.
Filed October 17, 1918. Serial No. 113,777. PUBLISHED DECEMBER 3, 1918.

124,861. COFFEE AND TEA. JAMES A. MCATEER & SONS, INC., Pittsburgh, Pa.
Filed October 10, 1918. Serial No. 113,654. PUBLISHED DECEMBER 3, 1918.

124,862. WRITING-PAPER AND ENVELOPS. NATIONAL PAPETERIE COMPANY, Springfield, Mass.
Filed February 14, 1918. Serial No. 106,997. PUBLISHED NOVEMBER 19, 1918.

124,863. INSPIRATOR. JOSEPH B. NEUBURGER, New York, N. Y.
Filed May 28, 1918. Serial No. 111,161. PUBLISHED DECEMBER 10, 1918.

124,864. CANNED TOMATOES, CANNED TOMATO PASTE, CANNED TOMATO PURÉE, AND HOT SAUCE. NILES GARDEN CANNING CO. INCORPORATED, Oakland and Manteca, Cal.
Filed October 10, 1918. Serial No. 113,659. PUBLISHED DECEMBER 3, 1918.

124,865. NUT-MARGARIN AND OLEOMARGARIN. NORTHERN OHIO DAIRY COMPANY, Ashland, Ohio.
Filed September 28, 1918. Serial No. 113,472. PUBLISHED DECEMBER 3, 1918.

124,866. FRESH APPLES AND FRESH PEARS. NORTHWESTERN FRUIT EXCHANGE, Seattle, Wash.
Filed October 10, 1918. Serial No. 113,658. PUBLISHED DECEMBER 3, 1918.

124,867. CRAPE BANDAGES USED FOR MEDICAL AND SURGICAL PURPOSES. THE NORWICH CRAPE COMPANY 1856 LIMITED, Norwich, England.
Filed May 28, 1918. Serial No. 111,248. PUBLISHED DECEMBER 10, 1918.

124,868. TABLE-SYRUP. OELRICH & BERRY CO., Chicago, Ill.
Filed September 19, 1918. Serial No. 113,262. PUBLISHED DECEMBER 3, 1918.

124,869. CERTAIN NAMED BEVERAGES, NON-ALCOHOLIC. HENRY H. OTTENS MFG. CO., INC., Philadelphia, Pa.
Filed August 10, 1918. Serial No. 112,662. PUBLISHED OCTOBER 15, 1918.

124,870. CANNED TOMATOES, CANNED SPINACH, CANNED STRING-BEANS, CANNED PUMPKINS, AND CANNED TOMATO SAUCE. NORVAL B. OOSE, El Monte, Cal.
Filed September 3, 1918. Serial No. 112,991. PUBLISHED DECEMBER 10, 1918.

124,871. DYES. PALATINE ANILINE & CHEMICAL CORPORATION, Poughkeepsie, N. Y.
Filed July 22, 1918. Serial No. 112,267. PUBLISHED DECEMBER 10, 1918.

124,872. TEA. PARK & TILFORD, New York, N. Y.
Filed September 21, 1918. Serial No. 113,805. PUBLISHED DECEMBER 3, 1918.

124,873. MASSAGE-CREAM. JOSEPH CHARLES PHILLIPS, Philadelphia, Pa.
Filed September 24, 1918. Serial No. 113,828. PUBLISHED DECEMBER 3, 1918.

124,874. ORANGES IN FRESH OR NATURAL CONDITION. PLACENTIA MUTUAL ORANGE ASSOCIATION, Placentia, Cal.
Filed September 19, 1918. Serial No. 113,364. PUBLISHED DECEMBER 3, 1918.

124,875. CIGARS, SMOKING AND CHEWING TOBACCO, AND CIGARETTES. JOHN D. PIGGOTT, Highland Park, Mich.
Filed May 24, 1917. Serial No. 104,051. PUBLISHED JULY 16, 1918.

124,876. SEEDS. PITTMAN & HARRISON COMPANY, Sherman, Tex.
Filed October 28, 1918. Serial No. 113,923. PUBLISHED DECEMBER 3, 1918.

124,877. SEEDS. PITTMAN & HARRISON COMPANY, Sherman, Tex.
Filed October 28, 1918. Serial No. 113,921. PUBLISHED DECEMBER 3, 1918.

124,878. CERTAIN NAMED ARTICLES OF MERCHANDISE MADE OF OR PLATED WITH PRECIOUS METAL. THE R & G Co., Attleboro, Mass.
Filed November 14, 1916. Serial No. 30,201. PUBLISHED JULY 9, 1918.

124,879. PREPARED ROOFING. RECIPROCITY SUPPLY COMPANY, Habana, Cuba.
Filed October 18, 1917. Serial No. 106,844. PUBLISHED DECEMBER 10, 1918.

124,880. WOMEN'S, MISSES', MEN'S, AND BOYS' SHOES MADE WHOLLY OR IN PART OF LEATHER OR CLOTH. REMIS SHOE CO., St. Louis, Mo.
Filed October 18, 1918. Serial No. 113,794. PUBLISHED DECEMBER 3, 1918.

124,881. DRIED, FRESH, AND CANNED FRUITS AND VEGETABLES. SAMUEL ROSENBLUM, Brooklyn, N. Y.
Filed August 27, 1918. Serial No. 112,897. PUBLISHED DECEMBER 10, 1918.

124,882. TEXTILE FABRIC, WOVEN OR KNITTED, COMPOSED OF SILK, ARTIFICIAL SILK, COTTON, OR COMBINATION THEREOF. ROYAL EMBROIDERY WORKS, NADAY & FLEISCHER, New York, N. Y.
Filed September 5, 1918. Serial No. 113,033. PUBLISHED NOVEMBER 12, 1918.

124,883. CONDENSERS, EVAPORATORS, AND GREASE-EXTRACTORS FOR FEED-WATER HEATERS. ROW & DAVIS, ENGINEERS, INC., New York, N. Y.
Filed June 15, 1918. Serial No. 111,600. PUBLISHED DECEMBER 3, 1918.

124,884. COTTON, SILK, AND WOOLEN PIECE GOODS AND COMBINATIONS THEREOF. ROYAL EMBROIDERY WORKS, NADAY & FLEISCHER, New York, N. Y.
Filed September 26, 1918. Serial No. 113,435. PUBLISHED NOVEMBER 19, 1918.

124,885. SOAPS AND SCOURING AND CLEANING COMPOUNDS. SARNETON MFG. CO., Tampa, Fla.
Filed September 5, 1918. Serial No. 113,036. PUBLISHED DECEMBER 3, 1918.

124,886. DISPLAY-COUNTERS. SHERER GILLETT CO., Chicago, Ill.
Filed April 8, 1918. Serial No. 110,055. PUBLISHED DECEMBER 10, 1918.

124,887. TALKING-MACHINES, PHONOGRAPHS, GRAMOPHONES, GRAPHOPHONES, AND MUSIC-BOXES. SONORA PHONOGRAPH CORPORATION, New York, N. Y.
Filed August 20, 1917. Serial No. 105,761. PUBLISHED NOVEMBER 19, 1918.

124,888. TALKING-MACHINES, PHONOGRAPHS, GRAMOPHONES, GRAPHOPHONES, AND MUSIC-BOXES. SONORA PHONOGRAPH CORPORATION, New York, N. Y.
Filed October 10, 1918. Serial No. 113,677. PUBLISHED DECEMBER 3, 1918.

124,889. TALKING-MACHINES, PHONOGRAPHS, GRAMOPHONES, GRAPHOPHONES, AND MUSIC-BOXES. SONORA PHONOGRAPH CORPORATION, New York, N. Y.
Filed October 10, 1918. Serial No. 113,678. PUBLISHED DECEMBER 3, 1918.

124,890. TALKING-MACHINES, PHONOGRAPHS, GRAMOPHONES, GRAPHOPHONES, AND MUSIC-BOXES. SONORA PHONOGRAPH CORPORATION, New York, N. Y.
Filed August 20, 1917. Serial No. 105,762. PUBLISHED NOVEMBER 19, 1918.

124,891. CERTAIN NAMED BEVERAGES, NON-ALCOHOLIC. A. M. LUCKETT, Fort Worth, Tex.
Filed February 23, 1918. Serial No. 109,180. PUBLISHED SEPTEMBER 3, 1918.

124,892. PERIODICAL ISSUED MONTHLY. LE ROY M. SMITH, Chicago, Ill.
Filed September 23, 1918. Serial No. 113,319. PUBLISHED NOVEMBER 19, 1918.

124,893. ASPHALTIC OR BITUMINOUS WATER AND VERMIN PROOF COATINGS FOR WRAPPERS OF MEATS AND OTHER FOODS. STANDARD ASPHALT & REFINING CO., Chicago, Ill.
Filed May 2, 1918. Serial No. 110,608. PUBLISHED DECEMBER 3, 1918.

124,894. COTTON PIECE GOODS. ROBERT A. SUFFERN, New York, N. Y.
Filed September 28, 1918. Serial No. 113,477. PUBLISHED NOVEMBER 19, 1918.

124,895. CANNED SARDINES IN OIL. SUNSET PACKING COMPANY, New York, N. Y., and West Pembroke, Me.
Filed October 18, 1918. Serial No. 113,798. PUBLISHED DECEMBER 3, 1918.

124,896. MAGAZINE PUBLISHED MONTHLY. THE TEXAS COMPANY, Houston, Tex., and New York, N. Y.
Filed October 1, 1918. Serial No. 113,516. PUBLISHED NOVEMBER 26, 1918.

124,897. MACARONI. PETER W. TOZZI, Weehawken, N. J.
Filed April 15, 1918. Serial No. 110,226. PUBLISHED DECEMBER 10, 1918.

124,898. REFRIGERATORS AND ICE-BOXES. TRAVERSE CITY REFRIGERATOR CO., Traverse City, Mich.
Filed August 5, 1918. Serial No. 112,546. PUBLISHED NOVEMBER 19, 1918.

124,899. CIGARETTES. THE UNITED KINGDOM TOBACCO COMPANY, LIMITED, London, England.
Filed March 19, 1918. Serial No. 109,661. PUBLISHED NOVEMBER 19, 1918.

124,900. MACARONIC FOODS—NAMELY, MACARONI, VERMICELLI, AND SPAGHETTI. UNITED STATES MACARONI COMPANY, Los Angeles, Cal.
Filed November 28, 1917. Serial No. 107,759. PUBLISHED FEBRUARY 5, 1918.

124,901. CERTAIN NAMED BEVERAGES, NON-ALCOHOLIC, NOT OF A CEREAL NATURE. VER-BA BEVERAGE CO., Newark Ohio.
Filed September 16, 1918. Serial No. 113,204. PUBLISHED NOVEMBER 19, 1918.

124,902. CANE AND MAPLE SYRUP. VERMONT MAPLE SYRUP COMPANY INC., Essex Junction, Vt.
Filed September 5, 1918. Serial No. 113,040. PUBLISHED DECEMBER 3, 1918.

124,903. PAMPHLET OR MAGAZINE PERIODICALLY PUBLISHED. VICTOR SHAW RING TRAVELER CO., Providence, R. I.
Filed February 2, 1918. Serial No. 106,777. PUBLISHED NOVEMBER 19, 1918.

124,904. HOSIERY FOR MEN, WOMEN, AND CHILDREN. CHARLES ALBRIGHT WANNER, Fleetwood, Pa.
Filed September 19, 1918. Serial No. 113,272. PUBLISHED DECEMBER 3, 1918.

124,905. COTTON PIECE GOODS—VIZ., SHIRTING AND SHEETING. WAMSUTTA MILLS, New Bedford, Mass.
Filed September 6, 1918. Serial No. 113,053. PUBLISHED NOVEMBER 12, 1918.

124,906. COTTON PIECE GOODS—VIZ., SHIRTINGS. WAMSUTTA MILLS, New Bedford, Mass.
Filed September 5, 1918. Serial No. 113,042. PUBLISHED NOVEMBER 12, 1918.

124,907. SHORTENING COMPOSITION. WARD BAKING COMPANY, New York, N. Y.
Filed July 8, 1918. Serial No. 112,001. PUBLISHED DECEMBER 3, 1918.

124,908. FLOUR MADE FROM WHEAT. WARNER, Moore & Co., Richmond, Va.
Filed June 29, 1917. Serial No. 104,762. PUBLISHED FEBRUARY 19, 1918.

124,909. WHEAT-FLOUR. THE WARRENSBURG MILLS, Warrensburg, Mo.
Filed September 7, 1918. Serial No. 113,071. PUBLISHED DECEMBER 10, 1918.

124,910. COFFEE. THE WEIDEMAN COMPANY, Cleveland, Ohio.
Filed October 21, 1918. Serial No. 113,868. PUBLISHED DECEMBER 3, 1918.

124,911. WOMEN'S AND MISSES' OUTER COATS, WAISTS. WEINERS & HOROWITZ, New York, N. Y.
Filed September 28, 1918. Serial No. 113,490. PUBLISHED DECEMBER 3, 1918.

124,912. CERTAIN NAMED WRITING-TABLETS AND TYPE-WRITER PAPER. WESTERN TABLET COMPANY, St. Joseph, Mo.
Filed June 10, 1918. Serial No. 111,474. PUBLISHED DECEMBER 3, 1918.

124,913. LEATHERS. WEBER-LORD TANNING COMPANY, Boston, Mass.
Filed April 15, 1918. Serial No. 110,289. PUBLISHED DECEMBER 3, 1918.

124,914. COFFEE. THE WIDLAR CO., Cleveland, Ohio.
Filed October 10, 1918. Serial No. 113,666. PUBLISHED DECEMBER 3, 1918.

124,915. TALKING-MACHINES, PHONOGRAPHS, AND RECORDS AND NEEDLES. THE WILCOX & WHITE CO., Meriden, Conn.
Filed May 2, 1918. Serial No. 110,612. PUBLISHED DECEMBER 3, 1918.

124,916. STERILIZERS ADAPTED FOR LABORATORY AND SURGICAL WORK. WILMOT CASTLE COMPANY, Rochester, N. Y.
Filed May 15, 1918. Serial No. 110,914. PUBLISHED DECEMBER 10, 1918.

124,917. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. WISE & WHITLOCK, Inc., New York, N. Y.
Filed October 10, 1918. Serial No. 113,663. PUBLISHED DECEMBER 3, 1918.

124,918. EGG SUBSTITUTE. WIXON SPICE CO., Chicago, Ill.
Filed March 15, 1918. Serial No. 109,561. PUBLISHED DECEMBER 3, 1918.

TRADE-MARK REGISTRATIONS RENEWED.

16,707. MEDICAL COMPOUNDS FOR EXTERNAL APPLICATION. EVELINA DE LA FORREST KELLY, New Brighton, N. Y.
Registered June 11, 1889. Renewed June 11, 1919.

TRADE-MARK REGISTRATIONS CANCELED.

72,030. CERTAIN SYRUPS AND SUGAR CREAMS. RIGNEY & COMPANY, New York, N. Y.
Registered December 29, 1908. Canceled March 15, 1919.

120,645. DRESSES. SAMUEL SPRINTZ, New York, N. Y.
Registered February 19, 1919. Canceled March 13, 1919.

122,987. TRADE-JOURNALS PUBLISHED MONTHLY. PETROLEUM PUBLICATION COMPANY, Chicago, Ill.
Registered October 1, 1919, Canceled March 12, 1919.

LABELS

REGISTERED MARCH 18, 1919.

21,173.—*Title:* "'MOUNTAIN VIEW' BRAND." (For Canned Red Raspberries.) HENRY A. BAKER, Puyallup, Wash. Filed December 31, 1918.

21,174.—*Title:* "CARAVEL COMPANY INC." (For Chemicals and Dyestuffs.) CARAVEL COMPANY, INC., New York, N. Y. Filed September 10, 1919.

21,175.—*Title:* "FRANKLIN'S ORIGINAL—SNOW FLAKE, 'THE MYSTIC WASHING TABLET.'" (For "The Mystic Washing Tablet.") FRANKLIN PRODUCTS COMPANY, Stapleton, Staten Island, N. Y. Filed November 22, 1918.

21,176.—*Title:* "THE STAR'S PALETTE OUTFIT." (For Children's Paint Sets.) STAR CRAYON MANUFACTURING COMPANY, INC., New York, N. Y. Filed February 3, 1919.

21,177.—*Title:* "CHERRY ALMOND." (For Cherry Almond Flavor.) SOLOMON WERNER, Philadelphia, Pa. Filed December 20, 1918.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE ONDERDONK.

Decided April 9, 1910.

PATENTS—INVENTION—INCLOSING PARTS WITHIN A CASING HAVING A TRANSPARENT WINDOW.

Claims for a stamp-affixing machine presenting as the only novelty an "inclosing frame," "a face plate interposed between the cutter and the feeding device," and a "transparent plate" *Held* not patentable, as these features involve no invention, it being obvious to inclose a mechanism to protect it from dust or from being tampered with and to provide a glass window to permit observation of the mechanism within the inclosure.

APPEAL from Examiners-in-Chief.

STAMP-AFFIXING MACHINE.

Mr. Charles McC. Chapman for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 21, 30, 36, 37, 38, and 40, of which claims 21, 30, 36, and 40 are examples:

21. A stamp affixing machine having, in combination, an inclosing frame, a reciprocating cutter; a feeding device; a face plate interposed between the cutter and the feeding device; a ledger-blade carried by the face plate for cooperating with said cutter; said face plate having a slot through which the stamps may be fed by the feeding-device into position to be cut by the cutting device, means by which the stamp may be affixed, all said parts being inclosed by said frame, and a transparent plate set in the front of said frame through which the stamps and cutter may be seen.

30. The combination of a receptacle for gummed stamps, feeding and affixing means for said stamps, a liquid reservoir, intermittently operating feeding and locking means for advancing and locking the stamp-feeding means against further advancing or feed movement, and suitable connections whereby said feeding and locking means may receive its action from the operation of the stamp affixing means.

36. In a stamp affixer, the combination with a frame, a movable affixing member guided therein and provided with a cutting device, a cooperating cutter on the frame, and a holder detachably supported on the frame, and adapted to hold a rolled strip of stamps, of a guideway leading downwardly from the holder and having its open end terminating at the cutter on the frame, and means for advancing the strip step by step to project its extremity into the part of the affixing member.

40. In a stamp affixer, the combination with a stamp guideway having a discharge end; an affixing member adjacent said end, a feeding member cooperating with a strip of stamps to move it longitudinally of the guideway; and means including pins on the periphery of the feeding member cooperating with the stamp strip to arrest it when said strip is drawn forwardly in the guideway.

The references are: Hadida, No. 863,169, August 13, 1907; Hadida, No. 953,661, March 29, 1910.

The rejected claims cover a stamp-affixing device including a casing inclosing the stamps, means for advancing the roll of stamps, locking the roll, cutting the stamps off, and for moistening them, the stamp-affixer being visible through a glass plate.

Claim 21 reads on either Hadida patent except for the "inclosing frame," "the face plate interposed between the cutter and the feeding device," and the "transparent plate;" but these are features that may be left out of or put on Hadida without any invention and, indeed, without any materially different results. They do not change the mode of operation and involve no invention. Take, for example, the "inclosing frame." Everybody knows that if a mechanism gets dusty when exposed to dust or if one does not want people to tamper with it the ordinary thing to do is to inclose it in a frame, and if one wishes to see what is going on inside the casing the natural thing to do is to supply a glass window, and no invention is involved in either the idea or the mechanism.

Claim 30 depends for its novelty on the "feeding and locking means;" but as broadly as expressed in this claim Hadida shows feeding and locking means in the parts *t' u'* in No. 863,169. It is true, as pointed out by applicant, that his locking means are probably more efficient than Hadida's and operate differently; but the difference is not brought out in this claim.

Claims 36 to 38, inclusive, include the guideway 100 through the casing down to the cutter. Hadida shows no such guideway, because he has no inclosing frame; but if the stamps are inclosed in a casing and it is necessary to project them out and cut them off they would naturally go down through a passageway in the casing to the place to which they are cut off. In other words, these claims differ from the Hadida references by the inclusion of nonpatentable features.

Claim 40 involves pins on the feeding-roll and the guideway. These also seem to be incidental features quite common in other constructions, and I am unwilling to allow this or any of the appealed claims, the applicant having been already allowed claims commensurate with his invention, and the decision of the Examiners-in-Chief is accordingly affirmed.

EX PARTE THE THIRD NATIONAL BANK OF ST. LOUIS, MISSOURI.

Decided March 10, 1919.

TRADE-MARKS—USE IN TRADE PREREQUISITE TO REGISTRATION.

The words "National Bank 3rd of St. Louis," written between two concentric ellipses, *Held* not registrable to the applicant as a trade-mark for letter-heads, writing-paper, etc., for the reason that applicant, who uses this mark on its stationery, has made no trade-mark use thereof.

ON APPEAL.

TRADE-MARK FOR ENVELOPS, LETTER-HEADS, WRITING-PAPER, POSTAL CARDS, ETC.

Mr. Frederick R. Cornwall for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from a refusal to register an alleged trade-mark consisting of the applicant's name or description—"National Bank 3rd of St. Louis"—written within and between two concentric ellipses. The refusal was because the applicant has no goods in trade.

In the brief it is said that the—

applicant sells and distributes service by means of its trade-marked articles, and receives remuneration for said service.

Plainly, then, the thing sold is not the paper, envelops, bank-books, etc., on which the alleged trade-mark appears. The commerce with which trade-marks have to do is commerce in the literal sense of buying and selling physical wares. However valuable or salable "service" may be, it is not goods or capable of being tagged and marked by a sign of origin. The articles actually marked are not sold at all for purposes of trade and profit.

It is difficult to understand what supposed *rationale* there could be for any trade-mark on a bank's stationery, since there could be no "other goods of the same class" from which this stationery is to be distinguished.

This particular mark is itself all about the paper that is peculiar to the applicant, and the peculiarity about the paper is that it bears the mark of the user and not of the maker. The very reason why it cannot be sold is that nobody else could properly use it.

The applicant has no trade-mark at all. The Examiner's ruling is sustained.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

JONES *et al. v.* GENERAL FIREPROOFING CO.

Decided June 4, 1918.

[254 Fed. Rep., 97.]

1. CLAIMS—FUNCTIONAL—MERE CHANGE FROM HAND TO AUTOMATIC OPERATION NOT PATENTABLE.

The Curtis patent, No. 670,606, on machines for expanding sheet metal, claim 13 *Held* invalid as not involving invention, but the thought that automatic opening mechanism could be made to operate in a transverse plane, it not being patentable merely to do by automatic machinery what has commonly been done by hand.

2. CLAIMS—PART OF DEVICE.

Claims of a patent intended to reach the operation of half of the device, considered by itself, may be valid.

3. VALIDITY—SHEET-METAL-EXPANDING MACHINES.

The Curtis patent, No. 796,402, on machines for expanding sheet metal, claim 3 *Held* to be for the diagonal edge over which the sheet should be drawn into another plane as it progressed longitudinally, a new element in the association, and to be valid.

4. CONSTRUCTION—LIMITING WORDS.

Limiting words in the claim of a patent, relied on in Patent Office to differentiate it from a prior patent, while to be given their full meaning, if clear and definite, when developing ambiguity should not be read any more broadly than is reasonably necessary to serve such purpose of differentiation.

5. INFRINGEMENT—SHEET-METAL-EXPANDING MACHINES—DRAWING.

The Curtis patent, No. 796,402, on machines for expanding sheet metal, claim 3 *Held* infringed by defendant's machine, as "drawing" the sheet. Claims 5 and 9 also *Held* valid and infringed.

6. VALIDITY—SHEET-METAL-EXPANDING MACHINES.

The Curtis patent, No. 796,402, on machines for expanding sheet metal, claims 1, 8, and 10 *Held* invalid as too broad.

APPEAL from the District Court of the United States for the Eastern Division of the Northern District of Ohio; John M. Killits, judge.

Suit by Breckenridge Jones, trustee, and others, against the General Fireproofing Company. Bill dismissed, and complainants appeal. Reversed and remanded.

Messrs. Dyrenforth, Lee, Chrition & Wiles and *Mr. Russell Wiles* and *Messrs. Bates & Macklin* for the appellants.

Messrs. Hoyt, Dustin, Kelley, McKechan & Andrews (*Mr. Charles Neave* and *Mr. Fred L. Chappell* of counsel) for the appellee.

Before KNAPPEN and DENISON, Circuit Judges, and SESSIONS, District Judge.

DENISON, *Cir. J.:*

(1) For lack of infringement, the court below dismissed the bill of the appellants charging infringement of two patents issued to Curtis, one No. 670,606, of March 26, 1901, and the other No. 796,402, of August 1, 1905, upon machines for expanding sheet metal. Both patents relate to a device which receives as its raw material to be acted upon a slitted sheet of metal prepared as described in our opinion to-day filed in No. 3032, *Jones v. Sykes Co.*, (254 Fed., 91.) The final product of the machines of the patents in suit was intended to be used as metal lath. It was not new in itself. It is fully enough described in the opinion of the Supreme Court in *Expanded Co. v. Bradford* (214 U. S., 366, 376; 29 Sup. Ct., 652; 53 L. Ed., 1034) as being the product of the methods which the patentee in that case undertook to supersede by his patent there involved. It had also been known that after a sheet was fully cut, as, for example, by the Curtis machine of the patent involved in the Sykes case, and after the sheet was thus ready for expanding by a pulling or stretching force, such force would be much more effective if exerted at a lateral angle to the plane of the sheet than if exerted in the same plane. This was obvious, since, if the force were exerted in the same plane, the sheet could yield and expand only by a distor-

tion and twisting at and near the bonding-points, while, if an equivalent force were exerted at, e. g., a right angle to the plane of the sheet, the necessary yielding and expansion would call only for a bending of the strands without material twisting, and would produce an approximately diamond-shaped mesh (quasi-hexagonal) with the strands lying edgewise in the new plane instead of flat in the old. This had been accomplished by taking the finished sheet after it had come from the slitting-machine, seizing the opposite edges by suitable holders, and then carrying them apart from each other in a transverse plane. This had been an essentially manual operation, although aided by hand-operated mechanism. Curtis was the first to construct any machine which would receive at one end a ready-slitted sheet, carry the same longitudinally along through the machine, and deliver at the other end the transversely-expanded product ready for use—all without intermediate handling or attention. The novel characteristic of his machine was to expand transversely and progressively as an incident to the longitudinal feed and travel of this slitted sheet. In his first machine (670,606) he did this by employing traveling grips which seized the edges of the sheet as it passed longitudinally off the end of the horizontal feed-table, and which grips traveled in angling paths forward from, and transversely up and down from, the feed-table, thereby gradually expanding the sheet in this transverse plane until the full intended width was reached. His thirteenth claim, the one said to be infringed, reads as follows:

> The machine for opening or expanding sheet metal the slits in which have been previously cut, wherein are combined means for feeding the slitted sheets and means acting to open them by opening the strands between the slits in a direction substantially at right angles to the plane of the sheet, substantially as specified.

The other claims of the patent covered, with various breadth of expression, the specific means which Curtis showed and described, and claim 13 must be considered as reaching any suitable feeding means combined with any suitable opening means which automatically bend the strands at right angles to the plane of the sheet as it leaves the end of the feed-table. Thus construed, the claim did not express a patentable invention. The history of the transaction makes this clear. Caldwell had devised a machine which gripped the slitted sheet by its edges as it left the horizontal feed-table and opened it in its own plane. Curtis, as a mechanical expert, was asked by the owner of the Caldwell invention to see if he could improve it. He knew that the sheet ought to be opened in a transverse plane, and knew that it was common practice to do this manually, and he modified and adopted the Caldwell mechanism so that the grips moved away from each other up and down instead of sidewise. He was entitled to a patent upon the devices by which he caused this to be done and to a fair measure of equivalency; but we see no invention involved in the mere thought sought to be monopolized by this thirteenth claim, that automatic opening mechanism could be made to operate in the transverse plane. To find invention in such thought would be to say that it is broadly patentable merely to do by automatic machinery what has commonly been done by hand, and the general rule is to the contrary. (*Marchand* v. *Emken*, 132 U. S., 195, 199, 200; 10 Sup. Ct., 65; 33 L. Ed., 332.)

The prosecution, under the second patent in suit, is based upon claims 1, 3, 5, 8, 9, and 10. Claim 3 reads thus:

> In a machine for expanding previously slitted sheets, the combination with a support over which the slitted sheet is moved, of means for continuously feeding the sheet lengthwise along said support and means for drawing it away from the plane of the support as it passes off the same, substantially as specified.

(2) In this patent, Curtis took a completely-slitted sheet and conveyed it longitudinally along a feed-table. This feed-table was broken away on a diagonal line commencing at one of the forward corners and extending back at the desired angle to the other side. The result was that, as the sheet fed forward, first one corner would pass off the supporting means, and then a gradually-increasing triangular section would do so, until, eventually, the whole sheet would be passing over and beyond this diagonal edge. Means were then provided for carrying the free edge of the sheet downwardly at an angle to the plane of the feed-table, and, accordingly, the sheet was expanded by pulling it over the diagonal edge. It is true that Curtis showed a double-acting device, so that, in order to apply thereto the foregoing description, his sheet should be thought of as divided into two by a longitudinal center line, the first-opening corner of each half-sheet being at the central division-point between them, and one half being pulled downwardly and the other half pulled upwardly over diagonal edges extending from the two outer corners of the feeding means inward to the center. However, there are claims devoted to this double construction, and the claims in suit clearly have no reference thereto, but are intended to reach the operation of one-half the device considered by itself; and there is no inherent reason why claims drawn on that theory may not be valid.

(3) Our conclusion is that this is a proper case for the application for the principle to which we referred in *Davis* v. *New Departure Co.*, (217 Fed., 775; 133 C. C. A., 505.) From the broad point of view involved in claim 3, the new thing provided by Curtis was the diagonal edge over which the sheet should be drawn into another plane as it progressed longitudinally. This we consider a new element in this association, and it imparts both validity and character to the claim. Curtis did not merely provide a new association of old elements; the thought that the feed-table or supporting means could be cut away on a diagonal line so that this diagonal edge would serve as the resisting means over which the sheet might be pulled into expanded form was the novel thought, and the other recited elements of the claim only provide its necessary working environment. There is therefore no occasion to confine the claim to the

particular operative mechanism shown and described, but infringement will be found if a defendant has adopted substantially this novel element of the claim, even though it is put into association with other elements of distinctly different form from those shown in the patent, provided that they furnish the necessary field for the novel element to operate and to function as contemplated by the patent, and do not omit, in specie and by equivalent, any specified part.

We do not overlook the fact that this diagonal edge is not, in so many words, specified in claim 3; but we conclude that it is imperatively implied. The claim calls for "a support over which the slitted sheet is moved," and since such a sheet could not be moved lengthwise of the support and drawn away from the plane of the support into expansion as it passes off the same, unless it passes off in a diagonal line, we must conclude that the "support" of the claim is the support thus described. If there were doubt about the necessary presence of this element in claim 3, there could be none as to claim 5.

There is the common controversy whether the patented device has been largely used. If the patent is of the relatively generic scope claimed for it, then it has been embodied in machines which have been extensively adopted; if it is of the precise and limited scope insisted on by defendant, it has had no commercial use. In such a case, to argue against validity because the specific form has not been marketed is to beg the question.

(4–6) Having determined that the claim is valid and has the scope which we have attributed to it, the question of infringement remains. We conclude that this question depends upon the force to be given to the word "drawing," found in the claim. Defendant's machine does not draw the sheet over the diagonal edge in the same manner nor to the same degree that the Curtis device does. The allusion to the drawing function was relied upon during its progress through the Patent Office, to avoid a reference, and it therefore must have the limiting effect which the circumstance requires; but of course it does not follow that the "drawing" must be of the same kind and extent as shown by Curtis.[1] The file-wrapper discloses that Pitkin had an earlier patent upon a device which (for the purpose of construing claim 3) we may assume discloses a longitudinal feed-table or support broken away in a diagonal line; but Pitkin fed through this device an unslitted sheet, and above the angling edge he placed a corresponding row of star-wheels, which operated to slit, punch, stretch, and expand that line of the metal sheet progressing thereunder. The strand thus cut and punched was forced down and away from the plane of the support, and thereupon another strand was treated in the same manner. The result was that the sheet, as a whole, was carried somewhat away from the plane of the support; but Pitkin did not disclose the idea of drawing or pulling the sheet over this edge and thereby accomplishing the expanding. When Pitkin was cited, Curtis met the rejection by pointing out this drawing function. If words so inserted or relied upon as indicating difference, and which thereby become words of limitation, are clear and definite, they must have their full meaning, even though it later appear that the patentee thereby measurably lessened the monopoly to which he was really entitled; but, if these limiting words develop ambiguity, they should not be read any more broadly than is reasonably necessary to serve that purpose of differentiation for which they were adopted. (See *Clipper Co. v. E. W. Co.*, C. C. A. 6, 237 Fed., 602, 606; 150 C. C. A., 484, and cases cited.) When we come to consider defendant's form of turning the sheet over the edge, it is evident that the limitation to "drawing" is ambiguous, and we therefore must inquire whether defendant's operation draws the sheet over the edge in the sense in which Curtis said that he did and that Pitkin did not.

Defendant's machine is very different in appearance from Curtis's, and its operation is obscure. It has been necessary to study it in detail and observe the function of each part, but we are finally satisfied that it responds to the terms of the claim. It clearly accomplishes the general result; it feeds in longitudinally a completely-slitted sheet and delivers the sheet at the other end fully expanded and in a plane right-angled to the plane of feed. It accomplishes this by turning the sheet over a diagonal edge in the feed-table. This turning is done by a series of cams or wedges each of which meets and directs away in a right-angled plane one of the diagonal strands, and, as it does so, it pulls open the space between this strand and the next one and bends the intermediate connectors into the new plane. The result is certainly not the effect of a pushing force, applied from beyond or above the plane of feed, as in Pitkin. It certainly is the result of a pulling strain, applied in the plane of the expanded sheet, as in Curtis. A detailed discussion of the operation involved would serve no good purpose. It is enough to say that, taking Curtis and Pitkin as the prototypes of differentiated classes, we feel confident that defendant's device must be classified with Curtis; and, consequently, infringement must be found.

We see no vital distinction in the fact that Curtis's machine shows a pull transmitted from the farther margin through the entire expanded portion, while defendant's bending and turning force comes directly from the next strand, and is exerted strand by strand. Theoretically, Curtis completes his expansion strand by strand; practically, he probably does not. In theory, defendant's cam or abutment has served its full office when it has turned a strand away in the other plane and bent the connectors; in practice, the cams are continued so that they control the whole expanding portion. The essence of Curtis's invention—turning the slitted sheet at an angle as it flows over the diagonal edge of the support—is present just as much if the

[1] We give defendant the benefit of all doubts, by assuming that the effect is the same as if the limiting words had been inserted by amendment.

effective strain comes from the nearest strand as if from one or several farther away. There are claims which say or imply that this operating pull is to come from the farther margin of the sheet, according to the form shown in the drawing; not so with claim 3.

Claim 5 we think controlled by the same consideration as claim 3, and it also should be held infringed. Claim 1, when compared with other claims, cannot well be confined to a device having the diagonal edge which we think the essence of the invention. It seems intended to be broad enough to reach a sheet moving laterally over the edge of the support. Unless it has this construction, it does not seem to add anything to the other claims, and, with this construction, we think it too broad to be valid. Claims 8 and 10 are invalid for the same reasons. In view of our other conclusions, it is not very important whether claim 9 is valid and infringed; but we think it is. The claim was not rejected on Pitkin, does not contain the limitation to "drawing," and infringement is clearer than of claim 3. As to validity, Pitkin comes nearest to anticipating. Since Curtis regards his form as duplex, divided by a longitudinal center line, he must treat Pitkin from the same standpoint; but we cannot regard Pitkin's series of lower cutting-jaws, diagonally arranged, as the full equivalent of Curtis's diagonal edge over which the previously-slitted sheet is turned and opened. We are not here constrained by the estoppel from any action by Curtis in the Patent Office.

The decree below is reversed and the case remanded for the entry of a new decree in accordance herewith and pursuant to the disclaimer practice pointed out in *Westinghouse Co.* v. *Cooper Co.*, (245 Fed., 463, 470; 157 C. C. A., 625.) Appellants will recover one-half the costs of this court.

ON MOTION FOR REHEARING AND TO REOPEN.

[254 Fed. Rep., 970.]

PER CURIAM:

An application for rehearing demonstrates inaccuracy in the opinion filed, and necessitates further discussion.

It was the theory of the opinion that the diagonally-edged support is the essence of the invention, and that the language of the claims which we sustained justifies, and the whole case requires, the conclusion that such support should be implied as an element in these claims. It is now pointed out that this diagonal support is expressly specified in certain other claims not in suit, and hence that it should not be read into claims where it is not named. The rule invoked does not go to the extent which requires its application here. We suppose the reason of the rule is that each claim is supposed to have a distinguishing characteristic, and that no construction should be unnecessarily adopted which would cause two claims to be identical. From this reason, it follows that the prohibition is directed, not broadly against importing into one claim a specific limitation expressed in another, but, when stated with precision, is aimed against importing a limitation of that character when, by it alone, the two claims come to be different. If we apply the rule thus stated to the present case, and, for example, to claim 3, and compare it with claim 2, which bears the closest resemblance to claim 3, we must concede that claim 2 expressly calls for the diagonal support by saying "the edge of the support being arranged at an angle to the direction of the feed," while claim 3 includes it only by the implication arising from the call for feeding the sheet lengthwise and expanding the sheet by drawing it away from the plane of the support, thus employing the support with the diagonal edge; but we further observe that claim 2 calls for "means for continuously drawing the sheet over the edge of the support," while claim 3 calls for "means for drawing it away from the plane of the support," and that claim 3 specifies, while claim 2 does not, "means for continuously feeding the sheet lengthwise." These distinctions may not be very substantial; but the draftsman intended them to have distinguishing effect, and we are not inclined to overlook them for the sake of compelling what we think a substantially wrong result. With respect to this particular question, there is even less objection to importing this same element—the diagonal edge—into claim 9. There is no other claim closely similar to 9 which contains the limitation in express form.

In this connection, two models have been submitted with the rehearing application which are designed to show that a structure can be made fully responding to claim 3 and yet having no diagonal edge support. As to that model which illustrates the progressive operation, it is to be observed, first, that for the missing diagonal support it provides an approximate substitute in the form of two points of support diagonally disposed; and, second, that the claim by its terms fairly contemplates expansion as the sheet is drawn off the support; while in the model the sheet "passes off the same" (the support) mostly unexpanded. We are not satisfied that there was error in our construction of the claim in this respect.

The opinion stated that claim 9[1] was not rejected on reference to Pitkin; and hence we gave no consideration to the alleged limiting effect of such rejection. This statement was not accurate. Claim 9 was not rejected on reference to Pitkin at the same time that several other claims were, nor was claim 9 amended to distinguish from Pitkin by inserting the "drawing" feature; but at a later time, and when claim 9 had taken the same form as when issued, excepting that it did not contain the word "marginal," it was so rejected, and the word "marginal" was then inserted to avoid the reference. It follows that the phrase "holding a longitudinal marginal portion of the unexpanded sheet in a fixed

[1] Claim 9. The machine for expanded previously slitted sheet metal wherein are combined means for feeding the sheet longitudinally and continuously, with means for holding a longitudinal marginal portion of the unexpanded sheet in a fixed plane and means for deflecting the adjacent longitudinal portion of the sheet from said plane and simultaneously expanding it.

plane" must be deemed to have been adopted by Curtis in the sense necessary to distinguish his device from Pitkin, and if, when used in this sense, it will also distinguish the patented machines from the defendant's, the claim cannot be so construed as to cover the defendant's device. Pitkin held an entire sheet upon the plane surface, except as the edges were forced away; he, therefore, by inclusion, held a "longitudinal portion" of the sheet. Curtis gripped and held both longitudinal edges of his sheet and began his expansion at the center. However, claim 9 we think clearly intended to refer to and cover the treatment of one-half of the Curtis sheet. It was foreseen that, without departing from the basic principle, one margin only might be held and the other margin proceed into expansion. Other claims refer specifically to the holding of both margins, and we do not doubt that claim 9 was intended to describe the handling of one-half of the sheet shown by the drawings, without including the simultaneous, similar handling of the other half. Hence, it is apparent that in the Curtis device, as in the defendant's, one entire longitudinal margin of the sheet is firmly held while expansion progresses upon the other side; while, in the Pitkin machine, the whole central part is held while both sides are expanded. It is true enough that if we draw an imaginary line through the center of the Pitkin sheet and consider it as two units, as we do in the Curtis sheet, we will find that Pitkin holds one longitudinal margin of each half-sheet; but, to do this, we must put a construction upon Pitkin not recognized either by Curtis or by the Patent Office; because, if they had viewed Pitkin in that light and if they also intended—as we think they certainly did—that claim 9 should refer to one-half of the Curtis sheet, the force of Pitkin as a reference would not have been avoided by the amendment inserting the limitation to "marginal." Here, again, we are not inclined to give an overstrict application to rather technical reasoning when the effect is to reach an unsatisfactory result.

The opinion said that claim 5 should also be construed to include the limitation to the diagonal support. This seems to have been an inadvertent reading of claim 6 instead of claim 5. Claim 6 contains this express limitation; claim 5 is the same, verbatim, excepting the limitation. It, therefore, most certainly cannot be read into claim 5; and claim 5 must be classed with 1, 8, and 10, and be considered invalid. Claim 6 was at first sued upon, but later plaintiff omitted it from the list of those upon which he intended to depend. This was done because he adopted a theory of the respective meanings of 5 and 6 which we have not been able to approve, and which seems to have been nothing more than that hypothesis which is not an election.[1]

[1] Mr. Justice Holmes in *Northern Co. v. Grandview Co.*, (203 U. S., 106, 108; 27 Sup. Ct., 27; 51 L. Ed., 109.)

We do not now see that it is important, in any practical way, whether claim 6 is added to 3 and 9 to serve as the basis of the decree. If plaintiff thinks it is, application may be made to the court below to shape the decree so as to include claim 6, and the court below will grant or refuse the application, or grant it upon terms as to a further opportunity for defendant to be heard thereon—all as to that court may seem proper.

There is no occasion to open the case at this stage for further proof regarding defendant's new machine. Whether that infringes may be considered in the court below in any way in which such questions are commonly presented.

Upon what may be considered the main, meritorious question, reargued and presented most exhaustively, we are not convinced that we reached the wrong conclusion. We think the substance of Curtis's invention lay in the diagonal supporting edge over which the longitudinally-moving slitted sheet was deflected and expanded at an angle to the plane of the sheet, and that defendant's device is rightly thus described. We also adhere to the view that the sheet is "drawn" over the edge in the fair sense which the whole record requires should be given to that word in the patent.

The application for rehearing and the motion to reopen are denied.

ADJUDICATED PATENTS.

(U. S. C. C. A. N. Y.) The Carrier patent, No. 854,270, for a method of heating and humidifying air, claims 1, 3, 5, 6, and 7 *Held* valid and infringed. *Buffalo Forge Co.* v. *City of Buffalo*, 255 Fed. Rep., 83.

(U. S. C. C. A. Pa.) The Hartman patents, Nos. 943,188, 951,311, 951,312, and 951,313, relating to methods and apparatus for the electrolytic purification of water, *Held* not infringed. *McDowell Mfg. Co.* v. *Electric Water Sterilizer Co.*, 255 Fed. Rep., 77.

(U. S. C. C. A. Ill.) The Reed patent, No. 939,620, for a concrete-mixer, claim 1 *Held* infringed by a new machine made by defendant after decree adjudging infringement by prior structures. Claims 2 and 4 *Held* not infringed. *Cropp* v. *Reed*, 255 Fed. Rep., 91.

Application Made to the Federal Trade Commission for License Under Enemy-Controlled Copyright Pursuant to the "Trading with the Enemy Act."

Copyright registration No. 25,569, Class D. XXc, to the heirs of Felix Bloch, Berlin, Germany, October 23, 1911, play entitled "Der Seeräuber." License applied for by Joseph W. Herbert, Edgwood Lane, Palisade, N. J.

Patents Nos. 1,297,982 to 1,298,632.

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Issue of March 25, 1919.

Patents	651—No. 1,297,982 to No.	1,298,632,	inclusive.
Designs	28—No. 53,106 to No.	53,142,	inclusive.
Trade-Marks	27—No. 124,919 to No.	124,945,	inclusive.
Prints	8—No. 5,072 to No.	5,079,	inclusive.
Reissues	5—No. 14,617, to No.	14,621,	inclusive.
Total	727		

Notice—Marking Drawings for Identification.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 24, 1919.

The attention of the attorneys is called to Rule 52, paragraph (*g*), which reads in part as follows:

* * * "The title should be written with pencil on the back of the sheet."

A compliance with this suggestion will avoid trouble in identifying the application to which the drawing belongs, especially in design cases, where more than one application is filed by the same inventor.

Whenever a substitute or additional drawing is filed, the serial number of the application should be written on the back of the drawing.

J. T. NEWTON,
Commissioner.

WATCH THE STOCK PEDDLERS.

Get the names and addresses of all persons and companies offering you speculative or doubtful stocks and securities in exchange for your Liberty Bonds or War Savings Stamps, with copies of their "literature." Mail them promptly for investigation to the

FEDERAL TRADE COMMISSION,
Washington, D. C.

HELP THE VICTORY LIBERTY LOAN.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 18, 1919.

Jones & Dudley, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered July 30, 1889, No. 16,883, to Jones & Dudley, of 140 Monticello avenue, Jersey City, N. J., and a notice of such declaration sent by registered mail to said Jones & Dudley at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jones & Dudley, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 18, 1919.

Thomas J. Duffy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered April 18, 1915, No. 103,841, to Thomas J. Duffy, of 1204 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Thomas J. Duffy at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Thomas J. Duffy, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 19, 1919.

The heirs, assigns, or legal representatives of John Baker, Jr., deceased, take notice:

An interference existing between the applications for patent of Michael A. Popkess and James E. Black, care of Bituminized Road Company, 405 Reliance Building, Kansas City, Mo., and John Baker, Jr., of 17 Battery Place, New York, N. Y., was on February 6, 1919, suspended for a period of thirty days in order that the legal representatives of Baker might intervene, the Office having been notified of the death of said Baker. The time referred to has expired, but no response has been made on behalf of the heirs, assigns, or legal representatives of Baker. Notice is therefore hereby given that unless said heirs, assigns, or legal representatives of Baker shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 21, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Feb. 11	Feb. 13	215
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 13	Dec. 3	300
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Feb. 14	Dec. 17	143
234	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Sept. 27	Jan. 31	223
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Nov. 19	Nov. 2	173
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Nov. 4	Jan. 6	264
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Jan. 20	Jan. 23	275
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 6	Feb. 3	113
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Aug. 12	Dec. 10	376
235	10. Carriages and Wagons; Motor Vehicles	Jan. 18	Feb. 24	489
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 13	Mar. 3	179
322	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Sept. 20	Sept. 7	987
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 29	Feb. 11	584
323	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 30	Feb. 14	161
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 3	418
112	16. Radiant Energy; Telegraphy; Telephony	Oct. 23	Nov. 4	548
307	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Feb. 5	Feb. 3	87
229	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 4	Dec. 16	536
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Jan. 31	Jan. 14	231
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 24	Feb. 14	158
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spanning; Weaving; Winding and Reeling.	Sept. 4	Jan. 6	
249	22. Aeronautics; Firearms; Ordnance	Jan. 8	Jan. 20	208
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Dec. 31	Jan. 17	200
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 4	314
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 27	Feb. 5	153
105	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Sept. 16	Nov. 16	571
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 2	Dec. 2	427
225	28. Internal-Combustion Engines	Sept. 16	Nov. 23	523
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Dec. 3	Dec. 17	401
132	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 2	Mar. 13	186
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 6	Jan. 4	240
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Sept. 3	Jan. 18	700
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Roads and Pavements; Paving; Roofs.	Nov. 21	Nov. 20	226
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Nov. 23	Jan. 3	214
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Feb. 17	Dec. 16	286
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Feb. 17	Feb. 18	371
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Aug. 30	Oct. 3	667
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice Harvesting; Stationery; Stone-Working; Wells.	Feb. 12	Feb. 11	121
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Oct. 7	Nov. 16	480
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 2	Jan. 28	388
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 21	Dec. 21	222
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Oct. 16	Nov. 4	433
382	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 14	Oct. 2	107
253	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Sept. 4	Dec. 3	148
379	45. Clutches; Lubrication; Motors; Railway Brakes	Nov. 20	Nov. 9	264

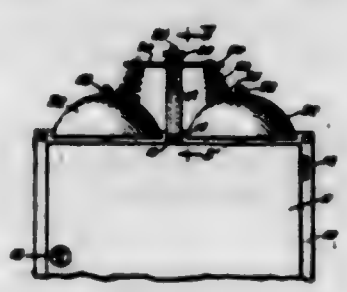
Oldest new case, Aug. 12; oldest amended, Sept. 7.
Total number of applications awaiting action 14,980

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 11	Mar. 7	199
	Designs	Feb. 3	Feb. 20	101
	Labels and Prints	Feb. 10	Feb. 24	103

PATENTS

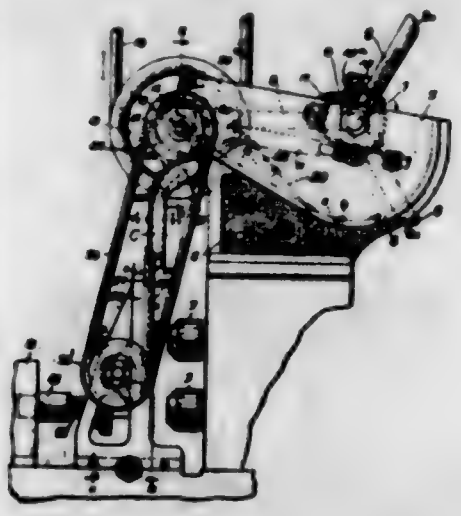
GRANTED MARCH 25, 1919.

1,297,982. TELEPHONE-BELL DAMPER. Soorem Acopian, Montreal, Quebec, Canada. Filed Oct. 26, 1917, Serial No. 198,569. Renewed Jan. 29, 1919. Serial No. 273,881. 2 Claims. (Cl. 116—32.)



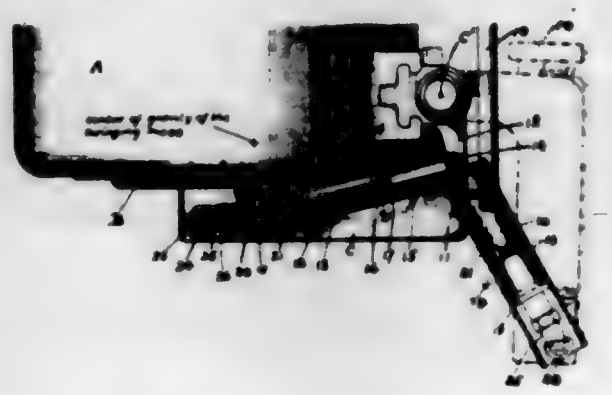
2. In a telephone bell damper, the combination with a support, and a pair of bells mounted thereon, of a standard secured vertically to said support, a horizontal element formed with said standard, arms on said horizontal element extending over said bells, a coiled spring secured at the end of each of said arms, pliable disk secured at the opposite ends of said springs, a rod mounted in said support, said rod extending through said horizontal element, and a nut fitted to said rod and adapted to engage with said horizontal element whereby the tension of said springs may be adjusted.

1,297,983. MULTIPLE-SPINDLE TURRET-MACHINE. Olof Anderson, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 21, 1916. Serial No. 138,178. 17 Claims. (Cl. 29—60.)



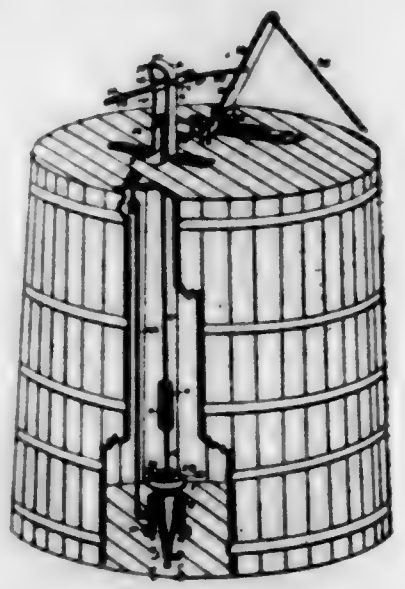
2. In a machine of the class described, the combination of a chuck-supporting turret, chute mechanism for feeding blanks, a supporting head shiftable toward and away from said turret in line with one of the chuck positions thereon, a shaft extending from said head, jaws pivoted on said shaft, a passageway at the lower end of the chute structure for the passage of said shaft and jaws, said jaws having pockets normally in alinement with said chute structure to receive blanks therefrom, means normally holding said jaws closed to clamp a blank, and means controlled during the end of the forward movement of said head for moving said shaft and jaws for effecting opening thereof to release the blank.

1,297,984. COUNTERBALANCE FOR SWINGING BREECH MECHANISMS. Dorsey F. Asbury, Washington, D. C., assignor to United States Ordnance Company, Washington, D. C., a Corporation of Virginia. Filed Feb. 23, 1916. Serial No. 79,900. 15 Claims. (Cl. 89—20.)



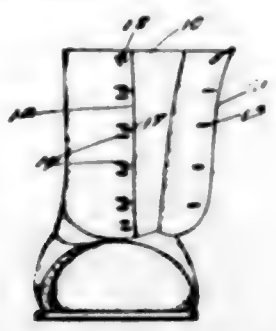
15. In a breech mechanism for ordnance loaded at high angles of elevation, the combination with a breech screw carrier having its pivotal axis inclined to the vertical when the gun is being loaded, of a balancing spring exerting upon the carrier a turning moment which will vary substantially in accordance with the falling moment of the carrier during its opening and closing movements.

1,297,985. VALVE CONTROL IN LIQUID-TANKS. James Edwin Atkinson, Landis, Saskatchewan, Canada. Filed May 13, 1916, Serial No. 97,409. Renewed Feb. 3, 1919. Serial No. 274,804. 3 Claims. (Cl. 137—21.)



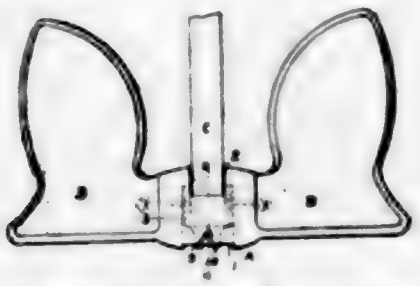
3. In a valve control for fluid tanks, the combination with a tank having a fluid opening and a valve closing said opening, of a crank lever pivotally mounted on said tank, a pair of standards on said tank joined at the upper end, a step intermediate of the height of said standards, an arm pivotally secured between said standards and normally dropping therebetween, a connecting rod joining said crank lever and said arm, a link connection from said crank lever and a valve rod joined to said link connection.

1,297,986. SHOE-CLOSURE. PAUL BABLE, Los Angeles, Calif. Filed Dec. 27, 1917. Serial No. 209,105. 1 Claim. (Cl. 24—140.)



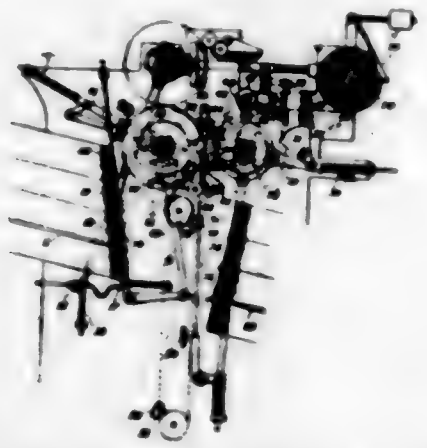
In a closure, the combination with a shoe upper having a plurality of longitudinal series of transverse slots disposed with their corresponding slots in groups, of a flap shiftable and overlappable with respect to the shoe upper and having a longitudinal series of single transverse slots and positioned and spaced to register with the separate series of slots of the shoe upper when the flap is correspondingly shifted, a strap secured to the flap and interlaced through the slots of the shoe upper and the flap, and means for securing the other end of the strap to the flap at the other end thereof.

1,297,987. ANCHOR. FREDERICK BALDT, JR., Tarentum, Pa. Filed Aug. 21, 1918. Serial No. 250,809. 2 Claims. (Cl. 114—208.)



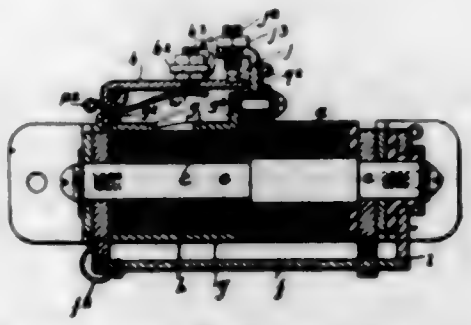
1. In a stockless anchor, the combination of a head carrying flukes and provided with a central recess extending from the rear thereof and a slot transverse of the head and connecting said recess with the front of the head, said recess having semi-cylindrical bearings on either side of said slot, a shank extending through said slot and having its butt in the form of a cylindrical boss journaled in said bearings and provided with axial seats at either end, and trunnion blocks occupying seats in the end walls of said recess and having projections concentric with said bearings engaging the seats in the ends of said boss, substantially as described.

1,297,988. MACHINE FOR APPLYING PATCHES TO PRECUT-WINDOW ENVELOP-BLANKS. WILLIAM H. BANZETT, Bergenfield, N. J., assignor to Mercantile Corporation, Dayton, Ohio, a Corporation of New York. Filed Apr. 8, 1916. Serial No. 89,769. 8 Claims. (Cl. 93—61.)



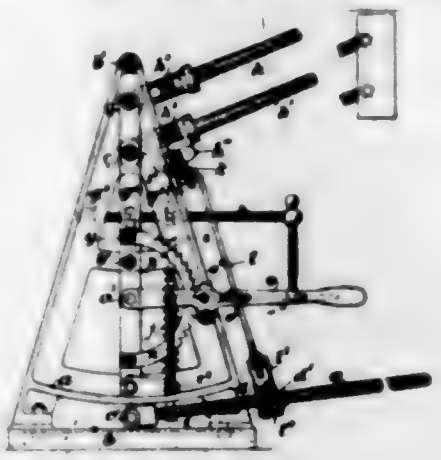
1. In a patch applying machine, in combination, a rotary platen; means for supplying pre-cut notched rhomb shaped window envelop blanks from a stack to said rotary platen, said means having provisions to supply the said blanks with the major axes thereof tangential to the periphery of the rotary platen; said rotary platen having means which is adapted to grip the leading corner of the blank and withdraw the same from the stack, and having supplementary means for thereafter gripping the blank adjacent the notches to secure the same to the rotary platen; means for gumming the said blanks about the borders of the pre-cut window; a rotary patch bed; means for advancing patch material to the said rotary patch bed; means for securing said patch material to the rotary patch bed, said patch extending longitudinally about the periphery of the patch bed; means for rotating the patch bed for rolling the patch upon the blank and securing the patch thereto by the gum thereon; and means for concurrently disengaging the patch from the rotary patch bed.

1,297,989. REGULATOR FOR MOTOR-GENERATOR SYSTEMS. JOHN A. BRIANS, Detroit, Mich. Filed July 24, 1915. Serial No. 41,656. 10 Claims. (Cl. 175—349.)



4. In an apparatus of the kind described, a core, a coil surrounding said core, a second core of cylindrical form sleeved over said coil, an armature adapted to be actuated by the magnetism of the first named core and an armature adapted to be actuated by the magnetism of said other core, an end of said outer core being intermediate the ends of said inner core and having its armature located at said intermediate end.

1,297,990. TREADLE-HAMMER. WILLIAM BLACKER, Staleybridge, England. Filed Feb. 19, 1918. Serial No. 218,051. 4 Claims. (Cl. 78—33.)



1. A treadle hammer having a head, parallel arms for said head, a sliding frame carrying the parallel arms, a traversing device for said frame, hammer head adjusting means carried on said sliding frame, locking means therefor, a foot treadle and a connection to work the parallel arms as set forth.

1,297,991. KEYLESS LOCK. HARRY L. BOOK, Honolulu, Hawaii. Filed Sept. 20, 1918. Serial No. 254,990. 4 Claims. (Cl. 70—14.)

1. In a lock of the class described, a bolt having an arm for extension through the closure to be secured, and pro-

vided at its terminal with an actuating handle, a bolt locking rod for extension through the closure and adapted to be swung into the path of the locking bolt, a member



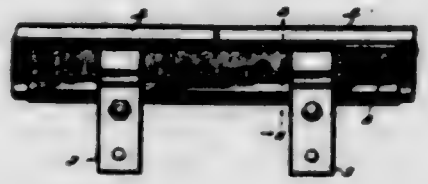
mounted to swing over said rod to hold it in engagement with said bolt, and a locking device for holding said member in engagement with the rod.

1,297,992. ELEVATOR. WALTER O. BORCHERDT, Austinville, Va. Filed Apr. 27, 1917. Serial No. 164,844. 8 Claims. (Cl. 187—75.)



1. In an elevator, the combination with the shaft and the car movable therein, of a pair of chairs pivotally mounted opposite each other and arranged to occupy a position for supporting the car at a landing and to be turned about their pivots into a non-supporting position with respect to the car, and motive fluid operating means mounted intermediate said pair of chairs and including a pair of piston rods connected to said chairs so as to effect corresponding movements of the chairs upon the admission of motive fluid to said means; substantially as described.

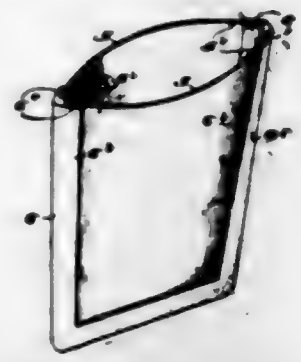
1,297,993. RAIL-CLAMP. OLE O. BORDSON, Cross Plains, Wis. Filed Dec. 10, 1918. Serial No. 266,085. 2 Claims. (Cl. 239—6.)



2. An emergency rail joint comprising fish plates adapted to embrace the rail ends, a clamp for clamping the plates on the rails at each end of the joint, each clamp comprising a pair of bars shaped at their upper ends to fit the outer faces of the fish plates, a bolt connecting the bars just below the rail, and means at the lower ends of the bars for forcing said ends outwardly and the upper ends inwardly.

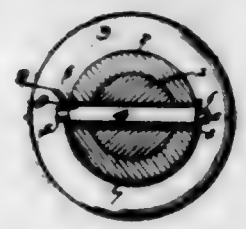
1,297,994. DRINKING-CUP. WILLIAM W. R. BOYER, Oklahoma, Okla. Filed May 17, 1918. Serial No. 235,178. 1 Claim. (Cl. 229—3.)

A cup including two normally flat walls of elastic material, the edges of said walls being secured together by a binding of resilient material adapted to act as a hinge in allowing the opening and collapsing movements of the cup, the binding being substantially U-shaped in cross-



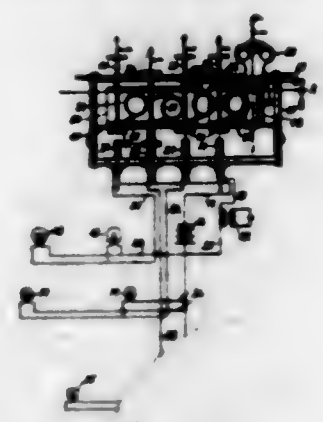
section and having each of its arms grooved, the edges of the sides being inserted in the grooves and being held therein by cement.

1,297,995. PIN-FASTENING DEVICE. SIMON BRALOVE, Washington, D. C. Filed Mar. 14, 1918. Serial No. 222,522. 2 Claims. (Cl. 287—53.)



1. A pin having end abutting faces to be engaged by the ends of a resilient bowed member, and a bowed spring member engageable at its ends with said abutting faces to prevent endwise displacement of the pin, said member having a body portion to closely frictionally engage the member through which the pin passes whereby the ends of the bowed member are held against the said abutting faces.

1,297,996. SWITCH FOR ELECTRIC CIRCUITS. CARL BRAMMING, Chicago, Ill., assignor to Accessories Manufacturing Company, a Corporation of Illinois. Filed Oct. 16, 1917. Serial No. 196,885. 8 Claims. (Cl. 175—282.)

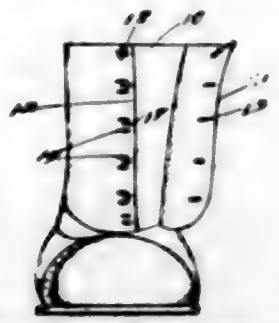


6. In combination, a plurality of light circuits, a spring retracted plunger switch for each circuit, one of such switches being adapted to close its circuit when advanced and the other being adapted to close its circuit when retracted, means for holding the plungers in advanced position, such holding means being releasable by the inward movement of each plunger.

1,297,999. PRINTING-PRESS. ABRAHAM T. H. BROWER, assignor of one-half to ALBERT MOE, Chicago, Ill.; said Moe assignor to said Brower. Filed May 17, 1917. Serial No. 169,186. 14 Claims. (Cl. 101—285.)

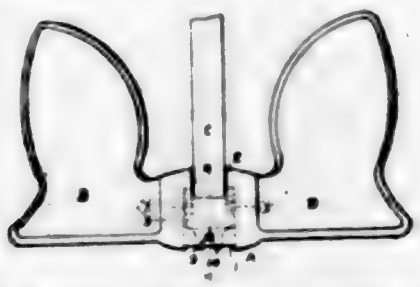
2. In a one-revolution, bed-and-cylinder printing press, the combination of an impression cylinder adapted to re-

1,297,986. SHOE-CLOSURE. PAUL BABLE, Los Angeles, Calif. Filed Dec. 27, 1917. Serial No. 209,105. 1 Claim. (Cl. 24—140.)



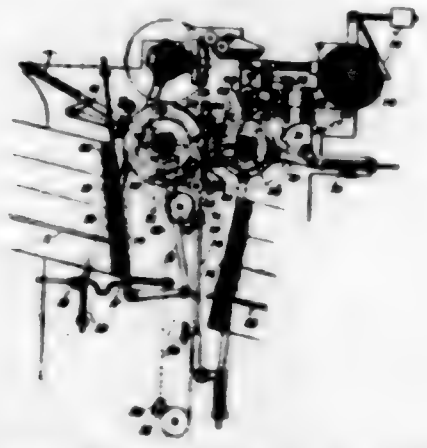
In a closure, the combination with a shoe upper having a plurality of longitudinal series of transverse slots disposed with their corresponding slots in groups, of a flap shiftable and overlappable with respect to the shoe upper and having a longitudinal series of single transverse slots and positioned and spaced to register with the separate series of slots of the shoe upper when the flap is correspondingly shifted, a strap secured to the flap and interlaced through the slots of the shoe upper and the flap, and means for securing the other end of the strap to the flap at the other end thereof.

1,297,987. ANCHOR. FREDERICK BALDT, JR., Tarentum, Pa. Filed Aug. 21, 1918. Serial No. 250,809. 2 Claims. (Cl. 114—208.)



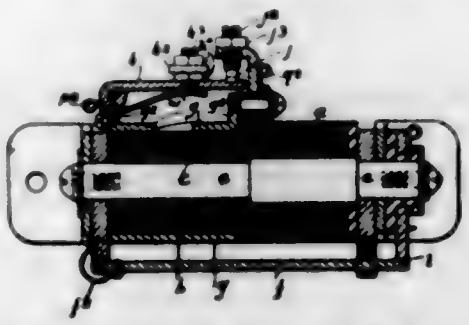
1. In a stockless anchor, the combination of a head carrying flukes and provided with a central recess extending from the rear thereof and a slot transverse of the head and connecting said recess with the front of the head, said recess having semi-cylindrical bearings on either side of said slot, a shank extending through said slot and having its butt in the form of a cylindrical boss journaled in said bearings and provided with axial seats at either end, and trunnion blocks occupying seats in the end walls of said recess and having projections concentric with said bearings engaging the seats in the ends of said boss, substantially as described.

1,297,988. MACHINE FOR APPLYING PATCHES TO PRECUT-WINDOW ENVELOP-BLANKS. WILLIAM H. BANZETT, Bergenfield, N. J., assignor to Mercantile Corporation, Dayton, Ohio, a Corporation of New York. Filed Apr. 8, 1916. Serial No. 89,769. 8 Claims. (Cl. 93—61.)



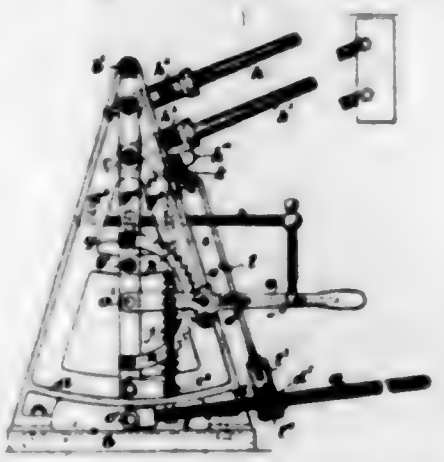
1. In a patch applying machine, in combination, a rotary platen; means for supplying pre-cut notched rhomb shaped window envelop blanks from a stack to said rotary platen, said means having provisions to supply the said blanks with the major axes thereof tangential to the periphery of the rotary platen; said rotary platen having means which is adapted to grip the leading corner of the blank and withdraw the same from the stack, and having supplementary means for thereafter gripping the blank adjacent the notches to secure the same to the rotary platen; means for gumming the said blanks about the borders of the pre-cut window; a rotary patch bed; means for advancing patch material to the said rotary patch bed; means for securing said patch material to the rotary patch bed, said patch extending longitudinally about the periphery of the patch bed; means for rotating the patch bed for rolling the patch upon the blank and securing the patch thereto by the gum thereon; and means for concurrently disengaging the patch from the rotary patch bed.

1,297,989. REGULATOR FOR MOTOR-GENERATOR SYSTEMS. JOHN A. BRIRNS, Detroit, Mich. Filed July 24, 1915. Serial No. 41,656. 10 Claims. (Cl. 175—349.)



4. In an apparatus of the kind described, a core, a coil surrounding said core, a second core of cylindrical form sleeved over said coil, an armature adapted to be actuated by the magnetism of the first named core and an armature adapted to be actuated by the magnetism of said other core, an end of said outer core being intermediate the ends of said inner core and having its armature located at said intermediate end.

1,297,990. TREADLE-HAMMER. WILLIAM BLACKER, Staleybridge, England. Filed Feb. 19, 1918. Serial No. 218,051. 4 Claims. (Cl. 78—33.)

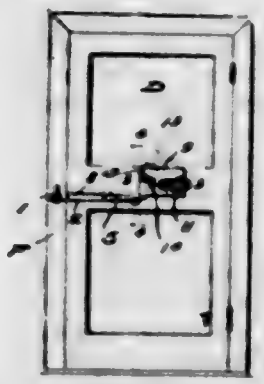


1. A treadle hammer having a head, parallel arms for said head, a sliding frame carrying the parallel arms, a traversing device for said frame, hammer head adjusting means carried on said sliding frame, locking means therefor, a foot treadle and a connection to work the parallel arms as set forth.

1,297,991. KEYLESS LOCK. HARRY L. BOOK, Honolulu, Hawaii. Filed Sept. 20, 1918. Serial No. 254,900. 4 Claims. (Cl. 70—14.)

1. In a lock of the class described, a bolt having an arm for extension through the closure to be secured, and pro-

vided at its terminal with an actuating handle, a bolt locking rod for extension through the closure and adapted to be swung into the path of the locking bolt, a member



mounted to swing over said rod to hold it in engagement with said bolt, and a locking device for holding said member in engagement with the rod.

1,297,862. ELEVATOR. WALTER O. BORCHERDT, Austinville, Va. Filed Apr. 27, 1917. Serial No. 164,844. 8 Claims. (Cl. 187—75.)



1. In an elevator, the combination with the shaft and the car movable therein, of a pair of chairs pivotally mounted opposite each other and arranged to occupy a position for supporting the car at a landing and to be turned about their pivots into a non-supporting position with respect to the car, and motive fluid operating means mounted intermediate said pair of chairs and including a pair of pistons rods connected to said chairs so as to effect corresponding movements of the chairs upon the admission of motive fluid to said means; substantially as described.

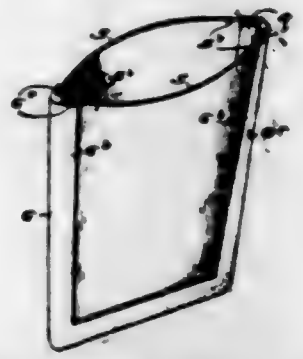
1,297,993. RAIL-CLAMP. OLE O. BORDSON, Cross Plains, Wis. Filed Dec. 10, 1918. Serial No. 266,085. 2 Claims. (Cl. 239—6.)



2. An emergency rail joint comprising fish plates adapted to embrace the rail ends, a clamp for clamping the plates on the rails at each end of the joint, each clamp comprising a pair of bars shaped at their upper ends to fit the outer faces of the fish plates, a bolt connecting the bars just below the rail, and means at the lower ends of the bars for forcing said ends outwardly and the upper ends inwardly.

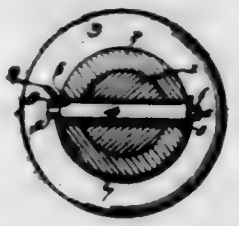
1,297,994. DRINKING-CUP. WILLIAM W. E. BOYER, Oklahoma, Okla. Filed May 17, 1918. Serial No. 235,176. 1 Claim. (Cl. 229—3.)

A cup including two normally flat walls of elastic material, the edges of said walls being secured together by a binding of resilient material adapted to act as a hinge in allowing the opening and collapsing movements of the cup, the binding being substantially U-shaped in cross-



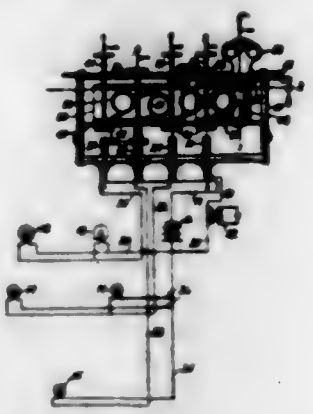
section and having each of its arms grooved, the edges of the sides being inserted in the grooves and being held therein by cement.

1,297,995. PIN-FASTENING DEVICE. SIMON BRALOVE, Washington, D. C. Filed Mar. 14, 1918. Serial No. 222,522. 2 Claims. (Cl. 287—53.)



1. A pin having end abutting faces to be engaged by the ends of a resilient bowed member, and a bowed spring member engageable at its ends with said abutting faces to prevent endwise displacement of the pin, said member having a body portion to closely frictionally engage the member through which the pin passes whereby the ends of the bowed member are held against the said abutting faces.

1,297,996. SWITCH FOR ELECTRIC CIRCUITS. CARL BRAMMING, Chicago, Ill., assignor to Accessories Manufacturing Company, a Corporation of Illinois. Filed Oct. 16, 1917. Serial No. 196,885. 8 Claims. (Cl. 175—282.)

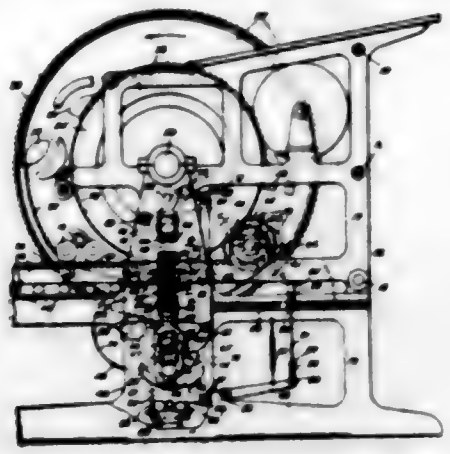


6. In combination, a plurality of light circuits, a spring retracted plunger switch for each circuit, one of such switches being adapted to close its circuit when advanced and the other being adapted to close its circuit when retracted, means for holding the plungers in advanced position, such holding means being releasable by the inward movement of each plunger.

1,297,997. PRINTING-PRESS. ABRAHAM T. H. BROWER, and SIVERT MOE, Chicago, Ill.; said Moe assignor to said Brower. Filed May 17, 1917. Serial No. 169,186. 14 Claims. (Cl. 101—285.)

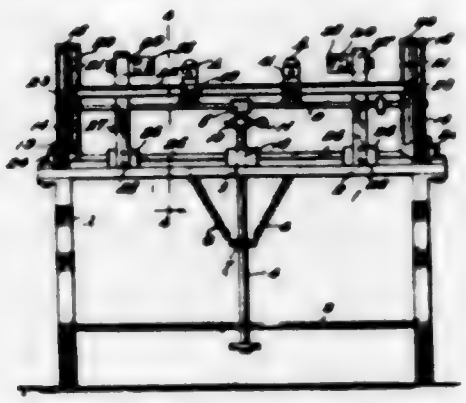
2. In a one-revolution, bed-and-cylinder printing press, the combination of an impression cylinder adapted to re-

tate continuously in one direction, a form bed, mechanism connected to said cylinder for reciprocating said bed, power operated trip mechanism comprising normally disengaged driving and driven members arranged to be operatively engaged in two different ways to effect the



raising and lowering movements respectively of said cylinder in timed relation with the bed and cylinder movements, a manually operable device and yielding connections between the same and one of said members for effecting such engagements.

1,297,998. COIL-SHAPING MACHINE. SAMUEL H. BROWNING, Columbus, Ohio. Filed Mar. 25, 1918. Serial No. 224,469. 4 Claims. (Cl. 153—17.)



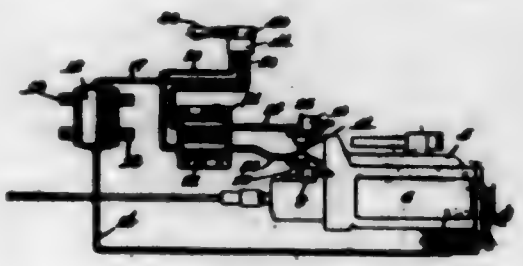
1. A coil shaping machine of the class described, comprising a bed structure, a longitudinally extending guide element carried by said structure, end loop receiving members slidably carried by said guide rod, vertically adjustable blocks carried by said members and capable of receiving the ends of wire loops positioned for spreading within said machine, pivoted arms carried by the ends of said structure, means for effecting the oscillation of said arms, vertically adjustable bars carried by said arms and loop gripping elements longitudinally adjustable upon said bars and capable of gripping and retaining portions of said wire loops situated intermediately of said blocks, whereby upon the oscillation of said arms said loops will be spread to assume desired contours.

2. In a coil shaping machine of the class described, a bed structure, oscillatory arms carried by said structure, vertically and longitudinally adjustable loop gripping elements carried by said arms, manually operated means for effecting the oscillation of said arms, said means including a plurality of links having their lower ends connected for vertical adjustment with said arms, a longitudinally extending rod connected with the meeting ends of said links, a vertically positioned shaft having the upper end thereof connected with said rod, a foot pedal carried by the lower end of said shaft, whereby upon the downward movement of said shaft said arms will be synchronously oscillated, springs for returning said shaft to its normal elevated position, and an adjustable stop collar carried by the upper end of said shaft and operable to limit the degree of oscillation of said arms.

3. In coil shaping mechanism of the class described, including a bed structure, a longitudinally extending guide rod carried by said bed structure, spaced blocks slidably mounted upon said guide rod, vertically extending U shaped straps having the ends thereof connected with said blocks, a loop receiving structure carried by said straps, said structure including a body portion shaped to be received by said straps, means for clamping said body portion in vertically adjusted positions within said straps, a plurality of opposed loop gripping plates carried by said body portion, means for varying the distance between the adjacent faces of said plates, and a loop retaining pin adapted to be situated within alined openings formed in said plates.

4. In coil shaping mechanism of the class described, including a bed structure, sets of pivoted arms carried by the ends of said structure, manually operated means for effecting the oscillation of said arms, vertically adjustable bars carried by said arms and extending longitudinally of said bed structure, pairs of longitudinally and transversely spaced loop gripping elements carried by said bars, means for clamping said elements in longitudinally adjusted positions upon said bars, an adjustable plunger carried by each of said elements and adapted to frictionally engage with wire loops passing through said elements in order to retain said loops in secured relation therewith, means for retaining said plunger in frictional engagement with said loops, and a sliding plate carried by each of said elements and located immediately above said plunger to further lock said loops within each of said elements.

1,297,999. PNEUMATIC BRAKE AND CLUTCH CONTROLLER FOR AUTOMOBILES. CORWIN W. BRYANT, Minneapolis, Minn. Filed Sept. 6, 1918. Serial No. 252,927. 8 Claims. (Cl. 188—3.)



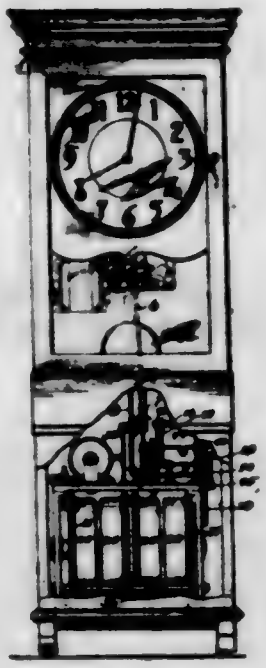
3. The combination with a brake mechanism and a clutch mechanism, of a pneumatic cylinder for each mechanism, a piston movable in each cylinder and connected to the respective mechanism for operation of the latter, a valve governing the inlet to each cylinder, a hollow shaft for operation of one of said valves, a second shaft for the operation of the other of said valves and receivable in said hollow shaft, and means carried by first said shaft for operation of both of said shafts.

1,298,000. TIME-INDICATING SYSTEM. JAMES W. BRYCE, Bloomfield, N. J. Filed Sept. 7, 1917. Serial No. 190,120. 4 Claims. (Cl. 58—24.)

1. A system of the kind described, comprising, in combination, a master clock, a circuit therefrom, time indicating devices connected with said circuit, spring motors for driving said indicating devices, controlled in their application of power for operating the same by impulses transmitted from the master clock, local sources of current and means controlled by movements of predetermined extent of said motors, less than those required for exhausting them for rewinding the motors by the local current, whereby the system will remain in operative condition over extended periods during which no current from the local source is furnished.

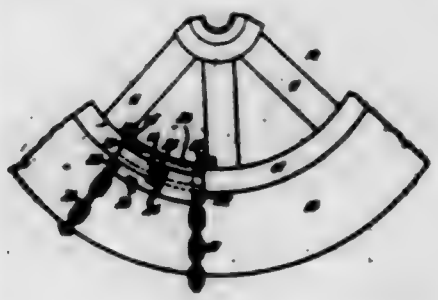
3. In a system of the kind described, the combination of a master clock, a circuit therefrom, a plurality of time-indicating devices connected with said circuit, a storage power motor, a magneto generator for producing

impulses that control the operation of the time-indicating devices, an escapement controlled by the clock for



the power motor and an actuating spring therefor adapted to be maintained under operative tension by the said motor.

1,298,001. NON-SKID ATTACHMENT FOR VEHICLE-TIRES. JAMES N. BURRIS, Davenport, Iowa. Filed Apr. 19, 1917. Serial No. 163,290. 1 Claim. (Cl. 188—14.)

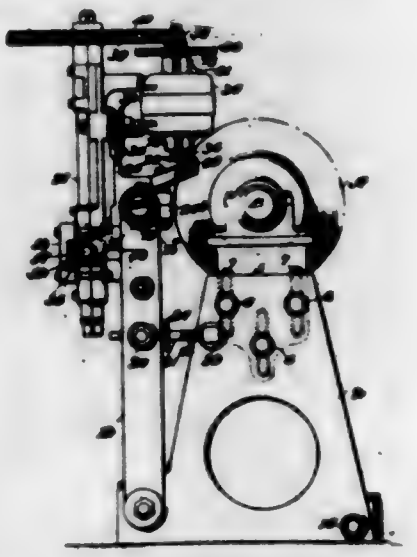


A non-skid attachment for automobile wheels comprising a rigid plate longitudinally and transversely curved to snugly embrace the rim of a wheel, an inwardly curved radially extending flange on each end of said plate to partly encircle the adjacent spoke of the wheel, said flanges preventing transverse movement and undue longitudinal movement of the plate, the length of the plate being sufficiently shorter than the distance between two adjacent spokes to permit the plate to be thrust into position between the spokes for engaging the rim of the wheel, a pair of chains adapted to pass transversely across the tire, each chain being hingedly attached at one end to one side of the plate, and means joining the other ends of the chains for releasably connecting them to the opposite side of the plate.

1,298,002. GIN-SAW-SHARPENING MACHINE. ROBERT H. BUTTRAM, Atlanta, Ga., assignor to The Buttera-Camp Mfg. Co., a Corporation of Georgia. Filed Apr. 24, 1916. Serial No. 93,298. 44 Claims. (Cl. 76—87.)

1. In a gin saw sharpening machine, in combination, a saw sharpening element, a movable carrier therefor, gearing for operating the carrier to cause a continuous movement thereof transversely of the gang of saws, and a motor for operating said element and said gearing.

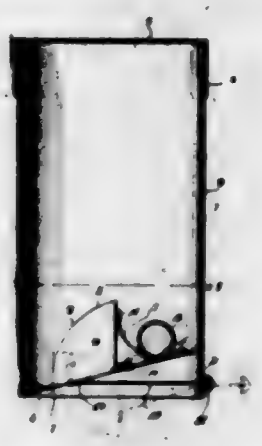
30. In a gin saw sharpening machine, in combination, a saw sharpening element, a carrier therefor, a rack bar parallel to the path of movement of the carrier, and gearing carried by the carrier for effecting its operation including a pair of axially slidable pinions engaging the rack bar, gear wheels for driving the respective pinions, the shaft of each pinion projecting through its companion gear wheel, an intermediate gear for driving the gear wheels, a flat spring acting on the ends of the pinions, co-acting clutch teeth formed on each pinion and its companion gear wheel and a transversely reciprocatory reversing bar having recesses for the ends of the pinion shafts, said recesses having their spacing from one another less than the distance between the pinion shafts.



31. In a gin saw sharpening machine, in combination, a saw filing element, a carrier therefor, a supporting element along which the carrier is movable and spacing blocks carried by said supporting element to project between and laterally brace the gin saws.

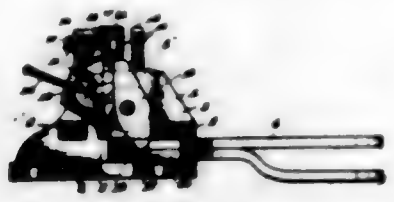
44. In a gin saw-sharpening machine, in combination, a rotary grinding wheel adapted to operate on the front and back surfaces of the saw teeth, a carrier therefor, a support disposed transversely of the gang of saws along which the carrier is movable, and means for continuously rotating the grinding wheel and for effecting the continuous movement of said carrier along said support.

1,298,003. DISPENSING-CAN. ROSCOE J. BYRUM, New Rockford, N. D. Filed July 31, 1916. Serial No. 112,345. 4 Claims. (Cl. 221—116.)



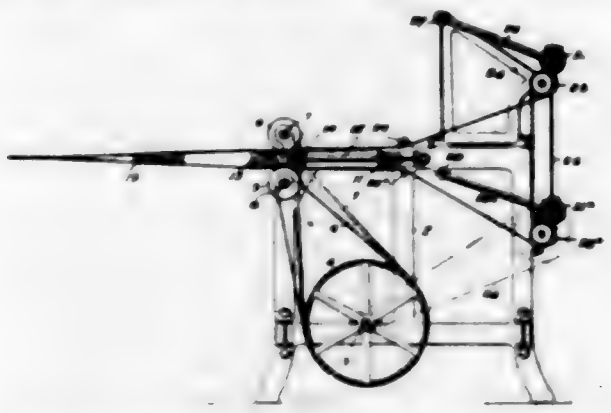
1. A dispensing can including a deliverer having bottom and side walls, one of the walls being substantially in alinement with the bottom of the container, means to normally maintain said deliverer in said position, consisting of a spring connected to the can and to the deliverer, and means to actuate said deliverer mounted in the wall of the can, and a stop on said means exteriorly of the can to engage the can and limit the return pulling movement of the spring.

1,298,004. AUTOMATIC-RELEASE DRAFT-COUPLING. JAMES OLIVER CASADAY, South Bend, Ind. Filed May 13, 1918. Serial No. 234,224. 11 Claims. (Cl. 213—67.)



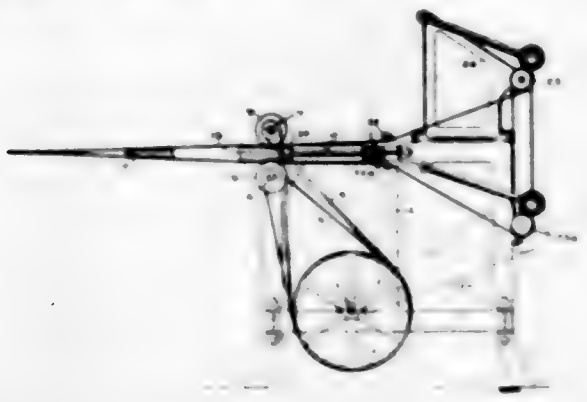
11. An automatic release draw bar connector, comprising a base adapted to receive the draw bar, resisting means moving at right angles to the direction of movement of the draw bar, a connection between said means and draw bar to compel a movement of such means under a predetermined pull on the draw bar, the movement of such means withdrawing the connection with the draw bar to release the same.

1,298,005. MACHINE FOR SLITTING KNIT FABRIC. FRANKLIN CHATFIELD, Minneapolis, Minn. Filed Jan. 18, 1916. Serial No. 72,733. 11 Claims. (Cl. 164—65.)



1. The combination, with the upper and lower slitting knives, of a fabric stretcher fitting between said knives, the upper and under surfaces of said stretcher having slits therein, those in the upper surface being in staggered relation to those in the under surface, and said slits being positioned to receive said knives, some of the slits in one surface being near the edges of the stretcher and the corresponding slits in the other surface being spaced from said edges, and means for guiding those portions of the fabric which pass around the edges of the stretcher to a flattened form after leaving the slitting knives.

1,298,006. FABRIC-STRETCHER. FRANKLIN CHATFIELD, Minneapolis, Minn. Original application filed Jan. 18, 1916, Serial No. 72,733. Divided and this application filed Jan. 21, 1918. Serial No. 213,025. 10 Claims. (Cl. 26—8.)



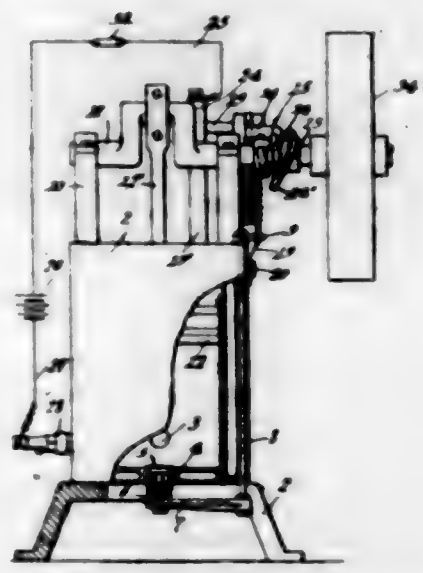
6. A fabric stretcher comprising a block having upper and under surfaces and a curved edge for bearing on the walls of the fabric and stretching the same, the fabric resting snugly on the upper and under surfaces of said stretcher and the rear portion of said stretcher having parallel slits therein to receive the fabric slitting saws.

1,298,007. AUTOMATIC CHECK-VALVE FOR COMPRESSED-AIR DRILLING-MACHINES. CHARLES C. CHENEY, Charlestown, Mass., assignor to Frederick K. Daggett, Brookline, Mass. Filed July 10, 1918. Serial No. 244,158. 8 Claims. (Cl. 136—11.)



1. In a fluid pressure operating device the combination with open-ended fluid conducting means in axial alinement and in spaced relation with each other and a by-pass conduit connecting said conducting means and a reciprocating valve rod intermediate said conducting means and in axial alinement therewith, of a casing surrounding said valve rod, adjustable abutting means on said valve rod, abutting means at one end of said casing and integral therewith, an encircling spring between said abutting means, and near one end of said valve rod, a substantially cup shaped plunger at the other end of said valve rod, pin-and-slot motion limiting means intermediate the plunger and said adjustable abutting means.

1,298,008. VALVE-GEAR. EMILE FOSS CHRISTIANI, Washington, D. C. Filed Aug. 5, 1918. Serial No. 248,420. 3 Claims. (Cl. 123—93.)

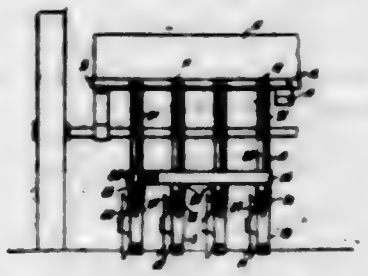


1. The combination with a cylinder having an inlet and an exhaust port, a piston, a crank shaft, and a connection between the crank shaft and the piston, of a valve normally closing the exhaust port, a slidably mounted valve lifting rod, a spiral cam thread having a return portion extending across the threads of the cam, an arm, means on the arm for engaging the thread of the cam, means operated by the lateral swinging of the arm under the action of the cam for controlling the ignition of a charge in the cylinder, and means operated by the elevation of the arm by the return portion of the cam thread for opening the exhaust valve.

1,298,009. GRAIN-DRILL. DEZERA CLYMER, Boulder, Colo. Filed Aug. 21, 1916. Serial No. 116,182. 3 Claims. (Cl. 111—66.)

1. In combination with a seed drill having a plurality of drill teeth, of a means for weighting said drill teeth, a

support having a plurality of openings therein, bolts carried by said support and passing through each of said



openings, a standard carried by each of said bolts, a weight carried by said standards and means for permitting independent vertical movement of the drill teeth.

1,298,010. COMBINED FOLDING SQUARE AND LEVEL. WALTER R. COLEMAN, Omaha, Nebr., assignor of one-half to Anthony E. Alberter, Omaha, Nebr. Filed June 18, 1917. Serial No. 175,281. 4 Claims. (Cl. 33—69.)



1. In devices for the purpose described, a rectangular, attenuated, graduated frame including a pair of apertured side-strips, a graduated cap having a recess opening on one of its ends and rigidly mounted on the side-strips at one of their longitudinal edges, a graduated slide having a recess opening on one of its ends and engaging the longitudinal edges of the side-strips opposite to said cap, a graduated blade provided with a slot midway between its longitudinal edges and adapted to be disposed in the recess of the slide intermediate the side-strips, a pivot-pin traversing the apertures of the side-strips and the slot of said blade, said slide being movable longitudinally of the frame to permit the blade to be disposed at selected angles with reference to said frame, and a latch on the pivot-pin in engagement with the slide for maintaining the blade and slide in stationary relation with the frame.

2. In devices for the purpose described, a graduated frame substantially of I-shape in cross-section having a channel opening on its ends and one longitudinal edge and having a recess in its opposite longitudinal edge opening on the channel and one of its ends, a graduated slide provided with a recess opening on one of its ends and mounted on the longitudinal edge of the frame opposite to the recess of said frame, a graduated blade provided with a slot midway between its longitudinal edges and disposed in the channel and adapted to engage in the recess of the frame and in the recess of the slide, a pivot-pin traversing the frame and the slot of said blade, means for securing the frame and slide in locked relation for maintaining said blade at right-angles to the frame, said slide being adapted to be released from its locked relation to permit it to be moved longitudinally of the frame to dispose the blade at a selected angle with reference to the frame, the end wall of the recess of the slide bearing upon a longitudinal edge of said blade.

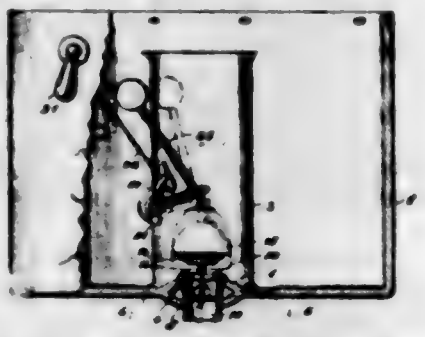
1,298,011. HEEL. LEON B. CONANT, Cambridge, Mass. Filed Sept. 19, 1918. Serial No. 254,716. 3 Claims. (Cl. 36—42.)

1. A heel consisting of a fibrous portion attached to the shoe for which it is designed, a lower heel portion, and a metal plate permanently attached to the lower heel portion, the attaching means for the metal plate embracing



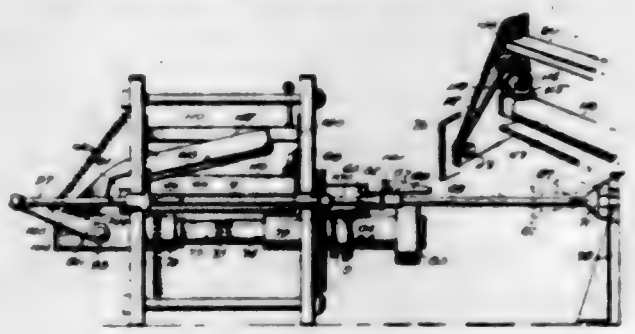
pointed spurs struck up from the plate at an acute angle therewith, all being parallel with each other and adapted to be pressed into a snug fit within the fibrous portion.

1,298,012. WATER-CLOSET FLUSH-TANK. RAYMOND E. CRANE, Wilmette, Ill. Filed May 29, 1918. Serial No. 237,254. 7 Claims. (Cl. 4—5.)



1. A flush tank provided with a valve seat, a flush valve coöperating therewith, a counter-weighted rock lever for holding said valve in open and closed position, a handle mounted in the tank wall for complete rotation, and a lost-motion connection between the handle and the lever, whereby a slight movement of the handle initiates the movement of the rock lever to unseat the valve, further movement being effected by the counter-weight without strain on the handle and its connections.

1,298,013. MACHINE FOR MEASURING AND WINDING WALL-PAPER IN COMMERCIAL ROLLS. JOHN CROWE, St. Joseph, Mo. Filed Aug. 6, 1917. Serial No. 184,711. 11 Claims. (Cl. 242—56.)

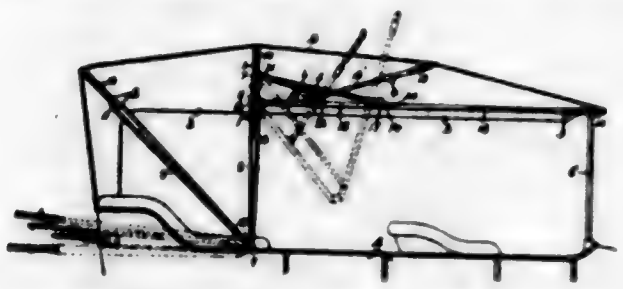


1. A winding device for paper rolls consisting of a frame, a paper feed roll having bearings in the frame, means for guiding the paper fed from the said feed roll, including measuring and pressure rolls between which the paper web extends, and a swinging paper carriage having means to grip the paper web upon movement in one direction, a rotatable and longitudinally shiftable winding shaft adjacent the feed carriage and onto which the web is fed, a driven shaft, connections between the driven shaft and the said winding shaft for rotating the latter and including a clutch controlled by the shifting movement of the winding shaft, clutch controlled and normally inactive connections from the driven shaft for shifting the winding shaft into and out of engagement with the paper web and including means for swinging the said paper carriage, a web cutting member also actuated by the said clutch controlled connections, and means controlled by the said measuring roll for actuating the clutch of the said connections.

2. A winding device for paper rolls consisting of a frame, a paper feed roll having bearings in the frame, means for guiding the paper fed from the said feed roll, including measuring and pressure rolls between which the paper web extends, and a swinging paper carriage having means to grip the paper web upon movement in one direction, a rotatable and longitudinally shiftable winding shaft adjacent the feed carriage and onto which the web is fed, a driven shaft, connections between the driven shaft and the said winding shaft for rotating the latter and including a clutch controlled by the shifting movement of the winding shaft, said driven shaft being in two parts having relatively engaging clutch faces, and one part of which is connected to the winding shaft to rotate the latter, connections between the other part of the winding shaft for shifting the latter and including means whereby to actuate the paper carriage, and means controlled by the said measuring roll to shift said shaft parts into and out of engagement.

3. A winding device for paper rolls consisting of a frame, a paper feed roll having bearings in the frame, means for guiding the paper fed from the said feed roll, a rotatable and longitudinally shiftable winding shaft onto which the paper is fed, a cutting knife, a paper feed carriage movable toward and away from the said winding shaft, and automatically controlled connections for actuating said winding shaft, cutting knife and paper feed carriage.

1,298,014. ONE-MAN TOP. ALMON W. CURTIS, Cortland, N. Y. Filed Oct. 30, 1916. Serial No. 128,599. 5 Claims. (Cl. 21—62.)



1. In a folding top for vehicles, the combination of a main bow, a rocking member thereon, a front bow composed of front and rear sections hinged to each other and having its rear section pivoted to the main bow, an intermediate bow pivoted to the rear section of the front bow, and links pivotally connected at one end to the rocking member and having their opposite ends connected, respectively, to the front section of the front bow and to the intermediate bow.

1,298,015. WIRE NAIL. GEORGE A. CURTIS, Medford, Mass. Filed Mar. 9, 1918. Serial No. 221,447. 1 Claim. (Cl. 85—28.)



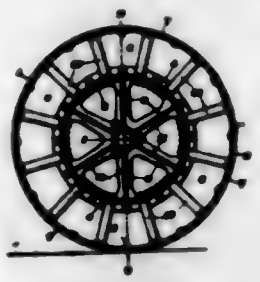
A wire nail including a circular head, a cylindrical shank and a clenching portion, said head having a flat outer face in a plane at right angles with the shank and a substantially circular edge face, the shank and head being joined by an endwise and laterally displaced condensed and compacted reëntrant portion which is joined to the shank and enlarged by a relatively small but progressively increasing inclination to the edge of the head with which it is joined, being substantially tangential to the inner face of said head, whereby sharp edges are avoided, said head being of a diameter approximately three times the diameter of the shank.

1,298,016. GARMENT-BUTTON. SARAH W. CUSHMAN, Norwich, N. Y. Filed Mar. 30, 1917. Serial No. 158,705. 3 Claims. (Cl. 24—104.)



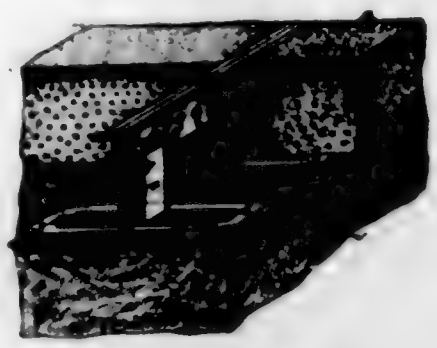
1. A button comprising a part formed with bayonet slots, and a part formed with tongues to fit in said bayonet slots, one of said parts being adapted to be permanently secured to a garment, the other being quickly attachable to and detachable from the permanently secured part at will.

1,298,017. TRACTOR-WHEEL. JOSEPH DAIN, Moline, Ill., assignor to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed July 12, 1915. Serial No. 39,404. 2 Claims. (Cl. 21—69.)



1. A wheel for tractors having in combination with a hub and a tire, an annular gear of a lesser diameter than the tire and supported on the hub, means extending from the annular gear to the tire and substantially at a right angle to the tire to close one side of the wheel and present a surface flush with the edge of the gear and the tire, and spokes between the gear and the tire on the opposite side of the wheel.

1,298,018. PAVEMENT AND EXPANSION-JOINT THEREFOR. ANTHONY E. DAVIS, Philadelphia, Pa. Filed Nov. 24, 1914. Serial No. 873,676. 5 Claims. (Cl. 94—1.)



2. In a device of the character stated, a supporting and alining member having a base portion and provided with upwardly extending sides, and armor strips supported by said sides and spaced thereby from the bottom of said member.

1,298,019. TURN-TABLE FOR TALKING-MACHINES. JOHN A. DAVIS, Boston, Mass. Filed Aug. 7, 1916. Serial No. 113,504. 1 Claim. (Cl. 274—39.)

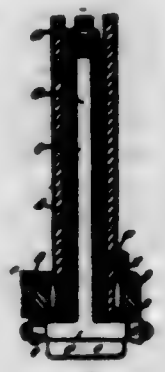
A turn table for talking machines, the body portion of which consists of a disk having in the upper surface two

annular depressions which are concentric with each other and with the periphery of the disk, one of said depressions being located at some distance inside of the margin of the disk, the other of said depressions being located at a considerable distance nearer the center of the disk, the outer depression having an abrupt shoulder at its outer periphery, the bottom of the depression having a gradual slope from its inner to its outer edge, the inner depression having an abrupt shoulder at its inner edge, the bot-



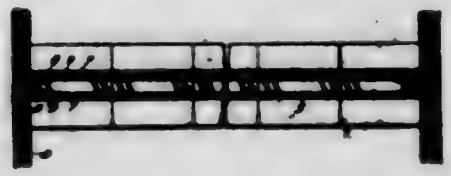
tom of said depression having a gradual slope from its outer periphery to its inner periphery, and an annular piece of felt secured to the surface of the table disk covering the space between the shoulders of said two depressions, the inner and outer edges of said felt lying within said depressions so that the edges of the felt do not project above the shoulders formed by the depressions in the table disk.

1,298,020. **BREECH MECHANISM OF ORDNANCE.** ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to United States Ordnance Company, Washington, D. C., a Corporation of Virginia. Filed June 21, 1917. Serial No. 176,113. 5 Claims. (Cl. 89—20.)



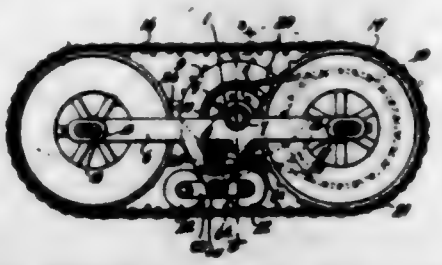
1. In breech mechanism for ordnance loaded at high angles of elevation, the combination with the breech screw carrier having its pivotal axis inclined to the vertical when the gun is being loaded, of a balancing spring and a cam for causing said spring to exert upon the carrier a turning moment which will vary substantially in accordance with the falling moment of the carrier during its opening and closing movements.

1,298,021. **CULVERT.** MARK R. DUVO, Bradford, Ill. Filed June 14, 1918. Serial No. 240,046. 1 Claim. (Cl. 72—52.)



A structure of the character specified, composed of sections abutting at their ends, each section having at its opposite side walls longitudinally extending grooves opening externally, the grooves of the sections registering to form channels extending the full length of the structure, spaced rods lying in the channels, each section having reinforcing elements embedded in its wall and extending at their ends into the grooves, the said ends being connected with the rods to form a continuous compound reinforcement at each side of the conduit structure extending the full length thereof, the channels being adapted to be filled with plastic material capable of hardening.

1,298,022. **MOTOR-VEHICLE.** RAYMOND L. DICKERSON, Spokane, Wash., assignor of one-third to Andrew S. Jones, Spokane, Wash., and one-third to W. J. Michelet, Portland, Oreg. Filed Mar. 20, 1918. Serial No. 223,511. 2 Claims. (Cl. 180—9.)



1. The combination of an axle and a frame pivoted thereon, a hub on the axle having a pair of sprocket wheels, a frame pivoted on the axle and a driving and driven sheave journaled in the frame, the driving sheave having a central sprocket member and a chain connecting said member with one of the hub sprockets, and an endless traction belt on the sheaves driven by one of said sheaves.

1,298,023. **ANTICREEPING DEVICE FOR RAILS.** AUGUST J. DINKLAGE, East Orange, N. J. Filed Dec. 26, 1916. Serial No. 138,790. 9 Claims. (Cl. 238—4.)



1. An anti-creeping device comprising a clamp having a rail engaging jaw at one end and a second jaw at the other end spaced from said rail, a projection on said clamp adapted to engage said rail and means extending between said second jaw and said rail for rocking said clamp on said projection as a fulcrum whereby said rail engaging jaw and said projection are caused to grip said rail.

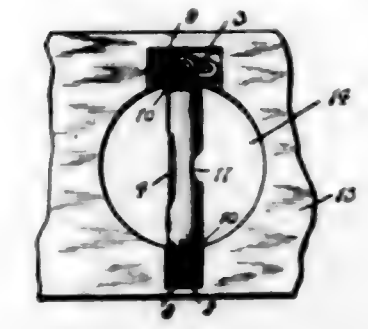
2. An anti-creeping device comprising a clamp having a rail engaging jaw at one end and a second jaw at the other end arranged to extend over and at a distance from the upper surface of the rail base, a projection on said clamp adapted to engage the lower face of said rail base and a wedge between said second jaw and the upper surface of said rail base for moving said clamp on said projection as a fulcrum whereby said rail-engaging jaw and said projection are caused to grip said rail base.

3. An anti-creeping device comprising a tie-engaging clamp adapted to be operatively combined with a rail, and a wedge between said clamp and said rail arranged to be influenced by the creeping force of said rail in a direction transverse to said clamp, said wedge being located entirely upon the upper surface of the rail base.

4. An anti-creeping device comprising a tie-engaging clamp having a jaw extending over and at a distance from the upper surface of the rail base, and a wedge located in its entirety upon said upper surface and extending between said jaw and said surface of the rail base, said wedge coöperating with said surface to cause said clamp to grip the rail.

5. An anti-creeping device comprising a tie-engaging clamp having a jaw extending over and at a distance from the upper surface of the rail base, and a wedge located between said jaw and said surface of the rail base and arranged to be forced up on said surface in a direction toward the rail web whereby said clamp is caused to grip said rail.

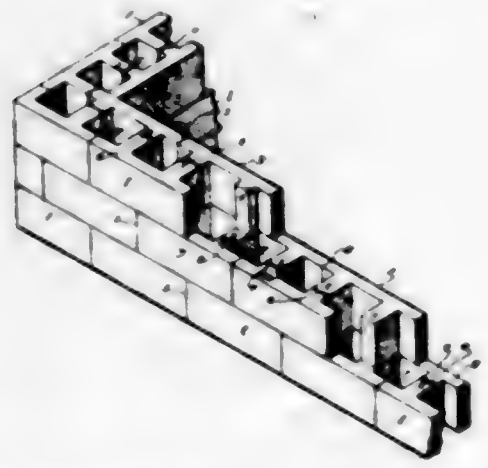
1,298,024. SPIRIT-LEVEL. AUGUST J. ELLISON, Montreal, Quebec, Canada, assignor of one-half to Ernest Henry Day, Montreal, Quebec, Canada. Filed Dec. 10, 1917. Serial No. 206,367. 2 Claims. (Cl. 33—213.)





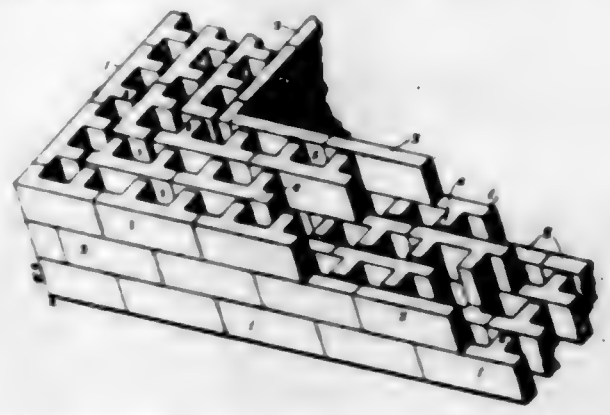
2. The combination in a leveling instrument, of an open-ended tube, a bubble glass arranged within said tube, a filling within said tube for holding said bubble glass in place, disks arranged within the opposite ends of said tube, ing projections carried by said tube for holding the disks in place, flanges projecting from the opposite ends of said tube, one of said flanges having an arcuate slot therein, the other of said flanges having a longitudinally extending slot therein, fastening members adapted to extend through said slots for detachably connecting said tube with the leveling instrument, cushioning devices arranged between said flanges and said fastening members, and said tube and filling having coincident light openings therein substantially as and for the purpose specified.

1,298,025. SECTIONALLY-SPACED HOLLOW-WALL CONSTRUCTION. JOHN A. FERGUSON, Denver, Colo. Filed Nov. 27, 1916. Serial No. 133,718. 1 Claim. (Cl. 72—39.)



In hollow wall construction composed of spaced sections, the employment of two sets of building blocks, each comprising a flat base and lateral webs disposed at right angles to and of the same vertical depth as their bases, the webs of one set of blocks being substantially longer than the webs of the other set but of the same lateral length relative to their respective bases, and the bases of the long webbed blocks forming a component part of one wall section while the bases of the short webbed blocks, in the same course, similarly function in the other wall section, with the end faces of the long and short webs disposed in opposed abutting relation, the arrangement of the blocks being so bodily transposed, in successive courses, that the bases of the respective sets of blocks are reversely located, in alternate courses, with the longer webs of an intermediate course functioning as set forth to overlap and bond, from opposite wall sections, the opposed long and short webs of the courses immediately above and below, substantially as described.

1,298,026. MULTIPLE SECTION HOLLOW-WALL CONSTRUCTION. JOHN A. FERGUSON, Denver, Colo. Filed Nov. 27, 1916. Serial No. 133,719. 1 Claim. (Cl. 72—39.)



In hollow wall construction, an inner and an outer wall, substantially spaced apart, each built up of rows of plane-surfaced slabs alternating with rows of laterally webbed building blocks of uniform dimensions, with the slabs and blocks of one wall disposed complementally of the blocks and slabs of the other wall; and one or more intermediate walls composed wholly of laterally webbed building blocks of congruent dimensions with those aforesaid; all of the building blocks, in all of the walls containing them in any same horizontal course, being laid with their webs projecting in the same direction, with the adjacent end faces of the blocks abutting without spacing therebetween, and with the end faces of their webs terminating on the same side of the opposed surface of a contiguous wall; while in alternate courses the said blocks are reversely set to provide for the vertical alinement and interbonding of complemental webs, substantially as described.

1,298,027. MULTIPLE MOLD FOR TILES AND THE METHOD OF FORMING ITS COMPLEMENTALLY-FUNCTIONING MATRIX UNITS. JOHN A. FERGUSON, Denver, Colo. Filed Dec. 9, 1918. Serial No. 265,880. 3 Claims. (Cl. 25—119.)

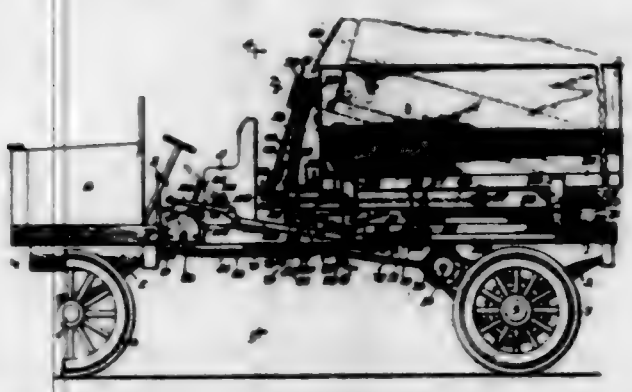


1. In the multiple manufacture of tiles, employing a stacked series of uniform units, a suitably constructed shallow settling pan, the bottom of which is depressed to provide an interior transverse groove, at each end of the pan, and a longitudinal groove at each side thereof, forming corresponding congruent pattern beads exteriorly of said bottom, the transverse groove at one end of the pan being subsequently effaced by the introduction of a suitable filling, for smoothly leveling the interior bottom surface at that end of the pan, and the assembled units individually functioning both as a matrix, for the body proper and top face of a tile being molded therein, and also as a pattern element, for the bottom face of a tile being molded in a unit below, substantially as described.

1,298,028. DUMPING-TRUCK. ALEXANDER FINKELSTEIN, Chicago, Ill. Filed July 25, 1918. Serial No. 246,666. 3 Claims. (Cl. 21—20.)

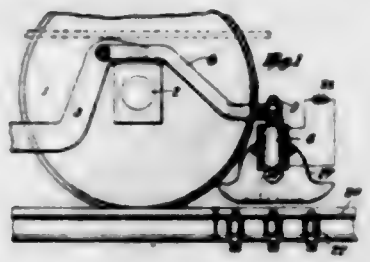
1. The combination with a power driven vehicle comprising a chassis, running gear, driving engine and transmission shaft, of a platform pivoted on said chassis for rotation in a horizontal plane, a load supporting body

hinged at its rear end to said platform whereby it may be tilted to dump its load, a counter shaft having a driving pinion thereon, a transmission gearing train connecting with said platform, a second transmission train con-



necting with said body, means for shifting said countershaft to bring its gear into connection with either of said trains, and means for connecting said transmission shaft in driving relation with said counter shaft.

1,298,029. MAGNETIC CONTROLLING DEVICE FOR RAILWAYS. AUSTEN H. FOX, New York, and ARNOLD W. LUNDMOTH, Stapleton, N. Y. Filed Apr. 30, 1915. Serial No. 24,881. 7 Claims. (Cl. 246—194.)



2. A detector magnet for systems of railway signaling or control, adapted to be carried by a moving vehicle in proximity to an extended armature, comprising a magnetic core pivotally supporting two magnetic elements movable in the plane of the track and having non-magnetic counterpoises, the said elements being of like magnetic polarity whereby they are repelled and forced apart by magnetic repulsion, but by the attraction therefor of the armature they are drawn into close relation.

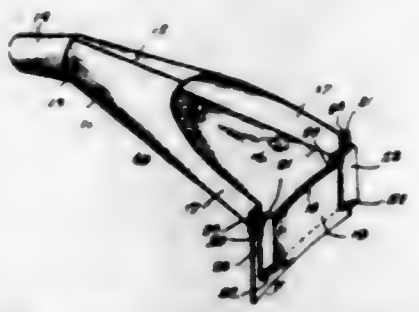
7. In a railway signaling or control system, the combination with a moving vehicle, of a circuit controlling device comprising a magnetic coil and a movable core requiring for its operative movement a definite time under a given attractive force, and an armature composed of carbon steel rails having interruptions in its magnetic continuity along the right of way in operative relation to the movable core.

1,298,030. METHOD OF MAKING COMB-CASES. ARTHUR H. FRANKE, Manitowoc, Wis. Filed Aug. 30, 1918. Serial No. 252,103. 4 Claims. (Cl. 229—68.)



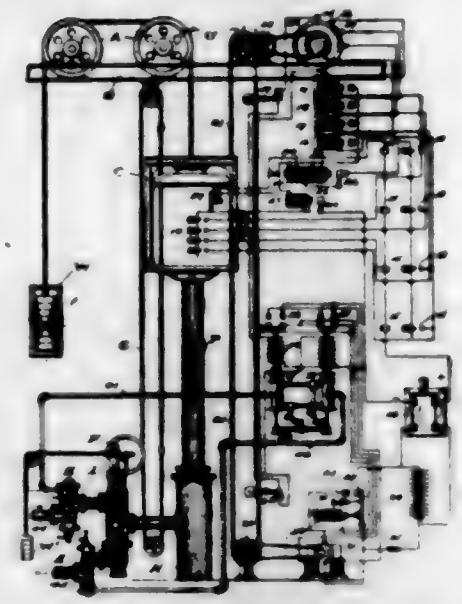
1. The method of forming an article of the class described, which consists in feeding a continuous length of flattened body material onto a continuous strip of cover material, in simultaneously cutting lengths from said cover strip and body material transversely with a portion of one end of the severed length of cover strip extending past the adjacent end of the severed length of body material, and in then folding the free portions of the cover strip around the adjacent edge portions of the body material.

1,298,031. ATTACHABLE SPOUT FOR VESSELS. FREDERICK FROMHAGEN, Brooklyn, N. Y. Filed Apr. 10, 1918. Serial No. 227,715. 1 Claim. (Cl. 221—23.)



An attachable spout comprising a flattened tapering body portion, oppositely extending end flanges on the wide end of said body portion, a flange on the side of said body portion adjacent the end thereof, a plate secured to said side flange, and a pair of resilient strips formed on the ends of said plate, bent upon themselves and formed with a rolled portion at the point of flexure to fit around the bead on the rim of a bucket.

1,298,032. ELECTRICALLY-CONTROLLED ELEVATOR. FLOYD C. FURLOW, Montclair, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 22, 1915. Serial No. 23,012. 5 Claims. (Cl. 172—152.)



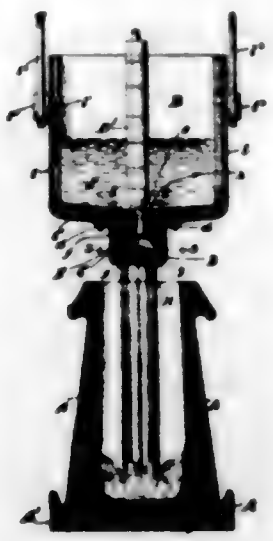
1. In a plunger elevator, the combination of the car, means for controlling the application of power to operate the car, a generator driven by the car for supplying current to effect the operation of the said controlling means, a storage battery, chargeable by the generator, and a switch to connect the battery to the said controlling means.

1,298,033. ATTACHMENT FOR KNITTING-NEEDLES. HARRY W. GARDNER, Baltimore, Md., assignor of one-third to Vernon Kelly. Filed Dec. 19, 1917. Serial No. 207,878. 5 Claims. (Cl. 66—17.)



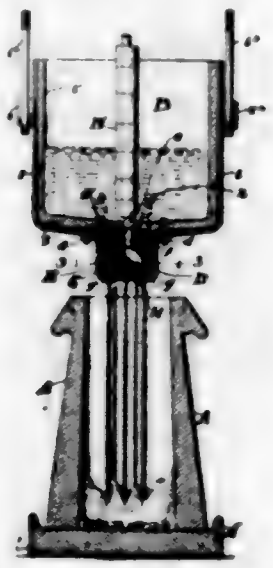
1. Means adapted to removably connect a pair of knitting needles together, comprising a pair of members each provided with a pair of spaced openings, one opening of each member adapted to be arranged on the shank of the knitting needle at the head thereof and the free opening of each member adapted to receive the shank of the adjacent needle for the purpose specified.

1,298,034. APPARATUS FOR TEEMING INGOT-MOLDS. EMIL GATHMANN, Baltimore, Md. Filed Dec. 6, 1918. Serial No. 265,582. 10 Claims. (Cl. 22—86.)



1. Apparatus for teeming an ingot mold, comprising a ladle or container of molten metal and a valve-controlled nozzle therefor provided with means for discharging molten metal at reduced velocity and with increased area in an approximately vertical direction into a mold without materially reducing the volume of metal delivered thereto.

1,298,035. METHOD OF TEEMING INGOT-MOLDS. EMIL GATHMANN, Baltimore, Md. Filed Dec. 6, 1918. Serial No. 265,583. 6 Claims. (Cl. 22—209.)

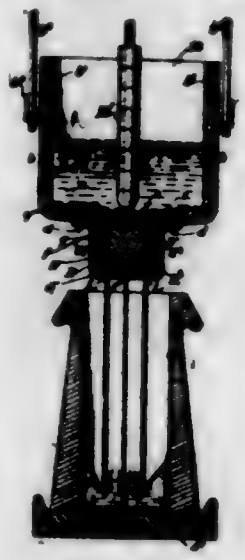


3. The method herein described of teeming ingot molds, which consists in forming molten metal by hydraulic pressure in an unbroken but divided stream and in an approximately vertical direction from a ladle through a plurality of openings under reduced pressure into a single mold chamber.

1,298,036. TEEMING INGOT-MOLDS. EMIL GATHMANN, Baltimore, Md. Filed Jan. 8, 1919. Serial No. 270,178. 15 Claims. (Cl. 22—209.)

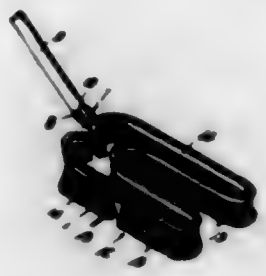
1. A ladle or container of molten metal provided with a nozzle having a vertical inlet passage, a baffle chamber into which the metal flows vertically, and in which it then rises, and an outlet for the metal, the entrance of which is above the bottom of said baffle chamber.

8. A method of teeming ingot molds from a ladle or container of molten metal provided with a nozzle, which consists in passing the metal downward into the nozzle, causing it to then change its course and to then pass in a



substantially vertical direction from the nozzle into the mold.

1,298,037. MOP. KATHARINE V. GOOLDY, Fulton, Mo. Filed Oct. 17, 1918. Serial No. 258,510. 2 Claims. (Cl. 15—13.)



1. A mop comprising a length of wire bent into substantially U-shape, the legs of the U being bent outwardly and backwardly substantially upon themselves and continued beyond the crotch of the U, the ends of said wire being bent to form handle attaching means, a handle connected to said attaching means, and a mop element having a bead through which said wire passes from end to end.

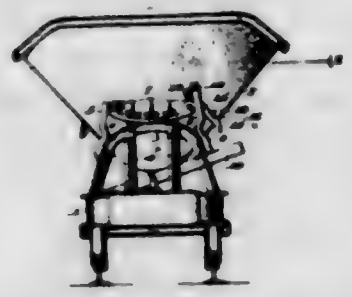
1,298,038. LANDING-CHASSIS. FREDERICK MICHAEL GREEN, Parkside, Coventry, England, assignor to Siddeley-Deasy Motor Car Company Limited, Parkside, Coventry, England. Filed Sept. 28, 1918. Serial No. 256,112. 5 Claims. (Cl. 244—2.)



1. In a shock absorbing strut for the landing chassis of aeroplanes and the like, the combination with two

tubular members arranged to telescope with respect to one another and in which the relative movement of said members is controlled by hydraulic means, of springs operating in tension between said tubular members to limit the relative movement of one in respect to the other in the direction to reduce the length of the strut, of a check device to limit the re-action of said members, and of covers or "fairings" adapted to give the strut an elliptical or stream-line shape in cross section.

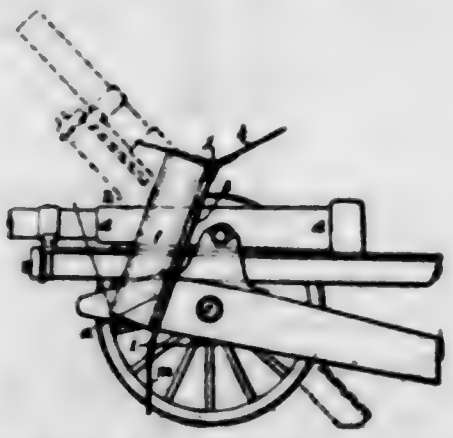
1,298,039. DUMP-CAR. LOUIS DAMARIN GRECO, Hackensack, N. J., assignor to The Gregg Company, Limited, Hackensack, N. J., a Corporation of New York. Filed June 9, 1915. Serial No. 33,101. 3 Claims. (Cl. 105—264.)



1. A dump-car comprising a tiltable car-body, a rocker-shoe attached to the body, a support affording a bearing for the rocker-shoe, upright extensions between which the rocker-shoe may oscillate, a gravitating locking latch pivoted at one end to one of the upright extensions, the latch consisting of an elongated arm formed at its pivoted end with a dog so disposed that when the arm is in its normal downward and outwardly inclined position the dog will overlie the rocker-shoe to secure the car-body in an upright position, and means for sustaining the arm in an upwardly and inwardly inclined position in the path of the rocker-shoe so as to be engaged by the shoe in the movement of the car-body to throw the arm into its normal inclined locking position.

3. A dump-car comprising a tiltable car-body, a rocker-shoe attached to the body, a support affording a bearing for the rocker-shoe, upright extensions from the support between which the rocker-shoe may rock, and a pivoted latch supported by one of said extensions, the rocker-shoe being formed with a socket and the latch with a pin to enter the socket to secure the car-body in a tilted position.

1,298,040. SHIELD FOR USE WITH GUN-CARRIAGES. ALBERT GEORGE HADCOCK, Newcastle-upon-Tyne, England, assignor to Sir W. G. Armstrong, Whitworth and Company, Limited, Newcastle-upon-Tyne, England. Filed Mar. 8, 1918. Serial No. 221,157. 5 Claims. (Cl. 89—36.)



1. A shield for use with a gun carriage in which the gun can be traversed, consisting of two parts, a front part which moves with the gun as it is traversed and a rear part which is fitted to the axle, and plates pivoted to the two parts which form in conjunction with the two parts a continuous protection whatever the traverse of the gun may be.

1,298,041. TOOTH-BRUSH HOLDER. JAMES H. HARRIS, Ashland, Va. Filed Nov. 18, 1918. Serial No. 262,849. 2 Claims. (Cl. 248—63.)



1. A device of the class described comprising a back having one end extended laterally to form a bottom, a top hinged to its upper end, a foraminous covering arranged between said top and bottom and secured to said back, means for holding said covering in extended position, and an article clamp carried by said back within said covering.

1,298,042. BOAT AND CANOE. HENRY L. HASKELL, Ludington, Mich., assignor to Haskelite Manufacturing Corporation, Grand Rapids, Mich., a Corporation of Michigan. Filed Oct. 13, 1917. Serial No. 196,420. 6 Claims. (Cl. 9—6.)



1. A boat comprising walls formed from multiple-ply veneer, inner stems disposed between and to which the end edges of the walls are secured, outer stems secured to said inner stems and abutting the end edges of the walls, cut-waters secured to said outer stems, a keel disposed to overlap the lower ends of said inner stem and abut the outer ends of said outer stems, the inner ends of said cut-water overlapping the joint between said keel and said outer stems, gunwales extending from end to end and secured to the upper ends of said stems, the said gunwales being rabbeted on the under side to receive the longitudinal edges of the walls, and decks formed of multiple ply-veneer the edges of which are secured in the rabbets of said gunwale.

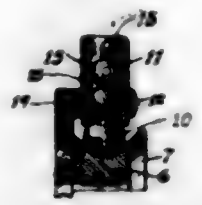
1,298,043. OVERSUIT. JACOB H. HOLLANDER, Newark, N. J., assignor of one-third to Samuel J. Unger and one-third to Oscar N. Pollak, Newark, N. J. Filed Feb. 28, 1918. Serial No. 219,575. 2 Claims. (Cl. 2—144.)



1. In a combination outer garment, a body portion adapted to fit over the shoulders and about the body of

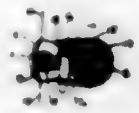
the wearer, a trousers portion, a belt having means whereby it is detachably secured to the trousers portion, means for detachably securing said belt to the body portion, a crotch support attached in the rear to the seat of the trousers portion, and means for detachably securing said crotch support to said belt at the front thereof.

1,298,044. TENSION DEVICE. LEON H. HORNER, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 20, 1918. Serial No. 250,733. 7 Claims. (Cl. 242—155.)



1. A tension device comprising a wheel with a grooved periphery, a ball supported in the groove, and means for retaining the ball in the groove.

1,298,045. MOISTENING ATTACHMENT FOR TYPEWRITER RIBBONS. LE ROY B. HUDDLESTON, Lakewood, Ohio, assignor to The Ribbon Life Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 23, 1918. Serial No. 259,389. 5 Claims. (Cl. 91—48.)



1. A ribbon moistening attachment comprising a box, a roller therein over which the ribbon passes, means to supply moisture to the surface of the roller including a wick, and a device for moving the wick into or out of contact with the roller.

1,298,046. ATTACHMENT FOR PLANTERS. WELLMAN K. HUFF, Guy, N. Mex. Filed Feb. 25, 1918. Serial No. 219,058. 4 Claims. (Cl. 97—64.)



1. An attachment for planters, including a spindle having a central longitudinal bore, a sleeve rotatable on the spindle, a cutting disk secured to the sleeve, a bolt insertible through the bore for clamping the sleeve and disk in place upon the spindle, and means on the spindle for attaching the same to a support.

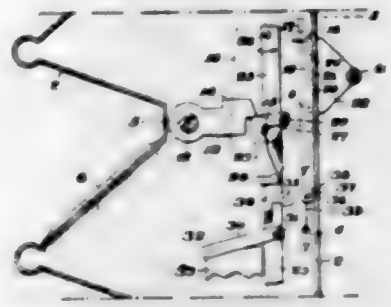
1,298,047. RIDGER ATTACHMENT FOR PLOWS. CLIFTON H. JACKSON, Clio, S. C. Filed June 30, 1916. Serial No. 106,831. 1 Claim. (Cl. 97—1.)

A ridging attachment for turning plows comprising attaching means adapted for attachment to a plow beam, longitudinally extensible draft bars connected to said attaching means and angling outwardly and rearwardly therefrom, a longitudinally extensible brace bar connecting the rear ends of said draft bars and provided with



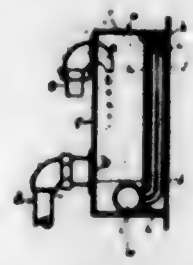
rearwardly and outwardly angling spindles upon its ends, and ridging disks mounted upon said spindles.

1,298,048. DISPENSING DEVICE. OTTO JAECKER, Elkins Park, Pa., assignor to Harry S. Kelsey, Boston, Mass. Filed Dec. 20, 1917. Serial No. 208,035. 9 Claims. (Cl. 232—1.)



1. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means acting automatically to hold the front door in its closed position when it is moved thereto, and means controlled by the movement of the rear door to prevent the operation of the first named means by the movement of the front door to its closed position when the rear door is in one position and to permit the operation of the first named means when the rear door is moved to another position.

1,298,049. MOTOR-INDICATING MECHANISM. STEPHEN JENCICK, Minneapolis, Minn., assignor to G. A. Schanze, Minneapolis, Minn. Filed July 24, 1915. Serial No. 41,754. 6 Claims. (Cl. 184—6.)

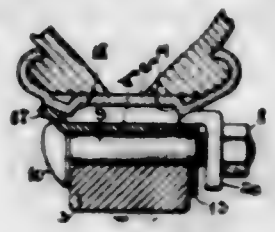


6. The combination with an oil circulating system for the motor of a motor vehicle, of means for simultaneously and separately indicating the temperature of the oil and the existence of pressure in said system.

1,298,050. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. OTTO H. JOSAM, Cleveland, Ohio, assignor to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 2, 1917. Serial No. 152,112. 7 Claims. (Cl. 152—21.)

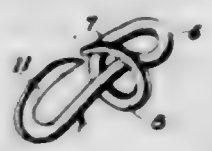
1. In a vehicle wheel, the combination with a wheel body and a rim adapted to seat demountably thereon; of means adapted to secure said rim in such seated posi-

tion, said means including integral, stamped-up beveled lugs projecting inwardly toward the same and trans-



versely movable clamps on said wheel-body having complementary beveled portions adapted to engage with said lugs.

1,298,031. HOOK AND GUARD THEREFOR. CHARLES D. KRATOR, Campti, La., assignor to The Connecting Link Company, Inc., Natchitoches, La., a Corporation of Louisiana. Filed June 22, 1916. Serial No. 105,224. 1 Claim. (Cl. 24—231.)



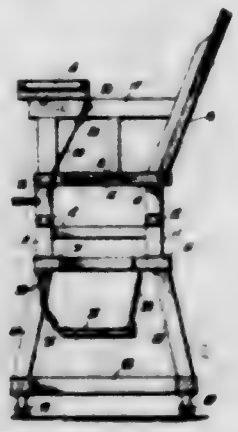
A device of the class described comprising a cylindrical shank portion, and hooks formed on opposite ends thereof, one of said hooks being bent to extend parallel to said shank and formed with flattened converging sides, and the other of said hooks being bent at its end at right angles to and spirally surrounding said shank, said spiral portion being flattened on opposite sides and tapered toward its extremity.

1,298,052. CABLE-CLAMP. JAMES KELLEY, Clarkia, Idaho. Filed Oct. 15, 1918. Serial No. 258,158. 2 Claims. (Cl. 24—124.)



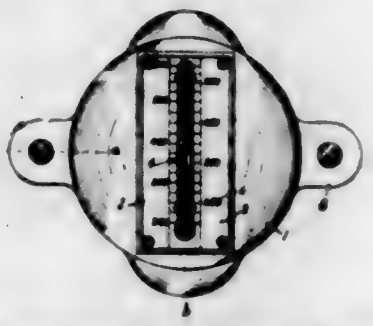
2. The combination with a cable and loop ends, of a pair of complementary plates each provided with parallel rows of biting teeth and the teeth in the rows biting in opposite directions, said plates having flanges to constitute an inclosing casing, rivets securing the plates together, and cast metal within the casing embedding the cable and loop ends and said biting teeth.

1,298,053. CONVERTIBLE CHAIR. HUGH A. KENNEDY, Metaline, Wash., assignor of one-half to Verna I. Tucker, Bossburg, Wash. Filed Jan. 8, 1918. Serial No. 210,891. 1 Claim. (Cl. 155—12.)



A structure of the character described comprising the base, casters carried by the base frame, standards carried by the base frame, a platform carried by the standards and provided with an opening, a plurality of spaced sockets opening into the upper face of said platform, covering plates secured to the platform over said sockets, each of said covering plates having a slot formed therein, and enlarged at one end, a chair provided with supporting legs, and pins carried by said legs and provided at their outer ends with enlarged heads fitting into the sockets beneath said plates, said heads being inserted through the large ends of the slots and then moved toward the narrow end thereof.

1,298,054. OVEN-THERMOMETER. HORACE B. KERLIN, Hamilton, Ohio. Filed Nov. 4, 1918. Serial No. 260,929. 4 Claims. (Cl. 73—110.)



1. An oven thermometer comprising, a casing provided with a front compartment and a rear compartment, a scale-plate separating the two compartments and bearing compensated graduations to indicate oven temperature to the rear of the oven door portion, an oven-door-portion constituting the rear wall of the rear compartment, a thermometer-tube portion secured to the front of the scale plate, and a bulbed portion forming a prolongation of the thermometer-tube disposed in the rear compartment of the casing at the rear of the scale-plate, combined substantially as set forth.

1,298,055. SIGNAL APPARATUS FOR AUTOMOBILES. JOSEPH KERSHAW, Joplin, Mo. Filed Sept. 27, 1917. Serial No. 193,510. 4 Claims. (Cl. 177—314.)

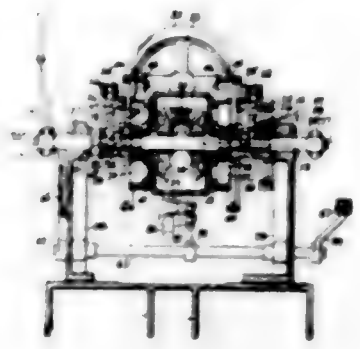


4. A signal apparatus to prevent the unauthorized use of an automobile, comprising a license plate secured to the automobile, a vision obstructing plate associated with the license plate and adapted to be shifted to an active position to cover the same, means to lock the vision obstructing plate in the active position, and signal means capable of operating when the vision obstructing plate is in the active position and the automobile is traveling.

1,298,056. CLUTCH AND LOCKING DEVICE. CHARLES B. KING, CHARLES S. JOHNSON, and BENJAMIN JACOBY, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Original application filed Sept. 25, 1915, Serial No. 52,546. Divided and this application filed July 21, 1916. Serial No. 110,432. 11 Claims. (Cl. 74—46.)

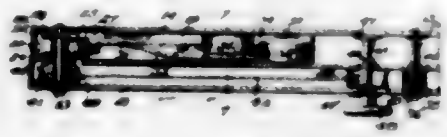
10. In a mechanism of the character described, a rotatable member provided with a drum and band, said rotatable member being operatively connected with a source of power, reversing mechanism for said rotatable member,

said reversing mechanism comprising a pair of drums provided with bands, said bands being provided with common



operating means arranged so that no two of them can simultaneously engage their drums.

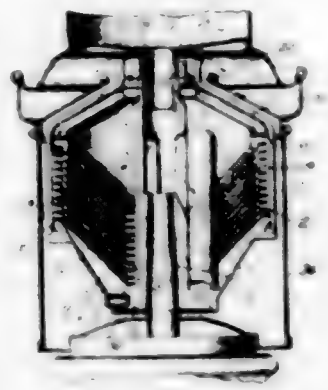
1,298,057. VEHICLE-SIGNAL. GEORGE W. KIRKPATRICK, Rochester, N. Y. Filed Sept. 18, 1916. Serial No. 120,644. 6 Claims. (Cl. 116—31.)



4. A vehicle signaling device comprising a casing, a signaling arm pivotally mounted upon the casing, means for moving the arm to and from the casing and inner and outer lamps carried by the arm each provided with relatively large and small illuminated faces visible from opposite directions, the larger illuminated face of one lamp being positioned upon the opposite side of the arm from the larger face of the other lamp.

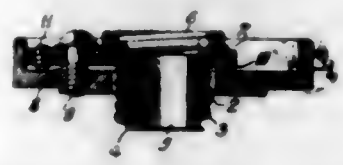
6. In a vehicle signaling device, the combination of a casing, a signaling arm pivotally mounted thereon, inner and outer lamps on said arm, means for projecting the arm from the casing, means for locking the arm in projected position, and a spring for automatically returning the arm to the casing when the locking means is released.

1,298,058. CREAM-SEPARATOR. OTTO KRENKE, Port Huron, Mich., assignor to Anker Holth Manufacturing Company, Port Huron, Mich., a Corporation of South Dakota. Filed Sept. 10, 1917. Serial No. 190,669. 1 Claim. (Cl. 233—1.)



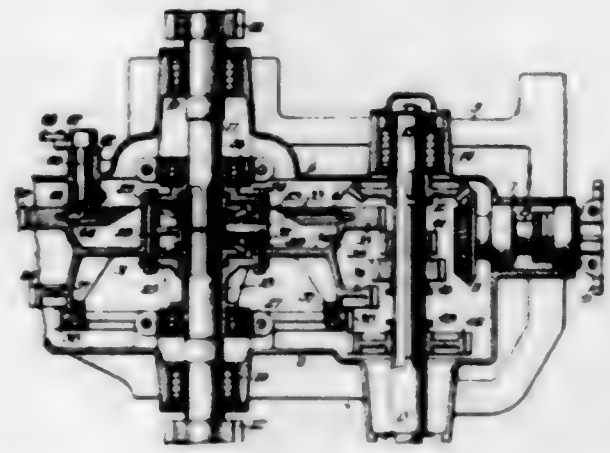
In a cream separator, a rotary bowl devoid of balancing material, superposed separating disks in said bowl, and means centrally of said bowl about which said disks have a limited movement maintaining the peripheral edges of said disks out of contact with said bowl hood, and adapted to allow said disks to self-balance relative to said bowl.

1,298,059. YIELDABLE BEARING. OTTO A. KRENKE, Port Huron, Mich., assignor to Anker Holth Manufacturing Company, Port Huron, Mich., a Corporation of South Dakota. Filed Sept. 10, 1917. Serial No. 190,670. 3 Claims. (Cl. 64—48.)



1. A yieldable bearing comprising a stationary member, an adjustable centering member on said stationary member and adapted to be fixed relative thereto, a spring screwed in said centering member and a spindle bearing screwed in said spring.

1,298,060. TRANSMISSION MECHANISM. ALFRED KRIEG, Minneapolis, Minn., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Mar. 26, 1917. Serial No. 157,541. 2 Claims. (Cl. 74—58.)



1. In a transmission mechanism, the combination of a longitudinally extending driving shaft, a transverse intermediate shaft connected by bevel gears to the driving shaft, a transverse sectional driven shaft provided with a differential mechanism in longitudinal alinement with the driving shaft, rigidly united first, second and third speed driven gears mounted concentrically on the casing of the differential mechanism at one side of the bevel gear on the intermediate shaft, rigidly united first and second speed driving gears splined on the intermediate shaft between the first and second speed driven gear, an independent third speed driving gear also splined on the intermediate shaft at the outer side of the third speed driven gear, and means for shifting said driving gears into meshing relation with their companion driven gears.

1,298,061. COW-TAIL HOLDER. FRODE A. KRUSE, Tyler, Minn. Filed May 7, 1918. Serial No. 233,072. 2 Claims. (Cl. 24—260.



1. In a device of the class described, a pair of spring clamping jaws having a tendency to normally spring apart, arms extending rearwardly from said jaws with inbent portions intermediate their ends, said arms converging toward their rear, a locking sleeve encircling and slidable on said arms, and composed of coils longitudinally spaced and connected to form a clamping band and an operating

handle, said sleeve when moved forward operating to cross the arms to position their inbent portions to provide oppositely extending lateral projections for preventing backward movement of the sleeve.

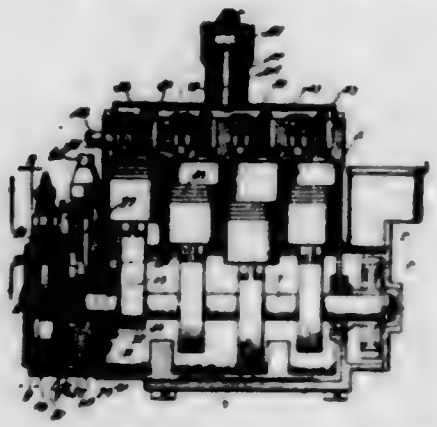
1,298,062. DETACHABLE AUTOMOBILE SPRING-TIRE. LILLIE W. LA BAUVE, Houston, Tex. Filed Apr. 11, 1918. Serial No. 227,902. 4 Claims. (Cl. 152—87.)



2. A tire for automobiles comprising a rim, springs on the rim, an outer casing therefor having a tread covering, a series of U-supports extending inwardly within the casing and having perforated sides, leaf springs seating on the U-supports between the sides thereof, a transverse plate riveted to the casing springs with the outer heads of the rivets engaged in a recess formed in the respective supports, the transverse plates and embedded rivet heads being channeled crosswise in alinement with the perforations in the sides of the U-supports, securing pins engaged in the channels of the plates and rivets and passed through the perforations of the U-supports and the sides of the outer casing, and links connecting the ends of the casing springs to the ends of the rim springs.

4. A tire for automobiles comprising a rim, an outer hollow casing formed in sections, a hook secured at one end within an end of one casing section, said hook being offset adjacent its point of mounting and extending in spaced relation to the inner wall of said section beyond the end thereof, the free end of the hook being formed into a catch part, and a keeper carried within the adjacent end of the adjacent casing section, said keeper consisting of a hood-like dowel part projecting beyond its supporting casing section for alining the sections and for guiding the hook to its keeper, and a radially extending end wall at the inner end of the dowel part formed with an opening to receive the hook, said keeper and hook being spaced outwardly beyond the rim and coöperating therewith to hold the casing sections alined against lateral movement.

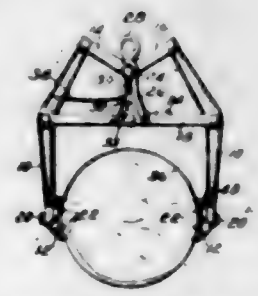
1,298,063. ENGINE-STARTER. GEORGE Y. LAUCHIN, Crystal Falls, Mich., assignor of one-half to Edward H. Sensiba, Crystal Falls, Mich. Filed Feb. 21, 1916. Serial No. 79,544. 11 Claims. (Cl. 60—16.)



1. The combination with a timer, a pump, and a fluid pressure distributer all having a common operating shaft; of a gas engine to which the shaft is connected; a pressure reservoir connected to the pump; a check valve between the pump and the reservoir; automatically operating means dependent upon the reservoir pressure for rendering the pump but not the shaft ineffective; and means for connecting the reservoir with the engine through the distributer.

10. The combination with a pump and a fluid distributer, both having a common operating shaft, a gas engine to which said shaft is connected, a pressure reservoir connected to the pump, a check valve between the pump and reservoir, means for automatically rendering the pump but not said shaft or distributer ineffective, means including an operating valve for connecting the reservoir with the engine through the distributer, and a separate valve to shut off the reservoir from the operating valve and the pump.

1,298,064. LIFTING-TONGS. FRANK EDWARD LICHTENTHALER, Newton Highlands, Mass., assignor to The Walter E. Lummus Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 19, 1917. Serial No. 192,102. 9 Claims. (Cl. 57—9.)



1. A lifting tongs having, in combination, a fulcrum bar, gripping levers pivoted to said bar, jaws pivoted to the lower ends of said levers to rotate about a line connecting the ends of the levers, means to limit the rotation of said jaws on the levers, and means to actuate the gripping levers.

2. A lifting tongs having, in combination, a fulcrum bar, gripping levers pivoted to said bar, jaws pivoted to the lower ends of said levers to rotate about a line connecting the ends of the levers, a flexible band connecting said jaws, and means to actuate the gripping levers.

3. A lifting tongs having, in combination, a fulcrum bar, gripping levers pivoted to said bar, jaws pivoted to the lower ends of said levers, a toggle connecting the other ends of said levers, and a pivoted latch arranged to lock the toggle to hold the jaws in open position.

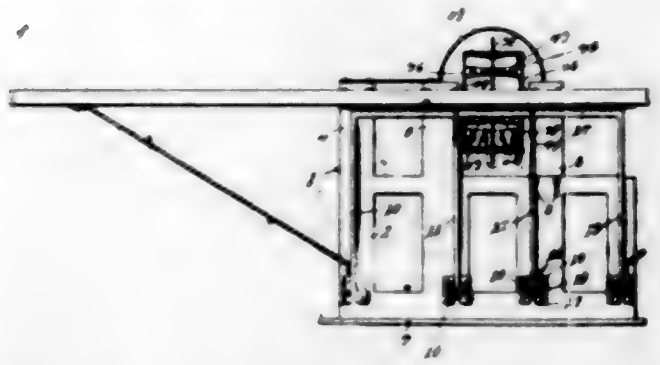
4. A lifting tongs having, in combination, a fulcrum bar, gripping levers pivoted to said bar, jaws pivoted to the lower ends of said levers to rotate about a line connecting the ends of the levers, stops on said jaws arranged to contact with said levers to limit the rotation of said jaws to approximately 90°, and means to actuate the gripping levers.

5. A lifting tongs having, in combination, a fulcrum bar, jaws pivoted to the lower ends of said levers to rotate about a line connecting the ends of said levers, a flexible band connecting said jaws, means to limit the rotation of said jaws with relation to said levers, a toggle pivotally connected to the other ends of said levers, and means to lock said toggle in position to hold the jaws in open position.

1,298,065. DADOING-MACHINE. CARL F. LIENKE, Minneapolis, Minn. Filed Oct. 7, 1913. Serial No. 793,871. 1 Claim. (Cl. 144—133.)

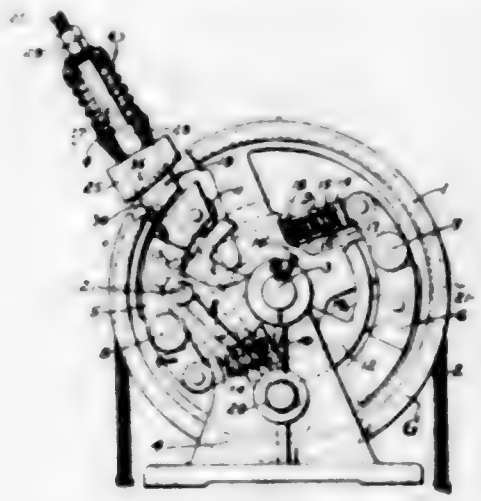
In a dadoing machine, a spindle, a circular saw mounted upon said spindle, a pair of drums of less external diameter than said saw mounted upon opposite sides of said saw and in engagement therewith, the circumferential surfaces of said drums having spaced recesses therein and the portions of the outer walls of

the recesses adjacent the periphery of the drums having slots therein, said drums having recesses in the opposed end faces thereof arranged between the first mentioned recesses, adjustable knives confined between the circular saw and the outer walls of the recesses, the outer cut-



ting ends of the knives being increased in width and extended within the slots, and a plurality of scoring spurs adjustably secured to the last mentioned recesses having cutting edges disposed in the plane of the adjacent terminals of the cutting edges of the knives.

1,298,066. GOVERNOR FOR ELEVATORS. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 28, 1913. Serial No. 797,712. 12 Claims. (Cl. 74—46.)



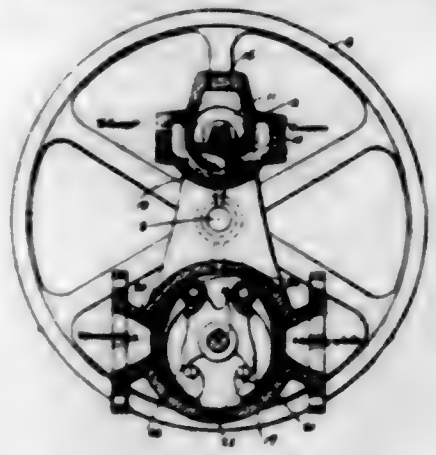
1. A speed governor comprising a pivoted weight arranged to be actuated by centrifugal force, and additional means acting positively to assist centrifugal force to actuate the weight.

3. In a governor for operating the safety device of an elevator, the combination of a running cable, a governor sheave driven by said cable, a brake adapted to brake both the sheave and cable jointly and independently of each other, a pivoted member supporting the said brake, and speed controlled means to rock said member on the pivot.

6. In a governor for operating the safety device of an elevator, the combination of a running cable, a governor sheave driven by said cable, speed controlled means for applying a brake action to the said sheave and a yielding braking action to the cable.

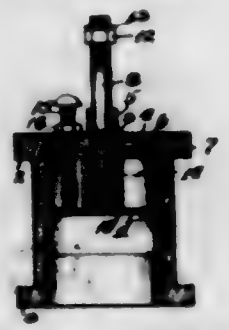
1,298,067. HYDRO-STEAM VALVE. DAVID L. LINDQUIST, Hartsdale, N. Y., and WILLIAM H. HULTGREN, Roselle Park, N. J., assignors to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 12, 1917. Serial No. 174,180. 5 Claims. (Cl. 138—14.)

3. In valve mechanism, the combination of a valve, controlling means therefor, a second valve also controlled by said controlling means, two gates for said last named valve, and means for lifting one gate off its



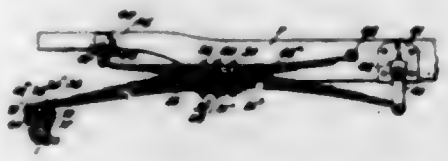
seat due to the rotation of the two valves by the said controlling device.

1,298,068. GAS-ENGINE GOVERNOR AND AUXILIARY AIR-INLET. BENJAMIN T. MCCANNA and EMIL R. KLEMM, Chicago, Ill. Filed Sept. 11, 1916. Serial No. 119,556. 8 Claims. (Cl. 48—180.)



2. In a governor device of the class described, an interiorly tapered casing member, an impedance disk movable therein to vary the area of passage through said member, means resisting movement of said disk, mechanism adjustable in said casing member to limit the movement of said disk by contact therewith and means adapted to admit air into the mixture as the impedance disk restricts the passage through the member.

1,298,069. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 24, 1915. Serial No. 35,996. 15 Claims. (Cl. 267—27.)

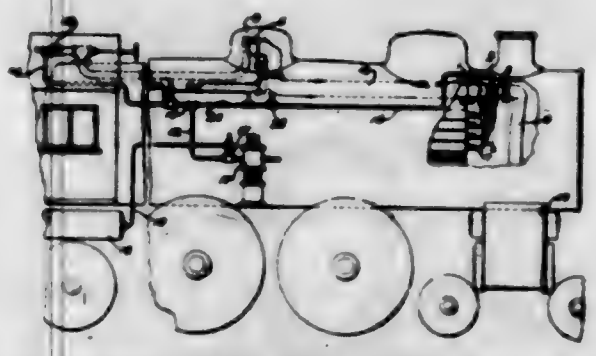


6. The combination, with a vehicle body frame and axle, of a spring comprising a plurality of plates, two of said plates being provided with eyes, means connecting said eyes to the axle at longitudinally spaced intervals, one of such connections being a yielding connection, means connecting the opposite end of the spring to the frame, an auxiliary spring also connected to the frame, and means connecting the auxiliary spring to the body of the first mentioned spring.

15. The combination, with a vehicle body frame and axle, of a main spring comprising a main plate and one or more plates additional thereto, one end of the main plate extending beyond the corresponding end of one of the additional plates, means connecting such ends of the last two plates to the axle at longitudinally spaced intervals, one of such connections being a yielding connection, means connecting the opposite end of the spring

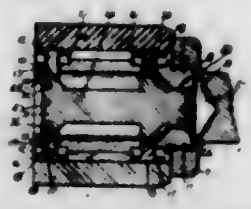
to the frame, an auxiliary spring pivotally connected to the main spring, an upwardly projecting shackle connecting the front end of said auxiliary spring to the frame, and a downwardly extending shackle connecting the rear end of the auxiliary spring to the frame.

1,298,070. LOCOMOTIVE. NEAL T. MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 13, 1918. Serial No. 253,950. 4 Claims. (Cl. 60—49.)



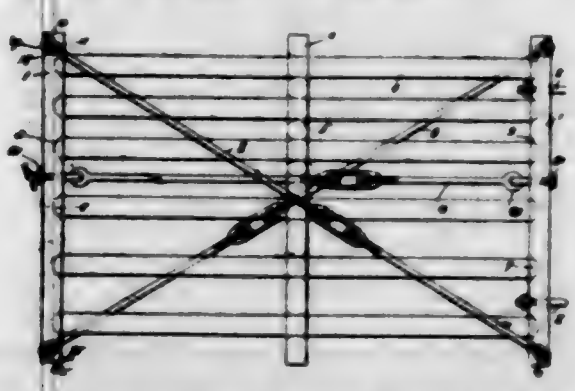
1. In apparatus of the class described, the combination of a superheater, a pipe supplying it with steam, a throttle controlling the pipe, an auxiliary steam-consuming device, means to supply the auxiliary device with steam from the superheater and automatic means to supply it with steam from another point than the superheater when the throttle is closed.

1,298,071. BORING AND CUTTING TOOL. HARRY C. MCKINLEY, Elyria, Ohio, assignor of one-half to Charles Marsh, Elyria, Ohio. Filed Sept. 25, 1916. Serial No. 121,942. 5 Claims. (Cl. 77—76.)



1. In a tool of the character described, a body member having a central bore and a threaded opening, an adjusting member having a threaded extension fitting in said opening, frusto-conical flanges on said member and located adjacent each end thereof, said body member having a plurality of peripherally spaced slots extending inwardly and being separated from said bore by web members, said web members having a plurality of holes extending into said bore, blade supports in said holes having cam members bearing on said flanges, cutting blades adapted to fit in said slots and to bear against said supports, and means for rigidly holding the blades against the supports.

1,298,072. GATE. JAMES R. MCNABNEY and CHARLES E. ANDREWS, Kokomo, Ind. Filed Oct. 25, 1918. Serial No. 259,674. 2 Claims. (Cl. 256—73.)



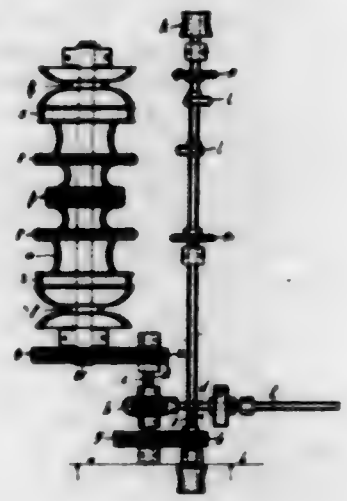
1. A gate comprising end posts having seats in their inner edges; an intermediate bar having transverse passages; rails having their ends abutting against the posts within the seats and mounted to rock therein, the rails having their intermediate portions mounted to rock in the passages; and diagonal, longitudinally adjustable tightening devices having their ends assembled with the ends of the posts.

1,298,073. POCKET CHECK-PROTECTOR. GRANT MCNEAL, North Platte, Nebr. Filed Nov. 14, 1918. Serial No. 262,499. 5 Claims. (Cl. 120—43.)



1. A check writing pen, including a handle, and a pair of complemental bowed blades projecting from the handle and terminating in corresponding transversely extending toothed edges adapted to form a line of perforations when the pen is forced against a sheet of paper.

1,298,074. POWER-DRIVE FOR SHIPS' HOISTING AND PUMPING MACHINERY. ALEXANDER R. MCPHERSON and EDWARD H. MUNRO, Windsor, Nova Scotia, Canada, assignors to Windsor Foundry and Machine Company Ltd., Windsor, Nova Scotia, Canada. Filed June 11, 1918. Serial No. 239,498. 1 Claim. (Cl. 74—7.)

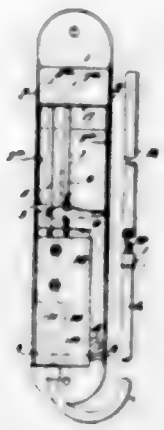


A device of the class described, including a windlass having a shaft, a longitudinal driving shaft spaced from and parallel with the windlass shaft and extending beyond one end of the same, a short intermediate shaft spaced from said shafts and arranged opposite the extended portion of the longitudinal shaft and having its inner end located between the windlass shaft and the said longitudinal shaft, inner and outer sets of gears located at the ends of the intermediate shaft and connecting the same with the windlass shaft and the longitudinal shaft, one of the gears of the inner set being slidable on the intermediate shaft and one of the gears of the other set being slidable on the longitudinal shaft, the sliding gears being adapted to connect the intermediate shaft with either the longitudinal shaft or the windlass shaft; a worm wheel mounted on the intermediate shaft, a power shaft arranged at right angles to the said shafts and located between the said sets of gears and a worm actuated by the power shaft and meshing with the worm wheel.

1,298,075. DISTANCE-THERMOMETER. JOHN FOX JEBENS MALONE, Newcastle-upon-Tyne, England, assignor to The Sentinal Company Limited, Newcastle-upon-Tyne, England. Filed May 8, 1917. Serial No. 167,237. 2 Claims. (Cl. 73—52.)

1. In a distance thermometer, a base having upstanding side walls formed with opposing guiding grooves, a

scale plate slidable in the grooves across the base, a main indicating tube and a second indicating tube having gas-containing bulbous upper ends, distance tubes connected to their lower ends, a cover inclosing the lower ends of said indicating tubes and spaced from one side wall of the base, said scale plate having a downward extension to one side between the cover and the spaced side wall of the base, and scale plate shifting means connected with the downward extension and disposed between the cover and said spaced side wall.



2. In a distance thermometer, a base having upstanding side walls formed with opposing guiding grooves, a scale plate, provided with a scale and slidable in the grooves across the base, a main indicating tube and a second indicating tube having gas-containing bulbous upper ends, distance tubes connected to their lower ends, a cover inclosing the lower ends of said indicating tubes and spaced from one side wall of the base, said scale plate having a downward extension to one side between the cover and the spaced side wall of the base, and scale plate shifting means connected with the downward extension and disposed between the cover and said spaced side wall, the lower edge of said scale plate forming the zero line of said scale.

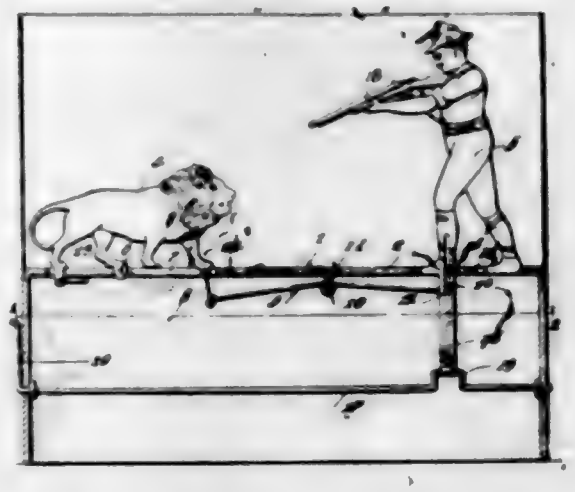
1,298,076. FUSE FOR PROJECTILES. JOHN HERBERT MANSELL, Coventry, England, assignor to The Coventry Ordnance Works, Limited, Coventry, England. Filed July 1, 1918. Serial No. 242,847. 7 Claims. (Cl. 102—36.)



1. In a shell fuse, the combination of a gaine, a solid transverse diaphragm therein, a charge of high explosive in front of the diaphragm, another charge of high explosive in rear of the diaphragm, and a powder pellet between the two charges.

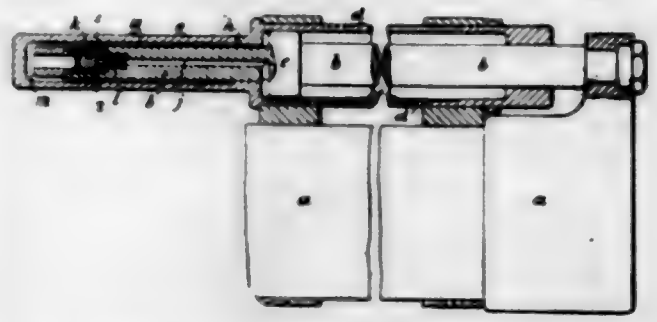
1,298,077. FIGURE TOY. JAMES G. MASUMIAN, Brooklyn, N. Y. Filed Sept. 29, 1917. Serial No. 194,042. 4 Claims. (Cl. 46—40.)

2. A toy comprising a supporting base, objects mounted to move vertically thereon, one of said objects being mounted for rocking movement and the other for reciprocatory movement, a lever connecting said objects, and a crank shaft connected with one end of said lever and with one of said objects whereby the turning of said



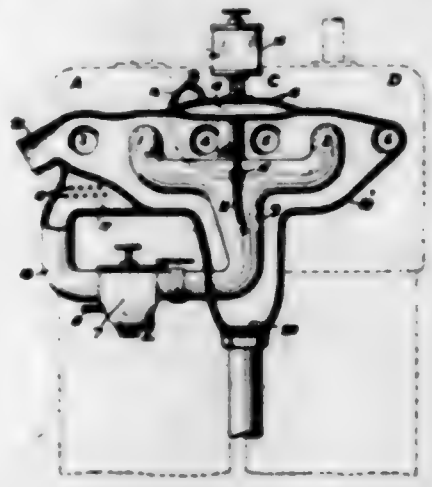
shaft will operate to reciprocate the object connected therewith and to rock the other.

1,298,078. BUFFER. ERNEST HENRY MOLE, Newcastle-upon Tyne, England, assignor to Sir W. G. Armstrong, Whitworth and Company, Limited, Newcastle-upon-Tyne, England. Filed Feb. 19, 1918. Serial No. 218,041. 2 Claims. (Cl. 89—43.)



2. In combination with a gun, a piston rod attached to the gun, two cylinders, a piston on the piston rod working in one cylinder and the front part of the piston rod working in the other cylinder, a flat on the front part of the piston rod, a passage in the front part and a spring controlled valve in the passage.

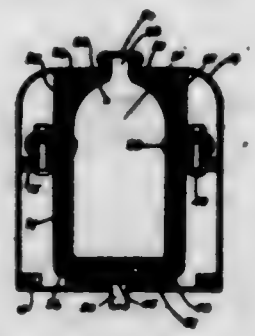
1,298,079. INTERNAL-COMBUSTION ENGINE. HAROLD E. MONTAGUE, Philadelphia, Pa., assignor of one-half to Ewald A. Fritze, Philadelphia, Pa. Filed Oct. 22, 1917. Serial No. 197,761. 3 Claims. (Cl. 123—25.)



3. In a device of the class described the combination of a wall inclosing an elongated intake chamber, a second wall spaced from and independent of the first wall and inclosing an exhaust compartment closed at its top, the

space between said walls permitting access for hot exhaust to the entire surface of the intake chamber, a third wall depending from the closed top of the compartment and sub-dividing the upper part of the space between the chamber and compartment, a steam generator arranged on the wall at the closed top of the compartment, and means for introducing steam from the generator into the upper part of the chamber, substantially as described.

1,298,060. FUEL-TANK. HARRY C. MOUGEY and JAMES M. H. JACOBS, Dayton, Ohio, assignors to The Dayton Metal Products Company, a Corporation of Ohio. Filed Sept. 23, 1918. Serial No. 255,406. 12 Claims. (Cl. 244—1.)



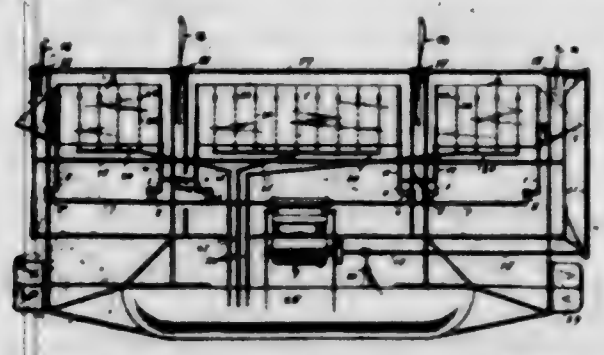
1. A fuel tank for airplanes comprising a thin metal tank adapted to contain the fuel; a loose covering of rubber inclosing said tank; and a second covering of rubber, inclosing the first mentioned covering and spaced therefrom.

1,298,081. CUTTING ATTACHMENT FOR ROLL-PAPER HOLDERS. GENGO NAITO, Toppenish, Wash. Filed Aug. 28, 1917. Serial No. 188,629. 1 Claim. (Cl. 211—32.)



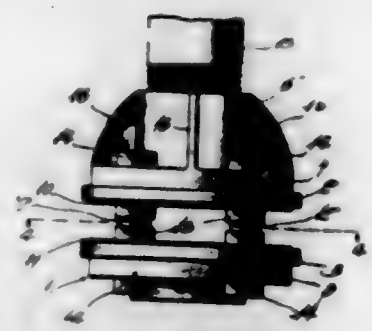
In a holder for roll paper, the combination with a supporting frame; a cutting device associated therewith and including a frame having a rear longitudinal member adapted for engagement with the roll of paper supported by the first named frame, a cutting bar arranged forwardly of said longitudinal member, coöperating paper-guide plates extending forwardly and downwardly from said longitudinal member and having their forward edges disposed rearwardly of said cutting bar, and springs interposed between the rear edges of said guide plates, arranged to urge the forward edges thereof toward each other.

1,298,082. AIRSHIP. JOHN NEPP, Sr., West Hoboken, N. J. Filed June 8, 1918. Serial No. 238,828. 6 Claims. (Cl. 244—18.)



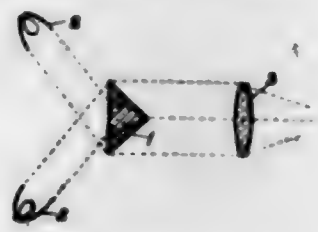
1. In an airship, a peaked hollow central wing, a pair of peaked hollow end wings, the length of the central wing being equal substantially to the combined lengths of the two end wings, means for reciprocating the central wing, and means for conjointly reciprocating the end wings in a direction opposite to that of the central wing.

1,298,083. PERFORATION-CLEANER FOR WELL-CASINGS. FRANK M. NEVINS, Coalinga, Calif. Filed Jan. 10, 1918. Serial No. 211,208. 1 Claim. (Cl. 166—20.)



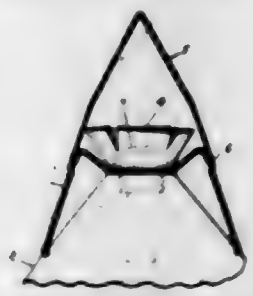
A perforation cleaner for well casings comprising a head adapted to be lowered into the casing and formed of upper and lower vertically spaced sections, packers carried by said sections for sealing the casing above and below the perforations, the upper section of said head having an inlet opening into the space between the two sections and adapted to supply fluid under pressure thereto, and tie bolts extending between said sections of the head to secure them relatively, said tie bolts having passages therethrough with open ends located at the upper and lower ends of the head.

1,298,084. LANTERN. LOWELL W. NICOLS, Sewickley, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Apr. 5, 1917. Serial No. 159,927. 3 Claims. (Cl. 240—41.)



1. In a lantern, the combination of a plurality of light sources, a pyramidal prism having a base and a plurality of faces, corresponding in number to the number of light sources, and means for projecting pencils of light from each source through the base and one side of the prism, the angles of incidence of the pencils of light from said several sources upon the base being acute, and the angle of refraction of all the pencils leaving the prism being substantially perpendicular to the base thereof.

1,298,085. NON-RICOCHETING SHELL. JOHN P. NIKONOW, New York, N. Y. Filed June 17, 1918. Serial No. 240,303. 4 Claims. (Cl. 102—26.)

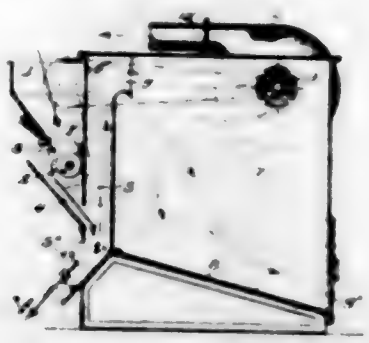


1. In a non-ricocheting shell, the combination with a shell, a cap, provided with edges, adapted to penetrate

the water, said cap being fastened to said shell, and a wind cap in coöperation with said first cap, said wind cap being adapted to break off from the impact with the water.

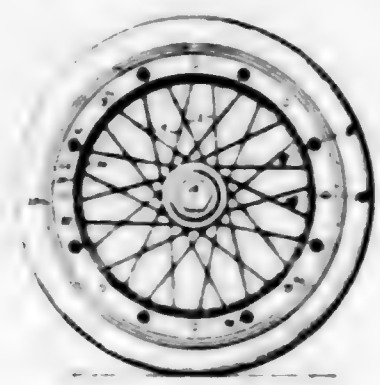
4. In a non-ricocheting shell, the combination with a shell, sharp edges on the forward portion of said shell, and a wind cap, covering said sharp edges and adapted to break off from the impact with the water.

1,298,086. GREEN-PEA CLEANER. JOHN PETER PALLANSCH, Fredonia, Wis. Filed Aug. 5, 1916. Serial No. 113,216. 1 Claim. (Cl. 130—17.)



A green pea cleaner including a settling and storage chamber, an upwardly extending chute at the front of the chamber and communicating with the upper front portion thereof, means for exhausting air from the chamber, a hopper disposed forwardly of the chute and having an open bottom portion, a feeding member arranged under said open bottom portion of the hopper, the outer wall of the chute being provided with a slot below the member, and a boot normally open at its upper end to the atmosphere having its outer wall disposed at the lower edge of the slot and lying in a plane oblique with respect to the chute, said boot inclosing the feed roller whereby to discharge material obliquely across the chute, the open end of the boot providing for an auxiliary flow of air longitudinally through the boot with the work material to loosen dirt contained in the work material and facilitate detachment of dirt from the work material upon projection of the work material obliquely across the main current of air passing through the chute.

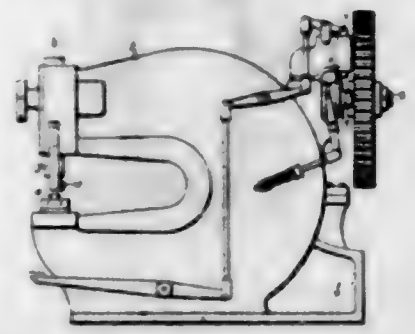
1,298,087. WIRE WHEEL. CLARK W. PARKER, Highland Park, Mich. Filed June 3, 1918. Serial No. 237,884. 8 Claims. (Cl. 21—69.)



1. In a vehicle hub, the combination of two telescoping members, the inner provided with internal and external shoulders, a plurality of bearing rings within the hub positioned by the inner member, and a pair of spoke anchoring collars on the hub positioned by the outer member.

1,298,088. FLOATING PUNCH. PAUL G. PATER, Hamilton, Ohio, assignor to The Long & Allstatter Company, Hamilton, Ohio. Filed May 20, 1918. Serial No. 235,469. 8 Claims. (Cl. 164—104.)

1. In a floating punch, the combination, of a die, a ram reciprocable to and from the die, a stripper disposed between the die and ram, a downwardly presenting abutment carried by the ram, an upwardly presenting abutment carried by the ram, a punch reciprocable in the ram, an upwardly presenting surface connected with the punch and adapted for contact with the downwardly presenting abutment of the ram, a downwardly presenting surface connected with the punch and adapted for contact with the upwardly presenting abutment of the ram and located at a distance from said upwardly presenting surface in excess of the distance between the two abutments of the ram whereby the punch may have a limited degree of reciprocation in the ram when the ram is at an intermediate point of its stroke, and means for arresting the motion of the ram when both its abutments are free of contact with the punch and said surfaces of the punch are free to reciprocate between said abutments, substantially as set forth.



3. A structure as specified in claim 1 in combination with means for adjusting the protrusion of the punch from the ram when no plate is present for the punch to float upon, substantially as set forth.

5. A structure as specified in claim 4 in combination with an automatic clutch for effecting the automatic arrest of the ram while the punch is floating on the plate, substantially as set forth.

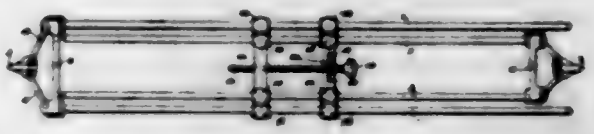
8. A structure as specified in claim 6 in combination with a block clamped to the base of the ram and forming part of the threaded socket for the reception of the bushing and forming in addition a locknut for the bushing, substantially as set forth.

1,298,089. SHOE. MORTON L. PATERSON, Wilmette, Ill., assignor to Converse Rubber Shoe Company, a Corporation of Massachusetts. Filed Jan. 5, 1917. Serial No. 140,821. 4 Claims. (Cl. 36—4.)



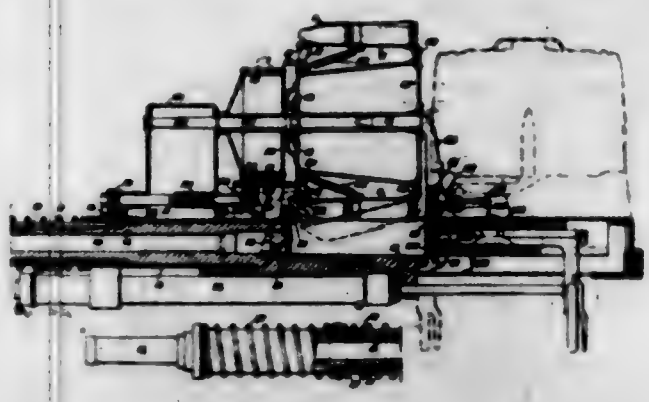
4. In a shoe having a rubber sole with a marginal rubber strip projecting upwardly therefrom and an inner sole; an upper comprising an outer cloth layer secured to said rubber strip and strength-giving and pure rubber layers having edge portions interposed between and secured to said soles.

1,298,090. GAGE FOR WHEELS OF MOTOR-CARS AND THE LIKE. CHARLES HENRY PYM and EDWARD JAMES WITCOMBE, Wellington, New Zealand. Filed Oct. 6, 1917. Serial No. 195,127. 6 Claims. (Cl. 33—143.)



1. The herein described gage comprising two pairs of parallel rods slidably held in relation to each other and pointers carried by each pair, substantially as set forth.

1,298,091. FEED MECHANISM FOR AUTOMATIC GUNS. ROBERT REDPATH and HELGE HELLAMO, Coventry, England, assignors to The Coventry Ordnance Works, Limited, Coventry, England. Filed June 24, 1918. Serial No. 241,583. 14 Claims. (Cl. 89—33.)



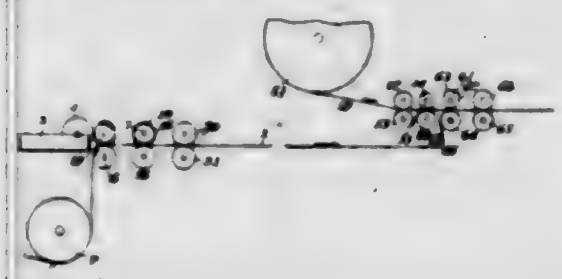
1. In feed mechanism for guns, a drum, a number of trays pivoted at their rear ends to the drum and each adapted to receive a cartridge, catches on the drum adapted to secure the front ends of the trays, means for releasing the catches and means for turning the drum.

1,298,092. EYE-PROTECTOR. HOWARD T. REEVE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Nov. 24, 1917. Serial No. 203,754. 3 Claims. (Cl. 2—149.)



3. The combination with a transparent base member, of a second transparent visual member formed thereon and extending over the edges of the base member, as and for the purpose set forth.

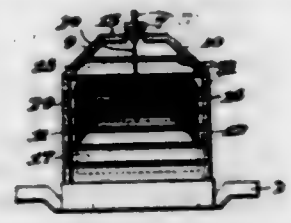
1,298,093. ENVELOP-MAKING MACHINE. JULIUS REGENSTEIN, Chicago, Ill. Original application filed Apr. 18, 1914, Serial No. 831,490. Divided and this application filed July 22, 1914. Serial No. 852,378. 4 Claims. (Cl. 93—61.)



1. An envelop making machine including in combination means for running a flat or unfolded web, means for applying paste circumjacent to the location of a window, means for cutting a window in the flat or unfolded running web within the applied paste, and means located beyond said cutting means at a later point for removing the window chip.

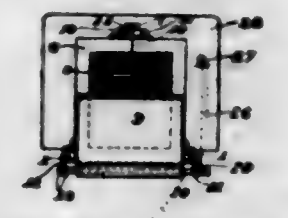
1,298,094. AUTOMOBILE-RADIATOR SHIELD. HARRY A. RISHEL, Philadelphia, Pa. Filed Dec. 4, 1916. Serial No. 134,962. 1 Claim. (Cl. 257—132.)

An automobile radiator shield comprising the combination of a frame adapted to extend forwardly of the perimeter of the radiator and provided with confronting ways, a rollable flexible curtain marginally coöperating with the ways, means including a roller for operating the curtain, and a grating extending across the frame



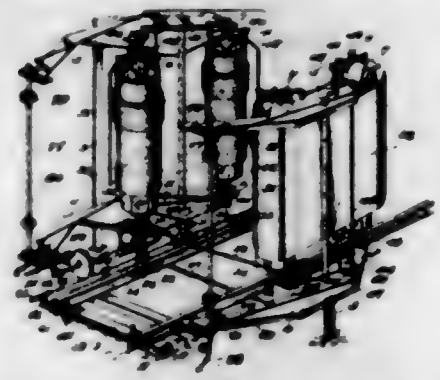
and supported thereby to prevent the curtain from bulging.

1,298,095. AUTOMOBILE-RADIATOR SHIELD. HARRY A. RISHEL, Philadelphia, Pa. Filed Jan. 31, 1917. Serial No. 145,740. 1 Claim. (Cl. 257—132.)



A shield for automobile radiators comprising the combination of a flexible curtain, a roller upon which the curtain is rolled to uncover the radiator, fixed bearings for the roller and manually operated means accessible from the driver's seat and adapted to positively turn said roller to roll the curtain against adherence to the radiator face caused by wind pressure when the car is in motion, and a recoil device for unrolling the curtain to cover the radiator, substantially as described.

1,298,096. RAILWAY-CAR-WASHING APPARATUS. GEORGE A. ROBERTS, Chicago, Ill. Filed Oct. 23, 1917. Serial No. 198,161. 10 Claims. (Cl. 141—7.)



1. In car-washing apparatus, the combination of washing means, drying means, a shifting rod arranged to be actuated by a passing car, and means whereby when said rod is shifted in one direction the washing means will be rendered operative and the drying means inoperative and when the rod is shifted in the opposite direction washing means will be rendered inoperative and the drying means operative.

2. In car-washing apparatus, the combination of a track over which the car to be washed may travel, washing mechanism mounted at the side of the track and movable toward and from the same, a drying mechanism also mounted at the side of the track and movable toward and from the same, connections between said mechanisms whereby they will simultaneously move in opposite directions relative to the track, a shifting rod, means whereby said rod may be actuated by the travel of the car, and means connected with said rod for rendering the washing and drying mechanisms operative or inoperative.

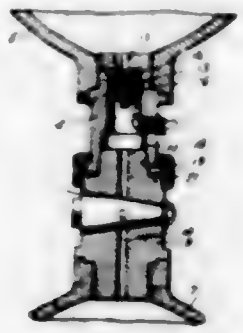
3. In car-washing apparatus, the combination of a track over which the car to be washed may travel, a washing mechanism adjacent the track, a normally in-

active drying mechanism adjacent the track, a shifting rod adjacent the track, means whereby travel of the car over the track will actuate said rod in the direction of travel of the car, means whereby the washing mechanism will be rendered operative when the rod is moved in one direction and will be rendered inoperative when the rod is moved in the opposite direction, means whereby the drying mechanism will be rendered operative upon movement of the rod in the last-mentioned direction, means whereby the drying mechanism will be maintained operative during the travel of the car in said last-named direction, and means for rendering the drying mechanism inoperative when the car is moved past the same.

4. In car-washing apparatus, a brush, means for operating the brush, a water spray, a valve for controlling the water spray, an air blast, a normally closed valve controlling the air blast, a shifting rod arranged for actuation by the movement of a car past the apparatus, means carried by said rod to render active the brush operating means and to open the water valve upon movement of the rod in one direction and upon movement in the opposite direction to render the brush operating means inactive and to close the water valve, and means connected with the rod to open the air blast valve upon the last-mentioned movement.

5. In car-washing apparatus, a washing mechanism, an air blast, a valve for controlling the air blast, car-actuated means for rendering the washing mechanism active upon movement of the car in one direction past the apparatus and inactive upon movement in the opposite direction, means to open the air blast valve upon the last named movement, and means for closing the said valve when the car passes beyond the air blast.

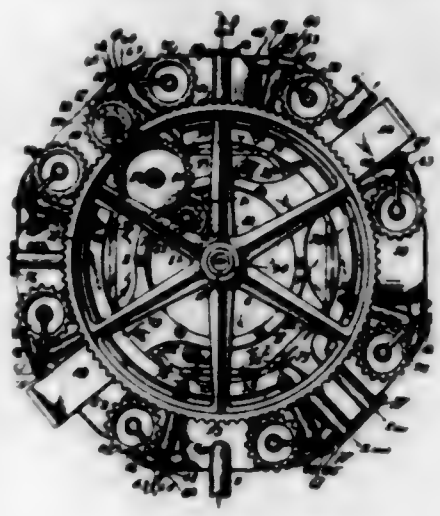
1,298,097. EXPLOSIVE CARTRIDGE. MONTAGUE H. ROBERTS, Jersey City, N. J., assignor to Air Reduction Company, Incorporated, a Corporation of New York. Filed Nov. 13, 1918. Serial No. 262,270. 10 Claims. (Cl. 102—6.)



8. An explosive cartridge comprising two separate containers, a supply of combustible material in one of said containers, a supply of oxidizing gas under pressure in the other container, means for assembling said containers with a communicating passage therebetween, and means for releasing said gas from the container therefor.

1,298,098. INTERNAL-COMBUSTION ENGINE. JOSEPH ROTHCHILD, New York, N. Y., assignor to John Simmons Company, New York, N. Y., a Corporation of New York. Filed Nov. 28, 1917. Serial No. 204,327. 4 Claims. (Cl. 123—55.)

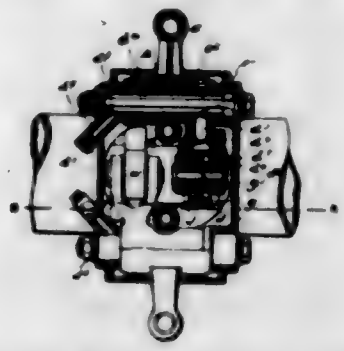
1. In an internal-combustion engine, the combination of a pair of power cylinders cast in a block having a flange between its ends and a rotary valve casing common to the pair of cylinders in the block; each cylinder in the block having an elongated gas port opening into the chamber of the valve casing at each end portion thereof; the casing being chambered from end to end and being frusto conoidal from each outer end toward its mid-section; a frusto conoidal rotary lengthwise-chambered gas supply and exhaust valve located in each end portion of the valve chamber and having an outwardly-projecting fixed valve-rotating member; the valves extending only part way to the mid-section of the valve casing chamber, the latter and each valve being ported for admission of water to and through each valve; water jackets for the cylinder walls in each block, the jacket water-chamber being in communication with the mid-section of the valve casing; and water-conduit connections between all the water jackets.



3. In the structure of claim 1 the inner surface of the valve chamber wall having lengthwise-extending gas-receiving recesses and a groove connecting them to put the recesses into communication one with the other; the valve being provided with a gas intake port, with an exhaust port, and with a bleeder port and bleeder groove for putting the cylinder chamber and said groove and recesses into communication during the compression stroke of the piston and explosion; and means intermediate the shaft and valve to rotate the latter synchronously with the piston movements and to permit gas in said recesses to be exploded simultaneously with the explosion in the cylinder chamber, all constructed and operating for balancing the valve when explosions occur.

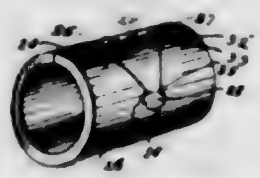
4. In an internal-combustion engine, the combination of an open-ended chambered power-cylinder supporting-frame having end walls provided with openings; clampable end plates to cover said openings; a main shaft journaled in the end plates; within the chamber of the frame a pair of power-transmitting mechanisms spaced apart along the shaft in the direction thereof, and each comprising a series of power pistons; fixed to the frame a series of twin-cylinder blocks radially disposed to the shaft and severally positioned with their longer dimensions extending in the direction of the length of the shaft; the series of pistons in each power-transmitting mechanism working in a circular series of the power cylinders; each twin-cylinder block having a rotary valve chamber the axis of which is parallel to the main shaft; a pair of rotary gas supply and exhaust valves in each valve chamber, the latter being in ported communication with its cylinder chamber; intercommunicating water-jacket chambers for all the power cylinders, such chambers being in communication with water chambers formed between opposed ends of each two valves in one casing and also within the valves; for each rotary valve casing, an intake gas conduit and an exhaust gas conduit each communicating with one end portion of the casing chamber; and connected with the other end portion of the casing chamber, another gas-supply conduit and another exhaust conduit; the two conduits at each end portion of the casing extending inwardly in the general direction of the shaft, and each of the conduits at each end portion of the casing communicating with an arced manifold supported in a side portion of the engine; and for all the rotary valves on each side of the engine, a valve-gear driving mechanism operatively connected with the main shaft.

1,298,099. LUBRICATING MEANS FOR THE VALVE-GEAR OF INTERNAL-COMBUSTION ENGINES. FREDERICK HENRY ROYCE, Derby, England, assignor to Rolls Royce Limited, Derby, England. Filed Mar. 13, 1918. Serial No. 222,177. 2 Claims. (Cl. 64—24.)



1. In valve mechanism for internal combustion engines comprising a cam shaft operating a rocker adapted to control a cylinder valve said rocker being furnished with a roller bearing on a cam on said shaft, a lubricating system consisting of a hollow cam shaft adapted to receive lubricant under pressure, a hollow fulcrum pin for the valve rocker, a hollow spindle for the roller with means of communication between the cam shaft and the fulcrum pin and between the latter and the roller spindle and means of communication between the interiors of the fulcrum pin and roller spindle and the outer surfaces thereof.

1,298,100. BUSHING. ROWLAND H. ROYCE, Hartford, Conn. Filed Oct. 12, 1917. Serial No. 196,261. 2 Claims. (Cl. 64—10.)



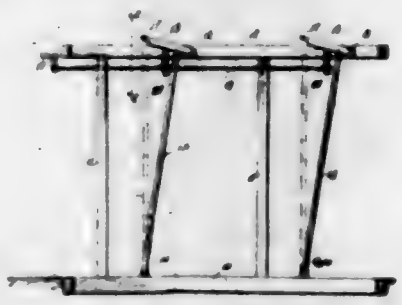
1. A bushing formed from a sheet of metal rolled into tubular form and having its engaging edges formed with outwardly tapering tongues, said tongues being formed with terminal enlargements.

1,298,101. BULKHEAD. EDWARD E. SANDS, Houston, Tex. Filed May 20, 1918. Serial No. 235,446. 2 Claims. (Cl. 61—39.)



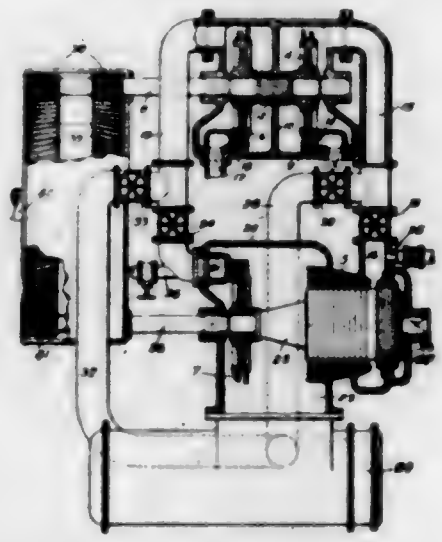
1. A seawall or bulkhead, including a plurality of piling driven into the ground, entirely below the normal water level, said piling being spaced apart and inclining upwardly from the water, and whose upper ends are spaced back from the water's edge, a transverse beam secured on the upper ends of said piling, vertical piling driven into the ground adjacent the water's edge located below the water level, a transverse beam supported by and secured to the upper ends of said vertical piling, a series of vertical beams arranged in front of the piling, extending from the top of the fill down into the bottom of the channel, said beams extending above the normal water level, tie rods secured at their outer ends to said vertical beams near the tops thereof, and above the water level, and whose inner ends are secured to the upper ends of the inclined piling, a platform supported by said transverse beams and extending back from the water's edge and filling materials supported by said platform and extending to the top of the curtain wall.

1,298,102. STANCHION-OPERATOR. WILLIAM K. SARGENT, Kissimmee, Fla. Filed June 18, 1918. Serial No. 240,582. 1 Claim. (Cl. 119,148.)



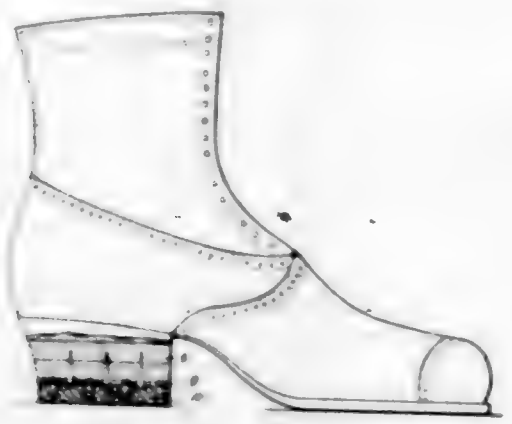
A cattle stanchion comprising a base, a plurality of pairs of uprights secured on the base, a movable bar pivotally connected to the base adjacent each pair of uprights and intermediate the uprights of each pair, longitudinally extending bars connecting the tops of the pairs of uprights, transverse rods rotatably carried between the longitudinally extending bars, locking bars secured to the transverse rods and adapted to engage the upper ends of the movable bars, a rod rotatably mounted in one upright of each pair of uprights, means for rotating the rod, and arcuate arms secured to the rod and adapted to engage the locking bars for raising the same.

1,298,103. MARINE TURBINE. HENRY F. SCHMIDT, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 4, 1915, Serial No. 25,737. Renewed Dec. 30, 1918. Serial No. 269,028. 8 Claims. (Cl. 60—70.)



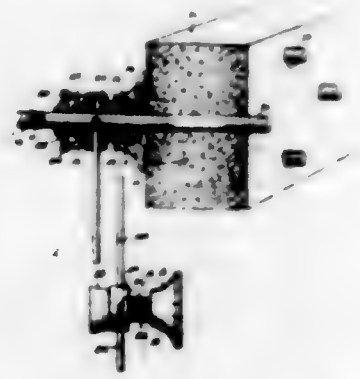
1. A power system comprising an ahead turbine divided into sections, each of which is provided with a separate casing, an astern turbine divided into separate sections corresponding to the divisions of the ahead turbine, with the separate sections located in the same casings with the corresponding sections of the ahead turbine, a condenser communicating with the casing including the low pressure sections of the ahead and astern turbines, and means for by-passing the low pressure sections of both the ahead and the astern turbines by delivering fluid issuing from sections normally of higher pressure direct to the condenser.

1,298,104. ATTACHABLE HEEL. GEORGE SCHRADS, New York, N. Y. Filed Nov. 15, 1917. Serial No. 202,159. 2 Claims. (Cl. 36—36.)



1. The combination with an attachable outer heel member of elastic material having sockets formed therein and opening on the upper surface thereof, each socket leading to a separate enlarged blind cavity in the interior of the heel member, of a metal attaching plate to be secured to the heel of a shoe and having projecting pins to fit said sockets and directly engage the elastic material of said heel member surrounding said sockets, said pins having heads of greater diameter than the sockets for directly engaging the elastic material of the heel member surrounding said enlarged cavities.

1,298,105. TIE-ROD-WITHDRAWING JACK. ROBERT SHARP, Tuckahoe, N. Y. Filed Dec. 4, 1918. Serial No. 265,292. 9 Claims. (Cl. 25—131.)



1. In a device of the class described, the combination with a tie rod for connecting the mold boards of a concrete form, one end of said rod which is designed to extend beyond the concrete being threaded and provided with a hole extending transversely therethrough, of a jack provided with an opening extending axially therethrough for receiving the threaded portion of the rod, said jack including a female bearing member internally screw threaded and provided with a concrete engaging end, a male member provided with a massive head and a shank portion in threaded engagement with the bearing member, said head provided with an opening extending therethrough and designed to be alined with the opening in the rod whereby a crow-bar or similar leverage tool may be inserted in said alined openings and the head and rod rotated simultaneously thereby to screw the rod out of the concrete.

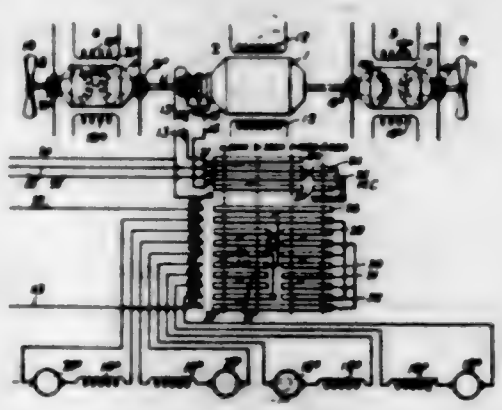
1,298,106. PIPE-BENDER. MONTTIE M. SILVEY, Kansas City, Mo. Filed June 10, 1918. Serial No. 239,127. 4 Claims. (Cl. 81—15.)

1. A pipe bender comprising a head and a handle attached thereto, the head having in one side extending from end to end a longitudinal groove for receiving the pipe to be bent, the groove at one end having a laterally curved portion with converging side walls for embracing the pipe, the bottom of said curved portion between said



side walls being outside of and spaced apart from a circle to which the side walls are tangent.

1,298,107. ELECTRICAL SYSTEM. KARL A. SIMMON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 4, 1916. Serial No. 82,099. 9 Claims. (Cl. 172—179.)



1. In an electrical system, the combination with a generator, two motors having armature and field windings, two blowers, and a shaft for supporting the rotating parts of said generator, motors and blowers, of means for varying the relations of the armature and field windings of the motors in accordance with the voltage supplied thereto, whereby the voltage of the generator may be maintained substantially constant.

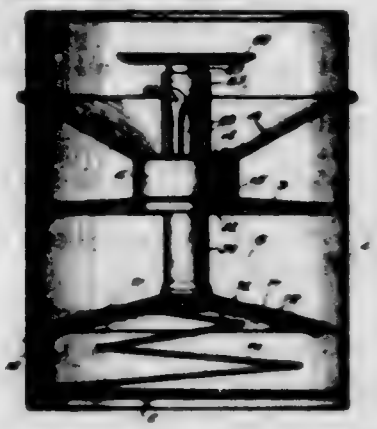
5. In an electrical system, the combination with two series motors having armatures and field windings, each of said motor armatures having two independent windings and two commutators, a generator having an armature and field windings, a shaft for supporting the armatures of said motors and said generators, and a supply circuit, of means for connecting the armature windings of said motors in series, series-parallel and parallel-circuit relation to said supply circuit, whereby the generator may be operated at full capacity in case the voltage of the line supply be lowered.

9. In an electrical system, a generator, a plurality of motors for operating the generator, each of said motors having a plurality of independent field and armature windings, and a supply circuit for said motors, of means comprising a commutating switch for varying the circuit connections of the generator and the motors to maintain the generator voltage constant in case of variation in the voltage applied to the motors.

1,298,108. STORAGE AND DISPENSING VESSEL. SALVATORE LEO SISTI, Chicago, Ill., assignor to Sisti Safety Can Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 17, 1917. Serial No. 142,956. 2 Claims. (Cl. 91—66.)

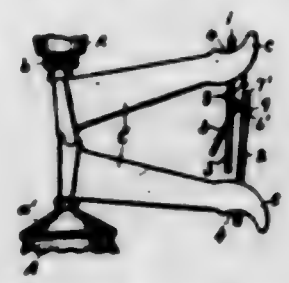
1. A storage and dispensing vessel comprising a receptacle separated by a partition into a lower storage chamber and an upper dispensing chamber, an additional partition in the upper part of the storage chamber to provide an air space between the two partitions and insulate the storage chamber against heat, a tube or passageway

through the partitions to convey liquid from the storage chamber to the dispensing chamber, and valve structure controlling the discharge of liquid.



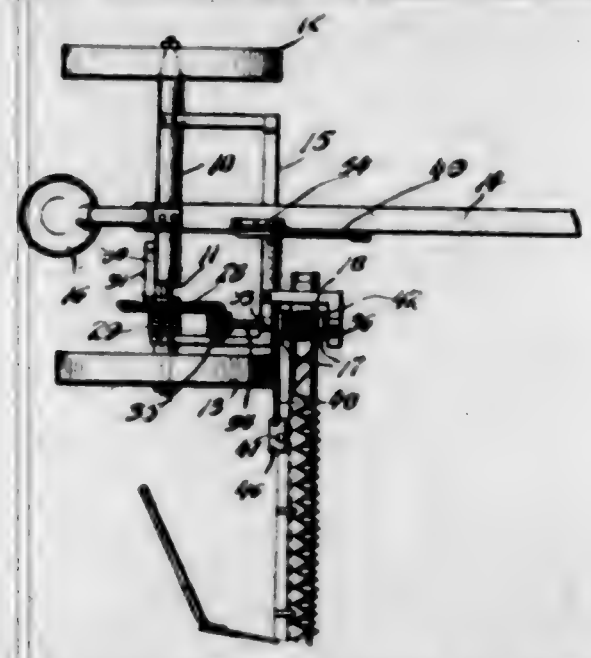
2. A storage and dispensing vessel comprising a receptacle separated by a partition into a lower storage chamber and an upper dispensing chamber, a passageway affording communication from the storage chamber to the dispensing chamber, a hollow movable plunger extending through such passageway, valves in the opening through such plunger, a dish-shaped disk on the top of such plunger, and openings in the bottom of such disk communicating with the hollow part of such plunger.

1,298,109. SPRINKLER-HEAD. CHARLES W. SIVEN, Syracuse, N. Y., assignor to Edward P. Bates Co., Inc., Syracuse, N. Y., a Corporation of New York. Filed July 30, 1918. Serial No. 247,386. 2 Claims. (Cl. 169—26.)



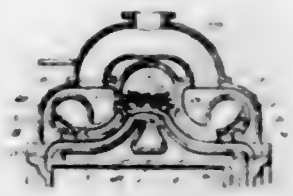
1. A three-part fusible link for sprinkler heads, one of the parts having bearing ledges projecting from opposite faces thereof and engaged, respectively, with the other parts for resisting their relative endwise movement, the first-named part being soldered to said other parts.

1,298,110. DETACHABLE GEARING FOR MOWERS. NEWTON M. SOMMERVILLE, Emerick, Nebr. Filed May 10, 1916. Serial No. 96,689. 2 Claims. (Cl. 74—7.)



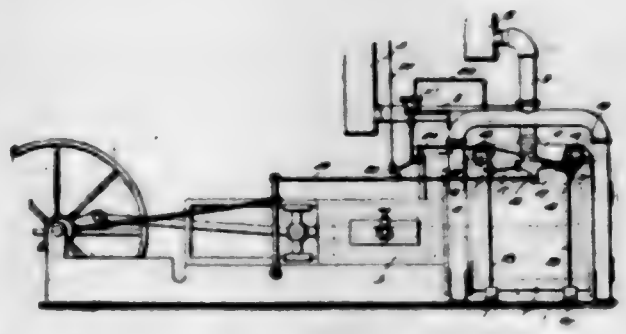
1. In a device of the class described the combination with a frame, a stationary axle, a rotating axle, a wheel loosely mounted upon said stationary axle, a wheel secured to said rotating axle and adapted to rotate the same, a slidable gear mounted upon said rotating axle, a spring for normally urging said slidable gear to an inoperative position, a mowing device, a driving shaft therefor, a pinion carried by said shaft, and a lever for engaging the rear face of said slidable gear and urging the same to a meshing engagement with said pinion for driving said mowing device.

1,298,111. VACUUM-PUMP. CHARLES NEVILLE SOWDEN, Central Caracas, Cuba. Filed Feb. 18, 1918. Serial No. 217,912. 14 Claims. (Cl. 230—32.)



1. In a vacuum-pump for creating relatively high and low vacuums simultaneously, a cylinder and a piston therein, a main valve casing and secondary valve casings on opposite sides thereof, main ports leading from the ends of the cylinder to said main valve casing, a main oscillating valve in said main casing for establishing communication between the ends of the cylinder as the piston reaches the ends of its strokes, secondary ports from said main ports to said secondary valve casings, secondary suction inlet means opening into said secondary valve casings, secondary oscillating valves in said secondary valve casings for controlling communication between said secondary suction inlet means and said secondary ports, main valve-controlled suction inlet means for alternate communication with the opposite ends of said cylinder, and valve-controlled exhaust means for similar communication with the cylinder ends.

1,298,112. VACUUM-PUMP. CHARLES NEVILLE SOWDEN, Central Caracas, Cuba. Filed Apr. 22, 1918. Serial No. 230,178. 2 Claims. (Cl. 230—32.)

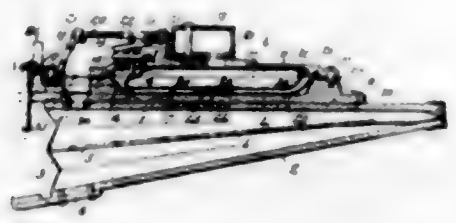


1. In a vacuum pump in which a balance of pressure must be created after each stroke, the combination with the pump cylinder and its piston, of ports in the wall of said cylinder adjacent its ends and of less width than said piston, said piston having ports opening through its periphery and through its sides for registration with said wall ports for permitting communication between the ends of the cylinder to create said balance of pressure.

1,298,113. PLAYER-PIANO PNEUMATIC. CHARLES H. BRANCH, Baltimore, Md., assignor to Henry S. Dulaney, Baltimore, Md. Filed Sept. 19, 1917. Serial No. 192,128. 6 Claims. (Cl. 84—178.)

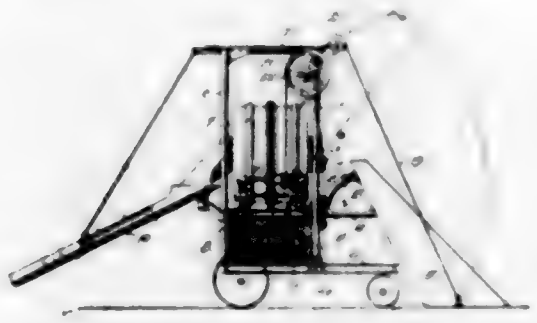
1. In a pneumatic action of the character set forth, a valve casing comprising oppositely disposed striker and trunk chambers having inner portions overlapped, and having an opening in the wall separating the overlapped portions of the chambers, the striker chamber having an opening in line with the opening formed in the separating

wall between the chambers, reversely disposed separate independently mounted valves for alternately closing said openings and an adjustable stop carried by one of such valves and disposed between the valves, one of said valves being removable independently of the other valve.



3. A player piano pneumatic comprising a valve casing embodying separable parts between which is formed a trunk chamber, one of such parts having an opening in an end portion thereof, a valve for closing such opening, a diaphragm within the trunk chamber and having its edge portions clamped between the parts of the casing, and a valve lifter within the trunk chamber and pivoted at one end to the part of the valve casing provided with the valve controlled opening and having its opposite end in engagement with the said valve.

1,298,114. CHARGING DEVICE FOR CONCRETE-MIXERS. HUGO O. STAMP, Milwaukee, Wis. Filed May 12, 1917. Serial No. 168,128. 4 Claims. (Cl. 214—148.)



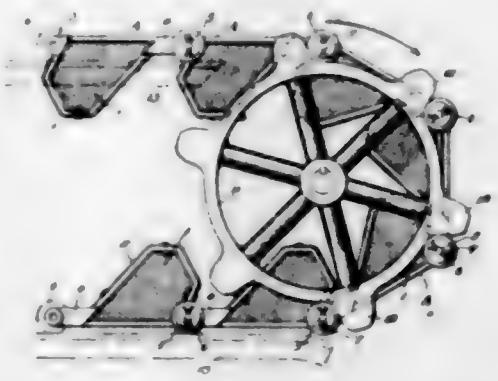
1. A loading device comprising a support, a skip having a rolling and then pivotal connection with the support, and means for raising the skip from a loading to a discharging position, the pivot of the skip when in discharging position being relatively closer thereto than when in loading position, substantially as described.

2. A loading device comprising a supporting frame, a loading skip, an initial pivotal connection between said frame and skip when the skip is in a loading position, a final pivotal connection between the frame and skip when the skip is in discharging position, a continuously shifting pivotal connection between said frame and skip intermediate the said initial and final pivot points whereby said pivot points change from a position giving maximum initial leverage at the beginning of upward movement of the skip to a position giving a maximum return leverage when in discharging position, and hoisting means connected with the skip near its outer end for raising the same from loading to discharging position, substantially as described.

3. A loading device comprising a supporting frame, a loading skip, means for raising and lowering said loading skip, and means operative incidental to the application of continuous substantially even lifting power to the skip for progressively reducing the speed of lifting movement of the skip, said means being operative to progressively increase the speed of lowering movement of the skip incidental to an even operation of said first named means.

4. In a high drum paving mixer, a loading device therefor comprising, in combination, a support, upwardly extending channel tracks carried by the support, a loading skip, arcuate rocker arms carried by the skip near its inner end and including outturned side flange portions engageable in the channels of the track members, flexible members secured at the end portions of the tracks and connected with the rocker arms to hold said arms in rocking and pivotal engagement with the track members, said rocker arms having an initial pivotal movement, a rocking movement and then a final pivotal movement when the skip is being raised from loading to discharging position, the final pivotal movement of the skip being relatively closer to the skip than the initial pivotal movement whereby to provide a maximum initial leverage at the beginning of upward movement of the skip and a maximum return leverage when the skip is in discharging position, substantially as described.

1,298,115. ENDLESS CONVEYER. CLARENCE E. STEERS, Milwaukee, Wis., assignor to Henry Scarborough, Milwaukee, Wis. Filed Apr. 3, 1918. Serial No. 226,430. 2 Claims. (Cl. 193—7.)



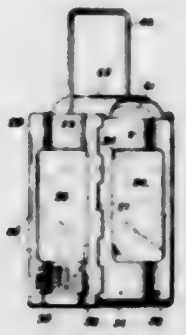
1. In an over-shot discharge conveying apparatus the combination with a pair of coöperating sprocket wheels, of a plurality of conveyer buckets, a pair of ears extending from adjacent corners of each bucket and pivotally connected with the other corners of an adjacent bucket, plates extending between the buckets and covering the spaces therebetween, sprocket wheel engaging members at the pivotal connections of said ears and buckets, one end wall of each bucket section being angular in cross section, whereby the upper portion of said wall is disposed in a plane which, when the buckets are swung together in passing around the sprocket wheel is substantially parallel to the connecting plate portion of the other bucket, while its lower or bottom portion is substantially parallel to the other end wall of the adjacent bucket in such position.

2. The combination with a sprocket wheel and tracks extending in substantially horizontal direction from the upper and lower portions thereof, of a plurality of conveyer buckets, a pair of ears extending from the sides of one end wall of each bucket, a pair of relatively longer ears extending from the sides of the other wall of each bucket and having their end portions in lapped relation to the short ears of an adjacent bucket, pivot bolts passed through the lapped portions of the ears, rollers on said pivot bolts engageable by the sprocket wheel and adapted to ride on the tracks, and a plate extension at the upper edge portion of each end wall adjacent the relatively long ears extending between said ears and terminating above the upper edge of the end wall of the adjacent section whereby to cover the space between the buckets, said space between the buckets permitting pivotal movement thereof together in passing around the sprocket wheels.

1,298,116. FOLDING LANTERN. CHARLES H. STONEBRIDGE, New York, N. Y. Filed June 7, 1918. Serial No. 238,645. 11 Claims. (Cl. 240—36.)

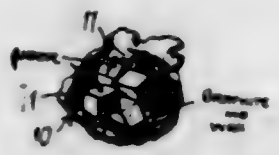
4. A lantern of the class described composed of a plurality of body sections which are arc-shaped in form in cross section, a top member hinged to one of said body sections and a bottom member hinged to said body sec-

tion, said top and bottom members being foldable onto said section, and means provided for folding the other of



said sections onto said first named section and said top and bottom members.

1,298,117. METALLIC PACKING. JOSEPH G. STROCK, Pittsburgh, Pa. Original application filed Oct. 24, 1917, Serial No. 198,336. Divided and this application filed Mar. 9, 1918. Serial No. 221,529. 16 Claims. (Cl. 100—8.)



9. A packing of the character described composed of a substantial proportion of anti-frictional bearing metal, and elastic particles which when the packing is under confinement will expand to compensate for the contraction of the first named ingredient and be compressed upon an expansion of the first named ingredient.

10. A packing of the character described including as ingredients particles of a substantial proportion of anti-frictional bearing metal, and particles of elastic material intimately mixed with the particles of metal, the packing being compressed.

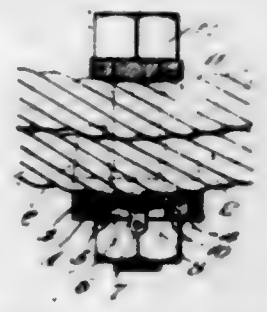
11. A packing including particles of a substantial proportion of anti-frictional metal, graphite intimately mixed therewith, a binder, and particles of elastic material intermittently mixed therewith, the whole mass being compressed to bring the particles into intimate contiguity whereby when the packing is confined said elastic particles will be compressed upon expansion of the metallic particles and will expand as the metallic particles contract.

13. A packing having as one of its ingredients thin walled, hollow, somewhat globular, perforated shells of pliable substantially non-elastic, anti-frictional metal, and as another of its ingredients cubical particles of rubber inclosed within said shells and protected thereby.

14. A packing having as one of its ingredients thin walled, hollow, somewhat globular, perforated shells of pliable substantially non-elastic, anti-frictional metal, and as another of its ingredients cubical particles of composition rubber containing graphite inclosed within said shells and protected thereby.

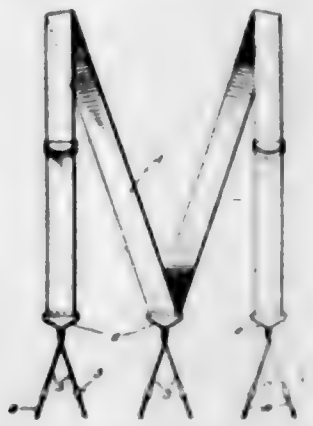
1,298,118. CABLE-CLIP. FREDRIC H. STROM, St. Paul, Minn. Filed July 11, 1918. Serial No. 244,406. 3 Claims. (Cl. 24—135.)

3. A cable clip comprising a base plate having two spaced pairs of parallel fingers extending laterally from one of its sides and adapted to receive the cables therebetween, said side of the base plate having a longitudinal channel between said fingers, said channel decreasing in depth from its center to its ends, a shoe between said fingers decreasing in thickness from its center to its ends for sliding contact with the bottom of said channel, the upper face of said shoe being roughened to engage one of the cables, an apertured lug depending centrally from said shoe, said base plate having a longitudinal slot through which said lug extends, a pin passing through said lug below said base plate, apertured ears extending



laterally from the edges of said base plate, and a cable clamping yoke having bolts to straddle the cable and pass through said ears.

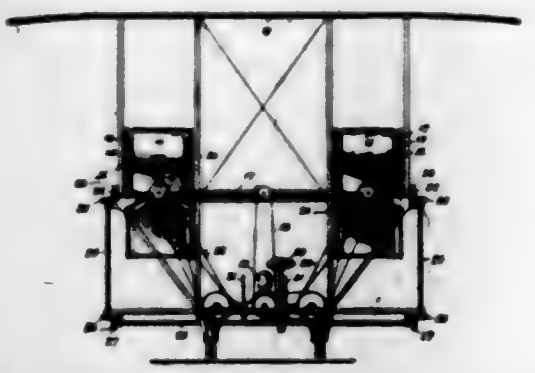
1,298,119. SUSPENDERS. HARVEY SUGG, Ladysmith, Wis. Filed June 28, 1918. Serial No. 242,365. 3 Claims. (Cl. 241—27.)



1. A garment supporting device comprising a member formed with a loop, legs extending from the loop, the legs being bent upwardly at their free ends to form hooks, and means carried by each leg for releasably engaging the free end thereof.

2. A garment supporting device comprising an attaching member formed from a single strand of wire, the same being coiled upon itself intermediate of its ends to form a permanent attaching loop, the free ends of the wire being flared obliquely with relation to each other to form legs, the end of each leg being bent upwardly to form an open loop, and a clip member carried by each leg adapted to engage the free end of the loop.

1,298,120. FLYING-MACHINE. GEORGE F. SWAIN, Chicago, Ill. Filed Sept. 4, 1917. Serial No. 189,537. 3 Claims. (Cl. 244—25.)



1. In a flying machine, the combination of a plurality of outer reels composed of intersecting rectangular frames, an inner U shaped frame revoluble within each outer reel, means such as a main horizontal shaft 28, gears 26 and 27, vertical shafts 25, gears 23 and 24, and short shafts 22, for moving the U shaped frames; a sec-

ond horizontal shaft parallel to the main shaft for revolving the outer reels; a sail attached to each end of each rectangular frame and all the sails of each reel having one end fastened to the inner U shaped frame.

1,298,121. CALKING-TOOL. GUSTAVE O. SWANSON, Vancouver, British Columbia, Canada. Filed Oct. 21, 1918. Serial No. 258,949. 5 Claims. (Cl. 114—224.)



5. A calking tool comprising in combination, a disk wheel, the edge of which is adapted to the requirement of the seam to be calked, said wheel having a central hub projected from each side, a stem adapted at one end to receive the blows of a pneumatic hammer and bifurcated at the opposite end to pass on each side of the disk wheel and bear on each hub projection of the wheel.

1,298,122. AUTOMOBILE-TOP. RICHARD J. TALBOT, Springfield, Mass. Filed July 21, 1917. Serial No. 182,050. 5 Claims. (Cl. 21—62.)



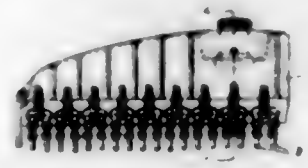
1. In combination, a rear section of an automobile top, a flexible extension attached to the upper portion of the rear top section in rear of the front edge thereof, means engaging the front end of the extension to hold same extended in front of the rear section, means for holding the flexible extension back flat on the upper side of the rear top section, side curtains attached to the sides of the extension and adapted to be folded inwardly toward each other to lie close to the surface when the extension is back on the rear top section, and means for fastening the slide curtains to hold them in vertical position when the extension is extended forwardly.

2. In combination, a rear top section of a vehicle, a wind shield spaced from the front edge of the rear top section, a flexible extension adapted to extend between the upper part of the rear top section and the wind shield, a flexible frame forming a part of the extension, means for permanently securing the rear edge of the extension to the rear top section in the rear of the front edge of the latter, means between the front edge of the extension and the wind shield to hold the extension in extended position, rods and supports for further supporting the extension in extended position, and means for holding the extension flat on the outer surfaces of the rear top section when folded back and out of use.

3. In combination, a rear top section of a vehicle, a forward support spaced from the rear top section, an extension fastened at its rear edge to the outer surface of the rear top section, said extension being of sufficient length to extend over the outer upper and rear surface of the rear top section, foldable side curtains attached to the extension and adapted to be let down substantially vertical when the section is extended to the support, means between the support and the extension to hold the latter in extended position, means between the rear top section and the side curtains and between the latter and the support to secure the side curtains in substantially vertical position, and means to fasten the extension and the side curtains over the outside of the rear top section when said extension is not in use whereby to form a rear curtain for the rear top extension.

5. In combination, a rear top section of a vehicle, a support spaced from the front of the rear top section, a flexible extension attached to the upper surface of the rear top section in rear of the front edge thereof, said extension being of sufficient length to extend over the outer upper and rear surfaces of the rear top section, whereby to form a rear curtain, and means for securing the free end of the extension, the extension when extended forwardly of the rear top section being fastened to the support, whereby to provide a forward top section for the vehicle.

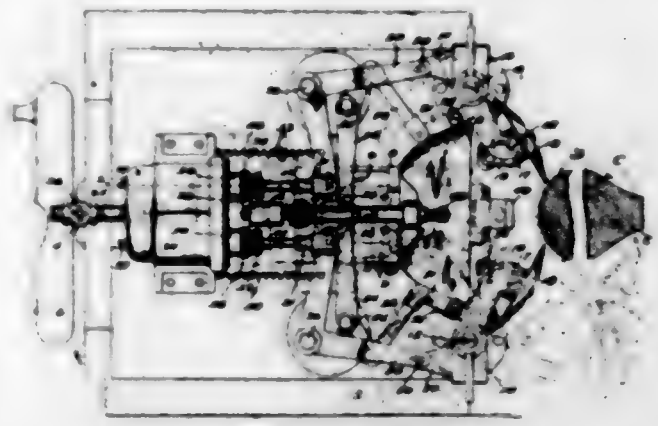
1,298,123. RADIATOR. GEORGE J. THOMAS, Lansing, Mich., assignor to Duplex Truck Company, Lansing, Mich. Original application filed June 27, 1917, Serial No. 177,249. Divided and this application filed June 24, 1918. Serial No. 241,710. 3 Claims. (Cl. 220—124.)



1. In a structure of the class described, the combination of a radiator comprising a water tank having a depression or well in the top wall thereof, the bottom of said well being provided with a threaded cap opening, and a hollow cap threaded into said opening, there being a drain and vent opening near the lower end of said cap, the upper end of the cap projecting above the top wall of the radiator.

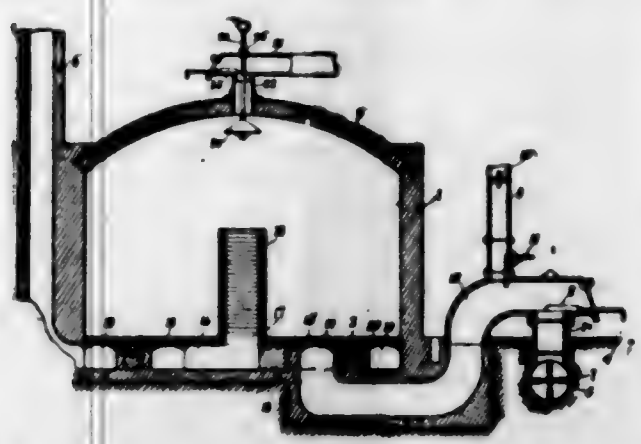
3. In a structure of the class described, the combination of a radiator comprising a water tank having a depression or well in the top wall thereof adapted as a filling funnel and as an overflow receptacle, the bottom of said well being provided with a threaded cap opening, and a cap threaded into said opening.

1,298,124. TIRE-MAKING STRUCTURE. WILLIAM C. TYLER, Racine, Wis., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 30, 1918. Serial No. 225,697. 30 Claims. (Cl. 154—10.)



1. A tire-building machine including a carriage, a traveling member normally connected to the carriage and automatically disconnectible therefrom, means for effecting relative movement between the carriage and the member, stitching mechanism traveling with the carriage, and means influenced by the traveling member for actuating said stitching mechanism.

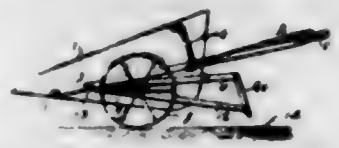
1,298,125. METHOD OF AND APPARATUS FOR TREATING CERAMIC AND SIMILAR MATERIAL. JOHN T. UNDERWOOD, Dayton, Ohio, assignor to Underwood Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 3, 1917. Serial No. 200,078. 10 Claims. (Cl. 25—157.)



1. In a device of the class described, the combination, with a kiln comprising side walls and a roof, and a floor having two concentric circular fuel passages thereunder, one covered continuously and one having a perforated covering, of means for forcing fuel through the continuously covered passage, thence through the kiln space, next through the perforated covering into the other fuel passage and finally out of the kiln.

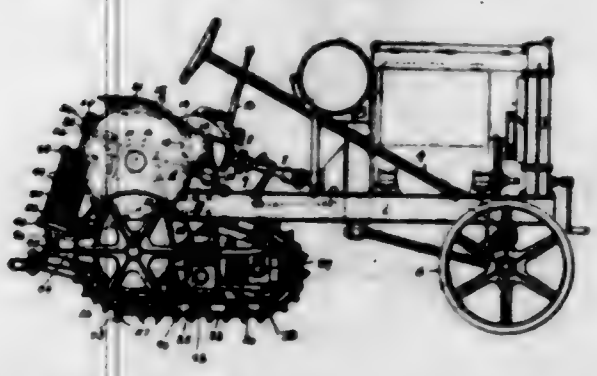
8. The method of treating ceramic material, which comprises forcing mixed gaseous fuel and air into a kiln under pressure at one point causing partial combustion of the mixture to take place as the mixture enters the kiln at said point, then forcing air under pressure into the kiln at another point, mixing the air with the gaseous fuel entering the kiln at the first point, and completing combustion of the fuel entirely inside the kiln space.

1,298,126. WHEELBARROW. FRANK D. VESSEY, Kellogg, Idaho. Filed July 2, 1918. Serial No. 243,024. 2 Claims. (Cl. 37—33.)



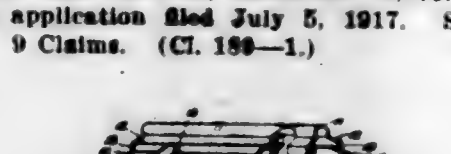
1. The combination with a barrow body and the handles pivoted thereto and carrying supporting wheels, of a pushing device pivoted on the handles and operative when the barrow body is flat upon the ground, and adapted, when the handles are manipulated to push the barrow body with a scooping motion.

1,298,127. TRACTOR. WILLIAM G. WAGENHALS, Detroit, Mich. Filed June 26, 1918. Serial No. 242,065. 8 Claims. (Cl. 180—8.)



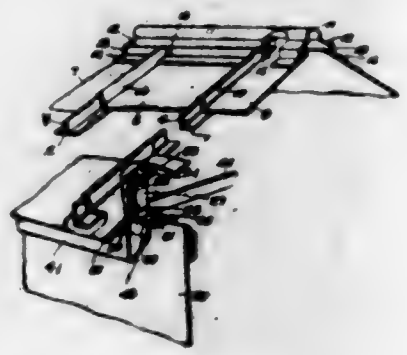
1. In a tractor, the combination of a frame and a rear axle, means to drive the rear axle, tractor wheels mounted to the ends of the axle, an auxiliary frame mounted on the axle between the tractor wheels and extending forwardly therefrom, tractor belt wheels mounted centrally of the tractor on the auxiliary frame and on the rear axle, the latter being a driving wheel, a tractor belt extending around said wheels, and means to depress the front end of the auxiliary frame.

1,298,128. FASTENING DEVICE. RICHARD P. WHITE, Chicago, Ill. Filed Dec. 23, 1918. Serial No. 267,923. 3 Claims. (Cl. 215—90.)



1. A fastener for clamping a cover on a receptacle, including in combination with the receptacle, a cover therefor, a stud or projection provided on the side of the receptacle near the top thereof, said stud or projection having an opening therethrough, said fastener including a finger actuated part and a clamping part adapted to engage the cover, said finger actuating part being in the form of a loop, having its free ends spaced apart and extending toward each other and positioned in the passage within the stud or projection, said finger actuated member also having means on each side thereof near the free end for engagement with the free ends of the clamping member, said finger actuated member being bent at an intermediate point so that the lower end thereof stands away from the sides of the receptacle, said clamping member being in the form of a loop, having divergent legs terminating in free ends which are bent to engage the means on the sides of the finger actuated member, the loop part of said clamping member being bent so as to fit over the top edge of the receptacle and the edge of the cover, the bearing points being so arranged as to form a toggle joint which is locked when the finger actuated lever is depressed and the clamping member in clamping position.

1,298,129. METALLIC BUILDING STRUCTURE. LUCIUS H. WHITTREDGE, Lynn, Mass. Original application filed Apr. 22, 1916, Serial No. 92,975. Divided and this application filed July 5, 1917. Serial No. 178,624. 9 Claims. (Cl. 189—1.)



1. A metallic building structure comprising a plurality of rafters having flat upstanding portions disposed in spaced parallelism along the roof, a plurality of roof sheets having their lateral edges bent upwardly at substantially right-angles to form channel members adapted to fit snugly into the channel-shaped spaces between adjacent portions of said upstanding portions, the bent-up edges of said sheets being folded outwardly through substantially 180° so as to fit over said upstanding portions in superposition, the outer ends of said sheets being turned under to hold the sheets on the rafters, whereby

the rafters and roof sheets are rigidly united without the use of fastening means along the rafters.

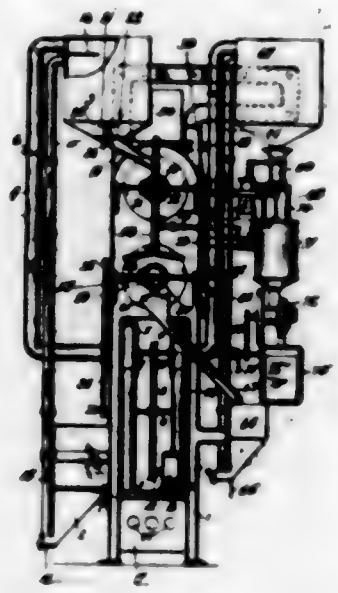
2. A metallic building structure comprising a plurality of rafters having flat upstanding portions disposed in spaced parallelism along the roof, a plurality of roof sheets having their lateral edges bent upwardly at substantially right-angles to form channel members adapted to fit snugly into the channel-shaped spaces between adjacent portions of said upstanding portions, the bent-up edges of said sheets being folded outwardly through substantially 180° so as to fit over said upstanding portions in superposition, the outer ends of said sheets being turned under to hold the sheets on the rafters, and a ridge roll mounted over the inner ends of said sheets, whereby the rafters and roof sheets are rigidly united without the use of fastening means along the rafters.

3. A metallic building structure comprising a rafter having a vertical longitudinal rib, roof sheets having channels at their edges fitting over said rib, a ridge roll having a portion overlapping said roof sheets and a portion substantially perpendicular to said roof sheets adjacent said overlapping portion and having an opening in said portions to receive said rafter and channels, and a clip secured to said rafter within said ridge roll and to the perpendicular portion of said ridge roll.

4. A metallic building structure comprising a rafter having a vertical longitudinal strip, roof sheeting supported by the rafter, a ridge roll having a portion substantially perpendicular to said rafter and having an opening in said portion to receive said rafter, and a clip having one end secured to said rafter, said clip having a projection bearing against the inside of said portion and having an intermediate portion bearing against the outside of said portion.

5. In a metallic building structure, the combination of a roof sheet, means for supporting said roof sheet near its outer edge, and a channel member secured to said supporting means beneath said outer edge of the roof sheet, said channel member having a flange in parallel juxtaposition to said outer edge of the roof sheet and the roof sheet being folded over said flange through an angle of approximately 180°.

1,298,130. COFFEE-ROASTER. FREDERICK A. WILCOX and GEORGE H. MCINTIRE, Spokane, Wash., assignors of one-third to A. I. Switzer, Spokane, Wash. Filed Apr. 8, 1918. Serial No. 227,308. 6 Claims. (Cl. 34—5.)



1. The combination in a coffee roasting apparatus including a roasting cylinder, of a cooling cylinder below the roasting cylinder to receive roasted coffee therefrom, a lower hopper and spout receiving coffee by gravity from the cooling cylinder, an elevated reservoir and means for conveying the cooled roasted coffee thereto, and dispensing means coacting with said reservoir.

1,298,131. WELL-SCREEN WASHER AND PERFORATOR. AARON L. WILKIRSON, Houston, Tex. Filed July 20, 1918. Serial No. 245,807. 10 Claims. (Cl. 166—20.)

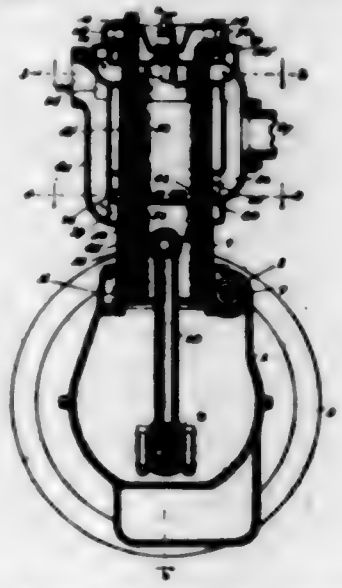


1. A washer for wells, including an outer pipe, having perforated sections, expansible members surrounding said pipe and spaced apart, and means operating within said pipe for engaging with and operating said members.

4. A washer for well screens, including a tubular member, having a perforated section, a stem within said member, having a perforated section, and from which the member is suspended, said stem being rotatable, relative to the member, expansible packers carried by the said member and spaced apart, means carried by the stem and located so as to engage simultaneously with the packers, and expand the same against the screen, as the stem is rotated in said member, and a packer setting mechanism carried by said member and arranged to engage with the screen and anchor said member, when the stem is rotated.

9. In a device of the character described, the combination with cutting disks, of a support therefor, means for supporting said support within a pipe to bring said disks in frictional contact with the pipe whereby they are forced through the pipe, thereby perforating the same, and means for forcing water from the interior through said perforations to the exterior of said pipe.

1,298,182. GAS-ENGINE. MARTIN L. WILLIAMS, South Bend, Ind., assignor, by mesne assignments, to American Sleeve-Valve Motor Company, a Corporation of Delaware. Filed Jan. 2, 1913, Serial No. 739,682. Renewed June 11, 1917. Serial No. 174,165. 8 Claims. (Cl. 123—80.)



1. In a four cycle gas engine, the combination with a cylinder, of a port ring in either end of said cylinder, the

internal diameter of said cylinder between said rings being slightly less than the diameter of said rings, a valve sleeve rotating in said cylinder and provided with ports at its upper and lower end adapted to register with the ports of said rings, a piston reciprocating in said sleeve and means for actuating said sleeve and piston in timed relation.

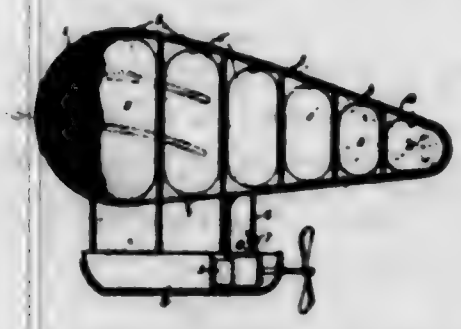
2. In a four cycle gas engine, the combination with a cylinder structure having inlet and exhaust ports at its upper and lower ends respectively, the internal diameter of said cylinder structure being less at an intermediate portion of said cylinder structure than at the ends thereof, a valve sleeve rotating in said cylinder structure and having ports registering with the inlet and exhaust ports of said cylinder structure, a piston reciprocating in said sleeve and means for actuating said sleeve and piston in timed relation.

3. In a four cycle gas engine, the combination with a cylinder structure having inlet and exhaust ports, of a valve sleeve rotating in said cylinder and having a plurality of inlet and exhaust ports, the opposed walls of said cylinder and sleeve being recessed to form an intermediate annular lubricating pocket, a piston reciprocating in said sleeve and means for actuating said piston and sleeve in timed relation.

4. In a four cycle gas engine, the combination with a cylinder provided with inlet and exhaust passages, a rotary valve sleeve having inlet and exhaust ports coöperating with the inlet and exhaust passages of said cylinder, an annular ported bearing member interposed between said sleeve and said cylinder, a piston reciprocating in said sleeve and means for actuating said piston and sleeve in timed relation.

5. In a four cycle gas engine, the combination with a cylinder provided with inlet and exhaust passages at either end, a rotary valve sleeve having inlet and exhaust ports coöperating with the inlet and exhaust passages of said cylinder, annular ported bearing members interposed between either end of said sleeve and said cylinder, and means for actuating said piston, and means for rotating said sleeve at a reduced speed relative to the speed of said piston.

1,298,122. AIRCRAFT. HENRY WILSON-FOX, London, England. Filed Nov. 21, 1918. Serial No. 263,605. 1 Claim. (Cl. 244—3.)



A flying machine including a body, wings attached to said body, a propeller, driving means therefor, a gas reservoir located above said body, the gas therein serving to assist in an initial rising of the flying machine and subsequently in supplying fuel for said driving means, and means for supplying air to said reservoir in proportion to the volume of gas drawn therefrom by the driving means.

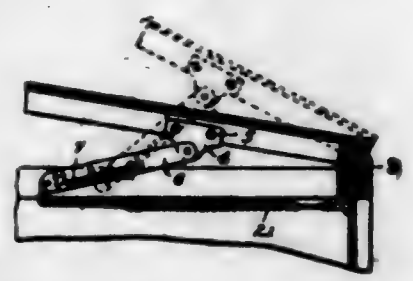
1,298,184. PLANT-SETTER. RICHARD L. WILSON, Union City, Tenn. Filed June 3, 1918. Serial No. 238,002. 2 Claims. (Cl. 111—4.)

1. In a device of the class described, the combination of a handle bar, a strap fixed upon said handle bar and provided with a right-angularly extending projection engaged with the lower end of the handle bar and terminating in an offset extension, a blade fixed upon the offset extension to be in alinement with the opposite side of the handle bar, a guide tube fixed upon said handle bar and terminating contiguous to the upper end of the blade and adjacent the upper end of the handle, and an open plant box secured to said handle at the upper end of the



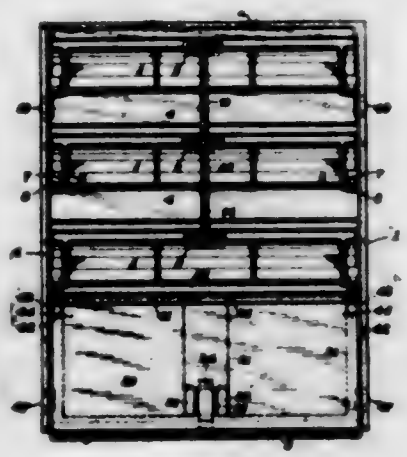
tube, thus permitting plants to be lifted from the box and dropped into the tube to pass downwardly into a pocket formed by said blade.

1,298,185. AUTOMATIC LID-SUPPORT. CARL EDWARD WILTON, Philadelphia, Pa. Filed Apr. 17, 1917. Serial No. 162,637. 2 Claims. (Cl. 217—57.)



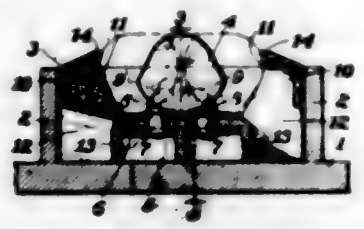
1. An automatic prop for the hinged lid of a box or the like consisting of a slotted plate pivoted to said lid, a projection on the box working in said slot, a guide plate for said projection having a pair of separated slots adapted to be shifted relatively with respect to said first mentioned slot.

1,298,186. VENTILATOR FOR FREIGHT-CARS. WILLIAM E. WINE, Toledo, Ohio. Filed Aug. 18, 1917. Serial No. 186,886. 5 Claims. (Cl. 189—62.)



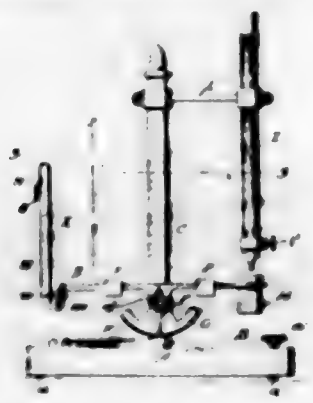
1. In a ventilator a frame, a bar extending from side to side of said frame and provided at its edge with a downwardly disposed flange, trunnions mounted at the sides of the frame, a shutter pivotally mounted on said trunnions, the upper portion of said shutter extending behind said flange, said shutter being adapted to be swung outwardly and upwardly to assume a horizontal position whereby the shutter may assume a position below the flange, said shutter being adapted to be moved rearwardly when in a horizontal position, and means on said cross bar for retaining the shutter in its open position.

1,298,137. SIDE BEARING. WILLIAM E. WINE, Toledo, Ohio. Filed Apr. 2, 1918. Serial No. 226,165. 7 Claims. (Cl. 64—65.)



1. In combination with a truck bolster provided with a pocket, a side bearing comprising a housing fitting snugly in said pocket, a rocker bearing in said housing, the end portions of the housing limiting the amount of the travel of the rocker in said housing, and said housing open at its opposite sides.

1,298,138. PAPER-TESTER. GEORGE S. WITHAM, Sr., Hudson Falls, N. Y., assignor of one-half to George S. Witham, Jr., Hudson Falls, N. Y. Filed May 17, 1918. Serial No. 235,058. 10 Claims. (Cl. 265—15.)



1. A paper tester comprising means for supporting a strip of paper, means for fastening one side of one end of the strip to the support, a weighted lever provided with means on one side of its fulcrum for engaging the other side of said paper, means for adding weight to the opposite side of said lever, including means for indicating the force required to perform the tearing operation.

1,298,139. DOUBLE SUCTION-CUP. CHARLES M. WOLCOTT, New York, N. Y., assignor of three-fourths to Samuel Myerberg and Isidor Myerberg, Baltimore, Md. Filed July 19, 1918. Serial No. 245,668. 1 Claim. (Cl. 248—39.)



A support comprising a suction cup of flexible material, an auxiliary flexible suction cup inside said cup and having its mouth facing in the same direction as the mouth thereof and located inward of said mouth, and a solid base from one side of which the cups project in concentric and spaced relation.

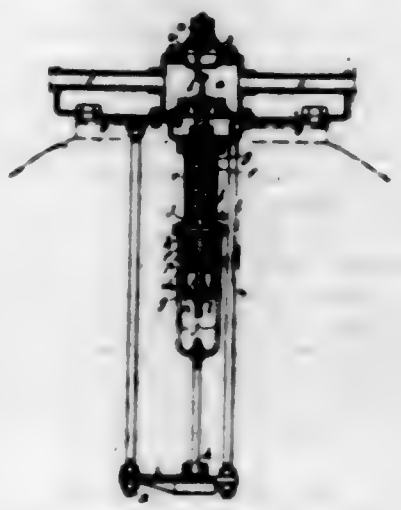
1,298,140. ROTARY GAS-ENGINE. LEWIS E. WORKMAN, Los Angeles, Calif. Filed Oct. 17, 1916. Serial No. 120,191. 1 Claim. (Cl. 123—13.)

A rotary gas engine comprising a rotary case member rotatively mounted upon a hollow disk member, said hollow disk member constituting a compression chamber, a rotary piston fitted rotatively in the periphery of said hollow disk member and communicating with the working chambers of said engine and coacting with pistons fixed upon the inner surface of the rotary case member, a feed valve housed in the periphery of the said rotary disk member and communicating with the interior of the said stationary disk member and the working chamber of the said engine, a rotary pump located within the compression



chamber of the stationary disk member and coacting with the said feed valve to supply gas under compression to said engine.

1,298,141. SUBMARINE MINE. THOMAS WRIGHTSON and JUSTUS M. RINGQUIST, Thornaby-on-Tees, England, assignors to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Filed Aug. 7, 1917. Serial No. 184,860. 3 Claims. (Cl. 102—8.)



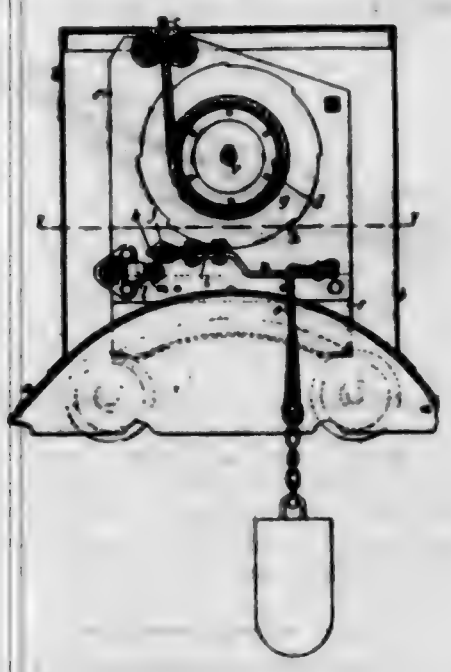
1. In a submarine mine pistol, the combination of a striker, a firing spring, means for compressing the spring, a trigger carried by the striker and having in it a hole, a fixed rod engaging the trigger and an incline adapted to move the trigger transversely during the compression of the spring so as to bring the hole in the trigger into line with the rod.

1,298,142. FLOATING MINE. THOMAS WRIGHTSON, Thornaby-on-Tees, England, assignor to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Filed Aug. 7, 1917. Serial No. 184,861. 4 Claims. (Cl. 102—8.)

1. In a floating mine having a liquid supply chamber, the combination of an expansion chamber connected with

the supply chamber, an intermediate chamber connected with the supply chamber and the expansion chamber, and means for transferring liquid from the intermediate chamber to the expansion chamber and from the expansion chamber to the supply chamber.

1,298,143. SUBMARINE-MINE SINKER. THOMAS G. WRIGHTSON and JUSTUS M. RINQUIST, Thornaby-on-Tees, England, assignors to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Filed Aug. 7, 1917. Serial No. 184,862. 2 Claims. (Cl. 102—8.)



1. In a submarine mine sinker, a rope drum, ratchet teeth on the rope drum, a plate meshing with the ratchet teeth, trunnions on the plate, a base, two plates fixed to the base, slots in the two plates adapted to receive the trunnions and springs pressing the plate into engagement with the ratchet teeth.

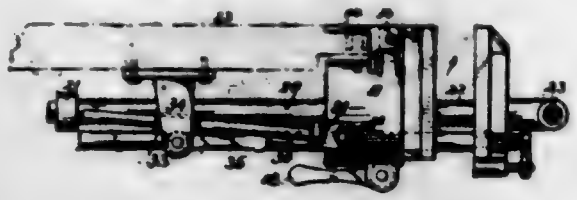
1,298,144. CARRIER FOR BASKETS, BUNDLES, &c. ABRAHAM M. YEAKEL, Perkasie, Pa., assignor of one-half to Wilson L. Yeakel, Perkasie, Pa. Filed Jan. 11, 1919. Serial No. 270,631. 2 Claims. (Cl. 217—125.)



1. A carrier of the character stated consisting of a rod and hook-like members depending therefrom, said hooks having shanks, loops on said shanks, and laterally deflected lips on the terminals of the limbs of said loops forming elbows with said limbs, said limbs being embedded in said rod, and said lips being adapted to engage angularly the side of said rod.

1,298,145. VISE. GILMORE M. YOST, Cleveland, Ohio, assignor to The Columbian Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 17, 1916. Serial No. 115,362. 7 Claims. (Cl. 81—36.)

1. In a vise, a pair of clamping jaws including a normally stationary and a relatively movable jaw, a feed screw connected to the relatively movable jaw, a normally stationary nut normally engaging the screw and movable toward and from the same, means for causing the release and engagement of the nut and screw comprising a rotary cam shaft extending from the relatively movable jaw past the relatively stationary jaw and in proximity to said nut, a guide extending from the relatively movable jaw, an annular support, and an annular member on the relatively stationary jaw having a bearing in said support



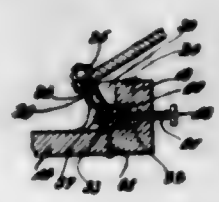
whereby both jaws, feed screw guide and shaft may be simultaneously turned in said support, said nut being located in said annular member, and the feed screw, cam shaft and guide extending through said annular member.

1,298,146. VISE. GILMORE M. YOST, Cleveland, Ohio, assignor to The Columbian Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 17, 1916. Serial No. 115,363. 3 Claims. (Cl. 81—36.)



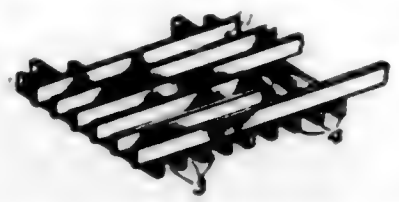
1. In a vise, a pair of jaws including a rear normally fixed jaw and a front movable jaw, a hollow rectangular guide beam extending from the front jaw through the rear jaw, an annular bearing for the jaws, an annular support for the rear jaw and received in said bearing whereby both jaws may be turned about the axis of the bearing, a feed screw extending from the front jaw and through the said guide beam longitudinally thereof, a nut within the said beam and adapted to engage the feed screw, the said nut being movable with the guide beam, said guide beam being formed with a longitudinal slot, a cam shaft extending lengthwise of the beam and occupying said slot, said cam shaft engaging the nut and moving the same into engagement with the said feeding screw, the cam shaft when turned in one direction releasing the nut from the screw.

1,298,147. LIFE-SAVING BOAT. ANTON ZISK, Baltimore, Md. Filed June 8, 1918. Serial No. 238,892. 1 Claim. (Cl. 114—203.)



In a hatch operating device for life saving boats of the character described, the combination of a plurality of raised recessed and slotted blocks with a bolt pivotally secured with its ends within the recesses of said blocks, a T-shaped center extension on said bolt, screw threaded at its upper end, a nut on said bolt, pivoting on the same in hinge-like fashion, a looped coil spring having its lower end firmly secured to said block, the upper end of said spring encircling said bolt, a brake-block mounted within the slot of said block, and a hand screw controlling said block and spring, substantially set forth and for the purpose set forth.

1,298,148. ELECTRODE OF SECONDARY BATTERIES. EDWARD FREDERICK ARLITT, London, England. Filed Oct. 31, 1918. Serial No. 260,590. 2 Claims. (Cl. 204—29.)



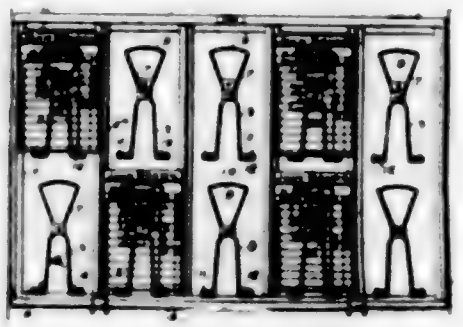
1. An electrode grid for a secondary battery including a single integral plate having grooves in its upper face and grooves in its lower face at right angles to the first named grooves.

1,298,149. GROUND-GRIPPING DEVICE FOR VEHICLE-WHEELS. MICHAEL ADAMSKI, Detroit, Mich. Filed Apr. 2, 1917. Serial No. 159,321. 3 Claims. (Cl. 152—14.)



1. In a device of the class described, counterpart side portions formed with arms on end portions of their inner margins, said arms terminating in meeting flanges, said side portions being also formed with connecting means between and spaced from said flanges, and means for connecting outer margins of said side portions.

1,298,150. FILING APPLIANCE. EBENEZER N. AIKEN, Avalon, Pa., assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Filed Oct. 8, 1915. Serial No. 54,745. Renewed Sept. 11, 1918. Serial No. 119,599. 10 Claims. (Cl. 129—35.)



1. A filing appliance including a bill holder, a bill clamp having an index number thereon, and a code device designating a credit limit on the bill clamp in proximity to the index number.

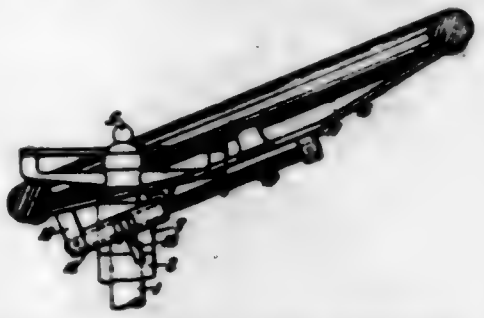
3. A filing appliance including a bill holder, a series of bill clamps having index numbers thereon, and a device designating a credit limit adapted to be applied to any one of the bill clamps in proximity to the index number thereon.

4. A filing appliance, including a bill holder, a bill clamp made of spring wire with an index plate connecting the sides of the clamp intermediate the ends thereof, and a device designating a credit limit detachably engaged with the connecting plate.

6. A filing appliance including a bill holder, a bill clamp made of spring wire with a connecting plate having its ends bent around the wire sides of the clamp, and a signal device having a stem adapted to be secured in the socket formed by the bent ends of the connecting plate.

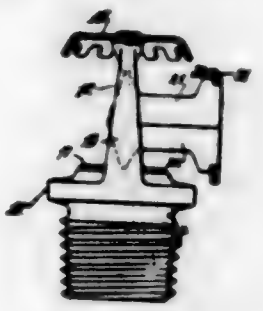
10. A filing appliance including a bill holder, a bill clamp having an index number thereon, and a signal device on the bill clamp in proximity to the index number.

1,298,151. ADJUSTABLE STEERING-WHEEL. EDWARD L. AIKEN, Springfield, Mass. Filed Feb. 14, 1918. Serial No. 217,227. 5 Claims. (Cl. 74—33.)



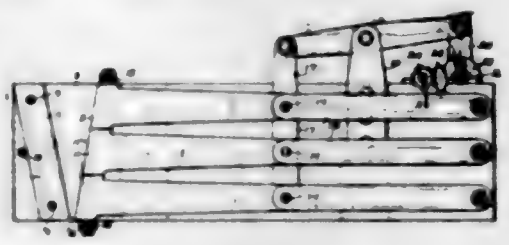
1. The combination in a steering mechanism having a column, a steering post therein, a steering wheel comprising a suitable rim, spoke-like members attached thereto provided with downwardly projecting lugs, supporting rods secured to said lugs, a bearing for said supporting rods carried by the steering post, and means to lock one of said supporting rods in position in its bearings.

1,298,152. AUTOMATIC SPRINKLER. PHILIP ALLEN, Providence, R. I. Filed Sept. 20, 1918. Serial No. 254,928. 3 Claims. (Cl. 169—5.)



1. In an automatic fire extinguisher, the combination with the valve and yoke, of brace plates arranged edge to edge engaging the valve and yoke, and means for maintaining the plates under torsional stress.

1,298,153. STONE-CRUSHER. PETER C. ANDERSON, Racine, Wis. Filed June 5, 1917. Serial No. 172,910. 1 Claim. (Cl. 83—53.)



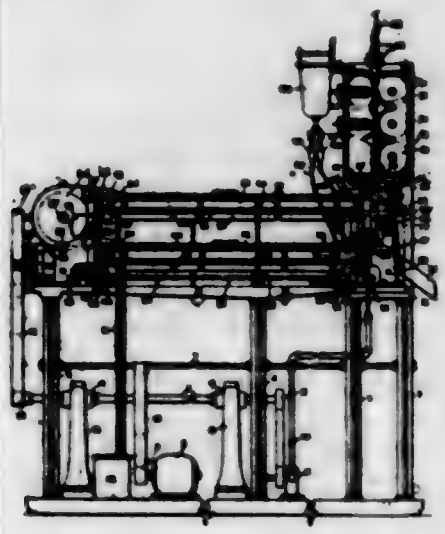
In a crusher, the combination of a frame, a fixed crusher jaw mounted therein, a movable crusher jaw mounted therein and coöperating with said fixed jaw and comprising a plurality of superimposed oscillatory members, said members being guided by the frame and by the adjacent members or members with which they are in contact, links pivotally connected at their rear ends to

the frame and at their front end to the rear ends of said members to form toggle joints, an upright connecting the joints of the toggles together, and an oscillatory lever pivotally connected to said upright for reciprocating it to operate said toggles to move said jaws.

1,298,154. LEACHING PROCESS FOR CEMENT-KILN DUST. EVALD ANDERSON, Los Angeles, Calif., assignor to International Precipitation Company, Los Angeles, Calif., a Corporation of California. Filed June 4, 1917. Serial No. 172,617. 4 Claims. (Cl. 23—22.)

1. The process of extracting potassium compound from cement kiln dust containing such compound in difficultly soluble form, which consists in digesting such dust with water and admitting steam at a pressure above atmospheric pressure to said water while in presence of said material to raise the temperature of the water above 100° C., and thereby convert the difficultly soluble potassium compound to a readily soluble potassium salt.

1,298,155. MACHINE FOR POINTING METALLIC ARTICLES BY ELECTROLYTIC ACTION. MARCUS O. ANTHONY, Englewood, N. J., assignor to A. Kimball Company, New York, N. Y., a Corporation of New York. Filed Aug. 4, 1916. Serial No. 113,053. 26 Claims. (Cl. 204—1.)



1. A machine for shaping metallic articles comprising a tank of electrolyte, means for conveying successively a series of articles across said tank with portions of said articles depending into said electrolyte, means for passing an electric current through said articles and said electrolyte to cause a reduction of the material in said articles, means for varying the area of submersion of said articles in said electrolyte during their progress therethrough to effect the reduction of the ends of said articles to conoidal form, means for automatically supplying said articles successively to said conveying means and means for discharging the shaped articles therefrom.

4. A machine for shaping metallic articles comprising a tank of electrolyte, an endless chain conveyer located above said tank and comprising a series of links having coöperating pivotally movable gripping members positioned to engage the central portions of said articles and to suspend said articles with the end portions thereof submerged in said electrolyte, means for passing an electric current through said articles and said electrolyte, means for actuating said conveyer, means for bending said conveyer sharply to move gripping members about their pivots and cause the separation of said members, whereby the articles may be introduced therein and means for passing an electric current through said articles and said electrolyte.

7. A machine for shaping metallic articles comprising a tank of electrolyte, an endless chain conveyer consisting of pivotally connected links having lateral extensions adapted when said chain is straightened to lie in substantial parallelism normal to the path of the lead of said chain and when said chain is bent to be pivotally separated, said extensions each having a resilient member adapted to coöperate with the extension of an adjacent link to grip the central portion of an article, a horizontal guide for said conveyer overlying said electrolyte and adapted to cause the end portion of each article suspended by said gripping members to be submerged in said electrolyte, means for passing an electric current through said articles and said electrolyte, means for actuating said conveyer, and a plurality of means for bending the same sharply and adapted respectively to separate said gripping members to permit the insertion of articles therebetween and to cause the discharge of the shaped articles therefrom.

9. A machine for shaping the ends of metallic wire blanks comprising a traveling endless conveyer, a series of means on said conveyer for gripping said blanks intermediate of their ends, tanks of electrolyte beneath the upper and lower leads of said conveyer, means for guiding said conveyer to cause the opposite ends of said blanks alternately to be submerged in the electrolyte, and means for passing an electric current through said blanks and said electrolyte.

18. A machine for forming double pointed wire blanks comprising an endless conveyer consisting of a series of pivotally connected links having lateral extensions adapted when said chain is straightened to lie in substantial parallelism and when said chain is bent to be pivotally separated, each of said extensions having a resilient member adapted to coöperate with the extension of an adjacent link to grip a blank intermediate of the ends thereof when the chain is in straightened position, means for guiding the upper and lower leads of the conveyer horizontally, a driving drum at one end of said leads having teeth engaging said links, with an annular groove therebetween and a plurality of separated guiding rolls of small diameter at the opposite end of said leads adapted to bend the conveyer sharply and thereby to separate said gripping members, means for intermittently rotating said driving drum, means for successively delivering blanks to said gripping means when in open position, electrolytic tanks located beneath the leads of said conveyer and adapted to submerge a portion of the ends of said blanks, means for passing an electric current through said blanks and said electrolyte and means for discharging a jet of fluid upon the shaped blanks after they emerge from the electrolyte.

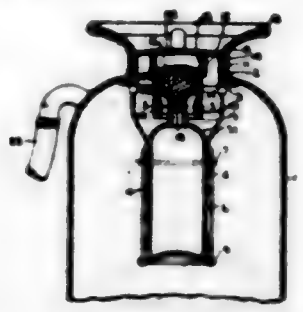
1,298,156. INNERSOLE FOR SHOES. WILLIAM J. C. ARLIDGE, Barnard, N. Y. Filed Jan. 17, 1918. Serial No. 212,349. 3 Claims. (Cl. 36—22.)



1. An inner sole comprising a body layer, a rib forming device made of a strip of fabric folded to provide a rib, one edge of said device being turned inwardly and laterally and stitched to the body while the other edge abuts the sole body directly beneath the rib and on the outer side of the laterally turned edge, and a fabric layer cemented to and covering said body layer and said rib forming device.

3. An inner sole comprising a body layer having a stiff heel and shank portion provided with a beveled end and also having a flexible toe portion of textile material, a second layer of textile material cemented to the under side of the body layer, and a rib forming device stitched to the under side of the body layer between the layers and extending onto both the stiff and the flexible portions of the body layer.

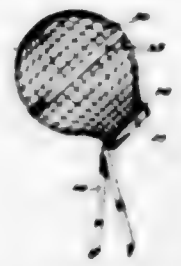
1,298,157. CHEMICAL FIRE-EXTINGUISHER. WILLIAM H. BANFIL, Watertown, Mass. Filed July 29, 1918. Serial No. 247,132. 2 Claims. (Cl. 169—7.)



1. A cage for a bottle stopper of a chemical fire extinguisher in which the stopper for the acid bottle is provided with a central distributing stem adapted to enter the neck of the bottle, comprising a sleeve having means of attachment to the cover of the extinguisher, a series of depending arms provided at a distance from their ends with shoulders positioned to limit the movement of the stopper and to retain the stem within the boundary of said cage whereby breakage or injury to said stem when the cover is removed from the receptacle or replaced thereon will be avoided.

2. A cage for a bottle stopper of a chemical fire extinguisher in which the stopper for the acid bottle is provided with a central distributing stem adapted to enter the neck of the bottle, comprising a sleeve having means of attachment to the cover of the extinguisher, a series of depending arms adapted to guide the stopper-distributer, and means for limiting the movement of the stopper in position to retain the stem thereof within the boundary of said cage, whereby breakage or injury to said stem when the cover is removed from the receptacle or replaced thereon will be avoided.

1,298,158. HAND-GUARD. EDWARD ELLSWORTH BARTRAM, Los Angeles, Calif. Filed Aug. 29, 1917. Serial No. 188,794. 4 Claims. (Cl. 128—133.)

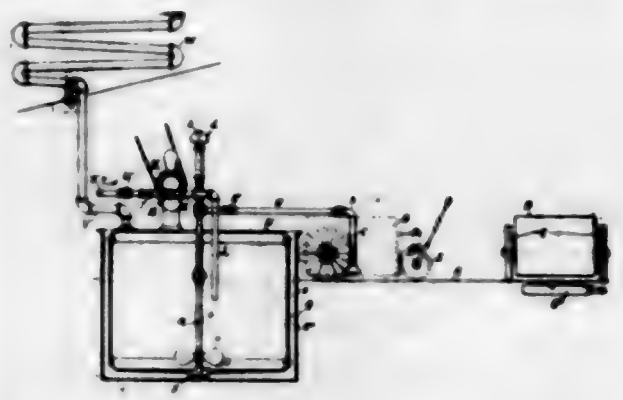


1. A device of the class described comprising a substantially globular body formed of woven wire and provided with a hand-receiving opening and a relatively wide reinforcing band extending circumferentially around the globular body at approximately the center thereof.

4. A device of the class described comprising a globular body formed of woven wire and provided with a substantially elliptical shaped hand-receiving opening, a binding element of relatively soft material surrounding the walls of the opening in the body, a relatively wide reinforcing band extending circumferentially around the exterior of the body at approximately the center thereof, and a flexible attaching element threaded between the wires constituting the body and bearing against the binding element.

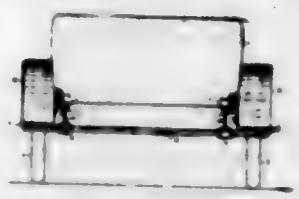
1,298,159. APPARATUS FOR MANUFACTURING VARNISH. CLARK HERALD BENNETT, Chicago, Ill. Filed May 18, 1916. Serial No. 98,283. 4 Claims. (Cl. 134—26.)

2. In an apparatus for the manufacture of varnish, the combination, with a cooking kettle and a closed blending vessel, of a pump, and connections therefrom to the kettle and to the vessel to empty the contents of the kettle into the vessel in a stream, a pipe adapted to receive a solvent and extended to near the entrance of the other material into the vessel, so that the solvent and such material will intermix as they enter the vessel, other pipe connections from the pump to within the vessel to discharge the product therefrom, and a condenser communicating with the interior of the vessel and adapted to receive vapor therefrom and to condense and return it to the vessel.



3. In an apparatus for the manufacture of varnish, the combination, with a movable cooking kettle adapted to cook a varnish composition at one point and to convey the composition to another point away from the heating medium, and a closed blending vessel located distant from the heating medium and to near which the kettle is adapted to be moved, of a pump, and pipe connections from it adapted to be coupled with the discharge pipe of the kettle when near the vessel and to deliver the contents of the kettle into the vessel.

1,298,160. FOOTBOARD-BRACE FOR VEHICLES. DANIEL A. BEYER, Houston, Tex., assignor of one-half to A. M. Chambers, Harris county, Tex. Filed Mar. 19, 1917. Serial No. 155,874. 1 Claim. (Cl. 21—55.)

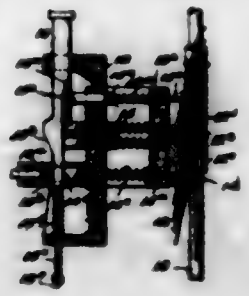


The combination with a vehicle having a frame and side foot boards, of a rigid transverse brace whose ends rest underneath the corresponding foot boards, said brace being formed of inverted channel iron, a hanger attached to each side member of the frame, said hangers being formed into hooks which engage over, and are detachably secured to the respective side members, the lower ends of said hangers being turned outwardly and provided with orifices, oblong anchors formed of inverted U-shaped members slidably mounted on said brace, the free ends of whose arms are formed into hooks which form long bearings and engage over the flanges of said brace to hold the anchors against detachment therefrom and to permit said members to slide on said brace, the rods secured to the respective anchors at one end and whose other ends project through the orifices of said hangers and are outwardly threaded and nuts screwed upon said threaded ends to secure said tie rods against detachment from the hangers, and to permit the adjustment of the brace relative to the foot boards.

1,298,161. GAME APPARATUS. WILMUTH E. BLACKBURN, Summit, N. J. Filed July 10, 1916. Serial No. 244,257. 16 Claims. (Cl. 46—62.)

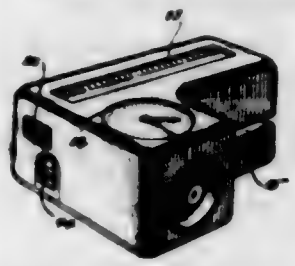
1. In game apparatus wherein a succession of balls or missiles may be projected toward a target having goal values, means for visually indicating the values of goals made, said means including a plurality of indicating ele-

ments bodily shiftable from a normal position relative to an exposure opening and to each other, said exposure opening being common to the path of movement of the



several elements whereby exposure is limited to a single element, said shifting movements being controlled by the movements of the sealed bails or missiles.

1,298,162. CLOTH MEASURING AND COMPUTING MACHINE. WALTER E. HOSCH, St. Louis, Mo., assignor to The Measuregraph Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 8, 1915. Serial No. 6,954. 7 Claims. (Cl. 33—133.)



1. In a machine of the class described, the combination with a rotary member adapted to be actuated by the movement of the goods to be measured, of a dial, an index hand movable over the dial, means for effecting a movement of the indicating hand corresponding to the movement of the rotary member, a stationary price scale, a chart coöperating with said price scale, which chart bears rows of figures indicating price totals of yards of goods and fractional parts thereof, a pair of drums on which said chart is mounted, means for driving one of said drums and for imparting movement to said chart corresponding to the movement of the rotary member and the index hand, and manually operable means independent of the said rotatable member for actuating the index hand and the chart.

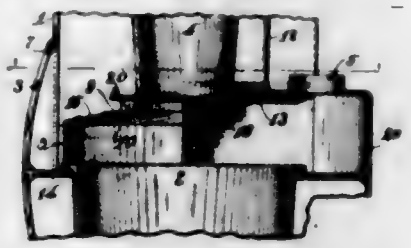
7. In a machine of the class described, a rotary member mounted so as to be actuated by goods passed through the machine, a spring-pressed frame adjacent to said rotary member, a roller carried by said spring-pressed frame for engaging the goods to press the same against the rotary member, a catch for engaging said frame to hold the same and the pressure roller away from the rotary member, manually operated means for releasing said catch, and manually operated means for moving the pressure roller and the frame away from the rotary member to enable said catch to engage and hold the frame.

1,298,163. MOUNT FOR TENSION-PULLEYS FOR SPINNING AND TWISTING MACHINES. CHARLES W. BOARDMAN, Pawtucket, R. I. Filed Jan. 2, 1915. Serial No. 3. 4 Claims. (Cl. 118—48.)



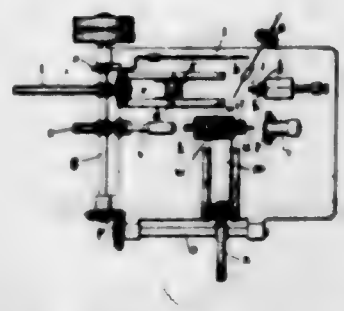
1. A spindle-driving mechanism having in combination a horizontal driving drum, a stationary supporting rod arranged parallel with said drum, a sleeve mounted on said rod, a bearing member swivel-mounted on said sleeve, and a pulley-hanger mounted on said bearing member.

1,298,164. SMOKE-HOOD FOR STOVES. ALBERT T. BOMHARD, Piqua, Ohio. Filed Dec. 23, 1918. Serial No. 267,941. 4 Claims. (Cl. 126—58.)



1. In a stove of the class specified, the combination with the fire bowl and the magazine thereof, of a smoke hood interposed between the fire bowl and the magazine, the forward portion of said hood consisting of an annular skirt, vertical walls and a rearwardly extending wall engaging the back of the stove, and a slide supported on said hood and adapted to open and close the outlet from the magazine, substantially as specified.

1,298,165. MACHINE FOR MANUFACTURING PRESS-BUTTONS OR THE LIKE. JOSEPH LOUIS ADHEMAR BORREL and EMILIE GRANGE, *née* BORREL, Annecy, France. Filed Oct. 12, 1917. Serial No. 196,310. 3 Claims. (Cl. 79—3.)

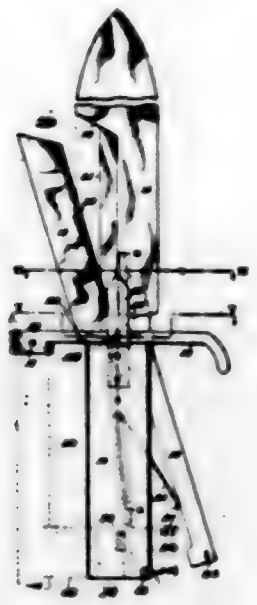


1. A device for mounting the retaining spring in the cap like member of press buttons, comprising, in combination:—means for shaping the wire of which the spring is to be formed, under such conditions that the spring, after being shaped, remains engaged on the extremity of a rod in a plane passing through the axis of the latter, a spring carrying rod capable of being brought underneath the said rod, a movable fork for the purpose of disengaging the spring from the said rod and of engaging it on the spring carrying rod in such a way as to place it astride of the latter, and means for pushing away the spring when it has in this way been placed on the rod, and of engaging it in the cap like member of the button and of turning the rim of the cap like member over the spring engaged therein.

1,298,166. WIRE-CUTTER. PETER BORSZCZ, West Pullman, Ill., assignor of one-half to John Dmitrasz, Laporte, Ind. Filed Oct. 21, 1918. Serial No. 259,007. 2 Claims. (Cl. 42—90.)

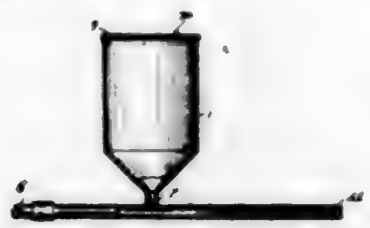
1. A device of the class described comprising a grip, having a longitudinal pocket in one side thereof, a bayonet blade projecting from said grip, a transverse pummel upon said grip at the base of the blade, the blade, pummel and handle having a slot therethrough, and the blade having a cutaway side portion at the opposite side of the device from said pocket with a sharpened flange adjacent the inner side of the cutaway portion, a shank pivoted through said slot, a cutter upon one end of said shank, adapted for closing upon said cutting edge within the cutaway

portion of the blade, an operating handle for the cutter upon the opposite end of the shank in the same plane with



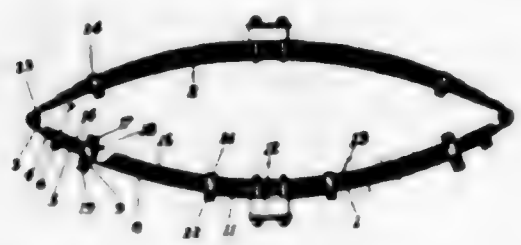
the cutter and adapted for closing within said pocket when the cutter is closed.

1,298,167. PROCESS OF FILLING FUSE-CONTAINERS FOR POWDER-BAGS. HARRY D. BOWMAN, East Orange, N. J. Filed Feb. 13, 1918. Serial No. 216,998. 3 Claims. (Cl. 86—20.)



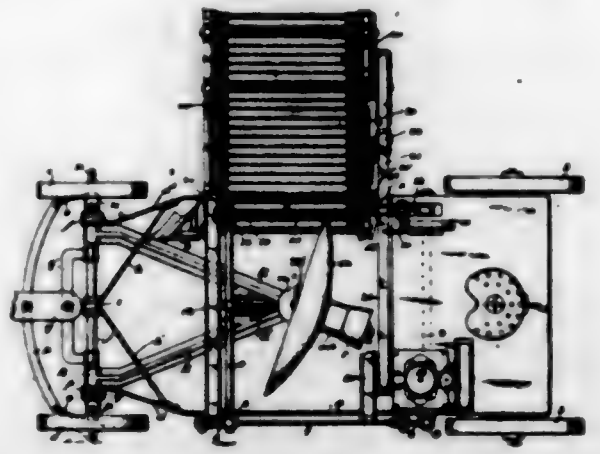
1. The process of filling the powder receiving pockets of fuse containers of powder bags which consists of pneumatically distending said pockets and simultaneously filling the same with an explosive compound.

1,298,168. VEHICLE-SPRING. ETHELBERT J. BREWSTER, Fresno, Calif. Filed Sept. 9, 1918. Serial No. 253,298. 1 Claim. (Cl. 267—27.)



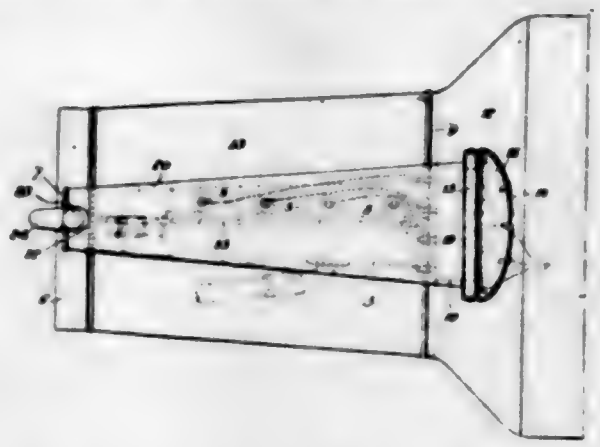
A vehicle spring comprising a main spring, a supplemental spring adjacent to and above the same, clamps near the center thereof connecting the main and supplemental springs, transverse bolts on the main spring in alinement with the ends of the supplemental spring, and straps pivotally mounted to such ends, such straps being provided with vertical slots for the passage of the bolts therethrough, and normally extending below the same whereby the main spring may be flattened the length of the slots before the supplemental spring is brought into play.

1,298,169. POTATO-DIGGING MACHINE. JOHN A. BROWN, Camas, Wash., assignor of one-half to Hugh E. Brown, Portland, Oreg. Filed Mar. 14, 1918. Serial No. 222,490. 7 Claims. (Cl. 55—51.)



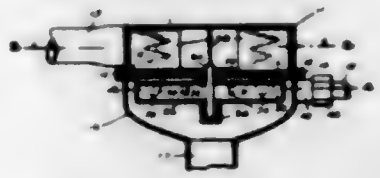
1. A digging machine comprising a vehicle body, a rotatably mounted dished disk carried by the vehicle body, an elevator, and a plow arranged to cut a furrow adjacent the path cut by the disk thereby to provide a path for the bottom end of the elevator to move in.

1,298,170. RAIN-SHIELD FOR AUTOMOBILE-HOODS. JOSEPH A. BROWN, Philadelphia, Pa. Filed July 30, 1918. Serial No. 247,378. 10 Claims. (Cl. 180—89.)



1. A rain shield for automobile power units comprising a housing mounted upon the cowl of the automobile between the wind shield and the engine hood and provided with means for preventing the passage of water beneath the same, and an apron mounted in said housing normally maintained retracted therein and adapted to be drawn out over the top of the engine hood.

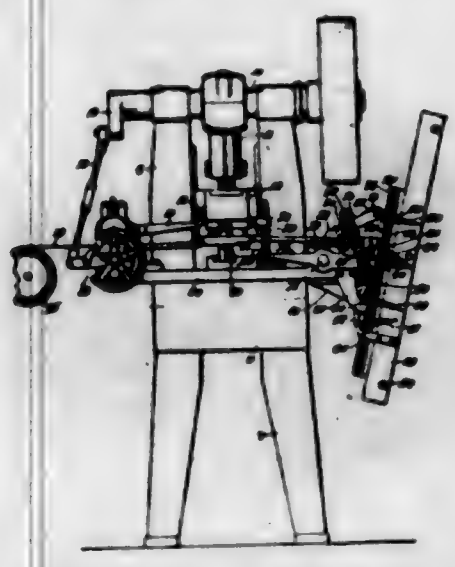
1,298,171. VENTILATOR. ADELBERT E. BURDIN, Seattle, Wash. Filed Oct. 14, 1918. Serial No. 258,081. 2 Claims. (Cl. 230—11.)



1. In a device of the class described comprising a cylindrical housing formed of an upper section having an outwardly directed annular flange around its bottom edge and a lower section having an outwardly directed flange around its top edge, one of said flanges being wider than the other flange and being crimped over said outer flange to form a water tight connection that will permit a relative turning movement between said upper section and said lower section, a water inlet opening disposed within said

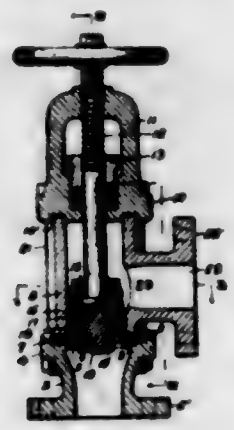
lower section, and an air outlet opening disposed within said upper section, said turning movement permitting the water inlet opening and the air outlet opening to be turned to any desired angle.

1,298,172. JIG-FILLING MECHANISM. PHILIP M. BURR, Hartford, Conn. Filed Aug. 16, 1917. Serial No. 186,000. 45 Claims. (Cl. 29—33.)



1. In combination with a support for a piece of material from which parts are to be severed and with means for feeding said piece with respect to said support, a jig guide arranged to receive jigs provided with means to receive said severed parts, and means for moving the jigs along said guide.

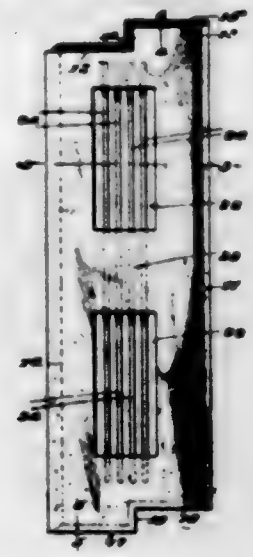
1,298,173. BLOW-OFF VALVE. RALPH W. CADMAN, Edgewood, Pa. Filed July 5, 1916. Serial No. 107,526. 8 Claims. (Cl. 251—156.)



2. In a blow-off valve, the combination of a base having a through passage, the passage enlarged at one end with the enlargement having a smooth bore, a valve seat entered in the passage and having a continuous outwardly projecting flange fitting within and of less depth than the passage enlargement to provide space within the enlargement for the extremity of a casing, a valve casing having its extremity fitting within the enlargement and against the valve seat flange, said seat overlapping the opposing faces of the casing extremity and base, means securing together the casing and base, and a valve within the casing and adapted to coöperate with said seat.

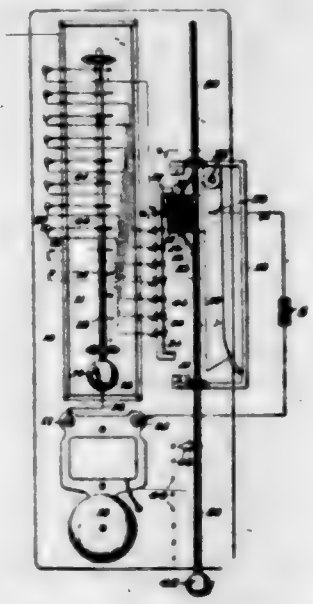
4. In a blow-off valve, the combination with a valve casing and a seat therein having a beveled face, of a valve stem operative in the casing, a head secured to the stem and having a beveled recess, and a reversible disk having its opposite faces beveled complementary with the seat and adapted to fit the same interchangeably, the disk faces each shaped complementary with and adapted to fit interchangeably within the head depression, said casing having its inlet intermediate the ends of the casing bore and spaced from the seat a distance sufficient to locate the disk entirely beyond the inlet when the valve is seated, whereby said disk will be held against lateral expansion under seating pressure.

1,298,174. VENTILATED GRAIN-CRIB OR SILO. WARREN A. CALDWELL, Oskaloosa, Iowa. Filed May 9, 1918. Serial No. 233,518. 4 Claims. (Cl. 72—6.)



1. A concrete silo stave including an elongated body portion having spaced openings formed therein and extending in the direction of the length of the stave and opening through the opposite side faces thereof, said openings defining an intermediate connecting web, and a plurality of rigid reinforcing bars having their intermediate portions extending through the connecting web and their opposite ends extended across said openings and embedded in the body portion to form a grating.

1,298,175. AUTOMATIC HEAT-ALARM. PAOLO CARDONE, Brooklyn, N. Y. Filed Feb. 23, 1918. Serial No. 218,715. 2 Claims. (Cl. 200—19.)



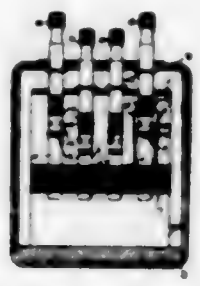
2. In a device of the class described, a switch bar, successively arranged contact buttons carried by said switch bar, a screw having a contact head adapted for selective engagement with said buttons, a switch block to which said screw is attached, a slidably mounted rod to which said switch block is attached, a cover plate upon said block contacting said screw, said block having a side slot through which said rod extends, a mounting frame for said rod, insulating bushings upon said frame through which said rod slidably extends, and a guide strip longitudinally carried by said frame, said slot in the block engaging with a part of said guide strip.

1,298,176. APPARATUS FOR CASTING BOMBS OR PROJECTILES. JAMES NORMAN CHADWICK, Bolton, England. Filed June 5, 1918. Serial No. 238,271. 5 Claims. (Cl. 22—9.)



1. An apparatus for making molds for casting bombs or projectiles comprising a pair of casings, a pair of coacting cores in said casings, means for permitting separate packing of the casings, band molding means coacting with each of said cores, and base molding means coacting with one of said cores and with one of said band molding means.

1,298,177. COMBINATION-LOCK FOR AUTOMOBILES. HERBERT H. CHRISMAN and FRANK W. ADSIT, Minneapolis, Minn.; said Adsit assignor to said Chrisman. Filed Apr. 7, 1917. Serial No. 160,402. 7 Claims. (Cl. 70—63.)



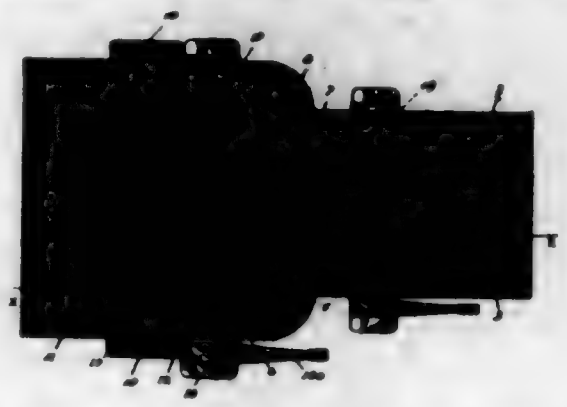
1. A combination lock comprising a casing, contact springs mounted in said casing and insulated from each other, electric conductors connected with certain of said contact springs and circuit closing keys mounted in said casing and having insulating and conducting surfaces positioned to engage said contact springs when said keys are moved, and said insulating and conducting surfaces being arranged for closing the circuit through said springs when certain of said keys in the circuit are moved in one direction and certain other keys are moved in the opposite direction.

2. A combination lock comprising a base and a frame mounted thereon, an insulating block mounted in said frame, contact springs carried by said block, electric circuits connected in groups with said springs, a series of keys mounted in said frame for sliding engagement with said contact springs, said keys having insulating and conducting surfaces, certain of said keys being movable in one direction to close the circuit through said springs and other keys being movable in the opposite direction for closing the same circuit.

3. A device of the class described comprising a base, arms pivoted thereon, a cover having means for interlocking with said arms, electro-magnets and armatures therefor connected with said arms and concealed when the cover is in its closed position, an electric circuit for said magnets and a plurality of keys operable outside said cover for closing said circuit to trip said arms and release said cover.

1,298,178. FLUID-PRESSURE TRANSMISSION MECHANISM. GRANT W. CHURCHILL, Sacramento, Calif. Filed May 15, 1917. Serial No. 168,760. 1 Claim. (Cl. 60—53.)

A fluid pressure transmission mechanism comprising a casing, a set of driving rotary pumps, and a set of driven rotary pumps arranged at right angles to the first set mounted in the casing, a passage way common to all the discharge sides of the driving pumps, a tubular hand-controlled valve rotatable seated in the casing axially parallel to the axis of the driven pumps in the path of the said passageway, diametrically opposed slotted ports in said valve for each driven pump unit arranged to constantly register with the said passageway and with either of a pair of passageways leading to the chamber of each of the driven pumps, and being spaced apart a circumferential distance approximately that of any two pump vanes at this point, the width of said first named passageway being slightly less than one half that of the two last



named passageways, as are also the ports in the valve registering therewith, another passageway in said casing common to all the said driving pumps leading from the intake sides thereof to said tubular valve and being adjacent to and the same width as said first named passageway at this point, slotted ports in said tubular valve adapted to register with the last named passageway and that one of the second named passageways not then in communication with the first named passageway, and a vertical wall in the said tubular valve separating the first named from the last named port units, all whereby a continuous flow of fluid through the driving and driven pumps may be had.

1,298,179. INCANDESCENT ELECTRIC LAMP. JACOB H. COGGINS, Talladega, Ala. Filed Jan. 22, 1917. Serial No. 143,790. Renewed Oct. 5, 1918. Serial No. 257,064. 3 Claims. (Cl. 176—24.)



3. In an incandescent electric lamp to be used in a series system, the combination of a feeder, filaments connected to said feeder, a source of current supply connected to said feeder and one of said filaments, and a dielectric wound between the adjacent ends of the filaments.

1,298,180. MACHINE FOR MAKING SPIRAL FLY-TRAPS. FRANK C. CURTIS, Troy, N. Y. Filed Apr. 12, 1917. Serial No. 161,687. 5 Claims. (Cl. 93—61.)

1. In a machine of the class described and in combination, a strip-rolling device; a tension for the strip; a rotatory mutilated adhesive-applying roll engageable with the strip between said tension and said strip-rolling device; and means intermittently engageable with the strip to displace the strip from its normal path, said means being timed in its operation to so displace the strip as the mutilated portion of said roll is brought adjacent to the strip.

2. In a machine of the class described and in combination, a strip-rolling device; a tension for the strip; a rotatory mutilated adhesive-applying roll engageable with the strip between said tension and said strip-rolling device; and a rotatory roll having a peripheral swell over which said strip passes between said mutilated roll and said strip-rolling device, said rolls being so timed in their movements that said swell engages said strip as the mutilated portion of said mutilated roll is brought adjacent to the strip.

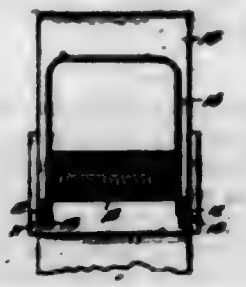


3. In a machine of the class described and in combination, a strip-rolling device; a tension for the strip; a rotatory mutilated adhesive-applying roll engageable with the strip between said tension and said strip-rolling device; means intermittently engageable with the strip to displace the strip from its normal path; and a rotatory roll having an adhesive-applying peripheral enlargement engageable with the strip, said rolls being so timed in their movements that adhesive is applied to alternate portions on opposite sides of the strip by said mutilated roll and said roll having the peripheral enlargement respectively, and said strip-displacing means engaging the strip to displace the same as the mutilated portion of said mutilated roll is brought adjacent to the strip.

4. In a machine of the class described and in combination, a strip-rolling device; a tension for the strip; a rotatory mutilated adhesive-applying roll engageable with the strip between said tension and said strip-rolling device; means intermittently engageable with the strip to displace the strip from its normal path, said means being timed in its operation to so displace the strip as the mutilated portion of said roll is brought adjacent to the strip; and an intermittently operating cutter engageable with the strip between said strip-rolling device and said strip-displacing means.

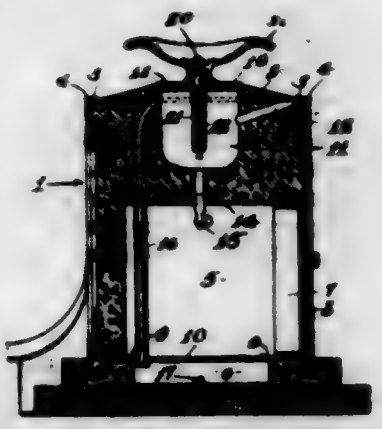
5. In a machine of the class described and in combination, a strip-rolling device; a tension for the strip; a rotatory mutilated adhesive-applying roll engageable with the strip between said tension and said strip-rolling device; means intermittently engageable with the strip to displace the strip from its normal path; a rotatory roll having an adhesive-applying peripheral enlargement engageable with the strip, said rolls being so timed in their movements that adhesive is applied to alternate portions on opposite sides of the strip by said mutilated roll and said roll having the peripheral enlargement respectively; and an intermittently operating cutter engageable with the strip between said strip-rolling device and said strip-displacing means.

1,298,181. COAT AND ARTICLE HOLDER FOR THEATER-SEATS. CARL R. DAVIS, Le Roy, Kans. Filed Apr. 12, 1918. Serial No. 228,112. 1 Claim. (Cl. 155—26.)



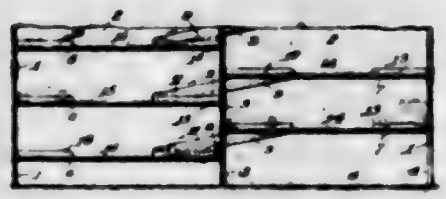
A coat and article holder comprising a pair of brackets adapted for attachment to a surface, an inverted U-shaped frame having the ends of its arms resiliently secured in said brackets, the arms of said frame being bowed to lie spaced from a surface to which the brackets are attached when the transverse portion of the frame is in engagement with such a surface, and a receptacle carried by the frame arms on the concave sides thereof.

1,298,182. MONUMENT. LIBERTUS W. DE WITT, Syracuse, N. Y. Filed Aug. 14, 1918. Serial No. 249,798. 5 Claims. (Cl. 125—15.)



1. A monument having the top thereof shaped to collect rainfall, a compartment in the lower portion of the monument opening through one of the outer sides thereof, a water reservoir above said compartment, a duct leading from the top to the reservoir, a duct leading from the reservoir to the compartment, and means in the compartment for controlling the flow through the latter duct, substantially as and for the purpose described.

1,298,183. GARAGE. FERNAND E. D'HUMY, Englewood, N. J. Filed May 1, 1917. Serial No. 165,766. 3 Claims. (Cl. 20—1.13.)



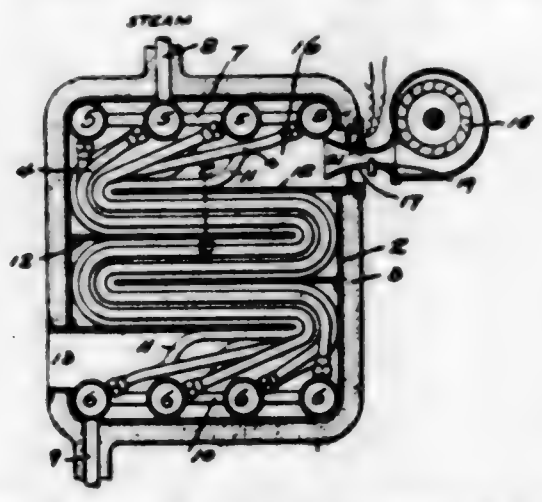
1. A building having a plurality of groups of floors, the floors of one group being arranged in planes intermediate the respective floors of an adjacent group, a plurality of series of oppositely inclined passage-ways connecting the floors of adjacent groups with each other, and partitions forming rows of storage compartments extending along opposite sides of each of said floors, each floor having a passage extending between said rows of compartments and communicating adjacent the ends thereof with two oppositely inclined passage-ways.

2. A garage having outer walls and an intermediate dividing wall, a plurality of floors at opposite sides of said dividing wall, the floors at one side of the dividing wall being arranged in planes substantially midway between the floors at the opposite side of said wall, each of said floors having storage spaces extending along the dividing wall and also along the opposite outer wall of the garage, and two series of oppositely inclined ramps extending through the dividing wall each ramp of each series connecting two floors at opposite sides of the dividing wall, each of said floors having a passage extending between said storage spaces and communicating with one ramp of each series.

3. A garage having an intermediate dividing wall, a series of floors at each side of said wall, the floors of one series being disposed in planes intermediate the planes of the floors of the other series, partitions extending outwardly from the opposite sides of said dividing wall and forming a series of vehicle storage compartments along

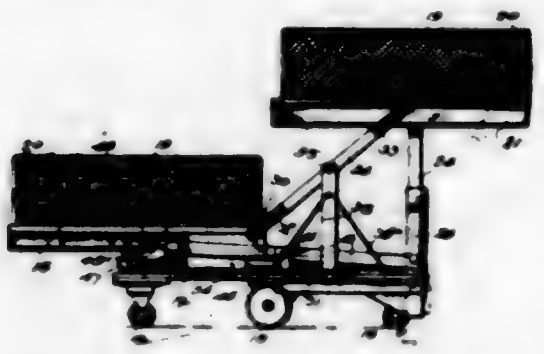
each floor adjacent the dividing wall, each floor having a driveway extending longitudinally of the dividing wall and communicating with the outer ends of said compartments, a series of superposed parallel ramps extending through the dividing wall and connecting driveways on the floors of one series with driveways on the adjacent floors of the other series adjacent the ends of said series of compartments, and a second series of superposed parallel ramps inclined oppositely to said first series of ramps and extending through the dividing wall, said second series of ramps connecting driveways on the two series of floors adjacent the opposite ends of said series of compartments, whereby the two series of driveways and ramps form a continuous driveway connecting all of said floors and compartments.

1,298,184. STEAM-GENERATOR. WILLIAM A. DOBLE, WILLIAM A. DOBLE, Jr., and JOHN A. DOBLE, San Francisco, Calif., assignors to Doble Laboratories, San Francisco, Calif., a Corporation of California. Filed May 9, 1917. Serial No. 167,508. 1 Claim. (Cl. 122—356.)



In a steam generator, a casing, a steam header arranged within the casing at the top thereof, a water header arranged within the casing at the bottom thereof, tortuously bent tubes arranged to pass back and forth in the casing connecting the steam header with the water header, the upper return convolution of said tubes being spaced from the steam header a greater distance than the successive convolutions are spaced from each other, forming a combustion chamber, and a burner arranged to project a flame into said chamber.

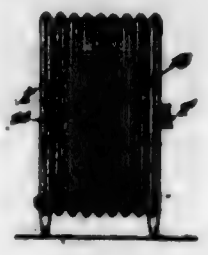
1,298,185. TABLE-TRUCK. SAMUEL C. DODSON, Baltimore, Md. Filed Feb. 28, 1918. Serial No. 219,620. 7 Claims. (Cl. 21—65.)



1. In a table truck, the combination of a roller mounted support, a table in sections, each of which is movable rectilinearly in vertical and horizontal directions with respect to the support, and levers fulcrumed upon a portion of the said support and having movable connections at opposite ends with the said table sections to constrain the latter to movement in relatively opposite directions.

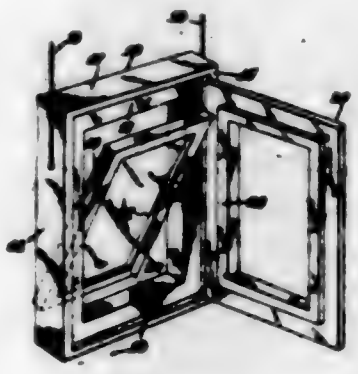
7. In a table truck, the combination of a roller mounted support having a horizontal body provided with longitudinal guide members and with uprights adjacent one end and at a point intermediate the ends thereof, a pair of table sections one of which has guides longitudinally thereof, a lazy tongs movably engaging the guides of the said table section and the said support, an angular frame having horizontal and vertical portions upon the former of which the other of said table sections is movably disposed and the latter of which is movably engaged with the end uprights of the said support, levers fulcrumed upon the intermediate uprights of the support and having movable connections at their opposite ends with the table sections, and levers intermediately fulcrumed upon the support and having rollers at one end for engagement with the table section supported by the lazy tongs, said last named levers having connections at their opposite ends with the movable frame of the other table section, for the purpose described.

1,298,186. STEAM-RADIATOR. FRANK J. DOUGLASS, Chicago, Ill. Filed May 11, 1918. Serial No. 233,907. 2 Claims. (Cl. 257—134.)



1. A radiator for a one-pipe pressure steam heating system having the usual supply and return pipe, said radiator comprising upright radiator sections communicating with each other at the bottom, with one end section of which said supply and return pipe is connected, in combination with a thermostatic air valve immediately attached to a section at the opposite end of the radiator from the supply and return pipe adapted to discharge air from the radiator to the atmosphere and to be automatically closed by the presence of steam in said section, and a thermostatic air valve immediately attached to an intermediate radiator section adapted to discharge air from the radiator to the atmosphere and to be closed automatically by the presence of steam in said section; said first named air valve adapted to be manipulated to prevent the outflow of air from the radiator at this point whereby all or part of the radiator may be made active.

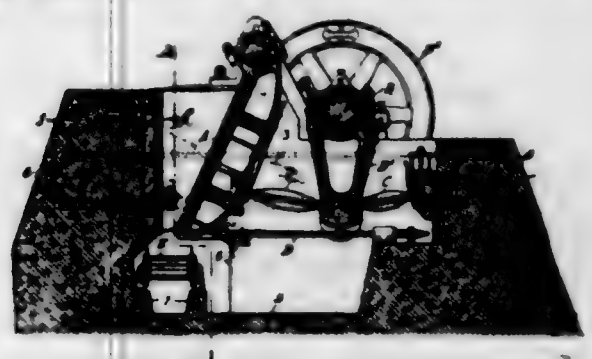
1,298,187. WINDOW-SASH. CHARLES W. DUNN, New York, N. Y. Filed May 13, 1918. Serial No. 234,247. 3 Claims. (Cl. 20—49.)



3. A window sash, comprising an outer frame adapted to be movably arranged in a window so as to be raised and lowered, a substantially rectangular flange extending inwardly of the frame, an inner frame with a transparent plate pivoted to the rectangular flange for being rotatably swung within the flange, a guard frame within the outer frame, hinged so as to be swung toward and from the transparent plate, a substantially rectangular flange member protruding from the guard frame, adapted to move

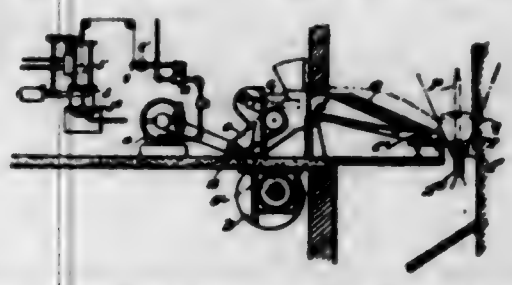
within the flange of the outer frame into and out of contact with the frame of the transparent plate when the guard frame is swung accordingly, and a catch to releasably lock the guard frame to the outer frame.

1,298,188. FRAME FOR JAW-CRUSHERS. WILLIAM B. EASTON, Chicago, Ill., and DAVID COLE, El Paso, Tex. Filed Aug. 19, 1918. Serial No. 250,505. 4 Claims. (Cl. 83—53.)



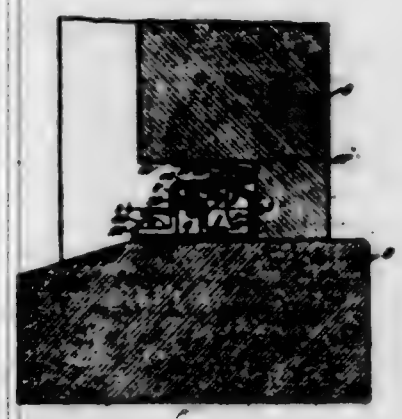
3. A frame for a jaw crusher comprising end, side and bottom portions made of concrete and formed integral with each other, and which form a pit in which the crusher jaws and certain associated parts are mounted, substantially as described.

1,298,189. MECHANICAL UNDERFEED STOKER. CHARLES EDITH, London, England. Filed Jan. 13, 1915. Serial No. 1,907. 1 Claim. (Cl. 110—44.)



A geared mechanical underfeed stoker for boiler furnaces, comprising retorts, reciprocating fuel feeding plungers, a crank shaft for actuating said plungers, twyers, an air chamber below the stoker, a fan for supplying air to said chamber and twyers, means for discharging the ash, intermittent gear associated with said crank shaft for controlling the plungers, a turbine for driving the crank shaft and fan, a valve for controlling the admission of steam to said turbine, and a regulator, including a piston positively actuated by water under pressure, connected to said valve.

1,298,190. WEATHER-STRIP. CLARENCE M. EVELETH, River Forest, Ill. Filed Aug. 2, 1918. Serial No. 247,990. 3 Claims. (Cl. 20—69.)



1. A weather strip, including a plate formed with an upturned longitudinal edge, a strip secured along that longitudinal edge of the plate remote from the upturned edge, said strip overlying the plate and having its free edge spaced from the upturned edge, a division strip extending longitudinally between the plate and strip, said first mentioned strip and division strip provided with apertures, the apertures of one strip offset from the apertures of the other, means for adjusting the first mentioned strip transversely of the plate, and a flexible metal strip turned back upon itself to form a tongue, said tongue adapted to enter between the first mentioned strip and the upturned portion of the plate.

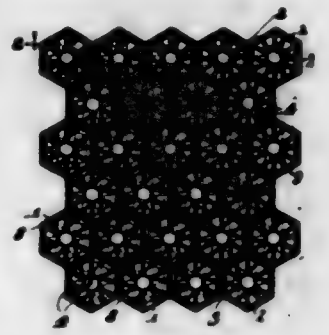
1,298,191. ENGINE. WILLIAM ROBERT FASEY, Shareshrook, England. Filed Oct. 8, 1915. Serial No. 54,854. 2 Claims. (Cl. 123—58.)



1. An internal combustion engine comprising cylinders arranged parallel to a central shaft, pistons reciprocating in the cylinders, a pair of rollers carried by each piston, a central shaft, a member rotatable relative to the cylinders, a cam rib on the periphery of said relatively rotatable member with which the rollers carried by the pistons coöperate, said rib being so shaped as to insure the maintenance of contact between the rollers and the cam rib at all positions of said rollers relative to said rib, and means for adjusting said rollers to said rib, substantially as specified.

2. An internal combustion engine comprising opposing groups of cylinders arranged in directly opposed positions, pistons in pairs, each pair operating in unison in a pair of directly opposed cylinders, a split hollow tubular structure connecting each pair of pistons, openings in said tubular structure, gudgeon pins screwing into said openings, rollers rotatably mounted upon said gudgeon pins, a bolt and nut bridging said split whereby said gudgeon pins can be locked in position in said openings, a member relatively rotatable in respect of the cylinders and located centrally between the two groups of cylinders, a cam rib on said relatively rotatable member, said cam rib being so shaped as to insure the maintenance of contact between the rollers and the cam rib at all positions of the rollers relative to said rib, substantially as specified.

1,298,192. RADIATOR. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Mar. 14, 1918. Serial No. 222,314. 3 Claims. (Cl. 257—128.)



1. A radiator comprising a plurality of tubes which are arranged side by side and each of which has enlarged ends and a contracted central part, and a non-contractible radiating member arranged in each of said tubes and comprising two sections which are introduced into said tube from opposite ends thereof and each of which is provided at its outer end with an enlargement which engages with the respective enlarged end of the tube.

1,298,193. ATTACHMENT FOR POUCHES OR BAGS. CATHERINE A. FOX, Chicago, Ill. Filed Apr. 6, 1918. Serial No. 227,032. 2 Claims. (Cl. 150—8.)



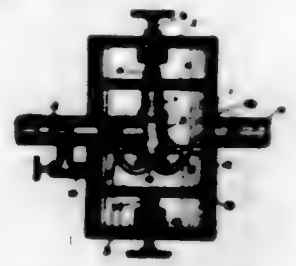
1. An attachment for a bag or pouch comprising a saddle-like body having forwardly and rearwardly extending top portions and downwardly extending side portions, said top and side portions terminating in a short constricted hollow neck adapted to receive the puckered edges of the open end of the bag or pouch, a head member upon the neck, said head member projecting but slightly above the neck and having a substantially rectangular discharge opening in communication with the hollow interior of the neck, a substantially flat cover hinged at one side of the discharge opening, said cover having a side piece or wing at opposite sides thereof and movable closely adjacent to the sides of and within the discharge opening when the cover is moved, means for limiting the outward movement of the cover, and means for holding the cover readily releasably in closed position.

1,298,194. TRACTION LOCOMOTIVE AND CAR. JOSEPH L. FRICK and HARRY G. CLEMENGER, Jamestown, N. Y. Filed Sept. 26, 1918. Serial No. 255,809. 7 Claims. (Cl. 105—4.)



7. A locomotive truck having front and rear traction wheels, a motorneer's cab supported on the truck over and in advance of the front wheels whereby the body of the truck will be exposed for supporting the forward end portion of a trailer car, and means substantially central of the truck for supporting and securing the forward end of a trailer car thereto.

1,298,195. FLUID-LINE-PRESSURE-REGULATING VALVE. EDWARD J. FRIES and THOMAS F. DICKEY, Toledo, Ohio. Filed Apr. 4, 1918. Serial No. 226,632. 4 Claims. (Cl. 50—9.)



1. In a device of the class described, a casing forming a chamber, a supply-pipe extending into said chamber through a side thereof and terminating adjacent to the center of the chamber with its discharge opening lengthwise of the chamber, a valve for closing said discharge opening, and means embodying a diaphragm and connecting levers normally permitting an opening of said valve under line pressure and operable by a predetermined fluid pressure in said chamber to effect a closing of said valve, and an outlet pipe for said chamber.

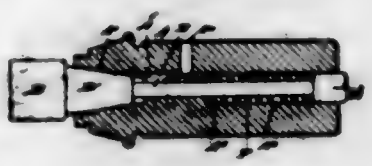
4. In a device of the class described, means forming a chamber, a fluid pressure supply line entering said chamber and having its discharge into the chamber lengthwise thereof, a valve within the chamber for closing said line and adapted to open under internal line pressure, a plunger mounted in said chamber and normally movable in one direction lengthwise thereof and movable in the opposite direction by internal pressure from said line, levers connecting said valve and plunger and operable to communicate a closing movement to the valve from a fluid pressure actuated movement of said plunger and adapted to permit an opening of the valve when the plunger is moved in the opposite direction, the fulcrum pivots of said levers being fixed relative to said means.

1,298,196. BORING-TOOL. EMIL GAIRING, Detroit, Mich., assignor to The Gairing-Needham Tool Co., Inc., Detroit, Mich., a Corporation of Michigan. Filed Nov. 10, 1917. Serial No. 201,207. 4 Claims. (Cl. 279—76.)



1. In a device of the character described, a tool supporting member provided with a socket to receive a tool shank and having an inclined bore opening into the socket to receive the ball, a ball lodged in said bore and having a limited upward and downward movement, a tool having a shank fitting said socket member, having an axial groove adjacent its upper end to admit the entry of the tool shank in the socket of the supporting member past the projecting ball carried thereby, and with a transverse peripheral groove connected with the axial groove to receive the projecting portion of the ball upon the rotation of the tool in the supporting member to secure it in locked relation thereto, and means carried by the said supporting member to urge the ball upwardly in the axial groove when the tool is in unlocked relation.

1,298,197. PLUG-GAGE. EMIL GAIRING, Detroit, Mich., assignor to The Gairing-Needham Tool Co., Inc., a Corporation of Michigan. Filed May 31, 1918. Serial No. 237,616. 5 Claims. (Cl. 33—178.)

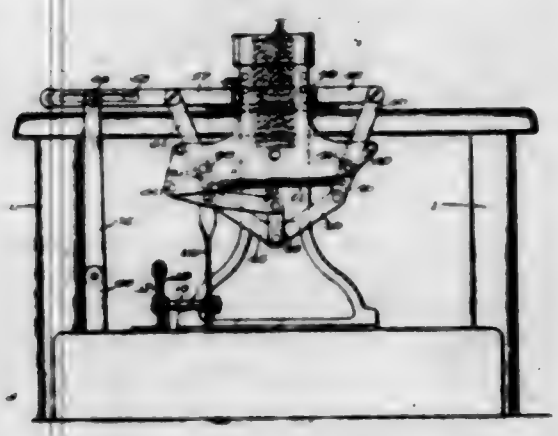


3. In a device of the character described, a holder having at one end a tapering socket and a bore communicating with the socket extending the length of the holder, a removable gage plug having a tapering shank fitted to the socket of the holder, a movable plunger lodged in the bore of the holder and adapted to act upon the shank of the gage plug to eject the latter from the holder, and a spring to return the plunger to its initial position following the discharge of the gage plug from the holder.

4. In a device of the character described, a holder having a tapering end to receive an annular gage plug, also a tapering socket to receive the shank of another gage plug, and a central longitudinal bore communicating with the socket to receive a movable plunger rod, a removable annular gage plug fitted to the tapering end of the holder, a nut screwed to the holder to secure the annular gage plug in position, a removable gage plug of relatively dif-

ferent diameter having a tapering shank fitted to the tapering socket of the holder, a movable plunger housed in the central longitudinal bore of the holder, adapted when manually actuated for forcibly ejecting the last named gage plug from the tapering socket of the holder, and a spring to return the plunger to its initial position following its operation.

1,298,198. CALCULATING-MACHINE. HYMAN ELI GOLDBERG, (now by judicial change of name Hyman Golber,) Chicago, Ill., assignor to Goldberg Calculating Machine Company, Chicago, Ill. Filed May 16, 1912. Serial No. 697,704. 13 Claims. (Cl. 235—59.)



1. In a machine of the type described, the combination of a set of displaceable stopping pieces, a calculating carriage adapted to be tabulated in either direction, and mechanism locating said carriage at a place dependent on a particular displaced stop.

2. In a machine of the type described, the combination of a set of displaceable stopping pieces, a calculating carriage adapted to be tabulated in either direction, and mechanism contacting with any displaced stopping piece and thereby locating the calculating carriage at a predetermined place.

3. In a machine of the type described, the combination of a set of displaceable stopping pieces and a constant aggregate mechanism contacting with the displaced stopping piece, whereby said mechanism is located at a predetermined place dependent upon the particular piece displaced.

8. In a machine of the type described, the combination of a set of displaceable stopping pieces, a totaliser adapted to be tabulated in either direction, and mechanism locating said totaliser at a place dependent on a particular displaced stop.

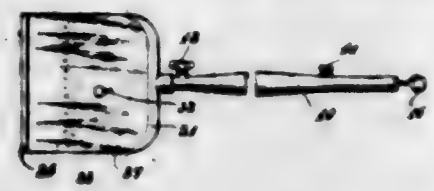
9. In a machine of the type described, the combination of a set of displaceable stopping pieces, a totaliser adapted to be tabulated in either direction, and mechanism contacting with any displaced stopping piece and thereby locating the totaliser at a predetermined place.

1,298,199. CELLULOSE-ESTER DOPE OR VARNISH. JOHN NAISH GOLDSMITH, Holborn, London, England, assignor to The British Emaillite Company, Limited, Piccadilly Circus, London, England. Filed June 18, 1917. Serial No. 174,345. 2 Claims. (Cl. 134—79.)

2. A cellulose ester dope of the kind set forth containing acetanilid or a mixture of acetanilid and triacetin amounting to from 5 to about 100 per cent. of the cellulose ester.

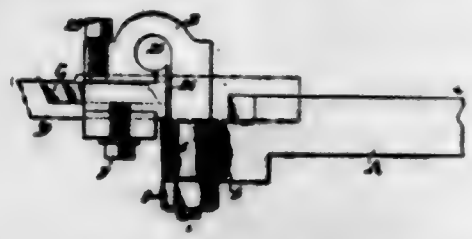
1,298,200. SNOW-MELTING DEVICE. WILLIAM GOUGH, South Bethlehem, Pa., assignor of one-half to Julius Wocelik, South Bethlehem, Pa. Filed Feb. 16, 1917, Serial No. 149,148. Renewed Jan. 20, 1919. Serial No. 278,978. 2 Claims. (Cl. 37—60.)

1. In an implement of the class described, the combination with a blade, and a handle element rigidly engaged therewith, of means permitting the filling of said handle with liquid, means for controlling the passage of the liquid, a header transversely disposed on said blade, connections between said header and said handle, a plu-



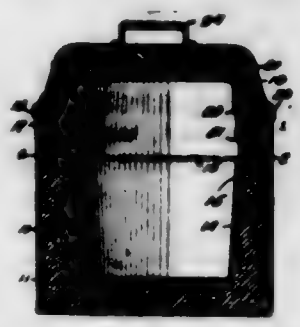
rality of burners engaged with said header directed toward the edge of said blade, means on said blade for directing the flames from said burners, and means for gasifying the contents of said handle prior to its entering said header.

1,298,201. TOOL-HOLDER. MAX HACKER, Brooklyn, N. Y. Filed June 21, 1918. Serial No. 241,126. 2 Claims. (Cl. 29—96.)



1. A tool holder comprising a head and shank, said head and shank being pivotally connected, said head having tool recesses on two sides thereof and adapted to hold a tool in either of said recesses on either side of the holder, and a tool recess in the approximate center line thereof, said head having a springable portion permitting the tool held thereby to recede under excessive strain.

1,298,202. FIRELESS COOKER. MAX E. HALL and GLEN P. HALL, Atlanta, Ga. Filed Nov. 22, 1917. Serial No. 203,417. 4 Claims. (Cl. 220—42.)

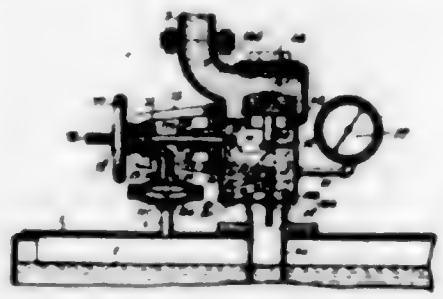


1. In a fireless cooker, the combination, of a body part including a rigid mass of heat non-conducting substance, shaped to provide an inner wall sloping inwardly to reduce the diameter of the body portion at the lower end thereof and offset outwardly to form a shoulder, and a removable shell formed to the configuration of the inner wall of said mass and provided near its upper end with an outwardly extending shoulder adapted to seat upon the shoulder of said mass.

1,298,203. EMERGENCY SHUT-OFF DEVICE FOR CHEMICAL EXTINGUISHING APPARATUS. JOHN R. HAMILTON, Yonkers, N. Y., assignor to Sypho-Chemical Sprinkler Corporation, Croton-on-Hudson, N. Y., a Corporation of New York. Filed Aug. 5, 1915. Serial No. 43,715. 18 Claims. (Cl. 169—24.)

1. In fire extinguishing apparatus, a wet pipe distributing system, a supplemental supply of extinguishing liquid for said system comprising a chemical mixing tank, a supply connection between said supplemental supply and said distributing system comprising a valve casing

provided with a normally closed cut-off check valve having a valve stem mounted in guides and provided with a venting drain device located between said check valve and said supply, a drain valve coöperating with said drain device and loosely connected with said valve stem, a manual valve closer comprising an operating wheel and nut and a threaded closer stem with which said nut coöperates, a closer lever pivoted in said casing and having a loose connection with said closer stem and having an operating end loosely coöperating with said valve stem, said closer lever having a loose connection with said drain valve to normally hold said drain valve open when said closer is in inoperative position and when said cut-off valve is closed and to effect the shutting of said drain valve when said closer positively holds said cut-off valve shut or when said cut-off valve automatically opens, an automatic locking device coöperating with said closer and comprising a locking ratchet device connected to said wheel and a coöperating inclosed locking pawl, a connected resilient diaphragm normally holding said locking device in operative position and means by which the emergency pressure in said supply can move said diaphragm and release said locking device to allow the manual closure of said shut-off valve under emergency conditions.



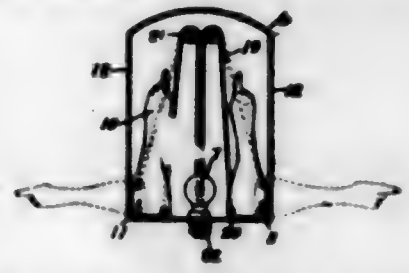
18. In fire extinguishing apparatus, a wet pipe distributing system, a chemical pressure tank, a supply connection between said tank and distributing system and provided with a check valve and with a normally open venting drain device located between said check valve and said tank and means by which said drain device is automatically closed when said check valve opens on the emergency operation of the system.

1,298,204. RUNNING-GEAR FOR AUTOMOBILES. HORACE B. HARVEY, Cleveland, Ohio. Filed Oct. 27, 1917. Serial No. 198,774. 7 Claims. (Cl. 21—151.)



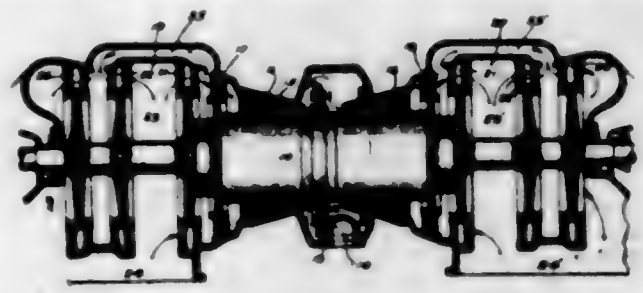
1. In a running gear for an automobile, the combination, with an axle, an annular wheel which surrounds an end portion of the axle and is provided at its outer circumference with a laterally and inwardly projecting annular rim arranged concentrically relative to the axle, said wheel being provided internally of said rim with a ring which is internally provided with an annular recess, said ring and its recess and the aforesaid rim being concentric relative to the axle, and the ring being composed of two sections forming opposite side walls respectively of said recess, of a non-rotatable ring which is concentric relative to the axle and arranged internally of the first-mentioned ring and provided externally with circumferentially spaced cavities, and antifriction bearings engaging said cavities and the aforesaid recess.

1,298,205. SIGNAL DEVICE FOR AUTOMOBILES OR OTHER VEHICLES. HARRY HELFENBEIN, Cleveland, Ohio. Filed Aug. 29, 1918. Serial No. 251,945. 1 Claim. (Cl. 116—31.)



A signal comprising a box having a compartment containing a lamp, and slots in the side walls of the box, an extension casing projecting from the rear face of the box, said extension casing having partitions dividing the same into a plurality of passages, lenses in said passages, arms pivoted at their lower corners near the bottom of the box and arranged to swing through said slots to upright position within the box or horizontal position outside of the box, said arms being located between the box and the inner ends of the passages when in upright position, to cut off light from the latter, and the passages having slots in the side walls thereof through which light may pass to illuminate the arms when they are swung out.

1,298,206. STEAM-TURBINE. HERBERT T. HOWE, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 16, 1913, Serial No. 761,619. Renewed May 21, 1917. Serial No. 170,081. 20 Claims. (Cl. 253—67.)



1. A turbine comprising a working section through which the fluid flows in one axial direction only, a divided flow secondary section receiving fluid from said working section, and a triple flow section at each end of said divided flow section, and each receiving motive fluid from the adjacent sub-section of the divided flow section.

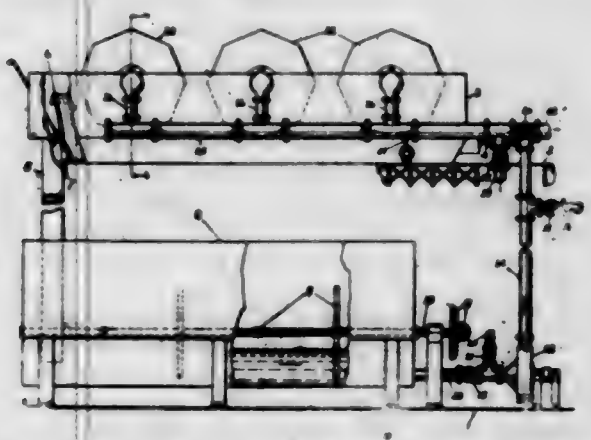
5. A turbine comprising a casing divided into a middle and two end compartments communicating with the middle compartment, a rotor element extending through all of said compartments, two sets of rotor blades located in said middle compartment and forming, with fluid delivery elements mounted on the casing, a divided flow section, a plurality of blade-carrying wheels located in each end compartment and mounted on the rotor element, blades mounted on each wheel, and means for directing the fluid discharged from each set of blades, located in the middle compartment, in separate streams, to the blades mounted on the blade-carrying wheels in the adjacent end compartment, and means for admitting motive fluid to said middle compartment.

10. In an organized turbine apparatus, a turbine section through which fluid flows in one axial direction,

a divided flow low-pressure turbine element, operating in tandem with the single flow section, and comprising at least three separate sets of blades through adjacent sets of which fluid flows in opposite axial directions, and means communicating with the exhaust of the first-mentioned section for delivering fluid to the separate sets of blades of the low-pressure turbine element.

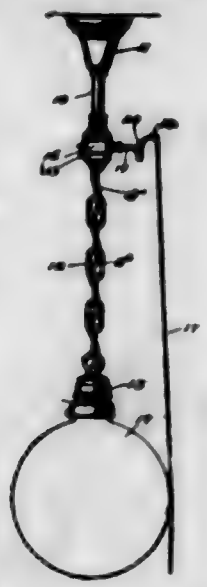
20. In a turbine, a rotor comprising a drum having pressure blades arranged thereupon and a disk, carrying not more than two rows of peripherally attached low pressure blades, fixed to the low pressure end of the drum so as to constitute a head therefor, said disk being of greater diameter than the drum and having its central part extended on the side away from the drum to constitute one end of the shaft.

1,298,207. MACHINE FOR TREATING PAPER-STOCK. WILLIAM J. HERRBOLD and CHARLES KEELAN, Kalamazoo, Mich. Filed Nov. 28, 1918. Serial No. 263,811. 8 Claims. (Cl. 141—12.)



6. In a machine for treating paper stock, the combination of a washing tank provided with a stock inlet at one end and a discharge conduit at the other, a stock tank to which said conduit delivers disposed below said washing tank, a screen for said washing tank, a waste pipe to which said screen delivers, and a circulating pump having its inlet connected to said stock tank and its discharge connected to the stock inlet of said washing tank.

1,298,208. ELECTRIC-LIGHTING FIXTURE. MAX HRASKOVITS, Chicago, Ill. Filed Feb. 28, 1918. Serial No. 218,707. 9 Claims. (Cl. 240—128.)



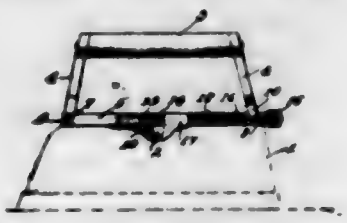
6. In an electric lighting fixture, upper and lower supporting members, an electric switch containing member, comprising two companion switch clasping members, one having an upright loop having a transverse hole formed therein and the other having a lug arranged to enter said hole to form a pivotal connection between said two members, both members being formed with companion externally screw threaded lugs, and an internally screw threaded ring secured on said lugs, the loop of said member serving as a connection between upper and lower supporting members.

1,298,209. DISK PLOW. EDWARD M. HEYLMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Mar. 14, 1918. Serial No. 222,333. 3 Claims. (Cl. 97—79.)



2. The combination with a soil-engaging disk and a mounting therefor, of a scraper for said disk, a support for the scraper, universal adjusting devices between the scraper and support, and means affording adjustable connection of said universal adjusting devices with said support.

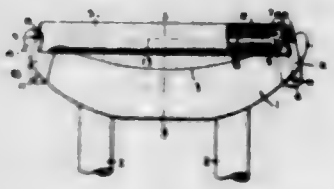
1,298,210. SAD-IRON HANDLE. LESLIE R. HIGHT and BERTHA G. HIGHT, Neodesha, Kans. Filed Dec. 6, 1917. Serial No. 205,831. 4 Claims. (Cl. 68—26.)



1. A detachable handle comprising a grip portion, a base having a slot therein and recesses in the opposite ends of said slot, a stationary lug carried by said base, a rod movably mounted in said slot and recesses, a lug carried by said rod, and spring means for normally urging the rod inwardly of the base so that the lug carried by said rod engages the stationary lug.

3. A detachable handle comprising a grip portion, a base having a slot therein, a lug carried by the base, a latch rod having a shouldered portion within said slot, a latch lug carried by said rod and normally abutting with one end of said slot and engaging its co-acting lug, and said shouldered portion of the latch rod adapted to abut with the opposite end of the slot when the latch lug is in its open position.

1,298,211. ARM-REST ATTACHMENT FOR CRUTCHES. GEORGE HIPWOOD, Boston, Mass. Filed Aug. 11, 1916. Serial No. 114,473. 4 Claims. (Cl. 135—52.)



1. The combination with a crutch head shaped to present the usual concave arm-supporting surface and having tapering ends, of a fastening device constructed to slip over each of said tapering ends, and a longitudinally-

resilient arm rest secured to and supported under tension by said fastening devices to permit cushioning or yielding of said rest when in use

4. A crutch attachment comprising two fastening devices adapted to embrace the ends of a crutch head, and an arm rest comprising a plurality of springs connected at their ends to the fastening devices.

1,298,212. COVER-HOLDER FOR GLASS JARS. ARTHUR J. HOLDSWORTH, Detroit, Mich., assignor of one-half to Christian Schneider, Detroit, Mich. Filed Oct. 22, 1915. Serial No. 57,246. 2 Claims. (Cl. 215—90.)



2. A device of the character described comprising a ring shaped member formed of a single piece of wire, the two ends being bent to extend in parallel relation at an angle from the body each terminating in similarly bent portions extending toward the opposite member, the parallel parts having apertures, a bolt extending through the apertures, a cover holder member formed of two similar parts in substantially parallel relation having spaced apertured ends through which the bolt extends, a tubular spacing member on the bolt between the said ends, and spacing members between each of the said ends and the adjacent extending portion of the body member, the opposite ends of the parts of this holder member being semi-circular in form and together forming an open loop adapted to engage about a portion of the cover, and a screw through the two said parts adapted to bind the loop portion to the cover.

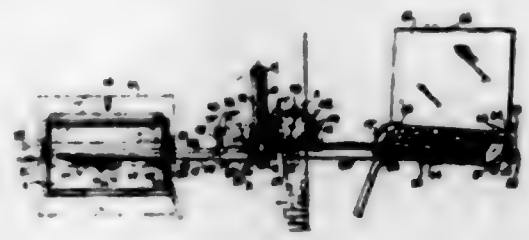
1,298,213. TIRE-CASING. GEORGE E. HOTTENSTEIN, Miami, Ariz. Filed Feb. 27, 1918. Serial No. 219,453. 3 Claims. (Cl. 152—18.)



1. In combination with a tire casing, a plurality of tubular members embedded within the tread portion of the casing with the outer ends thereof substantially flush with the periphery of the casing, the inner ends of said tubular members being provided with oppositely directed flanges, the flanges of adjacent members interlocking, and rivets connecting adjacent tubular members and positioned intermediate the length thereof.

3. The combination with a tire casing, a plurality of tubular members embedded within the tread portion of the casing with the outer ends thereof substantially flush with the periphery of the casing, and elements connecting adjacent tubular members and positioned intermediate the length thereof, said elements having sliding movement through the walls of the tubular member.

1,298,214. AUTOMATIC FIRE-KINDLER. WILLIAM F. HUDSON, Rockingham, N. C., assignor of one-half to Benjamin J. Bostick, Rockingham, N. C. Filed Feb. 26, 1918. Serial No. 219,104. 15 Claims. (Cl. 44—6.)



1. A fire kindler including a bracket, an arm swingingly mounted on the bracket for movement in a horizontal plane, a scuttle rotatably carried by the arm for movement in a vertical plane and urged to an inclined discharging position, means for releasing the arm from a predetermined position allowing the arm to swing to a discharging position, and automatic means for releasing the scuttle and allowing it to tip to a discharging position when the arm has swung to a predetermined position.

6. A fire kindler including a scuttle movable to a position to discharge its contents into a fireplace, and a match striking device mounted upon the scuttle, normally held in an inoperative position, but automatically released when the scuttle is moved into a discharging position.

7. A fire kindler including a scuttle movable into a discharging position, means constantly urging the scuttle into said position, means holding the scuttle from movement into a discharging position under the action of said urging means, and means for releasing said holding means.

15. The combination with a fireplace having a fireplace opening, of studs projecting from the face of the fireplace, a bracket having key-hole slots engaging said studs, a pintle mounted on the bracket, an arm engaging the pintle and swinging from a position at right angles to the fireplace to a position parallel therein, said arm being urged into the latter position, a scuttle rotatably mounted on the arm for movement in a vertical plane, said scuttle being urged to an inclined discharging position, a latch normally holding the scuttle in a horizontal position, but released by engagement with the wall of the fireplace when the scuttle approaches it, a match striking mechanism mounted on the scuttle, and means for holding the arm in a position approximately at right angles to the fireplace, and means releasing said holding means to permit the arm to swing to carry the scuttle to a discharging position and being operatively connected to the match striking means to release the latter while the scuttle is moving toward the fireplace.

1,298,215. BATH-TUB ATTACHMENT. RALPH C. IDONE, Cleveland, Ohio. Filed Jan. 10, 1919. Serial No. 270,471. 2 Claims. (Cl. 45—28.)



1. A bath tub attachment, comprising a single length of wire bent upon itself forming a tray loop at one side and a reversely extending loop at the other, said last mentioned loop being provided with double side arms having loop hooks adapted to engage the under side of the rim of a bath tub, and said tray and loop hooks being

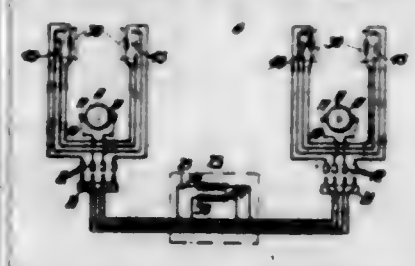
connected by upwardly curved members arranged above said loop hooks and conformed to and receiving the bath tub rim.

1,298,216. IRONING-CABINET. ANDERSON JENKINS, Jacksonville, Fla. Filed Sept. 30, 1918. Serial No. 256,266. 1 Claim. (Cl. 68—10.)



An ironing cabinet having laterally spaced guides for boards to be housed in the cabinet, a front plate connected with the cabinet by links and adapted to fit flat against the front face of the cabinet when not in use, a rest for supporting said plate when folded, a support engaging plate, an ironing board having means for engagement with said plate, a slide board, and means carried by said plates for supporting the slide board in inclined position below the ironing board.

1,298,217. INTERCOMMUNICATING SET. GEORGE MARK OMEGA JENKINS, Paris, France, assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 3, 1917. Serial No. 200,121. 10 Claims. (Cl. 179—1.)

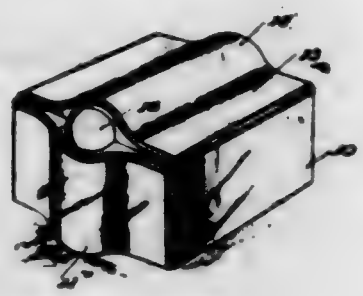


9. In an arrangement for communication between aviators or the like, a transmitter, a receiver, a source of energy, and means operable automatically to connect the transmitter in circuit with said source of energy and receiver upon the user lowering his head to talk into the transmitter.

1,298,218. APPARATUS FOR SEALING VESSELS. HARRY WILDAY JOHNSON, Atherton, England. Filed Mar. 26, 1917. Serial No. 157,496. 5 Claims. (Cl. 118—18.)

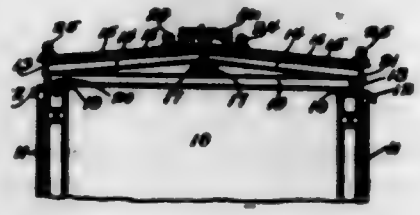
1. Apparatus for use in sealing petrol tins and other stoppered vessels or containers provided with an undercut recess of an inverted V-shape in cross-section comprising a casing, a plunger slidably mounted in said casing, a spiral spring tending to force said plunger toward the open end of the casing, a plurality of spring controlled members slidably mounted at said open end and whose inner edges are shaped to grip the neck of the vessel, upstanding projections on the aforesaid slidably mounted member, said spiral spring being sufficiently strong to force the upstanding projections, together with the ends of the seal, into the undercut recess of inverted U-shape in cross-section and means for retracting the sliding members when the latter are depressed clear of the undercut recess, substantially as described.

1,298,219. SELF-CLOSING INK-WELL. ROBERT D. JONES, Scranton, Pa. Filed Dec. 11, 1918. Serial No. 266,260. 6 Claims. (Cl. 120—68.)



1. An ink well including a body provided with a dipping font, a lid closing the body, and a closure member mounted to gravitate upon the lid to a position engaging the wall of said font for closing the font.

1,298,220. ROOF FOR BOX-CARS. LEONARD C. JORDAN, Morsemere, N. J. Filed Nov. 17, 1917. Serial No. 202,488. 11 Claims. (Cl. 105—377.)

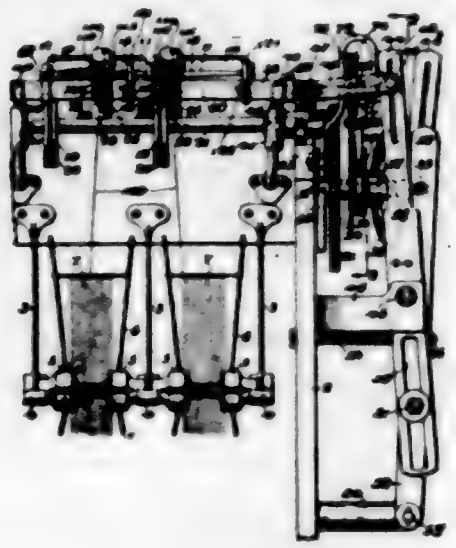


1. In a car roof, the combination with a box car body, of a pair of opposed roof sections, adapted to be opened and closed, means for connecting the sections to the car body and guiding the sections in their opening and closing movements, and an intermediate brace for said roof sections adjustably mounted across the top of the car body and adapted to be swung toward one side of the body when the roof is open.

1,298,221. QUILL-WRAPPING MACHINE. JOSEPH JOSEPHS and DAVID THEODORE BERLIZHEIMER, Philadelphia, Pa., assignors of one-third to Gustavus Josephs, Philadelphia, Pa. Filed May 13, 1918. Serial No. 234,112. 12 Claims. (Cl. 242—44.)

1. In a cop-wrapping machine, the following elements in combination:—a supporting frame;—a plurality of revoluble swifts which carry skeins of thread;—a plurality of spindles for holding cop-tubes which receive the threads from the skeins;—means for occasioning the rotation of the spindles;—a plurality of reciprocatory thread-carriers intermediate the swifts and the spindles, through which threads from the skeins pass to the cop-tubes;—mechanism for occasioning the constant longitudinal reciprocation of the thread carriers with respect to both the swifts and the spindles, which comprises a constantly reciprocating carrier-bar and a both intermittently re-

ciprocating and intermittently rotatable feed shaft;—and mechanism for occasioning the constant reciprocation



of the carrier-bar and the intermittent reciprocation and rotation of the feed shaft.

1,298,222. AERIAL PROJECTILE. PATRICK H. KANE, Buffalo, N. Y. Filed Mar. 24, 1916, Serial No. 86,297. Renewed June 20, 1917. Serial No. 175,979. 1 Claim. (Cl. 102—29.)



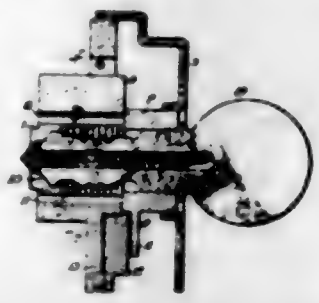
A projectile comprising a shell closed at one end and open at the other, a head detachably secured in the open end of the shell, a flanged head arranged within the closed end of the shell and having a plugged filling aperture, a tube adapted to contain an explosive and detachably secured at its ends to said heads, said tube containing a cartridge-seat, and a movable hammer guided in said tube and having a firing pin which faces said seat.

1,298,223. FACE-SHIELD. WALTER DEWITT KEMP, New York, N. Y. Filed Aug. 27, 1917. Serial No. 188,322. 4 Claims. (Cl. 2—149.)



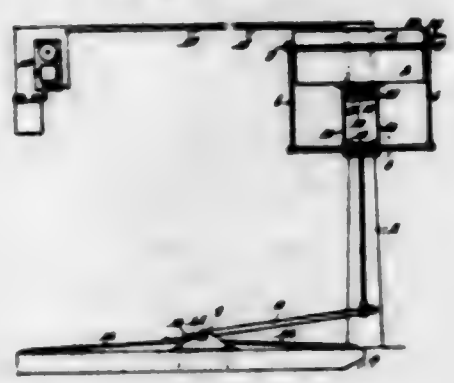
2. In a face shield, the combination with a flexible transparent plate having an opening through which the nose and lips may extend and a pair of openings for the eyes, of means engaged marginally of the first named opening adapted to make intimate contact with the face around the nose and lips, lenses over the second named openings, and means for maintaining said plate in an operative position.

1,298,224. LOCK. ROY D. KING, Chicago, Ill., assignor to Coin Controlled Lock Company, Chicago, Ill., a Corporation of California. Original application filed June 2, 1916, Serial No. 101,212. Divided and this application filed Mar. 19, 1917. Serial No. 155,737. 1 Claim. (Cl. 70—46.)



In a lock, the combination of endwise movable parallel tumblers disposed face to face in successive mutual engagement and provided with alined key openings, opposite edges of each key opening being beveled, and a key having opposite serrated complementary edges, the crest of each serration being of appreciable length and substantially parallel with the longitudinal axis of the key, the ends of each serration being beveled for engagement with the beveled edges of the tumblers to move the same, and the crests of the serrations permitting slight longitudinal movement of the key without moving the tumblers.

1,298,225. MAIL-BOX FOR RURAL DISTRICTS. ALEXANDER F. KALMUS, St. Joseph, Mich. Filed Sept. 25, 1915. Serial No. 52,686. 2 Claims. (Cl. 200—35.)

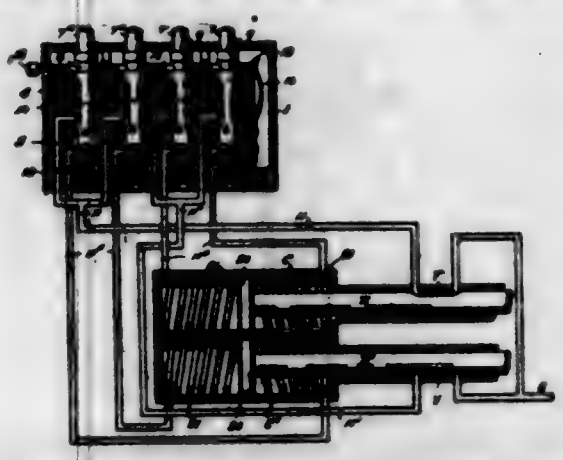


1. A device of the class described comprising a receptacle; a movable cover on said receptacle; a rockingly mounted crank shaft; an operative connection between said shaft and said cover whereby the latter will be opened upon actuation of said shaft, said connection comprising an arm on said shaft; a connecting element connected at its lower end with the outer end of said arm and having a bifurcated upper end connected with said cover at opposite sides thereof; a guide for the upper portion of said connecting element, said guide having vertically disposed spaced slotted portions loosely engaged by the branches of the upper end of said connecting element; depressible means arranged on the ground adjacent said receptacle and operatively connected with said crank shaft for actuating the latter; a normally open electric circuit having stationary spaced terminals at the under side of said receptacle; and means carried by said connecting element at the bifurcated upper end thereof adapted to engage with said terminals and close said circuit when said connecting element is moved to open said cover, substantially as described.

1,298,226. ROD-SHIFTING DEVICE. RAYMOND F. LANDIS, Reading, Pa., Filed Aug. 1, 1917, Serial No. 184,001. Renewed Aug. 27, 1918. Serial No. 251,690. 3 Claims. (Cl. 121—45.)

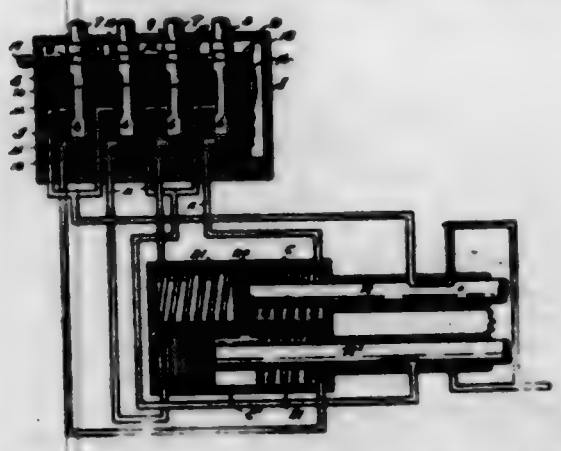
1. A rod shifting device comprising a pair of cylinders, spring backed pistons in the cylinders, rods carried by the pistons, fluid inlets and outlets in each cylinder, valves in

said rods, valve ports coacting with said valves and manually operable means in communication with said valves and with said fluid inlets and outlets for controlling



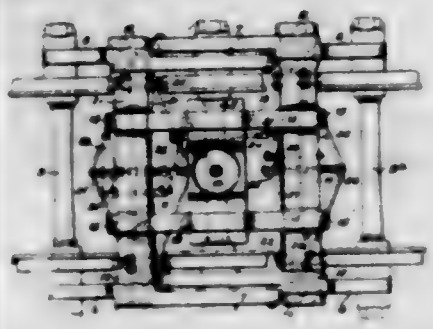
said valves, whereby the opening of the valve in one of the rods will permit the movement of the piston to which the other rod is attached.

1,298,227. VALVE CONTROLLING AND RELEASING DEVICE. RAYMOND F. LANDIS, Reading, Pa. Filed Aug. 1, 1917, Serial No. 184,002. Renewed Aug. 27, 1918. Serial No. 251,691. 2 Claims. (Cl. 277—20.)



1. In a device of the character described, the combination of a body member having a plurality of valve openings and ports leading into said openings, with manually operated valves in said openings, springs to keep the valves normally in closed position, each of said valves having an annular groove; and a slide member, formed with perforations whose walls are tapered and adapted to engage the tapered grooves in the valves, said slide being adapted for movement by the actuation of any one of the valves to open position.

1,298,228. BRAKE MECHANISM FOR SIX-WHEEL TRUCKS. JACOB C. LARSEN, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Apr. 1, 1918. Serial No. 226,032. 5 Claims. (Cl. 188—24.)



1. In a six wheel truck, the combination of a side frame having a seat for bolster springs, an upwardly projecting flange at the inner edge of said seat, brake hanger support originating at the upper edge of the spring seat flange and extending horizontally inwardly toward the center of the truck, and a brake hanger bracket attached to said support.

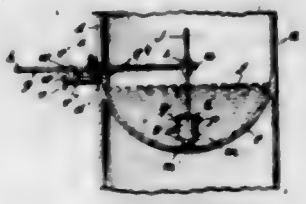
2. In a car truck, the combination of a truck side frame, a pair of parallel hangers carried by each side frame, a brake beam supported at each end by a pair of hangers, whereby the beam has a parallel movement in a horizontal position, a brake actuating lever connected with said beam and a swinging fulcrum for said lever.

3. In a car truck, the combination of truck side frames, a transverse bolster, a pair of hangers carried by each side frame, a brake beam supported at each end by a pair of hangers, a brake actuating lever, and a swinging fulcrum for said lever, the said fulcrum being carried by the bolster.

4. In a six wheel truck brake, the combination of three brake beams, an actuating lever for each beam, two of said beams being pivoted to their respective levers intermediate the ends of the latter, the third beam being pivoted to the lower end of its lever, a compression member connecting the lower ends of the two first-mentioned levers, a tension member connecting the upper end of the third lever with the upper end of one of the two first mentioned levers, and a swinging fulcrum for the third lever.

5. In a six wheel truck brake, the combination of two brake beams, an actuating lever for each, each lever being pivoted to its beam intermediate its ends, a third beam supported at each end by a pair of hangers, an actuating lever for the said third beam, a swinging fulcrum for said last mentioned lever intermediate the ends of the latter, a connection between said third beam and the lower end of its actuating lever, a compression member connecting the lower ends of the two first levers, and a tension member connecting the upper end of the third lever with the upper end of one of the two first named levers.

1,298,229. METAL-CLEANING APPARATUS. ABRAHAM HOYT LEVY, New York, N. Y., assignor to Syracuse Smelting Works, Brooklyn, N. Y., a Corporation of New York. Continuation of application Serial No. 89,742, filed Apr. 8, 1916. This application filed Nov. 10, 1917. Serial No. 201,222. 4 Claims. (Cl. 265—34.)



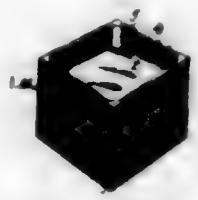
1. A metal-cleaning apparatus including a receptacle; a rod to which said receptacle is attached; a handle-bar in which said rod is mounted and which is angularly disposed thereto; and means for maintaining said handle-bar against the thrust due to the buoyant effort of the molten metal in which said receptacle is held.

1,298,230. METHOD OF PRODUCING WOVEN-REED ARTICLES. MARSHALL B. LLOYD, Menominee, Mich. Filed July 17, 1917. Serial No. 181,053. 2 Claims. (Cl. 147—48.)



1. The herein described method of producing reed articles, which consists in providing two frame members, one thereof being of tapering form, inserting the tapering frame member small end first into a tapering tubular reed fabric, and then securing the other frame member to the small end of the tapering frame member.

1,298,231. METHOD OF PRODUCING WOVEN-REED ARTICLES. MARSHALL B. LLOYD, Menominee, Mich. Filed July 17, 1917. Serial No. 181,054. 2 Claims. (Cl. 147—48.)



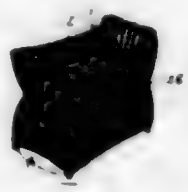
1. The herein described method of producing woven reed articles which consists in providing a plurality of article frames, providing a tubular woven reed fabric of a size sufficient to cover a plurality of the article frames, applying the fabric to the frames in an inclosing relation of either to the other affected by the tubular contour of the fabric and severing the fabric into a plurality of strips.

1,298,232. METHOD OF PRODUCING WOVEN-REED ARTICLES. MARSHALL B. LLOYD, Menominee, Mich. Filed July 17, 1917. Serial No. 181,055. 7 Claims. (Cl. 147—48.)



1. The herein described method of producing woven reed articles which consists in providing a plurality of article frames, providing a tubular reed fabric of a size sufficient to cover a plurality of said frames, and in using a part of said fabric for one frame and a part for another frame so that at least one part and one frame shall have an inclosing relation affected by the contour of the part.

1,298,233. METHOD OF PRODUCING WOVEN-REED ARTICLES. MARSHALL B. LLOYD, Menominee, Mich. Filed July 17, 1917. Serial No. 181,056. 2 Claims. (Cl. 147—48.)

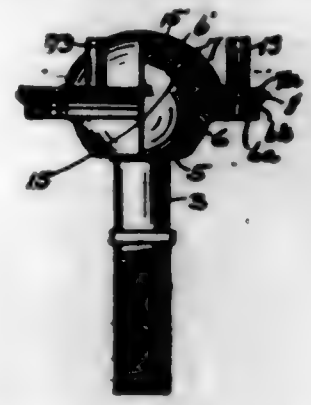


2. The herein described method of producing a woven reed article having a relatively small central portion and relatively large top and bottom portions, that consists in providing upper and lower frame portions of tapering form, inserting the frame members into the fabric small end first, and then securing the small ends of the frame members together.

1,298,234. PISTON. WILLIAM P. LOWTHER, Spokane, Wash. Filed Jan. 31, 1918. Serial No. 214,652. 3 Claims. (Cl. 74—85.)

1. The combination with a hollow piston of a connecting rod having a ball and socket joint therebetween comprising a pair of hemispherical flanged bearing plates, and a hemispherical casing over the upper plate, together, forming an oil chamber in the upper end of the piston, a packing ring carried by the casing, and a ball on the end of the connecting rod located in the socket.

2. The combination with a hollow piston, a connecting rod and a ball on its end, of a socket for the ball comprising bearing plates incasing the ball and formed with rigidly connected annular flanges, and a packing ring carried by the socket to provide an oil chamber in the upper



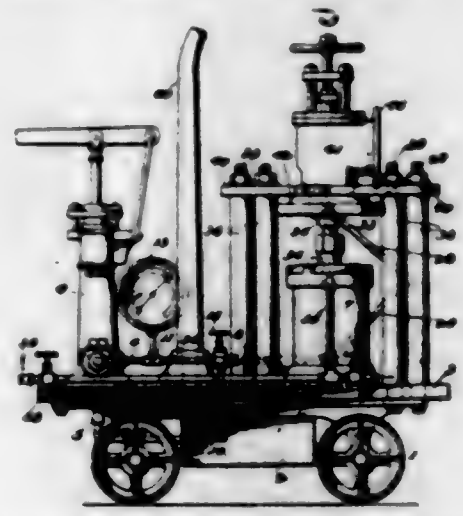
end of the piston, there being openings in the wall of the piston for passage of oil and openings in the socket for passage of oil to the surface of the ball.

1,298,235. HEAD-REST. JASPER MCCRILLIS, Modale, Iowa. Filed June 12, 1918. Serial No. 239,566. 1 Claim. (Cl. 155—10.)



In a head rest for barber's chairs, the combination with a friction hinge whereof one leaf is adapted to be attached to the chair back, a standard carried by the other leaf, and a lever for controlling the friction of the hinge; of a rest proper carried by said standard and having bracket-arms secured to its base and its upper face padded, a pair of flanged rollers rotatably mounted in said bracket-arm, an endless belt passing around said rollers with its upper run overlying said pad and its lower run underlying said base, and a knob carried by the lower run and depending therefrom, for the purpose set forth.

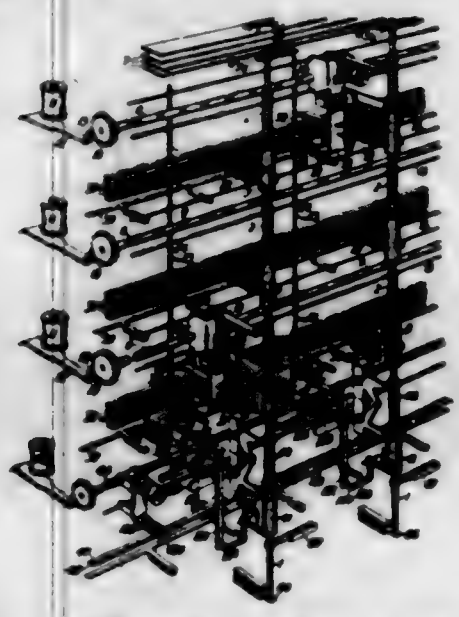
1,298,236. VALVE-TESTING MACHINE. WILLIAM H. MCKENZIE, Oakland, Calif. Filed Oct. 10, 1918. Serial No. 257,605. 8 Claims. (Cl. 73—51.)



1. In an apparatus for the purpose set forth, the combination of a head plate adapted to support a fitting to be tested, means for raising and lowering said plate and

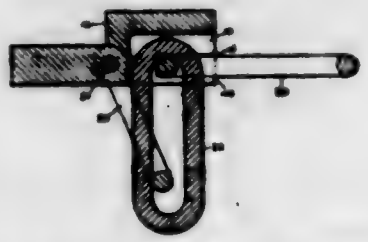
maintaining the plate in its elevated position, and flexible means for conveying fluid under pressure through the head plate to the fitting and withdrawing said fluid therefrom.

1,298,237. TELEPHONE SYSTEM. JAMES L. MCQUARRIE, Montclair, N. J., and CHARLES L. GOODRUM, New York, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 21, 1917. Serial No. 203,092. 19 Claims. (Cl. 179—27.5.)



1. In a telephone system, a telephone line, trunk selecting means, means for extending said line thereto, a group of trunks terminating in said trunk selecting means, a group of switches, each one permanently associated with one of said trunks, a plurality of common stepping devices, means for moving any one thereof into position to engage and actuate any one of said switches, and means for rendering one of said trunks non-selectable to said selecting means when none of said devices are operatively associated with the corresponding switch.

1,298,238. MINING-CAR COUPLING. NICHOLAS MANDARACH, Vincennes, Ind. Filed Oct. 7, 1918. Serial No. 257,204. 4 Claims. (Cl. 213—56.)

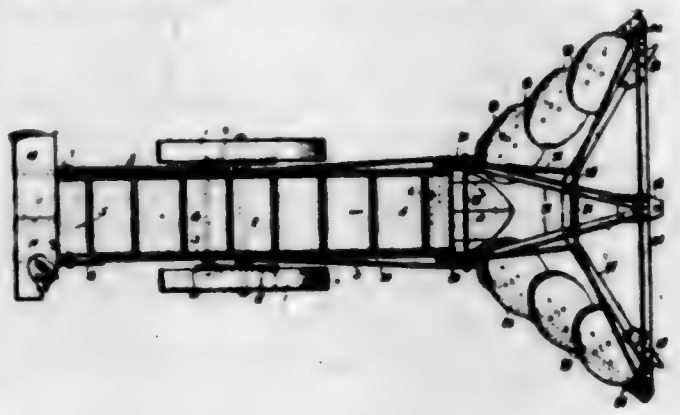


1. Coupling mechanism for cars including a chain coupling member, a draw bar to which one end of said coupling member is attached and provided with means for holding the outer link of said coupling member in horizontal position and projecting outwardly substantially for the purpose set forth.

1,298,239. STONE-GATHERER. THOMAS R. MANDERSCHEID, Terrebonne, Oreg. Filed May 7, 1918. Serial No. 233,098. 4 Claims. (Cl. 55—17.)

1. In a stone gatherer, the combination with a main framework mounted on wheels, a scoop carried at the lower end of the framework, and means for elevating and delivering the material received by the scoop; of bars extending obliquely forward from said main frame, and shovels and disks on said bars for gathering stones at and near the earth's surface and passing them back to said scoop.

2. In a stone gatherer, the combination with a main framework mounted on wheels, an upwardly moving endless carrier disposed in said framework and driven by the rotation of the wheels, and a scoop carried at the lower end of the framework and delivering stones to the carrier; of bars extending obliquely forward from said main frame, and shovels and disks on said bars for gathering stones at and near the earth's surface and passing them back to said scoop.



3. In a stone gatherer, the combination with a main framework mounted on wheels, an upwardly moving endless carrier disposed in said framework and driven by the rotation of the wheels, and a scoop carried at the lower end of the framework and delivering stones to the carrier; of bars extending obliquely forward from said main frame, a cross-bar connecting their forward ends, a tongue connecting the main frame with said cross bar and carrying means for attaching the draft, shovels near the ends of said cross bar, and means on said oblique bars for passing material from the shovels rearwardly to said scoop.

4. In a stone gatherer, the combination with a main framework mounted on wheels, an upwardly moving endless carrier disposed in said framework and driven by the rotation of the wheels, and a scoop carried at the lower end of the framework and delivering stones to the carrier; of brackets carried by the front end of said main framework, posts upstanding therefrom, a skeleton framework structure also carried by said brackets, means thereon for gathering said stones and delivering them to said scoop, and guy members connecting the main framework with the upper ends of the posts and the latter with said skeleton framework, for the purpose set forth.

1,298,240. TOY CONSTRUCTION. LEVERETT AUGUSTINE MANWARING, Middletown, Conn. Filed Oct. 1, 1918. Serial No. 256,284. 1 Claim. (Cl. 46—35.)



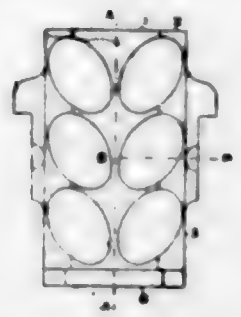
A set of building pins composed of three pins, one pin having the two ends similar and each end being of square cross section and provided with two cross slots that extend inwardly from the butt end, the two slots being positioned at right angles, one to the other, a second pin having one end similar to the two ends of the first mentioned pin and having the other end of wedge form, and a third pin being similar in formation at the two ends, and such formation being of wedge form.

1,298,241. TENSION-GATE. PAUL E. MARTIN, township 6 south, range 6 east, Custer county, S. D. Filed Jan. 28, 1919. Serial No. 272,700. 2 Claims. (Cl. 39—74.)



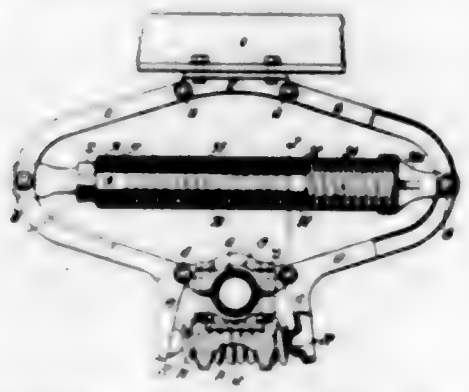
1. In a device of the character described the combination with a gate comprising a plurality of wires and a bar of a loop adapted to embrace a post, a tensioning device comprising a fixed part secured to said bar and a part hinged thereto, the pintle of the hinge lying horizontally upon and transversely of the top of said bar, said second part comprising a handle extension and a loop engaging hook, the latter lying much closer to the hinge pintle than the handle extension.

1,298,242. JOURNAL-BEARING. ALFRED GEORGE MEADEN, Montreal, Canada. Filed Jan. 24, 1918. Serial No. 213,443. 3 Claims. (Cl. 64—20.)



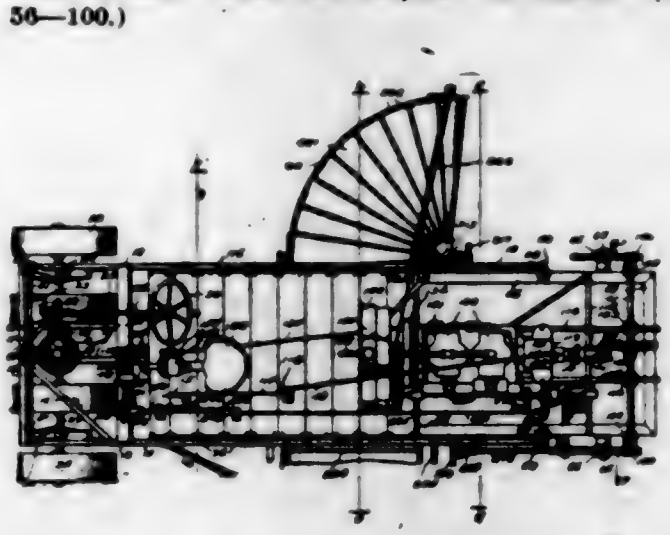
3. A journal bearing comprising a bearing member, the upper surface and beveled portions of which are cut away by ellipsoidal concavities on either side of the central line and said concavities having their major axes slanting inwardly toward the flanged end of the member.

1,298,243. VEHICLE-SPRING. CARL A. MILLER, Los Angeles, Calif. Filed Nov. 8, 1916. Serial No. 130,106. 1 Claim. (Cl. 267—8.)



A vehicle spring, embodying an upper and a lower seat adapted to be mounted on a vehicle frame and axle, respectively, two pairs of links connected to said seats, the links of each pair being pivotally connected together and being pivotally connected one to the upper seat and one to the lower seat, the four links normally lying in a substantially diamond configuration, a downward extension from the lower link of each pair, a compression spring carried by the lower seat and adapted to be engaged between the extensions after a certain amount of movement of the links, and a resilient element connected between the points of connection of the links to each other, embodying a spring containing tube connected at one end to one of said points, a plunger in the tube with its outer end connected to the other of said points, a head on the inner end of the plunger within the tube closer to the first mentioned end of the tube than to the other, heads for the tube one of which includes a packing gland surrounding the plunger and is adjustable in position in the tube, and two compression springs one long and one short confined between the plunger head and the tube heads.

1,298,244. TRACTOR-HARVESTER. STANLEY G. MILLER and DORCY OLEN DE WITT, St. Paul, Minn., assignors to The General Machinery & Investment Company, St. Paul, Minn., a Corporation of Minnesota. Filed June 5, 1916. Serial No. 101,660. 22 Claims. (Cl. 56—100.)



1. The combination in a tractor harvester of a gear frame, a steering frame pivotally connected therewith, an endless belt traction device carried on the gear frame, a harvester main frame mounted in the gear frame and extending longitudinally at right angles to the forward line of advance of the gear frame, the said harvester frame comprising a cutter bar, and an elevator or transporting frame secured to the said cutter bar, the latter being interposed in the gear frame between the upper and lower runs of the said endless belt traction device on the gear frame and being adapted to discharge material harvested by the machine on the side of the gear frame opposite to that on which the cutter bar is arranged.

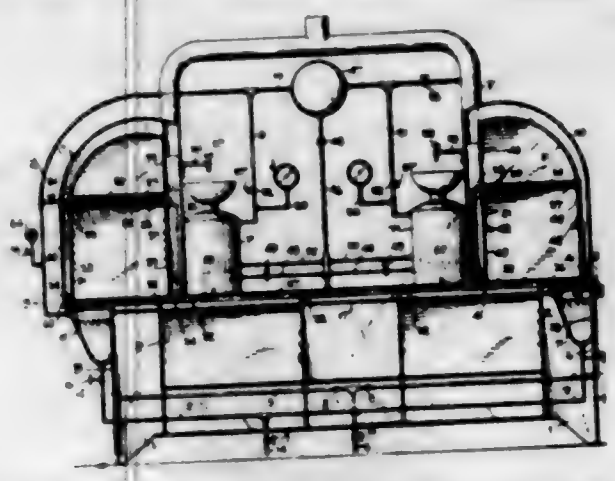
5. In a harvester tractor, the combination with a gear frame, of an endless belt traction device mounted on the gear frame and being adapted to support the same, a motor mounted on the gear frame, a main frame carrying harvester mechanism pivotally mounted in the gear frame and being interposed between the upper and lower runs of the endless belt traction device, means for operating the endless belt traction device from the motor, and independent means for operating the harvester mechanism from the motor.

10. In a harvester tractor, the combination with a gear frame, of an endless belt traction device connected therewith, a steering frame having a pivotal connection with the gear frame, means for lifting the free end of the gear frame from the steering frame, a motor on the gear frame, driving connections between the motor and the endless belt traction devices, a harvester main frame mounted in the gear frame and overlying and extending across one of the runs of the endless belt traction devices, a harvester cutting device connecting to the harvester main frame and extending therefrom at right angles to the direction of movement of said endless belt traction devices, and a swathing device pivotally connected to the said harvester main frame and extending laterally therefrom on the opposite side of the endless belt traction devices from the said harvester cutting device.

1,298,245. STOVE. WILLIAM H. MITCHELL, Chicago, Ill. Filed Dec. 1, 1917. Serial No. 204,882. 1 Claim. (Cl. 126—5.)

A stove comprising a hollow base, the bottom of the base adjacent the opposite ends being opened for the admission of air within the base, heat generating means

arranged within the base, communicating boilers supported by the base, one of said boilers being positioned therein, a flue in communication with the base, a steam pipe leading from one of the boilers and in communication



with the flue, branch pipes in communication with the steam pipe, valves interposed in the branches, and a valve interposed in the steam pipe for controlling the flow therethrough into the flue.

1,298,246. NEEDLE ACTUATING AND SHOGGING MECHANISM FOR BLINDSTITCH SEWING-MACHINES. HARLEY C. MOULTON, Dorchester, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed Sept. 8, 1915. Serial No. 49,622. 18 Claims. (Cl. 112—24.)



1. In a blind stitch sewing machine comprising a bed plate, an overhanging arm and head, a main shaft in said arm and head, a pivotally mounted needle bar carrying a curved needle, a needle bar actuating lever pivotally mounted in and inclosed within said head, means connecting said needle bar actuating lever to said needle bar and means connecting the main shaft to said needle bar actuating lever for oscillating the latter.

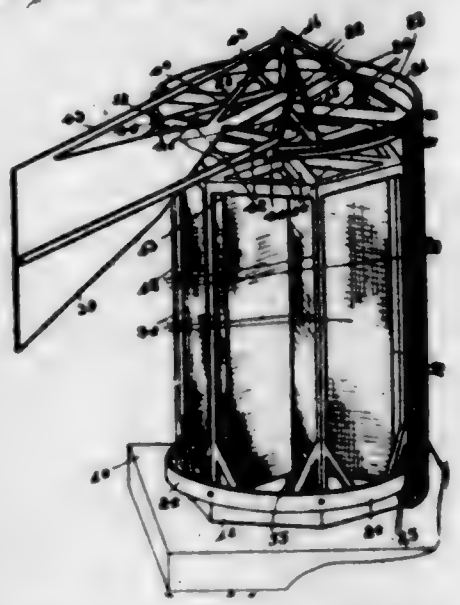
2. In a blind stitch sewing machine a curved needle, a pivotally mounted needle bar, a needle bar actuating lever, means for adjusting the pivotal support of said needle bar actuating lever.

6. In a blind stitch sewing machine comprising a curved needle and an oscillating needle bar carried by a needle bar supporting lever pivotally mounted in the head of the machine, means for vibrating the needle laterally actuated by mechanism within the head of the machine consisting of a cam, a link having cam engaging means and guiding means adapted to permit reciprocation and oscillation of said link in respect to the shaft of said cam.

9. In a blind stitch sewing machine comprising a bed plate, an overhanging arm and head, a main shaft rotatably mounted in said arm extending into said head, a stud carried by said main shaft eccentrically of its axis, a needle bar supporting lever pivotally mounted in said head, a needle bar having a curved needle pivotally mounted upon said needle bar supporting lever, a needle bar actuating lever pivotally mounted in said head and extending transversely thereof, means connecting said needle bar actuating lever to said needle bar and means for oscillating said needle bar actuating lever from said stud.

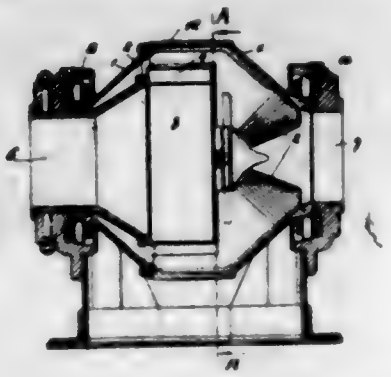
17. In a sewing machine having a vibratory instrumentality, means for actuating the same comprising a cam, a cam shaft, means for actuating said cam shaft, a cone adjustably mounted upon said cam shaft and a link pivotally secured to said vibratory instrumentality having means engaging said cam and means engaging said cone whereby wear may be taken up by adjustment of the cone upon the cam shaft.

1,298,247. WINDMILL. JOHN P. MULLER, San Fernando, Calif. Filed July 10, 1918. Serial No. 244,186. 2 Claims. (Cl. 170—15.)



1. In a wind mill of the class described, a main frame, a concentric bearing provided at the top end of the main frame, a track ring provided on the outside near the base of the main frame encircling the main frame in a practically horizontal plane, a wind shield of the size to incase a segment of the main frame from the base to the top end, a rotating frame mounted on the top bearing of the main frame for rotating movement in a practically horizontal plane, the wind shield being secured to the rotating frame at its upper edge hanging with its free end downwardly practically perpendicularly, one double roller provided on each corner at the lower end of the wind shield, and a suitable number of spring-actuated rollers provided at suitable places between the double rollers near the lower edge of the wind shield, all rollers in a position to engage with the track ring on the main frame.

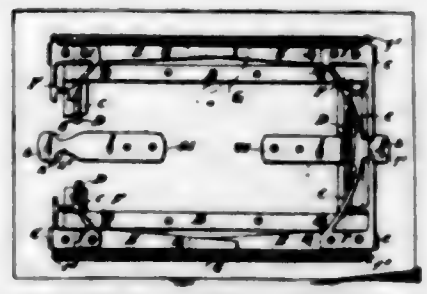
1,298,248. CENTRIFUGAL PUMP. HENRI ARNOLD JOHANNES DE BIJLL NACHENIUS, Haarlem, Netherlands. Filed Aug. 21, 1917. Serial No. 187,505. 5 Claims. (Cl. 103—43.)



1. In a centrifugal pump, a casing rotatable on its axis, a stationary delivery branch located within the cas-

ing and having an axial outlet opening, a stationary guide body having a tangential inlet opening, and a duct extending from the inlet opening to the outlet opening, the wall of the duct being constructed and arranged to gently change the flow of the fluid from a tangential to an axial direction.

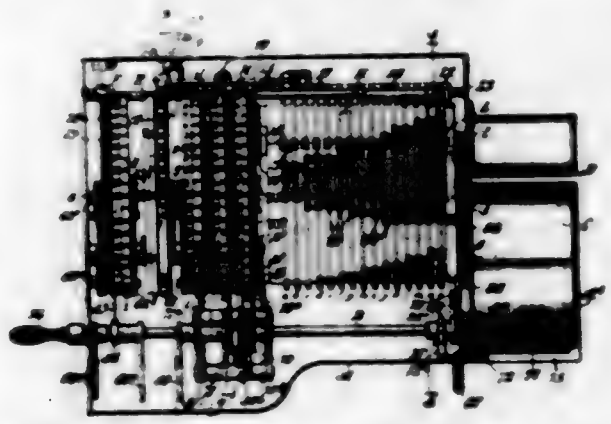
1,298,249. FOLDING-LEG FURNITURE. JOHN CHRISTOPHER NICHOL, Perth, Ontario, Canada. Filed July 5, 1918. Serial No. 243,461. 2 Claims. (Cl. 45—11.)



1. In folding-leg furniture, the combination with a top as a base, of a rectangular frame secured to it, a transverse pivot rod at each end passing through the sides of said frame near the ends and some distance from the top, a pair of legs at each end mounted upon the projecting ends of said rod and having their upper ends extending beyond the pivot and close to the top and said ends rounded to clear said top, a transverse connecting piece bracing the upper parts of each pair of legs, said connecting piece formed with a recess in the upper edge and having laterally projecting lugs near the top, a tension-spring on each side secured upon said lugs and linking the two end frames together, and a notch plate-spring near each end secured to the top and having a neck and shoulders engaging the recess in the connecting brace and forming a lock to hold the legs in position, substantially as set forth.

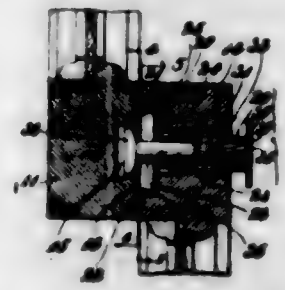
2. In folding-leg furniture, the combination with a base, such as a table top, of side rails secured to the underside of said base, transverse rods passing through said rails near their ends and some distance from the base, legs mounted upon the projecting ends of said rods having their ends extended beyond the pivot center and rounded to swing clear of the base, a brace connecting the upper ends of each pair of legs, said brace formed with a recess in the top edge and with laterally projecting lugs, tension springs secured to the lugs of opposite pairs and a plate spring secured to the base and having neck and shoulders engaging the connecting braces and forming a lock to keep the legs in position, substantially as set forth.

1,298,250. CLOTH-MEASURING MACHINE. JOHN J. NOONAN, St. Louis, Mo. Filed Feb. 26, 1918. Serial No. 219,193. 42 Claims. (Cl. 33—129.)



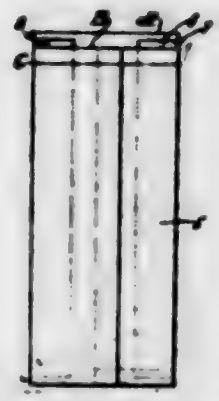
1. A cloth measuring machine provided with a housing having a sight opening, a roll that turns during the operation of passing cloth through the machine, a quantity indicator operating in conjunction with said roll and provided with characters that move progressively into alinement with the sight opening in said housing, said indicator being hidden from view by said housing, and a price computing mechanism operating in conjunction with said roll and comprising accumulater wheels equipped with characters or symbols arranged so that only those characters which represent the sale price of the piece of cloth measured will be exposed to view at the termination of the measuring operation.

1,298,251. AUTOMATIC LOCK FOR WINDOWS. ZYGMUNT PEHEL, New York, N. Y., assignor of one-half to Julian Stryckowski, New York, N. Y. Filed Nov. 10, 1916. Serial No. 130,521. 1 Claim. (Cl. 16—143.)



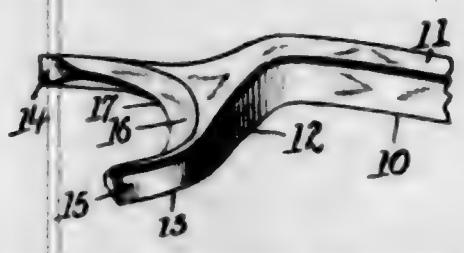
In a device as described, in combination, a window sash having an opening through one side thereof and having an enlarged portion at the opposite side thereof, an annular casing fitting snugly in said enlarged portion of said opening and having a cylindrical sleeve projecting concentrically into said opening, said casing being secured against displacement from said sash, a tubular element snugly and slidably fitting said opening and telescoping over said sleeve, said element having a reduced hollow stem, a bolt projecting into said sleeve and into said hollow stem, a disk formed upon the outer end of said stem, providing a handle and secured to said bolt, a spring coiled around said bolt, fitting said tubular element and bearing respectively against the inner edges of said sleeve and reduced stem, and a T-shaped head formed terminally upon said bolt, said spring normally disposing said head within said casing and spacing said disk outwardly from said sash, and coöperating locking means upon an adjacent sash adapted to be engaged by the T-shaped head on the bolt.

1,298,252. PAPER BAG. JAMES PERRY, Somerville, Mass. Filed July 11, 1917. Serial No. 179,821. 1 Claim. (Cl. 229—58.)



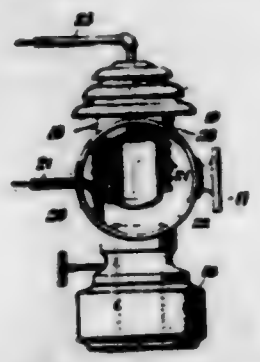
A bag comprising a sheet of paper folded to form an obvious portion, a reverse portion and two side portions, said side portion being folded toward each other to form a V between said obverse and reverse portions, said reverse portion at one end thereof extending beyond said obverse portion and said side portions terminating intermediate the ends of said obverse and reverse portions, the portions of said reverse portion and said side portions which extend beyond said obverse portion being folded over upon said obverse portion along the end edge thereof and attached thereto by adhesive material to close the end of said bag and form a bottom therefor, the end of said obverse portion terminating along the line of fold.

1,298,253. TOOL FOR REMOVING OVERHEAD-VALVE CAGES OF INTERNAL-COMBUSTION MOTORS. CARL E. PETERSON, Irvington, N. J. Filed Aug. 17, 1918. Serial No. 250,301. 2 Claims. (Cl. 29—87.1.)



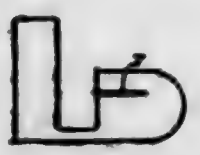
1. A lever tool for removing valve cages of overhead valves of internal combustion motors, said tool comprising a handle, a yoke-shaped head comprising a pair of prongs sharpened substantially to knife edges on their inner faces, one of said knife edges being vertically offset in height with respect to the other.

1,298,254. HEATER FOR WATER-COOLED ENGINES. HENRY F. PHILLIPS and HOMER V. DEAN, Spokane, Wash. Filed Dec. 14, 1916. Serial No. 137,022. 2 Claims. (Cl. 122—250.)



1. An apparatus of the class described comprising a water tank, a pipe leading into the lower end of the tank through the side wall thereof and adapted to be connected into the feed end of an engine water cooling system, a pipe leading from the top of the tank and bent to form a coil surrounding the tank and spaced laterally from said tank to form a circumferential heating chamber, the pipe at the lower end of the coil being carried upwardly on the outside thereof and adapted to be connected into the outlet end of the system, and means for heating the water in the tank.

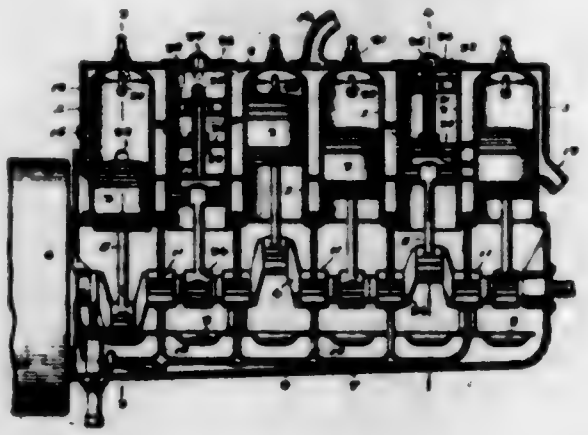
1,298,255. GUY-STRAND CAP. CHESTER R. PIERCE, La Crosse, Wis., assignor to The Gund Manufacturing Company, La Crosse, Wis., a Corporation of Wisconsin. Filed Jan. 18, 1917. Serial No. 143,034. 1 Claim. (Cl. 16—128.)



As an article of manufacture, a guy strand cap comprising a thimble having an open end and a closed end, the wall of said thimble having corrugations therein extending longitudinally thereof and spiraling said thimble at substantially the same angle as the wires comprising the outer layer of the guy strand to which it is to be applied are spiral.

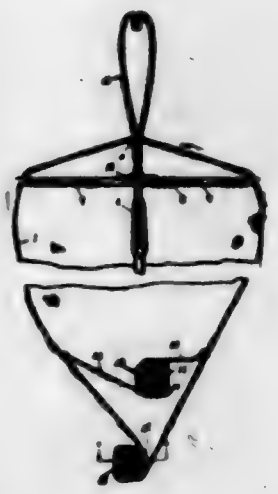
1,298,256. INTERNAL-COMBUSTION ENGINE. ABBA A. PROSSITT, Gibson City, Ill. Filed Aug. 5, 1918. Serial No. 248,434. 8 Claims. (Cl. 123—59.)

1. In a multiple cylinder internal combustion engine, the combination of a pair of power cylinders, a charging cylinder arranged between and adjacent to said power cylinders, a crank shaft to which the power pistons are connected at approximately one hundred and eighty degrees offset, a double charging piston operatively connected to said crank shaft at a ninety degree offset from the power pistons, and a partition in the charging cylinder, the charging piston having two heads working at opposite sides of said partition, said charging piston operating in



one stroke to draw in a charge of explosive mixture and at the same time expel another charge into one power cylinder and in the return stroke to draw in another charge of explosive mixture and at the same time expel a charge into the other power cylinder, and a compressed air tank in communication with one end of the charging cylinder beyond said charging piston.

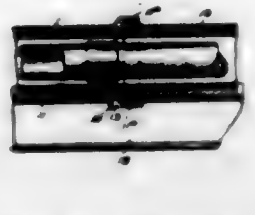
1,298,257. GARMENT-BAG. SILAS C. RAND, Chicago, Ill. Filed Jan. 25, 1918. Serial No. 213,713. 7 Claims. (Cl. 206—7.)



2. A garment bag formed of moth and dust excluding fabric open at the bottom, suspending straps disposed through the top of the bag, a suspending bar carried by said straps, the bar being spaced from the top of the bag so that a garment may be hung over the bar between the straps, said bar being provided with means with which a garment hanger may be engaged, a spreader disposed above said suspending bar, said bag being adapted to be collapsed above said spreader, and means for closing the mouth of said bag.

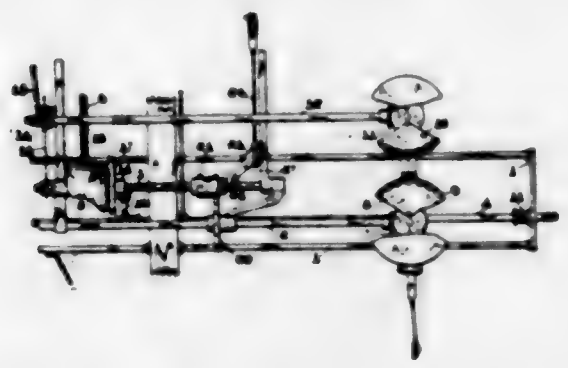
3. A garment bag formed of moth and dust excluding fabric open at the bottom, suspending straps disposed through the top of the bag, a suspending bar carried by said straps, the bar being spaced from the top of the bag so that a garment may be hung over the bar between the straps, said bar being provided with means with which a garment hanger may be engaged, said bag being collapsible longitudinally above said suspending bar to expose said bar and the garment hanger means, thereby facilitating the arrangement of garments and hangers thereon, and means for closing the mouth of said bag.

1,298,258. DRAINAGE SYSTEM. GLENDON A. RICHARDS, Grand Rapids, Mich., assignor to The Ric-Wil Underground Pipe Covering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 19, 1915. Serial No. 46,250. 1 Claim. (Cl. 137—75.)



In conduit systems, the combination with a sectional conduit having bell and spigot connections, of a sectional supporting drain therefor, the drain sections having a seat for the major portions of the conduit sections and being cut away on the line of the seat to accommodate the conduit bells, said cut away portions having a length and depth to intersect the interior of the drain and prevent surface contact of the conduit bells and drain sections, whereby said cut away portions will additionally act as passageways for drainage emanating externally of the conduit and in the vicinity of the bell and spigot connection, said conduit having a drainage opening leading through its walls, with the exit of said opening leading to a cut-away portion of a drain section.

1,298,259. CORN-PLANTER. OTTO G. RISSER, Toronto, Ontario, Canada, assignor to The Massey-Harris Company, Limited, Toronto, Ontario, Canada. Filed Mar. 22, 1916. Serial No. 86,022. 2 Claims. (Cl. 74—41.)



1. Gearing for a corn planter comprising a spur gear wheel; and a pinion, said pinion having a plurality of sets of similar teeth formed thereon on pitch circles of the same circumference but having a different number of teeth in each set, the teeth of any set being equally spaced on the pitch circle, and the pinion teeth and spaces between the gear wheel teeth being so proportioned as to give a material amount of lost motion; the rear sides of the gear wheel teeth also being concavely curved and merging into rounded outer ends.

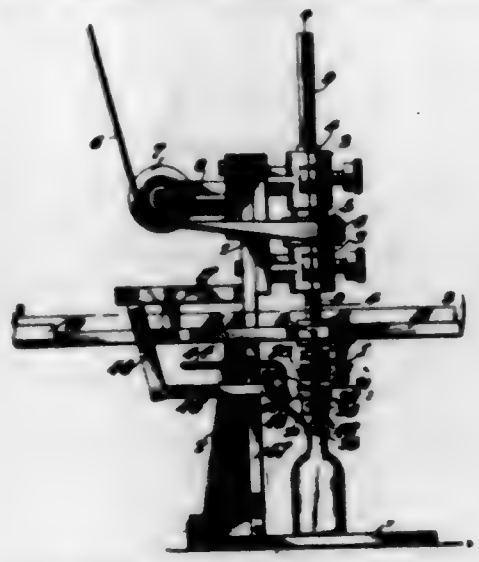
1,298,260. UNDERGARMENT. WILLIAM B. ROOD, Ware, Mass., assignor to Otis Company, Ware, Mass., a Corporation of Massachusetts. Filed July 18, 1912. Serial No. 710,162. 1 Claim. (Cl. 2—144.)

A union garment the body portion of which has an open front and is provided with a rear opening extending to about the middle of said body portion, or from a point well above the waist line downward to the crotch, said body portion having a front opening at the crotch and said garment having at its rear an inner and relatively narrow flap the free edge of which is practically straight and an outer and relatively wide flap overlapping said inner flap, said flaps being stitched to the body of the garment at the edges of said rear opening, said flaps having overlapping upturned loose lower parts, each stitched at one edge to one edge of the garment at said front opening of the crotch and said wide flap having its outer edge con-



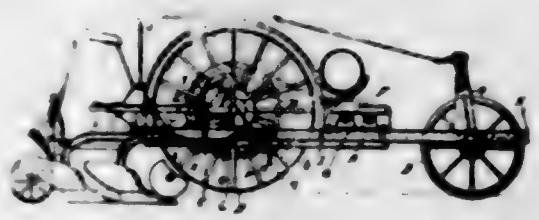
vex at the upper portion to form a wide seat piece and concave between said seat piece and the upturned point.

1,298,261. MACHINE FOR GRINDING GLASS STOPPERS. ISAAC L. SHOEMAKER, Bridgeton, N. J., assignor to The Cumberland Glass Mfg. Co., Bridgeton, N. J., a Corporation of New Jersey. Filed Apr. 22, 1918. Serial No. 229,968. 12 Claims. (Cl. 51—3.)



1. In a machine for grinding a glass stopper, a shaft adapted to be lowered, means for rotating said shaft, a spout for delivering abrasive material to the stopper at the mouth of a bottle, a movable support for said spout, and means for operating said support whereby said spout may be set in adjusted position.

1,298,262. TRACTOR. CLAUDE SINTZ, Detroit, Mich., assignor to Steel King Motor Plow Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 15, 1913. Serial No. 795,180. 5 Claims. (Cl. 180—14.)



1. The combination with a self-propelled tractor including a frame, a traction wheel and a steering wheel,

the dead weight on said frame being distributed with a predeterminedly limited load upon the steering wheel, of means for propelling the tractor reacting counter to the dead load on the steering wheel, a draft load, and an adjustable connection for said draft load to said frame constructed to transmit a force to the frame counter to the reactive force from the propelling mechanism and proportioned thereto to substantially neutralize the turning effect upon the same.

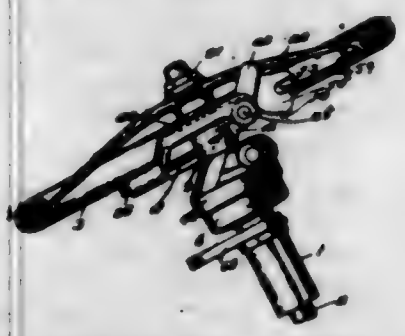
2. The combination with a self-propelled tractor, including the frame and wheel, bearings on said frame, a hollow axle for said wheel journaled in said bearings, arms arranged upon opposite sides of said frame and pivotally connected thereto, a shaft extending through said hollow axle, arms connected to the opposite ends of said shaft, links connecting the last-mentioned arms with the first-mentioned arms, a device having portions pivotally connected to the first-mentioned arms, and an adjusting lever forming an extension of one of the arms attached to said shaft.

3. The combination of a self-propelled tractor, including the frame and means for propelling the tractor, said means transmitting a force to the frame tending to move one end of the frame in a direction transverse to the tractive movement of the tractor, an arm pivotally connected to the frame, an adjusting lever, a link having its opposite ends respectively pivotally connected to said lever and to said arm, means for holding said lever in its different positions of adjustment, a load, and a connection between said load and said arm, the proportion of the parts being such that the reaction of the load substantially counterbalances the reaction of the tractor to maintain a substantially constant holding-down force.

4. The combination of a self-propelled tractor, including the frame, a driven wheel and means for driving the wheel, said means transmitting a force to the frame tending to move one end of the frame upwardly, a load, and a connection between the load and the frame constructed to transmit a force to the frame proportioned in relation to the first-mentioned force and acting to oppose the same, said connection comprising arms connected to the frame upon opposite sides of the wheel and to which said load is attached, the proportion of the parts being such that the reaction of the load substantially counterbalances the reaction of the tractor to maintain a substantially constant holding-down force.

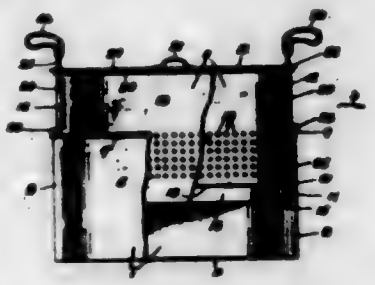
5. The combination of a self-propelled tractor, including the frame, a driven wheel and means for driving the wheel, said means transmitting a force to the frame tending to move one end of the frame upwardly, a load, and a connection between the load and the frame constructed to transmit a force to the frame proportioned in relation to the first-mentioned force and acting to oppose the same, said connection comprising arms upon opposite sides of the wheel and to which said load is attached and means for simultaneously adjusting said arms, the proportion of the parts being such that the reaction of the load substantially counterbalances the reaction of the tractor to maintain a substantially constant holding-down force.

1,298,263. STEERING DEVICE FOR AUTOMOBILES. RICHARD C. STONE, Muncie, Ind. Filed Dec. 8, 1917. Serial No. 205,200. 2 Claims. (Cl. 74—33.)



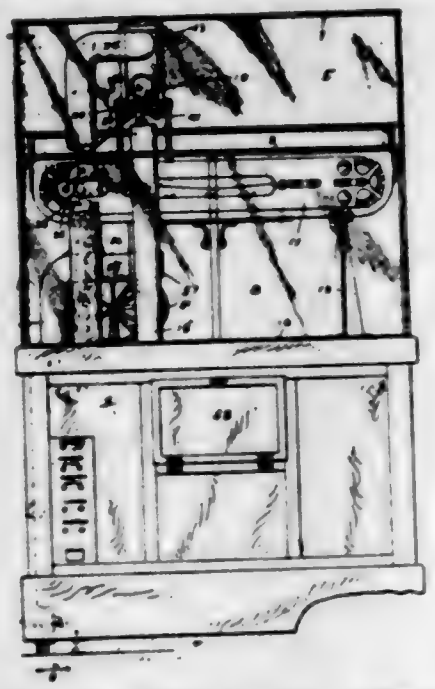
1. In a steering gear, the combination with a steering post having a stationary part at its upper end, a shaft projecting above it, and a steering wheel having an opening in its hub adapted to fit on the end of the shaft, of a member made in two parts, hinged together, and interposed between the end of the shaft and the wheel, one part having an opening corresponding to the opening in the hub of the wheel and fitting on the end of the shaft and the other part being movable with respect thereto, and having a portion engaging in the opening in the hub of the wheel and a flange with a notch and a projection extending outward at right angles to the depth of the notch, said flange adapted to enter a slot between two projections on the stationary part at the upper end of the steering post, the projection on said flange engaging under a shoulder, and means for locking said flange in said slot consisting of a sliding bolt adapted to enter the notch in said flange, whereby the wheel is retained in a displaced position and secured against removal.

1,298,264. WASHBOILER. FRANK H. TATJE, Metropolitan, N. Y. Filed Aug. 9, 1918. Serial No. 249,107. 1 Claim. (Cl. 68—30.)



A container of the class specified, comprising a casing open at the top and bottom, the bottom edge of the casing being provided with an upwardly directed flange spaced from the inner face of the casing to form an annular chamber, a perforated bottom provided with a downwardly directed annular flange adapted to be secured in said annular chamber to form a raised bottom for the casing, the walls of said casing being perforated at the bottom portion thereof, and rods rotatably mounted in the opposite end portions of the casing, said rods being provided centrally with lugs or projections and at the top thereof with handle members.

1,298,265. MEANS FOR SUPPLYING MATERIAL TO AND REMOVING IT FROM ROASTERS, POPPERS, AND THE LIKE. CHARLES A. TRIPP, Indianapolis, Ind., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind., a Corporation. Filed Oct. 16, 1917. Serial No. 196,920. 10 Claims. (Cl. 198—10.)



1. A machine for treating peanuts or like material, including a flexible non-collapsible tube for feeding the pea-

nuts from a source of supply to the mechanism of the machine for treating the same, the lower end of the tube adapted to rest on the surface of the peanuts, means for moving the supply of nuts in a circular path below the lower end of the tube, and means for exhausting air through said tube for elevating the peanuts through the tube.

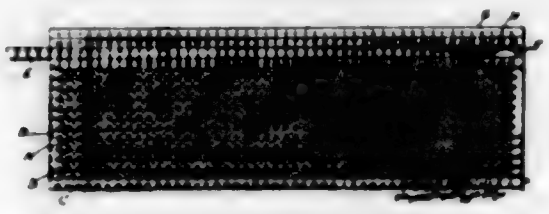
9. A machine for roasting peanuts or like material, including a casing having a transparent upper portion and non-transparent lower portion, a receptacle for the peanuts located in the lower portion and a floor for the upper portion located between the two portions of the casing, mechanism for roasting the peanuts horizontally disposed in the upper portion so as to leave a chamber between the same and the bottom of the upper portion for the roasted peanuts and having a discharge outlet near one end thereof, pneumatic means for elevating peanuts from the receptacle below to a position above said roasting mechanism for feeding the same to said mechanism, and pneumatic mechanism for blowing the peanuts discharged from said roasting mechanism horizontally to the opposite end of the receiving chamber for the roasted peanuts.

1,298,266. DOOR-LATCH. JOHN VAUDREUIL, Milwaukee, Wis. Filed Mar. 18, 1918. Serial No. 223,103. 1 Claim. (Cl. 70—119.)



In a latch of the class described, a casing, a bolt slidably mounted in the casing and provided with a longitudinal recess, a stop member for said bolt carried by the casing extending into the longitudinal recess and engageable with the rear end of the recess to limit forward sliding movement of the bolt, an adjusting screw slidably passed through the rear portion of the bolt and threaded in the stop member and a spring interposed between said adjusting screw and the forward end of the recess.

1,298,267. COMPUTING-TABLE. CLARENCE H. WALLACE, St. Helena, Calif. Filed Mar. 15, 1917. Serial No. 155,017. 4 Claims. (Cl. 235—61.)



1. As a means to facilitate calculating, a device which graphically or mechanically gives the numbers in the form of the integral exponents of a geometrical series of powers of 2, said series expressing any desired numbers the sum of which powers will give a series which is the product of the numbers so expressed.

2. As a means to facilitate calculating, a device which graphically or mechanically gives the numbers in the form of the integral exponents of a geometrical series of powers of 2, said series being capable of expressing any desired number the difference of which powers will give the quotient of the numbers expressed as a series.

3. In a device of the class described, means for graphically or mechanically representing any number as a geometrical series of the powers of 2 by means of locations predetermined by the series.

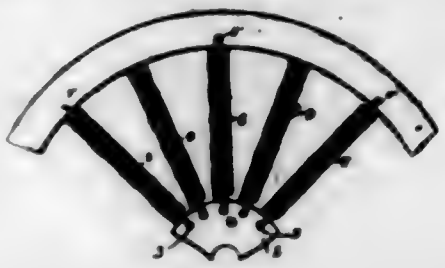
4. A computing device comprising a board divided by transverse, horizontal and diagonal lines with peg holes at intersections of the line, a transversely movable slide mounted in a slot in the board and having peg holes identified by numerals increasing in regular order in opposite directions, the horizontal lines of peg holes being designated from left to right by numerals from 1 upward, the peg holes at the bottom being designated by numerals in reverse order, the horizontal lines being designated at the left by numerals from 1 to 11 consecutively and the horizontal lines at the right of the board being identified to reversely arranged numerals from 11 to zero.

1,298,268. MARKING-TICKET. GUSTAF A. WALLIN, Scotch Plains, N. J., assignor to A. Kimball Company, New York, N. Y., a Corporation of New York. Filed May 4, 1915. Serial No. 25,832. 2 Claims. (Cl. 40—21.)



1. A marking ticket comprising a body portion of fibrous material having a transverse folding line, apertures in said body portion located at equal distances from said folding line and adapted to be superposed, a neck portion integral with said body portion and extending from one end of said body portion in alinement with said apertures and an aperture adjacent the end of said neck portion which by folding the neck portion may be caused to register with the apertures in the body portion and a fastening device which when passed through said apertures will secure the neck portion to the body portion in the form of a loop and will also secure the folded portions of the body together.

1,298,269. SPRING-WHEEL. JOHN R. WARREN, Commerce, Okla., assignor of one-half to Walter L. McCracken, Commerce, Okla. Filed Apr. 18, 1917. Serial No. 162,991. 1 Claim. (Cl. 152—32.)

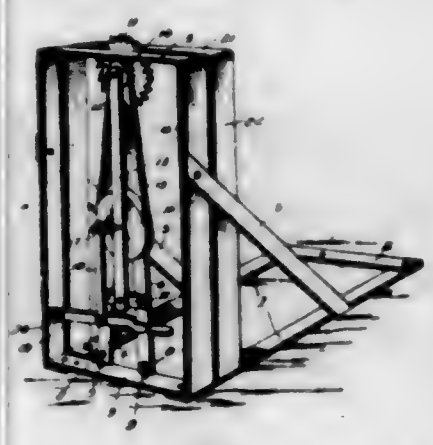


In an automobile wheel, a relatively short hub, having an annular flange mounted at each end thereof, a wide and a narrow rim section secured together whereby the said narrow section is centrally located with respect to the said wide rim section, each of channel like formation for providing annular flanges laterally spaced apart and of substantially the same diameter, the outermost flanges being spaced for a distance considerably greater than the distance between the flanges of the said hub, the latter being spaced for a distance substantially equal to the distance between the innermost flanges on the rim; in combination with resilient means comprising a plurality of coil springs connected to the said flanges on the hub and to the said flanges on the rim sections.

1,298,270. SAWING-MACHINE. CHARLES J. WEBORG, Pender, Nebr. Filed Oct. 12, 1918. Serial No. 257,867. 3 Claims. (Cl. 143—48.)

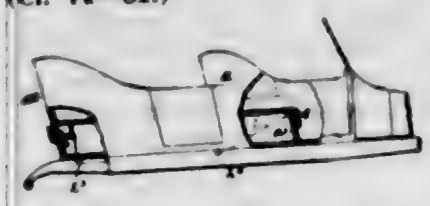
3. A sawing machine comprising a substantially rectangular main frame, an auxiliary frame rigid with one end of the main frame and extending at right angles thereto, a saw supporting standard detachably connected with the main frame and the auxiliary frame at their

connection and adapted to lie in the plane of the main frame or in the plane of the auxiliary frame, said



standard carrying a saw extending beyond the ends of the frames when the standard is in place.

1,298,271. OPERATING MECHANISM FOR SIGNALING APPARATUS. FRANK ALDRICH, Highland Park, Mich. Filed Apr. 2, 1917. Serial No. 159,083. 2 Claims. (Cl. 74—81.)



2. In an apparatus of the kind described, a signaling apparatus, a lever having a longitudinal groove in one of its surfaces, a cord connected to said signaling apparatus and to said lever within said groove, the parts being so constructed that the cord shall pass into the groove and beyond the pivotal point of the lever at one extremity of the throw of the latter, said signaling apparatus being adapted to produce a tension in said cord, substantially as and for the purpose described.

1,298,272. LATCH. CARL E. ANDERSON, Chicago, Ill., assignor, by mesne assignments, to White Products Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1916. Serial No. 120,616. Renewed Dec. 6, 1918. Serial No. 265,672. 8 Claims. (Cl. 70—82.)



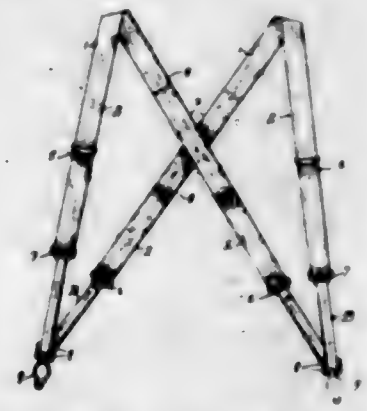
1. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; an abutment connected with the latch bar; a spring pressing against this abutment for operating the latch bar; a second abutment, the spring being interposed between the abutments; a pivoted link connected with the second abutment; a hand piece connected with the latch bar for operating it against the force of said spring; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch to permit the latch to be opened by the spring; and an additional link connecting the latter link with the hand piece.

1,298,273. WORKMAN'S IDENTIFICATION-BADGE. FREDERICK HOWARD AULD, Columbus, Ohio. Filed Apr. 15, 1918. Serial No. 228,773. 2 Claims. (Cl. 40—2.)



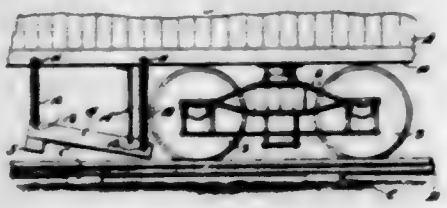
1. A workman's identification badge consisting of the combination of a body portion provided with an opening, a ring having a web and a headed portion to support a vignette inserted at one side of said opening, and a cup shaped member inserted in said ring at the opposite side of said body portion the circumferential wall of said cup shaped member and the web of said ring being bent over together toward said body portion to secure said parts together.

1,298,274. GARMENT-SUPPORTER. MAURICE H. AVED, Harvey, N. D. Filed Jan. 22, 1919. Serial No. 272,515. 1 Claim. (Cl. 241—12.)



A garment supporter comprising two straps crossed one over the other and adapted to be disposed over the shoulders of the wearer, bands connecting the adjacent extremities of the straps, and garment attaching members engaged with said bands, each of said straps comprising two sections of webbing, the inner end portions of the sections overlapping with the extremity of each section secured to the other section resulting in a loop, a wall of the loop of each strap being threaded through the loop of the second strap.

1,298,275. CAR-REPLACER. WILLIAM J. BALLARD, St. Joseph, Mo. Filed Jan. 5, 1916. Serial No. 70,507. 2 Claims. (Cl. 104—261.)

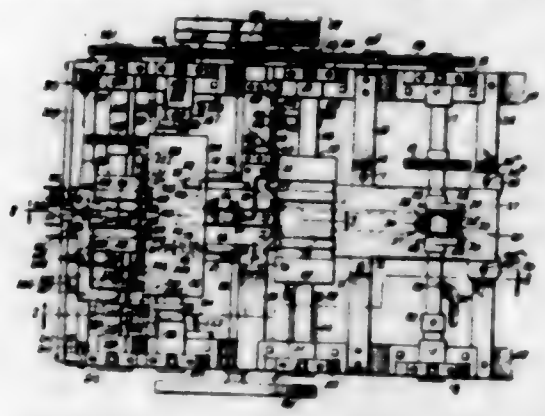


1. The combination with a car, of a replacer yieldably supported thereby, and means carried by the car for engaging the replacer to prevent lateral movement thereof in one direction.

2. The combination with a car, of a replacer comprising a body, means for yieldably supporting the body by

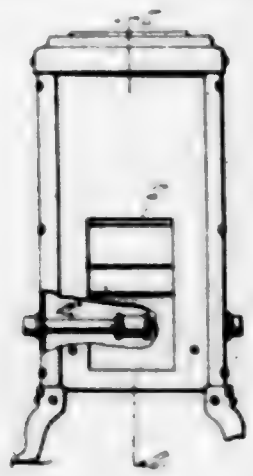
the car to hold the same normally in its inoperative position, said body having an inclined face at one end for engagement by the car wheels, an inclined surface carried by the upper surface of the body for laterally directing the wheels to the adjacent rail, and means carried by the car for engaging the body to prevent lateral movement thereof in one direction.

1,298,276. PAPER-BAG-MAKING MACHINE. PHINEAS L. BARTHOLOMEW, Aurora, Ill. Filed June 7, 1918. Serial No. 238,662. 14 Claims. (Cl. 93—15.)



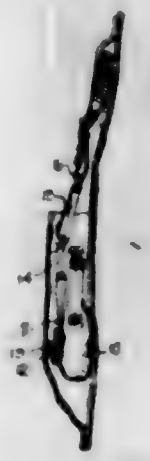
2. A gripper roll having a pair of pivotally mounted gripper fingers therein, said gripper fingers projecting outward through slots in said gripper roll and having overhanging gripping flanges at their outer ends, bell crank levers mounted in said gripper roll and each having a gripping dog adapted to be moved toward and from the gripping flange on the associated gripper finger, a link connecting one end of said bell crank lever with the associated gripper finger, a rock shaft to which said bell crank levers are connected, and means for rocking said shaft.

1,298,277. GAS-HEATER. BENJAMIN C. BARTLEBAUGH, Wheeling, W. Va. Filed Apr. 11, 1918. Serial No. 228,015. 2 Claims. (Cl. 126—86.)



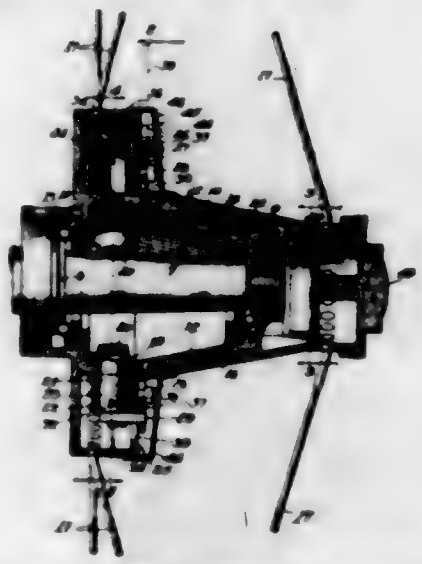
1. A gas heater comprising a casing closed at its upper end and divided by a pair of vertical partitions into a front, an intermediate and a rear channel, all communicating at their upper ends, the lower end of said rear channel being closed and the lower ends of said front and intermediate channels being open, a horizontal one-pipe burner at the lower end of said intermediate channel, said burner being adapted to supply hot air and unburned gases to said front and intermediate channels, so that the combined action of the two will force said hot air and gases downwardly in the rear channel, said intermediate and rear channels communicating at their lower ends immediately above said burner, a single gas supply pipe for said burner extending across the lower end of said rear channel and a single air mixer in said pipe located in said lower end of the rear channel whereby to supply the hot unburned gases and hot air from this channel to said burner with force.

1,298,278. SAFETY ATTACHMENT FOR PURSES. HARRY BASHINSKI, Macon, Ga. Filed Sept. 7, 1918. Serial No. 253,094. 2 Claims. (Cl. 24—3.)



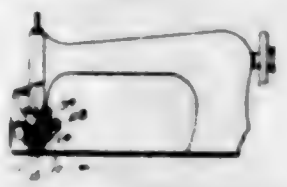
1. A purse having thereon a leather strip, the strip being provided with a coacting stud and snap socket, a ring through which the strip passes, a snap hook engaging the ring, and a leather loop adapted to receive a belt and engaging the snap hook.

1,298,279. DEMOUNTABLE WHEEL. LEROY BAUMGARTL and HENRY F. GASTON, Chicago, Ill.; said Gaston assignor to said Baumgartl. Filed Feb. 6, 1917. Serial No. 146,932. 14 Claims. (Cl. 21—31.)



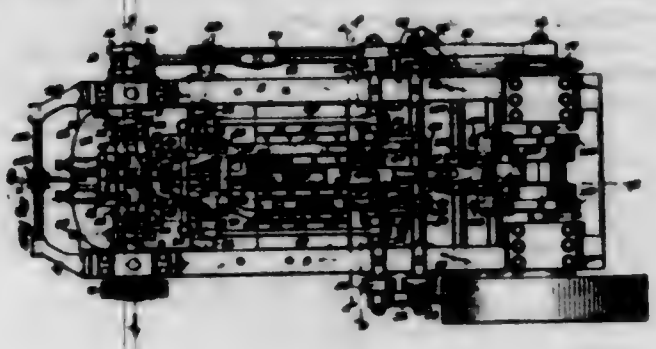
1. In a structure of the character set forth, the combination of an inner hub-member and an outer hub-member, one of which contains a socket and the other a plunger adapted to be moved into and out of said socket, and means for insuring a tight fit between said plunger and socket regardless of slight variations in proportions of the interfitting parts of the structure.

1,298,280. SEWING-MACHINE ATTACHMENT. WILLIAM H. BAYNARD, Braintree, Mass., assignor to Beckwith Box Toe Company, Dover, N. H., a Corporation of Maine. Filed Aug. 27, 1917. Serial No. 188,514. 12 Claims. (Cl. 112—20.)



1. An attachment for sewing machines, comprising a lubricant holder adapted to be arranged in the path of the needle, and means for connecting the said holder to the needle bar for moving said holder in lines longitudinal of the path of the needle.

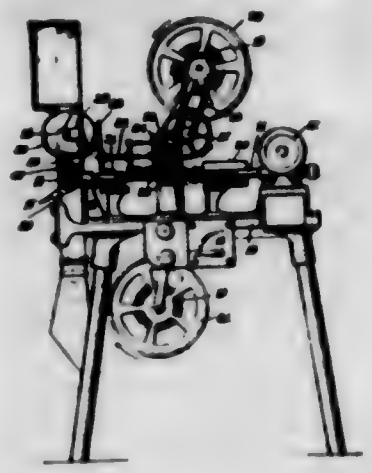
1,298,181. SPIKE-MACHINE. LAURENCE J. BERKELEY, Racine, Wis., assignor to Hercules Manufacturing Company, Racine, Wis., a Corporation of Wisconsin. Filed Jan. 7, 1918. Serial No. 210,599. 19 Claims. (Cl. 10—58.)



1. In a spike machine the combination of rolls provided with opposing dies, means for simultaneously rotating said rolls in opposite directions step by step, reciprocating jaws movable alongside the roll dies with which they form a pass and coöperate to form the points and bodies of spikes, means for advancing said jaws simultaneously with the intermittent advance movement of the roll dies, and means for opening the jaws at the beginning of their backward movement and closing them at the beginning of their advance movement against the spike blank between the roll dies.

18. In a spike machine the combination with gripping dies, means for opening and closing said dies, a reciprocating bar provided at one end adjacent to the gripping dies with a swaging die, rockers supporting and guiding said bar, the rocker adjacent to the swaging die being adjustable transversely to the axis of the bar and to the axis on which the rocker swings, and a crank directly connected with the other end of said bar for imparting a reciprocating movement thereto.

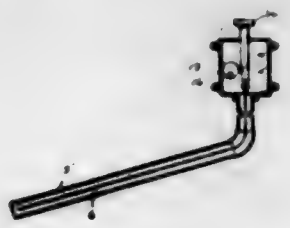
1,298,282. MOTION-PICTURE-TRANSPOSING APPARATUS. GIANNI BETTINI, Paris, France. Filed Nov. 16, 1916. Serial No. 131,680. 6 Claims. (Cl. 88—24.)



1. A motion picture transposing apparatus for photographically printing a series of images between a plate-like image member having a substantial number of successive transverse rows of images, and a second image member having a different arrangement, the same including in combination with the optical means and drive means, connections for advancing the second member relatively to the optical means, and mechanism for carrying and moving the first member in synchronism with the second member, comprising clutch connections for shifting the image member transversely from image to image along each successive row, clutch connections for gradually advancing the member bodily longitudinally to bring row after row into optical position, and a controller acting at the end of each row to unclutch the first connections and clutch the second connections for the period of one shift.

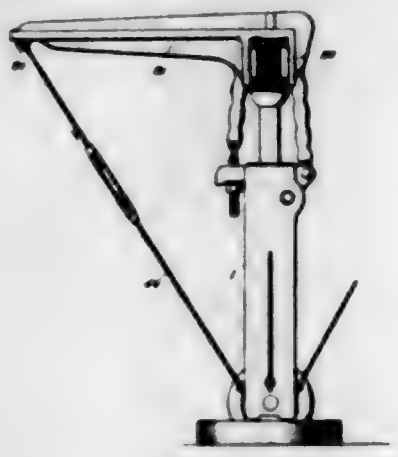
6. A motion picture transposing apparatus for photographically printing a series of images between an image plate having a substantial number of successive transverse rows of images, and a second image member having a different arrangement, the same including in combination with the optical and drive means, connections for advancing the second member relatively to the optical means, connections for shifting the plate transversely from image to image along each successive row, and connections for gradually advancing the plate longitudinally to bring row after row into optical position, comprising a clutch, means for closing the clutch for one action at the end of the row, a cam turned by the clutch, a plate engaging means or finger, and a device for disengaging the finger, all arranged so that the cam causes the finger to engage and advance the plate, disengage and return.

1,298,283. LOCK FOR AUTOMOBILES OR POWER-DRIVEN VEHICLES. GEORGE A. BIGELOW, Portland, Oreg. Filed Oct. 1, 1917. Serial No. 194,128. 2 Claims. (Cl. 21—8.)



1. In a locking device for power driven vehicles, in combination with the transmission gear on the rear axle, of a pawl capable of meshing with the gear, a spring which tends to keep the pawl in mesh, a cable attached to one arm of the pawl, a case hardened tube surrounding said cable, a pull bar attached to the other end of the cable and locking means to engage the pull bar.

1,298,284. EMERGENCY JACK AND TRUCK FOR VEHICLES. SAMUEL A. BLAIR, Brooklyn, N. Y. Filed Feb. 16, 1918. Serial No. 217,569. 2 Claims. (Cl. 21—118.)

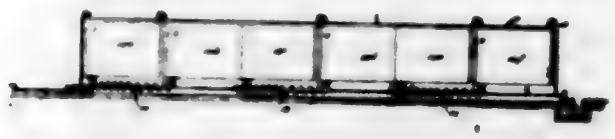


1. A truck device of the class described comprising a body, a rolling means at the bottom of the body for riding on the road surface, means on the body to engage under an axle, a flexible element connected with the body and adapted to extend over the axle to clamp the axle to the said last-mentioned means, an axle-engaging arm, and a guy member connected with the outer end of the arm and with the said body, whereby the body, arm and guy member form a triangular axle-supporting structure.

2. A truck device for a vehicle axle, comprising a body for supporting the vehicle, a wheel on the bottom of the body, and means for bracing the body with respect to

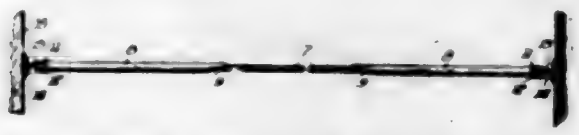
the axle, said means including an arm having one extremity shaped to straddle the axle with the arm extending outwardly at right-angles to the latter, and adjustable means between the outer end of the arm and the bottom of the body.

1,298,285. DRYING APPARATUS. HERMANS BOGATY, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 11, 1918. Serial No. 253,559. 11 Claims. (Cl. 34—46.)



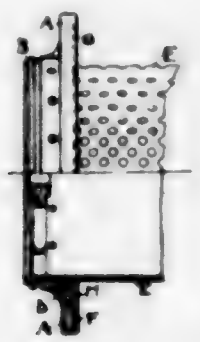
1. The combination in a drying apparatus, of a drying chamber; means for circulating air therein; a series of cars arranged to travel through the chamber; and a differential screw for moving the cars forward in the chamber.

1,298,286. ADJUSTABLE SASH-CURTAIN SUPPORT. JAMES H. BOYE, Chicago, Ill., assignor to James H. Boye Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1918. Serial No. 239,713. 4 Claims. (Cl. 156—19.)



1. An adjustable sash curtain support, comprising a flexible rod forming the intermediate section of the support, and tubular end sections, each of said end sections being formed with a side opening adjacent to its inner end through which said flexible rod may be inserted and withdrawn and with means for automatically gripping said rod when it is brought into alinement with the end section.

1,298,287. PERFORATED BEAM FOR DYEING AND LIKE APPARATUS. THOMAS BRANDWOOD, Walshaw, England. Filed July 19, 1917. Serial No. 181,471. 3 Claims. (Cl. 8—17.)

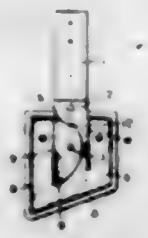


1. In a composite flange for beams for dyeing and the like, a heavy outer flange having an annular recess on its inner face, said recess being of considerably less diameter than the outer flange, and an inner flange of non-corrosive metal spun into the said recess in such a manner that it makes a liquid-tight joint with the outer flange and forms a flush surface with the inner face of said outer flange, substantially as described.

2. In a composite flange for beams for dyeing and the like, a heavy outer flange having an annular recess on its inner face, an inner and smaller flange of non-corrosive metal fitting in said recess and forming a flush surface with the inner face of the outer flange, and a groove or recess around the eye of the flange into which the inner edge of the inner flange may be spun or pressed to make a liquid tight joint, substantially as described.

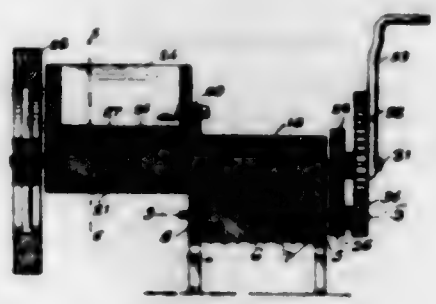
3. In a composite flange for beams for dyeing and the like, a heavy outer flange having an annular recess on its inner face, the walls of said recess tapering so that the bottom of the said recess is of greater diameter than the top, and an inner flange of non-corrosive metal spun or pressed into such recess, the tapering walls of the recess insuring a secure junction between the flanges, and a groove or recess around the eye of the flange into which the inner edge of the inner flange may be spun or pressed to make a liquid tight joint, substantially as described.

1,298,288. LOCK. HENRY S. BRILL, New York, N. Y. Filed Dec. 10, 1918. Serial No. 266,029. 3 Claims. (Cl. 70—3.)



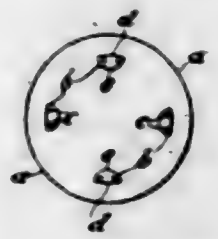
2. A lock comprising a plunger having a swinging double latch provided with a head and tail, a socket having an opening to permit the lengthwise insertion of the latch, and an inclined surface opposite the opening for swinging the latch crosswise of the opening to permanently unite the plunger and socket, one wall of the opening being yielding for permitting the tail of the latch to snap by the same as the plunger is inserted into the socket.

1,298,289. REDUCING-MILL. CLARENCE BYRD, Opp, Ala. Filed June 19, 1918. Serial No. 240,752. 3 Claims. (Cl. 83—14.)



1. In a reducing mill, a revoluble cutter, a rectilinearly movable member for directing the material to the cutter and having a face opposed to the cutter and concaved in eccentric relation thereto, the major portion of said concave face being unbroken and said member having a series of grooves formed in said concave face adjacent to the cutter, and means for adjustably positioning said member relative to the cutter.

1,298,290. DIAPHRAGM FOR TALKING-MACHINES. THOMAS CHALMERS, Crewe, England. Filed May 2, 1916. Serial No. 94,870. 6 Claims. (Cl. 181—32.)



1. A diaphragm comprising a thin disk having portions thereof of greater thickness than said disk proper, and said thickened portions being located between the center and the periphery of said disk.

6. A diaphragm comprising a thin disk having indentations formed therein, and a member filling each of said indentations rigidly secured to said diaphragm, said indentations being located between the center and periphery of the disk and arranged in circular form.

1,298,291. GOVERNOR FOR AIR-MOTORS. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 12, 1917. Serial No. 190,903. 3 Claims. (Cl. 230—36.)

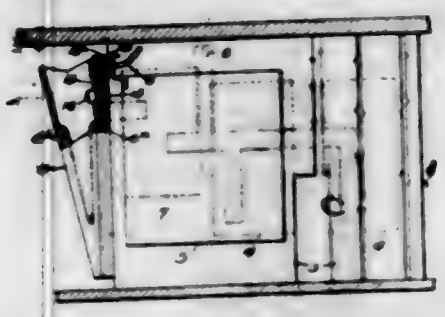


1. In combination with an air motor and exhaust devices by which it is operated, air connections from the exhaust devices to the motor comprising a main passage, a by-pass, a valve in the main passage and tempo controlling devices for operating that valve; a pneumatically operated valve in the by-pass having air connections from the exhaust devices for operating said pneumatically-operated valve in one direction and yielding means resisting its actuation in that direction, and means controlled by the tempo-controlling devices for controlling said last mentioned air connection with the exhaust devices.

2. In combination with an air motor and exhaust devices by which it is operated, air connections from the exhaust devices to the motor comprising a main passage and by-pass, a valve in the main passage and tempo-controlling devices for operating that valve, a pneumatically-actuated valve in the by-pass connection; air connections from the exhaust devices for actuating said last mentioned valve independent of the valve control in the air connection from the exhaust devices to the motor.

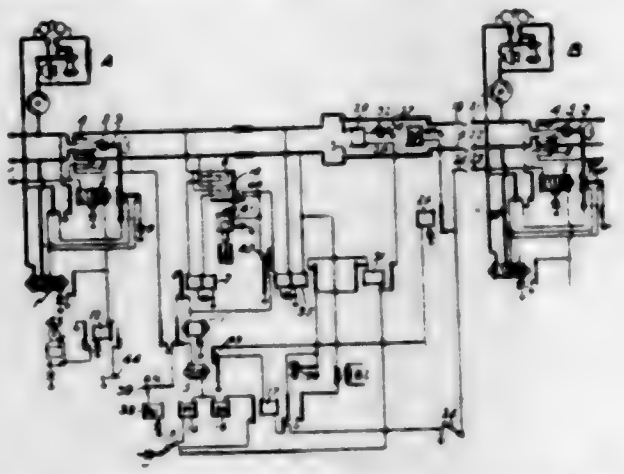
3. In a structure such as defined in claim 1, the means of controlling the exhaust connection with the pneumatic valve-actuating devices, comprising a partitioned chamber in the air conduit which connects said pneumatic devices with the exhaust devices, the partition having a narrow and elongated slot; a valve mounted for sliding longitudinally over said slot, having mechanical operating connections from the tempo valve operating means to said slot-controlling valve.

1,298,292. EXHAUST DEVICE FOR AIR-MOTOR-OPERATED PLAYER-PIANOS. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1917. Serial No. 208,764. 2 Claims. (Cl. 84—168.)



2. In an automatic player having a pneumatic player action and an air motor for actuating the note sheet, the combination with a vacuum chamber of the pneumatic action and the vacuum chamber of the air motor, an exhaust system comprising exhausting means, a high tension exhaust receiver connected with the exhausting means; a low tension exhaust receiver in communication with the exhausting means, the tensioning means of the high and low tension receivers respectively, being related as to tensioning capacity so that the low tension receiver remains collapsed until the high tension receiver is nearly fully expanded; conduits from said exhaust system to the vacuum chamber of the pneumatic player action and to the vacuum chamber of the air motor respectively; a valve which controls the communication of the low tension receiver with the exhausting means, and mechanical connections from the moving member of high tension receiver for opening said valve near the limit of the expansion of the high tension receiver.

1,298,293. TELEPHONE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 29, 1917. Serial No. 199,037. 14 Claims. (Cl. 179—18.)



9. In a telephone exchange system, a calling and a called subscriber's lines, switches for interconnecting said lines, means for locking said switches in an actuated position, variably operable means for controlling the last named means, and a signal actuated when said switches are locked.

1,298,294. BRIDGE FOR EYEGLASSES AND SPECTACLES. STEPHEN J. CLULEE, Attleboro, Mass. Filed Dec. 23, 1918. Serial No. 267,936. 1 Claim. (Cl. 88—43.)



As a new article of manufacture, a blank for a bridge for eye-glasses or spectacles, the same comprising in a single piece an oblong flat strip having a swelled intermediate portion, and circular convex enlargements adjacent the ends.

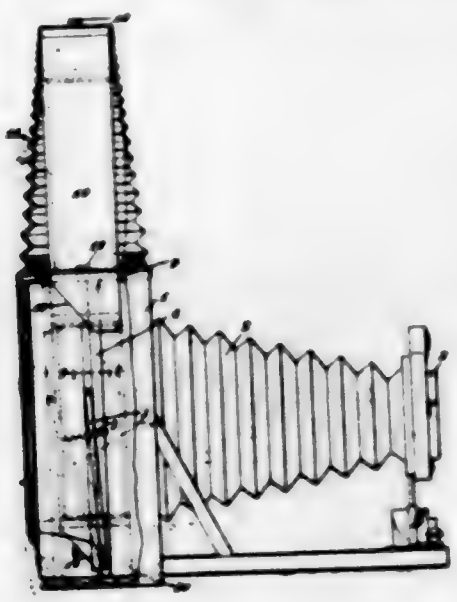
1,298,295. CUSPIDOR-CLEANER. OSCAR COHEN, New York, N. Y. Filed Feb. 28, 1918. Serial No. 219,662. 8 Claims. (Cl. 141—7.)



7. In a device of the character described, a handle provided at its lower end with means for detachably securing the same to a cuspidor, a guide casing hingedly secured to said handle so as to have its angle thereto varied, means for adjusting the angle of said casing relative to the handle, said guide casing being provided in its outer face with a guide and having an opening through its peripheral wall, a brush handle projecting

into the guide casing and operable through said opening, and a knob operable in the guide and secured to said handle so as to cause vertical and lateral movement thereof when said knob is moved.

1,298,296. CAMERA. ROBERT CAMERON COLWELL, Beaver Falls, Pa. Filed Dec. 12, 1917. Serial No. 206,807. 1 Claim. (Cl. 95—49.)



In a camera the combination with a case, of links within the case and pivotally connected to the lower portions of the sides thereof, a frame pivotally connected at its sides to the upper ends of the links, stop cleats within the case and upon the sides thereof, springs connecting the links with the sides of the case for holding the frame normally pressed against the cleats, a ground glass screen secured in the frame, a film holder slidably mounted in the top of the case and having a beveled lower end adapted, when the holder is moved into the case, to engage the upper end of the frame and shift said frame rearwardly out of the path of the holder, and a bellows connecting the case with the outer ends of the holder and constituting a housing for the holder.

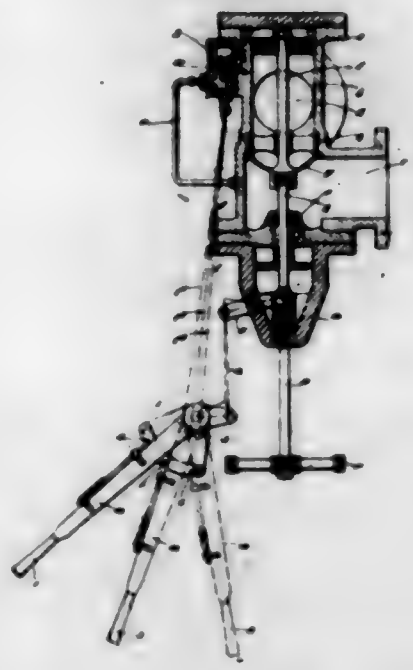
1,298,297. INSULATED WIRE. WILLIAM E. COOK, New York, N. Y., assignor to Insulation Development Corporation, a Corporation of New York. Filed Apr. 24, 1917. Serial No. 164,309. 7 Claims. (Cl. 173—264.)



1. Insulated wire embodying therein a conductor wire having a cotton sliver wound spirally about and compacted upon same with the edges of succeeding convolutions overlapped, and an outside binder therefor consisting of a continuous strand of absorbent material wound spirally about, and embedded in, said cotton sliver, said sliver and said strand being saturated or impregnated with a viscous material forming a bond between the fibers of said sliver and between said sliver and said binding strands.

7. An insulated wire embodying therein a conductor wire having a strip of ribbon consisting of cotton sliver folded upon and bonded to a flexible, absorbent strand wound spirally about same with the edges of succeeding convolutions overlapped, and an outside binder therefor consisting of a plurality of parallel, continuous strands of absorbent material, wound spirally about, and embedded in, said cotton sliver, and a binding medium between said conductor wire and said sliver, said sliver and said strands being saturated or impregnated with a viscous material forming a bond between the fibers of said sliver and between said sliver and said binding strands.

1,298,298. MARINE-ENGINE STOP AND CONTROL VALVE. RIDLEY COPELAND, Wallsend, England. Filed Sept. 16, 1918. Serial No. 254,199. 1 Claim. (Cl. 137—139.)



A stop and control valve comprising a casing, a cylinder in said casing, said cylinder being closed at one end and open to the said casing at the other end, a valve adapted to close the said open end of the cylinder, a piston adapted to work in said cylinder, the piston rod of said piston forming the stem of said valve, a steam inlet to said casing, a steam outlet from the cylinder to the engine, means for admitting steam from the casing to the back of the piston, means for shutting off the steam to the back of the piston, means for moving the said valve, means for keeping the valve in its closed position, said means for moving the said valve comprising an operating lever and a link connection, and said means for admitting steam to the back of the piston comprising a slide valve and a link connection with the said operating lever, the arrangement being such that the said slide valve can be opened and closed by the initial movement of said operating lever, the said valve being regulated by the secondary movement of the said operating lever without moving said slide valve.

1,298,299. ELECTRIC INCANDESCENT LAMP. JOHN H. DALE, New York, N. Y., assignor to Dale Lighting Fixture Co., Inc., a Corporation of New York. Filed Jan. 20, 1915. Serial No. 3,198. 1 Claim. (Cl. 176—16.)



An electric incandescent lamp comprising a chamber containing a filament element, a base for the lamp, a de-

pending annular skirt having openings secured to said base and constituting a cooling chamber and a vacuum chamber located between the skirt and the filament chamber.

1,298,300. FOOT-SCRAPER. JOHN K. DANIELS, St. Paul, Minn. Filed May 8, 1917. Serial No. 167,335. 5 Claims. (Cl. 21—55.)

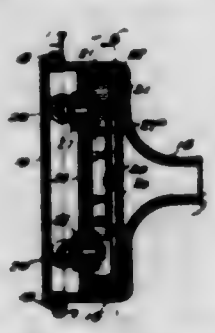


1. A foot scraper comprising a scraper blade of uniform width and thickness having its upper edge reduced to form a scraping edge and having its ends portions extended laterally of the blade in the same direction, then parallel to the blade in opposite directions, then laterally and upwardly in the same direction from the bottom edge to form U-shaped clamps offset from the blade, the arms of the U-shaped clamp thus formed being perforated to receive a bolt.

3. The combination with a sheet metal automobile platform having a downwardly extending flange along its edge, of a foot scraper formed of sheet metal and comprising a body portion having its upper edge beveled to form a scraper blade, U-shaped attaching means formed at opposite ends of said body portion and offset laterally therefrom and engaging the flange of the running board for attachment thereto, the arms of the U-shaped attaching means and the said flange being provided with registering perforations to receive attaching screws, and an upwardly extending ear formed on one arm of said U-shaped attaching means and clenched or bent over the top of the platform across the gap of the U-shaped portion.

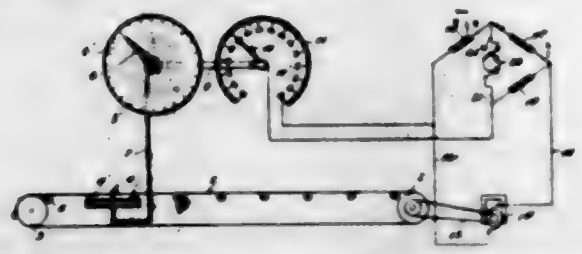
5. In combination with a platform, a foot scraper formed of a strip of metal adapted to be offset from the edge of the platform and rigidly held parallel thereto, with fastening means comprising as its essential feature a downwardly extending ear or projection formed on the metal strip, the downward projection being bent laterally and then upwardly into U-shape and engaging beneath the edge of the platform, and the upward projection being bent laterally and clenched down upon the upper surface of the platform so as to overlie the mouth of the U-shaped figure of the first projection, and prevent disengagement thereof.

1,298,301. WATER-HEATING SYSTEM. VIRGIL ELMO DAVID, Omaha, Nebr. Filed Apr. 1, 1918. Serial No. 226,018. 3 Claims. (Cl. 219—39.)



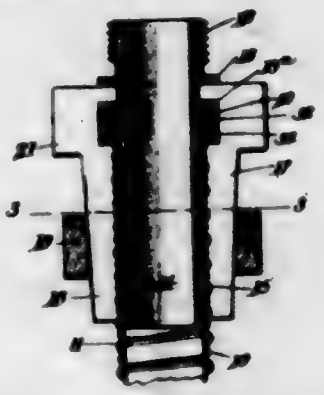
1. A water heating system, comprising an electrically controlled heater interposed in the system over which the water flows, said system having a valved discharge and having beyond the discharge a casing with which the system communicates, a diaphragm extending transversely of the casing, an electric switch controlled by the lateral movement of the diaphragm, and an electrical circuit having a source of energy for the heater and in which the switch is interposed for opening and closing the same, said switch being arranged to open the circuit when the diaphragm is moved laterally by the pressure of the water in the system and to close the circuit when the pressure is relaxed by the opening of the valve.

1,298,302. MEASURING INSTRUMENT. BENJES N. DAVIS, New Orleans, La. Filed Mar. 27, 1914. Serial No. 827,568. 2 Claims. (Cl. 265—28.)



1. An automatic weighing device for continuous conveyers comprising a scale for weighing the material carried by the conveyer as it passes a given point, an electrical meter, a circuit having two normally balanced branches connected to said meter so as to unaffect it while said branches are balanced, a dynamo-electric machine driven at a speed proportionate to the speed of the conveyer and generating a current in direct proportion to its own speed, and means controlled by said scale for varying the current in one of said branches and unbalancing said branches whereby a current will flow through said meter.

1,298,303. HOSE-COUPLING. JAMES A. DEMPSEY, New York, N. Y. Filed Aug. 31, 1917. Serial No. 189,132. 3 Claims. (Cl. 285—84.)



1. A hose coupling comprising a tubular member adapted to be inserted in the end of a section of hose and provided with an annular flange against which the end of the hose will abut, a nut adapted to clamp the hose to the tubular member and abut said flange, a split sleeve surrounding the tubular member and provided with a recess to receive said flange and nut, and a nut fitted to the sleeve and adapted to cause the sleeve to firmly clamp the hose onto said tubular member.

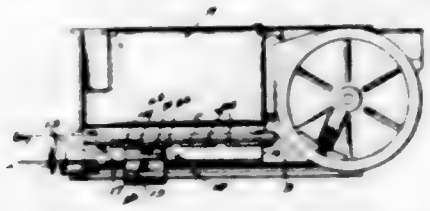
2. A coupling for hose having interior and exterior threads, produced by a spiral groove formed in its body, comprising a tubular member provided with an exterior thread adapted to be screwed into an end of a hose section, engaging the interior thread thereof, a nut adapted to engage the exterior thread on the hose, a split sleeve adapted to directly engage the exterior thread of the hose and having a recess to receive said nut, and means for clamping the sections of the sleeve upon the hose and interior tubular member.

3. A hose coupling comprising an exteriorly threaded tubular member adapted to be screwed into an end of a section of hose and provided with an annular flange against which the end of the hose will abut, means for clamping the hose to said tubular threaded member, a split sleeve surrounding the threaded member and hose and recessed on its inner face to receive said flange and clamping means, and means for holding said sleeve in close engagement with the hose.

1,298,304. SKID FOR MINING-MACHINES. GEORGE DOBSON, Palisades, Colo. Filed Apr. 30, 1918. Serial No. 231,721. 4 Claims. (Cl. 262—8.)

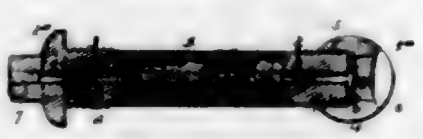
1. A skid of the character described, comprising a runner, means for securing it to the under frame of a coal

mining machine, and raising and lowering means on the runner and engaged with the securing means to operatively



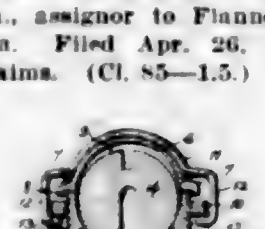
hold the runner beneath the machine and to permit the raising and lowering of the latter relative to said runner.

1,298,305. STAY-BOLT FOR BOILERS. ETHAN I. DODDS and CHARLES HYLAND, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Mar. 7, 1917. Serial No. 153,043. 2 Claims. (Cl. 85—1.5.)



1. A flexible stay bolt comprising a body portion having a tell-tale bore extending through the same from end to end, and a separate head secured on the outer end of said body portion and closing the outer end of said bore.

1,298,306. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,895. 5 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing member, and a removable cap, of a clamping device freely embracing the bearing member and engaging the cap, and a ring adjustable on the bearing member and engaged by said clamping device.

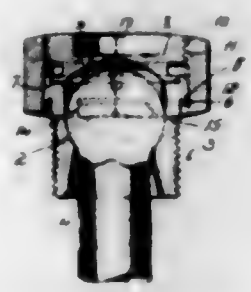
5. In a staybolt structure, the combination with an exteriorly threaded bearing sleeve, of a cap seated on the outer end of the sleeve and constituting a removable closure therefor, a spring clamping yoke engaging said cap, and having inwardly projecting lips at its ends, and a nut on said sleeve to engage the outer faces of said lips.

1,298,307. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,897. 2 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve, and a removable cap constituting a closure for said sleeve, of a clamping member freely encircling the sleeve and adapted to engage said cap, and a nut on said sleeve constituting a temporary securing means for said clamping member.

1,298,308. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Apr. 26, 1918. Serial No. 230,913. 2 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve having laterally projecting lugs at its outer end portion, of a cap or closure to seat against the bearing sleeve and adapted to receive a wrench, said cap or closure having a threaded peripheral portion, a locking sleeve threaded on said cap or closure and receiving the outer end portion of the bearing sleeve, and provided with inwardly projecting flanges at its rear end to engage the lugs on the bearing sleeve, and stop means in said locking sleeve to limit the turning of said locking sleeve relatively to the bearing sleeve.

1,298,309. STAY-BOLT STRUCTURE. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,318. 4 Claims. (Cl. 85—1.5.)



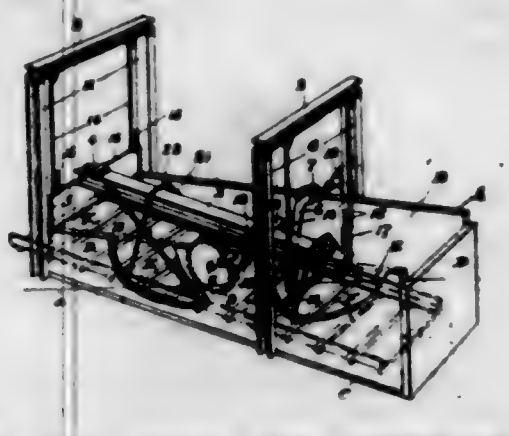
1. In a staybolt structure, the combination with a bearing member adapted for connection with a boiler sheet, of a cap having interlocking relation to said bearing member and provided interiorly with an annular flange or enlargement, a staybolt having a head mounted in said bearing member, and a part on said head to be engaged by the internal annular flange or enlargement of the cap.

3. In a staybolt structure, the combination with a bearing member and a staybolt having a head mounted therein, said head having a threaded portion, of a cap having interlocking relation with the bearing member and provided interiorly with an annular flange or enlargement disposed beyond the head of the staybolt, and a knob secured to the threaded portion of the head of the staybolt, said knob overhanging the internal annular flange or enlargement of the cap and normally spaced therefrom.

1,298,310. CLASSIFIER. WILLIAM HECTOR DONALD, Oak Ridges, Ontario, Canada, assignor of one-half to Samuel Gundy Forst, Toronto, Ontario, Canada. Filed Jan. 20, 1919. Serial No. 272,221. 3 Claims. (Cl. 83—81.)

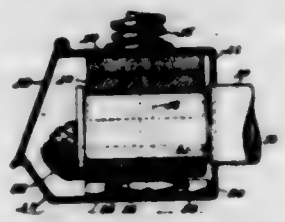
1. In a classifier, the combination with the trough thereof; a rake mounted therein, and first and second groups of fixed supporting means associated with said trough; of a crank-shaft having bearing in said trough; reciprocating means coupled to said crank-shaft and in which the same is journaled; means flexibly coupling said reciprocating means to said rake so as to move the same longitudinally of said trough; flexible means supporting the upper end of said reciprocating means from one group of said fixed supporting means, and flexible means whereby, when said means for supporting said rake from

said reciprocating means is not in operation, the rake is supported from both groups of said fixed supporting



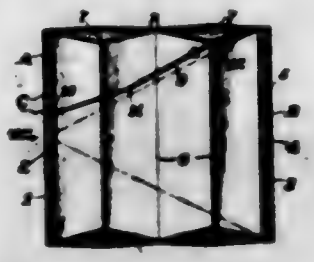
means, the whole arranged so that a complete cycle of the rake will carry the teeth thereof each through a curvilinear path of movement.

1,298,311. JOURNAL-BOX-LUBRICATING DEVICE. ROBERT DORNAN, 2d, Wayne, Pa. Filed Nov. 16, 1917. Serial No. 202,294. 4 Claims. (Cl. 64—24.)



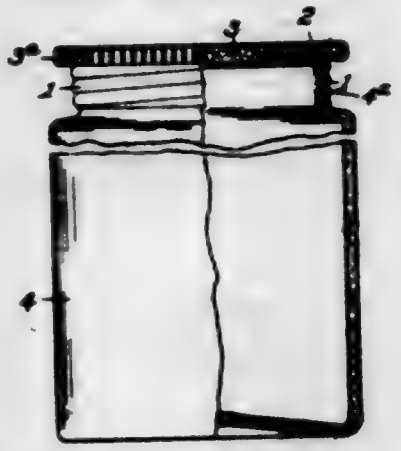
1. The combination of a standard journal box having an interior basal portion and provided at its lower portion with a front wall spaced from the end of the axle, and a journal box lubricating device comprising a base member adapted to be arranged upon the basal portion of the journal box, a waste supporting pan located beneath the axle and having a front wall extending upward at the end of the axle above the bottom of the same, and resilient means interposed between the base member and the pan and yieldably pressing the said pan upwardly for holding waste against the axle and connecting the pan and the base member to form a single unit, the space between the front wall of the journal box and the end of the axle being sufficiently constricted to prevent the withdrawal of the lubricating device while the journal box and the axle are in their normal working position.

1,298,312. CAMERA. ELIAS P. EARLE, Townville, S. C. Filed Aug. 9, 1917, Serial No. 185,255. Renewed Feb. 8, 1919. Serial No. 275,848. 7 Claims. (Cl. 95—39.)



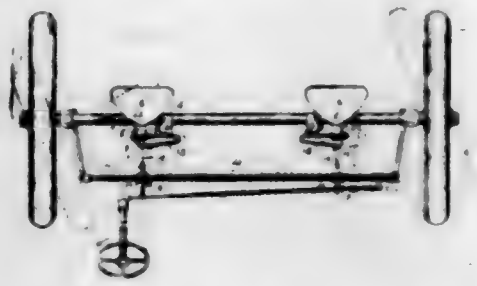
1. A foldable camera comprising a front and a rear board connected by a bellows, a sensitised surface within said camera and removably secured to said rear board, said front board being provided with an opening, a paper covering over said front board and said opening, means secured to the inner portion of said bellows and said front board for protecting the said opening when said camera is in its folded condition.

1,298,313. CAP FOR THREADED GLASS RECEPTACLES. PHILLIP EBELING, Moundsville, W. Va., assignor, by mesne assignments, to Lena E. Ebeling, Moundsville, W. Va. Filed Dec. 2, 1918. Serial No. 264,925. 5 Claims. (Cl. 215—84.)



1. A cap for glass containers having integral threaded necks, consisting of a threaded sheet metal collar or sleeve having both ends open, and a glass top mounted in closing relation to the upper end of said sleeve, said glass top having the upper end of said sleeve firmly embedded therein.

1,298,314. DIRIGIBLE HEADLIGHT. JOHN F. ELLMAURER, Fairchild, Wis. Filed Mar. 1, 1918. Serial No. 219,793. 4 Claims. (Cl. 240—62.)



1. In a vehicle provided with a steering cross bar operatively connected with the steering wheel, the combination of a set of lamp supporting vertically disposed standards, each having a rearwardly projecting arm adapted to oscillate about their vertical axes, a coupling block connected with each of said arms, and also adapted to oscillate about a vertical axis, slides connected with the respective coupling blocks, and adapted for limited sliding movements therein along lines parallel with the cross bar, each of said slides being normally positioned at the inner end of its field of movement in the block, and an extensible shank connecting each of the slides with the cross bar,—said cross bar having sleeves in which the shanks are journaled, and adapted to oscillate about an axis transverse to the cross bar.

1,298,315. CHARGE-MIXING DEVICE. FRED C. EVANS, Ithaca, N. Y. Filed Apr. 19, 1918. Serial No. 229,643. 2 Claims. (Cl. 48—180.)



1. A mixing device for attachment to intake means of internal combustion engines, comprising a ring with axially spaced series of convergently bent fingers laterally separated to form narrow spaces, the fingers of one series being staggered as to those of the other.

2. A mixing device for attachment to intake means of internal combustion engines, comprising a cylindrical tube

having inturned tapering prongs at its upper end, the prongs substantially forming a truncated cone, and the prongs being laterally spaced from each other at their junctions with the ends of the cylinder, and a set of inturned tapered prongs directed upwardly into the cylinder and of a length approximately equaling the length of the cylinder, the prongs at the lower end thereof being spaced from each other at their junctions with the cylinder, and outwardly turned fastening lugs between certain of the prongs at the lower end of the cylinder the prongs of one series being staggered as to those of the other.

1,298,316. SCREW-JACK. HARRY L. EWING, Dallas, Tex. Filed May 2, 1918. Serial No. 232,107. 2 Claims. (Cl. 254—98.)



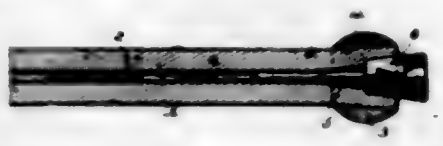
2. In a tool of the kind described, the combination of a base, a screw longitudinally threaded into said base, a pawl on the lower end of said screw projecting laterally beyond the side thereof, a vertical shaft journaled within said base substantially parallel to said screw and at one side thereof, a lug on the upper end of said shaft in position to be engaged by the pawl on the screw when the latter is raised to its highest position and rock said shaft, an audible alarm secured within said base, a hammer carried by the lower end of said shaft for striking said alarm when the shaft is rocked, a second alarm within the base carried by a pivot arm for actuating said alarm, and a finger on the aforesaid hammer for striking said arm when the hammer is operated.

1,298,317. NEEDLE-VALVE. EUGENE D. FERRELL, Wayzata, Minn. Filed Jan. 22, 1917. Serial No. 143,553. 1 Claim. (Cl. 137—4.)



The combination with a valve casing having a contracted conduit with a valve seat at the inner extremity thereof, of a needle valve of the plug type screwed into the casing with its head terminating short of the adjacent end thereof and with its pointed end arranged, when moved into said seat, to close the contracted conduit, an annular chamber surrounding the pointed end of the valve, said valve having a longitudinal passageway affording communication between the conduit above the valve and the chamber, and a connection applied to the casing above the needle valve.

1,298,318. STAY-BOLT FOR BOILERS. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 21, 1917. Serial No. 150,202. 3 Claims. (Cl. 85—1.5.)



1. A stay bolt comprising a body and a separate head, the head having a tapering opening to receive the expanded end portion of the body of the bolt, the said head being rigidly secured on said expanded end portion.

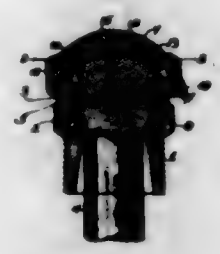
1,298,319. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,295. 5 Claims. (Cl. 85—1.5.)



1. In a staybolt structure, the combination with a bearing sleeve, of a head, means removably connecting said head with the bearing sleeve, a cap or closure for the bearing sleeve inclosed within said head, lateral cams on said cap or closure, and shoulders within the head to be disposed over the lateral cams of the cap or closure and coöperable with the same.

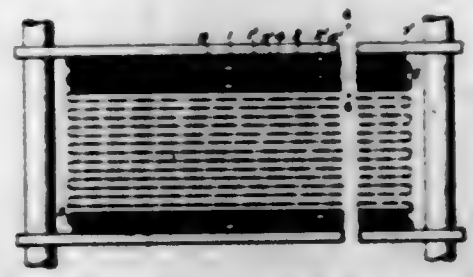
5. In a staybolt structure, the combination with a bearing sleeve, of a head or carrier means effecting a removable connection of said head or carrier with the bearing sleeve, said head or carrier having an annular flaring groove centrally located therein, a cap or closure inclosed within said head and having an annular projection loosely entering the flaring groove in said head or carrier, lateral cams on the cap or closure, and segmental shoulders in the head or carrier to coöperate with said last-mentioned segmental shoulders.

1,298,320. STAY-BOLT STRUCTURE. JOHN ROGERS FLANNERY and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed May 3, 1918. Serial No. 232,305. 3 Claims. (Cl. 85—1.5.)



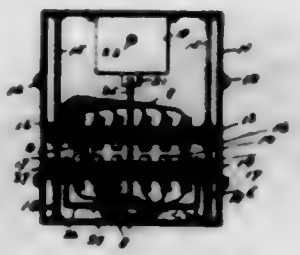
1. In a staybolt structure, the combination with a bearing member provided with a part having external outwardly beveled segmental shoulders, of a cap or closure to seat against said bearing member, and a head having a part provided with internal inwardly beveled segmental shoulders to engage the beveled shoulders on the bearing member.

1,298,321. TERMINAL BANK. OSCAR F. FONDIGO, Yonkers, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 29, 1916. Serial No. 87,581. 5 Claims. (Cl. 175—306.)



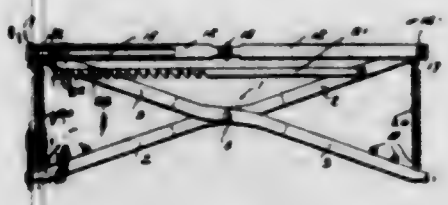
2. In a terminal bank, superimposed strips of metal separated from one another by insulation, integral contact portions projecting from said metal strips, pairs of said strips comprising the multiple terminal sets of lines, and a flexible strip continuously woven between said pairs of strips for the purpose of eliminating crosstalk.

1,296,822. LOCK-ACTUATED CIRCUIT-BREAKER FOR IGNITION SYSTEMS OF EXPLOSIVE-ENGINES. OTTO FORTHMILLER, Minneapolis, Minn., assignor of one-half to John J. Maier, one-sixth to Gustave Forthmiller, and one-sixth to Karl Forthmiller, Minneapolis, Minn. Filed Apr. 5, 1918. Serial No. 226,828. 3 Claims. (Cl. 175—282.)



1. Switch mechanism including a casing, a pair of guide rods, a fixed bar, a movable bar mounted on the guide rods for movement toward and from the fixed bar, coöperating contacts carried by said two bars, springs operative on the ends of the movable bar to hold the contacts carried thereby in engagement with the contacts carried by the fixed bar, lock mechanism including a tumbler-actuated lock-bolt, and a connection between the lock bolt and movable bar for moving the said movable bar and the contacts carried thereby into circuit-open position.

1,298,823. CURTAIN-STRETCHER. GUSTAV FREIWALD, Portland, Oreg. Filed Feb. 26, 1918. Serial No. 219,290. 3 Claims. (Cl. 45—24.)



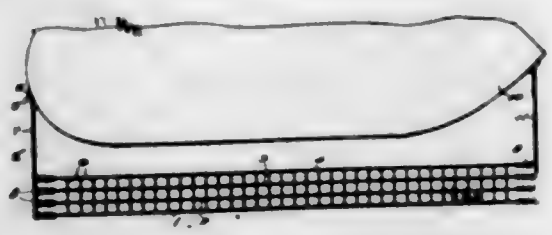
1. In a curtain stretcher, a plurality of folding trusses, side bars connecting the upper ends of said trusses and provided with curtain engaging means, said trusses being expansible and contractible to vary the height of the stretcher, a locking bar pivotally connected at one end to one leg of one of said trusses, the other leg of said truss and said bar having coöperating interlocking means for holding the truss in adjusted position.

1,298,824. STUD-DRIVER. FRANK M. FUNK, Detroit, Mich. Filed Nov. 18, 1918. Serial No. 262,931. 7 Claims. (Cl. 81—53.)



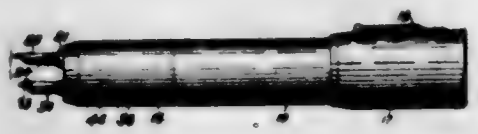
1. A stud driver, comprising a stem provided with threads, a sleeve threaded at its outer end to engage over a stud and further threaded interiorly to engage the threads of the stem and the threads of a cap nut, and a cap nut for engaging in the threads at the inner end of the sleeve and behind the threads of the stem, the said threads of the stem being of less length than the complementary threads of the sleeve when the cap is in place to establish a lost motion driving connection between the stem and the sleeve.

1,298,825. SHIP-PROTECTOR. FRANK GARACA, Bessemer, Ala. Filed Sept. 29, 1917. Serial No. 194,051. 5 Claims. (Cl. 114—240.)



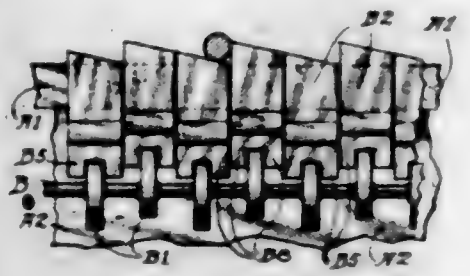
1. In a device of the class described, the combination of a protector formed from a plurality of nets, each net having openings formed therein, the openings in said nets registering and being smaller toward the inner net thereby providing a plurality of substantially pyramid shaped pockets whereby the nose of the torpedo will be directed into said pockets for limiting the movement of such a torpedo.

1,298,826. TWO-COLORED FOUNTAIN-PEN. EDMUND GROSSMANN, Union Hill, N. J. Filed Mar. 23, 1918. Serial No. 224,154. 1 Claim. (Cl. 120—42.)



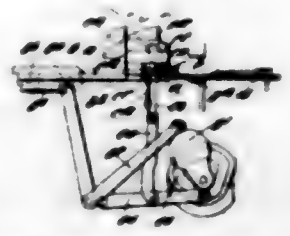
In a two colored fountain pen, the combination with a cylindrical barrel and an extension secured thereto, of a pair of opposed reservoirs formed in said barrel, means for maintaining ink therein, a plug fixed in said extension in alinement with one of said reservoirs, a pen point carried thereby, means for conducting ink from one of said reservoirs to said pen point, a second plug sliding in a sleeve within said extension, and having a central longitudinal channel, said plug being in alinement with the other of said ink reservoirs, a pen point fixed therein, communicating means between said ink reservoir and said pen point through said plug, a guiding sleeve for said movable plug, slots formed in said guiding sleeve and through said extension longitudinally of said barrel, spring arms rigidly engaged in said movable plug extending outward through said slots, knobs formed upon the ends of said spring arms whereby they may be actuated in said slots, recesses formed in the edges of said slot, and detents formed upon said spring arms adjacent to said knobs whereby said sliding plug may be held in an adjusted position at either end of said slots.

1,298,827. HEAT-TREATING AND FORGING FURNACE. JAMES V. GITHENS, Knoxville, Tenn. Filed Mar. 29, 1918. Serial No. 225,564. 10 Claims. (Cl. 214—18.)



1. In an apparatus of the nature described, a furnace floor having upright slots, a plurality of drivers located in each of said slots in a row parallel to the slot, and means for actuating adjacent drivers in alternation, substantially as described.

1,298,328. CIGARETTE-PACKET FORMING AND FILLING MACHINE. ALFRED GODFREY, Middlesex, England. Filed Mar. 26, 1918. Serial No. 224,805. 13 Claims. (Cl. 93—58.)



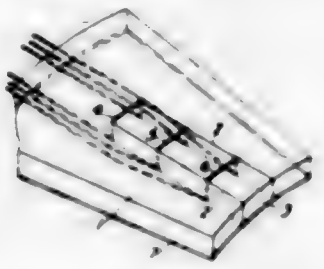
6. In a cigarette forming and filling machine, the combination of a rising and falling upper cutting die portion coöperating with a fixed lower cutting die portion and a spring table, means for gripping a blank from which the packet is subsequently formed upon said lower die portion and means carried by said upper portion for engaging the waste portions of the blank detached by the cutting action and removing said waste portions upward with said upper portion of the die.

1,298,329. MOTOR PLOW AND CULTIVATOR. EDWIN JOHN GOODS, Saffron Walden, England. Filed July 11, 1918. Serial No. 244,354. 4 Claims. (Cl. 97—54.)



1. In a plow, the combination of an implement frame, a crank thereon, a land wheel carried by the crank, said wheel provided with a spiral cam lifting rib, means on the frame coöperating with the spiral rib to raise said frame when the land wheel revolves and turn said crank, and means for holding said crank in position to maintain the frame in elevated position.

1,298,330. CONTACT-BANK. CHARLES L. GOODRUM, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 19, 1917. Serial No. 175,587. 3 Claims. (Cl. 175—306.)



1. A switchboard comprising a contact support, a plurality of tongues formed along one face thereof, and circuit wires extending different distances onto the support and having portions looped over said tongues to form spaced contacts.

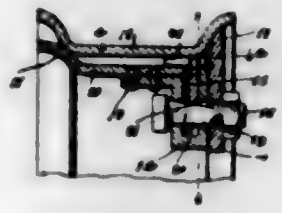
1,298,331. ROAD-GRADER. JOHN N. GOULD, Fredericktown, Ohio, assignor to The F. B. Zieg Mfg. Company, Fredericktown, Ohio. Filed Mar. 5, 1915. Serial No. 12,353. Renewed Feb. 4, 1919. Serial No. 274,999. 1 Claim. (Cl. 37—49.)

In a road-grader, the combination of a main frame, a scraper or mold-board frame connected at its forward end to the main frame, a scraper or mold-board carried by the scraper or mold-board frame, adjustable means of suspension for the opposite ends of said scraper or mold-board frame, means for laterally adjusting the suspended end of the scraper or mold-board frame, said means comprising a cross-bar, a casting mounted to slide thereon, a rack, a shaft journaled in the casting, and carrying a pinion, the teeth of which engage the rack, means ex-



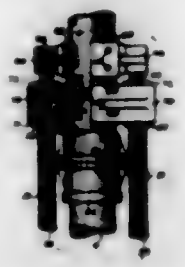
tending from the casting to the rear end of the mold-board frame, whereby, when the shaft is turned, the casting and frame are shifted laterally or cross-wise of the frame of the machine, and means for locking said casting to the cross-bar comprising a spring-actuated bolt, a cam-lever connected therewith, and means for controlling the position of the cam-lever.

1,298,332. AUTO-WHEEL. ALBERT C. GRANT, Chicago, Ill., assignor to Grant Wire Wheel Manufacturing Company, a Corporation of Delaware. Filed May 10, 1918. Serial No. 233,722. 3 Claims. (Cl. 152—21.)



1. A rim securing means comprising a clamp plate carried by a main rim for terminal engagement with the outer edge of a demountable rim, spacing fingers carried by said clamp plate for interposition between the main and demountable rims, a radially movable slide carried by the main rim for terminal engagement with the inner surface of the demountable rim and disposed at its outer extremity between said spacing fingers, and wedging means for adjusting the slide relative to the main rim.

1,298,333. DRAW-IN PERISCOPE. ALBERT GREBE, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 2, 1917. Serial No. 159,128. 6 Claims. (Cl. 114—16.)

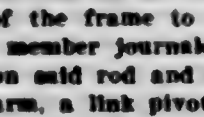


1. In a periscope, the combination of a foundation adapted to be fixed to the hull of a vessel and having an opening therethrough, an observation tube in said opening, a screw supported on said foundation and substantially parallel with said observation tube, and means for moving the observation tube in said opening when the screw is rotated.

1,298,334. METHOD FOR THE UTILIZATION OF NITER CAKE. JACOB GROSSMANN, Manchester, England. Filed Sept. 2, 1916. Serial No. 118,209. 3 Claims. (Cl. 23—22.)

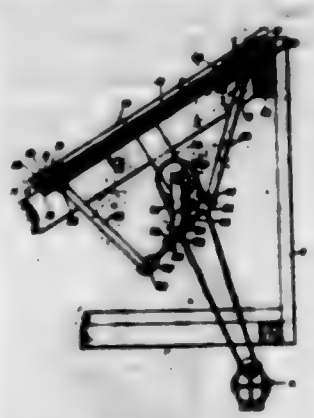
1. The process of producing caustic soda and sodium sulfate which consists in mixing calcium sulfite with niter cake in solution whereby soluble compounds and a precipitate are formed, and adding calcium hydroxid to the soluble compounds.

1,298,335. LINING FOR FRICTION-SURFACES. CHARLES H. GUNN, Sacramento, Calif. Filed Jan. 8, 1918. Serial No. 210,833. 1 Claim. (Cl. 74—13.)



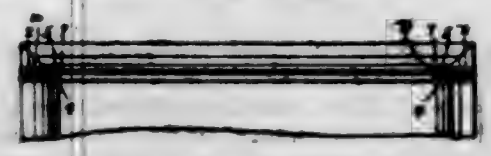
The combination with a brake band, of a lining therefor, such lining consisting of laminations of canvas laid side by said to present their edges to the wearing surface and being vulcanized together to form a continuous strip, and means for fastening the lining to the brake band, such means consisting of rivets passing through the band and lining, each having a plurality of flexible prongs extending at right angles from the head, the prongs being bent outwardly and pressed into the wearing surface of the lining.

1,298,336. WINDOW-CONTROLLING APPARATUS. FRED L. GUNTON, Elyria, Ohio, assignor of one-half to Frank M. Stevens, Elyria, Ohio. Filed Oct. 5, 1918. Serial No. 256,938. 6 Claims. (Cl. 268—17.)



1. In window controlling apparatus, the combination with a window casement or sash, of a frame in which the casement fits when the window is closed, arms hinged at one end to the frame and at the other to the casement opposite the part of the frame to which the arms are hinged, a rotatable member journaled adjacent the window, a crank arm on said rod and controlled thereby, a crank pin on said arm, a link pivoted on said pin, rods connecting the ends of said link to opposite sides of said casement and means to oscillate said member clockwise or counter-clockwise to tilt said casement about either side thereof and open said window.

1,298,337. ADJUSTABLE SHADE-BRACKET. AUGUSTUS S. HALE, Atlanta, Ga., assignor to Letcher Ogie Grice, Washington, D. C. Filed June 9, 1916, Serial No. 102,712. Renewed June 21, 1918. Serial No. 241,202. 2 Claims. (Cl. 156—24.)



1. A curtain bracket comprising in combination, a base plate having vertical walls and inturned horizontal flanges to provide a slotted channel-way, and a bracket slidable in said channel-way, said bracket including a slide plate having upturned flanges of less height than the vertical walls of the channel-way, and a bowed spring secured to the lower face of the slide plate and having its ends extended beyond the limits of the slide plate and into contact with the bottom of the channel-way before and behind the slide plate to resiliently support the latter above the bottom of the channel with the upturned flanges on the slide plate in contact with the flanges of the channel-way.

2. A curtain bracket comprising in combination, a base plate having vertical walls and inturned flanges to provide a slotted channel-way, and a bracket slidable in said channel-way, said bracket including a slide plate and a bowed spring secured to the lower face of the slide plate and having its ends extended beyond the limits of the slide plate and into contact with the bottom of the channel-way before and behind the slide plate to resiliently support the latter above the bottom of the channel in contact with the flange of the channel-way.

1,298,338. AEROPLANE. LEWIS MONTGOMERY MURRAY HALL, Ealing, London, England. Filed May 9, 1917. Serial No. 167,468. 5 Claims. (Cl. 244—12.)



5. In aeroplanes a pair of wing members consisting of a wing surface of sheet metal made integral with a midrib and so shaped that the midrib lies on a portion of a parabolic curve while the surface of the wing on either side of the midrib lies on the surface of the cone which would extend on either side of the parabola, said pair of wings being disposed at divergent angles in the direction of flight and having the weight carried forwardly so as to give a clear angular vision to an operator in front of the point where the wings come together.

1,298,339. TELEPHONE SYSTEM. HARVEY L. HARRIS, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Apr. 26, 1915. Serial No. 23,814. 19 Claims. (Cl. 179—41.)



13. In a telephone system, the combination of a calling station, a called station, conductors connecting said stations, normally open contacts in said conductors, an electromagnet controlling said contacts, a circuit for said electromagnet, a switch in said circuit, a signal at the called station, a source of calling current at the calling station for causing the actuation of said signal, an electromagnet at the called station responsive to the calling current controlling said signal and the switch in the circuit of the first named electromagnet, said second named electromagnet maintaining said switch open during the application of calling current but closing the same when the application of calling current to said conductors is interrupted.

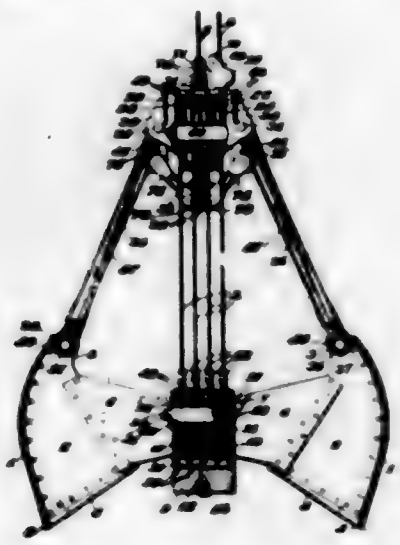
15. In a telephone system, the combination of a main exchange central station and a private branch exchange

central station, a trunk circuit for connecting said stations together, a signal at the private branch exchange main station, a telephone set at the private branch exchange main station, a source of calling current at the main exchange central station, means to apply current from said source to said trunk, a commutator for interrupting the application of current from said source to said trunk, the current from said source controlling the operation of said signal, normally open contacts in said trunk and mechanism including a relay controlling said contacts for preventing the connection of the telephone receiver of said set to said trunk during the application of calling current to the trunk, said means permitting the connecting of said receiver to said trunk when the calling current is interrupted by said commutator.

16. In a telephone system, the combination of a calling station, a called station, conductors for connecting said stations, a source of calling current at the calling station and means to apply the same to said conductors, a commutator for interrupting the application of current from said source to said conductors, a signal at the called station controlled by calling current from said source, a telephone set including a telephone receiver at the called station and mechanism inoperative during the application of the calling current to connect said receiver to said conductors, but operating to make such connection as soon as said commutator interrupts the application of the calling current.

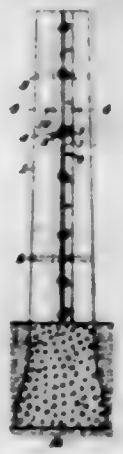
17. In a telephone system, the combination of a main exchange central station, a private branch exchange central station, a trunk circuit for connecting the same, normally open switches in the strands of the trunk circuit, an electromagnet controlling said switches, a telephone set including a telephone receiver at the private branch exchange central station and means to connect said receiver to the strands of the trunk circuit, a signal at the private branch exchange central station, automatic signal current generating means at the main exchange central station, means to connect the same to the strands of the trunk circuit, apparatus for periodically interrupting the flow of current therefrom, a circuit for said first named electromagnet and a second electromagnet governed by the current from said automatic means controlling the circuit of the first named electromagnet and a circuit for said signal controlled by the second named electromagnet.

1,298,340. BUCKET. LEMUEL J. HATT, St. Louis, Mo. Filed Oct. 12, 1917. Serial No. 196,198. 11 Claims. (Cl. 37—30.)



1. A bucket of the class described, the same including a supporting-head or upper center, a movable lower center, sheaves mounted for rotation in the upper and lower centers, coöperating load-trays, connecting-bars pivotally connected to the upper center and to the trays, arms on the trays pivotally connected to the lower center, and a closing line coöperating with the upper and lower sheaves to lower and raise the lower center and thereby open and close the trays, in combination with means for maintaining the upper and lower centers in working alinement in the operations of the bucket, said means comprising pins mounted for endwise slidable movement in the upper center, and links pivotally connected at their opposite ends to said pins and to said connecting bars.

1,298,341. MOLD FOR CONCRETE POSTS. WILLARD G. HENKLE, Garrison, Iowa. Filed July 22, 1918. Serial No. 245,972. 1 Claim. (Cl. 25—121.)



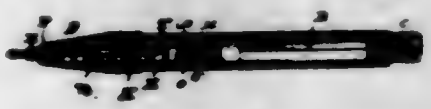
A mold for concrete posts, comprising a resilient plate bent into a conical frustum with overlapped longitudinal edges, an angle-bar secured to the outer wall of the mold near the overlapped longitudinal edge, the overlapping part of the mold being bent outwardly to be opposite said angle-bar, and removable devices for securing said longitudinally bent part of the mold to said angle-bar to hold said edge parts in overlapped relation.

1,298,342. HEADLIGHT-LENS. ERNEST E. HILLYER, Port Richmond, N. Y. Filed Oct. 5, 1918. Serial No. 256,984. 3 Claims. (Cl. 240—48.4.)



3. In a headlight lens, a transparent glass plate portion having flat surfaces, a visor integral therewith and extending forwardly and downwardly from the upper portion of the outer surface of said plate, and an intercepting medium also integral with said plate and extending rearwardly and upwardly from the inner surface thereof, the outer surface of said visor and the inner surface of said intercepter being frosted.

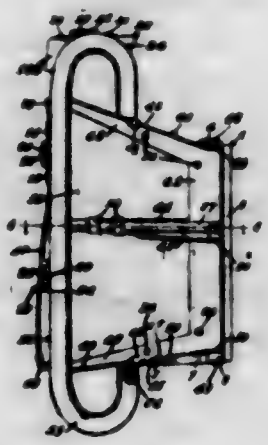
1,298,343. PENCIL. JOHN A. HOLLENBERGER, Hagerstown, Md. Filed July 18, 1918. Serial No. 245,525. 1 Claim. (Cl. 120—18.)



A pencil, comprising a hollow barrel portion, a tapering cap swiveled thereon and having an apertured slitted end, a plug fitted within the barrel portion and having a contracted extension, a cylindrical split shell fitted over said extension and its outer end engaging the tapering wall of said cap, a coil of wire mounted within said shell and abutting against the extension of said plug, the outer

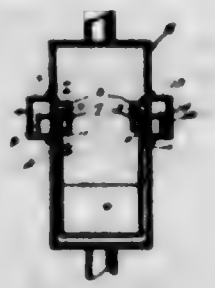
end of the coil extending through an aperture in the cap and having adjacent to its ends convolutions which are in contact with each other, a follower mounted within said coil and having its inner end outwardly bent and extending through the space intermediate the longitudinal edges of the split shell, the inner end of the coil, which is resilient, adapted to spring by said outwardly bent end of the follower as the cap and pencil are rotated in opposite directions.

1,298,244. SWIMMING DEVICE. ELDON C. HOWARD, The Plains, Ohio. Filed Dec. 26, 1918. Serial No. 268,246. 7 Claims. (Cl. 9—21.)



1. A device of the class described comprising a base bar; oppositely disposed wings pivoted to the base bar; and spring means coacting with the wings to swing the wings normally toward each other.

1,298,345. RURAL-MAIL-BOX SIGNAL. ERIC JOHNSON, New York, N. Y. Filed Mar. 5, 1918. Serial No. 220,576. 2 Claims. (Cl. 232—34.)



1. A mail box having a vertically movable mail matter receiving container, horizontally disposed shafts journaled in opposite sides of the box, crank arms on the shafts interiorly of the box and having pivotal connection with the container, pointers exteriorly of the box and carried by the shafts to balance the container and indicate movement thereof when mail matter has been deposited in said container, casings on the box and inclosing each pointer and having a sight opening for viewing the pointer, and boxings interiorly of the box and inclosing the crank arms of said shafts.

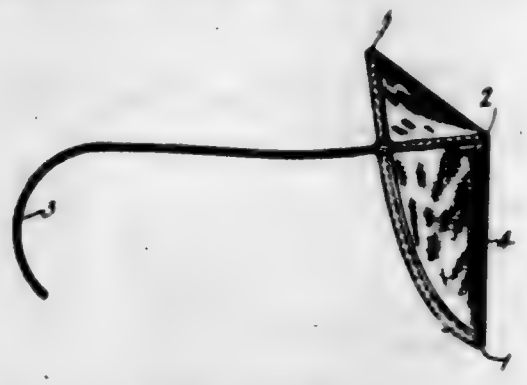
1,298,346. GARMENT. HORACE G. JOHNSON, Kenosha, Wis. Filed Oct. 19, 1912. Serial No. 726,687. 1 Claim. (Cl. 2—144.)

An undergarment of the class described having an up-and-down posterior opening formed between inner and outer lapping parts; the free margins of said lapping parts extending to one leg only substantially below the apex of the crotch and from permanently attached points



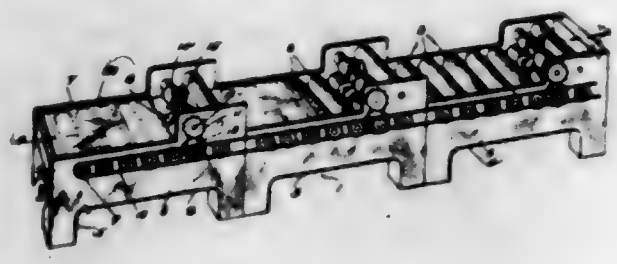
in the back above the seat to permanently attached points at substantially the inseam of said leg.

1,298,347. DUST-EXCLUDER. JAMES W. JORDAN, Williamsburg, Ky. Filed Feb. 8, 1918. Serial No. 216,048. 1 Claim. (Cl. 128—146.)



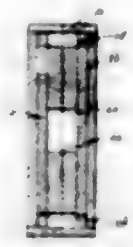
A device of the class described, comprising an arch member embodying in a one-piece structure, a forwardly extended bend and rearwardly extended ear engaging arms; a loop-shaped frame secured at its sides and intermediate its ends to the arch member at the rear of the bend; and a covering peripherally assembled with the loop-shaped frame and supported by the bend.

1,298,348. CONVEYER. JAMES E. KANE and JOHN ROSE, Yorkville, Ohio. Filed Jan. 2, 1918. Serial No. 210,080. 2 Claims. (Cl. 271—46.)



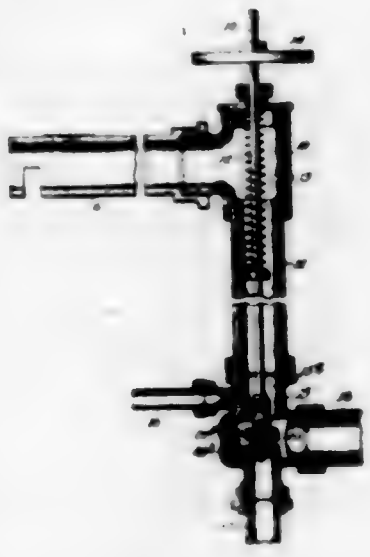
1. In a conveyer for sheets, means for preventing the feeding of sheets in superposed relation, said means comprising a constantly rotated shaft overlying the path of travel of said sheets, a hub frictionally carried by and rotatable on said shaft, and fingers carried by said hub, said fingers being so disposed that one thereof rides upon the top surface of an advancing sheet and obstructs the advance of a second sheet in superposed relation to the first-mentioned sheet.

1,298,349. COLLAPSIBLE BOX. JAMES J. KEATING, Highland Falls, N. Y. Filed June 8, 1917. Serial No. 173,632. 1 Claim. (Cl. 217—16.)



A collapsible box comprising sides provided adjacent their upper edges with longitudinal grooves, side boards secured to the bottom and top of said sides, a removable bottom supported by the bottom side boards, guide strips secured to the sides and arranged adjacent said grooves, a removable top slidably engaging said guide strips and provided with tongues engaging in said grooves, the movement of said top being limited in one direction by engagement with certain of said side boards, vertical strips secured to said sides at the ends thereof and of greater thickness than that of the top and bottom, and hingedly connected end sections hinged to said vertical strips and movable inwardly to permit of said guides being collapsed.

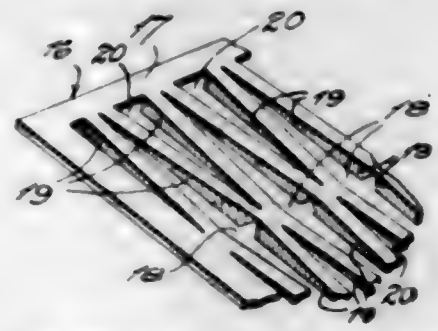
1,298,350. WATER-CLOSET. JAMES W. KELLY, Chicago, Ill. Filed Jan. 29, 1919. Serial No. 273,768. 5 Claims. (Cl. 4—28.)



1. In a water-closet equipment having a bowl provided with a discharge-pipe, a flush-tank and a pipe leading therefrom, a water-supply pipe, and a dry-pipe leading to the bowl, a single valve-device at the junction of said three last named pipes, comprising a valve normally seating against the pressure in said supply-pipe and a piston-valve operating by unseating said valve, to shut off communication between the pipe leading from the tank and the dry pipe.

1,298,351. GRATE FOR MEAT-SMOKERS. ALEKSANDER KIRUZINSKI, Hartford, Conn. Filed Mar. 23, 1918. Serial No. 224,368. 1 Claim. (Cl. 126—152.)

In a meat smoker, a grate, said grate comprising a plate having diamond-shaped openings arranged at spaced intervals therein, said plate also having triangular openings therein pairwise arranged between each two of the diamond-shaped openings and reinforcing elements formed along the edges of the openings with their apexes approximately meeting near substantially the center of the grate, said reinforcing elements being formed of the material



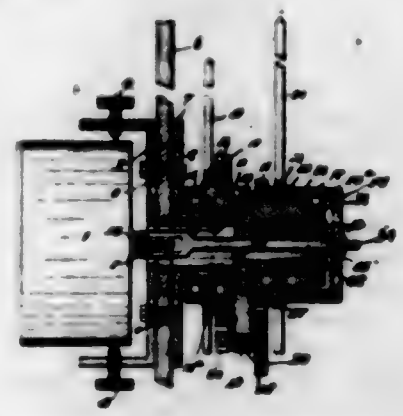
cut from the openings by bending said material substantially straight downwardly.

1,298,352. LOOM FEELER-MOTION. HARRY G. KIMBALL, Bronxville, N. Y., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 11, 1918. Serial No. 216,639. 7 Claims. (Cl. 139—85.)



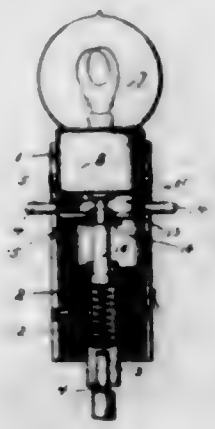
1. A loom feeler motion having, in combination, a normally stationary pivoted feeler carrier 9, having guides 16, 16, offset to one side of its axis, and a catch 8, having its back face inclined; a stop 14; a light spring 13, normally holding the feeler carrier stationary against the stop; a feeler finger 10, slidingly mounted in the guides of the feeler carrier in a line offset from the axis of the feeler carrier; a spring 15, pressing the feeler finger rearwardly, said spring being stiffer than the spring 13; a controller 5, having a latch 7, normally below said catch, said latch having its back face inclined and adapted when said carrier swings to engage the back face of the catch to enable the carrier to be restored to normal position; a spring 6, acting upon the controller to normally maintain its latch in engagement with said catch and to move the controller when the catch and latch are disengaged by the swing of the carrier; and restoring means acting upon the controller in opposition to the spring 6, to move the controller latch below the catch.

1,298,353. CLOCK. GEORGE KISH, Cleveland, Ohio. Filed Apr. 8, 1918. Serial No. 227,217. 8 Claims. (Cl. 58—125.)



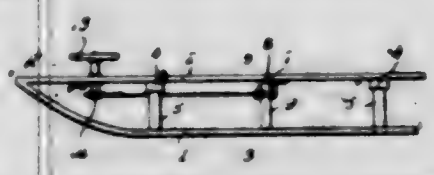
1. The combination, with a clock having a drive shaft, of a frame detachably connected to said clock, a dial secured to said frame, a hub also secured to said frame and having a pair of bearings thereon, a hand rotatably mounted on each of said bearings, a spindle supported by said frame and removably connected to said shaft, a driving connection between said spindle and one of said hands, and gearing connecting said hand and the other hand.

1,298,354. SWITCHING-SOCKET. GEORGE C. KNAUFF, Chicago, Ill., assignor to Edmunds & Jones Corporation, Detroit, Mich., a Corporation of New York. Filed Jan. 17, 1917. Serial No. 142,815. 3 Claims. (Cl. 173—340.)



1. In an electric socket, a casing having a slot, a lamp and plug held by the casing in fixed relation and presenting a pair of relatively opposed terminals, a conductor movably mounted on the plug terminal and adapted in one position to contact with the lamp terminal, operating means associated with the conductor and insulated therefrom and projecting through the slot in the casing for moving the conductor to a position in which it is out of contact with the lamp terminal, detent means carried by the casing for coacting with the operating means to hold the conductor in its last named position, and common spring means interposed between the conductor and the plug terminal for maintaining the conductor in either of its said positions.

1,298,355. SLED. BARNEY C. KNUDSEN, Montclair, N. J. Filed May 4, 1916. Serial No. 95,470. 1 Claim. (Cl. 21—94.)

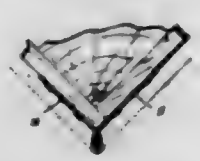


A sleigh having flexible runners, a steering shaft and wheel, a sprocket mounted on the shaft, pulleys stationarily mounted one at each side of the longitudinal center of the sleigh, a support movable with the runners and a flexible element passing around the sprocket and the pulleys and connected to the support.

1,298,356. PRODUCTION OF ACETIC ANHYDRID AND ACETALDEHYDE. JOSEPH KONTSCHEF and MAURICE BRUDET, Lyon, France, assignors to Societe Chimique des Usines du Rhone, (Anciennement, Gilliard, P. Monnet et Cartier.) Paris, France. Filed June 11, 1918. Serial No. 239,353. 7 Claims. (Cl. 23—24.)

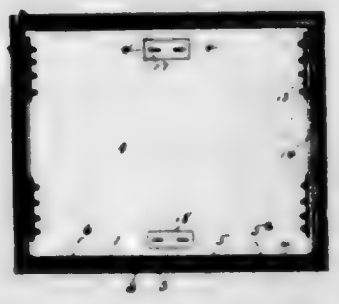
1. A process of making acetaldehyde and an acetic anhydrid, comprising heating ethylidene diacetate in presence of a catalyser while maintaining the temperature below the boiling point of the ethylidene diacetate.

1,298,357. METAL CORNER-BEAD AND STOPPING-OFF STRIP. ALOIS L. KRODINGER, Maplewood, Mo. Filed Sept. 30, 1918. Serial No. 256,177. 1 Claim. (Cl. 72—121.)



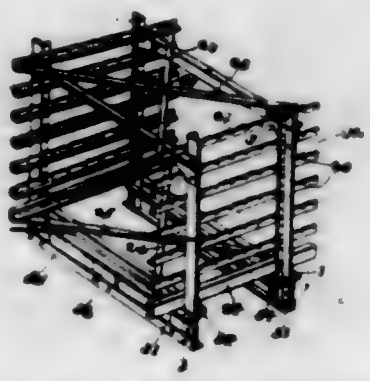
A combined metal corner bead and stopping-off strip comprising a body formed of a single piece of sheet metal bent to form three substantially parallel legs of equal length and width, and with one leg positioned between the other two, and a plurality of attaching plates secured to said body by having portions of their ends clamped between the legs forming the body of the bead.

1,298,358. OVEN. FRANK KUHN and JAY A. HAND, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 21, 1918. Serial No. 218,406. 8 Claims. (Cl. 126—275.)



8. The combination with an oven wall, of a lining for said oven therewithin, and a sheet metal retaining strip secured to the oven at the front thereof and having a portion projecting within the oven offset to provide an abutment retaining the lining in place.

1,298,359. CORE-RACK. HENRY M. LANE, Detroit, Mich. Filed Sept. 22, 1917. Serial No. 192,754. 8 Claims. (Cl. 34—26.)



1. In a device of the character described, a rack comprising a skeleton frame, shelves removably supported on said frame, and guide bars connected to the frame arranged to guide a truck beneath the rack.

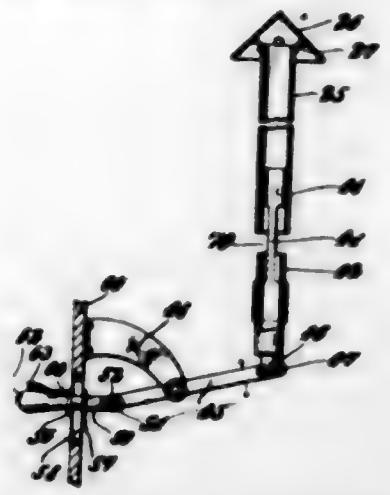
2. In a device of the character described, a rack comprising vertical posts, side bars and end bars connected to said posts, guides carried by the rack and suitably spaced from each other, and adapted to guide a truck beneath the rack.

1,298,360. LIFE-SAVING BOAT. JULIUS LEHOSKY, Glenfield, N. J. Filed Dec. 4, 1917. Serial No. 205,343. 2 Claims. (Cl. 9—4.)

1. In a life-boat of the character described, the combination of a hollow column, constituting an air-inlet for said boat, of a conical head on top of said column, brackets securing said head to said column, a plunger within said column for controlling the air supply through the same, and means for determinating the quantity of air to be supplied.

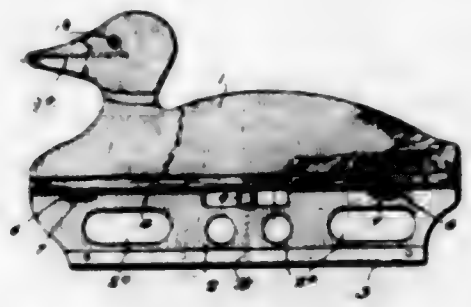
2. In a life-boat of the character described, the combination of a hollow column, constituting an air-inlet for said boat, of a conical head on top of said column, brackets securing said head to said column, a plunger within said column having a reduced central portion controlling the air supplied through said column, a lever secured by a pin and slot connection to the lower end of said plunger, a bracket to which said lever is pivoted intermediate its ends, a slotted support, a movable element

secured by a pin and slot connection to the free end of said lever and passed through the slot in said support, a handle on said element, washers on said element at both sides of said support, said support having its front face



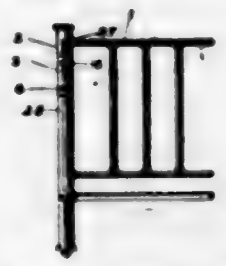
corrugated, a detent lever on said handle adapted to engage with its free end the corrugations of said support, and a graduated scale near the corrugated part of said support and said handle, substantially as described and for the purpose set forth.

1,298,361. DECOY. WILLIAM LEVY, St. Louis, Mo. Filed Nov. 26, 1918. Serial No. 264,166. 7 Claims. (Cl. 43—2.)



1. A decoy composed of a single ply wooden body and keel portions, and single ply wooden wing portions, the grain of the latter extending at an angle to that of the former.

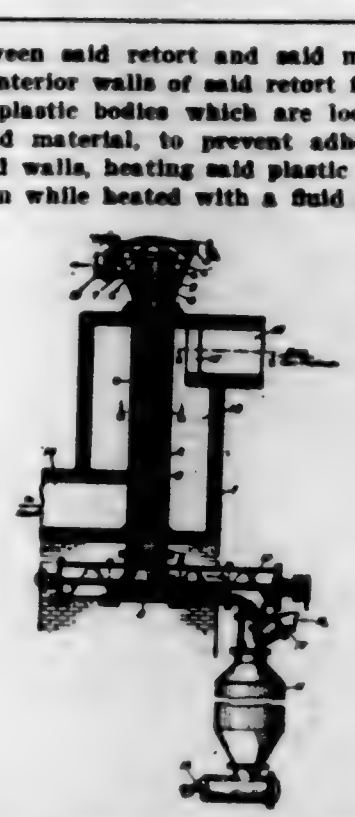
1,298,362. FURNITURE. MAHLON LEWRY, Brooklyn, N. Y. Filed May 8, 1918. Serial No. 233,321. 13 Claims. (Cl. 240—4.)



1. In a bedstead having a post, a rotatable section in the post and a lamp carried by said section, said section being tubular and a battery therein for feeding the lamp, a lamp socket within the tube for the lamp, the upper and lower walls of said tube being insulated and contact members carried thereby whereby a lighting circuit may be completed.

1,298,363. METHOD OF FIXING NITROGEN. FRANK D. LINDQUIST, New York, N. Y., assignor to Nitrogen Products Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 15, 1916. Serial No. 91,446. 16 Claims. (Cl. 23—13.)

1. The method of chemically reacting upon plastic material in a retort, which comprises effecting relative movement between said retort and said material while screening the interior walls of said retort from said material by less plastic bodies which are loosely movable along with said material, to prevent adhesion of said material to said walls, heating said plastic material, and reacting thereon while heated with a fluid reagent.



3. The method of chemically reacting upon briqueted material which includes as a constituent thereof a chemically reactive substance which tends to fluidify and to render said material increasingly plastic, as its temperature is raised within determined limits,—which comprises at least partly surrounding said briqueted material with bodies capable of absorbing the excess of said substance which may exude from the briqueted material, to aid in reducing its plasticity and in maintaining the interstices thereof open, subjecting said briqueted material to heat, and passing a current of a gaseous reagent through said interstices, to react on said substance.

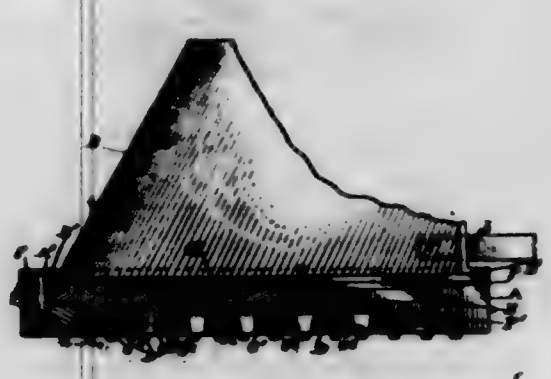
9. The method of fixing nitrogen which comprises placing in contact two species of briquets, one of said species including as constituents thereof, carbon, iron in finely divided condition, and an alkaline substance which supplies the base of a cyanogen compound to be formed, the other of said species including similar constituents but with a reduced content of said alkaline substance, heating said briquets of both species, while in contact with each other, to a reaction temperature sufficient to at least partially fluidify said alkaline substance, the briquets having the lower content of said subetance acting, in part, to absorb excess fluid matter present, and reacting upon briquets of both species with free nitrogen, while said briquets are in movement through a retort to form said cyanogen compound, said absorbently acting briquets co-acting with those having the higher content of said alkaline substance to substantially prevent choking of said retort by excessive fluidification of said substance.

12. The method of fixing nitrogen in a retort to form a cyanogen compound,—which comprises forming in said retort a charge containing carbon, a catalyzer and a substance which yields the base of said cyanogen compound, and which charge is materially less reactive in the portions thereof which contact with the walls of said retort, whereby to form a lower percentage of said compound in said portions, heating said charge to the reaction temperature, treating it with free nitrogen, chilling the reactive mass with its unequally disposed content of said cyanogen compound, effecting a downward movement of said charge through said retort, and breaking up the caked charge preparatory to the separation of said compound therefrom.

15. The method of effecting a chemical reaction in a charge in course of movement through a retort, to prevent adherence of said charge to the walls of said retort, which comprises, forming the materials of the charge into briquets which tend to become plastic when heated to the reaction temperature, at least one of said mate-

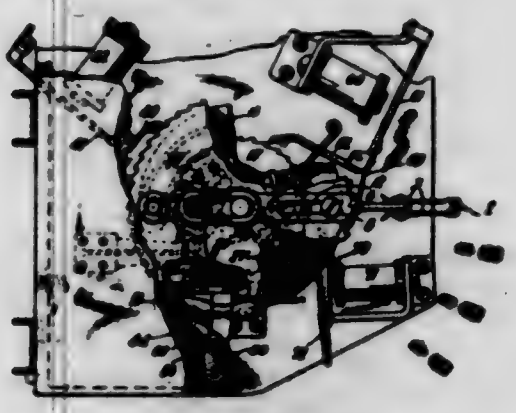
rials being liquefiable as said temperature is approached, delivering said briquets to said retort together with an auxiliary charge of retort shielding material which is capable of absorbing excess liquid which may exude from the briquets in contact therewith, feeding said briquets through the retort together with said auxiliary charge and with the latter interposed between the briquets aforesaid and the walls of said retort with which said briquets would otherwise contact, and effecting the desired reaction through the intermediacy of a gaseous reagent and heat sufficient to render said briquets plastic while leaving open the interstices therebetween to permit of the passage of said gaseous reagent.

1,298,264. HORSESHOE. ROBERT MCCOY, New York, N. Y. Filed July 11, 1917. Serial No. 179,816. 3 Claims. (Cl. 168—18.)



1. A detachable horseshoe having a tread portion and an upper portion adapted for securing the tread portion beneath the hoof, said tread portion having an elastic tread member secured beneath the edge of the tread, and a metal plate disposed upon the elastic tread and having a corrugated under surface, and means for securing the elastic tread in its position, substantially as shown and described and for the purposes set forth.

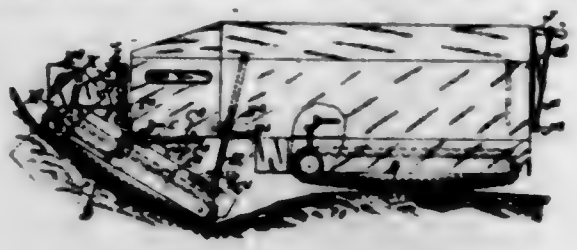
1,298,265. TELEPHONE-EXCHANGE SYSTEM. JAMES L. MCQUARRIE, Montclair, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1917. Serial No. 197,574. 5 Claims. (Cl. 179—27.5.)



1. The combination with a plurality of terminal banks arranged vertically, of a plurality of superimposed switches each having a set of brushes movable in a horizontal plane, said brushes being arranged to select a bank by a rotative movement and to select a terminal in the selected bank by a radial movement.

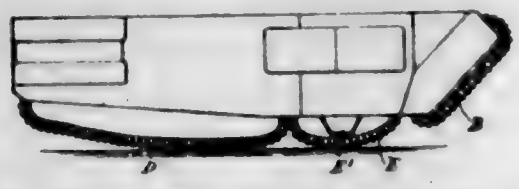
1,298,266. MOTOR-VEHICLE. ROBERT FRANCIS MACFIE, London, England. Filed Sept. 4, 1917. Serial No. 189,654. 4 Claims. (Cl. 180—9.)

1. In a self propelled vehicle, the combination of the vehicle body, supporting means therefor, a bogie pivotally connected about a vertical axis to said body, a frame pivotally connected about a horizontal axis to said bogie, an arcuate guide on said frame concentric with said vertical axis, a cross head on said guide movable longitudinally relatively thereto, extensible means operatively connecting the cross head to the body of the vehicle for



increasing or decreasing the distance between these two parts at will, locking means whereby the cross head can be fixed relatively to said arcuate guide, an endless portable track mounted on said frame, a power unit in the body of the vehicle, and an operative connection between said portable track and said power unit.

1,298,367. SELF-PROPELLED VEHICLE. ROBERT FRANCIS MACFIE, London, England. Filed Sept. 4, 1917. Serial No. 189,656. 2 Claims. (Cl. 180—9.)



1. In a self-propelled vehicle the combination with the frame and body of supporting and propelling means therefor, an additional portable track at one end of the vehicle disposed in a plane inclined to the plane wherein the said supporting and propelling means are operative, means operatively connecting said portable track to the power unit of the vehicle and means whereby said operative connection can be disengaged.

1,298,368. MULTIGAP SPARK-PLUG. MYRON M. METZINGER, Blair, Nebr. Filed Apr. 18, 1918. Serial No. 229,291. 3 Claims. (Cl. 123—169.)

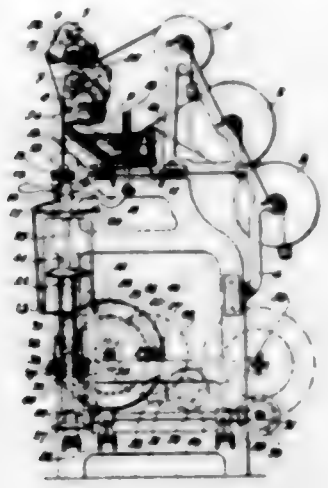


1. In a device as described, in combination, a tubular shell, a plug held against longitudinal displacement and concentrically within said shell, an elongated rod removably held against longitudinal displacement within said plug and projecting beyond the latter, and an integral disk electrode formed terminally upon the projecting end of said rod, said disk being bored out to provide a pair of concentric rings upon its flat surface.

1,298,369. MACHINE FOR FORMING TWINE OR CORD FROM RIBBONS OF PAPER. GEORGE SEATON MILDE, London, England, assignor of one-half to Textilite Engineering Company Limited, London, England, a Corporation of Great Britain. Filed July 6, 1917. Serial No. 179,043. 1 Claim. (Cl. 28—21.)

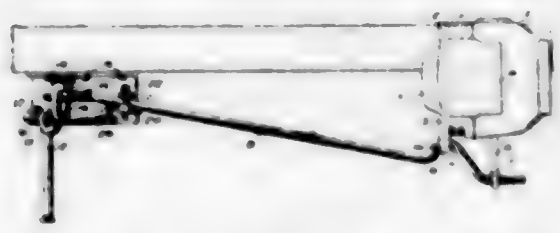
A cord-making machine, including cord strip feed reels and lead-wire bobbin, a spinning means for the cord-

strips, feed rolls for said cord-strips intermediary of said reels and bobbin and said spinning means, a moistening tank intermediary of said reels and said cord feed-rolls through which tank may be passed said cord-strips, a vertically slidable member positioned in said tank and



equipped with spaced elements beneath which are passed said cord-strips and means for effecting the movement of said slidable member comprising an angular lever having a limiting slot and projection connection with the machine frame and a rod connection with said slidable member.

1,298,370. UNCOUPLING AND CENTERING MECHANISM. ISAAC H. MILLIKEN, Aspinwall, and WILLIAM J. REGAN, Pittsburgh, Pa., assignors to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 24, 1917. Serial No. 144,173. 13 Claims. (Cl. 213—59.)

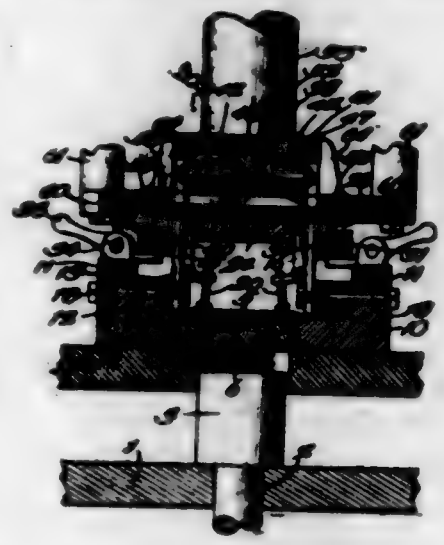


9. In mechanism of the character indicated, the combination with a laterally movable coupler, of a rod operatively connected to said coupler for shifting the same laterally, a lever movably connected to said rod and adapted to shift the same transversely of the car in either direction, and an extended pivotal support for said lever, said lever being adapted to engage said rod above said pivotal support and being adapted to be shifted bodily upon said pivotal support to change the pivotal relation of said support and lever for effecting lateral shifting of said coupler.

1,298,371. INSOLE-MAKING MACHINE. CLARENCE W. MOFFATT, Maywood, Ill. Filed June 29, 1917. Serial No. 177,628. 27 Claims. (Cl. 12—20.)

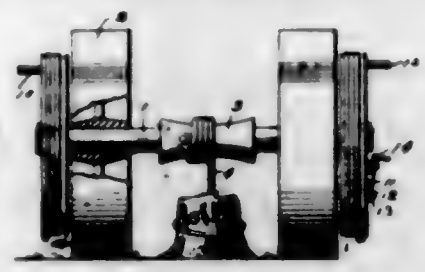
9. Mechanism for making insoles having wales, said mechanism having a set of independent clamps for gripping the wales, a templet forming an abutment against which the clamps may be held, a templet holder in the form of a receptacle into which templets of varying outline may be inserted, and means for holding the clamps, templet, and templet holder assembled in proper relationship.

22. In mechanism for making insoles provided with wales, the combination, with a recessed die, of a projecting die, comprising a flexible strip adapted to enter the recessed die for forcing part of the work fabric thereinto, a templet having a working edge, the templet being removable whereby templets having varying outlines may be



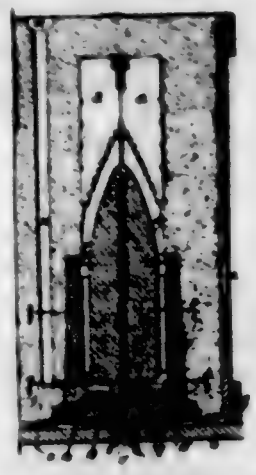
substituted, and means for drawing the flexible strip tightly against said working edge.

1,298,372. STUMP-PULLER. THOMAS H. MONK, Thomasville, Ga. Filed June 7, 1918. Serial No. 238,776. 6 Claims. (Cl. 212—142.)



1. In a stump puller, the combination with a main axle, and ground wheels loosely mounted thereon; of a relatively small pulley fast on said axle, a lifting chain attached thereto, a relatively large drum also fast on said axle, and a hauling rope attached to the drum.

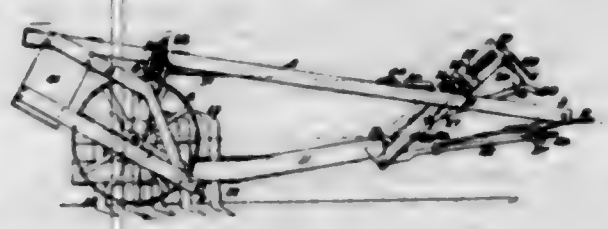
1,298,373. MOLD FOR CASTING SHELLS. ABRAM C. MOTT, Jr., ALBERT J. MEYER, JOHN K. HALTEMAN, and CHARLES H. WHEAWILL, Philadelphia, Pa., assignors to Abram Cox Stove Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 25, 1918. Serial No. 255,549. 4 Claims. (Cl. 22—133.)



1. The combination of a mold for casting shells having bands; a flask; a base; a core forming the interior of the shell and connected to the base by a contracted neck; a cylindrical section surrounding the body portion of the core and spaced therefrom and having an annular groove

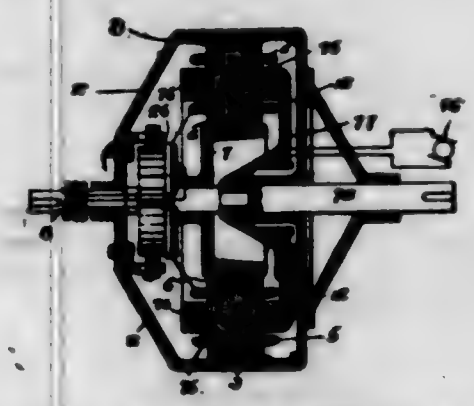
therein; and green sand forming the balance of the mold so that when the metal is poured it will flow into the space between the core and the outer wall formed by the cylindrical section and the sand mold and will flow into the annular groove forming the ring of the shell.

1,298,374. SCARIFIER. FRANKLIN T. MOYER, Napa, Calif. Filed July 9, 1918. Serial No. 244,002. 15 Claims. (Cl. 37—50.)



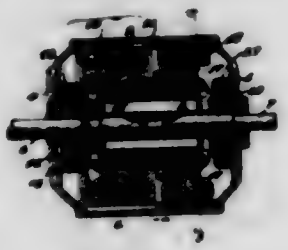
1. A scarifier comprising a main frame having its forward end adapted to be connected to a draw-bar, a pair of wheels, one on each side of said frame, an intermediate frame carried by the wheels supporting the rear end of the main frame, a sub-frame pivotally connected at its rear end to the intermediate frame, an adjustable connection between the forward end of the sub-frame and the main frame, and a plurality of tines carried by the sub-frame.

1,298,375. ELECTROMAGNETIC POWER-TRANSMITTING APPARATUS. ALFONS H. NEULAND, San Francisco, Calif. Filed Aug. 8, 1914. Serial No. 855,673. 21 Claims. (Cl. 172—239.)



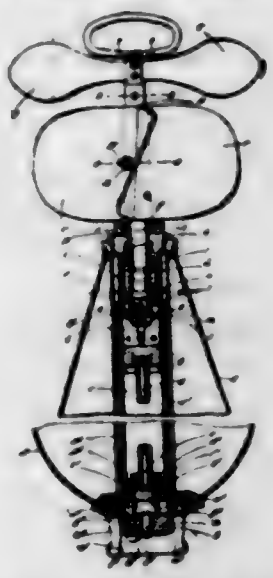
1. In a power transmitting apparatus of the induction type, an armature provided with a winding, a stator provided with a winding which is connected to the armature winding by means of stationary brushes, and a rotatable field element in inductive relation to said armature and stator.

1,298,376. ELECTROMAGNETIC TRANSMISSION. ALFONS H. NEULAND, New York, N. Y. Filed Jan. 18, 1916. Serial No. 72,663. 22 Claims. (Cl. 290—7.)



1. A dynamo-electric machine comprising a driven rotative armature, a driving rotative armature immediately opposing the driven armature, whereby each acts as the field for the other, and a stationary field element in co-operative relation with the driven armature, the windings of the two armatures and of the field element being arranged to be electrically connected.

1,298,377. BOMB. THOMAS KETTEL NORTH, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed July 7, 1917. Serial No. 179,277. 9 Claims. (Cl. 102—37.)



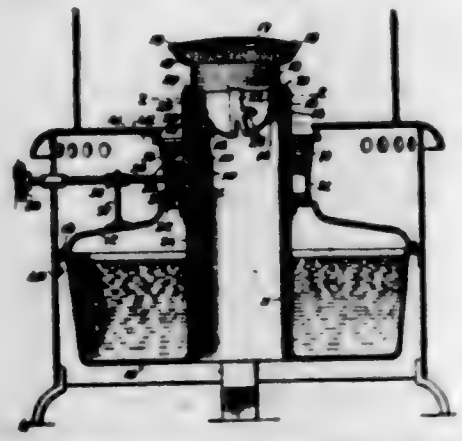
1. In a bomb, the combination of impact firing mechanism, time firing mechanism, and a displaceable member adapted to be moved downward by its inertia to actuate the impact firing mechanism or to be moved upward by contact to actuate the time firing mechanism.

5. In a bomb, the combination of impact firing mechanism, time firing mechanism, a displaceable member adapted to be moved downward by its inertia to actuate the impact firing mechanism or to be moved upward by contact to actuate the time firing mechanism, a spindle extending longitudinally into the striker of said impact firing mechanism, displaceable detents carried by the striker and normally retained in engagement with the displaceable member by said spindle, vanes on said spindle for causing it to revolve during the descent of the bomb through the air and means whereby its revolution removes it from its detent retaining position.

8. In a bomb, the combination of impact firing mechanism, time firing mechanism, a displaceable tubular piston-like member, a casing containing the primer charge and surrounded by the tubular portion of said member, and detonators at the opposite ends of said casing one of which is adapted to be fired by the impact firing mechanism and the other by the time firing mechanism according to the direction in which said displaceable member moves.

9. In a bomb, the combination of impact firing mechanism, time firing mechanism, a displaceable member adapted to be moved downward by its inertia to actuate the impact firing mechanism or to be moved upward by contact to actuate the time firing mechanism, an open nose piece on said bomb, and a cap for closing said nose piece.

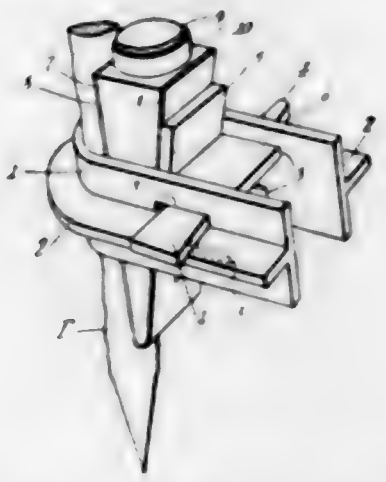
1,298,378. OIL-BURNER. THOMAS F. I. O'BRIEN, Brooklyn, N. Y. Filed Jan. 15, 1918. Serial No. 211,990. 10 Claims. (Cl. 158—94.)



5. In an oil burner, a reservoir, a tube rising therefrom, a wick surrounding said tube, a retaining ring for hold-

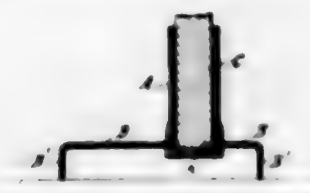
ing said wick stationary on said tube, said wick and tube being contracted at one end, a detachable wick section superimposed on said contracted wick and retaining ring, a flanged cap removably carried by said tube, a flange of said cap overlying said wick, detachable wick section, and retaining ring, and adapted to conduct heat to said retaining ring, guiding and locking means carried by said cap for applying and removing said cap to and from said tube, a sleeve movable on said wick and detachable wick section for exposing and covering portions of said detachable wick section, guides for determining the travel of said sleeve on said wick sections, and remotely controlled actuating means for imparting movements to said sleeve.

1,298,379. POST-SETTING DEVICE. JAMES HENRY OSTEN, White City, Kans., assignor of two-fifths to Robert Guy Osten and one-fifth to Frank Knudson, White City, Kans. Filed Oct. 9, 1918. Serial No. 257,538. 2 Claims. (Cl. 61—77.)



1. A post setting device including a post straddling yoke, a backing member in the yoke and adjustable toward and from an engaged post, a driving wedge insertible into the yoke between the engaged post and the backing member, and a striking block upon the wedge.

1,298,380. CHRISTMAS-TREE HOLDER. RUTH C. OWEN, Port Jervis, N. Y. Filed May 29, 1917. Serial No. 171,701. 1 Claim. (Cl. 248—38.)



A holder for Christmas trees and like articles, comprising a hollow body open at the top and provided at its lower portion with screw-threaded sockets open to the interior of said body and extending from such interior to the outside of the body, and detachable legs having screw-threaded inner portions to fit said sockets and provided at their outer portions with feet for engagement with a support, while the inner ends of said legs are adapted to project into the interior of said body to engage and clamp the article within the holder, whereby the inner or clamping ends of said legs will move outwardly simultaneously with an outward movement of their outer ends or feet, and whereby both ends of the legs will also move inwardly at the same time, so that the base area spanned by the feet will be increased when the clamping portions of the legs are adjusted from each other to accommodate an article of relatively great thickness, and decreased when the clamping portions of the legs are adjusted toward each other to accommodate an article of relatively small thickness.

1,298,381. CAR-REPAIRER'S TRUCK. GAETANO J. PACE, San Jose, Calif. Filed Dec. 7, 1918. Serial No. 265,705. 2 Claims. (Cl. 5—43.)



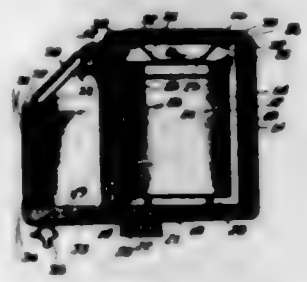
1. A car repairer's truck comprising a wheeled body-supporting structure having centrally mounted resilient supporting means operatively positioned at the end thereof and extending a distance beyond the sides thereof, and a head-rest pivotally mounted on said structure and adapted to engage said resilient supporting means.

1,298,382. SOFT-NOSE HAMMER. WARREN J. PACKER, Meriden, Conn. Filed July 25, 1918. Serial No. 246,714. 3 Claims. (Cl. 145—36.)



2. A hammer of the character described, comprising a handle, having a metallic circular band mounted at one end, the said band having an opening to receive one end of the pipe, an annular groove formed in the band, the end of the pipe being notched to receive the said groove at a point diametrically opposite the said opening, and a soft hammer head mounted on the end of the pipe within the band and embraced by the said band, and a locking pin extended transversely through the said pipe within the band and having its end extended to form studs embedded in the said hammer head.

1,298,383. COMBINED TANK AND TOOL-CHEST FOR AUTOMOBILES. SAMUEL C. PANDOLFO, St. Cloud, Minn. Filed Nov. 21, 1917. Serial No. 203,085. 4 Claims. (Cl. 220—14.)



1. An automobile tank formed with top, bottom and side walls permanently secured together to form a fluid-tight receptacle, provided with a partition extending from end to end and from top to bottom and permanently secured thereto, a pair of transversely disposed partitions at one end of the tank on opposite sides of the first partition and permanently secured thereto and to the front and rear walls, respectively, so as to provide two fluid-tight, non-communicating chambers at said end of the tank, the chamber formed by the longitudinally disposed partition, one of said transversely disposed partitions and the opposite end of the tank being provided with an inner permanently secured wall arranged in spaced relation with the adjacent outer or main walls of the tank and both of said partitions, the space intervening being provided with heat-insulating material, said chamber having an opening in the top, an insulated cover or lid hingedly secured to the top so as to extend into said opening, said lid having marginal flanges on all sides thereof adapted to overlap the top and provide moisture-shedding relation therewith, the chamber forward of said insulated chamber

being disposed lengthwise of the tank and having its top provided with an opening, a cover or lid hingedly secured to the top and provided with marginal flanges on all sides thereof arranged to overlap the top, the top of the tank at points coincident with the fluid-holding chambers at the end of the tank being provided with inlet openings having removable fluid-tight closure means, while the bottom of the fluid chamber located rearward of the longitudinally disposed partition is provided with a draw-off conduit disposed toward the front of tank and through the compartments forward of said longitudinally disposed partition, said conduit and the chamber at the end of the tank forward of said partition being provided with controllable outlets operable from the tank exterior.

4. An elongated metallic automobile tank having top, side and bottom walls secured together to form a fluid-tight receptacle, a fluid-tight partition extending from end to end and from top to bottom intermediate of the front and rear sides of the tank, the top of the tank forward of said partition being made sloping downwardly toward the front side of the tank, transversely disposed partitions at one end of the tank intermediate of said first mentioned partition and the front and rear walls of the tank and secured to the top and bottom so as to provide non-communicating fluid-tight chambers, the tops of said last chambers being provided with inlet-nipples having removable closure means while the bottoms are provided with draw-off means, one of the chambers intermediate of one side wall of the tank and said first mentioned partition being provided with inner walls having heat insulating material therebetween, said last mentioned chamber being provided with a fluid-tight partition so as to provide a liquid-holding portion in said insulated chamber, the top wall of said portion being provided with an inlet-nipple having removable closure means, while the other portion of said insulated chamber has a hinged insulated cover at its top, the chamber forward of said first mentioned partition being provided with a bottom filler of noise-deadening material, while the top of said chamber is provided with a cover-receiving opening, and a cover hingedly secured in said opening and provided with laterally disposed marginal flanges adapted to overlap the top of the chamber about said opening.

1,298,384. ILLUMINATOR FOR WRITING ELEMENTS. BYRON L. S. PERRIN, Ottawa, Ontario, Canada. Filed July 18, 1916. Serial No. 109,930. 2 Claims. (Cl. 240—8.4.)



1. A self contained illuminator for a writing element comprising a tubular casing, a writing element therein, an electric lamp within the casing adjacent the scribing end of the writing element, a dry battery within the casing, a pair of spaced contacts on the exterior surface of the casing, a connection between one contact and one terminal of the lamp, a connection between one electrode of the battery and the other lamp terminal, a connection between the other electrode of the battery and the other contact, a slip cap to be embraced about either end of the tubular casing, and a band of conducting material mounted interiorly within the cap to connect the spaced contacts when the cap is applied to the end of the tubular casing bearing the contact whereby to illuminate the lamp.

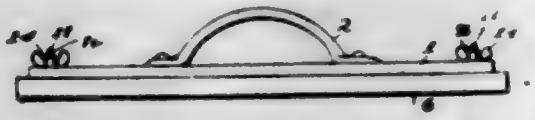
1,298,385. ROLLER ATTACHMENT FOR GANG-PLOWS. DAVENPORT PLUMER, Three Tuns, Pa. Filed Feb. 11, 1919. Serial No. 276,291. 4 Claims. (Cl. 97—44.)

2. In a roller attachment for gang plows the combination of a plow-beam, a land roller, a pole attached to the roller and pivoted to the beam and adapted to swing free thereof in one lateral direction, a stop disconnected from the pole and arranged on the beam for limiting the angular relation of the pole and beam in the other



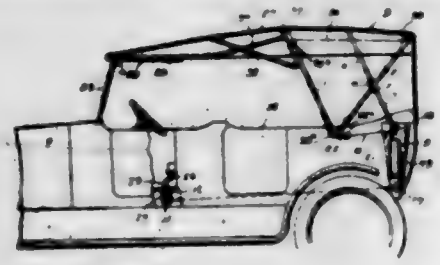
direction, and means for relatively adjusting the stop and pivot point of the pole to vary the angular relation of the pole and beam.

1,298,386. PLASTERER'S FLOAT. EDWARD H. PLUNKETT, Gebo, Wyo. Filed Nov. 27, 1918. Serial No. 264,261. 4 Claims. (Cl. 72—136.)



1. A plasterer's float including an upper plate, a lower plate, a handle applied to the upper plate, a fabric cover stretched across the lower plate and formed with flaps which are stretched around the plate and provided with eyelets, retaining screws extending through the eyelets to hold the cover in position, and nuts threaded upon the retaining screws for coöperation therewith to clamp the upper plate against the lower plate.

1,298,387. AUTOMOBILE-TOP-RAISING DEVICE. EDWARD P. PORCHER, Charleston, S. C. Filed Feb. 9, 1917. Serial No. 147,658. 2 Claims. (Cl. 21—62.)

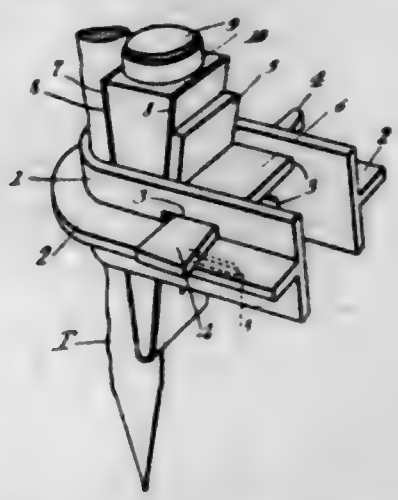


1. The combination with a vehicle body having a foldable top associated therewith and including a pair of movable supporting bows pivotally connected with the body and adapted when in inoperative position and the top folded to lie in superposed relation, of a casing mounted on the vehicle body, a vertically movable lifting element slidably mounted in the casing and having connection with one of the bows, a laterally extending arm carried by the other bow, a rotatable drum mounted on the vehicle body, and a flexible element having connection with the lifting element and the arm and adapted to be wound around the drum so as to effect raising of the bows from inoperative to operative position when it is desired to unfold the top.

2. The combination with a vehicle body, of a foldable top associated with the body and including a cover and front and rear pivotally mounted supporting bows and a frame connected to the front bow by rods, pulleys associated with one of the bows, an auxiliary bow mounted for sliding movement on the front bow and adapted to lie parallel therewith when the top is in folded position, casings mounted on the vehicle body, pulleys located within each casing and disposed at the upper end thereof, lifting elements slidably mounted withing the casings and having connection with the rear supporting bow, pulleys carried by the lifting elements, a rotatable drum, and a

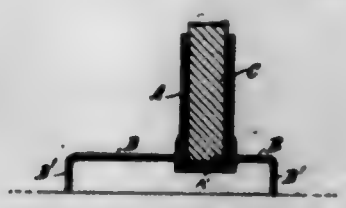
ing said wick stationary on said tube, said wick and tube being contracted at one end, a detachable wick section superimposed on said contracted wick and retaining ring, a flanged cap removably carried by said tube, a flange of said cap overlying said wick, detachable wick section, and retaining ring, and adapted to conduct heat to said retaining ring, guiding and locking means carried by said cap for applying and removing said cap to and from said tube, a sleeve movable on said wick and detachable wick section for exposing and covering portions of said detachable wick section, guides for determining the travel of said sleeve on said wick sections, and remotely controlled actuating means for imparting movements to said sleeve.

1,298,379. POST-SETTING DEVICE. JAMES HENRY OSTEN, White City, Kans., assignor of two-fifths to Robert Guy Osten and one-fifth to Frank Knudson, White City, Kans. Filed Oct. 9, 1918. Serial No. 257,538. 2 Claims. (Cl. 61—77.)



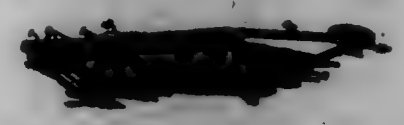
1. A post setting device including a post straddling yoke, a backing member in the yoke and adjustable toward and from an engaged post, a driving wedge insertible into the yoke between the engaged post and the backing member, and a striking block upon the wedge.

1,298,380. CHRISTMAS-TREE HOLDER. RUTH C. OWEN, Port Jervis, N. Y. Filed May 29, 1917. Serial No. 171,701. 1 Claim. (Cl. 248—38.)



A holder for Christmas trees and like articles, comprising a hollow body open at the top and provided at its lower portion with screw-threaded sockets open to the interior of said body and extending from such interior to the outside of the body, and detachable legs having screw-threaded inner portions to fit said sockets and provided at their outer portions with feet for engagement with a support, while the inner ends of said legs are adapted to project into the interior of said body to engage and clamp the article within the holder, whereby the inner or clamping ends of said legs will move outwardly simultaneously with an outward movement of their outer ends or feet, and whereby both ends of the legs will also move inwardly at the same time, so that the base area spanned by the feet will be increased when the clamping portions of the legs are adjusted from each other to accommodate an article of relatively great thickness, and decreased when the clamping portions of the legs are adjusted toward each other to accommodate an article of relatively small thickness.

1,298,381. CAR-REPAIRER'S TRUCK. GAETANO J. PACK, San Jose, Calif. Filed Dec. 7, 1918. Serial No. 265,705. 2 Claims. (Cl. 5—43.)



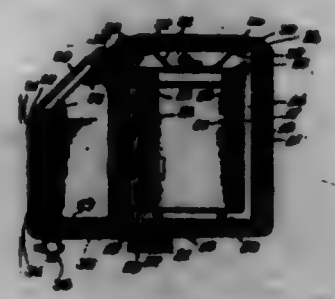
1. A car repairer's truck comprising a wheeled body-supporting structure having centrally mounted resilient supporting means operatively positioned at the end thereof and extending a distance beyond the sides thereof, and a head-rest pivotally mounted on said structure and adapted to engage said resilient supporting means.

1,298,382. SOFT-NOSE HAMMER. WARREN J. PACKER, Meriden, Conn. Filed July 23, 1918. Serial No. 246,714. 2 Claims. (Cl. 145—36.)



2. A hammer of the character described, comprising a handle, having a metallic circular band mounted at one end, the said band having an opening to receive one end of the pipe, an annular groove formed in the band, the end of the pipe being notched to receive the said groove at a point diametrically opposite the said opening, and a soft hammer head mounted on the end of the pipe within the band and embraced by the said band, and a locking pin extended transversely through the said pipe within the band and having its end extended to form studs embedded in the said hammer head.

1,298,383. COMBINED TANK AND TOOL-CHEST FOR AUTOMOBILES. SAMUEL C. PANDOLFO, St. Cloud, Minn. Filed Nov. 21, 1917. Serial No. 203,095. 4 Claims. (Cl. 220—14.)



1. An automobile tank formed with top, bottom and side walls permanently secured together to form a fluid-tight receptacle, provided with a partition extending from end to end and from top to bottom and permanently secured thereto, a pair of transversely disposed partitions at one end of the tank on opposite sides of the first partition and permanently secured thereto and to the front and rear walls, respectively, so as to provide two fluid-tight, non-communicating chambers at said end of the tank, the chamber formed by the longitudinally disposed partition, one of said transversely disposed partitions and the opposite end of the tank being provided with an inner permanently secured wall arranged in spaced relation with the adjacent outer or main walls of the tank and both of said partitions, the space intervening being provided with heat-insulating material, said chamber having an opening in the top, an insulated cover or lid hingedly secured to the top so as to extend into said opening, said lid having marginal flanges on all sides thereof adapted to overlap the top and provide moisture-shedding relation therewith, the chamber forward of said insulated chamber

being disposed lengthwise of the tank and having its top provided with an opening, a cover or lid hingedly secured to the top and provided with marginal flanges on all sides thereof arranged to overlap the top, the top of the tank at points coincident with the fluid-holding chambers at the end of the tank being provided with inlet openings having removable fluid-tight closure means, while the bottom of the fluid chamber located rearward of the longitudinally disposed partition is provided with a draw-off conduit disposed toward the front of tank and through the compartments forward of said longitudinally disposed partition, said conduit and the chamber at the end of the tank forward of said partition being provided with controllable outlets operable from the tank exterior.

4. An elongated metallic automobile tank having top, side and bottom walls secured together to form a fluid-tight receptacle, a fluid-tight partition extending from end to end and from top to bottom intermediate of the front and rear sides of the tank, the top of the tank forward of said partition being made sloping downwardly toward the front side of the tank, transversely disposed partitions at one end of the tank intermediate of said first mentioned partition and the front and rear walls of the tank and secured to the top and bottom so as to provide non-communicating fluid-tight chambers, the tops of said last chambers being provided with inlet-nipples having removable closure means while the bottoms are provided with draw-off means, one of the chambers intermediate of one side wall of the tank and said first mentioned partition being provided with inner walls having heat insulating material therebetween, said last mentioned chamber being provided with a fluid-tight partition so as to provide a liquid-holding portion in said insulated chamber, the top wall of said portion being provided with an inlet-nipple having removable closure means, while the other portion of said insulated chamber has a hinged insulated cover at its top, the chamber forward of said first mentioned partition being provided with a bottom filler of noise-deadening material, while the top of said chamber is provided with a cover-receiving opening, and a cover hingedly secured in said opening and provided with laterally disposed marginal flanges adapted to overlap the top of the chamber about said opening.

1,298,284. ILLUMINATOR FOR WRITING ELEMENTS. BYRON L. S. PERRIN, Ottawa, Ontario, Canada. Filed July 18, 1916. Serial No. 109,980. 2 Claims. (Cl. 240—8.4.)



1. A self contained illuminator for a writing element comprising a tubular casing, a writing element therein, an electric lamp within the casing adjacent the scribing end of the writing element, a dry battery within the casing, a pair of spaced contacts on the exterior surface of the casing, a connection between one contact and one terminal of the lamp, a connection between one electrode of the battery and the other lamp terminal, a connection between the other electrode of the battery and the other contact, a slip cap to be embraced about either end of the tubular casing, and a band of conducting material mounted interiorly within the cap to connect the spaced contacts when the cap is applied to the end of the tubular casing bearing the contact whereby to illuminate the lamp.

1,298,285. ROLLER ATTACHMENT FOR GANG-PLOWS. DAVENPORT PLOWER, Three Tree, Pa. Filed Feb. 11, 1919. Serial No. 276,201. 4 Claims. (Cl. 97—46.)

2. In a roller attachment for gang plows the combination of a plow-beam, a lugged roller, a pole attached to the roller and pivoted to the beam and adapted to swing free thereof in one lateral direction, a stop disconnected from the pole and arranged on the beam for limiting the angular relation of the pole and beam in the other



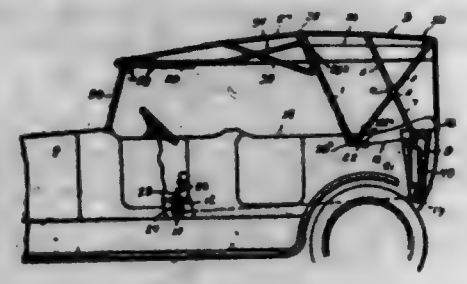
direction, and means for relatively adjusting the stop and pivot point of the pole to vary the angular relation of the pole and beam.

1,298,386. PLASTERER'S FLOAT. EDWARD H. PLUNKETT, Gebo, Wyo. Filed Nov. 27, 1918. Serial No. 264,261. 4 Claims. (Cl. 72—136.)



1. A plasterer's float including an upper plate, a lower plate, a handle applied to the upper plate, a fabric cover stretched across the lower plate and formed with flaps which are stretched around the plate and provided with eyelets, retaining screws extending through the eyelets to hold the cover in position, and nuts threaded upon the retaining screws for coöperation therewith to clamp the upper plate against the lower plate.

1,298,287. AUTOMOBILE-TOP-RAISING DEVICE. EDWARD P. PORCHER, Charleston, S. C. Filed Feb. 9, 1917. Serial No. 147,658. 2 Claims. (Cl. 21—62.)

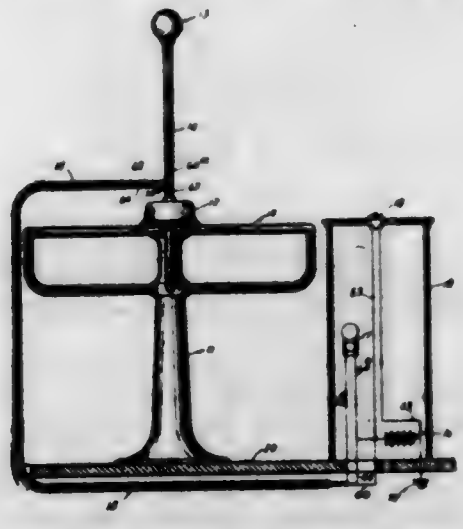


1. The combination with a vehicle body having a foldable top associated therewith and including a pair of movable supporting bows pivotally connected with the body and adapted when in inoperative position and the top folded to lie in superposed relation, of a casing mounted on the vehicle body, a vertically movable lifting element slidably mounted in the casing and having connection with one of the bows, a laterally extending arm carried by the other bow, a rotatable drum mounted on the vehicle body, and a flexible element having connection with the lifting element and the arm and adapted to be wound around the drum so as to effect raising of the bows from inoperative to operative position when it is desired to unfold the top.

2. The combination with a vehicle body, of a foldable top associated with the body and including a cover and front and rear pivotally mounted supporting bows and a frame connected to the front bow by rods, pulleys associated with one of the bows, an auxiliary bow mounted for sliding movement on the front bow and adapted to lie parallel therewith when the top is in folded position, casings mounted on the vehicle body, pulleys located within each casing and disposed at the upper end thereof, lifting elements slidably mounted withing the casings and having connection with the rear supporting bow, pulleys carried by the lifting elements, a rotatable drum, and a

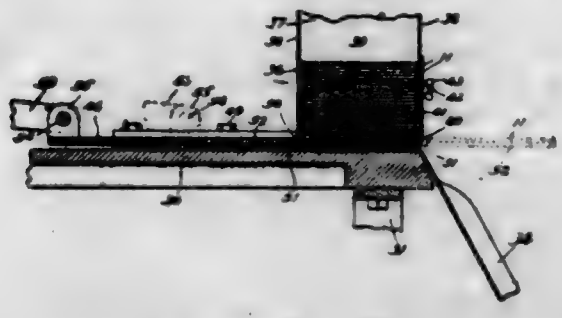
flexible element trained around the pulleys in the casing and the pulleys on the lifting elements and on the supporting bow and having connection with the auxiliary bow and adapted to be wound around the drum when the top is in folded position so as to effect raising of the front and auxiliary bows from folded to unfolded position and to raise the lifting elements from the casings so as to effect movement of the rear supporting bow to unfolded position.

1,298,388. TURNSTILE MECHANISM. THOMAS IRVING POTTER, Portland, Oreg., assignor to Coin Machine Manufacturing Company, Portland, Oreg., a Corporation of Oregon. Filed Aug. 30, 1916. Serial No. 117,710. 17 Claims. (Cl. 235—98.)



8. The combination with a turnstile, of a registering mechanism, a pair of clutch members for connecting said registering mechanism for operation by the turnstile, means for manually positioning said clutch members to permit subsequent clutching engagement of the latter, means for effecting such clutching engagement when the turnstile has accomplished a part of its operative stroke, and means for completing an operating cycle of the registering mechanism independently of the turnstile.

1,298,389. MACHINE FOR AUTOMATICALLY DEPOSITING ARTICLES IN PACKAGES. JOSEPH PROCK, Chicago, Ill., assignor to Pacific Coast Borax Company, New York, N. Y., a Corporation of Nevada. Filed June 7, 1916. Serial No. 102,329. 7 Claims. (Cl. 271—44.)

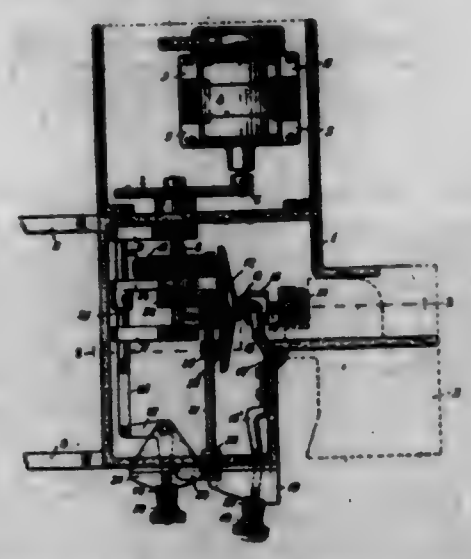


1. In a machine of the class described, the combination of a supply receptacle provided with a discharge opening, a reciprocating plunger having a feeding portion movable toward and from said discharge opening and adapted to engage an article to be fed from said supply receptacle, crank and pitman mechanism operatively connected with said plunger, a rotative shaft adapted to be connected with a source of power, for operating the crank and pitman mechanism, clutch mechanism, for connecting the crank mechanism with said shaft and disconnecting it therefrom, a toothed gear member, intermittently rotative tripping mechanism comprising a toothed gear wheel in toothed engagement with said first mentioned toothed gear member, and reciprocating tripping mechanism adapted to operatively engage said clutch mechanism and operatively connected with and adapted to be operated by said intermittently rotative tripping mechanism.

5. In a machine of the class described, the combination of a supply receptacle provided with a discharge opening, a reciprocating plunger adapted to engage articles to be successively discharged from the interior of said receptacle, crank and pitman mechanism operatively connected with said plunger, a rotative shaft adapted to be connected with a source of power, a ratchet member fixed to said shaft, a spring-pressed pawl mounted upon the crank member of said crank and pitman mechanism and adapted to be held yieldingly in engagement with said ratchet member, for connecting the crank and shaft mechanism, a tripping member mounted on a suitable support and movable into and out of tripping engagement with said pawl, resilient means operatively connected with said tripping mechanism for yieldingly holding said pawl-engaging tripping member in engagement with said pawl, and means for automatically moving said pawl-engaging tripping member out of engagement with the pawl.

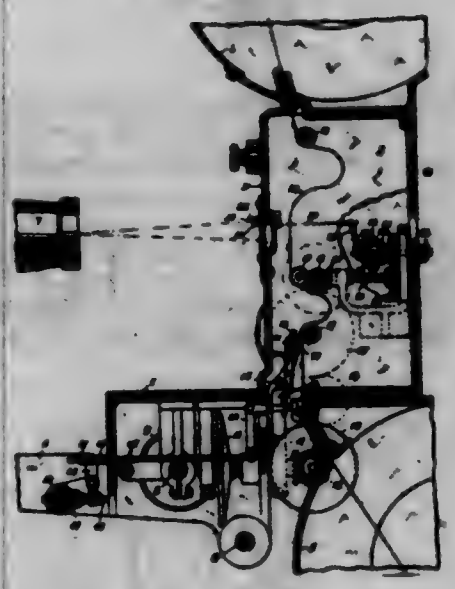
6. In a machine of the class described, the combination of a supply receptacle provided with a discharge opening, a reciprocating plunger adapted to successively engage articles to be discharged from the interior of said receptacle, said plunger having a forward portion adapted to extend through said discharge opening and in supporting engagement with an article on the outside of the receptacle, a rotative shaft adapted to be connected with a source of power, a clutch member fixed to said shaft, crank and pitman mechanism operatively connected with said plunger, a spring-pressed pawl mounted upon the crank member of said crank and pitman mechanism and adapted to be moved into and out of engagement with said first mentioned clutch member, a plurality of tripping members movable into and out of the path of movement of and adapted to alternately engage said pawl, for releasing the clutch mechanism when the plunger is at the forward and rearward extremities of its path of movement, respectively, and means for automatically operating said tripping members.

1,298,390. DRIVING AND RETARDING MECHANISM FOR MOVING-PICTURE PROJECTORS. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,049. 1 Claim. (Cl. 88—17.)



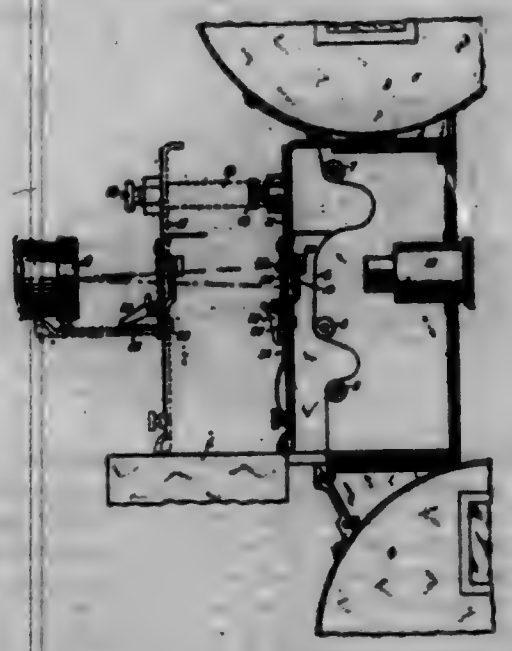
In a projector of the class described, a main driving shaft arranged to be positively and continuously driven, a driving disk keyed to said shaft, a second shaft at right angles with the driving shaft and operatively connected with the shutter and film display mechanism, a driven disk keyed to said second shaft, a spring for pressing the driven disk against the driving disk, a brake arm mounted adjacent said driven disk and adapted to be pressed in contact therewith against the resistance of said spring, and an external finger piece for controlling said brake arm.

1,298,891. SAFETY DEVICE FOR MOVING-PICTURE PROJECTORS. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,050. 5 Claims. (Cl. 88—17.)



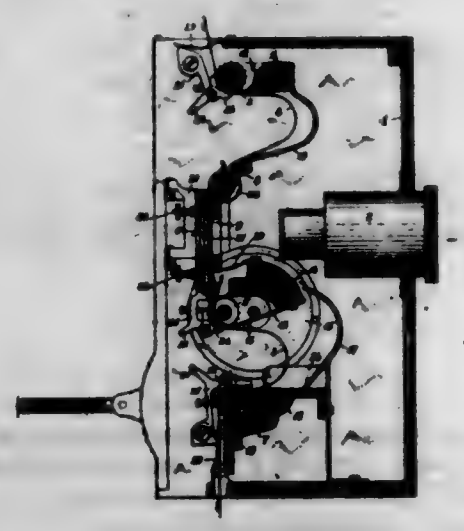
1. In a moving picture projector, a power source, film display mechanism driven by said power source, means adapted to be actuated so as to cut off the power source from the display mechanism said means being normally held by the film in inoperative position, and an actuating member moving with the display mechanism for engaging and actuating the cutting off means.

1,298,892. PROTECTIVE SHIELD AND FIRE-SHUTTER. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,051. 5 Claims. (Cl. 88—17.)



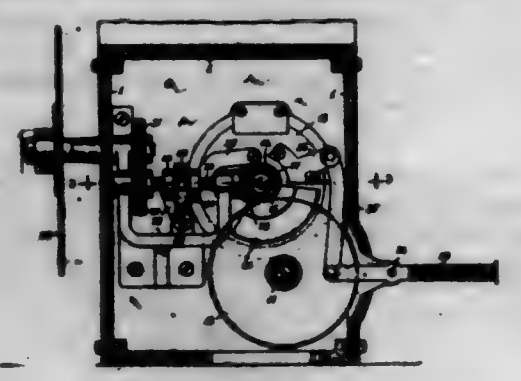
1. In a moving picture projector, a housing for the film display mechanism, a door for closing the rear side of the housing arranged to slide in a direction normal to its surface and provided with an opening, a shutter for said opening, and a pin movably mounted in the housing and adapted to cooperate with the shutter when the door is closed the position of the pin determining the position of the shutter, whether open or closed, and being itself determined by the rate of speed of the film display mechanism.

1,298,898. MOVING-PICTURE MACHINE. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,053. 1 Claim. (Cl. 88—17.)



In a moving picture machine, a sprocket wheel having a head provided with teeth to engage the film, a curved shoe shaped to fit a substantial portion of the periphery of said head and provided with an extension having a pressure spring, a spring for pressing the shoe against the film and a track ending adjacent the sprocket wheel under the pressure spring.

1,298,894. FRAMING MECHANISM FOR MOVING-PICTURE MACHINES. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,054. 3 Claims. (Cl. 88—18.)

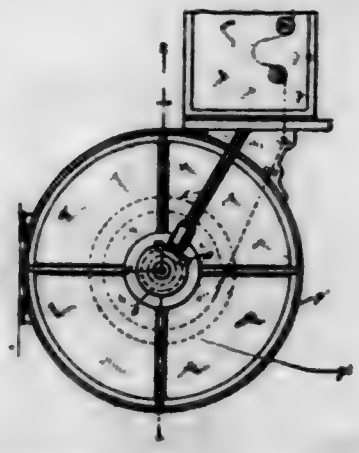


1. In a moving picture machine provided with an aperture adapted to have a strip of linearly disposed pictures drawn thereover, a support carrying a shaft and having heads concentric with said shaft, fixed bearings for said heads, a Geneva driving member fixed to said shaft, means for driving said shaft, a Geneva driven member in co-operative relation with the Geneva driving member, an eccentric shaft carried by the support and carrying said Geneva driven member, a sprocket wheel fixed to said eccentric shaft, a divided shaft one end of which is operatively connected to the Geneva driving member, a shutter operatively connected with the other end of said divided shaft, and means for simultaneously rotating the support and angularly adjusting the two ends of the divided shaft.

1,298,895. AUTOMATIC COMPENSATED TAKE-UP REEL. BARTON A. PROCTOR, Bridgeton, N. J., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J., a Corporation of Delaware. Filed June 21, 1917. Serial No. 176,055. 3 Claims. (Cl. 74—26.)

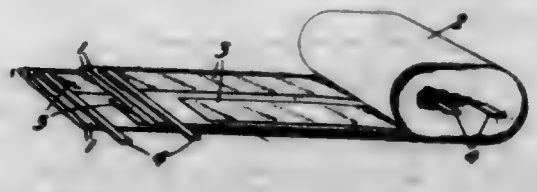
1. In a moving picture machine, a take-up reel, rotary drive means therefor, and a power transmitting connection between reel and drive means, said connection comprising frictional elements and a helical spring which also main-

tains said elements in contact, said spring, considering its power receiving end as its origin, being wound in the same direction as that in which the drive means is required to



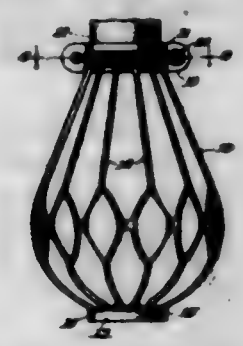
rotate so that slowing of the reel with respect to the drive means will cause the spring to unwind and thus increase the pressure between the frictional elements.

1,298,396. CONDENSER. ALBERT PRUDEMAN, Berwyn, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1916. Serial No. 137,602. 2 Claims. (Cl. 250—41.)



1. A multiple condenser comprising a cylindrical structure having a plurality of independent parallel convolutions of conducting material separated by convolutions of a dielectric common to a plurality of other conducting convolutions to form a plurality of independent similar balanced condenser units.

1,298,397. LAMP-GUARD. GEORGE E. PURPLE, La Grange, Ill., assignor to Flexible Steel Lacing Co., Chicago, Ill., a Corporation of Illinois. Filed July 26, 1915. Serial No. 41,983. 2 Claims. (Cl. 85—45.)



1. Means for securing two portions of a lamp guard having registering apertures together comprising a screw for extending through one of said apertures and or threading into the other aperture, said screw having a high, upwardly-tapering frusto-conical head having an axial non-circular socket therein whereby said socket may be engaged by a non-circular key portion and whereby said head cannot be firmly grasped by pliers or the like.

1,298,398. SECURING DEVICE FOR LAMP-GUARDS. GEORGE E. PURPLE, La Grange, Ill., assignor to Flexible Steel Lacing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 17, 1916. Serial No. 72,483. 4 Claims. (Cl. 85—9.)

1. Means for securing two sections of a lamp guard having registering apertures together comprising a screw for extending through one of said apertures and for threading into the other aperture, said screw having a head having a deep axial recess circular in cross section therein, and a second recess circular in cross section extending from the bottom of said first recess and eccentric thereto.

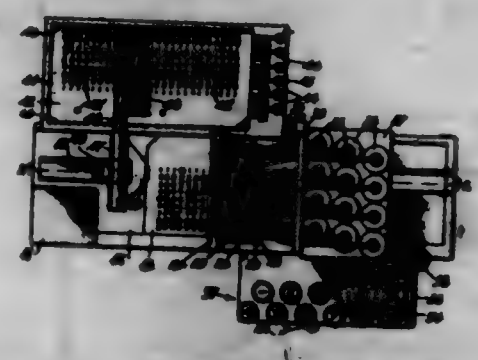


1,298,399. VEHICLE-WHEEL. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed July 17, 1916. Serial No. 109,701. 1 Claim. (Cl. 21—69.)



A vehicle wheel, comprising a hub section provided with an outwardly-extending flange, a sleeve section engaging said hub having a parallel flange, a dished disk having its central portion clamped between said flanges and having an annular extension from said central portion engaging said hub section and sleeve section, and a rim peripherally secured to said disk.

1,298,400. MACHINE OPERATING MECHANISM. LYNUS CLYDE REYNOLDS, Washington, D. C., assignor to himself and J. W. Fisher, Jr., Washington, D. C. Filed July 6, 1918. Serial No. 243,690. 33 Claims. (Cl. 164—113.)



1. A machine for operating on sheets, embodying means for feeding a sheet, manually-controlled work-performing members to operate on the sheet when fed from position to position, and means for automatically controlling said members at some previously selected positions only of the sheet to perform predetermined repetition work without manual aid and leaving the rest of the work for manual control in the other positions of the sheet.

9. A machine for operating on sheets, embodying means for feeding a sheet, manually-controlled work-performing members to operate the sheet, a pattern for determining predetermined repetition work to be performed on the sheet in some positions only thereof and leaving the rest of the work for manual control, and means controlled by said pattern and controlling said members to only operate them automatically in the predetermined positions of the sheet determined by said pattern.

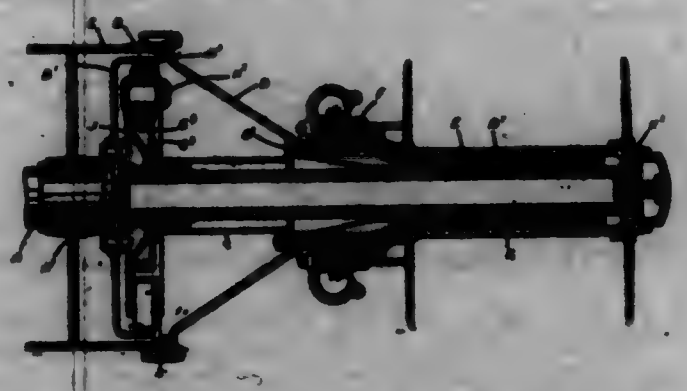
18. A machine for performing work on sheets, embodying means movable back and forth for feeding a sheet in

one direction, work-performing members to operate on the sheet, and means including relatively movable coöperable parts, one movable with the sheet, for automatically controlling said members to operate on the sheet and means operable to prevent coöperation of said parts when said movable part is moved in the other direction.

24. A machine having a frame and work producing members, and a key board having a set of keys operatively connected with said members, said key board being adjustably connected to said frame to permit the key board to be shifted to different positions for the convenience of the operator.

30. A machine having means movable back and forth for feeding an object step by step, work producing devices to operate on the object in each step, and automatic means for controlling said devices, including a controlling pattern and coöperating means movable relatively, one back and forth simultaneously with the first named means to bring the automatic means into operation.

1,296,401. DRIVING MECHANISM FOR PROPELLERS. HARRY RALPH RICARDO, London, England. Filed Apr. 23, 1918. Serial No. 230,257. 8 Claims. (Cl. 74—34.)



1. In mechanism for driving an air propeller the combination of a driving shaft, an internally toothed ring mounted on the end of this shaft, a hollow member one end of which is fixed while the other end is free and directed toward the end of the driving shaft the length and structure of this member being such that its free end can flex about its axis, an externally toothed ring mounted on the free end of the hollow member and within the internally toothed ring, a driven shaft arranged coaxially with the driving shaft, a plurality of pinions mounted on one end of this driven shaft all disposed between and gearing with both the toothed rings, and a propeller coupled to the other end of the driven shaft as set forth.

1,296,402. SEAL. HARRY R. ROGERS, Chicago, Ill., assignor to Chicago Car Seal Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1918. Serial No. 245,464. 3 Claims. (Cl. 70—99.)



1. A seal comprising a dished disk having an annular flange projecting from the dished portion and having a forwardly-projecting flange carried thereby, provided with a cut-away portion affording a shackle-opening, a dished cap-disk having an annular flange projecting from the dished portion and fitting within said forwardly-projecting flange, said forwardly-projecting flange being crimped over the flange of said cap disk, a retainer-plate clampingly secured between the projecting flanges of said dished disks and provided with a yielding shackle-engaging prong extending in a direction away from said opening and provided with a projection adapted to prevent disengagement of the shackle from said prong, and a shackle provided with end-portions having perforations adapted to engage said prong.

1,296,403. WIRE-CUTTER. HIPPOLYTE ROMANOFF, New York, N. Y. Filed Jan. 25, 1918. Serial No. 213,633. 5 Claims. (Cl. 42—90.)



1. In a wire cutter, the combination of a stationary member having a cam, a support pivoted to said member, a wire cutting blade rigidly mounted in said support, a second blade, and a carrier therefor mounted to slide in said support and actuated by said cam with a swinging movement when said blades approach one another.

2. In a wire cutter, the combination of a stationary member, means for detachably connecting said member to a handle, a knife support pivotally connected with said member, said member having a cam eccentric to the pivot, a pair of knives carried by said knife support, and a holder for one of said knives pivoted to said support but movable longitudinally on said pivot, said holder engaging said cam and serving to advance its knife with a wiping movement when said support swings on its pivotal connection with said stationary member.

1,296,404. ANTIGAS-RESPIRATOR. HIPPOLYTE ROMANOFF, New York, N. Y. Filed Feb. 9, 1918. Serial No. 216,298. 6 Claims. (Cl. 128—141.)



1. The combination, with a gas mask; of a rigid container connected therewith and having internal air inlet and outlet compartments which are distinct from each other and both of which are in communication with the atmosphere, to permit air to be drawn from the atmosphere directly into the inlet compartment and discharged from the outlet compartment directly into the atmosphere; purifying material in the inlet compartment; a check valve allowing air to be drawn through the inlet compartment directly into said mask; and a check valve allowing respirated air to be expelled from said mask directly into and through the outlet compartment.

3. The combination, with a gas mask including a depending funnel; of a container connected with the lower end of said funnel and having internal air inlet and outlet compartments which are distinct from each other and both of which are in communication with the atmosphere, said inlet and outlet compartments being provided, respectively, with an outlet opening and an inlet opening communicating directly with said funnel; purifying material in the inlet compartment; and a pair of reversely-acting check valves associated with said outlet and inlet openings for causing the air to pass successively through the outlet opening into said funnel and from the latter through the inlet opening.

4. The combination, with a gas mask including a depending funnel; of a container connected with the lower end of said funnel, and having internal air inlet and outlet conduits leading, respectively, to and from said funnel end; purifying material in each conduit; a pair of reversely-acting check valves associated with said conduits

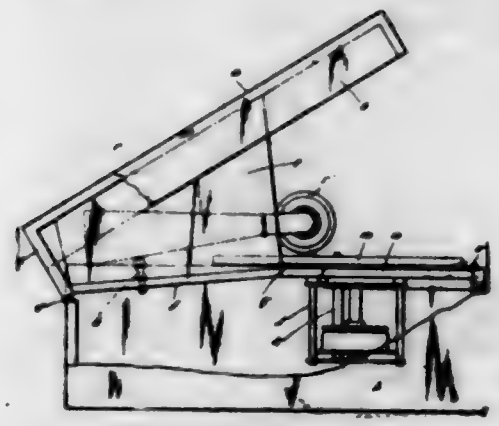
for causing the air to pass therethrough in succession; and a member connecting said valves and projecting into said funnel to be grasped between the teeth of the wearer, thereby to withdraw both valves from their conduits into said funnel, so as to completely open both conduits.

1,298,405. PACKAGE-TIE. CHARLES T. ROGNER, Camden, N. J. Filed Nov. 16, 1916. Serial No. 131,731. 1 Claim. (Cl. 24—17.)



A tie of the class described comprising a metal base plate, fabric strips, each connected at one end with one end of said base plate, metal connecting plates, each connected at one end with the free end of one of said strips, said connecting plates overlapping when in operative position, the outer or overlapping plate having longitudinally spaced transverse slots, a carrier plate secured to the free end of the inner or underlapping plate, and a pliable latch tongue carried by said carrier plate and adapted to extend through one of the slots in the outer connecting plate whereby the tie is secured in operative position.

1,298,406. GRAMOPHONE AND THE LIKE. CHARLES JOSEPH RYAN, Acton, England. Filed May 24, 1917. Serial No. 170,766. 1 Claim. (Cl. 274—2.)



A gramophone comprising a base part, a lid, a sound wave reflector pivoted to the base part and having a bottom and sides adapted to be moved as a whole, the sound wave reflector being so formed and mounted as to lie within the cabinet when the cabinet is closed, a tone arm pivotally connected to the sound wave reflector, a sound box on the tone arm, said tone arm and sound box being connected to the sound wave reflector so as to be raised and lowered with the sound wave reflector, a clockwork motor attached to the base part, a record carrying table driven by the motor, and a flap pivoted to the base part and supporting said motor, the parts being so formed and arranged that the bottom of the sound wave reflector coacts with the flap to support the sound wave reflector in its raised position.

1,298,407. SALVE. ROBERT ELSBURY SAMS, Asheville, N. C. Filed Jan. 20, 1919. Serial No. 272,016. 1 Claim. (Cl. 167—9.)

A salve or ointment, consisting of petroleum jelly as a vehicle, gum camphor and smaller proportions of oil of pennyroyal, menthol, birch oil, and sassafras oil, all thoroughly mixed in approximately the proportions hereinbefore described.

1,298,408. GASOLENE AND CLUTCH LOCK FOR AUTOMOBILES. LOUIS SCHAFFERT, Brooklyn, and SAMUEL G. CONKLING, New York, N. Y. Filed June 29, 1917. Serial No. 177,784. 5 Claims. (Cl. 70—126.)



1. A lock having a valve and locking bar, and a combination controlled key adapted to be moved into and secured out of engagement with said valve and bar to operate said valve and bar.

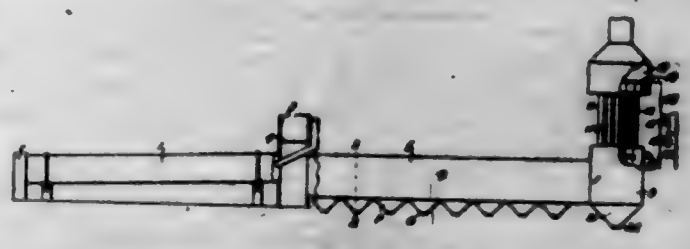
2. A lock having a valve and locking bar, a rotatable key for operating said valve and bar, and means independent of said valve and bar for locking said key into said lock to retain it out of engagement with valve and bar.

3. A lock having a valve and locking bar and a disk and cup isolated therefrom, and a key adapted to operate said valve and bar, and to be locked into said disk and cup to prevent the operation of said valve and bar.

4. A lock having a body member, a longitudinal passage therethrough, a valve for controlling said passage, a bar extending through said body member and a locking bar operating with said first mentioned bar and adapted to secure a member independent of said lock, a key having a projection adapted to operate said valve and means upon said valve for operating said locking bar, and means for locking said key in a position away from said valve and bar.

5. A lock having a block provided with a passage therethrough, a valve in said passage, a squared stem upon said valve, a shield over said valve to prevent seepage above said valve, a pinion upon said stem, and a locking bar provided with a rack in engagement with said pinion and adapted to be moved by the rotation of said valve and a bar secured by said locking bar and adapted to engage a clutch pedal.

1,298,409. PROCESS AND APPARATUS FOR SEPARATING FINELY-DIVIDED MATERIALS. WALTER A. SCHMIDT, Los Angeles, Calif., assignor to International Precipitation Company, Los Angeles, Calif., a Corporation of California. Filed Oct. 17, 1916. Serial No. 126,080. 6 Claims. (Cl. 183—114.)



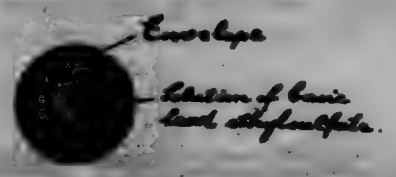
1. The process of selectively separating and collecting material suspended in a gas which consists in causing a stream of such gas to flow at such velocity that coarser particles are separated therefrom by the mechanical action of a force dependent on the mass of the particles, and then subjecting said gas current, containing the remaining particles, in continued flow to the action of an electric field to precipitate the finer particles therefrom.

1,298,410. PLAYING-BALL. ROBERT C. SCHÜTTHAUS, Brooklyn, N. Y. Filed June 20, 1915. Serial No. 37,240. 5 Claims. (Cl. 46—4.)

1. In a playing ball a core composed of a basic lead salt of alkylsulfuric acid and water.

2. In a playing ball a core composed of a basic lead salt of alkylsulfuric acid and a menstruum.

8. In a playing ball a core composed of a basic lead salt of ethyl-sulfuric acid and water.



4. In a playing ball a core composed of a basic lead salt of ethyl-sulfuric acid and a menstruum.

5. In a playing ball a core composed of a basic lead salt and a menstruum, forming a stable homogeneous liquid of great density.

1,296,411. PLASTER LATH. JAMES P. SEXTON, Los Angeles, Calif., assignor to Buttonlath Manufacturing Company, Los Angeles, Calif., a Corporation of California. Filed Nov. 6, 1916. Serial No. 129,651. 4 Claims. (Cl. 72—124.)



1. A plaster lath, comprising a cementitious body and a perforated facing sheet, said facing sheet being corrugated to present longitudinal grooves, the perforations being spaced in the grooves, and the cementitious body projecting through the perforations to form flaring buttons in the grooves, and portions of the facing sheet standing out as lips across the grooves at opposite sides of the buttons, so that the flaring buttons are substantially completely confined by the groove walls and the lips.

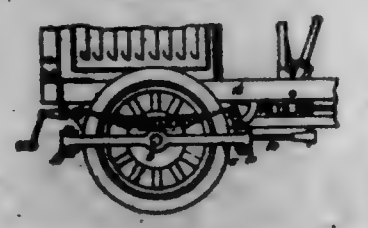
2. A plaster lath, comprising a cementitious body and a perforated facing sheet, said facing sheet being corrugated to present longitudinal grooves, and the cementitious body projecting through the perforations to form protrusions, and portions of the facing sheet standing out as lips across the grooves on the opposite side surfaces of a protrusion and delimiting the protrusion lengthwise of the groove, so that the protrusions are substantially completely confined by the groove walls and the lips.

3. A plaster lath, comprising a cementitious body and a perforated facing sheet, said facing sheet being corrugated to present longitudinal grooves, and the cementitious body projecting through the perforations to form protrusions and portions of the facing sheet standing out as lips across the grooves at opposite sides of the protrusions, the lips extending not quite to the top of the grooves and the protrusions extending substantially flush with the top of the grooves so that the cementitious protrusion may somewhat overhang the end edge of the lips.

4. A plaster lath, comprising a cementitious body and a perforated facing sheet, said facing sheet being corrugated to present longitudinal grooves, and the cementitious body projecting through the perforations to form protrusions, and portions of the facing sheet standing out as lips across the grooves on the opposite side surfaces of a protrusion and delimiting the protrusion lengthwise of the groove, and the lips ending somewhat short of the sides of the grooves so that the cementitious protrusion may overhang the edges of the lips next the groove wall, substantially as described.

1,296,412. MOUNTING FOR THE FRONT WHEELS OF TRUCKS. JOHN C. SEEGAR and RAYMOND B. AUSTIN, Cadillac, Mich. Filed May 10, 1918. Serial No. 233,695. 3 Claims. (Cl. 180—43.)

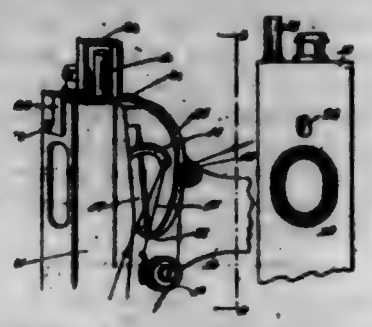
1. A wheel mounting for trucks comprising in combination, a truck frame, wheel frames, a wheel revolubly mounted in each frame, rods connecting the wheel frames pivotally, braces connected pivotally to the rods and adapted to be disposed parallelly to the wheels, an axle housing having a pivotal connection with the braces, axles in the housing, a universal joint connecting the axles to the wheels, and springs interposed between the axle housing and the truck frame.



2. A wheel mounting for trucks comprising in combination, a truck frame, wheel frames, a wheel revolubly mounted in each frame, rods connecting the wheel frames pivotally and adapted to run substantially parallel to the axis of the wheels, braces connecting the rods pivotally and adapted to be disposed in planes parallel to the planes of the wheels, an axle housing and axles, turntables connecting the housing to the braces, a universal joint interposed between each of the wheels and the axles, and springs connected to the turntables and to the truck frame.

3. A wheel mounting for trucks comprising in combination, a truck frame, wheel frames, a wheel revolubly mounted in each frame, rods pivotally connecting the wheel frames, braces pivotally connecting the rods, axles and axle-housing, turntables connecting the housing to the braces, a universal joint associated with the hub of each wheel and connected to the axles, and semielliptical springs anchored between their ends to the turntables and having their ends connected to the truck frame.

1,296,413. SEWING-MACHINE HEAD-GUARD. ELLIS O. STVOKOE, New York, N. Y. Filed Nov. 18, 1917. Serial No. 201,734. 2 Claims. (Cl. 112—29.)



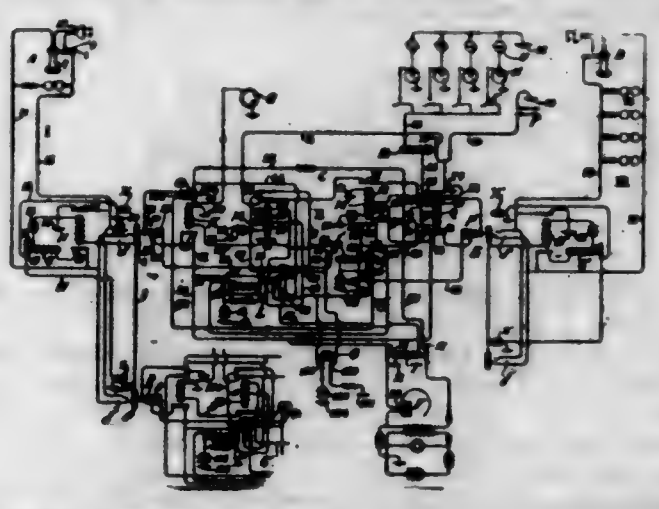
1. A sewing machine head guard comprising a U shaped loop positioned on the head of the machine over the end of the presser foot bar, an arcuately curved strip hinged to said loop extending to the front of the head of the machine to cover the take-up arm thereof and means for securing said guard in position upon the head of a machine.

1,296,414. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed July 15, 1915. Serial No. 39,941. 33 Claims. (Cl. 179—73.)

13. In a telephone system, the combination of a telephone line, a connected cord circuit, a relay for interrupting one or more strands of the cord circuit, means controlled by said subscriber for conditioning said relay for operation when said subscriber's substation apparatus is retired, a second subsequently connected cord circuit and means controlled by means of the second cord circuit for causing the operation of said disconnect relay when the second cord circuit is connected to the telephone line.

14. In a telephone system, the combination of a subscriber's telephone line, a cord circuit, a disconnect relay for interrupting one or more strands of said cord circuit, means controlled by the subscriber for conditioning said disconnect relay for operation upon the retire-

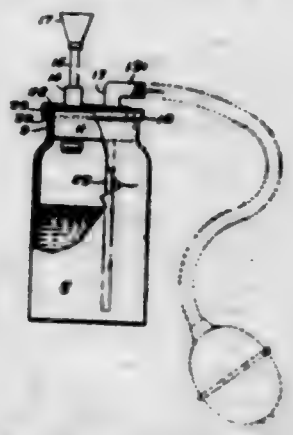
ment of said subscriber and means separate from the above-mentioned cord circuit controlled by an operator for causing the operation of said disconnect relay.



24. In a telephone system, the combination of a main station, a plurality of telephone lines leading to the main station, substations on said lines, a plurality of cord circuits at the main station for connecting telephone lines together, each cord circuit comprising a plurality of talking strands and a third conductor, a relay for interrupting the talking strands of a first-connected cord and a circuit for said relay including portions of the third strands of a plurality of said cord circuits, and means under the control of a subscriber governing said circuit.

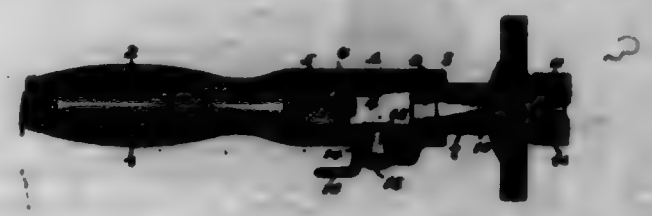
27. In a telephone system, the combination of a telephone line including line conductors and the contacts of a subscriber's receiver hook switch, a cord circuit including talking strands, a plug and jack switch for connecting the cord to the telephone line, a relay having contacts in the cord circuit, said relay adapted when actuated to interrupt the talking strands of the cord circuit, thereby severing the cord and leaving the plug in the jack, a circuit for said relay, a second relay controlling the circuit of the first relay, a circuit for the second relay including the line conductors and contacts of the switch hook, a disconnect signal, a circuit for said signal and a commutator and means controlled by said first-named relay to connect the commutator in the circuit of the disconnect lamp.

1,298,415. HUMIDOR. LAWRENCE A. SMITH, Port Gibson, Miss. Filed July 14, 1914. Serial No. 850,989. 2 Claims. (Cl. 131—30.)



1. A device of the character specified, comprising a receptacle for flavoring extract, means for introducing gas under pressure into the extract in the receptacle to cause the gas to become impregnated with the extract, a cigar receiving element provided with means for establishing communication with the interior of the receptacle to guide the impregnated gas into and through the interior of the cigar, said cigar receiving element being spring supported and movable under the pressure of the cigar, and valve mechanism normally closing the communication between the receptacle and the said element and controlled by the movement of the said element.

1,298,416. STAY-BOLT-TESTING DEVICE. BENJAMIN E. D. STAFFORD, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 8, 1918. Serial No. 216,027. 4 Claims. (Cl. 73—51.)



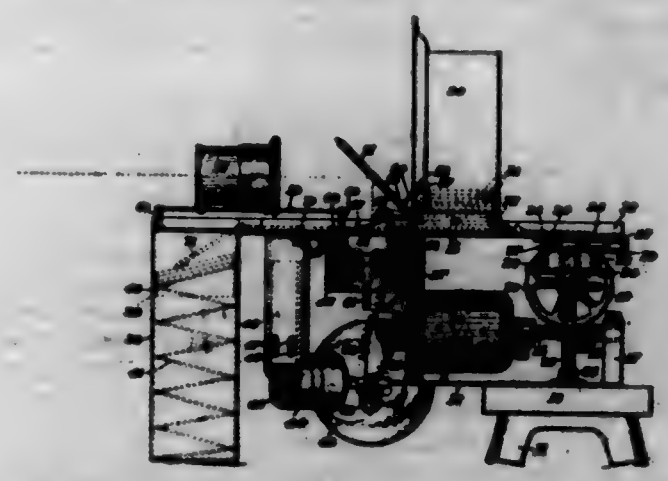
1. A staybolt testing device, comprising a member having a chamber, a nozzle communicating therewith and adapted for application to the tell-tale bore of a stay bolt, means for connecting air exhausting means with said chamber and nozzle, said chambered member having an opening in its bottom in rear of said nozzle whereby water escaping with the air from the tell-tale bore may be detected and a closure for said opening.

2. A staybolt testing device, comprising a member having a chamber, a nozzle communicating with said chamber and adapted for application to the tell-tale bore of a stay bolt, means for connecting air-exhausting means with said chamber and nozzle, said member having means whereby water escaping with the air from the tell-tale bore may be detected, and means in said chamber for deflecting water to said detecting means.

3. A staybolt testing device, comprising a member having a chamber and a handle having a duct, said member also having an outlet in its bottom, a nozzle communicating with said duct and projecting into said chamber, a deflector on said nozzle in rear of the outlet in the bottom of the chambered member, and a nozzle attached to the forward end of said chambered member and communicating therewith, said last-mentioned nozzle projecting forwardly from the chambered member and adapted for application to the tell-tale bore of a stay bolt.

4. A staybolt testing device, comprising a head having a chamber, means for connecting air exhausting means with said chamber, a nozzle projecting from said member and communicating with the chamber therein, a nipple depending from said member and communicating with the chamber therein rearwardly of said nozzle, and a manually operable valve for said nipple.

1,298,417. STEREOPTICON APPARATUS. JOHN H. STILLWAGGON, New York, N. Y., assignor to Auto Slyde & Moving Picture Machine Co., Inc., New York, N. Y., a Corporation of New York. Filed Feb. 1, 1918. Serial No. 214,806. 15 Claims. (Cl. 88—28.)



3. In a stereopticon apparatus and in combination, a slide holding receptacle adapted to contain a plurality of superimposed slides, a track upon which the bottom slide in the superimposed pile rests, and an ejector plate adapted to move the said bottom slide from the superimposed pile to position for use and to move a preceding slide sufficiently far to permit the same to drop into a receiving receptacle.

1,296,413. FUSE FOR PROJECTILES. FREDERICK WILFRID SCOTT STOKES, London, England. Filed July 2, 1917. Serial No. 178,262. 8 Claims. (Cl. 102—86.)



1. In a fuse for a projectile the combination of a fuse body having a longitudinal chamber therein, an anvil at the rear end of said chamber, a strip of fuse material composed of a highly combustible substance inclosed in an outer covering of material less readily combustible, said strip being doubled on itself so that the two parts are parallel and in contact, a percussion cap at one end of the fuse strip in proximity to the anvil and a detonator at the other end of the fuse strip substantially as and for the purpose set forth.

1,296,419. ARTIFICIAL TOOTH. CHARLES H. SUMMY, Primghar, Iowa. Filed Mar. 28, 1918. Serial No. 224,204. 2 Claims. (Cl. 32—9.)



1. A tooth having a recess, and an anchoring plate having an upstanding stud entering said recess, the lower face of the plate being provided with depressions; combined with a vulcanite plate into which said anchoring plate is embedded.

2. The combination of a vulcanizing plate, an anchoring plate embedded therein, its lower face having depressions and its body an aperture, and a stud rising from said anchoring plate and inclined inward; of a tooth having its lower end shaped to fit over said vulcanizing plate and provided with a recess larger than the stud, and a fastening medium around said stud.

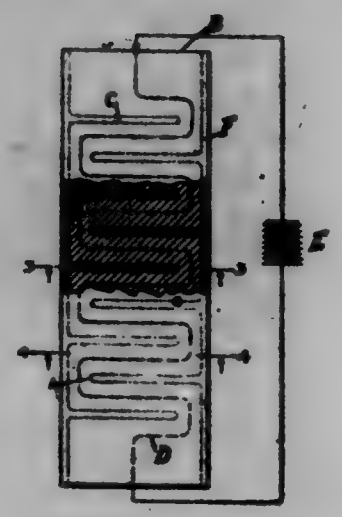
1,296,420. AUTOMATIC SIGNAL. HARVEY H. THARP, Smith Center, Kans., assignor of one-half to Jessie O. Buzzard, Smith Center, Kans. Filed Sept. 14, 1917. Serial No. 191,874. 1 Claim. (Cl. 200—87.)



The combination with a vehicle wheel having an inflatable tire including an inner tube; of a movable contact plate supported interiorly of the inner tube by the tread portion thereof, relatively stationary and spaced contact pins extending through the rim of the wheel and the inner tube and adapted to be engaged and the space therebetween bridged by said contact plate when the tire becomes deflated whereby to operate a signal mechanism.

1,296,421. ZIGZAG CARBON ELECTRIC RESISTER. JESSE THOMSON, New York, N. Y. Filed Apr. 16, 1918. Serial No. 228,998. 12 Claims. (Cl. 219—75.)

1. An electric, carbon, zig-zag resistor whose slots are filled and whose exterior surfaces, or a major portion thereof, are coated with material relatively non-conductive to electricity, immune to oxidation and non-reactive with carbon.



4. An electric, carbon, zig-zag resistor the slots of which are filled with relatively, electrically non-conducting material.

9. An electric, carbon resistor the slots of which are filled with fused aluminum oxid and silicon carbid in crystalline form.

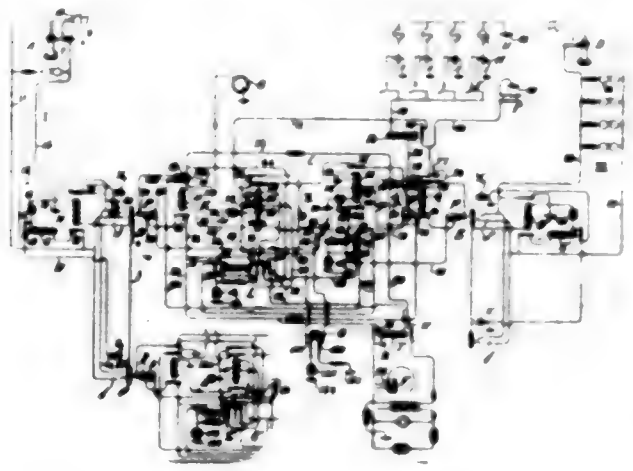
11. In the manufacture of electric resisters, the method which comprises squirting a mixture containing carbon through a die in order to form a longitudinally extending member, providing slots in said member in a manner that there results a zig-zag member, filling said slots with relatively electrically non-conducting material and surrounding said zig-zag member with a wet or moist material, partially drying moist material thus added, and finally passing electrical current through said zig-zag member and progressively heating it until the temperature reaches a point higher than that at which the resulting resister is to be used.

1,296,422. NASAL NOZZLE. JOHN M. TOBIN, New York, N. Y. Filed Apr. 1, 1918. Serial No. 225,922. 1 Claim. (Cl. 128—239.)



A collapsible container provided with a detachable nasal nozzle having a vertical passage therethrough and interiorly screw threaded at each end portion thereof, the smooth outer surface of said nozzle being tapered longitudinally from its central portion to its upper end and also tapered longitudinally from its center to the extreme lower threaded end portion thereof, thereby forming a convex outer surface throughout its entire length, in combination with a closure screw adapted to be fitted in the upper interiorly threaded portion of the nozzle and provided with a head adapted to be seated against the upper surface of said nozzle.

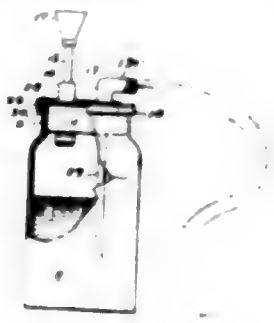
ment of said subscriber and means separate from the above mentioned cord circuit controlled by an operator for causing the operation of said disconnect relay.



24. In a telephone system, the combination of a main station, a plurality of telephone lines leading to the main station, substations on said lines, a plurality of cord circuits at the main station for connecting telephone lines together, each cord circuit comprising a plurality of talking strands and a third conductor, a relay for interrupting the talking strands of a first-connected cord and a circuit for said relay including portions of the third strands of a plurality of said cord circuits, and means under the control of a subscriber governing said circuit.

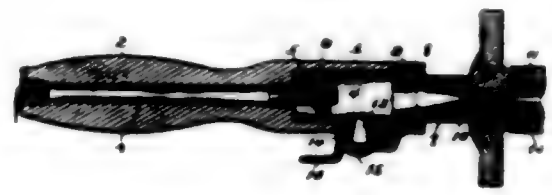
27. In a telephone system, the combination of a telephone line including line conductors and the contacts of a subscriber's receiver hook switch, a cord circuit including talking strands, a plug and jack switch for connecting the cord to the telephone line, a relay having contacts in the cord circuit, said relay adapted when actuated to interrupt the talking strands of the cord circuit, thereby severing the cord and leaving the plug in the jack, a circuit for said relay, a second relay controlling the circuit of the first relay, a circuit for the second relay including the line conductors and contacts of the switch hook, a disconnect signal, a circuit for said signal and a commutator and means controlled by said first-named relay to connect the commutator in the circuit of the disconnect lamp.

1,298,415. HUMIDOR. LAWRENCE A. SMITH, Port Gibson, Miss. Filed July 14, 1914. Serial No. 850,939. 2 Claims. (Cl. 131—30.)



1. A device of the character specified, comprising a receptacle for flavoring extract, means for introducing gas under pressure into the extract in the receptacle to cause the gas to become impregnated with the extract, a cigar receiving element provided with means for establishing communication with the interior of the receptacle to guide the impregnated gas into and through the interior of the cigar, said cigar receiving element being spring supported and movable under the pressure of the cigar, and valve mechanism normally closing the communication between the receptacle and the said element and controlled by the movement of the said element.

1,298,416. STAY-BOLT-TESTING DEVICE. BENJAMIN E. D. STAFFORD, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 8, 1918. Serial No. 216,027. 4 Claims. (Cl. 73—51.)



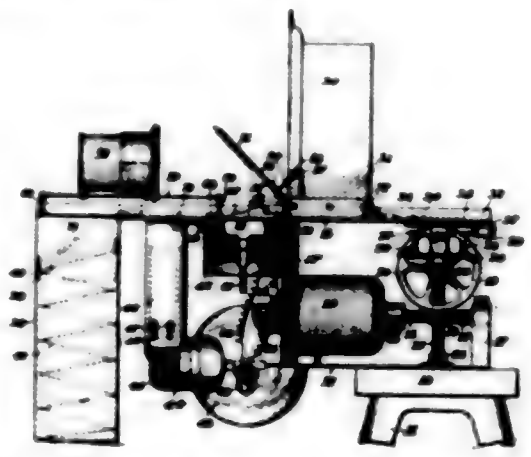
1. A staybolt testing device, comprising a member having a chamber, a nozzle communicating therewith and adapted for application to the tell-tale bore of a stay bolt, means for connecting air exhausting means with said chamber and nozzle, said chambered member having an opening in its bottom in rear of said nozzle whereby water escaping with the air from the tell-tale bore may be detected and a closure for said opening.

2. A staybolt testing device, comprising a member having a chamber, a nozzle communicating with said chamber and adapted for application to the tell-tale bore of a stay bolt, means for connecting air-exhausting means with said chamber and nozzle, said member having means whereby water escaping with the air from the tell-tale bore may be detected, and means in said chamber for deflecting water to said detecting means.

3. A staybolt testing device, comprising a member having a chamber and a handle having a duct, said member also having an outlet in its bottom, a nozzle communicating with said duct and projecting into said chamber, a deflector on said nozzle in rear of the outlet in the bottom of the chambered member, and a nozzle attached to the forward end of said chambered member and communicating therewith, said last-mentioned nozzle projecting forwardly from the chambered member and adapted for application to the tell-tale bore of a stay bolt.

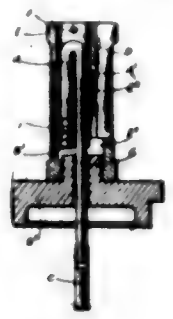
4. A staybolt testing device, comprising a head having a chamber, means for connecting air exhausting means with said chamber, a nozzle projecting from said member and communicating with the chamber therein, a nipple depending from said member and communicating with the chamber therein rearwardly of said nozzle, and a manually operable valve for said nipple.

1,298,417. STEREOPTICON APPARATUS. JOHN H. STILLWAGGON, New York, N. Y., assignor to Auto Slyde & Moving Picture Machine Co., Inc., New York, N. Y., a Corporation of New York. Filed Feb. 1, 1918. Serial No. 214,806. 15 Claims. (Cl. 88—28.)



3. In a stereopticon apparatus and in combination, a slide holding receptacle adapted to contain a plurality of superimposed slides, a track upon which the bottom slide in the superimposed pile rests, and an ejector plate adapted to move the said bottom slide from the superimposed pile to position for use and to move a preceding slide sufficiently far to permit the same to drop into a receiving receptacle.

1,298,418. FUSE FOR PROJECTILES. FREDERICK WILFRID SCOTT STOKES, London, England. Filed July 2, 1917. Serial No. 178,282. 8 Claims. (Cl. 102—86.)



1. In a fuse for a projectile the combination of a fuse body having a longitudinal chamber therein, an anvil at the rear end of said chamber, a strip of fuse material composed of a highly combustible substance inclosed in an outer covering of material less readily combustible, said strip being doubled on itself so that the two parts are parallel and in contact, a percussion cap at one end of the fuse strip in proximity to the anvil and a detonator at the other end of the fuse strip substantially as and for the purpose set forth.

1,298,419. ARTIFICIAL TOOTH. CHARLES E. SUMMY, Primghar, Iowa. Filed Mar. 23, 1918. Serial No. 224,204. 2 Claims. (Cl. 32—9.)



1. A tooth having a recess, and an anchoring plate having an upstanding stud entering said recess, the lower face of the plate being provided with depressions; combined with a vulcanite plate into which said anchoring plate is embedded.

2. The combination of a vulcanizing plate, an anchoring plate embedded therein, its lower face having depressions and its body an aperture, and a stud rising from said anchoring plate and inclined inward; of a tooth having its lower end shaped to fit over said vulcanizing plate and provided with a recess larger than the stud, and a fastening medium around said stud.

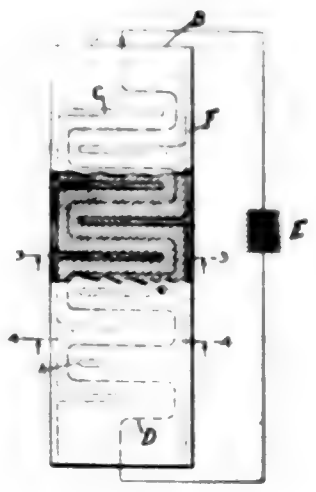
1,298,420. AUTOMATIC SIGNAL. HARVEY E. THARP, Smith Center, Kans., assignor of one-half to Jessie O. Buzzard, Smith Center, Kans. Filed Sept. 14, 1917. Serial No. 191,374. 1 Claim. (Cl. 200—27.)



The combination with a vehicle wheel having an inflatable tire including an inner tube; of a movable contact plate supported interiorly of the inner tube by the tread portion thereof, relatively stationary and spaced contact pins extending through the rim of the wheel and the inner tube and adapted to be engaged and the space therebetween bridged by said contact plate when the tire becomes deflated whereby to operate a signal mechanism.

1,298,421. ZIGZAG CARBON ELECTRIC RESISTER. JOHN THOMSON, New York, N. Y. Filed Apr. 16, 1918. Serial No. 228,906. 12 Claims. (Cl. 219—75.)

1. An electric, carbon, zig-zag resister whose slots are filled and whose exterior surfaces, or a major portion thereof, are coated with material relatively non-conductive to electricity, immune to oxidization and non-reactive with carbon.



4. An electric, carbon, zig-zag resister the slots of which are filled with relatively, electrically non-conducting material.

9. An electric, carbon resister the slots of which are filled with fused aluminum oxid and silicon carbid in crystalline form.

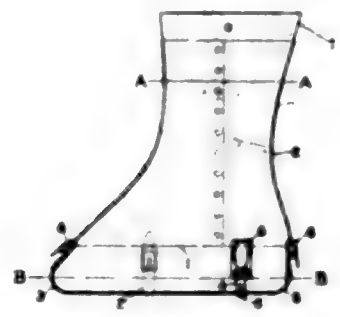
11. In the manufacture of electric resisters, the method which comprises squirting a mixture containing carbon through a die in order to form a longitudinally extending member, providing slots in said member in a manner that there results a zig-zag member, filling said slots with relatively electrically non-conducting material and surrounding said zig-zag member with a wet or moist material, partially drying moist material thus added, and finally passing electrical current through said zig-zag member and progressively heating it until the temperature reaches a point higher than that at which the resulting resister is to be used.

1,298,422. NASAL NOZZLE. JOHN M. TOBIN, New York, N. Y. Filed Apr. 1, 1918. Serial No. 225,922. 1 Claim. (Cl. 128—239.)



A collapsible container provided with a detachable nasal nozzle having a vertical passage therethrough and interiorly screw threaded at each end portion thereof, the smooth outer surface of said nozzle being tapered longitudinally from its central portion to its upper end and also tapered longitudinally from its center to the extreme lower threaded end portion thereof, thereby forming a convex outer surface throughout its entire length, in combination with a closure screw adapted to be fitted to the upper interiorly threaded portion of the nozzle and provided with a head adapted to be seated against the upper surface of said nozzle.

1,298,423. GAITER-DRYING APPARATUS. EDITH MABEL TRINKS, Pittsburgh, Pa. Filed Oct. 5, 1917. Serial No. 194,948. 1 Claim. (Cl. 223—19.)



A non yielding flat form of the outline of a gaiter lying flat, an elastic, non corrosive strap extending around the bottom of the form from one tip of the gaiter to the other, said strap carrying clasps at its ends adapted to grip the gaiter and hold it in position while drying.

1,298,424. PITMAN. JAMES WARRENER, Sr., Fall River, Mass., assignor of one-half to James Warrener, Jr., Washington, D. C. Filed Apr. 30, 1918. Serial No. 231,631. 3 Claims. (Cl. 74—47.)



3. A pitman of the character specified comprising a pair of rods, each having one end threaded, a double nut with which the threaded ends of the rods engage, said ends being oppositely threaded, blocks, each having at one end an opening for receiving the plain portion of the rod and having the other end concaved transversely, a keeper comprising a body and arms, the body coöperating with the concaved end of the block for forming a bearing, the arms extending along opposite faces of the block, and a detachable connection between the arms, the blocks and the rods.

1,298,425. WHEEL. WINFIELD S. WATSON, Cleveland, Ohio. Filed Aug. 7, 1917. Serial No. 184,842. 5 Claims. (Cl. 21—31.)

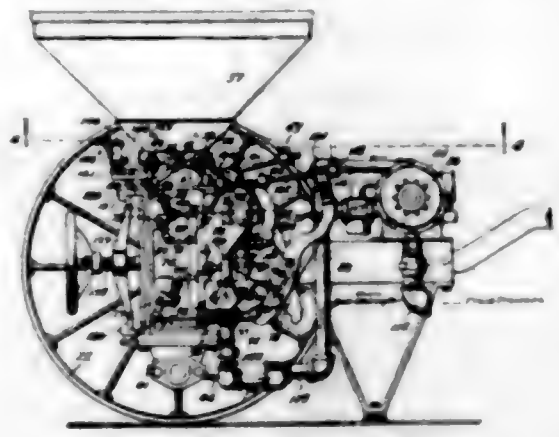


1. In a hub construction, a plurality of flat metal spokes, a central cylindrical hub member, metal fillers disposed between said spokes, each of said metal fillers comprising a body portion consisting of an arcuate plate, outwardly extending ears carried by said body portion disposed parallel with and arranged to engage abutting spokes, inwardly extending ears having faces in alinement with the contiguous outwardly extending ears and arranged to engage a portion of the spokes, the ends of the inwardly extending ears being curved to fit the cylindrical hub member, hub flanges carried by said cylindrical hub member, and bolts disposed between the body portions of the fillers and the cylindrical hub member, said bolts being arranged to extend through said inwardly extending ears and through the hub flanges for securing the fillers to the flanges.

3. In a hub construction, a plurality of flat metal spokes, a central cylindrical hub member, metal fillers disposed between said spokes, each of said metal fillers comprising a body portion consisting of an arcuate plate, outwardly extending ears carried by said body portion disposed parallel with and arranged to engage abutting spokes, inwardly extending ears having faces in alinement with the contiguous outwardly extending ears and arranged to engage a portion of the spokes, the ends of the inwardly extending ears being curved to fit the cylindrical hub member, hub flanges carried by said cylindrical hub member, bolts disposed between the body portions of the fillers and the cylindrical hub member, said bolts being arranged to extend through said inwardly extending ears and through the hub flanges for securing the fillers to the flanges, and a bolt arranged to extend through each pair of spokes and through the adjacent ear on each side thereof for clamping the spokes between the ears.

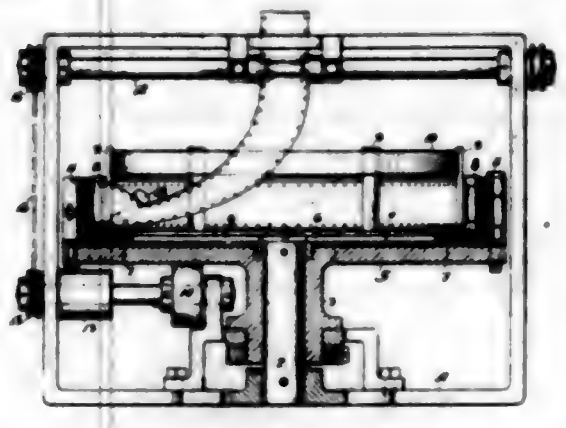
5. A hub construction, a plurality of pairs of flat metal spokes, metal fillers disposed between adjacent pairs of spokes, each of said fillers comprising an arc-shaped body portion having outwardly bent ears at each end, said ears extending in substantially a radial direction and being arranged to engage adjacent spokes, inwardly bent ears at the edges of the body portion between the outwardly bent ears, the plane of the inwardly bent ears being in alinement with the edges of the outwardly bent ears for providing a bearing surface for the spokes on the inwardly and outwardly bent ears, a central hub portion arranged to be engaged by the inner end of all of the fillers, bolts for clamping each pair of spokes between the ears of adjacent fillers, a permanent hub flange, a removable hub flange, and bolts arranged to pass through alined openings in said hub flange and said fillers for clamping the fillers and spokes between the hub flanges.

1,298,426. APPARATUS FOR PLASTERING WALL-SURFACES. CARL WEBER, Chicago, Ill., assignor to Cement Gun Company, Incorporated, Allentown, Pa., a Corporation of New York. Filed Aug. 7, 1915. Serial No. 44,273. 3 Claims. (Cl. 193—10.)



1. In apparatus of the character set forth, the combination of a series of chambers one of which is a blow-chamber, valves controlling communication between said chambers, means operating said valves to cause material introduced into the first of the series of said chambers, to successively pass through said chambers and into said blow-chamber, and releasable means adapted to be moved into and out of engagement with one of said valves remote from said blow-chamber, and operating when in one position to hold said valve closed, the connection between said first-named means and said last-referred-to valve being constructed and arranged to permit said valve-operating means to operate idly relative to said last-referred-to valve when said last-named means are in position for holding this valve closed, and operate the others of said valves to effect the passage through said chambers of the material previously introduced into these chambers.

1,298,427. REWINDING FILM-REEL FOR PROJECTING-MACHINES. EINAR G. WENNERBLAD, Emeryville, Calif., assignor of one-half to Peter M. Diers, Berkeley, Calif. Filed Dec. 27, 1917. Serial No. 209,143. 8 Claims. (Cl. 88—18.7.)

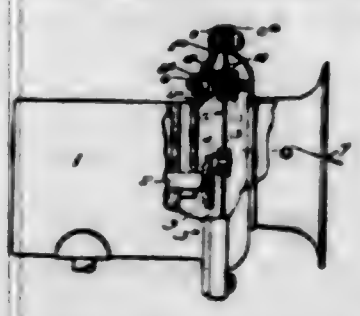


2. A rewinding film reel comprising a disk having a projecting peripheral rim formed thereon, means for attaching a film to the inner face of said rim, a support within the rim, a plurality of radially disposed grooves formed in the face of the support, a block slidably mounted in each groove, a roller carried by each block, means for exerting an outward pressure on each block, and means for guiding the film between said rollers and the rim to permit rewinding of the film in the manner described.

5. A rewinding film reel comprising a disk having a projecting peripheral rim formed thereon, means for attaching a film to the inner face of said rim, a support within the rim, a plurality of radially disposed grooves formed in the face of the support, a block slidably mounted in each groove, a roller carried by each block, a collapsible coil spring mounted interiorly of the blocks engaging the blocks and adapted to exert an outward pressure on the same, an angularly disposed roller carried by one of the blocks adapted to direct and guide the film between the rollers and the rim to permit the film to be rewound as described, and a friction driving member adapted to revolve the disk, said friction drive permitting a slippage so that the disk may revolve comparatively slowly when the film winding operation is started and to gradually increase in speed as the film winding operation progresses.

8. A rewinding film reel comprising a rotatable member having a projecting peripheral rim formed thereon, means for attaching a film to the inner face of said rim, a stationary support within the rim, a plurality of radially disposed grooves formed in the support, a block slidably mounted in each groove, a roller carried by each block, means for feeding a film substantially axially of the disk, and means carried by one of the blocks for guiding the film from the feeding means to the adjacent roller.

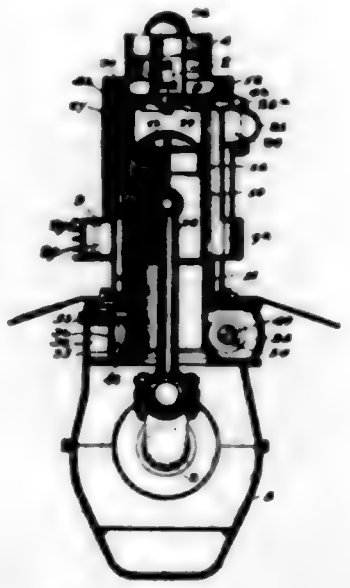
1,298,428. TUNING DEVICE FOR SIGNAL-DIAPHRAGMS. FREDERIK G. WHITTINGTON, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Jan. 27, 1917. Serial No. 144,821. 2 Claims. (Cl. 116—1.)



1. In a signal device, in combination with a diaphragm, a mounting member to which it is peripherally secured, and means for vibrating said diaphragm, said diaphragm being apertured at a point between said vibrating means and its peripheral securement, means extending through said aperture and clamped against both sides of the diaphragm together with an adjusting screw extending from said means into rotative engagement with the mounting member, for variably stressing the diaphragm.

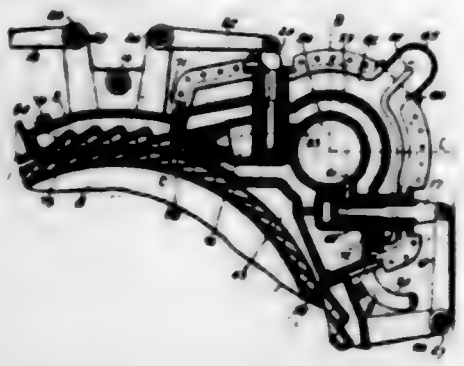
2. In the combination set out in claim 1, the means which is clamped in the diaphragm aperture being in the nature of a nut threaded to engage the adjusting screw, and said screw being stopped against endwise movement in the mounting member.

1,298,429. ENGINE. MARTIN L. WILLIAMS, South Bend, Ind., and SAMUEL E. WITT, Chicago, Ill., assignors, by mesne assignments, to American Sleeve-Valve Motor Company, a Corporation of Delaware. Original application filed Aug. 6, 1914, Serial No. 855,458. Divided and this application filed Apr. 3, 1915. Serial No. 19,020. 2 Claims. (Cl. 123—52.)



1. In a gas engine, the combination with a cylinder casing having circumferentially extending ports, of a ported bushing mounted in said casing, a rotary valve sleeve in said bushing, vertically extending oil channels formed between the cylinder casing and opposed wall of the bushing, said channels being formed in and as a part of the cylinder casing.

1,298,430. INTERNAL-COMBUSTION TURBINE. FRANZ WONDRA, Schenectady, N. Y. Filed Feb. 27, 1911, Serial No. 611,139. Renewed Aug. 1, 1918. Serial No. 247,863. 9 Claims. (Cl. 60—41.)



1. In an internal combustion turbine in combination a plurality of fluid pressure generators for supplying the turbine with vapor energy, a combustion chamber in each of said generators, means for intermittently admitting air under pressure therein, means for intermittently admitting fuel under pressure therein, the temperature of the air or fuel being sufficient to cause spontaneous combustion therein, the combustion chamber being closed after the admission of fuel and air whereby

combustion at constant volume takes place, a jacket surrounding each of said combustion chambers, means feeding condensable fluid thereto to be subjected to the heat of the burning gases during the combustion, a mixing chamber adjacent to each of said combustion chambers whereto the products of combustion and the condensable fluid are intermittently discharged and mixed, a turbine wheel, a nozzle in each of said generators, that discharges the mixed fluid against the turbine wheel to produce rotation, a compressor for discharging air under pressure into said generators, a regenerator heated by the gases exhausting from the turbine, and through which the fuel and the condensable fluid passes before admitted into said generators.

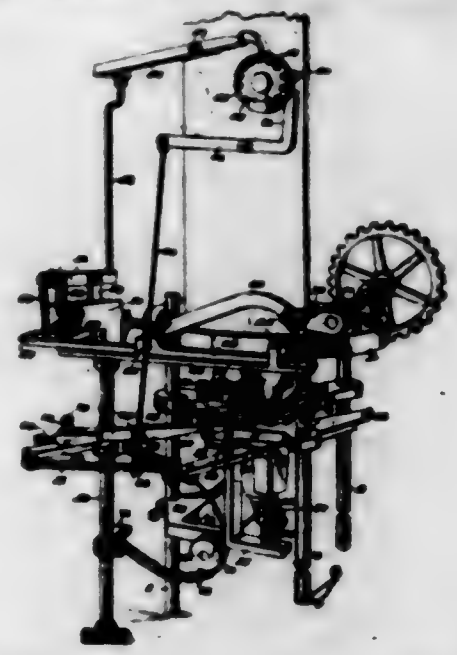
2. In combination, a turbine, a fluid pressure generator supplying products of combustion mixed with steam to the turbine and comprising a combustion chamber wherein spontaneous combustion at constant volume takes place having separate ports for fuel and air, a mixing chamber adjacent to said combustion chamber, a connecting port leading from said combustion chamber and discharging the products of combustion into said mixing chamber, a steam chamber surrounding the combustion chamber and mixing chamber, means for delivering condensable medium thereto to evaporate it from the heat of the live gases radiating from said combustion chamber during the combustion, communication port between said mixing chamber and the steam chamber discharging steam into said mixing chamber, an air chamber with connection port leading into said combustion chamber, means for admitting air under pressure thereto, a fuel chamber having a connection port leading into said combustion chamber, means for delivering fuel under pressure thereto, an exhaust hood surrounding the various chambers, adapted to guide the exhaust from the turbine around said chambers, assisting thereby in heating the working fluid, valves for controlling the connection ports between the different chambers and means for shifting said valves.

3. In an internal combustion turbine a jacketed combustion chamber having supply and outlet valves, means for supplying condensable fluid to said jacket, means for supplying intermittently fuel and air separately under pressure to said chamber, the temperature of the fuel or air being sufficient to cause spontaneous combustion at constant volume therein, a mixing chamber adjacent said combustion chamber, means discharging intermittently the products of combustion supplied from said combustion chamber into said mixing chamber, and means for discharging intermittently steam from said jacket into said mixing chamber, the discharge of the products of combustion and the discharge of steam occurring simultaneously.

4. In an internal combustion turbine, in combination a plurality of fluid pressure generators for supplying the turbine with vapor energy, a combustion chamber in each of said generators, means for intermittently admitting air under pressure therein, means for intermittently admitting fuel under pressure therein, the combustion chamber being closed after the admission of fuel and air whereby combustion at constant volume takes place, a jacket surrounding each of said combustion chambers, means feeding condensable fluid thereto to be subjected to the heat of the burning gases during the combustion, a mixing chamber adjacent to each of said combustion chambers whereto the products of combustion and the condensable fluid are intermittently discharged and mixed, a turbine wheel, a nozzle in each of said generators, that discharge the mixed fluid against the turbine wheel to produce rotation, a compressor for discharging air under pressure into said generators, a regenerator heated by the gases exhausting from the turbine, and through which the fuel and the condensable fluid passes before admitted into said generators.

5. An internal combustion turbine having fluid pressure generator supplying intermittently the turbine with motive fluid, a turbine wheel with rows of buckets for abstracting the energy of the fluid, a nozzle that receives the fluid from said generator and discharges it against the buckets of the wheel, rows of reversing buckets receiving the fluid from the wheel buckets and discharging it against the buckets of the wheel for further abstraction of the energy of the fluid, an exhaust passage connected to said fluid pressure generator, in combination with a regenerator receiving the exhaust from the turbine through the exhaust passage and having pipes carrying the fuel and condensable fluid laid in the path of the exhaust gases whereby the heat of the exhaust is abstracted by the fuel and condensable fluid.

1,298,431. STRIP-SEVERING DEVICE. JACOB H. ADAMER, Durham, N. C., assignor of one-third to Julian S. Carr, Jr., Durham, N. C. Filed Aug. 18, 1916. Serial No. 115,707. 7 Claims. (Cl. 164—45.)



1. In combination with a knitting machine, a web-clamping mechanism adapted to clamp the free portion of a depending web; a severing mechanism adapted to sever the pendent portion of the web while the web is clamped; and a stacker associated and working in timed relation with the severing mechanism, for stacking the severed portion of the web.

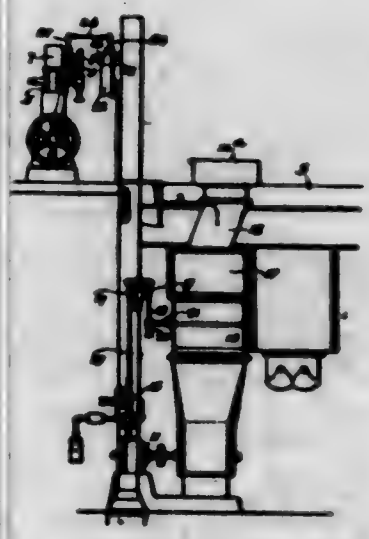
3. In combination with a knitting machine, a fixed plate or supporting member; a fixed blade carried thereby in line with the passage of the web; a sliding clamping plate; means acting to urge the plate into clamping relation with the fixed blade; a movable shear blade; a latch for normally holding said clamping plate out of operative relation with the movable shear blade; a constantly-operating actuating mechanism; and means controlled by the knitting machine acting first to release the latch which holds the clamp out of operative relation and then connecting said actuating mechanism with the shear blade.

5. In combination with a knitting machine, a fixed supporting plate or member; a fixed shear blade carried thereby; a clamping plate adapted to coöperate with said shear blade; means acting on said clamping plate to urge the same into clamping relation with the fixed shear blade; a latch for holding said clamping plate out of clamping relation; a movable shear blade; an actuating shaft therefor; a constantly reciprocating actuating mechanism; means controlled by the knitting machine for releasing the latch and then throwing the constantly reciprocating actuating mechanism into operative relation with the movable shear blade actuating shaft; a pivoted plate located in line with the discharge of the web to be severed and beneath the shear blades; and connections between said plate and the shear operating parts, whereby the plate will be thrown downwardly at the time the web is severed.

7. In combination with a knitting machine, a clamping mechanism for the web; means controlled by the knitting machine for causing said mechanism to clamp

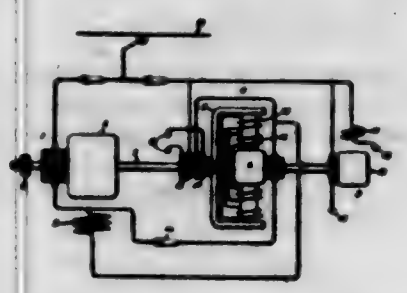
the web at predetermined intervals; a severing mechanism; continuously-moving actuating mechanism for said severing mechanism; means for bringing said severing mechanism into operative relation with said actuating mechanism after the web has been clamped; and means for successively stacking the severed sections of the web.

1,298,432. GOVERNING MECHANISM. MAXWELL ALPERN, Philadelphia, Pa., assignor to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 9, 1914. Serial No. 871,097. 10 Claims. (Cl. 110—103.)



1. The combination of a source of air under pressure; a conduit connecting said source with a furnace; a boiler; an automatic stoker; a motor for driving said stoker; and automatically acting means for varying the speed of the motor by means of and in accordance with variations in the pressure of the air from said source.

1,298,433. ELECTRICAL SYSTEM OF POWER TRANSMISSION AND REGENERATIVE BRAKING. CLINTON J. ARTHUR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 4, 1918. Serial No. 215,279. 5 Claims. (Cl. 171—225.)



2. The combination with a dynamo-electric machine provided with a field winding, of means for varying the excitation of said field winding inversely with variations in the speed of said machine, said means comprising a generator having a rotatable armature member, electrically connected to said field winding, and a field member, one of said members being connected to rotate at speeds varying with the speed of said machine, and means for rotating the other of said members.

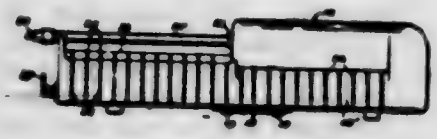
1,298,434. SURGICAL APPLIANCE. WILLIAM BARR, Cincinnati, Ohio. Filed Feb. 16, 1917. Serial No. 149,119. 1 Claim. (Cl. 128—79.)

A surgical appliance consisting of any suitable spring material formed into the general shape of the figure 8 having thereby an upper and lower portion and a centrally disposed vertical portion, said upper portion having at its top the ends of said spring material and means for locking the same together, said lower portion having an upward bend therein dividing the same into two lateral convolutions, one of which being longer and larger than the other, the apex of said bend being positioned at the side of the central vertical portion of said figure, said



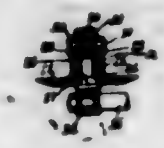
apex being adapted to give the greatest amount of pressure possible on the dorsal vein positioned near the point 9 of said figure and the least amount of pressure possible on the urethra positioned near the point 7 of said figure.

1,298,435. OIL-BURNER. WILLIAM B. BAILEY, Seattle, Wash., assignor, by direct and mesne assignments, of one-half to Alfred A. Bailey and one-half to Allan P. Van Cleve, Seattle, Wash. Filed Oct. 14, 1916. Serial No. 256,039. 2 Claims. (Cl. 158—65.)



1. In an oil-burner, a casing containing a mixing chamber connected from its rear end by diving ducts with flues disposed at opposite sides of a tunnel extending longitudinally below said mixing chamber, said casing being provided with an air inlet extending upwardly from the tunnel into the forward end of the mixing chamber, apertures provided in the outside walls of said flues, a valve provided in said tunnel for regulating the admission of air into said inlet, an oil vaporizer extending into said mixing chamber, and means to supply oil into said vaporizer.

1,298,436. PRESSER-WHEEL. WILLIAM T. BARRATT, Bennington, Vt., assignor to Charles S. Kehoe, Annie Cooper, and Alexander J. Cooper, executors of Charles Cooper, deceased. Filed Sept. 10, 1917. Serial No. 190,454. 6 Claims. (Cl. 66—27.)



1. A presser wheel for spring needle knitting machines, a support therefor, and a series of rotatable members contacting with said support and forming a bearing upon which said presser wheel is rotatably mounted.

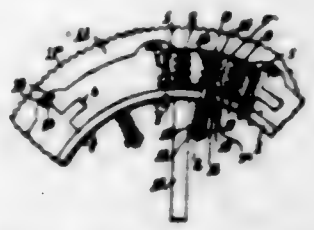
1,298,437. RACK AND FOOT-REST. JOHN J. BATTERMAN, Boston, Mass., assignor, by mesne assignments, to Plymouth Rubber Company, Canton, Mass., a Corporation of Massachusetts. Filed June 23, 1917. Serial No. 176,579. 2 Claims. (Cl. 155—9.)



1. An article of the character described, comprising the combination with a support, of a foot rest pivoted to said

support, and a leg pivoted to said rest and coöperating with said support to sustain the rest in its operative position, a spring tending to hold said leg in its operative position, and means for limiting the movement of the leg under the influence of said spring, said parts being constructed and arranged to enable the rest and leg to be folded back under said support.

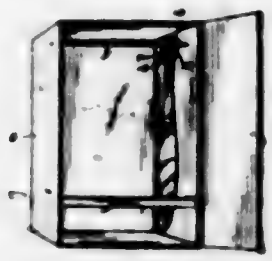
1,298,438. RESILIENT WHEEL. DAVID S. BEACH, Bridgeport, Conn. Filed July 24, 1916. Serial No. 111,047. 2 Claims. (Cl. 152—8.)



1. In a resilient wheel, the combination of a felly, a tire supporting rim composed of a plurality of interlocking sections secured to said felly, each of said sections forming a spring pocket, a tire mounted in the tire supporting rim, means for securing the tire in the said tire supporting rim and for securing the interlocking sections of said rim together, and a plurality of resilient members mounted in each of said spring pockets and engaging the inner face of said tire.

2. In a resilient wheel, the combination of a felly, a tire supporting rim composed of a plurality of arcuate sections secured to said felly, each of said sections forming a spring pocket, a tire mounted in the tire supporting rim, means for securing the tire in said tire supporting rim and for securing the sections of said rim together, and a plurality of resilient members mounted in each of said spring pockets and engaging the inner face of said tire.

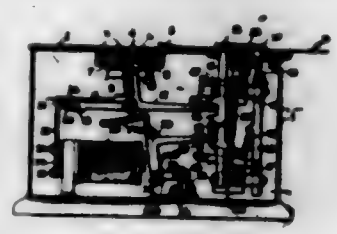
1,298,439. NECKTIE-HOLDER. DIRCK C. BENEDICT, Bellingham, Wash. Filed Mar. 18, 1918. Serial No. 223,012. 2 Claims. (Cl. 211—16.)



1. As an article of manufacture, a hanger of the character described formed of a piece of resilient material and folded to provide two opposing folds for clasping an article therebetween, the upper portion of the hanger being formed with a slot extending from one edge thereof through both of said folds to provide a hook to engage over a supporting object.

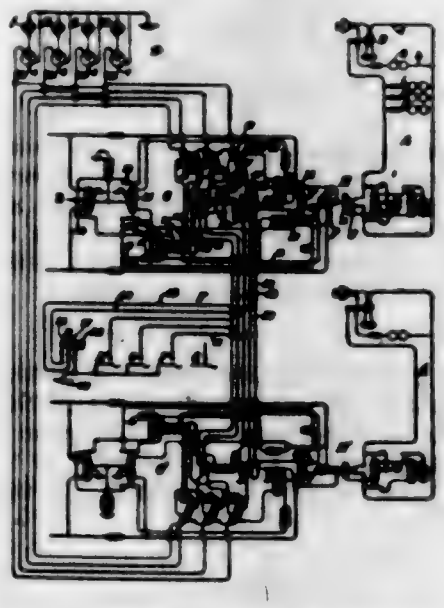
1,298,440. AUTOMATIC TRANSMITTER. GEORGE R. BENJAMIN, Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 26, 1915. Serial No. 23,791. 18 Claims. (Cl. 178—17.)

1. A telegraph transmitter comprising in combination intermittently operating tape feeding means adapted to feed longitudinally a transversely perforated tape, a series of feelers arranged transversely with respect to the direction of feed of such tape and adapted to move rectilinearly through perforations of that tape, means tending to move said feelers toward and through the tape, restoring means for withdrawing from engagement with the tape feelers already in engagement therewith, means for synchronizing the tape feed with the operation of said feelers, and contact means, one for each such feeler, each such contact means having two positions, one or the other of which will be occupied according to the position of



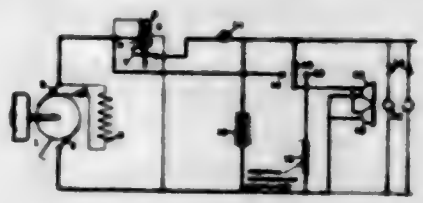
its corresponding feeler, and means, independent of the feelers, arranged to hold such contact means in the positions to which they may be adjusted by the feelers, such holding means adapted to yield to motion of the contact means produced by said feelers.

1,298,441. TELEPHONE SYSTEM. SIDNEY A. BEYLAND, North Ridgeville, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed June 23, 1915. Serial No. 35,757. 22 Claims. (Cl. 179—35.)



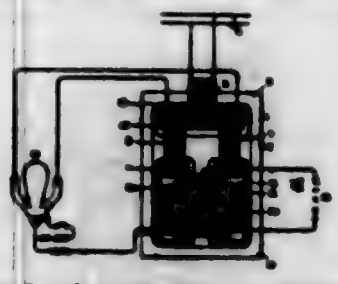
21. In a telephone system, the combination of a ringing circuit, a ringing relay, a ringing key, a conductor normally connecting the ringing key to the ringing relay, a second relay controlling said conductor, each of said relays being controlled by said ringing key and a switch in the ringing circuit controlling each of said relays.

1,298,442. ELECTRICAL SYSTEM FOR MOTOR-VEHICLES. JOSEPH BIJUR, New York, N. Y., assignor, by mesne assignments, to Bijur Motor Appliance Company, a Corporation of Delaware. Filed July 7, 1914. Serial No. 849,442. 9 Claims. (Cl. 171—318.)



4. In an electrical system for motor vehicles in combination, a constant current generator, a battery across said generator, a translating device across said generator and said battery and means for bringing about a tapering charge of said battery when said translating device is disconnected.

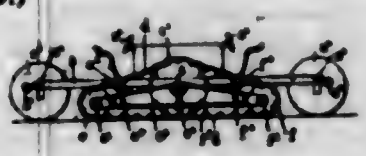
1,298,443. TRANSFORMING DEVICE. THEODORE BOSSE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 13, 1916. Serial No. 90,856. 7 Claims. (Cl. 171—119.)



1. The method of producing a current of constant value from a constant potential alternating current by means of a stationary transformer having a core provided with a stationary magnetic shunt which consists in dividing the primary magnetic flux into two portions one threading the secondary windings, the other threading the magnetic shunt, and in changing the permeability of the magnetic shunt in substantially inverse proportion to changes in the load resistance.

4. The combination with a constant potential source of alternating current, of a transformer comprising a magnetic core, primary and secondary windings carried thereby, said core being provided with a stationary magnetic shunt, and series and shunt windings on said core arranged for magnetically changing the permeability of said magnetic shunt in substantially inverse proportion to changes in the load resistance.

1,298,444. MOTOR-TRACTOR HAVING ENDLESS-CHAIN TRACKS. ADOLPHE BOISSIÈRE, Paris, France. Filed Feb. 27, 1918. Serial No. 219,499. 2 Claims. (Cl. 180—9.)



1. A motor tractor having an endless chain track passing over three wheels (of which one wheel is a driving wheel) in an approximately triangular path, and means for causing at will said endless chain to rest on the ground with its lower base or to be raised on both sides of the shaft of the wheel, that drives or supports the middle portion of the endless chain track.

1,298,445. SUPPLEMENTARY CARBURETER FOR FACILITATING THE STARTING OF INTERNAL-COMBUSTION ENGINES. WALTER JAMES BOUGHTON, Thetford, Norfolk, England, assignor to Percy Garfield Blake, London, England. Filed Sept. 21, 1918. Serial No. 255,173. 1 Claim. (Cl. 261—94.)



The combination of a hollow body having an apertured bottom adapted for attachment to an induction pipe of a gas-engine, the top of said hollow body having a bearing extending axially therethrough and also having inlet apertures extending therethrough, the upper surface of said top being downwardly and inwardly inclined so as to conduct liquid fuel into said hollow body through said inlet apertures, a valve in said hollow body, a valve stem connected to the valve an dextending through said bearing, a spring around said valve stem and pressing against said bearing and valve, absorbent material in said hollow body between said bottom and valve, and means to open said valve to admit the liquid to said absorbent material after it has entered the hollow body, also to permit air to pass through the absorbent material so as to carburet the liquid fuel.

1,298,446. VACUUM-BONNET. JOHN H. BOYD, Mount Vernon, N. Y. Filed July 6, 1918. Serial No. 243,717. 3 Claims. (Cl. 187—122.)

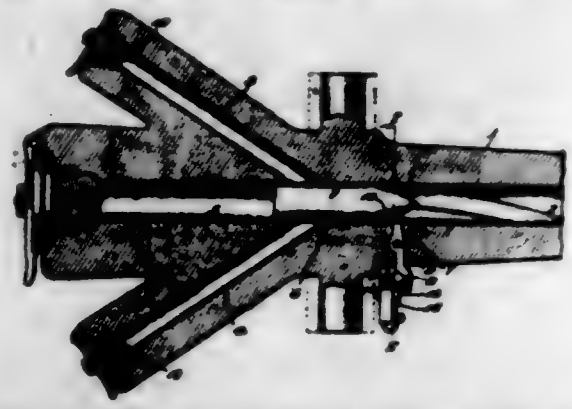


1. A vacuum bonnet for radiators comprising a casing, means for connecting the casing with a radiator so that air may pass from the radiator into the casing, said casing having a vent whereby said air will pass out of said casing, a valve member arranged between the vent and the means for connecting the casing with the radiator, and a spring guided by the casing acting on said valve for normally closing the valve, said spring having a conical shaped end connected to said valve whereby the valve is permitted a universal movement while under spring pressure.

2. A vacuum bonnet for radiator valves comprising a casing, a spring arranged in said casing having a substantially tubular section fitting in said casing whereby it is guided in its movement, said tubular section merging into a conical end section, said casing having a vent and an inlet opening in one end, a valve seat surrounding said opening, and a valve member connected with the cone shaped section of said spring coacting with said seat, said valve member closing said inlet opening under the action of said spring.

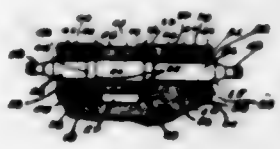
3. A vacuum bonnet for radiator valves comprising a tubular casing closed at one end, a connecting nipple secured to the opposite end, said connecting nipple having an internally threaded extension merging into a passageway which opens into said casing, said casing having a vent, a valve member normally closing said passageway, said valve member closing over said passageway and away from the vent, and a spring guided by the casing acting on said valve member, said spring being of a strength to close the valve member when the pressure on each side thereof is substantially equal.

1,298,447. MULTIPLE-BREECH GUN. THOMAS JEFFERSON BRADFORD, Lorane, Oreg. Filed Oct. 29, 1918. Serial No. 260,181. 3 Claims. (Cl. 89—8.)



2. A gun of the class described, having a main bore, an auxiliary breech bore communicating with the main bore, a trigger projecting into the main bore and arranged to be operated by the projectile and firing means for the auxiliary charge and controlled by the trigger.

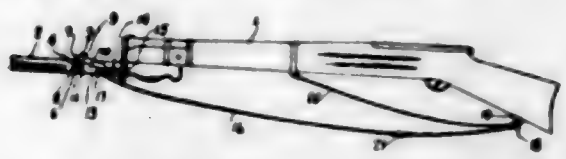
1,298,449. BEARING-HEAD FOR GRINDING-MACHINES. FRANK ALOISIOUS BRASSILL, Hartford, Conn., assignor to Middlesex Machine Company, Inc., Middletown, Conn. Filed Dec. 17, 1917. Serial No. 207,460. 2 Claims. (Cl. 64—36.)



1. In a bearing head for a grinding machine, a pair of standards in spaced relation, a spindle extending through the said standards, a pulley supported by the said spindle and positioned between the said standards, and bearing structures for the said spindle housed in the said standards, the said bearing structures comprising a pair of ball bearings positioned one on each side of the said pulley and a sleeve bearing positioned outwardly from each of the said ball bearings.

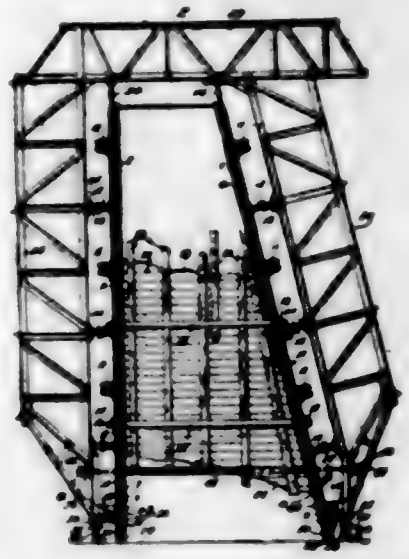
2. In a bearing head for a grinding machine, a pair of ball bearings for the spindle in suitably spaced relation to receive the driving pulley in the separating space, and a sleeve bearing positioned outwardly from one of the said ball bearings for operatively supporting the end portion of the spindle.

1,298,449. TRENCH WIRE-CUTTER. GEORGE BROADMACK, Chicago, Ill. Filed Dec. 16, 1918. Serial No. 266,969. 2 Claims. (Cl. 42—90.)



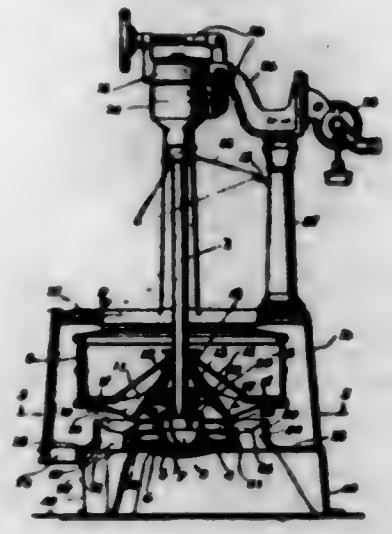
1. In combination with a bayonet having a notch therein, a cutting member of angle shape, having one limb pivoted to the bayonet, a wedge member engaging with the other limb, means for slidingly connecting said wedge member with the bayonet and means for actuating said member.

1,298,450. APPARATUS FOR CONSTRUCTING CONCRETE WALLS. CHRISTIAN BEYNOLDT, Pittsburgh, Pa., assignor to Blaw-Knox Company, a Corporation of New Jersey. Filed May 14, 1918. Serial No. 234,370. 19 Claims. (Cl. 25—131.)



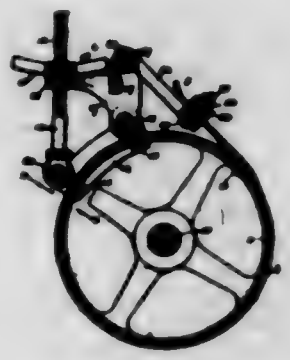
15. A mold form comprising in combination, a pair of opposing wall mold sections, means whereby the sections may be independently supported in operative and inoperative positions, and a hinged bulkhead adapted to connect the sections when closed, and be supported by one of the sections when in open position.

1,298,451. CENTRIFUGAL MACHINE. TANDY A. BEYSON, Troy, N. Y., assignor to Tolhurst Machine Works, a Corporation of New York. Filed May 14, 1915. Serial No. 28,012. 7 Claims. (Cl. 210—35.)



1. A centrifugal machine including in combination the basket having discharge apertures in its bottom, and its shaft, a spherical bearing for the basket shaft in which the lower end of said shaft rests, an annular guard disposed about said shaft bearing and between it and the discharge apertures in the bottom of the basket, said guard comprising an annular member extending inwardly toward the bearing, and an annular member outside said inwardly extending member and disposed upwardly toward the apertures in the bottom of the basket.

1,298,452. LAGGING-STRETCHER. JACOB WIENS BULLER, Hillsboro, Kans., assignor to Buller Coupler Company, Inc., Hillsboro, Kans., a Corporation of Wisconsin. Filed Nov. 5, 1918. Serial No. 261,263. 1 Claim. (Cl. 69—1.)



A lagging stretcher comprising a plurality of clamping plates adapted for engaging opposite overhanging edges of a cylindrical body; a plurality of contracting bolts engaging said plates for drawing the same into engagement with said body; a rocking lever pivotally mounted on one of said bolts, said lever having a bracket extending toward the other of said bolts; a feed nut and screw pivotally mounted on said other bolt and operatively engaging said bracket for rocking said lever; and a clamping jaw pivotally connected with said lever at a point removed from the fulcrum thereof, the free end of said jaw being adapted to hold the free end of the lagging.

1,298,453. FOLDING DISPLAY-CABINET. WALTER C. CARLSON, Milwaukee, Wis., assignor to Milwaukee Paper Box Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 30, 1915. Serial No. 53,471. 2 Claims. (Cl. 211—24.)

1. A cabinet for buttons and other small articles, provided with a vertical wall having a folding extension, a folding brace secured to the rear face of said extension, and a resilient connection between an intermediate por-

tion of the brace, and the opposite side of the cabinet from that which is provided with said extension, said



resilient connection being adapted to also retain the extension in folded position.

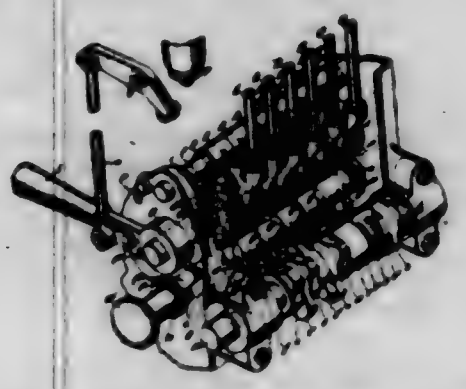
1,298,454. PROCESS FOR EXTRACTING SILVER FROM ORE. MARTINUS H. CARON, Weltevreden, Java, Dutch East Indies, assignor to Research Corporation, New York, N. Y., a Corporation of New York. Filed July 16, 1917. Serial No. 180,834. 3 Claims. (Cl. 75—84.)

1. Process of recovering values from ores containing manganese dioxid, comprising subjecting the ore to a preparatory reducing roast, cooling the reduced ore under nonoxidizing conditions, and recovering the values from the reduced ore by methods applicable to free-milling ores.

2. Process of recovering values from ores containing manganese dioxid, comprising subjecting the ore to a preparatory reducing roast, cooling the reduced ore under reducing conditions, and recovering the values from the reduced ore by methods applicable to free-milling ores.

3. Process of recovering values from ores containing manganese dioxid, comprising heating the ore to a temperature sufficient to eliminate a portion of the oxygen of the manganese dioxid, subjecting the heated ore to the action of a gaseous reducing agent to effect a further reduction thereof, cooling the reduced ore under nonoxidizing conditions and recovering the values from the reduced ore by methods applicable to free-milling ores.

1,298,455. MEANS FOR STARTING AND REVERSING INTERNAL-COMBUSTION ENGINES. FRANK CARTER and EVERARD CARTER, Stamford, England, assignors of one-third to George Mills Blackstone, Stamford, England. Filed Nov. 20, 1918. Serial No. 263,300. 7 Claims. (Cl. 60—16.)



1. In a valve gear for internal combustion engines of the kind specified, the combination of a series of cam-operated levers, a series of cams for operating the levers, a second series of levers actuated from the first series by plungers, said plungers, and means for moving the plungers in and out of engagement with the levers.

1,298,456. SAFETY-RAZOR. WILLIAM FERGUSON CARY, Chicago, Ill. Filed Apr. 2, 1918. Serial No. 226,217. 1 Claim. (Cl. 30—12.)

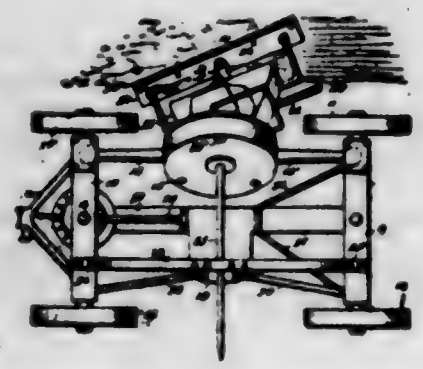


A safety razor including a resilient clip having open ends and presenting a longitudinal slot at the front, a separate razor blade, a separate guard for the blade, the rear portions of said blade and guard jointly being slidable endwise in the clip, said guard having a flange on the back edge thereof adapted to overlie the back of the blade and accommodated with the rear portions of the blade and guard in said clip, and a short shank on the blade at one end near the rear edge adapted to be gripped between the thumb and finger for stropping, or to be inserted in a tubular holder, said shank presenting a shoulder adjacent to the blade to limit the sliding of the blade and guard into the clip.

1,298,457. VARIABLE RESISTANCE. THEODORE W. CASE, Scipio, N. Y. Original application filed Feb. 19, 1917, Serial No. 149,704. Divided and this application filed May 16, 1917. Serial No. 169,111. 4 Claims. (Cl. 219—76.)

1. A resistance element formed of a material containing lead, antimony and sulfur.

1,298,458. BANK-CUTTING ROAD-MACHINE. HENRY CHENAULT, Allensville, Ky. Filed June 29, 1918. Serial No. 242,584. 7 Claims. (Cl. 37—49.)



5. In a device of the class described, a supporting structure including a plurality of axles, wheels carried by the axles, blade mounting means, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a blade carried at one side of the supporting structure and normally extending longitudinally thereof, means for changing the position of the blade to an angle with reference to the transverse axis of the supporting structure and changing the vertical elevation of the blade and the angle thereof with reference to the surface of the road-way upon which the device is traveling, said blade being adjustable with reference to the means directly mounting the same, and a lever for effecting such adjustment.

1,298,459. SAW-SET. JACOB F. CHERVENKA, Caney, Iowa. Filed May 3, 1916, Serial No. 95,050. Renewed Feb. 20, 1919. Serial No. 278,239. 1 Claim. (Cl. 76—71.)

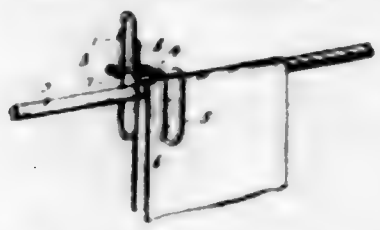
In a saw-set, the combination with a shank having a grip handle at one end, of a laterally extending rigid arm at the opposite end having a slot in the extremity thereof offset from said shank, a laterally-extending bifurcated adjustable arm carried on said shank astride thereof having a laterally extending slot in the bifurcated portion and a rounded head on the outer end thereof, a transverse bolt

extending through said shank and slotted portion of the arm, and a clamp nut on said bolt for adjustably fastening



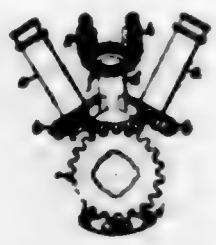
the head of said slotted arm in relation to the end of the rigid arm, substantially as described.

1,298,460. CLOTHES-PIN. ISAAC BEACH CLEVELAND, Brooklyn, N. Y. Filed Mar. 10, 1917. Serial No. 153,937. 1 Claim. (Cl. 24—139.)



A clothes pin formed from a single piece of resilient wire having a loop adapted to receive a line and provided with an end portion which normally lies in close contact with the loop but which is disconnected therefrom, the wire from the loop being extended laterally therefrom approximately at a right angle to the plane in which the loop lies and formed with a clamping jaw, the wire from the upper end of the said clamping jaw being carried over and down in the form of a second clamping jaw which is spaced from and approximately parallel with the first mentioned clamping jaw, the said wire from the second mentioned clamping jaw being extended through the said loop and having a portion which is approximately parallel with the wire which extends from the loop.

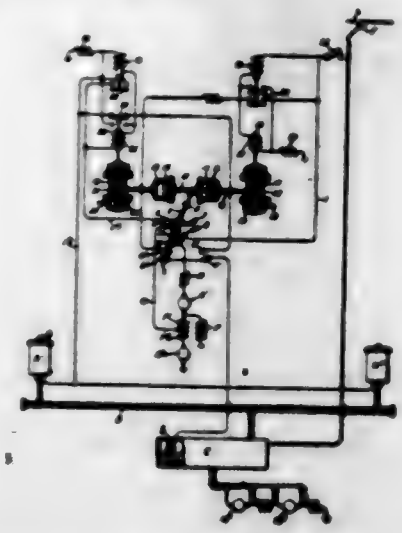
1,298,461. GEARING FOR INTERNAL-COMBUSTION ENGINES. LOUIS COATALEN and HERBERT CHARLES MACLEOD STEVENS, Wolverhampton, England. Filed Apr. 9, 1918. Serial No. 227,518. 2 Claims. (Cl. 74—7.)



1. In internal combustion engines of the type in which the cylinders are arranged in pairs, the cylinders of each pair being relatively inclined, the combination comprising a bevel wheel on the crank-shaft, a pair of relatively inclined counter-shafts, an intermediate shaft, a bevel wheel on the intermediate shaft gearing with the bevel wheel on the crankshaft, and a bevel wheel on each of the counter-shafts gearing with the bevel wheel on the intermediate shaft, substantially as described.

1,298,462. ELECTRIC-RAILWAY CONTROL SYSTEM. CHARLES B. CONNELY, Scotia, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 10, 1915. Serial No. 60,678. 10 Claims. (Cl. 191—2.)

1. In an electric railway system the combination with a supply conductor carrying current of low potential in one portion and high potential in another, of a circuit for carrying low potential only, a source of low potential current, a switch adapted to control the connection between the source and its circuit, electro magnetic means for controlling said switch and responsive to direct changes from one potential to the other and means independent of said switch for preventing high potential from being applied to said low potential circuit.



2. In an electric railway system, the combination with a supply conductor carrying current of low potential in one portion and high potential in another, of a circuit for carrying low potential current only, a source of low potential current for said circuit, a switch automatically operated by the change from one potential to the other to connect said source to the low potential circuit when operating on the high potential portion of the line conductor and to connect the line conductor to the low potential circuit when operating on the low potential portion, and means whereby high potential is prevented from being applied to said low potential circuit even though the switch be in position for high potential operation.

3. In an electric railway system, the combination with a supply conductor carrying current of low potential in one portion and high potential in another, and electric motors supplied thereby, of a low potential circuit for controlling the operation of said motors, a source of low potential for said circuit, a switch automatically operated by the change from one potential to the other to connect said source to the low potential circuit when operating on the high potential portion of the line conductor and to connect the line conductor to the low potential circuit when operating on the low potential portion, and means independent of said switch for preventing high potential from being applied to said low potential circuit.

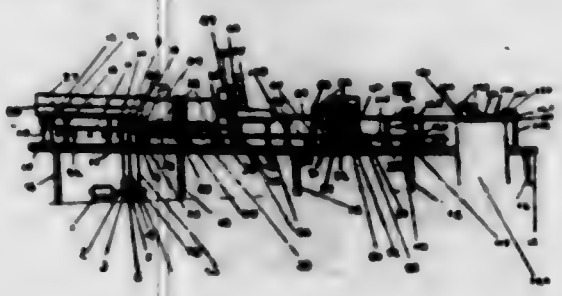
4. In an electric railway system, the combination with a supply conductor carrying current of low potential in one portion and high potential in another, of a circuit for carrying low potential current only, a source of low potential current, a switch adapted to control the connection between the source and its circuit, fluid pressure means for actuating said switch, and electromagnetic devices for controlling said means and responsive to changes in the potential of the line.

5. In an electric railway system, the combination with a low potential control circuit, of a dynamotor, a selective switch for cutting said dynamotor into said circuit in one position of said switch, fluid pressure means for actuating said switch, valves controlling said fluid pressure, and electro-magnets for actuating said valves, one responsive to a low potential current and the other to a high potential.

1,298,463. GLASS-ROD MACHINE AND PROCESS. ROBERT MACKEY COEL and HENRY F. HAGENBUCH, Toledo, Ohio, assignors, by mesne assignments, to John W. Willys, Toledo, Ohio. Filed Feb. 14, 1913. Serial No. 748,300. 18 Claims. (Cl. 49—1.)

1. The method of working glass comprising the forming of ingots; the joining of said ingots end to end to form a continuous charge; continuously advancing said charge;

heating the forward portion of the charge to render the same plastic; continuously drawing from said plastic portion of the charge; and automatically severing the finished product into predetermined lengths.
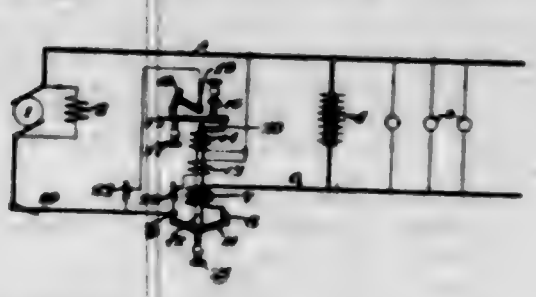


5. A glass working machine comprising the combination of conveying mechanism for continuously advancing a charge of glass at a temperature below the fusing point; means for rotating said charge as it is advanced; a plurality of burners disposed to heat the forward portion of the charge to render it plastic; a burner regulating means controlled by the size of the product; means for advancing the product; means for rotating the product in synchronism with the charge; and automatic means for severing the product into predetermined lengths.

12. A glass rod machine comprising the combination of a casing; means for supporting and advancing a charge of glass therein; means for rotating said casing with the charge of glass within and means for moving the glass forward relative to said casing at a temperature below the fusing point; means for heating the forward portion of the charge to render it plastic; and means for continuously drawing a rod therefrom.

15. A glass rod machine comprising the combination of conveyer mechanism for continuously advancing a charge of glass; means for rotating said advancing charge; means for continuously drawing a rod therefrom; and means for rotating and advancing said rod comprising a ring mounted coaxially with the rod, means for rotating said ring in synchronism with the charge, a plurality of rod-engaging rollers carried by said ring with their axes in a plane at right angles to the rod, a driving ring, driving connections between said ring and said rollers, and means for driving said driving ring adjustable to vary the speed thereof.

18. In a glass rod machine the combination of means for drawing a rod; means for rotating said rod; a pair of upwardly inclined arms converging toward each other and mounted for movement in a plane transverse to the rod; rollers mounted on the upper ends of said arms and adapted to engage the rod; and automatic means drawing said arms toward each other.

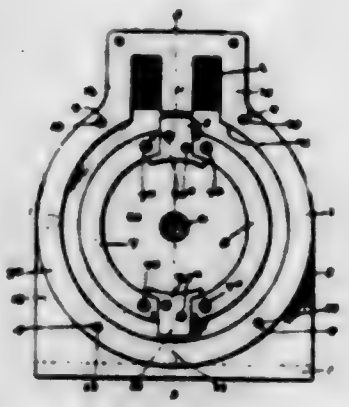
1,298,464. ELECTRIC SWITCH. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Dec. 29, 1911. Serial No. 668,501. 4 Claims. (Cl. 175—281.)



1. In apparatus of the class described, the combination with a supply circuit, of a circuit-closing device, a coil in shunt with said circuit for closing said device, a second shunt coil in operative relation to said first shunt coil, means for making said second shunt coil operative upon the closure of said device to lessen the effect of said first shunt coil, and a series coil to maintain said device closed.

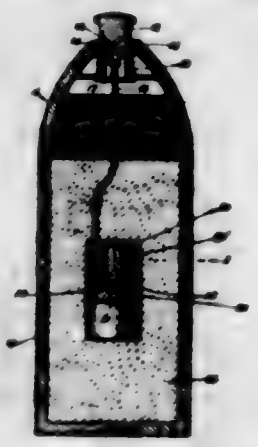
2. In apparatus of the class described, the combination with a supply circuit, of a circuit-closing device, a coil in shunt with said circuit for closing said device, a second shunt coil in operative relation to and wound to act differentially with respect to said first shunt coil, a switch for closing the circuit of said second shunt coil upon the actuation of said circuit-closing device, means for varying the degree of differential action of the one coil upon the other, and a series coil to control the further operation of said device.

1,298,465. GENERATOR. WILLIAM WARREN DEAN, Stamford, Conn., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 25, 1917. Serial No. 164,443. 5 Claims. (Cl. 171—209.)



1. A generator including, in combination, a three-legged core structure, a generating coil carried by the center leg, a rotatable magnet having its poles spaced so as to pass said center leg carrying the generating coils at equal time intervals, and a flux receiving member connected with the outer legs of the core disposed so as to provide a flux path between the poles of the magnet when said magnet is furnishing flux to the generating coil.

1,298,466. DELAY-ACTION DETONATOR. PHILIPPO L. E. DEL FUNGO-GIERA, Pelham, N. Y. Filed Jan. 30, 1918. Serial No. 214,469. 3 Claims. (Cl. 102—39.)



1. In a device of the character set forth, the combination with a container charged with high explosive, a fuse and means to ignite the fuse, of detonating means including a charge of slow explosive into which the fuse leads to fire it, a chemical re-agent adapted to initiate the detonation of the high explosive and a fusible container for the re-agent adjacent to the slow explosive and adapted to be melted thereby to free the re-agent.

2. In a device of the character set forth, the combination with a shell, a time fuse within the shell, a mass of high explosive within the shell and means to control the ignition of the outer end of the fuse, of detonating means for the high explosive and to which the inner end of the fuse leads, said detonating means including a quantity of black powder to be fired by the fuse, a quantity of sulfuric acid and a fusible container for the acid adjacent to the black

powder whereby the acid will be freed when the black powder acts to melt the container.

3. In a device of the character set forth, the combination of a shell, a high explosive within the shell, of detonating means for the high explosive, said detonating means including a combustible material, manually controlled means to ignite the combustible material, and a chemical reagent set free to ignite the high explosive as a direct and immediate result of the combustion of said material.

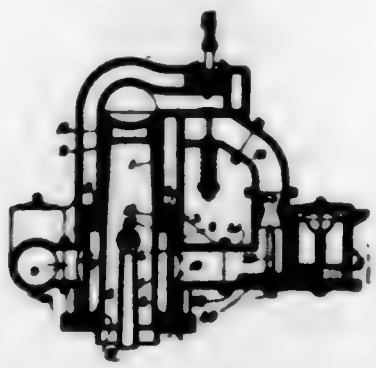
1,298,467. CHEMICAL BASE-DETONATOR. PHILIPPO L. E. DEL FUNGO-GIBRA, Pelham, N. Y. Filed May 8, 1918. Serial No. 233,305. 5 Claims. (Cl. 102—39.)



1. The herein described base detonator shell filled with high explosive, automatic arming means carried at the base of the shell and chemical means made active at impact for firing the high explosive.

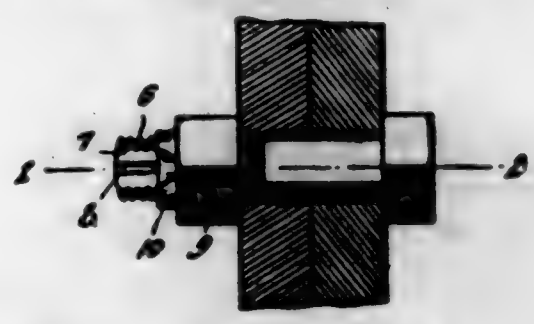
5. In a high explosive shell, the combination of a block of cast T. N. T., a chemical reagent, and detonator means carried at the base of the shell acted upon by the reagent to fire the T. N. T. as a result of impact of the shell.

1,298,468. INTERNAL-COMBUSTION ENGINE. ERNEST DERIHON, London, England. Filed Sept. 5, 1918. Serial No. 252,767. 7 Claims. (Cl. 123—71.)



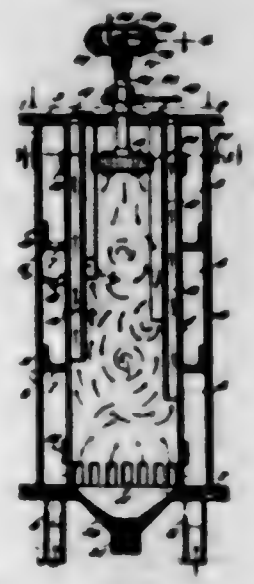
1. In an internal combustion engine, the combination with the engine cylinder having a piston therein, of a compressor drawing in air comprising an auxiliary piston directly connected to or carried by the engine piston and working in a cylinder independent of but in axial alinement with the engine cylinder for the purpose of compressing the air and delivering during each cycle of the engine a greater quantity than the maximum quantity required to be supplied to the engine; a reservoir between the compressor and the intake of the engine into which the compressed air is delivered; and a relief valve for maintaining the pressure in said reservoir at a constant value irrespective of variations in the pressure of the atmosphere, substantially as described.

1,298,469. NUT-LOCK. HARVEY V. DU YOUNG and LEE TERWILLIGER, Crystal, Mich. Filed Dec. 28, 1917. Serial No. 208,535. 1 Claim. (Cl. 151—21.)



The combination with a bolt having its threaded shank provided with a flat non-threaded surface, and said non-threaded surface being provided with a longitudinally extending groove, a nut screwed upon the bolt, said nut having its outer face provided with a compressible sleeve surrounding the bore thereof, the inner surface of the said sleeve being non-threaded, and said sleeve designed to be compressed against the flat surface of the bolt but not to enter the groove in the said flat surface, whereby an instrument may be inserted in the groove to engage with the compressed portion of the sleeve to bulge the same outwardly to its initial shape, to permit of the unscrewing of the nut from the bolt.

1,298,470. EVAPORATING APPARATUS. SAMUEL M. DICK, Minneapolis, Minn., assignor of one-half to Francis E. Mick, Minneapolis, Minn. Filed Dec. 18, 1917. Serial No. 206,975. 9 Claims. (Cl. 127—9.)

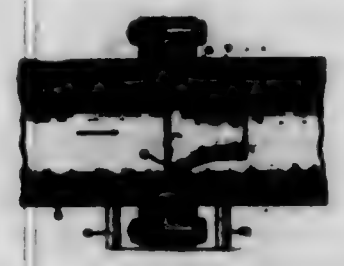


1. An evaporating apparatus comprising a vertical cell, means for spraying liquid into the upper end of said cell, means for supplying hot air to the upper end of said cell at points spaced around the vertical wall thereof, means for supplying air at a higher temperature to the lower end of said cell at points spaced around said wall of the latter, and air outlets spaced around said wall and also spaced apart vertically.

5. An evaporating apparatus comprising a vertical cell, means for spraying liquid into the upper end of said cell, means for supplying hot air to the upper end of said cell, means for supplying air at a higher temperature to the lower end of said cell, and a plurality of air outlets leading from vertically spaced points of said cell.

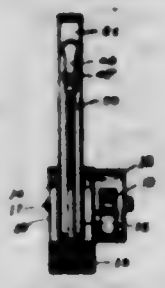
9. The method of evaporating liquid consisting in spraying the same into the upper end of a chamber while supplying hot air to the lower end of said chamber and air at a lower temperature to the upper end of said chamber, and at the same time permitting the air to escape at different elevations, whereby to produce the several air currents as set forth.

1,296,471. PRESSURE-DIFFERENCE-CREATING DEVICE. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 16, 1917. Serial No. 180,712. 4 Claims. (Cl. 73—167.)



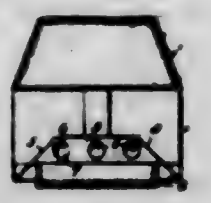
2. The combination of a circuit through which a fluid flows, an apertured disk extending transversely of the conduit and forming an orifice, a nozzle carried by the disk and pointing in the direction of the flow of fluid in the conduit, and leading and trailing pressure pipes connected to the conduit on opposite sides of the orifice disk, the point of connection of the trailing pressure pipe to the conduit being between the disk and the end of said nozzle.

1,296,472. WINDOW-LOCKING DEVICE. MICHAEL DONSON, Rumford, Me. Filed July 20, 1918. Serial No. 245,888. 1 Claim. (Cl. 16—19.)



In a device of the class described, a frame provided with a channel extending longitudinally thereof, an offset portion carried by the frame and adapted to engage a window stile, a plunger mounted within the frame and movable in a direction longitudinally thereof, a pivotally mounted arm located within the channel and provided with an enlarged portion having a slot extending partially around the edge thereof, one end portion of the plunger extending into the slot, said arm also being provided with slots extending eccentrically with reference to the mounting of the arm, means engaging the slots and connected with the end of the plunger entering the slot first named, a pin for mounting the arm, said pin extending through the frame, and an eccentrically mounted member carried by an outer end of the pin, said member last named and the aforesaid plunger being positioned to positively engage respectively the upper and lower sash members of a window.

1,296,473. ENVELOP. ANDREW CLAUD DORSETT, Coffinton, Ga. Filed Nov. 8, 1918. Serial No. 261,651. 1 Claim. (Cl. 229—81.)



An envelop of the class described, having a bottom flap provided with a series of holes, a strip of tissue paper pasted across said holes, a top flap having a part engaging with said strip through the holes and a strip of transparent material secured to the bottom flap, and adapted to be secured to the upper flap when the same is folded over.

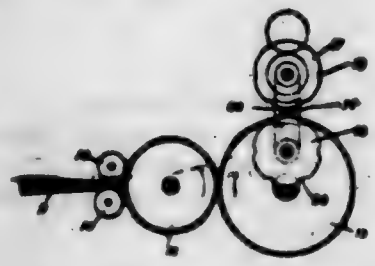
1,296,474. GLASS-FURNACE. HENRY DOUCHAMP, Smethport, Pa., assignor to Smethport Glass Co., Smethport, Pa. Filed Sept. 20, 1916. Serial No. 121,222. 2 Claims. (Cl. 49—56.)



1. In a glass drawing apparatus including a furnace having a drawing portion comprising tiles constructed to form a drawing opening, said tiles being vertically adjustable to vary the level of the opening; means for moving said tiles comprising a main supporting frame, an auxiliary frame disposed below said main supporting frame and vertically adjustably supported therefrom, and a plurality of supporting members connected with said auxiliary frame and with the respective tiles, said last named members being individually adjustable in respect to said auxiliary frame.

2. In a glass drawing apparatus, a furnace having a drawing portion formed of tiles constructed to provide a drawing opening, a main supporting frame, an auxiliary frame disposed below and vertically adjustably connected with said main frame, a plurality of supporting rods vertically adjustably connected with said auxiliary frame, and a plurality of supporting rods connected with said tiles and flexibly connected with said last named supporting rods, whereby the position of said tiles may be varied individually in respect to said auxiliary frame, movement of said auxiliary frame varying the positions of all the tiles simultaneously.

1,296,475. YARN-SPINNING MACHINE AND METHOD. LOUIS W. DOWNES, Providence, R. I., assignor to D & W Fuse Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 6, 1917. Serial No. 184,661. 12 Claims. (Cl. 28—6.)



12. The method of forming a composite yarn which consists in covering a base thread or core with a coating of fibers by first twisting and then releasing it from its twisted tension to freely return to its normal twist whereby its rotation causes the fibers to be wound upon its surface.

1,296,476. PROCESS OF TREATING WASTE SULFITE LIQUORS, &c. VICCO DARWARX, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 9, 1914. Serial No. 811,141. 9 Claims. (Cl. 23—24.)

6. The process of treating waste sulfite liquors which consists in incorporating therewith an excess of caustic

soda and simultaneously heating the mixture for several hours under pressure, in precipitating the lignin compounds thus produced and separating the liquid containing lactonic acids or other converted material in solution, and in drying and subjecting the converted material to distillation with steam to produce acetone or other ketones and additional, volatile material.

1,298,477. PROCESS OF TREATING WASTE SULFITE LIQUORS, &c. VIGGO DRAWSEN, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Original application filed Jan. 9, 1914, Serial No. 811,141. Divided and this application filed Dec. 12, 1917. Serial No. 206,753. 11 Claims. (Cl. 23—24.)

11. The process of treating the waste liquor from the sulfite cellulose manufacture, consisting in boiling the waste liquor with an excess of alkali under pressure for such a time that the constituents of the waste liquor are transformed into a precipitate comprising lignin and a solution of organic salts, separating said solution of salts from said precipitate, and subjecting said salts to dry distillation with strong bases.

1,298,478. PROCESS FOR THE PRODUCTION OF ACETATES FROM WASTE SODA LIQUORS, &c. VIGGO DRAWSEN, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 19, 1916, Serial No. 115,886. Renewed Nov. 22, 1917. Serial No. 239,662. 12 Claims. (Cl. 23—24.)

1. The process of treating the waste soda liquor produced in the manufacture of paper pulp from wood by the soda pulp process which comprises concentrating the waste liquor to a specific gravity of about 1.30 and incorporating about 10% of caustic soda and about 50% of powdered caustic lime to form strong porous causticized organic material and heating the same to about 250° C. and cooling in the absence of air, extracting the same with hot water to secure strong crude acetate liquor of about 30° Baumé, percolating carbon-dioxid through said liquor to precipitate and remove sodium bicarbonate, adding acetic acid to the purified acetate liquor to the extent of about 6% of the solids therein to neutralize contained carbonate and incorporating powdered lime to the extent of about 5% of such solids and filtering, concentrating the filtrate and crystallizing sodium acetate therefrom and adding sulfuric acid to the resultant mother liquor and distilling acetic acid therefrom.

2. The process of treating the waste soda liquor produced in the manufacture of paper pulp from wood by the soda pulp process which comprises concentrating the waste liquor and incorporating about 50% of powdered caustic lime to form strong porous causticized organic material and heating the same to about 250° C. and cooling in the absence of air, extracting the same with hot water to secure strong crude acetate liquor of about 30° Baumé, percolating carbondioxid through said liquor to precipitate and remove sodium bicarbonate, adding acetic acid to the purified acetate liquor to the extent of about 6% of the solids therein to neutralize contained carbonate and incorporating powdered lime to the extent of about 5% of such solids and filtering, concentrating the filtrate and crystallizing sodium acetate therefrom.

3. The process of treating the waste soda liquor produced in the manufacture of paper pulp from wood by the soda pulp process which comprises concentrating the waste liquor and incorporating about 50% of powdered caustic lime to form strong porous causticised organic material, extracting the same with water to secure strong crude acetate liquor, percolating carbon-dioxid through said liquor to precipitate and remove sodium bicarbonate, adding acetic acid to the purified acetate liquor to neutralize contained carbonate and incorporating powdered lime and filtering, concentrating the filtrate and crystallizing sodium acetate therefrom.

4. The process of treating the waste soda liquor produced in the manufacture of paper pulp from wood by the soda process which comprises concentrating the waste liquor to a specific gravity of about 1.30 and incorporating about 50% of powdered caustic lime to form porous masses of causticized organic material and heating the same to about 250° C. and cooling in the absence of air, extracting the same and forming a strong crude acetate liquor, percolating carbon-dioxid through said liquor to precipitate and remove sodium bicarbonate, adding to the purified acetate liquor and incorporating powdered lime solids and filtering, concentrating the filtrate and crystallizing sodium acetate therefrom and adding sulfuric acid to the resultant mother liquor and distilling acetic acid therefrom.

12. The process of producing acetates from the waste soda liquor produced in the manufacture of cellulose from vegetable fiber material by the soda process which comprises forming therefrom crude acetate liquor, and adding acetic acid to the acetate liquor to convert undesirable alkali salts into acetates.

1,298,479. PROCESS FOR THE TREATMENT OF WASTE LIQUORS FROM SODA PULP PROCESSES, &c. VIGGO DRAWSEN, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Filed July 22, 1918. Serial No. 246,330. 17 Claims. (Cl. 203—6.)

17. The process of treating the waste liquor produced in the manufacture of wood pulp by the soda pulp process, which consists in concentrating the waste liquor, in incorporating powdered quicklime therewith to transform the resulting mixture into substantially dry condition and produce causticised ligneous acetate material, and in subjecting the substantially dry causticised material to distillation to recover acetone and additional allied volatile material.

1,298,480. CAUSTICIZED LIGNEOUS ACETATE MATERIAL AND PROCESS OF MAKING THE SAME. VIGGO DRAWSEN, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Filed July 23, 1918. Serial No. 246,331. 25 Claims. (Cl. 203—6.)

4. The calcareous ligneous acetate material adapted for the production of acetone by dry distillation with steam and which is permanently solid under dry distilling conditions so as not to undesirably melt or foam and which comprises acetate compounds and a large proportion of ligenous material and a large proportion of intimately incorporated lime.

1,298,481. PROCESS FOR THE TREATMENT OF WASTE SODA LIQUORS. VIGGO DRAWSEN, Brooklyn, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of Delaware. Filed June 10, 1914, Serial No. 844,254. Renewed Aug. 10, 1918. Serial No. 249,331. 15 Claims. (Cl. 23—24.)

1. The process of treating the waste soda liquor produced in the manufacture of wood pulp from poplar wood by the soda pulp process, which consists in concentrating the waste liquor by evaporation until the proportion of water in the concentrated material is only about fifty per cent. in delignating the waste liquor by largely precipitating therefrom the ligneous material and sodium bicarbonate by treatment with carbon-dioxid while heating the liquor under pressure to promote the collection of the precipitated material, in filtering the treated liquor to separate from the precipitate the delignated waste liquor, in concentrating the said delignated waste liquor and incorporating therewith about half its weight of powdered quicklime to produce causticized substantially dry, powdered, lime organic material, in aggregating the hydrated lime particles by treatment with carbondioxid and moisture, in heating the treated causticized material to about 160 to 200 degrees C., in leaching said causticized ma-

terial with relatively small proportions of cold water to leach out the sodium acetate free from interference by undesirable organic material and in concentrating and separating by crystallisation sodium acetate from the leaching liquor.

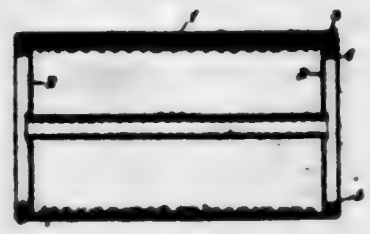
2. The process of treating the waste soda liquor produced in the manufacture of wood pulp from deciduous wood, by the soda pulp process, which consists in concentrating the waste liquor by evaporation until the proportion of water in the concentrated material is not more than about sixty per cent., in delignating the waste liquor by largely precipitating therefrom the ligneous material and sodium bicarbonate by treatment with carbon-dioxid while heating the liquor under pressure to promote the collection of the precipitated material, in filtering the treated liquor to separate from the precipitated the delignated waste liquor, in concentrating the said delignated waste liquor and incorperating therewith quicklime to produce causticised substantially dry, powdered, lime organic material, in heating the treated causticised material to about 180 to 200 degrees C., in leaching said causticised material with relatively small proportions of cold water to leach out the sodium acetate free from interference by undesirable organic material and in concentrating and separating by crystallization sodium acetate from the leaching liquor.

3. The process of treating the waste soda liquor produced in the manufacture of wood pulp from deciduous wood by the soda pulp process, which consists in concentrating the waste liquor by evaporation until the proportion of water in the concentrated material is not more than about sixty per cent., in delignating the waste liquor by largely precipitating therefrom the ligneous material and sodium bicarbonate by treatment with carbon-dioxid while heating the liquor under pressure to promote the collection of the precipitated material, in filtering the treated liquor to separate from the precipitate the delignated waste liquor, in concentrating the said delignated waste liquor and incorporating therewith quicklime to produce causticised lime organic material, in leaching said causticised material with relatively small proportions of cold water to leach out the sodium acetate free from interference by undesirable organic material and in concentrating and separating sodium acetate from the leaching liquor.

4. The process of treating the waste soda liquor produced in the manufacture of paper pulp from deciduous wood by the soda pulp process, which consists in concentrating the waste liquor until the proportion of water in the concentrated material is only about fifty per cent. in delignating the waste liquor by largely precipitating the ligneous material therefrom without eliminating the acetate material therefrom, in concentrating the delignated waste liquor and incorporating therewith about half its weight of powdered quicklime and heating the mixture to produce causticised substantially dry, powdered, lime organic material, in leaching said causticised material with relatively small proportions of cold water to leach out the sodium acetate free from interference by undesirable organic material and in recovering by evaporation and crystallization sodium acetate from the leaching liquor.

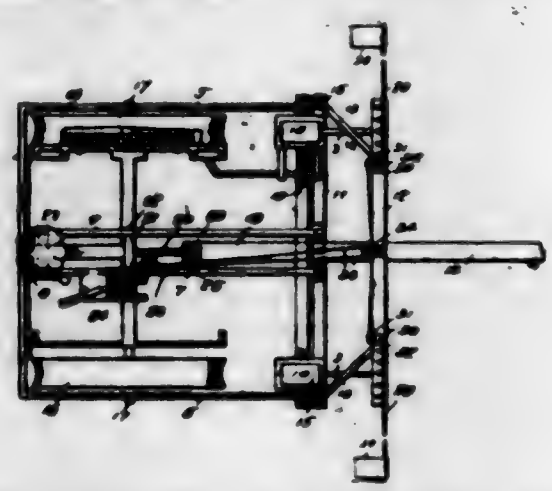
5. The process of treating the waste soda liquor produced in the manufacture of paper pulp from deciduous wood by the soda pulp process, which consists in concentrating the waste liquor until the proportion of water in the concentrated material is only about fifty per cent., in delignating the waste liquor by precipitating ligneous material therefrom without eliminating the acetate material therefrom, in concentrating the delignated waste liquor and incorporating therewith quicklime and heating the mixture to produce causticised substantially dry, lime organic material, in leaching said causticised material with relatively small proportions of cold water to leach out the sodium acetate free from interference by undesirable organic material and in recovering sodium acetate from the leaching liquor.

1,298,482. LAND-ROLLER. RAY E. DUNHAM, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed Aug. 20, 1915. Serial No. 46,535. 1 Claim. (Cl. 220—1.)



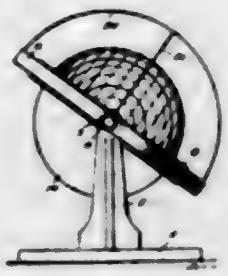
In a land roller, the combination with a sheet of metal bent and welded to form a cylindrical shell, circular flanged heads fitted in the ends respectively of said shell, each such head consisting of a mail or body portion and a peripheral flange; each end portion of the shell being bent around and inwardly and then outwardly, the corresponding flange being bent around and inwardly so as to interlock with the bent portion of said shell; the adjacent portions of the main or body portion of the heads and the bent portions of the shell being integrally united.

1,298,483. CORN-PLANTER. THOMAS J. ELLISON, Terrill, Ky. Filed Sept. 17, 1918. Serial No. 254,388. 1 Claim. (Cl. 97—83.)



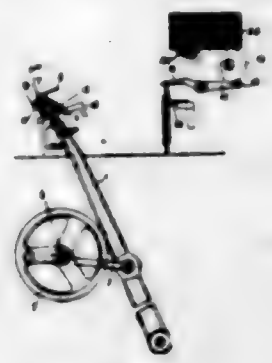
In a corn-planter, a main frame, a runner frame in front thereof, a lever carried by the main frame and having a connection with the runner frame for raising and lowering the same, a pair of guide staffs extending from opposite sides of the runner frame, crank arms on the inner ends of the staffs, bearings on the runner frame in which the crank-arms are journaled, rocker-arms extending from the crank-arms, and flexible connections between the rocker-arms and the aforesaid lever.

1,298,484. INCLINOMETER. JOHN E. FAHS, New York, N. Y. Filed July 29, 1918. Serial No. 247,195. 9 Claims. (Cl. 33—215.)



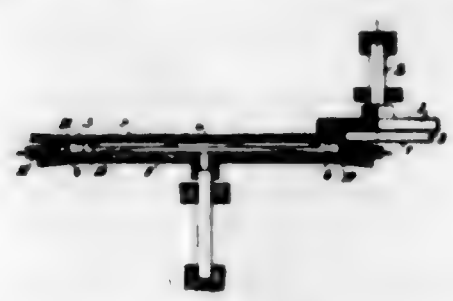
3. An inclinometer comprising supporting means, a swinging annulus, a graduated weighted globular member movable about its axis in the annulus at right angles to the axis of rotation of the annulus, and pointer means carried by the supporting means and adapted to coöperate with the globular member.

1,298,485. APPARATUS FOR TAKING OFF SINGLE SHEETS FROM PILES. SHIMON FELDMAN, Petrograd, Russia, assignor to J. M. Aivaz Societe par action pour Construction de Machines, Petrograd, Russia. Filed Sept. 5, 1918. Serial No. 252,810. 1 Claim. (Cl. 271—29.)



The combination with a pile of sheets and an inclined surface, of an oscillating lever, the end of which moves between the pile of sheets and the inclined surface, a fixed finger carried by the lever, a movable finger pivotally mounted on the lever and coöperating with the fixed finger for grasping a sheet between them, a disk movable with the movable finger and provided with a peripheral notch, an arm movable with the movable finger and having an operating roller coöperating with said inclined surface for opening the movable finger, a spring pressed pawl carried by the lever and having a nose coöperating with said notch for holding the movable finger in open position during the period when the lever is moving from the inclined surface to the pile of sheets, means for moving one of the end sheets of the pile to permit the fingers to grasp the same, means for holding the fingers in closed position during the movement of the lever from the pile of sheets to the inclined surface, a stop adapted to engage the pawl when the lever moves toward the pile of sheets for withdrawing the nose from the notch, and means located adjacent the pile of sheets for temporarily holding the movable finger open when the nose is withdrawn from the notch.

1,298,486. PROCESS OF AND MEANS FOR GRINDING THE CURVED SUPERFICIES OF CONICAL ROLLERS. BENGT WIKTOR FJELLMAN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Aug. 12, 1916. Serial No. 114,606. 5 Claims. (Cl. 51—4.)



1. The process of grinding the superficies of a plurality of conical rollers at a time, which consists in placing the rollers to be ground on a conical roller-supporting track, applying a rotary grinding disk to the rollers thereon, and during the grinding operation continually moving the rollers in a direction toward their apices.

2. The process of grinding the superficies of a plurality of conical rollers at a time, which consists in placing the rollers to be ground on a conical roller-supporting track, the apices of the angles of the rollers being directed toward the apex of the angle of the said track, applying a grinding element to the said rollers, and continually adjusting the position of the rollers toward the said track apex during the grinding.

3. In a machine for grinding the superficies of conical rollers, the combination of a rotary grinding disk, a rotary roller-supporting cone placed eccentrically in relation to the said grinding disk, the base angle of said roller-supporting cone being equal to the top angle of the rollers to be ground, a stationary disk placed above the said cone, in contact with the rollers to be ground, the portion of the said disk bearing on the rollers being on a plane with the apex of the said cone, said disk being further provided with a recess allowing the rollers to be worked by the grinding disk, and means for individually moving the rollers toward the center of the said roller-supporting cone, substantially as described.

4. In a machine for grinding the superficies of conical rollers, the combination of a rotary grinding disk, a rotary roller-supporting cone placed eccentrically in relation to the said grinding disk, the base angle of said roller-supporting cone being equal to the top angle of the rollers to be ground, a stationary disk placed above the said cone, in contact with the rollers to be ground, the portion of the said disk bearing on the rollers being on a plane with the apex of the said cone, said disk being further provided, with a recess allowing the rollers to be worked by the grinding disk, and spring-actuated bolts adapted to press the rollers toward the center of the said roller-supporting cone, substantially as described.

5. In a machine for grinding the superficies of conical rollers, the combination of a rotary grinding disk, a rotary roller-supporting cone placed eccentrically in relation to the said grinding disk, the base angle of said roller-supporting cone being equal to the top angle of the rollers to be ground, a stationary disk placed above the said cone, in contact with the rollers to be ground, the portion of the said disk bearing on the rollers being on a plane with the apex of the said cone, said disk being further provided with a recess allowing the rollers to be worked by the grinding disk, a ring secured to the roller-supporting cone, said ring having projections extending toward the center of the said cone to form pockets for the rollers, and spring-actuated bolts placed in recesses in the said ring and adapted to press on the outer ends of the rollers, substantially as described.

1,298,487. AIRSHIP. SPENCER A. FLOWER, London, England. Filed June 25, 1917. Serial No. 176,865. 13 Claims. (Cl. 244—3.)



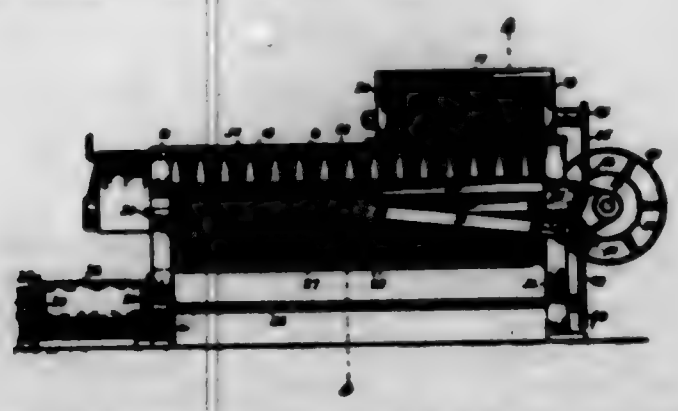
1. In an air-ship, a frame comprising in combination a central boom, transverse frames secured at intervals to the boom, flexible elements secured to adjacent transverse frames resisting the pressure of gas contained in gas bags and an outer system of longitudinal and also of inclined wires secured to the said transverse frames to resist the bending moments and shearing forces due to the weight of the structure and to the gaseous pressures.

1,298,488. MACHINE FOR STEMMING FRUIT. JOHN B. FOOTE, Oak Park, Ill. Filed June 8, 1914. Serial No. 843,654. 22 Claims. (Cl. 130—30.)

1. In a machine for stemming fruit, the combination of a stationary trough, having perforations therein, means for conveying the fruit longitudinally through the trough, and means for gripping the stems passing through said perforations to cause the stems to be severed by the movement of the fruit relatively to the trough while the stems are held by the gripping means.

5. In a machine for stemming fruit, the combination of a trough, having perforations therein, means for conveying the fruit longitudinally through the trough, and correspondingly perforated means for gripping the stems passing through the trough.

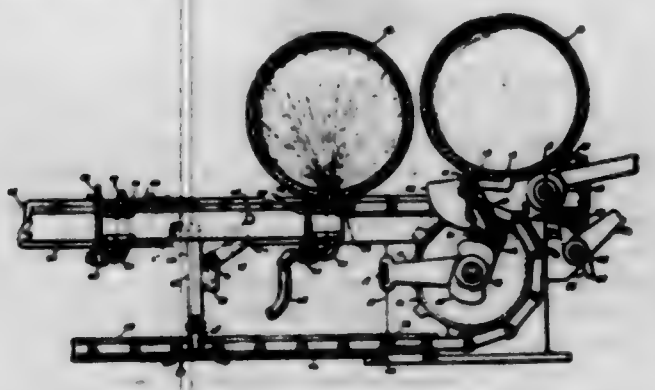
7. In a machine for stemming fruit, the combination of a trough, having perforations in and above bottom, means for conveying the fruit longitudinally through the trough, and a correspondingly perforated plate coacting with the perforated trough to grip the stems.



13. In a machine for stemming fruit, the combination of a trough having perforations therein, means for conveying the fruit longitudinally through the trough, means for gripping the stems passing through the perforations in the trough, and mechanism for reciprocating the gripping-means.

20. In a machine for stemming fruit, the combination of a curved plate having perforations therein, and forming a trough, a helical conveyer extending longitudinally through the trough for conveying the fruit from end to end thereof, a curved perforated plate for gripping the stems passing through the trough, and mechanism for reciprocating one of said plates.

1,298,489. CASK-WASHING MACHINE. GEORGE G. FRELINGHUYSEN, Morris county, and LOUIS A. HAWTHORNE, Newark, N. J., assignors to Steel Utilities, Incorporated, a Corporation of New York. Filed Apr. 9, 1915. Serial No. 20,175. 17 Claims. (Cl. 141—6.)



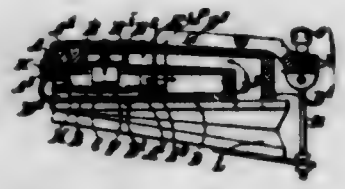
1. A cask washing machine including in combination, means for alining and arresting a cask with the bung hole in nozzle receiving position, means for conveying the cask, and a nozzle and means for inserting it into the bung hole and retracting it therefrom and returning it independently of the cask conveyer to meet another cask.

1,298,490. ELECTRICAL-OSCILLATION GENERATOR. LEONARD F. FULLER, San Francisco, Calif., assignor to Federal Telegraph Company, San Francisco, Calif., a Corporation of California. Filed July 12, 1916. Serial No. 108,846. 3 Claims. (Cl. 250—38.)



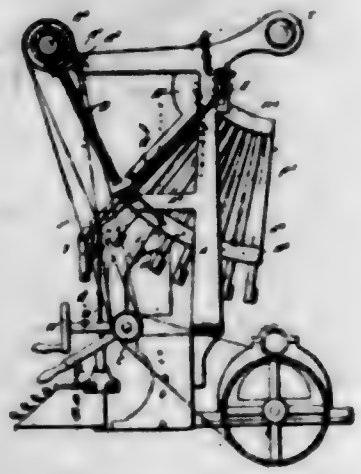
1. In an electrical oscillation generator, a cathode, an anode of less width than the cathode, and magnetic poles for producing a magnetic flux in the gap between the anode and cathode, the distance between the anode and the poles being greater than the distance between the cathode and the poles and being greater than the distance from the anode to the cathode.

1,298,491. PNEUMATIC ACTION FOR PIANO-PLAYERS. ARCHIBALD EATON GOLDSPINK, Kentish Town, London, England, assignor to Chappell & Company, Limited, London, England. Filed Feb. 4, 1919. Serial No. 274,944. 2 Claims. (Cl. 84—178.)



1. In pneumatic piano actions, the combination of a bellows and a wind trunk having an exhaust space with an opening through one side of the trunk communicating with the exhaust space and a right angled passage communicating at one end with said bellows and having its other end opening through the side of the trunk just above said first mentioned opening, a valve carrying unit removably supported on the bellows at the side of said wind trunk, said unit being composed of three superposed layers, each layer being recessed centrally, the recesses in the layers communicating with each other, the recess in the uppermost layer providing a valve chamber, upper and lower valve seats in said chamber, a double beat valve mounted in said valve chamber and adapted to be alternately moved against said upper and lower seats, said uppermost layer having a passage communicating at one end with said valve chamber and opening at its other end through the side wall of said unit, said passage adapted to register with the second mentioned opening in said wind trunk, said lowermost layer having a passage therein communicating with the central recess in said layer at one end and having its other end opening through the side of said unit, said last named passage adapted to register with the first mentioned opening in said wind trunk, a diaphragm beneath said last mentioned recess and adapted to actuate said valve, and means placing said diaphragm in communication with the ducts of a tracker board, substantially as described.

1,298,492. TYPOGRAPHICAL OR SLUG-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed May 8, 1915, Serial No. 26,780. Renewed Feb. 18, 1919. Serial No. 277,817. 13 Claims. (Cl. 199—16.)



1. In a typographical machine, in combination, a frame having a pivot, a plurality of removable magazines, a basket hinged to said pivot made to house said magazines in such position that their rear ends are closer together

than their front ends, a pair of stationary entrance and exit channels relatively remote from and on the same side of said pivot, but in substantial alinement therewith and between which the basket and magazines are adapted to swing about said pivot whereby the magazines are successively brought into alinement with said common entrance and exit channels as desired.

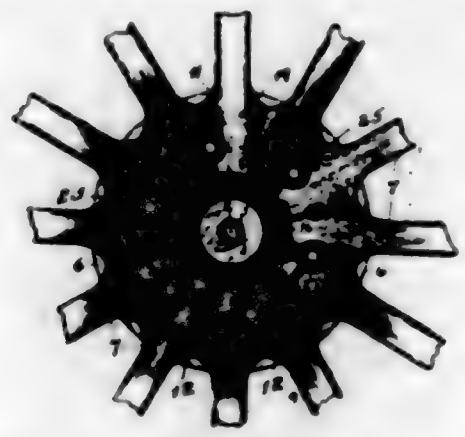
6. In a typographical machine, in combination, a frame having a vertical member and an upper transverse member, a pivot near one end of said transverse member, a basket suspended therefrom, a plurality of removable magazines radially disposed within said basket with respect to said pivot, a pair of entrance and exit channels in alinement with each other and said pivot, one of which is supported from said vertical member, and means for moving said basket in the arc of a circle about the pivot between the entrance and exit channels.

7. In a typographical machine the combination of a plurality of removable magazines, a rack to house said magazines so that they are closer at their rear than at their frontal ends, means to shift said rack, a forked arm having forward and backward projections, a pivot on which said rack is supported from said backward projections, and a support pivoted to the forward projections of said forked arm connected with said rack.

12. A typographical machine having a plurality of matrix magazines and supporting means therefor, including extensions disposed rearwardly from the distributer head, and frame members pivotally supported on said extensions for movably supporting said magazines in the machine, said magazines being disposed in planes converging at the axis of said frame members.

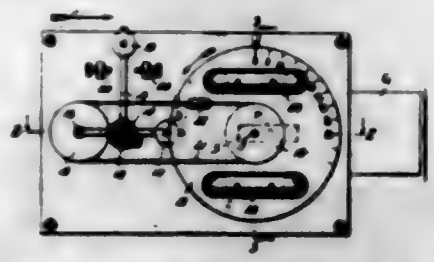
13. A typographical machine comprising a frame extended at the rear, distributing means for the matrices depending from said frame, magazine supporting members pivotally held on said frame at the rear of said distributing means, and a plurality of matrix magazines slidably held on said supporting means in planes converging at the axis thereof and capable of movement for effecting the selective placement of said magazines, into operative position.

1,298,493. RESILIENT WHEEL. LYCURGUS GUDGELL, Rock Island, Ill., assignor to The Gudgell's Rubber Hub Company, Rock Island, Ill., a Corporation. Filed May 11, 1917. Serial No. 167,958. 1 Claim. (Cl. 152—43.)



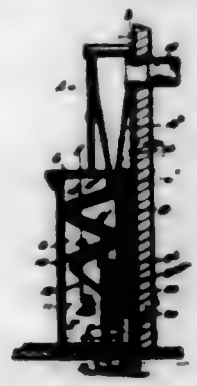
A resilient wheel structure comprising a spindle hub having a flange at one end thereof, a resilient spring member secured upon said spindle and abutting one face of the flange, an annulus having a spoke bearing portion slidably mounted upon said spindle hub and the spring member, a flange carried by said bearing hub and in engagement with said spindle hub, a second annulus slidable upon and over said spindle hub and spring member, a cap ring mounted on said spindle hub and engaging said second annulus, spokes arranged between the first and second annulus and having their inner ends resting upon said spring member and bolts extending through said spindle hub flanges first and second annulus flanges and the spokes and cap ring whereby the parts are held against displacement relative to one another.

1,298,494. GROUND-SPEED INDICATOR. JOSEPH MARR GWINN, Jr., New Orleans, La. Filed Nov. 20, 1917. Serial No. 202,969. 7 Claims. (Cl. 264—1.)



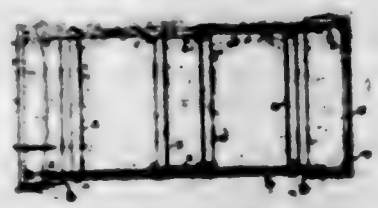
7. In a device of the character set forth, the combination of a weight, means to support said weight for free relative displacement rearwardly or forwardly in a direction parallel with the direction of movement of the vehicle, means to indicate to the observer the extent of such displacement and the corresponding velocity of the aeroplane, means for compensating for the frictional resistance of the said supporting means, and means for maintaining the device in a horizontal position.

1,298,495. FIREPLACE-FURNACE. CALVIN H. HAGAN, Seattle, Wash., assignor to Charles F. Whittlesey, Seattle, Wash. Filed Apr. 25, 1918. Serial No. 230,787. 5 Claims. (Cl. 126—122.)



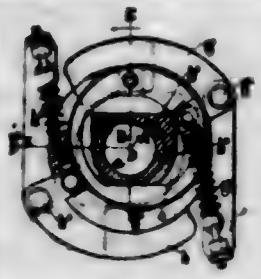
1. In a fire-place furnace, a casing divided by partitions to afford a front fire-place and a pair of superposed air heating chambers, a smoke flue extending from the fire-place through the upper one of said chambers, air inlet and outlet openings in both of said chambers, said fire-place being interposed between the openings of the lower one of said chambers to afford rising and diving ducts at opposite sides of the fire place, and partitions provided between the openings of the lower chamber to afford rising and diving ducts therein.

1,298,496. KNOCKDOWN FURNITURE. WILLIAM H. HAIGHT, Northfield, Minn. Filed June 2, 1917. Serial No. 172,417. 6 Claims. (Cl. 5—5.)



1. A device of the class described comprising a pair of substantially rectangular frames, the side rails of one frame being arranged to cross the corresponding rails of the other frame, cross bars intermediate to the ends of said frames, the cross bar of one frame forming a rest and support for the upper portion of the other frame and allowing a slidable adjustment of said frames one upon the other for varying their height and angle with respect to the ground line, said cross bars being interchangeable from the top side of one frame to the underside of the other to adapt them for different articles of furniture, and a filler of flexible material adjustably connected to the upper ends of said frames.

1,298,497. INTERNAL-COMBUSTION ENGINE. SIDNEY ZALDUKI HALL, London, England. Filed Jan. 29, 1918. Serial No. 214,408. 2 Claims. (Cl. 264—16.)



1. A governor for varying the supply of liquid fuel to the cylinder of an internal combustion engine in accordance with the load, comprising a block secured to the shaft of the engine, said block having one part of circular cross-section, the outer periphery of which is concentric with the shaft and another part formed with two flat surfaces, a ring carried on the part of the circular cross-section of the block so as to be capable of angular displacement thereon, the outer periphery of said ring being concentric with the shaft, centrifugal weights and springs attached thereto for displacing the said ring, and an eccentric mounted on the part of the block formed with the two flat surfaces so that it shall be capable of being displaced by the ring along the said flat surfaces to get a different eccentricity, as and for the purpose set forth.

1,298,498. SURVEYOR'S TRANSIT. MARVIN L. HAMMITT, Carbonite, Idaho. Filed May 14, 1918. Serial No. 234,515. 2 Claims. (Cl. 33—60.)

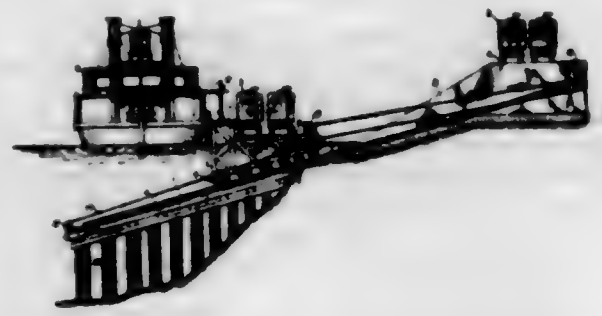


1. In a device of the class described, a disk member, a telescope mounted thereon, a ring member having a flange and channel connection with the disk member, standards provided with segmental rib portions, trunnions carried by the ring member and provided with annular channels engaging said segmental portions, a semicircular guiding device carried by the underside of the ring member and provided with graduations, and means for guiding the device last named.

2. In a device of the class described, a stationary element, a plurality of standards mounted thereon, each provided with a segmental rib portion at its upper end, a ring member provided with channeled trunnions engaging said segmental portions, a semicircular member mounted beneath the ring member and having rigid connection therewith, means for forming a dovetailed connection between said semicircular member and the stationary element, a disk mounted within the ring and having dovetail connection therewith, and a telescope mounted on said disk.

1,298,499. STEAMBOAT AND BARGE LOADING AND UNLOADING SYSTEM. GUSTAVE A. HANSEN, St. Louis, Mo. Filed Aug. 26, 1918. Serial No. 251,500. 1 Claim. (Cl. 214—14.)

An improved loading and unloading apparatus for vessels, consisting of a cut or underground recess formed at the top of an incline adjacent a body of water; an inclined railway, the upper end of which is depressed below the surrounding surface and located and terminates within said cut or recess, and the lower end of which railway is submerged a sufficient depth to permit vessels to float over it; a wheeled cradle mounted upon said inclined railway; a horizontal platform at the top of said cradle; horizontal railway-rails mounted on said horizontal platform and extending in a direction at right-angles to the path of the wheels of said cradle in traversing said inclined railway; railway-tracks on the surface terminating on opposite sides of said cut or underground recess, and located in a plane above the upper end of said inclined railway, to aline with the said rails carried by the said horizontal platform of said cradle when the latter is run into said cut; wire cables for pulling down said cradle, having their lower ends anchored to the submerged lower portion of the said inclined railway, and having the other ends loosely wound around a



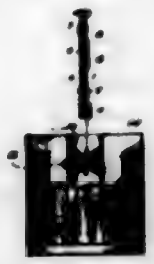
winding-drum carried by the said cradle; additional cables for hauling up the latter; suitable means mounted upon said cradle, for winding up and unwinding said cables, to force said cradle downwardly and to draw the same upwardly upon said railway, and an additional horizontal platform located at the extreme outer end of the said cradle, and elevated such a distance above the plane of the said platform that said additional platform will be flush with the deck of a vessel being loaded or unloaded, as well as on about the same level as the floors of cars that are standing upon the said platform.

1,298,500. CHARGE-TORPEDO. JEAN AMÉDÉE HARDEL, Paris, France. Filed Sept. 10, 1918. Serial No. 253,407. 11 Claims. (Cl. 102—4.)



8. In a charge torpedo, a spring-pressed percussor recessed at one end, a guide tube in which said percussor works, a plummet adapted to lie in said recess and be held therein by the guide tube, a trigger adapted to engage said percussor and hold the same against the action of its spring, a pull cord secured to said plummet for shifting said percussor in the guide tube against the action of its spring, into position to be engaged by said trigger, said guide tube being apertured to permit the escape of the plummet from the recess in the guide tube after the percussor has reached position for engagement by the trigger, a frictional detent within the tube to halt the plummet, and a releasing cam on the trigger engaged by the plummet to shift the trigger into position to free the percussor after the plummet has passed the detent, substantially as described.

1,298,501. THREAD CUTTER AND HOLDER. FREDERIC W. HAWKES, New York, N. Y. Filed Nov. 17, 1917. Serial No. 202,528. 4 Claims. (Cl. 30—14.)



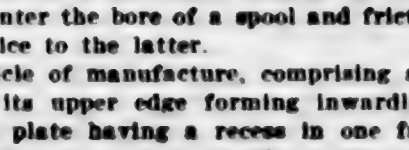
1. An article of manufacture, comprising a plate having a recess in its upper edge forming inwardly projecting fingers, said plate also having a recess in one face, a blade seated in the recess in the face of the plate and having its cutting edge extending across the first mentioned recess and under said fingers, means secured to said plate and holding said blade in place in the recess in the face thereof, and means carried by said plate and adapted to enter the bore of a spool and frictionally connect the device to the latter.

2. An article of manufacture, comprising a plate having a recess in its upper edge forming inwardly projecting fingers, said plate having a recess in one face, a blade seated in said recess and having its cutting edge extending across said first-mentioned recess, a separate face plate on the first-mentioned plate and retaining the blade in its seat, the upper portion of said face plate conforming approximately to the shape of the upper portion of the first-mentioned plate, fastening devices passing through said plates independently of the blade, and means carried by one of said plates and adapted to enter the bore of a spool and frictionally connect the device with the latter.

3. An article of manufacture, comprising a holder for a blade, a blade mounted in said holder, a tongue depending from said holder adapted to enter the bore of a spool, and a friction device carried by said tongue and projecting laterally therefrom to frictionally engage the bore of the spool.

4. An article of manufacture, comprising a blade holder, a blade mounted in said holder, a tongue depending from the holder and adapted to enter the bore of a spool, and a bolus passing through said tongue and projecting laterally therefrom.

1,298,502. ARTIFICIAL HAND. FREDERICK C. HERNING, Chicago, Ill., assignor to The Miracle Artificial Arm Co., Chicago, Ill. Filed Feb. 1, 1918. Serial No. 214,824. 28 Claims. (Cl. 3—12.)



1. In an apparatus of the character described, two relatively movable artificial limb members, a lock, a lock-controlling device, a ratchet wheel connected to said device for actuating the same, and means interconnected with said members for moving said ratchet wheel step by step through successive predetermined relative movements of said members from a predetermined relative position of said members.

4. In an apparatus of the character described, an upper arm member, a forearm member, a hand having movable fingers, a controlling means for said fingers, a lock for said controlling means, and means controlled by relative movements of said arm members for operating said lock.

5. In an apparatus of the character described, an upper arm member, a forearm member, a hand having movable fingers, a controlling device for said fingers, a lock for said device, means including a ratchet wheel for operating the lock, and means interconnected between said arm members for moving said ratchet wheel step by step through successive relative movements of said members through a predetermined angle from a straight arm position.

7. In an apparatus of the character described, a hand member, a finger hinged at its base to the hand member and having at an intermediate point a hinge joint in the vicinity of the back or outer side of the finger, an arm hung in the vicinity of the base of the finger, a connecting rod extending from the free end of said arm to a point lying in the vicinity of the said hinge joint in the finger and near the inner side of the finger, the adjacent ends of the finger members having stops to limit the relative angular movements in the closing direction, and means for actuating said rod.

8. In an apparatus of the character described, a hand member, a finger hinged to the hand member at its base and provided between its ends with a hinge joint located near the back or outer surface of the finger, a rod extending longitudinally through the inner end of the finger to the vicinity of said hinge joint, and a connection between said rod and the finger as far removed from the hinge joint in the finger as the thickness of the finger will permit.

1,298,503. SANITARY MILK-BUCKET. SHERMAN F. HOLDEN, Duggar, Ind. Filed Dec. 7, 1917. Serial No. 206,087. 2 Claims. (Cl. 31—14.)



2. In combination with a milk pail, having a spout at its mouth at one of the sides thereof, and an arched cowl at its said mouth opposite the said spout, of a cover for the pail, comprising a flanged member conforming to the shape of the pail including the spout thereof, and frictionally engaging therewith, said cover having a transverse arched outstanding plate at approximately the center thereof designed to contact with the inner end of the cowl, a rounded plate secured on the edge of the outstanding plate and to the flange of the cover and overlying the cowl and the spout, said cover having its lower and straight face provided with an opening and an inwardly flared flange surrounding the opening, a pivoted member normally closing the opening, and latching means between said cover and said member.

1,298,504. POWER-DRIVEN SOCKET-WRENCH. HAROLD HOLLINGSHEAD, Pasadena, Calif. Filed Feb. 8, 1918. Serial No. 216,282. 9 Claims. (Cl. 81—57.)



1. In a power driven wrench a socket; a motor; gearing by which said motor drives said socket, said gearing being so arranged that said socket cannot drive said motor except upon the application of excessive turning movements to said socket; a case in which said gearing and said motor are mounted; and a handle by which said case may be turned manually.

6. A combination as in claim 2 which also comprises a clutch placed in said gearing between said motor and said socket, said clutch comprising means for positively driving in one direction and means for slipping at predetermined upon torques in the opposite direction.

7. In a power driven wrench for turning right-handed bolts and nuts, a driving shaft; an electric motor; gearing so arranged that said motor turns said driving shaft

in a right handed direction; a socket free to turn on said driving shaft; a head fixed to said driving shaft; and co-engaging serrated teeth formed on said head and said socket, said teeth having straight faces which are engaged when said driving shaft rotates in a left-handed direction and inclined faces which are engaged and by means of which said head drives said socket when said driving shaft rotates in a right-handed direction.

1,296,505. AUTOMOBILE-RADIATOR. MORTIMER C. HOLLISTER, Elgin, Ill. Filed June 19, 1917. Serial No. 175,577. 6 Claims. (Cl. 219—33.)

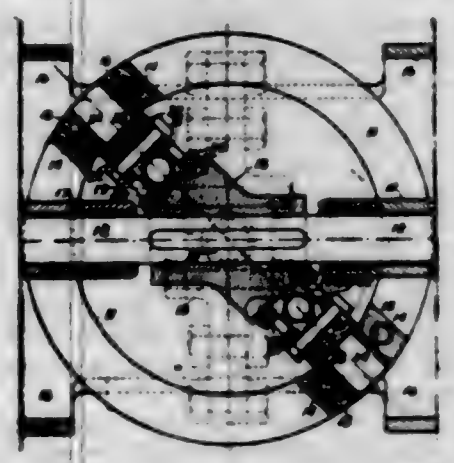


1. The combination with an automobile radiator, of a double-walled casing, located in a water passage of said radiator, a heating element contained between said double walls, said casing having an opening therethrough for the passage of water, and means for energizing the heating element.

2. The combination with an automobile radiator, of a tubular casing open at both ends and arranged longitudinally of a water passage in the radiator, a heating element lying against the inner face of such tubular casing, means for protecting said heating element from contact with water passing through the casing, and means for energizing the heating element.

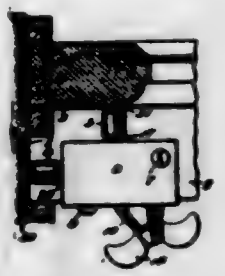
6. The combination with an automobile radiator, of a double-walled casing located in a water passage of said radiator and of materially less diameter than the passage, said casing having an opening therethrough from end to end to permit water to be in contact with both of the walls of the casing, a heating element supported between said double walls, a hollow member extending between a wall of the radiator-passage and said casing and serving as a water-excluding means of communication between an opening in said radiator wall and an opening in the outer wall of said casing and serving also to hold said casing at a distance from the wall of the said radiator passage, and means connected with the heating element and passing through said hollow member for energizing said heating element.

1,296,506. ROTARY MECHANISM FOR THE TRANSMISSION OF POWER AT VARYING SPEEDS. WILFRED HUNT, Glasgow, Scotland. Filed Nov. 22, 1916. Serial No. 133,870. 17 Claims. (Cl. 74—14.)



1. In power transmitting mechanism, a primary member, a secondary member, and inertia masses, in combination with means so indirectly interconnecting the inertia masses between the primary and secondary members that the said masses are not only oscillated in accordance with the difference in speed between the primary and secondary members, but also given substantially even oscillating motion so that their phases of acceleration are substantially equal as are also their phases of retardation and the power-capacity of any given phase is equal to the power-capacity of any other like phase.

1,296,507. WINDOW-LOCK. RICHARD IRVINE, Detroit, Mich. Filed Dec. 16, 1918. Serial No. 266,962. 2 Claims. (Cl. 16—52.)



2. A sash lock comprising a casing, interiorly threaded studs disposed at right angles to each other and arranged exteriorly of the casing, a body movable in the casing and having an inclined side and also having a threaded pin extending through a wall of the casing and connected with one stud, a second body movable in the casing and having an inclined side opposed to that of the first-named body and also having a threaded pin extending through a wall of the casing, and connected to the other stud, a spring for retracting the second-named body, and means connected with the casing and the first-named body for adjusting and adjustably fixing said body.

1,296,508. KNOCKDOWN HOISTING-FRAME. JOSEPH JEROME and GEORGE ORBAN EBERHARDT, Battleriver, Minn. Filed May 2, 1917. Serial No. 165,981. 1 Claim. (Cl. 189—16.)



In a hoisting frame of the class described channel metal sills arranged with their channeled sides uppermost and provided with central openings and also with openings near their ends; standards having their lower ends detachably arranged in the channeled upper sides of the sills fitted between the walls of the sills and provided with tongues arranged in the central openings of the sills, lower braces pivotally connected to the standards, foldable thereagainst and having their lower ends fitted between the walls of the sills and provided with tongues at their lower ends engageable in the end openings of the sills; a beam of channel metal having its channeled side uppermost and arranged on the upper ends of the standards, said beam having openings near its ends and said standards so that the walls of the beam bear against opposite sides of the standards having tongues at their upper ends

1,298,501. THREAD CUTTER AND HOLDER. FREDERIC W. HAWKES, New York, N. Y. Filed Nov. 17, 1917. Serial No. 202,528. 4 Claims. (Cl. 30—14.)



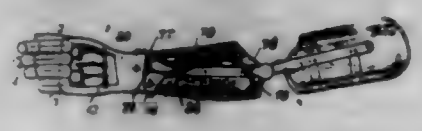
1. An article of manufacture, comprising a plate having a recess in its upper edge forming inwardly projecting fingers, said plate also having a recess in one face, a blade seated in the recess in the face of the plate and having its cutting edge extending across the first mentioned recess and under said fingers, means secured to said plate and holding said blade in place in the recess in the face thereof, and means carried by said plate and adapted to enter the bore of a spool and frictionally connect the device to the latter.

2. An article of manufacture, comprising a plate having a recess in its upper edge forming inwardly projecting fingers, said plate having a recess in one face, a blade seated in said recess and having its cutting edge extending across said first-mentioned recess, a separate face plate on the first-mentioned plate and retaining the blade in its seat, the upper portion of said face plate conforming approximately to the shape of the upper portion of the first-mentioned plate, fastening devices passing through said plates independently of the blade, and means carried by one of said plates and adapted to enter the bore of a spool and frictionally connect the device with the latter.

3. An article of manufacture, comprising a holder for a blade, a blade mounted in said holder, a tongue depending from said holder adapted to enter the bore of a spool, and a friction device carried by said tongue and projecting laterally therefrom to frictionally engage the bore of the spool.

4. An article of manufacture, comprising a blade holder, a blade mounted in said holder, a tongue depending from the holder and adapted to enter the bore of a spool, and a bolus passing through said tongue and projecting laterally therefrom.

1,298,502. ARTIFICIAL HAND. FREDERICK C. HENNING, Chicago, Ill., assignor to The Miracle Artificial Arm Co., Chicago, Ill. Filed Feb. 1, 1918. Serial No. 214,824. 23 Claims. (Cl. 3—12.)



1. In an apparatus of the character described, two relatively-movable artificial limb members, a lock, a lock-controlling device, a ratchet wheel connected to said device for actuating the same, and means interconnected with said members for moving said ratchet wheel step by step through successive predetermined relative movements of said members from a predetermined relative position of said members.

4. In an apparatus of the character described, an upper arm member, a forearm member, a hand having movable fingers, a controlling means for said fingers, a lock for said controlling means, and means controlled by relative movements of said arm members for operating said lock.

5. In an apparatus of the character described, an upper arm member, a forearm member, a hand having movable fingers, a controlling device for said fingers, a lock for said device, means including a ratchet wheel for operating the lock, and means interconnected between said arm members for moving said ratchet wheel step by step through successive relative movements of said members through a predetermined angle from a straight arm position.

7. In an apparatus of the character described, a hand member, a finger hinged at its base to the hand member and having at an intermediate point a hinge joint in the vicinity of the back or outer side of the finger, an arm hung in the vicinity of the base of the finger, a connecting rod extending from the free end of said arm to a point lying in the vicinity of the said hinge joint in the finger and near the inner side of the finger, the adjacent ends of the finger members having stops to limit the relative angular movements in the closing direction, and means for actuating said rod.

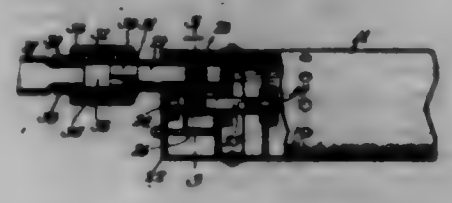
8. In an apparatus of the character described, a hand member, a finger hinged to the hand member at its base and provided between its ends with a hinge joint located near the back or outer surface of the finger, a rod extending longitudinally through the inner end of the finger to the vicinity of said hinge joint, and a connection between said rod and the finger as far removed from the hinge joint in the finger as the thickness of the finger will permit.

1,298,503. SANITARY MILK-BUCKET. SHERMAN F. HOLDEN, Duggar, Ind. Filed Dec. 7, 1917. Serial No. 206,087. 2 Claims. (Cl. 31—14.)



2. In combination with a milk pail, having a spout at its mouth at one of the sides thereof, and an arched cowl at its said mouth opposite the said spout, of a cover for the pail, comprising a flanged member conforming to the shape of the pail including the spout thereof, and frictionally engaging therewith, said cover having a transverse arched outstanding plate at approximately the center thereof designed to contact with the inner end of the cowl, a rounded plate secured on the edge of the outstanding plate and to the flange of the cover and overlying the cowl and the spout, said cover having its lower and straight face provided with an opening and an inwardly flared flange surrounding the opening, a pivoted member normally closing the opening, and latching means between said cover and said member.

1,298,504. POWER-DRIVEN SOCKET-WRENCH. HAROLD HOLLINGSHEAD, Pasadena, Calif. Filed Feb. 8, 1918. Serial No. 216,883. 9 Claims. (Cl. 81—57.)



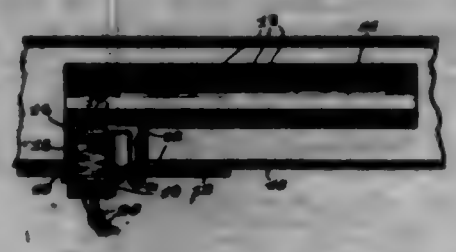
1. In a power driven wrench a socket; a motor; gearing by which said motor drives said socket, said gearing being so arranged that said socket cannot drive said motor except upon the application of excessive turning movements to said socket; a case in which said gearing and said motor are mounted; and a handle by which said case may be turned manually.

6. A combination as in claim 3 which also comprises a clutch placed in said gearing between said motor and said socket, said clutch comprising means for positively driving in one direction and means for slipping at predecided upon torques in the opposite direction.

7. In a power driven wrench for turning right-handed bolts and nuts, a driving shaft; an electric motor; gearing so arranged that said motor turns said driving shaft

in a right handed direction; a socket free to turn on said driving shaft; a head fixed to said driving shaft; and co-engaging serrated teeth formed on said head and said socket, said teeth having straight faces which are engaged when said driving shaft rotates in a left-handed direction and inclined faces which are engaged and by means of which said head drives said socket when said driving shaft rotates in a right-handed direction.

1,298,505. AUTOMOBILE-RADIATOR. MORTIMER C. HOLLISTER, Elgin, Ill. Filed June 19, 1917. Serial No. 175,577. 6 Claims. (Cl. 219—38.)

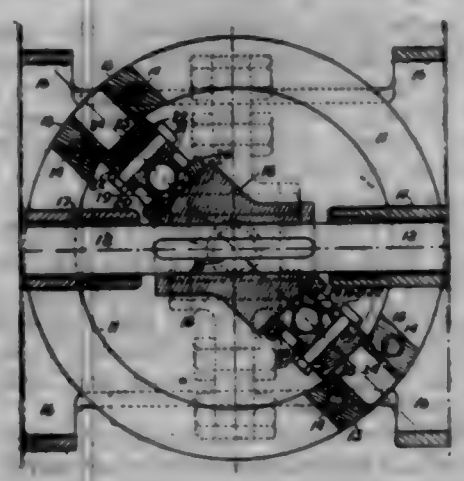


1. The combination with an automobile radiator, of a double-walled casing, located in a water passage of said radiator, a heating element contained between said double walls, said casing having an opening therethrough for the passage of water, and means for energizing the heating element.

2. The combination with an automobile radiator, of a tubular casing open at both ends and arranged longitudinally of a water passage in the radiator, a heating element lying against the inner face of such tubular casing, means for protecting said heating element from contact with water passing through the casing, and means for energizing the heating element.

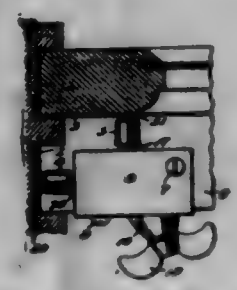
6. The combination with an automobile radiator, of a double-walled casing located in a water passage of said radiator and of materially less diameter than the passage, said casing having an opening therethrough from end to end to permit water to be in contact with both of the walls of the casing, a heating element supported between said double walls, a hollow member extending between a wall of the radiator-passage and said casing and serving as a water-excluding means of communication between an opening in said radiator wall and an opening in the outer wall of said casing and serving also to hold said casing at a distance from the wall of the said radiator passage, and means connected with the heating element and passing through said hollow member for energizing said heating element.

1,298,506. ROTARY MECHANISM FOR THE TRANSMISSION OF POWER AT VARYING SPEEDS. WILFRED HUNT, Glasgow, Scotland. Filed Nov. 22, 1916. Serial No. 132,870. 17 Claims. (Cl. 74—14.)



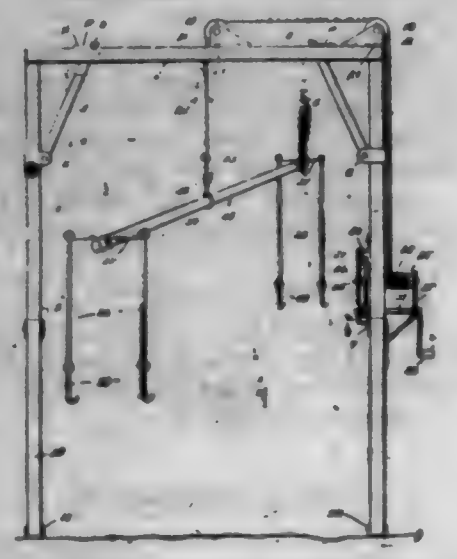
1. In power transmission mechanism, a primary member, a secondary member, and inertia masses, in combination with means so inflexibly interconnecting the inertia masses between the primary and secondary members that the said masses are not only oscillated in accordance with the difference in speed between the primary and secondary members, but also given substantially even oscillating motion so that their phases of acceleration are substantially equal as are also their phases of retardation and the power-capacity of any given phase is equal to the power-capacity of any other like phase.

1,298,507. WINDOW-LOCK. RICHARD IRVINE, Detroit, Mich. Filed Dec. 16, 1918. Serial No. 266,962. 2 Claims. (Cl. 16—52.)



2. A sash lock comprising a casing, interiorly threaded studs disposed at right angles to each other and arranged exteriorly of the casing, a body movable in the casing and having an inclined side and also having a threaded pin extending through a wall of the casing and connected with one stud, a second body movable in the casing and having an inclined side opposed to that of the first-named body and also having a threaded pin extending through a wall of the casing, and connected to the other stud, a spring for retracting the second-named body, and means connected with the casing and the first-named body for adjusting and adjustably fixing said body.

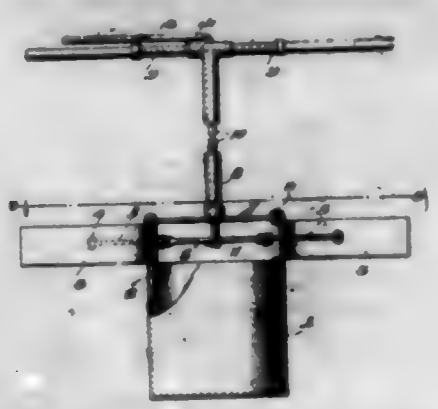
1,298,508. KNOCKDOWN HOISTING-FRAME. JOSEPH JEROME and GEORGE ORBAN EBERHARDT, Battleriver, Minn. Filed May 2, 1917. Serial No. 165,981. 1 Claim. (Cl. 189—16.)



In a hoisting frame of the class described channel metal sills arranged with their channeled sides uppermost and provided with central openings and also with openings near their ends; standards having their lower ends detachably arranged in the channeled upper sides of the sills fitted between the walls of the sills and provided with tongues arranged in the central openings of the sills, lower braces pivotally connected to the standards, foldable thereagainst and having their lower ends fitted between the walls of the sills and provided with tongues at their lower ends engageable in the end openings of the sills; a beam of channel metal having its channeled side undermost and arranged on the upper ends of the standards, said beam having openings near its ends and said standards so that the walls of the beam bear against opposite sides of the standards having tongues at their upper ends

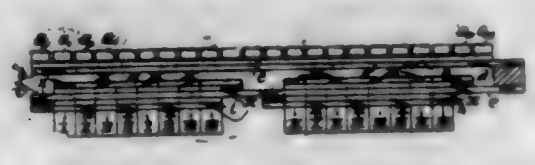
engageable in said openings, and upper braces pivotally connected to the standards and foldable thereagainst, said upper braces having tongues at their upper ends engageable in openings with which the beam is provided.

1,298,509. POST-HOLE REAMER. NELS J. JOHNSON, High Lake township, Emmet county, Iowa. Filed Dec. 11, 1918. Serial No. 266,263. 2 Claims. (Cl. 255—67.)



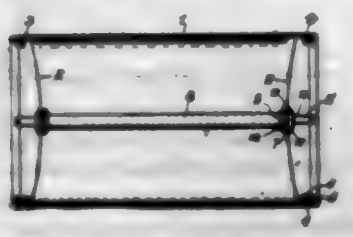
1. A reaming tool having a dirt receiving bucket, a standard rigidly attached to said bucket, scooping blades hinged to said bucket, an operating shaft for said blades extending through said standard, a lever for operating said shaft at the upper end of the standard, and means for locking said lever.

1,298,510. PLANT FOR AUTOMATICALLY ASSORTING WOODEN MATERIALS AND THE LIKE ACCORDING TO THEIR SIZES. HARALD KAAS, Christiania, Norway. Filed Oct. 30, 1917. Serial No. 199,370. 7 Claims. (Cl. 83—92.)



1. In an apparatus for automatically assorting planks and the like according to their size, a conveyer for carrying the planks, means located at suitable intervals along the conveyer adapted to push the planks from the conveyer, operating devices for said means, and mechanism actuated by the movement of the planks for indirectly controlling the operating devices to move said planks from the conveyer.

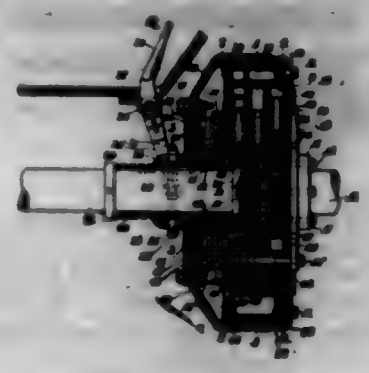
1,298,511. LAND-ROLLER. GEORGE B. KARL, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed Aug. 20, 1915. Serial No. 46,484. 3 Claims. (Cl. 220—1.)



1. In a land roller, the combination with a metal sheet bent and butt-welded to form a cylindrical shell of uniform exterior contour, of two end heads, each formed with a peripheral flange and each respectively in contact throughout its extent, with the inner surface of an end of the shell, the ends of the shell being extended beyond the ends of the flanges and bent around said flange ends, said shell being welded to said flanges at a zone of spots between the inner turned over ends of the shell and the inner or beginning parts of the flanges, and means whereby the heads may be put under tension to tend to draw or flex the ends of the shell toward the center, the pull of the tensioned heads coming mainly upon the welded spots.

8. In a land roller, in combination with a cylindrical metallic shell, flanged heads for the ends of said shell, head-holding connections between said flanges and shell, there being besides, beyond said connections water tight joints between the shell and the heads, effective longitudinally of the roller and means, to put strain upon said heads, the effect of the strain thus coming upon said connections, whereby the said water tight joints are relieved of strain.

1,298,512. POWER-TRANSMISSION DEVICE. JUSTUS R. KINNEY, Allston, Mass. Filed Apr. 13, 1918. Serial No. 228,799. 20 Claims. (Cl. 192—18.)



1. In a device of the class described, the combination of a driving shaft; a fluid clutch, one part of which is secured to said driving shaft and is provided with a single controlling valve having a plurality of ports for the passage of fluid; a driven shaft alined with said driving shaft and supporting the other part of said fluid clutch; a friction clutch member keyed to and slidable on the driven shaft; means for normally retaining said friction clutch member in engagement with the fluid clutch casing; and means for disengaging said friction clutch member from the fluid clutch casing and positively moving said valve endwise whereby its ports may be opened.

10. In a device of the class described, the combination of a driving shaft; a fluid clutch, one part of which is secured to said driving shaft and is provided with a controlling valve having a plurality of ports for the passage of fluid; an actuator for said valve; a driven shaft alined with said driving shaft and supporting the other part of said fluid clutch; a friction clutch member keyed to and slidable on the driven shaft and provided with a hub having a peripheral groove therein; a ring in said groove to which said actuator is secured; anti-friction members in said grooves on opposite sides of said ring; means for normally retaining said friction clutch member in engagement with the fluid clutch casing; and means for disengaging said friction clutch member from the fluid clutch casing and positively moving said valve whereby its ports may be opened.

15. In a device of the class described, the combination of a driving shaft; a fluid clutch one part of which is secured to said driving shaft and is provided with a single controlling valve having a plurality of ports for the passage of fluid; a driven shaft alined with said driving shaft and supporting the other part of said fluid clutch; a friction clutch member keyed to and slidable on the driven shaft; a collar on said driven shaft; a spring interposed between said collar and friction clutch member, and normally retaining said friction clutch member in engagement with said fluid clutch casing; and a pivoted lever for disengaging said friction clutch member from the fluid clutch casing and positively moving said valve endwise whereby its ports may be opened.

20. In a device of the class described, the combination of a driving shaft; a fluid clutch one part of which is secured to said driving shaft and is provided with a controlling valve having a plurality of ports for the passage of fluid; an actuator for said valve; a driven shaft alined with said driving shaft and supporting the other part of said fluid clutch; a friction clutch member keyed to and slidable on the driven shaft; means controlled by the movement of

said friction clutch member for operating said valve actuator; means for normally retaining said friction clutch member in engagement with the fluid clutch casing; means for disengaging said friction clutch member from the fluid clutch casing and positively moving said valve whereby its ports may be opened; a cover plate bolted to said fluid clutch casing having a depression in its outer face; a cylindrical plate fixedly positioned in said depression; a peripheral flange on the end of the driving shaft; bolts in said cylindrical plate and extending outwardly through the flange of said driving shaft; and locking bolts extending through said fluid casing, cover plate, and cylindrical plate.

1,298,513. TREATING LIQUOR FROM REDUCING PROCESSES OF NITRATED COAL-TAR DERIVATIVES. ISIDOR KITSEE, Philadelphia, Pa. Filed Jan. 26, 1918. Serial No. 213,970. 2 Claims. (Cl. 204—1.)

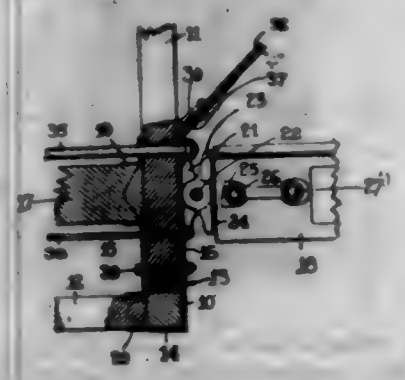
1. The process which consists in electrolyzing out of the liquor, used to reduce nitrated coal-tar derivatives, the metal in its metallic state at one and the same time as the acid radical is electrolysed out of said liquor.

1,298,514. COLOR PHOTOGRAPHY. ISIDOR KITSEE, Philadelphia, Pa. Filed Sept. 22, 1916, Serial No. 121,614. Renewed Feb. 5, 1919. Serial No. 275,196. 2 Claims. (Cl. 95—2.)



1. In color photography the method which consists in first providing a suitable support on both sides with films of colored chromated gelatin, the color of one of said films differing from the color of the second of said films and then printing simultaneously on both of said films through color filters identical with the color of said films.

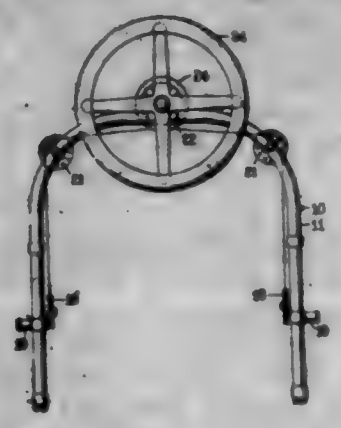
1,298,515. FUSELAGE-CLIP. HENRY KLECKLER, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Original application filed Jan. 18, 1916, Serial No. 71,892. Divided and this application filed May 14, 1917. Serial No. 168,585. 10 Claims. (Cl. 244—31.)



1. In an aeroplane, the combination with a longeron, of a U-fitting embracing the longeron, and ears struck out from one side of the fitting to provide hinges integral therewith.

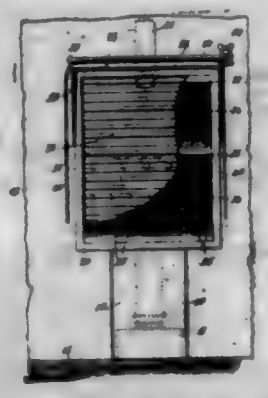
1,298,516. AEROPLANE-CONTROL BRIDGE. HENRY KLECKLER, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed July 18, 1917. Serial No. 181,263. 8 Claims. (Cl. 244—29.)

8. A control bridge for aeroplanes including bridge-pieces of substantially inverted U-form, spaced connections between said bridge-pieces arranged, three upon each leg of the bridge, a trunnion carried by the intermediately located connection of each leg, and anchorages for control



leads carried respectively by any two of said connections of each leg as are equidistantly spaced from said trunnions above and below.

1,298,517. HEATER. HUGO F. KOCH, New York, N. Y. Filed Jan. 9, 1918. Serial No. 211,034. 8 Claims. (Cl. 126—96.)



1. A heater for use in garages, comprising a lamp casing containing a lamp and adapted to extend through an opening in a wall of the garage, and a heating chamber rising from the top of the said lamp casing to be within the garage, the heating chamber receiving the heat emanating from the lamp burning in the lamp casing, the front of the heating chamber being corrugated and adapted to be arranged in juxtaposition to the front of a radiator of an automobile driven up to the heater.

2. A heater for use in garages, comprising a lamp casing containing a lamp and adapted to extend through an opening in a wall of a garage, a heating chamber rising from the top of the said lamp casing to be within the garage, the heating chamber receiving the heat emanating from the lamp burning in the lamp casing, the front of the heating chamber being corrugated and adapted to be arranged in juxtaposition to the front of a radiator of an automobile driven up to the heater, an inwardly projecting hood on the upper portion of the said heating chamber, and a cover held on the said hood and adapted to cover the radiator and the engine hood of the automobile.

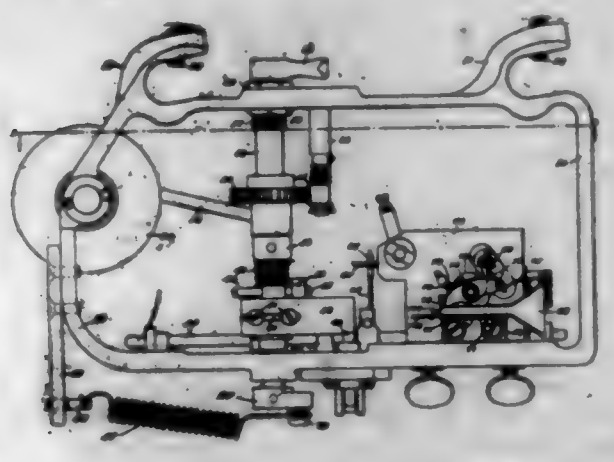
3. A heater for use in garages, comprising a lamp casing containing a lamp and adapted to extend through an opening in a wall of a garage, a heating chamber rising from the top of the said lamp casing to be within the garage, the heating chamber receiving the heat emanating from the lamp burning in the lamp casing, the front of the heating chamber being corrugated and adapted to be arranged in juxtaposition to the front of a radiator of an automobile driven up to the heater, and an outlet pipe adapted to extend from the upper end of the said heating chamber through a wall of the garage to the outside thereof.

4. A heater for use in garages, comprising a lamp casing containing a lamp and adapted to extend through an opening in a wall of a garage, the lamp casing having a door adapted to be outside of the garage to gain access to the lamp in the lamp casing, a heating chamber rising from the top of the said lamp casing to be within the garage, the

heating chamber receiving the heat emanating from the lamp burning in the lamp casing, the front of the heating chamber being corrugated and adapted to be arranged in juxtaposition to the front of a radiator of an automobile driven up to the heater, the said heating chamber having a series of partitions extending from the back of the heating chamber upwardly and forwardly to the front thereof, each partition having openings at its lower end for the passage of the heat, and an outlet pipe leading from the top of the heating chamber and adapted to extend through a wall of the garage to the outside thereof.

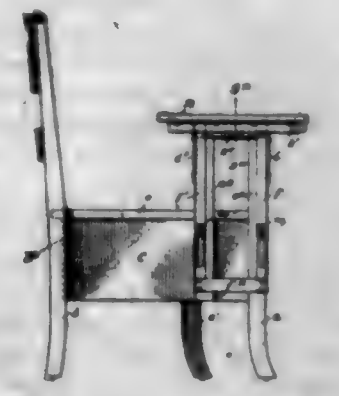
5. A heater as characterized including a casing adapted to extend through an opening in the wall of a garage, said casing comprising a heat generating chamber at its lower end, and a heat distributing member disposed above the heat generating chamber, the heat distributing member including vertically disposed front and rear walls, and a series of partitions beginning at the rear wall and extending obliquely therefrom to the front wall and dividing the heat distributing member into a plurality of heat distributing chambers directing heat to the front walls across superposed zones.

1,298,518. ELECTRIC COUNTER FOR BOX-MAKING MACHINES. HAROLD S. LADOMBARDE, Nashua, N. H. Filed June 10, 1918. Serial No. 239,174. 28 Claims. (Cl. 93—93.)



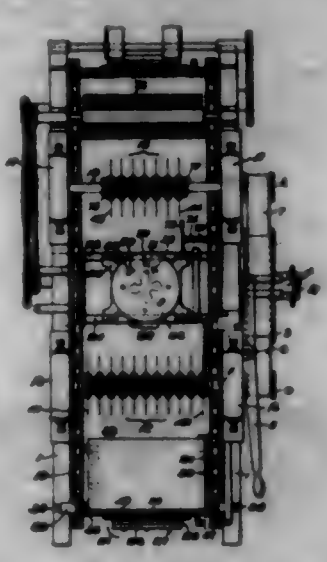
28. A counting attachment for box-making machines, comprising a guide for the successive passage of boxes, a ratchet, means controlled by the passage of each box for actuating the ratchet, an electric circuit, means operated by said ratchet for controlling said circuit, a magnet in said circuit, a lever having an armature at one end and a pad at the other end, and a fixed pad, the two pads being in position to grasp a portion of a passing box when the circuit of the magnet is closed.

1,298,519. SCHOOL-CHAIR. CHARLES I. LATTIG, Rochester, N. Y., assignor, by mesne assignments, to Langslow-Fowler Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 14, 1918. Serial No. 760,874. 2 Claims. (Cl. 155—34.)



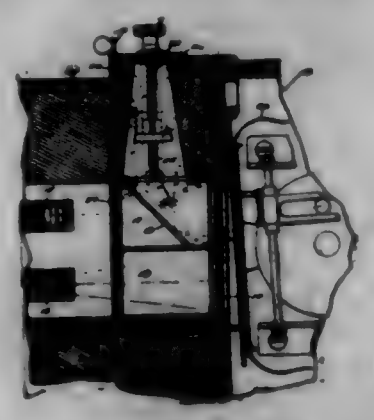
1. A freely movable school chair comprising a seat, two hind legs and a leg at a forward portion of the seat, a desk and a supporting frame therefor, said frame comprising a horizontal part extending in front of and above the seat and a vertical part at one end only, the vertical part being secured to the chair, the desk being entirely supported on said supporting frame, thus providing a clearance on one side for ingress and egress, said chair having a base support immovable relatively to the chair and located in front of the seat, and which extends approximately to the front edge of the supporting frame preventing easy forward tipping of the desk and chair.

1,298,520. MECHANISM AND PROCESS FOR CUTTING FILLED WAFERS. EDWARD E. LAWRENCE, Jamaica, N. Y., assignor to Loose Wiles Biscuit Company, Long Island City, New York, N. Y., a Corporation of New York. Filed Oct. 26, 1918. Serial No. 259,745. 18 Claims. (Cl. 146—11.)



1. Sheet cutting mechanism comprising in combination, means to sever the sheet into strips, rectifying means for the severed strips, and means to impart rectifying movement in a right line to said rectifying means.

1,298,521. WHITE-DISSOLVE MECHANISM FOR MOTION-PICTURE CAMERAS. JOHN E. LEONARD, Los Angeles, Calif. Filed Apr. 20, 1917, Serial No. 163,498. Renewed Feb. 12, 1919. Serial No. 276,603. 10 Claims. (Cl. 88—16.)



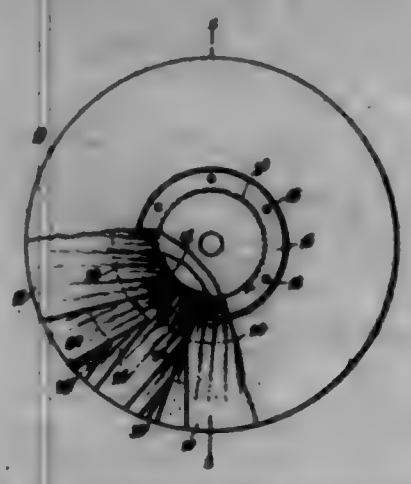
1. In a white dissolve mechanism for moving picture cameras, the combination with a photographic film, of a photographic lens adapted to expose said film, and means whereby the film may be preëxposed to reduce the photographic field which will thereafter record the exposure made through the photographic lens.

4. In a white dissolve mechanism for moving picture cameras, the combination with a photographic film, of a photographic lens adapted to expose said film, means whereby the film may be preëxposed to reduce the photographic field which will thereafter record the exposure made through the photographic lens, operating means for gradually increasing or decreasing the unexposed area during the preëxposure, and means for readily rendering the preëxposure apparatus operative or inoperative as desired.

6. A white dissolve mechanism for moving picture cameras, comprising photographic lenses, means whereby a photographic film may be preëxposed to rays of light and thereafter exposed to the photographic lenses, means whereby said rays of light may be distributed upon the film in a manner to cause a central area of the film to remain unexposed, and means whereby said central unexposed area may be varied.

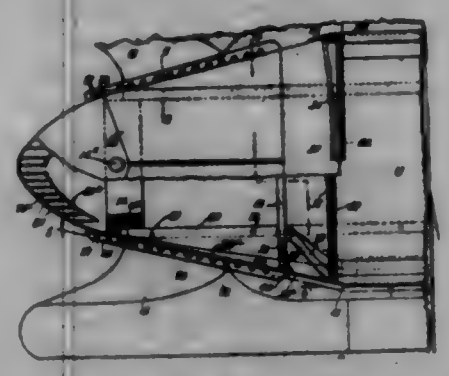
7. A white dissolve mechanism for moving picture cameras, comprising photographic lenses, means whereby a photographic film may be preëxposed to rays of light and thereafter exposed to the photographic lenses, means whereby said rays of light may be distributed upon the film in a manner to cause a central area of the film to remain unexposed, and means for gradually increasing or decreasing said central unexposed area of the film.

1,298,522. **BUFFING OR POLISHING WHEEL.** ALEXANDER LEVETT, New York, N. Y. Filed Aug. 14, 1918. Serial No. 249,846. 8 Claims. (Cl. 51—1.)



1. A buffing or polishing wheel comprising a hub and a body, the body being made of a helically wound strip of material doubled up widthwise and having its median line gathered and wound around the said hub, the outer raw edge of the strip forming the peripheral face of the wheel.

1,298,523. **ATTACHMENT FOR AUTOMOBILES.** D MCRA LIVINGSTON, New York, N. Y. Filed Feb. 9, 1918. Serial No. 216,292. 18 Claims. (Cl. 180—69.)



1. An automobile attachment of the character described, including auxiliary hood boards, means to secure the same to an automobile over the usual hood boards, to present overhanging hood-receiving portions laterally outward from the frame of the automobile, forwardly extending members on the said auxiliary hood boards at the front ends thereof adapted to extend at the sides of the automobile radiator, a radiator mask, brackets on said mask, means to secure said brackets to said forwardly extending members of the auxiliary hood boards, independently of the radiator, a rearwardly flaring motor hood aligning with said mask and disposed on the laterally overhanging portions of the auxiliary boards, and means to coördinate said auxiliary hood boards, motor hood and mask with an automobile body, said last-mentioned means comprising an attachable cowl piece in the rear of said hood and having side members extending downward outside of the permanent side portions of the automobile body at the front.

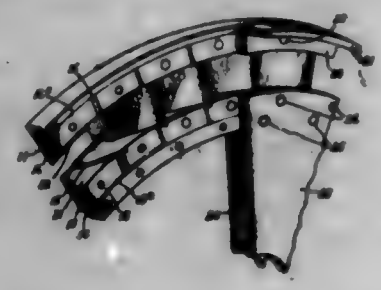
5. The combination with an automobile, of hood boards secured thereto above the frame of the automobile and overhanging beyond said frame at the outside thereof, a hood positioned on said overhanging portions, means on said overhanging portions to clamp the hood thereon, members on the hood boards at the front ends and constituting extension thereof beyond the front ends of the frame bars, and a bracketed structure supported on said members.

9. In an automobile attachment, a cowl, means whereby it may be removably positioned on an automobile and having a member carried thereby at the rear end thereof, and an instrument board carried by said member to be removable with the cowl.

13. An attachment of the class described including a radiator mask, a cowl adapted to be secured on an automobile to mask the features of the automobile body at the front, a motor hood between the radiator mask and cowl and having support on both, a depending member on the cowl at the interior of its top portion, a depending member on the radiator mask at the interior, and a tie rod connecting the depending member of the cowl with the depending member on the mask.

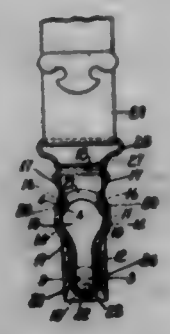
18. In an attachment for motor-driven vehicles, a mask adapted to be placed over the radiator of the vehicle to form an air passage over the radiator within said mask, and means on said mask at the interior and transverse to said passage, adjacent to the rear end thereof, to restrict the outflow of air from the mask.

1,298,524. **ELASTIC-FLUID TURBINE.** WILLIAM J. A. LONDON, Springfield, and EDMUND M. PHILLIPS, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Dec. 12, 1917. Serial No. 206,728. 14 Claims. (Cl. 253—78.)



1. In a diaphragm for elastic-fluid turbines, the combination of two spaced concentric rings provided with slots in their adjacent sides, nozzle partitions having their edges located in said slots, said partitions being provided with arms which lie against surfaces of the rings, and means for fastening said arms to the rings.

1,298,525. **HOSE-SUPPORTER.** EMMA L. LOVEJOY, Wakefield, Mass. Filed May 27, 1918. Serial No. 236,704. 2 Claims. (Cl. 24—245.)

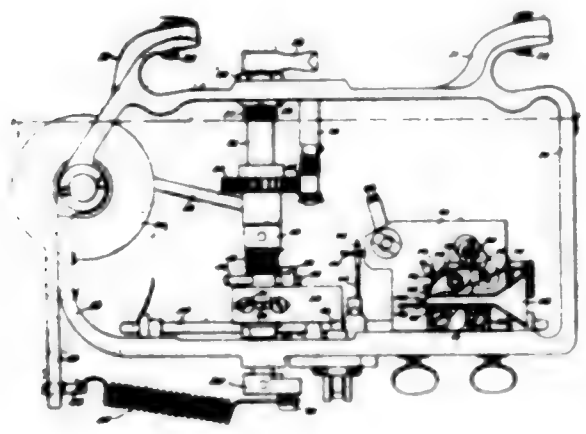


2. A hose supporter having, in combination, a loop formed of wire, a stud adapted to project into said loop, a

heating chamber receiving the heat emanating from the lamp burning in the lamp casing, the front of the heating chamber being corrugated and adapted to be arranged in juxtaposition to the front of a radiator of an automobile driven up to the heater, the said heating chamber having a series of partitions extending from the back of the heating chamber upwardly and forwardly to the front thereof, each partition having openings at its lower end for the passage of the heat, and an outlet pipe leading from the top of the heating chamber and adapted to extend through a wall of the garage to the outside thereof.

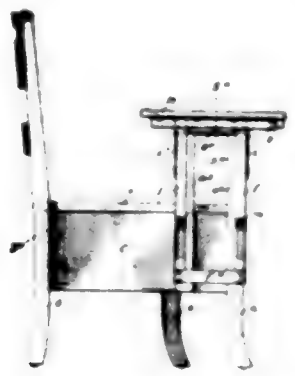
5. A heater as characterized including a casing adapted to extend through an opening in the wall of a garage, said casing comprising a heat generating chamber at its lower end, and a heat distributing member disposed above the heat generating chamber, the heat distributing member including vertically disposed front and rear walls, and a series of partitions beginning at the rear wall and extending obliquely therefrom to the front wall and dividing the heat distributing member into a plurality of heat distributing chambers directing heat to the front walls across superposed zones.

1,298,518. ELECTRIC COUNTER FOR BOX-MAKING MACHINES. HAROLD S. LABOMBARDE, Nashua, N. H. Filed June 10, 1918. Serial No. 239,174. 28 Claims. (Cl. 93—93.)



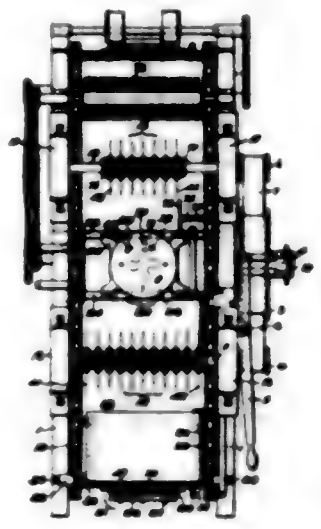
28. A counting attachment for box-making machines, comprising a guide for the successive passage of boxes, a ratchet, means controlled by the passage of each box for actuating the ratchet, an electric circuit, means operated by said ratchet for controlling said circuit, a magnet in said circuit, a lever having an armature at one end and a pad at the other end, and a fixed pad, the two pads being in position to grasp a portion of a passing box when the circuit of the magnet is closed.

1,298,519. SCHOOL-CHAIR. CHARLES I. LATTIG, Rochester, N. Y., assignor, by mesne assignments, to Langslow Fowler Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 14, 1913. Serial No. 760,874. 2 Claims. (Cl. 155—34.)



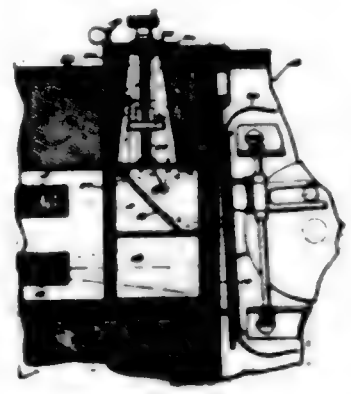
1. A freely movable school chair comprising a seat, two hind legs and a leg at a forward portion of the seat, a desk and a supporting frame therefor, said frame comprising a horizontal part extending in front of and above the seat and a vertical part at one end only, the vertical part being secured to the chair, the desk being entirely supported on said supporting frame, thus providing a clearance on one side for ingress and egress, said chair having a base support immovable relatively to the chair and located in front of the seat, and which extends approximately to the front edge of the supporting frame preventing easy forward tipping of the desk and chair.

1,298,520. MECHANISM AND PROCESS FOR CUTTING FILLED WAFERS. EDWARD E. LAWRENCE, Jamaica, N. Y., assignor to Loose Wiles Biscuit Company, Long Island City, New York, N. Y., a Corporation of New York. Filed Oct. 26, 1918. Serial No. 259,745. 18 Claims. (Cl. 146—11.)



1. Sheet cutting mechanism comprising in combination, means to sever the sheet into strips, rectifying means for the severed strips, and means to impart rectifying movement in a right line to said rectifying means.

1,298,521. WHITE-DISSOLVE MECHANISM FOR MOTION-PICTURE CAMERAS. JOHN E. LEONARD, Los Angeles, Calif. Filed Apr. 20, 1917, Serial No. 163,498. Renewed Feb. 12, 1919. Serial No. 276,603. 10 Claims. (Cl. 88—16.)



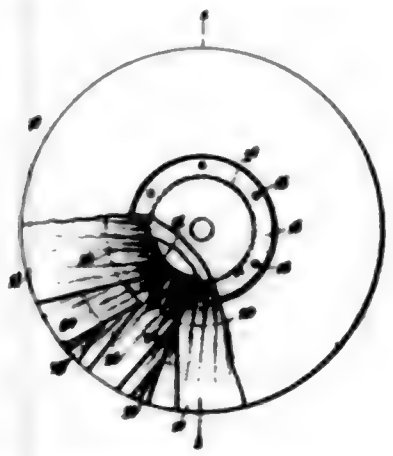
1. In a white dissolve mechanism for moving picture cameras, the combination with a photographic film, of a photographic lens adapted to expose said film, and means whereby the film may be preëxposed to reduce the photographic field which will thereafter record the exposure made through the photographic lens.

4. In a white dissolve mechanism for moving picture cameras, the combination with a photographic film, of a photographic lens adapted to expose said film, means whereby the film may be preëxposed to reduce the photographic field which will thereafter record the exposure made through the photographic lens, operating means for gradually increasing or decreasing the unexposed area during the preëxposure, and means for readily rendering the preëxposure apparatus operative or inoperative as desired.

6. A white dissolve mechanism for moving picture cameras, comprising photographic lenses, means whereby a photographic film may be preëxposed to rays of light and thereafter exposed to the photographic lenses, means whereby said rays of light may be distributed upon the film in a manner to cause a central area of the film to remain unexposed, and means whereby said central unexposed area may be varied.

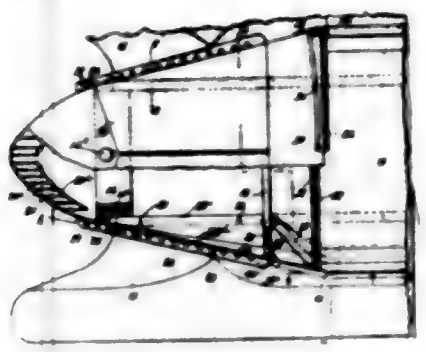
7. A white dissolve mechanism for moving picture cameras, comprising photographic lenses, means whereby a photographic film may be preëxposed to rays of light and thereafter exposed to the photographic lenses, means whereby said rays of light may be distributed upon the film in a manner to cause a central area of the film to remain unexposed, and means for gradually increasing or decreasing said central unexposed area of the film.

1,298,522. BUFFING OR POLISHING WHEEL. ALEXANDER LEVETT, New York, N. Y. Filed Aug. 14, 1918. Serial No. 249,846. 8 Claims. (Cl. 51—1.)



1. A buffing or polishing wheel comprising a hub and a body, the body being made of a helically wound strip of material doubled up widthwise and having its median line gathered and wound around the said hub, the outer raw edge of the strip forming the peripheral face of the wheel.

1,298,523. ATTACHMENT FOR AUTOMOBILES. D MCRA LIVINGSTON, New York, N. Y. Filed Feb. 9, 1918. Serial No. 216,292. 18 Claims. (Cl. 160—69.)



1. An automobile attachment of the character described, including auxiliary hood boards, means to secure the same to an automobile over the usual hood boards, to present overhanging hood-receiving portions laterally outward from the frame of the automobile, forwardly extending members on the said auxiliary hood boards at the front ends thereof adapted to extend at the sides of the automobile radiator, a radiator mask, brackets on said mask, means to secure said brackets to said forwardly extending members of the auxiliary hood boards, independently of the radiator, a rearwardly flaring motor hood alining with said mask and disposed on the laterally overhanging portions of the auxiliary boards, and means to coördinate said auxiliary hood boards, motor hood and mask with an automobile body, said last-mentioned means comprising an attachable cowl piece in the rear of said hood and having side members extending downward outside of the permanent side portions of the automobile body at the front.

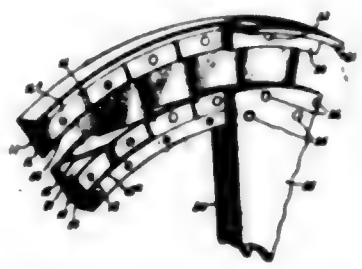
5. The combination with an automobile, of hood boards secured thereto above the frame of the automobile and overhanging beyond said frame at the outside thereof, a hood positioned on said overhanging portions, means on said overhanging portions to clamp the hood thereon, members on the hood boards at the front ends and constituting extension thereof beyond the front ends of the frame bars, and a bracketed structure supported on said members.

9. In an automobile attachment, a cowl, means whereby it may be removably positioned on an automobile and having a member carried thereby at the rear end thereof, and an instrument board carried by said member to be removable with the cowl.

13. An attachment of the class described including a radiator mask, a cowl adapted to be secured on an automobile to mask the features of the automobile body at the front, a motor hood between the radiator mask and cowl and having support on both, a depending member on the cowl at the interior of its top portion, a depending member on the radiator mask at the interior, and a tie rod connecting the depending member of the cowl with the depending member on the mask.

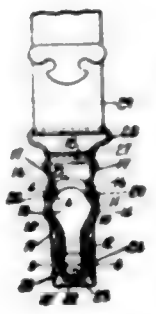
18. In an attachment for motor-driven vehicles, a mask adapted to be placed over the radiator of the vehicle to form an air passage over the radiator within said mask, and means on said mask at the interior and transverse to said passage, adjacent to the rear end thereof, to restrict the outflow of air from the mask.

1,298,524. ELASTIC-FLUID TURBINE. WILLIAM J. A. LONDON, Springfield, and EDMUND M. PHILLIPS, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Dec. 12, 1917. Serial No. 206,728. 14 Claims. (Cl. 253—78.)



1. In a diaphragm for elastic-fluid turbines, the combination of two spaced concentric rings provided with slots in their adjacent sides, nozzle partitions having their edges located in said slots, said partitions being provided with arms which lie against surfaces of the rings, and means for fastening said arms to the rings.

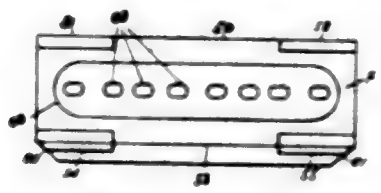
1,298,525. HOSE-SUPPORTER. EMMA L. LOVEJOY, Wakefield, Mass. Filed May 27, 1918. Serial No. 236,704. 2 Claims. (Cl. 24—245.)



2. A hose supporter having, in combination, a loop formed of wire, a stud adapted to project into said loop, a

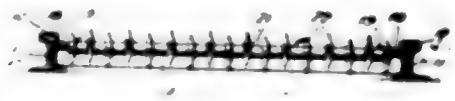
rubber tube covering a portion only of said loop, a clamp extending across said loop and two pairs of oppositely disposed V-shaped ears on said clamp adapted to extend around said wire and rubber tube adjacent to the ends of said tube whereby said ends are clamped to said wire.

1,298,526. ANVIL-KNIFE. ROY F. LOVEJOY, Lowell, Mass., and GEORGE D. ALEXIS, New Orleans, La. Filed Feb. 4, 1918. Serial No. 215,355. 9 Claims. (Cl. 83—75.)



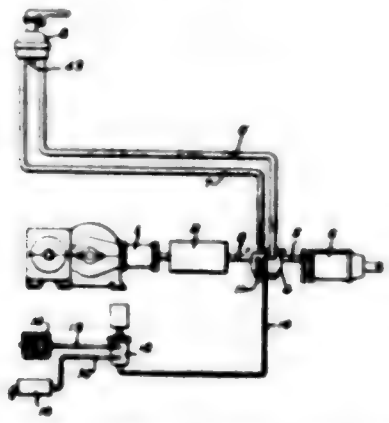
1. A substantially rigid reversible and adjustable anvil knife of substantially rectangular form having relatively long parallel cutting edges at substantially right angles with the face of the knife, the part proximate each end of each edge being of hardened metal, and relatively short fitting edges at equal oppositely disposed oblique angles with said face, a longitudinal bolt head recess in the face and one or more longitudinal slots which, from such recess, pass through the knife.

1,298,527. CATTLE-GUARD. FRANCIS HAY MCLEAN, JOHN SELINE, and BERNARD J. REDDECK, Calgary, Alberta, Canada. Filed May 14, 1918. Serial No. 234,447. 1 Claim. (Cl. 256—16.)



A cattle guard for railway tracks comprising a rectangular frame having its side members adapted to be supported between the heads and bases of the rails, cross bars extending across the frame and having their ends secured to the side members and adapted to rest on the bases of the rails, spurs carried by the upper faces of said bars, said side members having spaced notches therein, rollers having openings in their ends, trunnions detachably and adjustably held in said openings and engaging the notches, wheels adjustably mounted on the rollers and spurs on said wheels.

1,298,528. CAR-CONTROLLER. GEORGE MACLOSKIE, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Aug. 28, 1918. Serial No. 251,824. 5 Claims. (Cl. 188—1.)



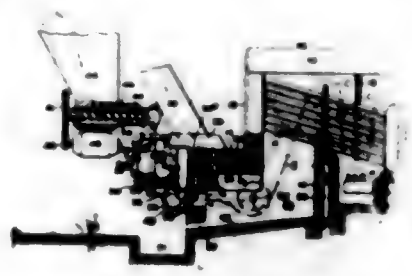
2. The combination with a brake valve device for controlling the fluid pressure operated brakes of a car, of means associated with the brake valve device for controlling fluid pressure to first operate a mechanism to apply sand to the tracks when the brakes are applied and then to operate a mechanism to open the car doors.

1,298,529. SURGICAL SPLINT. ROBERT D. MADDOX, U. S. Army. Filed Oct. 19, 1918. Serial No. 258,878. 7 Claims. (Cl. 128—87.) (Filed under the act of Mar. 3, 1883, 22 Stat. L., 625.)



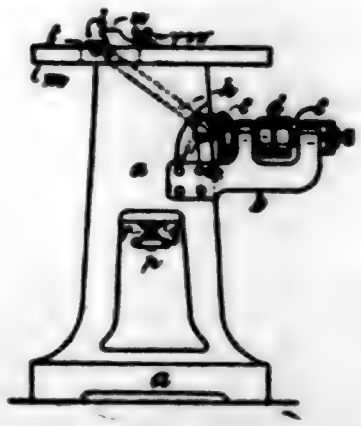
7. A device of the class described comprising a supporting body, and a member of bendable material movable relative to the body and extensible laterally thereof.

1,298,530. APPARATUS FOR BURNING POWDERED FUEL. ARTHUR S. MANN, deceased, Schenectady, N. Y., by Eleanor D. Mann, administratrix, assignor to General Electric Company, a Corporation of New York. Filed July 20, 1916. Serial No. 110,397. 5 Claims. (Cl. 110—28.)



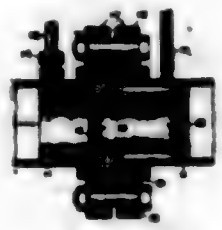
1. In an apparatus of the character described, the combination of a furnace and a series of burners arranged across the front of it for feeding powdered fuel thereto, said burners each comprising a casing having a closed outer end and an open inner end and being provided with a tangential opening through which fuel and air are fed to it whereby a whirl is set up in the casing, the tangential openings of adjacent burners being arranged on opposite sides so that the whirl in them is in opposite directions.

1,298,531. MACHINE FOR RABBETING AND RECESSING AND CHAMFERING SQUARE OR ANGULAR CORNERS. EDWIN WILLIAM MANTON, Port Broughton, South Australia, Australia, assignor to Clarence James Waters, Port Broughton, South Australia, Australia. Filed Jan. 30, 1919. Serial No. 274,104. 5 Claims. (Cl. 144—134.)



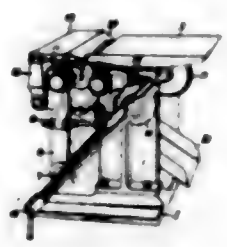
1. In an improved machine for rabbeting and recessing and chamfering square or angular corners a machine stand having bearings arranged at opposite corners for the accommodation of a rotary tool spindle such bearings characterised by being set to accommodate the spindle at an angle formed by drawing a line from extreme opposite corners of a cube being an angle of 35 16" from the horizontal.

1,298,532. PRESSURE-DIFFERENCE-CREATING DEVICE FOR FLOW-METERS AND THE LIKE. HAROLD H. MAPELSDEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 4, 1918. Serial No. 252,665. 5 Claims. (Cl. 73—167.)



1. The combination with a conduit through which a fluid flows, of an apparatus associated with the conduit for setting up a pressure difference which bears a definite relation to the rate of flow through the conduit, said apparatus comprising an annular disk extending transversely of the conduit and forming an orifice, a straight section of pipe connected to the disk at the periphery of the orifice and pointing up stream, a leading pressure pipe connected with said straight pipe section, and a trailing pressure pipe connected with the conduit on the down stream side of said disk.

1,298,533. APPARATUS FOR SHAPING FILAMENTS. JAMES E. MARSHALL, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed May 10, 1916. Serial No. 96,727. 8 Claims. (Cl. 140—105.)



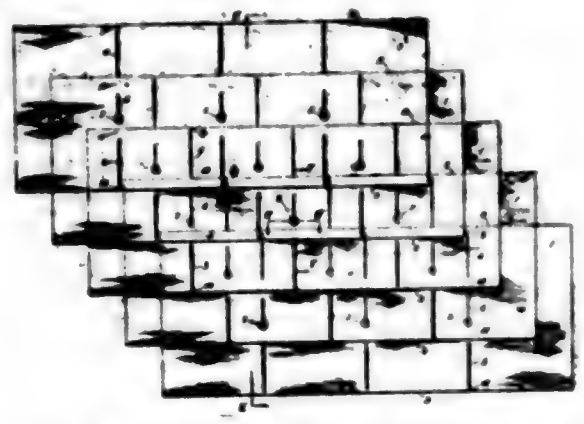
1. In an apparatus for shaping filament lengths, two coöperating crimping rollers, a hopper containing filament lengths located above said rollers, means for opening said hopper to feed the filaments transversely between said rollers and a spring for returning said hopper to its closed position and simultaneously actuating said rollers.

1,298,534. IGNITION-DYNAMO. CHARLES THOMAS MASON, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 19, 1916. Serial No. 92,196. 20 Claims. (Cl. 171—209.)



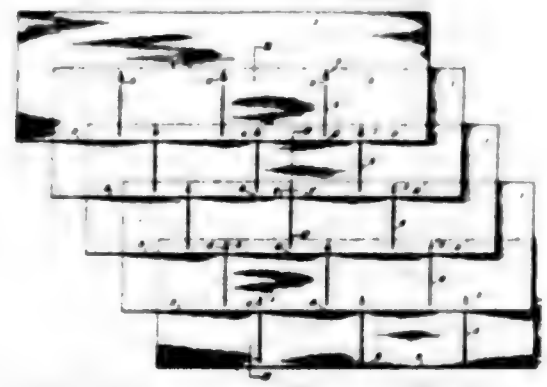
17. In an ignition dynamo, primary and secondary windings, a core therefor, heads on said windings, a terminal for one end of said secondary winding on both heads, and a circuit terminal mounted exteriorly of said dynamo and adapted to be placed in contact with said first terminal, at either end thereof.

1,298,535. SHINGLE-STRIP. EDWIN A. MASTICK, Jr., Cleveland, Ohio. Filed Dec. 31, 1917. Serial No. 209,657. 15 Claims. (Cl. 106—7.)



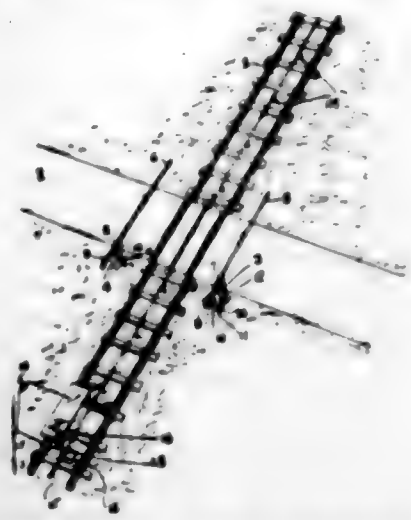
1. A shingle strip consisting of a waterproof felt formed with a plurality of sets of slots consisting each of three vertically alined spaced slots, the respective upper and lower ends of the outer of which slots are removed somewhat from the top and bottom edges of the strip to form continuous narrow marginal portions along said edges.

1,298,536. SHINGLE-STRIP. EDWIN A. MASTICK, Jr., Cleveland, Ohio. Filed Aug. 22, 1918. Serial No. 250,993. 9 Claims. (Cl. 106—7.)



1. A shingle strip consisting of a waterproof felt formed with a plurality of sets of slots consisting each of two vertically alined spaced slots of which the upper is disposed approximately centrally of the strip and the lower is disposed in the lower portion of the strip.

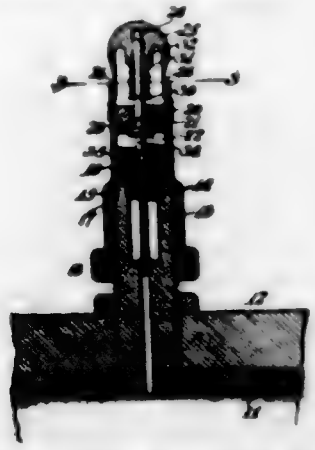
1,298,537. RAILWAY-GATE. JESSE A. MAY, Springfield, Ky., assignor of one-eighth to R. C. Bottom and one-eighth to J. O. Milton, Mackville, Ky., one-eighth to J. E. Brown, Harrodsburg, Ky., and one-eighth to J. T. Skeins, Springfield, Ky. Filed Mar. 15, 1918. Serial No. 222,674. 1 Claim. (Cl. 246—125.)



In combination with a pair of railway crossing gates pivotally mounted for vertical movement, weights to raise

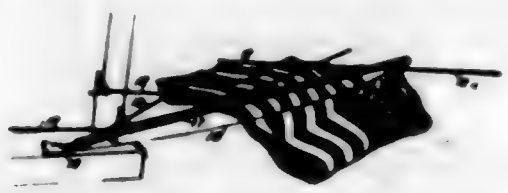
the gates, a cable connecting the gates, the ends of the cable being attached to the respective gates at points spaced from opposite sides of the respective pivots of the gates so that one of the gates is lowered by the other, a solenoid, a link connecting the armature of the solenoid to the last named gate, a contact rail extending across and beyond opposite sides of the crossing and being independent of and disconnected from the track rails and being electrically connected to the winding of the solenoid, and a train carried circuit closer to contact with the contact rail and arranged in contact therewith by moving from end to end thereof.

1,298,538. TIRE-ALARM. OTTO F. MEYER and JAMES I. PAYNE, Taft, Calif. Filed Jan. 31, 1918. Serial No. 214,776. 3 Claims. (Cl. 116—1.)



3. In combination with a pneumatic tire valve, a removable cap seated on the tire stem, a whistle adjustably mounted on said cap, a secondary valve in said cap, means on said secondary valve adapted to open the tire valve when the secondary valve is seated, a stem on said secondary valve slidably extending into the whistle body, a pin in said stem, and a coiled spring on said stem between said pin and the whistle body.

1,298,539. FLAG-CONTROLLING APPARATUS. AUGUSTUS MILLER, East Orange, N. J. Filed May 11, 1918. Serial No. 233,965. 5 Claims. (Cl. 116—12.)



1. An apparatus as characterized comprising a flag pole; a plurality of swivel plates mounted on said pole in spaced relation lengthwise thereof; means for swinging said plates on their centers; and a plurality of yielding members laterally extended from said plates for preventing the flag passing above said pole.

3. An apparatus as characterized comprising a flag pole; a plurality of swivel plates mounted on said pole in spaced relation lengthwise thereof; means for swinging said plates on their centers; and a plurality of yielding members laterally extended from said plates for preventing the flag passing above said pole, said members being disposed in paired relation and freely yielding to a position approximately vertical; and means for arresting the upward movement of said members and for permitting the depression thereof, said means embodying a plurality of knuckle members pivotally connected with said plates, and suspension springs for normally holding said knuckles in position where said members are horizontally disposed.

5. An apparatus as characterized comprising a mounting strip adapted to overlie the flag pole; a plurality of swivel plates pivotally mounted to rotate on said mounting strip, said swivel plates having upturned lugs; a plurality of knuckle members pivotally mounted on said swivel plates normally extensible in opposite directions; a spring latch for holding said knuckle members in normal extension; a plurality of spring members for supporting said members in the normal horizontal position; a plurality of wands pivotally mounted in said knuckle members for extension normally in horizontal relation; and means for normally preventing the depression of said wands from the horizontal level of said knuckle members, said means embodying a pivot connecting said knuckle members and said wands, and a tail piece on said wands extending between the pivotal connection of said wands and knuckles, and the pivotal connection of said knuckle members and said swivel plates.

1,298,540. DEVICE FOR MAKING JEWELS. LEVI B. MILLER, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 12, 1917. Serial No. 201,619. 7 Claims. (Cl. 204—31.)



5. A burner for a jewel-forming apparatus, comprising means for supplying a combustible gas and a combustion supporting gas, one of said gases bearing a charge of powder, and means for deflecting said powder away from the center of the gas stream conveying the same.

1,298,541. SHEET-METAL COVERING. THOMAS DENTON MILLER, Catonsville, Md. Filed Aug. 16, 1917. Serial No. 186,618. 4 Claims. (Cl. 108—3.)



1. A metal sheet provided with a one-piece cover of fibrous material adhesively secured thereto in fixed relation and extending around one end of said sheet and entirely covering said end, the opposite surfaces and the side edges of said metal sheet.

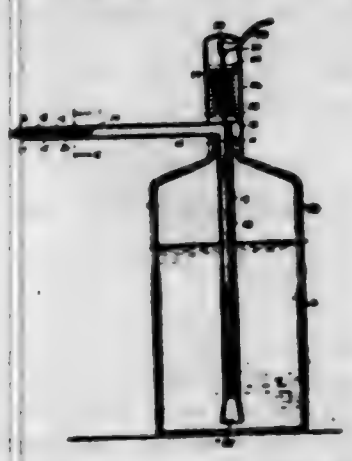
2. A metal sheet provided with a one-piece cover of fibrous material adhesively secured thereto in fixed relation and extended around one end of said sheet and covering the said end, the opposite surfaces and the side edges of said metal sheet, with the portions of the fibrous material which cover the side edges of the metal sheet adhesively affixed to the portions of the cover which are affixed to the opposite surface of said metal sheet.

1,298,542. PAPER-CLIP. BENJAMIN L. MINK, Philadelphia, Pa. Filed Sept. 30, 1918. Serial No. 256,220. 1 Claim. (Cl. 24—261.)



A paper clip of oblong shape formed of wire convoluted to produce two clamping members united by a central loop that is located at one end of the clip, each clamping member having two legs united by a loop, which latter loops are at the end of the clip opposite the central loop, characterized by having the central loop located in a plane inclined in one direction and the loops of the clamping members at the opposite end of the clip located in planes inclined in the other direction, which latter planes are approximately parallel, the free legs of each clamping member being inclined from the loops to which they are respectively joined toward the plane in which is located the central loop.

1,298,543. AUTOMATIC SPRAYING-BOTTLE. LEWIS KEMPTON MOSLEY, New York, N. Y. Filed July 29, 1918. Serial No. 247,205. 1 Claim. (Cl. 128—3.)



A spraying attachment for bottles, including a cap adapted to fit the bottle neck, a tube supported by said cap above the lower end thereof to be thereby disposed in the bottle by the application of the cap thereto, a lateral discharge branch, extending from said tube through the side of the cap, a spray nozzle on said discharge branch, upper and lower packing disks in the cap above the tube, a valve controlling the lower end of said tube, a compression spring coiled about the stem between said disks, and acting on the stem in a manner tending to maintain the valve closed, and a cam lever pivoted in the cap for depressing the valve stem, said spring acting to maintain the valve stem in contact with the cam lever.

1,298,544. DISH-WASHING MACHINE. VITO MONTALTO, Allentown, Pa. Filed Apr. 24, 1918. Serial No. 230,516. 2 Claims. (Cl. 259—124.)



1. A washing machine comprising a receptacle, an agitator therein, wings pivoted on the agitator and a stop for holding the wings vertically and at right angles to the current set up by the agitator when the current is slower than the movement of the agitator, and for permitting the wings to assume a horizontal position when the current is more rapid than the rotation of the agitator.

1,298,545. HEAD-LAMP. CARL MORU, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 22, 1916. Serial No. 132,727. 12 Claims. (Cl. 240—41.)



1. In a lamp of the class described, the combination of an outer bowl-shaped casing, a parabolic reflector coaxial with and nested within said casing, the casing being provided with a flange intermediate the casing and the reflector, a flat circumferentially extending necked member on the other part coöperating with said flange to secure said parts together, said flange being circumferentially cut away to admit the head of said necked member, said reflector and casing being adapted to be locked together by relative circumferential movement, and a member insertible in said cut behind said neck to prevent relative reverse circumferential movement of said parts.

1,298,546. VULCANIZING FUEL. WILLIS E. MOUCK, Santa Barbara, Calif. Filed Aug. 16, 1918. Serial No. 250,195. 1 Claim. (Cl. 44—1.)

A vulcanizing fuel made up substantially of sawdust, ten to twenty parts; ground walnut shells, ten to twenty parts; saltpeter, two to four parts; and celluloid, one to two parts.

1,298,547. HINGE FOR DOORS, WINDOWS, FLAPS, AND THE LIKE. EMIL MCLLER-MEYER, Wallisellen, Switzerland. Filed Feb. 10, 1919. Serial No. 276,069. 4 Claims. (Cl. 16—110.)



2. In combination with a door, two hinge-sections, one of said sections being fixed to the frame of the door, and the other one to the leaf of the door, resilient means mounted in said first mentioned section and adapted to detachably couple the two sections of the hinge, a projection provided on one of said sections adapted to engage an annular groove provided in the other section when the two sections are moved relatively to one another, the section provided with said groove having a slot to permit access to said groove from the side, and a tongue like member formed integral with the last mentioned section and adapted to secure the proper entrance of said projection into the groove when the two sections of the hinge acting as a pivot are moved relatively to one another.

1,298,548. PACKING-RING. ARDEN J. MUMMERT and JESSE T. WOODBRIDGE, St. Louis, Mo., assignors to McQuay-Norris Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed July 21, 1917. Serial No. 181,999. 3 Claims. (Cl. 121—108.)

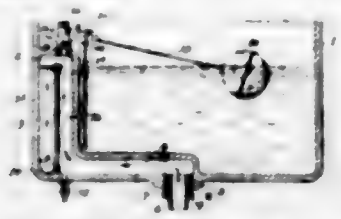
1. A piston packing ring comprising a resilient split band provided with peripheral oil-collecting basins at the outer corners of the band, the outer wall of each basin or that adjacent the side of the band being inclined to the plane of moments by which the band is stressed when in service and terminating in an edge clearing the walls of the cylinder in which the piston is to operate, the inner wall of the basin terminating in a cutting edge operating to scrape the oil from the walls of the cylinder with a given stroke of the piston, the edges of the respective walls

of each basin being disposed in different transverse planes through the axis of the band.



3. A piston packing ring for engine cylinders comprising a resilient imperforate split band provided on opposite sides of a medial circumferential line with an annular basin bounded on one side by an outer wall inclined to the plane of moments by which the band is stressed when in service, and terminating in an edge clearing the walls of the cylinder in which the piston is to operate, and bounded on the opposite side by an inner wall terminating in a cutting edge operating to scrape the oil from the walls of the cylinder into the basin with a given stroke of the piston, the oil being free to flow into the basin past the clearing edge aforesaid.

1,298,549. SIPHON FLUSH-TANK. JOHN N. MURPHY, Springfield, Ill., assignor of one-third to Fred H. Baker, Tulsa, Okla. Filed Sept. 10, 1917. Serial No. 190,688. 3 Claims. (Cl. 4—5.)



1. The one piece tank and siphon structure comprising a flat bottom, erect side walls and erect end walls integral with the bottom, a discharge opening through the bottom and intermediate of the length thereof, an erect first siphon-member integral with one side wall and one end wall of the tank-body and having a top, a partition integral with the bottom and one side wall of the tank-body and with one side wall of the erect siphon-member, and dividing it into an air chamber and a water chamber, an inlet opening through one wall of the erect siphon member and communicating with the water chamber thereof, an opening through the top of the erect siphon member and in line with the air chamber thereof; and a second siphon member integral with the bottom and one side wall of the tank-body and intercommunicating with the air chamber of the erect siphon member and with the discharge opening through the bottom of the tank.

1,298,550. NON-ENTANGLING DEVICE FOR FLAGS. OTIS K. NEWELL, Philadelphia, Pa. Filed Oct. 20, 1917. Serial No. 197,695. 1 Claim. (Cl. 116—12.)



The combination with a flag adapted for suspension from a horizontal support, of a pocket secured upon the lower free edge thereof, and a plurality of spherical weights disposed within said pocket and freely movable in respect to one another whereby said lower free edge of the flag will be prevented from tangling about the support to which it is secured while permitting flexibility for waving action or folding.

1,298,551. RUBBER SOLE. FRANCIS A. NOLAN, St. Paul, Minn. Filed Aug. 2, 1917. Serial No. 184,175. 3 Claims. (Cl. 36—32.)



1. An elastic shoe sole having tread and shank portions, part of the outer surface of said shank portion being surfaced with an exposed thin flexible strengthening strip vulcanized on the sole to prevent cracking and for engaging and holding fasteners, the surface of said strip substantially coinciding with the outer surface of said sole.

3. A full length outsole having flexible fore-part and shank portions, the adjacent portions of said fore-part and shank portions being surfaced with an exposed flexible strengthening strip vulcanized thereto and adapted to be penetrated by fasteners and to act as a fastener holder.

1,298,552. PROCESS OF BLEACHING. GEORG ORNSTEIN, New York, N. Y., assignor to Electro Bleaching Gas Company, a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,748. 21 Claims. (Cl. 8—2.)

15. The process of bleaching, which comprises hydrolyzing chlorin in the presence of water to form a solution containing HOCl, all such HOCl being in a free state and the dilution being sufficient to give a content of chlorin of the order of magnitude not greater than about 0.01 per cent, and treating the material to be bleached with such solution.

1,298,553. BLEACHING PROCESS. GEORG ORNSTEIN, New York, N. Y., assignor to Electro Bleaching Gas Company, a Corporation of New York. Filed Dec. 2, 1916. Serial No. 134,748. 16 Claims. (Cl. 8—2.)

3. The process of bleaching, which comprises producing a solution of HOCl by introducing chlorin into water and causing substantially complete conversion of the chlorin by employing sufficient water to give a solution of great dilution and supplying sufficient basic material to take up all the HCl formed by the conversion of chlorin and in the bleaching operation, such material being one which will combine with HCl but not with HOCl, and submitting the material to be bleached to the action of such solution at the time or substantially at the time of the production of the HOCl.

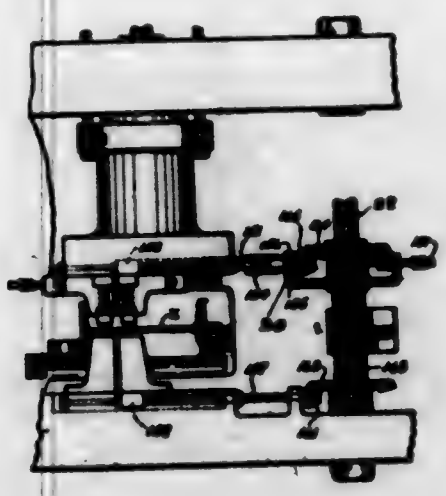
1,298,554. PROCESS OF BLEACHING. GEORG ORNSTEIN, New York, N. Y., assignor to Electro Bleaching Gas Company, a Corporation of New York. Filed Dec. 4, 1916, Serial No. 134,829. Renewed Feb. 15, 1919. Serial No. 277,304. 20 Claims. (Cl. 8—2.)

3. The process of bleaching, which comprises mingling chlorin and water in the presence of such an amount of normal sodium carbonate as will merely suffice to react with the HCl produced in the hydrolysis of such chlorin and to form a neutral chlorid and sodium bicarbonate without also acting upon the HOCl also produced in such hydrolysis, the amount of water being sufficient to give a solution of great dilution, and submitting the material to be bleached to the action of the bleaching liquor so produced at the time, or substantially at the time, of the production thereof.

1,298,555. METAL-WORKING MACHINE. THEODORE P. PAYNE, New York, N. Y., and EDWARD V. WURTS, Newark, N. J., assignors to Steel Utilities, Inc., a Corporation of New York. Original application filed Apr. 28, 1914, Serial No. 834,895. (Patent No. 1,241,254, dated Sept. 25, 1917.) Divided and this application filed July 11, 1917. Serial No. 179,887. 19 Claims. (Cl. 164—60.)

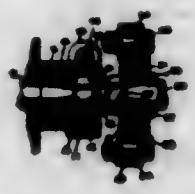
1. A punching machine including in combination a plu-

rality of punches, a head carrying said punches, means for increasing and decreasing the distance between the



punches, and automatic means for controlling said spacing.

1,298,556. COUPLING. OTTO F. PERSSON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Sept. 4, 1917. Serial No. 189,512. 6 Claims. (Cl. 64—90.)

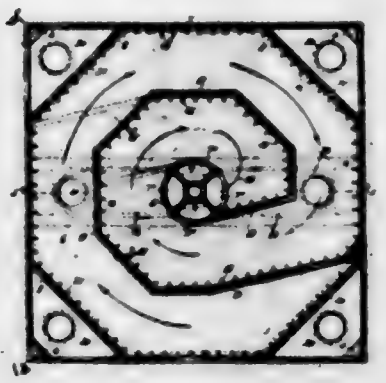


1. The combination with adjacent shaft ends, of a coupling connecting them which comprises members fastened to the adjacent shaft ends and bolted to each other, the connection between one of said members and the shaft end to which it is connected, comprising a split collar, and means comprising a worm for adjusting the collar circumferentially of the shaft end and for clamping the collar to the shaft end.

1,298,557. AIR STARTING MEANS FOR INTERNAL-COMBUSTION ENGINES. OTTO F. PERSSON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Sept. 13, 1918. Serial No. 253,998. 2 Claims. (Cl. 60—16.)

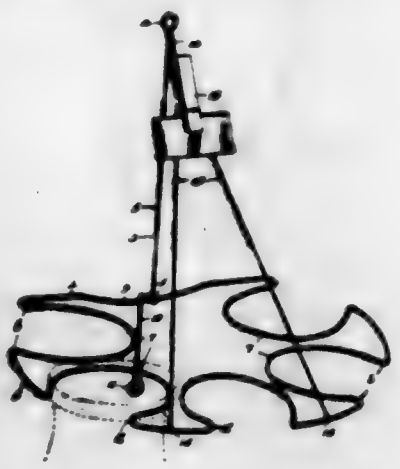
1. In an internal combustion engine, the combination of an air starting valve, a cam shaft, a cam thereon, means through which the cam actuates the air starting valve, said means including a lever and a roller, and a movable fulcrum for the lever which is moved by starting air to bring the roller into operative relation to the cam.

1,298,558. PLANSIFTER. JACOB PETER, Zurich, Switzerland. Filed Oct. 31, 1918. Serial No. 260,595. 12 Claims. (Cl. 83—38.)



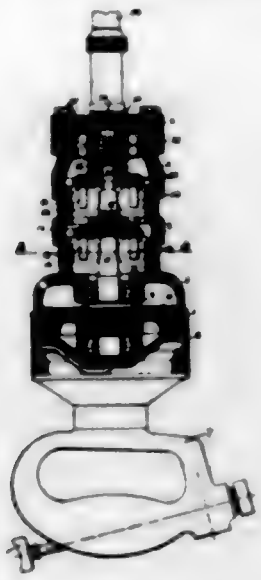
1. A plansifter of the class described, comprising a series of sieves, the sieves being stacked one on the top of the other and each being provided with a sifting channel for the stock to be bolted, inner vertical passageways arranged about the central portion of the sieves and extending through the whole series of sieves and each bordering on the sifting channel of the single sieves, outer vertical passage-ways provided in the sieves and also bordering on the sifting channels of the sieves and situated outside said sifting channels and also extending through the whole series of sieves, the arrangement of the inner and outer vertical passage-ways relatively to one another and the shape of the sieves all designed in the same manner being such that upon a rotation of a single sieve about its center according to the division into vertical passage-ways, the same passage-ways as before are obtained, and means for guiding the stock discharged by the sieves and the products passing through the screens of the latter into any one of said vertical passage-ways, so that the flow-sheet of the plansifter can be changed at will.

1,298,559. MILK-BOTTLE HOLDER. JAMES A. R. PHIPPS, Binghamton, N. Y. Filed Mar. 30, 1918. Serial No. 225,728. 1 Claim. (Cl. 248—20.)



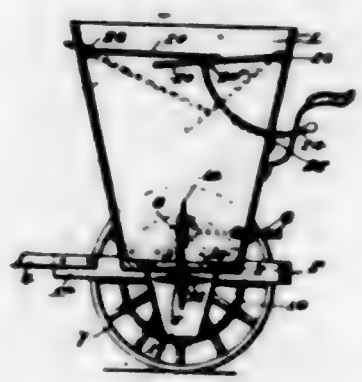
In a device for the purpose set forth, a frame formed from a single strand of wire and designed to be disposed horizontally, said frame having equally spaced reëntrant loops constituting spring clamps for engaging with the necks of milk bottles, the end strands of the frame being bent around themselves and continued in opposite directions angularly with respect to the frame, said end strands being formed with loops designed to receive supporting elements, and a supporting wire between the upper strand and the frame.

1,298,560. MEANS FOR TRANSMITTING ROTARY MOTION. JAN HENDRIK POPPINK, Tilburg, Netherlands, assignor of one-half to Johan Coenraad Bischoff, Amsterdam, Netherlands. Filed Oct. 1, 1918. Serial No. 256,431. 3 Claims. (Cl. 74—26.)



1. In mechanism for the transmission of rotary motion of the type referred to, the combination of a casing, a shaft rotatably mounted therein, a ring or track around said shaft, said shaft and ring having a tapering annular space formed therebetween, balls in contact with the inner and the outer walls of said space, a second shaft in alinement with the first shaft, means for coupling the balls with the second shaft so as to insure them freedom of rolling motion on said walls in a circular path around the shaft, means for axially moving the balls relative to their races, and automatic means for permanently insuring the required contact between the balls and their races.

1,298,561. FEED-REGULATOR FOR MANURE-DRILLS. ANDREW J. POWELL, Aspen Hill, Tenn. Filed Mar. 19, 1918. Serial No. 223,386. 2 Claims. (Cl. 83—44.)



1. A hopper having pivoted adjacent to its inlet overlapping grates one of which is adapted to ride upon the other, and means connected with one of said grates within the hopper and working through one of the walls thereof for operating said grates.

1,298,562. ADJUSTABLE SUSPENSION DEVICE. TIMOTHY B. POWERS, New York, N. Y. Filed Dec. 13, 1917. Serial No. 206,938. 1 Claim. (Cl. 248—8.)

In a device of the character set forth, the combination of a pair of clamping members adapted for attachment to a securing cable, a retarding device carried by the upper clamping member, and a cord having both ends secured to the lower clamping member and movably engaging the retarding device by its intermediate portion, whereby on downward pull on either end portion of the cord it will move through the retarding device and draw upward on the other end portion of the cord to elevate the lower clamping member and cable, and the retarding device will retain the cord and lower clamping member in raised



position, to be lowered by downward pull on the lower clamping member.

1,298,563. PROCESS OF SAPONIFYING GLYCERIDS. BALTHASAR E. REUTER, Chicago, Ill., assignor to Reuter Process Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1914. Serial No. 830,590. 11 Claims. (Cl. 87—4.)

1. In the art of saponifying glycerid the improvement which comprises removal of the watery layer and discolored fatty material from the saponifying apparatus and return of the watery portion freed from the discolored fatty material.

2. The process of saponifying glycerid which consists in bringing about saponification and thereby forming a ribbon of colored material between the watery and non-watery contents of the apparatus and removing such colored ribbon from the saponifying apparatus.

3. The process of saponifying glycerid which comprises adding to the glycerid water sulfuric acid and saponifier; bringing about saponification; interrupting said saponification; removing the watery portion and the discolored fatty portion of the contents of the saponifying apparatus and returning to the saponifying apparatus the watery portion so removed and resuming the saponifying operation.

7. The process of saponifying glycerid which consists in adding water, sulfuric acid, and saponifier to the glycerid under treatment, boiling the mixture thus formed, interrupting the boiling operation before saponification is completed, settling out the watery portion of the mixture by means of sulfuric acid, drawing off the watery portion and the "ribbon of impurity" which separates the watery portion from the unsaponified glycerid and fatty acid, separating the "ribbon of impurity" from the watery portion, returning the watery portion to the mixture, and resuming the boiling operation.

11. The process of saponifying glycerid which consists in bringing about saponification and thereby forming a ribbon of colored material between the watery and non-watery contents of the apparatus, removing such colored ribbon from the saponifying apparatus and thereupon replenishing the mixture under treatment with a supply of water containing no discolored fatty material.

1,298,564. ELASTIC-FLUID TURBINE. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 12, 1918. Serial No. 239,640. 6 Claims. (Cl. 253—78.)



1. A diaphragm for elastic fluid turbines comprising two annular disks, nozzle partitions having their inner

ends held between the peripheries of said disks, spacing strips for the outer ends of said partitions, and means for holding said spacing strips in position.

1,298,565. NECKTIE. CHARLES HOWARD ROSEBACK, Lago, Idaho. Filed Mar. 18, 1918. Serial No. 223,156. 4 Claims. (Cl. 2—11.)



3. A necktie of the four-in-hand type having one end thereof constructed to be knotted about the remaining end which will slide through the knot, said sliding end having a padding strip associated therewith, and extending transversely thereof, and stitching by which said padding strip is held in place.

1,298,566. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Aug. 17, 1914. Serial No. 857,016. 15 Claims. (Cl. 74—46.)



8. The combination with a work-performing element and a driving element therefor, of yieldable means for actuating the former from the latter, and stationary cam means associated with the driving element for controlling the operation of the yieldable means.

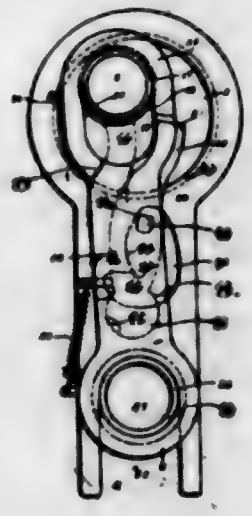
1,298,567. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Oct. 5, 1914. Serial No. 864,874. 12 Claims. (Cl. 74—46.)

11. In a safety device, in combination with a reciprocatory work-engaging element and an anvil, of driving mechanism, yieldable means connecting the work-engaging element and the driving mechanism, and means re



movably mounted on the driving mechanism for controlling the operation of the yieldable connecting means.

1,298,568. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Oct. 30, 1914. Serial No. 869,466. 12 Claims. (Cl. 74—46.)

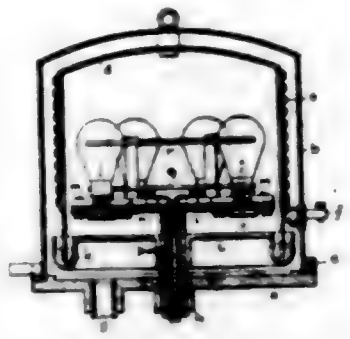


8. In combination with a work engaging element and a driving mechanism embodying a crank, means to couple said driving mechanism and work engaging element comprising a rigid link and a coupling member, said coupling member being pivoted on the link and movable transversely of the axis of the crank to and from a position of direct coupling engagement with the crank, and means to prevent said coupling member from engaging the driving mechanism when an obstruction extraneous to the work is in the path of the element and to permit said coupling member to engage the driving mechanism whereby to exert a pressure upon the work engaging element when the path of the element is free.

1,298,569. APPARATUS FOR EXHAUSTING INCANDESCENT LAMPS. ROBERT LE ROSSIGNOL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 30, 1917. Serial No. 145,563. 8 Claims. (Cl. 176—2.)

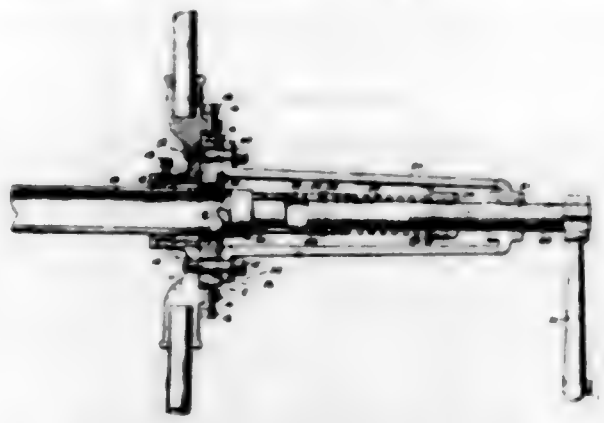
7. Apparatus for exhausting incandescent lamps comprising a vacuum chamber, means for exhausting said chamber, means for holding in said chamber an incandes-

cent lamp having an exhaust aperture open to the interior of said chamber, and heating means in said chamber for



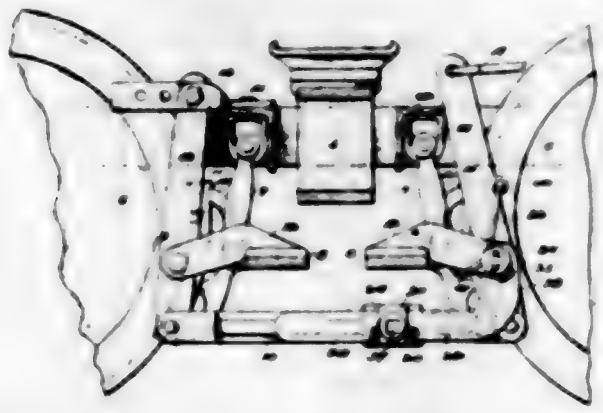
sealing said exhaust aperture while said chamber is exhausted.

1,298,570. PIPE-REAMER. THOMAS P. SALLEY, U. S. Navy. Filed Sept. 28, 1918. Serial No. 256,042. 3 Claims. (Cl. 77—73.5.)



1. In a pipe reamer, the combination of a bracket having a threaded hub in axial alinement with a pipe to be reamed, means to hold the bracket in operative position, a threaded shank rotatable in and movable positively along said hub, a cutting tool carried by the inner end of the shank, means to positively rotate the tool from the shank, and a cushion acting between the shank and the tool to permit the tool to yield under excessive pressure even though the shank is driven positively forward.

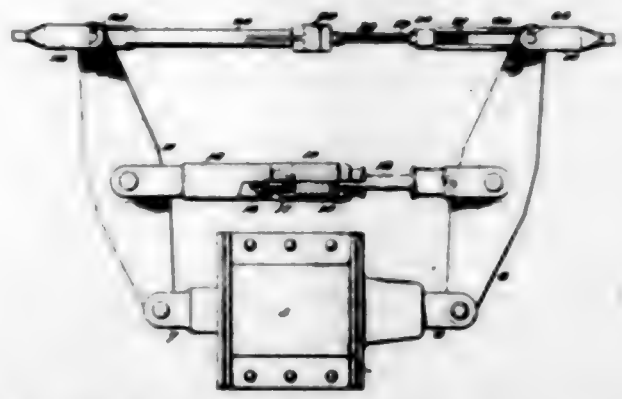
1,298,571. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,684. 17 Claims. (Cl. 188—49.)



7. A slack adjuster comprising, in combination, a two-part telescopic push rod, one of said parts containing a housing, a plurality of dogs within said housing and normally held in canted position, and means to prevent said dogs from dropping down from normal position.

12. An automatic slack adjuster comprising a tubular member, a rod telescoping therewith, an adjusting rod substantially parallel to said first mentioned rod, a housing integrally formed with said tubular member, permanent take up mechanism coacting with said first rod and temporary take up mechanism coacting with said second rod, both of said mechanisms being concealed and protected within said housing.

1,298,572. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,685. 11 Claims. (Cl. 188—49.)



1. In a slack adjuster, in combination with a power cylinder having a piston adapted to be centrally disposed beneath the car floor, a dead lever connected with one end of the cylinder, a live lever connected with a piston at one end, a telescopic push rod connecting the central parts of the live and dead levers including a housing and a member telescoping therewith and a plurality of spring held dogs within the housing adapted to permanently take up the slack, and temporary take up and holding mechanism parallel to said push rod including a housing and a rod connected with the live lever telescoping with the housing, a plurality of spring held holding dogs within the housing coacting with the rod, said adjusting rod having a lost motion connection with the live lever adapted to insure uniform brake shoe clearance.

2. In a slack adjuster, in combination, a power cylinder having a piston, live and dead levers at opposite ends thereof and connected therewith, an extensible rod connecting the central parts of said levers, a telescopic adjusting rod connecting the free ends of said levers having a lost motion connection at one point adapted to provide for normal piston travel, and means associated with said lost motion connection permitting an adjustment of the piston travel.

5. In a slack adjuster, in combination, a power cylinder having a piston, live and dead levers connected therewith at opposite sides thereof, a telescopic rod connecting the central parts of the levers, pull rods at the free ends of said levers leading to the truck brake rigging, a telescopic adjusting rod connecting the live and dead levers at their points of connection with respective pull rods, one of said connections including an adjustable lost motion slot, permanent take up and holding mechanism associated with the first rod, and temporary take up and holding mechanism associated with the adjusting rod.

10. In a slack adjuster, in combination, a power cylinder having a piston, a fixed support at one end, a dead lever supported thereby, a live lever pivotally connected with the end of the piston, permanent take up and holding mechanism associated with one of said parts, and temporary take up and holding mechanism connecting said levers, said mechanisms each including a casing pivotally connected with one lever, a rod pivotally connected with the other lever, holding means protectively housed within each casing adapted to engage the rod, a lost motion device at one of the points of connection with the end of one of the levers, means for adjusting the lost motion thereby to regulate the piston travel, and means associated with said last mentioned parts adapted to lock the same in their adjusted positions.

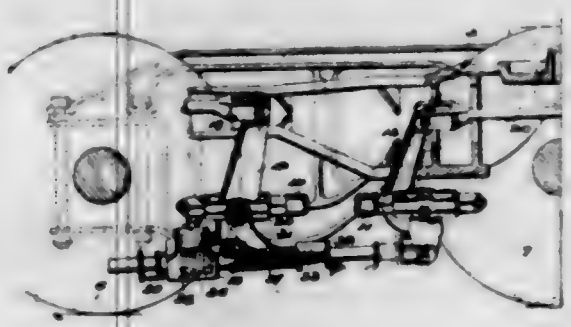
11. In a slack adjuster, in combination, a source of power, live and dead levers connected therewith, telescopic mechanism between the central parts of said levers adapted to permanently take up the slack of the brake rigging, an adjusting mechanism parallel to said first mechanism for actuating the same, both of said mechanisms comprising an inclosing protective housing, a plurality of perforated holding dogs in each housing, spring means adapted to hold said dogs in canted relation and a rod passing through the perforations in said holding dogs, the rod associated with the adjusting mechanism having a lost motion connection with the lever to which it is attached thereby to insure predetermined brake shoe clearance, and means for adjusting said lost motion.

1,298,573. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,686. 10 Claims. (Cl. 188—49.)



1. In an apparatus of the character described, in combination with a locomotive truck, an air brake cylinder mounted on the truck, live and dead levers associated with said cylinder, and a slack adjuster at each side of the truck connected therebetween and adapted to automatically take up the slack on application of the brakes, said slack adjuster including a two-part longitudinally extensible push rod connecting said levers and a two-part frictional yielding adjusting rod connecting said levers.

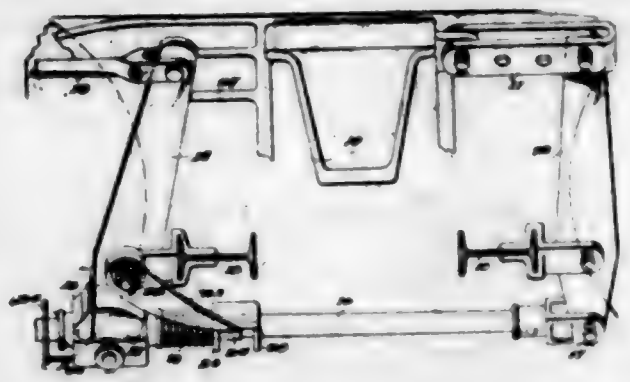
1,298,574. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,687. 15 Claims. (Cl. 188—49.)



1. In an apparatus of the character described, in combination, a six-wheel truck, a series of three levers, brake shoes associated therewith adapted to co-act with the wheels, slack adjuster mechanism between the first two levers and adjusting means between the second and third levers adapted to act upon said slack adjuster mechanism.

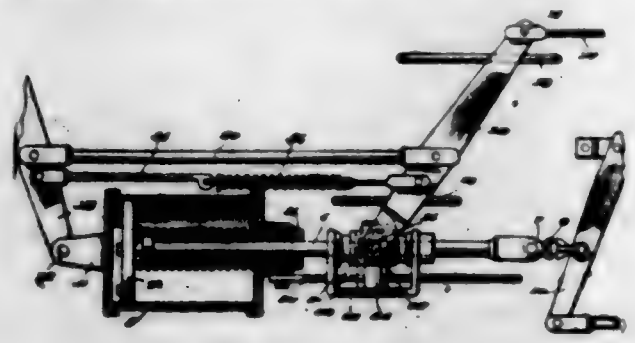
1,298,575. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,688. 21 Claims. (Cl. 188—49.)

2. In an apparatus of the character described, in combination, a live lever, a dead lever, a two-part extensible telescopic push rod connecting said levers, one of the parts of said push rod comprising a housing containing permanent take up and holding means therein, an adjusting rod acting between the live lever and the push



rod having a lost motion connection with the latter, and a return spring between the housing and adjusting rod.

1,298,576. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,689. 14 Claims. (Cl. 188—49.)



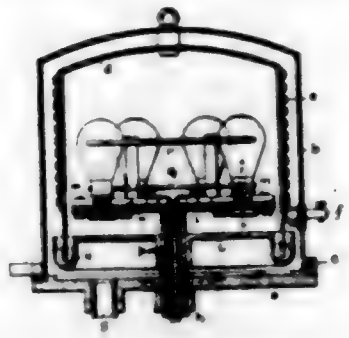
1. In an apparatus of the character described, in combination, a power cylinder, live and dead levers, a piston within said power cylinder having a piston rod, a housing mounted on said rod capable of moving in one direction relatively thereto and held against movement in the opposite direction, a pivoted connection between said housing and live lever, an adjusting rod associated with said cylinder, and adjusting means operating between said adjusting rod and said housing adapted to temporarily take up the slack due to excess wear and permanently register said slack in said housing when the brakes are released.

1,298,577. GOLD WASHING AND ACCUMULATING DEVICE. ROY C. SAWYER [illegible] JOHN W. WEST, Pasadena, Calif. Filed Nov. 15, [illegible] Serial No. 202,138. 4 Claims. (Cl. 83—81.)



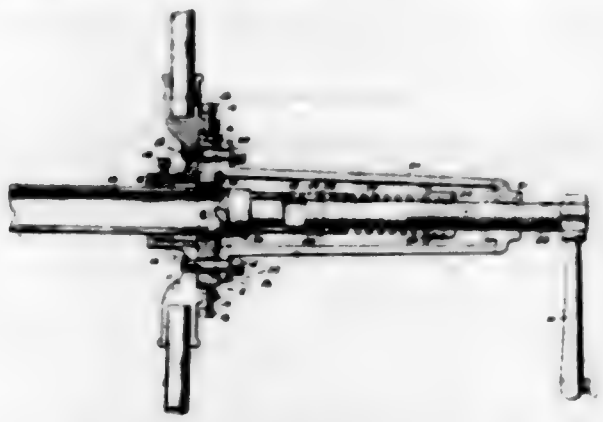
3. In a gold washing device of the class described a tubular body open at one end and partly closed at the other end, the partly closed end forming an ore-retaining baffle and also an overflow opening above the baffle within the area of the tubular body, the open end having an extension end spreading out beyond the area of the tubular body, a shaft turnably disposed concentrically to the tubular body, a propeller mounted on one end of the shaft near the open end of the tube for drawing ore-holding sand into and through the tubular body, conveying means mounted on the shaft within the tubular body, accumulating baffles provided near the ore-retaining baffle within the tubular body, and agitating means provided on the shaft between the several baffles for washing the retained gold.

cent lamp having an exhaust aperture open to the interior of said chamber, and heating means in said chamber for



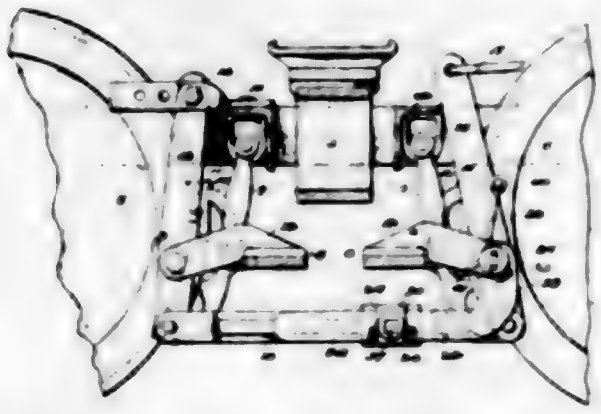
sealing said exhaust aperture while said chamber is exhausted.

1,298,570. PIPE-REAMER. THOMAS P. SALLEY, U. S. Navy. Filed Sept. 28, 1918. Serial No. 256,042. 3 Claims. (Cl. 77—73.5.)



1. In a pipe reamer, the combination of a bracket having a threaded hub in axial alinement with a pipe to be reamed, means to hold the bracket in operative position, a threaded shank rotatable in and movable positively along said hub, a cutting tool carried by the inner end of the shank, means to positively rotate the tool from the shank, and a cushion acting between the shank and the tool to permit the tool to yield under excessive pressure even though the shank is driven positively forward.

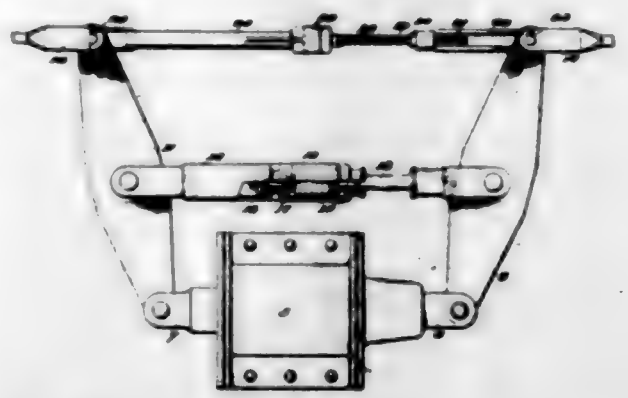
1,298,571. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,684. 17 Claims. (Cl. 188—49.)



7. A slack adjuster comprising, in combination, a two-part telescopic push rod, one of said parts containing a housing, a plurality of dogs within said housing and normally held in canted position, and means to prevent said dogs from dropping down from normal position.

12. An automatic slack adjuster, comprising a tubular member, a rod telescoping therewith, an adjusting rod substantially parallel to said first mentioned rod, a housing integrally formed with said tubular member, permanent take up mechanism coacting with said first rod and temporary take up mechanism coacting with said second rod, both of said mechanisms being concealed and protected within said housing.

1,298,572. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,685. 11 Claims. (Cl. 188—49.)



1. In a slack adjuster, in combination with a power cylinder having a piston adapted to be centrally disposed beneath the car floor, a dead lever connected with one end of the cylinder, a live lever connected with a piston at one end, a telescopic push rod connecting the central parts of the live and dead levers including a housing and a member telescoping therewith and a plurality of spring held dogs within the housing adapted to permanently take up the slack, and temporary take up and holding mechanism parallel to said push rod including a housing and a rod connected with the live lever telescoping with the housing, a plurality of spring held holding dogs within the housing coacting with the rod, said adjusting rod having a lost motion connection with the live lever adapted to insure uniform brake shoe clearance.

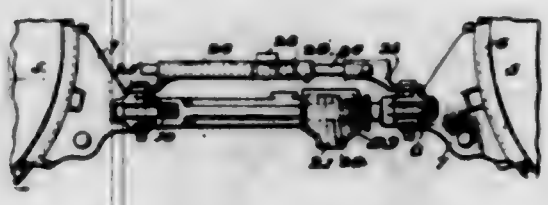
2. In a slack adjuster, in combination, a power cylinder having a piston, live and dead levers at opposite ends thereof and connected therewith, an extensible rod connecting the central parts of said levers, a telescopic adjusting rod connecting the free ends of said levers having a lost motion connection at one point adapted to provide for normal piston travel, and means associated with said lost motion connection permitting an adjustment of the piston travel.

3. In a slack adjuster, in combination, a power cylinder having a piston, live and dead levers connected therewith at opposite sides thereof, a telescopic rod connecting the central parts of the levers, pull rods at the free ends of said levers leading to the truck brake rigging, a telescopic adjusting rod connecting the live and dead levers at their points of connection with respective pull rods, one of said connections including an adjustable lost motion slot, permanent take up and holding mechanism associated with the first rod, and temporary take up and holding mechanism associated with the adjusting rod.

10. In a slack adjuster, in combination, a power cylinder having a piston, a fixed support at one end, a dead lever supported thereby, a live lever pivotally connected with the end of the piston, permanent take up and holding mechanism associated with one of said parts, and temporary take up and holding mechanism connecting said levers, said mechanisms each including a casing pivotally connected with one lever, a rod pivotally connected with the other lever, holding means protectively housed within each casing adapted to engage the rod, a lost motion device at one of the points of connection with the end of one of the levers, means for adjusting the lost motion thereby to regulate the piston travel, and means associated with said last mentioned parts adapted to lock the same in their adjusted positions.

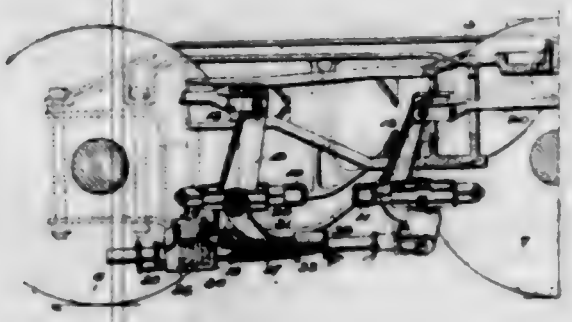
11. In a slack adjuster, in combination, a source of power, live and dead levers connected therewith, telescopic mechanism between the central parts of said levers adapted to permanently take up the slack of the brake rigging, an adjusting mechanism parallel to said first mechanism for actuating the same, both of said mechanisms comprising an inclosing protective housing, a plurality of perforated holding dogs in each housing, spring means adapted to hold said dogs in canted relation and a rod passing through the perforations in said holding dogs, the rod associated with the adjusting mechanism having a lost motion connection with the lever to which it is attached thereby to insure predetermined brake shoe clearance, and means for adjusting said lost motion.

1,298,573. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,686. 10 Claims. (Cl. 188—49.)



1. In an apparatus of the character described, in combination with a locomotive truck, an air brake cylinder mounted on the truck, live and dead levers associated with said cylinder, and a slack adjuster at each side of the truck connected therebetween and adapted to automatically take up the slack on application of the brakes, said slack adjuster including a two-part longitudinally extensible push rod connecting said levers and a two-part frictional yielding adjusting rod connecting said levers.

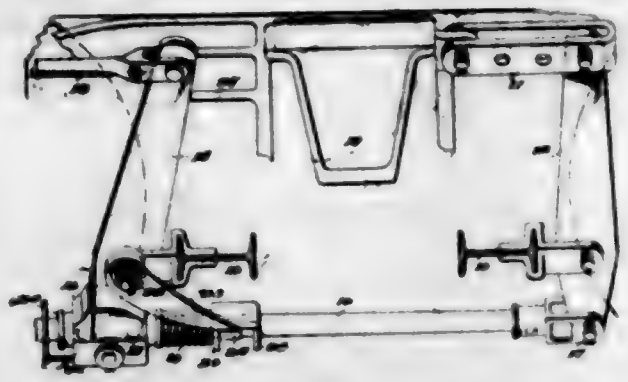
1,298,574. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,687. 15 Claims. (Cl. 188—49.)



1. In an apparatus of the character described, in combination, a six-wheel truck, a series of three levers, brake shoes associated therewith adapted to co-act with the wheels, slack adjuster mechanism between the first two levers and adjusting means between the second and third levers adapted to act upon said slack adjuster mechanism.

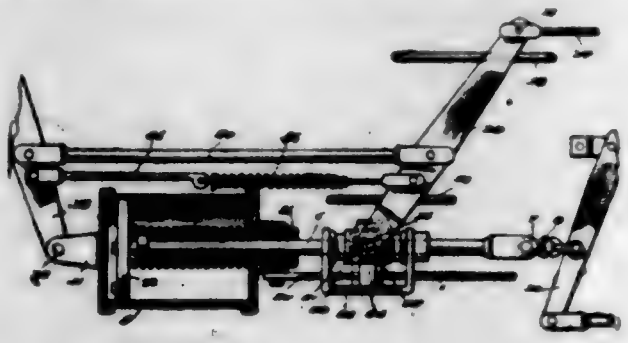
1,298,575. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,688. 21 Claims. (Cl. 188—49.)

2. In an apparatus of the character described, in combination, a live lever, a dead lever, a two-part extensible telescopic push rod connecting said levers, one of the parts of said push rod comprising a housing containing permanent take up and holding means therein, an adjusting rod acting between the live lever and the push



rod having a lost motion connection with the latter, and a return spring between the housing and adjusting rod.

1,298,576. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Filed Jan. 31, 1918. Serial No. 214,689. 14 Claims. (Cl. 188—49.)



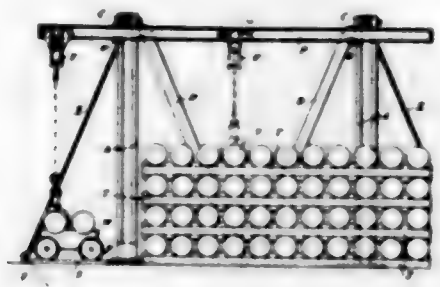
1. In an apparatus of the character described, in combination, a power cylinder, live and dead levers, a piston within said power cylinder having a piston rod, a housing mounted on said rod capable of moving in one direction relatively thereto and held against movement in the opposite direction, a pivoted connection between said housing and live lever, an adjusting rod associated with said cylinder, and adjusting means operating between said adjusting rod and said housing adapted to temporarily take up the slack due to excess wear and permanently register said slack in said housing when the brakes are released.

1,298,577. GOLD WASHING AND ACCUMULATING DEVICE. ROY C. SAWYER and JOHN W. WEST, Pasadena, Calif. Filed Nov. 15, 1917. Serial No. 202,138. 4 Claims. (Cl. 83—81.)



3. In a gold washing device of the class described a tubular body open at one end and partly closed at the other end, the partly closed end forming an ore-retaining baffle and also an overflow opening above the baffle within the area of the tubular body, the open end having an extension end spreading out beyond the area of the tubular body, a shaft turnably disposed concentrically to the tubular body, a propeller mounted on one end of the shaft near the open end of the tube for drawing ore-holding sand into and through the tubular body, conveying means mounted on the shaft within the tubular body, accumulating baffles provided near the ore-retaining baffle within the tubular body, and agitating means provided on the shaft between the several baffles for washing the retained gold.

1,298,578. GIN FOR MOUNTING AND DISMOUNTING THE CARRIAGES OF GUNS OF LARGE CALIBER. EUGÈNE SCHNEIDER, Le Creusot, France, assignor to Schneider & Cie., Paris, France, a Limited Joint-Stock Company of France. Filed Feb. 14, 1918, Serial No. 217,183. Renewed Feb. 10, 1919. Serial No. 276,247. 3 Claims. (Cl. 214—87.)



1. In a gin for handling the parts of a carriage of a gun of large caliber, the combination of beams for supporting the parts to be handled, two iron frames stayed together serving as guides for said beams, jacks for raising and lowering, two "assemblages" located one in each of the upper angles between the upper cross member and the uprights of each frame, said "assemblages" being attached solely to their cross members or alternatively to both the said cross member and the respective uprights of their frames, a rolling track adapted to be attached directly to said "assemblages," and a traveling crane adapted to travel along said rolling track, whereby said gin after use as an ordinary gin for handling the parts of a gun carriage, can be converted quickly into a structure for supporting a traveling crane, erected over a pile of ammunition located close to the head of a railroad, for transferring ammunition from said pile on to a truck running over said railroad.

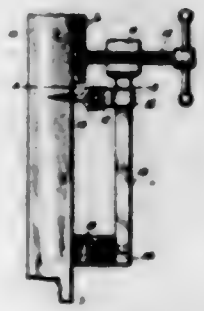
1,298,579. MEASURING IMPLEMENT. HARRY M. SCHNIPPEL, Shelbyville, Ind. Filed Apr. 24, 1918. Serial No. 230,505. 4 Claims. (Cl. 33—3.)



2. A device of the class described comprising a graduated rod, a cross bar having an opening therein through which the rod passes, spring means for holding the bar in adjusted position on the rod, and an arch support measuring device slidably and detachably connected with said rod.

1,298,580. PLANKING-CLAMP. JOHN ANDREW SEEBY, Tampa, Fla. Filed Aug. 8, 1918. Serial No. 248,956. 2 Claims. (Cl. 144—298.)

1. A planking clamp including a bar having means at one end adapted to seat on a frame timber of a ship, a transverse clamp screw carried by the bar at the opposite end, and an anchor for the bar, said anchor comprising an attaching member adapted to engage a frame timber,



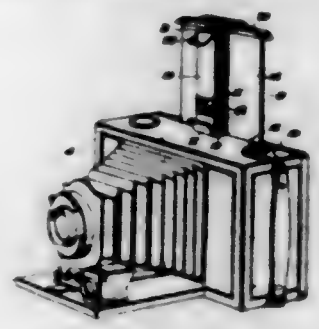
and a shackle receiving said bar and pivotally and detachably connected with said attaching member.

1,298,581. PNEUMATIC-TIRE RELINER. HAMDAN W. SHAAR, Monroe, Wash. Filed Jan. 24, 1917. Serial No. 144,538. 1 Claim. (Cl. 152—18.)



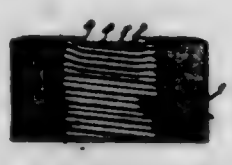
A re-liner for pneumatic tires comprising an intermediate body portion of strong flexible material, a plurality of narrow metallic strips of arcuate shape extending transversely around the interior of said body portion, said strips being spaced apart and having outwardly directed integral prongs formed on the ends thereof clenched into said body portion to secure said metallic strips against the inner face thereof, a plurality of narrow metallic strips of arcuate shape extending in a transverse direction around the exterior of said body portion in a position to bridge the spaces between said interiorly disposed metallic strips, each of said exteriorly disposed strips having inwardly directed prongs on the ends thereof clenched into said body portion to secure said last-named metallic strips against the outer face thereof, and inner and outer flexible protective coverings for said metallic strips, said coverings being transversely grooved for reception of said metallic strips in one face thereof substantially as described.

1,298,582. FOCUSING DEVICE. LE ROY D. SHAFER and LESTER J. BOLLINGER, Grove City, Pa. Filed May 14, 1918. Serial No. 234,451. 2 Claims. (Cl. 95—42.)



2. A camera having a slot in the top thereof, and an opening communicating with said slot, a movable plate within the camera extending within said slot, a finger piece on said plate overlying said slot, image delineating means on said plate extending within said opening, and a cross piece adjacent the bottom of said plate in line with said opening and slot.

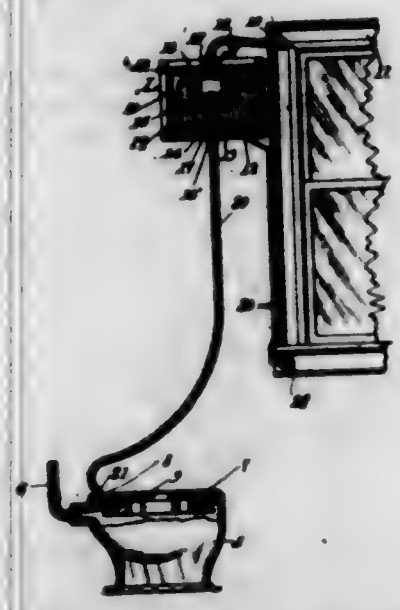
1,298,583. LOCK-NUT AND METHOD OF CONSTRUCTING THE SAME. WILLIAM E. SHARP, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 22, 1917. Serial No. 197,855. 4 Claims. (Cl. 151—21.)



1. A lock nut comprising a threaded bolt nut having a centrally disposed depression across one face thereof not greater in width than the diameter of the bolt hole, a section of one or more of the threads near that face of the nut beneath the depression on each side of the bolt hole being depressed beyond their normal line of direction, said effect growing less toward the center of the nut.

4. The process of forming a lock nut consisting in taking a threaded bolt nut of the usual form and forming a centrally disposed depression across one face thereof less in width than the diameter of the bolt hole, to cause a section of one or more of the threads near the face of the nut beneath the depression on each side of the bolt hole to be depressed beyond their normal line of direction, said effect disappearing toward the center of the nut.

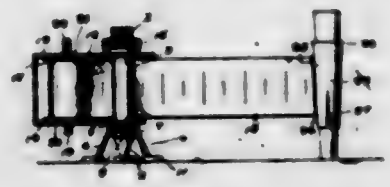
1,298,584. VENTILATOR. ROBERT S. SHAW, Philadelphia, Pa. Filed Sept. 12, 1918. Serial No. 253,742. 1 Claim. (Cl. 4—21.)



The combination with a closet bowl having a seat, of a tube, said tube being arranged within said seat and provided with a funnel-shaped end extending into said closet bowl, the funnel-shaped end being located above the normal water line of said seat, a casing remotely located with respect to said closet bowl, a fan rotatably mounted within said casing, an elongated flexible hose connecting said tube and casing, said hose being detachably connected with said tube, a second flexible hose connected with said casing and means for rotating said fan whereby atmosphere may be drawn from said closet bowl into said casing through said tube and first named flexible hose, the atmosphere being discharged from said casing through the second named hose to a remote location with respect to said casing.

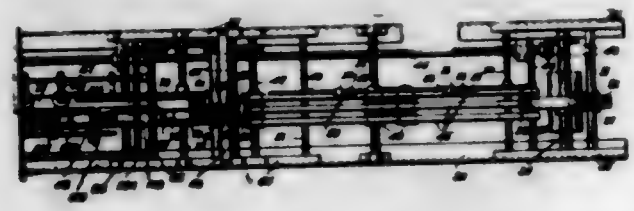
1,298,585. COMPASSES. FLOYD B. SHEPPARD, Wayland, N. Y. Filed Nov. 26, 1918. Serial No. 264,188. 4 Claims. (Cl. 33—27.)

3. A compass of the class described, comprising a supporting base, an axis stud mounted for rotation in the base, a frame mounted on the axis stud and extending from one side thereof, and a tape reel mounted in said



frame, the said axis stud havin a slot extending therethrough for the passage of the tape from the reel.

1,298,586. MACHINE FOR MAKING TUBULAR BOX-SHELLS. MELVIN H. SIDEBOTHAM, Cliftondale, Mass., assignor to Elie W. Labombarde, Nashua, N. H. Filed June 13, 1918. Serial No. 239,858. 43 Claims. (Cl. 93—52.)



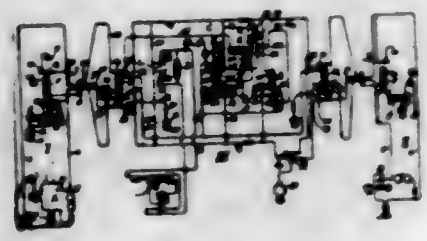
5. In a machine of the character described, means for causing long blanks to travel, means for folding the traveling blanks, a stop for arresting the folded blanks, pushers to transfer them laterally, and cutters to sever them into sections.

1,298,587. REGULATING-DAMPER. RUFUS A. SKINNER, St. Marys, Ohio. Filed Dec. 6, 1918. Serial No. 265,549. 3 Claims. (Cl. 236—5.)



1. A damper construction, comprising a split ring having a shank, and a lid opposed to the said ring and having a shank connected in hinged manner with that of the ring.

1,298,588. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Nov. 12, 1914. Serial No. 871,665. 12 Claims. (Cl. 179—73.)

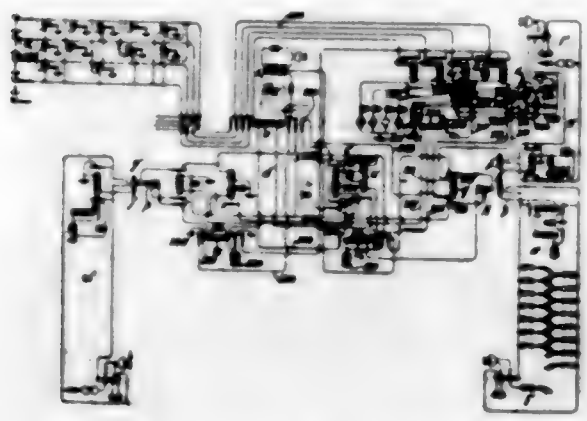


1. In a telephone system, the combination of a plurality of telephone lines and a cord circuit, a listening key in the cord circuit and subscriber controlled switches on the telephone lines, and means without the talking strands of the cord circuit controlling the strands of the cord circuit governed by the listening key and the subscriber controlled switches.

4. In a telephone system, the combination of a plurality of supervisory signals, means to actuate one of said signals when one of said subscribers retires, means

to actuate a second of said signals when the other of said subscribers retires, means to extinguish both said first and second signals when both said subscribers retire, and means to operate the third of said signals when both of said subscribers retire.

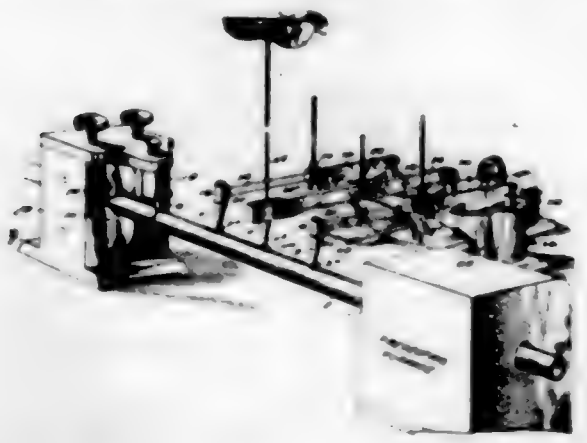
1,298,589. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed June 19, 1915. Serial No. 35,013. 43 Claims. (Cl. 179—35.)



1. In a telephone system, the combination of a calling telephone line, substation apparatus thereon, a called telephone line, a signal on said line, a main station, link conductors at the main station for connecting the telephone lines together, a switching device for connecting the link conductors to the called line, a signaling generator at the main station, means to connect said generator to said signal, including said called telephone line, a signaling key including key contacts controlling the connecting means and mechanism, operable independently of said switching device and substation apparatus for relieving such key contacts from the control of said connecting means.

18. In a telephone system, the combination of a signaling circuit including a plurality of signals, each signal constructed to respond to a particular one of a plurality of currents of defferent character, means for producing a number of currents of different character, means for determining which character of current shall be connected in said circuit and mechaniam for modifying the current thus connected into the circuit according to a particular code.

1,298,590. ELECTRIC-ARC WELDING. ANDREW SMITH, San Mateo, Calif., assignor to Smith Metal Perforating Company, San Mateo, Calif. Filed Aug. 17, 1914. Serial No. 857,227. 19 Claims. (Cl. 219—8.)

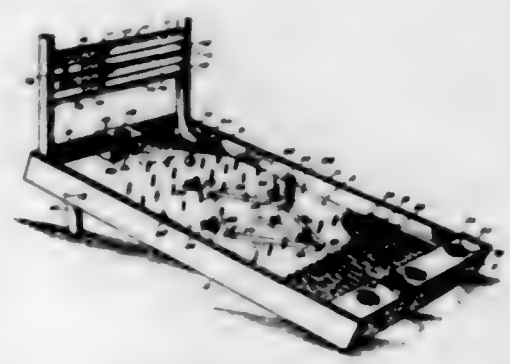


3. The method of welding metal joints which comprises heating the article containing the joint to be welded to substantially a red heat, heating the metal parts to be welded approximately to the point of fusion in an electric arc, maintaining the integrity of the metal of the joint and of the electrode from which the arc springs by subjecting the latter to the action of the fluid cooling medium, and subjecting said heated joint portions to the action of an arc carrying fused globules of the same metal as the joint.

12. Apparatus for welding, comprising a non-consuming fluid-cooled metal electrode, a fusible metal electrode adapted to supply fused metal to the joint, means for supplying metal to replenish said electrode as it is consumed, a second non-consuming fluid-cooled electrode, means to oscillate the last-named electrode and means for automatically establishing and maintaining the arcs from said electrodes.

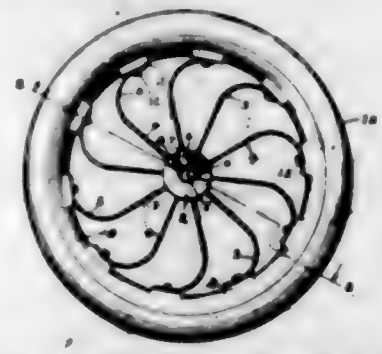
19. Apparatus for electric welding, comprising a non-consuming fluid-cooled metal electrode, and a fusible metal adapted to supply fused metal to the weld under the action of the arc from said electrode.

1,298,591. GAME. RAY A. SMITH, Oakland, Calif. Filed Jan. 14, 1918. Serial No. 211,847. 4 Claims. (Cl. 46—61.)



2. A game comprising a base board, and a score board having legs pivoted to said base board and adjustable to support the same in an inclined position.

1,298,592. SPRING-WHEEL. WILLIAM M. SMITH, Woodward, Okla. Filed July 6, 1918. Serial No. 243,521. 1 Claim. (Cl. 152—50.)



A spring wheel comprising a plurality of spokes formed of flat pieces of spring metal having their outer ends curved and their inner ends provided with wedge shaped enlargements, each enlargement having a tongue on one side and a groove on the other for receiving the tongue on the adjacent enlargement, said tongues and grooves being mid-way the ends of the enlargements, means including end plates for holding said enlargements together and a rim connected with the curved ends of the spokes.

1,298,593. AUTOMOBILE-WINDOW CONSTRUCTION. JOHN E. SPENCER and ARTHUR C. LILLIE, Los Angeles, Calif., assignors to William R. Johnston Manufacturing Company, Chicago, Ill. Filed Aug. 11, 1917. Serial No. 186,640. 1 Claim. (Cl. 21—220.)

In a structure of the character described, a frame having an opening therein, an inner curtain extending over one side of said frame and turned over the edge of the opening therein, a welt attached to the edge of said frame and said curtain around said opening, a transparent ele-

ment held in said opening on the edge of said welt, an outer curtain having an opening therein, said curtain extending over the outer side of said frame and the edge thereof around said opening overlapping the periphery of said transparent element, and a detachable retaining ring



adapted to be secured to said frame for holding said outer curtain in position on said frame and between said transparent element and said ring, the inner edges of said inner and outer curtain serving to cushion opposite sides of said transparent element.

1,298,594. CAUSTICIZED ORGANIC MATERIAL AND PROCESS OF MAKING THE SAME. NOEL STATHAM, Hastings-upon-the-Hudson, N. Y., assignor to West Virginia Pulp and Paper Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 5, 1918. Serial No. 220,463. 11 Claims. (Cl. 23—24.)

1. The strong porous uniformly permeable causticized ligneous acetate material having a weight of not more than about forty pounds per cubic foot and a crushing resistance of at least several hundred pounds per square inch and adapted for the production of acetone by dry distillation with steam and which is permanently solid under dry distilling conditions so as not to undesirably melt or foam and which comprises acetate compounds, a large proportion of ligneous material from wood pulp waste liquor and about fifty per cent. of incorporated lime on a calcium oxid basis.

1,298,595. DRAIN-CUP FOR BRASS WIND INSTRUMENTS. JOHN C. STRIKMACKER, Auburn, Wash. Filed Mar. 1, 1918. Serial No. 219,816. 5 Claims. (Cl. 84—8.)

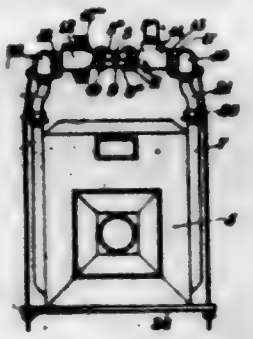


2. The combination with a wind instrument provided with a bend having an opening therein, of a drain receptacle located at said bend below the wind passage thereof and surrounding said opening and a gravity operated valve within said receptacle, said valve being opened when the instrument is in a normal or playing position and closed when the instrument is in an inverted position.

5. The combination with a wind instrument provided with a bend having an opening therein, of a valve cage communicating with said opening, a valve seat at the inner end of the cage, a port at the opposite end thereof, the latter being provided with radially disposed notches, a ball valve in said cage, a receptacle removably connected with the cage and means secured to the instrument for retaining said cage in position.

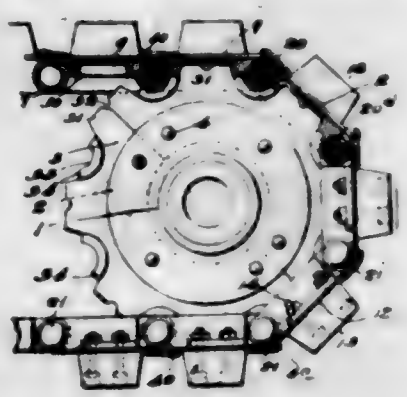
1,298,596. GAS-METER-CONNECTING DEVICE. FRANK E. STEVENS, Columbus, Ohio, assignor to The Lattimer-Stevens Company, Columbus, Ohio, a Corporation of Ohio. Filed July 8, 1918. Serial No. 243,859. 2 Claims. (Cl. 285—8.)

1. In combination with a meter and meter hanger structure having a fluid passage, a plurality of elbows having a threaded connection with each other and a threaded connection at one end of the connected elbows with the first



mentioned fluid passage and a union connection with the meter at the other end of said connected elbows.

1,298,597. TRACTOR-BELT MECHANISM. WILLIAM STRAIT, Appleton, Wis. Filed May 24, 1913, Serial No. 769,620. Renewed Aug. 4, 1917. Serial No. 184,533. 3 Claims. (Cl. 21—150.)



1. In tractor belt mechanism, the combination of chain links having interfitting hinge-eyes on their ends, said eyes extending inwardly of the links to form sprocket-engaging members, pins passing through said eyes, the links being provided with substantially central sockets and sprocket-engaging shoulders between said sockets and said eyes, a sprocket having laterally-extending sockets to engage said projections, shoulders to engage the shoulders on the links and teeth to engage the sockets in the links and tread blocks secured to the outer faces of the links.

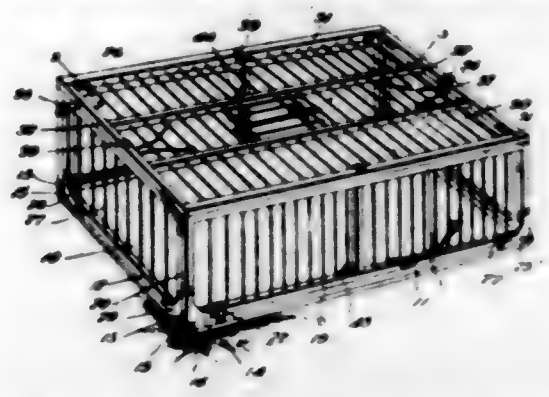
2. In tractor belt mechanism, the combination of chain links having interfitting hinge-eyes on their ends, said eyes extending inwardly of the links to form part-cylindrical sprocket-engaging members, pins passing through said eyes, the links being provided with substantially central sockets and sprocket-engaging shoulders between said sockets and said eyes, a sprocket having laterally-extending sockets to engage said part-cylindrical projections, shoulders to engage the shoulders on the links, teeth to engage the sockets in the links, tread blocks secured to the outer faces of the links, guard plates secured to the outer faces of the links, each plate extending beyond one end of its link and overlapping, and flexibly engaging the adjacent link so as to prevent passage of dirt in any of the angular positions of the links.

3. In traction belt mechanism, the combination of chain-links having interfitting hinge-eyes adapted to engage the teeth of a sprocket wheel, tread blocks secured to the links, hollow hinge pins passing through the eyes, lubricators within the pins, and detachable caps upon the pins engaging the outermost hinge-eyes to secure the pins and lubricators in position.

1,298,598. COLLAPSIBLE COOP. SANFORD R. STUTLER, Bristol, W. Va. Filed Nov. 8, 1917. Serial No. 200,105. 1 Claim. (Cl. 217—47.)

In a collapsible coop, a top frame having side frames swingingly connected therewith, a bottom, side rails on said bottom with which said side frames are swingingly

connected having slots at the ends thereof, end rails on said bottom having bearings spaced from the ends thereof and having their extremities extending within



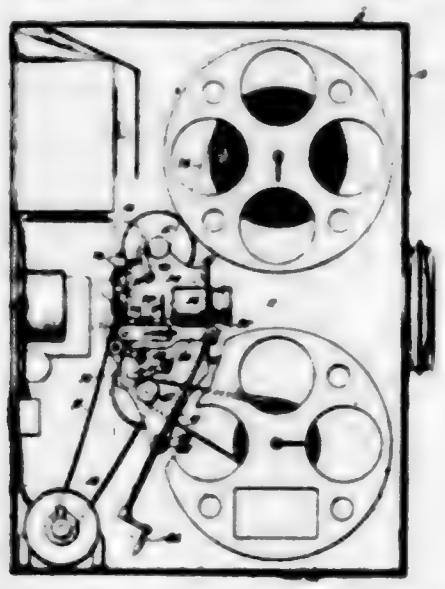
said slots, end frames, and brackets at the lower corners of the end frames having loops formed thereon through which said bearings are passed whereby said end frames are swingingly mounted.

1,298,599. ADDING-MACHINE. WILLIAM W. TALBOT, Baltimore, Md., assignor of one-half to Hoyt P. Simmons, Baltimore, Md. Filed Aug. 15, 1917. Serial No. 186,264. 1 Claim. (Cl. 235—74.)



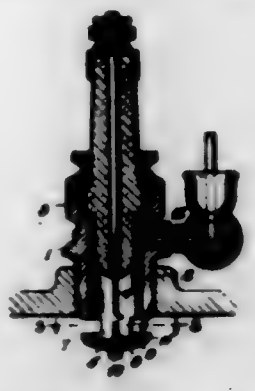
In an adding machine, a casing, a central shaft in the casing, a plurality of shaft arranged in a circular series around the central shaft, registering members of different orders carried by said circular series of shafts, a pinion loosely and slidably mounted on each of the last-mentioned shafts, and having a ratchet clutch member, a cooperating ratchet clutch member on each one of said shafts, and a resetting gear wheel on the central shaft in mesh with all the aforesaid pinions.

1,298,600. MOVING-PICTURE PROJECTOR. FREDERICK C. TAYLOR, New York, N. Y., assignor to Ferdinand McCann, San Francisco, Calif. Filed Feb. 19, 1918. Serial No. 218,150. 4 Claims. (Cl. 88—17.)



1. In a moving-picture projector, a bed plate, a film gate carried by the plate, a frame mounted to swing on the plate to and from the gate, a swivel bracket associated with the frame, a rod connected to the swivel bracket so as to turn therein but prevented from longitudinal displacement relative to the bracket, a swivel nut carried by the plate and in threaded engagement with the rod, means for revolving the rod whereby the movement of the frame relative to the gate is controlled, and an intermittent film feed carried by the frame for drawing a film through the gate.

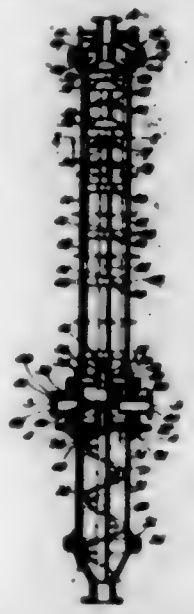
1,298,601. SPARK-PLUG. FREDERICK F. THOMARSON, Boise, Idaho. Filed Apr. 24, 1917. Serial No. 164,143. 2 Claims. (Cl. 123—169.)



1. A spark plug comprising a body having a pan-shaped head at its inner end and provided with lateral ports, an electrode grounded on the head and disposed within the body at a point between the ports, an insulation bushing in the body, an electrode in the bushing and arranged in coöperative relation with the first-mentioned electrode to form a spark gap, and means for supplying a priming charge of fuel to the body for filing the said pan.

2. A spark plug comprising a hollow body having a pan-shaped head at its inner end and provided with lateral ports, an electrode carried by the pan and extending upwardly therefrom, with its upper end disposed between the ports and above the bottom of the latter, an insulation bushing in the said body, an electrode in the bushing and coöperating with the first-mentioned electrode to form a spark gap, and means for supplying a priming charge of fuel to the said pan.

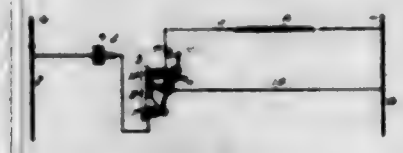
1,298,602. APPARATUS FOR REMOVING DEPOSITS FROM STILLS. NELSON W. THOMPSON, Oakland, Calif., assignor, by mesne assignments, to Shell Company of California, San Francisco, Calif., a Corporation of California. Filed Aug. 27, 1917. Serial No. 188,521. 3 Claims. (Cl. 196—4.)



1. In combination, a vertically arranged still, oil inlet means at the top of the still, oil outlet means at the bottom of the still, a hollow column rotatably mounted in the still having opening to permit the outflow of vapors therethrough, spreader devices in the still to cause the

oil to flow downwardly over the inner walls of the still, scraping devices mounted on said column arranged to remove deposits from the inner walls of the still, and means for rotating said column during the dirtilling operation.

1,298,603. WELDING-CONTROLLER. EDWIN B. H. TOWER, Jr., Milwaukee, Wis., and RAYMOND H. VAN NEST, Chicago, Ill., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 11, 1915. Serial No. 13,608. 10 Claims. (Cl. 218—8.)

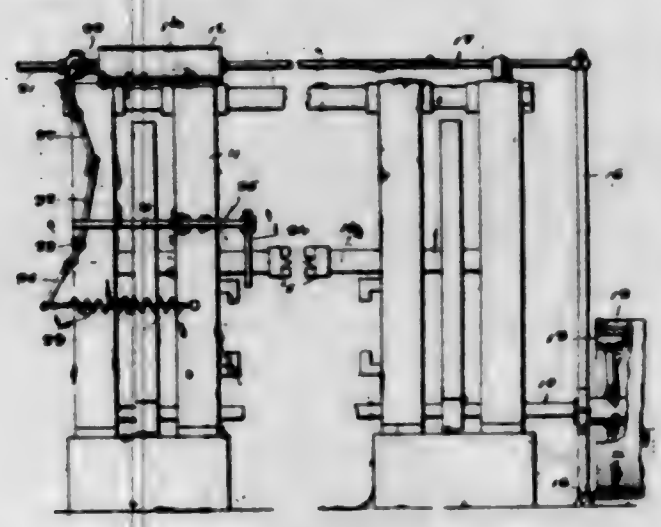


1. A welding controller comprising a current limiting resistance, and a switch therefor having a pair of windings subjected to the same electrical conditions to include said resistance when the welding current tends to rise above a certain value and to exclude said resistance when the welding current is below a certain value.

6. A welding controller provided with a resistance to limit the working current and an electromagnetic switch having a closing winding and a holding winding whereby the switch is held in one position under certain electrical conditions and moved to another position under other electrical conditions to automatically control the resistance.

10. A welding controller having a pair of electrodes between which an arc may be drawn for the welding operation, a resistance for controlling the welding current, a switch for including and excluding said resistance, and a pair of windings common to said switch and both in series with one of said electrodes at starting to close said switch after but not before the arc is drawn.

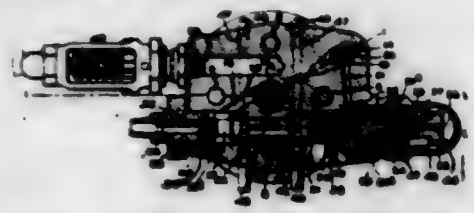
1,298,604. AUTOMATIC CLUTCH FOR VENEER-CUTTING MACHINES. HOMER C. TREVILLION, Prescott, Ark. Filed Nov. 22, 1918. Serial No. 263,714. 2 Claims. (Cl. 144—209.)



1. In a device of the class described, driving means, stock holding means rotated thereby, a cutting blade, a clutch connected with the driving means, and means automatically actuated when the cutting blade reaches a predetermined position, for actuating the clutch.

1,298,605. INTERNAL-COMBUSTION ENGINE. WILLIAM EVERETT VER PLANCK and HENRY W. STOCK, Erie, Pa., assignors to General Electric Company, a Corporation of New York. Filed Oct. 24, 1917. Serial No. 198,288. 11 Claims. (Cl. 123—32.)

1. In an apparatus of the character described, the combination with an engine cylinder, of a fuel injector having a body provided with a conduit through which fuel is supplied and a conduit through which blast air is supplied, a by-pass conduit leading from the fuel supply conduit, a by-pass valve therein, a valve in the blast air



conduit which is opened by the pressure of the blast air, and means for closing the by-pass valve when the blast air valve opens.

1,298,606. GAGE. BENJAMIN WEBSTER, Detroit, Mich., assignor to Perfection Gauge Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 1, 1917. Serial No. 199,756. 9 Claims. (Cl. 116—40.)

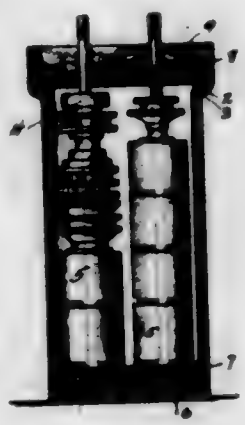


1. A gage, comprising an apertured plate or dial, a pivot bearing depending therefrom, a cylindrical segment having a spiral index thereon codperating with markings on said plate adjacent to said aperture, and a member engaging said pivot bearing having a portion extending in one direction from said bearing forming a support for said segment and in another direction therefrom forming a float arm.

5. A gage, comprising a plate or dial having an aperture therein and lugs struck up from the material removed from said aperture forming thumb and finger grips, a pivot bearing depending from said plate, a rock-arm pivoted to said bearing, and a segment mounted on said rock-arm concentric with said pivot and rockable beneath said plate adjacent the aperture therein.

9. A gage comprising a rock arm and rockable segment secured thereto, an apertured plate through which said segment may be viewed, and means limiting the rocking of said segment in one direction.

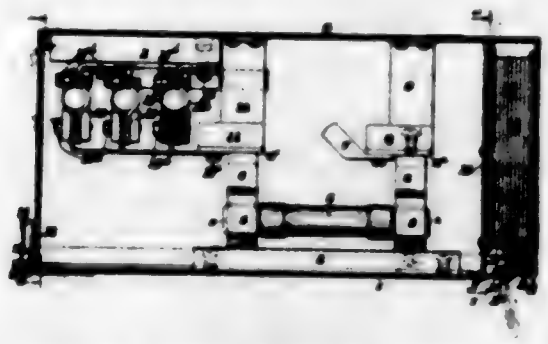
1,298,607. METHOD OF MALLEABLEIZING CAST METAL. WALTER G. WEBSTER, Highland Park, Mich., assignor of one-third to Hugh Ireland, Detroit, Mich. Filed Jan. 9, 1918. Serial No. 211,058. 4 Claims. (Cl. 148—16.)



1. The method of malleableizing metal consisting in placing the same in a hermetically sealed receptacle to-

gether with a quantity of material sufficient upon burning to exhaust the oxygen contained in the receptacle and form gas in a sufficient quantity to produce pressure preventing an inflow of gas containing oxygen, subjecting the receptacle to heat for a sufficient period prior to malleableizing metal and then allowing the same to cool while in the sealed receptacle.

1,298,608. FUSE-BOX. ALBERT A. WELLS and HARRY B. FIFE, Detroit, Mich. Filed Aug. 29, 1917. Serial No. 188,788. 21 Claims. (Cl. 175—292.)

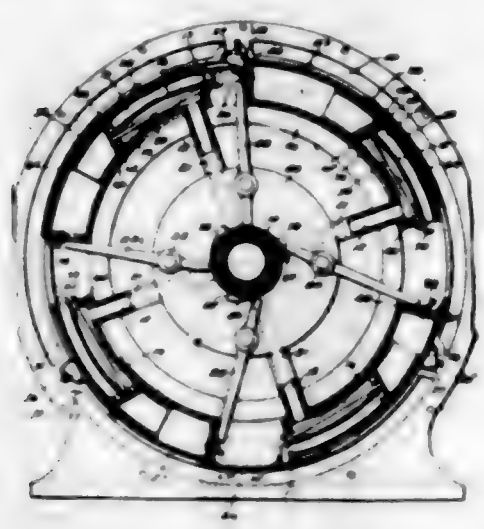


1. A fuse box having terminals, a cover for the fuse box, means on the cover for supporting the fuse for connecting the terminals, and means securing the cover to the fuse box which will permit of the movement of the cover to a position at a distance from the fuse box while thus secured.

1,298,609. SHEATHED-WIRE TERMINAL. ARTHUR M. WENTWORTH, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 25, 1918. Serial No. 255,631. 9 Claims. (Cl. 173—269.)

1. The method of forming a terminal on sheath wire which consists in placing a terminal member over the end of the core wire, reducing the terminal member until it firmly grips the core wire and then reducing the sheath between the terminals to the desired degree.

1,298,610. ROTARY ENGINE. MATHEW C. WERLE, Billings, Mont. Filed July 3, 1917. Serial No. 178,420. 7 Claims. (Cl. 123—43.)



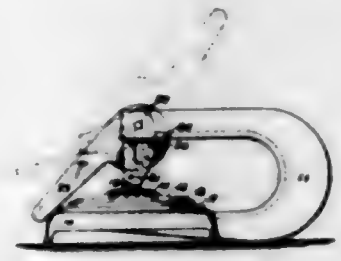
7. In a rotary engine, a casing including an outer channel, a main shaft provided with an internal bore and constituting an inlet, inlet ducts leading from said bore to the channel of the casing, a member rigidly carried by the shaft, means mounted on said member extending into the channel and dividing the latter into a plurality of chambers, cylinders operating respectively in said chambers, means for holding said cylinders in a given position during the power stroke, plungers for said cylinders, the plungers being mounted rigidly with reference to the rigid member carried by the shaft, a plurality of pivoted devices mounted on said member, and operable in timed relation to the operation of the plungers, means carried by the casing engaging one end of each of the pivoted members, a spark plug for each cylinder, and means for completing an electric circuit for each of said plugs upon the aforesaid timed operation of the pivoted members.

1,298,611. PERISCOPE. EARL WEST, San Francisco, Calif. Filed June 29, 1918. Serial No. 242,582. 5 Claims. (Cl. 88—1.)



2. In a device of the class described, an upper periscope section including a reflector and lens, a lower section including a lens and a pivotally mounted reflector, means controlling said lower reflector, and means for connecting the two sections.

1,298,612. VULCANIZING-TOOL. CHARLES T. WHITE, Santa Barbara, Calif., assignor of one-third to George E. White, Santa Cruz county, Calif., and one-third to William E. Mouck, Santa Barbara county, Calif. Filed June 13, 1918. Serial No. 239,758. 4 Claims. (Cl. 18—18.)

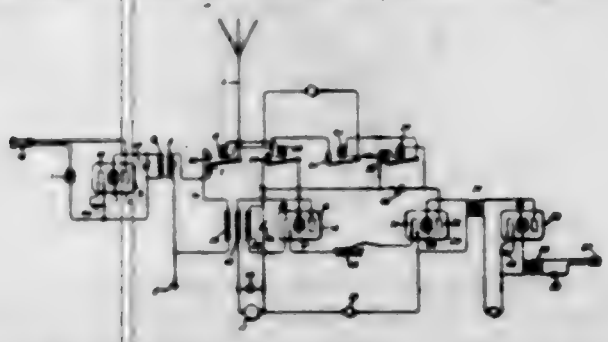


1. A vulcanizer including a base, a pressure foot, a support extending over the base, a cam lever fulcrumed on said support above the base, and means pivotally suspending the pressure foot, said means being swingably and slidably movable on the support when released by said cam lever, and adapted when in the clamping position to receive the pressure of said lever, to thereby exert a clamping action on the pressure foot after said foot is in clamping position.

4. A vulcanizer of the class described including a base, a support rigid with the base and extending over the

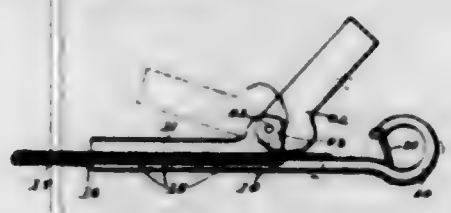
same, a cam lever or fulcrum pin extending through said lever and support, links at the sides of the lever and formed with slots into which the fulcrum pin extends, so that the links normally hang pendent from the support, to be swingable or slidable thereon, said support having forwardly facing stop surfaces against which the backs of the links may bear, a head pivotally hung on the links at the lower ends and adapted when the links are pendent to receive the pressure of the lever, and a pressure foot carried by said head.

1,298,613. WIRELESS SIGNALING SYSTEM. WILLIAM C. WHITE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 23, 1915. Serial No. 23,352. 37 Claims. (Cl. 250—6.)



34. In a radio telephone system, a receiving system, a transmitting system and a common antenna therefor, a switch for connecting said antenna to either of said systems, and voice controlled means for automatically operating said switch.

1,298,614. ROPE-CLAMP. FIRDIE WHITKANACK, West Union, Ill. Filed Oct. 26, 1918. Serial No. 259,767. 1 Claim. (Cl. 24—134.)



A rope clamp comprising a pair of plates arcuate in cross section, permanently hingedly connected at one longitudinal edge and having their other longitudinal edges detachably connected, one end of one of said plates being cut away to provide an opening and being provided with spaced laterally extending ears at the sides of said opening, the corresponding end of the other plate being formed into an attaching hook, and a longitudinally extending cam pivoted between said ears and extending through said opening into the space between said plates.

1,298,615. SAFETY APPARATUS FOR AVIATORS. LE ROY JOHN WILKINSON, Omaha, Nebr. Filed Dec. 30, 1918. Serial No. 268,782. 4 Claims. (Cl. 244—1.)



1. In a safety apparatus for aviators, the combination of an upright channel bar fixed in an aeroplane and having spaced apertures in its transverse wall and also having a vertical slot in said wall between said apertures, sheaves in said slot, fasteners extending longitudinally through the said apertures of the bar and having heads at their rear ends and eyes at their forward ends; said eyes for the engagement of hooks with which an aviator is to be equipped, slidable retaining plates, held to the back of the upright bar and having apertures for the passage of the fastener heads and also having inwardly extending slots in communication with said apertures and adapted to snugly receive the shanks of the fasteners, retractile springs interposed between the outer portions of said plates and the upright bar to normally hold the fastener heads in engagement with the plates, a handle carried by the aeroplane, and cables connected with the inner portions of the retaining plates and passed around the sheaves and connected with said handle.

1,298,616. BABY-COMFORTER. MARY WILSON, Northcote, Auckland, New Zealand. Filed July 31, 1918. Serial No. 247,627. 7 Claims. (Cl. 128—359.)



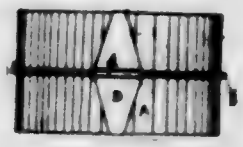
1. A child's comforter including a tray, a separate cover therefor, the two jointly forming a container adapted to hold material to be fed or administered, said container being sufficiently resilient to be partially collapsed and formed with outlet orifices through which the contents may exude, together with a fastener element passing through both the cover and tray and having a form to constitute a means to secure the comforter on the child.

4. A child's comforter including a tray, a separate cover therefor, the two jointly forming a container adapted to hold material to be fed or administered, said container being sufficiently resilient to be partially collapsed and formed with outlet orifices through which the contents may exude; means to hinge the cover to the tray at the front, and means detachably fastening the cover and tray at the rear, said last-mentioned means being formed into a loop to hang the comforter about the child's neck.

5. A child's comforter constituting a container to hold food, medicine, or other suitable material, and including a tray and a cover therefor, said cover and tray having registering outlet orifices and being sufficiently resilient to be partially collapsed by a child to cause the contents to exude through said orifice.

7. A child's comforter including a tray, a separate cover therefor, the two jointly forming a container adapted to hold material to be fed or administered, said container being sufficiently resilient to be partially collapsed and formed with outlet orifices through which the contents may exude; together with means to fasten the tray and cover, said fastening means consisting of a bead on the tray and a corresponding groove on the cover at the front of the comforter, and a flexible fastener element passing through the tray and cover at the rear, said flexible fastener being looped to hang the comforter about the child's neck.

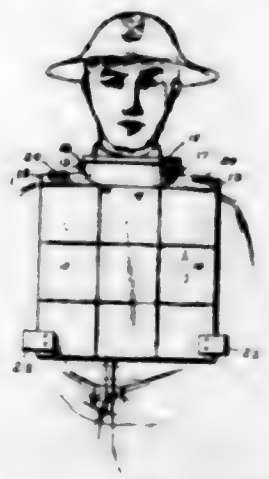
1,298,617. DUAL CONTAINER WITH OPENER THEREFOR. ROSS HAMILTON WING, Guelph, Ontario, Canada. Filed Dec. 13, 1918. Serial No. 266,626. 2 Claims. (Cl. 220—45.)



1. A dual container formed of a single receptacle divided by horizontal diaphragm placed therein at right

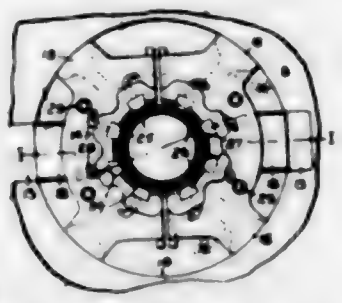
angles to the side walls thereof forming two compartments each of which is closed by a separate lid, and an externally centrally located double ended opener for said lids.

1,298,618. SOLDIER'S ARMOR. FRANK WLOSZEK, Lackawanna, N. Y. Filed Dec. 6, 1918. Serial No. 265,569. 2 Claims. (Cl. 89—36.)



1. A device of the character described comprising a plurality of metallic plates arranged in vertical and horizontal rows, hinges secured upon the rear sides of said plates and connecting the edges thereof, shoulder-engaging plates hingedly connected with the upper edges of the outermost ones of the uppermost row of said first named plates, interengaging waist-encircling straps secured upon the outermost ones of the lowermost row of said first named plates, interengaging straps secured to said first named straps and to said shoulder plates, and a neck engaging member hingedly connected with the upper edge of the central one of said uppermost row of plates.

1,298,619. SLIP. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 14, 1918. Serial No. 217,240. 1 Claim. (Cl. 255—23.)



In a well drilling machine or the like, a holder having a tapering opening circular in cross section, and a plurality of circularly arranged slips having their outer surfaces seated in the said opening and tapered to form bearing surfaces to correspond to the taper of the opening, said slips being cut away at points adjacent to the ends of their opposed faces to prevent the contact of the slips with the wall of the opening at points adjacent the opposed faces of the slips.

1,298,620. VULCANIZING DEVICE. JAMES H. WRIGHT, Lebanon, Mo. Filed Nov. 27, 1915. Serial No. 63,802. 6 Claims. (Cl. 18—18.)



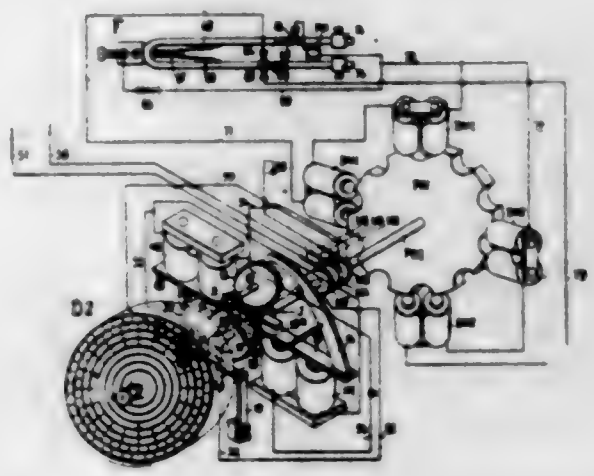
1. In a tire tube repair device, a shallow fuel container having a bendable bottom, a flange projecting inwardly from the upper portion of the wall of said container, a closure for the top of said container, which closure engages the inwardly projecting flange, a sheet of flexible material applied to the bottom of said container, which sheet is substantially larger than the area of the bottom of the container so that its edges project beyond the wall of the container, a repair patch applied to the underside of the flexible sheet, and a protecting sheet covering the repair patch.

1,298,621. ADVERTISING DEVICE. GARNET P. WRIGLEY, Elmira, N. Y. Filed Apr. 23, 1917. Serial No. 163,994. 1 Claim. (Cl. 40—21.)



A label, consisting of a card having V-shaped notches in opposite ends, a binder extending along a side of the card and through the notches in the ends thereof, and a strip disposed between the notches and extending over the binder and attached at its edges to the card upon opposite sides of the binder.

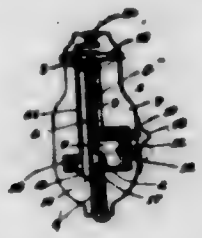
1,298,622. MEANS FOR SYNCHRONIZING ROTARY DEVICES. GEORGE M. YORKE, New York, N. Y., and GEORGE R. BENJAMIN, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1915. Serial No. 654. 36 Claims. (Cl. 178—53.)



1. In a telegraph system, the combination of two rotary distributers, means for driving the same, means for transmitting current impulses from the one distributer to the other, and for varying such impulses, according to combinations of a code having an odd number of impulses for each character, for the transmission of signals, and means for maintaining synchronism between said distributers, comprising correction mechanism arranged to restore proper phase relation between said distributers, and to be brought into operation immediately to that end by any variation of such impulses from the normal occasioned by the transmission of a code character, if the two distributers are not in proper phase relation when such variation occurs.

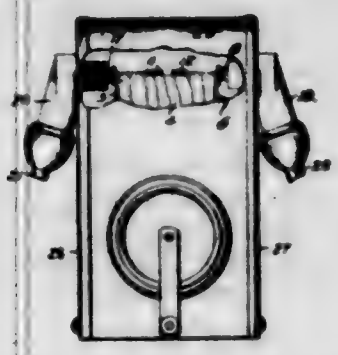
33. A synchronising system comprising two moving bodies having independent driving members, means for automatically producing relative motion between one of said bodies and its driving member to bring said moving bodies into synchronism, and means controlled thereby for insuring the completion of each movement.

1,298,623. ELECTRIC ATTACHMENT-PLUG. CARL ZAIOLEK, Lewiston, Me. Filed Oct. 29, 1917. Serial No. 197,651. 1 Claim. (Cl. 173—360.)



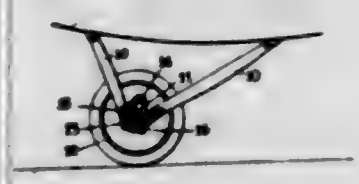
A plug of the class described having a chamber therein, transverse recesses in its upper end, a frame-work within the chamber, an L-shaped rod slidably mounted within the frame-work and having one end extending beyond the walls of the plug, a sliding button on said end, said frame-work having a recess therein adapted to receive the rod at the end of its upward movement, a spring for forcing said rod into the recess, and a pair of prongs pivoted to the upper end of the rod and lying in the transverse recesses in the plug.

1,298,624. IGNITION-DYNAMO. JAMES GARFIELD ZIMMERMAN, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed May 12, 1916. Serial No. 97,038. 10 Claims. (Cl. 171—209.)



1. In an ignition dynamo, a coil having a primary and a secondary winding, heads on said coil, terminals on said heads for the secondary winding forming a safety spark gap, and means for connecting conductors to said terminals.

1,298,625. LANDING-GEAR FOR AEROPLANES. PAUL G. ZIMMERMANN, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Dec. 22, 1916. Serial No. 138,501. 13 Claims. (Cl. 244—2.)



1. In a landing gear for aircraft, the combination of downwardly converging V-arranged struts, a fitting comprising a body portion having its ends socketed and upwardly and divergently extended to receive and join said struts, an axle, and shock absorber elastics laced over said axle and transversely beneath said fitting.

9. A landing-gear fitting for aircraft comprising a body portion having sockets formed thereon respectively intermediately of and adjacent its extremities, the sockets in one instance facing laterally and in the other instance substantially upwardly.

10. A landing-gear for aircraft including a strut fitting having its inner face socketed to receive an interconnection between the landing-gear struts.

1,298,626. FLOUR-SIFTER. FRANK J. MOHR, Peoria, Ill., assignor to Stuber & Kuck Company, Peoria, Ill., a Corporation of Illinois. Filed Feb. 25, 1918. Serial No. 218,970. 2 Claims. (Cl. 83—60.)

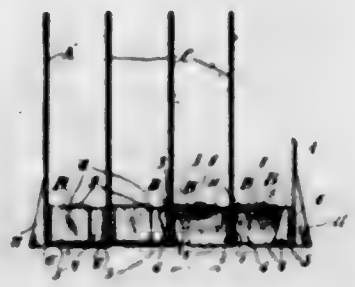


1. As an article of manufacture, an agitator for a sifter consisting of a single length of wire including terminal portions constituting supporting shaft-ends, said wire between said ends being bent to form a plurality of spaced independent arc shaped arms radiating from the axis of rotation of the agitator and free to flex independently of one another and to flex with the wire throughout its entire length between said shaft-ends in a lateral direction.

1,298,627. RESISTANCE ELEMENT. THEODORE W. CASE, Scipio, N. Y. Filed Feb. 19, 1917. Serial No. 149,704. 4 Claims. (Cl. 219—76.)

1. A resistance element formed of a compound of lead, antimony and sulfur.

1,298,628. RACK OR FILE FOR CORRESPONDENCE AND THE LIKE. HERBERT O. ROSS, St. Louis, Mo. Filed Apr. 20, 1918. Serial No. 229,764. 12 Claims. (Cl. 45—4.)

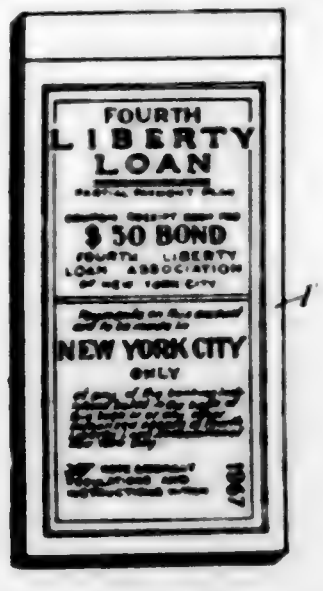


1. A rack of the class described comprising a plurality of sections each including a wall and an angular floor-member, the floor-member having one leg extending flatwise along the wall and the floor-member being rigidly fixed at its said leg to the wall, the other leg of the floor-member extending laterally of, and approximately at right angles to, the wall and overlapping flatwise upon the corresponding leg of the other section, and means engaging the overlapping legs of the floor-members of the sections for locking the sections together.

1,298,629. SUBSCRIPTION-BOOK. HERBERT F. RAWLL, Short Hills, N. J., assignor to Christmas Club, a Corporation of New York. Filed Nov. 11, 1918. Serial No. 262,097. 4 Claims. (Cl. 283—57.)

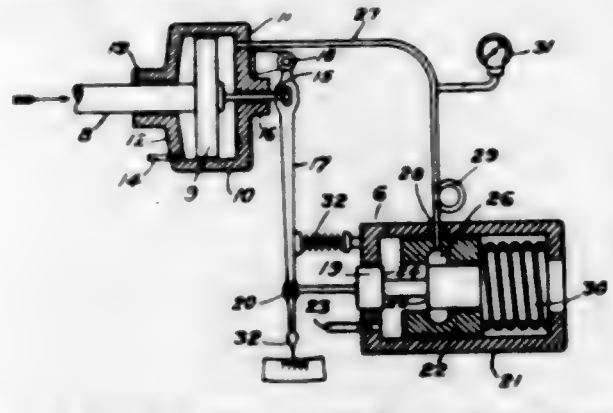
1. In a subscription book for use in a centralized system of partial payment subscriptions, having a central accounting office and a number of receiving agencies, at any one of which agencies payments are to be made, said book having a detachable purchase agreement sheet showing the terms of agreement and having an indicated place for signature of the subscriber and provided with marks to identify it with said book, a series of sheets provided with means for indicating successive partial payments on account of the total predetermined subscription, and a series of accounting means detachably secured in the book, provided with a legend indicating that the means must be detached by a receiving agency and forwarded to the

accounting office, and bearing matter to indicate that a certain number of payments indicated by the preceding



partial-payment sheets have been made, said accounting means having marks identifying them with the book.

1,298,630. THRUST-BEARING AND DYNAMOMETER. HENRY F. SCHMIDT, Pittsburgh, Pa., assignor to Westinghouse Gear & Dynamometer Company, a Corporation of Pennsylvania. Filed June 13, 1918. Serial No. 239,811. 6 Claims. (Cl. 64—25.)



1. In a thrust bearing, relatively rotatable members, means for delivering fluid under pressure to the space between said members, and means responsive to axial movements of one of the members for controlling the delivery of said fluid.

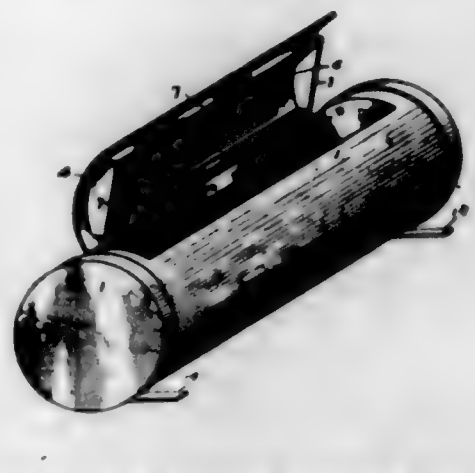
2. In a thrust bearing, relatively rotatable thrust members, means for delivering fluid under pressure to the space between said members, and means responsive to axial movements of one of the members for magnifying said movements and for controlling the delivery of the fluid to said thrust members.

4. A thrust bearing comprising a cylinder, a piston inclosed by the cylinder and movable axially in response to variations in the thrust load, means for admitting fluid under pressure to the cylinder and for controlling the amount of fluid delivered in response to variations in the axial movement of the piston, and means for measuring the thrust imparted by said shaft.

1,298,631. STERILIZER. BENJAMIN F. HILDEBRAND, San Francisco, Calif. Filed Sept. 13, 1918. Serial No. 254,860. 6 Claims. (Cl. 167—3.)

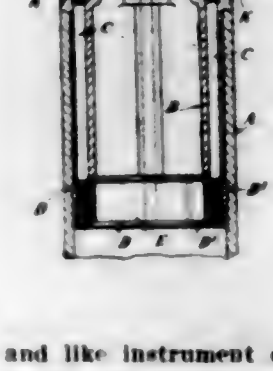
3. A sterilizer comprising a pair of nested cylinders; a well conecting the cylinders at the top portions thereof to provide an opening into the cylinder; a suitable cover hingedly mounted above the well; a condensing plate secured to the under side of the cover and having depending flanges to drain condensed moisture into said well; annular insulators mounted between the ends of the cylinders to retain and support said cylinders in spaced relation; and a heating unit mounted between said annular insulators.

6. A sterilizer comprising a pair of nested cylinders; a well connecting the cylinders between portions of their peripheries, said well having apertured walls to permit the passage of air to the space between said cylinders; a suitable cover hingedly mounted above the well; a condensing plate secured to the under side of the cover and having depending flanges on all sides thereof depending



into the well to convey condensed moisture from said plate into the inner cylinder; apertured annular insulators mounted between the cylinders to retain the same in spaced relation; a heating unit mounted within the apertures of said insulators; and lateral extensions mounted upon each end of the outer cylinders and opposite the well to retain said well uppermost.

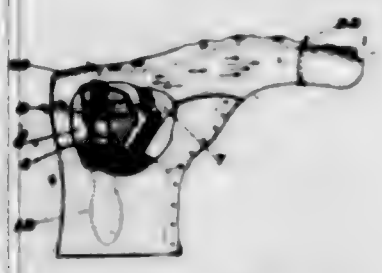
1,298,632. PERISCOPE AND LIKE INSTRUMENT CASING. JAMES WEIR FRENCH, Glasgow, Scotland, assignor to Barr and Stroud Limited, Anniesland, Glasgow, Scotland. Filed Nov. 12, 1918. Serial No. 262,233. 6 Claims. (Cl. 285—161.)



4. Periscope and like instrument casings composed of tubular parts, having two tubular casing parts, a first part and a second part, connected together co-axially, a faced surface at the end of the first part, a shoulder on the second part at a distance from and presented toward its end conforming to the faced surface end of the first part, one of the parts being bored to receive the end of the other part so that the faced surface end may bear against the shoulder, longitudinal draw bars, means for securing the foot end of each draw bar in the interior of the first part, longitudinal passages formed in the walls of the second part through which the draw bars are adapted to extend, recesses formed in the exterior of the second part to which the passages extend and into which the heads of the draw bars are adapted to project, tension means at the heads of the bars and means for covering the recesses, for the purposes set forth.

REISSUES.

14,617. METHOD OF MAKING SHOES. JAMES CAVANAGH, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 1, 1917. Serial No. 194,248. Original No. 1,197,603, dated Sept. 12, 1916, Serial No. 876,341, filed Dec. 9, 1914. 13 Claims. (Cl. 12—142.)



5. That improvement in the art of making shoes which consists in molding the toe portion of a shoe upper to substantially the shape which it is to have in the finished shoe assembling an insole and said upper upon a longitudinally shortened last, fastening the upper to the tread face of the insole to form a toe pocket and hold it in properly adjusted position at the tip line, lengthening said last and thereby stretching the upper to a predetermined size corresponding to the size of the finished shoe to be produced, and drawing the marginal edge of said upper over upon said insole and fastening a welt through said upper to the lip of the insole.

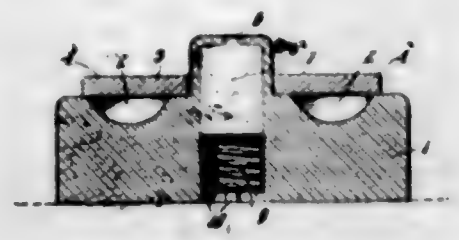
14,618. EXERCISING APPARATUS. JEAN CHANAUD, New York, N. Y. Filed Jan. 25, 1919. Serial No. 273,202. Original No. 1,285,620, dated Nov. 26, 1918, Serial No. 182,292, filed July 23, 1917. 1 Claim. (Cl. 46—69.)



In an exercising apparatus including a block and cable, means for limiting movement of the cable through the block, including a single strand of wire having one terminal coiled about the cable to form closely spaced convolutions and a single larger convolution spaced from the cable to form a stop, the other terminal being formed into a hook for the purpose set forth.

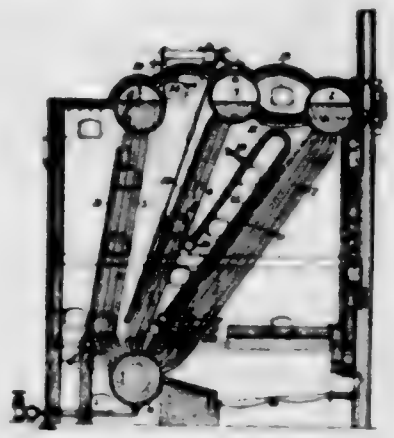
14,619. HOLDER FOR PERSONAL-TREATMENT PREPARATIONS. ANNETTA MOELLER, Indianapolis, Ind. Filed Jan. 11, 1919. Serial No. 270,761. Original No. 1,262,342, dated Apr. 9, 1918, Serial No. 203,193, filed Nov. 21, 1917. 4 Claims. (Cl. 206—1.)

1. A holder for manicuring preparations having a base body adapted to be supported directly upon a suitable plane surface and provided in its upper surface with a plurality of open receptacles for manicuring compositions, and a rotatable cover mounted on the upper face of said body and provided with a plurality of openings corresponding to said recesses and with a plurality of cover sections corresponding thereto whereby in the rotation of said cover said receptacles may be simultaneously opened or closed, and a central hollow post rising from the base body above the surface thereof said cover being centrally apertured to engage said post whereby the cover is retained against lateral displacement and said post being provided



with an opening in its upper end from which cotton stored in the post may be withdrawn.

14,620. SUPERHEATER-BOILER. JAMES P. SNEDDON, Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N. Y., a Corporation of New Jersey. Filed May 2, 1914. Serial No. 836,036. Original No. 1,045,207, dated Nov. 26, 1912, Serial No. 360,850, filed Mar. 6, 1907. 7 Claims. (Cl. 122—478.)



1. A steam superheater having headers within the boiler setting, tubes connecting said headers, a dead-header adjacent to one of said headers and within the boiler setting, an inlet pipe leading from the steam space of the boiler to one end of the dead-header, a connection betwen the dead-header and the adjacent header, and a steam offtake pipe leading from the other header, substantially as described.

2. A steam superheater having headers within the boiler setting, tubes connecting said headers, a dead-header adjacent to one of said headers and within the boiler setting, an inlet pipe leading from the steam space of the boiler to the dead-header at one side of the setting, a plurality of connections between the dead-header and the adjacent header at the other side of the boiler setting, and an offtake pipe communicating with the other header, the offtake pipe and the communication between the dead-header and the header being at opposite ends of the superheater, substantially as described.

3. A steam superheater having headers within the boiler setting and extending beyond said setting, tubes connecting said headers within the boiler setting, a dead-header adjacent to the lower header and extending beyond the boiler setting, an inlet pipe exterior of the boiler setting leading from the steam space of the boiler to the dead-header, connections between the dead-header and the lower header, and an offtake pipe exterior of the boiler setting communicating with the upper header, substantially as described.

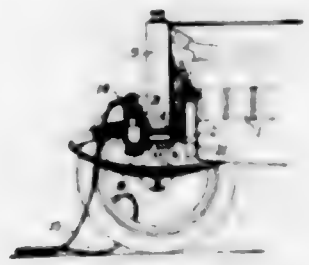
4. The combination with a steam boiler setting, of a superheater therein comprising transverse headers extending across the setting, tubes secured in the headers and overhanging the same, and metallic supports in the setting walls arranged to receive said headers and resist the overturning moment of the tubes, said supports being protected by the walls from contact with the flame and gases, substantially as described.

5. A steam boiler superheater comprising headers, upwardly projecting U-tubes secured thereto, both legs of said tubes extending in approximately the same direction and at an angle to the vertical and horizontal, recessed saddles to receive the headers arranged to prevent overturning thereof, and beams to which said saddles are secured, substantially as described.

6. A superheater boiler having transverse superheater headers, upwardly projecting tubes secured thereto, supports extending underneath the headers, recessed saddles for receiving the headers on said supports and arranged to resist the overturning moment of the tubes, the supports and saddles being beyond the inner surfaces of the side walls and protected from the flame and gases, substantially as described.

7. A steam boiler superheater comprising rectangular headers and U-shaped tubes expanded into said headers, and supports extending beneath the headers, said supports being protected by the brickwork of the boiler setting, and comprising saddles having angular recesses forming seats for the headers and cross beams upon which the saddles rest and to which they are secured, substantially as described.

14,621. PUMP FOR MOTOR-VEHICLES. SILAS A. STRICKLAND, Detroit, Mich., assignor to Detroit Accessories Corporation, Detroit, Mich., a Corporation of Michigan. Filed Dec. 31, 1915. Serial No. 69,696. Original No. 1,150,977, dated Aug. 24, 1915, Serial No. 855,348, filed Aug. 6, 1914. 13 Claims. (Cl. 230—27.)



1. The combination of an extension member for the shaft of a motor, a connecting member on the end of said extension member adapted to be engaged with a member on a motor shaft by an endwise movement of the extension member, a pump, and means for supporting the pump in engagement with the extension member to be driven thereby and for holding said member moved endwise to hold the connecting members engaged.

2. The combination of a pump having a casing and a shaft projecting therethrough, means for detachably connecting the pump shaft with the shaft of the motor of a motor vehicle, and a supporting member on the pump casing to detachably engage a bearing adjacent the end of the motor shaft to support the pump independently of the connecting means and with the pump shaft in axial alinement with the motor shaft, said member forming the sole support for the pump.

3. The combination of an extension member for the forwardly extending end of a motor crank-shaft, a connecting member on the end of the extension member to engage a connecting member on the shaft, a spring to normally hold said extension member moved endwise with said connecting members disengaged, a pump having a crank shaft adapted to be detachably connected to the outer end of the extension member, and means for holding the pump and the extension member moved endwise against the action of said spring with the connecting members engaged.

4. The combination of a pump having a crank shaft, a tubular member on the pump with the pump crank shaft extending into one end thereof, and formed to engage a bearing to rigidly support the pump with its crank shaft in axial alinement with an engine shaft, and connecting and disconnecting means for transmitting motion from an engine shaft to the pump shaft.

5. The combination of a pump having a crank shaft, a tubular supporting member into one end of which the pump crank shaft extends, connecting and disconnecting means within the tubular member for connecting an engine shaft and the pump shaft, and means coöperating with the tubular member for holding the connecting and disconnecting means engaged.

6. The combination of a pump having a crank shaft, an extension for an engine shaft, connecting and disconnecting means for connecting the engine shaft and extension, a bearing for the extension, a supporting member for the pump detachably engaging said bearing, and means for detachably holding the supporting member engaged with the bearing.

7. The combination of a pump having a casing provided with an extended hub forming a bearing for the crank shaft of the pump, a sleeve engaging said hub and adapted to engaged a supporting bearing to form a support for the pump casing, and a member within the sleeve projecting therefrom at one end and adapted to connect and disconnect the end of an engine shaft and the end of the pump shaft and detachably engaged with said pump shaft.

8. The combination of a pump having a crank shaft, an extension for an engine shaft, connecting and disconnecting means for the engine shaft and extension, a bearing for the extension, a supporting member for the pump to hold the same with its crank shaft engaged with the extension, and means for detachably holding the supporting member in place.

9. The combination of an extension member for the crank shaft of a motor, means for detachably connecting the extension member and the crank shaft of a motor by an endwise movement of the member, a bearing member for the extension member, a pump having a crank shaft, a tubular member on the pump surrounding its crank shaft and adapted to detachably engage the bearing for the extension member to support the pump with its crank shaft in alinement and engaged with the end of the extension member.

10. The combination of an extension member for a motor crank shaft adapted to be detachably engaged therewith, a bearing for the extension member, a pump having a casing provided with an extended hub and a crank shaft extending through the hub, a tubular supporting member secured upon the hub and into which the extension member extends, said tubular member being adapted to receive the bearing member for the extension member at its opposite end, and interlocking means between the bearing member and the tubular supporting member to hold the pump casing from turning and the extension member engaged with the crank shaft of the pump.

11. In a combination with a pump including a casing and shaft, of a member concentric with the pump shaft forming the sole means for detachably supporting the pump, and means for preventing the bodily rotation of the pump about the axis of the shaft when power is applied to the pump shaft to turn the same.

12. The combination of a pump casing having an extended hub, a shaft extending through the hub, said hub forming the sole support for the pump, and means for preventing the bodily rotation of the pump casing about the axis of the shaft when power is applied to the projecting end of the shaft to turn the same.

13. The combination with a pump, including a casing and shaft, of a tubular member forming the sole means for detachably supporting the pump, through which member motion is adapted to be transmitted from a driving shaft to the pump, and means for preventing the rotation of the casing about the axis of the pump shaft.

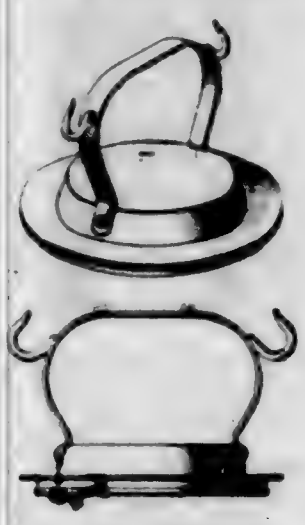
DESIGNS.

53,108. TIRE. HARRY C. ARNOLD, Brookline, Mass., assignor to Converse Rubber Shoe Company, Malden, Mass., a Corporation of Massachusetts. Filed Mar. 28, 1917. Serial No. 158,129. Term of patent 14 years.



The design for a tire, as shown.

53,109. MILK-PAIL COVER. HENRY B. BABSON, Chicago, Ill., assignor to Pine Tree Milking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1919. Serial No. 270,747. Term of patent 14 years.



The ornamental design for a milk pail cover, as shown.

53,110. TIMEPIECE-DIAL. BENJAMIN N. BLISS, Waltham, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1918. Serial No. 265,474. Term of patent 14 years.



The ornamental design for a timepiece dial, as shown.

53,111. PNEUMATIC TIRE. WILLIAM R. BLOWERS, Omaha, Nebr. Filed Jan. 24, 1919. Serial No. 272,934. Term of patent 14 years.



The ornamental design for a pneumatic tire, as shown.

53,112. PNEUMATIC TIRE. WILLIAM R. BLOWERS, Omaha, Nebr. Filed Jan. 24, 1919. Serial No. 272,935. Term of patent 14 years.



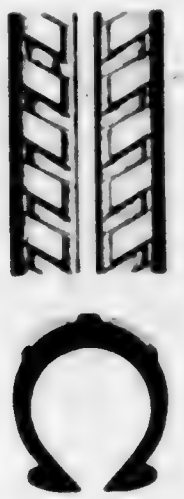
The ornamental design for a pneumatic tire, as shown.

53,113. PNEUMATIC TIRE. WILLIAM R. BLOWERS, Omaha, Nebr. Filed Jan. 24, 1919. Serial No. 272,936. Term of patent 14 years.



The ornamental design for a pneumatic tire, as shown.

53,114. PNEUMATIC TIRE. WILLIAM R. BLOWERS, Omaha, Nebr. Filed Jan. 24, 1919. Serial No. 272,937. Term of patent 14 years.



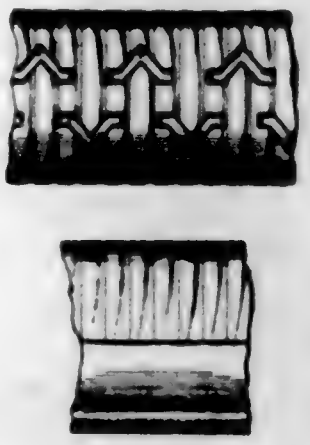
The ornamental design for a pneumatic tire, as shown.

53,115. SUCTION-SWEEPER CASING. FRED H. BURGNER, Lakewood, Ohio. Filed Dec. 31, 1917. Serial No. 209,802. Term of patent 14 years.



The ornamental design for a suction sweeper casing, as shown.

53,116. RUBBER TIRE. ARTHUR R. COLVIN, Bloomfield, N. J., assignor to The Combination Rubber M'f'g Co., Bloomfield, N. J., a Corporation of New Jersey. Filed Dec. 30, 1918. Serial No. 268,988. Term of patent 14 years.



The ornamental design for a rubber tire, as shown.

53,117. LIQUID-DISPENSING APPARATUS. VOLNEY E. H. CONE, Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed Nov. 23, 1918. Serial No. 263,932. Term of patent 14 years.



The ornamental design for a liquid dispensing apparatus, as shown.

53,118. BUTTON, BADGE, MEDAL, EMBLEM, OR WATCHCASE. JOSÉ BOTELHO D'AMARAL, Fall River, Mass. Filed Dec. 10, 1918. Serial No. 266,125. Term of patent 7 years.



The ornamental design for a button, badge, medal, emblem, or watchcase, as shown.

53,119. STATUETTE OR SIMILAR ARTICLE. HERBERT ELLIOTT, Toronto, Ontario, Canada. Filed Dec. 20, 1918. Serial No. 267,662. Term of patent 3½ years.



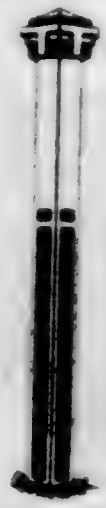
The ornamental design for a statuette or similar article, as shown.

53,120. LABEL. JOHN L. FLANNERY, Jr., Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1917. Serial No. 208,325. Term of patent 7 years.



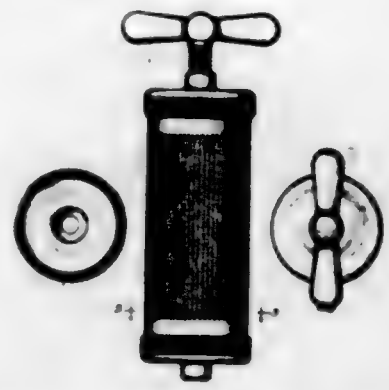
The ornamental design for a label as shown.

53,121. DISPLAY-PILLAR. IRA L. FRENCH, Chicago, Ill., assignor to The Brumbaugh System, a Corporation of Illinois. Filed Dec. 3, 1918. Serial No. 265,182. Term of patent 14 years.



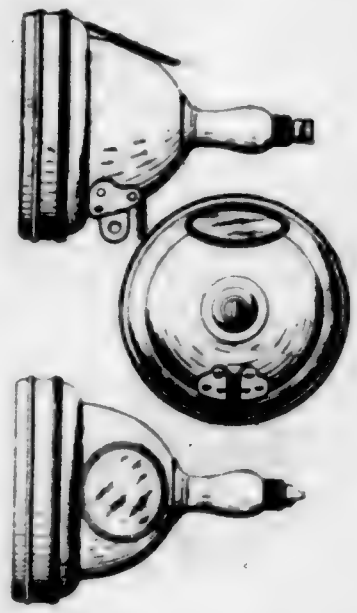
The ornamental design for a display pillar, as shown.

53,122. GREASE-GUN. ARTHUR V. GULLBORG, Chicago, Ill. Filed Dec. 21, 1918. Serial No. 267,859. Term of patent 7 years.



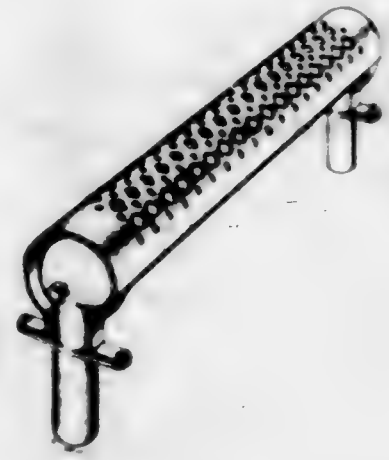
The ornamental design for a grease gun as shown.

53,123. VEHICLE-LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Apr. 10, 1916. Serial No. 90,262. Term of patent, 3½ years.



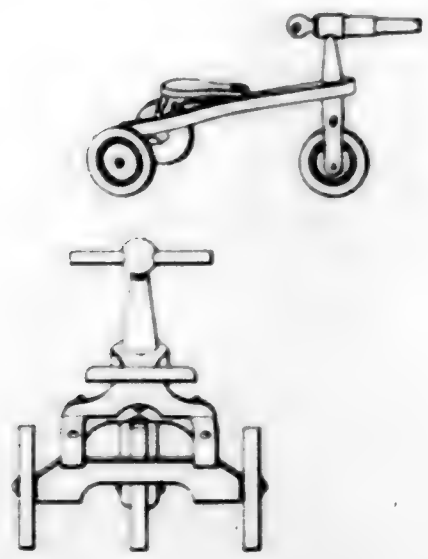
The ornamental design for a vehicle lamp as shown.

53,124. AUTOMOBILE-HEATER. EUGENE H. HELLER, Chicago, Ill., assignor to The Hill Pump Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1917. Serial No. 141,684. Term of patent 7 years.



The ornamental design for an automobile heater as shown.

53,125. CHILD'S CAR. HENRY G. HOGG, Winthrop, Mass. Filed Sept. 25, 1918. Serial No. 255,727. Term of patent 3½ years.



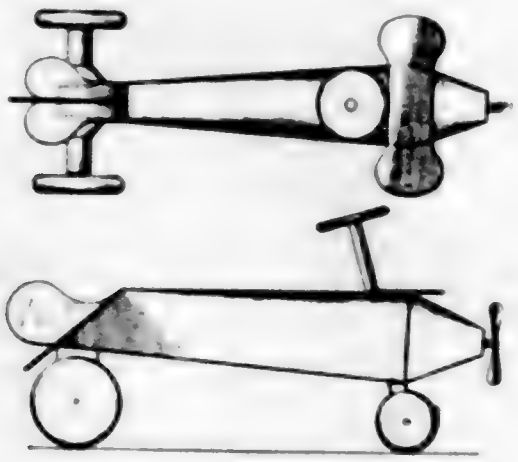
The ornamental design for a child's car as shown.

53,126. SERVICE-FLAG, PENNANT, EMBLEM, OR ARTICLE OF A SIMILAR NATURE. CHARLES SUMNER JACOBS, Melrose Highlands, Mass., assignor to The Over There Mfg. Co., Melrose Highlands, Mass., a Firm composed of Benjamin S. Samuels and Charles S. Jacobs. Filed May 16, 1918. Serial No. 235,049. Term of patent 3½ years.



The ornamental design for a service flag, pennant, emblem, or article of a similar nature, as shown.

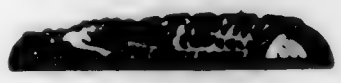
53,127. VELOCIPEDE. JOSEPH F. JONES, La Grange, Ill. Filed Nov. 9, 1917. Serial No. 201,178. Term of patent 7 years.



The ornamental design for a velocipede, as shown.

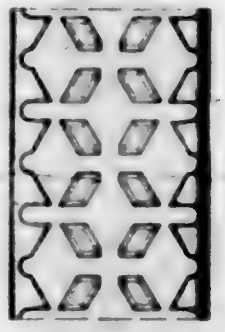
53,128. HAT-PIN, SCARF-PIN, CUFF-LINK, TIE-CLIP, RING, FOB, PENDANT FOR NECK-CHAINS, PIN, OR ARTICLE OF MANUFACTURE OF LIKE CHARACTER. FREDERICK KAUFMANN, Jr., Brooklyn, N. Y., assignor to Jefferson E. Duncan, Arlington Heights, Mass. Filed Aug. 19, 1918. Serial No. 250,613. Term of patent 7 years.





The ornamental design for a hat pin, scarf pin, cuff link, tie clip, ring, fob, pendant for neck chains, pin, or article of manufacture of like character, as shown.

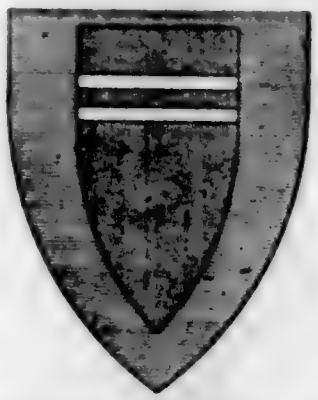
53,129. RUBBER TIRE. LAWRENCE J. KELLY, East Palestine, Ohio, assignor to The McGraw Tire & Rubber Company, East Palestine, Ohio, a Corporation of Ohio. Filed Nov. 20, 1918. Serial No. 263,480. Term of patent 14 years.





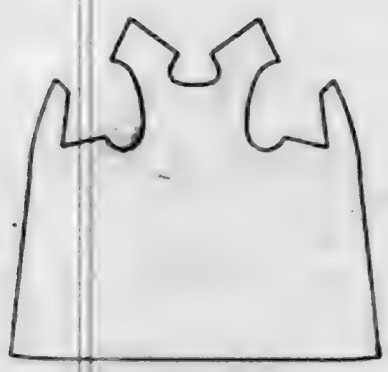
The ornamental design for a rubber tire as shown.

53,130. FLAG, PENNANT, SIGN, EMBLEM, OR AN ARTICLE OF A SIMILAR NATURE. MAY HURD KAUSSEN, Cleveland, Ohio. Filed Aug. 16, 1918. Serial No. 250,255. Term of patent 7 years.



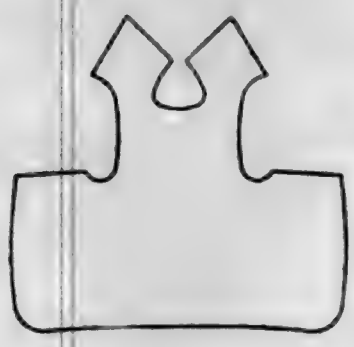
The ornamental design for a flag, pennant, sign, emblem, or an article of a similar nature, as shown.

53,131. PATTERN FOR TOP-COATS. ISAAC LEWIS, Hamilton, Ontario, Canada. Filed Apr. 27, 1918. Serial No. 231,253. Term of patent 7 years.



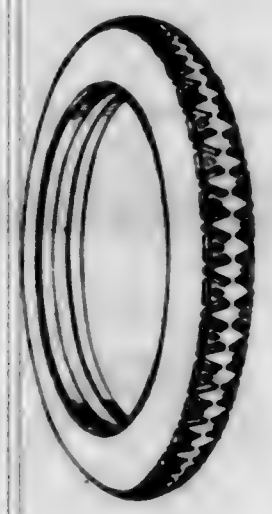
The ornamental design for a pattern for top coats, as shown.

53,132. PATTERN FOR SACK-COATS. ISAAC LEWIS, Hamilton, Ontario, Canada. Filed Apr. 27, 1918. Serial No. 231,254. Term of patent 7 years.



The ornamental design for a pattern for sack coats, as shown.

53,133. AUTOMOBILE-TIRE. CHARLES W. MCKONE, Canton, Ohio, assignor to The Gordon Tire & Rubber Company, Canton, Ohio, a Corporation of Ohio. Filed Sept. 9, 1918. Serial No. 253,338. Term of patent 7 years.



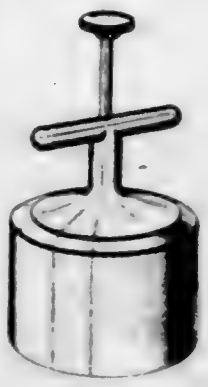
The ornamental design for an automobile tire, substantially as shown.

53,134. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to Art in Buttons, Incorporated, a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,808. Term of patent 3½ years.



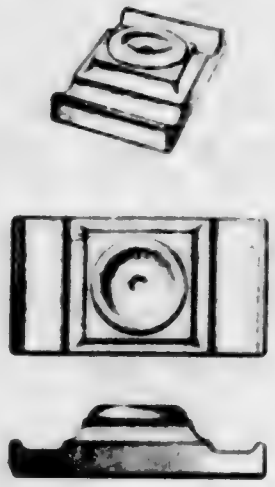
The ornamental design for a button substantially as shown and described.

53,135. ICE-CREAM MEASURE. ADOLPH P. OSIUS, Detroit, Mich. Filed Dec. 23, 1918. Serial No. 268,107. Term of patent 3½ years.



The ornamental design for an ice cream measure, as shown.

53,136. SINGLE DOUBLE-DESK INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., New York, N. Y., a Firm composed of Charles F. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Sept. 11, 1916. Serial No. 119,595. Term of patent 14 years.



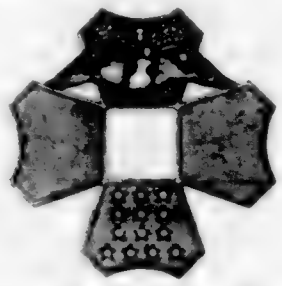
The ornamental design for a single double-desk inkstand, as shown.

53,137. AEROPLANE-BODY. EINO SALMINEN, Buffalo, N. Y., assignor to August Decker, Buffalo, N. Y. Filed June 10, 1918. Serial No. 239,331. Term of patent 14 years.



The ornamental design for an aeroplane body, substantially as shown.

53,138. FLAG, PENNANT, SIGN, EMBLEM, OR ARTICLE OF A SIMILAR NATURE. OLIVER FRED SELLE, St. Louis, Mo. Filed Dec. 31, 1918. Serial No. 269,162. Term of patent 7 years.



The ornamental design for a flag, pennant, sign, emblem, or article of a similar nature, as shown.

53,139. PHONOGRAPH-HORN. WILSON F. SMITH, East Liverpool, Ohio. Filed Dec. 7, 1918. Serial No. 265,801. Term of patent 7 years.



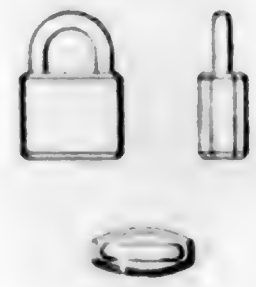
The ornamental design for a phonograph horn, as shown.

53,140. EMBLEM, PIN, OR SIMILAR ARTICLE. JACOB SOLINGER, Providence, R. I. Filed Nov. 29, 1918. Serial No. 264,739. Term of patent 3½ years.



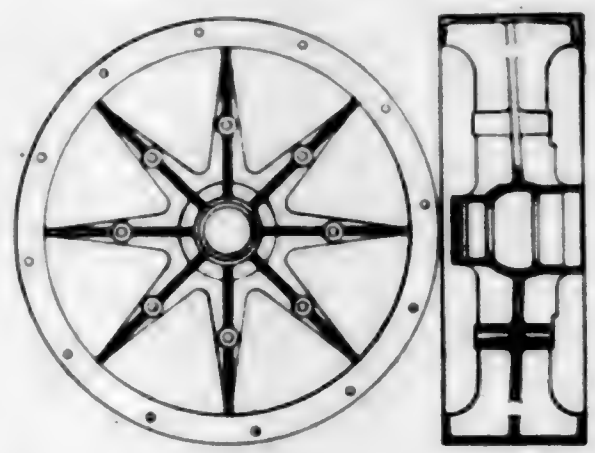
The ornamental design for an emblem, pin, or similar article, as shown.

53,141. PADLOCK. ELMER B. STONE, New Britain, Conn., assignor to American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 5, 1918. Serial No. 210,572. Term of patent 14 years.



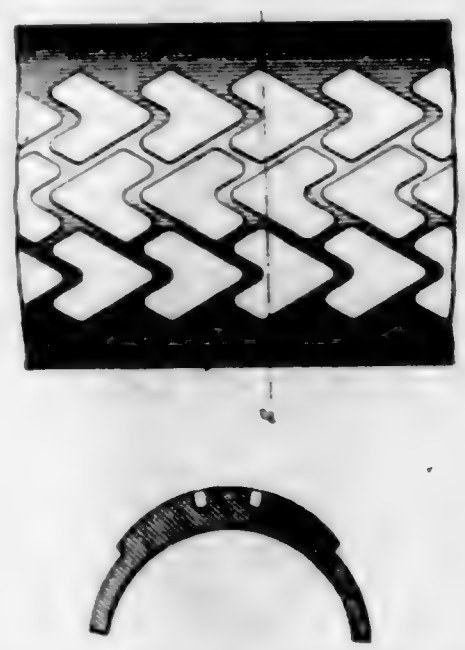
The ornamental design for a padlock as shown.

53,142. VEHICLE-WHEEL. RALPH H. WEST, Cleveland, Ohio. Filed Dec. 20, 1915. Serial No. 67,922. Term of patent 7 years.



The ornamental design for a vehicle wheel substantially as shown.

53,143. PNEUMATIC TIRE. MARTIN L. WIENER, Akron, Ohio, assignor to The Oldfield Tire Co., Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 25, 1919. Serial No. 273,179. Term of patent 14 years.



The ornamental design for a pneumatic tire as shown.

TRADE-MARKS

OFFICIAL GAZETTE, MARCH 25, 1919.

[PUBLISHED APRIL 17, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 100,646. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BONNEY VISE & TOOL WORKS, Inc., Philadelphia and Allentown, Pa., and New York, N. Y. Filed Jan. 16, 1917.



The word "Lehigh" is disclaimed apart from the mark shown in the drawing.

Particular description of goods.—Vises, Wrenches; Cement-Working Tools, as Follows: Inside-Angle Tools, Bevel-Edgers, Inside-Curve Tools, Curb-Edgers, Curb-Tools, Decorating-Edgers, Edgers, Female-Beading Tools, Fluting-Tools, Gutter-Tools, Jointers, Male-Beading Tools, Metal Edgers, Metal Jointers, Outside-Angle Tools, Outside-Curve Tools, Roller-Jointers, Rollers, Radius-Tools, Step-Edgers, Nosing-Tools, and Universal Edgers; Bench-Stops, Boxing-Tools, Combination-Pliers, Hollow Augers, Lathe-Dogs, Spoke-Trimmers, Tack-Claws, and Washer-Cutters.

Claims use since about Dec. 15, 1915.

Ser. No. 100,966. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md. Filed Jan. 26, 1917. Under ten-year proviso.



Particular description of goods.—Cotton Duck.

Claims use since about Jan. 20, 1894.

Ser. No. 101,080. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES D. BOYDSTON, Porterville, Cal. Filed Feb. 1, 1917.

Golden Queen

Particular description of goods.—Fresh Oranges.

Claims use since Nov. 10, 1916.

Ser. No. 101,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES D. BOYDSTON, Porterville, Cal. Filed Feb. 1, 1917.

Golden King

Particular description of goods.—Fresh Oranges.

Claims use since Nov. 10, 1916.

Ser. No. 101,848. (CLASS 12. CONSTRUCTION MATERIALS.) R. A. MARR, Norfolk, Va. Filed Feb. 13, 1917.

TEAKENA

Particular description of goods.—Encysted Wood, and in Particular Products Obtained by Encysting the Cheaper Woods, Such as Gum, Pine, and the Like, Such Wood Being Treated Either as Logs or Cut Up into Various Shapes, and the Particular Articles of Encysted Wood for Which I Have Appropriated the Mark are Lumber, Conduits, Piles, Boards, Decking, Wood for Making Boats or Parts Thereof, Sheathing, Cross-Arms for Telegraph or Telephone Poles, and the Pins for Holding the Insulators Therefor.

Claims use since Jan. 30, 1917.

Ser. No. 102,281. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CASCADE PACKING COMPANY, Anacortes, Wash. Filed Mar. 20, 1917.

UNCLE SALMON

No claim being made for the word "Salmon" apart from the mark shown on the drawing.

Particular description of goods.—Canned Salmon.

Claims use since May 8, 1916.

Ser. No. 102,344. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIUS SCHMID, INCORPORATED, New York, N. Y. Filed Mar. 22, 1917.

·TUSCA·

Particular description of goods.—Face Powders.

Claims use since January, 1914.

Ser. No. 102,347. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIUS SCHMID, INCORPORATED, New York, N. Y. Filed Mar. 22, 1917.

ELONORE

Particular description of goods.—Face Powders.

Claims use since January, 1914.

Ser. No. 102,348. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIUS SCHMID, INCORPORATED, New York, N. Y. Filed Filed Mar. 22, 1917.

JARICE

Particular description of goods.—Face Powders.

Claims use since Jan. 15, 1917.

Ser. No. 103,025. (CLASS 39. CLOTHING.) LOUIS LEVY, New York, N. Y. Filed Apr. 16, 1917.

Model

The trade-mark consists of the word "Model" in the particular type and with the black mark under it as shown in the drawing.

Particular description of goods.—Ladies' Wearing-Apparel—Namely, Brassières, Plain and Fancy Collars, Cuffs, and Jabots.

Claims use since 1899.

Ser. No. 103,267. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REDLANDS MUTUAL ORANGE COMPANY, Redlands, Cal. Filed Apr. 24, 1917.

CAMELLIA

Particular description of goods.—Fresh Oranges.

Claims use since Jan. 1, 1891.

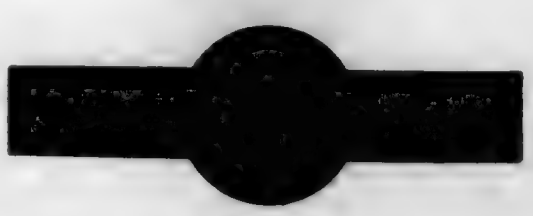
Ser. No. 105,887. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BERGER MANUFACTURING COMPANY, Canton, Ohio. Filed Aug. 27, 1917.



Particular description of goods.—Steel Office Equipment and Furniture—Namely, Filing-Cases, Bookcases, Cupboards, Wardrobes, Drawers, Lockers, and Shelving.

Claims use since June 4, 1917.

Ser. No. 105,888. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BERGER MANUFACTURING COMPANY, Canton, Ohio. Filed Aug. 27, 1917.



Particular description of goods.—Steel Office Equipment and Furniture—Namely, Filing-Cases, Bookcases, Cupboards, Wardrobes, Drawers, Lockers, and Shelving.

Claims use since April, 1914.

Ser. No. 106,426. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IMPERIAL CANDY CO., Seattle, Wash. Filed Sept. 25, 1917.



Particular description of goods.—Candy.

Claims use since July 20, 1917.

Ser. No. 107,672. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ANCHOR LEATHER CO., Chicago, Ill. Filed Nov. 30, 1917.



No claim being made to the words "Anchor Leather Co." apart from the mark shown in the drawing.

Particular description of goods.—Tanned Leather Hides for Shoe-Uppers.

Claims use since Feb. 11, 1915.

Ser. No. 108,030. (CLASS 39. CLOTHING.) ANDREW ADIE, Newton, Mass. Filed Dec. 18, 1917.

SHEPHERD

Particular description of goods.—Sweaters.

Claims use since Dec. 5, 1917.

Ser. No. 108,185. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) FLETCHER E. MAXWELL, Dallas, Tex. Filed Dec. 27, 1917.

Der Kaiser's Goat

Particular description of goods.—Toy Vehicles.

Claims use since July 15, 1917.

Ser. No. 108,459. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 14, 1918.

AMORET

Particular description of goods.—Biscuit.

Claims use since as early as Dec. 28, 1917.

Ser. No. 106,588. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CARL EDVARD JOHANSSON, Eskilstuna, Sweden. Filed Jan. 22, 1918.

CEJ

Particular description of goods.—Drills, Dies, Screw-Thread-Cutting Tools, Machine-Tools—Namely, Screw-Thread-Cutting Machines, Lathes, Milling-Machines, Planers for Metal, Filing-Machines, Grinding-Machines, Drilling-Machines, Drill-Presses, Boring-Mills, Presses, Riveting-Machines, Straightening-Machines, Forging-Machines, Forging-Presses, and Parts Thereof.

Claims use since June 16, 1916.

Ser. No. 108,818. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE BELDAM PACKING & RUBBER COMPANY LIMITED, London, England. Filed Feb. 5, 1918.

BELDAMITE

Particular description of goods.—Packing Made Up of Composite Materials.

Claims use since the 8th day of November, 1902.

Ser. No. 109,192. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CENTRAL STEEL & WIRE COMPANY, Chicago, Ill. Filed Feb. 25, 1918.

CASTOX

Particular description of goods.—Cast-Iron-Welding Metal.

Claims use since Jan. 1, 1915.

Ser. No. 109,398. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HARRIS AND BERNTZ CO., Philadelphia, Pa. Filed Mar. 6, 1918.

TRI-FONT



No claim being made to the word "Tri-Font" and the representation of a nipple apart from the composite mark shown in the drawing.

Particular description of goods.—Nursing-Nipples.

Claims use since November, 1917.

Ser. No. 109,509. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOUIS ROESSEL & CO., New York, N. Y. Filed Mar. 11, 1918.

Pannével

No exclusive right is made to the use of the word "Panne" apart from the mark shown on the drawing.

Particular description of goods.—Plushes.

Claims use since Jan. 1, 1918.

Ser. No. 110,399. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KAOLA COMPANY, Portland, Oreg. Filed Apr. 23, 1918.

KOLINE

Particular description of goods.—Cocoanut-Butter.
Claims use since April, 1910.

Ser. No. 110,418. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VALLE, BALLINA Y FERNANDEZ, S. A., Villaviciosa, Spain. Filed Apr. 24, 1918. Under ten-year proviso.



Wherein the apparel upon the figure is colored as follows: the waistcoat in red, the hat and coat in green, the trousers brown, the stockings blue, the shoes of a bluish tint, and the bag of the bagpipe red.
Particular description of goods.—Champagne Cider.
Claims use since about April, 1878.

Ser. No. 110,503. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Apr. 27, 1918.



Particular description of goods.—Coal-Tar Colors.
Claims use since December, 1910.

Ser. No. 110,504. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Apr. 27, 1918.



The words "Society of Chemical Industry in Basle" and "Indigo Pure" are not essential and are hereby disclaimed.
Particular description of goods.—Indigo.
Claims use since the 28th day of December, 1910.

Ser. No. 110,506. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Apr. 27, 1918.

DIAL

Particular description of goods.—A Pharmaceutical Product—viz., C. C.-Di-Allylbarbituric Acid, and Particularly Applicable as a Dormitive and a Sedative.
Claims use since Dec. 4, 1912.

Ser. No. 111,373. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE CRAVENETTE CO., U. S. A., Hoboken, N. J. Filed June 5, 1918.



Particular description of goods.—Waterproofed Fabrics.
Claims use since May 25, 1886.

Ser. No. 111,651. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) KELLY-SPRINGFIELD TIRE COMPANY, New York, N. Y. Filed June 18, 1918.



No claim is made herein to word "Springfield" except as a part of the mark shown.
Particular description of goods.—Pneumatic Tires of Rubber and Fabric.
Claims use since April, 1918.

Ser. No. 112,191. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DAVID ROSENSON, Brooklyn, N. Y. Filed July 17, 1918.

ROSAN

Particular description of goods.—Ready-Mixed Paints, Enamel Paints, Varnish-Stain, Japans, Prepared Shellac, Dry Colors, Cold-Water Paints, Colors in Oil, Colors in Japan, Colors in Water, Putty, Calcimine, Deck-Paint, Porch-Paint, and Solvent Compounds for Removing Paints and Varnishes.
Claims use since March, 1918.

Ser. No. 112,207. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SHERER-GILLETT CO., Chicago, Ill. Filed July 18, 1918.

SOS

Particular description of goods.—Removable Price and Article Tag Holders, Known as Sherer's Question Savers, Adapted to be Secured to Shelves.
Claims use since May 7, 1918.

Ser. No. 112,348. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SLEEP-IN-PEACE COMPANY, Savannah, Ga. Filed July 26, 1918.

SLEEP-IN-PEACE

Particular description of goods.—Insecticides and Poisons for Rodents and Insect Pests.
Claims use since Aug. 15, 1916.

Ser. No. 112,435. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BAUSH MACHINE TOOL COMPANY, Springfield, Mass. Filed July 31, 1918.

BAUSH

No claim is made herein for the name "Baush" apart from the mark shown in the drawing.
Particular description of goods.—Vertical Boring and Turning Mills, Radial-Drilling Machines, Upright and Horizontal Multiple-Spindle Drilling-Machines, Milling-Machines, Engine-Lathes, Planers, Stay-Bolt-Threading Machines, Bolt-Turning Machines, Universal Joints, and Worm-Gears.
Claims use since Dec. 4, 1917.

Ser. No 112,858. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS ROSA, New York, N. Y. Filed Aug. 24, 1918.

EXTION-ALL

Particular description of goods.—Laxative Pills.
Claims use since May 22, 1918.

Ser. No. 113,001. (CLASS 39. CLOTHING.) EDWIN E. WOLF, New York, N. Y. Filed Sept. 3, 1918.

The TOWN BLOUSE
The Blousemakers
NEW YORK

No claim being made to the words "The Town Blouse," "The Blousemakers," "New York," and "Trade Mark," apart from the mark shown on the drawing.
Particular description of goods.—Blouses, Shirt-Waists, Shirts for Outer Wear, Coats, Suits, and Dresses.
Claims use since May 1, 1918.

Ser. No. 113,069. (CLASS 39. CLOTHING.) STERN & RIEMER, New York, N. Y. Filed Sept. 7, 1918.

NOCKABOUT

Particular description of goods.—Children's Overalls.
Claims use since Aug. 21, 1918.

Ser. No. 113,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELMER CANDY COMPANY, INC., New Orleans, La. Filed Sept. 25, 1918.

DILETANTÉ

Particular description of goods.—Candy.
Claims use since Dec. 4, 1917.

Ser. No. 113,391. (CLASS 39. CLOTHING.) SUNSHINE CLOAK & SUIT COMPANY, Cleveland, Ohio. Filed Sept. 25, 1918.

Peggy Paris

Particular description of goods.—Children's Dresses, Coats, and Suits.
Claims use since May 4, 1918.

Ser. No. 113,604. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CROMPTON COMPANY, Crompton, R. I. Filed Oct. 7, 1918.

CROMPTON

The cross is never printed in red.
Particular description of goods.—Corduroys.
Claims use since May 1, 1918.

Ser. No. 113,605. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CROMPTON COMPANY, Crompton, R. I. Filed Oct. 7, 1918.

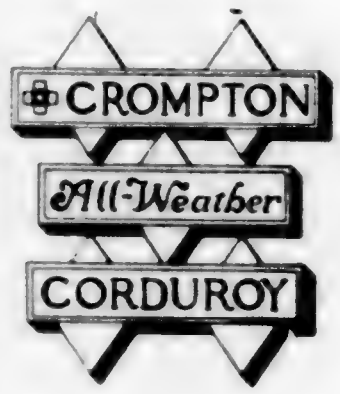


The cross is never printed in red. No claim is made to the words "All-Weather" and "Velveteen" apart from the mark shown in the drawing.

Particular description of goods.—Velveteens.

Claims use since Aug. 1, 1918.

Ser. No. 113,606. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CROMPTON COMPANY, Crompton, R. I. Filed Oct. 7, 1918.



The cross is never printed in red. No claim is made to the words "All-Weather" and "Corduroy" apart from the mark shown in the drawing.

Particular description of goods.—Corduroys.

Claims use since Aug. 1, 1918.

Ser. No. 113,614. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK PAUL SALEME, Juniata, Pa. Filed Oct. 7, 1918.



Said trade-mark being a portrait of myself.

Particular description of goods.—A Preparation for Sore Throat, Tonsillitis, Quinsy, Diphtheria, Catarrh, Asthma, and Hay-Fever.

Claims use since June 1, 1916.

Ser. No. 113,665. (CLASS 39. CLOTHING.) OSHKOSH MUSLIN UNDERWEAR CO., Oshkosh, Wis. Filed Oct. 10, 1918.



The lining on the drawing is for shading only.

Particular description of goods.—Ladies' and Children's Underwear—Namely, Drawers, Shirts, Union-Suits, and Vests—and Ladies' and Children's Aprons.

Claims use since Jan. 1, 1905.

Ser. No. 113,667. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RUDOLPH JOSEPH PERKA, Chicago, Ill. Filed Oct. 10, 1918.

DEFENDER

Particular description of goods.—A Washing Preparation in Powdered Form.

Claims use since Apr. 23, 1918.

Ser. No. 113,893. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BOOTT MILLS, Lowell, Mass. Filed Oct. 26, 1918.



Particular description of goods.—Cotton Crash Toweling and Towels.

Claims use since March, 1882.

Ser. No. 113,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. R. WARNER & COMPANY, INC., New York, N. Y. Filed Oct. 28, 1918.

TonoTonic

No claim being made to the word "Tonic" apart from the mark shown in the drawing.

Particular description of goods.—A Medicinal Tonic Remedial in Convalescence After Depression Following Bronchial and other Affections Resulting in Coughs and Colds.

Claims use since Sept. 14, 1918.

Ser. No. 113,984. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLY PFEIFFERKORN, Zug, Switzerland. Filed Oct. 31, 1918.

Perco

Particular description of goods.—Skinning Apparatus Comprising Mechanically-Operated Disk-Shaped Blades for Severing the Skin of Killed Animals.

Claims use since 1913.

Ser. No. 114,015. (CLASS 39. CLOTHING.) SANITARY KNITTING COMPANY, Grand Rapids, Mich. Filed Nov. 1, 1918.



No claim being made to the exclusive use of the word "Laniga" except in association with mark as shown.

Particular description of goods.—Men's, Women's, Boys', and Children's Knit Undershirts, Underdrawers, Union Suits, Undervests.

Claims use since Nov. 25, 1910.

Ser. No. 114,036. (CLASS 38. PRINTS AND PUBLICATIONS.) EASTLAND STUDIOS, Philadelphia, Pa.; Baltimore, Md.; Wilmington, Del., and Washington, D. C. Filed Nov. 4, 1918.

EASTLAND

Particular description of goods.—Photographs and Framed and Unframed Pictures.

Claims use since Jan. 1, 1914.

Ser. No. 114,092. (CLASS 39. CLOTHING.) CHEST-HEUR STOCK CO., Boston, Mass. Filed Nov. 8, 1918.

CHEST-HEUR

Particular description of goods.—Men's and Children's Hosiery.

Claims use since the latter part of July, 1918.

Ser. No. 114,110. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CEROXYLON COMPANY, Boston, Mass. Filed Nov. 9, 1918.

CEROXYLON

Particular description of goods.—Thread-Waxing Compound.

Claims use since 1900.

Ser. No. 114,254. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PABST PURE EXTRACT CO., INC., Reading, Pa. Filed Nov. 20, 1918.



Particular description of goods.—Food-Flavoring Extracts.

Claims use since about May 9, 1896.

Ser. No. 114,348. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY K. PORTER, Brookline, Mass. Filed Nov. 25, 1918.

HKP

Particular description of goods.—Bolt and Rivet Clippers.

Claims use since Nov. 1, 1917.

Ser. No. 114,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. E. SHOEMAKER CO., San Francisco, Cal. Filed Nov. 25, 1918.

Last



Particular description of goods.—Cotton-Seed Salad-Oil for Food Purposes, Mayonnaise Dressing, Tomato Catsup, Olives, Chow-Chow in Bottles, Bottled Pearl Onions, Horse-Radish, Dry Mustard, Prepared Mustard, Potato Chips, Bottled Capers, Spices, Black Pepper, Paprika.

Claims use since July 24, 1918.

Ser. No. 114,408. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE TOOMAY COMPANY, Boston, Mass. Filed Nov. 27, 1918.



Particular description of goods.—Finished Leather in the Piece.

Claims use since about Feb. 1, 1918.

Ser. No. 114,495. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) KING COAL COMPANY, San Francisco, Cal. Filed Dec. 5, 1918.



The trade-mark consists of a circular red band, within which band appear the words "High in Heat Units—Low in Ash" in white letters, no claim being made to the words "High in Heat Units—Low in Ash" apart from the mark shown in the drawing. Within this outer circular band on the blue background of the inner circle appear the words "King Coal," horizontally, the letters being in white, no claim being made to the word "Coal" apart from the mark shown in the drawing.

Particular description of goods.—Coal.

Claims use since Apr. 17, 1918.

Ser. No. 114,564. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) KOSCHERAK SIPHON BOTTLE WORKS, Hoboken, N. J. Filed Dec. 9, 1918.

Seal-again

Particular description of goods.—Bottle-Stoppers, Bottle-Caps, and Jar-Closures.
Claims use since July 15, 1918.

Ser. No. 114,579. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HERBERT H. HART, Evanston, Ill. Filed Dec. 10, 1918.

ECONOMY

The trade-mark consists of the word "Economy."
Particular description of goods.—Railroad-Tie Plates.
Claims use since the year 1908.

Ser. No. 114,587. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PARAGON TOOL COMPANY, Seattle, Wash. Filed Dec. 10, 1918.



No claim is made to the exclusive use of the representation of a tool apart from the mark as shown.
Particular description of goods.—Hand and Power Operated Punches and Dies, Riveting-Tools, Die and Punch Holders, Spike Sets, and Chisel-Blanks.
Claims use since May 1, 1918.

Ser. No. 114,593. (CLASS 7. CORDAGE.) AMERICAN CORE-TWINE COMPANY, Boston, Mass. Filed Dec. 11, 1918.

TUSKA

Particular description of goods.—Clothes-Line.
Claims use since Dec. 6, 1917.

Ser. No. 114,746. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NYAL COMPANY, Detroit, Mich. Filed Dec. 20, 1918.

CREOPHOS

Particular description of goods.—An Alterative, Hematic Stimulant, and Medicine for Bronchial Affections, Coughs, and General Debility.
Claims use since Dec. 3, 1918.

Ser. No. 114,819. (CLASS 39. CLOTHING.) THE FEDERAL RUBBER COMPANY, Cudahy, Wis. Filed Dec. 26, 1918.

F·R·C·

Particular description of goods.—Composition Soles and Heels.
Claims use since Oct. 29, 1918.

Ser. No. 114,843. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN LOCOMOTIVE COMPANY, New York, N. Y. Filed Dec. 28, 1918.



Particular description of goods.—Flexible Stay-Bolts.
Claims use since Aug. 1, 1918.

Ser. No. 114,848. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COHN-HALL-MARX CO., New York, N. Y. Filed Dec. 28, 1918.



The representation of the figure of the woman shown in the drawing being fanciful.
Particular description of goods.—Cotton Piece Goods.
Claims use since about Sept. 20, 1918.

Ser. No. 114,897. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES SARDINE COMPANY, Chicago, Ill. Filed Dec. 31, 1918.

STILL-MORE

Particular description of goods.—Canned Sardines.
Claims use since Oct. 12, 1918.

Ser. No. 114,905. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUITTARD COMPANY, San Francisco, Cal. Filed Dec. 31, 1918.

PAR-EX

Particular description of goods.—Chocolates, Chocolate and Cocoa Combined, and Cocoa.
Claims use since Dec. 1, 1917.

Ser. No. 114,939. (CLASS 46. FOODS AND INGREDIENTS OF FOODS. WHEAT'S ICE CREAM COMPANY, Buffalo, N. Y. Filed Dec. 31, 1918.

SUNNY BROOK

Particular description of goods.—Canned Sweetened Condensed Milk.
Claims use since Nov. 13, 1918.

Ser. No. 114,962. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THOS. R. THOMPSON, New Haven, Conn. Filed Jan. 2, 1919.



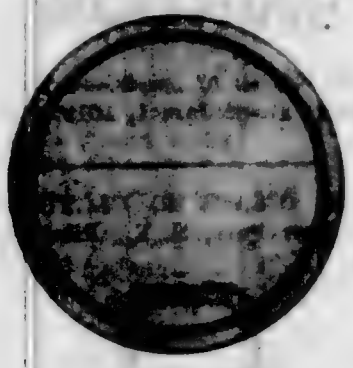
No claim being made to the words "Tots-Toie" and "Quality" apart from the mark shown.
Particular description of goods.—Wooden Toys—Namely, Dolls, Animals, Birds, and Doll-Cradles.
Claims use since February, 1918.

Ser. No. 114,964. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VALENTINE & COMPANY, New York, N. Y. Filed Jan. 2, 1919.

VALENITE

Particular description of goods.—Varnish-Stains, Color-Varnishes, Clear Varnishes, Ready-Mixed Paint, Varnish-Enamels.
Claims use since Sept. 19, 1918.

Ser. No. 115,003. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE CONGOLEUM COMPANY, Philadelphia, Pa. Filed Jan. 6, 1919.



The trade-mark being lined for red.
Particular description of goods.—Prepared Floor-Coverings of the Oiled-Cloth Type.
Claims use since July 5, 1918.

Ser. No. 115,000. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CHARLES E. HIRES COMPANY, Philadelphia, Pa. Filed Jan. 6, 1919.



The band forming the background for the design being in dark brown and the background of the panel of the design being in light brown.
Particular description of goods.—Coffee.
Claims use since September, 1918.

Ser. No. 115,027. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HERZOG, New York, N. Y. Filed Jan. 7, 1919.

OUT-FLEW-ENZA

Particular description of goods.—A Preparation for the Treatment of Influenza.
Claims use since Dec. 21, 1918.

Ser. No. 115,039. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN SHEET & TIN PLATE COMPANY, Pittsburgh, Pa. Filed Jan. 8, 1919.



APOLLO

Particular description of goods.—Rolled Steel and Iron Sheets and Plates, Galvanized Sheets and Plates, Corrugated Sheets and Plates, Tin Plates, and Terne Plates.
Claims use since 1905.

Ser. No. 115,046. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DYENE CHEMICAL CO., Baltimore, Md. Filed Jan. 8, 1919.

DYENE

Particular description of goods.—A Dye for Coating Straw Hats and other Articles Made of Straw and Articles Made of Ratan, Willow, and Leather.
Claims use in the year 1915 and since.

Ser. No. 115,053. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE SCHAEFFER AND BUDENBERG MFG. CO., Brooklyn, N. Y. Filed Jan. 8, 1919.

RESISTO

Particular description of goods.—Gage-Glasses.
Claims use since on or about Jan. 1, 1912.

Ser. No. 115,054. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE SCHAEFFER AND BUDENBERG MFG. CO., Brooklyn, N. Y. Filed Jan. 8, 1919.

REFORM

Particular description of goods.—Dial-Thermometers.
Claims use since on or about Jan. 1, 1908.

Ser. No. 115,058. (CLASS 39. CLOTHING.) JOHN T. CONOVER, New Brunswick, N. J. Filed Jan. 9, 1919.

BONDS

Consisting of the word "Bonds."
Particular description of goods.—Ladies' Hosiery.
Claims use since Dec. 1, 1918.

Ser. No. 115,061. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FUEL BRIQUET COMPANY, New York, N. Y., and Trenton, N. J. Filed Jan. 9, 1919.

COAL NUGGETS

No claim is made to the word "Coal" or the form of background shown apart from the mark shown on the drawing.
Particular description of goods.—Fuel-Briquets.
Claims use since Nov. 16, 1918.

Ser. No. 115,079. (CLASS 39. CLOTHING.) YOUNG BROTHERS, New York, N. Y. Filed Jan. 9, 1919. Under ten-year proviso.

Young Bros. NEW YORK

Particular description of goods.—Men's Hats.
Claims use since 1885.

Ser. No. 115,080. (CLASS 39. CLOTHING.) YOUNG BROTHERS, New York, N. Y. Filed Jan. 9, 1919. Under ten-year proviso.

Young's Hats

Particular description of goods.—Men's Hats.
Claims use since 1885.

Ser. No. 115,134. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN PIN COMPANY, Waterbury, Conn. Filed Jan. 13, 1919.

COIN

Particular description of goods.—Metal Air-Valves for General Use.
Claims use since June, 1914.

Ser. No. 115,150. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. KOHNSTAMM & CO., New York, N. Y. Filed Jan. 13, 1919.

CENTURY

Particular description of goods.—A Coloring for Foods.
Claims use since Aug. 23, 1917.

Ser. No. 115,175. (CLASS 39. CLOTHING.) MAURICE B. FREDERICKS, New York, N. Y. Filed Jan. 14, 1919.

CARRY ON

Consisting of the words "Carry On."
Particular description of goods.—Athletic Goods—viz., Suits; Dress, Negligée, and Outing Shirts; Jerseys, Coat-Sweaters, Sweaters, Bathing-Suits, Stockings, Gymnasium-Suits, Sporting and Camping Suits, Athletic Uniforms, Overcoats, and Rain-Coats for Men, Women, and Children.
Claims use since Dec. 30, 1918.

Ser. No. 115,216. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WAITE GRASS CARPET COMPANY, Oshkosh, Wis. Filed Jan. 15, 1919.

RAINBOW

Particular description of goods.—Grass Rugs.
Claims use since about Jan. 1, 1919.

Ser. No. 115,248. (CLASS 39. CLOTHING.) JAMES R. KRAMS, INC., New York, N. Y. Filed Jan. 17, 1919.

Particular description of goods.—Men's Cravats.
Claims use since Jan. 1, 1917.

Ser. No. 115,250. (CLASS 39. CLOTHING.) JAMES R. KRIANS, INC., New York, N. Y. Filed Jan. 17, 1919.

OCTAGON

Consisting of the word "Octagon."
Particular description of goods.—Men's Cravats.
Claims use since Sept. 12, 1918.

Ser. No. 115,270. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHERIDAN, INVESTMENT COMPANY, Sheridan, Oreg. Filed Jan. 17, 1919.

Phil Sheridan BRAND

The applicant disclaims as to the word "Brand" as shown on the drawing.
Particular description of goods.—Fresh Apples.
Claims use since Oct. 1, 1918.

Ser. No. 115,331. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed Jan. 20, 1919.

PLUMLADE

Particular description of goods.—A Jam or Conserve.
Claims use since Jan. 6, 1919.

Ser. No. 115,332. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed Jan. 20, 1919.

PEACHLADE

Particular description of goods.—A Jam or Conserve.
Claims use since Jan. 6, 1919.

Ser. No. 115,333. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed Jan. 20, 1919.

CHERRILADE

Particular description of goods.—A Jam or Conserve.
Claims use since Jan. 6, 1919.

Ser. No. 115,348. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOLDEN-LEONARD COMPANY, New York, N. Y. Filed Jan. 21, 1919.

HEATHERTONE

Particular description of goods.—Woolen Piece Goods.
Claims use since Jan. 1, 1919.

Ser. No. 115,384. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. WHITMORE, Cleveland, Ohio. Filed Jan. 22, 1919.

SENSOLENE

Particular description of goods.—An Ointment for the Treatment of Rough or Coarse Skin, Chapped Hands, Inflammation, Sunburns, Scalds, Burns, Irritations, or Injuries.
Claims use since Mar. 3, 1917.

Ser. No. 115,386. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ASSOCIATED PHARMACISTS, INC., New York, N. Y. Filed Jan. 23, 1919.

CHICKADEE



Particular description of goods.—Talcum Powder.
Claims use since Oct. 1, 1918.

Ser. No. 115,407. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHNSON, COWDIN & CO., New York, N. Y. Filed Jan. 24, 1919.

J.C.

Particular description of goods.—Ribbons.
Claims use since Jan. 16, 1919.

Ser. No. 115,418. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. B. DAVIS COMPANY, Hoboken, N. J. Filed Jan. 25, 1919. Under ten-year proviso.

DAVIS'

Particular description of goods.—Baking-Powder.
Claims use since July 1, 1880.

Ser. No. 115,429. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) OTIS CO., Ware, Mass. Filed Jan. 25, 1919.



Particular description of goods.—Cotton Piece Goods.
Claims use since Jan. 10, 1919.

Ser. No. 115,524. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAS. W. DOUTHITT, Bedford, Ind. Filed Jan. 30, 1919.

FRECKOLA

Particular description of goods.—A Remedy for the Treatment of Freckles, Tan, Pimples, and Sunburn Affecting the Skin.
Claims use since Dec. 20, 1918.

Ser. No. 115,525. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Jan. 30, 1919.

Kingcloth

The word "Cloth" is disclaimed when used apart from the mark shown in the drawing.
Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,549. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUTMANN & COMPANY, Chicago, Ill. Filed Jan. 31, 1919.

ADE-II-TAN

No claim is made to the exclusive use of the words "Ade" or "Tan" apart from the mark shown in the drawing.
Particular description of goods.—Liquid Chemicals for Use in Tanning Processes.
Claims use since Jan. 15, 1919.

Ser. No. 115,579. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED STATES STEEL PRODUCTS COMPANY, New York, N. Y. Filed Feb. 1, 1919.

LIBERTY

Particular description of goods.—Ammonium Sulfate.
Claims use since Jan. 16, 1919.

Ser. No. 115,581. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) YOUTH CRAFT CO., Chicago, Ill. Filed Feb. 1, 1919.

Youth Craft

Particular description of goods.—A Preparation for the Relief of Excessive Perspiration.
Claims use since Oct. 1, 1912.

Ser. No. 115,613. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FINKE AND JOHNSON, Fort Wayne, Ind. Filed Feb. 4, 1919.

DARLMO

Particular description of goods.—A Preparation for Treatment of Rheumatism and Kidney Disorders.
Claims use since 1918.

Ser. No. 115,619. (CLASS 39. CLOTHING.) MARGARET J. HUNTER, Los Angeles, Cal. Filed Feb. 4, 1919.

Antoinette

Particular description of goods.—Corsets.
Claims use since Sept. 1, 1916.

Ser. No. 115,645. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. S. MCKENZIE & CO., INC., New York, N. Y. Filed Feb. 5, 1919.

THRIFT

Particular description of goods.—Laundry Bluing.
Claims use since Oct. 12, 1918.

Ser. No. 115,696. (CLASS 39. CLOTHING.) PHILLIPS-JONES COMPANY, INC., New York, N. Y. Filed Feb. 8, 1919.

ACE

Particular description of goods.—Men's Outer Shirts, Men's Pajamas, Men's Night-Shirts, Men's Underwear, Both Knit and Woven Goods, and Men's Collars and Cuffs, Both Soft and Laundried.
Claims use since July 1, 1918.

Ser. No. 115,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.

"JAP-O-RICE"

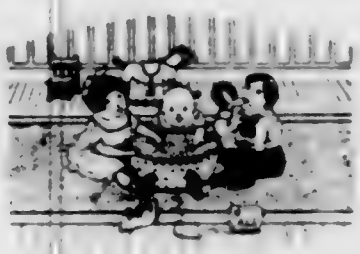
Particular description of goods.—Popping Corn.
Claims use since Nov. 1, 1915.

Ser. No. 115,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.

BIG CHIEF

Particular description of goods.—Popping Corn.
Claims use since Nov. 1, 1915.

Ser. No. 115,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.



Particular description of goods.—Popping Corn.
Claims use since Apr. 1, 1914.

Ser. No. 115,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.

GOLDEN GATE

Particular description of goods.—Popping Corn.
Claims use since Oct. 1, 1918.

Ser. No. 115,739. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) SCHISLER BROTHERS, St. Louis, Mo. Filed Feb. 10, 1919.

IT'S-IT

Particular description of goods.—Patch Kits, Including Cement and Rubber Patches for Repairs of Inner Tubes for Automobile Tires.
Claims use since on or about the 29th day of January, 1919.

Ser. No. 115,740. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN SCOTT & CO., INC., Philadelphia, Pa. Filed Feb. 10, 1919.

Aviation

Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since 1915.

Ser. No. 115,745. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. J. WALCKIEWICZ, La Salle, Ill. Filed Feb. 10, 1919.



The portrait shown being a likeness of myself.
Particular description of goods.—A Liniment.
Claims use since July 1, 1918.

Ser. No. 115,752. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. B. ANSBACHER & COMPANY, INC., New York, N. Y. Filed Feb. 11, 1919.

TRIANGLE

Particular description of goods.—Soluble Blue.
Claims use since Jan. 10, 1919.

Ser. No. 115,785. (CLASS 39. CLOTHING.) REVERSIBLE COLLAR COMPANY, Boston, Mass. Filed Feb. 11, 1919.

SnoCraft

The word "SnoCraft."
Particular description of goods.—Collars, Cuffs, and Shirt-Bosoms.
Claims use since about Jan. 1, 1918.

Ser. No. 115,793. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. TANN, Dayton, Ohio. Filed Feb. 11, 1919.



Particular description of goods.—A Medicinal Preparation for Disorders of Stomach and Bowels.
Claims use since Jan. 15, 1919.

Ser. No. 115,794. (CLASS 39. CLOTHING.) E. E. TAYLOR COMPANY, Boston, Mass. Filed Feb. 11, 1919.

FLEXI-TREAD

The word "Flexi-Tread."
Particular description of goods.—Men's and Women's Leather Boots and Shoes.
Claims use since Feb. 8, 1918.

Ser. No. 115,802. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB DONIGER, Brooklyn, N. Y. Filed Feb. 12, 1919.

DONTÉ

Particular description of goods.—A Depilatory.
Claims use since Jan. 1, 1919.

Ser. No. 115,814. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHNSON & JOHNSON, New Brunswick, N. J. Filed Feb. 12, 1919.

BELLATURA

Particular description of goods.—Medicinal Plasters.
Claims use since January, 1919.

Ser. No. 115,841. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CORPORATION, New York, N. Y.; Boston, Mass.; Chicago, Ill.; Philadelphia, Pa.; Cleveland, Ohio; Seattle, Wash., and San Francisco, Cal. Filed Feb. 13, 1919.

MOHTAN

The word "Mohtan."
Particular description of goods.—Dyes and Tanning Extracts.
Claims use since Aug. 1, 1918.

Ser. No. 115,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CORPORATION, New York, N. Y.; Boston, Mass.; Chicago, Ill.; Philadelphia, Pa.; Cleveland, Ohio; Seattle, Wash., and San Francisco, Cal. Filed Feb. 13, 1919.

MOHLIVE

The word "Mohlive."
Particular description of goods.—Oil for the Lubrication of Yarn in the Process of Manufacture.
Claims use since Aug. 1, 1918.

Ser. No. 115,883. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PONZIO BROTHERS, Philadelphia, Pa. Filed Feb. 15, 1919.



Particular description of goods.—Metal-Polish.
Claims use since Jan. 1, 1919.

Ser. No. 115,960. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CONRAD G. MOLLER, New Canaan township, Fairfield county, Conn. Filed Feb. 18, 1919.



Particular description of goods.—Soaps.
Claims use since May 1, 1917.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 25, 1919.

124,919. OVERALLS, WORK-PANTS, AND JUMPERS. Abbetter & Richman, St. Louis, Mo.
Filed August 7, 1917. Serial No. 105,512. PUBLISHED OCTOBER 22, 1917.

124,920. CERTAIN NAMED OILS AND GREASES. The Atlantic Refining Company, Philadelphia, Pa.
Filed July 20, 1918. Serial No. 112,226. PUBLISHED DECEMBER 3, 1918.

124,921. CERTAIN NAMED OILS AND GREASES. The Atlantic Refining Company, Philadelphia, Pa.
Filed July 20, 1918. Serial No. 112,227. PUBLISHED DECEMBER 3, 1918.

124,922. CERTAIN NAMED FOODS. Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y.
Filed September 25, 1918. Serial No. 113,340. PUBLISHED DECEMBER 10, 1918.

124,923. DRESS-FASTENERS. Columbia Fastener Company, Chicago, Ill.
Filed October 11, 1917. Serial No. 106,716. PUBLISHED APRIL 9, 1918.

124,924. CORN OR COTTON SALAD-OIL COMPOUNDED WITH EXTRA-FINE OLIVE-OIL. Crisafulli Bros., New York, N. Y.
Filed June 7, 1918. Serial No. 111,407. PUBLISHED NOVEMBER 12, 1918.

124,925. FINISHED SHEEPSKINS. Donnell, Carman & Munon, Boston, Mass.
Filed February 28, 1917. Serial No. 101,778. PUBLISHED JULY 23, 1918.

124,926. WHEAT-FLOUR. Enid Milling Company, Enid, Okla.
Filed October 25, 1917. Serial No. 106,945. PUBLISHED DECEMBER 10, 1918.

124,927. LAXATIVE TABLETS. Gilbert-Co., Lynchburg, Va.
Filed May 11, 1918. Serial No. 110,840. PUBLISHED DECEMBER 17, 1918.

124,928. ALLOYS CONTAINING CHROMIUM AND NICKEL. Hoskins Manufacturing Company, Detroit, Mich.
Filed September 9, 1918. Serial No. 113,077. PUBLISHED NOVEMBER 12, 1918.

124,929. THREADING-OIL. G. A. Hosmer Company, Buffalo, N. Y.
Filed March 28, 1917. Serial No. 102,516. PUBLISHED DECEMBER 3, 1918.

124,930. BUTTER. The Isaly Dairy Company, Marion, Ohio.
Filed August 4, 1917. Serial No. 105,475. PUBLISHED OCTOBER 30, 1917.

124,931. CERTAIN NAMED FOODS. Jaburg Brothers, New York, N. Y.
Filed November 17, 1916. Serial No. 99,350. PUBLISHED AUGUST 6, 1918.

124,932. THERAPEUTIC SALVE FOR CUTS, WOUNDS, AND BRUISES. Marie Kobzina, Chicago, Ill.
Filed April 11, 1918. Serial No. 110,120. PUBLISHED DECEMBER 17, 1918.

124,933. FACE-CREAM. Koken Barbers' Supply Company, St. Louis, Mo.
Filed October 10, 1918. Serial No. 113,652. PUBLISHED DECEMBER 17, 1918.

124,934. CERTAIN NAMED CHEMICAL COMPOUNDS USED IN EMBALMING. National Casket Company, New York, N. Y.
Filed November 3, 1917. Serial No. 107,140. PUBLISHED DECEMBER 17, 1918.

124,935. LIQUID MEDICINE USED FOR INDIGESTION AND FOR DISORDERS OF THE BOWELS. Joseph Nowack, West Hoboken, N. J.
Filed May 7, 1918. Serial No. 110,755. PUBLISHED DECEMBER 17, 1918.

124,936. CERTAIN NAMED MALT BEVERAGES, EXTRACTS, AND LIQUORS. Peoples Brewing Company, Trenton, N. J.
Filed August 16, 1918. Serial No. 112,757. PUBLISHED DECEMBER 17, 1918.

124,937. SODIUM SILICATE. Philadelphia Quartz Company, Philadelphia, Pa.
Filed October 2, 1918. Serial No. 113,527. PUBLISHED DECEMBER 17, 1918.

124,938. INTERNAL MEDICINE FOR LUNG TROUBLE. The Radgine Chemical Company, Cincinnati, Ohio.
Filed October 5, 1918. Serial No. 113,593. PUBLISHED DECEMBER 17, 1918.

124,939. TONICS AND OINTMENTS FOR EXTERNAL USE. James G. Roman, Wilmington, Del.
Filed August 23, 1918. Serial No. 112,853. PUBLISHED DECEMBER 17, 1918.

124,940. WHEAT-FLOUR. Sperry Flour Company, San Francisco, Calif.
Filed May 15, 1917. Serial No. 103,848. PUBLISHED MARCH 12, 1918.

124,941. CREAM-OF-TARTAR SUBSTITUE. Stickney & Poor Spice Co., Boston, Mass.
Filed August 5, 1918. Serial No. 112,538. PUBLISHED DECEMBER 17, 1918.

124,942. CARBONATED WATER. Stratford Magnesia Springs Compy., Wheeling, W. Va.
Filed October 31, 1918. Serial No. 113,989. PUBLISHED DECEMBER 3, 1918.

124,943. LUBRICATING-OILS, BURNING-OILS, PARAFFIN, GASOLENE, NAPHTHA, AND LUBRICATING PETROLEUM-GREASES. Sun Company, Philadelphia, Pa.
Filed July 9, 1915. Serial No. 87,860. PUBLISHED DECEMBER 3, 1918.

124,944. PURE APPLE-JUICE. Virginia Fruit Juice Co., Inc., Norfolk, Va.
Filed May 24, 1918. Serial No. 111,184. PUBLISHED DECEMBER 10, 1918.

124,945. DENTAL CHAIRS. The S. S. White Dental Manufacturing Company, Philadelphia, Pa.
Filed October 26, 1917. Serial No. 106,977. PUBLISHED AUGUST 13, 1918.

TRADE-MARK REGISTRATIONS RENEWED.

16,314. SOAPS AND DETERGENTS. Lever Bros., Warrington, county of Lancaster, England; Lever Brothers Company, assignee.
Registered February 26, 1889. Renewed February 26, 1919.

16,529. PETROLEUM LUBRICATING-OIL. Vacuum Oil Company, Rochester, N. Y., (now New York, N. Y.)
Registered April 23, 1889. Renewed April 23, 1919.

TRADE-MARK REGISTRATIONS CANCELED.

25,518. WHEAT-FLOUR. KUNHARDT & Co., New York, N. Y.
Registered November 13, 1894. Canceled March 13, 1919.

94,610. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

94,618. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

94,619. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

120,100. HAIR-DRESSING. CLARENCE C. HAY, Como, Miss.
Registered January 8, 1918. Canceled March 13, 1919.

PRINTS

REGISTERED MARCH 25, 1919.

5,072.—*Title:* "MEASUREMENT BLANK." (For Commercial Purposes for the Manufacture of Automobile-Tops.) BUCH & SCHEU, Cincinnati, Ohio. Filed November 7, 1918.

5,073.—*Title:* "SAMMIES SURE-STICK." (For Motor-Cycle-Tire Patches.) SAMMIES RUBBER CO., Oklahoma, Okla. Filed November 30, 1918.

5,074.—*Title:* "DISCHARGED FROM ACTIVE SERVICE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,075.—*Title:* "1919." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,076.—*Title:* "FROM SERVICE TO COUNTRY." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,077.—*Title:* "PEACE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,078.—*Title:* "APPROVED." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,079.—*Title:* "FROM WAR TO PEACE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE McNART.

Decided December 20, 1918.

1. APPLICATIONS—ACT OF MARCH 3, 1883—DISCLAIMER.

Where an application is filed without fees under the provisions of the act of March 3, 1883, the disclaimer must follow the language of the statute.

2. SAME—SAME—SAME—SHOULD NOT BE CONSTRUED BY THE PATENT OFFICE.

The Patent Office should not undertake to construe the scope of the disclaimer specified by the act of March 3, 1883, and the copies of the patent issued on an application filed under that act should not contain the statement "Dedicated to the public," but merely the words "Filed under the act of March 3, 1883, 22 Stat. L., 625."

ON PETITION.

PACK-CARRIER FOR SHELLS AND PROJECTORS.

NEWTON, *Commissioner:*

This application purports to have been filed under the act of March 3, 1883, (22 Stats. at L., p. 625,) which provides for the grant of a patent under certain conditions without the payment of fees.

The disclaimer which is put into the specification does not follow the language of the statute, but reads as follows:

> The invention described herein may be used by the Government or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, for the benefit of the Government without payment of any royalty thereon.

The petition states that it has been understood that the Commissioner requires applicant to either cancel the words "for the benefit of the Government" in the matter above quoted or to pay the fee.

The disclaimer placed in this specification limits the use of the invention without royalty clearly to any person who is working for the benefit of the Government. It is contended that this is the real meaning of the present statute and that there is no authority for construing the disclaimer set out therein to be a complete dedication to the public.

Prior to June 14, 1907, when an application was filed under the act in question a notation was placed on the file-wrapper that the fee was waived in accordance with that act, and the only reference to the act in the patent was the quotation of the proviso in the specification and the limitation of the grant in accordance with the proviso above mentioned. On that date it was directed by the Commissioner that the file-wrapper be indorsed "Dedicated to the public," and the Public Printer was instructed to print these words on the printed copies of the patent just under the line containing the filing date of the application.

Why this was done I have not been able to ascertain. I see no reason why this Office should undertake to construe the rights of a patentee under a patent granted under the act of 1883. That act authorizes the Commissioner to waive the fee if "the invention is used or is to be used in the public service" and if the specified proviso is placed in the specification.

It would seem, therefore, that all that this Office should do is to make it appear in the patent that the fee was waived because the invention came within the class mentioned in the act and to see that the proviso has been properly stated in the specification. The question of any one's rights under such a patent is one to be determined by the courts, as are the rights under any other patent. Of course if there should be filed a dedication going beyond the dedication required by the act of 1883 and specifically stating that any one in the United States may use the invention under any circumstances without the payment of royalty then it would be proper to note on the patent that it was actually dedicated to the public, although it may be seriously questioned whether a patent can be granted when in the grant it is stated that any one in the United States has a right to use the invention.

While the petition must be denied in its present form, it is directed that hereafter the file-wrapper of an application filed under the act of March 3, 1883, be not indorsed "Dedicated to the public" unless such a dedication is specifically made in the application in addition to the disclaimer required by that act and that unless such a further dedication is of record that there be printed under the filing date in the copies of the patent only the words "(Filed under the act of March 3, 1883, 22 Stat. L., 625)."

EX PARTE BERNHEIM.

Decided February 1, 1918.

PATENTABILITY—INVENTION—COMBINATION OF OLD FEATURES.

Although a conveyer made up of sections disposed at varying angles, an elevator having a horizontal and an inclined portion, and an elevator adapted to be swung so as to deliver at a desired point were separately old, the combination of such a conveyer with a swinging elevator having a horizontal and an inclined portion,

the horizontal portion being placed to receive packages from the conveyer, provided a device of greater flexibility and is patentable.

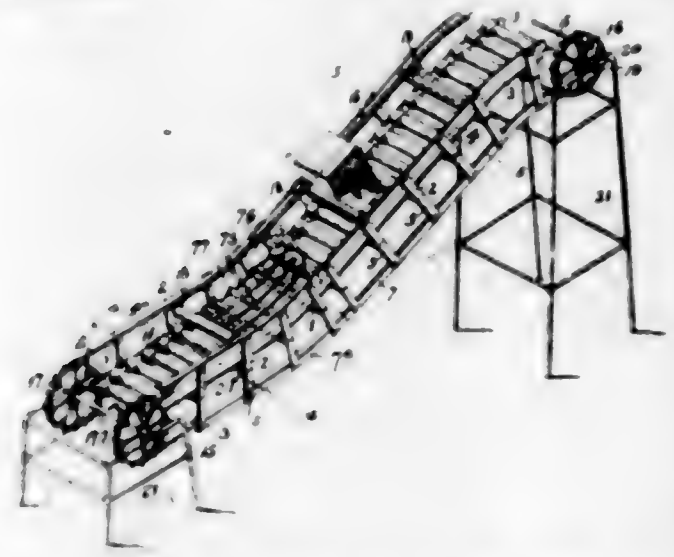
APPEAL from Examiners-in-Chief.

CONVEYING MECHANISM.

The subject-matter claimed, as illustrated in Fig. 1 of the drawings, is here shown:



The structure of the Alvey patent, No. 790,811, is as follows:



Mr. Charles J. Stockman for the applicant.

WHITEHEAD, *First Assistant Commissioner:*

This is an appeal from a decision of the Examiners-in-Chief affirming the decision of the Primary Examiner finally rejecting claims 1 to 8, inclusive, and 14 to 22, inclusive. Of these, claims 1 and 14 are illustrative.

1. A conveying apparatus comprising a plurality of related conveyer sections and an elevator, the receiving end of said elevator being disposed to receive packages from the line of conveyer sections and the discharging end of the elevator being mounted to swing, while leaving its receiving end disposed in coöperative relation to said conveyer sections.

14. The combination with a substantially horizontal conveyer section including a plurality of endless traveling beds, of a second conveyer section also including an endless traveling bed, said second section having a lower substantially horizontal end portion arranged in the same horizontal plane with the first mentioned conveyer section, an inclined section merging into the lower horizontal section, and an upper substantially horizontal section, the construction being such that packages may be uninterruptedly delivered from one of the conveyer sections to the other, and means for driving the conveyer sections.

The references cited are: Fulwider, 436,348, September 16, 1890; Harrison, 448,857, March 24, 1891; Rowe, 606,740, July 5, 1898; Brown, 655,676, August 7, 1900; Record, 667,335, February 5, 1901; Claypool, 732,519, June 30, 1903; Lamborn, 771,648, October 4, 1904; Brouk, 785,471, March 21, 1905; Alvey, 790,811, May 23, 1905; Brown *et al.*, 846,725, March 12, 1907; Paul, 882,795, March 24, 1908; Morenus, 923,064, May 25, 1909; Torseth, 966,489, August 9, 1910; Gibbons, (British,) 2,523, January 31, 1907.

Since the hearing the Examiner has called attention to the patent to Greenwood, No. 745,821, December 1, 1903.

The application discloses a conveying apparatus consisting of several sections coöperatively associated and adapted to be disposed at varying angles with relation to each other and an elevator mounted for arcuate movement, while its receiving end remains in position to receive packages from the conveyer-sections.

A conveyer made up of sections adapted to be disposed at varying angles to each other is not new, being old, for example, in the British patent of record and also in the patent to Claypool; nor is it broadly new to arrange such sections with a driving-shaft having universal joints, so that the movement may be conveyed from one section of the shaft to another. An elevator adapted to be swung about, so as to deliver at a desired point, is old in the patent to Brown *et al.*, and an elevator having a horizontal portion and an inclined portion is old in the patent to Alvey. Applicant, however, by combining the conveyer with an elevator of the character described has formed a conveying apparatus which has a greater amount of flexibility than any of those shown in the references, whereby packages can be transferred from wagons or cars and piled in the desired place in the warehouse or other place of storage. By making the elevator with the horizontal section lying in the plane of the conveyer-section it is particularly adapted to receive packages from such a section.

There would be no invention, broadly, in combining a movable elevator, such as shown in Brown or such as would be obtained by mounting the Alvey elevator on casters, as in the Brown patent, with a conveyer made up in sections.

The Examiners-in-Chief allowed certain claims which bring out certain details of construction of the conveyer and of the elevator. A conveyer, defined in those claims, coöperates with the elevator no differently than would a conveyer such as shown in the British patent.

In view of the art as above set out it is thought that the appealed claims were properly refused, since they do not bring out clearly the idea of the flexible conveying apparatus as a whole.

Applicant has presented an amendment including a number of claims, of which claims 3 and 8 are deemed allowable as defining this flexible apparatus. The other claims are deemed to be not patentable over the art or to set out mere aggregations of the details of construction of one part of the apparatus with the other.

Claims such as claim 20 are not regarded as patentable over Alvey or Rowe.

The decision of the Examiners-in-Chief is therefore affirmed; but if the applicant within twenty days from the date hereof presents an amendment containing proposed claims 3 and 8 the Examiner will enter the amendment and allow the claims in the absence of better references.

EX PARTE ROBERT E. MILLER, INC.

Decided March 14, 1919.

TRADE-MARKS—"U-PUT-ON," FOR RUBBER HEELS—DESCRIPTIVE.

The term "U-Put-On" as a trade-mark for rubber heels with an open casing attached, so that they may be applied by slipping the casing over the flared heel of a woman's shoe, *Held* not registrable as a trade-mark, since it is descriptive of the goods with which it is used.

ON APPEAL.

TRADE-MARK FOR RUBBER HEELS.

Messrs. Toulmin, Toulmin & Glass for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from the Examiner's refusal to register the phrase "U-Put-On" as a trade-mark for rubber heels for shoes, on the ground that the mark is descriptive of the character of the goods, and therefore its registration is inhibited by section 5 of the statute.

The applicant exhibits the goods themselves, and the labels on file show a perspective picture of them. They are rubber heels with an open casing attached, so that they may be applied by slipping the casing over the flared heels of women's shoes. On the packages the direction is: "Turn inside out; then snap on heel." The alleged trade-mark is written as three words, apparently to avoid wrong pronunciation or misunderstanding, and to my mind they plainly tell the purchaser to put the heels on her shoes herself or that they are heels which she puts on.

The case is not without some difficulty, for the alleged mark is catchy and is somewhat out of the ordinary usage of language. The English courts have refused registration even to a mark like "Uneeda," for biscuits, (18 R. P. C., p. 170,) as descriptive. This case, however, is not a good guide, because the British law is radically different from our own in that it is a permissive law specifying what may be registered rather than a restrictive law directing the Commissioner what he shall not register. The term "Uneeda" could only come under section 64 (*d*) of the British law as a distinctive or "inventive word," or else under section 64 (*e*) as a "word having no reference to the character or quality of the goods," whereas neither definition would admit "Uneeda." I think under our law "Uneeda" is good; but it should be observed that it does not describe any character or quality of the biscuit, but rather suggests the necessity of any and all biscuits. The term "U-Put-On" rubber heels, on the contrary, does directly state the character of the heels—namely, that they are of such construction that the purchaser herself applies them or may apply them.

This case is not, as contended in the brief, similar to the case of "The American Girl," for shoes, (*Hamilton* v. *Wolfe*, 240 U. S., 251,) for in that case there was no direct statement or even intimation of the character of the shoes. At most it was suggestive that the shoes were popular with the girls of a particular country. The applicant quotes from that decision the statement of the Court:

It does not signify that the shoes are manufactured in America or intended to be sold or used in America, nor does it indicate the quality or characteristics of the shoes. Indeed it does not in its primary significance indicate shoes at all.

The last sentence is emphasized particularly, and it is contended by the applicant that there is no more connection between his mark "U-Put-On" and rubber heels than there is between "The American Girl" and shoes. Elsewhere the applicant's brief says:

A person seeing the mark "U-Put-On" cannot tell that it refers to rubber heels. It could be applied to various articles. There is *nothing in the mark to indicate rubber heels.*

This is quite beside the question. Notwithstanding the remark of the Supreme Court above quoted from *Hamilton* v. *Wolfe* it is manifestly quite immaterial whether there is anything in the mark to indicate rubber heels, for the same thing would be true if the mark were "Good," or "Removable," or "Durable," or any other descriptive word. The fallacy arises from conceiving of a trade-mark as something standing alone and apart from the goods. It is not to be ever so considered any more than a handle is considered apart from the thing of which it is the handle. The descriptiveness here arises from applying the mark to the goods, as it must always be applied. To call a given article "U-Put-On" rubber heels is to state a capability of those particular rubber heels. Moreover, the trade-mark would be descriptive of a great many articles to be attached by the purchaser himself. On the principle applied in *ex parte Bronson Company* (87 O. G., 1782) and *Procter & Gamble Co.* v. *Globe Ref. Co.* (92 Fed. Rep., 357) I think registration was properly refused, and the Examiner's ruling is affirmed.

OPINION OF THE ACTING JUDGE-ADVOCATE GENERAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 21, 1919.

The following opinion of the Acting Judge-Advocate General with reference to the act of March 3, 1883, providing for the filing of applications by Government employees without fees under certain conditions, is published for the information of those concerned.

J. T. NEWTON,
Commissioner.

WAR DEPARTMENT, J. A. G. O.,
November 30, 1918.

To Army and Navy Patent Board,
Patent Office Building, Washington, D. C.

1. By your letter, dated November 22, 1918, you submit to me for consideration a provision of the act of March 3, 1883, (22 Stat., 603, 625,) reading as follows:

The Secretary of the Interior and the Commissioner of Patents are authorized to grant any officer of the Govern-

ment, except officers and employees of the Patent Office, a patent for any invention of the classes mentioned in section forty-eight hundred and eighty-six of the Revised Statutes, when such invention is used or to be used in the public service, without the payment of any fee: *Provided*, That the applicant in his application shall state that the invention described therein, if patented, may be used by the Government or any of its officers or employees in the prosecution of work for the Government, or by any other person in the United States, without the payment to him of any royalty thereon, which stipulation shall be included in the patent.

In particular you state that the Patent Office construes the proviso above quoted as giving any person in the United States the right to use an invention patented under the act without the payment of any royalty, whereas your Board contends that it can be so used only by the Government, its officers or employees, or other persons in the prosecution of work for the Government. The question which interpretation is correct becomes of moment because many members of the military forces have refused to apply for patents under the act for inventions of considerable value to the Government, if the interpretation given to the act by the Patent Office is to prevail, while they at the same time have expressed their willingness that the Government shall use their inventions, if they may retain "the commercial rights" therein. It may be added that the matter is of special interest to the War Department, in view of the invitation recently given by the department to persons in the military service to patent their inventions under this act. (G. O. No. 93, Oct. 17, 1918.)

2. It must be admitted that the language of the proviso, taken literally and without regard to the context or the purpose of the act, amounts to a renunciation by the applicant for a patent of any claim for royalties for the use of the invention, if patented, against any person in the United States. Every person in this country would seem to be put on a parity with the Government and its officers and employees in the prosecution of work for the Government, and like them to have the free use of the invention patented. The sole effect of the patent would, then, appear to be, as you say the Patent Office holds—

> a publication or prior reference for the invention it covers, so that no person from then on could secure a patent on that invention.

But of course the context and the purpose of the act must be looked to in order to fix the meaning of the provision under discussion, and the question becomes, therefore, do the context and the purpose of the act in this case require something other than the literal interpretation set forth in the preceding paragraph?

In approaching this question, the first point to be noted is that the phrase "or by any other person in the United States" invites attention to the preceding language—

> by the Government or any of its agents or employees in the prosecution of work for the Government.

If Congress intended that any person in the United States might use the invention, it was obviously unnecessary to specify that any of the agents or employees of the Government might use it, and if Congress intended that any person in the United States might use the invention *for any purpose* it was inconsistent to specify that any of the agents or employees of the Government might use it *only in the prosecution of work for the Government*. I am impelled, therefore, to the conclusion that, taking into view merely the language of the proviso, the term "any other person in the United States" was not used by Congress in its literal sense, but must be interpreted as being *ejusdem generis* with the preceding words and confined to persons in the prosecution of work for the Government. In giving the term this interpretation, we are merely adhering to the rule that general terms following specific terms in a statute are to be construed as referring to persons or things of the same character as those specified. This is so firmly established by a long line of Federal decisions that very positive language in an act of Congress would be necessary to exempt its provisions from the application of the rule. (*United States* v. *Barnes*, 3 Wheat., 330, 390, 391; *Moore* v. *American Transportation Co.*, 24 How., 1, 36; *Newport News & M. Val. Co.* v. *United States*, 61 Fed., 488, 490; *Aberdeen Bank* v. *Chehalis County*, 166 U. S., 440; *United States* v. *1,150¼ Pounds of Celluloid*, 82 Fed., 627, 636; *Crowther* v. *Fidelity Ins., etc., Co.*, 85 Fed., 41 43; *Western Dredging & Improvement Co.* v. *Heidmaier*, 111 Fed., 123, 124; *Merchants' National Bank* v. *United States*, 42 Ct. Cl., 6, 19; *First Nat. Bank* v. *United States*, 206 Fed., 374, 379.)

But the construction of the phrase under discussion is not to be arrived at on so narrow a view as that which we have taken hitherto. The phrase occurs in a proviso, and a proviso cannot be regarded separately from the clause to which it is attached. It is not the office of a proviso to enact, but merely to qualify or restrain the enacting-clause. (*Minis* v. *United States*, 15 Pet., 423, 425.) It is, moreover, to be construed strictly, so as not to render the enacting-clause ineffective. (*United States* v. *Dickson*, 15 Pet., 141, 165; *Dollar Savings Bank* v. *United States*, 19 Wall., 227, 236.) Looking therefore to the enacting-clause, we find that it has to do with the grant of patents to officers of the Government for inventions "used or to be used in the public service." It needs no argument to show that the public service does not mean the private service of each and every individual member of the public, but the service of the State or the community as distinguished from its members. (*Lowell* v. *Boston*, 111 Mass., 454, 470; *Opinion of the Justices*, 30 N. E., 1142, 1144; *Louisville Ry Co.* v. *Louisville Fire & Life Protective Ass'n.*, 152 S. W., 799, 801.) If the proviso is construed to give any person in the United States the right to use the patented invention, then, contrary to its true office, it vastly enlarges the scope of the enacting-clause, and indeed makes the words thereof meaningless. Such a liberal construction of the proviso should not, in my judgment, be entertained.

When we pass to a consideration of the enactment as a whole, the argument is greatly fortified.

The statute provides for the grant of "a patent" for an invention, and is to be construed liberally in favor of the inventor. (*Turrill* v. *Michigan Southern, etc., R. Co.*, 1 Wall., 491, 510.) Now, it is of the very essence of a patent that the patentee has a right to exclude others from the use of the thing patented, (*United States* v. *Standard Sanitary Mfg. Co.*, 191 Fed., 172, 190,) and if the patentee in this case can exclude no one in the United States from such use his rights are indeed shadowy, and the plain purpose of the legislation is defeated. The patent becomes an evidence of the self-abnegation of the inventor rather than of any property in the invention, and the question immediately arises why Congress, in permitting the grant of such a patent to officers of the Government, should exclude officers and employees of the Patent Office. Obviously, Congress felt that it was granting a valuable right, and obviously, therefore, the proviso should not be construed as depriving the right of all value.

There is here involved, moreover, a public policy additional to that which encourages invention. The Government is not, merely by reason of the fact that an inventor is an officer of the United States, entitled to the benefits of his discoveries. (*Solomons* v. *United States*, 137 U. S., 342, 346; *Gill* v. *United States*, 160 U. S., 426, 435.) If the United States is to acquire the right to use a patentable invention of such an officer made, so to speak, in his private capacity, it must be under legislation of this character. But the construction given to the act by the Patent Office has deterred officers of the Government from applying for patents under it. This construction appears to me to adhere too closely to the letter, even at the expense of arriving at an unreasonable result. The reason of the law is against it, and to avoid conflict with the spirit of the act the general terms of the proviso must be confined to the narrower limits of the specific terms which precede it. Even without the aid of the technical rules of interpretation upon which we can rely in this case, the Supreme Court, to reach a sensible construction, has frequently limited the application of terms which in their literal significance would be too sweeping. (*United States* v. *Kirby*, 7 Wall., 482, 486, 487; *Atkins* v. *Disintegrating Co.*, 18 Wall., 272, 302; *Church of the Holy Trinity* v. *United States*, 143 U. S., 457, 459–462, 472; *Lau Ow Bew* v. *United States*, 144 U. S., 47, 59.) It is a sound principle of construction and of common sense that a statute should be interpreted *ut res magis valeat quam pereat*.

3. I am, therefore, of opinion that the words "any other person in the United States" should be interpreted as equivalent to "any other like person in the United States," that is, any other person "in the public service," or (and I regard this as a mere paraphrase) any other person "in the prosecution of work for the Government."

S. T. ANSELL,
Acting Judge-Advocate General.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE CAREY AND TODD.

Decided March 4, 1919.

PATENTABILITY—PUMP, MOTOR, OR THE LIKE.

Claims for a hydraulic pump, motor, or the like having certain specified characteristics *Held* unpatentable in view of the prior art.

Mr. C. A. Bateman and *Mr. James A. Norris* for the appellant.

Mr. T. A. Hostetler for the Commissioner of Patents.

SMYTH, *C. J.*:

On certain references the Patent Office rejected claims 1 and 2, which read as follows:

1. A hydraulic pump, motor or like apparatus of the rotary type having a circular series of cylinders cooperating with a valve having one inlet and one exhaust opening, a freely-rolling piston arranged for reciprocation in each cylinder, and a substantially circular track around which said pistons roll.

2. A hydraulic pump, motor or the like apparatus of the rotary type having a circular series of cylinders, a freely-rolling piston arranged for reciprocation in each cylinder, a substantially circular track arranged eccentrically of said circular series of cylinders on which said pistons roll, and a fluid-controlling valve encircled by said series of cylinders.

The rejection was based on a patent to Benham, No. 459,735, September 22, 1891, and on one to Beckfield, No. 683,834, October 1, 1901. Appellants assert that there is a patentable difference between the claims of the issue and the references just mentioned but we do not think so. The claims would be satisfied by the substitution of the ball-piston of Benham for the cylindrical pistons of Beckfield, Figures 7 and 8. There would be no difficulty in making such a substitution. Any intelligent mechanic could do it without invention. Where this is so, the device is not patentable. (*In re Iwan*, 17 App. D. C., 566; *in re Davenport*, 23 App. D. C., 370.)

It is further urged in behalf of the appellants that the references are not in point, because they deal with steam while their device is intended for use in pumping heavy oil. Primarily, this is its purpose, but it may be used in connection with steam. In their original application appellants state that the device is also applicable "to other fluid mediums, such as air, gas, steam." Clearly, the references are pertinent.

A proposed substitute claim was offered for consideration by the Commissioner of Patents which differs from the appealed claims in that it provides for a track in which "all curves bend in one direction." Such a track is anticipated by Beckfield, and hence the substitute is open to the same objections as those made to the appealed claims. In this court the same substitute is presented, but with certain limitations which provide that the pump or like apparatus of the issue is "for use with a viscous fluid medium" and that "the inward motion to the pistons" is given by the track, "centrifugal force being utilized for the outward motion." Fluid is an old medium and there is no patentable novelty in putting it to a new use. The function recited in the

other limitation is disclosed by the Beckfield patent, Fig. 7, if operated as a pump, for—

centrifugal force will drive the pistons against the circular track, which in turn gives inward motion to the pistons.

The decision of the Commissioner of Patents in rejecting the appealed claims is affirmed.

Affirmed.

Applications Made to the Federal Trade Commission for Licenses Under Enemy-Controlled Patents and Trade-Marks Pursuant to the "Trading with the Enemy Act."

Patent No. 1,116,398, dated November 10, 1914, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corportion of Germany, for "Dihydrochlorid of diaminodioxyarsenobenzene." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 986,148, dated March 7, 1911, to Paul Ehrlich and Alfred Berheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Derivative of oxyarlarsinic acids and process of making same." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 1,081,592, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 1,081,897, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 13,848, dated December 15, 1914, to Georg Korndorfer and Baptist Reuter, of Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Derivatives of diaminodioxyarsenobenzene and process of making same." License applied for by George J. Wallau, 6 Cliff street, New York city.

Changes in Classification.

(ORDER No. 2,470.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 22, 1919.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 74, Machine Elements, (Division XII,) establish subclass—

107. **Combined motor and transmission control.**

The patents contained in this subclass have been taken for the most part from class 121, Steam-Engines, subclass 120, Combined engine and gearing control.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(ORDER No. 2,471.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 22, 1919.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 220, Metallic Shipping and Storing Vessels, (Division XL,) change the title of the class to read *Class 220.—Metallic Receptacles*, abolish the existing subclass titles, and establish in lieu thereof the following subclasses and definitions:

220.—METALLIC RECEPTACLES.

1. **Miscellaneous.**
2. **Coal-receptacles.**
3. **High-pressure-gas holders.**
4. **Sectional—**
5. Barrel or tank type.
6. Folding—
7. Fastening members.
8. Telescoping.
9. **Spaced wall or jacket—**
10. Metal jacket.
11. Paper or wood jacket.
12. Skeleton jacket.
13. Water-jacket.
14. Attachments.
15. Spacing devices.
16. Compartment.
17. Removable inner receptacle.
18. **Wall or ground supported.**
19. **Wire.**
20. **Compartment—**
21. Cell.
22. Partitions.
23. Receptacle in cover.
24. **Closures—**
25. External and internal bar or closure.
26. Float.
27. Frangible—
28. Breakable.
29. Multiple.
30. Pivoted—
31. Modified closure or receptacle.
32. Single-plane swing—
33. Angular pivot.

220.—METALLIC RECEPTACLES—Con.

Closures—
Pivoted—
Single-plane swing—
34. Multiple pivot.
35. Spring.
36. Opening devices.
37. Multiple-plane swing.
38. Sliding.
39. Screw—
40. Bayonet.
41. Sliding.
42. Slip type—
43. Opening devices.
44. Vent.
45. Seals, liquid.
46. Packing.
47. Opening devices—
48. Cutting—
49. Wire—
50. Seam.
51. Puncturing and closing.
52. Key.
53. Ripping—
54. Integral strip.
55. Fastening devices—
56. Rail or handle.
57. Bar.
58. Rail-ear.
59. Integral—
60. Snapping.
61. Ring.
62. **Blanks.**
63. **Linings—**
64. Coated.
65. Paper or wood.

220.—METALLIC RECEPTACLES—Con.

66. **End structures—**
67. Body and end seam or joint.
68. Double-walled.
69. Supports—
70. Integral.
71. **Body-reinforcing—**
72. Integral.
73. **Edge-reinforcing—**
74. Integral.
75. **Seams or joints—**
76. Interfitting parts—
77. Three to five walls.
78. Six or more walls.
79. Rolled.
80. Separate strip.
81. Packing.
82. **Transparent wall.**
83. **Wall structure—**
84. Skeleton frame.
85. **Attachments—**
86. Filling devices.
87. Disinfectant devices.
88. Fire-preventing.
89. Frangible or fusible.
90. Scrapers.
91. **Rail-ears—**
92. Wire.
93. **Followers.**
94. **Handles—**
95. Wire.
96. Holders.
97. **Stacking devices.**
98. **Garbage-handling devices.**

J. T. NEWTON, *Commissioner.*

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF MARCH, 1919.

A. Kimball Company. (See Anthony, Marcus O., assignor.)
A. Kimball Company. (See Wallin, Gustaf A., assignor.)
Ablitt, Edward F., London, England. Electrode of secondary batteries. No. 1,298,148; Mar. 25; v. 260; p. 604.

Abram Cox Stove Company. (See Mott, Meyer, Halteman, and Wheawill, assignors.)
Accessories Manufacturing Company. (See Bramming, Carl, assignor.)
Acopian, Sooren, Montreal, Quebec, Canada. Telephone-bell damper. No. 1,297,982; Mar. 25; v. 260; p. 569.
Adamee, Jacob H., assignor of one-third to J. S. Carr, Jr., Durham, N. C. Strip-severing device. No. 1,298,431; Mar. 25; v. 260; p. 664.
Adamski, Michael, Detroit, Mich. Ground-gripping device for vehicle-wheels. No. 1,298,149; Mar. 25; v. 260; p. 604.

Adsit, Frank W. (See Chrisman and Adsit.)
Aiken, Ebenezer N., Avalon, Pa., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,298,150; Mar. 25; v. 260; p. 604.
Aiken, Edward L., Springfield, Mass. Adjustable steering-wheel. No. 1,298,151; Mar. 25; v. 260; p. 604.
Air Reduction Company. (See Roberts, Montague H., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Fjellman, Bengt W., assignor.)
Alberter, Anthony E. (See Coleman, Walter R., assignor.)
Aldrich, Frank, Highland Park, Mich. Operating mechanism for signaling apparatus. No. 1,298,271; Mar. 25; v. 260; p. 631.
Alexis, George D. (See Lovejoy and Alexis.)
Allen, Philip, Providence, R. I. Automatic sprinkler. No. 1,298,152; Mar. 25; v. 260; p. 604.
Alpern, Maxwell, assignor to American Engineering Company, Philadelphia, Pa. Governing mechanism. No. 1,298,432; Mar. 25; v. 260; p. 665.
American Electrical Heater Company. (See Kuhn and Hand, assignors.)
American Engineering Company. (See Alpern, Maxwell, assignor.)
American Optical Company. (See Reeve, Howard T., assignor.)
American Sleeve-Valve Motor Company. (See Williams and Witt, assignors.)
American Sleeve-Valve Motor Company. (See Williams, Martin L., assignor.)
Andersen, Peter C., Racine, Wis. Stone-crusher. No. 1,298,153; Mar. 25; v. 260; p. 604.
Anderson, Carl E., assignor, by mesne assignments, to White Products Company, Chicago, Ill. Latch. No. 1,298,272; Mar. 25; v. 260; p. 631.
Anderson, Evald, assignor to International Precipitation Company, Los Angeles, Calif. Leaching process for cement-kiln dust. No. 1,298,154; Mar. 25; v. 260; p. 605.
Anderson, Olof, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Multiple-spindle turret-machine. No. 1,297,983; Mar. 25; v. 260; p. 569.
Andrews, Charles E. (See McNabney and Andrews.)
Anker Holth Manufacturing Company. (See Krenke, Otto, assignor.)
Anthony, Marcus O., Englewood, N. J., assignor to A. Kimball Company, New York, N. Y. Machine for pointing metallic articles by electrolytic action. No. 1,298,155; Mar. 25; v. 260; p. 605.
Arbetter Felling Machine Company. (See Moulton, Harley C., assignor.)
Arlidge, William J. C., Barnard, N. Y. Innersole for shoes. No. 1,298,156; Mar. 25; v. 260; p. 605.
Asbury, Dorsey F., assignor to United States Ordnance Company, Washington, D. C. Counterbalance for swinging breech mechanisms. No. 1,297,984; Mar. 25; v. 260; p. 569.
Atkinson, James E., Landis, Saskatchewan, Canada. Valve control in liquid-tanks. No. 1,297,985; Mar. 25; v. 260; p. 569.
Auld, Frederick H., Columbus, Ohio. Workman's identification-badge. No. 1,298,273; Mar. 25; v. 260; p. 631.
Austin, Raymond B. (See Sheler and Austin.)

Auto Slyde & Moving Picture Machine Co. (See Stillwaggon, John H., assignor.)
Aved, Maurice H., Harvey, N. D. Garment-supporter. No. 1,298,274; Mar. 25; v. 260; p. 631.
Axtell, Clinton J., assignor to General Electric Company, Schenectady, N. Y. Electrical system of power-transmission and regenerative braking. No. 1,298,433; Mar. 25; v. 260; p. 665.
Babcock & Wilcox Company, The. (See Sneddon, James P., assignor.) (Reissue.)
Babie, Paul, Los Angeles, Calif. Shoe-closure. No. 1,297,986; Mar. 25; v. 260; p. 570.
Badger Brass Mfg. Co., The. (See Moru, Carl, assignor.)
Baer, William, Cincinnati, Ohio. Surgical appliance. No. 1,298,434; Mar. 25; v. 260; p. 665.
Bailey, Alfred A., *et al.* (See Bailey, William B., assignor.)
Bailey, William B., assignor of one-half to A. A. Bailey and one-half to A. P. Van Cleve, Seattle, Wash. Oil-burner. No. 1,298,435; Mar. 25; v. 260; p. 665.
Baker, Fred H. (See Murphy, John M., assignor.)
Baldt, Frederick, Jr., Tarentum, Pa. Anchor. No. 1,297,987; Mar. 25; v. 260; p. 570.
Ballard, William J., St. Joseph, Mo. Car-replacer. No. 1,298,275; Mar. 25; v. 260; p. 631.
Bandi, William H., Watertown, Mass. Chemical fire-extinguisher. No. 1,298,157; Mar. 25; v. 260; p. 606.
Bansett, William H., Bergenfield, N. J., assignor to Mercantile Corporation, Dayton, Ohio. Machine for applying patches to precut-window envelop-blanks. No. 1,297,988; Mar. 25; v. 260; p. 570.
Barr and Stroud Limited. (See French, James W., assignor.)
Barratt, William T., assignor to Charles S. Kehoe and A. and A. J. Cooper executors, Bennington, Vt. Presser-wheel. No. 1,298,436; Mar. 25; v. 260; p. 665.
Bartholomew, Phineas L., Aurora, Ill. Paper-bag-making machine. No. 1,298,276; Mar. 25; v. 260; p. 632.
Bartlebaugh, Benjamin C., Wheeling, W. Va. Gas-heater. No. 1,298,277; Mar. 25; v. 260; p. 632.
Bartram, Edward E., Los Angeles, Calif. Hand-guard. No. 1,298,158; Mar. 25; v. 260; p. 606.
Bashinski, Harry, Macon, Ga. Safety attachment for purses. No. 1,298,278; Mar. 25; v. 260; p. 632.
Batterman, John J., Boston, assignor, by mesne assignments to Plymouth Rubber Company, Canton, Mass. Rack and foot-rest. No. 1,298,437; Mar. 25; v. 260; p. 665.
Baumgartl, Leroy, and H. F. Gaston, Chicago, Ill.; said Gaston assignor to said Baumgartl. Demountable wheel. No. 1,298,279; Mar. 25; v. 260; p. 632.
Bausch & Lomb Optical Company. (See Grebe, Albert, assignor.)
Baynard, William H., Braintree, Mass., assignor to Beckwith Box Toe Company, Dover, N. H. Sewing-machine attachment. No. 1,298,280; Mar. 25; v. 260; p. 632.
Beach, David S., Bridgeport, Conn. Resilient wheel. No. 1,298,438; Mar. 25; v. 260; p. 666.
Beckwith Box Toe Company. (See Baynard, William H., assignor.)

Beirns, John A., Detroit, Mich. Regulator for motor-generator systems. No. 1,297,989; Mar. 25; v. 260; p. 570.
Benedict, Dirck C., Bellingham, Wash. Necktie-holder. No. 1,298,439; Mar. 25; v. 260; p. 666.
Benjamin, George R., Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Automatic transmitter. No. 1,298,440; Mar. 25; v. 260; p. 666.
Benjamin, George R. (See Yorke and Benjamin.)
Bennett, Clark H., Chicago, Ill. Apparatus for manufacturing varnish. No. 1,298,159; Mar. 25; v. 260; p. 606.
Berkeley, Laurence J., assignor to Hercules Manufacturing Company, Racine, Wis. Spike-machine. No. 1,298,281; Mar. 25; v. 260; p. 633.
Berlizheimer, David T. (See Josephs and Berlizheimer.)
Bettini, Gianni, Paris, France. Motion-picture-transposing apparatus. No. 1,298,282; Mar. 25; v. 260; p. 633.
Beudet, Maurice. (See Koetschet and Beudet.)
Beyer, Daniel A., Houston, assignor of one-half to A. M. Chambers, Harris county, Tex. Footboard-brace for vehicles. No. 1,298,160; Mar. 25; v. 260; p. 606.

Beyland, Sidney A., North Ridgeville, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,441; Mar. 25; v. 260; p. 666.

Bigelow, George A., Portland, Oreg. Lock for automobiles or power-driven vehicles. No. 1,298,283; Mar. 25; v. 260; p. 633.

Bijur, Joseph, New York, N. Y., assignor, by mesne assignments, to Bijur Motor Appliance Company. Electrical system for motor-vehicles. No. 1,298,442; Mar. 25; v. 260; p. 666.

Bijur Motor Appliance Company. (See Bijur, Joseph, assignor.)

Bischoff, John C. (See Poppink, Jan H., assignor.)

Blackburn, Wilmuth E., Summit, N. J. Game apparatus. No. 1,298,161; Mar. 25; v. 260; p. 606.

Blacker, William, Staleybridge, England. Treadle-hammer. No. 1,297,990; Mar. 25; v. 260; p. 570.

Blackstone, George M. (See Carter, Frank and E., assignors.)

Blair, Samuel A., Brooklyn, N. Y. Emergency jack and truck for vehicles. No. 1,298,284; Mar. 25; v. 260; p. 633.

Boardman, Charles W., Pawtucket, R. I. Mount for tension-pulleys for spinning and twisting machines. No. 1,298,163; Mar. 25; v. 260; p. 607.

Blaw-Knox Company. (See Brynoldt, Christian, assignor.)

Blake, Percy G. (See Boughton, Walter J., assignor.)

Bodde, Theodore, Lynn, Mass., assignor to General Electric Company. Transforming device. No. 1,298,443; Mar. 25; v. 260; p. 667.

Bogaty, Hermann, assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Drying apparatus. No. 1,298,285; Mar. 25; v. 260; p. 634.

Bolssière, Adolphe, Paris, France. Motor-tractor having endless-chain tracks. No. 1,298,444; Mar. 25; v. 260; p. 667.

Bollinger, Lester J. (See Shafer and Bollinger.)

Bomhard, Albert T., Piqua, Ohio. Smoke-hood for stoves. No. 1,298,164; Mar. 25; v. 260; p. 607.

Book, Harry L., Honolulu, Hawaii. Keyless lock. No. 1,297,991; Mar. 25; v. 260; p. 570.

Borcherdt, Walter O., Austinville, Va. Elevator. No. 1,297,992; Mar. 25; v. 260; p. 571.

Bordson, Ole O., Cross Plains, Wis. Rail-clamp. No. 1,297,993; Mar. 25; v. 260; p. 571.

Borel, Joseph L. A., and E. Grange, *née* Borel, Annecy, France. Machine for manufacturing press-buttons or the like. No. 1,298,165; Mar. 25; v. 260; p. 607.

Borszcs, Peter, West Pullman, Ill., assignor of one-half to J. Dmitrasz, Laporte, Ind. Wire-cutter. No. 1,298,166; Mar. 25; v. 260; p. 607.

Bostick, Benjamin J. (See Hudson, William F., assignor.)

Bottom, R. C., *et al.* (See May, Jesse A., assignor.)

Boughton, Walter J., Thetford, Norfolk, assignor to P. G. Blake, London, England. Supplementary carbureter for facilitating the starting of internal-combustion engines. No. 1,298,445; Mar. 25; v. 260; p. 667.

Bowman, Harry D., East Orange, N. J. Filling fuse-containers for powder-bags. No. 1,298,167; Mar. 25; v. 260; p. 608.

Boyd, John H., Mount Vernon, N. Y. Vacuum-bonnet. No. 1,298,446; Mar. 25; v. 260; p. 667.

Boye, James H., assignor to James H. Boye Manufacturing Company, Chicago, Ill. Adjustable sash-curtain support. No. 1,298,286; Mar. 25; v. 260; p. 634.

Boyer, William W. E., Oklahoma, Okla. Drinking-cup. No. 1,297,994; Mar. 25; v. 260; p. 571.

Bradford, Thomas J., Lorane, Oreg. Multiple-breech gun. No. 1,298,447; Mar. 25; v. 260; p. 667.

Bralove, Simon, Washington, D. C. Pin-fastening device. No. 1,297,995; Mar. 25; v. 260; p. 571.

Bramming, Carl, Chicago, Ill., assignor to Accessories Manufacturing Company. Switch for electric circuits. No. 1,297,996; Mar. 25; v. 260; p. 571.

Brandwood, Thomas, Walshaw, England. Perforated beam for dyeing and like apparatus. No. 1,298,287; Mar. 25; v. 260; p. 634.

Brassill, Frank A., Hartford, assignor to Middlesex Machine Company, Inc., Middletown, Conn. Bearing-head for grinding-machines. No. 1,298,448; Mar. 25; v. 260; p. 668.

Brewster, Ethelbert J., Fresno, Calif. Vehicle-spring. No. 1,298,168; Mar. 25; v. 260; p. 608.

Brill, Henry S., New York, N. Y. Lock. No. 1,298,288; Mar. 25; v. 260; p. 634.

British Emaillite Company, The. (See Goldsmith, John N., assignor.)

Broadmack, George, Chicago, Ill. Trench-wire cutter. No. 1,298,449; Mar. 25; v. 260; p. 668.

Brower, Abraham T. H., and S. Moe, Chicago, Ill.; said Moe assignor to said Brower. Printing-press. No. 1,297,997; Mar. 25; v. 260; p. 571.

Brown, Hugh E. (See Brown, John A., assignor.)

Brown, J. E., *et al.* (See May, Jesse A., assignor.)

Brown, John A., Camas, Wash., assignor of one-half to H. E. Brown, Portland, Oreg. Potato-digging machine. No. 1,298,169; Mar. 25; v. 260; p. 608.

Brown, Joseph A., Philadelphia, Pa. Rain-shield for automobile-hoods. No. 1,298,170; Mar. 25; v. 260; p. 608.

Browning, Samuel H., Columbus, Ohio. Coil-shaping machine. No. 1,297,998; Mar. 25; v. 260; p. 572.

Bryant, Corwin W., Minneapolis, Minn. Pneumatic brake and clutch controller for automobiles. No. 1,297,999; Mar. 25; v. 260; p. 572.

Bryce, James W., Bloomfield, N. J. Time-indicating system. No. 1,298,000; Mar. 25; v. 260; p. 572.

Brynoldt, Christian, Pittsburgh, Pa., assignor to Blaw-Knox Company. Apparatus for constructiong concrete walls. No. 1,298,450; Mar. 25; v. 260; p. 668.

Bryson, Tandy A., Troy, N. Y., assignor to Tolhurst Machine Works. Centrifugal machine. No. 1,298,451; Mar. 25; v. 260; p. 668.

Buckeye Steel Castings Company, The. (See Larsen, Jacob C., assignor.)

Buckham, George T. (See Dawson and Buckham.)

Buller Coupler Company. (See Buller, Jacob W., assignor.)

Burdin, Adelbert E., Seattle, Wash. Ventilator. No. 1,298,171; Mar. 25; v. 260; p. 608.

Buller, Jacob W., assignor to Buller Coupler Company, Inc., Hillsboro, Kans. Lagging-stretcher. No. 1,298,452; Mar. 25; v. 260; p. 668.

Burris, James N., Davenport, Iowa. Non-skid attachment for vehicle-tires. No. 1,298,001; Mar. 25; v. 260; p. 573.

Bush, Philip M., Hartford, Conn. Jig-filling mechanism. No. 1,298,172; Mar. 25; v. 260; p. 609.

Butters Camp Mfg. Co., The. (See Butters, Robert H., assignor.)

Butters, Robert H., Atlantic, Ga., assignor to The Butters Camp Mfg. Co. Gin-saw-sharpening machine. No. 1,298,002; Mar. 25; v. 260; p. 573.

Buttonlath Manufacturing Company. (See Sexton, James P., assignor.)

Bussard, Jessie O. (See Tharp, Harvey E., assignor.)

Byrd, Clarence, Opp, Ala. Reducing-mill. No. 1,298,289; Mar. 25; v. 260; p. 634.

Byrum, Roscoe J., New Rockford, N. D. Dispensing-can. No. 1,298,003; Mar. 25; v. 260; p. 573.

Cadman, Ralph W., Edgewood, Pa. Blow-off valve. No. 1,298,173; Mar. 25; v. 260; p. 609.

Caldwell, Warren A., Oskaloosa, Iowa. Ventilated grain-crib or silo. No. 1,298,174; Mar. 25; v. 260; p. 609.

Cardone, Paolo, Brooklyn, N. Y. Automatic heat-alarm. No. 1,298,175; Mar. 25; v. 260; p. 609.

Carlson, Walter C., assignor to Milwaukee Paper Box Company, Milwaukee, Wis. Folding display-cabinet. No. 1,298,453; Mar. 25; v. 260; p. 668.

Caron, Martinus H., Weltevreden, Java, Dutch East Indies, assignor to Research Corporation, New York, N. Y. Extracting silver from ore. No. 1,298,454; Mar. 25; v. 260; p. 669.

Carr, Julian S., Jr. (See Adamee, Jacob H., assignor.)

Carter, Evershed. (See Carter, Frank and E.)

Carter, Frank and E., assignors of one-third to G. M. Blackstone, Stamford, England. Means for starting and reversing internal-combustion engines. No. 1,298,455; Mar. 25; v. 260; p. 669.

Cary, William F., Chicago, Ill. Safety-razor. No. 1,298,456; Mar. 25; v. 260; p. 669.

Casaday, James O., South Bend, Ind. Automatic-release draft-coupling. No. 1,298,004; Mar. 25; v. 260; p. 574.

Case, Theodore W., Scipio, N. Y. Variable resistance. No. 1,298,457; Mar. 25; v. 260; p. 669.

Case, Theodore W., Scipio, N. Y. Resistance element. No. 1,298,627; Mar. 25; v. 260; p. 795.

Cavanagh, James, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Making shoes. (Reissue.) No. 14,617; Mar. 25; v. 260; p. 707.

Cement Gun Company. (See Weber, Carl, assignor.)

Chadwick, James N., Bolton, England. Apparatus for casting bombs or projectiles. No. 1,298,176; Mar. 25; v. 260; p. 610.

Chalmers, Thomas, Crew, England. Diaphragm for talking-machines. No. 1,298,290; Mar. 25; v. 260; p. 634.

Chambers, A. M. (See Beyer, Daniel A., assignor.)

Chanaud, Jean, New York, N. Y. Exercising apparatus. (Reissue.) No. 14,618; Mar. 25; v. 260; p. 707.

Chappell & Company. (See Goldspink, Archibald E., assignor.)

Chatfield, Franklin, Minneapolis, Minn. Machine for slitting knit fabric. No. 1,298,005; Mar. 25; v. 260; p. 574.

Chatfield, Franklin, Minneapolis, Minn. Fabric-stretcher. No. 1,298,006; Mar. 25; v. 260; p. 574.

Chenault, Henry, Allensville, Ky. Bank-cutting road-machine. No. 1,298,458; Mar. 25; v. 260; p. 669.

Cheney, Charles C., Charlestown, assignor to F. K. Daggett, Brookline, Mass. Automatic check-valve for compressed-air drilling-machines. No. 1,298,007; Mar. 25; v. 260; p. 574.

Chervenka, Jacob F., Casey, Iowa. Saw-set. No. 1,298,459; Mar. 25; v. 260; p. 669.

Chicago Car Seal Company. (See Rogers, Harry R., assignor.)

Chrisman, Herbert H., and F. W. Adsit, Minneapolis, Minn., said Adsit assignor to said Chrisman. Combination-lock for automobiles. No. 1, 298,177; Mar. 25; v. 260; p. 610.

Christmas Club. (See Rawll, Herbert F., assignor.)

Christiani, Emile F., Washington, D. C. Valve-gear. No. 1,298,008; Mar. 25; v. 260; p. 574.

Churchill, Grant W., Sacramento, Calif. Fluid-pressure transmission mechanism. No. 1,298,178; Mar. 25; v. 260; p. 610.

Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Governor for air-motors. No. 1,298,291; Mar. 25; v. 260; p. 635.
Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Exhaust device for air-motor-operated player-pianos. No. 1,298,292; Mar. 25; v. 260; p. 635.
Clausen, Henry P., Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone system. No. 1,298,293; Mar. 25; v. 260; p. 635.
Clemenger, Harry G. (See Frick and Clemenger.)
Cleveland, Isaac B., Brooklyn, N. Y. Clothes-pin. No. 1,298,460; Mar. 25; v. 260; p. 670.
Clulee, Stephen J., Attleboro, Mass. Bridge for eyeglasses and spectacles. No. 1,298,294; Mar. 25; v. 260; p. 635.
Clyncke, Desere, Boulder, Colo. Grain-drill. No. 1,298,009; Mar. 25; v. 260; p. 574.
Coatalen, Louis, and H. C. M. Stevens, Wolverhampton, England. Gearing for internal-combustion engines. No. 1,298,461; Mar. 25; v. 260; p. 670.
Coggins, Jacob H., Talladega, Ala. Incandescent electric lamp. No. 1,298,179; Mar. 25; v. 260; p. 610.
Cohen, Oscar, New York, N. Y. Cuspidor-cleaner. No. 1,298,295; Mar. 25; v. 260; p. 635.
Coin Controlled Lock Company. (See King, Roy D., assignor.)
Coin Machine Manufacturing Company. (See Potter, Thomas I., assignor.)
Cole, David. (See Easton and Cole.)
Coleman, Walter R., assignor of one-half to A. E. Alberter, Omaha, Nebr. Combined folding square and level. No. 1,298,010; Mar. 25; v. 260; p. 575.
Columbian Hardware Company, The. (See Yost, Gilmore M., assignor.)
Colwell, Robert C., Beaver Falls, Pa. Camera. No. 1,298,296; Mar. 25; v. 260; p. 636.
Conant, Leon B., Cambridge, Mass. Heel. No. 1,298,011; Mar. 25; v. 260; p. 575.
Conkling, Samuel G. (See Schaffert and Conkling.)
Conn, Byron O. (See Root, Charles F., assignor.)
Connecting Link Company, The. (See Keator, Charles D., assignor.)
Connely, Charles B., Scotia, N. Y., assignor to General Electric Company. Electric-railway control system. No. 1,298,462; Mar. 25; v. 260; p. 670.
Converse Rubber Shoe Company. (See Paterson, Morton L., assignor.)
Cook, William E., New York, N. Y., assignor to Insulation Development Corporation. Insulated wire. No. 1,298,297; Mar. 25; v. 260; p. 636.
Copeland, Ridley, Wallsend, England. Marine-engine stop and control valve. No. 1,298,298; Mar. 25; v. 260; p. 636.
Cooper, Alexander J., et al., executors. (See Barratt, William T., assignor.)
Cooper, Annie, et al., executors. (See Barratt, William T., assignor.)
Corl, Robert M., and H. F. Hagemeyer, assignors, by mesne assignments, to J. N. Willys, Toledo, Ohio. Glass-rod machine and process. No. 1,298,463; Mar. 25; v. 260; p. 670.
Coventry Ordnance Works, The. (See Mansell, John H., assignor.)
Coventry Ordnance Works, The. (See Redpath and Hellberg, assignors.)
Crane, Raymond E., Wilmette, Ill. Water-closet flush-tank. No. 1,298,012; Mar. 25; v. 260; p. 575.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric switch. No. 1,298,464; Mar. 25; v. 260; p. 670.
Crowe, John, St. Joseph, Mo. Machine for measuring and winding wall-paper in commercial rolls. No. 1,298,013; Mar. 25; v. 260; p. 575.
Cumberland Glass Mfg. Co., The. (See Shoemaker, Isaac L., assignor.)
Curtis, Almon W., Cortland, N. Y. One-man top. No. 1,298,014; Mar. 25; v. 260; p. 576.
Curtis, Frank C., Troy, N. Y. Machine for making spiral fly-traps. No. 1,298,180; Mar. 25; v. 260; p. 610.
Curtis, George A., Medford, Mass. Wire nail. No. 1,298,015; Mar. 25; v. 260; p. 576.
Curtiss Aeroplane and Motor Corporation. (See Klechler, Henry, assignor.)
Curtiss Aeroplane and Motor Corporation. (See Zimmermann, Paul G., assignor.)
Cushman, Sarah W., Norwich, N. Y. Garment-button. No. 1,298,016; Mar. 25; v. 260; p. 576.
Cutler-Hammer Mfg. Co., The. (See Tower and Van Nest, assignors.)

D & W Fuse Company. (See Downes, Louis W., assignor.)
Daggett, Frederick K. (See Cheney, Charles C., assignor.)
Dain, Joseph, assignor to Deere and Company, Moline, Ill. Tractor-wheel. No. 1,298,017; Mar. 25; v. 260; p. 576.
Dale, John H., New York, N. Y., assignor to Dale Lighting Fixture Co., Inc. Electric incandescent lamp. No. 1,298,299; Mar. 25; v. 260; p. 636.
Dale Lighting Fixture Co. (See Dale, John H., assignor.)
Daniels, John K., St. Paul, Minn. Foot-scraper. No. 1,298,300; Mar. 25; v. 260; p. 637.
David, Virgil E., Omaha, Nebr. Water-heating system. No. 1,298,301; Mar. 25; v. 260; p. 637.
Davis, Anthony E., Philadelphia, Pa. Pavement and expansion-joint therefor. No. 1,298,018; Mar. 25; v. 260; p. 576.
Davis, Bemiss N., New Orleans, La. Measuring instrument. No. 1,298,302; Mar. 25; v. 260; p. 637.
Davis, Carl R., Le Roy, Kans. Coat and article holder for theater-seats. No. 1,298,181; Mar. 25; v. 260; p. 611.
Davis, John A., Boston, Mass. Turn-table for talking-machines. No. 1,298,019; Mar. 25; v. 260; p. 576.
Dawson, Arthur T., and G. T. Buckham, Westminster, London, England, assignors to United States Ordnance Company, Washington, D. C. Breech mechanism of ordnance. No. 1,298,020; Mar. 25; v. 260; p. 577.
Day, Ernest H. (See Ellison, August J., assignor.)
Dayton Metal Products Company, The. (See Mougey and Jacobs, assignors.)
Dean, Homer V. (See Phillips and Dean.)
Dean, William W., Stamford, Conn., assignor to Splitdorf Electrical Company, Newark, N. J. Generator. No. 1,298,465; Mar. 25; v. 260; p. 671.
De Bijll Nachenius, Henri A. J., Haarlem, Netherlands. Centrifugal pump. No. 1,298,248; Mar. 25; v. 260; p. 625.
Deere and Company. (See Dain, Joseph, assignor.)
Del Fungo-Giera, Philippo L. E., Pelham, N. Y. Delay-action detonator. No. 1,298,466; Mar. 25; v. 260; p. 671.
Del Fungo-Giera, Philippo L. E., Pelham, N. Y. Chemical base-detonator. No. 1,298,467; Mar. 25; v. 260; p. 672.
Dempsey, James A., New York, N. Y. Hose-coupling. No. 1,298,303; Mar. 25; v. 260; p. 637.
Derihon, Ernest, London, England. Internal-combustion engine. No. 1,298,468; Mar. 25; v. 260; p. 672.
Detroit Accessories Corporation. (See Strickland, Silas A., assignor.) (Reissue.)
Detroit Pressed Steel Company. (See Putnam, Alden L., assignor.)
De Witt, Dorcy O. (See Miller and De Witt.)
De Witt, Lizette W., Syracuse, N. Y. Monument. No. 1,298,182; Mar. 25; v. 260; p. 611.
Deye, Mark R., Bradford, Ill. Culvert. No. 1,298,021; Mar. 25; v. 260; p. 577.
De Young, Ernest V., and L. Terwilliger, Crystal, Mich. Nut-lock. No. 1,298,469; Mar. 25; v. 260; p. 672.
D'Humy, Fernand E., Englewood, N. J. Garage. No. 1,298,183; Mar. 25; v. 260; p. 611.
Dick, Samuel M., assignor of one-half to F. E. Mick, Minneapolis, Minn. Evaporating apparatus. No. 1,298,470; Mar. 25; v. 260; p. 672.
Dickerson, Raymond L., assignor of one-third to A. S. Jones, Spokane, Wash., and one-third to W. J. Michelet, Portland, Oreg. Motor-vehicle. No. 1,298,022; Mar. 25; v. 260; p. 577.
Dickey, Thomas F. (See Fries and Dickey.)
Diers, Peter M. (See Wennerblad, Einar G., assignor.)
Dinklage, August J., East Orange, N. J. Anticreeping device for rails. No. 1,298,023; Mar. 25; v. 260; p. 577.
Dmitrass, John. (See Borsecs, Peter, assignor.)
Doble, John A. (See Doble, William A., W. A., Jr., and J. A.)
Doble Laboratories. (See Doble, William A., W. A., Jr., and J. A., assignors.)
Doble, William A., Jr. (See Doble, William A., W. A., Jr., and J. A.)
Doble, William A., W. A., Jr., and J. A., assignors to Doble Laboratories, San Francisco, Calif. Steam-generator. No. 1,298,184; Mar. 25; v. 260; p. 612.
Dobson, George, Palisades, Colo. Skid for mining-machines. No. 1,298,304; Mar. 25; v. 260; p. 637.
Dodds, Ethan I. (See Flannery and Dodds.)
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,306; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,307; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,308; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,309; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., and C. Hyland, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,298,305; Mar. 25; v. 260; p. 638.
Dodge, Austin E., Schenectady, N. Y., assignor to General Electric Company. Pressure-difference-creating device. No. 1,298,471; Mar. 25; v. 260; p. 673.
Dodson, Samuel C., Baltimore, Md. Table-truck. No. 1,298,185; Mar. 25; v. 260; p. 612.
Donald, William H., Oak Ridges, assignor of one-half to S. G. Forst, Toronto, Ontario, Canada. Classifier. No. 1,298,310; Mar. 25; v. 260; p. 638.
Dorion, Michael, Rumford, Me. Window-locking device. No. 1,298,472; Mar. 25; v. 260; p. 673.
Dornan, Robert, 2d, Wayne, Pa. Journal-box-lubricating device. No. 1,298,311; Mar. 25; v. 260; p. 639.
Dorsett, Andrew C., Coffinton, Ga. Envelop. No. 1,298,473; Mar. 25; v. 260; p. 673.
Douchamp, Henry, assignor to Smethport Glass Co., Smethport, Pa. Glass-furnace. No. 1,298,474; Mar. 25; v. 260; p. 673.
Douglass, Frank J., Chicago, Ill. Steam-radiator. No. 1,298,186; Mar. 25; v. 260; p. 612.

Downes, Louis W., assignor to D & W Fuse Company, Providence, R. I. Yarn-spinning machine and method. No. 1,298,475; Mar. 25; v. 260; p. 673.
Draper Corporation. (See Kimball, Harry G., assignor.)
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treating waste sulfite liquors, &c. No. 1,298,476; Mar. 25; v. 260; p. 673.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treating waste sulfite liquors, &c. No. 1,298,477; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Production of acetates from waste soda liquors, &c. No. 1,298,478; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treatment of waste liquors from soda pulp processes, &c. No. 1,298,479; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Causticized ligneous acetate material and making the same. No. 1,298,480; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treatment of waste soda liquors. No. 1,298,481; Mar. 25; v. 260; p. 674.
Dulaney, Henry S. (See Spencer, Charles H., assignor.)
Dunham Company, The. (See Dunham, Ray E., assignor.)
Dunham Company, The. (See Karl, George E., assignor.)
Dunham, Ray E., assignor to The Dunham Company, Berea, Ohio. Land-roller. No. 1,298,482; Mar. 25; v. 260; p. 675.
Dunn, Charles W., New York, N. Y. Window-sash. No. 1,298,187; Mar. 25; v. 260; p. 612.
Duplex Truck Company. (See Thomas, George J., assignor.)
Earle, Elias P., Townville, S. C. Camera. No. 1,298,312; Mar. 25; v. 260; p. 639
Easton, William B., Chicago, Ill., and D. Cole, El Paso, Tex. Frame for jaw-crushers. No. 1,298,188; Mar. 25; v. 260; p. 613.
Ebeling, Lena E. (See Ebeling, Phillip, assignor.)
Ebeling, Phillip, assignor, by mesne assignments, to L. E. Ebeling, Moundsville, W. Va. Cap for threaded glass receptacles. No. 1,298,313; Mar. 25; v. 260; p. 639.
Eberhardt, George O. (See Jerome and Eberhardt.)
Edmunds & Jones Corporation. (See Knauff, George C., assignor.)
Edward P. Bates Co. (See Siver, Charles W., assignor.)
Electro Bleaching Gas Company. (See Ornstein, Georg, assignor.)
Ellison, August J., assignor of one-half to E. H. Day, Montreal, Quebec, Canada. Spirit-level. No. 1,298,024; Mar. 25; v. 260; p. 578.
Ellison, Thomas J., Terrill, Ky. Corn-planter. No. 1,298,483; Mar. 25; v. 260; p. 675.
Ellmauerer, John F., Fairchild, Wis. Dirigible headlight. No. 1,298,314; Mar. 25; v. 260; p. 639.
Emmerson-Brantingham Company. (See Krieg, Alfred, assignor.)
Erith, Charles, London, England. Mechanical underfeed stoker. No. 1,298,189; Mar. 25; v. 260; p. 613.
Evans, Fred C., Ithaca, N. Y. Charge-mixing device. No. 1,298,315; Mar. 25; v. 260; p. 639.
Eveleth, Clarence M., River Forest, Ill. Weather-strip. No. 1,298,190; Mar. 25; v. 260; p. 613.
Ewing, Harry L., Dallas, Tex. Screw-jack. No. 1,298,316; Mar. 25; v. 260; p. 640.
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Fahs, John E., New York, N. Y. Inclinometer. No. 1,298,484; Mar. 25; v. 260; p. 675.
Fasey, William, Shareshrook, England. Engine. No. 1,298,191; Mar. 25; v. 260; p. 613.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator. No. 1,298,192; Mar. 25; v. 260; p. 613.
Fedders Manufacturing Company. (See Fedders, John M., assignor.)
Federal Telegraph Company. (See Fuller, Leonard F., assignor.)
Feldman, Shimon, assignor to J. M. Alvaz Societe par action pour Construction de Machines, Petrograd, Russia. Apparatus for taking off single sheets from piles. No. 1,298,485; Mar. 25; v. 260; p. 676.
Ferguson, John A., Denver Colo. Sectionally-spaced hollow-wall construction. No. 1,298,025; Mar. 25; v. 260; p. 578.
Ferguson, John A., Denver, Colo. Multiple sectional hollow-wall construction. No. 1,298,026; Mar. 25; v. 260; p. 578.
Ferguson, John A., Denver, Colo. Multiple mold for tiles and forming its complementally-functioning matrix units. No. 1,298,027; Mar. 25; v. 260; p. 578.
Ferrell, Eugene D., Wayzata, Minn. Needle-valve. No. 1,298,317; Mar. 25; v. 260; p. 640.
Fife, Harry B. (See Wells and Fife.)
Finkelstein, Alexander, Chicago, Ill. Dumping-truck. No. 1,298,028; Mar. 25; v. 260; p. 578.
Fisher, J. W., Jr. See Reynolds, Lynus C., assignor.)
Fjellman, Bengt W., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Process of and means for grinding the curved superficies of conical rollers. No. 1,298,486; Mar. 25; v. 260; p. 676.
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Flannery Bolt Company. (See Flannery and Dodds, assignors.)
Flannery Bolt Company. (See Stafford, Benjamin E. D., assignor.)
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,298,318; Mar. 25; v. 260; p. 640.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,319; Mar. 25; v. 260; p. 640.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,320; Mar. 25; v. 260; p. 640.
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Forsberg, Oscar F., Yonkers, assignor to Western Electric Company, Incorporated, New York, N. Y. Terminal bank. No. 1,298,321; Mar. 25; v. 260; p. 640.
Forst, Samuel G. (See Donald, William H., assignor.)
Forthmiller, Gustave, *et al.* (See Forthmiller, Otto, assignor.)
Forthmiller, Karl, *et al.* See Forthmiller, Otto, assignor.)
Forthmiller, Otto, assignor of one-half to J. J. Maier, one-sixth to G. Forthmiller, and one-sixth to K. Forthmiller, Minneapolis, Minn. Lock-actuated circuit-breaker for ignition systems of explosive-engines. No. 1,298,322; Mar. 25; v. 260; p. 641.
Fox, Austen H., New York, and A. W. Lenderoth, Stapleton, N. Y. Magnetic controlling device for railways. No. 1,298,029; Mar. 25; v. 260; p. 579.
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Freiwald, Gustav, Portland, Oreg. Curtain-stretcher. No. 1,298,323; Mar. 25; v. 260; p. 641.
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French, James W., assignor to Barr and Stroud Limited, Glasgow, Scotland. Periscope and like instrument casing. No. 1,298,632; Mar. 25; v. 260; p. 706.
Frick, Joseph L., and H. G. Clemenger, Jamestown, N. Y. Traction locomotive and car. No. 1,298,194; Mar. 25; v. 260; p. 614.
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Fromhagen, Frederick, Brooklyn, N. Y. Attachable spout for vessels. No. 1,298,031; Mar. 25; v. 260; p. 579.
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Furlow, Floyd C., Montclair, assignor to Otis Elevator Company, Jersey City, N. J. Electrically-controlled elevator. No. 1,298,032; Mar. 25; v. 260; p. 579.
Gaddess, Harry W., Baltimore, Md., assignor of one-third to V. Kelly. Attachment for knitting-needles. No. 1,298,033; Mar. 25; v. 260; p. 579.
Gairing, Emil, assignor to The Gairing-Needham Tool Co., Inc., Detroit, Mich. Boring-tool. No. 1,298,196; Mar. 25; v. 260; p. 614.
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Garacn, Frank, Bessemer, Ala. Ship-protector. No. 1,298,325; Mar. 25; v. 260; p. 641.
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Gathmann, Emil, Baltimore, Md. Apparatus for teeming ingot-molds. No. 1,298,034; Mar. 25; v. 260; p. 580.
Gathmann, Emil, Baltimore, Md. Teeming ingot-molds. No. 1,298,035; Mar. 25; v. 260; p. 580.
Gathmann, Emil, Baltimore, Md. Teeming ingot-molds. No. 1,298,036; Mar. 25; v. 260; p. 580.
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General Electric Company. (See London and Phillips, assignors.)
General Electric Company. (See Macloskie, George, assignor.)
General Electric Company. (See Mann, Arthur S., assignor.)
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General Electric Company. (See Marshall, James E., assignor.)
General Electric Company. (See Miller, Levi B., assignor.)
General Electric Company. (See Persson, Otto F., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Ver Planck and Stock, assignors.)
General Electric Company. (See Wentworth, Arthur M., assignor.)
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Goldberg, Hyman E., (now by judicial change of name Hyman Golber,) assignor to Goldberg Calculating Machine Company, Chicago, Ill. Calculating-machine. No. 1,298,198; Mar. 25; v. 260; p. 615.
Goldsmith, John N., Holborn, London, assignor to The British Emaillite Company, Limited, Piccadilly Circus, London, England. Cellulose ester dope or varnish. No. 1,298,199; Mar. 25; v. 260; p. 615.
Goldspink, Archibald E., Kentish Town, assignor to Chappell & Company, Limited, London, England. Pneumatic action for piano-players. No. 1,298,491; Mar. 25; v. 260; p. 677.
Goode, Edwin J., Saffron Walden, England. Motor plow and cultivator. No. 1,298,329; Mar. 25; v. 260; p. 642.
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Goodrum, Charles L., assignor to Western Electric Company, Incorporated, New York, N. Y. Contact-bank. No. 1,298,330; Mar. 25; v. 260; p. 642.
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Görgey, William, assignor of one-half to J. Waculik, South Bethlehem, Pa. Snow-melting device. No. 1,298,200; Mar. 25; v. 260; p. 615.
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Gould, John N., assignor to The F. B. Zieg Mfg. Company, Fredericktown, Ohio. Road-grader. No. 1,298,331; Mar. 25; v. 260; p. 642.
Graham, John W., Hinton, W. Va. Typographical or slug-casting machine. No. 1,298,492; Mar. 25; v. 260; p. 677.
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Grant, Albert C., Chicago, Ill., assignor to Grant Wire Wheel Manufacturing Company. Auto-wheel. No. 1,298,332; Mar. 25; v. 260; p. 642.
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Grebe, Albert, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Draw-in periscope. No. 1,298,333; Mar. 25; v. 260; p. 642.
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Gregg, Louis D., assignor to The Gregg Company, Limited, Hackensack, N. J. Dump-car. No. 1,298,039; Mar. 25; v. 260; p. 581.
Grice, Letcher O. (See Hale, Augustus S., assignor.)
Grip Nut Company. (See Sharp, William E., assignor.)
Grossmann, Jacob, Manchester, England. Utilization of niter cake. No. 1,298,334; Mar. 25; v. 260; p. 643.
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Gunn, Charles H., Sacramento, Calif. Lining for friction-surfaces. No. 1,298,335; Mar. 25; v. 260; p. 643.
Gunton, Fred L., assignor of one-half to F. M. Stevens, Elyria, Ohio. Window-controlling apparatus. No. 1,298,336; Mar. 25; v. 260; p. 643.
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Hacker, Max, Brooklyn, N. Y. Tool-holder. No. 1,298,201; Mar. 25; v. 260; p. 615.
Hadcock, Albert G., assignor to Sir W. G. Armstrong, Whitworth and Company, Limited, Newcastle-upon-Tyne, England. Shield for use with gun-carriages. No. 1,298,040; Mar. 25; v. 260; p. 581.
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Haight, William H., Northfield, Minn. Knockdown furniture. No. 1,298,496; Mar. 25; v. 260; p. 678.
Hale, Augustus S., Atlanta, Ga., assignor to L. O. Grice, Washington, D. C. Adjustable shade-bracket. No. 1,298,337; Mar. 25; v. 260; p. 643.
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Hall, Olin P. (See Hall, Max R. and O. P.)
Hall, Sidney Z., London, England. Internal-combustion engine. No. 1,298,497; Mar. 25; v. 260; p. 679.
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Hamilton, John R., Yonkers, assignor to Sypho-Chemical Sprinkler Corporation, Croton-on-Hudson, N. Y. Emergency shut-off device for chemical extinguishing apparatus. No. 1,298,203; Mar. 25; v. 260; p. 615.
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Hand, Jay A. (See Kuhn and Hand.)
Hansen, Gustave A., St. Louis, Mo. Steamboat and barge loading and unloading system. No. 1,298,499; Mar. 25; v. 260; p. 679.
Hardel, Jean A., Paris, France. Charge-torpedo. No. 1,298,500; Mar. 25; v. 260; p. 679.
Harris, Harvey L., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,339; Mar. 25; v. 260; p. 643.
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Haskell, Henry L., Ludington, assignor to Haskelite Manufacturing Corporation, Grand Rapids, Mich. Boat and canoe. No. 1,298,042; Mar. 25; v. 260; p. 581.
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Head, Wrightson & Company. (See Wrightson, Thomas, assignor.)
Heifenbein, Harry, Cleveland, Ohio. Signal device for automobiles or other vehicles. No. 1,298,205; Mar. 25; v. 260; p. 616.
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Henkle, Willard G., Garrison, Iowa. Mold for concrete posts. No. 1,298,341; Mar. 25; v. 260; p. 644.
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Herr, Herbert T., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Steam-turbine. No. 1,298,206; Mar. 25; v. 260; p. 616.
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Hight, Leslie R. and B. G., Neodesha, Kans. Sad-iron handle. No. 1,298,210; Mar. 25; v. 260; p. 617.
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Holder, Sherman F., Duggar, Ind. Sanitary milk-bucket. No. 1,298,503; Mar. 25; v. 260; p. 680.
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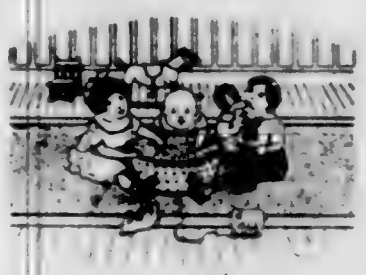
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Irvine, Richard, Detroit, Mich. Window-lock. No. 1,298,507; Mar. 25; v. 260; p. 681.
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Johnson, Eric, New York, N. Y. Rural-mail-box signal. No. 1,298,345; Mar. 25; v. 260; p. 645.
Johnson, Harry W., Atherton, England. Apparatus for sealing vessels. No. 1,298,218; Mar. 25; v. 260; p. 619.
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Kemp, Walter D., New York, N. Y. Face-shield. No. 1,298,223; Mar. 25; v. 260; p. 620.
Kennedy, Hugh A., Metaline, assignor of one-half to V. I. Tucker, Bossburg, Wash. Convertible chair. No. 1,298,053; Mar. 25; v. 260; p. 583.
Kerlin, Horace B., Hamilton, Ohio. Oven-thermometer. No. 1,298,054; Mar. 25; v. 260; p. 583.
Kershaw, Joseph, Joplin, Mo. Signal apparatus for automobiles. No. 1,298,055; Mar. 25; v. 260; p. 583.
Kibuzinski, Aleksander, Hartford, Conn. Grate for meat-smokers. No. 1,298,351; Mar. 25; v. 260; p. 646.
Kimball, Harry G., Bronxville, N. Y., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Loom feeler-motion. No. 1,298,352; Mar. 25; v. 260; p. 646.
King, Charles B., C. S. Johnson, and B. Jacoby, assignors to The Marion Steam Shovel Company, Marion, Ohio. Clutch and locking device. No. 1,298,056; Mar. 25; v. 260; p. 583.
King, Roy D., assignor to Coin Controlled Lock Company, Chicago, Ill. Lock. No. 1,298,224; Mar. 25; v. 260; p. 620.
Kinney, Justus R., Allston, Mass. Power-transmission device. No. 1,298,512; Mar. 25; v. 260; p. 682.
Kinotkon Apparatus Corporation. (See Proctor, Barton A., assignor.)
Kirkpatrick, George W., Rochester, N. Y. Vehicle-signal. No. 1,298,057; Mar. 25; v. 260; p. 584.
Kish, George, Cleveland, Ohio. Clock. No. 1,298,353; Mar. 25; v. 260; p. 646.
Kitsee, Isidor, Philadelphia, Pa. Treating liquor from reducing processes of nitrated coal-tar derivatives. No. 1,298,513; Mar. 25; v. 260; p. 683.
Kitsee, Isidor, Philadelphia, Pa. Color photography. No. 1,298,514; Mar. 25; v. 260; p. 683.
Kleckler, Henry, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Fuselage-clip. No. 1,298,515; Mar. 25; v. 260; p. 683.
Kleckler, Henry, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Aeroplane-control bridge. No. 1,298,516; Mar. 25; v. 260; p. 683.
Klemm, Emil R. (See McCanna and Klemm.)
Knauff, George C., Chicago, Ill., assignor to Edmunds & Jones Corporation, Detroit, Mich. Switching-socket. No. 1,298,354; Mar. 25; v. 260; p. 647.
Knudsen, Barney C., Montclair, N. J. Sled. No. 1,298,355; Mar. 25; v. 260; p. 647.
Knudson, Frank, *et al.* (See Osten, James H., assignor.)
Koch, Hugo F., New York, N. Y. Heater. No. 1,298,517; Mar. 25; v. 260; p. 683.
Koetschet, Joseph, and M. Beudet, Lyon, assignors to Societe Chimique des Usines du Rhone, (Anciennement, Gilliard, P. Monnet et Cartier,) Paris, France. Production of acetic anhydrid and acetaldehyde. No. 1,298,356; Mar. 25; v. 260; p. 647.
Krenke, Otto, assignor to Anker Holth Manufacturing Company, Port Huron, Mich. Cream-separator. No. 1,298,058; Mar. 25; v. 260; p. 584.
Krenke, Otto A., assignor to Anker Holth Manufacturing Company, Port Huron, Mich. Yieldable bearing. No. 1,298,059; Mar. 25; v. 260; p. 584.
Krieg, Alfred, Minneapolis, Minn., assignor to Emmerson-Brantingham Company, Rockford, Ill. Transmission mechanism. No. 1,298,060; Mar. 25; v. 260; p. 584.
Krieger, Alexander F., St. Joseph, Mich. Mail-box for rural districts. No. 1,298,225; Mar. 25; v. 260; p. 620.
Krodinger, Alois L., Maplewood, Mo. Metal corner-bead and stopping-off strip. No. 1,298,357; Mar. 25; v. 260; p. 647.
Kruse, Frode A., Tyler, Minn. Cow-tail holder. No. 1,298,061; Mar. 25; v. 260; p. 584.
Kuhn, Frank, and J. A. Hand, assignors to American Electrical Heater Company, Detroit, Mich. Oven. No. 1,298,358; Mar. 25; v. 260; p. 647.
La Bauve, Lillie W., Houston, Tex. Detachable automobile spring-tire. No. 1,298,062; Mar. 25; v. 260; p. 585.
Labombarde, Elie W. (See Sidebotham, Melvin H., assignor.)
Labombarde, Harold S., Nashua, N. H. Electric counter for box-making machines. No. 1,298,518; Mar. 25; v. 260; p. 684.
Landis, Raymond F., Reading, Pa. Rod-shifting device. No. 1,298,226; Mar. 25; v. 260; p. 620.
Landis, Raymond F., Reading, Pa. Valve controlling and releasing device. No. 1,298,227; Mar. 25; v. 260; p. 621.
Lane, Henry M., Detroit, Mich. Core-rack. No. 1,298,359; Mar. 25; v. 260; p. 647.
Langstow-Fowler Company. (See Lattig, Charles I., assignor.)
Larsen, Jacob C., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Brake Mechanism for six-wheel trucks. No. 1,298,228; Mar. 25; v. 260; p. 621.
Lattig, Charles I., assignor, by mesne assignments, to Langslow-Fowler Company, Rochester, N. Y. School-chair. No. 1,298,519; Mar. 25; v. 260; p. 684.
Lattimer-Stevens Company, The. (See Stevens, Frank E., assignor.)

Ser. No. 115,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.

BIG CHIEF

Particular description of goods.—Popping Corn.
Claims use since Nov. 1, 1915.

Ser. No. 115,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.



Particular description of goods.—Popping Corn.
Claims use since Apr. 1, 1914.

Ser. No. 115,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN POP CORN COMPANY, Sioux City and Schaller, Iowa. Filed Feb. 10, 1919.

GOLDEN GATE

Particular description of goods.—Popping Corn.
Claims use since Oct. 1, 1918.

Ser. No. 115,729. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) SCHISLER BROTHERS, St. Louis, Mo. Filed Feb. 10, 1919.

IT'S-IT

Particular description of goods.—Patch Kits, Including Cement and Rubber Patches for Repairs of Inner Tubes for Automobile Tires.
Claims use since on or about the 29th day of January, 1919.

Ser. No. 115,740. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN SCOTT & Co., INC., Philadelphia, Pa. Filed Feb. 10, 1919.

Aviation

Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since 1915.

Ser. No. 115,745. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. J. WALUKIEWICZ, La Salle, Ill. Filed Feb. 10, 1919.



The portrait shown being a likeness of myself.
Particular description of goods.—A Liniment.
Claims use since July 1, 1918.

Ser. No. 115,752. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. B. ANSBACHER & COMPANY, INC., New York, N. Y. Filed Feb. 11, 1919.

TRIANGLE

Particular description of goods.—Soluble Blue.
Claims use since Jan. 10, 1919.

Ser. No. 115,785. (CLASS 39. CLOTHING.) REVERSIBLE COLLAR COMPANY, Boston, Mass. Filed Feb. 11, 1919.

SnoCraft

The word "SnoCraft."
Particular description of goods.—Collars, Cuffs, and Shirt-Bosoms.
Claims use since about Jan. 1, 1918.

Ser. No. 115,793. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. TANN, Dayton, Ohio. Filed Feb. 11, 1919.



Particular description of goods.—A Medicinal Preparation for Disorders of Stomach and Bowels.
Claims use since Jan. 15, 1919.

Ser. No. 115,794. (CLASS 39. CLOTHING.) E. E. TAYLOR COMPANY, Boston, Mass. Filed Feb. 11, 1919.

FLEXI-TREAD

The word "Flexi-Tread."
Particular description of goods.—Men's and Women's Leather Boots and Shoes.
Claims use since Feb. 8, 1918.

Ser. No. 115,802. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB DONIGER, Brooklyn, N. Y. Filed Feb. 12, 1919.

DONTÉ

Particular description of goods.—A Depilatory.
Claims use since Jan. 1, 1919.

Ser. No. 115,814. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHNSON & JOHNSON, New Brunswick, N. J. Filed Feb. 12, 1919.

BELLATURA

Particular description of goods.—Medicinal Plasters.
Claims use since January, 1919.

Ser. No. 115,841. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CORPORATION, New York, N. Y.; Boston, Mass.; Chicago, Ill.; Philadelphia, Pa.; Cleveland, Ohio; Seattle, Wash., and San Francisco, Cal. Filed Feb. 13, 1919.

MOHTAN

The word "Mohtan."
Particular description of goods.—Dyes and Tanning Extracts.
Claims use since Aug. 1, 1918.

Ser. No. 115,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CORPORATION, New York, N. Y.; Boston, Mass.; Chicago, Ill.; Philadelphia, Pa.; Cleveland, Ohio; Seattle, Wash., and San Francisco, Cal. Filed Feb. 13, 1919.

MOHLIVE

The word "Mohlive."
Particular description of goods.—Oil for the Lubrication of Yarn in the Process of Manufacture.
Claims use since Aug. 1, 1918.

Ser. No. 115,885. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PONZIO BROTHERS, Philadelphia, Pa. Filed Feb. 15, 1919.

50-50

Particular description of goods.—Metal-Polish.
Claims use since Jan. 1, 1919.

Ser. No. 115,960. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CONRAD G. MOLLER, New Canaan township, Fairfield county, Conn. Filed Feb. 18, 1919.

PRI-SALTO

Particular description of goods.—Soaps.
Claims use since May 1, 1917.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 25, 1919.

124,919. OVERALLS, WORK-PANTS, AND JUMPERS. Arbitter & Richman, St. Louis, Mo.
Filed August 7, 1917. Serial No. 105,512. PUBLISHED OCTOBER 23, 1917.

124,920. CERTAIN NAMED OILS AND GREASES. The Atlantic Refining Company, Philadelphia, Pa.
Filed July 20, 1918. Serial No. 112,226. PUBLISHED DECEMBER 3, 1918.

124,921. CERTAIN NAMED OILS AND GREASES. The Atlantic Refining Company, Philadelphia, Pa.
Filed July 20, 1918. Serial No. 112,227. PUBLISHED DECEMBER 3, 1918.

124,922. CERTAIN NAMED FOODS. Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y.
Filed September 25, 1918. Serial No. 113,340. PUBLISHED DECEMBER 10, 1918.

124,923. DRESS-FASTENERS. Columbia Fastener Company, Chicago, Ill.
Filed October 11, 1917. Serial No. 106,716. PUBLISHED APRIL 9, 1918.

124,924. CORN OR COTTON SALAD-OIL COMPOUNDED WITH EXTRA-FINE OLIVE-OIL. Crisafulli Bros., New York, N. Y.
Filed June 7, 1918. Serial No. 111,407. PUBLISHED NOVEMBER 12, 1918.

124,925. FINISHED SHEEPSKINS. Donnell, Carman & Munoz, Boston, Mass.
Filed February 28, 1917. Serial No. 101,778. PUBLISHED JULY 23, 1918.

124,926. WHEAT-FLOUR. Enid Milling Company, Enid, Okla.
Filed October 25, 1917. Serial No. 106,945. PUBLISHED DECEMBER 10, 1918.

124,927. LAXATIVE TABLETS. Gilbert-Co., Lynchburg, Va.
Filed May 11, 1918. Serial No. 110,840. PUBLISHED DECEMBER 17, 1918.

124,928. ALLOYS CONTAINING CHROMIUM AND NICKEL. Hoskins Manufacturing Company, Detroit, Mich.
Filed September 9, 1918. Serial No. 113,077. PUBLISHED NOVEMBER 12, 1918.

124,929. THREADING-OIL. G. A. Hosmer Company, Buffalo, N. Y.
Filed March 28, 1917. Serial No. 102,516. PUBLISHED DECEMBER 3, 1918.

124,930. BUTTER. The Isaly Dairy Company, Marion, Ohio.
Filed August 4, 1917. Serial No. 105,475. PUBLISHED OCTOBER 30, 1917.

124,931. CERTAIN NAMED FOODS. Jaburg Brothers, New York, N. Y.
Filed November 17, 1916. Serial No. 99,350. PUBLISHED AUGUST 6, 1918.

124,932. THERAPEUTIC SALVE FOR CUTS, WOUNDS, AND BRUISES. Marie Kossina, Chicago, Ill.
Filed April 11, 1918. Serial No. 110,120. PUBLISHED DECEMBER 17, 1918.

124,933. FACE-CREAM. Koken Barbers' Supply Company, St. Louis, Mo.
Filed October 10, 1918. Serial No. 113,652. PUBLISHED DECEMBER 17, 1918.

124,934. CERTAIN NAMED CHEMICAL COMPOUNDS USED IN EMBALMING. National Casket Company, New York, N. Y.
Filed November 3, 1917. Serial No. 107,140. PUBLISHED DECEMBER 17, 1918.

124,935. LIQUID MEDICINE USED FOR INDIGESTION AND FOR DISORDERS OF THE BOWELS. Joseph Nowack, West Hoboken, N. J.
Filed May 7, 1918. Serial No. 110,755. PUBLISHED DECEMBER 17, 1918.

124,936. CERTAIN NAMED MALT BEVERAGES, EXTRACTS, AND LIQUORS. Peoples Brewing Company, Trenton, N. J.
Filed August 16, 1918. Serial No. 112,757. PUBLISHED DECEMBER 17, 1918.

124,937. SODIUM SILICATE. Philadelphia Quartz Company, Philadelphia, Pa.
Filed October 2, 1918. Serial No. 113,527. PUBLISHED DECEMBER 17, 1918.

124,938. INTERNAL MEDICINE FOR LUNG TROUBLE. The Ragoine Chemical Company, Cincinnati, Ohio.
Filed October 5, 1918. Serial No. 113,593. PUBLISHED DECEMBER 17, 1918.

124,939. TONICS AND OINTMENTS FOR EXTERNAL USE. James G. Roman, Wilmington, Del.
Filed August 23, 1918. Serial No. 112,853. PUBLISHED DECEMBER 17, 1918.

124,940. WHEAT-FLOUR. Sperry Flour Company, San Francisco, Calif.
Filed May 15, 1917. Serial No. 103,848. PUBLISHED MARCH 12, 1918.

124,941. CREAM-OF-TARTAR SUBSTITUE. Stickney & Poor Spice Co., Boston, Mass.
Filed August 5, 1918. Serial No. 112,538. PUBLISHED DECEMBER 17, 1918.

124,942. CARBONATED WATER. Stratford Magnesia Springs Compy., Wheeling, W. Va.
Filed October 31, 1918. Serial No. 113,989. PUBLISHED DECEMBER 3, 1918.

124,943. LUBRICATING-OILS, BURNING-OILS, PARAFFIN, GASOLENE, NAPHTHA, AND LUBRICATING PETROLEUM-GREASES. Sun Company, Philadelphia, Pa.
Filed July 9, 1915. Serial No. 87,860. PUBLISHED DECEMBER 3, 1918.

124,944. PURE APPLE-JUICE. Virginia Fruit Juice Co., Inc., Norfolk, Va.
Filed May 24, 1918. Serial No. 111,184. PUBLISHED DECEMBER 10, 1918.

124,945. DENTAL CHAIRS. The S. S. White Dental Manufacturing Company, Philadelphia, Pa.
Filed October 26, 1917. Serial No. 106,977. PUBLISHED AUGUST 13, 1918.

TRADE-MARK REGISTRATIONS RENEWED.

16,514. SOAPS AND DETERGENTS. Lever Bros., Warrington, county of Lancaster, England; Lever Brothers Company, assignee.
Registered February 26, 1889. Renewed February 26, 1919.

16,529. PETROLEUM LUBRICATING-OIL. Vacuum Oil Company, Rochester, N. Y., (now New York, N. Y.)
Registered April 23, 1889. Renewed April 23, 1919.

TRADE-MARK REGISTRATIONS CANCELED.

25,518. WHEAT-FLOUR. KUNHARDT & Co., New York, N. Y.
Registered November 13, 1894. Canceled March 13, 1919.

94,610. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

94,618. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

94,619. TAGS. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Registered December 23, 1913. Canceled February 7, 1919.

120,100. HAIR-DRESSING. CLARENCE C. HAY, Como, Miss.
Registered January 8, 1918. Canceled March 13, 1919.

PRINTS

REGISTERED MARCH 25, 1919.

5,072.—*Title:* "MEASUREMENT BLANK." (For Commercial Purposes for the Manufacture of Automobile-Tops.) BUOB & SCHEU, Cincinnati, Ohio. Filed November 7, 1918.

5,073.—*Title:* "SAMMIES SURE-STICK." (For Motor-Cycle-Tire Patches.) SAMMIES RUBBER Co., Oklahoma, Okla. Filed November 30, 1918.

5,074.—*Title:* "DISCHARGED FROM ACTIVE SERVICE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,075.—*Title:* "1919." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,076.—*Title:* "FROM SERVICE TO COUNTRY." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,077.—*Title:* "PEACE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,078.—*Title:* "APPROVED." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

5,079.—*Title:* "FROM WAR TO PEACE." (For Type-Writing Machines.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed February 7, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE McNARY.

Decided December 20, 1918.

1. APPLICATIONS—ACT OF MARCH 3, 1883—DISCLAIMER.

Where an application is filed without fees under the provisions of the act of March 3, 1883, the disclaimer must follow the language of the statute.

2. SAME—SAME—SAME—SHOULD NOT BE CONSTRUED BY THE PATENT OFFICE.

The Patent Office should not undertake to construe the scope of the disclaimer specified by the act of March 3, 1883, and the copies of the patent issued on an application filed under that act should not contain the statement "Dedicated to the public," but merely the words "Filed under the act of March 3, 1883, 22 Stat. L., 625."

ON PETITION.

PACK-CARRIER FOR SHELLS AND PROJECTORS.

NEWTON, *Commissioner:*

This application purports to have been filed under the act of March 3, 1883, (22 Stats. at L., p. 625,) which provides for the grant of a patent under certain conditions without the payment of fees.

The disclaimer which is put into the specification does not follow the language of the statute, but reads as follows:

The invention described herein may be used by the Government or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, for the benefit of the Government without payment of any royalty thereon.

The petition states that it has been understood that the Commissioner requires applicant to either cancel the words "for the benefit of the Government" in the matter above quoted or to pay the fee.

The disclaimer placed in this specification limits the use of the invention without royalty clearly to any person who is working for the benefit of the Government. It is contended that this is the real meaning of the present statute and that there is no authority for construing the disclaimer set out therein to be a complete dedication to the public.

Prior to June 14, 1907, when an application was filed under the act in question a notation was placed on the file-wrapper that the fee was waived in accordance with that act, and the only reference to the act in the patent was the quotation of the proviso in the specification and the limitation of the grant in accordance with the proviso above mentioned. On that date it was directed by the Commissioner that the file-wrapper be indorsed "Dedicated to the public," and the Public Printer was instructed to print these words on the printed copies of the patent just under the line containing the filing date of the application.

Why this was done I have not been able to ascertain. I see no reason why this Office should undertake to construe the rights of a patentee under a patent granted under the act of 1883. That act authorizes the Commissioner to waive the fee if "the invention is used or is to be used in the public service" and if the specified proviso is placed in the specification.

It would seem, therefore, that all that this Office should do is to make it appear in the patent that the fee was waived because the invention came within the class mentioned in the act and to see that the proviso has been properly stated in the specification. The question of any one's rights under such a patent is one to be determined by the courts, as are the rights under any other patent. Of course if there should be filed a dedication going beyond the dedication required by the act of 1883 and specifically stating that any one in the United States may use the invention under any circumstances without the payment of royalty then it would be proper to note on the patent that it was actually dedicated to the public, although it may be seriously questioned whether a patent can be granted when in the grant it is stated that any one in the United States has a right to use the invention.

While the petition must be denied in its present form, it is directed that hereafter the file-wrapper of an application filed under the act of March 3, 1883, be not indorsed "Dedicated to the public" unless such a dedication is specifically made in the application in addition to the disclaimer required by that act and that unless such a further dedication is of record that there be printed under the filing date in the copies of the patent only the words "(Filed under the act of March 3, 1883, 22 Stat. L., 625)."

EX PARTE BERNHEIM.

Decided February 1, 1918.

PATENTABILITY—INVENTION—COMBINATION OF OLD FEATURES.

Although a conveyer made up of sections disposed at varying angles, an elevator having a horizontal and an inclined portion, and an elevator adapted to be swung so as to deliver at a desired point were separately old, the combination of such a conveyer with a swinging elevator having a horizontal and an inclined portion,

the horizontal portion being placed to receive packages from the conveyer, provided a device of greater flexibility and is patentable.

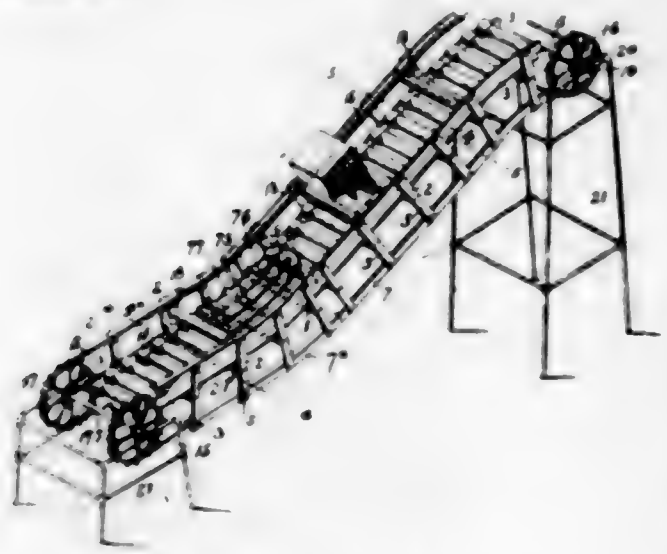
APPEAL from Examiners-in-Chief.

CONVEYING MECHANISM.

The subject-matter claimed, as illustrated in Fig. 1 of the drawings, is here shown:



The structure of the Alvey patent, No. 790,811, is as follows:



Mr. Charles J. Stockman for the applicant.

WHITEHEAD, *First Assistant Commissioner:*

This is an appeal from a decision of the Examiners-in-Chief affirming the decision of the Primary Examiner finally rejecting claims 1 to 8, inclusive, and 14 to 22, inclusive. Of these, claims 1 and 14 are illustrative.

1. A conveying apparatus comprising a plurality of related conveyer sections and an elevator, the receiving end of said elevator being disposed to receive packages from the line of conveyer sections and the discharging end of the elevator being mounted to swing, while leaving its receiving end disposed in coöperative relation to said conveyer sections.

14. The combination with a substantially horizontal conveyer section including a plurality of endless traveling beds, of a second conveyer section also including an endless traveling bed, said second section having a lower substantially horizontal end portion arranged in the same horizontal plane with the first mentioned conveyer section, an inclined section merging into the lower horizontal section, and an upper substantially horizontal section, the construction being such that packages may be uninterruptedly delivered from one of the conveyer sections to the other, and means for driving the conveyer sections.

The references cited are: Fulwider, 436,348, September 16, 1890; Harrison, 448,857, March 24, 1891; Rowe, 606,740, July 5, 1898; Brown, 655,676, August 7, 1900; Record, 667,335, February 5, 1901; Claypool, 732,519, June 30, 1903; Lamborn, 771,648, October 4, 1904; Brouk, 785,471, March 21, 1905; Alvey, 790,811, May 23, 1905; Brown *et al.*, 846,725, March 12, 1907; Paul, 882,795, March 24, 1908; Morenus, 923,064, May 25, 1909; Torseth, 966,489, August 9, 1910; Gibbons, (British,) 2,523, January 31, 1907.

Since the hearing the Examiner has called attention to the patent to Greenwood, No. 745,821, December 1, 1903.

The application discloses a conveying apparatus consisting of several sections coöperatively associated and adapted to be disposed at varying angles with relation to each other and an elevator mounted for arcuate movement, while its receiving end remains in position to receive packages from the conveyer-sections.

A conveyer made up of sections adapted to be disposed at varying angles to each other is not new, being old, for example, in the British patent of record and also in the patent to Claypool; nor is it broadly new to arrange such sections with a driving-shaft having universal joints, so that the movement may be conveyed from one section of the shaft to another. An elevator adapted to be swung about, so as to deliver at a desired point, is old in the patent to Brown *et al.*, and an elevator having a horizontal portion and an inclined portion is old in the patent to Alvey. Applicant, however, by combining the conveyer with an elevator of the character described has formed a conveying apparatus which has a greater amount of flexibility than any of those shown in the references, whereby packages can be transferred from wagons or cars and piled in the desired place in the warehouse or other place of storage. By making the elevator with the horizontal section lying in the plane of the conveyer-section it is particularly adapted to receive packages from such a section.

There would be no invention, broadly, in combining a movable elevator, such as shown in Brown or such as would be obtained by mounting the Alvey elevator on casters, as in the Brown patent, with a conveyer made up in sections.

The Examiners-in-Chief allowed certain claims which bring out certain details of construction of the conveyer and of the elevator. A conveyer, defined in those claims, coöperates with the elevator no differently than would a conveyer such as shown in the British patent.

In view of the art as above set out it is thought that the appealed claims were properly refused, since they do not bring out clearly the idea of the flexible conveying apparatus as a whole.

Applicant has presented an amendment including a number of claims, of which claims 3 and 8 are deemed allowable as defining this flexible apparatus. The other claims are deemed to be not patentable over the art or to set out mere aggregations of the details of construction of one part of the apparatus with the other.

Claims such as claim 20 are not regarded as patentable over Alvey or Rowe.

The decision of the Examiners-in-Chief is therefore affirmed; but if the applicant within twenty days from the date hereof presents an amendment containing proposed claims 3 and 8 the Examiner will enter the amendment and allow the claims in the absence of better references.

EX PARTE ROBERT E. MILLER, INC.

Decided March 14, 1919.

TRADE-MARKS—"U-PUT-ON," FOR RUBBER HEELS—DESCRIPTIVE.

The term "U-Put-On" as a trade-mark for rubber heels with an open casing attached, so that they may be applied by slipping the casing over the flared heel of a woman's shoe, *Held* not registrable as a trade-mark, since it is descriptive of the goods with which it is used.

ON APPEAL.

TRADE-MARK FOR RUBBER HEELS.

Messrs. Toulmin, Toulmin & Glass for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from the Examiner's refusal to register the phrase "U-Put-On" as a trade-mark for rubber heels for shoes, on the ground that the mark is descriptive of the character of the goods, and therefore its registration is inhibited by section 5 of the statute.

The applicant exhibits the goods themselves, and the labels on file show a perspective picture of them. They are rubber heels with an open casing attached, so that they may be applied by slipping the casing over the flared heels of women's shoes. On the packages the direction is: "Turn inside out; then snap on heel." The alleged trade-mark is written as three words, apparently to avoid wrong pronunciation or misunderstanding, and to my mind they plainly tell the purchaser to put the heels on her shoes herself or that they are heels which she puts on.

The case is not without some difficulty, for the alleged mark is catchy and is somewhat out of the ordinary usage of language. The English courts have refused registration even to a mark like "Uneeda," for biscuits, (18 R. P. C., p. 170,) as descriptive. This case, however, is not a good guide, because the British law is radically different from our own in that it is a permissive law specifying what may be registered rather than a restrictive law directing the Commissioner what he shall not register. The term "Uneeda" could only come under section 64 (*d*) of the British law as a distinctive or "inventive word," or else under section 64 (*e*) as a "word having no reference to the character or quality of the goods," whereas neither definition would admit "Uneeda." I think under our law "Uneeda" is good; but it should be observed that it does not describe any character or quality of the biscuit, but rather suggests the necessity of any and all biscuits. The term "U-Put-On" rubber heels, on the contrary, does directly state the character of the heels—namely, that they are of such construction that the purchaser herself applies them or may apply them.

This case is not, as contended in the brief, similar to the case of "The American Girl," for shoes, (*Hamilton* v. *Wolfe*, 240 U. S., 251,) for in that case there was no direct statement or even intimation of the character of the shoes. At most it was suggestive that the shoes were popular with the girls of a particular country. The applicant quotes from that decision the statement of the Court:

It does not signify that the shoes are manufactured in America or intended to be sold or used in America, nor does it indicate the quality or characteristics of the shoes. Indeed it does not in its primary significance indicate shoes at all.

The last sentence is emphasized particularly, and it is contended by the applicant that there is no more connection between his mark "U-Put-On" and rubber heels than there is between "The American Girl" and shoes. Elsewhere the applicant's brief says:

A person seeing the mark "U-Put-On" cannot tell that it refers to rubber heels. It could be applied to various articles. There is *nothing in the mark to indicate rubber heels.*

This is quite beside the question. Notwithstanding the remark of the Supreme Court above quoted from *Hamilton* v. *Wolfe* it is manifestly quite immaterial whether there is anything in the mark to indicate rubber heels, for the same thing would be true if the mark were "Good," or "Removable," or "Durable," or any other descriptive word. The fallacy arises from conceiving of a trade-mark as something standing alone and apart from the goods. It is not to be ever so considered any more than a handle is considered apart from the thing of which it is the handle. The descriptiveness here arises from applying the mark to the goods, as it must always be applied. To call a given article "U-Put-On" rubber heels is to state a capability of those particular rubber heels. Moreover, the trade-mark would be descriptive of a great many articles to be attached by the purchaser himself. On the principle applied in *ex parte Bronson Company* (87 O. G., 1782) and *Procter & Gamble Co.* v. *Globe Ref. Co.* (92 Fed. Rep., 357) I think registration was properly refused, and the Examiner's ruling is affirmed.

OPINION OF THE ACTING JUDGE-ADVOCATE GENERAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 21, 1919.

The following opinion of the Acting Judge-Advocate General with reference to the act of March 3, 1883, providing for the filing of applications by Government employees without fees under certain conditions, is published for the information of those concerned.

J. T. NEWTON,
Commissioner.

WAR DEPARTMENT, J. A. G. O.,
November 30, 1918.

To Army and Navy Patent Board,
Patent Office Building, Washington, D. C.

1. By your letter, dated November 22, 1918, you submit to me for consideration a provision of the act of March 3, 1883, (22 Stat., 603, 625,) reading as follows:

The Secretary of the Interior and the Commissioner of Patents are authorized to grant any officer of the Govern-

ment, except officers and employees of the Patent Office, a patent for any invention of the classes mentioned in section forty-eight hundred and eighty-six of the Revised Statutes, when such invention is used or to be used in the public service, without the payment of any fee: *Provided*, That the applicant in his application shall state that the invention described therein, if patented, may be used by the Government or any of its officers or employees in the prosecution of work for the Government, or by any other person in the United States, without the payment to him of any royalty thereon, which stipulation shall be included in the patent.

In particular you state that the Patent Office construes the proviso above quoted as giving any person in the United States the right to use an invention patented under the act without the payment of any royalty, whereas your Board contends that it can be so used only by the Government, its officers or employees, or other persons in the prosecution of work for the Government. The question which interpretation is correct becomes of moment because many members of the military forces have refused to apply for patents under the act for inventions of considerable value to the Government, if the interpretation given to the act by the Patent Office is to prevail, while they at the same time have expressed their willingness that the Government shall use their inventions, if they may retain "the commercial rights" therein. It may be added that the matter is of special interest to the War Department, in view of the invitation recently given by the department to persons in the military service to patent their inventions under this act. (G. O. No. 93, Oct. 17, 1918.)

2. It must be admitted that the language of the proviso, taken literally and without regard to the context or the purpose of the act, amounts to a renunciation by the applicant for a patent of any claim for royalties for the use of the invention, if patented, against any person in the United States. Every person in this country would seem to be put on a parity with the Government and its officers and employees in the prosecution of work for the Government, and like them to have the free use of the invention patented. The sole effect of the patent would, then, appear to be, as you say the Patent Office holds—

> a publication or prior reference for the invention it covers, so that no person from then on could secure a patent on that invention.

But of course the context and the purpose of the act must be looked to in order to fix the meaning of the provision under discussion, and the question becomes, therefore, do the context and the purpose of the act in this case require something other than the literal interpretation set forth in the preceding paragraph?

In approaching this question, the first point to be noted is that the phrase "or by any other person in the United States" invites attention to the preceding language—

> by the Government or any of its agents or employees in the prosecution of work for the Government

If Congress intended that any person in the United States might use the invention, it was obviously unnecessary to specify that any of the agents or employees of the Government might use it, and if Congress intended that any person in the United States might use the invention *for any purpose* it was inconsistent to specify that any of the agents or employees of the Government might use it *only in the prosecution of work for the Government*. I am impelled, therefore, to the conclusion that, taking into view merely the language of the proviso, the term "any other person in the United States" was not used by Congress in its literal sense, but must be interpreted as being *ejusdem generis* with the preceding words and confined to persons in the prosecution of work for the Government. In giving the term this interpretation, we are merely adhering to the rule that general terms following specific terms in a statute are to be construed as referring to persons or things of the same character as those specified. This is so firmly established by a long line of Federal decisions that very positive language in an act of Congress would be necessary to exempt its provisions from the application of the rule. (*United States* v. *Barnes*, 3 Wheat., 336, 390, 391; *Moore* v. *American Transportation Co.*, 24 How., 1, 36; *Newport News & M. Val. Co.* v. *United States*, 61 Fed., 488, 490; *Aberdeen Bank* v. *Chehalis County*, 166 U. S., 440; *United States* v. *1,150½ Pounds of Celluloid*, 82 Fed., 627, 636; *Crowther* v. *Fidelity Ins., etc., Co.*, 85 Fed., 41 43; *Western Dredging & Improvement Co.* v. *Heldmaier*, 111 Fed., 123, 124; *Merchants' National Bank* v. *United States*, 42 Ct. Cl., 6, 19; *First Nat. Bank* v. *United States*, 206 Fed., 374, 379.)

But the construction of the phrase under discussion is not to be arrived at on so narrow a view as that which we have taken hitherto. The phrase occurs in a proviso, and a proviso cannot be regarded separately from the clause to which it is attached. It is not the office of a proviso to enact, but merely to qualify or restrain the enacting-clause. (*Minis* v. *United States*, 15 Pet., 423, 425.) It is, moreover, to be construed strictly, so as not to render the enacting-clause ineffective. (*United States* v. *Dickson*, 15 Pet., 141, 165; *Dollar Savings Bank* v. *United States*, 19 Wall., 227, 236.) Looking therefore to the enacting-clause, we find that it has to do with the grant of patents to officers of the Government for inventions "used or to be used in the public service." It needs no argument to show that the public service does not mean the private service of each and every individual member of the public, but the service of the State or the community as distinguished from its members. (*Lowell* v. *Boston*, 111 Mass., 454, 470; *Opinion of the Justices*, 30 N. E., 1142, 1144; *Louisville Ry Co.* v. *Louisville Fire & Life Protective Ass'n.*, 152 S. W., 790, 801.) If the proviso is construed to give any person in the United States the right to use the patented invention, then, contrary to its true office, it vastly enlarges the scope of the enacting-clause, and indeed makes the words thereof meaningless. Such a liberal construction of the proviso should not, in my judgment, be entertained.

When we pass to a consideration of the enactment as a whole, the argument is greatly fortified.

The statute provides for the grant of "a patent" for an invention, and is to be construed liberally in favor of the inventor. (*Turrill* v. *Michigan Southern, etc., R. Co.*, 1 Wall., 491, 510.) Now, it is of the very essence of a patent that the patentee has a right to exclude others from the use of the thing patented, (*United States* v. *Standard Sanitary Mfg. Co.*, 191 Fed., 172, 190,) and if the patentee in this case can exclude no one in the United States from such use his rights are indeed shadowy, and the plain purpose of the legislation is defeated. The patent becomes an evidence of the self-abnegation of the inventor rather than of any property in the invention, and the question immediately arises why Congress, in permitting the grant of such a patent to officers of the Government, should exclude officers and employees of the Patent Office. Obviously, Congress felt that it was granting a valuable right, and obviously, therefore, the proviso should not be construed as depriving the right of all value.

There is here involved, moreover, a public policy additional to that which encourages invention. The Government is not, merely by reason of the fact that an inventor is an officer of the United States, entitled to the benefits of his discoveries. (*Solomons* v. *United States*, 137 U. S., 342, 346; *Gill* v. *United States*, 160 U. S., 426, 435.) If the United States is to acquire the right to use a patentable invention of such an officer made, so to speak, in his private capacity, it must be under legislation of this character. But the construction given to the act by the Patent Office has deterred officers of the Government from applying for patents under it. This construction appears to me to adhere too closely to the letter, even at the expense of arriving at an unreasonable result. The reason of the law is against it, and to avoid conflict with the spirit of the act the general terms of the proviso must be confined to the narrower limits of the specific terms which precede it. Even without the aid of the technical rules of interpretation upon which we can rely in this case, the Supreme Court, to reach a sensible construction, has frequently limited the application of terms which in their literal significance would be too sweeping. (*United States* v. *Kirby*, 7 Wall., 482, 486, 487; *Atkins* v. *Disintegrating Co.*, 18 Wall., 272, 302; *Church of the Holy Trinity* v. *United States*, 143 U. S., 457, 459–462, 472; *Lau Ow Bew* v. *United States*, 144 U. S., 47, 59.) It is a sound principle of construction and of common sense that a statute should be interpreted *ut res magis valeat quam pereat*.

3. I am, therefore, of opinion that the words "any other person in the United States" should be interpreted as equivalent to "any other like person in the United States," that is, any other person "in the public service," or (and I regard this as a mere paraphrase) any other person "in the prosecution of work for the Government."

S. T. ANSELL,
Acting Judge-Advocate General.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE CAREY AND TODD.

Decided March 3, 1919.

PATENTABILITY—PUMP, MOTOR, OR THE LIKE.

Claims for a hydraulic pump, motor, or the like having certain specified characteristics *Held* unpatentable in view of the prior art.

Mr. C. A. Bateman and *Mr. James A. Norris* for the appellant.

Mr. T. A. Hostetler for the Commissioner of Patents.

SMYTH, *C. J.*:

On certain references the Patent Office rejected claims 1 and 2, which read as follows:

1. A hydraulic pump, motor or like apparatus of the rotary type having a circular series of cylinders co-operating with a valve having one inlet and one exhaust opening, a freely-rolling piston arranged for reciprocation in each cylinder, and a substantially circular track around which said pistons roll.

2. A hydraulic pump, motor or the like apparatus of the rotary type having a circular series of cylinders, a freely-rolling piston arranged for reciprocation in each cylinder, a substantially circular track arranged eccentrically of said circular series of cylinders on which said pistons roll, and a fluid-controlling valve encircled by said series of cylinders.

The rejection was based on a patent to Benham, No. 459,735, September 22, 1891, and on one to Beckfield, No. 683,834, October 1, 1901. Appellants assert that there is a patentable difference between the claims of the issue and the references just mentioned but we do not think so. The claims would be satisfied by the substitution of the ball-piston of Benham for the cylindrical pistons of Beckfield, Figures 7 and 8. There would be no difficulty in making such a substitution. Any intelligent mechanic could do it without invention. Where this is so, the device is not patentable. (*In re Iwan*, 17 App. D. C., 566; *In re Davenport*, 23 App. D. C., 370.)

It is further urged in behalf of the appellants that the references are not in point, because they deal with steam while their device is intended for use in pumping heavy oil. Primarily, this is its purpose, but it may be used in connection with steam. In their original application appellants state that the device is also applicable "to other fluid mediums, such as air, gas, steam." Clearly, the references are pertinent.

A proposed substitute claim was offered for consideration by the Commissioner of Patents which differs from the appealed claims in that it provides for a track in which "all curves bend in one direction." Such a track is anticipated by Beckfield, and hence the substitute is open to the same objections as those made to the appealed claims. In this court the same substitute is presented, but with certain limitations which provide that the pump or like apparatus of the issue is "for use with a viscous fluid medium" and that "the inward motion to the pistons" is given by the track, "centrifugal force being utilized for the outward motion." Fluid is an old medium and there is no patentable novelty in putting it to a new use. The function recited in the

other limitation is disclosed by the Beckfield patent, Fig. 7, if operated as a pump, for—

centrifugal force will drive the pistons against the circular track, which in turn gives inward motion to the pistons.

The decision of the Commissioner of Patents in rejecting the appealed claims is affirmed.

Affirmed.

Applications Made to the Federal Trade Commission for Licenses Under Enemy-Controlled Patents and Trade-Marks Pursuant to the "Trading with the Enemy Act."

Patent No. 1,116,398, dated November 10, 1914, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corportion of Germany, for "Dihydrochlorid of diaminodioxyarsenobenzene." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 986,148, dated March 7, 1911, to Paul Ehrlich and Alfred Berheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Derivative of oxyarlarsinic acids and process of making same." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 1,081,592, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 1,081,897, dated December 16, 1913, to Paul Ehrlich and Alfred Bertheim, of Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Medicinal preparation." License applied for by George J. Wallau, 6 Cliff street, New York city.

Patent No. 13,848, dated December 15, 1914, to Georg Korndorfer and Baptist Reuter, of Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, of Höchst-on-the-Main, Germany, a corporation of Germany, for "Derivatives of diaminodioxyarsenobenzene and process of making same." License applied for by George J. Wallau, 6 Cliff street, New York city.

Changes in Classification.

(ORDER No. 2,470.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 22, 1919.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 74, Machine Elements, (Division XII,) establish subclass—

107. Combined motor and transmission control.

The patents contained in this subclass have been taken for the most part from class 121, Steam-Engines, subclass 120, Combined engine and gearing control.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(ORDER No. 2,471.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 22, 1919.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 220, Metallic Shipping and Storing Vessels, (Division XL,) change the title of the class to read *Class 220.—Metallic Receptacles*, abolish the existing subclass titles, and establish in lieu thereof the following subclasses and definitions:

220.—METALLIC RECEPTACLES.

1. Miscellaneous.
2. Coal-receptacles.
3. High-pressure-gas holders.
4. Sectional—
5. Barrel or tank type.
6. Folding—
7. Fastening members.
8. Telescoping.
9. Spaced wall or jacket—
10. Metal jacket.
11. Paper or wood jacket.
12. Skeleton jacket.
13. Water-jacket.
14. Attachments.
15. Spacing devices.
16. Compartment.
17. Removable inner receptacle.
18. Wall or ground supported.
19. Wire.
20. Compartment—
21. Cell.
22. Partitions.
23. Receptacle in cover.
24. Closures—
25. External and internal bar or closure.
26. Float.
27. Frangible—
28. Breakable.
29. Multiple.
30. Pivoted—
31. Modified closure or receptacle.
32. Single-plane swing—
33. Angular pivot.

220.—METALLIC RECEPTACLES—Con.

Closures—
Pivoted—
Single-plane swing—
34. Multiple pivot.
35. Spring.
36. Opening devices.
37. Multiple-plane swing.
38. Sliding.
39. Screw—
40. Bayonet.
41. Sliding.
42. Slip type—
43. Opening devices.
44. Vent.
45. Seals, liquid.
46. Packing.
47. Opening devices—
48. Cutting—
49. Wire—
50. Seam.
51. Puncturing and closing.
52. Key.
53. Ripping—
54. Integral strip.
55. Fastening devices—
56. Bail or handle.
57. Bar.
58. Bail-ear.
59. Integral—
60. Snapping.
61. Ring.
62. Blanks.
63. Linings—
64. Coated.
65. Paper or wood.

220.—METALLIC RECEPTACLES—Con.

66. End structures—
67. Body and end seam or joint.
68. Double-walled.
69. Supports—
70. Integral.
71. Body-reinforcing—
72. Integral.
73. Edge-reinforcing—
74. Integral.
75. Seams or joints—
76. Interfitting parts—
77. Three to five walls.
78. Six or more walls.
79. Rolled.
80. Separate strip.
81. Packing.
82. Transparent wall.
83. Wall structure—
84. Skeleton frame.
85. Attachments—
86. Filling devices.
87. Disinfectant devices.
88. Fire-preventing.
89. Frangible or fusible.
90. Scrapers.
91. Bail-ears—
92. Wire.
93. Followers.
94. Handles—
95. Wire.
96. Holders.
97. Stacking devices.
98. Garbage-handling devices.

J. T. NEWTON, *Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MARCH, 1919.

[The opinion of the Acting Judge-Advocate General is indicated by two degree-marks (**), the decisions of the Court of Appeals of the District of Columbia by a star (*), and of the Circuit Court of Appeals by the letter d.]

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OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MARCH, 1919.

[The opinion of the Acting Judge-Advocate General is indicated by two degree-marks (°°), the decisions of the Court of Appeals of the District of Columbia by a star (*), and of the Circuit Court of Appeals by the letter ᵈ.]

ACT OF MARCH 3, 1883.

See Construction of Statutes.

COMBINATION.

See Patentability, 2.

CONSTRUCTION OF CLAIMS.

1. INVENTION—INCLOSING PARTS WITHIN A CASING HAVING A TRANSPARENT WINDOW.
Claims for a stamp-affixing machine presenting as the only novelty an "inclosing frame," "a face plate interposed between the cutter and the feeding device," and a "transparent plate" *Held* not patentable, as these features involve no invention, it being obvious to inclose a mechanism to protect it from dust or from being tampered with and to provide a glass window to permit observation of the mechanism within the inclosure.
[*Ex parte* Onderdonk, 561.

2. VALIDITY—PART OF DEVICE.
Claims of a patent intended to reach the operation of half of the device considered by itself may be valid.
[ᵈ Jones *et al.* *v.* General Fireproofing Co., 562.

3. LIMITING WORDS.
Limiting words in the claim of a patent, relied on in Patent Office to differentiate it from a prior patent, while to be given their full meaning, if clear and definite, when developing ambiguity should not be read any more broadly than is reasonably necessary to serve such purpose of differentiation. [ᵈ Id.

4. PATENTABILITY—PUMP, MOTOR, OR THE LIKE.
Claims for a hydraulic pump, motor, or the like having certain specified characteristics *Held* unpatentable in view of the prior art. [* *In re* Carey and Todd, 735.

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

See Particular Patents.

PATENT NO. 966,599—SUBSTITUTION OF MATERIAL.
Where it was old to form an ore-screen of soft wire, with the weft-wires larger than and spaced farther apart than the warp-wires, *Held* that there was no invention in making the smaller wire of harder material than the larger, so as to give to the screen greater durability.
[ᵈ W. S. Tyler Co. *v.* Ludlow-Saylor Wire Co., 394.

CONSTRUCTION OF STATUTES.

ACT OF MARCH 3, 1883—DISCLAIMER.
Where an application is filed without fees under the provisions of the act of March 3, 1883, the disclaimer must follow the language of the statute.
[*Ex parte* McNary, 731; °° Opinion of Acting Judge-Advocate General, 733.

2. SAME—SAME—SHOULD NOT BE CONSTRUED BY THE PATENT OFFICE.
The Patent Office should not undertake to construe the scope of the disclaimer specified by the act of March 3, 1883, and the copies of the patent issued on an application filed under that act should not contain the statement "Dedicated to the public," but merely the words "Filed under the act of March 3, 1883, 22 Stat. L., 625." [Id.; °°Id.

DEDICATION TO THE PUBLIC.

See Construction of Statutes.

DESCRIPTIVENESS.

See Registration of Trade-Marks, 1, 3.

DISCLAIMERS.

See Construction of Statutes.

ELEMENTS.

See Patentability; Particular Patents, 2.

INFRINGEMENT.

See Particular Patents, 3.

INVENTION.

See Construction of Claims, 1; Construction of Specifications and Patents; Particular Patents, 1; Patentability, 1.

MACHINES.

See Particular Patents.

LIMITATION OF CLAIMS.

See Construction of Claims, 3.

PARTICULAR PATENTS.

See Construction of Specifications and Patents.

1. CURTIS—NO. 670,606—MACHINE FOR EXPANDING SHEET METAL—FUNCTION—PATENTABILITY.
The Curtis patent, No. 670,606, on machines for expanding sheet metal, claim 13 *Held* invalid as not involving invention, but the thought that automatic opening mechanism could be made to operate in a transverse plane, it not being patentable merely to do by automatic machinery what has commonly been done by hand. [ᵈ Jones *et al.* *v.* General Fireproofing Co., 562.

2. SAME — No. 796,402 — SHEET-METAL-EXPANDING MACHINES—VALIDITY.
The Curtis patent, No. 796,402, on machines for expanding sheet metal, claim 3 *Held* to be for the diagonal edge over which the sheet should be drawn into another plane as it progresse longitudinally, a new element in the association, and to be valid. [4 Id.

3. SAME—SAME—SAME—INFRINGEMENT—"DRAWING."
The Curtis patent, No. 796,402, on machines for expanding sheet metal, claim 3 *Held* infringed by defendant's machine as, "drawing" the sheet. Claims 5 and 9 also *Held* valid and infringed. [4 Id.

4. SAME—SAME—SAME—VALIDITY.
The Curtis patent, No. 796,402, on machines for expanding sheet metal, claims 1, 8, and 10 *Held* invalid as too broad. [4 Id.

PATENTABILITY.

See Construction of Claims, 1, 4; Particular Patents, 1.

1. INVENTION—HANDLES ON PARTS OF A BURIAL-CASKET.
The provision of handles wherever they are needed is so common that the provision of handles on the parts of a separable burial-casket involves no invention.
[*Ex parte* McKinney, 303.

2. SAME—COMBINATION OF OLD FEATURES.
Although a conveyer made up of sections disposed at varying angles, an elevator having a horizontal and an inclined portion, and an elevator adapted to be swung so as to deliver at a desired point were separately old, the combination of such a conveyer with a swinging elevator having a horizontal and an inclined portion, the horizontal portion being placed to receive packages from the conveyer, provided a device of greater flexibility and is patentable. [*Ex parte* Bernheim, 731.

PATENTS WITHOUT FEE.

See Construction of Statutes.

PRIOR PATENTS.

See Construction of Claims, 2.

REGISTRATION OF TRADE-MARKS.

1. DESCRIPTIVENESS—PICTORIAL REPRESENTATION OF GOODS.
A mark consisting of the perspective view of the under side of a foot supported on a mechanical arch held by a hand *Held* not registrable as a trade-mark for instep-arch supports, as it is descriptive of the goods with which it is used
[*Ex parte* Scholl Manufacturing Company, Inc., 393.

2. USE IN TRADE PREREQUISITE TO REGISTRATION.
The words "National Bank 3rd of St. Louis," written between two concentric ellipses, *Held* not registrable to the applicant as a trade-mark for letter-heads, writing-paper, etc., for the reason that applicant, who uses this mark on its stationery, has made no trade-mark use thereof.
[*Ex parte* The Third National Bank of St. Louis, Missouri, 562.

3. "U-PUT-ON," FOR RUBBER HEELS—DESCRIPTIVE.
The term "U-Put-On" as a trade-mark for rubber heels with an open casing attached, so that they may be applied by slipping the casing over the flared heel of a woman's shoe, *Held* not registrable as a trade-mark, since it is descriptive of the goods with which it is used. [*Ex parte* Robert E. Miller, Inc., 733.

SCOPE OF DISCLAIMER.

See Construction of Statutes, 2.

STATE OF THE ART.

See Construction of Claims, 4.

SUBSTITUTION OF MATERIAL.

See Construction of Specifications and Patents.

TRADE-MARK USE.

See Registration of Trade-Marks, 2.

VALID PATENTS.

See Construction of Claims, 2; Particular Patents, 2, 3.

VOID PATENTS.

See Particular Patents, 1, 4.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1919.

A. Kimball Company. (See Anthony, Marcus O., assignor.)
A. Kimball Company. (See Wallin, Gustaf A., assignor.)
A. Schrader's Son. (See Henemier, Robert B., assignor.)
A. Schrader's Son. (See Myers, Eugene V., assignor.)
A. Schrader's Son. (See Patton, Moses F., assignor.)
A. G. Brown Boveri & Cie. (See Buchli, Jakob, assignor.)
A. O. Smith Corporation. (See Starr, Herman J., assignor.)

Abel, Charles, Fort Sam Houston, Tex. Rotary tooth-brush. No. 1,297,771; Mar. 18; v. 260; p. 499.

Ablitt, Edward F., London, England. Electrode of secondary batteries. No. 1,298,148; Mar. 25; v. 260; p. 604.

Abram Cox Stove Company. (See Mott, Meyer, Halteman, and Wheawill, assignors.)

Accessories Manufacturing Company. (See Bramming, Carl, assignor.)

Acker, Elmer L., Chicago, Ill. Vehicle-wheel. No. 1,296,151; Mar. 4; v. 260; p. 78.

Acme Card System Company. (See Hendry, James R., assignor.)

Acme Card System Company. (See MacDonagh, Frank L., assignor.)

Acopian, Sooren, Montreal, Quebec, Canada. Telephone-bell damper. No. 1,297,982; Mar. 25; v. 260; p. 569.

Ad Photoscope Company. (See Burnett, John P., assignor.)

Adam, Harry C., St. Louis, assignor to the Reflectolyte Company, St. Louis, Mo. Concealed-terminal receptacle. No. 1,297,772; Mar. 18; v. 260; 499.

Adamee, Jacob H., assignor of one-third to J. S. Carr, Jr., Durham, N. C. Strip-severing device. No. 1,298,431; Mar. 25; v. 260; p. 664.

Adams, Alfred W. (See James and Adams.)

Adams, Arthur H., Sparkill, assignor to Western Electric Company, Incorporated, New York, N. Y. Switch-operating mechanism. No. 1,296,604; Mar. 11; v. 260; p. 213.

Adams, Joseph, Northfleet, England. Production of molded or shaped material or articles by rolling. No. 1,297,773; Mar. 18; v. 260; p. 499.

Adams & Westlake Company, The. (See Hamm and Stewart, assignors.)

Adamski, Michael, Detroit, Mich. Ground-gripping device for vehicle-wheels. No. 1,298,149; Mar. 25; v. 260; p. 604.

Adder Machine Company, The. (See Pentecost, Arthur, assignor.)

Adee, Arthur L., Vancouver, Wash., assignor to H. W. Arnold, R. C. Sagg, and F. Robinson. Device for attaching a child's nursery toilet-seat to the seat of an ordinary toilet. No. 1,296,901; Mar. 11; v. 260; p. 281.

Adler, Jack R., Elsinore, Cal. Necktie-presser. No. 1,296,031; Mar. 4; v. 260; p. 49.

Adsit, Frank W. (See Chrisman and Adsit.)

Adsit, Frank W., et al. (See Shields, Nelson, assignor.)

Adsit, Frank W., St. Paul, Minn. Automatic dispenser. No. 1,296,032; Mar. 4; v. 260; p. 49.

Aeolian Company, The. (See Young, Francis L., assignor.)

Aetna Explosives Company. (See Wollemberg and Bigelow, assignors.)

Ahlgren, Axel G., Bridgeport, Conn. Band-brake. No. 1,297,531; Mar. 18; v. 260; p. 446.

Aichele, Albert, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Insulating-sleeve. No. 1,296,731; Mar. 11; v. 260; p. 242.

Aiken, Ebenezer N., Avalon, Pa., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,298,150; Mar. 25; v. 260; p. 604.

Aiken, Edward L., Springfield, Mass. Adjustable steering-wheel. No. 1,298,151; Mar. 25; v. 260; p. 604.

Ainsworth, Ray W. D., Bigtrails, Wyo. Sled-brake. No. 1,296,033; Mar. 4; v. 260; p. 50.

Air Reduction Company. (See Roberts, Montague H., assignor.)

Ajax Metal Company, The. (See Northrak, Edwin F., assignor.)

Akeley Camera. (See Akeley, Carl E., assignor.)

Akeley, Carl E., assignor to Akeley Camera, Inc., New York, N. Y. Film-guide for motion-picture cameras. No. 1,297,532; Mar. 18; v. 260; p. 446.

Akimoff, Nicholas W., assignor, by mesne assignments, to Dynamic Balancing Machine Company, Philadelphia, Pa. Method of and apparatus for obtaining dynamic balance. No. 1,296,605; Mar. 11; v. 260; p. 213.

Akimoff, Nicholas W., assignor, by mesne assignments, to Dynamic Balancing Machine Company, Philadelphia, Pa. Dynamic balancing-machine. No. 1,296,606; Mar. 11; v. 260; p. 213.

Akimoff, Nicholas W., assignor, by mesne assignments, to Dynamic Balancing Company, Philadelphia, Pa. Dynamic balancing-machine. No. 1,296,607; Mar. 11; v. 260; p. 213.

Akimoff, Nicholas W., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa. Dynamic balancing-machine. No. 1,296,608; Mar. 11; v. 260; p. 214.

Akimoff, Nicholas W., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa. Static balancing-machine. No. 1,296,609; Mar. 11; v. 260; p. 214.

Akimoff, Nicholas W., assignor to Dynamic Balancing Machine Company, Philadelphia, Pa. Balancing-machine. No. 1,296,610; Mar. 11; v. 260; p. 214.

Akimoff, Nicholas W., Philadelphia, Pa., assignor to Vibration Specialty Company. Balancing appliance. No. 1,296,732; Mar. 11; v. 260; p. 242.

Akin, John A., North Little Rock, Ark. Garment-cuff. No. 1,296,733; Mar. 11; v. 260; p. 242.

Aktiebolaget Baltic. (See Johansson, Gustaf W., assignor.)

Aktiebolaget Svenska Kullagerfabriken. (See Fjellman, Bengt W., assignor.)

Aktiengesellschaft Brown, Boveri & Cie. (See Aichele, Albert, assignor.)

Aktiengesellschaft der Maschinenfabriken Escher Wyss & Co. (See Graemiger, Benjamin, assignor.)

Aladalo, Abraham E., Lead, S. D. First-aid box. No. 1,297,051; Mar. 11; v. 260; p. 315.

Albers, O. J. (See Hess and Scott, assignors.)

Alberter, Anthony E. (See Coleman, Walter R., assignor.)

Alberti, Emilio. (See Binder and Alberti.)

Alderson, Charles, Ouray, Colo. Pistol-holster. No. 1,295,831; Mar. 4; v. 260; p. 8.

Aldrich, Frank, Highland Park, Mich. Operating mechanism for signaling apparatus. No. 1,298,271; Mar. 25; v. 260; p. 631.

Alexis, George D. (See Lovejoy and Alexis.)

Alfsen, Harald, Porsgrund, Norway, assignor to J. M. Larsen, Chicago, Ill. Casting of reinforced-concrete vessels. No. 1,296,152; Mar. 4; v. 260; p. 78.

Allan, William N., San Antonio, Tex. Vehicle-wheel. No. 1,297,052; Mar. 11; v. 260; p. 315.

Alldredge, Francis B., Des Moines, Iowa. Steering-gear. No. 1,296,251; Mar. 4; v. 260; p. 99.

Allen, Albert E. (See Dahl and Allen.)

Allen, Charles, El Paso, Tex. Overflow control for separating-tanks. No. 1,296,252; Mar. 4; v. 260; p. 100.

Allen, David, New York, N. Y. Cigar-vending machine. No. 1,297,775; Mar. 18; v. 260; p. 500.

Allen, Elmer E., Flushing, N. Y. Liquid-dispenser. No. 1,296,251; Mar. 4; v. 260; p. 121.

Allen, Henry H. (See Allen, Preston H. and H. H.)

Allen, Lloyd S., New York, N. Y. Landing-gear for aeroplanes. No. 1,296,734; Mar. 11; v. 260; p. 243.

Allen, Moses T., Neville, Saskatchewan, Canada. Telephone attachment. No. 1,297,774; Mar. 18; v. 260; p. 499.

Allen, Philip, Providence, R. I. Automatic sprinkler. No. 1,298,152; Mar. 25; v. 260; p. 604.

Allen, Preston H. and H. H., assignors to Bemis Bro. Bag Company, St. Louis, Mo. Waterproof container or envelop. No. 1,295,832; Mar. 4; v. 260; p. 8.

Allen, Preston H., assignor to Bemis Bro. Bag Company, St. Louis, Mo. Mailing device. No. 1,295,833; Mar. 4; v. 260; p. 8.

Allen, Sherman T., Los Angeles, Calif. Tractor-wheel. No. 1,297,631; Mar. 18; v. 260; p. 467.

Allen, William L., Jacksonville, Fla. Signaling means. No. 1,296,253; Mar. 4; v. 260; p. 100.

Almedia, Jose M., Shoshone, Idaho. Locking device for bags. No. 1,295,834; Mar. 4; v. 260; p. 8.

Alpern, Maxwell, assignor to American Engineering Company, Philadelphia, Pa. Governing mechanism. No. 1,298,432; Mar. 25; v. 260; p. 665.

Aluminum Castings Company, The. (See Bamberg, Joseph H., assignor.)

Aluminum Castings Company, The. (See Jeffries, Zay, assignor.)

Aluminum Castings Company, The. (See Norton, Allen B., assignor.)

Aluminum Castings Company, The. (See Parkhurst, Frederic A., assignor.)

American Badge Company. (See Smith, Frank A., assignor.)
American Brake Company, The. (See Burton, Thomas L., assignor.)
American Chain Company. (See Reyburn, John R., assignor.)
American Chain Company. (See Reyburn and Sagendorf, assignors.)
American Chain Company. (See White, Bishop, assignor.)
American Cyanamid Company. (See Landis, Walter S., assignor.)
American Dan Stopper Company. (See Nordstrom, Elof, assignor.)
American Electrical Heater Company. (See Kuhn and Hand, assignors.)
American Engineering Company. (See Alpern, Maxwell, assignor.)
American Lithographic Company. (See Schoder, Charles E., assignor.)
American Optical Company. (See Boutelle, William H., assignor.)
American Optical Company. (See Reeve, Howard T., assignor.)
American Sheet & Tin Plate Company. (See Dewey, Vradley, assignor.)
American Sheet and Tin Plate Company. (See Skemp, Robert, assignor.)
American Sleeve-Valve Motor Company. (See Williams and Witt, assignors.)
American Sleeve-Valve Motor Company. (See Williams, Martin L., assignor.)
American Tool Works Company, The. (See Schatz and Sosa, assignors.)
American Tool Works Company, The. (See Schatz, Herman W., assignor.)
American Well Works, The. (See Chapman, Matthew T., assignor.)
Ames, Elmer U., assignor to H. Brinton Company, Philadelphia, Pa. Transfer mechanism for knitting-machines. No. 1,297,632; Mar. 18; v. 260; p. 468.
Ammen, Francis D. (See Howard and Ammen.)
Andersen, Peter C., Racine, Wis. Stone-crusher. No. 1,298,153; Mar. 25; v. 260; p. 604.
Anderson, Carl E., assignor, by mesne assignments, to White Products Company, Chicago, Ill. Latch. No. 1,298,272; Mar. 25; v. 260; p. 631.
Anderson, Evald, assignor to International Precipitation Company, Los Angeles, Calif. Leaching process for cement-kiln dust. No. 1,298,154; Mar. 25; v. 260; p. 605.
Anderson, James, Victoria, British Columbia, Canada. Gate. No. 1,296,034; Mar. 4; v. 260; p. 50.
Anderson, James B., Shaler township, Allegheny county, Pa. Cutting-torch. No. 1,297,053; Mar. 11; v. 260; p. 315.
Anderson, Martin J., Warren, Minn. Weed-destroyer. No. 1,296,153; Mar. 4; v. 260; p. 78.
Anderson, Olof, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Multiple-spindle turret-machine. No. 1,297,983; Mar. 25; v. 260; p. 569.
Anderson, Olof B. (See Webb and Anderson.)
Andren, Fritz L., Chicago, Ill. Wire-coiling machine. No. 1,295,835; Mar. 4; v. 260; p. 3.
Andren, Rafael, New York, N. Y. Means for propelling marine vessels. No. 1,296,352; Mar. 4; v. 260; p. 121.
Andrew, William E., Atlantic Highlands, N. J. Chair. No. 1,297,431; Mar. 18; v. 260; p. 425.
Andrews, Arthur B., assignor of one-half to himself and one-half to H. F. Kelley, Auburn, Me. Extracting potash and the like. No. 1,296,035; Mar. 4; v. 260; p. 50.
Andrews, Charles E. (See McNabney and Andrews.)
Andrew's Mill Company. (See Long, Charles J., assignor.)
Anker Holth Manufacturing Company. (See Krenke, Otto, assignor.)
Anthony, Marcus O., Englewood, N. J., assignor to A. Kimball Company, New York, N. Y. Machine for pointing metallic articles by electrolytic action. No. 1,298,155; Mar. 25; v. 260; p. 605.
Aranar Company, The. (See Roberts, Fred T., assignor.) (Reissue.)
Arbetter Felling Machine Company. (See Hayes, Thomas J., assignor.)
Arbetter Felling Machine Company. (See Moulton, Harley C., assignor.)
Arbuckle, Samuel F., Indianapolis, Ind. Internal-combustion-engine vacuum actuating means. No. 1,296,735; Mar. 11; v. 260; p. 243.
Arenson, Abe, assignor of one-half to J. J. Cohen, Chicago, Ill. Ash-sifter. No. 1,297,054; Mar. 11; v. 260; p. 316.
Arkin, Louis, Boston, Mass. Fastener. No. 1,296,254; Mar. 4; v. 260; p. 100.
Arlidge, William J. C., Barnard, N. Y. Innersole for shoes. No. 1,298,156; Mar. 25; v. 260; p. 605.
Armfield, Tillman O., Elwood, Ind. Sanitary folding bed. No. 1,297,308; Mar. 18; v. 260; p. 401.
Armorcord Tire & Rubber Co. (See Mayne, Herbert N., assignor.)
Armstrong, Harry Y., assignor to Package Machinery Company, Springfield, Mass. Packaging-machine. No. 1,295,951; Mar. 4; v. 260; p. 80.
Arnold, H. W., *et al.* (See Adee, Arthur L., assignor.)
Arnold, Harold D., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Manufacture of vacuum-tube devices. No. 1,297,309; Mar. 18; v. 260; p. 401.
Arnow, Irwin. (See Schafer and Arnow.)
Arrigoni, Guido, St. Paul, Minn. Invalid-bed. No. 1,296,451; Mar. 4; v. 260; p. 142.
Aronson, Louis V., Newark, N. J. Ignition-cap for fuses. No. 1,295,952; Mar. 4; v. 260; p. 30.
Asbury, Dorsey F., assignor to United States Ordnance Company, Washington, D. C. Counterbalance for swinging breech mechanisms. No. 1,297,984; Mar. 25; v. 260; p. 569.
Ashinger, Herman H., assignor to George Cutter Company, South Bend, Ind. Film-socket. No. 1,297,432; Mar. 18; v. 260; p. 426.
Ashland Products Co., The. (See Willour, Le Roy, assignor. (Reissue.)
Ashley, Charles S., Toledo, Ohio. Cooling and ventilating method. No. 1,297,633; Mar. 18; v. 260; p. 468.
Aspinwall, Lewis A., Jackson, Mich., assignor to Aspinwall Mfg. Co. Potato-planter. No. 1,296,255; Mar. 4; v. 260; p. 100.
Aspinwall Mfg. Co. (See Aspinwall, Lewis A., assignor.)
Atchison, Isaac W., Cicero, and F. M. Steimer, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y. Mechanism for removing burs. No. 1,296,154; Mar. 4; v. 260; p. 79.
Atkinson, James E., Landis, Saskatchewan, Canada. Valve control in liquid-tanks. No. 1,297,985; Mar. 25; v. 260; p. 569.
Au Buchon, Perry P., St. Louis, Mo. Garment-fastener. No. 1,297,634; Mar. 18; v. 260; p. 468.
Auer, John, New York, N. Y. Pouch. No. 1,296,353; Mar. 4; v. 260; p. 122.
Auferi, Angelo, Pittsburgh, Pa. Attachment for radiator-hoods. No. 1,296,611; Mar. 11; v. 260; p. 214.
Aufero, Emanuel, Brooklyn, N. Y. Engine-actuated alarm. No. 1,296,603; Mar. 11; v. 260; p. 213.
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August, Joseph, Boston, Mass. Fire-extinguisher. No. 1,297,310; Mar. 18; v. 260; p. 401.
Auld, Frederick H., Columbus, Ohio. Workman's identification-badge. No. 1,298,273; Mar. 25; v. 260; p. 631.
Austin, Andrew D., San Francisco, Cal. Aero safety device. No. 1,296,736; Mar. 11; v. 260; p. 243.
Austin, Frank F., Chicago, Ill. Golf-cup. No. 1,297,055; Mar. 11; v. 260; p. 316.
Austin, Frederick C. (See Nowell, Herbert T., assignor.)
Austin, Raymond B. (See Sheler and Austin.)
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Automatic Electric Company. (See Roberts, Homer J., assignor.)
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Avery, Lyman A., Green Lake, N. Y. Saw gage and jointer. No. 1,297,433; Mar. 18; v. 260; p. 426.
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Axtell, Clinton J., assignor to General Electric Company, Schenectady, N. Y. Electrical system of power-transmission and regenerative braking. No. 1,298,433; Mar. 25; v. 260; p. 665.
Ayres, Eugene E., Jr., Chester, assignor to Sharples Specialty Company, West Chester, Pa. Refining liquids. No. 1,297,635; Mar. 18; v. 260; p. 468.
B. F. Avery & Sons. (See Ray, Charles T., assignor.)
B. F. Goodrich Company, The. (See Kroeger, Edwin J., assignor.)
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Babcock & Wilcox Company, The. (See Sneddon, James P., assignor.) (Reissue.)
Babie, Paul, Los Angeles, Calif. Shoe-closure. No. 1,297,986; Mar. 25; v. 260; p. 570.
Bach, Leopold, and E. Kübler, New York, N. Y. Toy. No. 1,296,036; Mar. 4; v. 260; p. 50.
Bacher, David, New York, N. Y. Display device. No. 1,297,311; Mar. 18; v. 260; p. 401.
Bachmann, Siegmund, Chicago, Ill. Box. No. 1,297,636; Mar. 18; v. 260; p. 468.
Backhaus, Arthur A., Baltimore, Md., assignor to U. S. Industrial Alcohol Co. Liquid fuel. No. 1,296,902; Mar. 11; v. 260; p. 281.
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Baer, William, Cincinnati, Ohio. Surgical appliance. No. 1,298,434; Mar. 25; v. 260; p. 665.
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Bailey, Arthur A., Seattle, assignor, by mesne assignments, to J. A. Cavanagh, King county, Wash. Oil-burner. No. 1,296,037; Mar. 4; v. 260; p. 50.

Bailey, William B., assignor of one-half to A. A. Bailey and one-half to A. P. Van Cleve, Seattle, Wash. Oil-burner. No. 1,298,436; Mar. 25; v. 260; p. 665.

Baker, Abner D., Swanton, Ohio, assignor to The Indiana Manufacturing Company, Indianapolis, Ind. Grain-saving device for threshing-machines. No. 1,296,903; Mar. 11; v. 260; p. 282.

Baker, Abner D., Swanton, Ohio. Metal wheel for steam and gas tractors. No. 1,296,904; Mar. 11; v. 260; p. 282.

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Baker, Brothers. (See Halleabeck, George E., assignor.)

Baker, Fred H. (See Murphy, John M., assignor.)

Baker, Frederick J., Dayton, Ohio. Differential gearing. No. 1,296,256; Mar. 4; v. 260; p. 100.

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Baldt, Frederick, Jr., Tarentum, Pa. Anchor. No. 1,297,987; Mar. 25; v. 260; p. 570.

Baldwin Locomotive Works, The. (See Rushton, Kenneth, assignor.)

Ball & Ball Carburetor Company. (See Ball, Frederick O., assignor.)

Ball, Frederick O., assignor to Ball & Ball Carburetor Company, Detroit, Mich. Explosive-engine. No. 1,295,836; Mar. 4; v. 260; p. 4.

Ball Grain Explosives Company. (See Du Pont, Ernest, assignor.)

Ballard, William J., St. Joseph, Mo. Car-replacer. No. 1,298,275; Mar. 25; v. 260; p. 631.

Ballard, William L., Vermilion, S. D. Support for cultivator-disks. No. 1,296,452; Mar. 4; v. 260; p. 142.

Ballou, Virgil, Oskaloosa, Iowa. Furnace. No. 1,297,056; Mar. 11; v. 260; p. 316.

Bamberg, Joseph H., Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio. Metal-mold. No. 1,296,588; Mar. 4; v. 260; p. 173.

Bamberg, Joseph H., Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio. Casting and making same. No. 1,296,589; Mar. 4; v. 260; p. 173.

Bamberg, Joseph H., Tonawanda, N. Y., assignor to The Aluminum Castings Company, Cleveland, Ohio. Metal-mold. No. 1,296,590; Mar. 4; v. 260; p. 173.

Bamberg, Joseph H., Toledo, assignor to The Aluminum Castings Company, Cleveland, Ohio. Piston-casting. No. 1,296,591; Mar. 4; v. 260; p. 173.

Bamberg, Joseph H., Toledo, assignor to The Aluminum Castings Company, Cleveland, Ohio. Piston-casting. No. 1,296,592; Mar. 4; v. 260; p. 174.

Bamberg, Joseph H., Toledo, assignor to The Aluminum Castings Company, Cleveland, Ohio. Piston-casting. No. 1,296,593; Mar. 4; v. 260; p. 174.

Banfil, William H., Watertown, Mass. Chemical fire-extinguisher. No. 1,298,157; Mar. 25; v. 260; p. 606.

Banks, Charles E., assignor of one-half to S. R. Davis, Pittsburgh, Pa. Toy. No. 1,297,777. Mar. 18; v. 260; p. 500.

Banks, George L., and O. B. Kirkpatrick, Los Angeles, Calif. Envelop. No. 1,297,778; Mar. 18; v. 260; p. 500.

Bansett, William H., Bergenfield, N. J., assignor to Mercantile Corporation, Dayton, Ohio. Machine for applying patches to precut-window envelop-blanks. No. 1,297,988; Mar. 25; v. 260; p. 570.

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Barker, Charles F., Ponca, Nebr. Towing attachment for tractors. No. 1,297,057; Mar. 11; v. 260; p. 317.

Barker, Charles L., Norwalk, Conn. Check-valve. No. 1,297,312; Mar. 18; v. 260; p. 401.

Barker, James, Detroit, Mich. Card-index. No. 1,295,837; Mar. 4; v. 260; p. 4.

Barker, Joel, Irvine, Ky. Self-cleaning spark-plug. No. 1,297,058; Mar. 11; v. 260; p. 317.

Barker, John, Venice, Cal. Folding canopy-chair. No. 1,296,905; Mar. 11; v. 260; p. 282.

Barnes, Frank, Philadelphia, Pa. Shaft-bearing. No. 1,297,779; Mar. 18; v. 260; p. 501.

Barnes, Charles E., New York, N. Y., assignor of one-half to T. G. Strater, Brookline, Mass. Leg for multiform chairs. No. 1,297,059; Mar. 11; v. 260; p. 317.

Barnes Manufacturing Company, The. (See Gorman, James C., Jr., assignor.)

Barr and Stroud Limited. (See French, James W., assignor.)

Barratt, William T., assignor to Charles S. Kehoe and A. and A. J. Cooper executors, Bennington, Vt. Presser-wheel. No. 1,298,436; Mar. 25; v. 260; p. 665.

Barrett, Arthur C., Stockton, Cal. Wrench. No. 1,295,838; Mar. 4; v. 260; p. 4.

Barrett Company, The. (See Perry, Ray P., assignor.)

Bart, Blasius, Providence R. I., assignor, by mesne assignments, to Dymalkon Metals Corporation, Croton-on-Hudson, N. Y. Galvanoplasty. No. 1,296,453; Mar. 4; v. 260; p. 142.

Bartels, Reinhard E., Winchester, Mass. Preparing soles. (Reissue.) No. 14,611; Mar. 18; v. 260; p. 544.

Bartholomew, Phineas L., Aurora, Ill. Paper-bag-making machine. No. 1,298,276; Mar. 25; v. 260; p. 632.

Bartlebaugh, Benjamin C., Wheeling, W. Va. Gas-heater. No. 1,298,277; Mar. 25; v. 260; p. 632.

Bartlett, Harry D., Chicago, Ill. Foldable furniture. No. 1,295,839; Mar. 4; v. 260; p. 4.

Bartlett, Harry D., Delavan, Wis., assignor to J. Kramer, Chicago, Ill. Sofa-bed. No. 1,295,840; Mar. 4; v. 260; p. 5.

Bartlett, Harry D., Delavan, Wis., assignor to Pullman Couch Company, Chicago, Ill. Sofa-bed. No. 1,296,612; Mar. 11; v. 260; p. 215.

Bartlett, William. (See Hanton, Archibald N., assignor.)

Bartram, Edward E., Los Angeles, Calif. Hand-guard. No. 1,298,158; Mar. 25; v. 260; p. 606.

Basch, David, Schenectady, N. Y., assignor to General Electric Company. System of distribution. No. 1,297,780; Mar. 18; v. 260; p. 501.

Bashinski, Harry, Macon, Ga. Safety attachment for purses. No. 1,298,278; Mar. 25; v. 260; p. 632.

Basman, Anthony M., Detroit, Mich. Rotatable ventilator-hood. No. 1,295,953; Mar. 4; v. 260; p. 30.

Batchelor, Horton, Sheridan, Wyo. Furnace. No. 1,296,906; Mar. 11; v. 260; p. 282.

Bates, Edith M. (See Wheeler and Bates.)

Batterman, John J., Boston, assignor, by mesne assignments to Plymouth Rubber Company, Canton, Mass. Rack and foot-rest. No. 1,298,437; Mar. 25; v. 260; p. 665.

Baucom, Claud R., Apex, N. C. Mail-bag catching and delivering apparatus. No. 1,297,060; Mar. 11; v. 260; p. 317.

Baumgartl, Leroy, and H. F. Gaston, Chicago, Ill.; said Gaston assignor to said Baumgartl. Demountable wheel. No. 1,298,279; Mar. 25; v. 260; p. 632.

Bausch & Lomb Optical Company. (See Grebe, Albert, assignor.)

Bausch & Lomb Optical Company. (See Kandler, Edmund, assignor.)

Baynard, William H., Braintree, Mass., assignor to Beckwith Box Toe Company, Dover, N. H. Sewing-machine attachment. No. 1,298,280; Mar. 25; v. 260; p. 632.

Bazaine, Léon, assignor to Société Anonyme Des Etablissements Nieuport, Issy-les-Moulineaux, France. Boat-hull. No. 1,296,155; Mar. 4; v. 260; p. 79.

Beach, Carl F., Battle Creek, Mich. Valve. No. 1,296,257; Mar. 4; v. 260; p. 101.

Beach, David S., Bridgeport, Conn. Resilient wheel. No. 1,298,438; Mar. 25; v. 260; p. 666.

Beam, Oliver N., Los Angeles, Cal. Compound antirecoil-spring. No. 1,295,954; Mar. 4; v. 260; p. 31.

Beardslee Chandelier Manufacturing Company. (See Beardslee, George M., assignor.)

Beardslee, George M., Chicago, Ill., assignor to Beardslee Chandelier Manufacturing Company. Lighting-fixture. No. 1,297,781; Mar. 18; v. 260; p. 501.

Beausejour, Reme A., New York, assignor to Standard Varnish Works, Elm Park, Port Richmond, N. Y. Construction of metal doors. No. 1,297,534; Mar. 18; v. 260; p. 447.

Becherer, George, St. Louis, Mo. Heel-protector. No. 1,297,434; Mar. 18; v. 260; p. 426.

Beck, Charles W., assignor to The Beck-Frost Corporation, Detroit, Mich. Holder for oil-cans or the like. No. 1,297,435; Mar. 18; v. 260; p. 426.

Beck Duplicator Company, The. (See Saliger, Alois B., assignor.)

Beck-Frost Corporation, The. (See Beck, Charles W., assignor.)

Becker, Joseph, Washington, D. C., assignor to Eastman Kodak Company, Rochester, N. Y. Finder. No. 1,296,156; Mar. 4; v. 260; p. 79.

Becker, Richard M., Brooklyn, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,296,354; Mar. 4; v. 260; p. 122.

Becker, Richard M., Brooklyn, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,296,355; Mar. 4; v. 260; p. 122.

Beckwith Box Toe Company. (See Baynard, William H., assignor.)

Beech-Nut Packing Company *et al.* (See Lorenz and Law, assignors.)

Beech-Nut Packing Company *et al.* (See Peller, Karl E., assignor.)

Beggs, Harry W. (See Clark and Hovey, assignors.)

Beier, William R. R., *et al.* (See Fawkes, Wilbert C., assignor.)

Beirns, John A., Detroit, Mich. Regulator for motor-generator systems. No. 1,297,989; Mar. 25; v. 260; p. 570.

Bekke, Atus L. K. H., Sidney, Mich. Potato-fork. No. 1,296,738; Mar. 11; v. 260; p. 244.

Belczynski, Jan. (See Nieznalski and Belczynski.)

Beldam, George W., Ealing, and A. U. B. Ryall, Brentford, England. Sole and heel of boots and shoes. No. 1,297,061; Mar. 11; v. 260; p. 318.

Bell, John E., New York, N. Y. Superheater. No. 1,296,739; Mar. 11; v. 260; p. 244.

Bell, John H., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telegraph system. No. 1,296,613; Mar. 11; v. 260; p. 215.

Bell, John H., South Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telegraph system. No. 1,296,740; Mar. 11; v. 260; p. 244.

Bellhouse, Thomas F., Sacramento, Cal. Flange-lubricator. No. 1,296,907; Mar. 11; v. 260; p. 283.

Bellini, Ettore, Enghien les Bains, France. Apparatus for directed wireless telegraphy and telephony. No. 1,297,313; Mar. 18; v. 260; p. 402.
Bellville, Joseph, Detroit, Mich. Shoe-protector. No. 1,297,062; Mar. 11; v. 260; p. 318
Bemis Bro. Bag Company. (See Allen, Preston H., assignor.)
Bemis Bro. Bag Company. (See Allen, Preston H. and H. H., assignors.)
Benedict, Dirck C., Bellingham, Wash. Necktie-holder. No. 1,298,439; Mar. 25; v. 260; p. 666.
Benedict, Ernest M., Cincinnati, Ohio. Machine for washing dishes. (Reissue.) No. 14,612; Mar. 18; v. 260; p. 544
Benerlin, Clifton, Condon, Oreg. Velocipede. No. 1,297,314; Mar. 18; v. 260; p. 402.
Benjamin, Clarence F., Milford, Conn. Combined carpenter's square and miter-gage. No. 1,295,841; Mar. 4; v. 260; p. 5.
Benjamin, George H., New York, N. Y. Continuous tunnel kiln. No. 1,295,955; Mar. 4; v. 260; p. 31.
Benjamin, George R., Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Automatic transmitter. No. 1,298,440; Mar. 25; v. 260; p. 666.
Benjamin, George R. (See Yorke and Benjamin.)
Benkert, Percy B., Sydenham, London, England. Bracket for supporting lamps and the like. No. 1,297,533; Mar. 18; v. 260; p. 446.
Bennett, Clark H., Chicago, Ill. Apparatus for manufacturing varnish. No. 1,298,159; Mar. 25; v. 260; p. 606.
Bennett, Elmer A., Cliftondale, Mass. Clothes-line fastener. No. 1,297,782; Mar. 18; v. 260; p. 501.
Bennett, Furlong M., Bluefield, W. Va., and H. S. Bennett, Blairsville, Pa. Fastener for automobile-chains. No. 1,297,063; Mar. 11; v. 260; p. 318.
Bennett, Harlan S. (See Bennett, Furlong M. and H. S.)
Benon, Moritz, New York, N. Y., assignor to E. Ekstrom, Gottenborg, Sweden. Recording mechanism. No. 1,297,637; Mar. 18; v. 260; p. 468.
Bentley, Dozier T., *et al.* (See Butterfield, Charles V., assignor.)
Bergen, Abram S., New York, N. Y. Carbureter. No. 1,296,454; Mar. 4; v. 260; p. 143.
Berger, Christian, New York, N. Y. Measuring apparatus. No. 1,295,842; Mar. 4; v. 260; p. 5.
Berger, Joseph, Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing machines. No. 1,296,455; Mar. 4; v. 260; p. 143.
Bergren, John A., assignor of one-twentieth to A. Holmgren, three-twentieths to J. H. Moan, three-twentieths to C. H. Kelson, one-twentieth to C. T. Strand, and two-twentieths to A. F. Youngberg, Lake Park, Minn. Plow-lifting device for gang plows. No. 1,296,039; Mar. 4; v. 260; p. 51.
Berkeley, Laurence J., assignor to Hercules Manufacturing Company, Racine, Wis. Spike-machine. No. 1,298,281; Mar. 25; v. 260; p. 633.
Berlizheimer, David T. (See Josephs and Berlizheimer.)
Bernhard, Charles A., Chicago, Ill. Metallic kitchen-cabinet. No. 1,296,908; Mar. 11; v. 260; p. 283.
Bernstein, Julius D., New York, N. Y. Non-sinkable lifeboat. No. 1,295,843; Mar. 4; v. 260; p. 5.
Berson, Hyman, Brooklyn, N. Y. Paint set. No. 1,295,956; Mar. 4; v. 260; p. 31.
Besserdich, William A., Clintonville, Wis. Steering mechanism for four-wheel-drive vehicles. No. 1,297,962; Mar. 18; v. 260; p. 538.
Besserdich, William A., Clintonville, Wis. Steering mechanism for vehicles. No. 1,297,963; Mar. 18; v. 260; p. 539.
Best Electric Company. (See Kenney, John J., assignor.)
Bester, Harry E., Hagerstown, Md. Vibrator. No. 1,296,741; Mar. 11; v. 260; p. 244.
Bettini, Gianni, Paris, France. Motion-picture-transposing apparatus. No. 1,298,282; Mar. 25; v. 260; p. 633.
Beudet, Maurice. (See Koetschet and Beudet.)
Bevington, Charles C., assignor of one-half to F. L. Tregesser, Akron, Ohio. Collapsible receptacle. No. 1,296,742; Mar. 11; v. 260; p. 245.
Bey, George, Jersey City, N. J. Combined motor and pump. No. 1,296,356; Mar. 4; v. 260; p. 122.
Beyer, Daniel A., Houston, assignor of one-half to A. M. Chambers, Harris county, Tex. Footboard-brace for vehicles. No. 1,298,160; Mar. 25; v. 260; p. 606.
Beyland, Sidney A., North Ridgeville, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,441; Mar. 25; v. 260; p. 666.
Bicker, Edgar B., St. Louis, Mo. Display-clip. No. 1,296,584; Mar. 4; v. 260; p. 172.
Bicknell, Alvie E., Indianapolis, Ind. Hot-water heater. No. 1,296,909; Mar. 11; v. 260; p. 283.
Biddle, Eugene S., Muncy, Pa. Automatic controlling appliance for railway-trains. No. 1,297,783; Mar. 18; v. 260; p. 501.
Bidwell, Alfred M., Jersey City, N. J. Mattress basin-drain. No. 1,295,844; Mar. 4; v. 260; p. 6.
Bigelow, Charles A. (See Wollenberg and Bigelow.)
Bigelow, George A., Portland, Oreg. Lock for automobiles or power-driven vehicles. No. 1,298,283; Mar. 25; v. 260; p. 633.
Bigos, Andrzej, Lorain, Ohio. Shoe-clasp. No. 1,296,157; Mar. 4; v. 260; p. 79.
Bijou Button Co. (See Cohn, Ovadio, assignor.)
Bijur, Joseph, New York, N. Y., assignor, by mesne assignments, to Bijur Motor Appliance Company. Electrical system for motor-vehicles. No. 1,298,442; Mar. 25; v. 260; p. 666.
Bijur Motor Appliance Company. (See Bijur, Joseph, assignor.)
Bijur Motor Appliance Company. (See Wolffsohn, Lional, assignor.)
Billings, Frank. (See Greenleaf, Robert P., assignor.)
Billson, Edward F. (See Lippincott and Billson.)
Binder, John, and E. Alberti, New York, assignors to International Cork Company, Brooklyn, N. Y. Cork-feeding mechanism. No. 1,296,743; Mar. 11; v. 260; p. 245.
Birch, Sydney, Newton, Mass. Cloth guiding and feeding apparatus. No. 1,297,064; Mar. 11; v. 260; p. 318.
Bird, Thomas F., Wilkes-Barre, Pa. Pick. No. 1,297,065; Mar. 11; v. 260; p. 318.
Birnbaum, Samuel, New York, N. Y. Envelop-moistener. No. 1,297,784; Mar. 18; v. 260; p. 502.
Birney, Charles O. (See Bouenbury, Joseph M., assignor.)
Biscayart, Jules D., Atlanta, Ga. Cotter-pin remover. No. 1,297,785; Mar. 18; v. 260; p. 502.
Bischoff, John C. (See Poppiuk, Jan H., assignor.)
Black, Albert F., Sandusky, Mich. Cow-tail holder. No. 1,296,258; Mar. 4; v. 260; p. 101.
Blackburn, Wilmuth E., Summit, N. J. Game apparatus. No. 1,298,161; Mar. 25; v. 260; p. 606.
Blacker, William, Staleybridge, England. Treadle-hammer. No. 1,297,990; Mar. 25; v. 260; p. 570.
Blackstone, George M. (See Carter, Frank and E., assignors.)
Blair, George O., Harrisburg, Colo. Wind-motor. No. 1,297,066; Mar. 11; v. 260; p. 319.
Blair, Samuel A., Brooklyn, N. Y. Emergency jack and truck for vehicles. No. 1,298,284; Mar. 25; v. 260; p. 633.
Blake, Percy G. (See Boughton, Walter J., assignor.)
Blake, William F., Detroit, Mich. Skillet, griddle, and bake-pan oiler. No. 1,296,456; Mar. 4; v. 260; p. 143.
Blakely, Edward B., assignor to R. M. Hvid Company, Chicago, Ill. Valve for oil-engines. No. 1,296,614; Mar. 11; v. 260; p. 215.
Blanchard, Harry E., assignor to Lapointe Machine Tool Company, Hudson, Mass. Broaching-machine. No. 1,295,957; Mar. 4; v. 260; p. 31.
Blaw-Knox Company. (See Brynoldt, Christian, assignor.)
Bliss, William L., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Belt-guard for pulleys. No. 1,296,259; Mar. 4; v. 260; p. 101.
Blood, Burr B., assignor to G. Heidman and N. A. Street, Chicago, Ill. Cover-support. No. 1,296,260; Mar. 4; v. 260; p. 101.
Blood, Harold L., Plainfield, N. J., assignor to Niles-Bement-Pond Company, New York, N. Y. System of lubrication. No. 1,296,744; Mar. 11; v. 260; p. 245.
Bloodgood, James H., Jacksonville, Fla., assignor to T. H. Spencer, trustee, Birmingham, Ala. Portable hand-planer. No. 1,296,910; Mar. 11; v. 260; p. 284.
Bloodgood, James H., Jacksonville, Fla., assignor to T. H. Spencer, trustee, Birmingham, Ala. Portable hand-planer. No. 1,296,911; Mar. 11; v. 260; p. 284.
Blossom, Fred V., Denver, Colo. Sunshade for automobiles. No. 1,297,067; Mar. 11; v. 260; p. 319.
Blot-Garnier, Paul G., and G. P. Chevalier, Paris, France. Indicating or recording apparatus particularly applicable to marine logs. No. 1,296,947; Mar. 11; v. 260; p. 292.
Bluhm, Joseph, assignor to Dana Manufacturing Corporation, Troy, N. Y. Ice-cream scoop. No. 1,296,745; Mar. 11; v. 260; p. 245.
Blumenberg, Henry, Jr., Los Angeles, Cal. Producing potassium nitrate. No. 1,296,460; Mar. 4; v. 260; p. 144.
Blumenberg, Henry, Jr., Los Angeles, Cal. Making potassium chlorid. No. 1,296,461; Mar. 4; v. 260; p. 144.
Blumenberg, Henry, Jr., Oro Grande, Cal. Apparatus for recovering potassium salts from cement-kilns. No. 1,296,462; Mar. 4; v. 260; p. 144.
Blumenberg, Henry, Jr., Oro Grande, Cal. Recovering potassium compounds from waste gases of cement-kilns and the like. No. 1,296,463; Mar. 4; v. 260; p. 144.
Blumenberg, Henry, Jr., Oro Grande, Cal. Treating cement mixtures for the recovery of potassium compounds. No. 1,296,464; Mar. 4; v. 260; p. 145.
Blumenberg, Henry, Jr., Oro Grande, Cal. Treating Portland cement and the resulting product. No. 1,296,467; Mar. 4; v. 260; p. 145.
Blumenberg, Henry, Jr., Oro Grande, Cal. Toxic cement. No. 1,296,468; Mar. 4; v. 260; p. 145.
Blumenberg, Henry, Jr., Los Angeles, Calif. Producing potassium sulfate. No. 1,297,638; Mar. 18; v. 260; p. 469.
Blumenberg, Henry, Jr., Oro Grande, Calif. Apparatus for recovering potassium compounds from cement-kiln gases. No. 1,297,639; Mar. 18; v. 260; p. 469.
Blumenberg, Henry, Jr., Oro Grande, assignor to Chemical Construction Company, Los Angeles, Calif. Making potassium nitrate. No. 1,297,640; Mar. 18; v. 260; p. 469.

Blumenberg, Henry, Jr., assignor to Chemical Construction Company, Los Angeles, Cal. Making boric acid and sodium borate. No. 1,295,958; Mar. 4; v. 260; p. 82.

Blumenberg, Henry, Jr., assignor to Chemical Construction Company, Los Angeles, Cal. Extracting potassium salts from feldspar. No. 1,296,457; Mar. 4; v. 260; p. 143.

Blumenberg, Henry, Jr., assignor to Chemical Construction Company, Los Angeles, Cal. Extracting potassium from minerals. No. 1,296,458; Mar. 4; v. 260; p. 143.

Blumenberg, Henry, Jr., assignor to Chemical Construction Company, Los Angeles, Cal. Producing potassium salts. No. 1,296,459; Mar. 4; v. 260; p. 143.

Blumenberg, Henry, Jr., Oro Grande, assignor to Chemical Construction Company, Los Angeles, Cal. Treating cement-kiln gases. No. 1,296,465; Mar. 4; v. 260; p. 145.

Blumenberg, Henry, Jr., Oro Grande, assignor to Chemical Construction Company, Los Angeles, Cal. Recovering potassium compounds from waste gases of cement-kilns or the like. No. 1,296,466; Mar. 4; v. 260; p. 145.

Blumenthal, Isadore, New York, N. Y. Match-box. No. 1,296,912; Mar. 11; v. 260; p. 284.

Bly, Elmer L., Stanley, Wis. Windlass attachment for motor-driven vehicles. No. 1,296,615; Mar. 11; v. 260; p. 215.

Boardman, Charles W., Pawtucket, R. I. Mount for tension-pulleys for spinning and twisting machines. No. 1,298,163; Mar. 25; v. 260; p. 607.

Bodde, Theodore, Lynn, Mass., assignor to General Electric Company. Transforming device. No. 1,298,443; Mar. 25; v. 260; p. 667.

Boddie, Clarence A., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,296,616; Mar. 11; v. 260; p. 215.

Bodell, Allen W., Wilmette, Ill. Internal-combustion engine. No. 1,297,068; Mar. 11; v. 260; p. 319.

Bodmer, Gottlieb, Zurich, Switzerland. Cock for liquids and vapors. No. 1,296,746; Mar. 11; v. 260; p. 246.

Boe, Edd. (See Halseth, Edwin A., assignor.)

Bogaty, Hermann, assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Drying apparatus. No. 1,298,285; Mar. 25; v. 260; p. 644.

Bogue, Charles R., Arlington Heights, assignor to Simplex Wire & Cable Co., Boston, Mass. Accelerator for the vulcanization of rubber. No. 1,296,469; Mar. 4; v. 260; p. 145.

Bohachik, Cassimir, Chicago, Ill. Bullet-firing alarm-lock. No. 1,296,747; Mar. 11; v. 260; p. 246.

Boissière, Adolphe, Paris, France. Motor-tractor having endless-chain tracks. No. 1,298,444; Mar. 25; v. 260; p. 667.

Boland, John V., St. Louis, Mo. Mold. No. 1,297,315; Mar. 18; v. 260; p. 402.

Bolens, Harry W., Port Washington, Wis. Chair-iron. No. 1,297,436; Mar. 18; v. 260; p. 426.

Boller, Carl H., Kansas City, Mo. Ventilating window, louver, door, and the like. No. 1,297,786; Mar. 18; v. 260; p. 502.

Bollinger, Lester J. (See Shafer and Bollinger.)

Bolus, Glenn H., and W. A. Darrah, assignors to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire hanger. No. 1,296,748; Mar. 11; v. 260; p. 246.

Bombard, Albert T., Piqua, Ohio. Smoke-hood for stoves. No. 1,298,164; Mar. 25; v. 260; p. 607.

Bonaker, Otto. (See Weinberger, Marcus, assignor.)

Bonham, Anson R., Philadelphia, Pa. Display-box. No. 1,296,158; Mar. 4; v. 260; p. 79.

Bonney-Floyd Company, The. (See Dorsey, Walter A., assignor.)

Bontya, John, Trenton, N. J. Locomotive draft apparatus. No. 1,296,040; Mar. 4; v. 260; p. 51.

Bonus, George Y., Chicago, Ill. Regenerative power system. No. 1,297,069; Mar. 11; v. 260; p. 319.

Book, Harry L., Honolulu, Hawaii. Keyless lock. No. 1,297,991; Mar. 25; v. 260; p. 570.

Bookwalter, Albert R., Coeur d'Alene, Idaho. Electric furnace for smelting ores. No. 1,297,041; Mar. 18; v. 260; p. 469

Boots, Hiram E., *et al.* (See Gilbert, Arthur, assignor.)

Borcherdt, Walter O., Austinville, Va. Elevator. No. 1,297,992; Mar. 25; v. 260; p. 571.

Borchert, Fred L. (See Borchert, William and F. L.)

Borchert, William and F. L., Rockford, Ill. Tag-affixing machine. No. 1,296,749; Mar. 11; v. 260; p. 246.

Borden, Moro M., Collingswood, N. J., assignor to Simplex Valve & Meter Company, Philadelphia, Pa. Fluid-meter. No. 1,296,041; Mar. 4; v. 260; p. 51.

Borden's Condensed Milk Company. (See Rogers, James, assignor.)

Bordson, Ole O., Cross Plains, Wis. Rail-clamp. No. 1,297,993; Mar. 25; v. 260; p. 571.

Borel, Joseph L. A., and E. Grange, *née* Borel, Annecy, France. Machine for manufacturing press-buttons or the like. No. 1,298,165; Mar. 25; v. 260; p. 607.

Borgstrom, Carl A. (See Wickstrom and Borgstrom.)

Borland, John A., St. Paul, Minn. Demountable rim for automobile-wheels. No. 1,297,316; Mar. 18; v. 260; p. 402.

Borsse, Anton A., and G. Pire, Sheboygan, Wis. Dirigible headlight. No. 1,296,261; Mar. 4; v. 260; p. 101.

Borsuk, Peter, West Pullman, Ill., assignor of one-half to J. Dmitrass, Laporte, Ind. Wire-cutter. No. 1,298,166; Mar. 25; v. 260; p. 607.

Bortree, Seth, Ariel, Pa. Horseshoe-calk. No. 1,297,070; Mar. 11; v. 260; p. 319.

Bosenbury, Joseph M., Peoria, Ill., assignor of one-half to C. O. Birney, Mount Healthy, Ohio. Straight-air one-man equipment. No. 1,297,437; Mar. 18; v. 260; p. 426

Bossert, William F. (See Warring, Royal C., assignor.)

Bostick, Benjamin J. (See Hudson, William F., assignor.)

Bosworth, George P., Central Falls, assignor to Hemphill Manufacturing Co., Pawtucket, R. I. Stocking-knitting machine, antiraveling. No. 1,296,750; Mar. 11; v. 260; p. 247.

Bottom, R. C., *et al.* (See May, Jesse A., assignor.)

Botts, John, Lane, Kans. Washing-machine. No. 1,297,071; Mar. 11; v. 260; p. 320.

Boughton, Walter J., Thetford, Norfolk, assignor to P. G. Blake, London, England. Supplementary carbureter for facilitating the starting of internal-combustion engines. No. 1,298,445; Mar. 25; v. 260; p. 667.

Bouley, Arthur G., Boston, Mass. Tool. No. 1,297,072; Mar. 11; v. 260; p. 320.

Bournonville, Joseph M., *et al.* (See Lamar, Alexis L., assignor.)

Boutelle, William H., assignor to American Optical Company, Southbridge, Mass. Ophthalmic mounting. No. 1,296,159; Mar. 4; v. 260; p. 79.

Bovard, William P., assignor to The Ohio Brass Company, Mansfield, Ohio. Clamping mechanism. No. 1,296,470; Mar. 4; v. 260; p. 145.

Bower, Thomas H., Richmond, Va. Journal-bearing. No. 1,297,073; Mar. 11; v. 260; p. 320.

Bowers, Benton W., Easton, Pa. Welding-electrode. No. 1,296,358; Mar. 4; v. 260; p. 123.

Bowles, Philip R., Jr. (See McNear and Bowles.)

Bowling, Joseph R., St. Louis, Mo. Tractor. No. 1,297,291; Mar. 11; v. 260; p. 367.

Bowman, Harry D., East Orange, N. J. Feeding apparatus for weighing-machines. No. 1,295,959; Mar. 4; v. 260; p. 82.

Bowman, Harry D., East Orange, N. J. Filling fuse-containers for powder-bags. No. 1,298,167; Mar. 25; v. 260; p. 608.

Boyd, John H., Mount Vernon, N. Y. Vacuum-bonnet. No. 1,298,446; Mar. 25; v. 260; p. 667.

Boye, James H., assignor to James H. Boye Manufacturing Company, Chicago, Ill. Adjustable sash-curtain support. No. 1,298,288; Mar. 25; v. 260; p. 634.

Boyer, Harry L., Trenton, N. J. Apparatus for applying ribs to storage-battery separators. No. 1,297,642; Mar. 18; v. 260; p. 469.

Boyer, Harry L., Trenton, N. J. Applying ribs to storage-battery separators. No. 1,297,643; Mar. 18; v. 260; p. 470.

Boyer, Harry L., assignor to Joseph Stokes Rubber Company, Trenton, N. J. Apparatus for forming storage-battery separators. No. 1,297,644; Mar. 18; v. 260; p. 470.

Boyer, Harry L., assignor to Joseph Stokes Rubber Company, Trenton, N. J. Forming storage-battery separators. No. 1,297,645; Mar. 18; v. 260; p. 470.

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Boykin, Burwell, Jr., Beaumont, Tex. Casting chilled valve-seats. No. 1,296,751; Mar. 11; v. 260; p. 247.

Boynton, Alexander, U. S. N. Army. Pneumatic trigger-pull for firearms. No. 1,297,535; Mar. 18; v. 260; p. 447.

Beack, Albert, Gebo, Wyo. Beet-planter. No. 1,295,845; Mar. 4; v. 260; p. 6.

Bradford, Thomas J., Lorane, Oreg. Multiple-breech gun. No. 1,298,447; Mar. 25; v. 260; p. 667.

Bradley, John, Pawhuska, Okla. Scythe. No. 1,297,074; Mar. 11; v. 260; p. 320.

Bradner, Hosea T. (See Lees, Ernest J., assignor.)

Bragg, Lallie T., Camden, Ala. Chimney-support for oil-lamps. No. 1,297,646; Mar. 18; v. 260; p. 470.

Brainard, Lura S., Meriden, Conn. Making motion-pictures. No. 1,296,471; Mar. 4; v. 260; p. 146.

Braley, Wilbur G., Towanda, Kans. Bolt-cutter. No. 1,297,075; Mar. 11; v. 260; p. 320.

Bralove, Simon, Washington, D. C. Pin-securing device. No. 1,296,042; Mar. 4; v. 260; p. 52.

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Bramming, Carl, Chicago, Ill., assignor to Accessories Manufacturing Company. Switch for electric circuits. No. 1,297,996; Mar. 25; v. 260; p. 571.

Brand, John J. F., Roseville, Ohio. Clay-working. No. 1,296,472; Mar. 4; v. 260; p. 146.

Brandenburg, Joseph, Denver, Colo. Griddle-greaser. No. 1,297,076; Mar. 11; v. 260; p. 321.

Brandwood, Thomas, Walshaw, England. Perforated beam for dyeing and like apparatus. No. 1,298,287; Mar. 25; v. 260; p. 634.

Brannon, Daniel M., Williston, N. D. Belt-shifter. No. 1,297,787; Mar. 18; v. 260; p. 502.

Brantley, James A., Sand Springs, Okla. Drive-gearing for mining-machines. No. 1,297,647; Mar. 18; v. 260; p. 470.

Brashier, Henry J., London, England. Receptacle for blacking, tooth-paste, and like plastic materials. No. 1,296,473; Mar. 4; v. 260; p. 146.
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Brassill, Frank A., Hartford, assignor to Middlesex Machine Company, Inc., Middletown, Conn. Bearing-head for grinding-machines. No. 1,298,448; Mar. 25; v. 260; p. 668.
Braud, Samuel C., New Orleans, La. Packer for stock feed. No. 1,297,077; Mar. 11; v. 260; p. 321.
Brent, James A., San Francisco, Cal. Ore-concentrator. No. 1,295,960; Mar. 4; v. 260; p. 32.
Brenzinger, Julius, Fairfield, Conn. Machine for applying a seam-packing composition to can-covers. No. 1,296,474; Mar. 4; v. 260; p. 146.
Bressler, Regina N., New York, N. Y. Swimming device. No. 1,297,648; Mar. 18; v. 260; p. 470.
Bretz, John, Jr., Detroit, Mich. Fuel-heater. No. 1,296,043; Mar. 4; v. 260; p. 52.
Brewer, William A., Pittsburgh, assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,296,913; Mar. 11; v. 260; p. 284.
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Brill, Henry S., New York, N. Y. Lock. No. 1,298,288; Mar. 25; v. 260; p. 634.
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Brittain, William J., Holdenville, Okla. Measuring device. No. 1,297,649; Mar. 18; v. 260; p. 471.
Britten, William G., Fanwood, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone system. No. 1,296,617; Mar. 11; v. 260; p. 216.
Broadmack, George, Chicago, Ill. Trench-wire cutter. No. 1,298,449; Mar. 25; v. 260; p. 668.
Brons, Richard S. (See Sage, Edwin R., assignor.)
Brogan, James A., Lawrence, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for inserting fastenings. No. 1,295,846; Mar. 4; v. 260; p. 6.
Brookby, Harry E., Evanston, Ill. Producing potassium compounds. No. 1,297,078; Mar. 11; v. 260; p. 321.
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Brown, Beriah, Seattle, Wash. Rotary engine. No. 1,296,618; Mar. 11; v. 260; p. 216.
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Brown, Charles L. (See Webster, Frederick H., assignor.)
Brown, Chauncey L., Northfield, Minn. Tractor device. No. 1,297,536; Mar. 18; v. 260; p. 447.
Brown, Daniel W., Youngstown, Ohio. Pneumatic mat. No. 1,296,359; Mar. 4; v. 260; p. 123.
Brown, David B. (See Reid, George H., assignor.)
Brown, George W., Portland, Me., assignor to S. J. Dodge, Newcastle, Me. Safety fluid lamp and heater. No. 1,297,650; Mar. 18; v. 260; p. 471.
Brown, Harold, assignor to Reynolds Engineering Company, Moline, Ill. Lapping-machine. No. 1,295,962; Mar. 4; v. 260; p. 32.
Brown, Harold P., New York, N. Y. Mixing concrete and similar cementitious materials. No. 1,297,080; Mar. 11; v. 260; p. 321.
Brown, Harold P., New York, N. Y. Method of and apparatus for mixing concrete. No. 1,297,081; Mar. 11; v. 260; p. 322.
Brown, Harold P., New York, N. Y. Apparatus for leveling the surface of plastic walls. No. 1,297,082; Mar. 11; v. 260; p. 322
Brown, Hugh E. (See Brown, John A., assignor.)
Brown, J. E., *et al.* (See May, Jesse A., assignor.)
Brown, John A., Camas, Wash., assignor of one-half to H. E. Brown, Portland, Oreg. Potato-digging machine. No. 1,298,169; Mar. 25; v. 260; p. 608.
Brown, John W., assignor to The John W. Brown Manufacturing Company, Columbus, Ohio. Automobile-lamp. No. 1,297,317; Mar. 18; v. 260; p. 402.
Brown, Joseph A., Philadelphia, Pa. Rain-shield for automobile-hoods. No. 1,298,170; Mar. 25; v. 260; p. 608.
Brown, Louis M., Beverly, and A. A. Macleod, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Work-support for shoe-machines. No. 1,295,963; Mar. 4; v. 260; p. 33.
Brown, Louis M., deceased; M. E. Brown, administratrix, Beverly, and A. A. Macleod, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Trimming-machine. No. 1,295,964; Mar. 4; v. 260; p. 33.
Brown, Louis M., Beverly, and A. A. Macleod, Swampscott, Mass., assignors, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Work-support for shoe-machines. No. 1,295,965; Mar. 4; v. 260; p. 33.
Brown, May E., administratrix. (See Brown and Macleod.)
Brown, Oscar, Homer, Ga. Collar attachment. No. 1,297,651; Mar. 18; v. 260; p. 471.
Brown, Raymond E., Bellevue, assignor to Heyl & Patterson, Inc., Pittsburgh, Pa. Rail-clamp for traveling bridges. No. 1,297,083; Mar. 11; v. 260; p. 322.
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Browning, Samuel H., Columbus, Ohio. Coil-shaping machine. No. 1,297,998; Mar. 25; v. 260; p. 572.
Brophy, Oscar, Philadelphia, Pa. Electric induction-furnace. No. 1,296,752; Mar. 11; v. 260; p. 247.
Brosi, Henry W. E., Girard, Kans. Mine-car wheel. No. 1,296,914; Mar. 11; v. 260; p. 285.
Brubaker, Charity H., administratrix. (See Brubaker, Samuel H.)
Brubaker, Samuel H., deceased; C. H. Brubaker, administratrix, assignor of one-fourth to J. V. Dittemore, Indianapolis, Ind. Apparatus for transporting perishable articles. No. 1,297,318; Mar. 18; v. 260; p. 403.
Bruce, George W., Larimore, N. D. Potato-harvester. No. 1,296,475; Mar. 4; v. 260; p. 147.
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Brunel, Fred A., Hempstead, N. Y. Burglar-alarm. No. 1,296,262; Mar. 4; v. 260; p. 101.
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Brush, Gerome, Dublin, N. H. System for reducing the visibility of objects. No. 1,296,753; Mar. 11; v. 260; p. 248.
Brussel, Richard, New York, N. Y. Cuff. No. 1,297,538; Mar. 18; v. 260; p. 447.
Bryant, Corwin W., Minneapolis, Minn. Pneumatic brake and clutch controller for automobiles. No. 1,297,999; Mar. 25; v. 260; p. 572.
Bryant, Stanley C., assignor to Bryant Zinc Company, Chicago, Ill. Time-controlled highway-crossing alarm. No. 1,296,360; Mar. 4; v. 260; p. 123.
Bryant, Stanley C., assignor to Bryant Zinc Company, Chicago, Ill. Highway-crossing signal. No. 1,296,361; Mar. 4; v. 260; p. 123.
Bryant, Stanley C., assignor to Bryant Zinc Company, Chicago, Ill. Lightning-arrester. No. 1,296,362; Mar. 4; v. 260; p. 123.
Bryant Zinc Company. (See Bryant, Stanley C., assignor.)
Bryce, James W., Bloomfield, N. J. Time-indicating system. No. 1,298,000; Mar. 25; v. 260; p. 572.
Brynoldt, Christian, Pittsburgh, Pa., assignor to Blaw-Knox Company. Apparatus for constructiong concrete walls. No. 1,298,450; Mar. 25; v. 260; p. 668.
Bryson, Tandy A., Troy, N. Y., assignor to Tolhurst Machine Works. Centrifugal machine. No. 1,298,451; Mar. 25; v. 260; p. 668.
Buchli, Jakob, assignor to A. G. Brown Boveri & Cie., Baden, Switzerland. Driving mechanism for electric locomotives. No. 1,296,754; Mar. 11; v. 260; p. 248.
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Buchsbaum, Samuel, Chicago, Ill., assignor to Gordon Electric and Manufacturing Co., Waterville, Conn. Switch-movement. No. 1,295,966; Mar. 4; v. 260; p. 34.
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Buckham, George T. (See Dawson and Buckham.)
Buckingham, Fremont H., assignor to Standard Computing Scale Company, Detroit, Mich. Tare-beam mounting. No. 1,295,967; Mar. 4; v. 260; p. 34.
Buckley, Sydney, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Crane. No. 1,296,755; Mar. 11; v. 260; p. 248.
Buckley, Sydney, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y. Lifting-beam for cranes. No. 1,296,756; Mar. 11; v. 260; p. 248.
Buckley, Sydney, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y. Bridge for traveling cranes. No. 1,296,757; Mar. 11; v. 260; p. 249.
Buckley, Sydney, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y. Bridge for traveling cranes. No. 1,296,758; Mar. 11; v. 260; p. 249.
Buckley, Sydney, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, New York, N. Y. Bridge for traveling cranes. No. 1,296,759; Mar. 11; v. 260; p. 249.
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Budd, Clifford M. (See Dingwall and Budd.)
Bueschel, Andrew E., assignor of one-half to W. Penta, Chicago, Ill. Folding paper box. No. 1,296,760; Mar. 11; v. 260; p. 249.

Bugher, Clarence E., Brookston, Ind., assignor, by mesne assignments, to Auto Speed Gear Manufacturing Co. Differential gearing. No. 1,297,439; Mar. 18; v. 260; p. 427.
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Bulat, Nicolai, Lawrence, Mass. Carrier. No. 1,296,619; Mar. 11; v. 260; p. 216.
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Buller, Jacob W., assignor to Buller Coupler Company, Inc., Hillsboro, Kans. Lagging-stretcher. No. 1,298,452; Mar. 25; v. 260; p. 668.
Bullwinkel, John H. F., Weehawken, N. J. Portable window-seat. No. 1,297,540; Mar. 18; v. 260; p. 448.
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Burgess, Charles F., Madison, Wis., assignor to Burgess Battery Company. Dry battery. No. 1,297,653; Mar. 18; v. 260; p. 471.
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Burgess, Charles F., Madison, Wis., assignor to Burgess Battery Company. Hand-lamp. No. 1,297,655; Mar. 18; v. 260; p. 472.
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Burgess, Charles F., Madison, Wis., assignor to Burgess Battery Company. Battery hand-lamp. No. 1,297,657; Mar. 18; v. 260; p. 472.
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Burridge, Lee S., deceased; F. O. Burridge, executor, assignor, by mesne assignments, to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,297,085; Mar. 11; v. 260; p. 322.
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Burroughs, Charles F., East Orange, N. J. Heating or cooling plate for molding-presses. No. 1,296,916; Mar. 11; v. 260; p. 285.
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Burton, Charles S., Oak Park, Ill. Fuel-feeding device for internal-combustion engines. No. 1,296,364; Mar. 4; v. 260; p. 124.
Burton, Charles S., Oak Park, Ill. Fuel-feeding device for internal-combustion engines. No. 1,296,365; Mar. 4; v. 260; p. 124.
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Butler, Henry E., Schenectady, N. Y. Adjustable backrest. No. 1,297,088; Mar. 11; v. 260; p. 323.
Butterfield, Charles V., Los Angeles, Cal., assignor of one-fourth to E. Wiese, one-fourth to E. Lyons, and one-fourth to D. T. Beatley. Audible pressure-indicator. No. 1,296,160; Mar. 4; v. 260; p. 80.
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Butters, Robert H., Atlantic, Ga., assignor to The Butters Camp Mfg. Co. Gin-saw-sharpening machine. No. 1,298,002; Mar. 25; v. 260; p. 573.
Buttonlath Manufacturing Company. (See Sexton, James P., assignor.)
Buzzard, Jessie O. (See Tharp, Harvey E., assignor.)
Byers, Jacob J., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Rail-anchor. No. 1,296,263; Mar. 4; v. 260; p. 102.
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Caccialanza, Romeo, assignor to Western Doll and Toy Mfg. Co., Los Angeles, Cal. Doll-head. No. 1,297,089; Mar. 11; v. 260; p. 323.
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Cameron, Duncan, Detroit, Mich. Resilient wheel. No. 1,297,791; Mar. 18; v. 260; p. 503.
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Cantrell, Edwin B. and G. E. Miller, San Francisco, Calif. Shim. No. 1,297,658; Mar. 18; v. 260; p. 473.
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Carlisle, Fred B., North Kingston, R. I., assignor to J. M. Gilbert, New York, N. Y. Machine for making tire-casings. No. 1,296,762; Mar. 11; v. 260; p. 250.
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Carmichael, Robert E., Damon, Tex., assignor of one-half to G. Hamman, Houston, Tex. Means for reducing wear in the working barrels of pumps. No. 1,295,848; Mar. 4; v. 260; p. 6.
Caron, Martinus H., Weltevreden, Java, Dutch East Indies, assignor to Research Corporation, New York, N. Y. Extracting silver from ore. No. 1,298,454; Mar. 25; v. 260; p. 669.
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Carter, Lionel A., St. Louis, Mo. Quick-change mechanism. No. 1,296,161; Mar. 4; v. 260; p. 80.
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Casablancas, Fernando, Sabadell, Spain. Spinning-frame. No. 1,297,794; Mar. 18; v. 260; p. 503.
Casaday, James O., South Bend, Ind. Automatic-release draft-coupling. No. 1,298,004; Mar. 25; v. 260; p. 574.
Case, Theodore W., Scipio, N. Y. Variable resistance. No. 1,298,457; Mar. 25; v. 260; p. 669.
Case, Theodore W., Scipio, N. Y. Resistance element. No. 1,298,627; Mar. 25; v. 260; p. 705.
Casgrain, Louis A., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Fastening-inserting machine. No. 1,295,851; Mar. 4; v. 260; p. 7.
Cass, Freeman, Brooklyn, assignor to Mitchell-Bissell Co., New York, N. Y. Porcelain thread-guide. No. 1,296,479; Mar. 4; v. 260; p. 148.
Cassel, Gunnar E. Stockholm, assignor to A. Leffer, Djursholm, Sweden. Variable-speed gearing. No. 1,296,162; Mar. 4; v. 260; p. 80.
Cassel, Gunnar E., Stockholm, assignor to A. L. O. A. Leffer, Djursholm, Sweden. Combined driving and steering device for motor-vehicles. No. 1,296,163; Mar. 4; v. 260; p. 80.
Cassidy, George W., New York, N. Y. Hood and electric-light support. No. 1,295,852; Mar. 4; v. 260; p. 8.
Caughey, Robert C., assignor to Grand Detour Plow Company, Dixon, Ill. Power-lift gang-plow. No. 1,296,266; Mar. 4; v. 260; p. 103.
Caulkins, George W. (See Goodwin and Caulkins.)
Cavanagh, Charles R., Boston, Mass. Flying machine. No. 1,297,795; Mar. 18; v. 260; p. 504.
Cavanagh, James, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Making shoes. (Reissue.) No. 14,617; Mar. 25; v. 260; p. 707.
Cavanagh, James A. (See Bailey, Arthur A., assignor.)
Cement Gun Company. (See Weber, Carl, assignor.)
Central Railway Signal Company. (See Dutcher, Frank, assignor.)
Central Railway Signal Company. (See Ross, Louis S., assignor.)
Chadbourne, Henry W., and A. F. Knight, Schenectady, N. Y., assignors to General Electric Company. Starting direct-current motors. No. 1,297,096; Mar. 11; v. 260; p. 325
Chadwick, James N., Bolton, England. Apparatus for casting bombs or projectiles. No. 1,298,176; Mar. 25; v. 260; p. 610.
Chalmers, Thomas, Crew, England. Diaphragm for talking-machines. No. 1,298,290; Mar. 25; v. 260; p. 634
Chalmers, Thomas A., Camden, N. J. Steam-trap. No. 1,297,659; Mar. 18; v. 260; p. 473.
Chambers, A. M. (See Beyer, Daniel A., assignor.)
Chambers, Frank B., Buffalo, N. Y. Weighing apparatus. No. 1,296,920; Mar. 11; v. 260; p. 286.
Chambers, Frank B., Buffalo, N. Y. Valve-actuating mechanism for dispensing or weighing apparatus. No. 1,296,921; Mar. 11; v. 260; p. 286
Champion Shoe Machinery Company. (See Dobyne, Stephen A., assignor.)
Chanaud, Jean, New York, N. Y. Exercising apparatus. (Reissue.) No. 14,618; Mar. 25; v. 260; p. 707.
Chance and Hunt. (See Holley and Mott, assignors.)
Chandler, Chester C., Kingsville, Tex. Sectional pneumatic tire. No. 1,297,097; Mar. 11; v. 260; p. 325.
Chantler, James D., Freeport, N. Y. Planter. No. 1,296,267; Mar. 4; v. 260; p. 103.
Chapman, Matthew T., assignor to The American Well Works, Aurora, Ill. Pump. No. 1,297,441; Mar. 18; v. 260; p. 427.
Chappell & Company. (See Goldspink, Archibald E., assignor.)
Charbonneaux, Georges, Le Magnou, par Aigrefeuille D'Aunis, France. Electrolytic cell. No. 1,296,046; Mar. 4; v. 260; p. 53.
Charles B. Foster and Company. (See Higinbotham, Arthur O., assignor.)
Charles, James, Richmond, Ind. Water-motor. No. 1,296,622; Mar. 11; v. 260; p. 217
Charles, James, Richmond, Ind. System of hydraulic power utilization. No. 1,296,623; Mar. 11; v. 260; p. 217.
Chatfield, Franklin, Minneapolis, Minn. Machine for slitting knit fabric. No. 1,298,005; Mar. 25; v. 260; p. 574.
Chatfield, Franklin, Minneapolis, Minn. Fabric-stretcher. No. 1,298,006; Mar. 25; v. 260; p. 574.
Chauffepied, Ulysses, Shreveport, La. Comb-cleaner. No. 1,297,098; Mar. 11; v. 260; p. 325.
Cheek, Reuben W., Buford, Ga. Hand-propelled vehicle. No. 1,297,796; Mar. 18; v. 260; p. 504.
Chemical Construction Company. (See Blumenberg, Henry, Jr., assignor.)
Chemical Construction Company. (See Hechenbleikner, Ingenuin, assignor.)
Chenault, Henry, Allensville, Ky. Bank-cutting road-machine. No. 1,298,458; Mar. 25; v. 260; p. 669.
Chenery, Charles R., Buffalo, N. Y. Hat-box. No. 1,297,442; Mar. 18; v. 260; p. 428.
Cheney, Charles C., Charlestown, assignor to F. K. Daggett, Brookline, Mass. Automatic check-valve for compressed-air drilling-machines. No. 1,298,007; Mar. 25; v. 260; p. 574.
Cherry, Edgar, Oakland, Cal. Sound-transmitting device. No. 1,296,763; Mar. 11; v. 260; p. 250.
Chervenka, Jacob F., Casey, Iowa. Saw-set. No. 1,298,459; Mar. 25; v. 260; p. 669.
Cheselka, Peter, Fairbank, Pa. Can-opener. No. 1,297,797; Mar. 18; v. 260; p. 504.
Cheshire, Carey A., deceased, Chicago, Ill., M. F. Cheshire, administrator, assignor to T. A. Cheshire, Des Moines, Iowa. Addressing-machine. No. 1,297,443; Mar. 18; v. 260; p. 428.
Cheshire, Milton F., administrator. (See Cheshire, Carey A.)
Cheshire, Thomas A. (See Cheshire, Carey A., assignor.)
Chesnutt, John L., Kansas City, Mo. Swivel-caster. No. 1,296,764; Mar. 11; v. 260; p. 250.
Chevalier, Gabriel P. (See Blott-Garnier and Chevalier.)
Chiaraviglio, Dino, Rome, Italy. Firearm. No. 1,297,798; Mar. 18; v. 260; p. 504.
Chicago Car Seal Company. (See Rogers, Harry R., assignor.)
Chicago-Cleveland Car Roofing Company. (See Hamilton, Karl M., assignor.)
Chick, Martines, San Diego, Calif. Automatic spot-light apparatus. No. 1,297,543; Mar. 18; v. 260; p. 449.
Chrisman, Herbert H., and F. W. Adsit, Minneapolis, Minn., said Adsit assignor to said Chrisman. Combination-lock for automobiles. No. 1, 298,177; Mar. 25; v. 260; p. 610.
Christensen, Eben R., Chicago, Ill. Wrapper. No. 1,296,765; Mar. 11; v. 260; p. 250.
Christensen Machine Company. (See Christensen, Martin, assignor.)
Christensen, Martin, assignor to Christensen Machine Company, Racine, Wis. Conveyer for book-stitching machines. No. 1,296,047; Mar. 4; v. 260; p. 53.
Christensen, Martin, assignor to Christensen Machine Company, Racine, Wis. Conveyer for book-stitching machines. No. 1,297,322; Mar. 18; v. 260; p. 403.
Christensen, Martin, assignor to Christensen Machine Company, Racine, Wis. Signature-handling device. No. 1,297,444; Mar. 18; v. 260; p. 428.
Christiani, Emile F., Washington, D. C. Valve-gear. No. 1,298,008; Mar. 25; v. 260; p. 574.
Christie, Walter, Weehawken, N. J. Motor-driven gun-carriage. No. 1,297,445; Mar. 18; v. 260; p. 428.
Christmas Club. (See Rawll, Herbert F., assignor.)
Chubb, Lewis W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,295,853; Mar. 4; v. 260; p. 8.
Churchill, Grant W., Sacramento, Calif. Fluid-pressure transmission mechanism. No. 1,298,178; Mar. 25; v. 260; p. 610.
Chvojka, Joseph, Philadelphia, Pa. Vehicle-fender. No. 1,297,544; Mar. 18; v. 260; p. 449.
Clapham, Thomas H., Pittsburg, Kans. Valve. No. 1,296,480; Mar. 4; v. 260; p. 148.
Clark, Arthur J., Traverse City, Mich. Hose-coupling. No. 1,296,481; Mar. 4; v. 260; p. 148.
Clark, Carlos N., South Orange, N. J. Sweat-band sticker, marker, and finisher. No. 1,296,766; Mar. 11; v. 260; p. 251.
Clark Gate Co. (See Clark, James R., assignor.)
Clark, Hervey D., Decatur, Ill. Attachment for headwear. No. 1,296,366; Mar. 4; v. 260; p. 124.
Clark, James R., assignor to Clark Gate Co., Lexington, Ky. Gate. No. 1,297,099; Mar. 11; v. 260; p. 326.
Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Governor for air-motors. No. 1,298,291; Mar. 25; v. 260; p. 635.
Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Exhaust device for air-motor-operated player-pianos. No. 1,298,292; Mar. 25; v. 260; p. 635.
Clark, Robert C., Winnipeg, Manitoba, Canada. Roofing-clip. No. 1,297,323; Mar. 18; v. 260; p. 404.
Clark, Thomas E., Detroit, Mich., and M. H. Hovey, Madison, Wis., assignors to H. W. Beggs, Vincennes, Ind. Electric contact device for railway-vehicles. No. 1,297,324; Mar. 18; v. 260; p. 404.
Clark, Vincent W., Douglas, Ariz. Case for funnels. No. 1,296,624; Mar. 11; v. 260; p. 217.
Claus, Emil L., Milwaukee, Wis. Gas-cock. No. 1,296,625; Mar. 11; v. 260; p. 217.
Clausen, Henry P. (See McQuarrie and Clausen.)
Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,297,100; Mar. 11; v. 260; p. 326.

Clausen, Henry P., Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone system. No. 1,296,298; Mar. 25; v. 260; p. 635

Claussen, Walter E., Hartford, Conn. Receptacle. No. 1,296,923; Mar. 11; v. 260; p. 287.

Clemenger, Harry G. (See Frick and Clemenger.)

Cleveland Folding Machine Company, The. (See Kimball, Robert E., assignor.)

Cleveland, Isaac B., Brooklyn, N. Y. Clothes-pin. No. 1,298,460; Mar. 25; v. 260; p. 670.

Clouse, William L., assignor to The National Machinery Co., Tiffin, Ohio. Heading-slide for forging-machines. No. 1,297,101; Mar. 11; v. 260; p. 326.

Clulee, Stephen J., Attleboro, Mass. Bridge for eyeglasses and spectacles. No. 1,298,294; Mar. 25; v. 260; p. 635.

Clyncke, Dezern, Boulder, Colo. Grain-drill. No. 1,298,009; Mar. 25; v. 260; p. 574.

Coackley, William, Pendleton, Manchester, England. Fitting for use in glazing roof and like structures. No. 1,296,924; Mar. 11; v. 260; p. 287.

Coatalen, Louis, and H. C. M. Stevens, Wolverhampton, England. Gearing for internal-combustion engines. No. 1,298,461; Mar. 25; v. 260; p. 670.

Cochran, Alfred, Brooklyn, assignor of one-half to T. Cochran, New York, N. Y. Process and apparatus for cracking and distilling hydrocarbons. No. 1,296,367; Mar. 4; v. 260; p. 124.

Cochran, Thomas. (See Cochran, Alfred, assignor.)

Cockrane, Samuel B. (See Voltz, Charles, assignor.)

Codd, Mortimer A., Lambeth, England. Ignition device for internal-combustion engines. No. 1,297,102; Mar. 11; v. 260; p. 326.

Coggins, Jacob H., Talladega, Ala. Incandescent electric lamp. No. 1,298,179; Mar. 25; v. 260; p. 610.

Cohen, Jacob J. (See Arenson, Abe, assignor.)

Cohen, Mitchell, Chicago, Ill., assignor to De Leon Bandeau Company, St. Louis, Mo. Hatband. No. 1,297,103; Mar. 11; v. 260; p. 327.

Cohen, Oscar, New York, N. Y. Cuspidor-cleaner. No. 1,298,295; Mar. 25; v. 260; p. 635.

Cohn, Ovadio, assignor to Bijou Button Co., Inc., New York, N. Y. Machine for making celluloid buttons. No. 1,296,767; Mar. 11; v. 260; p. 251.

Coin Controlled Lock Company. (See King, Roy D., assignor.)

Coin Machine Manufacturing Company. (See Potter, Thomas I., assignor.)

Coke, George M., assignor to The Fuller-Warren Co., Milwaukee, Wis. Cooking-range. No. 1,296,626; Mar. 11; v. 260; p. 218.

Cole, David. (See Easton and Cole.)

Colahan, Charles, Stockton, Cal. Tractor-engine. No. 1,297,104; Mar. 11; v. 260; p. 327.

Coleman, Stephen L. C., assignor of forty-nine one-hundredths to C. W. Whelpley, Fredericton, New Brunswick, Canada. Vehicle suspension. No. 1,297,325; Mar. 18; v. 260; p. 404.

Coleman, Walter R., assignor of one-half to A. E. Alberter, Omaha, Nebr. Combined folding square and level. No. 1,298,010; Mar. 25; v. 260; p. 575.

Collier, David B. (See Peterson and Collier.)

Collier Keyworth Company. (See Peterson and Collier, assignors.)

Collins, Frank F., Danville, Ill. Valve. No. 1,297,446; Mar. 18; v. 260; p. 428.

Collins, George A., assignor of one-half to S. G. Marshuta, Los Angeles, Calif. Lens and producing same. No. 1,297,660; Mar. 18; v. 260; p. 473.

Collins, James H., Harrisburg, Pa. Radiator. No. 1,297,447; Mar. 18; v. 260; p. 429.

Collins, Thomas J., and R. B. Jordan, Brownwood, Tex. Tire-carrier. No. 1,296,768; Mar. 11; v. 260; p. 251.

Collins, Ulysses L., Encanto, Cal. Electric clock. No. 1,296,048; Mar. 4; v. 260; p. 53.

Columbian Hardware Company, The. (See Yost, Gilmore M., assignor.)

Colwell, Robert C., Beaver Falls, Pa. Camera. No. 1,298,296; Mar. 25; v. 260; p. 636.

Combination Police Club and Extension Pistol Barrel Corporation. (See Moor, Edward N., assignor.)

Commercial Electrolytic Corporation. (See Laughlin, Robert, assignor.)

Conant, Leon B., Cambridge, Mass. Heel. No. 1,298,011; Mar. 25; v. 260; p. 575.

Congoleum Company, The. (See Prifold, George, assignor.)

Conkling, Samuel G. (See Schaffert and Conkling.)

Conn, Byron O. (See Root, Charles F., assignor.)

Connecticut Dynamo and Motor Company. (See Flynn, John J., assignor.)

Connecting Link Company, The. (See Keator, Charles D., assignor.)

Connelly, James H., East Boston, Mass. Flagpole-supporting device. No. 1,296,049; Mar. 4; v. 260; p. 53.

Connely, Charles B., Scotia, N. Y., assignor to General Electric Company. Electric-railway control system. No. 1,298,462; Mar. 25; v. 260; p. 670.

Conner, Lawrence E., Jackson, Mich. Transmission mechanism for automobiles. No. 1,297,105; Mar. 11; v. 260; p. 327.

Conrad, Frank, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Side lamp for automobiles. No. 1,296,482; Mar. 4; v. 260; p. 148.

Conrad, Frank, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gear-shifting mechanism. No. 1,296,483; Mar. 4; v. 260; p. 148.

Converse Rubber Shoe Company. (See Paterson, Morton L., assignor.)

Conway, George W., Newark, N. J. Resilient wheel. No. 1,296,925; Mar. 11; v. 260; p. 287.

Cook, Charles F., Houston Heights, Tex. Cooking-stove. No. 1,297,545; Mar. 18; v. 260; p. 449.

Cook, David S., Salt Lake City, Utah. Agricultural implement. No. 1,297,546; Mar. 18; v. 260; p. 449.

Cook, Stanley S. (See Parsons, Cook, and Douglas.)

Cook, Stanley S. (See Parsons, Cook, and Walker.)

Cook, Wallace A., assignor to Greenfield Tap and Die Corporation, Greenfield, Mass. Bottoming-tap. No. 1,296,627; Mar. 11; v. 260; p. 218.

Cook, William E., New York, N. Y., assignor to Insulation Development Corporation. Insulated wire. No. 1,298,297; Mar. 25; v. 260; p. 636.

Cooke, Richard T., Indianapolis, Ind. Power-transmitting mechanism. No. 1,296,769; Mar. 11; v. 260; p. 251.

Cooney, Michael J., Forbestown, Cal. Stabilizing foundation. No. 1,296,628; Mar. 11; v. 260; p. 218.

Cooper, Alexander J., *et al.*, executors. (See Barratt, William T., assignor.)

Cooper, Annie, *et al.*, executors. (See Barratt, William T., assignor.)

Cooper, George J., Havre, Mont. Internal-combustion engine. No. 1,296,368; Mar. 4; v. 260; p. 125.

Cooper, William, Syracuse, N. Y. Handle for shovels and the like. No. 1,297,661; Mar. 18; v. 260; p. 473.

Copeland, Ridley, Wallsend, England. Marine-engine stop and control valve. No. 1,298,298; Mar. 25; v. 260; p. 636.

Copley, Almon W., Wilkinsburg, and C. L. Fortescue, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company. Distributing system for electric railways. No. 1,295,854; Mar. 4; v. 260; p. 8.

Coppins, Scott R., Princeton, Ill. Roller-bearing. No. 1,295,855; Mar. 4; v. 260; p. 8.

Corder, Waitman D., Philippi, W. Va. Elastic connection for garment-supporters. No. 1,297,106; Mar. 11; v. 260; p. 327.

Cordill, Emery H., Iantha, Mo. Shock-absorber. No. 1,297,799; Mar. 18; v. 260; p. 504.

Corl, Robert M., and H. F. Hagemeyer, assignors, by mesne assignments, to J. N. Willys, Toledo, Ohio. Glass-rod machine and process. No. 1,298,463; Mar. 25; v. 260; p. 670.

Cornelison, Floyd, Hague, N. D. Transmission mechanism. No. 1,296,629; Mar. 11; v. 260; p. 218.

Corson, Floyd W., Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Generator-testing apparatus. No. 1,296,164; Mar. 4; v. 260; p. 80.

Cossman, Joseph H., Perth Amboy, N. J., assignor to The Optical Appliance Corporation, New York, N. Y. Lens-chuck. No. 1,296,050; Mar. 4; v. 260; p. 53.

Costuma, Jacob A., New York, N. Y. Screw or like article. No. 1,296,165; Mar. 4; v. 260; p. 81.

Couch, Buel. (See Kneedler, John D., assignor.)

Couture, Adelard, Arctic, R. I. Rotary oil-burner. No. 1,295,856; Mar. 4; v. 260; p. 9.

Coventry Ordnance Works, The. (See Mansell, John H., assignor.)

Coventry Ordnance Works, The. (See Redpath and Hellberg, assignors.)

Cox, John W., assignor of one-fourth to G. R. Metcalf and one-fourth to E. E. Walker, Erie, Pa. Apparatus for producing comminuted material. No. 1,296,926; Mar. 11; v. 260; p. 287.

Cox, John W., assignor of one-fourth to G. R. Metcalf and one-fourth to E. E. Walker, Erie, Pa. Steering mechanism for trucks. No. 1,296,927; Mar. 11; v. 260; p. 288.

Craft, Augustus P., Galena, Ill. Treating zinc ores. No. 1,295,857; Mar. 4; v. 260; p. 9.

Craig, Allietta A., *et al.* (See Patrick, Charles E., assignor.)

Craig, John J., Carnegie, Pa. Kite-string holder. No. 1,296,268; Mar. 4; v. 260; p. 103.

Craig, Thomas P., *et al.* (See Patrick, Charles E., assignor.)

Crane, Raymond E., Wilmette, Ill. Water-closet flush-tank. No. 1,298,012; Mar. 25; v. 260; p. 575.

Craney, Thomas, Bay City, Mich. Grate. No. 1,297,293; Mar. 11; v. 260; p. 367.

Cranford, Henry L., Washington, D. C. Baby-walker. No. 1,297,800; Mar. 18; v. 260; p. 504.

Crason, George C., San Francisco, Cal. Treating ores and metals in reverberatory furnaces. No. 1,296,478; Mar. 4; v. 260; p. 147.

Crate, Walter W., Camden, N. J. Mold for making artificial teeth. No. 1,297,448; Mar. 18; v. 260; p. 429.

Crawford, Gustavus C., East Orange, N. J., and G. H. Stevenson, Mount Vernon, assignors to Western Electric Company, Incorporated, New York, N. Y. Generating system. No. 1,296,269; Mar. 4; v. 260; p. 103.

Creasy, Reuben B., Ballinger, Tex. Saw-filing machine. No. 1,297,547; Mar. 18; v. 260; p. 449.

Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric switch. No. 1,298,464; Mar. 25; v. 260; p. 670.

Criqueboeuf, Gaston. (See Camus, Duchemin, and Criqueboeuf.)

Cross, Arthur N., Philadelphia, Pa. Artificial tooth. No. 1,296,928; Mar. 11; v. 260; p. 288.

Crouse-Hinds Company. (See Olley, Edwin A., assignor.)

Crouse, Samuel W. (See Gillar and Crouse.)

Crow, Clarence E., Chesapeake, Ohio. Washing-machine. No. 1,297,107; Mar. 11; v. 260; p. 328.

Crowder, Raymond, Edgewood, assignor to Guarantee Liquid Measure Company, Rochester, Pa. Controlling mechanism for liquid-dispensing apparatus. No. 1,297,801; Mar. 18; v. 260; p. 504.

Crowe, John, St. Joseph, Mo. Machine for measuring and winding wall-paper in commercial rolls. No. 1,298,013; Mar. 25; v. 260; p. 575.

Crucible Steel Company of America. (See Shonnard, Harold W., assignor.)

Culbertson, Warren W. (See O'Connor and Culbertson.)

Culver, James C. (See Jones and Culver.)

Cumberland Glass Mfg. Co., The. (See Shoemaker, Isaac L., assignor.)

Cumbler, Melvin B., Harrisburg, Pa. Aeroplane. No. 1,295,970; Mar. 4; v. 260; p. 35.

Cunningham, John J., Manchester, N. H. Leather-cutting machine. No. 1,297,108; Mar. 11; v. 260; p. 328.

Cunningham, Charles W., Decatur, Ill. Electric brake for autos. No. 1,297,109; Mar. 11; v. 260; p. 328.

Currie, Emerson, Palo Alto, assignor of one-half to W. C. Hones, Los Angeles, Calif. Carbureter attachment. No. 1,297,662; Mar. 18; v. 260; p. 473.

Curtin, E. S. (See Moran, Thomas W., assignor.)

Curtis, Almon W., Cortland, N. Y. One-man top. No. 1,298,014; Mar. 25; v. 260; p. 576.

Curtis, Frank C., Troy, N. Y. Machine for making spiral fly-traps. No. 1,298,180; Mar. 25; v. 260; p. 610.

Curtis, George A., Medford, Mass. Wire nail. No. 1,298,015; Mar. 25; v. 260; p. 576.

Curtis, Harry D., Red Bank, N. J. Fitting-band for hats, &c. No. 1,296,051; Mar. 4; v. 260; p. 54.

Curtiss Aeroplane and Motor Corporation. (See Curtiss, Glenn H., assignor.)

Curtiss Aeroplane and Motor Corporation. (See Dalton, Nelson W., assignor.)

Curtiss Aeroplane and Motor Corporation. (See Gilmore and Valk, assignors.)

Curtiss Aeroplane and Motor Corporation. (See Kleckler, Henry, assignor.)

Curtiss Aeroplane and Motor Corporation. (See Tarbox, John P., assignor.)

Curtiss Aeroplane and Motor Corporation. (See Zimmermann, Paul G., assignor.)

Curtiss Aeroplane and Motor Corporation. (See Zimmermann and Kleckler, assignors.)

Curtiss, Glenn H., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Hydroaircraft. No. 1,296,630; Mar. 11; v. 260; p. 218.

Curtiss, Glenn H., Garden City, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Airplane landing gear. No. 1,296,770; Mar. 11; v. 260; p. 251.

Cushman, Sarah W., Norwich, N. Y. Garment-button. No. 1,298,016; Mar. 25; v. 260; p. 576.

Cutler-Hammer Mfg. Co., The. (See Tower and Van Nest, assignors.)

Cutler-Hammer Mfg. Co., The. (See Zimmer, Paul H., assignor.)

Cutler, William C., North Glendale, Cal. Card-case. No. 1,296,484; Mar. 4; v. 260; p. 149.

Cypert, Joseph A., Kansas City, Mo. Heat-shield for automobiles. No. 1,295,858; Mar. 4; v. 260; p. 9.

Czechowicz, Jakób, Terre Haute, Ind. Self-propelling invalid chair. No. 1,297,449; Mar. 18; v. 260; p. 429.

D. H. Burrell & Company. (See Dalzell, Charles B., assignor.)

D & W Fuse Company. (See Downes, Louis W., assignor.)

D'Angelillo, Pellegrino, New York, N. Y. Milk-bottle holder. No. 1,296,369; Mar. 4; v. 260; p. 125.

D'Humy, Fernand E., Englewood, N. J. Garage. No. 1,298,183; Mar. 25; v. 260; p. 611.

Dady, Joseph A., Kellogg, Minn. Gopher-poisoner. No. 1,296,771; Mar. 11; v. 260; p. 251.

Daggett, Frederick K. (See Cheney, Charles C., assignor.)

Dahl, Lars J., and A. E. Allen, Alpha, Minn. Electric and thermostatic indicator and alarm. No. 1,297,326; Mar. 18; v. 260; p. 404.

Dailey, Clarence L., Jeffersonville, Ind. Feed-box. No. 1,296,772; Mar. 11; v. 260; p. 252.

Dain, Joseph, assignor to Deere and Company, Moline, Ill. Tractor-wheel. No. 1,298,017; Mar. 25; v. 260; p. 576.

Dakin, Edward W., and E. E. Underwood, assignors to Eastman Kodak Company, Rochester, N. Y. Shutter-operating device. No. 1,297,327; Mar. 18; v. 260; p. 404.

Dale, John H., New York, N. Y., assignor to Dale Lighting Fixture Co., Inc. Electric incandescent lamp. No. 1,298,299; Mar. 25; v. 260; p. 636.

Dale Lighting Fixture Co. (See Dale, John H., assignor.)

Dalton, Nelson W., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Convertible control system. No. 1,296,773; Mar. 11; v. 260; p. 252.

Dalton, Nelson W., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Magneto-cut-off switch. No. 1,296,774; Mar. 11; v. 260; p. 252.

Dalton, Nelson W., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Aerofoil construction. No. 1,296,775; Mar. 11; v. 260; p. 252.

Dalzell, Charles B., assignor to D. H. Burrell & Company, Little Falls, N. Y. Milking-machine. No. 1,296,166; Mar. 4; v. 260; p. 81.

Dalzell, Charles B., assignor to D. H. Burrell & Company, Little Falls, N. Y. Milking-machine. No. 1,296,167; Mar. 4; v. 260; p. 81.

Dalziel, Harvey, London, England. Insuring the accurate registration of the plates for multicolor printing. No. 1,296,929; Mar. 11; v. 260; p. 288.

Dambrowski, Stanislaw, Central Falls, R. I. Rail-tie. No. 1,295,859; Mar. 4; v. 260; p. 10.

Dambruch, William H., Milwaukee, Wis. Turning cake-stand. No. 1,297,802; Mar. 18; v. 260; p. 505.

Dana Manufacturing Corporation. (See Bluhm, Joseph, assignor.)

Dana, William M., and C. C. Palmer, Minneapolis, Minn.; said Palmer assignor to said Dana. Fire-alarm. No. 1,296,270; Mar. 4; v. 260; p. 104.

Daniels, John K., St. Paul, Minn. Foot-scraper. No. 1,298,300; Mar. 25; v. 260; p. 637.

Darby, Levi L., Newark, N. J. Collapsible rack. No. 1,297,548; Mar. 18; v. 260; p. 450.

Darling, Alice O., Lebanon, N. H. Means for overcoming insomnia. No. 1,296,930; Mar. 11; v. 260; p. 288.

Darling, Willis F., Derry, N. H. Fishing-tackle device. No. 1,296,370; Mar. 4; v. 260; p. 125.

Darrah, William A. (See Bolus and Darrah.)

Darrin, Marc, Wilkinsburg, assignor to H. Koppers Company, Pittsburgh, Pa. Paint or varnish and paint or varnish ingredient. No. 1,296,776; Mar. 11; v. 260; p. 252.

Darrin, Marc, Wilkinsburg, assignor to H. Koppers Company, Pittsburgh, Pa. Resin and manufacturing the same from crude solvent naphtha. No. 1,297,328; Mar. 18; v. 260; p. 405.

David, Virgil E., Omaha, Nebr. Water-heating system. No. 1,298,301; Mar. 25; v. 260; p. 637.

Davis, Anthony E., Philadelphia, Pa. Pavement and expansion-joint therefor. No. 1,298,018; Mar. 25; v. 260; p. 576.

Davis, Bemiss N., New Orleans, La. Measuring instrument. No. 1,298,302; Mar. 25; v. 260; p. 637.

Davis, Carl R., Le Roy, Kans. Coat and article holder for theater-seats. No. 1,298,181; Mar. 25; v. 260; p. 611.

Davis, Charles H., Reynolds, N. D. Hay-press. No. 1,297,450; Mar. 18; v. 260; p. 429.

Davis, Cilvia, New York, N. Y. Sanitary toilet-paper holder and deliverer. No. 1,297,110; Mar. 11; v. 260; p. 328.

Davis, Clarence M., Cape May, N. J. Velocipede. No. 1,296,931; Mar. 11; v. 260; p. 288.

Davis, Harvey N., Cambridge, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,297,803; Mar. 18; v. 260; p. 505.

Davis, Henry J., Waynesboro, Ga. Vending-machine. No. 1,295,971; Mar. 4; v. 260; p. 35.

Davis, Herman S., Pittsburgh, Pa. Genealogical chart. No. 1,297,663; Mar. 18; v. 260; p. 474.

Davis, Hugh, assignor to Eastman Kodak Company, Rochester, N. Y. Enlarging-camera. No. 1,297,329; Mar. 18; v. 260; p. 405.

Davis, John A., Boston, Mass. Turn-table for talking-machines. No. 1,298,019; Mar. 25; v. 260; p. 576.

Davis, Luther L., Kingsville, assignor of one-half to G. L. Spivey, Corpus Christi, Tex. Journal-box. No. 1,297,111; Mar. 11; v. 260; p. 328.

Davis, Samuel R. (See Banks, Charles E., assignor.)

Davis, William I., assignor of one-half to E. A. Vogel, Little Rock, Ark. Flying-machine. No. 1,296,631; Mar. 11; v. 260; p. 218.

Davoplane Bed Company. (See Freedman, Hyman and N. M., assignors.)

Dawson, Arthur T., and G. T. Buckham, Westminster, London, England, assignors to United States Ordnance Company, Washington, D. C. Breech mechanism of ordnance. No. 1,298,020; Mar. 25; v. 260; p. 577.

Day, Ernest H. (See Ellison, August J., assignor.)

Day, John S. (See Stine, George R., assignor.)

Day, Willard L. (See Stratton, Nathaniel A., assignor.)

Daymon, George W. (See Leckey and Daymon.)

Dayton Beater & Hoist Company. (See Folsom, Clarence P., assignor.)

Dayton, James S., Cumberland, Md. Rail sawing and punching machine. No. 1,297,112; Mar. 11; v. 260; p. 328.

Dayton Metal Products Company, The. (See Midgley, Thomas, Jr., assignor.)

Dayton Metal Products Company, The. (See Mougey and Jacobs, assignors.)

De Bijll Nachenius, Henri A. J., Haarlem, Netherlands. Centrifugal pump. No. 1,296,248; Mar. 25; v. 260; p. 625.

De Bolotoff, Serge V., London, England. Means to receive strut ends in aeroplanes and other structures. No. 1,297,331; Mar. 18; v. 260; p. 405.

De Clairmont, Adolfo, Toledo, Ohio. Combined air and decarbonizing valve. No. 1,296,922; Mar. 11; v. 260; p. 286.

De Escobales, Hilarion, New York, N. Y. Labeling-machine. No. 1,297,664; Mar. 18; v. 260; p. 474.
De Guire, Georges A., Montreal, Quebec, Canada. Electromechanical motor. No. 1,296,634; Mar. 11; v. 260; p. 219.
De Guire, Georges A., Montreal, Quebec, Canada. Electromechanical motor. No. 1,296,635; Mar. 11; v. 260; p. 220.
De Guire, Georges A., Montreal, Quebec, Canada. Trip-switch. No. 1,296,636; Mar. 11; v. 260; p. 220.
De Leon Bandeau Company. (See Cohen, Mitchell, assignor.)
De Lloyd, Hudson K. (See Schoenl, Frank A., assignor.)
De Mars, Alfred A., Cleveland, Ohio. Filing and delivering apparatus for phonograph-records. No. 1,297,306; Mar. 11; v. 260; p. 370.
De Normanville, Samuel A., Ealing, and L. H. Kent, Stanmore, England. Visual weather-screen. No. 1,297,805; Mar. 18; v. 260; p. 505.
De Rochemont, Percy E. (See Fuller and De Rochemont.)
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Needle-bar mechanism. No. 1,296,633; Mar. 11; v. 260; p. 219.
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Attachment for sewing-machines. No. 1,296,632; Mar. 11; v. 260; p. 219.
De Waele, Julia, St. Louis, Mo. Folding umbrella. No. 1,297,806; Mar. 18; v. 260; p. 506.
De Witt, Dorcy O. (See Miller and De Witt.)
De Witt, Lisette W., Syracuse, N. Y. Monument. No. 1,298,182; Mar. 25; v. 260; p. 611.
De Witt, Melville L., Holliston, Mass. Toaster and warmer. No. 1,297,549; Mar. 18; v. 260; p. 450.
De Young, Ernest V., and L. Terwilliger, Crystal, Mich. Nut-lock. No. 1,298,469; Mar. 25; v. 260; p. 672.
Deadwyler, Carl M., Dayton, Ohio. Furniture-brace. No. 1,297,330; Mar. 18; v. 260; p. 405.
Dean, Homer V. (See Phillips and Dean.)
Dean, John S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Brush-holder. No. 1,295,860; Mar. 4; v. 260; p. 10.
Dean, William W., Stamford, Conn., assignor to Splitdorf Electrical Company, Newark, N. J. Generator. No. 1,298,465; Mar. 25; v. 260; p. 671.
Decatur, Burt W., Springfield, Mass. Axle-bending device. No. 1,297,804; Mar. 18; v. 260; p. 505.
Deere and Company. (See Dain, Joseph, assignor.)
Deere and Company. (See Howard, Otis W., assignor.)
Deere & Company. (See White, Charles E., assignor.)
Defiance Manufacturing Company. (See Marx, Richard, assignor.)
Degen, H., Sr., et al. (See Lamar, Alexis L., assignor.)
Deitrick, Frederick S., Cambridge, and E. C. Franzmann, Somerville, Mass.; said Franzmann assignor to said Deitrick. Safety-razor. No. 1,295,972; Mar. 4; v. 260; p. 35.
Del Fungo-Giera, Philippo L. E., Pelham, N. Y. Delay-action detonator. No. 1,298,466; Mar. 25; v. 260; p. 671.
Del Fungo-Giera, Philippo L. E., Pelham, N. Y. Chemical base-detonator. No. 1,298,467; Mar. 25; v. 260; p. 672.
Delay, Clyde L., Sandborn, Ind. Rotary harrow. No. 1,296,777; Mar. 11; v. 260; p. 252.
Delling, Erik H., Newton, Mass. Spring-shackle. No. 1,296,778; Mar. 11; v. 260; p. 253.
Deming Company, The. (See Stratton, James M., assignor.)
Dempsey, James A., New York, N. Y. Hose-coupling. No. 1,298,303; Mar. 25; v. 260; p. 637.
Denio, William L., assignor of one-half to H. H. Simms, Rochester, N. Y. Record-cleaner. No. 1,296,779; Mar. 11; v. 260; p. 253.
Deribon, Ernest, London, England. Internal-combustion engine. No. 1,298,468; Mar. 25; v. 260; p. 672.
Derr, Charles E., assignor to Packard Motor Car Company, Detroit, Mich. Gear-cutting machine. No. 1,297,332; Mar. 18; v. 260; p. 405.
Detroit Accessories Corporation. (See Strickland, Silas A., assignor.) (Reissue.)
Detroit Pressed Steel Company. (See Putnam, Alden L., assignor.)
Deutsche Gasglühlichtaktiengesellschaft (Auergesellschaft). (See Polotsky, Abraham, assignor.)
Dewey, Vradley, assignor to American Sheet & Tin Plate Company, Pittsburgh, Pa. Treating coated metals. No. 1,297,807; Mar. 18; v. 260; p. 506.
Deyo, Mark R., Bradford, Ill. Culvert. No. 1,298,021; Mar. 25; v. 260; p. 577.
Dick, Joseph, assignor to The Joseph Dick Manufacturing Company, Canton, Ohio. Fodder-cutter feed mechanism. No. 1,296,485; Mar. 4; v. 260; p. 149.
Dick, Joseph, assignor to The Joseph Dick Manufacturing Company, Canton, Ohio. Fodder-cutter feed conveyer. No. 1,296,486; Mar. 4; v. 260; p. 149.
Dick, Samuel M., assignor of one-half to F. E. Mick, Minneapolis, Minn. Evaporating apparatus. No. 1,298,470; Mar. 25; v. 260; p. 672.
Dickerson, Ernest N. (See Stewart and Dickerson.)
Dickerson, Raymond L., assignor of one-third to A. S. Jones, Spokane, Wash., and one-third to W. J. Michelet, Portland, Oreg. Motor-vehicle. No. 1,298,022; Mar. 25; v. 260; p. 577.
Dickey, Thomas F. (See Fries and Dickey.)
Dickman, Smith V., Shavertown, N. Y. Speed-changing transmission mechanism and brake. No. 1,296,371; Mar. 4; v. 260; p. 125.
Diebold, Emil, Ennetbaden, Switzerland. Braiding-machine. No. 1,296,271; Mar. 4; v. 260; p. 104.
Diehl, William E., Chicago, Ill. Safety-pocket. No. 1,296,168; Mar. 4; v. 260; p. 82.
Diers, Peter M. (See Wennerblad, Einar G., assignor.)
Dietz, Edward H., Aumsville, Oreg. Fire-escape. No. 1,296,052; Mar. 4; v. 260; p. 54.
Diffendall, Walter H., Hagerstown, Md., assignor, by mesne assignments, to The Liberty Tool Company. Stay-bolt-heading attachment for pneumatic hammers, &c. (Reissue.) No. 14,606; Mar. 11; v. 260; p. 371.
Dilley, Edward F., Henning, Ill. Concrete post. No. 1,296,053; Mar. 4; v. 260; p. 54.
Dingwall, Nelson W., and C. M. Budd, New York, N. Y. Adapter and booster casing for shells. No. 1,296,169; Mar. 4; v. 260; p. 82.
Dingwall, Nelson W., and C. M. Budd, New York, N. Y. Adapter and booster casing for shells. No. 1,296,170; Mar. 4; v. 260; p. 82.
Dingwall, Nelson W., and C. M. Budd, New York, N. Y. Adapter and booster casing for shells. No. 1,296,171; Mar. 4; v. 260; p. 82.
Dinieee, John M., South Bethlehem, Pa. Car-coupling. No. 1,297,808; Mar. 18; v. 260; p. 506.
Dinklage, August J., East Orange, N. J. Anticreeping device for rails. No. 1,298,023; Mar. 25; v. 260; p. 577.
Disbennett, Edward C. (See Sanders and Disbennett.)
Dittemore, John V. (See Brubaker, Samuel H., assignor.)
Dittrick, Robert A., Fort Myers, Fla. Level. No. 1,296,372; Mar. 4; v. 260; p. 126.
Dixon, Harold W. A. (See Dixon, Lewis M. and H. W. A.)
Dixon, Lewis M. and H. W. A., New York, N. Y. Expansible mandrel. No. 1,297,809; Mar. 18; v. 260; p. 506.
Dixon, Samuel J. (See Elks and Dixon.)
Dmitrasa, John. (See Borsecz, Peter, assignor.)
Doble, John A. (See Doble, William A., W. A., Jr., and J. A.)
Doble Laboratories. (See Doble, William A., W. A., Jr., and J. A., assignors.)
Doble, William A., Jr. (See Doble, William A., W. A., Jr., and J. A.)
Doble, William A., W. A., Jr., and J. A., assignors to Doble Laboratories, San Francisco, Calif. Steam-generator. No. 1,298,184; Mar. 25; v. 260; p. 612.
Doble, William H., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass. Hollow panel. No. 1,296,272; Mar. 4; v. 260; p. 104.
Dobson, George, Palisades, Colo. Skid for mining-machines. No. 1,298,304; Mar. 25; v. 260; p. 637.
Dobyne, Stephen A., assignor to Champion Shoe Machinery Company, St. Louis, Mo. Horn for fastener-inserting machines. No. 1,296,582; Mar. 4; v. 260; p. 171.
Dodds, Ethan I. (See Flannery and Dodds.)
Dodds, Ethan I. (See Stafford and Dodds.)
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,861; Mar. 4; v. 260; p. 10.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,862; Mar. 4; v. 260; p. 10.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,863; Mar. 4; v. 260; p. 10.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,864; Mar. 4; v. 260; p. 10.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,865; Mar. 4; v. 260; p. 11.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,866; Mar. 4; v. 260; p. 11.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,867; Mar. 4; v. 260; p. 11.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,868; Mar. 4; v. 260; p. 11.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,869; Mar. 4; v. 260; p. 11.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,870; Mar. 4; v. 260; p. 12.
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Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,872; Mar. 4; v. 260; p. 12.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,873; Mar. 4; v. 260; p. 12.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,874; Mar. 4; v. 260; p. 12.

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,306; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,307; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,308; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,309; Mar. 25; v. 260; p. 638.
Dodds, Ethan I., and C. Hyland, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,298,305; Mar. 25; v. 260; p. 638.
Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Pressure-difference-creating device. No. 1,298,471; Mar. 25; v. 260; p. 673.
Dodge, Daniel C., Boone, Iowa. Magneto-tester. No. 1,296,932; Mar. 11; v. 260; p. 288.
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Dodson, Samuel C., Baltimore, Md. Table-truck. No. 1,298,185; Mar. 25; v. 260; p. 612.
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Donald, William H., Oak Ridges, assignor of one-half to S. G. Forst, Toronto, Ontario, Canada. Classifier. No. 1,298,310; Mar. 25; v. 260; p. 638.
Doner, George W., Osceola, S. D. Incubator attachment. No. 1,297,114; Mar. 11; v. 260; p. 329.
Donner, Percy E. (See Snyder, Jacob R., assignor.)
Dorion, Michael, Rumford, Me. Window-locking device. No. 1,298,472; Mar. 25; v. 260; p. 673.
Dornan, Robert, 2d, Wayne, Pa. Journal-box-lubricating device. No. 1,298,311; Mar. 25; v. 260; p. 639.
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Dorsey, Walter A., assignor to The Bonney-Floyd Company, Columbus, Ohio. Car-mover. No. 1,295,978; Mar. 4; v. 260; p. 35.
Douchamp, Henry, assignor to Smethport Glass Co., Smethport, Pa. Glass-furnace. No. 1,298,474; Mar. 25; v. 260; p. 673.
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Douglass, Frank J., Chicago, Ill. Steam-radiator. No. 1,298,186; Mar. 25; v. 260; p. 612
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Dow, Herbert H., assignor to The Dow Chemical Company, Midland, Mich. Mechanical or structural element. No. 1,296,378; Mar. 4; v. 260; p. 126.
Downes, Louis W., assignor to D & W Fuse Company, Providence, R. I. Yarn-spinning machine and method. No. 1,298,475; Mar. 25; v. 260; p. 673.
Doyle, Ambrose S., Sharon, Mass. Mine-field puzzle. No. 1,297,451; Mar. 18; v. 260; p. 429.
Draper, Charles F., Lancaster, Pa. Cutter-sharpener. No. 1,296,054; Mar. 4; v. 260; p. 54.
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Draper Corporation. (See Rhoades, Alonzo E., assignor.)
Draver, Emil R., Richmond, Ind. Transmission mechanism for feeders connected in gangs. No. 1,296,637; Mar. 11; v. 260; p. 220.
Dreschel, George H. (See Stoll, George W., assignor.)
Drewes, Charles J., New York, N. Y. Dispensing apparatus. No. 1,296,172; Mar. 4; v. 260; p. 82.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treating waste sulfite liquors, &c. No. 1,298,476; Mar. 25; v. 260; p. 673.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treating waste sulfite liquors, &c. No. 1,298,477; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Production of acetates from waste soda liquors, &c. No. 1,298,478; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treatment of waste liquors from soda pulp processes, &c. No. 1,298,479; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Causticized ligneous acetate material and making the same. No. 1,298,480; Mar. 25; v. 260; p. 674.
Drewsen, Viggo, Brooklyn, assignor to West Virginia Pulp & Paper Company, New York, N. Y. Treatment of waste soda liquors. No. 1,298,481; Mar. 25; v. 260; p. 674.
Driver, Charles H., Racine, and A. H. Goetz, Mukwonago, assignors to J. M. Jones, Racine, Wis. Power-hacksaw. No. 1,296,933; Mar. 11; v. 260; p. 289
Droege, Oscar E., Pompton Lakes, N. J., and G. A. Robinson, New York, N. Y. Expansion socket or plug. No. 1,296,374; Mar. 4; v. 260; p. 126.
Dron, Andrew P., and G. W. Wilson, Fresno, Cal. Non-leaking bearing for revolving shafts. No. 1,295,974; Mar. 4; v. 260; p. 35.
Droulily, Eugène, Paris, France. Cutting and piling up thin aluminium sheets. No. 1,296,934; Mar. 11; v. 260; p. 289.
Du Laney, James A., Seattle, Wash. Band-saw. No. 1,296,488; Mar. 4; v. 260; p. 150.
Du Pont, Ernest, assignor to Ball Grain Explosives Company, Wilmington, Del. Manufacturing pellets of explosive material. No. 1,295,975; Mar. 4; v. 260; p. 36.
Duchemin, René. (See Camus, Duchemin, and Crique-boeuf.)
Dudley, Adolphus M., Oakmont, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of speed control for induction-motors. No. 1,296,487; Mar. 4; v. 260; p. 149.
Duerfeldt, H. G. (See Hardy, Homer L., assignor.)
Dulac, Rosetta E., San Francisco, Cal. Sanitary high-chair tray. No. 1,297,115; Mar. 11; v. 260; p. 329.
Dulaney, Henry S. (See Spencer, Charles H., assignor.)
Duncan, William M., Alton, Ill. Furnace-grate. No. 1,297,116; Mar. 11; v. 260; p. 329.
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Dunham Company, The. (See Karl, George E., assignor.)
Dunham, Ray E., assignor to The Dunham Company, Berea, Ohio. Land-roller. No. 1,298,482; Mar. 25; v. 260; p. 675.
Dunn, Charles W., New York, N. Y. Window-sash. No. 1,298,187; Mar. 25; v. 260; p. 612.
Dunn, Jerry J. (See Offutt, Dunn, and Nicholson.)
Dunn, Nellie, Escanaba, Mich. Propagation pot or can. No. 1,297,810; Mar. 18; v. 260; p. 506.
Dupler, Raymond R., Monroe, Mich. Pulverizing-plow. No. 1,297,117; Mar. 11; v. 260; p. 329.
Duplex Truck Company. (See Thomas, George J., assignor.)
Durham, Almond D., Denver, Colo. Internal-combustion engine. No. 1,297,118; Mar. 11; v. 260; p. 329.
Dusenbery, Gowen, *et al.* (See Gardner, Lee, assignor.)
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,296,489; Mar. 4; v. 260; p. 150.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,296,490; Mar. 4; v. 260; p. 150.
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Dymalkon Metals Corporation. (See Fodor, Antal, assignor.)
Dynamic Balancing Machine Company. (See Akimoff, Nicholas W., assignor.)
E. G. Staude Manufacturing Company. (See Staude, Edwin G., assignor.)
E. R. Calthrop's Aerial Patents Limited. (See Calthrop, Everard R., assignor.)
Eaglesfield, Robert D., Indianapolis, Ind. Feeding mechanism for molding-machines. No. 1,295,875; Mar. 4; v. 260; p. 13.
Earl, Charles M., Detroit, Mich. Dispensing device for carbonated beverages. No. 1,297,333; Mar. 18; v. 260; p. 405.
Earle, Elias P., Townville, S. C. Camera. No. 1,298,312; Mar. 25; v. 260; p. 639.
Earlenbaugh, Cloyd G. (See Paddison and Earlenbaugh.)
Earnshaw, Frank R., Lake Beulah, Wis. Shock-absorber. No. 1,296,375; Mar. 4; v. 260; p. 126.
Eastman Kodak Company. (See Becker, Joseph, assignor.)
Eastman Kodak Company. (See Dakin and Underwood, assignors.)
Eastman Kodak Company. (See Davis, Hugh, assignor.)
Eastman, Lewis A., Laconia, N. H. Oil-burner. No. 1,296,935; Mar. 11; v. 260; p. 289.
Easton, William B., Chicago, Ill., and D. Cole, El Paso, Tex. Frame for jaw-crushers. No. 1,298,188; Mar. 25; v. 260; p. 613.
Eaton, John, Schenectady, N. Y., assignor to General Electric Company. Motor-control system. No. 1,297,120; Mar. 11; v. 260; p. 330.
Eaton, John, Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 1,297,121; Mar. 11; v. 260; p. 330.
Ebbels, John L., New York, N. Y. Bird-cage perch. No. 1,297,811; Mar. 18; v. 260; p. 507.
Ebbs, Robert E., Huttig, Ark. Automobile-tire. No. 1,297,550; Mar. 18; v. 260; p. 450.
Ebeling, Lena E. (See Ebeling, Phillip, assignor.)
Ebeling, Phillip, assignor to Fostoria Glass Company, Moundsville, W. Va. Apparatus for the manufacture of prism-pendants. No. 1,297,122; Mar. 11; v. 260; p. 330.

Ebeling, Phillip, assignor, by mesne assignments, to L. R. Ebeling, Moundsville, W. Va. Cap for threaded glass receptacles. No. 1,298,313; Mar. 25; v. 260; p. 639.

Eberhardt, George O. (See Jerome and Eberhardt.)

Eckart, Charles F., Olaa, Hawaii. Enhancing the growth of sugar-cane. No. 1,296,173; Mar. 4; v. 260; p. 83.

Eckhardt, Walter L., Philadelphia, Pa. Needle-arm for talking-machines. No. 1,296,638; Mar. 11; v. 260; p. 220.

Eckleberry, Dorsey M., Lockwood, Saskatchewan, Canada. Disk harrow. No. 1,297,123; Mar. 11; v. 260; p. 331.

Economic Propeller Company. (See Gracey, James G., assignor.)

Eddy, John S., Los Angeles, Calif. Means for holding covers on beds and the like. No. 1,297,551; Mar. 18; v. 260; p. 450.

Edison Storage Battery Company. (See Norton, Charles W., assignor.)

Edison, Thomas A., Llewellyn Park, West Orange, N. J. Projectile. No. 1,297,294; Mar. 11; v. 260; p. 368.

Edmonds, Samuel P., Catonsville, Md. Life-buoy. No. 1,297,665; Mar. 18; v. 260; p. 474.

Edmonds, Sterling O., Eagleville, Tenn. System of automobile towage. No. 1,296,781; Mar. 11; v. 260; p. 253.

Edmunds & Jones Corporation. (See Knauff, George C., assignor.)

Edmundson, Christian, Tientsin, China. Alarm-watch. No. 1,295,876; Mar. 4; v. 260; p. 13.

Edward P. Bates Co. (See Siver, Charles W., assignor.)

Edwards, William C., Jr., Kansas City, Mo. Clip and structural member for plaster-board partition construction. No. 1,296,936; Mar. 11; v. 260; p. 289.

Egbert, George H., Evansville, Ind. Station-indicator. No. 1,295,877; Mar. 4; v. 260; p. 13.

Eggers, Julius, Wilhelmshöhe, near Cassel, assignor to Schmidt'sche Heissdampf Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Superheater for marine, fire, or smoke tube boilers. No. 1,296,055; Mar. 4; v. 260; p. 54.

Elchin, Donald V., Olney, Ill. Cigar-lighter. No. 1,296,056; Mar. 4; v. 260; p. 55.

Elchorst, Herman E., Waldorf, Minn. Heater. No. 1,297,124; Mar. 11; v. 260; p. 331.

Ekstrom, Emil. (See Benon, Moritz, assignor.)

Elder, Donald, New York, N. Y. Concrete-paving machine. No. 1,296,495; Mar. 4; v. 260; p. 151.

Elder, Leonard G., *et al.* (See Garnett, Thomas W., assignor.)

Electro Bleaching Gas Company. (See Ornstein, Georg, assignor.)

Electric Storage Battery Company, The. (See Lobdell, Wilbur S., assignor.)

Ella, Giovanni E., Westminster, London, assignor to Vickers Limited, London, England. Submarine mine. No. 1,296,273; Mar. 4; v. 260; p. 104.

Ella, Giovanni E., New York, N. Y., assignor to Vickers Limited, London, England. Submarine mine. No. 1,296,376; Mar. 4; v. 260; p. 126.

Elizondo, Fernando R., Mexico, Mexico. Automobile-jack. No. 1,297,334; Mar. 18; v. 260; p. 406.

Elks, Willie M., and S. J. Dixon, Weldon, N. C. Wood-working-machine. No. 1,297,125; Mar. 11; v. 260; p. 331.

Elles, John, Warren, Ohio. Beet-topper. No. 1,297,666; Mar. 18; v. 260; p. 475.

Ellis, Carleton, Montclair, N. J. Nickel-formate catalyzer and making same. No 1,296,496; Mar. 4; v. 260; p. 151.

Ellis, Carleton, Montclair, N. J., assignor to Hydrogenated Oil Company. Edible oil product. (Reissue.) No. 14,607; Mar. 11; v. 260; p. 371.

Ellis, Frank E., Revere, Mass. Printer's blanket. No. 1,296,782; Mar. 11; v. 260; p. 253.

Ellis, P. T., *et al.* (See Lamar, Alexis L., assignor.)

Ellison, August J., assignor of one-half to E. H. Day, Montreal, Quebec, Canada. Spirit-level. No. 1,298,024; Mar. 25; v. 260; p. 578.

Ellison, Thomas J., Terrill, Ky. Animal-trap. No. 1,297,667; Mar. 18; v. 260; p. 475.

Ellison, Thomas J., Terrill, Ky. Corn-planter. No. 1,298,483; Mar. 25; v. 260; p. 675.

Ellman, Louis, assignor to The Hagan Corporation, Pittsburgh, Pa. Conveying apparatus for disintegrated material. No. 1,296,497; Mar. 4; v. 260; p. 151.

Elmen, Gustaf W., Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Magnet-core. No. 1,297,126; Mar. 11; v. 260; p. 331.

Elmen, Gustaf W., Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Magnet-core. No. 1,297,127; Mar. 11; v. 260; p. 332.

Elmauerer, John F., Fairchild, Wis. Dirigible headlight. No. 1,298,314; Mar. 25; v. 260; p. 639.

Ellsworth, William, Parkwood, Oreg. Fish-tackle. No. 1,296,057; Mar. 4; v. 260; p. 55.

Elmer, Martin, Hastings, Mich. Frangible seal. No. 1,297,452; Mar. 18; v. 260; p. 430.

Elton, Edwin M., Atwater, Ohio. Nut-lock. No. 1,296,174; Mar. 4; v. 260; p. 83.

Emerson, Victor L., Alexandria, Va. Machine element. No. 1,297,128; Mar. 11; v. 260; p. 332.

Emerson, Victor L., Philadelphia, Pa. Producing machine elements. No. 1,297,129; Mar. 11; v. 260; p. 332.

Emery, Frederick H., Scranton, Pa. Railway-crossover. No. 1,297,812; Mar. 18; v. 260; p. 507.

Emmerson-Brantingham Company. (See Krieg, Alfred, assignor.)

Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. System of ship propulsion. No. 1,297,130; Mar. 11; v. 260; p. 332.

Emmons, Edgar B. and E. T. Johnson, Davenport, Iowa. Tie lifter and holder. No. 1,297,453; Mar. 18; v. 260; p. 430.

Ena, Maria K., Los Angeles, Calif. Bed-pan. No. 1,297,813; Mar. 18; v. 260; p. 507.

Enameled Metals Company. (See McIlroy, Peter, assignor.)

Engelbrekt, Gustaf, Superior, Wis. Heater element for heat-engine plants and expansion-fluid motors. No. 1,297,814; Mar. 18; v. 260; p. 507.

Englehart, Henry, Elmer, N. J. Pool-table. No. 1,297,815; Mar. 18; v. 260; p. 507.

Englander, Benjamin B., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Spring-mattress. No. 1,297,552; Mar. 18; v. 260; p. 451.

Englander Spring Bed Company. (See Englander, Benjamin B., assignor.)

Englander Spring Bed Company. (See Kreuzkamp, August J., assignor.)

Ennis, Tillie A., Los Angeles, Cal. Collar support and fastener. No. 1,296,783; Mar. 11; v. 260; p. 254.

Epps, Frank A., Philadelphia, Pa., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y. Apparatus for extinguishing fire. No. 1,296,937; Mar. 11; v. 260; p. 290.

Epright, Alonso W., Altoona, Pa. Railway track-scale. No. 1,296,274; Mar. 4; v. 260; p. 105.

Erickson, Andrew E., *et al.* (See Pfeifer, Frank, assignor.)

Erith, Charles, London, England. Mechanical underfeed stoker. No. 1,298,189; Mar. 25; v. 260; p. 613.

Erslev, Knud, Nijmegen, Netherlands. Manufacture of artificial milk. No. 1,297,668; Mar. 18; v. 260; p. 475.

Eskesen, Eckardt V., New York, N. Y. Mold for dummy aerial bombs. No. 1,296,639; Mar. 11; v. 260; p. 220.

Espeland, Franklin A., Oakes, N. D. Mopping-machine. No. 1,297,816; Mar. 18; v. 260; p. 507.

Esperon, J. F. (See Ostrander, Lewis F., assignor.)

Essen, Eric E., Brooklyn, N. Y. Valve-lifter. No. 1,296,784; Mar. 11; v. 260; p. 254.

Esta Company, The. (See Shawvan, Walter S., assignor.)

Estey Organ Company. (See Haskell, William E., assignor.)

Estoppey, Georges, Orange, N. J., assignor to Musa, Estoppey & Co. Inc., New York, N. Y. Sighting apparatus. No. 1,296,640; Mar. 11; v. 260; p. 221.

Estoppey, Georges, Orange, N. J., assignor to Musa, Estoppey & Co., Inc., New York. Speed-indicator. No. 1,296,641; Mar. 11; v. 260; p. 221.

Estoppey, Georges, Orange, N. J., assignor to Musa, Estoppey & Co., Inc., New York, N. Y. Sighting apparatus. No. 1,296,642; Mar. 11; v. 260; p. 221.

Etheridge, Theodore S., Grand Rapids, Mich. Book-covering machine. No. 1,297,131; Mar. 11; v. 260; p. 332.

Etter, Robert L., Pawnee City, Nebr. Stump-puller. No. 1,297,817; Mar. 18; v. 260; p. 508.

Evans, Fred C., Ithaca, N. Y. Charge-mixing device. No. 1,298,315; Mar. 25; v. 260; p. 639.

Evans Fuel Saving Company. (See Evans, Joseph P., assignor.)

Evans, Joseph P., Birmingham, Ala., assignor to Evans Fuel Saving Company. Preventing the loss of fuel in starting furnace-fires. No. 1,297,669; Mar. 18; v. 260; p. 475.

Evans, Newton, assignor of one-third to C. F. Schader and one-third to W. H. Heady, Los Angeles, Calif. Extracting copper from ores, &c. No. 1,297,670; Mar. 18; v. 260; p. 476.

Eveleth, Clarence M., River Forest, Ill. Weather-strip. No. 1,298,190; Mar. 25; v. 260; p. 613.

Everett, James A., McLouth, Kans. Protector for gas mantles and lamps. No. 1,297,335; Mar. 18; v. 260; p. 406.

Evershed, Sydney, Chiswick, London, England. Testing of insulation. No. 1,296,175; Mar. 4; v. 260; p. 83.

Evershed, Sydney, Chiswick, London, England. Testing of insulation. No. 1,296,176; Mar. 4; v. 260; p. 83.

Ewing, Harry L., Dallas, Tex. Screw-jack. No. 1,298,316; Mar. 25; v. 260; p. 640.

Excelsior Steel Furnace Company, The. (See Scherer, Albert G., assignor.)

Exhaust Heat, Light & Power Company. (See Pfeifer, Frank, assignor.)

F. B. Zieg Mfg. Company, The. (See Gould, John N., assignor.)

F. L. Schmidt Company. (See Novick, Abraham, assignor.)

Fahrenwald, Frank A., assignor to The Rhotanium Company, Cleveland, Ohio. Composition of matter for platinum substitute. No. 1,296,938; Mar. 11; v. 260; p. 290.

Fahs, John E., New York, N. Y. Inclinometer. No. 1,298,484; Mar. 25; v. 260; p. 675.

Fairbank, William G., Middletown, Conn. Pastry-cutting guide. No. 1,297,671; Mar. 18; v. 260; p. 476.

Fandrei, Fred, Sturgeon Bay, Wis. Scoop. No. 1,297,132; Mar. 11; v. 260; p. 333.
Farbwerke vorm. Meister Lucius & Brüning. (See Flaecher and Reuter, assignors.)
Farnum, William C., Winchendon, Mass. Cutter. No. 1,295,976; Mar. 4; v. 260; p. 36.
Fasey, William, Snaresbrook, England. Engine. No. 1,298,191; Mar. 25; v. 260; p. 613.
Fawkes, Wilbert C., assignor of one-half to W. R. R. Beier, one-fourth to B. Metzger, and one-fourth to A. Meyer, Portland, Oreg. Garden-sprinkler. No. 1,297,818; Mar. 18; v. 260; p. 508.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator. No. 1,296,058; Mar. 4; v. 260; p. 55.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator. No. 1,296,785; Mar. 11; v. 260; p. 254.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator. No. 1,297,454; Mar. 18; v. 260; p. 430.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator. No. 1,298,192; Mar. 25; v. 260; p. 613.
Fedders Manufacturing Company. (See Fedders, John M., assignor.)
Federal Telegraph Company. (See Fuller, Leonard F., assignor.)
Feldman, Shimon, assignor to J. M. Alvaz Societe par action pour Construction de Machines, Petrograd, Russia. Apparatus for taking off single sheets from piles. No. 1,298,485; Mar. 25; v. 260; p. 676.
Feltner, Theadie F., Boise, Idaho. Inhaler and dust-protector. No. 1,297,337; Mar. 18; v. 260; p. 406.
Fenn, William B., assignor to The Wedoit Company, Columbus, Ohio. Bill or letter sheet. No. 1,296,059; Mar. 4; v. 260; p. 56.
Ferguson, John A., Denver Colo. Sectionally-spaced hollow-wall construction. No. 1,298,025; Mar. 25; v. 260; p. 578.
Ferguson, John A., Denver, Colo. Multiple sectional hollow-wall construction. No. 1,298,026; Mar. 25; v. 260; p. 578.
Ferguson, John A., Denver, Colo. Multiple mold for tiles and forming its complementally-functioning matrix units. No. 1,298,027; Mar. 25; v. 260; p. 578.
Ferguson, Robert F., Dearborn, Mich. Lamp-bracket. No. 1,296,060; Mar. 4; v. 260; p. 56
Fermier, Victor E., Forney, Tex. Drinking-cup. No. 1,296,786; Mar. 11; v. 260; p. 254.
Ferrell, Eugene D., Wayzata, Minn. Needle-valve. No. 1,298,317; Mar. 25; v. 260; p. 640.
Ferrier, Walter, Wilmington, Del. Nose-forming machine. No. 1,297,819; Mar. 18; v. 260; p. 508.
Ferris, Walter, Milwaukee, assignor to Bucyrus Company, South Milwaukee, Wis. Detent. No. 1,296,787; Mar. 11; v. 260; p. 254.
Ferris, Warren F., Springfield, assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Building fluid-bags. No. 1,297,295; Mar. 11; v. 260; p. 368.
Fether, Simon H., Archbold, Ohio. Hot-box detector for railway-cars. No. 1,296,490; Mar. 4; v. 260; p. 152.
Field, Alvan, Aline, Okla. Draft-tongue extension. No. 1,297,553; Mar. 18; v. 260; p. 451.
Fier, Isidore, Brooklyn, N. Y., assignor to one-half to H. Fire, Paterson, N. J. Window-lock and alarm. No. 1,297,672; Mar. 18; v. 260; p. 476.
Fife, Harry B. (See Wells and Fife.)
Filkins, Charles D., Schenectady, N. Y., assignor to General Electric Company. Clamp, binding-post, or the like. No. 1,297,133; Mar. 11; v. 260; p. 333.
Filmer, George R., Moose Jaw, Saskatchewan, Canada. Demountable wheel-rim. No. 1,297,338; Mar. 18; v. 260; p. 406.
Fimiani, Giovanni, Cleveland, Ohio. Shield. No. 1,297,455; Mar. 18; v. 260; p. 430.
Finance & Trading Corporation of New York. (See Fry, Walter L., assignor.)
Finberg, David H., St. Louis, Mo. Shoe-heel. No. 1,296,939; Mar. 11; v. 260; p. 290.
Finkelstein, Alexander, Chicago, Ill. Dumping-truck. No. 1,298,028; Mar. 25; v. 260; p. 578.
Finley, Charles W., Battle Creek, Mich. Electrical connector. No. 1,296,061; Mar. 4; v. 260; p. 56
Finley, Max S., Indianapolis, Ind. Vehicle-top. No. 1,296,062; Mar. 4; v. 260; p. 56.
Finstad, Christian M., Brooklyn, N. Y. Compasses. No. 1,296,377; Mar. 4; v. 260; p. 127
Fire, Hiram. (See Fier, Isidore, assignor.)
Firma, Adolphe Sanrer. (See Wyss, Walter, assignor.)
Firth, William C., East Cleveland, Ohio. Holding device. No. 1,296,275; Mar. 4; v. 260; p. 105
Fischer, Moritz B., Chicago, Ill. Circuit-closer for signals for automobiles. No. 1,296,276; Mar. 4; v. 260; p. 105.
Fischer, Peter, et al. (See Lamar, Alexis L., assignor.)
Fischer, William G., Cincinnati, Ohio. Flue-top. No. 1,297,134; Mar. 11; v. 260; p. 333.
Fish, Gilbert D., assignor to F. L. Stanton, New York, N. Y. Dental surveying apparatus. No. 1,296,643; Mar. 11; v. 260; p. 221.
Fisher, J. W., Jr. See Reynolds, Lynus C., assignor.)
Fisk Rubber Company, The. (See Ferris, Warren F., assignor.)
Fisk Rubber Company, The. (See Little, Thomas P., assignor.)
Fitz Power, Richard, Doveridge, England. Model artillery-range for instructional purposes. No. 1,296,426; Mar. 4; v. 260; p. 137.
Fitzgerald, Richard, Pontiac, Mich. Support. No. 1,297,820; Mar. 18; v. 260; p. 508.
Fjellman, Bengt W., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Process of and means for grinding the curved superficies of conical rollers. No. 1,298,486; Mar. 25; v. 260; p. 676.
Flaecher, Franz, and B. Reuter, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Extractive product from the hypophysis gland. No. 1,296,063; Mar. 4; v. 260; p. 57.
Flaecher, Franz, and B. Reuter, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Salts of the extractive product from the hypophysis gland. No. 1,296,064; Mar. 4; v. 260; p. 57.
Flagg, Ernest, New York, N. Y. Game. No. 1,295,878; Mar. 4; v. 260; p. 13.
Flahive, John A. (See McMurtrie, Thomas A., assignor.)
Flannery Bolt Company. (See Dodds, Ethan I., assignor.)
Flannery Bolt Company. (See Dodds and Hyland, assignors.)
Flannery Bolt Company. (See Flannery and Dodds, assignors.)
Flannery Bolt Company. (See Stafford, Benjamin E. D., assignor.)
Flannery Bolt Company. (See Stafford and Dodds, assignors.)
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,879; Mar. 4; v. 260; p. 13.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,880; Mar. 4; v. 260; p. 14.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,881; Mar. 4; v. 260; p. 14.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,882; Mar. 4; v. 260; p. 14.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,883; Mar. 4; v. 260; p. 14.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,295,884; Mar. 4; v. 260; p. 14.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,298,318; Mar. 25; v. 260; p. 640.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,319; Mar. 25; v. 260; p. 640.
Flannery, John R., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure. No. 1,298,320; Mar. 25; v. 260; p. 640.
Fleming, James R., Scranton, Pa. Car-axle box. No. 1,296,940; Mar. 11; v. 260; p. 290.
Fleming, John, Houghton, Mich. Poultry-exercising feeder. No. 1,297,821; Mar. 18; v. 260; p. 508.
Fletcher Works. (See Schaum, Otto W., assignor.)
Flexible Steel Lacing Co. (See Purple, George E., assignor.)
Flexon, Richard G., Williamstown, N. J. Crossing-signal. No. 1,297,339; Mar. 18; v. 260; p. 406.
Flower, Spenser A., London, England. Airship. No. 1,298,487; Mar. 25; v. 260; p. 676.
Flynn, John J., Irvington, N. J., assignor to Connecticut Dynamo and Motor Company. Brush-connector for electroplating-generators. No. 1,296,941; Mar. 11; v. 260; p. 291.
Foamite Firefoam Company. (See Epps, Frank A., assignor.)
Foamite Firefoam Company. (See Meigs, Charles H., assignor.)
Fodor, Antal, assignor to Dymalkon Metals Corporation, New York, N. Y. Reproducing articles in metal. No. 1,296,498; Mar. 4; v. 260; p. 152.
Foljambe, Eugene S., Drexel Hill, Pa. Wheeled-top watercraft. No. 1,296,277; Mar. 4; v. 260; p. 105.
Folsom, Clarence P., assignor to Dayton Beater & Hoist Company, Dayton, Ohio. Roll for beating-machines. No. 1,297,972; Mar. 18; v. 260; p. 541.
Foos Gas Engine Company, The. (See Schettler, Wesley W., assignor.)
Foote, John B., Oak Park, Ill. Machine for stemming fruit. No. 1,298,488; Mar. 25; v. 260; p. 676.
Forbes, Charles W., Pasadena, Cal. Direction-indicator for autovehicles. No. 1,296,065; Mar. 4; v. 260; p. 57.
Ford, Alexander H. (See Campbell and Ford.)
Ford, Hannibal C., New York, N. Y., assignor, by mesne assignments, to Ford Instrument Company, Inc. Speedometer. No. 1,297,554; Mar. 18; v. 260; p. 451.
Ford Instrument Company. (See Ford, Hannibal C., assignor.)
Ford, Otis R., Pittsburgh, Pa. Dimming device. No. 1,297,822; Mar. 18; v. 260; p. 508.
Ford, Shelley W., assignor of one-half to R. A. Sundvahl, Chicago, Ill. Trousers stretcher and hanger. No. 1,296,942; Mar. 11; v. 260; p. 291.
Ford, Silas M., St. Paul, Minn. Machine for making lath-board. No. 1,297,304; Mar. 11; v. 260; p. 370.

Forsberg, Oscar F., Yonkers, assignor to Western Electric Company, Incorporated, New York, N. Y. Terminal bank. No. 1,298,321; Mar. 25; v. 260; p. 640.

Forst, Samuel G. (See Donald, William H., assignor.)

Fortescue, Charles L. (See Copley and Fortescue.)

Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Mfnufacturing Company. Relay system. No. 1,295,885; Mar. 4; v. 260; p. 15.

Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Distributing system for electric railways. No. 1,295,886; Mar. 4; v. 260; p. 15.

Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of distribution. No. 1,295,887; Mar. 4; v. 260; p. 15.

Forthmiller, Gustave, *et al.* (See Forthmiller, Otto, assignor.)

Forthmiller, Karl, *et al.* See Forthmiller, Otto, assignor.)

Forthmiller, Otto, assignor of one-half to J. J. Maier, one-sixth to G. Forthmiller, and one-sixth to K. Forthmiller, Minneapolis, Minn. Lock-actuated circuit-breaker for ignition systems of explosive-engines. No. 1,298,322; Mar. 25; v. 260; p. 641.

Foster, Arthur B., Washington, D. C., assignor to Sulphur Syndicate, Limited, London, England. Desulfurizing metal sulfids. No. 1,296,585; Mar. 4; v. 260; p. 172.

Fostoria Glass Company. (See Ebeling, Phillip, assignor.)

Föttinger, Hermann, Zoppot, near Danzig, Germany. Steam-turbine plant for ships. No. 1,296,378; Mar. 4; v. 260; p. 127.

Fox, Austen H., New York, and A. W. Lenderoth, Stapleton, N. Y. Magnetic controlling device for railways. No. 1,298,029; Mar. 25; v. 260; p. 579.

Fox, Catherine A., Chicago, Ill. Attachment for pouches or bags. No. 1,298,193; Mar. 25; v. 260; p. 614.

Frahm, Charley, Westbrook, Minn. Grain-shock loader. No. 1,296,644; Mar. 11; v. 260; p. 221.

Franck-Phillipson, Axel F., Chicago, Ill. Removing natural enamel from the surface of ratan, &c. No. 1,296,553; Mar. 4; v. 260; p. 165.

Franke, Arthur H., Manitowoc, Wis. Making comb-cases. No. 1,298,030; Mar. 25; v. 260; p. 579.

Franklin, Charles S., London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y. Aerial for wireless signaling. No. 1,296,177; Mar. 4; v. 260; p. 84.

Franzheim, May W., Wheeling, W. Va. Kitchen-sink. No. 1,296,178; Mar. 4; v. 260; p. 84.

Franzmann, Emile C. (See Deitrick and Franzmann.)

Fraser, George, Topeka, Kans. Grease-cup. No. 1,296,943; Mar. 11; v. 260; p. 291.

Frazer, Ray, and B. J. Robertson, assignors to Lyle Corrugated Culvert Company, Minneapolis, Minn. Milling-machine. No. 1,296,066; Mar. 4; v. 260; p. 57.

Frederick, Frank A., West Hoboken, N. J. Garbage-receptacle. No. 1,297,823; Mar. 18; v. 260; p. 509.

Frederick, Theodore, Hammond, Ind. Sugar-dispensing device. No. 1,296,788; Mar. 11; v. 260; p. 254.

Freedman, Hyman and N. M., Chicago, Ill., assignors to Davoplane Bed Company. Davenport-bed structure. No. 1,296,278; Mar. 4; v. 260; p. 105.

Freedman, Nathan M. (See Freedman, Hyman and N. M.)

Freiwald, Gustav, Portland, Oreg. Curtain-stretcher. No. 1,298,323; Mar. 25; v. 260; p. 641.

Frelinghuysen, George G., Morris county, and L. A. Hawthorne, Newark, N. J., assignors to Steel Utilities, Incorporated. Cask-washing machine. No. 1,298,480; Mar. 25; v. 260; p. 677.

French Battery & Carbon Co. (See Ruhoff, Otto E., assignor.)

French, Fred W., Grandville, Mich. Demountable-wheel construction. No. 1,297,673; Mar. 18; v. 260; p. 476.

French, James W., assignor to Barr and Stroud Limited, Glasgow, Scotland. Periscope and like instrument casing. No. 1,298,632; Mar. 25; v. 260; p. 706.

Freschl, Sylvester, Keansburg, N. J. Envelop. No. 1,297,555; Mar. 18; v. 260; p. 451.

Frey, August J., assignor to Brass Goods Mfg. Co., Brooklyn, N. Y. Tube-compressor. No. 1,297,456; Mar. 18; v. 260; p. 430.

Frick, Henry N., Philadelphia, Pa. Grease-cup. No. 1,296,944; Mar. 11; v. 260; p. 291.

Frick, Joseph L., and H. G. Clemenger, Jamestown, N. Y. Traction locomotive and car. No. 1,298,194; Mar. 25; v. 260; p. 614.

Fricker, Anthony, Cleveland, Ohio. Discharge mechanism for bituminous distributers. No. 1,297,135; Mar. 11; v. 260; p. 333.

Fricker, Anthony, Cleveland, Ohio. Bituminous distributer. No. 1,297,136; Mar. 11; v. 260; p. 333.

Friebe, Fred C., Bay City, Mich. Valve-tool. No. 1,296,279; Mar. 4; v. 260; p. 105.

Friedlander, Samuel, New York, N. Y. Stretching-frame. No. 1,297,556; Mar. 18; v. 260; p. 451.

Friedrich, Gustav J., assignor of two-thirds to himself and one-third to A. Baker, trustees, New York, N. Y. Loom-shuttle. No. 1,296,845; Mar. 11; v. 260; p. 222.

Fries, Edward J., and T. F. Dickey, Toledo, Ohio. Fluid-line-pressure-regulating valve. No. 1,298,195; Mar. 25; v. 260; p. 614.

Fritze, Ewald A. (See Montague, Harold E., assignor.)

Frodsham, John, Frodsham, Cal. Rotary pump. No. 1,296,500; Mar. 4; v. 260; p. 153.

Fromhagen, Frederick, Brooklyn, N. Y. Attachable spout for vessels. No. 1,298,031; Mar. 25; v. 260; p. 579.

Fry, Walter L., Detroit, Mich., assignor, by mesne assignments, to Finance & Trading Corporation of New York. Automobile-body. No. 1,297,674; Mar. 18; v. 260; p. 476.

Fuchs, Herman, St. Louis, Mo. Valve-cap. No. 1,297,824; Mar. 18; v. 260; p. 509.

Fuhrmann, Warren, Westfield, N. J., and E. M. Squarey, Tuckahoe, assignors, by mesne assignments, to Wilkinson Brothers and Company, Incorporated, New York, N. Y. Keyboard-locking means for calculators. No. 1,296,379; Mar. 4; v. 260; p. 127.

Fuhrmann, Warren, Westfield, N. J., and E. M. Squarey, Tuckahoe, assignors, by mesne assignments, to Wilkinson Brothers and Company, Incorporated, New York, N. Y. Key-actuated keyboard releaser and lock. No. 1,296,380; Mar. 4; 260; p. 127.

Fuller, Alfred C., Hartford, Conn. Tooth-brush. No. 1,296,067; Mar. 4; v. 260; p. 57.

Fuller, Ben A., Lampasas, Tex. Combined railway level and gage. No. 1,296,381; Mar. 4; v. 260; p. 128.

Fuller Brush Company, The. (See Hines, William J., assignor.)

Fuller, Carl T., Nutley, N. J., assignor to General Electric Company. Metal-drawing die. No. 1,297,825; Mar. 18; v. 260; p. 509.

Fuller, Charles E., assignor of one-half to G. J. Hats, Omaha, Nebr. Locomotive-saddle. No. 1,297,826; Mar. 18; v. 260; p. 509.

Fuller, Elmer L., Arlington, and P. E. de Rochemont, Medford, Mass. Shock-absorber. No. 1,297,827; Mar. 18; v. 260; p. 509.

Fuller, Leonard F., assignor to Federal Telegraph Company, San Francisco, Calif. Electrical-oscillation generator. No. 1,298,490; Mar. 25; v. 260; p. 677.

Fuller, Perley H., Auburn, Me. Oil-burner. No. 1,297,137; Mar. 11; v. 260; p. 334.

Fuller-Warren Co., The. (See Coke, George M., assignor.)

Fulton Iron Works Company. (See Hurter, Henry, assignor.)

Funk, Frank M., Detroit, Mich. Stud-driver. No. 1,298,324; Mar. 25; v. 260; p. 641.

Furber, Frederick M., Revere, Mass. Tube-flanging implement. No. 1,297,457; Mar. 18; v. 260; p. 431.

Furlow, Floyd C., Montclair, assignor to Otis Elevator Company, Jersey City, N. J. Electrically-controlled elevator. No. 1,298,032; Mar. 25; v. 260; p. 579.

Fussell, George, Lockport, N. Y. Means for nitrating gun-cotton. No. 1,296,280; Mar. 4; v. 260; p. 106.

Gaddess, Harry W., Baltimore, Md., assignor of one-third to V. Kelly. Attachment for knitting-needles. No. 1,298,033; Mar. 25; v. 260; p. 579.

Gahring, Frederick A., Minneapolis, assignor to Peerless Chain Company, Winona, Minn. Tire-chain. No. 1,296,069; Mar. 4; v. 260; p. 58.

Gail, John F., assignor, by mesne assignments, to Simmons Company, Kenosha, Wis. Edge-band machine. No. 1,297,340; Mar. 18; v. 260; p. 406.

Gail, John F., assignor to Simmons Company, Kenosha, Wis. Rolling and punching mechanism. No. 1,297,341; Mar. 18; v. 260; p. 407.

Gainer, Simon, Chicago, Ill. Box-spring. No. 1,296,068; Mar. 4; v. 260; p. 58.

Gairing, Emil, assignor to The Gairing-Needham Tool Co., Inc., Detroit, Mich. Boring-tool. No. 1,298,196; Mar. 25; v. 260; p. 614.

Gairing, Emil, Detroit, Mich., assignor to The Gairing-Needham Tool Co., Inc. Plug-gage. No. 1,298,197; Mar. 25; v. 260; p. 614.

Gairing-Needham Tool Co. (See Gairing, Emil, assignor.)

Gaisler, Fred, assignor of one-half to F. Graf, Jr., St. Louis, Mo. Core-forming appliance for patterns. No. 1,296,945; Mar. 11; v. 260; p. 291.

Gallardo, Ernest V., New York, N. Y. Apparatus for controlling respiration. No. 1,296,946; Mar. 11; v. 260; p. 292.

Ganahl, Emil C. (See Gracey, James G., assignor.)

Garaca, Frank, Bessemer, Ala. Ship-protector. No. 1,298,325; Mar. 25; v. 260; p. 641.

Garber, Ira A., Towson, Md. Railway-tie. No. 1,297,828; Mar. 18; v. 260; p. 510.

Gardner, Lee, deceased, assignor of forty-five one-hundredths to J. F. Cannon, G. Dusenbery, and M. H. Caldwell, Concord, N. C.; J. F. Cannon, executor. Liquid-fuel burner. No. 1,297,138; Mar. 11; v. 260; p. 334.

Garford Manufacturing Company. (See Manson, Ray H., assignor.)

Garlick, Jew, Paterson, N. J. Self-grinding valve. No. 1,297,842; Mar. 18; v. 260; p. 407.

Garnett, Thomas W., Salina, assignor of one-third to L. G. Elder, Colwich, and one-third to F. E. Torgler, Topeka, Kans. Window-blind and lace-curtain holder. No. 1,297,139; Mar. 11; v. 260; p. 334.

Garretson, Joel H., Forsyth, Mont. Folding umbrella. No. 1,297,140; Mar. 11; v. 260; p. 334.

Garrett, Spencer M. (See Mason, Julius H., assignor.)

Gary, Shirley L., and F. B. Moss, Richmond, Va. Automatic self-locking expanding-mandrel. No. 1,296,501; Mar. 4; v. 260; p. 152.

Garvey, Christopher A., Clayton, Mo. Brush. No. 1,297,675; Mar. 18; v. 260; p. 476.

Garvey, Edward, Farmington, Minn. Predetermined-bulk liquid-dispenser. No. 1,297,458; Mar. 18; v. 260; p. 431.
Gaston, Henry F. (See Baumgartl and Gaston.)
Gathmann, Emil, Baltimore, Md. Fuse mechanism for projectiles. No. 1,296,070; Mar. 4; v. 260; p. 58.
Gathmann, Emil, Baltimore, Md. Percussion-fuse for explosive-shells. No. 1,296,281; Mar. 4; v. 260; p. 106.
Gathmann, Emil, Baltimore, Md. Apparatus for teeming ingot-molds. No. 1,298,034; Mar. 25; v. 260; p. 580.
Gathmann, Emil, Baltimore, Md. Teeming ingot-molds. No. 1,298,035; Mar. 25; v. 260; p. 580.
Gathmann, Emil, Baltimore, Md. Teeming ingot-molds. No. 1,298,036; Mar. 25; v. 260; p. 580.
Gauthier, Ernest, Chemin Gouin, Hebert Station, Quebec, Canada. Animal-trap. No. 1,296,282; Mar. 4; v. 260; p. 106.
Gelatt, Philo M., La Crosse, Wis. Gage-support. No. 1,296,071; Mar. 4; v. 260; p. 58.
Gelatt, Philo, M., La Crosse, Wis. Dial-plate construction. No. 1,297,459; Mar. 18; v. 260; p. 431.
General Automatic Scale Company, The. (See Schaper, Henry C., assignor.)
General Electric Company. (See Axtell, Clinton J., assignor.)
General Electric Company. (See Basch, David, assignor.)
General Electric Company. (See Bodde, Theodore, assignor.)
General Electric Company. (See Chadbourne and Knight, assignors.)
General Electric Company. (See Connely, Charles B., assignor.)
General Electric Company. (See Davis, Harvey N., assignor.)
General Electric Company. (See Dodge, Austin R., assignor.)
General Electric Company. (See Eaton, John, assignor.)
General Electric Company. (See Emmet, William L. R., assignor.)
General Electric Company. (See Filkins, Charles D., assignor.)
General Electric Company. (See Fuller, Carl T., assignor.)
General Electric Company. (See Guay, Emile J., assignor.)
General Electric Company. (See Hendricks, Allan B., Jr., assignor.)
General Electric Company. (See Jacobs, Ernest H., assignor.)
General Electric Company. (See Jacobs, Harry M., assignor.)
General Electric Company. (See King, William L., assignor.)
General Electric Company. (See Langmuir, Irving, assignor.)
General Electric Company. (See Le Rossignol, Robert, assignor.)
General Electric Company. (See London, William J. A., assignor.)
General Electric Company. (See London and Phillips, assignors.)
General Electric Company. (See Lorenz, Charles F., assignor.)
General Electric Company. (See Macloskie, George, assignor.)
General Electric Company. (See Mann, Arthur S., assignor.)
General Electric Company. (See Mapelsden, Harold H., assignor.)
General Electric Company. (See Lumley, Wilfrid, assignor.)
General Electric Company. (See Macloskie, George, assignor.)
General Electric Company. (See Marshall, James E., assignor.)
General Electric Company. (See Miller, Levi B., assignor.)
General Electric Company. (See Persson, Otto F., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Sharp, Clayton H., assignor.)
General Electric Company. (See Stevens, George E., assignor.)
General Electric Company. (See Taylor, John B., assignor.)
General Electric Company. (See Traver, Oliver C., assignor.)
General Electric Company. (See Ver Planck and Stock, assignors.)
General Electric Company. (See Wentworth, Arthur M., assignor.)
General Electric Company. (See White, William C., assignor.)
General Electric Company. (See Whiting, Max A., assignor.)
General Machinery & Investment Company, The. (See Miller and De Witt, assignors.)
General Railway Signal Company. (See Rekers, Gerret, assignor.)
General Research Laboratories. (See Moisant, Alfred J., assignor.)
George Cutter Company. (See Ashinger, Herman H., assignor.)
Georgelis, George H., Fort Screven, Ga. Submarine-destroyer. No. 1,296,646; Mar. 11; v. 260; p. 222.
Gerlach, George W., Cumberland, Iowa. Circuit-breaker. No. 1,297,343; Mar. 18; v. 260; p. 407.
Germeshausen, Henry B., Woodland, Cal. Scraper. No. 1,296,789; Mar. 11; v. 260; p. 255.
Gerrish, Seldon W., Greenville Junction, Me. Fruit-picker. No. 1,295,888; Mar. 4; v. 260; p. 16.
Gerwer, Joseph A., Stapleton, N. Y. Signal for vehicles. No. 1,297,829; Mar. 18; v. 260; p. 510.
Gessmann, Edmund, Union Hill, N. J. Two-colored fountain-pen. No. 1,298,326; Mar. 25; v. 260; p. 641.
Geszty, Alexander, New York, N. Y. Cigar-holder. No. 1,295,977; Mar. 4; v. 260; p. 36.
Gibbons, William J., Philadelphia, Pa. Upsetting-die. No. 1,297,141; Mar. 11; v. 260; p. 334.
Gibbons, William J., Philadelphia, Pa. Bushing-blank and making bushings. No. 1,297,142; Mar. 11; v. 260; p. 334.
Gibson, Arthur H., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Connecting-rod construction. No. 1,297,830; Mar. 18; v. 260; p. 510.
Gibson, Arthur H. C., assignor, by mesne assignments, to Gibson Mon-Auto Company, New York, N. Y. Motor-vehicle. No. 1,297,676; Mar. 18; v. 260; p. 477.
Gibson, Lewis L., Macon, Ga. Automobile-lock. No. 1,296,382; Mar. 4; v. 260; p. 128.
Gibson Mon-Auto Company. (See Gibson, Arthur H. C., assignor.)
Giddings, Albert F., Chicago, Ill. Producing illustrations and reproducing same. No. 1,295,978; Mar. 4; v. 260; p. 36.
Gilbert, Arthur, Terre Haute, Ind., assignor of one-third to H. Jemune and one-third to H. E. Boots, Greenup, Ill. Combined cigarette and match box. No. 1,297,931; Mar. 18; v. 260; p. 510.
Gilbert, Joseph M. (See Carlisle, Fred B., assignor.)
Gilbough, Benjamin G., Los Angeles, Cal. Pressure-gage for tires. No. 1,296,889; Mar. 4; v. 260; p. 16.
Gilletti, Secondo, San Francisco, Cal. Concrete-ship mold. No. 1,297,143; Mar. 11; v. 260; p. 335.
Gillar, Henry, and S. W. Crouse, South River, N. J. Cutting-off machine for taffy or the like. No. 1,296,647; Mar. 11; v. 260; p. 222.
Gillespie, Alexander P., Wilkinsburg, Pa. Staff holder and attaching device. No. 1,295,072; Mar. 4; v. 260; p. 58.
Gillinder, Edgar A., Philadelphia, Pa. Jar for preserves, &c. No. 1,296,283; Mar. 4; v. 260; p. 106.
Gillmor, Horatio G., Washington, D. C. Rail-anchor. No. 1,297,460; Mar. 18; v. 260; p. 431.
Gilman, Harry K., Washington, D. C. Guitar-pick. No. 1,296,284; Mar. 4; v. 260; p. 107.
Gilmore, James E., Prince Rupert, British Columbia, Canada. Oakum seam-caiking tool. No. 1,296,948; Mar. 11; v. 260; p. 292.
Gilmore, William L., and W. E. Valk, Jr., Buffalo, N. Y., assignors to Curtiss Aeroplane and Motor Corporation. Radiator for aeroplanes. No. 1,296,790; Mar. 11; v. 260; p. 255.
Ginsbach, Frank P., Watertown, S. D. Agricultural machine. No. 1,296,648; Mar. 11; v. 260; p. 222.
Giolitti, Federico, Turin, assignor to Società Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Heat treatment of steel. No. 1,296,649; Mar. 11; v. 260; p. 223.
Giordano, Anthony, San Antonio, Tex. Furniture. No. 1,297,144; Mar. 11; v. 260; p. 335.
Girth, Edward, Alton, Ill. Transfer-holder. No. 1,297,145; Mar. 11; v. 260; p. 335.
Githens, James V., Knoxville, Tenn. Heat-treating and forging furnace. No. 1,298,327; Mar. 25; v. 260; p. 641.
Glass, Christopher C., Bessemer, Ala. Fish-spear. No. 1,297,344; Mar. 18; v. 260; p. 407.
Gleason, John L., Boston, Mass. Continuous-contact reel. No. 1,297,146; Mar. 11; v. 260; p. 335.
Gliwski, Frank, et al. (See Krzyzanowski, Theodore R., assignor.)
Godfrey, Alfred, Middlesex, England. Cigarette-packet forming and filling machine. No. 1,298,328; Mar. 25; v. 260; p. 642.
Goedhart, Gerrit L., The Hague, Netherlands. Means for protecting vessels from mines. No. 1,296,949; Mar. 11; v. 260; p. 292.
Goehring, Frank P., Richmond, Minn. Vehicle-wheel casing and tire-protector. No. 1,296,502; Mar. 4; v. 260; p. 153.
Goehring, Phillip, Seattle, Wash. Toy. No. 1,296,179; Mar. 4; v. 260; p. 84.
Goetz, Arthur H. (See Driver and Goetz.)
Goetz, Frank C. A., Chicago, Ill. Wire-working machine. No. 1,297,461; Mar. 18; v. 260; p. 431.
Golber, Hyman. (See Goldberg, Hyman E.)
Goldberg Calculating Machine Company. (See Goldberg, Hyman E., assignor.)
Goldberg, Hyman E., (now by judicial change of name Hyman Golber,) assignor to Goldberg Calculating Machine Company, Chicago, Ill. Algebraic-total calculating-machine. No. 1,296,073; Mar. 4; v. 260; p. 59.

Goldberg, Hyman E., (now by judicial change of name Hyman Golber,) assignor to Goldberg Calculating Machine Company, Chicago, Ill. Calculating-machine. No. 1,298,198; Mar. 25; v. 260; p. 615.
Golden, Abraham H., New York, N. Y. Button. No. 1,297,345; Mar. 18; v. 260; p. 408.
Golding, Samuel H. (See Miller and Golding.)
Goldsmith, John N., Holborn, London, assignor to The British Emaillite Company, Limited, Piccadilly Circus, London, England. Cellulose ester dope or varnish. No. 1,298,199; Mar. 25; v. 260; p. 615.
Goldspink, Archibald E., Kentish Town, assignor to Chappell & Company, Limited, London, England. Pneumatic action for piano-players. No. 1,298,491; Mar. 25; v. 260; p. 677.
Golightly, William J. (See Hitchcock and Golightly.)
Gomber, George W., Conyngham, assignor to Standard Automatic Machine Company, Pittsburgh, Pa. Vending mechanism. No. 1,297,677; Mar. 18; v. 260; p. 477.
Gonsouland, Henry P., Oakland, Cal. Toilet for railway-cars. No. 1,297,147; Mar. 11; v. 260; p. 336.
Gooch, Terry J., Lewisburg, N. C. Steam-cooker. No. 1,297,832; Mar. 18; v. 260; p. 510.
Good, Ezra E., Minneapolis, Minn. Milking apparatus. No. 1,297,346; Mar. 18; v. 260; p. 408.
Goodale, Frank B., Iola, Kans. Motor-stand. No. 1,296,074; Mar. 4; v. 260; p. 59.
Goode, Edwin J., Saffron Walden, England. Motor plow and cultivator. No. 1,298,329; Mar. 25; v. 260; p. 642.
Goodrum, Charles L. (See McQuarrie and Goodrum.)
Goodrum, Charles L., assignor to Western Electric Company, Incorporated, New York, N. Y. Contact-bank. No. 1,298,330; Mar. 25; v. 260; p. 642.
Goodwin, John F. and G. W. Caulkins, Boston, Mass. Governor for controlling the supply of liquid fuel to stoves or heaters. No. 1,297,557; Mar. 18; v. 260; p. 451.
Goodyear Tire & Rubber Company, The. (See Tyler, William C., assignor.)
Gooldy, Katharine V., Fulton, Mo. Mop. No. 1,298,037; Mar. 25; v. 260; p. 580.
Gordon Electric and Manufacturing Co. (See Buchsbaum, Samuel, assignor.)
Görgey, William, assignor of one-half to J. Waculik, South Bethlehem, Pa. Snow-melting device. No. 1,298,200; Mar. 25; v. 260; p. 615.
Gorman, James C., Jr., assignor to The Barnes Manufacturing Company, Mansfield, Ohio. Diaphragm-pump. No. 1,296,503; Mar. 4; v. 260; p. 153.
Gould Coupler Company. (See Jepson, John W., assignor.)
Gould Coupler Company. (See Sauvage, William H., assignor.)
Gould, John H., Detroit, Mich., and M. E. Konigslow, Cleveland, Ohio, assignors to Pfanstiehl Company, Inc., North Chicago, Ill. Valve for internal-combustion engines and making the same. No. 1,295,979; Mar. 4; v. 260; p. 86.
Gould, John N., assignor to The F. B. Zieg Mfg. Company, Fredericktown, Ohio. Road-grader. No. 1,298,331; Mar. 25; v. 260; p. 642.
Government of the United States. (See Carpentier, Georges J. N., assignor.)
Government of the United States. (See McConnell, James W., assignor.)
Government of the United States. (See Taylor, Lyndon B., assignor.)
Govers, Francis X., New York, N. Y. Apparatus for the heat treatment of chemical compounds and method for the operation thereof. No. 1,297,833; Mar. 18; v. 260; p. 511.
Grabert, Gustave W., assignor of one-half to S. J. Miller, Mount Vernon, Ind. Grain-cleaner. No. 1,296,791; Mar. 11; v. 260; p. 255.
Grace, Gordon R., Seattle, Wash. Combined pin and disk gage. No. 1,296,950; Mar. 11; v. 260; p. 292.
Gracey, James G., assignor to Economic Propeller Company, St. Louis, Mo. Propeller and current-motor. No. 1,296,792; Mar. 11; v. 260; p. 255.
Gracey, James G., assignor of one-half to E. C. Ganahl, St. Louis, Mo. Driving-gear for vehicles. No. 1,297,148; Mar. 11; v. 260; p. 336.
Graemiger, Benjamin, assignor to Aktiengesellschaft der Maschinenfabriken Escher Wyss & Co., Zurich, Switzerland. Device for balancing shafts. No. 1,296,180; Mar. 4; v. 260; p. 84.
Graf, Fred, Jr. (See Gaisler, Fred, assignor.)
Graham, David F., Coudersport, Pa. Ball-bearing. No. 1,296,650; Mar. 11; v. 260; p. 223.
Graham, John W., Hinton, W. Va. Typographical or slug-casting machine. No. 1,298,492; Mar. 25; v. 260; p. 677.
Graham, William J., *et al.* (See Knoblock, William, assignor.)
Grand Detour Plow Company. (See Caughey, Robert C., assignor.)
Grange, *née* Borel, Emilie. (See Borel and Grange, *née* Borel.)
Grannis, Laurence R., assignor of one-half to B. F. Hall, Chicago, Ill. Appliance for bathing infants. No. 1,296,075; Mar. 4; v. 260; p. 59.
Grant, Albert C., Chicago, Ill., assignor to Grant Wire Wheel Manufacturing Company. Auto-wheel. No. 1,298,332; Mar. 25; v. 260; p. 642.
Grant Wire Wheel Manufacturing Company. (See Grant, Albert C., assignor.)
Graser, Thomas T., Syracuse, N. Y. Kettle. No. 1,297,678; Mar. 18; v. 260; p. 477.
Gravell, James H., Brooklyn, N. Y., assignor to Thomson Spot Welder Company, Boston, Mass. Securing together heavy steel plates. No. 1,296,651; Mar. 11; v. 260; p. 223.
Gray, Alanson M., Elizabeth, N. J. Chill-plate. No. 1,296,652; Mar. 11; v. 260; p. 223.
Gray, Thomas F., Peekskill, N. Y. Skeleton hull for seagoing vessels. No. 1,297,558; Mar. 18; v. 260; p. 452.
Grebe, Albert, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Draw-in periscope. No. 1,298,333; Mar. 25; v. 260; p. 642.
Green, Frederick M., assignor to Siddeley-Deasy Motor Car Company Limited, Parkside, Coventry, England. Landing-chassis. No. 1,298,038; Mar. 25; v. 260; p. 580.
Green, Laura I. (See Thompson, Mary E., assignor.)
Greene, Albert E., Seattle, Wash. Electric furnace. No. 1,297,149; Mar. 11; v. 260; p. 336.
Greene, James G., and L. F. A. Buchner, deceased, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Buttonhole-sewing machine. (Reissue.) No. 14,608; Mar. 11; v. 260; p. 371.
Greenfield, Albert, Chicago, Ill. Billiard-cue. No. 1,296,285; Mar. 4; v. 260; p. 107.
Greenfield, Samuel S., Fairport, N. Y. Fluid transmission mechanism. No. 1,297,347; Mar. 18; v. 260; p. 408.
Greenfield Tap and Die Corporation. (See Cook, Wallace A., assignor.)
Greenleaf, Robert P., assignor to F. Billings, Cleveland, Ohio. Loading-machine. No. 1,297,150; Mar. 11; v. 260; p. 336.
Gregg Company, The. (See Gregg, Louis D., assignor.)
Gregg, George A., *et al.* (See Simms, Joseph A., assignor.)
Gregg, James H., *et al.* (See Simms, Joseph A., assignor.)
Gregg, Louis D., assignor to The Gregg Company, Limited, Hackensack, N. J. Dump-car. No. 1,298,039; Mar. 25; v. 260; p. 581.
Grey, Charles R., Billings, Mont. Trash-separator for beets and beet-tailings. No. 1,296,383; Mar. 4; v. 260; p. 128.
Grice, Letcher O. (See Hale, Augustus S., assignor.)
Griffin, Lilyan A., Chicago, Ill. Eye-shade and eye-protector. No. 1,295,980; Mar. 4; v. 260; p. 37.
Griffin, William W., Atlanta, Ga. Building-block. No. 1,297,151; Mar. 11; v. 260; p. 337.
Grigg, William S., Port Huron, Mich. Lubricant-retainer. No. 1,296,181; Mar. 4; v. 260; p. 84.
Grimshaw, William, Glenellyn, Ill. Fire-extinguisher. No. 1,297,559; Mar. 18; v. 260; p. 452.
Grip Nut Company. (See Sharp, William E., assignor.)
Griswold, George L., Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Container for electrical apparatus. No. 1,296,653; Mar. 11; v. 260; p. 223.
Groenenstein, Arnold G., Elyria, Ohio. Terminal clip for electric wires. No. 1,297,560; Mar. 18; v. 260; p. 452.
Grosjean, James E., Lima, assignor of one-fourth to L. F. Montgomery, Fort Recovery, and one-fourth to F. L. Maire, Lima, Ohio. Sole for boots and shoes. No. 1,297,834; Mar. 18; v. 260; p. 511.
Grossmann, Jacob, Manchester, England. Utilisation of niter cake. No. 1,298,334; Mar. 25; v. 260; p. 643.
Groves, Charles M., Hudson, Wyo. Brick or tile apparatus. No. 1,296,793; Mar. 11; v. 260; p. 256.
Grubb, Orin A., Wichita Falls, Tex. Power-transmitting mechanism. No. 1,296,654; Mar. 11; v. 260; p. 224.
Grush, Elmer B., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Last. No. 1,295,890; Mar. 4; v. 260; p. 16.
Guarantee Liquid Measure Company. (See Crowder, Raymond, assignor.)
Guarantee Liquid Measure Company. (See MacKenzie, George W., Jr., assignor.)
Guay, Emile J., Lynn, Mass., assignor to General Electric Company. Gear-wheel. No. 1,297,835; Mar. 18; v. 260; p. 511.
Gudgell, Lycurgus, assignor to The Gudgell's Rubber Hub Company, Rock Island, Ill. Resilient wheel. No. 1,298,493; Mar. 25; v. 260; p. 678.
Gudgell's Rubber Hub Company, The. (See Gudgell, Lycurgus, assignor.)
Gulick, David E., San Francisco, Calif. Flushing-valve. No. 1,297,836; Mar. 18; v. 260; p. 511.
Gumm, Joseph R. (See Wood, Lorena M., assignor.)
Gund Manufacturing Company, The. (See Pieper, Chester R., assignor.)
Gunderson, Harley J., *et al.* (See Shields, Nelson, assignor.)
Gunn, Charles H., Sacramento, Calif. Lining for friction-surfaces. No. 1,298,335; Mar. 25; v. 260; p. 643.
Guntner, Frank G., White Plains, assignor to Samuel G. Supplee & Co., New York, N. Y. Attaching means for dentures. No. 1,297,561; Mar. 18; v. 260; p. 452.

Gunton, Fred L., assignor of one-half to F. M. Stevens, Elyria, Ohio. Window-controlling apparatus. No. 1,298,336; Mar. 25; v. 260; p. 643.
Gurney, Erving R., assignor to Knox Motors Company, Springfield, Mass. Tractor-trailer construction. No. 1,296,655; Mar. 11; v. 260; p. 224.
Guyton, Tom, *et al.* (See Pecher, Daniel, assignor.)
Gwinn, Joseph M., Jr., New Orleans, La. Ground-speed indicator. No. 1,298,494; Mar. 25; v. 260; p. 678.
Györi, Janos, Reed, Pa. Automatic railway-switch. No. 1,297,837; Mar. 18; v. 260; p. 511.
H. Brinton Company. (See Ames, Elmer U., assignor.)
H. A. H. Tractors Limited. (See Hatfield, Hubert A., assignor.)
H. C. Fry Glass Company. (See Nicols, Lowell W., assignor.)
H. Koppers Company. (See Darrin, Marc, assignor.)
H. W. Johns-Manville Company. (See Carson, Clarence, assignor.)
Hacker, Max, Brooklyn, N. Y. Tool-holder. No. 1,298,201; Mar. 25; v. 260; p. 615.
Hackney, Fay S., Topeka, Kans. Insulated or non-conducting container. No. 1,297,152; Mar. 11; v. 260; p. 337.
Hadaway, John B., Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Channel-closing machine. No. 1,295,891; Mar. 4; v. 260; p. 16.
Hadcock, Albert G., assignor to Sir W. G. Armstrong, Whitworth and Company, Limited, Newcastle-upon-Tyne, England. Shield for use with gun-carriages. No. 1,298,040; Mar. 25; v. 260; p. 581.
Haeseler, Charles H., Philadelphia, Pa. Pneumatic tool. No. 1,297,679; Mar. 18; v. 260; p. 477.
Hagan, Calvin H., assignor to C. F. Whittlesey, Seattle, Wash. Fireplace-furnace. No. 1,298,495; Mar. 25; v. 260; p. 678.
Hagan Corporation, The. (See Ellman, Louis, assignor.)
Hagemeyer, Henry F. (See Corl and Hagemeyer.)
Haggstrom, Charles J., Warren, Pa. Liquid-sampler. No. 1,296,794; Mar. 11; v. 260; p. 256.
Hagman, William J., Philadelphia, Pa., assignor to Niles-Bement Pond Company, New York, N. Y. Planer and attachment therefor. No. 1,296,795; Mar. 11; v. 260; p. 256.
Haight, William H., Northfield, Minn. Knockdown furniture. No. 1,298,496; Mar. 25; v. 260; p. 678.
Haines, Kendall S., Jacksonville, Fla. Take-down stanchion. No. 1,297,838; Mar. 18; v. 260; p. 512.
Haiss, Hugo, Alliance, Ohio. Means for heating steering-wheels. No. 1,296,286; Mar. 4; v. 260; p. 107.
Hale, Augustus S., Atlanta, Ga., assignor to L. O. Grice, Washington, D. C. Adjustable shade-bracket. No. 1,298,337; Mar. 25; v. 260; p. 643.
Hall, Beverly F. (See Grannis, Laurence R., assignor.)
Hall, Ernest L. (See Sadler and Hall.)
Hall, Lewis M. M., Ealing, London, England. Aeroplane. No. 1,298,338; Mar. 25; v. 260; p. 643.
Hall, Max R. and O. P., Atlanta, Ga. Fireless cooker. No. 1,298,202; Mar. 25; v. 260; p. 615.
Hall, Olin P. (See Hall, Max R. and O. P.)
Hall, Sidney Z., London, England. Internal-combustion engine. No. 1,298,497; Mar. 25; v. 260; p. 679.
Hallauer, Carl, Los Angeles, Cal. Combined centrifugal and air-lift pump. No. 1,295,981; Mar. 4; v. 260; p. 37.
Hallenbeck, George E., assignor to Baker Brothers, Toledo, Ohio. Variable-speed gearing. No. 1,297,462; Mar. 18; v. 260; p. 432.
Hallenbeck, George E., assignor to Baker Brothers, Toledo, Ohio. Machine-tool structure. No. 1,297,463; Mar. 18; v. 260; p. 432.
Halseth, Edwin A., assignor of one-half to E. Boe, Clearbrook, Minn. Composition of matter for tempering steel. No. 1,296,951; Mar. 11; v. 260; p. 293.
Halteman, John K. (See Mott, Meyer, Halteman, and Wheawill.)
Hamilton, John B., Yonkers, assignor to Sypho-Chemical Sprinkler Corporation, Croton-on-Hudson, N. Y. Emergency shut-off device for chemical extinguishing apparatus. No. 1,298,203; Mar. 25; v. 260; p. 615.
Hamilton, Karl M., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Composite car end. No. 1,297,153; Mar. 11; v. 260; p. 337.
Hamilton, Walter B., Yorkshire, England. Manufacture of gray cast-iron. No. 1,296,384; Mar. 4; v. 260; p. 129.
Hamm, William S., Hubbard Woods, and W. F. Stewart, assignors to The Adams & Westlake Company, Chicago, Ill. Solder cutter and feeder. No. 1,296,656; Mar. 11; v. 260; p. 224.
Hamman, George. (See Carmichael, Robert E., assignor.)
Hammer, Wilbur J., Kansas City, Mo. Base-ball game-board. No. 1,297,839; Mar. 18; v. 260; p. 512.
Hammitt, Marvin L., Carbonite, Idaho. Surveyor's transit. No. 1,298,498; Mar. 25; v. 260; p. 679.
Hammond, Elmer C., Crawfordsville, Ind., and C. F. Nelson, Minneapolis, Minn. Tractor. No. 1,297,154; Mar. 11; v. 260; p. 337.
Hammond, John H., Jr., Gloucester, Mass. Radio telegraphy and telephony. No. 1,296,504; Mar. 4; v. 260; p. 153.
Hammond, Theodore A., assignor of one-half to W. P. Hammond, Passaic, N. J. Pressure-regulator. No. 1,296,657; Mar. 11; v. 260; p. 224.
Hammond, William P. (See Hammond, Theodore A., assignor.)
Hammond, William P., Passaic, N. J. Glass-covered dashboard for automobiles. No. 1,296,182; Mar. 4; v. 260; p. 84.
Hanak, Edward, Houston, Tex. Conveyer system. No. 1,297,680; Mar. 18; v. 260; p. 478.
Hanak, Edward, Houston, Tex. Cable-gripping mechanism for overhead conveyer systems. No. 1,297,681; Mar. 18; v. 260; p. 478.
Hancock, Harry H., Swampscott, assignor of one-half to A. S. Webster, Halifax, Mass. Lining apparatus. No. 1,297,840; Mar. 18; v. 260; p. 512.
Hancock, Harry H., Swampscott, assignor of one-half to A. S. Webster, Halifax, Mass. Printing. No. 1,297,841; Mar. 18; v. 260; p. 512.
Hand, Jay A. (See Kuhn and Hand.)
Hand, Townson, Orlando, Fla. Shoe-heel. No. 1,295,892; Mar. 4; v. 260; p. 17.
Handley, William, Providence, assignor to Tubular Woven Fabric Company, Pawtucket, R. I. Electric conduit. No. 1,296,952; Mar. 11; v. 260; p. 293.
Handy, John P., Long Prairie, Minn. Steering-wheel control. (Reissue.) No. 14,613; Mar. 18; v. 260; p. 544.
Haney, Oliver A., Cleveland, Okla. Combination tubing-ring and casing-head. No. 1,297,562; Mar. 18; v. 260; p. 453.
Hanks, Walter W., Eunice, assignor of one-eighth to C. B. Stagg, Church Point, La. Music-leaf turner and rack. No. 1,296,385; Mar. 4; v. 260; p. 129.
Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Fire-extinguisher. No. 1,296,505; Mar. 4; v. 260; p. 153.
Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Burner-tip for acetylene and similar hydrocarbon gases. No. 1,296,506; Mar. 4; v. 260; p. 154.
Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Burning acetylene and similar hydrocarbon gases for illuminating purposes. No. 1,296,507; Mar. 4; v. 260; p. 154.
Hansen, Edward, Seattle, Wash. Combination chair and bed. No. 1,297,683; Mar. 18; v. 260; p. 479.
Hansen, Gustave A., St. Louis, Mo. Steamboat and barge loading and unloading system. No. 1,298,499; Mar. 25; v. 260; p. 679.
Hansen, Otto W., Chicago, Ill. Barrier-gate. No. 1,296,658; Mar. 11; v. 260; p. 225.
Hansen, Robert C. (See Temple, Russell R., assignor.)
Hanson, Johannes, Montevido, Minn. Treating standing grain. No. 1,297,684; Mar. 18; v. 260; p. 479.
Hanton, Archibald N., Indianapolis, Ind., assignor, by mesne assignments, to W. Bartlett. Device for positioning tools to be dressed. No. 1,295,982; Mar. 4; v. 260; p. 37.
Hardel, Jean A., Paris, France. Charge-torpedo. No. 1,298,500; Mar. 25; v. 260; p. 679.
Hardie, Robert W., White Plains, N. Y. Air-moistener. No. 1,295,983; Mar. 4; v. 260; p. 37.
Harding, Charles K., Chicago, Ill. Electric spark-plug. No. 1,296,076; Mar. 4; v. 260; p. 59.
Hardy, Edward J., Coventry, England. Universal joint. No. 1,296,796; Mar. 11; v. 260; p. 256.
Hardy, Francis I. (See Southworth and Hardy.)
Hardy, Homer L., assignor of one-half to H. G. Duerfeldt, Spokane, Wash. Automatic self-closing flush-valve for toilets. No. 1,297,563; Mar. 18; v. 260; p. 453.
Hare, Asbery T., Baileyton, Ala. Grain-grinding mill. No. 1,296,797; Mar. 11; v. 260; p. 256.
Harger, Rolla N., Washington, D. C. Manufacturing N-methyl p-amino phenol. No. 1,297,685; Mar. 18; v. 260; p. 479.
Harley, Glen L. (See Sidney and Harley.)
Harllee, Ella S., Tampa, Fla. Mouth-guard for children and infants. No. 1,297,842; Mar. 18; v. 260; p. 513.
Harmon, Stanford. (See Robinson, Frank A., assignor.)
Harrington, Albert H., Fall River, assignor to Non Skid Company of America, Boston, Mass. Antiskid for wheels. No. 1,297,155; Mar. 11; v. 260; p. 338.
Harris, Adams O., Goble, Oreg. Net-float. No. 1,296,396; Mar. 4; v. 260; p. 129.
Harris, Ebenezer D., Jr., Lander, Wyo. Mechanical movement. No. 1,297,156; Mar. 11; v. 260; p. 338.
Harris, Ebenezer D., Jr., Lander, Wyo. Collapsible crate. No. 1,297,564; Mar. 18; v. 260; p. 453.
Harris, Gordon D., Bayonne, N. J. Evaporating moisture-containing materials. No. 1,296,508; Mar. 4; v. 260; p. 154.
Harris, Gordon D., Freeport, N. Y. Apparatus for evaporating moisture-containing materials. No. 1,296,509; Mar. 4; v. 260; p. 154.
Harris, Gordon D., Bayonne, N. J. Evaporating system for moisture-containing materials. No. 1,296,510; Mar. 4; v. 260; p. 155.
Harris, Harvey L., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,330; Mar. 25; v. 260; p. 643.
Harris, James H., Ashland, Va. Tooth-brush holder. No. 1,298,041; Mar. 25; v. 260; p. 581.

Harris, John, Lakewood, Ohio, assignor of one-half to J. R. Rose. Electrolytic cell. No. 1,297,157; Mar. 11; v. 260; p. 338.
Harris, Mary E., Modesto, Cal. Bread-raiser. No. 1,296,387; Mar. 4; v. 260; p. 129.
Harris, Ralph G., Salida, Colo. Trap-nest. No. 1,296,388; Mar. 4; v. 260; p. 130.
Harris, William, Silver City, N. Mex. Silt-gate. No. 1,297,843; Mar. 18; v. 260; p. 513.
Harrison Safety Boiler Works. (See Wright, Raymond D. B., assignor.)
Hart, Frederick A., Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,296,659; Mar. 11; v. 260; p. 225.
Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,296,953; Mar. 11; v. 260; p. 293.
Hart, George H., Hartford, Conn. Electric switch. No. 1,297,348; Mar. 18; v. 260; p. 408.
Hartford Fairmont Company. (See Peller, Karl E., assignor.)
Hartz, Henry V., deceased, Cleveland; W. G. Metzger, administrator, Painesville, Ohio. Life-boat. No. 1,295,893; Mar. 4; v. 260; p. 17.
Harvey, Horace B., Cleveland, Ohio. Running-gear for automobiles. No. 1,298,204; Mar. 25; v. 260; p. 616.
Harvey Hubbell, Inc. (See Knapp, George P., assignor.)
Hasbrouck, Charles H., Binghamton, N. Y. Machine for protecting checks and the like. No. 1,296,511; Mar. 4; v. 260; p. 155.
Hashimoto, Shuso, Kobe, assignor to Nippon Yusen Kwaisha Ltd., Tokyo, Japan. Thrust-meter. No. 1,297,686; Mar. 18; v. 260; p. 479.
Haskelite Manufacturing Corporation. (See Haskell, Henry L., assignor.)
Haskell, Henry L., Ludington, assignor to Haskelite Manufacturing Corporation, Grand Rapids, Mich. Boat and canoe. No. 1,298,042; Mar. 25; v. 260; p. 581.
Haskell, William E., assignor to Estey Organ Company, Brattleboro, Vt. Pneumatic switch. No. 1,297,687; Mar. 18; v. 260; p. 479.
Hatfield, Hubert A., London, assignor to H. A. H. Tractors Limited, Birmingham, England. Endless track. No. 1,296,512; Mar. 4; v. 260; p. 155.
Hatfield, Hubert A., London, assignor to H. A. H. Tractors Limited, Birmingham, England. Endless track. No. 1,297,844; Mar. 18; v. 260; p. 513.
Hatt, Lemuel J., St. Louis, Mo. Bucket. No. 1,298,340; Mar. 25; v. 260; p. 644.
Hats, George J. (See Fuller, Charles E., assignor.)
Haus, Henry, Pope Valley, Cal. Joint for drill-bits and other purposes. No. 1,296,954; Mar. 11; v. 260; p. 293.
Hausinger, Lawrence, Alhambra, Cal. Baby-chair. No. 1,295,984; Mar. 4; v. 260; p. 37.
Havemeyer, John F., Ardsley-on-Hudson, N. Y. Tie-piece for metallic reinforces. No. 1,296,513; Mar. 4; v. 260; p. 156.
Hawkes, Frederic W., New York, N. Y. Thread cutter and holder. No. 1,298,501; Mar. 25; v. 260; p. 680.
Hawkesworth, Arthur L., Butte, Mont. Oil-pump. No. 1,296,077; Mar. 4; v. 260; p. 59.
Hawkesworth, Arthur L., Butte, Mont. Drill. No. 1,296,078; Mar. 4; v. 260; p. 60.
Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Safety operating mechanism. No. 1,296,798; Mar. 11; v. 260; p. 257.
Hawkins Invisible Belt Company. (See Hawkins, Norment D., Jr., assignor.)
Hawkins, Norment D., Jr., assignor to Hawkins Invisible Belt Company, Pittsburgh, Pa. Belt. No. 1,297,158; Mar. 11; v. 260; p. 338.
Hawrylasz, Nikyfor, assignor of one-half to N. Jurach, Southington, Conn. Nut-lock. No. 1,297,845; Mar. 18; v. 260; p. 513.
Hawthorn, Louis A. (See Freilinghuysen and Hawthorne.)
Hayden, Zerah G., Eldora, Iowa. Combined scissors and square. No. 1,296,660; Mar. 11; v. 260; p. 225.
Hayes, Loren, and L. D. McKenzie, Los Angeles, Cal. Shoe-buckle holder. No. 1,295,985; Mar. 4; v. 260; p. 38.
Hayes, Thomas J., Alameda, Cal., assignor to Arbetter Felling Machine Company, Boston, Mass. Blindstitch sewing-machine. No. 1,296,514; Mar. 4; v. 260; p. 156.
Haya, Donald S., Washington, D. C. Powder-bag clamp. No. 1,296,515; Mar. 4; v. 260; p. 156.
Hazel-Atlas Glass Company. (See Stenhouse, Thomas, assignor.)
Haseltine, Benjamin P., Wheeling, W. Va., assignor to National Tube Company, Pittsburgh, Pa. Method of and means for preventing oxidation of rolled material. No. 1,295,986; Mar. 4; v. 260; p. 38.
Haselton, Fred S., *et al.* (See Van Meter, John N., assignor.)
Head, Wrightson and Company. (See Wrightson and Ringquist, assignors.)
Head, Wrightson & Company. (See Wrightson, Thomas, assignor.)
Heady, William H., *et al.* (See Evans, Newton, assignor.)
Heath, Howard T., Elgin, Ill. Float-valve mechanism. No. 1,295,987; Mar. 4; v. 260; p. 38.
Heaton Peninsular Button Fastener Company. (See Perkins, George W., assignor.)
Hechenbleikner, Ingenuin, assignor to Chemical Construction Company, Charlotte, N. C. Recovery process for waste gases. No. 1,297,464; Mar. 18; v. 260; p. 432.
Heck, Augustus, assignor to Package Machinery Company, Springfield, Mass. Wrapping-machine. No. 1,295,988; Mar. 4; v. 260; p. 38.
Hedberg, Carl W. J., New Britain, Conn., assignor to Research Corporation, New York, N. Y. Electric separator. No. 1,297,159; Mar. 11; v. 260; p. 338.
Hehman, Gerard F. (See Thieh and Hehman.)
Heidman, George, *et al.* (See Blood, Burr B., assignor.)
Heitler, Kurt, New York, N. Y. Jar-lifter. No. 1,296,389; Mar. 4; v. 260; p. 130.
Heitman, John, assignor of one-half to R. Lomen, Nome, Alaska. Graphophone and disk record holder. No. 1,297,160; Mar. 11; v. 260; p. 339.
Helfenbein, Harry, Cleveland, Ohio. Signal device for automobiles or other vehicles. No. 1,298,205; Mar. 25; v. 260; p. 616.
Hellberg, Helge. (See Redpath and Hellberg.)
Heller, Herman S., and J. Jorgenson, San Francisco, Cal.; said Jorgenson assignor to said Heller. Tailpiece for stringed instruments. No. 1,296,183; Mar. 4; v. 260; p. 85.
Hellmund, Rudolf E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,295,894; Mar. 4; v. 260; p. 17.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Phase-converting system. No. 1,296,287; Mar. 4; v. 260; p. 107.
Hemphill Manufacturing Co. (See Bosworth, George P., assignor.)
Henderson, Alfred J., Dallas, Tex. Puzzle. No. 1,296,955; Mar. 11; v. 260; p. 294.
Henderson, Finis J., Moreland, Ark. Door-check. No. 1,296,184; Mar. 4; v. 260; p. 85.
Hendrick, Foscolo O., East Orange, N. J., assignor to Pullclean Manufacturing Co., Inc., New York, N. Y. Roller-towel cabinet. No. 1,297,688; Mar. 18; v. 260; p. 480.
Hendricks, Allan B., Jr., Pittsfield, Mass., assignor to General Electric Company. Transformer. No. 1,297,161; Mar. 11; v. 260; p. 339.
Hendry, James R., assignor to Acme Card System Company, Chicago, Ill. Card-filing system. No. 1,296,956; Mar. 11; v. 260; p. 294.
Henemier, Robert H., New York, assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Tire-valve. No. 1,296,516; Mar. 4; v. 260; p. 156.
Henemier, Robert H., New York, assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Tire-valve. No. 1,296,517; Mar. 4; v. 260; p. 157.
Henkle, Willard G., Garrison, Iowa. Mold for concrete posts. No. 1,298,341; Mar. 25; v. 260; p. 644.
Hennig, Adolph C. J., Seattle, Wash. Steam-boiler. No. 1,296,798; Mar. 11; v. 260; p. 257.
Henning, Frederick C., assignor to The Miracle Artificial Arm Co., Chicago, Ill. Artificial hand. No. 1,298,502; Mar. 25; v. 260; p. 680.
Henry, Miguel, Manila, Philippine Islands. Roofing-tile. No. 1,297,162; Mar. 11; v. 260; p. 339.
Hensal, Elmer A., Panora, Iowa. Truck-scoop. No. 1,297,163; Mar. 11; v. 260; p. 339.
Hensley, Arthur F., Muncie, Ind. Collar. No. 1,296,185; Mar. 4; v. 260; p. 85.
Hercules Manufacturing Company. (See Berkeley, Laurence J., assignor.)
Herman, Jacob W. (See Hyle and Herman.)
Herr, Herbert T., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Steam-turbine. No. 1,298,206; Mar. 25; v. 260; p. 616.
Herr, John, near Lebanon, Ind. Seed harvester and cleaner. No. 1,297,349; Mar. 18; v. 260; p. 408.
Herrbold, William J., and C. Keelan, Kalamazoo, Mich. Machine for treating paper-stock. No. 1,298,207; Mar. 25; v. 260; p. 617.
Herring, Henry, Kouts, Ind. Dipper or bucket. No. 1,296,800; Mar. 11; v. 260; p. 257.
Herrman, Charles, New York, N. Y. Nut and bolt-head wrench. No. 1,297,846; Mar. 18; v. 260; p. 513.
Herskovitz, Max, Chicago, Ill. Electric-lighting fixture. No. 1,298,208; Mar. 25; v. 260; p. 617.
Hess, Fred F., and W. W. Scott, assignors of one-third to O. J. Albers, Chehalis, Wash. Attachment for motor-vehicles. No. 1,295,895; Mar. 4; v. 260; p. 17.
Hessel, William F., New York, N. Y. Electrical switch device. No. 1,296,801; Mar. 11; v. 260; p. 257.
Hewett, Robert J., Westfield, N. J. Cab signal system. No. 1,295,896; Mar. 4; v. 260; p. 18.
Heyl & Patterson. (See Brown, Raymond E., assignor.)
Heyman, Edward M., assignor to Oliver Chilled Plow Works, South Bend, Ind. Disk plow. No. 1,298,209; Mar. 25; v. 260; p. 617.
Heys, John J., Lynn, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J. Molding sheets of leather and analogous material. No. 1,296,518; Mar. 4; v. 260; p. 157.
Hibler, William E., Honolulu, Hawaii. Attachment for corn-planters. No. 1,297,847; Mar. 18; v. 260; p. 514.

Hickey, James C., and O. J. Cantrelle, New Orleans, La. Truck. No. 1,297,164; Mar. 11; v. 260; p. 339.
Higbee, George C., Tekoa, Wash. Air-brake for automobiles. No. 1,297,165; Mar. 11; v. 260; p. 340.
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Hight, Bertha G. (See Hight, Leslie R. and B. G.)
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Hilliard, Harry D. F., Kansas City, Kans., assignor to F. N. Winslow, Carmen, Okla. Auxiliary leaf-spring for motor-vehicles. No. 1,297,167; Mar. 11; v. 260; p. 340.
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Hitchcock, Halbert K., Pittsburgh, Pa., and W. J. Golightly, Kokomo, Ind., assignors to Pittsburgh Plate Glass Company. Vacuum lifting apparatus. No. 1,296,079; Mar. 4; v. 260; p. 60.
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Hoge, John A., New York, N. Y. Bellows-operating mechanism for player-pianos. No. 1,295,989; Mar. 4; v. 260; p. 38.
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Holdsworth, Arthur J., assignor of one-half to C. Schneider, Detroit, Mich. Cover-holder for glass jars. No. 1,298,212; Mar. 25; v. 260; p. 618.
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Holmes, Gwyllym R., Baltimore, Md. Marine torch. No. 1,296,664; Mar. 11; v. 260; p. 226.
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Hoops, Walter W., Chicago, Ill. Automobile-body. No. 1,297,467; Mar. 18; v. 260; p. 432.
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International Precipitation Company. (See Anderson, Evald, assignor.)
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Ireland, Ward S., assignor to National Shorthand Machine Company, St. Louis, Mo. Shorthand-machine. No. 1,296,191; Mar. 4; v. 260; p. 86.
Ireland, Ward S., assignor to National Shorthand Machine Company, St. Louis, Mo. Shorthand-machine. No. 1,296,192; Mar. 4; v. 260; p. 86.
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J. M. Alvaz Societe par action pour Construction de Machines. (See Feldman, Shimon, assignor.)
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Jobski, Otto H., assignor to The Standard Parts Company, Cleveland, Ohio. Demountable rim for vehicle-wheels. No. 1,298,050; Mar. 25; v. 260; p. 582.
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Jones, Andrew S., *et al.* (See Dickerson, Raymond L., assignor.)
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Jones, Budd J., assignor to The Jones-Fisher Company, Columbus, Ohio. Finger attachment for signaling devices. No. 1,296,088; Mar. 4; v. 260; p. 62.
Jones, Clarence V., Toronto, Ontario, Canada. Transom-operating mechanism. No. 1,297,860; Mar. 18; v. 260; p. 517.
Jones-Fisher Company, The. (See Jones, Budd J., assignor.)
Jones, Frederick D., Alhambra, Cal. Inherently-keyed graphic drill-problem device. No. 1,296,965; Mar. 11; v. 260; p. 296.
Jones, George A. E., Beverly, Mass. Apparatus for hot riveting. No. 1,297,570; Mar. 18; v. 260; p. 434.
Jones, J. M. (See Driver and Goetz, assignors.)
Jones, James D., Dunnville, Ky. Metal roof construction. No. 1,297,178; Mar. 11; v. 260; p. 342.
Jones, James R., and J. C. Culver, assignors of one-third to C. H. Smoot, Camden on Gauley, W. Va. Tool. No. 1,296,401; Mar. 4; v. 260; p. 132.
Jones, Robert D., Scranton, Pa. Self-closing ink-well. No. 1,298,219; Mar. 25; v. 260; p. 619.
Jordan, Clyde E., Trego, Mont. Can opener and sealer. No. 1,295,902; Mar. 4; v. 260; p. 19.
Jordan, Frederick G., Cement, Wash. Reinforced cement or concrete ship construction. No. 1,296,809; Mar. 11; v. 260; p. 259.
Jordan, James W., Williamsburg, Ky. Dust-excluder. No. 1,298,347; Mar. 25; v. 260; p. 645.
Jordan, Leonard C., Morsemere, N. J. Roof for box-cars. No. 1,298,220; Mar. 25; v. 260; p. 619.
Jordan, Royal B. (See Collins and Jordan.)
Jorgenson, John. (See Heller and Jorgenson.)
Joseph Dick Manufacturing Company, The. (See Dick, Joseph, assignor.)
Joseph Stokes Rubber Company. (See Boyer, Harry L., assignor.)
Josephs, Gustavus. (See Josephs and Berlizheimer, assignors.)
Josephs, Jean, and D. T. Berlizheimer, assignors of one-third to G. Josephs, Philadelphia, Pa. Quill-wrapping machine. No. 1,298,221; Mar. 25; v. 260; p. 619.
Juarez, José S., Mexico, Mexico. Resilient tire. No. 1,295,903; Mar. 4; v. 260; p. 19.
Junghanns, Ernest, Anaconda, Mont. Dump-car. No. 1,297,356; Mar. 18; v. 260; p. 410.
Jurach, Nykola. (See Hawrylasa, Nikyfor, assignor.)
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
Kaar, Eugene R., Galva, Ill. Cantaliver-spring for automobiles. No. 1,296,294; Mar. 4; v. 260; p. 109.
Kaas, Harald, Christiania, Norway. Plant for automatically assorting wooden materials and the like according to their sizes. No. 1,298,510; Mar. 25; v. 260; p. 682.
Kaczmaryk, Mike, Glen Carbon, Pa. Combined bayonet and wire-cutter. No. 1,297,571; Mar. 18; v. 260; p. 454.
Kahl, Edmund J., Wallingford, Conn. Insulated handle. No. 1,297,861; Mar. 18; v. 260; p. 517.
Kahl, John F., Brooklyn, N. Y. Flying-machine. No. 1,296,089; Mar. 4; v. 260; p. 62.
Kahn, Moritz, Westminster, London, England. Metal fabric for use in ferroconcrete construction. No. 1,296,402; Mar. 4; v. 260; p. 132.
Kaller, Harvey E., Aurora, Ill. Means for bracing the chassis-frames, running-boards, and fenders of automobiles. No. 1,295,904; Mar. 4; v. 260; p. 19.
Kalmus, Comstock & Westcott. (See Wall, Edward J., assignor.)
Kandler, Edmund, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Ophthalmic test-lens tray. No. 1,297,357; Mar. 18; v. 260; p. 410.
Kane, James E., and J. Rose, Yorkville, Ohio. Conveyer. No. 1,298,348; Mar. 25; v. 260; p. 645.
Kane, Patrick H., Buffalo, N. Y. Aerial projectile. No. 1,298,222; Mar. 25; v. 260; p. 620.
Kanegafuchi Boseki Kabushiki Kwaisha. (See Muto, Tomenosuke, assignor.)
Kappelhoff, John C., St. Paul, Minn. Bottle-capping machine. No. 1,296,810; Mar. 11; v. 260; p. 259.
Karbuab Company. (See Kartheiser, John J., assignor.)
Karl, George E., assignor to The Dunham Company, Berea, Ohio. Land-roller. No. 1,298,511; Mar. 25; v. 260; p. 682.
Kartheiser, John J., assignor to Karbuab Company, Chicago, Ill. Carbureter. No. 1,297,572; Mar. 18; v. 260; p. 454.
Kartheiser, John J., assignor to Karbuab Company, Chicago, Ill. Carbureter. No. 1,297,573; Mar. 18; v. 260; p. 455.
Kaufman, Harry A., New York, N. Y. Combined sleeve and mitten for garments. No. 1,296,966; Mar. 11; v. 260; p. 296.
Keasbey, Rowland P., New York, N. Y., assignor to National Fire Proofing Co., Pittsburgh, Pa. Building construction. No. 1,296,527; Mar. 4; v. 260; p. 159.
Keating, James J., Highland Falls, N. Y. Collapsible box. No. 1,298,349; Mar. 25; v. 260; p. 646.
Keator, Charles D., Compti, assignor to The Connecting Link Company, Inc., Natchitoches, La. Hook and guard therefor. No. 1,298,051; Mar. 25; v. 260; p. 583.
Kebl, Albert A., assignor of one-half to J. J. Pycha, Baltimore, Md. Life-saving device. No. 1,296,967; Mar. 11; v. 260; p. 296.
Keckler, Charles W., Newark, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,297,358; Mar. 18; v. 260; p. 410.
Keelan, Charles. (See Herrbold and Keelan.)
Keener, George L., Weston, W. Va. Antiskid-chain. No. 1,297,476; Mar. 18; v. 260; p. 434.
Keener, George L., Weston, W. Va. Fastening or coupling. No. 1,297,477; Mar. 18; v. 260; p. 434.
Kehoe, Charles S., *et al.*, executors. (See Barratt, William T., assignor.)
Keith, Frederick R., Randolph, Mass. Insole. No. 1,297,359; Mar. 18; v. 260; p. 410.
Keller, Claude A., Cleveland, assignor to The Mansfield Electric Hardware Manufacturing Company, Mansfield, Ohio. Switch-box. No. 1,296,811; Mar. 11; v. 260; p. 260.
Kelley, Herbert F. (See Andrews, Arthur B., assignor.)
Kelley, James, Clarkia, Idaho. Cable-clamp. No. 1,298,052; Mar. 25; v. 260; p. 583.
Kellogg, George W., assignor to Kellogg Manufacturing Co., Rochester, N. Y. Air-pump for automobiles. No. 1,295,991; Mar. 4; v. 260; p. 39.
Kellogg Manufacturing Co. (See Kellogg, George W., assignor.)
Kellogg Switchboard and Supply Company. (See Munsell, Harry W., assignor.)

Kellogg, William L., Detroit, Mich., and R. W. Burnett, Chicago, Ill.; said Burnett assignor to said Kellogg. Friction draft-gear. No. 1,296,812; Mar. 11; v. 260; p. 260.
Kelly, James W., Chicago, Ill. Water-closet. No. 1,298,350; Mar. 25; v. 260; p. 646.
Kelly, Vernon. (See Gaddess, Harry W., assignor.)
Kelsall, George A., assignor to Western Electric Company, Incorporated, New York, N. Y. Core-loss tester. No. 1,296,818; Mar. 11; v. 260; p. 260.
Kelsey, Harry S. (See Jaeger, Otto, assignor.)
Kelso, William, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,297,862; Mar. 18; v. 260; p. 517.
Kelson, Charles H., et al. (See Bergren, John A., assignor.)
Kemp, Walter D., New York, N. Y. Face-shield. No. 1,298,223; Mar. 25; v. 260; p. 620.
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Kennedy, Hugh A., Metaline, assignor of one-half to V. I. Tucker, Boesburg, Wash. Convertible chair. No. 1,298,053; Mar. 25; v. 260; p. 583.
Kenney, John J., assignor to Best Electric Company, Pittsburgh, Pa. Separable plug. No. 1,297,179; Mar. 11; v. 260; p. 342.
Kent, Leslie H. (See De Normanville and Kent.)
Kerlin, Horace B., Hamilton, Ohio. Oven-thermometer. No. 1,298,054; Mar. 25; v. 260; p. 583.
Kerner, Theodore, Milwaukee, Wis. Hopper-door for refuse-incinerators. No. 1,297,360; Mar. 18; v. 260; p. 410.
Kerner, Theodore, Milwaukee, Wis. Sand-spreader. No. 1,297,361; Mar. 18; v. 260; p. 411.
Kershaw, Joseph, Joplin, Mo. Signal apparatus for automobiles. No. 1,298,055; Mar. 25; v. 260; p. 583.
Ketler, John W., Chicago, Ill. Separator-plate. No. 1,297,478; Mar. 18; v. 260; p. 434.
Kibuzinski, Aleksander, Hartford, Conn. Grate for meat-smokers. No. 1,298,351; Mar. 25; v. 260; p. 646.
Kidder, Frank W., et al. (See Van Meter, John N., assignor.)
Kilbourne, Arthur F., Rochester, Minn. Egg-boiling timer. No. 1,297,180; Mar. 11; v. 260; p. 342.
Killark Electric Manufacturing Company. (See Johns and Trescott, assignors.)
Kimball, Harry G., Bronxville, N. Y., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Loom feeler-motion. No. 1,298,352; Mar. 25; v. 260; p. 646.
Kimball, Robert E., assignor to The Cleveland Folding Machine Company, Cleveland, Ohio. Paper-conveying mechanism. No. 1,297,181; Mar. 11; v. 260; p. 343.
Kinch, George E., Quirindi, New South Wales, Australia. Automatic closure and disinfecting seat-cabinet for pan-closets. No. 1,296,666; Mar. 11; v. 260; p. 227.
Kindle, Charles H., Washington, D. C. Grenade. No. 1,296,403; Mar. 4; v. 260; p. 132.
Kindling, Louis, Milwaukee, Wis. Squeegee-roller. No. 1,297,694; Mar. 18; v. 260; p. 481.
King, Charles B., C. S. Johnson, and B. Jacoby, assignors to The Marion Steam Shovel Company, Marion, Ohio. Clutch and locking device. No. 1,298,056; Mar. 25; v. 260; p. 583.
King, Fred S., Checotah, Okla. Stalk-cutter. No. 1,297,182; Mar. 11; v. 260; p. 343.
King, James G., Troy, Ala. Seed planter. No. 1,297,863; Mar. 18; v. 260; p. 517.
King, Ralph W. (See Wittenberg and King.)
King, Roy D., assignor to Coin Controlled Lock Company, Chicago, Ill. Lock. No. 1,298,224; Mar. 25; v. 260; p. 620.
King, William L., Cincinnati, Ohio, assignor to General Electric Company. Elastic-fluid turbine. No. 1,297,864; Mar. 18; v. 260; p. 517.
Kinikin, John L., Garden City, Kans. Adjustable shade-roller and curtain-holder. No. 1,297,574; Mar. 18; v. 260; p. 455.
Kinney, Charles S., assignor of one-half to P. A. Lyle, Paso Robles, Cal. Stove. No. 1,297,183; Mar. 11; v. 260; p. 343.
Kinney, John F., Humboldt, Kans. Aeroplane. No. 1,296,528; Mar. 4; v. 260; p. 159.
Kinney, Justus R., Allston, Mass. Power-transmission device. No. 1,298,512; Mar. 25; v. 260; p. 682.
Kinoikon Apparatus Corporation. (See Proctor, Barton A., assignor.)
Kirkpatrick, George W., Rochester, N. Y. Vehicle-signal. No. 1,298,057; Mar. 25; v. 260; p. 584.
Kirkpatrick, Otto B. (See Banks and Kirkpatrick.)
Kirkwood, Abraham L., Blocker, Tex. Combination measuring and transfer tank-pump. No. 1,297,865; Mar. 18; v. 260; p. 518.
Kish, George, Cleveland, Ohio. Clock. No. 1,298,353; Mar. 25; v. 260; p. 646.
Kitchener, Samuel A., Los Angeles, Calif. Stand for writing-machines. No. 1,297,866; Mar. 18; v. 260; p. 518.
Kitsee, Isidor, Philadelphia, Pa. Treating liquor from reducing processes of nitrated coal-tar derivatives. No. 1,298,513; Mar. 25; v. 260; p. 683.
Kitsee, Isidor, Philadelphia, Pa. Color photography. No. 1,298,514; Mar. 25; v. 260; p. 683.
Klansnic, Joseph, Black Diamond, Wash. Safety-stop for mine-cars. No. 1,297,575; Mar. 18; v. 260; p. 455.
Klassen, Jacob H., Los Angeles, Cal. Cylinder-inlaying machine. No. 1,295,992; Mar. 4; v. 260; p. 39.
Kleckler, Henry, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Wing-post socket. No. 1,296,667; Mar. 11; v. 260; p. 227.
Kleckler, Henry, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Fuselage-clip. No. 1,298,515; Mar. 25; v. 260; p. 683.
Kleckler, Henry, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Aeroplane-control bridge. No. 1,298,516; Mar. 25; v. 260; p. 683.
Klein, Albert R., New York, N. Y. Supplying air to interiors. No. 1,296,968; Mar. 11; v. 260; p. 297.
Kleisal, Friedrich, Pola, Austria. Game. No. 1,295,993; Mar. 4; v. 260; p. 39.
Klemm, Emil R. (See McCanna and Klemm.)
Kline, Charles D., Cleveland, Ohio. Headlight. No. 1,295,905; Mar. 4; v. 260; p. 19.
Klopfenstein, Robert S., and S. C. Brier, assignors to The National Lock-In-Tank Company, Wichita, Kans. Fluid-control lock for tanks. No. 1,297,184; Mar. 11; v. 260; p. 343.
Knapp, George P., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn. Shade-holder for porcelain work. No. 1,297,362; Mar. 18; v. 260; p. 411.
Knauff, George C., Chicago, Ill., assignor to Edmunds & Jones Corporation, Detroit, Mich. Switching-socket. No. 1,298,354; Mar. 25; v. 260; p. 647.
Kneedler, John D., assignor of one-half to B. Couch, Sioux City, Iowa. Heat and power producing apparatus. No. 1,297,363; Mar. 18; v. 260; p. 411.
Knight, Arthur F. (See Chadbourne and Knight.)
Knight, Ralph F., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson N. J. Machine for setting eyelets. No. 1,297,695; Mar. 18; v. 260; p. 481.
Knight, William L., Flint, Mich. Bean-harvester. No. 1,297,867; Mar. 18; v. 260; p. 518.
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Knoblock, Carola, et al. (See Knoblock, William, assignor.)
Knoblock, William, assignor of one-fourth to C. Knoblock, one-third to W. J. Graham, and one-third to J. Lamon, Philadelphia, Pa. Electric storage battery. No. 1,297,185; Mar. 11; v. 260; p. 344.
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Knudsen, Barney C., Montclair, N. J. Sled. No. 1,298,355; Mar. 25; v. 260; p. 647.
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Knutson, Alfred W., assignor to Rowe Manufacturing Co., Galesburg, Ill. Hoisting device for elevated carriers. No. 1,296,814; Mar. 11; v. 260; p. 260.
Koch, Hugo F., New York, N. Y. Heater. No. 1,298,517; Mar. 25; v. 260; p. 683.
Koester, Frank, New York, N. Y. Shoe and stiffener-strip for the uppers thereof. No. 1,296,529; Mar. 4; v. 260; p. 159.
Koester, Frank, New York, N. Y. Shoe and stiffener-strip for the same. No. 1,296,530; Mar. 4; v. 260; p. 159.
Koetschet, Joseph, and M. Beudet, Lyon, assignors to Societe Chimique des Usines du Rhone, (Anciennement, Gilliard, P. Monnet et Cartier,) Paris, France. Production of acetic anhydrid and acetaldehyde. No. 1,298,356; Mar. 25; v. 260; p. 647.
Kohler, Conrad, Zurich, Switzerland. Welding two metals of unequal fusibility. No. 1,296,815; Mar. 11; v. 260; p. 261.
Konigslow, Max E. (See Gould and Konigslow.)
Kopsch, Hermann, J. G., Boston, Mass. Commutator. No. 1,296,969; Mar. 11; v. 260; p. 297.
Koretzky, Harry M., New York, assignor to J. Satlow, Brooklyn, N. Y. Flash-light. No. 1,296,404; Mar. 4; v. 260; p. 133.
Kosht, Stephen J., and J. A. Petrilla, Pittsburgh, Pa. Anti-skid tire device. No. 1,297,869; Mar. 18; v. 260; p. 518.
Kotanchik, Paul, Ranshaw, Pa. Adjustable spike and nail puller. No. 1,297,870; Mar. 18; v. 260; p. 519.
Kovacs, Benjamin. (See Laszlo and Kovacs.)
Koziol, Joseph, Des Moines, Iowa. Life-boat. No. 1,296,668; Mar. 11; v. 260; p. 227.
Krahol, Olaus O., Chicago, Ill. Swiveled and tilting chair. No. 1,297,364; Mar. 18; v. 260; p. 411.
Kraft, Conrad J., assignor of one-half to O. P. Bailer, Memphis, Tenn. Safety-catch for brooches. No. 1,296,405; Mar. 4; v. 260; p. 133.
Kraft, Henry P., Ridgewood, N. J. Deflating-machine. No. 1,297,186; Mar. 11; v. 260; p. 344.
Krahmer, George W., Cylinder, Iowa. Chute for live-stock. No. 1,297,696; Mar. 18; v. 260; p. 482.
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Krecioch, Jan A. and A., Fall River, Mass. Submersible mine controller and observation station. No. 1,296,816; Mar. 11; v. 260; p. 261.

Krenke, Otto, assignor to Anker Holth Manufacturing Company, Port Huron, Mich. Cream-separator. No. 1,298,058; Mar. 25; v. 260; p. 584.
Krenker, Otto A., assignor to Anker Holth Manufacturing Company, Port Huron, Mich. Yieldable bearing. No. 1,298,059; Mar. 25; v. 260; p. 584.
Kreuzkamp, August J., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Bed-spring. No. 1,297,697; Mar. 18; v. 260; p. 482.
Kreuzkamp, Paul W., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Bed spring. No. 1,297,698; Mar. 18; v. 260; p. 482.
Kriebel, Joseph S., East Greenville, Pa. Vegetable-cutter. No. 1,296,091; Mar. 4; v. 260; p. 63.
Krieg, Alfred, Minneapolis, Minn., assignor to Emmerson-Brantingham Company, Rockford, Ill. Transmission mechanism. No. 1,298,060; Mar. 25; v. 260; p. 584.
Krieger, Alexander F., St. Joseph, Mich. Mail box for rural districts. No. 1,298,225; Mar. 25; v. 260; p. 620.
Kritz, Frank, assignor to Michigan Steel Tube Products Co., Detroit, Mich. Tube-welding machine. No. 1,296,970; Mar. 11; v. 260; p. 297.
Krodinger, Alois L., Maplewood, Mo. Metal corner-bead and stopping-off strip. No. 1,298,357; Mar. 25; v. 260; p. 647.
Kroeger, Edwin J., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Battery-jar mold. No. 1,296,092; Mar. 4; v. 260; p. 63.
Kruenung, Francis S., St. Louis, Mo. Roller-screen. No. 1,297,365; Mar. 18; v. 260; p. 411.
Kruse, Frode A., Tyler, Minn. Cow-tail holder. No. 1,298,061; Mar. 25; v. 260; p. 584
Krzysanowski, Theodore R., Philadelphia, assignor of ten one-hundredths to F. Gliwski, Chicopee, Mass., and one-half to S. S. Pinder, Wall, Pa. Anti-aircraft gun. No. 1,297,699; Mar. 18; v. 260; p. 482.
Kübler, Elias. (See Bach and Kübler.)
Kuharchek, Prokofy, Jerome, Pa. Ship-fender. No. 1,296,669; Mar. 11; v. 260; p. 227.
Kuhefuss, William, Brooklyn, N. Y. Window-fastener. No. 1,296,817; Mar. 11; v. 260; p. 261.
Kuhn, Frank, and J. A. Hand, assignors to American Electrical Heater Company, Detroit, Mich. Oven. No. 1,298,358; Mar. 25; v. 260; p. 647.
Kumagai, Buntaro, Seattle, Wash. Pencil-sharpener. No. 1,296,971; Mar. 11; v. 260; p. 297.
Kuppler, George W. (See Young, Conrad G., assignor.)
Kurtz, Thomas. (See Rose and Kurtz.)
Kyriakos, Costas, Flint, Mich. Gas-saver. No. 1,296,406; Mar. 4; v. 260; p. 133.
La Bauve, Lillie W., Houston, Tex. Detachable automobile spring-tire. No. 1,298,062; Mar. 25; v. 260; p. 585.
La Cour, Jens L., assignor to Norsk Hydro-elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electric-arc furnace. No. 1,296,194; Mar. 4; v. 260; p. 87.
La France, Richard, assignor to The Toledo Glass Company, Toledo, Ohio. Leer-charging device. No. 1,296,818; Mar. 11; v. 260; p. 261.
La Joie, Herbert J., Orange, N. J., assignor to Autopiano Company. Expression-controlling device. No. 1,296,819; Mar. 11; v. 260; p. 261.
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Labombarde, Harold S., Nashua, N. H. Electric counter for box-making machines. No. 1,298,518; Mar. 25; v. 260; p. 684
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Lafferior, Ollie L., and N. A., Argyle, Minn. Operating mechanism for washing-machines. No. 1,297,570; Mar. 18; v. 260; p. 456
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Lakewood Engineering Company, The. (See Carr, Edward G., assignor.)
Lamar, Alexis L., assignor of six thirty-seconds to J. R. Hinkle, seven thirty-seconds to O. L. Stamm, two thirty-seconds to G. H. Stucesi, one thirty-second to H. Degen, Sr., four thirty-seconds to J. M. Bournonville, eight thirty-seconds to S. J. Pole, Pittsburg, Kans., one-sixteenth to J. Jepsen and P. Fischer, and one-sixteenth to P. T. Ellis. Kerosene-vaporizer for internal-combustion engines. No. 1,296,972; Mar. 11; v. 260; p. 297.
Lamb, Chester C., assignor to Whitin Machine Works, Whitinsville, Mass. Traveling-flat carding-machine. No. 1,297,367; Mar. 18; v. 260; p. 412.
Lamb, Homer M., West Frankfort, Ill. Cable-socket. No. 1,297,187; Mar. 11; v. 260; p. 344.
Lamb, James G., Chattanooga, Tenn. Draft-producer for stoves. No. 1,297,871; Mar. 18; v. 260; p. 519.
Lamme, Benjamin G., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Speed control for induction-motors. No. 1,295,906; Mar. 4; v. 260; p. 19
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Lampert, Henry H., Chicago, Ill. Bar support and spacer for concrete reinforcements. No. 1,296,296; Mar. 4; v. 260; p. 109.
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Landby, John. (See Landby, Martin, J., and A.)
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Landis, Abraham B., Enfield, Pa. Change-speed transmission. No. 1,296,533; Mar. 4; v. 260; p. 160.
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Landis Machine Company. (See Miller, Daniel J., assignor.)
Landis, Raymond F., Reading, Pa. Rod-shifting device. No. 1,298,226; Mar. 25; v. 260; p. 620.
Landis, Raymond F., Reading, Pa. Valve controlling and releasing device. No. 1,298,227; Mar. 25; v. 260; p. 621.
Landis, Walter S., assignor to American Cyanamid Company, New York, N. Y. Production and purification of ammonia. No. 1,296,820; Mar. 11; v. 260; p. 262.
Lane, Henry M., Detroit, Mich. Core-rack. No. 1,298,359; Mar. 25; v. 260; p. 647.
Lane, James A., Los Angeles, Calif. Window adjuster and lock. No. 1,297,479; Mar. 18; v. 260; p. 435.
Langmuir, Irving, Schenectady, N. Y., assignor to General Electric Company. System for amplifying variable currents. No. 1,297,188; Mar. 11; v. 260; p. 344.
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Lapointe Machine Tool Company. (See Blanchard, Harry E., assignor.)
Lapointe, Ralph R., Hudson, and B. F. Levy, Boston, Mass. Broaching-machine. No. 1,296,535; Mar. 4; v. 260; p. 161.
Lappen, James E., Winona, Minn. Making cement-fiber board. No. 1,297,480; Mar. 18; v. 260; p. 435.
Larsen, Jacob C., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Brake Mechanism for six-wheel trucks. No. 1,298,228; Mar. 25; v. 260; p. 621.
Larsen, John M. (See Alfsen, Harald, assignor.)
Larson, John, Watkins, Colo. Lock. No. 1,297,872; Mar. 18; v. 260; p. 519.
Larsson, Sven, assignor, by mesne assignments, to Ludwigsbergs Verkstads Aktiebolag, Stockholm, Sweden. Rotary pump or engine. No. 1,297,700; Mar. 18; v. 260; p. 482
Lash, Horace W., San Francisco, Cal. Reducing iron oxids. No. 1,296,973; Mar. 11; v. 260; p. 298.
Laszlo, Anthony, *et al.* (See Simms, Joseph A., assignor.)
Laszlo, Sandor, and B. Kovacs, New York, N. Y. Anti-slipping device for heels. No. 1,297,701; Mar. 18; v. 260; p. 483.
Latham, Charles, Detroit, Mich. Window-curtain stretcher. No. 1,296,297; Mar. 4; v. 260; p. 109.
Lattig, Charles L., assignor, by mesne assignments, to Langslow-Fowler Company, Rochester, N. Y. School-chair. No. 1,298,519; Mar. 25; v. 260; p. 684.
Lattimer-Stevens Company, The. (See Stevens, Frank E., assignor.)
Lauchin, George Y., assignor of one-half to E. H. Sensiba, Crystal Falls, Mich. Engine-starter. No. 1,298,063; Mar. 25; v. 260; p. 585.
Laughlin, Robert, Buffalo, assignor to Commercial Electrolytic Corporation, New York, N. Y. Gun-cleaning compound and preparing same. No. 1,296,196; Mar. 4; v. 260; p. 87.
Laurie, John S., Fort Totten, N. Y. Projectile. No. 1,297,873; Mar. 18; v. 260; p. 519.
Lauritzen, John C. (See Nesbitt and Lauritzen.)
Lavalle, Cyril. (See Raymond, Mathieu, and Lavalle.)
Lavan, Frank, Gorham, Colo. Combined kitchen cabinet and sink. No. 1,296,670; Mar. 11; v. 260; p. 228.
Lavoie, Alphonse J., Montreal, Quebec, Canada. Chuck. No. 1,295,994; Mar. 4; v. 260; p. 39.
Law, James C., Carbondale, Pa. Detachable-link chain. No. 1,296,974; Mar. 11; v. 260; p. 298.
Law, William. (See Lorenz and Law.)
Lawler, Miles J., Denver, Colo. Door-check. No. 1,297,189; Mar. 11; v. 260; p. 345.
Lawrence, Edward E., Jamaica, assignor to Loose Wiles Biscuit Company, Long Island City, New York, N. Y. Mechanism and process for cutting filled wafers. No. 1,298,520; Mar. 25; v. 260; p. 684.
Lawrie, Alma G. (See Lawrie, John W., assignor.)
Lawrie, John W., Horton, Kans., assignor to A. G. Lawrie. Automobile-jack. No. 1,297,874; Mar. 18; v. 260; p. 519.
Lawson, David, West New Brighton, N. Y. Fire-extinguishing apparatus. No. 1,296,671; Mar. 11; v. 260; p. 228.
Lawson, Jasper C., assignor of two-fifths to G. Holloway, Calexico, Cal. Pie-plate. No. 1,297,190; Mar. 11; v. 260; p. 345.
Lawson, Laurits J. (See Lawson, Peter C. and L. J.)
Lawson, Peter C., Boston, and L. J. Lawson, Woburn, Mass. Signaling device for motor-vehicles. No. 1,296,093; Mar. 4; v. 260; p. 63.

Layne & Bowler Company. (See Woodburn, Oscar P., assignor.)

Layton, Churchill G., Albany, Oreg. Trap. No. 1,296,407; Mar. 4; v. 260; p. 133.

LeCompte, Edward P., Park City, Utah. Fire-starter. No. 1,295,907; Mar. 4; v. 260; p. 20.

L'heureux, Ludger, assignor to Montreal Patents Promoting Co. Limited, Montreal, Quebec, Canada. Safety apparatus for launching life-boats. No. 1,297,705; Mar. 18; v. 260; p. 483.

Le Rossignol, Robert, Berlin, Germany, assignor to General Electric Company. Apparatus for exhausting incandescent lamps. No. 1,298,569; Mar. 25; v. 260; p. 693.

Le Roy, James H., and R. G. Repman, Shawano, Wis. Paper-making machine. No. 1,297,192; Mar. 11; v. 260; p. 345.

Leach, Orville L., Providence, R. I. Storage battery. No. 1,296,408; Mar. 4; v. 260; p. 133.

Lebovitz, Max, Brooklyn, N. Y. Woman's undergarment. No. 1,297,481; Mar. 18; v. 260; p. 435.

Leckey, Alexander, Camden, N. J., and G. W. Daymon, Philadelphia, Pa. Vehicle direction-indicator and signal. No. 1,296,094; Mar. 4; p. 260; p. 63.

Lee, William, Galveston, Tex. Window-shade-operating lever. No. 1,297,875; Mar. 18; v. 260; p. 520.

Leech, Joseph P., Buffalo, N. Y. Expanding-reamer. No. 1,296,536; Mar. 4; v. 260; p. 161.

Leeds, Loring L., Short Hills, N. J., assignor to F. M. Needham, Chicago, Ill. Recorder and reproducer for talking-machines. No. 1,296,975; Mar. 11; v. 260; p. 298.

Lees, Ernest J., Cleveland, assignor, by mesne assignments, to H. T. Bradner, Gates Mills, Ohio. Arbor-support. No. 1,296,821; Mar. 11; v. 260; p. 262.

Leffler, Artur. (See Cassel, Gunnar E., assignor.)

Leffler, Artur L. O. A. (See Cassel, Gunnar E., assignor.)

Legg, William H., Toronto, Ontario, Canada. Oil-burner. No. 1,296,822; Mar. 11; v. 260; p. 262.

Lehmann, Eduard, Zurich, Switzerland. Washing and rinsing machine. No. 1,296,823; Mar. 11; v. 260; p. 262.

Lehosky, Julius, Glenfield, N. J. Life-saving boat. No. 1,298,360; Mar. 25; v. 260; p. 647.

Leighton, Albert, Latrobe, Pa. Buckle. No. 1,297,368; Mar. 18; v. 260; p. 412.

Leinweber, Curtis H., *et al.*, executors. (See Leinweber, Frederick H.)

Leinweber, Frederick H., deceased, Chicago, Ill.; C. H., W. H., and V. H. Leinweber, executors. Internal-combustion engine. No. 1,296,672; Mar. 11; v. 260; p. 228.

Leinweber, Frederick H., deceased, Chicago, Ill.; C. H., W. H., and V. H. Leinweber, executors. Exhaust-valve mechanism for internal-combustion engines. No. 1,296,673; Mar. 11; v. 260; p. 228.

Leinweber, Victor H., *et al.*, executors. (See Leinweber, Frederick H.)

Leinweber, William H., *et al.*, executors. (See Leinweber, Frederick H.)

Lemons, George G., Prescott, Ariz. Means for raising sunken vessels. No. 1,296,824; Mar. 11; v. 260; p. 262.

Lenderoth, Arnold W. See Fox and Lenderoth.)

Lenko, Mike, Minburn, Alberta, Canada. Door-operating device. No. 1,297,702; Mar. 18; v. 260; p. 483.

Leonard, George I., assignor to Leonard Pump and Motor Co., Chicago, Ill. Electrically-controlled apparatus. No. 1,296,976; Mar. 11; v. 260; p. 298.

Leonard, John E., Los Angeles, Calif. Shutter-dissolve for motion-picture cameras. No. 1,297,703; Mar. 18; v. 260; p. 483.

Leonard, John E., Los Angeles, Calif. Finder in combination with camera-shifting mechanisms for focusing. No. 1,297,704; Mar. 18; v. 260; p. 483.

Leonard, John E., Los Angeles, Calif. White-dissolve mechanism for motion-picture cameras. No. 1,298,521; Mar. 25; v. 260; p. 684.

Leonard Pump and Motor Co. (See Leonard, George I., assignor.)

Leonard, William F., Columbus, Ohio. Toy vehicle. No. 1,296,977; Mar. 11; v. 260; p. 298.

Lepley, Daniel F., Connellsville, Pa. Ventilating apparatus for mines. No. 1,297,191; Mar. 11; v. 260; p. 345.

Lepper, John H., Mason City, Iowa. Electrical priming-vaporizer. No. 1,297,369; Mar. 18; v. 260; p. 412.

Levett, Alexander, New York, N. Y. Folding and gathering device. No. 1,296,409; Mar. 4; v. 260; p. 134.

Levett, Alexander, New York, N. Y. Buffing or polishing wheel. No. 1,298,522; Mar. 25; v. 260; p. 685.

Levinsen, Claus, Brooklyn, N. Y. Steam-regulating valve. No. 1,296,410; Mar. 4; v. 260; p. 134.

Levinsen, Claus, Brooklyn, N. Y. Pressure check-valve. No. 1,296,411; Mar. 4; v. 260; p. 134.

Levinsen, Claus, Brooklyn, N. Y. Valve mechanism. No. 1,296,412; Mar. 4; v. 260; p. 134.

Levinsen, Claus, Brooklyn, N. Y. Steam-regulating valve. No. 1,297,193; Mar. 11; v. 260; p. 345.

Levinson, David, New York, N. Y. Wheel. No. 1,297,876; Mar. 18; v. 260; p. 520.

Levey, Samuel H., Chicago, Ill. Grease-gun. No. 1,296,298; Mar. 4; v. 260; p. 109.

Levy, Abraham H., New York, N. Y., assignor to Syracuse Smelting Works, Brooklyn, N. Y. Metal-cleaning apparatus. No. 1,298,229; Mar. 25; v. 260; p. 621.

Levy, Benjamin F. (See Lepointe and Levy.)

Levy, William, St. Louis, Mo. Decoy. No. 1,298,361; Mar. 25; v. 260; p. 648.

Lewis, John E., Pasadena, Cal. Steam-boiler. No. 1,296,978; Mar. 11; v. 260; p. 299.

Lewis, Lloyd V., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,296,095; Mar. 4; v. 260; p. 63.

Lewis, Robert C., Little Rock, Ark. Moisture-radiator for incubators. No. 1,296,197; Mar. 4; v. 260; p. 88.

Lewis, Rollin C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Lock. No. 1,296,538; Mar. 4; v. 260; p. 161.

Lewry, Mahlon, Brooklyn, N. Y. Furniture. No. 1,298,362; Mar. 25; v. 260; p. 648.

Liberty Burner Co. (See Yeager, Matthias S., assignor.)

Liberty, Saul R., Pawtucket, R. I. Bobbin holder for shuttles. No. 1,296,825; Mar. 11; v. 260; p. 263.

Liberty Tool Company, The. (See Diffendall, Walter H., assignor.) (Reissue.)

Lichtenhan, Henry E. (See Voss and Lichtenhan.)

Lichtenthaeler, Frank E., Newton Highlands, assignor to The Walter E. Lummus Company, Boston, Mass. Lifting-tongs. No. 1,298,064; Mar. 25; v. 260; p. 585.

Lienke, Carl F., Minneapolis, Minn. Dadoing-machine. No. 1,298,065; Mar. 25; v. 260; p. 585.

Lillie, Arthur C. (See Spencer and Lillie.)

Linde, Olaf N., and A. Linder, Lindberg, Wash. Inkstand. No. 1,297,877; Mar. 18; v. 260; p. 520.

Linder, Andrew. (See Linde and Linder.)

Lindgren, Frank G., assignor to The Sheffield Machine & Tool Company, Dayton, Ohio. Thread-lead indicator. No. 1,297,194; Mar. 11; v. 260; p. 346.

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Governor for elevators. No. 1,298,066; Mar. 25; v. 260; p. 586.

Lindquist, David L., Hartsdale, N. Y., and W. H. Hultgren, Roselle Park, assignors to Otis Elevator Company, Jersey City, N. J. Hydro-steam valve. No. 1,298,067; Mar. 25; v. 260; p. 586.

Lindquist, Frank D., New York, N. Y., assignor to Nitrogen Products Company, Providence, R. I. Fixing nitrogen. No. 1,298,363; Mar. 25; v. 260; p. 648.

Lindsay, Fred H., Campello, assignor of one-half to Woodward & Wright Last Company, Brockton, Mass. Knife grinding machine. No. 1,296,979; Mar. 11; v. 260; p. 299.

Lindsay, James E., Selma, La. Hose and garment supporter. No. 1,296,674; Mar. 11; v. 260; p. 229.

Lindstaedt, Fred, Fairmont, Minn. Collapsible flagpole. No. 1,297,578; Mar. 18; v. 260; p. 456.

Lingsch, Frederick A., New York, N. Y. Piano-action. No. 1,296,826; Mar. 11; v. 260; p. 263.

Lippincott, Roy A., and E. F. Billson, Melbourne, Victoria, Australia. Fastener for hinged structures. No. 1,297,195; Mar. 11; v. 260; p. 346.

Litchfield, Henry L., and C. E. Shiplet, assignors to The Litchfield Manufacturing Company, Waterloo, Iowa. Composite metal wheel. No. 1,297,973; Mar. 18; v. 260; p. 541.

Litchfield Manufacturing Company, The. (See Litchfield and Shiplet, assignors.)

Little, Herbert L., Jeffersonville, Ohio. Hog-oiler. No. 1,295,908; Mar. 4; v. 260; p. 20.

Little, Ivan B., North Manchester, Ind. Wick-extractor. No. 1,296,413; Mar. 4; v. 260; p. 134.

Little, Thomas P., assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Process and apparatus for the treatment of plastic substances. No. 1,297,482; Mar. 18; v. 260; p. 435.

Livingston, D. M., New York, N. Y. Attachment for automobiles. No. 1,298,523; Mar. 25; v. 260; p. 685.

Lloyd, Marshall B., Menominee, Mich. Producing woven-reed articles. No. 1,298,230; Mar. 25; v. 260; p. 621.

Lloyd, Marshall B., Menominee, Mich. Producing woven-reed articles. No. 1,298,231; Mar. 25; v. 260; p. 622.

Lloyd, Marshall B., Menominee, Mich. Producing woven-reed articles. No. 1,298,232; Mar. 25; v. 260; p. 622.

Lloyd, Marshall B., Menominee, Mich. Producing woven-reed articles. No. 1,298,233; Mar. 25; v. 260; p. 622.

Lobdell, Wilbur S., assignor to The Electric Storage Battery Company, Philadelphia, Pa. Hand-truck. No. 1,296,675; Mar. 11; v. 260; p. 229.

Lobe, Francisco, Brooklyn, N. Y. Internal-combustion turbine-engine. No. 1,296,980; Mar. 11; v. 260; p. 299.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Division, United Motors Corporation, Harrison, N. J. Ball-cage for roller-bearings. No. 1,297,579; Mar. 18; v. 260; p. 456.

Lockwood Folding Box Company. (See Saybolt, Chester A., assignor.)

Locomotive Stoker Company. (See Lower, Nathan M., assignor.)

Locomotive Superheater Company. (See McKee, Neal T., assignor.)

Loeffler, John V., Evansville, Ind. Auxiliary rim and tire. No. 1,296,539; Mar. 4; v. 260; p. 162.

Loewenthal, Ben, *et al.* (See Wilhelm and Posdal, assignors.)

Lohmeyer, Henry H., Ambrose, N. D. Traction device for motor-vehicles. No. 1,296,981; Mar. 11; v. 260; p. 300.

Lohrens, Louis F., Chicago, Ill. Burglar-alarm lock and door-bell. No. 1,296,982; Mar. 11; v. 260; p. 300.

Lombard, Levi W., Waltham, Mass. Can-cover-applying mechanism. No. 1,296,537; Mar. 4; v. 260; p. 161.
Lomen, Ralph (See Heitman, John, assignor.)
London, Charles E., Steveston, British Columbia, Canada. Apparatus for salvaging sunken vessels. No. 1,296,983; Mar. 11; v. 260; p. 300.
London, William J. A., Springfield, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,297,878; Mar. 18; v. 260; p. 520.
London, William J. A., Springfield, and E. M. Phillips, Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,298,524; Mar. 25; v. 260; p. 685.
Long & Allstatter Company, The. See Pater, Paul G., assignor.)
Long, Charles J., assignor to Andrew's Mill Company, Philadelphia, Pa. Protector mechanism for looms. No. 1,296,676; Mar. 11; v. 260; p. 229.
Long, Charles S., Toledo, Ohio. Planter. No. 1,296,540; Mar. 4; v. 260; p. 162.
Loomis, Evarts G., Newark, N. J. Swing-joint. No. 1,297,370; Mar. 18; v. 260; p. 412.
Loose Wiles Biscuit Company. (See Lawrence, Edward E., assignor.)
Lopez, Julian C., Habana, Cuba. Antiskidding device. No. 1,297,196; Mar. 11; v. 260; p. 346.
Lorch, William J., Cornwall-on-the-Hudson, N. Y. Supporting means for hose-clamps. No. 1,297,483; Mar. 18; v. 260; p. 436.
Lorenz, Charles F., Cleveland, Ohio, assignor to General Electric Company. Electrical controlling device. No. 1,297,879; Mar. 18; v. 260; p. 520.
Lorenz, Edward H., and W. Law, Hartford, Conn., assignors of six-ninths to Beech-Nut Packing Company, Canajoharie, N. Y., two-ninths to W. A. Lorenz, and one-ninth to K. E. Peller, Hartford, Conn. Gum-straining machine. No. 1,296,096; Mar. 4; v. 260; p. 63.
Lorenz, William A., *et al.* (See Lorenz and Law, assignors.)
Lorenz, William A., *et al.* (See Peller, Karl E., assignor.)
Louden, William, Fairfield, Iowa. Water-bowl. No. 1,296,586; Mar. 4; v. 260; p. 172.
Louden, William, Fairfield, Iowa. Manger for animal pens and stalls. No. 1,297,974; Mar. 18; v. 260; p. 541.
Loufek, Frank, Cedar Rapids, Iowa. Machine for setting wheels. No. 1,296,198; Mar. 4; v. 260; p. 88.
Louthan, Arthur C., Arcola, Ill. Railway-gate. No. 1,297,197; Mar. 11; v. 260; p. 346.
Lovejoy, Emma L., Wakefield, Mass. Hose-supporter. No. 1,298,525; Mar. 25; v. 260; p. 685.
Lovejoy, Roy F., Lowell, Mass., and G. D. Alexis, New Orleans, La. Anvil knife. No. 1,298,526; Mar. 25; v. 260; p. 686.
Loveman, William R., Lakewood, Ohio, assignor, by mesne assignments, to National Carbon Company, Inc. Purifying zirconium ores. No. 1,297,371; Mar. 18; v. 260; p. 413.
Loventhal, Allison S., Birmingham, and E. C. Nunnelley, Ashland, Ala. Mineral-separating apparatus. No. 1,297,372; Mar. 18; v. 260; p. 413.
Lower, Nathan M., Pittsburgh, Pa., assignor to Locomotive Stoker Company. Locomotive-stoker. No. 1,296,541; Mar. 4; v. 260; p. 162.
Lowther, William P., Spokane, Wash. Piston. No. 1,298,234; Mar. 25; v. 260; p. 622.
Lucey Manufacturing Corporation. (See Vreeland, Walter G., assignor.)
Luckey, Al. (See Pellissero, Nicholas C., assignor.)
Ludwigsbergs Verkstads Aktiebolag. (See Larsson, Sven, assignor.)
Ludwigsbergs Verkstads Aktiebolag. (See Svensson, Johan A., assignor.)
Lumley, Wilfrid, Cleveland, Ohio, assignor to General Electric Company. Portable lamp. No. 1,297,880; Mar. 18; v. 260; p. 521.
Lundahl, Fred A., Moline, Ill. Fender-bending machine. No. 1,296,199; Mar. 4; v. 260; p. 88.
Lundell, Alben E., assignor to Western Electric Company, Incorporated, New York, N. Y. Electric signaling system. No. 1,296,097; Mar. 4; v. 260; p. 64.
Lundius, Eric R., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,295,909; Mar. 4; v. 260; p. 20.
Lundius, Eric R., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,296,677; Mar. 11; v. 260; p. 229.
Lutey, Albert E., Detroit, Mich. Plant-receptacle. No. 1,297,484; Mar. 18; v. 260; p. 436.
Luther, Martin, Chicago, Ill. Terminal box. No. 1,295,995; Mar. 4; v. 260; p. 40.
Luther, William M., Walla Walla, Wash. Cubing-machine. No. 1,297,373; Mar. 18; v. 260; p. 413.
Lutz, Elmer T., Kansas City, Mo. Gas-burning appliance. No. 1,297,374; Mar. 18; v. 260; p. 413.
Lydon, Edward C., San Mateo, Cal. Lawn-renovator and treating lawns. No. 1,297,198; Mar. 11; v. 260; p. 346.
Lyle Corrugated Culvert Company. (See Frazer and Robertson, assignors.)
Lyle, Percy A. (See Kinney, Charles S., assignor.)
Lynch, James W., East St. Louis, Ill., assignor to Obear-Nester Glass Company, St. Louis, Mo. Glass-blowing machine. No. 1,297,706; Mar. 18; v. 260; p. 484.
Lyon, Fred C., Fayette, Ohio. Phonograph sound-chamber or horn. No. 1,295,910; Mar. 4; v. 260; p. 20.
Lyon, Fred C., Fayette, Ohio. Phonograph sound-chamber or horn. No. 1,295,911; Mar. 4; v. 260; p. 20.
Lyons, Edward, *et al.* (See Butterfield, Charles V., assignor.)
Lyons, Lowell W., and J. Wills, Los Angeles, Cal.; said Wills assignor to said Lyons. Roller-bearing. No. 1,296,827; Mar. 11; v. 260; p. 263.
M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)
M. D. Knowlton Company. (See Hoch, Otto M., assignor.)
MacDonagh, Frank L., assignor to Acme Card System Company, Chicago, Ill. Filing system. No. 1,296,681; Mar. 11; v. 260; p. 230.
MacDonald, Norman J., Winnipeg, Manitoba, Canada. Portable house. No. 1,297,379; Mar. 18; v. 260; p. 414.
MacKenzie, George W., Jr., assignor to Guarantee Liquid Measure Company, Rochester, Pa. Liquid-measuring apparatus. No. 1,297,210; Mar. 11; v. 260; p. 349.
Macfie, Robert F., London, England. Motor-vehicle. No. 1,298,366; Mar. 25; v. 260; p. 649.
Macfie, Robert F., London, England. Self-propelled vehicle. No. 1,298,367; Mar. 25; v. 260; p. 649.
Macleod, Albert A. (See Brown and Macleod.)
Macloskie, George, Erie, Pa., assignor to General Electric Company. Air-brake system. No. 1,297,884; Mar. 18; v. 260; p. 522.
Macloskie, George, Erie, Pa., assignor to General Electric Company. Car-controller. No. 1,298,528; Mar. 25; v. 260; p. 686.
Macneale, Neil, Cincinnati, Ohio, assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass. Electric riveting apparatus. No. 1,297,965; Mar. 18; v. 260; p. 539.
Macneale, Neil, Cincinnati, Ohio, assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass. Electric riveting apparatus. No. 1,297,966; Mar. 18; v. 260; p. 540.
Maddox, Robert D., Washington, D. C. Adjustable tool-handle. No. 1,296,416. Mar. 4; v. 260; p. 135.
Maddox, Robert D., U. S. Army. Surgical splint. No. 1,298,529; Mar. 25; v. 260; p. 686.
Magness, Grover C., Sardis, La. Electric-light bracket. No. 1,297,211; Mar. 11; v. 260; p. 349.
Maier, John, Detroit, Mich. Well-drilling tool. No. 1,297,708; Mar. 18; v. 260; p. 484.
Maier, John J., *et al.* (See Forthmiller, Otto, assignor.)
Maire, Frank L., *et al.* (See Grosjean, James E., assignor.)
Makaroff, Wadim, Washington, D. C. Apparatus for training range-finder operators. No. 1,297,967; Mar. 18; v. 260; p. 540.
Malhoit, Joseph H., West Haven, and A. O. Poirier, New Haven, Conn. Timing device for explosive-engines. No. 1,297,212; Mar. 11; v. 260; p. 349.
Malkevic, John, Amsterdam, N. Y. Picture-frame. No. 1,296,544; Mar. 4; v. 260; p. 163.
Malone, John F. J., assignor to The Sentinal Company, Limited, Newcastle-upon-Tyne, England. Distance-thermometer. No. 1,298,075; Mar. 25; v. 260; p. 587.
Maloney, Robert J., Holyoke, Mass. Combined extractor for closures for bottles, &c., and stoppers. No. 1,296,545; Mar. 4; v. 260; p. 163.
Mandabach, Nicholas, Vincennes, Ind. Mining-car coupling. No. 1,298,238; Mar. 25; v. 260; p. 623.
Manderscheid, Thomas R., Terrebonne, Oreg. Stone-gatherer. No. 1,298,239; Mar. 25; v. 260; p. 623.
Mangels, W. T., Brooklyn, N. Y. Amusement apparatus. No. 1,296,417; Mar. 4; v. 260; p. 135.
Manhattan Electrical Supply Company. (See Schwartz, Edward, assignor.)
Manly, Charles M., Freeport, N. Y. Power-driven adjusting mechanism. No. 1,296,303; Mar. 4; v. 260; p. 111.
Mann, Arthur S., deceased, Schenectady, N. Y., E. D. Mann, administratrix, assignor to General Electric Company. Apparatus for burning powdered fuel. No. 1,298,530; Mar. 25; v. 260; p. 686.
Mann, Eleanor D., administratrix. (See Mann, Arthur S.)
Mansell, John H., assignor to The Coventry Ordnance Works, Limited, Coventry, England. Fuse for projectiles. No. 1,298,076; Mar. 25; v. 260; p. 588.
Mansfield Electric Hardware Manufacturing Company, The. (See Keller, Claude A., assignor.)
Manson, Ray H., Rochester, N. Y., assignor to Garford Manufacturing Company, Elyria, Ohio. Circuit-controller. No. 1,295,912; Mar. 4; v. 260; p. 21.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Push-button switch. No. 1,295,913; Mar. 4; v. 260; p. 21.
Manson, Ray H., Rochester, N. Y., assignor to The Garford Manufacturing Company, Elyria, Ohio. Circuit-controller. No. 1,295,914; Mar. 4; v. 260; p. 21.
Manton, Edwin W., assignor to C. J. Waters, Port Broughton, South Australia, Australia. Machine for rabbeting and recessing and chamfering square or angular corners. No. 1,298,531; Mar. 25; v. 260; p. 686.
Manwaring, Leverett A., Middletown, Conn. Toy construction. No. 1,298,240; Mar. 25; v. 260; p. 623.

Mapelsden, Harold H., Schenectady, N. Y., assignor to General Electric Company. Pressure-difference-creating device for flow-meters and the like. No. 1,298,532; Mar. 25; v. 260; p. 687.
Marcinkiewicz, Casimir, Detroit, Mich. Box or crate. No. 1,297,885; Mar. 18; v. 260; p. 522.
Marconi Wireless Telegraph Company of America. (See Franklin, Charles S., assignor.)
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Sanitary closet. No. 1,297,709; Mar. 18; v. 260; p. 484.
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Sanitary closet. No. 1,297,710; Mar. 18; v. 260; p. 485.
Mardis, Paul L., Altoona, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control apparatus and system. No. 1,295,915; Mar. 4; v. 260; p. 21.
Marin, Alexandre J., Stockholm, Sweden. Explosive. No. 1,297,213; Mar. 11; v. 260; p. 350.
Marion Steam Shovel Company, The. (See King, Johnson, and Jacoby, assignors.)
Marriott, James L., Oskaloosa, Iowa. Reel. No. 1,297,380; Mar. 18; v. 260; p. 415.
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Marsh, Edwin T., Rochester, N. Y. Baling-press. No. 1,296,830; Mar. 11; v. 260; p. 264.
Marshall, James E., Cleveland, Ohio, assignor to General Electric Company. Apparatus for shaping filaments. No. 1,298,533; Mar. 25; v. 260; p. 687.
Marshall, James E., and T. J. Volz, Caney, Kans. Automobile lock and signal. No. 1,297,214; Mar. 11; v. 260; p. 350.
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Martin, Paul E., township 6 south, range 6 east, Custer county S. D. Tension-gate. No. 1,298,241; Mar. 25; v. 260; p. 624.
Martus, Martin L. (See Schoenmehl and Martus.)
Masiliunas, Kazimiras, Chicago, Ill. Candlestick. No. 1,296,682; Mar. 11; v. 260; p. 230.
Mason, Charles T., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Ignition-dynamo. No. 1,298,534; Mar. 25; v. 260; p. 687.
Mason, Julius H., Duncan Falls, assignor of one-half to S. M. Garrett, Muskingum county, Ohio. Sectional coal-auger nut. No. 1,297,215; Mar. 11; v. 260; p. 350.
Massey-Harris Company, The. (See Rieske, Otto G., assignor.)
Mastick, Edwin A., Jr., Cleveland, Ohio. Shingle-strip. No. 1,298,535; Mar. 25; v. 260; p. 687.
Mastick, Edwin A., Jr., Cleveland, Ohio. Shingle-strip. No. 1,298,536; Mar. 25; v. 260; p. 687.
Masumian, James G., Brooklyn, N. Y. Figure toy. No. 1,298,077; Mar. 25; v. 260; p. 588.
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Mathison, Andrew A., Vontress, Tex. Beet-harvester. No. 1,297,298; Mar. 11; v. 260; p. 369.
Matteus, August E., Gilby, Alberta, Canada. Shell. No. 1,297,216; Mar. 11; v. 260; p. 350.
Maurice Tauber Company, The. (See Tauber and Schenke, assignors.)
Maxfield, Joseph P., Maplewood, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-transmitter. No. 1,296,683; Mar. 11; v. 260; p. 231.
Maxted, Edward B., Walsall, England. Manufacture of a hydrogen-nitrogen mixture. No. 1,296,992; Mar. 11; v. 260; p. 302.
May, Jesse A., Springfield, assignor of one-eighth to R. C. Bottom and one-eighth to J. O. Milton, Mackville, one-eighth to J. E. Brown, Harrodsburg, and one-eighth to J. T. Skeins, Springfield, Ky. Railway-gate. No. 1,298,537; Mar. 25; v. 260; p. 687.
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Mays, James F., Birmingham, Ala., assignor to Mays Accounting Machine Company, Lexington, N. C. Quotient-registering mechanism for calculating-machines. No. 1,297,711; Mar. 18; v. 260; p. 485.
Mayse, Henry F., Girvin, Tex. Shade and curtain holder. No. 1,297,886; Mar. 18; v. 260; p. 522.
McAulay, George, Rumford Falls, Me., assignor to International Paper Company. Paper-making machine. No. 1,296,299; Mar. 4; v. 260; p. 110.
McAuley, Joseph A., West New York, N. Y. Attaching means for removable dentures. No. 1,297,199; Mar. 11; v. 260; p. 346.
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McCain, William M., Chicago, Ill. Sheet-feeding machine. No. 1,297,707; Mar. 18; v. 260; p. 484.
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McCanna, Benjamin T., and E. R. Kiemm, Chicago, Ill. Gas-engine governor and auxiliary air-inlet. No. 1,296,068; Mar. 25; v. 260; p. 586.
McCarthy, Edward F., Chicago, Ill., assignor to Vacuum Machinery Co., Marinette, Wis. Hydro-turbine vacuum-pump. No. 1,296,828; Mar. 11; v. 260; p. 263.
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McClain, Frank L. (See West, George W., assignor.)
McClain, Jamesie E., Tempe, Ariz. Ditch builder and cleaner. No. 1,295,996; Mar. 4; v. 260; p. 40.
McClure, John, Glenside, Pa. Inking mechanism for printing-presses. No. 1,296,098; Mar. 4; v. 260; p. 64.
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McConnell, James W., Washington, D. C., assignor to the Government of the United States. Spray-nozzle. No. 1,296,542; Mar. 4; v. 260; p. 162.
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McConway & Torley Company, The. (See Milliken and Regan, assignors.)
McCormack, William D., Nashville, Tenn. Attachment for aircraft to render same invisible. No. 1,297,882; Mar. 18; v. 260; p. 521.
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McCrillis, Jasper, Modale, Iowa. Head-rest. No. 1,298,235; Mar. 25; v. 260; p. 622.
McDonald, Arthur E., San Francisco, Cal. Gear-shift lock. No. 1,296,099; Mar. 4; v. 260; p. 64.
McEachern, Samuel D., Jayton, Tex. Cotton-picker. No. 1,297,376; Mar. 18; v. 260; p. 414.
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McFarland, Owen D., Chicago, Ill. Making shingle-simulating roofing strips. No. 1,296,984; Mar. 11; v. 260; p. 300.
McGehan, Patrick H., New York, N. Y. Safety non-slippable pedal plate or cap. No. 1,297,202; Mar. 11; v. 260; p. 347.
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McGovern, Daniel F., Montpelier, Vt. Polishing-wheel. No. 1,296,985; Mar. 11; v. 260; p. 300.
McGunigal, Sylvester B., assignor to The Stone Straw Company, Washington, D. C. Tube-cutting machine. No. 1,297,203; Mar. 11; v. 260; p. 347.
McIlroy, Peter, Allison Park, assignor to Enameled Metals Company, Sharpsburg, Pa. Pipe-protector. No. 1,296,678; Mar. 11; v. 260; p. 229.
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McIntosh, James A., La Fayette, Ind., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire hanger. No. 1,296,829; Mar. 11; v. 260; p. 264.
McIntosh, James O., Milford, Utah. Torpedo-guard. No. 1,296,543; Mar. 4; v. 260; p. 162.
McIntyre, Michael M., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Vehicle-spring. No. 1,298,069; Mar. 25; v. 260; p. 586.
McKaig, Eddy T., Waukegan, Ill. Friction-drive mechanism for automobiles. No. 1,297,485; Mar. 18; v. 260; p. 436.
McKay, Walter G., Casper, Wyo. Single-delivery toothpick-holder. No. 1,296,986; Mar. 11; v. 260; p. 301.
McKean, Edward S., Yonkers, N. Y., assignor of one-half to A. G. Jackson, Washington, D. C. Automobile-lock. No. 1,296,987; Mar. 11; v. 260; p. 301.
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Locomotive. No. 1,298,070; Mar. 25; v. 260; p. 587.
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McKenney, Emerson, assignor to McKenney-Carr Company, Bangor, Me. Pruning-shears. (Reissue.) No. 14,614; Mar. 18; v. 260; p. 545.
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McKinley, Harry C., assignor of one-half to C. Marsh, Elyria, Ohio. Boring and cutting tool. No. 1,298,071; Mar. 25; v. 260; p. 587.
McLane, John W., Washington, D. C. Preparing dried sweet corn. No. 1,297,204; Mar. 11; v. 260; p. 347.
McLaren, Alexander, Dayton, Ohio. Ice-cream-cone dispenser. No. 1,297,205; Mar. 11; v. 260; p. 347.
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McMahan, Delbert I., assignor of one-fourth to M. G. Ives, Des Moines, Iowa. Machine for cleaning and repairing radiators. No. 1,297,580; Mar. 18; v. 260; p. 457.

McMann, Margaret H., New York, N. Y. Nipple. No. 1,297,207; Mar. 11; v. 260; p. 348.
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McMillin, Oliver B., Pittsburgh, Pa., assignor to Pittsburgh Rolls Corporation. Manufacturing rolls. No. 1,296,200; Mar. 4; v. 260; p. 88.
McMurtrie, Thomas A., assignor of two-thirds to J. A. Flahive, Los Angeles, Cal. Pipe-making machine. No. 1,297,208; Mar. 11; v. 260; p. 348.
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McMyler, John, Cleveland, assignor, by mesne assignments, to The McMyler Interstate Company, Bedford, Ohio. Hoisting and conveying apparatus. No. 1,296,201; Mar. 4; v. 260; p. 88.
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McNear, Fred W., Menlo Park, and P. E. Bowles, Jr., Reward, Calif. Apparatus for dehydrating oil. No. 1,297,378; Mar. 18; v. 260; p. 414.
McNeel, Grant, North Platte, Nebr. Pocket check-protector. No. 1,298,073; Mar. 25; v. 260; p. 587.
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McNeill, George, Detroit, Mich., assignor to Morgan & Wright. Bead-wrapping apparatus. No. 1,296,991; Mar. 11; v. 260; p. 302.
McPherson, Alexander R., and E. H. Munro, assignors to Windsor Foundry and Machine Company Ltd., Windsor, Nova Scotia, Canada. Power-drive for ships' hoisting and pumping machinery. No. 1,298,074; Mar. 25; v. 260; p. 587.
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McQuarrie, James L., Montclair, N. J., and C. L. Goodrum, New York, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y. Telephone system. No. 1,298,237; Mar. 25; v. 260; p. 623.
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Marx, Richard, assignor to Defiance Manufacturing Company, Philadelphia, Pa. Calendar-stand. No. 1,296,304; Mar. 4; v. 260; p. 111.
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Mead, George A., assignor to The Ohio Brass Company, Mansfield, Ohio. Rail-bond. No. 1,297,382; Mar. 18; v. 260; p. 415.
Mead, George A., assignor to The Ohio Brass Company, Mansfield, Ohio. Rail-bond. No. 1,297,383; Mar. 18; v. 260; p. 415.
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Medgyes, Charles, Budapest, Hungary. Apparatus for carrying out gaseous reactions under high pressure. No. 1,295,917; Mar. 4; v. 260; p. 22.
Meghan, Oliver P., Westerville, Ohio. Insulator-support. No. 1,295,918; Mar. 4; v. 260; p. 22.
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Meier, Marcel, Los Angeles, Cal. Adjustable violin shoulder-support. No. 1,296,831; Mar. 11; v. 260; p. 264.
Meigs, Charles H., Philadelphia, Pa., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y. Fire-extinguishing apparatus. No. 1,296,993; Mar. 11; v. 260; p. 302
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Merkel, Joseph F., Flushing, N. Y. Motor-wheel. No. 1,297,218; Mar. 11; v. 260; p. 350.
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Merrill, Edward B., Toronto, Ontario, Canada. Bread-board. No. 1,297,712; Mar. 18; v. 260; p. 485.
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Merritt, Benjamin F., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telegraph-printer. No. 1,295,998; Mar. 4; v. 260; p. 40.
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Merwin, James E., assignor to A. E. Perry, Portland, Oreg. Shim. No. 1,296,418; Mar. 4; v. 260; p. 135.
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Metzger, Charles T., assignor to The Pullman Couch Company, Chicago, Ill. Knockdown furniture. No. 1,297,714; Mar. 18; v. 260; p. 485.
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Meyer, Albert J. (See Mott, Meyer, Halteman, and Wheawill.)
Meyer, Fred G., Detroit, Mich. Spark-plug intensifier. No. 1,296,101; Mar. 4; v. 260; p. 65.
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Michel, Henry, Sublette, Ill. Automatic flame-regulator. No. 1,297,887; Mar. 18; v. 260; p. 522.
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Michki, Jozsef, Terre Haute, Ind. Combination-tool for shoemakers. No. 1,297,386; Mar. 18; v. 260; p. 416.
Mick, Francis E. (See Dick, Samuel M., assignor.)
Middlesex Machine Company. (See Brassill, Frank A., assignor.)
Midgley, Thomas, Jr., Dayton, Ohio, assignor to The Dayton Metal Products Company. Fuel for internal-combustion engines. No. 1,296,832; Mar. 11; v. 260; p. 264.
Miehle Printing Press & Manufacturing Company. (See Rich, Frank E., assignor.)
Mikkelsen, Edward, Chicago, Ill. Door-catch. No. 1,297,221; Mar. 11; v. 260; p. 351.
Milano, Silvestro, New York, N. Y. Snap-fastener. No. 1,296,001; Mar. 4; v. 260; p. 41.
Milde, George S., assignor of one-half to Textilite Engineering Company Limited, London, England. Machine for forming twine or cord from ribbons of paper. No. 1,298,369; Mar. 25; v. 260; p. 649.
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Miller, Daniel J., Waynesboro, Pa., assignor to Landis Machine Company. Die-head. No. 1,296,546; Mar. 4; v. 260; p. 163.
Miller, Earl L., Overbrook, Kans. Timer-brush. No. 1,296,420; Mar. 4; v. 260; p. 136.
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Miller, Freeman P., Baldwinsville, N. Y. Forced-draft system and smoke-consumer. No. 1,297,582; Mar. 18; v. 260; p. 457.
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Miller, John B., Detroit, Mich. Machine for cutting or slicing food products. No. 1,296,102; Mar. 4; v. 260; p. 65.

Miller, John C., Covington, Ky., assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio. Bottle-handling apparatus. No. 1,296,547; Mar. 4; v. 260; p. 163.

Miller, Levi B., Lynn, Mass., assignor to General Electric Company. Device for making jewels. No. 1,298,540; Mar. 25; v. 260; p. 688.

Miller, Max, New York, N. Y. Means for forming concrete piles. No. 1,296,995; Mar. 11; v. 260; p. 303.

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Miller, Samuel J. (See Grabert, Gustave W., assignor.)

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Miller Train Control Corporation, The. (See Murray, William B., assignor.)

Milliken, Isaac H., Aspinwall, and W. J. Regan, Pittsburgh, assignors to The McConway & Torley Company, Pittsburgh, Pa. Uncoupling and centering mechanism. No. 1,298,370; Mar. 25; v. 260; p. 650.

Mills, Emory S., assignor to Muncie Wheel Company, Muncie, Ind. Tractor-drive. No. 1,296,997; Mar. 11; v. 260; p. 303.

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Milton, J. O., *et al.* (See May, Jesse A., assignor.)

Milwaukee Paper Box Company. (See Carlson, Walter C., assignor.)

Mink, Benjamin L., Philadelphia, Pa. Paper-clip. No. 1,298,542; Mar. 25; v. 260; p. 689.

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Mitchell, William H., Chicago, Ill. Stove. No. 1,298,245; Mar. 25; v. 260; p. 624.

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Mobley, Lewis K., New York, N. Y. Automatic spraying-bottle. No. 1,298,543; Mar. 25; v. 260; p. 689.

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Mock, Hugo, New York, N. Y. Picture-hanger. No. 1,297,584; Mar. 18; v. 260; p. 457.

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Moeller, Annetta, Indianapolis, Ind. Holder for personal-treatment preparations. (Reissue.) No. 14,619; Mar. 25; v. 260; p. 707.

Moffatt, Clarence W., Maywood, Ill. Insole-making machine. No. 1,298,371; Mar. 25; v. 260; p. 650.

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,296,002; Mar. 4; v. 260; p. 41.

Mohr, Frank J., assignor to Stuber & Kuck Company, Peoria, Ill. Flour-sifter. No. 1,298,626; Mar. 25; v. 260; p. 705.

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Moisant, Alfred J., New York, N. Y., assignor, by mesne assignments, to General Research Laboratories, Ozonising substances. No. 1,297,716; Mar. 18; v. 260; p. 486.

Mole, Ernest H., assignor to Sir W. G. Armstrong, Whitworth and Company, Limited, Newcastle-upon-Tyne, England. Buffer. No. 1,298,078; Mar. 25; v. 260; p. 588.

Moller, Carl N., New York, N. Y. Phonograph-reproducer. No. 1,296,833; Mar. 11; v. 260; p. 264.

Molnar, Joseph, Goose Bill, Mont. Apparatus for roasting or drying ores. No. 1,296,834; Mar. 11; v. 260; p. 265.

Mondor, Hector J., Holyoke, Mass. Device for making and forming cigarettes. No. 1,296,548; Mar. 4; v. 260; p. 164.

Mongardi, Giovanni, Somerville, Mass. Automatic firearm. No. 1,296,204; Mar. 4; v. 260; p. 89.

Monk, Thomas H., Thomasville, Ga. Stump-puller. No. 1,298,372; Mar. 25; v. 260; p. 650.

Monneuse, Edward W., West New Brighton, N. Y. Oil-cock opening and cleaning tool. No. 1,296,205; Mar. 4; v. 260; p. 89.

Monro, Edward H. (See McPherson and Monro.)

Monroe, Helen G., Riverside, Ill. Detachable fastener. No. 1,297,890; Mar. 18; v. 260; p. 523.

Monsen, Adolph, Chicago, Ill., assignor of one-half to N. Van Zandt, Logansport, Ind. Brake-adjusting device. No. 1,296,835; Mar. 11; v. 260; p. 265.

Montague, Harold E., assignor of one-half to E. A. Fritse, Philadelphia, Pa. Internal-combustion engine. No. 1,298,079; Mar. 25; v. 260; p. 588.

Montalto, Vito, Allentown, Pa. Dish-washing machine. No. 1,298,544; Mar. 25; v. 260; p. 689.

Montgomery, Leon F., *et al.* (See Grosjean, James R., assignor.)

Montreal Patents Promoting Co. Limited. (See L'heureux, Ludger, assignor.)

Moor, Edward N., Oakland, Calif., assignor to Combination Police Club and Extension Pistol Barrel Corporation. Extension pistol-barrel. No. 1,297,891; Mar. 18; v. 260; p. 523.

Moore, George, Joplin, Mo. Filter. No. 1,296,685; Mar. 11; v. 260; p. 231.

Moore, George A., Medford, Mass. Capstan-screw. No. 1,297,222; Mar. 11; v. 260; p. 352.

Moquist, Peter, Minneapolis, Minn. Furnace. No. 1,296,306; Mar. 4; v. 260; p. 111.

Morali, Ricciotti, assignor to Società Anonima Italiana Iator for steam-boilers. No. 1,296,206; Mar. 4; v. 260; p. 90.

Moran, Thomas W., Birmingham, Ala., assignor of one-fourth to E. S. Curtin. Advertising display apparatus. No. 1,296,307; Mar. 4; v. 260; p. 112.

Morgan, Charles N., Hildreth, Nebr. Automatic oiling device for vehicle-wheels. No. 1,297,717; Mar. 18; v. 260; p. 486.

Morgan & Wright. (See McNeill, George, assignor.)

Morris, Elzy V., assignor to James H. Channon Mfg. Co., Chicago, Ill. Trimming device for scenery and the like. No. 1,296,422; Mar. 4; v. 260; p. 136.

Morris, Hurd T. (See Simmon and Morris.) (Reissue.)

Moru, Carl, assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Head-lamp. No. 1,298,545; Mar. 25; v. 260; p. 689.

Mosher, Lewis A., Goose Creek, Tex. Oil-well torpedo. No. 1,296,836; Mar. 11; v. 260; p. 265.

Moss, Frank B. (See Gary and Moss.)

Mossop, George. (See Schmidt, August, assignor.)

Mott, Abraham C., Jr., A. J. Meyer, J. K. Halteman, and C. H. Wheawill, assignors to Abram Cox Stove Company, Philadelphia, Pa. Mold for casting shells. No. 1,298,373; Mar. 25; v. 260; p. 650.

Mott, Owen E. (See Holley and Mott.)

Mott, William P., Chicago, Ill. Sand-blast apparatus. No. 1,297,223; Mar. 11; v. 260; p. 352.

Mott, William R., Lakewood, Ohio, assignor, by mesne assignments, to National Carbon Company, Inc. Fume-absorber for electric lamps. No. 1,297,387; Mar. 18; v. 260; p. 416.

Mouck, William E., Santa Barbara, Calif. Vulcanizing fuel. No. 1,298,546; Mar. 25; v. 260; p. 689.

Mouck, William E., *et al.* (See White, Charles T., assignor.)

Mougey, Harry C., and J. M. H. Jacobs, Dayton, Ohio, assignors to The Dayton Metal Products Company. Fuel-tank. No. 1,298,080; Mar. 25; v. 260; p. 589.

Moulton, Harley C., Dorchester, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass. Needle actuating and shogging mechanism for blindstitch sewing-machines. No. 1,298,246; Mar. 25; v. 260; p. 622.

Mowery, Sterling L., Nescopeck, Pa. Transmission-clutch control. No. 1,296,837; Mar. 11; v. 260; p. 265.

Moyer, Franklin T., Napa, Calif. Scarifier. No. 1,298,374; Mar. 25; v. 260; p. 651.

Muehlberg, Karl O., Manitowoc, Wis. Tube-coupling. No. 1,296,103; Mar. 4; v. 260; p. 66.

Mueller, Curt L. E., Joliet, Ill. Motor-fuel. No. 1,297,388; Mar. 18; v. 260; p. 417.

Mueller, Frederick A., Indianapolis, Ind. Combined cabinet and automobile-repair trundle-platform. No. 1,297,224; Mar. 11; v. 260; p. 352.

Mueller, Frederick H., Grand Rapids, Mich. Rocking-chair. No. 1,297,718; Mar. 18; v. 260; p. 486.

Mueller, Vinzens, assignor to V. Mueller & Co., Chicago, Ill. Tonsil-remover. No. 1,297,389; Mar. 18; v. 260; p. 417.

Mueller, William V., Millstadt, Ill. Switch. No. 1,297,390; Mar. 18; v. 260; p. 417.

Muhlhausen, William C., Brooklyn, N. Y. Building-blocks and mechanical bond therefor. No. 1,295,919; Mar. 4; v. 260; p. 22.

Müller, Henry, Waterbury, Conn., assignor to The Shoe Hardware Company. Boot-last. No. 1,296,996; Mar. 11; v. 260; p. 303.

Muller, John P., San Fernando, Calif. Windmill. No. 1,298,247; Mar. 25; v. 260; p. 625.

Müller-Meyer, Emil, Wallisellen, Switzerland. Hinge for doors, windows, flaps, and the like. No. 1,298,547; Mar. 25; v. 260; p. 689.

Mummert, Arden J., and J. T. Woodbridge, assignors to McQuay-Norris Manufacturing Company, St. Louis, Mo. Packing-ring. No. 1,298,548; Mar. 25; v. 260; p. 689.

Muncie Wheel Company. (See Mills, Emory S., assignor.)

Mundy, Harry, and A. Stock, Montreal, Quebec, Canada; said Mundy assignor to said Stock. Cutter. No. 1,296,549; Mar. 4; v. 260; p. 164.

Munsell, Harry W., Indianapolis, Ind., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Semi-automatic telephone system. No. 1,296,104; Mar. 4; v. 260; p. 66.

Murphy, John N., Springfield, Ill., assignor of one-third to F. H. Baker, Tulsa, Okla. Siphon flush-tank. No. 1,298,549; Mar. 25; v. 260; p. 690.

Murphy, Walter P., New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,296,308; Mar. 4; v. 260; p. 112.

Murray, Howard J., Brooklyn, N. Y. Motor type of electric gear-shift. No. 1,295,920; Mar. 4; v. 260; p. 22.
Murray, Montford B., Albion, Mich. Casting-separating machine. No. 1,297,486; Mar. 18; v. 260; p. 436.
Murray, William B., Danville, Ill., assignor to The Miller Train Control Corporation, Staunton, Va. Train-control system. No. 1,296,838; Mar. 11; v. 260; p. 266.
Musa, Estoppey & Co. (See Estoppey, Georges, assignor.)
Mutchnik, Henry, and H. Rudow, Baltimore, Md. Window. No. 1,297,892; Mar. 18; v. 260; p. 523.
Muto, Tomenosuke, Kobe, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Producing an extract of proteolytic enzyms. No. 1,296,599; Mar. 4; v. 260; p. 175.
Muto, Tomenosuke, Kobe, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Producing an extract of proteolytic enzyms. No. 1,296,600; Mar. 4; v. 260; p. 175.
Muto, Tomenosuke, Kobe, assignor to Kanegafuchi Boseki Kabushiki Kwaisha, Tokyo-Fu, Japan. Treating silk fibers. No. 1,296,601; Mar. 4; v. 260; p. 176.
Muzzy, William H., Chicago, Ill. Fuel-feeding device for automobiles. (Reissue.) No. 14,602; Mar. 4; v. 260; p. 176.
Myerberg, Isidor, *et al.* (See Wolcott, Charles M., assignor.)
Myerberg, Samuel, *et al.* (See Wolcott, Charles M., assignor.)
Myers, Bertha B., Los Angeles, Cal. Combination-garment. No. 1,297,225; Mar. 11; v. 260; p. 352.
Myers, Eugene V., East Orange, N. J., assignor to A. Schrader's Son, Inc., Brooklyn, N. Y. Pump-coupling or the like. No. 1,297,719; Mar. 18; v. 260; p. 487.
Myers, Jacob S., Hagerstown, Md. Wagon hay-rack. No. 1,296,207; Mar. 4; v. 260; p. 90.
Myers, Robert R., assignor to Capital City Printing Plate Company, Des Moines, Iowa. Blackleading-machine. No. 1,296,839; Mar. 11; v. 260; p. 266.
Naito, Gengo, Toppenish, Wash. Cutting attachment for roll-paper holders. No. 1,298,081; Mar. 25; v. 260; p. 589.
Nash, Charles H., Ravenna, Ohio. Trap. No. 1,297,893; Mar. 18; v. 260; p. 524.
Nash Engineering Company. (See Jennings, Irving C., assignor.)
National Carbon Company. (See Loveman, William R., assignor.)
National Carbon Company. (See Mott, William R., assignor.)
National Fire Proofing Co. (See Keasbey, Rowland P., assignor.)
National Lock-In-Tank Company, The. (See Klopfenstein and Brier, assignors.)
National Machinery Co., The. (See Clouse, William L., assignor.)
National Malleable Castings Company, The. (See Byers, Jacob J., assignor.)
National Supply Company, The. (See Wright, Clyde S., assignor.)
National Shorthand Machine Company. (See Ireland, Ward S., assignor.)
National Tube Company. (See Hazeltine, Benjamin P., assignor.)
Nau, Frank L. and H. D., Crookston, Minn. Potato-hiller. No. 1,296,849; Mar. 11; v. 260; p. 267.
Nau, Harry D. (See Nau, Frank L. and H. D.)
Navratil, Frank, Kealy Springs, Saskatchewan, Canada. Connection-bar. No. 1,296,105; Mar. 4; v. 260; p. 66.
Navrot, Stanley, Hellwood, Pa. Fly-trap. No. 1,297,894; Mar. 18; v. 260; p. 524.
Naylor, Carl G., Chicago, Ill. Expansible mandrel. No. 1,296,106; Mar. 4; v. 260; p. 66.
Neal, William C., Abilene, Tex. Clothes-pin. No. 1,296,841; Mar. 11; v. 260; p. 267.
Neal, William H., London, England. Pipe for regulating the smoking of tobacco. No. 1,297,895; Mar. 18; v. 260; p. 524.
Needham, Frank M. (See Leeds, Loring L., assignor.)
Neef, William, Pocatello, Idaho. Baking-pan. No. 1,296,423; Mar. 4; v. 260; p. 136.
Neff, Adolph A., Chicago, Ill. Internal-combustion-engine construction. No. 1,296,686; Mar. 11; v. 260; p. 231.
Neff, John, Sr., West Hoboken, N. J. Airship. No. 1,298,082; Mar. 25; v. 260; p. 589.
Nelson, Carl F. (See Hammond and Nelson.)
Nelson, John A., *et al.* (See Shields, Nelson, assignor.)
Nelson, Leon J., Omaha, Nebr. Machine for box-making. No. 1,297,391; Mar. 18; v. 260; p. 417.
Nelson, Leon J., Omaha, Nebr. Box-assembling machine. No. 1,297,392; Mar. 18; v. 260; p. 417.
Nervo, Frank, Jr., Geyserville, Calif. Engine-primer. No. 1,297,896; Mar. 18; v. 260; p. 524.
Nesbitt, James H., and J. C. Lauritzen, assignors of one-third to said Lauritzen and two-thirds to The Williams Foundry and Machine Company, Akron, Ohio. Separable core. No. 1,297,226; Mar. 11; v. 260; p. 352.
Netzel, Richard J., Cleveland, Ohio. Tractor device for motor-vehicles. No. 1,296,309; Mar. 4; v. 260; p. 112.
Neuland, Alfons H., San Francisco, Calif. Electromagnetic power-transmitting apparatus. No. 1,298,375; Mar. 25; v. 260; p. 651.
Neuland, Alfons H., New York, N. Y. Electromagnetic transmission. No. 1,298,376; Mar. 25; v. 260; p. 651.
Nevins, Frank M., Coalinga, Calif. Perforation-cleaner for well-casings. No. 1,296,083; Mar. 25; v. 260; p. 589.
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New York Belting & Packing Company. (See Thatcher, Sheldon P., assignor.)
Newell, Otis K., Philadelphia, Pa. Non-entangling device for flags. No. 1,298,550; Mar. 25; v. 260; p. 690.
Newman, Albert T., Emporia, Kans. Musical instrument. No. 1,297,585; Mar. 18; v. 260; p. 458.
Newport Chemical Works. (See Reverdin, Frederick, assignor.)
Newton, Will L., assignor of four-tenths to H. C. Tyler, Columbus, Ohio. Nut-lock. No. 1,296,003; Mar. 4; v. 260; p. 42.
Nichol, John C., Perth, Ontario, Canada. Folding-leg furniture. No. 1,298,249; Mar. 25; v. 260; p. 626.
Nichols, Harold W., Maplewood, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Means for signaling from captive balloons. No. 1,296,687; Mar. 11; v. 260; p. 232.
Nicholson, John H. (See Offutt, Dunn, and Nicholson.)
Nicols, Lowell W., Sewickley, assignor to H. C. Fry Glass Company, Rochester, Pa. Lantern. No. 1,298,084; Mar. 25; v. 260; p. 589.
Nielsen, Henry W., Brooklyn, N. Y. Convertible drill and grinder. No. 1,296,004; Mar. 4; v. 260; p. 42.
Nielsen, Herman, Copenhagen, Denmark. Outflow-regulator. No. 1,296,208; Mar. 4; v. 260; p. 90.
Niesnalski, Joseph, and J. Belczynski, Detroit, Mich. Ore-charging machine for retorts. No. 1,296,998; Mar. 11; v. 260; p. 303.
Nikonow, John P., New York, N. Y. Non-ricocheting shell. No. 1,298,085; Mar. 25; v. 260; p. 589.
Niles-Bement-Pond Company. (See Blood, Harold L., assignor.)
Niles-Bement-Pond Company. (See Buckley, Sydney, assignor.)
Niles-Bement-Pond Company. (See Hagman, William J., assignor.)
Niles-Bement-Pond Company. (See Sears, Willard T., assignor.)
Niles-Bement-Pond Company. (See Wais, Albert C., assignor.)
Nippon Yusen Kwaisha Ltd. (See Hashimoto, Shuso, assignor.)
Nitrogen Products Company. (See Lindquist, Frank D., assignor.)
Noah, Robert S., Annapolis, assignor to H. B. Reinhardt, trustee, Roland Park, Md. Disappearing tower for submarines. No. 1,296,689; Mar. 11; v. 260; p. 232.
trustee, Roland Park, Md. Submarine gun-turret. No. 1,296,688; Mar. 11; v. 260; p. 232.
Noah, Robert S., Annapolis, assignor to H. B. Reinhardt,
Nolan, Francis A., St. Paul, Minn. Shoe-sole. No. 1,297,720; Mar. 18; v. 260; p. 487.
Nolan, Francis A., St. Paul, Minn. Rubber sole. No. 1,298,551; Mar. 25; v. 260; p. 690.
Non Skid Company of America. (See Harrington, Albert H., assignor.)
Nonotuck Silk Company. (See Shearn, Joseph H., assignor.)
Noonan, John J., St. Louis, Mo. Cloth-measuring machine. No. 1,298,250; Mar. 25; v. 260; p. 626.
Nordmann, George B., New Haven, Conn. Trough. No. 1,297,586; Mar. 18; v. 260; p. 458.
Nordstrom, Elof, Newark, N. J., assignor to American Dan Stopper Company, Bridgeport, Conn. Web-feeding mechanism. No. 1,297,587; Mar. 18; v. 260; p. 458.
Norsk Hydro-elektrisk Kvaelstofaktieselskab. (See La Cour, Jens L., assignor.)
North, Thomas K., assignor to Vickers Limited, Westminster, London, England. Bomb. No. 1,298,377; Mar. 25; v. 260; p. 651.
Northrup, Edwin F., Princeton, N. J., assignor to The Ajax Metal Company, Philadelphia, Pa. Production of chemical changes by oscillatory discharge. No. 1,297,393; Mar. 18; v. 260; p. 418.
Norton, Allen B., Detroit, Mich., assignor to The Aluminum Castings Company, Cleveland, Ohio. Mold. No. 1,296,594; Mar. 4; v. 260; p. 174.
Norton, Allen B., assignor to The Aluminum Castings Company, Cleveland, Ohio. Making castings. No. 1,296,595; Mar. 4; v. 260; p. 174.
Norton, Charles W., assignor to Edison Storage Battery Company, West Orange, N. J. Galvanic battery. No. 1,297,487; Mar. 18; v. 260; p. 437.
Novick, Abraham, assignor to F. L. Schmidt Company, New York, N. Y. Blank-feeding mechanism. No. 1,296,690; Mar. 11; v. 260; p. 232.
Nowell, Herbert T., Billings, Mont., assignor to F. C. Austin, Chicago, Ill. Projectile. No. 1,296,310; Mar. 4; v. 260; p. 112.
Nunnelley, Emmett C. (See Loventhal and Nunnelley.)
Nygaard, Christian, Moose Jaw, Saskatchewan, Canada. Shocking-machine. No. 1,297,394; Mar. 18; v. 260; p. 418.
Nystrom, Karl F., Montreal, Quebec, Canada. Car-roof. No. 1,297,488; Mar. 18; v. 260; p. 437.
O'Brien, Thomas F. I., Brooklyn, N. Y. Oil-burner. No. 1,298,378; Mar. 25; v. 260; p. 651.

O'Connor, Thomas J., Dallas, and W. W. Culbertson, Boyce, Tex. Railway-crossing. No. 1,297,721; Mar. 18; v. 260; p. 487.
O'Dea, John F. (See Quass, Charles E., assignor.)
O'Dowd, Henry W., Jersey City, N. J., assignor to William M. Crane Company. Heating apparatus. No. 1,296,209; Mar. 4; v. 260; p. 90.
O'Hara, Eliot, Waltham, Mass. Luminous switch-indicator. No. 1,296,311; Mar. 4; v. 260; p. 112.
O'Neill, William F. (See Rogers and O'Neill.)
O'Rourke, John F., New York, N. Y. Tunnel-shield. No. 1,296,312; Mar. 4; v. 260; p. 113.
O'Shields, Henry T., Atlanta, Ga. Non-freezing hydrant. No. 1,297,001; Mar. 11; v. 260; p. 304.
Oakley, Orley R., Decatur, Ill. Calking and glazing device. No. 1,296,107; Mar. 4; v. 260; p. 67.
Obear-Nester Glass Company. (See Lynch, James W., assignor.)
Oehler, Richard, St. Louis, Mo. Meat-grinder. No. 1,296,108; Mar. 4; v. 260; p. 67.
Offutt, John W., and J. J. Dunn, Ellwood City, and J. H. Nicholson, Pittsburgh, Pa. Making cartridge-cases. No. 1,296,842; Mar. 11; v. 260; p. 267.
Ohio Brass Company, The. (See Bocard, William P., assignor.)
Ohio Brass Company, The. (See Bolus and Darrah, assignors.)
Ohio Brass Company, The. (See McIntosh, James A., assignor.)
Ohio Brass Company, The. (See Mead, George A., assignor.)
Ohrt, James, Paxton, Ill. Signal-lamp casing. No. 1,296,109; Mar. 4; v. 260; p. 67.
Oiwa, Takeo, Toyotama Gun, Tokyo Fu, Japan. Apparatus for manufacturing chlorates by an electrolytic process. No. 1,297,395; Mar. 18; v. 260; p. 418.
Okey, Perry, Columbus, Ohio. Saw-cutting machine. No. 1,296,110; Mar. 4; v. 260; p. 67.
Oleson, Frank L., Chicago, Ill. Automatic stereopticon. No. 1,296,583; Mar. 4; v. 260; p. 172.
Oliver Chilled Plow Works. (See Heylman, Edward M., assignor.)
Olley, Edwin A., assignor to Crouse-Hinds Company, Syracuse, N. Y. Panel-board construction. No. 1,296,999; Mar. 11; v. 260; p. 304.
Olson, Andrew P., Chicago, Ill. Fastener for clutch and brake linings. No. 1,296,843; Mar. 11; v. 260; p. 267.
Olson, Carl G., assignor to Illinois Tool Works, Chicago, Ill. Grinding-machine. No. 1,297,396; Mar. 18; v. 260; p. 418.
Olson, Hans, Hibbing, Minn. Game. No. 1,296,111; Mar. 4; v. 260; p. 67.
Onderdonk, Lansing, and A. J. Wohlpart, New York, N. Y., assignors to Union Special Machine Company, Chicago, Ill. Ruffling sewing-machine. No. 1,296,550; Mar. 4; v. 260; p. 164.
Optical Appliance Corporation, The. (See Cossman, Joseph H., assignor.)
Orance, Peter, New York, N. Y. Making ductile bodies of refractory materials. No. 1,297,000; Mar. 11; v. 260; p. 304.
Orne, Ruel E., Everett, Wash. Combined buffet and dining-table. No. 1,297,489; Mar. 18; v. 260; p. 487.
Ornstein, Georg, New York, N. Y., assignor to Electro Bleaching Gas Company. Bleaching. No. 1,296,552; Mar. 25; v. 260; p. 690.
Ornstein, Georg, New York, N. Y., assignor to Electro Bleaching Gas Company. Bleaching process. No. 1,298,553; Mar. 25; v. 260; p. 690.
Ornstein, Georg, New York, N. Y., assignor to Electro Bleaching Gas Company. Bleaching. No. 1,298,554; Mar. 25; v. 260; p. 690.
Osiwala, Ignatius A., Detroit, Mich. Mail-box. No. 1,297,227; Mar. 11; v. 260; p. 353.
Osmondson, Osmond A., Salina, Kans. Combination post-drill and portable hand-drill. No. 1,296,691; Mar. 11; v. 260; p. 233.
Osmun, Russell A., New York, N. Y. Structural member. No. 1,297,228; Mar. 11; v. 260; p. 353.
Osten, James H., assignor of two-fifths to R. G. Osten and one-fifth to F. Knudson, White City, Kans. Post-setting device. No. 1,298,379; Mar. 25; v. 260; p. 652.
Osten, Robert G., *et al.* (See Osten, James H., assignor.)
Oster, Edward J., Cold Spring, Minn. Transmission mechanism. No. 1,297,397; Mar. 18; v. 260; p. 419.
Osterberg, Axel V., Fremont, Ohio. Toy. No. 1,296,844; Mar. 11; v. 260; p. 267.
Ostrander, Lewis F., St. Louis, Mo., assignor of one-half to J. F. Esperon, Indianapolis, Ind. Supply-valve for vapor, vacuum, and steam heating systems. No. 1,297,229; Mar. 11; v. 260; p. 353.
Otis Company. (See Rood, William B., assignor.)
Otis Elevator Company. (See Furlow, Floyd C., assignor.)
Otis Elevator Company. (See Lindquist, David L., assignor.)
Otis Elevator Company. (See Lindquist and Hultgren, assignors.)
Otto, Emil J. (See Bruner and Otto.)
Owen, Richard B., Washington, D. C. Internal-combustion engine. No. 1,297,897; Mar. 18; v. 260; p. 525.
Owen, Ruth C., Port Jervis, N. Y. Christmas-tree holder. No. 1,298,380; Mar. 25; v. 260; p. 652.
P. H. Murphy Company. (See Brewer, William A., assignor.)
P. H. Murphy Company. (See Murphy, Walter P., assignor.)
Pace, Gaetano J., San Jose, Calif. Car-repairer's truck. No. 1,298,381; Mar. 25; v. 260; p. 652.
Pacific Coast Borax Company. (See Prock, Joseph, assignor.)
Pacific Evaporator Company. (See Wittenberg and King, assignors.)
Package Machinery Company. (See Armstrong, Harry Y., assignor.)
Package Machinery Company. (See Heck, Augustus, assignor.)
Package Machinery Company. (See Redington and Milmoe, assignors.)
Packard Motor Car Company. (See Derr, Charles E., assignor.)
Packard Motor Car Company. (See Vincent, Jesse G., assignor.)
Packer, Warren J., Meriden, Conn. Soft-nose hammer. No. 1,298,382; Mar. 25; v. 260; p. 652.
Paddison, Bert M., and C. G. Earlenbaugh, Akron, Ohio. Heating attachment for gas-lamps. No. 1,297,230; Mar. 11; v. 260; p. 353.
Page, Elton J., Franklin, Nebr. Beet-harvester. No. 1,297,231; Mar. 11; v. 260; p. 354.
Pain, Henry J., New York, N. Y. Rocket. No. 1,297,898; Mar. 18; v. 260; p. 525.
Pallansch, John P., Fredonia, Wis. Green-pea cleaner. No. 1,298,086; Mar. 25; v. 260; p. 590.
Palmer, Charles C. (See Dana and Palmer.)
Palmer, Henry J., Brooklyn, N. Y. Passenger's side platform for cars. No. 1,297,002; Mar. 11; v. 260; p. 305.
Pandolfo, Samuel C., St. Cloud, Minn. Combined tank and tool-chest for automobiles. No. 1,298,383; Mar. 25; v. 260; p. 652.
Parcel Post Scale Co. (See Strubler, Gordon L., assignor.)
Parker, Clark W., Highland Park, Mich. Wire wheel. No. 1,298,087; Mar. 25; v. 260; p. 590.
Parker, George D., Riverside, Cal. Fruit-drying apparatus. No. 1,296,845; Mar. 11; v. 260; p. 267.
Parker, George D., Riverside, Calif. Drier. No. 1,297,722; Mar. 18; v. 260; p. 487.
Parker, George D., Riverside, Calif. Conveyer for fruit-drying apparatus. No. 1,297,723; Mar. 18; v. 260; p. 487.
Parkhurst, Frederic A., assignor to The Aluminum Castings Company, Cleveland, Ohio. Metal-mold. No. 1,296,596; Mar. 4; v. 260; p. 174.
Parkhurst, Frederic A., assignor to The Aluminum Castings Company, Cleveland, Ohio. Mold and casting. No. 1,296,597; Mar. 4; v. 260; p. 175.
Parks, Dennis, St. Louis, Mo. Machine for cutting blanks from leather. No. 1,297,899; Mar. 18; v. 260; p. 525.
Parmenter, William W., Redford, Mich. Power-frame. (Reissue.) No. 14,609; Mar. 11; v. 260; p. 371.
Parson, Charles A., S. S. Cook, and R. J. Walker, Walls-end, England; said Cook and said Walker assignors to said Parsons. Marine-turbine installation. No. 1,296,210; Mar. 4; v. 260; p. 91.
Parsons, Charles A., S. S. Cook, and L. M. Douglas, Walls-end, England; said Cook and said Douglas assignors to said Parsons. Lubrication of thrust-bearings. No. 1,296,211; Mar. 4; v. 260; p. 91.
Parsons, Fred A., Milwaukee, assignor to The Kempsmith Manufacturing Co., West Allis, Wis. Lubricating system for milling-machines. No. 1,296,692; Mar. 11; v. 260; p. 233.
Parsons, George K., Detroit, Mich. Automobile-starter. No. 1,297,003; Mar. 11; v. 260; p. 305.
Parsons, Harold K., Southbridge, Mass. Ophthalmic mounting. No. 1,297,232; Mar. 11; v. 260; p. 354.
Pastore, Vincent, New London, Conn. Guard for brushes. No. 1,297,233; Mar. 11; v. 260; p. 354.
Pater, Paul G., assignor to The Long & Allstatter Company, Hamilton, Ohio. Floating punch. No. 1,298,088; Mar. 25; v. 260; p. 590.
Paterson, Morton L., Wilmette, Ill., assignor to Converse Rubber Shoe Company. Shoe. No. 1,298,089; Mar. 25; v. 260; p. 590.
Patrick, Charles E., Colorado Springs, Colo., assignor of one-half to A. A. and T. P. Craig. Tatting-shuttle. No. 1,297,234; Mar. 11; v. 260; p. 354.
Patrick, Walter A., Baltimore, Md. Silica gel and making same. No. 1,297,724; Mar. 18; v. 260; p. 488.
Patton, Charles A., Pendleton, Oreg. Rail-joint. No. 1,297,235; Mar. 11; v. 260; p. 354.
Patton, Moses F., Tuscaloosa, Ala., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Quick-detachable dust-cap for tire-valves. No. 1,297,725; Mar. 18; v. 260; p. 488.
Patton, Sarah S., Acworth, Ga. Biscuit-cutter. No. 1,297,900; Mar. 18; v. 260; p. 525.
Pavon, Manuel R., Oakland, Calif. Coal-oil torch. No. 1,297,588; Mar. 18; v. 260; p. 458.
Pavon, Manuel R., Oakland, Calif. Fuel-oil-furnace burner. No. 1,297,589; Mar. 18; v. 260; p. 458.
Pawlick, Joseph, *et al.* (See Pecher, Daniel, assignor.)
Paxson, Levi B., Norristown, Pa. Power-transmission mechanism. No. 1,296,212; Mar. 4; v. 260; p. 91.
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Payne, Theodore P., New York, N. Y., and E. V. Wurts, Newark, N. J., assignors to Steel Utilities, Inc. Metal-working machine. No. 1,298,555; Mar. 25; v. 260; p. 690.
Peace, William H., assignor of one-half to Hughes Peace Lumber Co., Thomasville, N. C. Box-shook machine. No. 1,296,424; Mar. 4; v. 260; p. 136.
Peach, Samuel V. (See With, Julius E. B., assignor.)
Pearson, John, Chicago, Ill. Car construction. No. 1,297,004; Mar. 11; v. 260; p. 305.
Pecher, Daniel, assignor of one-third to T. Guyton and one-third to J. Pawlick, Princeton, British Columbia, Canada. Aeroplane. No. 1,296,551; Mar. 4; v. 260; p. 164.
Peerless Chain Company. (See Gabring, Frederick A., assignor.)
Pearson, James M., Florence, Ala. Compound press. No. 1,297,901; Mar. 18; v. 260; p. 525.
Pehel, Zygmunt, assignor of one-half to J. Strzyckowski, New York, N. Y. Automatic lock for windows. No. 1,298,251; Mar. 25; v. 260; p. 626.
Peiler, Karl E., *et al.* (See Lorenz and Law, assignors.)
Peiler, Karl E., assignor of one-ninth to himself and two-ninths to W. A. Lorenz, Hartford, Conn., and six-ninths to Beech-Nut Packing Company, Canajoharie, N. Y. Gum-strainer. No. 1,296,112; Mar. 4; v. 260; p. 68.
Peiler, Karl E., Hartford, Conn., assignor to Hartford Fairmont Company, Canajoharie, N. Y. Magnetic-clutch-controlling method and apparatus. No. 1,297,236; Mar. 11; v. 260; p. 355.
Pejchar, Josef, Brooklyn, N. Y. Ear-ring. No. 1,296,552; Mar. 4; v. 260; p. 165.
Peilissero, Nicholas C., Scammon, assignor of one-fifth to A. Luckey, Columbus, Kans. Resilient tire. No. 1,297,902; Mar. 18; v. 260; p. 526.
Penn Electrical & Manufacturing Company. (See Rogers and O'Neill, assignors.)
Pentecost, Arthur, East Orange, N. J., assignor to The Adder Machine Company, Wilkes-Barre, Pa. Calculating-machine. No. 1,296,693; Mar. 11; v. 260; p. 233.
Perfection Gauge Company. (See Webster, Benjamin, assignor.)
Perkins, George W., Boston, Mass., assignor to Heaton Peninsular Button Fastener Company, Grand Rapids, Mich. Button-fastening machine. No. 1,297,726; Mar. 18; v. 260; p. 488.
Perlman, Jacques M., New York, N. Y. Armor. No. 1,296,113; Mar. 4; v. 260; p. 68.
Perrin, Byron L. S., Ottawa, Ontario, Canada. Illuminator for writing elements. No. 1,298,384; Mar. 25; v. 260; p. 653.
Perry, A. E. (See Merwin, James E., assignor.)
Perry, Frank R., Chicago, Ill. Automatic control for vacuum-pumps or the like. No. 1,297,005; Mar. 11; v. 260; p. 305.
Perry, James, Somerville, Mass. Safety appliance for fluid-conduits. No. 1,296,213; Mar. 4; v. 260; p. 91.
Perry, James, Somerville, Mass. Paper bag. No. 1,298,252; Mar. 25; v. 260; p. 626.
Perry, Ray P., Montclair, N. J., assignor to The Barrett Company. Colored composition sheet. No. 1,296,114; Mar. 4; v. 260; p. 68.
Persson, Otto F., Erie, Pa., assignor to General Electric Company. Coupling. No. 1,298,556; Mar. 25; v. 260; p. 691.
Persson, Otto F., Erie, Pa., assignor to General Electric Company. Air starting means for internal-combustion engines. No. 1,298,557; Mar. 25; v. 260; p. 691.
Peter, Jacob, Zurich, Switzerland. Plansifter. No. 1,298,558; Mar. 25; v. 260; p. 691.
Peters, John F., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Parallel-flow reactance-coil. No. 1,295,921; Mar. 4; v. 260; p. 22.
Peterson, Carl E., Irvington, N. J. Tool for removing overhead valve-cages of internal-combustion motors. No. 1,298,253; Mar. 25; v. 260; p. 627.
Peterson, Frithiof, and D. R. Collier, Gardner, Mass., assignors to Collier Keyworth Company. Baby-carriage. No. 1,297,006; Mar. 11; v. 260; p. 306.
Petit, Henri, Ermont, France. Speed-indicating device. No. 1,297,237; Mar. 11; v. 260; p. 355.
Petrilla, John A. (See Kosht and Petrilla.)
Petter, Ernest W., Yeovil, England. Internal-combustion engine of the two-cycle type. No. 1,296,214; Mar. 4; v. 260; p. 91.
Pettersen, Kristian, Sarpsborg, Norway. Current-limiter. No. 1,296,314; Mar. 4; v. 260; p. 113.
Pettit, Harold L., assignor of one-half to N. M. Pettit, Watertown, N. Y. Spraying-nozzle. No. 1,295,922; Mar. 4; v. 260; p. 23.
Pettit, Nellie M. (See Pettit, Harold L., assignor.)
Petty, William E., Storm Lake, Iowa. Drier. No. 1,297,727; Mar. 18; v. 260; p. 488.
Petty, William E., Storm Lake, Iowa. Fly-trap. No. 1,297,728; Mar. 18; v. 260; p. 489.
Pfahler, William Q., Toledo, Ohio. Rolling tooth for worm-wheels. No. 1,297,238; Mar. 11; v. 260; p. 355.
Pfanstiehl Company. (See Gould and Konigslow, assignors.)
Pfeifer, Frank, assignor of one-fourth to G. E. Hovenden and one-fourth to A. E. Erickson, Minneapolis, Minn. Process of and apparatus for generating gas. No. 1,296,115; Mar. 4; v. 260; p. 68.
Pfeifer, Frank, Minneapolis, Minn., assignor to Exhaust Heat, Light & Power Company. Apparatus for generating gas. No. 1,296,116; Mar. 4; v. 260; p. 69.
Phelps, William R., Milford, Del. Artificial tooth. No. 1,296,846; Mar. 11; v. 260; p. 268.
Philadelphia Textile Machinery Company. (See Bogarty, Hermann, assignor.)
Philips, William D., Brooklyn, N. Y. Air-washing apparatus. No. 1,296,315; Mar. 4; v. 260; p. 113.
Phillips, Edmund M. (See London and Phillips.)
Phillips, George H., Muskegon, Mich. Carrier attachment for auto running-boards. No. 1,295,923; Mar. 4; v. 260; p. 23.
Phillips, Henry F., and H. V. Dean, Spokane, Wash. Heater for water-cooled engines. No. 1,298,254; Mar. 25; v. 260; p. 627.
Phillips, Henry H., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Commutator-terminals and mounting same. No. 1,297,903; Mar. 18; v. 260; p. 526.
Phipps, James A. R., Binghamton, N. Y. Milk-bottle holder. No. 1,298,559; Mar. 25; v. 260; p. 691.
Picard, Stanislas, Providence, R. I. Arbor-indicator. No. 1,297,729; Mar. 18; v. 260; p. 489.
Pieper, Chester R., assignor to The Gund Manufacturing Company, La Crosse, Wis. Guy-strand cap. No. 1,298,255; Mar. 25; v. 260; p. 627.
Pierce, Frank M. and W. B., assignors to Pierce Wrapping Machine Company, Chicago, Ill. Folder device. No. 1,296,117; Mar. 4; v. 260; p. 69.
Pierce, William B. (See Pierce, Frank M. and W. B.)
Pierce Wrapping Machine Company. (See Pierce, Frank M. and W. B., assignors.)
Pierson, Robert M., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Hydrometer-syringe. No. 1,296,694; Mar. 11; v. 260; p. 234.
Pietruszkiewicz, Jan, Kulpmont, Pa. Portable trench. No. 1,297,904; Mar. 18; v. 260; p. 526.
Piette, Joseph, St.-Gilles, Brussels, Belgium. Distilling apparatus. No. 1,297,590; Mar. 18; v. 260; p. 458.
Piggly Wiggly Corporation. (See Saunders, Clarence, assignor.)
Pinder, S. S., *et al.* (See Krzyzanowski, Theodore R., assignor.)
Pine, James K. P., Lansingburg, assignor to United Shirt and Collar Company, Troy, N. Y. Stock for neckwear. No. 1,297,398; Mar. 18; v. 260; p. 419.
Pinkler, Arthur P., Ridgefield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-transmitter. No. 1,297,905; Mar. 18; v. 260; p. 527.
Pinte, William. (See Bueschel, Andrew E., assignor.)
Pirc, Georg. (See Borsse and Pirc.)
Pittsburgh Plate Glass Company. (See Hitchcock and Golightly, assignors.)
Pittsburgh Plate Glass Company. (See Hitner, Harry F., assignor.)
Pittsburgh Rolls Corporation. (See McMillin, Oliver B., assignor.)
Pittsburgh Steel Company. (See Rose and Kurtz, assignors.)
Piver, William C. (See Riches and Piver.)
Plencner, John W., Warren, Minn. Clip-passer. No. 1,297,007; Mar. 11; v. 260; p. 306.
Plowman, William W., Camargo, Ill. Metallic tie. No. 1,296,425; Mar. 4; v. 260; p. 136.
Plumer, Davenport, Three Tuns, Pa. Roller attachment for gang-plows. No. 1,298,385; Mar. 25; v. 260; p. 653.
Plunkett, Edward H., Gebo, Wyo. Plasterer's float. No. 1,298,386; Mar. 25; v. 260; p. 653.
Plymouth Rubber Company. (See Batterman, John, assignor.)
Pneumatic Scale Corporation. (See Doble, William H., assignor.)
Poirier, Alfred O. (See Malbeit and Poirier.)
Pole, Samuel J., *et al.* (See Lamar, Alexis L., assignor.)
Polk, Thomas J., Beaumont, Tex. Combined kitchen-cabinet and refrigerator. No. 1,295,005; Mar. 4; v. 260; p. 42.
Pollak, Oscar N., *et al.* (See Hollander, Jacob H., assignor.)
Pollock, Charles C. (See Strang and Pollock.)
Polotsky, Abraham, Berlin-Charlottenburg, Germany, assignor to Deutsche Gasglühlichtaktiengesellschaft, (Auergesellschaft,) Berlin, Germany. Making cellulose esters with over twenty per cent. of bound fatty acid. No. 1,296,847; Mar. 11; v. 260; p. 268.
Pommer, Ernesto J., Buenos Aires, Argentina. Sheath for knives. No. 1,297,008; Mar. 11; v. 260; p. 306.
Poole, Arthur F., Chicago, Ill., assignor, by mesne assignments, to The Wahl Company, Wilmington, Del. Algebraic totalizer. No. 1,296,118; Mar. 4; v. 260; p. 69.
Poole, Arthur F., Chicago, Ill., assignor, by mesne assignments, to The Wahl Company, Wilmington, Del. Calculating-machine. No. 1,296,119; Mar. 4; v. 260; p. 69.
Poppink, Jan H., Tilburg, assignor of one-half to J. C. Blecboff, Amsterdam, Netherlands. Means for transmitting rotary motion. No. 1,298,560; Mar. 25; v. 260; p. 692.
Porcher, Edward P., Charleston, S. C. Automobile-top-raising device. No. 1,298,387; Mar. 25; v. 260; p. 653.

Porter, Harold E., Bayside, N. Y. Mandrel. No. 1,295,924; Mar. 4; v. 260; p. 23.
Poesdal, Joseph F. (See Wilhelm and Poesdal.)
Post, Howard A., Winfield, Kans. Telephone-mouthpiece attachment. No. 1,297,490; Mar. 18; v. 260; p. 488.
Potter, John W., Ardmore, Okla. Tire-inflation valve. No. 1,297,239; Mar. 11; v. 260; p. 355.
Potter, Thomas I., assignor to Coin Machine Manufacturing Company, Portland, Oreg. Turnstile mechanism. No. 1,298,388; Mar. 25; v. 260; p. 654.
Powell, Andrew J., Aspin Hill, Tenn. Feed-regulator for manure-drills. No. 1,298,561; Mar. 25; v. 260; p. 692.
Powell, William, London, England, assignor to Powell Wood Process (North America) Incorporated, New York, N. Y. Treating wood. No. 1,297,491; Mar. 18; v. 260; p. 438.
Powell Wood Process (North America) Incorporated. (See Powell, William, assignor.)
Power, Richard F., Doveridge, England, assignor of one-half to O. W. Thomas, Ithaca, N. Y. Control of aeroplanes. No. 1,296,848; Mar. 11; v. 260; p. 268.
Powers, Timothy B., New York, N. Y. Adjustable suspension device. No. 1,298,562; Mar. 25; v. 260; p. 692.
Pratt, George R., Williston, N. D. Attachment for drinking-fountains. No. 1,297,399; Mar. 18; v. 260; p. 419.
Preisler, Crist B., Portland, Oreg. Self-releasing davit-block hook for life-boats. No. 1,297,300; Mar. 11; v. 260; p. 369.
Prescott, Arthur W., Binghamton, N. Y. Snap-lock. No. 1,297,591; Mar. 18; v. 260; p. 459.
Press, Abraham, Washington, D. C. Spark-energiser. No. 1,296,006; Mar. 4; v. 260; p. 42.
Prichard, Edgar H. (See Ruffin and Prichard.)
Prifold, George, Linwood, assignor to The Congoleum Company, Philadelphia, Pa. Making floor-coverings. No. 1,297,009; Mar. 11; v. 260; p. 306.
Prime, Orton L., Milwaukee, Wis. Composite metal plug. No. 1,296,695; Mar. 11; v. 260; p. 234.
Prince, Louis A., Sumter, S. C. Running-board brace for automobiles. No. 1,297,730; Mar. 18; v. 260; p. 489.
Pringle, James B., Montreal, Quebec, Canada. Matrix-block. No. 1,297,731; Mar. 18; v. 260; p. 489.
Pritchett, William H., Cartersville, Ga. Automatic machine-gun. No. 1,297,240; Mar. 11; v. 260; p. 355.
Pritchett, William H., U. S. Marine Corps. Automatic rifle. No. 1,297,241; Mar. 11; v. 260; p. 356.
Prock, Joseph, Chicago, Ill., assignor to Pacific Coast Borax Company, New York, N. Y. Machine for automatically depositing articles in packages. No. 1,298,389; Mar. 25; v. 260; p. 654.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Driving and retarding mechanism for moving-picture projectors. No. 1,298,390; Mar. 25; v. 260; p. 654.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Safety device for moving-picture projectors. No. 1,298,391; Mar. 25; v. 260; p. 655.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Protective shield and fire-shutter. No. 1,298,392; Mar. 25; v. 260; p. 655.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Moving-picture machine. No. 1,298,393; Mar. 25; v. 260; p. 655.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Framing mechanism for moving-picture machines. No. 1,298,394; Mar. 25; v. 260; p. 655.
Proctor, Barton A., assignor to Kinoikon Apparatus Corporation, Bridgeton, N. J. Automatic compensated take-up reel. No. 1,298,395; Mar. 25; v. 260; p. 655.
Proffitt, Arba A., Gibson City, Ill. Internal-combustion engine. No. 1,298,256; Mar. 25; v. 260; p. 627.
Prokopczuk, Lukasz, Arran, Saskatchewan, Canada. Draft-equalizer. No. 1,297,592; Mar. 18; v. 260; p. 459.
Prosser, William J., Denver, Colo. Planer attachment. No. 1,297,242; Mar. 11; v. 260; p. 356.
Prouty, Theodore C., Elgin, Ill., assignor, by mesne assignments, to The Van Sicklen Company. Making cover-plates. No. 1,297,010; Mar. 11; v. 260; p. 306.
Pruessman, Albert, Berwyn, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Condenser. No. 1,298,396; Mar. 25; v. 260; p. 656.
Pugh, John V., Coventry, England, assignor, by mesne assignments, to Wire Wheel Corporation of America. Detachable wheel. No. 1,296,007; Mar. 4; v. 260; p. 42.
Pugh, John V., Coventry, England, assignor, by mesne assignments, to Wire Wheel Corporation of America. Detachable wheel. No. 1,296,316; Mar. 4; v. 260; p. 113.
Pullclean Manufacturing Co. (See Hendrick, Foscolo O., assignor.)
Pullman Conch Company. (See Bartlett, Harry D., assignor.)
Pullman Couch Company, The. (See Metager, Charles T., assignor.)
Purple, George E., La Grange, assignor to Flexible Steel Lacing Co., Chicago, Ill. Lamp-guard. No. 1,298,297; Mar. 25; v. 260; p. 656.
Purple, George E., La Grange, assignor to Flexible Steel Lacing Company, Chicago, Ill. Securing device for lamp-guards. No. 1,298,398; Mar. 25; v. 260; p. 656.
Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Vehicle-wheel. No. 1,298,399; Mar. 25; v. 260; p. 656.
Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Convertible dual-wheel construction. No. 1,297,243; Mar. 11; v. 260; p. 356.
Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Metallic wheel. No. 1,296,849; Mar. 11; v. 260; p. 268.
Pycha, James J. (See Kebl, Albert A., assignor.)
Pym, Charles H. and E. J. Witcombe, Wellington, New Zealand. Gage for wheels of motor-cars and the like. No. 1,298,090; Mar. 25; v. 260; p. 590.
Quass, Charles E., assignor to J. F. O'Dea, Canton, Ohio. Wall construction. No. 1,297,906; Mar. 18; v. 260; p. 527.
Quin, Thomas S. (See Johnson and Quin.)
R. M. Hvid Company. (See Blakely, Edward B., assignor.)
R-S Manufacturing Company. (See Ream, Fred H., assignor.)
Rainey, Paul M., Glen Ridge, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Speed-changing device. No. 1,296,850; Mar. 11; v. 260; p. 269.
Ramanauskas, Wincentas, Hartford, Conn. Match-box. No. 1,297,593; Mar. 18; v. 260; p. 459.
Ramshaw, John R., Edmonton, Alberta, Canada. Curtain-fastener. No. 1,296,427; Mar. 4; v. 260; p. 137.
Rand, Charles A. A., Chicago, Ill., assignor by mesne assignments, to International Harvester Company. Rake-tooth. No. 1,297,907; Mar. 18; v. 260; p. 527.
Rand, James H., Newton, Mass. Self-indexing storage device. No. 1,296,851; Mar. 11; v. 260; p. 269.
Rand, Silas C., Chicago, Ill. Garment-bag. No. 1,298,257; Mar. 25; v. 260; p. 627.
Raney, Henry W., Milstead, Ala. Window-shade bracket. No. 1,296,428; Mar. 4; v. 260; p. 137.
Ranschoff, Nathan, Cincinnati, Ohio. Tumbling-barrel. No. 1,297,400; Mar. 18; v. 260; p. 419.
Rasmussen, Andrew, Racine Junction, Wis. Hacksaw-blade. (Reissue.) No. 14,615; Mar. 18; v. 260; p. 545.
Rasmussen, Frederick W., Mangarama, New Zealand. Machine for use in making wire staples. No. 1,296,696; Mar. 11; v. 260; p. 234.
Rawes, Charles H., Seattle, Wash. Dispensing device. No. 1,297,244; Mar. 11; v. 260; p. 357.
Rauwald, John and J., Milwaukee, Wis. Fireproof wall-safe. No. 1,297,492; Mar. 18; v. 260; p. 438.
Rauwald, Joseph. (See Rauwald, John and J.)
Ravert, William I., Hazleton, assignor to Standard Automatic Machine Company, Pittsburgh, Pa. Coin-receiving box for vending-machines. No. 1,297,732; Mar. 18; v. 260; p. 489.
Rawll, Herbert F., Short Hills, N. J., assignor to Christmas Club. Subscription-book. No. 1,298,629; Mar. 25; v. 260; p. 705.
Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Plow. No. 1,297,594; Mar. 18; v. 260; p. 459.
Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Motor-plow. No. 1,297,908; Mar. 18; v. 260; p. 527.
Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Plow. No. 1,297,909; Mar. 18; v. 260; p. 527.
Ray, George W., Niagara Falls, N. Y. Corn-husking implement. No. 1,296,120; Mar. 4; v. 260; p. 70.
Ray, William F., Chicago, Ill. Vulcanizer. No. 1,296,215; Mar. 4; v. 260; p. 92.
Rayburn, Alden G. (See Rayburn, Elwyn M. and A. G.)
Rayburn, Eddy S. (See Rayburn, Elwyn M. and A. G., assignors.)
Rayburn, Elwyn M. and A. G., Sausalito, Calif. Transmission. No. 1,297,733; Mar. 18; v. 260; p. 490.
Rayburn, Elwyn M. and A. G., assignors of one-third to E. S. Rayburn, Sausalito, Calif. Transmission. No. 1,297,734; Mar. 18; v. 260; p. 490.
Raymond, Arthur F., A. Mathieu, and C. Lavalle, Webster, Mass. Loom. No. 1,296,697; Mar. 11; v. 260; p. 234.
Ream, Fred H., assignor to R-S Manufacturing Company, Kansas City, Mo. Universal joint. No. 1,297,968; Mar. 18; v. 260; p. 540.
Reddeck, Bernard J. (See McLean, Seline, and Reddeck.)
Reddicliffe, John, Hamilton, Ontario, Canada. Attachment for blow-torches. No. 1,297,245; Mar. 11; v. 260; p. 357.
Redfield, Cleveland, Ogden, Utah., assignor to Automatic Controller and Manufacturing Company. Manually-operable controlling device for electric motors. No. 1,296,698; Mar. 11; v. 260; p. 234.
Redington, Frank B., and M. J. Milmoe, Chicago, Ill., assignors to Package Machinery Company, Springfield, Mass. Cutting mechanism. No. 1,296,554; Mar. 4; v. 260; p. 165.
Redpath, Robert and H. Hellberg, assignors to The Coventry Ordnance Works, Limited, Coventry, England. Feed mechanism for automatic guns. No. 1,298,091; Mar. 25; v. 260; p. 591.
Reece Shoe Machinery Company. (See Schoenky, August R., assignor.)
Reeve, Howard T., assignor to American Optical Company, Southbridge, Mass. Eye-protector. No. 1,298,002; Mar. 25; v. 260; p. 591.
Reflectolyte Company, The. (See Adam, Harry C., assignor.)

Regan, William J. (See Milliken and Regan.)
Regenstein, Julius, Chicago, Ill. Envelop-making machine. No. 1,298,093; Mar. 25; v. 260; p. 591.
Reid, George H., assignor of one-half to D. B. Brown, Orangeville, Ontario, Canada. Traction-wheel. No. 1,297,493; Mar. 18; v. 260; p. 438.
Reid, James H., Newark, N. J., assignor to International Nitrogen Company. Making calcium or other metal nitrocarbid. No. 1,297,246; Mar. 11; v. 260; p. 357.
Reid, John, New York, N. Y. Furnace-front. No. 1,297,247; Mar. 11; v. 260; p. 357.
Reif, Bernard A., Cody, Wyo. Motor-propelled vehicle. No. 1,296,216; Mar. 4; v. 260; p. 92.
Reinhardt, Henry B., trustee. (See Noah, Robert S., assignor.)
Rekers, Gerret, Rochester, assignor to General Railway Signal Company, Gates, N. Y. Semaphore-signal mechanism. No. 1,297,969; Mar. 18; v. 260; p. 540.
Rekers, Gerret, Rochester, assignor to General Railway Signal Company, Gates, N. Y. Semaphore-signal mechanism. No. 1,297,970; Mar. 18; v. 260; p. 541.
Relyea, Fred H., Newark, N. J. Antiseptic compound. No. 1,297,735; Mar. 18; v. 260; p. 490.
Repman, Ray G. (See Le Roy and Repman.)
Research Corporation. (See Caron, Martinus H., assignor.)
Research Corporation. (See Hedberg, Carl W. J., assignor.)
Reuter, Balthasar E., assignor to Reuter Process Company, Chicago, Ill. Saponifying glycerids. No. 1,298,563; Mar. 25; v. 260; p. 692.
Reuter, Baptist. (See Flaecher and Reuter.)
Reuter Process Company. (See Reuter, Balthasar E., assignor.)
Reverdin, Frederick, Geneva, Switzerland, assignor to Newport Chemical Works, Inc., Milwaukee, Wis. Benzoylation of organic amido compounds. No. 1,296,602; Mar. 4; v. 260; p. 176.
Reyburn, John R., Fairfield, assignor to American Chain Company, Incorporated, Bridgeport, Conn. Chain-connecting device. No. 1,296,218; Mar. 4; v. 260; p. 92.
Reyburn, John R., Fairfield, and C. D. Sagendorf, assignors to American Chain Company, Incorporated, Bridgeport, Conn. Snap-hook. No. 1,296,217; Mar. 4; v. 260; p. 92.
Reyburn, John R., Fairfield, and C. D. Sagendorf, assignors to American Chain Company, Incorporated, Bridgeport, Conn. Chain-connector device. No. 1,296,219; Mar. 4; v. 260; p. 93
Reynolds Engineering Company. (See Brown, Harold, assignor.)
Reynolds, Hugh W., Kendallville, Ind. Artificial tooth. No. 1,296,429; Mar. 4; v. 260; p. 137.
Reynolds, Lynus C., assignor to himself and J. W. Fisher, Jr., Washington, D. C. Machine-operating mechanism. No. 1,298,409; Mar. 25; v. 260; p. 656
Rhea, James W., Kingsport, Tenn. Refrigerator. No. 1,297,910; Mar. 18; v. 260; p. 528
Rhein, Lizbeth E. V. W. (See Rhein, Meyer L., assignor.)
Rhein, Meyer L., assignor to L. E. V. W. Rhein, New York, N. Y. Dentifrice. No. 1,297,494; Mar. 18; v. 260; p. 438.
Rhoades, Alonzo E., assignor to Draper Corporation, Hopedale, Mass. Spooler. No. 1,297,495; Mar. 18; v. 260; p. 438
Rhotanium Company, The. (See Fahrenwald, Frank A., assignor.)
Ribbon Life Company, The. (See Huddleston, Le Roy B., assignor.)
Ric Wil Underground Pipe Covering Company, The. (See Richards, Glendon A., assignor.)
Ricardo, Harry R., London, England. Internal-combustion engine. No. 1,296,555; Mar. 4; v. 260; p. 165.
Ricardo, Harry R., London, England. Internal-combustion engine. No. 1,296,556; Mar. 4; v. 260; p. 165
Ricardo, Harry R., London, England. Internal-combustion engine. No. 1,297,248; Mar. 11; v. 260; p. 357
Ricardo, Harry R., London, England. Internal-combustion engine. No. 1,297,401; Mar. 18; v. 260; p. 419.
Ricardo, Harry R., London, England. Driving mechanism for propellers. No. 1,298,491; Mar. 25; v. 260; p. 657.
Rice, Edward E., Elmira, N. Y. Stone-creasing tool. No. 1,296,317; Mar. 4; v. 260; p. 114
Rice, Matthew C., Kansas City, Mo. Mowing attachment for automobiles. No. 1,295,925; Mar. 4; v. 260; p. 23.
Rice, Richard H., Swampscott, Mass., assignor to General Electric Company. Valve-gear. No. 1,297,249; Mar. 11; v. 260; p. 357.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,298,564; Mar. 25; v. 260; p. 692.
Rich, Frank E., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Gripper-pad adjustment. No. 1,296,008; Mar. 4; v. 260; p. 43.
Richards, Glendon A., Grand Rapids, Mich., assignor to The Ric-Wil Underground Pipe Covering Company, Cleveland, Ohio. Drainage system. No. 1,298,258; Mar. 25; v. 260; p. 628
Richards, Joseph L., San Francisco, Cal. Artificial-tooth attachment and making and utilizing the same. No. 1,296,009; Mar. 4; v. 260; p. 43.
Richardson, William, Toronto, Ontario, Canada. Reversing-hook. No. 1,297,402; Mar. 18; v. 260; p. 419.
Riches, George R., and W. C. Piver, Hoboken, N. J. Making arsenate of lead. No. 1,296,557; Mar. 4; v. 260; p. 166.
Rieske, Otto G., Toronto, Ontario, Canada, assignor to The Massey-Harris Company, Limited, Toronto, Ontario, Canada. Corn-planter. No. 1,298,259; Mar. 25; v. 260; p. 628.
Rieth, William J., Valley City, N. D. Music-leaf turner. No. 1,297,011; Mar. 11; v. 260; p. 306.
Rigby, Charles, Cincinnati, Ohio. Sanitary toilet-seat. No. 1,296,220; Mar. 4; v. 260; p. 93.
Riggs, Alfred L., Pittsburgh, Pa., assignor to Visible Spark Plug Company. Spark-plug. No. 1,296,318; Mar. 4; v. 260; p. 114.
Riley, Champlain L., North Plainfield township, Somerset county, N. J. Measuring apparatus. No. 1,297,595; Mar. 18; v. 260; p. 460.
Riley, James F., Lexington, Nebr. Sleeve-protector. No. 1,296,430; Mar. 4; v. 260; p. 137.
Ringquist, Justus M. (See Wrightson and Ringquist.)
Riordan, Emma H., South Rutland, N. Y. Vehicle-hub. No. 1,297,250; Mar. 11; v. 260; p. 358.
Rishel, Harry A., Philadelphia, Pa. Automobile-radiator shield. No. 1,298,094; Mar. 25; v. 260; p. 591.
Rishel, Harry A., Philadelphia, Pa. Automobile-radiator shield. No. 1,298,095; Mar. 25; v. 260; p. 591.
Rizor, Jacob H., Van Wert, Ohio. Attachment for plows. No. 1,296,319; Mar. 4; v. 260; p. 114.
Roberson, John J., Springfield, assignor of one-half to J. I. Rounds, Colton, Utah. Precious-metal separator. No. 1,297,911; Mar. 18; v. 260; p. 528.
Robert Gair Company. (See Tinsley, Edward O., assignor.)
Roberts, Fred T., Cleveland Heights, assignor to The Aranar Company, Cleveland, Ohio. Process of and apparatus for making hollow rubber articles. (Reissue.) No. 14,603; Mar. 4; v. 260; p. 176.
Roberts, Fred T., Cleveland Heights, assignor to The Aranar Company, Cleveland, Ohio. Process of and apparatus for making hollow rubber articles. (Reissue.) No. 14,604; Mar. 4; v. 260; p. 176.
Roberts, George A., Chicago, Ill. Railway-car-washing apparatus. No. 1,298,096; Mar. 25; v. 260; p. 591.
Roberts, Homer J., Evanston, Ill., assignor, by mesne assignments, to Automatic Electric Company. Telephone system. No. 1,297,251; Mar. 11; v. 260; p. 358.
Roberts, Montague H., Jersey City, N. J., assignor to Air Reduction Company, Incorporated. Explosive cartridge. No. 1,298,097; Mar. 25; v. 260; p. 592.
Robertson, Burton J. (See Frazer and Robertson.)
Robinson, Felix, et al. (See Adee, Arthur L., assignor.)
Robinson, Frank A., Auburn, N. Y., assignor to S. Harmon, Chicago, Ill. Coating apparatus. No. 1,296,010; Mar. 4; v. 260; p. 43.
Robinson, George A. (See Droege and Robinson.)
Robinson, John G., Manchester, England. Steam-superheater. No. 1,296,320; Mar. 4; v. 260; p. 114.
Robinson, Lloyd N., Berkeley, Cal. Protective device for electric circuits. No. 1,296,558; Mar. 4; v. 260; p. 166.
Robinson, William B., Easley, S. C. Pumping apparatus. No. 1,296,852; Mar. 11; v. 260; p. 259.
Robson, Alfred B. (See McCandlish and Robson.)
Rodeback, Charles H., Lago, Idaho. Necktie. No. 1,298,565; Mar. 25; v. 260; p. 693.
Roe, Walter E., assignor to Dodge Manufacturing Company, Mishawaka, Ind. Automatic lubricator. No. 1,295,926; Mar. 4; v. 260; p. 24.
Roer, William A., Wichita Falls, Tex. Sack-protector. No. 1,296,431; Mar. 4; v. 260; p. 138
Rogers, Albert N., Irwin, and W. F. O'Neill, Wilkinsburg, assignors to Penn Electrical & Manufacturing Company, Irwin, Pa. Dead-face switchboard. No. 1,297,912; Mar. 18; v. 260; p. 528.
Rogers, Charles E., Detroit, Mich. Apparatus for and method of desiccating fluids. No. 1,297,496; Mar. 18; v. 260; p. 439.
Rogers, Dwight T., Machias, N. Y. Milking-stool. No. 1,295,927; Mar. 4; v. 260; p. 24.
Rogers, Harry R., assignor to Chicago Car Seal Company, Chicago, Ill. Seal. No. 1,298,402; Mar. 25; v. 260; p. 657.
Rogers, James, Dixon, Ill., assignor to Borden's Condensed Milk Company, New York, N. Y. Apparatus for detecting leaks in containers. No. 1,296,699; Mar. 11; v. 260; p. 235.
Roll, William, Sandusky, Ohio. Pencil. No. 1,296,011; Mar. 4; v. 260; p. 44.
Rolls Royce Limited. (See Royce, Frederick H., assignor.)
Romanoff, Hippolyte, New York, N. Y. Wire-cutter. No. 1,298,403; Mar. 25; v. 260; p. 657.
Romanoff, Hippolyte, New York, N. Y. Anti-gas respirator. No. 1,298,404; Mar. 25; v. 260; p. 657.
Rood, William B., assignor to Otis Company, Ware, Mass. Undergarment. No. 1,298,260; Mar. 25; v. 260; p. 628.
Rook, William H., Jr., assignor to G. R. Hill, Akron, Ohio. Structural block. No. 1,296,559; Mar. 4; v. 260; p. 166.
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,298,566; Mar. 25; v. 260; p. 693.
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,298,567; Mar. 25; v. 260; p. 693.

Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,298,568; Mar. 25; v. 260; p. 693.

Roots, James D., West Kensington, London, England. Carbureter. No. 1,296,853; Mar. 11; v. 260; p. 270.

Rosback, Frederick P., Benton Harbor, Mich. Transmission mechanism. No. 1,297,736; Mar. 18; v. 260; p. 490.

Rose, George O., and T. Kurtz, Monessen, assignors to Pittsburgh Steel Company, Pittsburgh, Pa. Safety device for wire-drawing apparatus. No. 1,296,221; Mar. 4; v. 260; p. 93.

Rose, James, R. (See Harris, John, assignor.)

Rose, John. (See Kane and Rose.)

Rosenfield, William W., New York, N. Y. Suction-cleaner. No. 1,296,121; Mar. 4; v. 260; p. 70.

Rosengren, Anders A., Malmö, Sweden. Machine for capsuling or sealing bottles or other vessels. No. 1,295,928; Mar. 4; v. 260; p. 24.

Rosengren, Anders A., Malmö, Sweden. Hermetical sealing device for boxes, tins, or cans for preserves or for other vessels. No. 1,296,560; Mar. 4; v. 260; p. 166.

Rosenthal, August, West Allis, Wis. Nut-husking machine. No. 1,297,497; Mar. 18; v. 260; p. 439.

Rosner, Charles T., Camden, N. J. Package-tie. No. 1,298,405; Mar. 25; v. 260; p. 658.

Ross, David E., assignor to The Ross Gear and Tool Company, La Fayette, Ind. Machine for cutting internal threads, &c. No. 1,296,854; Mar. 11; v. 260; p. 270.

Ross Gear and Tool Company, The. (See Ross, David E., assignor.)

Ross, Herbert O., St. Louis, Mo. Rack or file for correspondence and the like. No. 1,298,628; Mar. 25; v. 260; p. 705.

Ross, John H., Kansas City, Mo. Mold for casting vent-pipe flashings. No. 1,296,321; Mar. 4; v. 260; p. 114.

Ross, Louis S., Newtonville, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Spike attachments for railway signal-fusees. No. 1,296,561; Mar. 4; v. 260; p. 166.

Roth, Carl H., Newark, N. J. Grinding and polishing machine. No. 1,297,596; Mar. 18; v. 260; p. 460.

Roth, Jacob M., Pittsburgh, Pa. Mold-heating furnace. No. 1,296,122; Mar. 4; v. 260; p. 70.

Rothchild, Joseph, assignor to John Simmons Company, New York, N. Y. Internal-combustion engine. No. 1,298,098; Mar. 25; v. 260; p. 592.

Rothfuchs, G. (See Rothfuchs, Louis, assignor.)

Rothfuchs, Louis, assignor of one-half to G. Rothfuchs, Three Oaks, Mich. Dirigible headlight for automobiles. No. 1,297,913; Mar. 18; v. 260; p. 528.

Rounds, James I. (See Roberson, John J., assignor.)

Rowe, James, Chicago, Ill. Book-pad adjuster for automatic book-trimming machines. (Reissue.) No. 14,616; Mar. 18; v. 260; p. 545.

Rowe Manufacturing Co. (See Knutson, Alfred W., assignor.)

Rowland, George, Louisville, Ky. Whip-top. No. 1,295,929; Mar. 4; v. 260; p. 24.

Rowntree, Harold, Kenilworth, Ill., assignor, by mesne assignments, to The Westinghouse Air Brake Company, Wilmerding, Pa. Car-control device. No. 1,297,498; Mar. 18; v. 260; p. 439.

Royce, Frederick H., assignor to Rolls Royce Limited, Derby, England. Lubricating means for the valve-gear of internal-combustion engines. No. 1,298,099; Mar. 25; v. 260; p. 593.

Royce, Rowland H., Hartford, Conn. Bushing. No. 1,298,100; Mar. 25; v. 260; p. 593.

Rudisill, John A., Lewistown, Mont. Coasting-wheel. No. 1,297,252; Mar. 11; v. 260; p. 358.

Rudow, Hyman. (See Mutchnik and Rudow.)

Ruffin, David A., and E. H. Prichard, Albuquerque, N. Mex. Level. No. 1,297,914; Mar. 18; v. 260; p. 528.

Ruhoff, Otto E., assignor to French Battery & Carbon Co., Madison, Wis. Primary battery. No. 1,296,700; Mar. 11; v. 260; p. 235.

Rushmore, Samuel W., Plainfield, N. J. Explosive shell. No. 1,297,499; Mar. 18; v. 260; p. 439.

Rushton, Kenneth, assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Power-reverse mechanism. No. 1,296,322; Mar. 4; v. 260; p. 115.

Russ, John D., Spencer, W. Va. Device for securing couplings to flexible hose. No. 1,296,222; Mar. 4; v. 260; p. 93.

Russell, William P., Anniston, Ala. Retouching-frame. No. 1,296,432; Mar. 4; v. 260; p. 138.

Ryall, Albert U. B. (See Beldam and Ryall.)

Ryan, Charles J., Acton, England. Gramophone and the like. No. 1,298,406; Mar. 25; v. 260; p. 658.

Rydquist, Adolph, Rochester, N. Y. Closure for hollow bodies. No. 1,297,403; Mar. 18; v. 260; p. 420.

Sabalala, Santie, Cleveland, Ohio. Car-brake. No. 1,297,915; Mar. 18; v. 260; p. 529.

Sabulite (Great Britain) Limited. (See McCandlish and Robson, assignors.)

Sachs, Joseph, Hartford, Conn. Convertible electric-appliance-receiving box. No. 1,296,323; Mar. 4; v. 260; p. 115.

Sachs, Joseph, Hartford, Conn. Electric switch. No. 1,297,012; Mar. 11; v. 260; p. 307.

Sadler, Edwin H., and E. L. Hall, Huntington Park, Calif. Supporting device for automobiles. No. 1,297,916; Mar. 18; v. 260; p. 529.

Sadonki, Walter, Detroit, Mich. Ash-sifter. No. 1,297,597. Mar. 18; v. 260; p. 460.

Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)

Sage, Edwin R., Jersey City, assignor to R. S. Brons, East Orange, N. J. Refrigeration apparatus. No. 1,296,012; Mar. 4; v. 260; p. 44.

Sagendorf, Claude D. (See Reyburn and Sagendorf.)

Sager, James H., assignor to J. H. Sager Company, Rochester, N. Y. Bumper. No. 1,296,855; Mar. 11; v. 260; p. 270.

Saha, Ludwig, Chicago, Ill. Match-box. No. 1,296,128; Mar. 4; v. 260; p. 71.

Sakaue, Suyeji, East San Pedro, Cal. Artificial bait. No. 1,296,701; Mar. 11; v. 260; p. 235.

Saliger, Alois B., New York, N. Y., assignor, by mesne assignments, to The Beck Duplicator Company. Duplicator. No. 1,297,404; Mar. 18; v. 260; p. 420.

Salley, Thomas P., U. S. Navy. Pipe-reamer. No. 1,298,570; Mar. 25; v. 260; p. 694.

Sams, Albert J., Chicago, Ill. Adjustable hub-plate. No. 1,296,856; Mar. 11; v. 260; p. 270.

Sams, Robert E., Asheville, N. C. Salve. No. 1,298,407; Mar. 25; v. 260; p. 658.

Samuel G. Supplee & Co. (See Guntner, Frank G., assignor.)

Sanders, Henry F., and H. C. Disbennett, Caruthersville, Mo. Shock-absorber. No. 1,297,253; Mar. 11; v. 260; p. 358.

Sands, Edward E., Houston, Tex. Bulkhead. No. 1,298,101; Mar. 25; v. 260; p. 593.

Sanifount Company. (See Wack, George E., assignor.)

Sargent & Company. (See Voight, Henry G., assignor.)

Sargent, William K., Kissimmee, Fla. Stanchion-operator. No. 1,298,102; Mar. 25; v. 260; p. 593.

Satlow, Joseph. (See Koretsky, Harry M., assignor.)

Sato, Natsuo, San Francisco, Cal. Illuminated aquarium. No. 1,297,254; Mar. 11; v. 260; p. 358.

Saunders, Clarence, assignor to Piggly Wiggly Corporation, Memphis, Tenn. Price-tagging means. No. 1,297,405; Mar. 18; v. 260; p. 420.

Saurer, Adolph. (See Laessker, Jean, assignor.)

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,571; Mar. 25; v. 260; p. 694.

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,572; Mar. 25; v. 260; p. 694.

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,573; Mar. 25; v. 260; p. 695.

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,574; Mar. 25; v. 260; p. 695.

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,575; Mar. 25; v. 260; p. 695.

Sauvage, William H., Flushing, assignor, by mesne assignments, to Gould Coupler Company, New York, N. Y. Slack-adjuster. No. 1,298,576; Mar. 25; v. 260; p. 695.

Sawyer, Roy C., and J. W. West, Pasadena, Calif. Gold washing and accumulating device. No. 1,298,577; Mar. 25; v. 260; p. 695.

Saxe, Sigmond, New York, N. Y. Tanning process. No. 1,297,255; Mar. 11; v. 260; p. 359.

Saybolt, Chester A., assignor to Lockwood Folding Box Company, Philadelphia, Pa. Easel display-carton. No. 1,296,223; Mar. 4; v. 260; p. 93.

Sayre, Robert H., Central City, Colo. Aerial navigation protractor. No. 1,296,704; Mar. 11; v. 260; p. 236.

Scarborough, Henry. (See Steere, Clarence E., assignor.)

Schaake, William, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Insulator. No. 1,296,587; Mar. 4; v. 260; p. 172.

Schader, Carl F., *et al.* (See Evans, Newton, assignor.)

Schaefer, Arthur E., Saginaw, Mich. Extracting salt from natural brines. No. 1,297,737; Mar. 18; v. 260; p. 491.

Schafer, Celia L., and I. Arnow, New York, N. Y. Supporter for electric-globe shades. No. 1,296,433; Mar. 4; v. 260; p. 138.

Schafer, John C. F., Mount Pulaski, Ill. Damper. No. 1,296,857; Mar. 11; v. 260; p. 271.

Schaffert, Louis, Brooklyn, and S. G. Conkling, New York, N. Y. Gasolene and clutch lock for automobiles. No. 1,298,408; Mar. 25; v. 260; p. 658.

Schanil, Fred H., Gahern, Alberta, Canada. Tractor attachment. No. 1,296,434; Mar. 4; v. 260; p. 138.

Schanse, G. A. (See Jencick, Stephen, assignor.)

Schaper, Henry C., assignor to The General Automatic Scale Company, St. Louis, Mo. Scale-beam lock and switch-operating device. No. 1,297,738; Mar. 18; v. 260; p. 491.

Scharun, William, Sr., Milwaukee, Wis. Foot-measure. No. 1,297,500; Mar. 18; v. 260; p. 439.

Scharwath, John A., Elizabeth, N. J. Roofing material. No. 1,296,324; Mar. 4; v. 260; p. 115.

Schatz, Herman W., Norwood, and A. M. Sosa, assignors to The American Tool Works Company, Cincinnati, Ohio. Drilling-machine. No. 1,297,256; Mar. 11; v. 260; p. 359.
Schatz, Herman W., Norwood, assignor to The American Tool Works Company, Cincinnati, Ohio. Drilling-machine. No. 1,297,257; Mar. 11; v. 260; p. 359.
Schaum, Otto W., Philadelphia, Pa., assignor to Fletcher Works, Incorporated. Loom. No. 1,296,702; Mar. 11; v. 260; p. 235.
Schenck, Samuel B., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,295,930; Mar. 4; v. 260; p. 24.
Schendel, William E., assignor to Independent Cracker & Biscuit Co., San Francisco, Calif. Container. No. 1,297,739. Mar. 18; v. 260; p. 491.
Schenke, John. (See Tauber and Schenke.)
Scherer, Albert G., assignor to The Excelsior Steel Furnace Company, Chicago, Ill. Device for locking register-frames in stack-head openings. No. 1,296,703; Mar. 11; v. 260; p. 236.
Schettler, Wesley W., assignor to The Foos Gas Engine Company, Springfield, Ohio. Oil-reservoir for internal-combustion engines. No. 1,296,124; Mar. 4; v. 260; p. 71.
Schevenell, James, New York, N. Y. Protective binding for collars. No. 1,297,501. Mar. 18; v. 260; p. 440.
Schimer, Baldwin F., New York, N. Y. Shock-absorber. No. 1,297,014; Mar. 11; v. 260; p. 307.
Schirmer, Baldwin F., New York, N. Y. Making beer. No. 1,297,013; Mar. 11; v. 260; p. 307.
Schlaegel, Daniel H., Wadena, Minn. Bunching attachment for potato-diggers. No. 1,296,562; Mar. 4; v. 260; p. 167.
Schlanger, Frederick A., Brooklyn, N. Y. Book-rest. No. 1,297,015; Mar. 11; v. 260; p. 307.
Schlossstein, Hans, Chicago, Ill. Apparatus for treating oils. No. 1,296,013; Mar. 4; v. 260; p. 44.
Schmidgall, Carl H., Peoria, Ill. Boring-tool. No. 1,297,740; Mar. 18; v. 260; p. 492.
Schmidt, August, Washington, D. C., assignor to G. Mossop, Philadelphia, Pa. Finger-ring. No. 1,296,435; Mar. 4; v. 260; p. 138.
Schmidt, Ernest E., Boston, Mass. Safety writing-ink. No. 1,296,858; Mar. 11; v. 260; p. 271.
Schmidt, Henry F., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Marine turbine. No. 1,298,103; Mar. 25; v. 260; p. 593.
Schmidt, Henry F., Pittsburgh, Pa., assignor to Westinghouse Gear & Dynamometer Company. Thrust-bearing and dynamometer. No. 1,298,630; Mar. 25; v. 260; p. 706.
Schmidt, Walter A., assignor to International Precipitation Company, Los Angeles, Calif. Process and apparatus for separating finely-divided materials. No. 1,298,409; Mar. 25; v. 260; p. 658.
Schmidt'sche Heissdampf Gesellschaft m. b. H. (See Eggers, Julius, assignor.)
Schmitt, John C., Chicago, Ill. Confection-molding machine. No. 1,297,917; Mar. 18; v. 260; p. 529.
Schneider, Christian. (See Holdsworth, Arthur J., assignor.)
Schneider & Cie. (See Schneider, Eugène, assignor.)
Schneider, Eugène, Le Creusot, France, assignor to Schneider & Cie., Paris, France. Gin for mounting and dismounting the carriages of guns of large caliber. No. 1,298,578; Mar. 25; v. 260; p. 696.
Schneider, Henry J., Rochester, N. Y. Scraping device. No. 1,297,502; Mar. 18; v. 260; p. 440.
Schnippel, Harry M., Shelbyville, Ind. Measuring implement. No. 1,298,579; Mar. 25; v. 260; p. 696.
Schoder, Charles E., assignor to American Lithographic Company, New York, N. Y. Adhesive surface and preparing same. No. 1,297,406; Mar. 18; v. 260; p. 420.
Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Press for cutting or punching sheet material. No. 1,295,931; Mar. 4; v. 260; p. 25.
Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Machine for grooving leather. No. 1,296,859; Mar. 11; v. 260; p. 271.
Schoenl, Frank A., assignor of one-half to H. K. De Lloyd, Cleveland, Ohio. Cloth-holding device. No. 1,297,016; Mar. 11; v. 260; p. 307.
Schoenmehl, Charles B., and M. L. Martus, assignors to The Waterbury Battery Company, Waterbury, Conn. Primary battery. No. 1,297,918; Mar. 18; v. 260; p. 529.
Schrade, George, New York, N. Y. Attachable heel. No. 1,298,104; Mar. 25; v. 260; p. 594.
Schuffenhauer, Arthur E., South Chicago, Ill. Jointer. No. 1,296,325; Mar. 4; v. 260; p. 115.
Schultz, Emile J. A., Paris, France. Engine-valve. No. 1,297,407; Mar. 18; v. 260; p. 420.
Schulz, Lorenz C., Detroit, Mich. Motor-shield. No. 1,297,258; Mar. 11; v. 260; p. 359.
Schulze, Hans O., Chicago, Ill. Trammel-point. No. 1,295,932; Mar. 4; v. 260; p. 25.
Schüpphaus, Robert C., Brooklyn, N. Y. Playing-ball. No. 1,298,410; Mar. 25; v. 260; p. 458.
Schuster, Harry H., Chicago, Ill. Armored inner tube. No. 1,297,408; Mar. 18; v. 260; p. 420.
Schut, Herman, Brandt, S. D. Traction-wheel. No. 1,297,259; Mar. 11; v. 260; p. 359.
Schutte Electric Company. (See Schutte, Herman, assignor.)
Schutte, Herman, Wilkinsburg, assignor to Schutte Electric Company, Pittsburgh, Pa. Trolley-wire holder. No. 1,296,969; Mar. 11; v. 260; p. 271.
Schwartz, Edward, New York, N. Y., assignor to Manhattan Electrical Supply Company, Jersey City, N. J. Electromagnet. No. 1,297,919; Mar. 18; v. 260; p. 529.
Schweinert, Maximilian C., West Hoboken, N. J. Pump-coupling. No. 1,297,741; Mar. 18; v. 260; p. 492.
Scollon, Richard, Barnesboro, Pa. Mixing device. No. 1,296,326; Mar. 4; v. 260; p. 115.
Scott, Alonzo B., Fairmont, W. Va. Card-holding attachment for pencils. No. 1,297,017; Mar. 11; v. 260; p. 307.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric & Manufacturing Company. Distributing system for electric railways. No. 1,295,933; Mar. 4; v. 260; p. 25.
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Scott, James H., assignor of one-half to N. E. Jewett, Los Angeles, Cal. Perambulator and cradle. No. 1,297,018; Mar. 11; v. 260; p. 308.
Scott, Walter W. (See Hess and Scott.)
Seaman, George O., Brooklyn, N. Y. Gear-shifting device. No. 1,296,436; Mar. 4; v. 260; p. 138.
Sears, George H., Guthrie, Okla. Broom-frame. No. 1,296,861; Mar. 11; v. 260; p. 272.
Sears, Willard T., Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Clamping mechanism. No. 1,296,862; Mar. 11; v. 260; p. 272.
Sears, Willard T., Brooklyn, assignor to Niles-Bement-Pond Company, New York, N. Y. Adjusting mechanism for drilling-machines. No. 1,296,863; Mar. 11; v. 260; p. 272.
Seckendorf, Samuel, assignor to Johnston & Seckendorf, New York, N. Y. Releasing mechanism. No. 1,297,019; Mar. 11; v. 100; p. 308.
Seeby, John A., Tampa, Fla. Planking-clamp. No. 1,298,580; Mar. 25; v. 260; p. 696.
Seek, James H., Chicago, Ill. Automatic adjusting carbureter. No. 1,296,705; Mar. 11; v. 260; p. 236.
Seline, John. (See McLean, Seline, and Reddeck.)
Sensiba, Edward H. (See Lauchin, George Y., assignor.)
Sentinel Company, The. (See Malone, John F. J., assignor.)
Sexton, James P., assignor to Buttonlath Manufacturing Company, Los Angeles, Calif. Plaster-lath. No. 1,298,411; Mar. 25; v. 260; p. 659.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,297,920; Mar. 18; v. 260; p. 529.
Shaar, Hamdan W., Monroe, Wash. Pneumatic-tire reliner. No. 1,298,581; Mar. 25; v. 260; p. 696.
Shafer, Le Roy D. and L. J., Bollinger, Grove City, Pa. Focusing device. No. 1,298,582; Mar. 25; v. 260; p. 696.
Sharp, Clayton H., White Plains, N. Y., assignor to General Electric Company. Photometer. No. 1,297,260; Mar. 11; v. 260; p. 360.
Sharp, Robert, Tuckahoe, N. Y. Tie-rod-withdrawing jack. No. 1,298,105; Mar. 25; v. 260; p. 594.
Sharp, William E., assignor to Grip Nut Company, Chicago, Ill. Lock-nut and constructing the same. No. 1,296,583; Mar. 25; v. 260; p. 697.
Sharples Specialty Company. (See Ayres, Eugene E., Jr., assignor.)
Shatto, George E., Cleveland, Ohio. Drier. No. 1,297,409; Mar. 18; v. 260; p. 421.
Shaul, Oliver J., Edmon, Pa. Demountable clutch-rim. No. 1,296,327; Mar. 4; v. 260; p. 116.
Shaw, Robert S., Philadelphia, Pa. Ventilator. No. 1,298,584; Mar. 25; v. 260; p. 697.
Shaw, Walter, Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Fastener-setting machine. No. 1,296,014; Mar. 4; v. 260; p. 44.
Shawvan, Walter S., New York, N. Y., assignor, by mesne assignments, to The Esta Company, Boston, Mass. Humidifier for internal-combustion engines. No. 1,297,586; Mar. 18; v. 260; p. 460.
Shean, James R., Los Angeles, Calif. Device for indicating the vertical. No. 1,297,921; Mar. 18; v. 260; p. 530.
Shearer, William A., and C. V. Bruch, Gas City, Ind. Curtain and shade holder. No. 1,297,261; Mar. 11; v. 260; p. 360.
Shearn, Joseph H., assignor to Nonotuck Silk Company, Leeds, Mass. Collapsible spindle. No. 1,296,864; Mar. 11; v. 260; p. 272.
Sheffield Machine & Tool Company, The. (See Lindgren, Frank G., assignor.)
Sheler, John C., and R. B. Austin, Cadillac, Mich. Mounting for the front wheels of trucks. No. 1,298,412; Mar. 25; v. 260; p. 659.
Shell Company of California. (See Thompson, Nelson W., assignor.)
Shepard, Wilbur L., West Hartford, assignor to The World Gas Engine Company, Hartford, Conn. Variable and reverse speed mechanism. No. 1,297,580; Mar. 18; v. 260; p. 460.

Shepard, Wilber L., West Hartford, assignor to The World Gas Engine Company, Hartford, Conn. Brake mechanism. No. 1,297,600; Mar. 18; v. 260; p. 461.
Sheppard, Charles A. N., Ottawa, Ontario, Canada. Electrical vibrator. No. 1,296,706; Mar. 11; v. 260; p. 236.
Sheppard, Floyd B., Wayland, N. Y. Compasses. No. 1,296,585; Mar. 25; v. 260; p. 607.
Sherrill, Guy M., Eastland, Tex. Spark-plug attachment. No. 1,296,126; Mar. 4; v. 260; p. 72.
Sherwin, Frank, Brookings, S. D. Press-drill. No. 1,297,601; Mar. 18; v. 260; p. 461.
Shields, Nelson, assignor of one-fourth to H. J. Gunderson, and one-fourth to J. A. Nelson, Minneapolis, and one-fourth to F. W. Adsit, St. Paul, Minn. Spring-motor automobile. No. 1,297,503; Mar. 18; v. 260; p. 440.
Shindel, Harry F., assignor to T. A. Willson & Co., Inc., Reading, Pa. Eye-cup for goggles. No. 1,296,707; Mar. 11; v. 260; p. 236.
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Shiplet, Clarence E. (See Litchfield and Shiplet.)
Shipley, Francis M., Piqua, Ohio. Undergarment. No. 1,297,262; Mar. 11; v. 260; p. 260.
Shodron, John G., assignor to James Manufacturing Company, Fort Atkinson, Wis. Harness-support. No. 1,297,021; Mar. 11; v. 260; p. 306.
Shoe Hardware Company, The. (See Müller, Henry, assignor.)
Shoemaker, Isaac L., assignor to The Cumberland Glass Mfg. Co., Bridgeton, N. J. Machine for grinding glass stoppers. No. 1,296,261; Mar. 25; v. 260; p. 628.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Distance-gear for automobile torpedoes. No. 1,296,328; Mar. 4; v. 260; p. 116.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Torpedo steering unit. No. 1,296,329; Mar. 4; v. 260; p. 116.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Gyroscopic steering mechanism. No. 1,296,330; Mar. 4; v. 260; p. 117.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Gyroscope spinning mechanism. No. 1,296,331; Mar. 4; v. 260; p. 117.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Diving-gear. No. 1,296,332; Mar. 4; v. 260; p. 117.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Automobile torpedo. No. 1,296,333; Mar. 4; v. 260; p. 117.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Gyroscopically-controlled torpedo. No. 1,296,334; Mar. 4; v. 260; p. 117.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Launching-tube. No. 1,296,335; Mar. 4; v. 260; p. 118.
Shorrock, Arthur, North Adams, Mass. Corset-stay. No. 1,297,742; Mar. 18; v. 260; p. 492.
Shreves, Frederick G., Denver, Colo. Obtaining oil from shale. No. 1,297,022; Mar. 11; v. 260; p. 306.
Sibley, Leon L., Monroe Bridge, Mass. Mandrel. No. 1,296,127; Mar. 4; v. 260; p. 72.
Siddeley-Deasy Motor Car Company. (See Green, Frederick M., assignor.)
Sidebotham, Melvin H., Cliftondale, Mass., assignor to E. W. Labomberde, Nashua, N. H. Machine for making tubular box-shells. No. 1,298,586; Mar. 25; v. 260; p. 697.
Sidey, Paul D., and G. L. Harley, Goldfield, Colo. Automatic filter-scraper shifter. No. 1,296,865; Mar. 11; v. 260; p. 273.
Siebrandt, John R., Kansas City, Mo. Buck extension. No. 1,296,128; Mar. 4; v. 260; p. 72.
Siegel, Herbert, Philadelphia, Pa. Combined toy and game apparatus. No. 1,296,129; Mar. 4; v. 260; p. 72.
Siegienski, Joseph F., Thorp, Wis. Fountain-pen. No. 1,297,602; Mar. 18; v. 260; p. 461.
Siemens & Halske, A. G. (See Huth, Max, assignor.)
Silver, Frank D., Germantown, Calif. Sanitary drinking apparatus; No. 1,297,410; Mar. 18; v. 260; p. 421.
Silvey, Monttie M., Kansas City, Mo. Pipe-bender. No. 1,298,106; Mar. 25; v. 260; p. 594.
Simmon, Karl A., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system. No. 1,296,015; Mar. 4; v. 260; p. 45.
Simmon, Karl A., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical system. No. 1,298,107; Mar. 25; v. 260; p. 594.
Simmon, Karl A., Edgewood Park, and H. T. Morris, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Control system. (Reissue.) No. 14,610; Mar. 11; v. 260; p. 271.
Simmons, Allen R., Stanberry, Mo. Stock-feeder. No. 1,297,743; Mar. 18; v. 260; p. 492.
Simmons Company. (See Gail, John F., assignor.)
Simmons Company. (See Travis, Don C., assignor.)
Simmons, Hoyt P. (See Talbot, William W., assignor.)
Simmons Manufacturing Company, The. (See Simmons, Paul R., assignor.)
Simmons, Paul R., assignor to The Simmons Manufacturing Company, Huntington, Ind. Milk-bottle-cap-making machine. No. 1,297,023; Mar. 11; v. 260; p. 309.
Simmons, Walter B. (See Staley and Simmons.)
Simms, Harold H. (See Denio, William L., assignor.)
Simms, Joseph A., assignor of one-half to J. H. Gregg and G. A. Gregg, and one-fourth to A. Laszlo, Detroit, Mich. Motor. No. 1,297,263; Mar. 11; v. 260; p. 260.
Simms, Joseph A., assignor of one-half to J. H. Gregg and G. A. Gregg, and one-fourth to A. Laszlo, Detroit, Mich. Aeroplane. No. 1,297,264; Mar. 11; v. 260; p. 260.
Simons, Harry B., Montesano, Wash. Traction coupling or hitch. No. 1,296,563; Mar. 4; v. 260; p. 167.
Simplex Valve & Meter Company. (See Borden, Moro M., assignor.)
Simplex Wire & Cable Co. (See Boggs, Charles R., assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singer Manufacturing Company, The. (See Greene and Buchner, assignors.) (Reissue.)
Sintz, Claude, assignor to Steel King Motor Plow Company, Detroit, Mich. Tractor. No. 1,296,262; Mar. 25; v. 260; p. 628.
Sir W. G. Armstrong, Whitworth and Company. (See Hadcock, Albert G., assignor.)
Sir W. G. Armstrong, Whitworth and Company. (See Mole, Ernest H., assignor.)
Sisti Safety Can Company. (See Sisti, Salvatore L., assignor.)
Sisti, Salvatore L., assignor to Sisti Safety Can Company, Chicago, Ill. Storage and dispensing vessel. No. 1,298,108; Mar. 25; v. 260; p. 594.
Sitts, Jacob B., Wampsville, N. Y. Trap. No. 1,296,437; Mar. 4; v. 260; p. 139.
Siver, Charles W., assignor to Edward P. Bates Co., Inc., Syracuse, N. Y. Sprinkler-head. No. 1,298,109; Mar. 25; v. 260; p. 595.
Sivolva, Ellia O., New York, N. Y. Sewing-machine head-guard. No. 1,298,413; Mar. 25; v. 260; p. 659.
Skemp, Robert, Scottdale, assignor to American Sheet and Tin Plate Company, Pittsburgh, Pa. Finishing galvanized sheets and plates. No. 1,297,405; Mar. 11; v. 260; p. 361.
Skerns, J. T., et al. (See May, Jesse A., assignor.)
Skinner, Clyde L., and P. A. Tucker, Chicago, Ill. Arch-support. No. 1,297,922; Mar. 18; v. 260; p. 530.
Skinner, Rufus A., St. Marys, Ohio. Regulating-damper. No. 1,298,587; Mar. 25; v. 260; p. 697.
Skretting, Martin, Opstead, Minn. Flag-holder. No. 1,296,566; Mar. 11; v. 260; p. 273.
Skulina, Raymond, Chicago, Ill. Inclinometer. No. 1,297,504; Mar. 18; v. 260; p. 440.
Slough, Frank M., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,414; Mar. 25; v. 260; p. 659.
Slough, Frank M., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,588; Mar. 25; v. 260; p. 697.
Slough, Frank M., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,298,589; Mar. 25; v. 260; p. 698.
Small, Chesley T., St. Louis, Mo. Feeding device. No. 1,297,506; Mar. 18; v. 260; p. 440.
Smart, Henry C., Brooklyn, assignor to Standard Oil Company of New York, New York, N. Y. Combined coal and gas burning furnace. No. 1,296,224; Mar. 4; v. 260; p. 94.
Smethport Glass Co. (See Douchamp, Henry, assignor.)
Smith, Andrew, San Mateo, Cal. Joint for metal casings. No. 1,296,016; Mar. 4; v. 260; p. 45.
Smith, Andrew, assignor to Smith Metal Perforating Company, San Mateo, Calif. Electric-arc welding. No. 1,298,590; Mar. 25; v. 260; p. 698.
Smith, Carl C., Oakland, Calif. Automobile-loading device. No. 1,297,923; Mar. 18; v. 260; p. 530.
Smith, Christian N., Elgin, Ill. Machine for making metallic printing-plates. No. 1,297,266; Mar. 11; v. 260; p. 361.
Smith, David B., Cape Girardeau, Mo. Holder for portable fire-extinguishers. No. 1,297,024; Mar. 11; v. 260; p. 306.
Smith, De Wane B., Utica, N. Y. Strainer and valve-box for pumps or the like. No. 1,297,603; Mar. 18; v. 260; p. 461.
Smith, Frank A., assignor to American Badge Company, Chicago, Ill. Locking mechanism for pocket savings-banks. No. 1,297,025; Mar. 11; v. 260; p. 309.
Smith, Harry C., Santa Barbara, Cal. Tie-press. No. 1,296,017; Mar. 4; v. 260; p. 45.
Smith, Henry L., Paterson, N. J. Radius-bar. No. 1,296,867; Mar. 11; v. 260; p. 273.
Smith, John C., Monaca, Pa., assignor to Solar Electric Company. Container for fragile articles. No. 1,297,026; Mar. 11; v. 260; p. 310.
Smith, Lawrence A., Port Gibson, Miss. Humidor. No. 1,298,415; Mar. 25; v. 260; p. 660.
Smith Metal Perforating Company. (See Smith, Andrew, assignor.)

Smith, Ray A., Oakland, Calif. Game. No. 1,298,591; Mar. 25; v. 260; p. 698.
Smith, Thomas A., Denver, Colo. Scrubbing and polishing machine. No. 1,296,868; Mar. 11; v. 260; p. 273.
Smith, Thomas B., Cheriton, Va. Aeroplane. No. 1,297,604; Mar. 18; v. 260; p. 462.
Smith, William E., Scotland Neck, N. C. Attachment for steam cotton-trampers. No. 1,297,027; Mar. 11; v. 260; p. 310.
Smith, William M., Woodward, Okla. Spring-wheel. No. 1,298,592; Mar. 25; v. 260; p. 698.
Smoot, Charles H. (See Jones and Culver, assignors.)
Sneddon, James P., Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N. Y. Superheater-boiler. (Reissue.) No. 14,620; Mar. 25; v. 260; p. 707.
Snow, Leon U., Lincoln, Nebr. Blow-torch. No. 1,296,869; Mar. 11; v. 260; p. 273.
Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Valve reversing gear. No. 1,295,934; Mar. 4; v. 260; p. 26.
Società Anonima Italiana Gio. Ansaldo & C. (See Giolitti, Federico, assignor.)
Società Anonima Italiana Gio. Ansaldo & C. (See Morali, Ricciotti, assignor.)
Société Anonyme Des Etablissements Nieuport. (See Bazaine, Léon, assignor.)
Societe Chimique des Usines du Rhone, (Anciennement, Gilliard, P. Monnet et Cartier.) (See Koetschet and Beudet, assignors.)
Sohm, Alfred L., Chicago, Ill., assignor, by mesne assignments, to Sohm Electric Company, trustee. Pawl-and-ratchet mechanism. No. 1,296,870; Mar. 11; v. 260; p. 274.
Sohm Electric Company, trustee. (See Sohm, Alfred L., assignor.)
Solar Electric Company. (See Smith, John C., assignor.)
Solomon, Harry D. (See Solomon, Thomas N. and H. D.)
Solomon, Thomas N. and H. D., Detroit, Mich. Air-dumping ballast-car. No. 1,297,924; Mar. 18; v. 260; p. 530.
Sommerville, Newton M., Emerick, Nebr. Detachable gearing for mowers. No. 1,298,110; Mar. 25; v. 260; p. 595.
Söraas, Ingvar, Aalvik, Ovam, Norway. Precipitating lignin from waste sulfite liquor. No. 1,297,028; Mar. 11; v. 260; p. 310.
Sosa, Augustus M. (See Schatz and Sosa.)
Soule, Francis L., Welland, Ontario, Canada. Bobbin-holder. No. 1,297,029; Mar. 11; v. 260; p. 310.
South, Augustus W., assignor to Automatic Reminder Company, Chicago, Ill. Reminder-clock. No. 1,296,438; Mar. 4; v. 260; p. 139
Southgate, George T., Brooklyn, N. Y. Resistance material. No. 1,297,744; Mar. 18; v. 260; p. 493.
Southworth, Dewitt C., and F. I. Hardy, South Bend, Ind. Fishing-reel. No. 1,296,871; Mar. 11; v. 260; p. 274.
Sowden, Charles N., Central Caracas, Cuba. Vacuum-pump. No. 1,298,111; Mar. 25; v. 260; p. 595.
Sowden, Charles N., Central Caracas, Cuba. Vacuum-pump. No. 1,298,112; Mar. 25; v. 260; p. 595.
Sowle, Herbert F., Everett, Mass. Divan-bed. No. 1,295,935; Mar. 4; v. 260; p. 26
Spahr, George W., Chicago, Ill. Muzzle. No. 1,297,301; Mar. 11; v. 260; p. 370.
Spangler, Franklin P., Indianapolis, Ind. Oil-burner. No. 1,296,708; Mar. 11; v. 260; p. 236.
Spellman, Edward, Louisville, Ky. Measuring instrument. No. 1,295,936; Mar. 4; v. 260; p. 26.
Spencer, Charles H., assignor to H. S Dulaney, Baltimore, Md. Player-piano pneumatic. No. 1,298,113; Mar. 25; v 260; p. 595.
Spencer, George H., Chicago, Ill. Appliance for handling timber, &c. No. 1,297,745; Mar. 18; v. 260; p. 493
Spencer, Ira H., West Hartford, assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Reservoir and controlling-valve for organs. No. 1,296,872; Mar. 11; v. 260; p. 274.
Spencer, John E., and A. C. Lillie, Los Angeles, Calif., assignors to William R. Johnston Manufacturing Company, Chicago, Ill. Automobile-window construction. No. 1,298,593; Mar. 25; v. 260; p. 698.
Spencer, Thomas H., trustee. (See Bloodgood, James H., assignor.)
Spencer Turbine Cleaner Company, The. (See Spencer, Ira H., assignor.)
Sperry, Elmer A., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y. Multiple-turret target-indicator. No. 1,296,439; Mar. 4; v. 260; p. 139.
Sperry, Elmer A., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y. Repeater system for gyro-compasses. No. 1,296,440; Mar. 4; v. 260; p. 139.
Sperry Gyroscope Company, The. (See Sperry, Elmer A., assignor.)
Spies, Peter, Cleveland, Ohio. Draining attachment for the dashboards of motor-vehicles. No. 1,297,030; Mar. 11; v. 260; p. 310.
Spivey, Geo. L. (See Davis, Luther L., assignor.)
Splitdorf Electrical Company. (See Dean, William W., assignor.)
Splitdorf Electrical Company. (See Mason, Charles T., assignor.)
Splitdorf Electrical Company. (See Zimmerman, James G., assignor.)
Sprengel, Gustav, Wheaton, Ill. Flycatcher. No. 1,297,267; Mar. 11; v. 260; p. 361.
Squarey, Edward M. (See Fuhrmann and Squarey.)
St. Stoesser, Leopold, et al. (See Higbee, Jesse P., assignor.)
Stable Juan N., Geneva, Switzerland. Apparatus for sterilising water-closet seats. No. 1,297,031; Mar. 11; v. 260; p. 311.
Stacy, Fred M., and W. F. Woods, Portsmouth, N. H. Fire-alarm indicator. No. 1,297,268; Mar. 11; v. 260; p. 362.
Stafford, Benjamin E. D., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt-testing device. No. 1,298,416; Mar. 25; v. 260; p. 660.
Stafford, Benjamin E. D., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Railway-track construction. No. 1,295,937; Mar. 4; v. 260; p. 26.
Stagg, Clayton B. (See Hanks, Walter W., assignor.)
Stage, Harold I., Soulsbyville, Calif. Automatic pneumatic feed. No. 1,297,925; Mar. 18; v. 260; p. 531.
Staina, George M. (See Woolever and Staina.)
Staley, Harrison L., Martinsville, Ind., and W. B. Simmons, assignors to Wilts Veneer Company, Richmond, Va. Pail-bottom fastener. No. 1,297,411; Mar. 18; v. 260; p. 421.
Stamm, O. L., et al. (See Lamar, Alexis L., assignor.)
Stamp, Hugo O., Milwaukee, Wis. Charging device for concrete-mixers. No. 1,298,114; Mar. 25; v. 260; p. 596.
Standard Automatic Machine Company. (See Gomber, George W., assignor.)
Standard Automatic Machine Company. (See Ravert, William L., assignor.)
Standard Computing Scale Company. (See Buckingham, Fremont H., assignor.)
Standard Oil Company of New York. (See Smart, Henry C., assignor.)
Standard Parts Company, The. (See Jobski, Otto H., assignor.)
Standard Parts Company, The. (See McIntyre, Michael M., assignor.)
Standard Varnish Works. (See Beausejour, Reme A., assignor.)
Standard Woven Fabric Company. (See Waite, Edwin E., assignor.)
Stanton, Frederick L. (See Fish, Gilbert D., assignor.)
Stark, Ambrose E., Aurora, Ind. Car-door brace. No. 1,297,269; Mar. 11; v. 260; p. 362.
Starman, Joseph. (See Weis and Starman.)
Starr, Alden B., Brooklyn, N. Y. Drying-machine. No. 1,297,926; Mar. 18; v. 260; p. 531.
Starr, Herman J., Osage, Iowa, assignor to A. O. Smith Corporation, Milwaukee, Wis. Motor-driven vehicle. No. 1,297,747; Mar. 18; v. 260; p. 493.
Statham, Noel, Hastings-upon-Hudson, assignor to West Virginia Pulp and Paper Company, New York, N. Y. Causticized organic material and making the same. No. 1,298,594; Mar. 25; v. 260; p. 699.
Staude, Edwin G., Minneapolis, assignor to E. G. Staude Manufacturing Company, St. Paul, Minn. Carbureter. No. 1,297,506; Mar. 18; v. 260; p. 440.
Stebbing, Frank, Chicago, Ill. Life-preserver. No. 1,297,270; Mar. 11; v. 260; p. 362.
Stebler, Fred, Riverside, Cal. Fruit-cleaner. No. 1,296,130; Mar. 4; v. 260; p. 72.
Stebler, Fred, Riverside, Cal. Fruit-cleaning machine. No. 1,296,131; Mar. 4; v. 260; p. 73.
Steel King Motor Plow Company. (See Sintz, Claude, assignor.)
Steel Utilities. (See Frelinghuysen and Hawthorne, assignors.)
Steel Utilities. (See Payne and Wurts, assignors.)
Steere, Clarence E., assignor to H. Scarborough, Milwaukee, Wis. Endless conveyer. No. 1,298,115; Mar. 25; v. 260; p. 596.
Steese, Marcus C., Duluth, Minn. Hydrocarbon-burner. No. 1,296,709; Mar. 11; v. 260; p. 237.
Steimer, Frederick M. (See Atchison and Steimer.)
Steinbrueck, John C., Auburn, Wash. Drain-cup for brass wind instruments. No. 1,298,595; Mar. 25; v. 260; p. 699.
Stenhouse, Thomas, Washington, Pa., assignor to Hazel-Atlas Glass Company, Wheeling, W. Va. Manufacture of articles of glass. No. 1,297,412; Mar. 18; v. 260; p. 421.
Stephenson, Benjamin F., U. S. Navy. Hair-cutter. No. 1,297,413; Mar. 18; v. 260; p. 421.
Sterling, Edward C., Chicago, Ill. Drain-cleaner for refrigerator-cars. No. 1,297,414; Mar. 18; v. 260; p. 422.
Sterling, Montaigu M. (See Carter, Charles H., assignor.)
Stevens, Augustus R., assignor of one-half to F. Tucker, Lindsay, Cal. Fruit-grader. No. 1,296,564; Mar. 4; v. 260; p. 167.
Stevens, Frank E., assignor to The Lattimer-Stevens Company, Columbus, Ohio. Gas-meter-connecting device. No. 1,298,596; Mar. 25; v. 260; p. 699.
Stevens, Frank M. (See Gunton, Fred L., assignor.)
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Manufacturing cylindrical magnet-frames and the like. No. 1,297,271; Mar. 11; v. 260; p. 362.
Stevens, Herbert C. M. (See Coatalen and Stevens.)
Stevenson, George H. (See Crawford and Stevenson.)

Stewart, Charles F., and E. N. Dickerson, Kinston, N. C. Clamping device for heading-machines. No. 1,297,927; Mar. 18; v. 260; p. 531.
Stewart-Warner Speedometer Corporation. (See Whittington, Frederik G., assignor.)
Stewart, Wilbet F. (See Hamm and Stewart.)
Stewart, William C., Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Sole-flexing machine. No. 1,297,605; Mar. 18; v. 260; p. 462.
Stillwaggon, John H., assignor to Auto Slyde & Moving Picture Machine Co., Inc., New York, N. Y. Stereopticon apparatus. No. 1,298,417; Mar. 25; v. 260; p. 660.
Stine, George R., Oakland, assignor of one-half to J. S. Day, San Francisco, Cal. Folding camp table and seat. No. 1,296,335; Mar. 4; v. 260; p. 118.
Stirton, Frank S., Springfield, Ontario, Canada. Aeroplane. No. 1,297,032; Mar. 11; v. 260; p. 311.
Stock, Albert. (See Mundy and Stock.)
Stock, Henry W. (See Ver Planck and Stock.)
Stokes, Frederick W., S., London, England. Fuse for projectiles. No. 1,298,418; Mar. 25; v. 260; p. 661.
Stokes & Smith Company. (See Streeper, William H., assignor.)
Stoll, George W., assignor of one-half to G. H. Dreschel, Indianapolis, Ind. Device for attaching table-legs. No. 1,297,415; Mar. 18; v. 260; p. 422.
Stoltz, Daniel J., Montpelier, Ind. Cup for pumps, &c. No. 1,297,033; Mar. 11; v. 260; p. 311.
Stone, Edgar L., Waterford, Me. Ice-cutting machine. No. 1,296,223; Mar. 4; v. 260; p. 94.
Stone, Herman F., Lawrence, N. Y. Bootjack. No. 1,296,565; Mar. 4; v. 260; p. 167.
Stone, Richard C., Muncie, Ind. Steering device for automobiles. No. 1,298,263; Mar. 25; v. 260; p. 629.
Stone Straw Company, The. (See McGunigal, Sylvester B., assignor.)
Stonebridge, Charles H., New York, N. Y. Folding lantern. No. 1,298,116; Mar. 25; v. 260; p. 596.
Stoner, Harvey H., assignor of one-half to W. D. Stoner, Springfield, Ohio. Armored tire. No. 1,296,441; Mar. 4; v. 260; p. 140.
Stoner, Willis D. (See Stoner, Harvey H., assignor.)
Stow, Audley H., Maybeury, W. Va. Method of and means for producing smoke screens for ships. No. 1,296,226; Mar. 4; v. 260; p. 94.
Strait, William, Appleton, Wis. Tractor-belt mechanism. No. 1,298,597; Mar. 25; v. 260; p. 699.
Strand, Carl T., *et al.* (See Bergren, John A., assignor.)
Strand, George, Cortland, Ill. Raking apparatus. No. 1,296,227; Mar. 4; v. 260; p. 94.
Strand, Nels A., Chicago, Ill. Flexible shafting. No. 1,297,034; Mar. 11; v. 260; p. 311.
Strang, Louise B., and C. C. Pollock, Seattle, Wash. Brush. No. 1,297,272; Mar. 11; v. 260; p. 362.
Strange, Edwin B., New York, N. Y. Pail. No. 1,296,132; Mar. 4; v. 260; p. 73.
Strater, Theodore G. (See Barnes, Charles E., assignor.)
Stratton, James M., assignor to The Deming Company, Salem, Ohio. Pump. No. 1,297,035; Mar. 11; v. 260; p. 311.
Stratton, Nathaniel A., Melrose, assignor of one-sixth to W. L. Day, Boston, Mass. Measuring instrument. No. 1,296,566; Mar. 4; v. 260; p. 168.
Straub, Oscar L., and M. Wildrick, U. S. Army. Aerial torpedo or mine. No. 1,297,273; Mar. 11; v. 260; p. 363.
Streeper, William H., assignor to Stokes & Smith Company, Philadelphia, Pa. Manufacture of container structures. No. 1,297,748; Mar. 18; v. 260; p. 494.
Street, Norman A., *et al.* (See Blood, Burr B., assignor.)
Strickland, Silas A., assignor to Detroit Accessories Corporation, Detroit, Mich. Pump for motor-vehicles. (Reissue.) No. 14,621; Mar. 25; v. 260; p. 708.
Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Sheet-metal wheel construction. No. 1,296,873; Mar. 11; v. 260; p. 274.
Strock, Joseph G., Pittsburgh, Pa. Metallic packing. No. 1,298,117; Mar. 25; v. 260; p. 597.
Strom, Fredric H., St. Paul, Minn. Cable-clip. No. 1,298,118; Mar. 25; v. 260; p. 597.
Stromberg-Carlson Telephone Mfg. Co. (See Beyland, Sidney A., assignor.)
Stromberg-Carlson Telephone Mfg. Co. (See Harris, Harvey L., assignor.)
Stromberg-Carlson Telephone Mfg. Co. (See Slough, Frank M., assignor.)
Strubler, Gordon L., Chicago, Ill., assignor of ninety-nine one-hundredths to Parcel Post Scale Co., Logansport, Ind. Parcel-post scale. No. 1,296,710; Mar. 11; v. 260; p. 237.
Strzyckowski, Julian. (See Pebel, Zygmunt, assignor.)
Stuart, Thomas E., Council Bluffs, Iowa. Tool-holder. No. 1,296,133; Mar. 4; v. 260; p. 73.
Stuber & Kuck Company. (See Mohr, Frank J., assignor.)
Stucki, Arnold, Pittsburgh, Pa. Roller side bearing. No. 1,297,928; Mar. 18; v. 260; p. 532.
Stuessi, Geo. H., *et al.* (See Lamar, Alexis L., assignor.)
Stultz, Otis E., Henry, W. Va. Protector for reels. No. 1,297,606; Mar. 18; v. 260; p. 462.
Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)
Sturtevant, Thomas J., Wellesley, assignor to Sturtevant Mill Company, Harrison Square, Mass. Mill. No. 1,296,134; Mar. 4; v. 260; p. 74.
Stutler, Santford R., Bristol, W. Va. Collapsible coop. No. 1,298,598; Mar. 25; v. 260; p. 699.
Sucuck, Robert, assignor to C. H. Wheeler Manufacturing Company, Philadelphia, Pa. Ejector apparatus. No. 1,296,567; Mar. 4; v. 260; p. 168.
Sugg, Harvey, Ladysmith, Wis. Suspenders. No. 1,298,119; Mar. 25; v. 260; p. 597.
Sugg, R. C., *et al.* (See Adee, Arthur L., assignor.)
Sullivan, John, *et al.* (See Higbee, Jesse P., assignor.)
Sullivan, Leonard J., North Sydney, New South Wales, Australia. Stud-fastener plate. No. 1,296,337; Mar. 4; v. 260; p. 118.
Sullivan, William B., Chicago, Ill. Percussion-tool. No. 1,296,338; Mar. 4; v. 260; p. 118.
Sulphur Syndicate. (See Foster, Arthur B., assignor.)
Sulzbacher, Samuel, Cincinnati, Ohio. Removable handle for vessels. No. 1,296,228; Mar. 4; v. 260; p. 94.
Summers, Walter, Hollsopple, Pa. Dirigible-headlight construction. No. 1,296,568; Mar. 4; v. 260; p. 168.
Summerson, James, Emporium, Pa. Tire. No. 1,296,874; Mar. 11; v. 260; p. 275.
Summerton, Ethel, Sheridan, N. Y. Gage-glass cleaner. No. 1,297,416; Mar. 18; v. 260; p. 422.
Summy, Charles E., Primghar, Iowa. Artificial tooth. No. 1,298,419; Mar. 25; v. 260; p. 661.
Sundvahl, Richard A. (See Ford, Shelley W., assignor.)
Svensson, Johan A., assignor, by mesne assignments, to Ludwigsbergs Verkstads Aktiebolag, Stockholm, Sweden. Rotary pump or engine. No. 1,297,749; Mar. 18; v. 260; p. 494.
Swain, George F., Chicago, Ill. Flying-machine. No. 1,298,120; Mar. 25; v. 260; p. 597.
Swank, Edgar W., Liberty, Mo. Cash-book. No. 1,297,417; Mar. 18; v. 260; p. 422.
Swanson, Gustave O., Vancouver, British Columbia, Canada. Calking-tool. No. 1,298,121; Mar. 25; v. 260; p. 598.
Swarthout, Joseph, Lodi, N. Y. Engine attachment. No. 1,296,018; Mar. 4; v. 260; p. 45.
Sweeney, William P., Minneapolis, Minn. Signal-torpedo. No. 1,296,135; Mar. 4; v. 260; p. 74.
Swenson, Paul, West Minneapolis, Minn. Hydraulic pump. No. 1,296,875; Mar. 11; v. 260; p. 275.
Switzer, A. I. (See Wilcox and McIntire, assignors.)
Sykes, Henry, Sheffield, England. Flexible coupling for transmission of power. No. 1,297,507; Mar. 18; v. 260; p. 441.
Sykes, Wilfred, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Speed-control system for induction-motors. No. 1,296,136; Mar. 4; v. 260; p. 74.
Sykora, John E., Windom, Minn. Carbureting apparatus for internal-combustion engines. No. 1,296,711; Mar. 11; v. 260; p. 237.
Sypho-Chemical Sprinkler Corporation. (See Hamilton, John R., assignor.)
Syracuse Smelting Works. (See Levy, Abraham H., assignor.)
Szaniszlo, Frank, Cleveland, Ohio. Combination milk and letter box. No. 1,296,712; Mar. 11; v. 260; p. 237.
T. A. Willson & Co. (See Shindel, Harry F., assignor.)
Tabour, Josephine L., Englewood, Colo. Jar-cap handle. No. 1,296,339; Mar. 4; v. 260; p. 118.
Takacs, Steve, Harvey, Ill. Folding baby-crib. No. 1,296,569; Mar. 4; v. 260; p. 168.
Talbot, Richard J., Springfield, Mass. Automobile-tire. No. 1,298,122; Mar. 25; v. 260; p. 598.
Talbot, William W., assignor of one-half to H. P. Simmons, Baltimore, Md. Adding-machine. No. 1,298,599; Mar. 25; v. 260; p. 700.
Tampier, René J. C., Boulogne-sur-Seine, France. Feeding apparatus for internal-combustion motors. No. 1,296,229; Mar. 4; v. 260; p. 94.
Tarbox, John P., Garden City, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Skid structure for hydroaircraft. No. 1,296,876; Mar. 11; v. 260; p. 275.
Tarrant, Frieda, administratrix. (See Tarrant, William P.)
Tarrant, William P., deceased, St. Louis, Mo.; F. Tarrant, administratrix. Towing apparatus. No. 1,297,418; Mar. 18; v. 260; p. 422.
Tatje, Frank H., Metropolitan, N. Y. Washboiler. No. 1,298,264; Mar. 25; v. 260; p. 629.
Tauber, Maurice, and J. Schenke, assignors to The Maurice Tauber Company, Chicago, Ill. Furniture. No. 1,297,036; Mar. 11; v. 260; p. 312.
Taylor, Frederick C., New York, N. Y., assignor to F. McCann, San Francisco, Calif. Moving-picture projector. No. 1,298,600; Mar. 25; v. 260; p. 700.
Taylor, James A., New York, N. Y. Engine-starting mechanism. No. 1,297,750; Mar. 18; v. 260; p. 494.
Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. Differentially-connected exploring-coils. No. 1,297,929; Mar. 18; v. 260; p. 532.
Taylor, Lyndon B., Newport, R. I., assignor to the Government of the United States. Gyroscope. No. 1,296,187; Mar. 4; v. 260; p. 74.
Taylor, Lyndon B., Newport, R. I., assignor to the Government of the United States. Centrifugal governor. No. 1,296,138; Mar. 4; v. 260; p. 74.

Teeling, George A., assignor to Carling Turbine Blower Co., Worcester, Mass. Steam-strainer. No. 1,297,978; Mar. 18; v. 260; p. 543.

Telin, Peter W., New York Mills, Minn. Ventilator. No. 1,296,019; Mar. 4; v. 260; p. 46.

Temple, Russell R., Santa Paula, assignor of one-half to R. C. Hansen, Los Angeles, Calif. Pumping apparatus. No. 1,297,930; Mar. 18; v. 260; p. 532.

Temple, Thomas, Fort Plain, N. Y. Carding-machine feeder. No. 1,297,607; Mar. 18; v. 260; p. 462.

Terwilliger, Lee. (See De Young and Terwilliger.)

Tew, George M., Kirkland, Wash. Running-gear for automobiles. No. 1,296,877; Mar. 11; v. 260; p. 275.

Textilite Engineering Company. (See Milde, George S., assignor.)

Thacher, Sheldon P., Weehawken, N. J., assignor to New York Belting & Packing Company. Tank. No. 1,297,305; Mar. 11; v. 260; p. 370.

Thackray, George E., Westmont borough, Pa. Hoop. No. 1,297,419; Mar. 18; v. 260; p. 422.

Thackston, Ralph F., Anderson, S. C. Bobbin-supporter for looms. No. 1,297,420; Mar. 18; v. 260; p. 423.

Tharp, Harvey E., assignor of one-half to J. O. Buzzard, Smith Center, Kans. Automatic signal. No. 1,298,420; Mar. 25; v. 260; p. 661.

Theim, Joseph, and G. F. Hehman, Newport, Ky. Combined car and pipe coupling. No. 1,296,230; Mar. 4; v. 260; p. 95.

Thermo Electric Regulator Co. (See Hynes, Lee P., assignor.)

Thiebaut, Francis L., San Francisco, Calif. Electric fuse. No. 1,297,931; Mar. 18; v. 260; p. 532.

Thierinjer, Emma P., New York, N. Y. Urinal for females. No. 1,296,713; Mar. 11; v. 260; p. 238.

Thoma, Cornille D., New York, N. Y. Convertible skirt and breeches. No. 1,297,932; Mar. 18; v. 260; p. 532.

Thomas, Alfred J., Boston, Mass. Inseam-trimming machine. No. 1,296,570; Mar. 4; v. 260; p. 169.

Thomas, Edward, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,297,037; Mar. 11; v. 260; p. 312.

Thomas, George J., assignor to Duplex Truck Company, Lansing, Mich. Radiator. No. 1,296,123; Mar. 25; v. 260; p. 598.

Thomas, Horace T., Lansing, Mich. Steering-gear. No. 1,297,421; Mar. 18; v. 260; p. 423.

Thomas, Nathaniel, Keo, Ark. Boll-weevil-destroying plow. No. 1,297,933; Mar. 18; v. 260; p. 533.

Thomas, Oliver W. (See Power, Richard F., assignor.)

Thomasson, Frederick F., Boise, Idaho. Spark-plug. No. 1,298,601; Mar. 25; v. 260; p. 700.

Thompson, Ernest H., New York, N. Y. Fare-register. No. 1,297,274; Mar. 11; v. 260; p. 363.

Thompson, Mary E., Newark, assignor of one-half to L. I. Green, East Orange, N. J. Elastic hose. No. 1,296,442; Mar. 4; v. 260; p. 140.

Thompson, Nelson W., Oakland, assignor, by mesne assignments, to Shell Company of California, San Francisco, Calif. Apparatus for removing deposits from stills. No. 1,298,602; Mar. 25; v. 260; p. 700.

Thompson, William B., Thornbank, Dundee, Scotland. Boiler-riveting machine. No. 1,296,139; Mar. 4; v. 260; p. 75.

Thompson, William P., Liverpool, England. Manufacturing certain lead products. No. 1,297,934; Mar. 18; v. 260; p. 533.

Thomson Electric Welding Company. (See Macneale, Neil, assignor.)

Thomson, John, New York, N. Y. Zigzag carbon electric resistor. No. 1,298,421; Mar. 25; v. 260; p. 661.

Thomson Spot Welder Company. (See Gravell, James H., assignor.)

Thorne, Robert H., and F. J. Miller, Williamsport, Pa. Fire-hydrant. No. 1,296,714; Mar. 11; v. 260; p. 238.

Thornton, Frank, Jr., Pittsburgh, and E. S. Zuck, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Electric-arc-welding system. No. 1,296,020; Mar. 4; v. 260; p. 46.

Thorton, Ray, Dartmouth, Mass. Section beam-head. No. 1,297,751; Mar. 18; v. 260; p. 495.

Tibbetts, Milton, Detroit, Mich., assignor, by mesne assignments, to The Isko Company, Chicago, Ill. Refrigerating apparatus. No. 1,296,878; Mar. 11; v. 260; p. 275.

Tibbetts, Milton, Detroit, Mich., assignor, by mesne assignments, to The Isko Company, Chicago, Ill. Refrigerating apparatus. No. 1,296,879; Mar. 11; v. 260; p. 276.

Tidball, Aubrey J., Duluth, Minn. Guard for electric-light connections. No. 1,297,608; Mar. 18; v. 260; p. 463.

Tidmarsh, Harry E., Bangor, Me., assignor of one-half to Union Iron Works. Ball-bearing. No. 1,296,021; Mar. 4; v. 260; p. 46.

Tillman, Albert G., Vicksburg, Miss. Fastener for tooth-brush holders. No. 1,296,231; Mar. 4; v. 260; p. 95.

Timmerhoff, Ernest, Elkhart, Ind. Steering-wheel lock. No. 1,297,038; Mar. 11; v. 260; p. 312.

Tinker, Ralph, Little York, Ill. Reversible tractor-plow. No. 1,295,938; Mar. 4; v. 260; p. 27.

Tinsley, Edward O., assignor to Robert Gair Company, Brooklyn, N. Y. Collapsible container. No. 1,296,140; Mar. 4; v. 260; p. 75.

Tiscornia, Frank E. (See Hill and Meroney, assignors.)

Tobin, John M., New York, N. Y. Nasal nozzle. No. 1,298,422; Mar. 25; v. 260; p. 661.

Toettcher, George, and C. O. Winkler, St. Louis, Mo. Motor-vehicle-converting apparatus. No. 1,296,340; Mar. 4; v. 260; p. 119.

Toledo Glass Company, The. (See La France, Richard, assignor.)

Tolhurst Machine Works. (See Bryson, Tandy A., assignor.)

Tolliver, John W., Buffalo, N. Y. Rotary internal-combustion engine. No. 1,296,890; Mar. 11; v. 260; p. 276.

Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Refractory article. No. 1,296,715; Mar. 11; v. 260; p. 238.

Tower, Edwin R. H., Jr., Milwaukee, Wis., and R. H. Van Nest, Chicago, Ill., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Welding-controller. No. 1,298,603; Mar. 25; v. 260; p. 701.

Towle, William J., St. Paul, Minn. Air-inlet means for containers. No. 1,296,241; Mar. 4; v. 260; p. 119.

Towle, William J., St. Paul, Minn. Closure for containers. No. 1,296,716; Mar. 11; v. 260; p. 238.

Townsend, Ernest F., assignor to L. A. Townsend, San Francisco, Cal. Tractor. No. 1,296,022; Mar. 4; v. 260; p. 46.

Townsend, Lucretia A. (See Townsend, Ernest F., assignor.)

Torgler, Fred E., *et al.* (See Garnett, Thomas W., assignor.)

Torkelson, Reinhard T., Worcester, assignor to F. I. Johnson, Fitchburg, Mass. Wire-rope-clamping device. No. 1,297,039; Mar. 11; v. 260; p. 312.

Toye, Alfred, Hammersmith, London, England. Cover for ink-wells and other receptacles. No. 1,296,232; Mar. 4; v. 260; p. 95.

Tozzi, Angelo M., Bayonne, N. J. Dowel for conduit-sections. No. 1,296,342; Mar. 4; v. 260; p. 119.

Tragesser, Frank L. (See Bevington, Charles C., assignor.)

Trapp, Edward A., deceased, New York, N. Y.; S. B. Trapp, executrix, Philadelphia, Pa. Lens. No. 1,297,040; Mar. 11; v. 260; p. 313.

Trapp, Susanna B., executrix. (See Trapp, Edward A.)

Traver, Oliver C., Schenectady, N. Y., assignor to General Electric Company. Protection of parallel feeders. No. 1,297,935; Mar. 18; v. 260; p. 533.

Traver, Oliver C., Schenectady, N. Y., assignor to General Electric Company. Protection of parallel feeders. No. 1,297,936; Mar. 18; v. 260; p. 533.

Travis, Don C., assignor to Simmons Company, Kenosha, Wis. Hospital-bed. No. 1,297,043; Mar. 11; v. 260; p. 313.

Tredup, Herman E., Sebewaing, Mich. Auto-wheel. No. 1,297,275; Mar. 11; v. 260; p. 363.

Treiber, Theodore R., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Device for resurfacing cue-tips. No. 1,297,041; Mar. 11; v. 260; p. 313.

Treichel, Thomas J., San Francisco, Cal. Automobile-curtain window. No. 1,297,042; Mar. 11; v. 260; p. 313.

Trenton Potteries Company, The. (See Hinsdale, Winfield E., assignor.)

Trescott, John B. (See Johns and Trescott.)

Trevillion, Homer C., Prescott, Ark. Automatic clutch for veneer-cutting machines. No. 1,298,604; Mar. 25; v. 260; p. 701.

Trevithick, Frederick H., Cairo, Egypt. Locomotive and like boiler. No. 1,296,233; Mar. 4; v. 260; p. 95.

Tri-City Steel Company. (See Hyle and Herman, assignors.)

Trinks, Edith M., Pittsburgh, Pa. Gaiter-drying apparatus. No. 1,298,423; Mar. 25; v. 260; p. 662.

Tripp, Charles A., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind. Machine for roasting peanuts and the like. No. 1,295,939; Mar. 4; v. 260; p. 27.

Tripp, Charles A., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind. Means for supplying material to and removing it from roasters, poppers, and the like. No. 1,298,265; Mar. 25; v. 260; p. 629.

Tripp, David A., Barberton, Ohio. Cable-support. No. 1,296,571; Mar. 4; v. 260; p. 169.

Trone, Maurice N., Hanover, Pa. Shift mechanism for type-writers. No. 1,296,717; Mar. 11; v. 260; p. 238.

Troy, William A., Archbald, Pa. Automatic register. No. 1,297,752; Mar. 18; v. 260; p. 495.

Tschudin, Trougott, Brooklyn, N. Y. Invisible support for brackets and the like. No. 1,297,609; Mar. 18; v. 260; p. 463.

Tschudin, Trougott, Brooklyn, N. Y. Invisible support for brackets and the like. No. 1,297,610; Mar. 18; v. 260; p. 463.

Tubular Woven Fabric Company. (See Handley, William, assignor.)

Tucker, Andrew P., assignor of one-half to M. Zimmerman, Cincinnati, Ohio. Machine for making paper forms. No. 1,297,971; Mar. 18; v. 260; p. 541.

Tucker, Fred. (See Stevens, Augustus R., assignor.)

Tucker, Purney A. (See Skinner and Tucker.)

Tucker, Verna I. (See Kennedy, Hugh A., assignor.)

Turnbull, William, Peoria, Ill., assignor to The Holt Manufacturing Company, Stockton, Cal. Creeper-tractor. No. 1,296,572; Mar. 4; v. 260; p. 160.
Turner, Horace W., Wilmington, Del. Air-cooling system for internal-combustion motors. No. 1,296,443; Mar. 4; v. 260; p. 140.
Turner, John C., assignor to The John C. Turner Novelty Co., Dayton, Ohio. Drawbridge. No. 1,297,044; Mar. 11; v. 260; p. 313.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electro-pneumatic brake. No. 1,297,422; Mar. 18; v. 260; p. 423.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Triple-valve test-rack. No. 1,297,506; Mar. 18; v. 260; p. 441.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Automatic cut-out valve. No. 1,297,509; Mar. 18; v. 260; p. 441.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Cut-off valve device. No. 1,297,510; Mar. 18; v. 260; p. 442.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electro-pneumatic brake. No. 1,297,511; Mar. 18; v. 260; p. 442.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake. No. 1,297,512; Mar. 18; v. 260; p. 442.
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Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electro-fluid-pressure brake. No. 1,297,514; Mar. 18; v. 260; p. 443.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Locomotive-brake. No. 1,297,515; Mar. 18; v. 260; p. 443.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Rail-sanding device. No. 1,297,516; Mar. 18; v. 260; p. 443.
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Tyler, Samuel T., assignor to Warwood Tool Company, Wheeling, W. Va. Manufacturing pick-mattocks. No. 1,296,235; Mar. 4; v. 260; p. 95.
Tyler, William C., Racine, Wis., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio. Tire-making structure. No. 1,298,124; Mar. 25; v. 260; p. 598.
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Udall, Phillip A., Stockton, Cal. Valve-grinding machine. No. 1,295,940; Mar. 4; v. 260; p. 27.
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Underwood, Ernest E. (See Dakin and Underwood.)
Underwood, John T., Dayton, Ohio, assignor to Underwood Engineering Company, Detroit, Mich. Method of and apparatus for treating ceramic and similar material. No. 1,298,125; Mar. 25; v. 260; p. 599.
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Unger, Samuel J., *et al.* (See Hollander, Jacob H., assignor.)
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Union Special Machine Company. (See Berger, Joseph, assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Special Machine Company. (See Onderdonk and Wohlpart, assignors.)
Union Special Machine Company. (See Seymour, Dudley S., assignor.)
Union Switch & Signal Company, The. (See Lewis, Lloyd V., assignor.)
United Shirt and Collar Company. (See Pine, James K. P., assignor.)
United Shoe Machinery Corporation. (See Brogan, James A., assignor.)
United Shoe Machinery Corporation. (See Brown and Macleod, assignors.)
United Shoe Machinery Corporation. (See Casgrain, Louis A., assignor.)
United Shoe Machinery Corporation. (See Cavanagh, James, assignor. (Reissue.)
United Shoe Machinery Corporation. (See Grush, Elmer B., assignor.)
United Shoe Machinery Corporation. (See Hadaway, John B., assignor.)
United Shoe Machinery Corporation. (See Heys, John J., assignor.)
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United Shoe Machinery Corporation. (See Winkley, Erastus E., assignor.)
United Shoe Machinery Corporation. (See Winslow, Sidney W., Jr., assignor.)
United States Ordnance Company. (See Asbury, Dorsey F., assignor.)
United States Ordnance Company. (See Dawson and Buckham, assignors.)
Upson, Charles A., Lockport, N. Y. Fastening device for wall-board, &c. No. 1,297,611; Mar. 18; v. 260; p. 464.
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Vacuum Machinery Co. (See McCarthy, Edward F., assignor.)
Valcauda, Joseph, Seattle, Wash. Direction-indicator. No. 1,297,612; Mar. 18; v. 260; p. 464.
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Van Valkenburg, Hermon L., assignor to Industrial Controller Company, Milwaukee, Wis. Magnetically-controlled switch. No. 1,297,979; Mar. 18; v. 260; p. 543.
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Vance, William L., Chicago, Ill. Game. No. 1,296,882; Mar. 11; v. 260; p. 276.
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Vickers Limited. (See Elia, Giovanni E., assignor.)
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Voight, Henry G., New Britain, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,297,758; Mar. 18; v. 260; p. 496.
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Vom Eigen, Benno, Newark, N. J., assignor to August Goertz & Co. Hasp. No. 1,296,343; Mar. 4; v. 260; p. 119.
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Waite, Edwin E., assignor of one-half to Standard Woven Fabric Company, Framingham, Mass. Needle-loom. No. 1,296,025; Mar. 4; v. 260; p. 47.
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Walker, Saul, Hamilton, Ontario, Canada. Automobile wheel-rim. No. 1,296,143; Mar. 4; v. 260; p. 75.
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Warrener, James, Sr., Fall River, Mass., assignor of one-half to J. Warrener, Jr., Washington, D. C. Pitman. No. 1,298,424; Mar. 25; v. 260; p. 662.
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Washburn, Chester A., Springfield, Mass. Leg-rest. No. 1,296,722; Mar. 11; v. 260; p. 239.
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Waterloo, John, New Eagle, assignor to Window Glass Machine Company, Pittsburgh, Pa. Glass-cutting machine. No. 1,296,886; Mar. 11; v. 260; p. 278.
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Wayne, Herbert N., Los Angeles, Cal., assignor to Armorcord Tire & Rubber Co. Inner tube for pneumatic tires. No. 1,297,279; Mar. 11; v. 260; p. 364.
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Wells, Willet C. and F. E., Columbus, Ohio. Refining, fractionating, and reducing oils. No. 1,296,244; Mar. 4; v. 260; p. 98.
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Welsh, Clyde L., assignor to Welsh Adjustable Aeroplane Company, Pittsburgh, Pa. Aeroplane. No. 1,296,578; Mar. 4; v. 260; p. 170.
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Western Electric Company. (See Ulrich, Horace W., assignor.)
Western Union Telegraph Company, The. (See Benjamin, George R., assignor.)
Western Union Telegraph Company, The. (See Yorke and Benjamin, assignors.)
Westinghouse Air Brake Company, The. (See Rowntree, Harold, assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Boddie, Clarence A., assignor.)
Westinghouse Electric & Manufacturing Company. (See Carpenter, David E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Chubb, Lewis W., assignor.)
Westinghouse Electric & Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric & Manufacturing Company. (See Copley and Fortescue, assignors.)
Westinghouse Electric & Manufacturing Company. (See Dean, John S., assignor.)
Westinghouse Electric & Manufacturing Company. (See Dudley, Adolphus M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Heilmund, Rudolf E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Herr, Herbert T., assignor.)
Westinghouse Electric & Manufacturing Company. (See Lamme, Benjamin G., assignor.)
Westinghouse Electric & Manufacturing Company. (See Mardis, Paul L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Peters, John F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Schaake, William, assignor.)
Westinghouse Electric & Manufacturing Company. (See Schenck, Samuel B., assignor.)
Westinghouse Electric & Manufacturing Company. (See Schmidt, Henry F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Scott, Charles F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon and Morris, assignors.) (Reissue.)
Westinghouse Electric & Manufacturing Company. (See Sykes, Wilfred, assignor.)
Westinghouse Electric & Manufacturing Company. (See Thornton and Zuck, assignors.)
Westinghouse Electric & Manufacturing Company. (See Zuck, Emerson S., assignor.)
Westinghouse Gear & Dynamometer Company. (See Schmidt, Henry F., assignor.)
Weston, Thomas I., Columbia, S. C. Siphon construction. No. 1,297,280; Mar. 11; v. 260; p. 364.

Wheawill, Charles H. (See Mott, Meyer, Halteman, and Wheawill.)
Wheeler, James A., Mangum, Okla. Header. No. 1,297,950; Mar. 18; v. 260; p. 536.
Wheeler, John M., Cadiz, Ohio. Railway-track construction. No. 1,296,348; Mar. 4; v. 260; p. 121.
Wheeler, Mary, and E. M. Bates, Los Angeles, Cal. Heating device. No. 1,297,281; Mar. 11; v. 260; p. 365.
Wheeler, Walter O., Worcester, Mass. Automatic ten-pin-setter. No. 1,297,951; Mar. 18; v. 260; p. 536.
Whelpley, Charles W. (See Coleman, Stephen L. C., assignor.)
Whipple, Ralph, Detroit, Mich. Automatic steering and control mechanism for tractors. No. 1,296,027; Mar. 4; v. 260; p. 48.
White, Bishop, West Hartford, assignor to American Chain Company, Incorporated, Bridgeport, Conn. Unit non-skid chain device. No. 1,297,620; Mar. 18; v. 260; p. 465.
White, Charles E., assignor to Deere & Company, Moline, Ill. Disk harrow. No. 1,297,302; Mar. 11; v. 260; p. 370.
White, Charles T., Santa Barbara, assignor of one-third to G. E. White, Santa Cruz county, and one-third to W. E. Mouck, Santa Barbara county, Calif. Vulcanizing-tool. No. 1,298,612; Mar. 25; v. 260; p. 702.
White, George E., et al. (See White, Charles T., assignor.)
White, John F., Karnes City, Tex. Hay-press. No. 1,296,889; Mar. 11; v. 260; p. 278.
White, John M., Meridian, Miss. Arsenical medical product and producing same. No. 1,297,952; Mar. 18; v. 260; p. 537.
White, Joseph F., deceased, Brookline, Mass.; M. F. White, administratrix. Child's vehicle. No. 1,297,282; Mar. 11; v. 260; p. 365.
White, Mary F., administratrix. (See White, Joseph F.)
White Products Company. (See Anderson, Carl E., assignor.)
White, Richard E., Houston Heights, Tex. Stove. No. 1,297,621; Mar. 18; v. 260; p. 466.
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White, William C., Schenectady, N. Y., assignor to General Electric Company. Wireless signaling system. No. 1,298,613; Mar. 25; v. 260; p. 703.
Whitin Machine Works. (See Horner, Leon H., assignor.)
Whitin Machine Works. (See Lamb, Chester C., assignor.)
Whiting, Max A., Schenectady, N. Y., assignor to General Electric Company. System of transmission. No. 1,297,953; Mar. 18; v. 260; p. 537.
Whitkanack, Firdie, West Union, Ill. Rope-clamp. No. 1,298,614; Mar. 25; v. 260; p. 703.
Whitney, Francis A., Kabugao Apayao, Philippine Islands. Spout for sealed containers. No. 1,296,447; Mar. 4; v. 260; p. 141.
Whittaker, Arthur, San Diego, Calif. Spraying apparatus. No. 1,297,622; Mar. 18; v. 260; p. 466.
Whittemore, Frederick M., New York, N. Y. Interchangeable-letter sign. No. 1,296,246; Mar. 4; v. 260; p. 98.
Whittington, Frederik G., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Tuning device for signal-diaphragms. No. 1,298,428; Mar. 25; v. 260; p. 663.
Whittlesey, Charles F. (See Hagan, Calvin H., assignor.)
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Whittredge, Lucius H., Lynn, Mass. Metallic building structure. No. 1,298,129; Mar. 25; v. 260; p. 599.
Wible, Milo B., Arcata, Cal. Device for nailing tins on binders. No. 1,296,146; Mar. 4; v. 260; p. 76.
Wickersham, Elmer E., assignor to The Holt Manufacturing Company, Stockton, Cal. Roller-truck frame for traction-engines. No. 1,296,579; Mar. 4; v. 260; p. 171.
Wickstrom, Alfred, and C. A. Borgstrom, Minneapolis, Minn. Spring-wheel for vehicles. No. 1,296,446; Mar. 4; v. 260; p. 141.
Widmer, Adolph, Paterson, N. J. Driving mechanism for looms. No. 1,297,623; Mar. 18; v. 260; p. 466.
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Wightman, William S., Norwich, N. Y. Lock. No. 1,297,427; Mar. 18; v. 260; p. 424.
Wilcomb, Frank, assignor to Wildman Mfg. Co., Norristown, Pa. Spring-beard needle. No. 1,297,428; Mar. 18; v. 260; p. 425.
Wilcox, Charles E. (See Willard, Wilson, and Wilcox.)
Wilcox, Frederick A., and G. H. McIntire, assignors of one-third to A. I. Switzer, Spokane, Wash. Coffee-roaster. No. 1,298,130; Mar. 25; v. 260; p. 600.
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Heading-machine. No. 1,297,429; Mar. 18; v. 260; p. 425.
Wildau, Michael F., Los Angeles, Calif. Automobile-body. No. 1,297,764; Mar. 18; v. 260; p. 497.
Wildman Mfg. Co. (See Wilcomb, Frank, assignor.)
Wildrick, Meade. (See Straub and Wildrick.)
Wilhelm, Oliver P., and J. F. Posdal, assignors of one-fourth to S. W. Wilhelm, Michigan City, Ind., and one-fourth to B. Loewenthal, Chicago, Ill. Oil or gas furnace. No. 1,295,944; Mar. 4; v. 260; p. 28.
Wilhelm, Santford W., et al. (See Wilhelm and Posdal, assignors.)
Wilkie, James G., Brooklyn, N. Y. Heat-radiating apparatus. No. 1,297,624; Mar. 18; v. 260; p. 466.
Wilkinson Brothers and Company. (See Fuhrmann and Squarey, assignors.)
Wilkinson, George, Harrogate, England. Coal-fired boiler-furnace. No. 1,296,247; Mar. 4; v. 260; p. 98.
Wilkinson, Le Roy J., Omaha, Nebr. Safety apparatus for aviators. No. 1,298,615; Mar. 25; v. 260; p. 702.
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Wilkirson, Aaron L., Houston, Tex. Well-screen washer and perforator. No. 1,298,131; Mar. 25; v. 260; p. 600.
Willard, Arthur G., and W. W. Wilson, Los Angeles, and C. R. Wilcox, East Bakersfield, Calif., assignors to said Arthur G. Willard and W. W. Wilson. Well-boring apparatus. No. 1,297,625; Mar. 18; v. 260; p. 466.
Willard Storage Battery Company. (See Willard, Theodore A., assignor.)
Willard, Theodore A., assignor to Willard Storage Battery Company, Cleveland, Ohio. Grid-pasting machine. No. 1,297,760; Mar. 18; v. 260; p. 498.
Willard, Theodore A., Cleveland, Ohio. Separator-slicing machine. No. 1,297,767; Mar. 18; v. 260; p. 498.
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William M. Crane Company. (See O'Dowd, Henry W., assignor.)
William R. Johnston Manufacturing Company. (See Spencer and Lillie, assignors.)
Williams, Alfred O., South Bend, Ind. Differential gearing. No. 1,297,954; Mar. 18; v. 260; p. 537.
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Williams, Martin L., South Bend, Ind., assignor, by mesne assignments, to American Sleeve-Valve Motor Company. Gas-engine. No. 1,298,132; Mar. 25; v. 260; p. 600.
Williams, Martin L., South Bend, Ind., and S. E. Witt, Chicago, Ill., assignors, by mesne assignments, to American Sleeve-Valve Motor Company. Engine. No. 1,298,429; Mar. 25; v. 260; p. 663.
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Williamson, Alpheus J., Cocolalla, Idaho. Track-leveling sight. No. 1,296,248; Mar. 4; v. 260; p. 98.
Willour, Le Roy, assignor to The Ashland Products Co., Ashland, Ohio. Jack. (Reissue.) No. 14,605; Mar. 4; v. 260; p. 176.
Wills, Joseph. (See Lyons and Wills.)
Willys, John N. (See Cori and Hagemeyer, assignors.)
Wilputte, Alice A. (See Wilputte, Louis, assignor.)
Wilputte, Louis, assignor of two-thirds to A. A. Wilputte, New Rochelle, N. Y. Coke-oven door. No. 1,296,892; Mar. 11; v. 260; p. 279.
Wilson, Carl F., Bay City, Mich. Walking-machine. No. 1,296,893; Mar. 11; v. 260; p. 279.
Wilson Dress-Hook Company, The. (See Wilson, Frank E., assignor.)
Wilson-Fox, Henry, London, England. Aircraft. No. 1,298,133; Mar. 25; v. 260; p. 601.
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Wilson, John H., U. S. Army. Electric-lighting system for automobiles. No. 1,297,768; Mar. 18; v. 260; p. 498.
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Wilson, Mary, Northcote, Auckland, New Zealand. Baby-comforter. No. 1,298,616; Mar. 25; v. 260; p. 703.
Wilson, Richard L., Union City, Tenn. Plant-setter. No. 1,296,134; Mar. 25; v. 260; p. 601.
Wilson, Wallace, Philadelphia, Pa. Flat-knitting machine. No. 1,297,626; Mar. 18; v. 260; p. 466.
Wilson, William W. (See Willard, Wilson, and Wilcox.)
Wilton, Carl E., Philadelphia, Pa. Automatic lid-support. No. 1,298,135; Mar. 25; v. 260; p. 601.
Wilts Veneer Company. (See Staley and Simmons, assignors.)
Wilzin, Arthur, St. Ouen, France. Automatic glass gathering and blowing machine. No. 1,297,981; Mar. 18; v. 260; p. 543.
Winans, Milton E., Newark, N. J. Bench-vise. No. 1,296,723; Mar. 11; v. 260; p. 239.
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Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Window Glass Machine Company. (See Waterloo, John, assignor.)
Windsor Foundry and Machine Company. (See McPherson and Munro, assignors.)
Wine, William E., Toledo, Ohio. Ventilator for freight-cars. No. 1,298,136; Mar. 25; v. 260; p. 601.
Wine, William E., Toledo, Ohio. Side bearing. No. 1,298,137; Mar. 25; v. 260; p. 602.
Wing, John F., Maywood, Ill. Spark-gap. No. 1,297,627; Mar. 18; v. 260; p. 467.
Wing, Ross H., Guelph, Ontario, Canada. Dual container with opener therefor. No. 1,298,617; Mar. 25; v. 260; p. 703.

Winget, Jasper S., York, Pa. Cigar-bunching machine. No. 1,296,724; Mar. 11; v. 260; p. 240.
Winkler, Charles O. (See Toettcher and Winkler.)
Winkley, Erastus E., Lynn, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for operating on heels. No. 1,295,945; Mar. 4; v. 260; p. 28.
Winslow, David H., Raleigh, N. C. Road-scraper. No. 1,297,420; Mar. 18; v. 260; p. 425.
Winslow, F. N. (See Hilliard, Harry D. F., assignor.)
Winslow, Sidney W., Jr., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Sole for use in the manufacture of boots and shoes. No. 1,296,894; Mar. 11; v. 260; p. 280.
Winter, Henry W., Hennessey, Okla. Harrow-dump. No. 1,297,955; Mar. 18; v. 260; p. 537.
Winterbotham, Joseph E., Winnetka, Ill. Damper-control means. No. 1,296,249; Mar. 4; v. 260; p. 99.
Winton, Alexander, Lakewood, assignor to The Winton Gas Engine & Manufacturing Company, Cleveland, Ohio. Air-supply for internal-combustion motors. No. 1,296,030; Mar. 4; v. 260; p. 49.
Winton, Alexander, Lakewood, assignor to The Winton Gas Engine & Manufacturing Company, Cleveland, Ohio. Internal-combustion motor. No. 1,296,147; Mar. 4; v. 260; p. 77.
Winton Gas Engine & Manufacturing Company, The. (See Winton, Alexander, assignor.)
Wire Wheel Corporation of America. (See Pugh, John V., assignor.)
Wirt, Joe W., Chicago, Ill. Card-index holder. No. 1,297,522; Mar. 18; v. 260; p. 444.
Wisnicwski, Frank, Washington, Pa. Lock. No. 1,297,284; Mar. 11; v. 260; p. 365.
Witcombe, Edward J. (See Pym and Witcombe.)
With, Julius E. B., assignor of one-half to S. V. Peach, Port Townsend, Wash. Fastening device for wall-boards. No. 1,297,522; Mar. 18; v. 260; p. 445.
Witham, George S., Jr. (See Witham, George S., Sr., assignor.)
Witham, George S., Sr., assignor of one-half to G. S. Witham, Jr., Hudson Falls, N. Y. Paper-tester. No. 1,298,132; Mar. 25; v. 260; p. 602.
Witham, George S., Jr., Au Sable Forks, N. Y. Safety-indicator for self-propelled vehicles. No. 1,296,148; Mar. 4; v. 260; p. 77.
Witt, Samuel E. (See Williams and Witt.)
Wittenberg, Mason, Portland, and R. W. King, The Dalles, assignors to Pacific Evaporator Company, Portland, Oreg. Drier. No. 1,296,946; Mar. 4; v. 260; p. 28.
Wloszek, Frank, Lackawanna, N. Y. Soldier's armor. No. 1,298,618; Mar. 25; v. 260; p. 704.
Wodham, William A., Moorehead, Minn. Implement draft and steering means. No. 1,297,626; Mar. 18; v. 260; p. 467.
Wohlgart, August J. (See Onderdonk and Wohlgart.)
Wolcott, Charles M., New York, N. Y., assignor of three-fourths to S. and I. Myerberg, Baltimore, Md. Double suction-cup. No. 1,298,139; Mar. 25; v. 260; p. 602.
Wolf, Fred W., Chicago, Ill. Compressor. No. 1,296,947; Mar. 4; v. 260; p. 29.
Wolf, Fred W., Chicago, Ill. Compressor. No. 1,296,948; Mar. 4; v. 260; p. 29.
Wolffsohn, Lionel, (now by judicial change of name Lionel M. Westsen,) Hoboken, N. J., assignor, by mesne assignments, to Bijur Motor Appliance Company. Ignition apparatus for internal-combustion engines. No. 1,297,956; Mar. 18; v. 260; p. 537.
Wollenberg, Harry L., and C. A. Bigelow, assignors to Aetna Explosives Company, Inc., New York, N. Y. Purifying nitro-aromatic compounds. No. 1,297,324; Mar. 18; v. 260; p. 445.
Wommer, Frederic, assignor of one-half to J. J. Barclay, Minneapolis, Minn. Gas-engine. No. 1,296,949; Mar. 4; v. 260; p. 29.
Wondra, Franz, Schenectady, N. Y. Internal-combustion turbine. No. 1,298,430; Mar. 25; v. 260; p. 663.
Wood, Charles P., New York, N. Y. Continuous furnace and regulating atmospheric condition in furnaces. No. 1,297,629; Mar. 18; v. 260; p. 467.
Wood, Frank S., Lamberville, Pa. Music-leaf turner. No. 1,296,725; Mar. 11; v. 260; p. 240.
Wood, Fred E., Sanger, Calif. Kit for plate-holders. No. 1,297,857; Mar. 18; v. 260; p. 538.
Wood, George B., Duluth, assignor of one-half to W. C. Wood, Minneapolis, Minn. Repair-patch. No. 1,296,249; Mar. 4; v. 260; p. 121.
Wood, James E. (See Merrill and Wood.)
Wood, Lorena M., Spokane, assignor of one-half to J. R. Gumm, Kelso, Wash. Apparatus for sterilizing liquids. No. 1,297,525; Mar. 18; v. 260; p. 445.
Wood, Louis E., Farrell, Pa. Attachment for screw-cutting lathes. No. 1,297,285; Mar. 11; v. 260; p. 365.
Wood, William, Birkenhead, England. Punching and the like machine. No. 1,296,895; Mar. 11; v. 260; p. 280.
Wood, Winfield C. (See Wood, George B., assignor.)
Woodbridge, Jesse T. (See Mummert and Woodbridge.)
Woodburn, Oscar P., assignor to Layne & Bowler Company, Memphis, Tenn. Thrust-bearing. No. 1,297,769; Mar. 18; v. 260; p. 498.
Woods, Edward D., Cleveland, Ohio, assignor to Woods Steel & Process Corporation, Boston, Mass. Intermittent operating mechanism. No. 1,296,726; Mar. 11; v. 260; p. 240.
Woods, Leonard, St. Louis, Mo. Garment-supporter. No. 1,297,526; Mar. 18; v. 260; p. 445.
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Woods, William F. (See Stacy and Woods, assignors.)
Woodvine, George, Shrewsbury, England. Manufacture of spring packing-rings for pistons and the like. No. 1,296,580; Mar. 4; v. 260; p. 171.
Woodward & Wright Last Company. (See Lindsay, Fred H., assignor.)
Woolever, Floyd W., and G. M. Staine, Akron, Ohio. Railway-tie. No. 1,297,976; Mar. 18; v. 260; p. 542.
Woolson, Lionel M. (See Wolffsohn, Lionel.)
Worhatch, Max, Pittsburgh, Pa. Aeroplane. No. 1,297,286; Mar. 11; v. 260; p. 366.
Wortman, Lewis E., Los Angeles, Calif. Rotary gas-engine. No. 1,296,140; Mar. 25; v. 260; p. 602.
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Woronoff, Dionysia, New York, N. Y. Food-order card. No. 1,296,149; Mar. 4; v. 260; p. 77.
Wormley, Otto G., Chicago, Ill. Spring-wheel. No. 1,297,287; Mar. 11; v. 260; p. 366.
Wright, Ben, Blacksbear, Ga. Clothes-pin. No. 1,297,527; Mar. 18; v. 260; p. 445.
Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Slip. No. 1,298,619; Mar. 25; v. 260; p. 704.
Wright, Denver M., Atlanta, Ga. Belt-making machine. No. 1,297,770; Mar. 18; v. 260; p. 499.
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Wright, Ivan B. (See Wright, Parvin and I. B.)
Wright, James H., Lebanon, Mo. Vulcanizing device. No. 1,298,620; Mar. 25; v. 260; p. 704.
Wright, John E., New York, N. Y. Tabulating device. No. 1,296,727; Mar. 11; v. 260; p. 240.
Wright, Parvin and I. B., Seattle, Wash. Electric furnace and melting metals and smelting ores. No. 1,296,896; Mar. 11; v. 260; p. 280.
Wright, Raymond D. B., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Fluid-proportioning apparatus. No. 1,296,150; Mar. 4; v. 260; p. 77.
Wright, Samuel E., Augusta, Kans. Time-controlled circuit-breaker. No. 1,297,529; Mar. 18; v. 260; p. 446.
Wrightson, Thomas, assignor to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Floating mine. No. 1,298,142; Mar. 25; v. 260; p. 602.
Wrightson, Thomas, and J. M. Ringquist, assignors to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Submarine mine. No. 1,298,141; Mar. 25; v. 260; p. 602.
Wrightson, Thomas G., and J. M. Ringquist, assignors to Head, Wrightson and Company, Limited, Thornaby-on-Tees, England. Submarine-mine sinker. No. 1,298,143; Mar. 25; v. 260; p. 603.
Wrigley, Garnet P., Elmira, N. Y. Advertising device. No. 1,298,621; Mar. 25; v. 260; p. 704.
Wulfeck, Edward C., Cincinnati, Ohio. Gas and air mixing device. No. 1,297,858; Mar. 18; v. 260; p. 538.
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Wyss, Walter, assignor to Firma Adolphe Saurer, Arbon, Switzerland. Automatic temperature-regulator. No. 1,296,250; Mar. 4; v. 260; p. 99.
Yale & Towne Manufacturing Company, The. (See Lewis, Rollin C., assignor.)
Yarrow, Harold E., Scotstoun, Scotland. Steering and maneuvering of ships. No. 1,296,448; Mar. 4; v. 260; p. 141.
Yarrow, Harold E., Glasgow, Scotland. Storage of oil-fuel in vessels. No. 1,296,449; Mar. 4; v. 260; p. 142.
Yarrow, Harold E., Glasgow, Scotland. Storage of oil-fuel in vessels. No. 1,296,450; Mar. 4; v. 260; p. 142.
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Yeager, Matthias S., Los Angeles, Cal., assignor to Liberty Burner Co. Gas-burner. No. 1,296,551; Mar. 4; v. 260; p. 171.
Yeakel, Abraham M., assignor of one-half to W. L. Yeakel, Perkasie, Pa. Carrier for baskets, bundles, &c. No. 1,298,144; Mar. 25; v. 260; p. 603.
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York, Victor, Brea, Cal. Oil-well-drilling drive. No. 1,297,289; Mar. 11; v. 260; p. 306.
Yorke, George M., New York, N. Y., and G. R. Benjamin, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y. Means for synchronizing rotary devices. No. 1,298,622; Mar. 25; v. 260; p. 704.
Yost, Gilmore M., assignor to The Columbian Hardware Company, Cleveland, Ohio. Vise. No. 1,296,145; Mar. 25; v. 260; p. 603.
Yost, Gilmore M., assignor to The Columbian Hardware Company, Cleveland, Ohio. Vise. No. 1,298,146; Mar. 25; v. 260; p. 603.
Young, Conrad G., Twin, assignor of one-half to G. W. Kuppler, Seattle, Wash. Hosiery. No. 1,297,530; Mar. 18; v. 260; p. 446.
Young, Francis L., New York, N. Y., assignor to The Aeolian Company. Phonograph-cabinet. No. 1,297,977; Mar. 18; v. 260; p. 542.

Young, Frank S., Riverside, Calif. Chalk-line reel. No. 1,297,959; Mar. 18; v. 260; p. 538.
Young, William, Toronto, Ontario, Canada. Chase. No. 1,296,898; Mar. 11; v. 260; p. 280.
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Yourtee, Ralph F., St. Louis, Mo. Wall construction. No. 1,297,960; Mar. 18; v. 260; p. 538.
Zabel, Bruno, Edgewood borough, Pa. Automobile warning device. No. 1,295,950; Mar. 4; v. 260; p. 30.
Zaun, George F., San Bernardino, Cal. Truck. No. 1,297,290; Mar. 11; v. 260; p. 367.
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Zbikowski, Frank, Bessemer, Pa. Automobile signaling device. No. 1,297,961; Mar. 18; v. 260; p. 538.
Zeigler, Carl, Lewiston, Me. Electric attachment-plug. No. 1,298,623; Mar. 25; v. 260; p. 705.
Zelvis, Charles J., Cleveland, Ohio. Churn. No. 1,296,899; Mar. 11; v. 260; p. 281.
Zimdars, John B., San Francisco, Cal. Magazine-pencil. No. 1,296,900; Mar. 11; v. 260; p. 281.
Zimmer, Paul H., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Circuit-controller. No. 1,296,729; Mar. 11; v. 260; p. 241.
Zimmerman, James G., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Ignition-dynamo. No. 1,298,624; Mar. 25; v. 260; p. 705.
Zimmerman, Maximillian. (See Tucker, Andrew P., assignor.)
Zimmermann, Paul G., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Landing-gear for aeroplanes. No. 1,298,625; Mar. 25; v. 260; p. 705.
Zimmermann, Paul G., and H. Kleckler, Buffalo, N. Y., assignors to Curtiss Aeroplane and Motor Corporation. Pusher-hydroaeroplane. No. 1,296,730; Mar. 11; v. 260; p. 242.
Zisk, Anton, Baltimore, Md. Life-saving boat. No. 1,298,147; Mar. 25; v. 260; p. 603.
Zonca, Giulio B., Glens Falls, N. Y. Ship's construction. No. 1,297,303; Mar. 11; v. 260; p. 370.
Zuck, Emerson S. (See Thornton and Zuck.)
Zuck, Emerson S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric welding system. No. 1,296,350; Mar. 4; v. 260; p. 121.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. G. Spalding & Bros. (See Reach, William F., assignor.)
Allen, Edward E., Rutland, Vt. Statuette. No. 53,026; Mar. 4; v. 260; p. 177.
Allen, James J., Spokane, Wash. Combination shade and curtain bracket. No. 53,027; Mar. 4; v. 260; p. 177.
American Can Company. (See Hoffman, Edmund, assignor.)
American Hardware Corporation. (See Stone, Elmer B., assignor.)
American Telephone and Telegraph Company. (See Thompson, George K., assignor.)
Arnold, Harry C., Brookline, assignor to Converse Rubber Shoe Company, Malden, Mass. Tire. No. 53,108; Mar. 25; v. 260; p. 709.
Art in Buttons. (See Monaghan, John S., assignor.)
Automatic Appliance Company, The. (See Mapel, Lewis A., assignor.)
Babson, Henry B., assignor to Pine Tree Milking Machine Company, Chicago, Ill. Milk-pail cover. No. 53,109; Mar. 25; v. 260; p. 709.
Bailey, Irving R., assignor to The Goodyear Tire and Rubber Company, Akron, Ohio. Rubber heel. No. 53,060; Mar. 11; v. 260; p. 372.
Barrett, Colin D., assignor to Gorham Manufacturing Company, Providence, R. I. Article of manufacture. No. 53,061; Mar. 11; v. 260; p. 372.
Becker, August. (See Salminen, Eino, assignor.)
Bland, Perry. (See Creech and Bland.)
Bliss, Benjamin N., assignor to Waltham Watch Company, Waltham, Mass. Timepiece-dial. No. 53,110; Mar. 25; v. 260; p. 709.
Blowers, William R., Omaha, Nebr. Pneumatic tire. Nos. 53,111–14; Mar. 25; v. 260; p. 709.
Boskowitz, Emma W., Watts, Cal. Clothes-hanger. No. 53,028; Mar. 4; v. 260; p. 177.
Boye Needle Company, The. (See Flannery, John L., Jr., assignor.)
Braden, Alfred E., Tacoma, Wash. Tire. No. 53,100; Mar. 18; v. 260; p. 545.
Brumbaugh System, The. (See French, Ira L., assignor.)
Buchenau, Lloyd W., Stockton, Calif. Gum and mint case. No. 53,101; Mar. 18; v. 260; p. 545.
Buchsbaum, Samuel, Chicago, Ill. Finger-ring or similar article of jewelry. No. 53,062; Mar. 11; v. 260; p. 372.
Buckle, John V., Salt Lake City, Utah. Emblem, brooch, button, fob, charm, stick-pin, or similar article. No. 53,063; Mar. 11; v. 260; p. 372.
Buckley, Francis J., New York, N. Y. Flag, banner, pennant, pin, button, emblem, or other similar article. No. 53,064; Mar. 11; v. 260; p. 372.
Burgher, Fred H., Lakewood, Ohio. Suction-sweeper casing. No. 53,115; Mar. 25; v. 260; p. 710.
Carborundum Company, The. (See Tone, Frank J., assignor.)
Cheney Talking Machine Company. (See Eggebrecht, William H., assignor.)
Cirkinian, Sarkis A., New York, N. Y. Ash-receiver. No. 53,029; Mar. 4; v. 260; p. 177
Colvin, Arthur R., assignor to The Combination Rubber M'f'g Co., Bloomfield, N. J. Rubber tire. No. 53,116; Mar. 25; v. 260; p. 710.
Combination Rubber M'f'g Co., The. (See Colvin, Arthur R., assignor.)
Cone, Volney E. H., Springfield, assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Liquid-dispensing apparatus. No. 53,117; Mar. 25; v. 260; p. 710.
Converse Rubber Shoe Company. (See Arnold, Harry C., assignor.)
Creech, Samuel E., and P. Bland, Sullivan, Ill. Hair-pin. No. 53,030; Mar. 4; v. 260; p. 178.
Creighton, David F., Avalon, Pa. Metal shingle. No. 53,102; Mar. 18; v. 260; p. 546.
Creighton, David F., Avalon, Pa. Metal shingle. No. 53,103; Mar. 18; vol. 260; p. 546.
D'Amaral, José B., Fall River, Mass. Button, badge, medal, emblem, or watchcase. No. 53,118; Mar. 25; v. 260; p. 710.
Dayton Rubber Manufacturing Company, The. (See Witsaman, George H., assignor.)
Delman, William, Bridgeport, Ohio. Hat. No. 53,065; Mar. 11; v. 260; p. 373.
Dickinson, Fredrick S., New York, N. Y. Tire-casing. No. 53,066; Mar. 11; v. 260; p. 373.
Dufek, Louis, Tacoma, Wash. Lamp-globe. No. 53,031; Mar. 4; v. 260; p. 178.
Duncan, Jefferson E. (See Kaupmann, Frederick, Jr., assignor.)
Eggebrecht, William H., Grand Rapids, Mich., assignor to Cheney Talking Machine Company, Chicago, Ill. Casing for automatic sound-producing instruments. No. 53,067; Mar. 11; v. 260; p. 373.
Elliott, Herbert, Toronto, Ontario, Canada. Statuette or similar article. No. 53,119; Mar. 25; v. 260; p. 711.
Ericksen, William A., Brooklyn, N. Y. Snow-skate. No. 53,068; Mar. 11; v. 260; p. 373.
Essayan, Harold G., Brookline, Mass. Emblem, badge, stick-pin, or similar article. Nos. 53,032–3; Mar. 4; v. 260; p. 178.
Excelsior Steel Furnace Company. (See Scherer, Albert G., assignor.)
Ferris, Otho L., *et al.* (See Michael, Moina, assignor.)
Finn, Eli A., Springfield, Mass. Shopping-bag. No. 53,034; Mar. 4; v. 260; p. 178.
Fisher, John M., Attleboro, Mass. Bracelet, watch-fob, or vest-chain. No. 53,035; Mar. 4; v. 260; p. 178.
Flannery, John L., Jr., assignor to The Boye Needle Company, Chicago, Ill. Label. No. 53,120; Mar. 25; v. 260; p. 711.
Fox, Irvin D., Austin, Minn. Liquid measure-mixer. No. 53,069; Mar. 11; v. 260; p. 373.
French, Ira L., Chicago, Ill., assignor to The Brumbaugh System. Display-pillar. No. 53,121; Mar. 25; v. 260; p. 711.
Gilbert & Barker Manufacturing Company. (See Cone, Volney E. H., assignor.)
Goodyear Tire and Rubber Company, The. (See Bailey, Irving R., assignor.)
Gordon Tire & Rubber Company, The. (See McKone, Charles W., assignor.)
Gorham Manufacturing Company. (See Barrett, Colin D., assignor.)
Griffiths, Richard T., assignor to The Miller Rubber Company, Akron, Ohio. Pneumatic tire. No. 53,070; Mar. 11; v. 260; p. 373.
Gullborg, Arthur V., Chicago, Ill. Grease-gun. No. 53,122; Mar. 25; v. 260; p. 711.
Harding, Thomas. (See Sommer and Harding.)
Harrell, Arlando T., Chicago, Ill. Button. No. 53,036; Mar. 4; v. 260; p. 178.
Haskell, Samuel, New York, N. Y. Doll or statuette. No. 53,037; Mar. 4; v. 260; p. 179.
Hawthorne, Ellsworth A., Bridgeport, Conn. Vehicle-lamp. No. 53,123; Mar. 25; v. 260; p. 711.
Heller, Eugene H., assignor to The Hill Pump Valve Company, Chicago, Ill. Automobile-heater. No. 53,124; Mar. 25; v. 260; p. 711.
Hill Pump Valve Company, The. (See Heller, Eugene H., assignor.)
Hoffman, Edmund, Brooklyn, assignor to American Can Company, New York, N. Y. Talcum-powder box. No. 53,071; Mar. 11; v. 260; p. 374.
Hogg, Henry G., Winthrop, Mass. Child's car. No. 53,125; Mar. 25; v. 260; p. 712.

Hutchison, Miller R., West Orange, N. J. Casing for stapling and fastening machines. No. 53,072; Mar. 11; v. 260; p. 374.
Iessi, Antonio, New York, N. Y. Doll. No. 53,038; Mar. 4; v. 260; p. 179.
Inlaid Company, The. (See Platt, Eugene P., assignor.)
International Silver Co. (See Kintz, Alfred G., assignor.)
International Silver Company. (See Leech, John, assignor.)
Isaacs, William M., Cleveland, Ohio. Collar-button. No. 53,039; Mar. 4; v. 260; p. 179.
J. L. Sommer Manufacturing Co. (See Sommer and Harding, assignors.)
Jacobs, Charles S., assignor to The Over There Mfg. Co., Melrose Highlands, Mass. Service flag, pennant, emblem, or article of a similar nature. No. 53,126; Mar. 25; v. 260; p. 712.
Jones, Joseph F., La Grange, Ill. Velocipede. No. 53,127; Mar. 25; v. 260; p. 712.
Kaupmann, Frederick, Jr., Brooklyn, N. Y., assignor to J. E. Duncan, Arlington Heights, Mass. Hat-pin, scarf-pin, cuff-link, tie-clip, ring, fob, pendant for neck-chains, pin, or article of manufacture of like character. No. 53,128; Mar. 25; v. 260; p. 712.
Keedick, Lee et al. (See Michael, Molna, assignor.)
Keller, Joseph F., New York, N. Y. Standard for die-sinking machines. No. 53,073; Mar. 11; v. 260; p. 374.
Kelly, Lawrence J., assignor to The McGraw Tire & Rubber Company, East Palestine, Ohio. Rubber tire. No. 53,129; Mar. 25; v. 260; p. 712.
Kimpton, Haupt & Co. (See Riley, James T., assignor.)
Kintz, Alfred G., Wallingford, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 53,074; Mar. 11; v. 260; p. 374.
Kropé, Magdalene H., New York, N. Y. Finger-ring. No. 53,040; Mar. 4; v. 260; p. 179.
Krueger, May H., Cleveland, Ohio. Flag, pennant, sign, emblem, or an article of a similar nature. No. 53,130; Mar. 25; v. 260; p. 712.
Landis, Abb L., Nashville, Tenn. Game-board. No. 53,041; Mar. 4; v. 260; p. 179.
Leech, John, assignor to International Silver Company, Bridgeport, Conn. Spoon, fork, or similar article. No. 53,075; Mar. 11; v. 260; p. 374.
Lewis, Isaac, Hamilton, Ontario, Canada. Pattern for top-coats. No. 53,131; Mar. 25; v. 260; p. 713.
Lewis, Isaac, Hamilton, Ontario, Canada. Pattern for sack-coats. No. 53,132; Mar. 25; v. 260; p. 713.
Mapel, Lewis A., assignor to The Automatic Appliance Company, St. Louis, Mo. Statuette. No. 53,042; Mar. 4; v. 260; p. 179.
Markowitz, Louis, New York, N. Y. Badge. No. 53,076; Mar. 11; v. 260; p. 374.
McGraw Tire & Rubber Company, The. (See Kelly, Lawrence J., assignor.)
McGrevy, Jeremiah, assignor to Solidarity Watch Case Company, Brooklyn, N. Y. Watch-bow. No. 53,078; Mar. 11; v. 260; p. 375.
McKone, Charles W., assignor to The Gordon Tire & Rubber Company, Canton, Ohio. Automobile-tire. No. 53,133; Mar. 25; v. 260; p. 713.
Messer, Charles J., Syracuse, N. Y. Candle. No. 53,043; Mar. 4; v. 260; p. 180
Messer, Charles J., Syracuse, N. Y. Candle. No. 53,077; Mar. 11; v. 260; p. 375.
Michael, Molna, assignor of one-half to L. Keedick, New York, N. Y., and one-half to O. L. Ferris, Portland, Oreg. Flag or banner. Nos. 53,079–80; Mar. 11; v. 260; p. 375.
Michael, Molna, assignor of one-half to L. Keedick, New York, N. Y., and one-half to O. L. Ferris, Portland, Oreg. Badge. Nos. 53,081–2; Mar. 11; v. 260; p. 375.
Miller Rubber Company, The. (See Griffiths, Richard T., assignor.)
Mitchell, Harold D., assignor to Norwalk Tire and Rubber Company, Norwalk, Conn. Tire. No. 53,083; Mar. 11; v. 260; p. 376.
Monaghan, John S., Rochester, N. Y., assignor to Art in Buttons, Incorporated. Button. No. 53,134; Mar. 25; v. 260; p. 713.
Moore, Harry G., Philadelphia, Pa. Vehicle-body. No. 53,044; Mar. 4; v. 260; p. 180.
Mueller, Gabriel, Cincinnati, Ohio. Emblem, flag, pendant, or article of similar nature. No. 53,045; Mar. 4; v. 260; p. 180.
Norwalk, Albert B., New York, N. Y. Doll. Nos. 53,084–5; Mar. 11; v. 260; p. 376.
Norwalk Tire and Rubber Company. (See Mitchell, Harold D., assignor.)
Oldfield Tire Company, The. (See Wiener, Martin L., assignor.)
Osius, Adolph P., Detroit, Mich. Ice-cream measure. No. 53,135; Mar. 25; v. 260; p. 713.
Over There Mfg. Co., The. (See Jacobs, Charles S., assignor.)
Overbury, Frederick C., Hilladale, N. J. Roofing element. Nos. 53,086–7; Mar. 11; v. 260; p. 376.
Pergl, Otto, Cleveland, Ohio. Wire-entanglement cutter. No. 53,104; Mar. 18; v. 260; p. 546.
Peristein, Joseph, Chicago, Ill. Collar. No. 53,046; Mar. 4; v. 260; p. 180.
Pine Tree Milking Machine Company. (See Babson, Henry B., assignor.)
Platt, Eugene P., assignor to The Inlaid Company, Inc., Providence, R. I. Photographic mount, mat, or similar article. No. 53,088; Mar. 11; v. 260; p. 376.
Reach, William F., Chicopee, Mass., assignor to A. G. Spalding & Bros., Jersey City, N. J. Tubular ice-skate. No. 53,047; Mar. 4; v. 260; p. 180.
Riley, James T., Brooklyn, assignor to Kimpton, Haupt & Co., New York, N. Y. Single double-desk inkstand. No. 53,136; Mar. 25; v. 260; p. 713.
Roberts, Clarence V., assignor to Roberts & Mander Stove Company, Philadelphia, Pa. Gas-heater. No. 53,048; Mar. 4; v. 260; p. 180.
Roberts & Mander Stove Company. (See Roberts, Clarence V., assignor.)
Rorimer, Louis, Cleveland, Ohio, assignor to Simmons Company, Kenosha, Wis. Bedstead. No. 53,105; Mar. 18; v. 260; p. 546.
Salminen, Eino, assignor to A. Becker, Buffalo, N. Y. Aeroplane-body. No. 53,137; Mar. 25; v. 260; p. 714.
Salzer, Arthur, New York, N. Y. Lamp-globe. No. 53,049; Mar. 4; v. 260; p. 181.
Scherer, Albert G., assignor to The Excelsior Steel Furnace Company, Chicago, Ill. Register. Nos. 53,050–2; Mar. 4; v. 260; p. 181.
Schuylkill Silk Mills. (See Winsten, Harry J., assignor.)
Selle, Oliver F., St. Louis, Mo. Flag, pennant, sign, emblem, or article of a similar nature. No. 53,138; Mar. 25; v. 260; p. 714.
Selsor, Margaret A., New York, N. Y. Shirt. No. 53,089; Mar. 11; v. 260; p. 377.
Sheras, Morris, Chicago, Ill. Time-stamp. No. 53,053; Mar. 4; v. 260; p. 181.
Simmons Company. (See Rorimer, Louis, assignor.)
Simpson, Hugh L., Fort Dodge, Kans. Attachment for baby-carriages. No. 53,106; Mar. 18; v. 260; p. 546.
Smith, Wilson F., East Liverpool, Ohio. Phonograph-horn. No. 53,139; Mar. 25; v. 260; p. 714.
Solidarity Watch Case Company. (See McGrevy, Jeremiah, assignor.)
Solinger, Jacob, Providence, R. I. Emblem, pin, or similar article. No. 53,140; Mar. 25; v. 260; p. 714.
Sommer, Adolph J., Ritzville, Wash. Automobile bolt and nut box. No. 53,107; Mar. 18; v. 260; p. 546.
Sommer, John L., and T. Harding, Newark, N. J., assignors to J. L. Sommer Manufacturing Co. Cake-turner or similar kitchen utensil. No. 53,054; Mar. 4; v. 260; p. 181.
Sonora Phonograph Corporation. (See Wolff, Joseph, assignor.)
Steinberger, Louis, Brooklyn, N. Y. Sound-transmitter. Nos. 53,090–1; Mar. 11; v. 260; p. 377.
Stone, Elmer R., assignor to American Hardware Corporation, New Britain, Conn. Padlock. No. 53,141; Mar. 25; v. 260; p. 714.
Stowe, William D., Scranton, Pa. Signaling device. No. 53,055; Mar. 4; v. 260; p. 182.
Strohhaker, Gustav, Wallingford, Conn., assignor to The United Jewelers, Incorporated, New York, N. Y. Spoon, fork, or similar article. No. 53,056; Mar. 4; v. 260; p. 182.
Stump, Blanche A., Toledo, Ohio. Badge. No. 53,057; Mar. 4; v. 260; p. 182.
Swanson, Swan, Seattle Wash. Bottle-cap. No. 53,092; Mar. 11; v. 260; p. 377.
Thompson, George K., Maplewood, N. J., assignor to American Telephone and Telegraph Company. Telephone-receiver holder. No. 53,093; Mar. 11; v. 260; p. 377.
Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Can. No. 53,094; Mar. 11; v. 260; p. 377.
United Jewelers, The. (See Strohhaker, Gustav, assignor.)
Waltham Watch Company. (See Bliss, Benjamin N., assignor.)
Waterbury Mfg Co. (See Wooden, Albert E., assignor.)
Weinberg, Isaac H., New York, N. Y. Work-stand. No. 53,058; Mar. 4; v. 260; p. 182.
West, Ralph H., Cleveland, Ohio. Vehicle-wheel. No. 53,142; Mar. 25; v. 260; p. 714.
Wiener, Martin L., Akron, assignor to The Oldfield Tire Company, Cleveland, Ohio. Pneumatic tire. No. 53,143; Mar. 25; v. 260; p. 714.
Wilson Brothers. (See Wilson, John H., assignor.)
Wilson, John H., assignor to Wilson Brothers, Minneapolis, Minn. Service-easel. No. 53,059; Mar. 4; v. 260; p. 182.
Winsten, Harry J., assignor to Schuylkill Silk Mills, Reading, Pa. Undergarment. No. 53,095; Mar. 11; v. 260; p. 377.
Witsaman, George H., assignor to The Dayton Rubber Manufacturing Company, Dayton, Ohio. Tire. No. 53,096; Mar. 11; v. 260; p. 378.
Wolff, Joseph, Brooklyn, N. Y., assignor to Sonora Phonograph Corporation. Phonograph-cabinet. No. 53,097; Mar. 11; v. 260; p. 378.
Wooden, Albert E., assignor to Waterbury Mfg. Co., Waterbury, Conn. Sheet-metal hot-water bottle. No. 53,098; Mar. 11; v. 260; p. 378.
Yilling, John, Akron, Ohio. Game-board. No. 53,099; Mar. 11; v. 260; p. 378.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Wittnauer Co., New York, N. Y. Watches, watch-movements, and parts thereof, watchcases. No. 124,806; Mar. 11; v. 260; p. 390.

A. H. Vogel & Co., Inc., New York, N. Y. Fur coats, coatees, wraps, capes, scarfs, muffs. No. 124,802; Mar. 11; v. 260; p. 389.

A. V. Victorius & Co., Inc., New York, N. Y. Hosiery. No. 124,801; Mar. 11; v. 260; p. 389.

Ajax Rubber Company, Inc., Millbrook, N. Y. Certain named pneumatic-tire accessories. No. 124,648; Mar. 11; v. 260; p. 385.

Ajax Rubber Company, Inc., Millbrook, N. Y. Rubber composition. No. 124,809; Mar. 18; v. 260; p. 555.

All-Americas Medicine Corporation, New York, N. Y. Medicinal preparation for affected respiratory organs. No. 124,649; Mar. 11; v. 260; p. 385.

American Cyanamid Company, New York, N. Y. Certain named chemicals, medicines, pharmaceutical preparations. No. 124,650; Mar. 11; v. 260; p. 385.

American Candy Co., Milwaukee, Wis. Candy. No. 124,810; Mar. 18; v. 260; p. 555.

American Economy Products Co., Inc., Boston, Mass. Egg substitute. No. 124,651; Mar. 11; v. 260; p. 385.

American Insulating Machinery Company, Philadelphia, Pa. Certain named cutlery, machinery, tools, and parts thereof. No. 124,652; Mar. 11; v. 260; p. 385.

American Lace Mfg. Co., The, Elyria, Ohio. Cotton camisole-laces. No. 124,653; Mar. 11; v. 260; p. 385.

American Manufacturing Company, Boston, Mass., and Brooklyn, N. Y. Rope manufactured from vegetable fiber. No. 124,811; Mar. 18; v. 260; p. 555.

American Paint Products Co., Chicago, Ill. Certain named paints and painter's materials. No. 124,654; Mar. 11; v. 260; p. 385.

American Soap & Washoline Co., Cohoes, N. Y. Washing compounds or mixtures. No. 124,655; Mar. 11; v. 260; p. 385.

Annette Island Packing Co., Seattle, Wash. Canned salmon. No. 124,656; Mar. 11; v. 260; p. 385.

Arbetter & Richman, St. Louis, Mo. Overalls, work-pants, and jumpers. No. 124,919; Mar. 25; v. 260; p. 729.

Arthur Balfour & Company Limited, Sheffield, England. Steel in the forms of rods, sheets, wire, &c. No. 124,661; Mar. 11; v. 260; p. 385.

Atlantic Refining Company, The, Philadelphia, Pa. Certain named oils and greases. Nos. 124,920–1; Mar. 25; v. 260; p. 729.

Auerbach & Sons, D., New York, N. Y. Candy. No. 124,658; Mar. 11; v. 260; p. 385.

Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y. Certain named foods. No. 124,922; Mar. 25; v. 260; p. 729.

Auwerter, Fred, Rapid City, S. D. Preparation for the treatment of hog-cholera. No. 124,659; Mar. 11; v. 260; p. 385.

B. B. & R. Knight, Providence, R. I. Cotton piece goods. Nos. 124,729–33; Mar. 11; v. 260; p. 387.

B. F. Goodrich Company, The, New York, N. Y. Conveyer-belts of rubber reinforced with fabric. No. 124,711; Mar. 11; v. 260; p. 387.

Barrett and Company, Incorporated, Penn Yan, N. Y. Beverages. No. 124,841; Mar. 18; v. 260; p. 556.

Becker Bros. Inc., San Francisco, Los Angeles, and San Diego, Cal. Non-alcoholic beverage. No. 124,662; Mar. 11; v. 260; p. 385.

Beekman Paper and Card Company, Inc., New York, N. Y. Writing and printing papers. No. 124,663; Mar. 11; v. 260; p. 385.

Berdan Company. (See Berdan and Company, assignor.)

Berdan and Company, assignor to Berdan Company, Toledo, Ohio. Tea, coffee, rice. No. 124,812; Mar. 18; v. 260; p. 555

Bianchi, Arthur, Washington, D. C. Hair switches, wigs, and false-hair trimmings. No. 124,664; Mar. 11; v. 260; p. 385.

Bickmore Company, Oldtown, Me. Ointment for eczema, sunburn, cuts, &c. No. 124,665; Mar. 11; v. 260; p. 385.

Bobrow Bros., Philadelphia, Pa. Cigars. No. 124,666; Mar. 11; v. 260; p. 385.

Booth Fisheries Company, Chicago, Ill., and Eastport, Me. Canned sardines. No. 124,667; Mar. 11; v. 260; p. 385.

Booth Fisheries Sardine Co., Chicago, Ill., and Eastport, Me. Canned sardines in tomato sauce. No. 124,813; Mar. 18; v. 260; p. 555.

Brewster & Co., Long Island City and New York, N. Y. Pleasure-vehicles. No. 124,668; Mar. 11; v. 260; p. 385.

Briggs Bituminous Composition Co., New York, N. Y. Bituminous compositions. No. 124,814; Mar. 18; v. 260; p. 555.

British Mannesmann Tube Company Ltd., The, London, England. Certain named vehicles. No. 124,815; Mar. 18; v. 260; p. 555.

British Mannesmann Tube Company Ltd., The, London, England. Cylinders and bottles to contain liquid or elastic fluids under pressure. No. 124,816; Mar. 18; v. 260; p. 555.

Brooklyn Macaroni Mfg. Co. Inc., Brooklyn, N. Y. Macaroni. No. 124,817; Mar. 18; v. 260; p. 555.

Burns, Wilbur S., Grand Rapids, Mich. Laundry soap. No. 124,669; Mar. 11; v. 260; p. 385.

Buzby, Augustus C., assignor to Keystone Lubricating Company, Philadelphia, Pa. Lubricants. No. 124,670; Mar. 11; v. 260; p. 385.

C. A. S. Engineering Co., Detroit, Mich. Automobile steering-gears. No. 124,699; Mar. 11; v. 260; p. 386.

California Fruit Exchange, Sacramento, Calif. Fresh peaches, plums, grapes. No. 124,818; Mar. 18; v. 260; p. 555.

California Packing Corporation, San Francisco, Calif. Potato-flour. No. 124,819; Mar. 18; v. 260; p. 555.

Camo Chemical Co., Laporte, Ind. Liquid compounds for certain named medicinal purposes. No. 124,671; Mar. 11; v. 260; p. 385.

Cardinal Mills, The, West Point, Miss. Cotton yarns. No. 124,672; Mar. 11; v. 260; p. 385.

Cellular Clothing Co. Ld., The, London, England. Certain named clothing for men. No. 124,674; Mar. 11; v. 260; p. 386.

Charles E. Weyand & Co., New York, N. Y. Writing-paper and envelops. No. 124,805; Mar. 11; v. 260; p. 380.

Chemists Co. of New York, Inc., New York, N. Y. Antiseptic tooth-paste. No. 124,675; Mar. 11; v. 260; p. 386.

Chesnutt, Cooper & Co., London, England. Bristles. No. 124,820; Mar. 18; v. 260; p. 555.

Chicago Cycle Supply Company, Chicago, Ill. Bicycles. No. 124,676; Mar. 11; v. 260; p. 386.

Chicago Pneumatic Tool Company, Chicago, Ill. Air-drills. No. 124,677; Mar. 11; v. 260; p. 386.

Cincinnati Auto Specialty Co., The, Cincinnati, Ohio. Radiator and engine covers. No. 124,678; Mar. 11; v. 260; p. 386.

Coast Fishing Co., Wilmington, Cal. Canned sardines. No. 124,679; Mar. 11; v. 260; p. 386.

Colby, Guy E., Morrison, Ill. Certain named spark-intensifying devices. No. 124,680; Mar. 11; v. 260; p. 386.

Colonial Steel Company, Pittsburgh, Pa. Bits for lathes for cutting metal. No. 124,681; Mar. 11; v. 260; p. 386.

Colorado Milling & Elevator Co., Denver, Colo., and Caldwell, Idaho. Wheat-flour. No. 124,682; Mar. 11; v. 260; p. 386.

Columbia Fastener Company, Chicago, Ill. Dress-fasteners. No. 124,821; Mar. 18; v. 260; p. 555.

Columbia Fastener Company, Chicago, Ill. Dress-fasteners. No. 124,923; Mar. 25; v. 260; p. 729.

Columbus Tractor Co., Columbus, Ohio. Farm-tractors. No. 124,683; Mar. 11; v. 260; p. 386.

Connecticut Telephone & Electric Co. Inc., Meriden, Conn. Electric switches. No. 124,684; Mar. 11; v. 260; p. 386.

Crane Bros. Inc., Kingston, Pa. Silk yarns. No. 124,685; Mar. 11; v. 260; p. 386.

Crisafulli Bros., New York, N. Y. Corn or cotton salad-oil compounded with extra-fine olive-oil. No. 124,924; Mar. 25; v. 260; p. 729.

Cutaway Harrow Co., The, Higganum, Conn. Certain named cutlery, machinery, &c. No. 124,686; Mar. 11; v. 260; p. 386.

David H. Fulton & Bro., Detroit, Mich. Stomach-tonic and alterative used in treating certain named disorders. No. 124,709; Mar. 11; v. 260; p. 387.

De Bataafsche Petroleum Maatschappij, The Hague, Netherlands. Petroleum, kerosene, benzin, naphtha, gasolene. No. 124,687; Mar. 11; v. 260; p. 386.

De Bruyn, Limited, London, England. Margarin and lard compound. No. 124,688; Mar. 11; v. 260; p. 386.

De Neergaard, Elma M., New York, N. Y. Looms. No. 124,689; Mar. 11; v. 260; p. 386.

Denzer & Nathan, New York, N. Y. Cotton piece goods. No. 124,690; Mar. 11; v. 260; p. 386.

Devine and Hoffner, Philadelphia, Pa. Children's shoes. No. 124,692; Mar. 11; v. 260; p. 386.

Dexter, Mrs. Billie, South Pasadena, Calif. Certain named garments for children. No. 124,822; Mar. 18; v. 260; p. 555.

Diamond Expansion Bolt Co., New York, N. Y. Drills, drill handles, points, and bits. No. 124,693; Mar. 11; v. 260; p. 386.

Diamond Expansion Bolt Co., New York, N. Y. Drills, drill handles, and points. No. 124,694; Mar. 11; v. 260; p. 386.

Diamond Match Co., The, Chicago, Ill. Matches. No. 124,823; Mar. 18; v. 260; p. 555.

Domestic Sewing Machine Company, Inc., Buffalo, N. Y. Sewing-machines. Nos. 124,695–6; Mar. 11; v. 260; p. 386.

Donald Company, The, Grand Island, Nebr. Coffee. No. 124,824; Mar. 18; v. 260; p. 555.

Donnell, Carman & Mudge, Boston, Mass. Finished sheepskins. No. 124,925; Mar. 25; v. 260; p. 729.

Duncan, Edna G., New York, N. Y. Hair-shampoo and hair-tonic. No. 124,825; Mar. 18; v. 260; p. 555.

Durkee-Atwood Co., Minneapolis, Minn. Blushing compound for protecting the surfaces of finished metal articles. No. 124,826; Mar. 18; v. 260; p. 555.

E. E. Lloyd Paper Co., Chicago, Ill. Safety-paper. Nos. 124,739–40; Mar. 11; v. 260; p. 388.

E-Z-Fit Artificial Limb Co., Inc., New York, N. Y. Artificial limbs and parts thereof. No. 124,830; Mar. 18; v. 260; p. 556.

Eclipse Milling Company, Inc., Graham, Va. Cornmeal. No. 124,667; Mar. 11; v. 260; p. 386.

Elec-Mi Manufacturing Co., Bloomfield, Nebr. Electric mail-indicators. No. 124,698; Mar. 11; v. 260; p. 386.

Eloesser-Heynemann Co., San Francisco, Calif. Overalls and work-clothes. No. 124,832; Mar. 18; v. 260; p. 555.

Empire Milling Company, Minneapolis, Minn. Wheat-flour. No. 124,836; Mar. 18; v. 260; p. 555.

Enid Milling Company, Enid, Okla. Wheat-flour. No. 124,926; Mar. 25; v. 260; p. 729.

Erwa Chemical Manufacturing Company, Needham, Mass. Waterproof compound for leather. No. 124,709; Mar. 11; v. 260; p. 386.

Eskimo Knitting Mills, Philadelphia, Pa. Cardigan jackets. No. 124,837; Mar. 18; v. 260; p. 555.

Fairbanks, Morse & Co., Chicago, Ill. Concrete barrel mixer. No. 124,701; Mar. 11; v. 260; p. 386.

Falls Motors Corporation, Sheboygan Falls, Wis. Internal-combustion engines. No. 124,702; Mar. 11; v. 260; p. 386.

Feasel, Harry L., New York, N. Y. Automobile and furniture polish. No. 124,703; Mar. 11; v. 260; p. 386.

Federal Snap Fastener Corporation, New York, N. Y. Snap and placket fasteners. No. 124,704; Mar. 11; v. 260; p. 386.

Fisher Flouring Mills Company, Seattle, Wash. Stock feed. No. 124,827; Mar. 18; v. 260; p. 555.

Food Products Inc., Wilmington, Del., and New York, N. Y. Prepared jellies and jellied desserts. No. 124,706; Mar. 11; v. 260; p. 386.

Ford, Elmer A., New York, N. Y. Automobile-polish. No. 124,707; Mar. 11; v. 260; p. 387.

Frenchtown Porcelain Company, Trenton, N. J. Insulation for spark-plugs. No. 124,708; Mar. 11; v. 260; p. 387.

G. A. Hosmer Company, Buffalo, N. Y. Threading-oil. No. 124,929; Mar. 25; v. 260; p. 729.

G. W. Carnrick Co., New York, N. Y. Ampuls made of glass. No. 124,673; Mar. 11; v. 260; p. 385.

G. W. Hume Company, San Francisco, Calif. Canned tomatoes with purée from trimmings. No. 124,835; Mar. 18; v. 260; p. 555.

Garhart Dental Specialty Company, Cambridge, Mass. Filling for teeth. No. 124,840; Mar. 18; v. 260; p. 556.

Gilbert-Co., Lynchburg, Va. Laxative tablets. No. 124,927; Mar. 25; v. 260; p. 729.

Gillespie, James W., Chattanooga, Tenn. Preparations for the treatment of certain named diseases. No. 124,838; Mar. 18; v. 260; p. 555.

Golden Grain Milling Company, East St. Louis, Ill. Hog feed. No. 124,842; Mar. 18; v. 260; p. 556.

Golden Grain Milling Company, East St. Louis, Ill. Dairy feed. No. 124,843; Mar. 18; v. 260; p. 556.

Golden Grain Milling Company, East St. Louis, Ill. Horse and mule feed. No. 124,844; Mar. 18; v. 260; p. 556.

Goulds Manufacturing Co., The, Seneca Falls, N. Y. Power-driven system for pumping water. No. 124,712; Mar. 11; v. 260; p. 387.

Gray, Frank A., New York, N. Y. Hair-dyes. No. 124,710; Mar. 11; v. 260; p. 387.

Groth, Herman A., Chicago, Ill. Preparation for treatment of foot diseases. No. 124,634; Mar. 4; v. 260; p. 197.

H. Evan Tayler, Inc., Philadelphia, Pa. Periodical financial publications. No. 124,838; Mar. 18; v. 260; p. 555.

H-R Manufacturing Company, Chicago, Ill. Locks for control-levers for automobiles. No. 124,847; Mar. 18; v. 260; p. 556.

Hagemeister Brewing Company, Green Bay, Wis. Non-alcoholic non-intoxicating cereal beverage. No. 124,848; Mar. 18; v. 260; p. 556.

Hanan & Son, Brooklyn, N. Y. Boots, shoes, and slippers. No. 124,713; Mar. 11; v. 260; p. 387.

Harley-Davidson Motor Co., Milwaukee, Wis. Bicycles. No. 124,714; Mar. 11; v. 260; p. 387.

Harris-Polk Hat Co., St. Louis, Mo. Hats. No. 124,715; Mar. 11; v. 260; p. 387.

Haviland, Lyman P., Camden, N. Y. Canned vegetables. No. 124,829; Mar. 18; v. 260; p. 555.

Haviland, Lyman P., Camden, N. Y. Canned vegetables. No. 124,830; Mar. 18; v. 260; p. 555.

Hemp & Co. (Corp.), St. Louis, Mo. Stovepipe-elbows and wood, coal, gas, oil, and vapor stoves. No. 124,716; Mar. 11; v. 260; p. 387.

Henry H. Ottens Mfg. Co., Inc., Philadelphia, Pa. Certain named beverages, non-alcoholic. No. 124,849; Mar. 11; v. 260; p. 556.

Herrman, Daniel W., New York, N. Y. Cotton linings. No. 124,717; Mar. 11; v. 260; p. 387.

Herrman, Daniel W., New York, N. Y. Velvets, velveteens, and woolen piece goods. No. 124,718; Mar. 11; v. 260; p. 387.

Hickory Hosiery Mills, Inc., Hickory, N. C. Infant's hosiery. No. 124,719; Mar. 11; v. 260; p. 387.

Heban, John, Ottawa, Ill. Men's garters. No. 124,720; Mar. 11; v. 260; p. 387.

Holmes-Letherman Seed Company, The, Canton, Ohio. Seeds, bulbs, and plants. No. 124,721; Mar. 11; v. 260; p. 387.

Hooven & Allison Company, The, Xenia, Ohio. Manila rope. No. 124,834; Mar. 18; v. 260; p. 555.

Hoskins Manufacturing Company, Detroit, Mich. Alloys containing chromium and nickel. No. 124,928; Mar. 25; v. 260; p. 729.

Ideal Linen Mesh Company, Poughkeepsie, N. Y. Linen-mesh underwear. No. 124,722; Mar. 11; v. 260; p. 387.

Inter-State Optical Corporation, Brooklyn, N. Y. Optical goods, eye-glasses and fittings, &c. No. 124,724; Mar. 11; v. 260; p. 387.

Irwin-Harrisons & Crosfield, Inc., New York, N. Y.; Boston, Mass.; Philadelphia, Pa.; Chicago, Ill., and San Francisco, Cal. Tea. No. 124,725; Mar. 11; v. 260; p. 387.

Isaly Dairy Company, The, Marion, Ohio. Butter. No. 124,930; Mar. 25; v. 260; p. 729.

J. H. Rand Corp'n, North Tonawanda, N. Y. Index-tabs. No. 124,761; Mar. 11; v. 260; p. 388.

J. S. Turner Manufacturing Co., Lowell, Mass. Leather belting. Nos. 124,791–3; Mar. 11; v. 260; p. 389.

Jaburg Brothers, New York, N. Y. Certain named foods. No. 124,931; Mar. 25; v. 260; p. 729.

James A. McAteer & Sons, Inc., Pittsburgh, Pa. Coffee and tea. No. 124,861; Mar. 18; v. 260; p. 556.

James Lowe Erskine Co., New York, N. Y. Shaving-brushes. No. 124,857; Mar. 18; v. 260; p. 556.

Jensen Creamery Machinery Company, Long Island City, N. Y. Coolers and ice-cream freezers. No. 124,848; Mar. 18; v. 260; p. 556.

John C. Dettra & Company, Inc., Oaks, Pa. Flags. No. 124,691; Mar. 11; v. 260; p. 386.

John E. King Coffee Co., Detroit, Mich. Coffee. No. 124,727; Mar. 11; v. 260; p. 387.

John Wanamaker, New York, New York, N. Y. Air-compressing engines. No. 124,803; Mar. 11; v. 260; p. 389.

Johnstone, Robert L., New York, N. Y. Chewing-gum. No. 124,726; Mar. 11; v. 260; p. 387.

Kayner Company, Cleveland, Ohio. Trunks and cases for containing and displaying merchandise. No. 124,849; Mar. 18; v. 260; p. 556.

Kee Lex Manufacturing Company, Rochester, N. Y. Carbon-paper. No. 124,850; Mar. 18; v. 260; p. 556.

Keystone Lubricating Company. (See Buzby, Augustus C., assignor.)

Kobzina, Marie, Chicago, Ill. Therapeutic salve for cuts, wounds, and bruises. No. 124,932; Mar. 25; v. 260; p. 729.

Koehler, Hillard W., Coronado, Cal. Metallic piston packing, and compression rings for engines. No. 124,728; Mar. 11; v. 260; p. 387.

Koken Barbers' Supply Company, St. Louis, Mo. Face-cream. No. 124,933; Mar. 25; v. 260; p. 729.

L. A. Young Industries, Inc., Detroit, Mich. Certain named cutlery, machinery, &c. No. 124,806; Mar. 11; v. 260; p. 390.

L. B. Holliday & Co., Limited, Huddersfield, England. Mineral dyes. No. 124,833; Mar. 18; v. 260; p. 555.

La Ford Chemical Co., Indianapolis, Ind. Certain named preparations for nourishing the skin. No. 124,734; Mar. 11; v. 260; p. 387.

Lake Mills Milk Company, Lake Mills, Wis. Canned condensed milk. No. 124,862; Mar. 18; v. 260; p. 556.

Landers, Frary & Clark, New Britain, Conn. Electrically-heated pads for therapeutic use. No. 124,853; Mar. 18; v. 260; p. 556.

Lawrenceburg Roller Mills Co., Lawrenceburg, Ind. Cornmeal. No. 124,854; Mar. 18; v. 260; p. 556.

Layton Pure Food Company, St. Louis, Mo., and East St. Louis, Ill. Baking powder and soda. No. 124,735; Mar. 11; v. 260; p. 387.

Lefo Chemical Company, Inc., The, Vineburg, Cal. Medicines. No. 124,736; Mar. 11; v. 260; p. 387.

Lemarchand frères & Cie., Treboul, France. Canned sardines in oil. No. 124,737; Mar. 11; v. 260; p. 387.

Liberty Steel Company, The, Warren, Ohio. Sheet and tin mill products. No. 124,738; Mar. 11; v. 260; p. 388.

Lloyd Brothers, Cincinnati, Ohio. Neutralizing-cordial for treatment of derangement of stomach and bowels. No. 124,635; Mar 4; v. 260; p. 197.

Lloyd Brothers, Cincinnati, Ohio. Certain named pharmaceutical preparations. No. 124,636; Mar. 4; v. 260; p. 197.

Lloyd Brothers, Cincinnati, Ohio. Extracts of ergot and a preparation of hydrastis. No. 124,637; Mar. 4; v. 260; p. 197.

Lloyd Brothers, Cincinnati, Ohio. Certain named compound for the treatment of certain affections and conditions. No. 124,638; Mar. 4; v. 260; p. 197.

Lloyd Brothers, Cincinnati, Ohio. Distillate from Apocynum cannabinum. No. 124,639; Mar. 4; v. 260; p. 197.
Lloyd Brothers, Cincinnati, Ohio. Certain named pharmaceutical products. No. 124,640; Mar. 4; v. 260; p. 197.
Lloyd Brothers, Cincinnati, Ohio. Tobacco-distillate for use in the relief of headache, &c. No. 124,641; Mar. 4; v. 260; p. 197.
Lloyd Brothers, Cincinnati, Ohio. Preparation of echinacea for surgical uses. No. 124,642; Mar. 4; v. 260; p. 197.
Lloyd Brothers, Cincinnati, Ohio. Preparation of caulophyllum for treatment of amenorrhea, &c. No. 124,643; Mar. 4; v. 260; p. 197.
Lober Art Brass & Specialty Co., Toledo, Ohio. Automobile-radiators. No. 124,741; Mar. 11; v. 260; p. 388.
Loomis, Evarts G., Newark, N. J. Watch-crystals. Nos. 124,855–6; Mar. 18; v. 260; p. 556.
Lurie Co., Inc., The, New York, N. Y. Dresses for girls and women. No. 124,742; Mar. 11; v. 260; p. 388.
Mallinckrodt, Louis K., Baltimore, Md. Wrapping-paper. No. 124,747; Mar. 11; v. 260; p. 388.
Margulies, Larry J., New York, N. Y. Silk piece goods. No. 124,748; Mar. 11; v. 260; p. 388.
Marvel Company, The, Cleveland, Ohio. Hand-operated vacuum-cleaners. No. 124,749; Mar. 11; v. 260; p. 388.
Massachusetts Chocolate Company, Boston, Mass. Sweet chocolate. No. 124,750; Mar. 11; v. 260; p. 388.
Matthews, Scott J., Port Clinton, Ohio. Internal-combustion-engine-driven electricity-generating sets. No. 124,858; Mar. 18; v. 260; p. 556.
McCormick & Co., Baltimore, Md. Lubricating-oils. No. 124,743; Mar. 11; v. 260; p. 388.
McCoy, William W., Cincinnati, Ohio. Shoes for men and women. No. 124,744; Mar. 11; v. 260; p. 388.
McLaughlin Coal Reduction Company, Decatur, Ill. Coal prepared for use as a fuel. No. 124,745; Mar. 11; v. 260; p. 388.
McNeil Drug Co., Inc., Jacksonville, Fla. Blood-purifier and relief for rheumatism. No. 124,746; Mar. 11; v. 260; p. 388.
Merit Electric Mfg. Co., New York, N. Y. Electric foot-warmers. No. 124,751; Mar. 11; v. 260; p. 388.
Merriman, John W., Seattle, Wash. Semipaste paint. No. 124,752; Mar. 11; v. 260; p. 388.
Merry Optical Company, Kansas City, Mo. Optical-chart cabinets. No. 124,859; Mar. 18; v. 260; p. 556.
Mirolene Co., The, Alsen, N. D. Veterinary medicines. No. 124,753; Mar. 11; v. 260; p. 388.
Mortellaro & Co., A., Tampa, Fla. Macaroni. No. 124,644; Mar. 4; v. 260; p. 197.
Mother Nature Publishing Company, New York, N. Y. Publication issued bimonthly. No. 124,860; Mar. 18; v. 260; p. 556.
National Casket Company, New York, N. Y. Certain named chemical compounds used in embalming. No. 124,934; Mar. 25; v. 260; p. 729.
National Drug Clerk, Inc., The, Chicago, Ill. Monthly magazine. No. 124,754; Mar. 11; v. 260; p. 388.
National Papeterie Company, Springfield, Mass. Printing and writing paper. No. 124,755; Mar. 11; v. 260; p. 388.
National Papeterie Company, Springfield, Mass. Writing-paper and envelops. No. 124,862; Mar. 18; v. 260; p. 556.
National Tire & Rubber Company, East Palestine, Ohio. Rubber tires. No. 124,756; Mar. 11; v. 260; p. 388.
Neuburger, Joseph B., New York, N. Y. Inspirator. No. 124,863; Mar. 18; v. 260; p. 556.
Neuss, Hesslein & Co., New York, N. Y. Woven cotton piece goods. No. 124,757; Mar. 11; v. 260; p. 388.
Nile Garden Canning Co. Incorporated, Oakland and Manteca, Calif. Canned tomatoes, canned tomato paste, and purée, hot sauce. No. 124,864; Mar. 18; v. 260; p. 556.
Niles-Bement-Pond Company, New York, N. Y. Metal-working machines, parts thereof, and accessories therefor. No. 124,758; Mar. 11; v. 260; p. 388.
Northern Ohio Dairy Company, Ashland, Ohio. Nut-margarin and oleomargarin. No. 124,865; Mar. 18; v. 260; p. 556.
Northwestern Fruit Exchange, Seattle, Wash. Fresh apples and pears. No. 124,866; Mar. 18; v. 260; p. 556.
Norwich Crape Company 1856 Limited, The, Norwich, England. Crape bandages for medical and surgical purposes. No. 124,867; Mar. 18; v. 260; p. 556.
Nowack, Joseph, West Hoboken, N. J. Medicine for indigestion and disorders of the bowels. No. 124,935; Mar. 25; v. 260; p. 729.
Noyes, Samuel M., Wheeling, W. Va. Blood builder and purifier. No. 124,645; Mar. 4; v. 260; p. 197.
O'Brien, Ellen C., Milwaukee, Wis. Hair-stain. No. 124,759; Mar. 11; v. 260; p. 388.
Oelerich & Berry Co., Chicago, Ill. Table-syrup. No. 124,868; Mar. 18; v. 260; p. 556.
Otto Heineman Phonograph Supply Co., Inc., New York, N. Y. Talking-machines, phonographs, graphophones, gramophones. No. 124,831; Mar. 18; v. 260; p. 555.
Ough, Norval B., El Monte, Calif. Canned tomatoes, spinach, string-beans, &c. No. 124,870; Mar. 18; v. 260; p. 556.
Palatine Aniline & Chemical Corporation, Poughkeepsie, N. Y. Dyes. No. 124,871; Mar. 18; v. 260; p. 557.
Park & Tilford, New York, N. Y. Tea. No. 124,872; Mar. 18; v. 260; p. 557.
Peggy Hoyt, Inc., New York, N. Y. Millinery, gowns, and furs. No. 124,722; Mar. 11; v. 260; p. 387.
Peoples Brewing Company, Trenton, N. J. Certain named malt beverages, extracts, and liquors. No. 124,936; Mar. 25; v. 260; p. 729.
Peterson, Christin J., Chicago, Ill. Motion-picture machines. No. 124,760; Mar. 11; v. 260; p. 388.
Philadelphia Quartz Company, Philadelphia, Pa. Sodium silicate. No. 124,937; Mar. 25; v. 260; p. 729.
Phillips, Joseph C., Philadelphia, Pa. Massage-cream. No. 124,873; Mar. 18; v. 260; p. 557.
Piggott, John D., Highland Park, Mich. Cigars, tobacco, cigarettes. No. 124,875; Mar. 18; v. 260; p. 557.
Pittman & Harrison Company, Sherman, Tex. Seeds. Nos. 124,876–7; Mar. 18; v. 260; p. 557.
Placentia Mutual Orange Association, Placentia, Calif. Oranges in fresh or natural condition. No. 124,874; Mar. 18; v. 260; p. 557.
Plapao Laboratories, Inc., St. Louis, Mo. Hernia-pads. No. 124,646; Mar. 4; v. 260; p. 197.
R & G Co., The, Attleboro, Mass. Certain named articles made of plated or precious metal. No. 124,878; Mar. 18; v. 260; p. 557.
Racine Chemical Company, The, Cincinnati, Ohio. Medicine for lung trouble. No. 124,938; Mar. 25; v. 260; p. 729.
Reciprocity Supply Company, Habana, Cuba. Prepared roofing. No. 124,879; Mar. 18; v. 260; p. 557.
Rhein Shoe Co., St. Louis, Mo. Shoes. No. 124,880; Mar. 18; v. 260; p. 557.
Rice-Stix Dry Goods Company, St. Louis, Mo. Certain named clothing. No. 124,762; Mar. 11; v. 260; p. 388.
Roman, James G., Wilmington, Del. Tonics and ointments for external use. No. 124,939; Mar. 25; v. 260; p. 729.
Rosenblum, Samuel, Brooklyn, N. Y. Dried, fresh, and canned fruits and vegetables. No. 124,881; Mar. 18; v. 260; p. 557.
Row & Davis, Engineers, Inc., New York, N. Y. Condensers, evaporators, and grease-extractors for feed-water heaters. No. 124,883; Mar. 18; v. 260; p. 557.
Royal Embroidery Works, Naday & Fleischer, New York, N. Y. Textile fabric, woven or knitted, of silk, cotton, &c. No. 124,882; Mar. 18; v. 260; p. 557.
Royal Embroidery Works, Naday & Fleischer, New York, N. Y. Cotton, silk, and woolen piece goods and combinations thereof. No. 124,884; Mar. 18; v. 260; p. 557.
S. Fisher & Co., Inc., Hoboken, N. J. Chocolate candy. No. 124,705; Mar. 11; v. 260; p. 388.
S. H. Grinstead Co. Inc., Lebanon, Ky. Dressed poultry. No. 124,845; Mar. 18; v. 260; p. 556.
S. S. White Dental Manufacturing Company, Philadelphia, Pa. Dental chairs. No. 124,945; Mar. 25; v. 729.
Saberton Mfg. Co., Tampa, Fla. Soaps, scouring and cleaning compounds. No. 124,763; Mar. 11; v. 260; p. 388.
Saberton Mfg. Co., Tampa, Fla. Soaps and scouring and cleaning compounds. No. 124,885; Mar. 18; v. 260; p. 557.
Sackman Brothers Company, New York, N. Y. Children's certain named clothing. No. 124,764; Mar. 11; v. 260; p. 388.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 124,765; Mar. 11; v. 260; p. 388.
Sealwood Company, St. Louis, Mo. Varnish and varnish-reducer. No. 124,766; v. 260; p. 388.
Sessions, Frank L., Lakewood, Ohio. Flexible knitting-needles for hand use. No. 124,767; Mar. 11; v. 260; p. 388.
Shane Bros. & Wilson Co., Philadelphia and Millbourne, Pa., and Minneapolis, Minn. Wheat-flour. No. 124,768; Mar. 11; v. 260; p. 388.
Shear Company, The, Waco, Tex. Roasted coffee. No. 124,769; Mar. 11; v. 260; p. 388.
Shepard Norwell Company, Boston, Mass. Corsets. No. 124,770; Mar. 11; v. 260; p. 388.
Sherer Gillett Co., Chicago, Ill. Display-counters. No. 124,886; Mar. 18; v. 260; p. 557.
Simon Ascher & Co., Inc., New York, N. Y. Knitted sweaters, leggings, caps, &c. No. 124,857; Mar. 11; v. 260; p. 385.
Sip, Richd. G., Jersey City, N. J. Chemical iron-rust and stain-removing cream. No. 124,771; Mar. 11; v. 260; p. 388.
Smith, Alfred A., South Braintree, Mass. Leather softening compound, dressing, and cleaning detergent. No. 124,772; Mar. 11; v. 260; p. 389.
Smith, Dr. R. M., Manzanola, Colo. Foot-balm. No. 124,773; Mar. 11; v. 260; p. 389.
Smith, Le Roy M., Chicago, Ill. Periodical issued monthly. No. 124,892; Mar. 18; v. 260; p. 557.
Smith's Inventions, Inc., Minneapolis, Minn. Churns and butter-mergers. No. 124,774; Mar. 11; v. 260; p. 389.
Snider, Mrs. Amanda C., Dallas, Tex. Preparation for tuberculosis, asthma, &c. No. 124,775; Mar. 11; v. 260; p. 389.
Sonora Phonograph Corporation, New York, N. Y. Talking-machines, phonographs, gramophones, &c. Nos. 124,887–90; Mar. 18; v. 260; p. 557.
Southern Fruit Julep Co., Fort Worth, Tex. Certain named beverages, non-alcoholic. No. 124,891; Mar. 18; v. 260; p. 557.

Sperry Flour Company, San Francisco, Calif. Wheat-flour. No. 124,940; Mar. 25; v. 260; p. 729.

Stamford Electric & Manufacturing Company, The, Stamford, Conn. Electric motors, generators, transformers, switches, &c. No. 124,776; Mar. 11; v. 260; p. 389.

Standard Asphalt & Refining Co., Chicago, Ill. Water and vermin proof coatings for the wrappers of meats and other foods. No. 124,893; Mar. 18; v. 260; p. 557.

Standard Cooper-Bell Co., Chicago, Ill. Enamel and oil paints, varnish-stains, &c. No. 124,777; Mar. 11; v. 260; p. 389.

States Metals Company, New York, N. Y. Sulfuret of antimony and zinc oxid. No. 124,778; Mar. 11; v. 260; p. 389.

Stickney & Poor Spice Co., Boston, Mass. Cream-of-tartar substitute. No. 124,941; Mar. 25; v. 260; p. 729.

Stone, John H., Providence, R. I. Imitation pearls. No. 124,779; Mar. 11; v. 260; p. 389.

Stratford Magnesia Springs Company, Wheeling, W. Va. Carbonated water. No. 124,942; Mar. 25; v. 260; p. 729.

Suckling & Sons, William, Birmingham, England. Certain named heating and lighting apparatus. No. 124,780; Mar. 11; v. 260; p. 389.

Suckling & Sons, William, Birmingham, England. Certain named cutlery, machinery, &c. No. 124,781; Mar. 11; v. 260; p. 389.

Suffern, Robert A., New York, N. Y. Cotton piece goods. Nos. 124,782–3; Mar. 11; v. 260; p. 389.

Suffern, Robert A., New York, N. Y. Cotton piece goods. No. 124,894; Mar. 18; v. 260; p. 557.

Sun Company, Philadelphia, Pa. Lubricating and burning oils, paraffin, gasolene, &c. No. 124,943; Mar. 25; v. 260; p. 729.

Sunset Packing Company, New York, N. Y., and West Pembroke, Me. Canned sardines in oil. No. 124,895; Mar. 18; v. 260; p. 557.

Surdacki, Walter, Depew, N. Y. Shoe-polish. No. 124,784; Mar. 11; v. 260; p. 389.

Taunton Rubber Co. Inc., Taunton, Mass. Rubber heels. No. 124,785; Mar. 11; v. 260; p. 389.

Texas Company, The, Houston, Tex., and New York, N. Y. Magazine published monthly. No. 124,896; Mar. 18; v. 260; p. 557.

Thalheimer Brothers, New York, N. Y. Certain named buttons for outer clothing. No. 124,786; Mar. 11; v. 260; p. 389.

Toohey, Anna A., Northampton, Mass. Corsets. No. 124,787; Mar. 11; v. 260; p. 389.

Tootal Broadhurst Lee Co. Limd., Manchester, England. Cotton piece goods. Nos. 124,788–9; Mar. 11; v. 260; p. 389.

Townsend Company, New Brighton, Pa. Ship-rivets. No. 124,790; Mar. 11; v. 260; p. 389.

Tozzi, Peter W., Weehawken, N. J. Macaroni. No. 124,897; Mar. 18; v. 260; p. 557.

Traverse City Refrigerator Co., Traverse City, Mich. Refrigerators and ice-boxes. No. 124,898; Mar. 18; v. 260; p. 557.

Union Smelting & Refining Company, Inc., New York, N. Y. White, &c., metals, white-metal alloys. No. 124,795; Mar. 11; v. 260; p. 389.

Union Special Machine Company, Chicago, Ill. Sewing-machines and parts thereof. No. 124,794; Mar. 11; v. 260; p. 389.

United Kingdom Tobacco Company, Limited, The, London, England. Cigarettes. No. 124,899; Mar. 18; v. 260; p. 557.

United Shoe Machinery Corporation, Paterson, N. J., and Boston, Mass. Nails and tacks. No. 124,796; Mar. 11; v. 260; p. 389.

United States Corn Confection Company, Battle Creek, Mich. Candied popcorn. No. 124,797; Mar. 11; v. 260; p. 389.

United States Macaroni Company, Los Angeles, Calif. Macaronic foods. No. 124,900; Mar. 18; v. 260; p. 557.

United States Rubber Company, The, New York, N. Y. Jar-rings. No. 124,798; Mar. 11; v. 260; p. 389.

Vacuum Oil Company, Rochester, N. Y. Lubricating-oils. No. 124,799; Mar. 11; v. 260; p. 389.

Velox Vise Co., Inc., Lowville, N. Y. Vises. No. 124,800; Mar. 11; v. 260; p. 389.

Ver-Ba Beverage Co., Newark, Ohio. Certain named non-alcoholic beverages. No. 124,901; Mar. 18; v. 260; p. 558.

Vermont Maple Syrup Company Inc., Essex Junction, Vt. Cane and maple syrup. No. 124,902; Mar. 18; v. 260; p. 558.

Werner, Herman, St. Louis, Mo. Vehicle-dumping devices. No. 124,804; Mar. 11; v. 260; p. 389.

Victor Shaw Ring Traveler Co., Providence, R. I. Pamphlet or magazine periodically published. No. 124,903; Mar. 18; v. 260; p. 558.

Virginia Fruit Juice Co., Inc., Norfolk, Va. Pure apple-juice. No. 124,944; Mar. 25; v. 260; p. 729.

W. W. Kimball Company, Chicago, Ill. Phonographs. No. 124,851; Mar. 18; v. 260; p. 556.

Wanner, Charles A., Fleetwood, Pa. Hosiery. No. 124,904; Mar. 18; v. 260; p. 558.

Wamsutta Mills, New Bedford, Mass. Cotton piece goods. No. 124,905; Mar. 18; v. 260; p. 558.

Wamsutta Mills, New Bedford, Mass. Cotton piece goods. No. 124,906; Mar. 18; v. 260; p. 558.

Ward Baking Company, New York, N. Y. Shortening composition. No. 124,907; Mar. 18; v. 260; p. 558.

Warner, Moore & Co., Richmond, Va. Flour made from wheat. No. 124,908; Mar. 18; v. 260; p. 558.

Warrensburg Mills, The, Warrensburg, Mo. Wheat-flour. No. 124,909; Mar. 18; v. 260; p. 558.

Weideman Company, The, Cleveland, Ohio. Coffee. No. 124,910; Mar. 18; v. 260; p. 558.

Weinreb & Horowitz, New York, N. Y. Women's and misses' outer coats, waists. No. 124,911; Mar. 18; v. 260; p. 558.

Western Tablet Company, St. Joseph, Mo. Certain named writing-tablets and type-writer paper. No. 124,912; Mar. 18; v. 260; p. 558.

Widen-Lord Tanning Company, Boston, Mass. Leathers. No. 124,913; Mar. 18; v. 260; p. 558.

Widlar Co., Cleveland, Ohio. Coffee. No. 124,914; Mar. 18; v. 260; p. 558.

Wilcox & White Co., The, Meriden, Conn. Talking-machines, phonographs, records, and needles. No. 124,915; Mar. 18; v. 260; p. 558.

William T. Baker Inc., Jersey City, N. J. Sash-putties. No. 124,660; Mar. 11; v. 260; p. 385.

Wilmot Castle Company, Rochester, N. Y. Sterilizers adapted for laboratory and surgical work. No. 124,916; Mar. 18; v. 260; p. 558.

Wise & Whitlock, Inc., New York, N. Y. Certain named clothing. No. 124,917; Mar. 18; v. 260; p. 558.

Wixen Spice Co., Chicago, Ill. Egg substitute. No. 124,918; Mar. 18; v. 260; p. 558.

Yardley & Co., Limited, London, England. Perfumes. No. 124,807; Mar. 11; v. 260; p. 390.

Zimmerman, William, Cedar Rapids, Iowa. Shampoo used in the treatment of the scalp and hair. No. 124,647; Mar. 4; v. 260; p. 197.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Armstrong, Julian, Chicago, Ill. "Valu Gage Field Fencing, Number 9 Series." (For Woven-Wire Field-Fencing.) No. 21,168; Mar. 11; v. 260; p. 391.

Armstrong, Julian, Chicago, Ill. "Valu Gage Field Fencing, Number 11 Series." (For Woven-Wire Field-Fencing.) No. 21,169; Mar. 11; v. 260; p. 391.

Armstrong, Julian, Chicago, Ill. "Valu Gage Field Fencing, Number 12 Series." (For Woven-Wire Field-Fencing.) No. 21,170; Mar. 11; v. 260; p. 391.

Baker, Henry A., Puyallup, Wash. "'Mountain View' Brand." (For Canned Red Raspberries.) No. 21,173; Mar. 18; v. 260; p. 559.

Caravel Company, Inc., New York, N. Y. "Caravel Company, Inc." (For Chemicals and Dyestuffs.) No. 21,174; Mar. 18; v. 260; p. 559.

Franklin Products Company, Stapleton, N. Y. "Franklin's Original—Snow Flake. 'The Mystic Washing Tablet.'" (For "The Mystic Washing Tablet.") No. 21,175; Mar. 18; v. 260; p. 559.

Maspero, C., New York, N. Y. "Due Frati." (For Domestic Macaroni.) No. 21,171; Mar. 11; v. 260; p. 391.

Star Crayon Manufacturing Company, Inc., New York, N. Y. "The Star's Palette Outfit." (For Children's Paint Sets.) No. 21,176; Mar. 18; v. 260; p. 559.

Stewart, Wm. A., Chicago, Ill. "Drum Brand." (For Coffee.) No. 21,172; Mar. 11; v. 260; p. 391.

Werner, Solomon, Philadelphia, Pa. "Cherry Almond." (For Cherry Almond Flavor.) No. 21,177; Mar. 18; v. 260; p. 559.

ALPHABETICAL LIST OF REGISTRANTS OF PRINTS.

Buob & Scheu, Cincinnati, Ohio. "Measurement Blank." (For Commercial Purposes for the Manufacture of Automobile-Tops.) No. 5,072; Mar. 25; v. 260; p. 730.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Say, what a trick you'll turn for your tongue." (For Smoking-Tobacco.) No. 5,070; Mar. 11; v. 260; p. 391.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "You just get-put with a jimmy pipe brimful of Prince Albert." (For Smoking-Tobacco.) No. 5,071; Mar. 11; v. 260; p. 391.

Sammies Rubber Co., Oklahoma, Okla. "Sammies Sure-Stick." (For Motorcycle-Tire Patches.) No. 5,073; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "Discharged from Active Service." (For Type-Writing Machines.) No. 5,074; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "1919." (For Type-Writing Machines.) No. 5,075; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "From Service to Country." (For Type-Writing Machines.) No. 5,076; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "Peace." (For Type-Writing Machines.) No. 5,077; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "Approved." (For Type-Writing Machines.) No. 5,078; Mar. 25; v. 260; p. 730.

Underwood Typewriter Company, New York, N. Y. "From War to Peace." (For Type-Writing Machines.) No. 5,079; Mar. 25; v. 260; p. 730.

DISCLAIMER.

Juengst, Charles A., Croton Falls, N. Y.; disclaimer filed by patentee and assignee, George Juengst & Sons. Signature-conveying and wire-stitching machine. (Reissue.) No. 13,967; disclaimer filed March 6, 1919; v. 260; p. 211.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1919.

Acetates from waste soda liquors, &c., Production of. V. Drewsen. No. 1,298,478; Mar. 25; v. 260; p. 674.
Acetic anhydrid and acetaldehyde, Production of. J. Koetschet and M. Boudet. No. 1,298,256; Mar. 25; v. 260; p. 647.
Addressing-machine. C. A. Chambre. No. 1,297,443; Mar. 18; v. 260; p. 428.
Adding-machine. W. W. Talbot. No. 1,298,599; Mar. 25; v. 260; p. 700.
Adhesive surface and preparing same. C. R. Scholes. No. 1,297,406; Mar. 18; v. 260; p. 426.
Advertising device. G. P. Wrigley. No. 1,298,621; Mar. 25; v. 260; p. 704.
Aero safety device. A. D. Austin. No. 1,296,726; Mar. 11; v. 260; p. 243.
Aerofoil construction. N. W. Dalton. No. 1,296,775; Mar. 11; v. 260; p. 252.
Aeroplane. M. B. Cumbler. No. 1,295,979; Mar. 4; v. 260; p. 35.
Aeroplane. L. M. M. Hall. No. 1,298,538; Mar. 25; v. 260; p. 642.
Aeroplane. J. F. Kinney. No. 1,296,528; Mar. 4; v. 260; p. 159.
Aeroplane. D. Pecher. No. 1,296,551; Mar. 4; v. 260; p. 164.
Aeroplane. J. A. Simms. No. 1,297,264; Mar. 11; v. 260; p. 309.
Aeroplane. T. B. Smith. No. 1,297,604; Mar. 18; v. 260; p. 462.
Aeroplane. F. S. Stirton. No. 1,297,032; Mar. 11; v. 260; p. 311.
Aeroplane. C. L. Welsh. No. 1,296,578; Mar. 4; v. 260; p. 170.
Aeroplane. M. Worhatch. No. 1,297,266; Mar. 11; v. 260; p. 366.
Aeroplane control. R. F. Power. No. 1,296,843; Mar. 11; v. 260; p. 268.
Aeroplane-control bridge. H. Klechler. No. 1,298,516; Mar. 25; v. 260; p. 683.
Aeroplane landing-gear. L. S. Allen. No. 1,296,736; Mar. 11; v. 260; p. 243.
Aeroplane landing-gear. P. G. Zimmermann. No. 1,298,625; Mar. 25; v. 260; p. 705.
Aeroplane-radiator. W. L. Gilmore and W. H. Valk, Jr. No. 1,296,790; Mar. 11; v. 260; p. 265.
Aeroplanes and other structures, Means to receive strut ends in. S. V. De Bolotoff. No. 1,297,321; Mar. 18; v. 260; p. 405.
Aeroplanes, Instrument for recording the paths of. G. J. N. Carpentier. No. 1,296,477; Mar. 4; v. 260; p. 147.
Agricultural implement. D. S. Cook. No. 1,297,546; Mar. 18; v. 260; p. 442.
Agricultural machine. F. P. Glasbach. No. 1,296,685; Mar. 11; v. 260; p. 222.
Air-brake system. G. Macloskie. No. 1,297,334; Mar. 18; v. 260; p. 522.
Air-moistener. R. W. Hardie. No. 1,296,963; Mar. 4; v. 260; p. 37.
Air one-man equipment, Straight-. J. M. Rosenbury. No. 1,297,487; Mar. 18; v. 260; p. 426.
Air to interiors, Supplying. A. R. Klein. No. 1,296,963; Mar. 11; v. 260; p. 297.
Aircraft. H. Wilson-Fox. No. 1,296,133; Mar. 25; v. 260; p. 601.
Aircraft to render same invisible, Attachment for. W. D. McCormack. No. 1,297,882; Mar. 18; v. 260; p. 521.
Airplane landing-gear. G. H. Curtiss. No. 1,296,779; Mar. 11; v. 260; p. 261.
Airship. S. A. Flower. No. 1,298,467; Mar. 25; v. 260; p. 670.
Airship. J. Neff, Sr. No. 1,296,062; Mar. 25; v. 260; p. 580.
Alarm: *See*—
Burglar-alarm. Heat-alarm.
Engine-actuated alarm. Highway-crossing alarm.
Fire-alarm. Tire-alarm.
Aluminium sheets, Cutting and piling up thin. H. Dewilly. No. 1,296,964; Mar. 11; v. 260; p. 289.
Ammonia, Production and purification of. W. S. Landis. No. 1,296,830; Mar. 11; v. 260; p. 262.
Amusement apparatus. W. F. Mangels. No. 1,296,417; Mar. 4; v. 260; p. 136.
Anchor. F. Baldt, Jr. No. 1,297,987; Mar. 25; v. 260; p. 570.
Animal-catcher. R. D. R. Holt. No. 1,297,462; Mar. 18; v. 260; p. 432.
Animal pens and stalls, Manger for. W. Louden. No. 1,297,974; Mar. 18; v. 260; p. 541.
Animal-trap. T. J. Hillman. No. 1,297,667; Mar. 18; v. 260; p. 475.
Animal-trap. E. Gauthier. No. 1,296,282; Mar. 4; v. 260; p. 106.
Anodes of solid manganese peroxid, Making. M. Huth. No. 1,296,188; Mar. 4; v. 260; p. 86.
Antigas-respirator. R. Romanoff. No. 1,296,404; Mar. 25; v. 260; p. 657.
Antirecoil-spring. Compound. O. N. Beam. No. 1,295,954; Mar. 4; v. 260; p. 31.
Antiseptic compound. F. H. Balyea. No. 1,297,735; Mar. 18; v. 260; p. 490.
Anti-skid-chain. G. I. Keener. No. 1,297,476; Mar. 18; v. 260; p. 434.
Antisticking device. J. C. Lopez. No. 1,297,196; Mar. 11; v. 260; p. 346.
Anvil-knife. R. F. Loveley and G. D. Alexis. No. 1,298,526; Mar. 25; v. 260; p. 686.
Aquarium, Illuminated. H. Sato. No. 1,297,254; Mar. 11; v. 260; p. 358.
Arbor-indicator. S. Picard. No. 1,297,729; Mar. 18; v. 260; p. 489.
Arbor-support. E. J. Lees. No. 1,296,821; Mar. 11; v. 260; p. 262.
Arch-support. C. L. Skinner and F. A. Tucker. No. 1,297,922; Mar. 18; v. 260; p. 530.
Armor. J. M. Perlman. No. 1,296,113; Mar. 4; v. 260; p. 68.
Armor, Soldier's. F. Wlosafk. No. 1,298,618; Mar. 25; v. 260; p. 704.
Armored inner tube. H. H. Schuster. No. 1,297,408; Mar. 18; v. 260; p. 426.
Armored inner tube. H. N. Wayne. No. 1,297,278; Mar. 11; v. 260; p. 294.
Arsenical medical product and producing same. J. M. White. No. 1,297,982; Mar. 18; v. 260; p. 537.
Artillery-range for instructional purposes, Model. R. Fitz Power. No. 1,296,426; Mar. 4; v. 260; p. 137.
Ash-receptacle. C. M. Hogge. 1,296,521; Mar. 4; v. 260; p. 157.
Auditory-device holder. M. F. Williams. No. 1,296,891; Mar. 11; v. 260; p. 279.
Auto electric brake. C. W. Cunningham. No. 1,297,109; Mar. 11; v. 260; p. 328.
Auto running-board carrier attachment. G. H. Phillips. No. 1,295,923; Mar. 4; v. 260; p. 23.
Auto-wheel. A. C. Grant. No. 1,298,332; Mar. 25; v. 260; p. 642.
Auto-wheel. M. E. Tredup. No. 1,297,278; Mar. 11; v. 260; p. 303.
Automatic lubricator. W. H. Rue. No. 1,295,926; Mar. 4; v. 260; p. 24.
Automatic register. W. A. Troy. No. 1,297,752; Mar. 18; v. 260; p. 493.
Automatic signal. H. E. Tharp. No. 1,296,420; Mar. 25; v. 260; p. 662.
Automatic sprinkler. P. Allen. No. 1,296,152; Mar. 25; v. 260; p. 604.
Automobile air-brake. G. C. Higbee. No. 1,297,165; Mar. 11; v. 260; p. 340.
Automobile attachment. D. M. Livingston. No. 1,298,523; Mar. 25; v. 260; p. 685.
Automobile-body. W. L. Fry. No. 1,297,674; Mar. 18; v. 260; p. 476.
Automobile-body. W. W. Heops. No. 1,297,657; Mar. 18; v. 260; p. 482.
Automobile-body. M. F. Wildau. No. 1,297,764; Mar. 18; v. 260; p. 497.
Automobile-chain fastener. F. M. and H. S. Bennett. No. 1,297,063; Mar. 11; v. 260; p. 312.
Automobile combination-lock. H. H. Chrisman and F. W. Adsit. No. 1,298,177; Mar. 25; v. 260; p. 610.
Automobile-curtain window. T. J. Treichel. No. 1,297,942; Mar. 11; v. 260; p. 313.
Automobile electric-lighting system. J. H. Wilson. No. 1,297,768; Mar. 18; v. 260; p. 498.
Automobile friction drive mechanism. E. T. McKaig. No. 1,297,495; Mar. 18; v. 260; p. 426.
Automobile fuel-feeding device. W. H. Muzzy. (Reissue.) No. 14,662; Mar. 4; v. 260; p. 176.
Automobile glass-covered dashboard. W. P. Hammond. No. 1,296,182; Mar. 4; v. 260; p. 84.
Automobile heat-shield. J. A. Cypert. No. 1,296,859; Mar. 4; v. 260; p. 9.

Automobile-hood rain-shield. J. A. Brown. No. 1,298,170; Mar. 25; v. 260; p. 608.
Automobile-jack. F. R. Elizondo. No. 1,297,834; Mar. 18; v. 260; p. 406.
Automobile-jack. J. W. Lawrie. No. 1,297,874; Mar. 18; v. 260; p. 519.
Automobile-loading device. C. C. Smith. No. 1,297,928; Mar. 18; v. 260; p. 530.
Automobile-lock. L. L. Gibson. No. 1,296,382; Mar. 4; v. 260; p. 128.
Automobile-lock. J. H. McClure. No. 1,296,301; Mar. 4; v. 260; p. 110.
Automobile-lock. E. S. McKean. No. 1,296,987; Mar. 11; v. 260; p. 301.
Automobile lock and signal. J. E. Marshall and T. J. Volz. No. 1,297,214; Mar. 11; v. 260; p. 250.
Automobile mowing attachment. M. C. Rice. No. 1,295,925; Mar. 4; v. 260; p. 23.
Automobile number-plate. G. E. Wack. No. 1,295,941; Mar. 4; v. 260; p. 27.
Automobile or other vehicle signal device. H. Helfenbein. No. 1,298,205; Mar. 25; v. 260; p. 616.
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Automobile-radiator. M. C. Hollister. No. 1,298,505; Mar. 25; v. 260; p. 681.
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Automobile-radiator shield. H. A. Rishel. No. 1,298,095; Mar. 25; v. 260; p. 591.
Automobile running-gear. H. B. Harvey. No. 1,298,204; Mar. 25; v. 260; p. 616.
Automobile running-gear. G. M. Tew. No. 1,297,877; Mar. 11; v. 260; p. 275.
Automobile signal apparatus. J. Kershaw. No. 1,298,005; Mar. 25; v. 260; p. 583.
Automobile signaling device. F. Zbikowski. No. 1,297,961; Mar. 18; v. 260; p. 538.
Automobile, Spring-motor for. N. Shields. No. 1,297,508; Mar. 18; v. 260; p. 440.
Automobile-starter. G. K. Parsons. No. 1,297,008; Mar. 11; v. 260; p. 305.
Automobile steering device. R. C. Stone. No. 1,298,268; Mar. 25; v. 260; p. 629.
Automobile-sunshade. F. V. Blossom. No. 1,297,067; Mar. 11; v. 260; p. 319.
Automobile-supporting device. E. H. Sadler and E. L. Hall. No. 1,297,916; Mar. 18; v. 260; p. 529.
Automobile-top. R. J. Talbot. No. 1,298,122; Mar. 25; v. 260; p. 598.
Automobile-top-raising device. E. P. Porcher. No. 1,298,887; Mar. 25; v. 260; p. 653.
Automobile towage system. S. O. Edmonds. No. 1,296,781; Mar. 11; v. 260; p. 253.
Automobile transmission mechanism. L. E. Conner. No. 1,297,105; Mar. 11; v. 260; p. 327.
Automobile warning device. B. Zabel. No. 1,295,950; Mar. 4; v. 260; p. 30.
Automobile-washer. J. P. Johnson. No. 1,297,567; Mar. 18; v. 260; p. 453.
Automobile-wheel. A. Hrabovsky. No. 1,296,665; Mar. 11; v. 260; p. 227.
Automobile-wheel. E. A. Jess. No. 1,297,355; Mar. 18; v. 260; p. 409.
Automobile-wheel rim. S. Walker. No. 1,296,143; Mar. 4; v. 260; p. 75.
Automobile-wheel demountable rim. J. A. Borland. No. 1,297,316; Mar. 18; v. 260; p. 402.
Automobile-window construction. J. E. Spencer and A. C. Lillie. No. 1,298,593; Mar. 25; v. 260; p. 698.
Automobiles, Cantaliver-spring for. E. R. Kaar. No. 1,296,294; Mar. 4; v. 260; p. 109
Automobiles, Circuit-closer for signals for. M. B. Fischer. No. 1,296,276; Mar. 4; v. 260; p. 105.
Automobiles, Combined tank and tool-chest for. S. C. Pandolfo. No. 1,298,385; Mar. 25; v. 260; p. 652.
Automobiles, Gasolene and clutch lock for. L. Schaffert and S. G. Conkling. No. 1,298,408; Mar. 25; v. 260; p. 658.
Automobiles, Means for bracing the chassis-frames, running-boards, and fenders of. H. E. Keller. No. 1,295,904; Mar. 4; v. 260; p. 19.
Automobiles or power-driven vehicles, Lock for. G. A. Bigelow. No. 1,298,283; Mar. 25; v. 260; p. 633.
Automobiles, Running-board brace for. L. A. Prince. No. 1,297,730; Mar. 18; v. 260; p. 489.
Automobiles, Side lamp for. F. Conrad. No. 1,296,482; Mar. 4; v. 260; p. 148.
Autosleigh. M., J., and A. Landby. No. 1,296,531; Mar. 4; v. 260; p. 160.
Autovehicle direction-indicator. C. W. Forbes. No. 1,296,065; Mar. 4; v. 260; p. 57.
Aviator safety apparatus. L. J. Wilkinson. No. 1,298,615; Mar. 25; v. 260; p. 703.
Axle-bending device. B. W. Decatur. No. 1,297,804; Mar. 18; v. 260; p. 505.
Baby-carriage. F. Peterson and D. R. Collier. No. 1,297,006; Mar. 11; v. 260; p. 306.
Baby-chair. L. Haussinger. No. 1,295,984; Mar. 4; v. 260; p. 37.
Baby-comforter. M. Wilson. No. 1,298,616; Mar. 25; v. 260; p. 703.
Baby-walker. H. L. Cranford. No. 1,297,800; Mar. 18; v. 260; p. 504.
Back-rest, Adjustable. H. E. Butler. No. 1,297,088; Mar. 11; v. 260; p. 323.
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Garment-bag. Paper bag.
Nose-bag. Tool-bag.
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Sighting apparatus. G. Estoppey. No. 1,296,642; Mar. 11; v. 260; p. 221.
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Electric-circuit switch.
Float-operated switch.
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Magneto-cut-off switch.
Pneumatic switch.
Push-button switch.
Railway-switch.
Trip-switch.
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Water-wheel. O. C. Huber. No. 1,296,082; Mar. 4; v. 260; p. 61.
Waterproof container or envelop. P. H. and H. H. Allen. No. 1,295,832; Mar. 4; v. 260; p. 3.
Weather-screen, Visual. S. A. de Normanville and L. H. Kent. No. 1,297,805; Mar. 18; v. 260; p. 505.
Weather-strip. C. M. Eveleth. No. 1,296,190; Mar. 25; v. 260; p. 613.
Web-feeding mechanism. E. Nordstrom. No. 1,297,587; Mar. 18; v. 260; p. 458.
Weed-destroyer. M. J. Anderson. No. 1,296,153; Mar. 4; v. 260; p. 78.
Weighing apparatus. F. B. Chambers. No. 1,296,920; Mar. 11; v. 260; p. 286.
Weighing-machine feeding apparatus. H. D. Bowman. No. 1,295,959; Mar. 4; v. 260; p. 32.
Welding-controller. E. B. H. Tower, Jr., and R. H. Van Nest. No. 1,296,603; Mar. 25; v. 260; p. 701.
Welding, Electric. F. L. Dyer. No. 1,296,780; Mar. 11; v. 260; p. 253.
Welding, Electric-arc. A. Smith. No. 1,296,590; Mar. 25; v. 260; p. 698.
Welding-electrode. B. W. Bowers. No. 1,296,358; Mar. 4; v. 260; p. 123.
Welding machine, Tube-. F. Kritz. No. 1,296,970; Mar. 11; v. 260; p. 297.
Welding system, Electric. E. S. Zuck. No. 1,296,350; Mar. 4; v. 260; p. 121.
Welding system, Electric-arc-. F. Thornton, Jr., and E. S. Zuck. No. 1,296,020; Mar. 4; v. 260; p. 46.
Welding two metals of unequal fusibility. C. Kohler. No. 1,296,815; Mar. 11; v. 260; p. 261.
Well-boring apparatus. A. G. Willard, W. W. Wilson, and C. E. Wilcox. No. 1,297,625; Mar. 18; v. 260; p. 466.
Well-casings, Perforation-cleaner for. F. M. Nevins. No. 1,296,083; Mar. 25; v. 260; p. 589.
Well-drilling tool. J. Maier. No. 1,297,708; Mar. 18; v. 260; p. 484.
Well-screen washer and perforator. A. L. Wilkirson. No. 1,296,131; Mar. 25; v. 260; p. 600.
Wheel: *See*—

Auto-wheel.	Polishing-wheel.
Automobile-wheel.	Presser-wheel.
Buffing or polishing wheel.	Resilient wheel.
Coasting-wheel.	Spring-wheel.
Demountable wheel.	Steering-wheel.
Detachable wheel.	Traction-wheel.
Gear-wheel.	Tractor-wheel.
Metal wheel.	Vehicle-wheel.
Metallic wheel.	Water-wheel.
Mine-car wheel.	Wire wheel.
Motor-wheel.	

Wheel. D. Levinson. No. 1,297,876; Mar. 18; v. 260; p. 520.
Wheel. W. S. Watson. No. 1,296,425; Mar. 25; v. 260; p. 662.
Wheel-antiskid. A. H. Harrington. No, 1,297,155; Mar. 11; v. 260; p. 338.
Wheel construction, Convertible dual-. A. L. Putnam. No. 1,297,243; Mar. 11; v. 260; p. 356.
Wheel construction, Demountable-. F. W. French. No. 1,297,673; Mar. 18; v. 260; p. 476.
Wheel-rim, Demountable. G. B. Filmer. No. 1,297,838; Mar. 18; v. 260; p. 406.
Wheel-rim lug. J. E. Merwin. No. 1,296,419; Mar. 4; v. 260; p. 135.
Wheel-setting machine. F. Loufek. No. 1,296,198; Mar. 4; v. 260; p. 88.
Wheels, Rolling-tooth for worm. W. O. Pfahler. No. 1,297,238; Mar. 11; v. 260; p. 355.
Wheels, Wheel-carrier for demountable. W. F. Wahrenberger. No. 1,297,942; Mar. 18; v. 260; p. 534.
Wheelbarrow. F. D. Vessey. No. 1,296,126; Mar. 25; v. 260; p. 599
Wick-extractor. I. B. Little. No. 1,296,418; Mar. 4; v. 260; p. 134.

Wind-motor. G. O. Blair. No. 1,297,066; Mar. 11; v. 260; p. 319.
Windmill. W. C. Brownell. No. 1,297,064; Mar. 11; v. 260; p. 322.
Windmill. J. P. Muller. No. 1,298,247; Mar. 25; v. 260; p. 625.
Window. H. Mutchnik and H. Rudow. No. 1,297,892; Mar. 18; v. 260; p. 523.
Window adjuster and lock. J. A. Lane. No. 1,297,479; Mar. 18; v. 260; p. 435.
Window automatic lock. Z. Pehel. No. 1,298,251; Mar. 25; v. 260; p. 626.
Window-blind and lace-curtain holder. T. W. Garnett. No. 1,297,139; Mar. 11; v. 260; p. 334.
Window-controlling apparatus. F. L. Gunton. No. 1,298,336; Mar. 25; v. 260; p. 643.
Window-fastener. W. Kuhefuss. No. 1,296,817; Mar. 11; v. 260; p. 261.
Window-lock. R. Irvine. No. 1,298,507; Mar. 25; v. 260; p. 681.
Window lock and alarm. I. Fier. No. 1,297,672; Mar. 18; v. 260; p. 476.
Window-locking device. M. Dorion. No. 1,298,472; Mar. 25; v. 260; p. 673.
Window louver, door, and the like, Ventilating. C. H. Boller. No. 1,297,786; Mar. 18; v. 260; p. 502.
Window-seat, Portable. J. H. F. Bullwinkel. No. 1,297,540; Mar. 18; v. 260; p. 448.
Wire-coiling machine. F. L. Andren. No. 1,295,835; Mar. 4; v. 260; p. 8.
Wire-cutter. P. Borszcz. No. 1,298,166; Mar. 25; v. 260; p. 607.
Wire-cutter. H. Romanoff. No. 1,298,403; Mar. 25; v. 260; p. 657.
Wire-drawing apparatus, Safety device for. G. O. Rose and T. Kurtz. No. 1,296,221; Mar. 4; v. 260; p. 93.
Wire, Insulated. W. E. Cook. No. 1,298,297; Mar. 25; v. 260; p. 636.
Wire nail. G. A. Curtis. No. 1,298,015; Mar. 25; v. 260; p. 576.
Wire-rope-clamping device. R. T. Torkelson. No. 1,297,039; Mar. 11; v. 260; p. 312.
Wire staples, Machine for use in making. F. W. Rasmussen. No. 1,296,696; Mar. 11; v. 260; p. 234.
Wire terminal, Sheathed-. A. M. Wentworth. No. 1,298,609; Mar. 25; v. 260; p. 702.
Wire wheel. C. W. Parker. No. 1,298,087; Mar. 25; v. 260; p. 590.
Wire-working machine. F. C. A. Goetz. No. 1,297,461; Mar. 18; v. 260; p. 431.
Wires, Joining up electric and other. J. H. van Viersen. No. 1,297,614; Mar. 18; v. 260; p. 464.
Wires, Terminal clip for electric. A. G. Groensteln. No. 1,297,560; Mar. 18; v. 260; p. 452.
Wireless signaling, Aerial for. C. S. Franklin. No. 1,296,177; Mar. 4; v. 260; p. 84.
Wireless signaling system. W. C. White. No. 1,298,613; Mar. 25; v. 260; p. 703.
Wood, Treating. W. Powell. No. 1,297,491; Mar. 18; v. 260; p. 428.
Woodworking-machine. W. M. Elks and S. J. Dixon. No. 1,297,125; Mar. 11; v. 260; p. 331
Woven-reed articles, Producing. M. B. Lloyd. No. 1,298,230; Mar. 25; v. 260; p. 621.
Woven-reed articles, Producing. M. B. Lloyd. No. 1,298,231; Mar. 25; v. 260; p. 622.
Woven-reed articles, Producing. M. B. Lloyd. No. 1,298,232; Mar. 25; v. 260; p. 622.
Woven-reed articles, Producing. M. B. Lloyd. No. 1,298,233; Mar. 25; v. 260; p. 622.
Wrapper. E. R. Christensen. No. 1,296,765; Mar. 11; v. 260; p. 250.
Wrapping-machine. A. Heck. No. 1,295,988; Mar. 4; v. 260; p. 88.
Wrapping machine, Quill-. J. Josephs and D. T. Berlinheimer. No. 1,298,221; Mar. 25; v. 260; p. 619.
Wrench: *See*—
Power-driven socket-wrench.
Wrench. A. C. Barrett. No. 1,295,838; Mar. 4; v. 260; p. 4.
Writing-element illuminator. B. L. S. Perrin. No. 1,298,384; Mar. 25; v. 260; p. 653.
Writing-machine stand. S. A. Kitchener. No. 1,297,866; Mar. 18; v. 260; p. 518.
Yarn-spinning machine and method. L. W. Downes. No. 1,298,475; Mar. 25; v. 260; p. 673.
Zinc arsenite, Producing. C. D. Vreeland. No. 1,296,344; Mar. 4; v. 260; p. 120.
Zinc ores, Treating. A. P. Craft. No. 1,296,857; Mar. 4; v. 260; p. 9.

ALPHABETICAL LIST OF DESIGNS.

Aeroplane-body. E. Salminen. No. 53,137; Mar. 25; v. 260; p. 714.
Article of manufacture. C. D. Barrett. No. 53,061; Mar. 11; v. 260; p. 372.
Ash-receiver. S. A. Cirkinian. No. 53,029; Mar. 4; v. 260; p. 177.
Automobile bolt and nut box. A. J. Sommer. No. 53,107; Mar. 18; v. 260; p. 546.
Automobile-heater. E. H. Heller. No. 53,124; Mar. 25; v. 260; p. 711.
Badge. L. Markowitz. No. 53,076; Mar. 11; v. 260; p. 374.
Badge. M. Michael. Nos. 53,081–2; Mar. 11; v. 260; p. 375.
Badge. B. A. Stump. No. 53,057; Mar. 4; v. 260; p. 182.
Bag, Shopping-. E. A. Finn. No. 53,034; Mar. 4; v. 260; p. 178.
Bedstead. L. Rorimer. No. 53,105; Mar. 18; v. 260; p. 546.
Bottle-cap. S. Swanson. No. 53,092; Mar. 11; v. 260; p. 377.
Bottle, Sheet-metal hot-water. A. E. Wooden. No. 53,098; Mar. 11; v. 260; p. 378.
Bracelet, watch-fob, or vest-chain. J. M. Fisher. No. 53,035; Mar. 4; v. 260; p. 178.
Button. A. T. Harrell. No. 53,036; Mar. 4; v. 260; p. 178.
Button. J. S. Monaghan. No. 53,134; Mar. 25; v. 260; p. 713.
Button badge, medal, emblem, or watchcase. J. B. d'Amaral. No. 53,118; Mar. 25; v. 260; p. 710.
Button, Collar-. W. M. Isaacs. No. 53,039; Mar. 4; v. 260; p. 179.
Cabinet, Phonograph-. J. Wolff. No. 53,097; Mar. 11; v. 260; p. 378.
Cake-turner or similar kitchen utensil. J. L. Sommer and T. Harding. No. 53,054; Mar. 4; v. 260; p. 181.
Can. F. J. Tone. No. 53,094; Mar. 11; v. 260; p. 377.
Candle. C. J. Messer. No. 53,043; Mar. 4; v. 260; p. 180.
Candle. C. J. Messer. No. 53,077; Mar. 11; v. 260; p. 376.
Car, Child's. H. G. Hogg. No. 53,125; Mar. 25; v. 260; p. 712.
Carriage attachment, Baby-. H. L. Simpson. No. 53,106; Mar. 18; v. 260; p. 546.
Clothes-hanger. E. W. Boskowitz. No. 53,026; Mar. 4; v. 260; p. 177.
Coat pattern, Sack-. I. Lewis. No. 53,132; Mar. 25; v. 260; p. 713.
Coat pattern, Top-. I. Lewis. No. 53,131; Mar. 25; v. 260; p. 713.
Collar. J. Peristein. No. 53,046; Mar. 4; v. 260; p. 180.
Desk inkstand, Single double-. J. T. Riley. No. 53,136; Mar. 25; v. 260; p. 713.
Dial, Timepiece-. H. N. Bliss. No. 53,110; Mar. 25; v. 260; p. 709.
Die-sinking-machine standard. J. F. Keller. No. 53,073; Mar. 11; v. 260; p. 374.
Display-pillar. I. L. French. No. 53,121; Mar. 25; v. 260; p. 711.
Doll. A. Iessi. No. 53,038; Mar. 4; v. 260; p. 179.
Doll. A. B. Norwalk. Nos. 53,084–5; Mar. 11; v. 260; p. 376.
Doll or statuette. S. Haskell. No. 53,037; Mar. 4; v. 260; p. 179.
Easel, Service-. J. H. Wilson. No. 53,059; Mar. 4; v. 260; p. 182.
Emblem, badge, stick-pin, or similar article. H. G. Easayan. Nos. 53,032–3; Mar. 4; v. 260; p. 178.
Emblem, brooch, button, fob, charm, stick-pin, or similar article. J. V. Buckle. No. 53,063; Mar. 11; v. 260; p. 372.
Emblem, flag, pendant, or article of similar nature. G. Mueller. No. 53,045; Mar. 4; v. 260; p. 180.
Emblem, pin, or similar article. J. Solinger. No. 53,140; Mar. 25; v. 260; p. 714.
Flag, banner, pennant, pin, button, emblem, or other similar article. F. J. Buckley. No. 53,064; Mar. 11; v. 260; p. 372.
Flag or banner. M. Michael. Nos. 53,079–80; Mar. 11; v. 260; p. 375.
Flag, pennant, emblem, or article of a similar nature, Service-. C. S. Jacobs. No. 53,126; Mar. 25; v. 260; p. 712.
Flag, pennant, sign, emblem, or article of similar nature. M. H. Krueger. No. 53,120; Mar. 25; v. 260; p. 712.
Flag, pennant, sign, emblem, or article of a similar nature. O. F. Selle. No. 53,138; Mar. 25; v. 260; p. 714.
Game-board. A. L. Landis. No. 53,041; Mar. 4; v. 260; p. 179.
Game-board. J. Tilling. No. 53,089; Mar. 11; v. 260; p. 378.
Gas-heater. C. V. Roberts. No. 53,048; Mar. 4; v. 260; p. 180.
Gum and mint case. L. W. Buchenau. No. 53,101; Mar. 18; v. 260; p. 545.
Gun, Grease-. A. V. Gullborg. No. 53,122; Mar. 25; v. 260; p. 711.

Hair-pin. S. E. Creech and P. Bland. No. 53,080; Mar. 4; v. 260; p. 178.
Hat. W. Delman. No. 53,065; Mar. 11; v. 260; p. 372.
Hat-pin, scarf-pin, cuff-link, tie-clip, ring, fob, &c. F. Kaupmann, Jr. No. 53,125; Mar. 25; v. 260; p. 712.
Heel, Rubber. I. R. Bailey. No. 53,060; Mar. 11; v. 260; p. 372.
Ice-cream measure. A. P. Osius. No. 53,135; Mar. 25; v. 260; p. 713.
Label. J. L. Flannery, Jr. No. 53,120; Mar. 25; v. 260; p. 611.
Lamp-globe. L. Dufek. No. 53,081; Mar. 4; v. 260; p. 178.
Lamp-globe. A. Salzer. No. 53,049; Mar. 4; v. 260; p. 181.
Lamp, Vehicle-. E. A. Hawthorne. No. 53,123; Mar. 25; v. 260; p. 711.
Liquid-dispensing apparatus. V. E. H. Cone. No. 53,117; Mar. 25; v. 260; p. 710.
Liquid-measure mixer. I. D. Fox. No. 53,069; Mar. 11; v. 260; p. 373.
Metal shingle. D. F. Creighton. Nos. 53,102–3; Mar. 18; v. 260; p. 546.
Padlock. E. B. Stone. No. 53,141; Mar. 25; v. 260; p. 714.
Pail cover, Milk-. H. B. Babson. No. 53,109; Mar. 25; v. 260; p. 709.
Phonograph-horn. W. F. Smith. No. 53,139; Mar. 25; v. 260; p. 714.
Photographic mount, mat, or similar article. E. P. Platt. No. 53,068; Mar. 11; v. 260; p. 376.
Powder box, Talcum-. E. Hoffman. No. 53,071; Mar. 11; v. 260; p. 374.
Register. A. G. Scherer. Nos. 53,050–2; Mar. 4; v. 260; p. 181.
Ring, Finger-. M. H. Kropé. No. 53,040; Mar. 4; v. 260; p. 179.
Ring or other article of jewelry, Finger-. S. Buchsbaum. No. 53,062; Mar. 11; v. 260; p. 372.
Roofing element. F. C. Overbury. Nos. 53,086–7; Mar. 11; v. 260; p. 376.
Shade and curtain bracket, Combination. J. J. Allen. No. 53,027; Mar. 4; v. 260; p. 177.
Shirt. M. A. Selzer. No. 53,089; Mar. 11; v. 260; p. 377.
Signaling device. W. D. Stowe. No. 53,055; Mar. 4; v. 260; p. 182.
Skate, Snow-. W. A. Ericksen. No. 53,068; Mar. 11; v. 260; p. 373.
Skate, Tubular ice-. W. F. Reach. No. 53,047; Mar. 4; v. 260; p. 180.
Sound-producing instruments, Casing for automatic. W. H. Eggebrecht. No. 53,067; Mar. 11; v. 260; p. 373.
Sound-transmitter. L. Steinberger. Nos. 53,090–1; Mar. 11; v. 260; p. 377.
Spoon, fork, or similar article. A. G. Kintz. No. 53,074; Mar. 11; v. 260; p. 374.
Spoon, fork, or similar article. J. Leech. No. 53,075; Mar. 11; v. 260; p. 374.
Spoon, fork, or similar article. G. Strohhaker. No. 53,056; Mar. 4; v. 260; p. 182.
Stamp, Time-. M. Sheras. No. 53,053; Mar. 4; v. 260; p. 181.
Stand, Work-. I. H. Weinberg. No. 53,058; Mar. 4; v. 260; p. 182.
Stapling and fastening machine casing. M. R. Hutchison. No. 53,072; Mar. 11; v. 260; p. 374.
Statuette. E. E. Allen. No. 53,026; Mar. 4; v. 260; p. 177.
Statuette. L. A. Mapel. No. 53,042; Mar. 4; v. 260; p. 179.
Statuette or similar article. H. Elliott. No. 53,119; Mar. 25; v. 260; p. 711.
Sweeper casing, Suction-. F. H. Burgher. No. 53,115; Mar. 25; v. 260; p. 710.
Telephone-receiver holder. G. K. Thompson. No. 53,093; Mar. 11; v. 260; p. 377.
Tire. H. C. Arnold. No. 53,108; Mar. 25; v. 260; p. 709.
Tire. A. E. Braden. No. 53,100; Mar. 18; v. 260; p. 545.
Tire. H. D. Mitchell. No. 53,083; Mar. 11; v. 260; p. 376.
Tire. G. H. Witsaman. No. 53,096; Mar. 11; v. 260; p. 378.
Tire, Automobile-. C. W. McKone. No. 53,133; Mar. 25; v. 260; p. 713.
Tire-casing. F. S. Dickinson. No. 53,066; Mar. 11; v. 260; p. 373.
Tire, Pneumatic. W. R. Blowers. No. 53,111; Mar. 25; v. 260; p. 709.
Tire, Pneumatic. W. R. Blowers. No. 53,112; Mar. 25; v. 260; p. 709.
Tire, Pneumatic. W. R. Blowers. No. 53,113; Mar. 25; v. 260; p. 710.
Tire, Pneumatic. W. R. Blowers. No. 53,114; Mar. 25; v. 260; p. 710.
Tire, Pneumatic. R. T. Griffiths. No. 53,070; Mar. 11; v. 260; p. 373.
Tire, Pneumatic. M. L. Wiener. No. 53,143; Mar. 25; v. 260; p. 714.
Tire, Rubber. A. R. Colvin. No. 53,116; Mar. 25; v. 260; p. 710.
Tire, Rubber. L. J. Kelly. No. 53,129; Mar. 25; v. 260; p. 712.
Undergarment. H. J. Winsten. No. 53,095; Mar. 11; v. 260; p. 377.
Vehicle-body. H. G. Moore. No. 53,044; Mar. 4; v. 260; p. 180.
Vehicle-wheel. R. H. West. No. 53,142; Mar. 25; v. 260; p. 714.
Velocipede. J. F. Jones. No. 53,127; Mar. 25; v. 260; p. 712.
Watch-bow. J. McGrevy. No. 53,078; Mar. 11; v. 260; p. 375.
Wire-entanglement cutter. O. Pergl. No. 53,104; Mar. 18; v. 260; p. 546.

ALPHABETICAL LIST OF TRADE-MARKS.

Alloys containing chromium and nickel. Hoskins Manufacturing Company. No. 124,928; Mar. 25; v. 260; p. 729.
Ampuls made of glass. G. W. Carnrick Co. No. 124,673; Mar. 11; v. 260; p. 385.
Apple-juice, Pure. Virginia Fruit Juice Co. No. 124,944; Mar. 25; v. 260; p. 729.
Apples and pears, Fresh. Northwestern Fruit Exchange. No. 124,846; Mar. 18; v. 260; p. 556.
Automobile and furniture polish. H. L. Feasel. No. 124,703; Mar. 11; v. 260; p. 386.
Automobile-polish. R. A. Ford. No. 124,707; Mar. 11; v. 260; p. 387.
Automobile-radiators. Lober Art Brass & Specialty Co. No. 124,741; Mar. 11; v. 260; p. 388.
Automobile steering-gears. C. A. S. Engineering Co. No. 124,690; Mar. 11; v. 260; p. 386.
Automobiles, Locks for central levers for. H-R Manufacturing Company. No. 124,847; Mar. 18; v. 260; p. 554.
Baking powder and soda. Layton Pure Food Company. No. 124,735; Mar. 11; v. 260; p. 387.
Balm, Foot-. Dr. R. M. Smith. No. 124,773; Mar. 11; v. 260; p. 389.
Bandages for medical and surgical purposes, Crape. Norwich Crape Company 1856, The. No. 124,867; Mar. 18; v. 260; p. 554.
Belts, Conveyer-. The B. F. Goodrich Company. No. 124,711; Mar. 11; v. 260; p. 387.
Belting, Leather. J. S. Turner Manufacturing Co. Nos. 124,791–3; Mar. 11; v. 260; p. 389.
Beverage, Non-alcoholic. Becker Bros. No. 124,662; Mar. 11; v. 260; p. 385.
Beverage, Non-alcoholic cereal. Hagemeister Brewing Company. No. 124,846; Mar. 18; v. 260; p. 556.
Beverages, Certain named non-alcoholic. Garrett and Company. No. 124,841; Mar. 18; v. 260; p. 556.
Beverages, Certain named non-alcoholic. Henry H. Ottens Mfg. Co. No. 124,869; Mar. 18; v. 260; p. 556.
Beverages, Certain named non-alcoholic. Southern Fruit Julep Co. No. 124,891; Mar. 18; v. 260; p. 557.
Beverages, Certain named non-alcoholic. Ver-Ba Beverage Co. No. 124,901; Mar. 18; v. 260; p. 558.
Beverages, extracts, and liquors, Certain named malt. Peoples Brewing Company. No. 124,936; Mar. 25; v. 260; p. 729.
Bicycles. Chicago Cycle Supply Company. No. 124,676; Mar. 11; v. 260; p. 386.
Bicycles. Harley-Davidson Motor Co. No. 124,714; Mar. 11; v. 260; p. 387.
Bits for lathes for cutting metal. Colonial Steel Company. No. 124,681; Mar. 11; v. 260; p. 386.
Bituminous compositions. Briggs Bituminous Composition Co. No. 124,814; Mar. 18; v. 260; p. 555.
Blood builder and purifier. S. M. Noyes. No. 124,645; Mar. 4; v. 260; p. 197.
Blood-purifier and relief for rheumatism. McNeil Drug Co. No. 124,746; Mar. 11; v. 260; p. 388.
Boots, shoes, and slippers. Hanan & Son. No. 124,713; Mar. 11; v. 260; p. 387.
Bristles. Chesnutt Cooper & Co. No. 124,820; Mar. 18; v. 260; p. 555.
Brushes, Shaving-. James Lowe Erskine Co., The. No. 124,857; Mar. 18; v. 260; p. 556.
Butter. The Isaly Dairy Company. No. 124,930; Mar. 25; v. 260; p. 729.
Buttons for outer clothing. Thalheimer Brothers. No. 124,786; Mar. 11; v. 260; p. 389.
Cabinets, Optical-chart. Merry Optical Company. No. 124,859; Mar. 18; v. 260; p. 556.
Candy. American Candy Co. No. 124,810; Mar. 18; v. 260; p. 555.
Candy. D. Auerbach & Sons. No. 124,658; Mar. 11; v. 260; p. 385.

Candy, Chocolate. S. Fisher & Co. No. 124,705; Mar. 11; v. 260; p. 386.
Canned condensed milk. Lake Mills Milk Company. No. 124,852; Mar. 18; v. 260; p. 556.
Canned salmon. Annette Island Packing Co. No. 124,656; Mar. 11; v. 260; p. 385.
Canned sardines. Booth Fisheries Company. No. 124,667; Mar. 11; v. 260; p. 385.
Canned sardines. Coast Fishing Co. No. 124,679; Mar. 11; v. 260; p. 386.
Canned sardines in oil. Lemarchand frères & Cie. No. 124,737; Mar. 11; v. 260; p. 387.
Canned sardines in oil. Sunset Packing Company. No. 124,895; Mar. 18; v. 260; p. 557.
Canned sardines in tomato sauce. Booth Fisheries Sardine Co. No. 124,813; Mar. 18; v. 260; p. 555.
Canned tomatoes, spinach, &c. N. B. Ough. No. 124,870; Mar. 18; v. 260; p. 556.
Canned tomatoes, tomato paste and purée, hot sauce. Nile Garden Canning Co. No. 124,864; Mar. 18; v. 260; p. 556.
Canned tomatoes with purée from trimmings. G. W. Hume Company. No. 124,835; Mar. 18; v. 260; p. 555.
Canned vegetables. L. P. Haviland. Nos. 124,829–30; Mar. 18; v. 260; p. 555.
Caulophyllum, Preparation of. Lloyd Brothers. No. 124,643; Mar. 4; v. 260; p. 197.
Chemicals, &c., Certain named. American Cyanamid Company. No. 124,650; Mar. 11; v. 260; p. 385.
Children's clothing. Sackman Brothers Company. No. 124,764; Mar. 11; v. 260; p. 388.
Chocolate, Sweet. Massachusetts Chocolate Company. No. 124,750; Mar. 11; v. 260; p. 388.
Churns and butter-mergers. Smith's Inventions. No. 124,774; Mar. 11; v. 260; p. 389.
Cigarettes. The United Kingdom Tobacco Company. No. 124,899; Mar. 18; v. 260; p. 557.
Cigars. Bobrow Bros. No. 124,666; Mar. 11; v. 260; p. 385.
Cigars, tobacco, cigarettes. J. D. Piggott. No. 124,875; Mar. 18; v. 260; p. 557.
Cleaners, Hand-operated vacuum-. The Marvel Company. No. 124,749; Mar. 11; v. 260; p. 388.
Clothing, Certain named. Wise & Whitlock. No. 124,917; Mar. 18; v. 260; p. 558.
Clothing for men, Certain named. The Cellular Clothing Co. No. 124,674; Mar. 11; v. 260; p. 386.
Coal. McLaughlin Coal Reduction Company. No. 124,745; Mar. 11; v. 260; p. 388.
Coats, waists, Women's and misses'. Weinreb & Horowitz. No. 124,911; Mar. 18; v. 260; p. 558.
Coffee. The Donald Company. No. 124,824; Mar. 18; v. 260; p. 555.
Coffee. J. E. King Coffee Co. No. 124,727; Mar. 11; v. 260; p. 387.
Coffee. The Weideman Company. No. 124,910; Mar. 18; v. 260; p. 558.
Coffee. The Widlar Co. No. 124,914; Mar. 18; v. 260; p. 558.
Coffee and tea. James A. McAteer & Sons. No. 124,861; Mar. 18; v. 260; p. 556.
Coffee, Roasted. The Shear Company. No. 124,769; Mar. 11; v. 260; p. 388.
Compound for the treatment of certain affections and conditions, Certain named. Lloyd Brothers. No. 124,638; Mar. 4; v. 260; p. 197.
Concrete barrel mixer. Fairbanks, Morse & Co. No. 124,701; Mar. 11; v. 260; p. 386.
Coolers and ice-cream freezers. Jensen Creamery Machinery Company. No. 124,848; Mar. 18; v. 260; p. 556.
Cordial for treatment of derangement of stomach and bowels, Neutralizing-. Lloyd Brothers. No. 124,635; Mar. 4; v. 260; p. 197.
Cornmeal. The Eclipse Milling Company. No. 124,697; Mar. 11; v. 260; p. 386.
Cornmeal. Lawrenceburg Roller Mills Co. No. 124,854; Mar. 18; v. 260; p. 556.
Corsets. Shepard Norwell Company. No. 124,770; Mar. 11; v. 260; p. 388.
Corsets. A. A. Toohey. No 124,787; Mar. 11; v. 260; p. 389.
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Cotton piece goods. Tootal Broadhurst Lee Co. Nos. 124,788–9; Mar. 11; v. 260; p. 389.
Cotton piece goods. Wamsutta Mills. Nos. 124,906–6; Mar. 18; v. 260; p. 558.
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Cotton, silk, and woolen piece goods and combinations thereof. Royal Embroidery Works, Naday & Fleischer. No. 124,884; Mar. 18; v. 260; p. 557.
Cream, Face-. Koken Barbers' Supply Company. No. 124,933; Mar. 25; v. 260; p. 729.
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Cutlery, machinery, &c. W. Suckling & Sons. No. 124,781; Mar. 11; v. 260; p. 389.
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Distillate from apocynum cannabinum. Lloyd Brothers. No. 124,639; Mar. 4; v. 260; p. 197.
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Dress-fasteners. Columbia Fastener Company. No. 124,923; Mar. 25; v. 260; p. 729.
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Drills, drill handles, points, and bits. Diamond Expansion Bolt Co. No. 124,693; Mar. 11; v. 260; p. 386.
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Flour, Wheat-. The Warrensburg Mills. No. 124,909; Mar. 18; v. 260; p. 558.
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Magazine, Monthly. The Texas Company. No. 124,896; Mar. 18; v. 260; p. 557.
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Periodical, Monthly. L. M. Smith. No. 124,892; Mar. 18; v. 260; p. 557.
Petroleum, kerosene, benzin, &c. De Bataafsche Petroleum Maatschappij. No. 124,687; Mar. 11; v. 260; p. 386.
Pharmaceutical preparations. Certain named. Lloyd Brothers. No. 124,636; Mar. 4; v. 260; p. 197.
Pharmaceutical preparations for the treatment of certain named diseases. J. W. Gillespie. No. 124,828; Mar. 18; v. 260; p. 555.
Pharmaceutical products, Certain named. Lloyd Brothers. No. 124,640; Mar. 4; v. 260; p. 197.
Phonographs. W. W. Kimball Company. No. 124,851; Mar. 18; v. 260; p. 556.
Picture machines, Motion-. C. J. Peterson. No. 124,760; Mar. 11; v. 260; p. 388.
Piston and packing rings and compression-rings for engines, Metallic. H. W. Koehler. No. 124,728; Mar. 11; v. 260; p. 387.
Plated or precious-metal articles, Certain named. R & G Co. No. 124,878; Mar. 18; v. 260; p. 557.
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Poultry, Dressed. S. H. Grinstead Co. No. 124,845; Mar. 18; v. 260; p. 556.
Preparation for the treatment of foot diseases. H. A. Groth. No. 124,634; Mar. 4; v. 260; p. 197.
Preparation for tuberculosis, asthma, &c. Mrs. A. C. Snider. No. 124,775; Mar. 11; v. 260; p. 389.
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Rubber composition. Ajax Rubber Company. No. 124,809; Mar. 18; v. 260; p. 555.
Rubber heels. Taunton Rubber Co. No. 124,785; Mar. 11; v. 260; p. 389.
Salve for cuts, wounds, and bruises. M. Kobzina. No. 124,932; Mar. 25; v. 260; p. 729.

Seeds. Pittman & Harrison Company. Nos. 124,876–7; Mar. 18; v. 260; p. 557.
Seeds, bulbs, and plants. The Holmes-Letherman Seed Company. No. 124,721; Mar. 11; v. 260; p. 387.
Sewing-machines. Domestic Sewing Machine Company. Nos. 124,695–6; Mar. 11; v. 260; p. 386.
Sewing-machines and parts thereof. Union Special Machine Company. No. 124,794; Mar. 11; v. 260; p. 389.
Shampoo. W. Zimmerman. No. 124,647; Mar. 4; v. 260; p. 197.
Sheet and tin mill products, Certain named. The Liberty Steel Company. No. 124,738; Mar. 11; v. 260; p. 388.
Sheepskins, Finished. Donnell, Carman & Mudge. No. 124,925; Mar. 25; v. 260; p. 729.
Ship-rivets. Townsend Company. No. 124,790; Mar. 11; v. 260; p. 389.
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Shoes. Rhein Shoe Co. No. 124,880; Mar. 18; v. 260; p. 557.
Shoes, Children's. Devine and Hoffner. No. 124,692; Mar. 11; v. 260; p. 386.
Shoes for men and women. W. W. McCoy. No. 124,744; Mar. 11; v. 260; p. 388.
Shortening composition. Ward Baking Company. No. 124,907; Mar. 18; v. 260; p. 558.
Silk, &c., piece goods. Rice-Stix Dry Goods Company. No. 124,762; Mar. 11; v. 260; p. 388.
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Soap, Laundry. W. S. Burns. No. 124,669; Mar. 11; v. 260; p. 385.
Soaps and scouring and cleaning compounds. Saberton Mfg. Co. No. 124,763; Mar. 11; v. 260; p. 388.
Soaps, scouring and cleaning compounds. Saberton Mfg. Co. No. 124,885; Mar. 18; v. 260; p. 557.
Sodium silicate. Philadelphia Quartz Company. No. 124,937; Mar. 25; v. 260; p. 729.
Spark-intensifiers, Certain named. G. E. Colby. No. 124,680; Mar. 11; v. 260; p. 386.
Spark-plug insulation. Frenchtown Porcelain Company. No. 124,708; Mar. 11; v. 260; p. 387.
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Sterilizers for laboratory and surgical work. Wilnot Castle Company. No. 124,916; Mar. 18; v. 260; p. 558.
Stovepipe-elbows and stoves. Hemp & Co. (Corp.). No. 124,716; Mar. 11; v. 260; p. 387.
Sulfuret of antimony and zinc oxid. States Metals Company. No. 124,778; Mar. 11; v. 260; p. 389.
Syrup, Cane and maple. Vermont Maple Syrup Company. No. 124,902; Mar. 18; v. 260; p. 558.
Syrup, Table-. Oelerich & Berry Co. No. 124,868; Mar. 18; v. 260; p. 556.
Tablets and type-writer paper. Certain named writing-. Western Tablet Company. No. 124,912; Mar. 18; v. 260; p. 558.
Tablets, Laxative. Gilbert Co. No. 124,927; Mar. 25; v. 260; p. 729.
Talking-machines, phonographs, &c. Otto Heineman Phonograph Supply Co. No. 124,831; Mar. 18; v. 260; p. 555.
Talking-machines, phonographs, &c. Sonora Phonograph Corporation. Nos. 124,887–90; Mar. 18; v. 260; p. 557.
Talking-machines, phonographs, &c. The Wilcox & White Co. No. 124,915; Mar. 18; v. 260; p. 558.
Tea. Irwin-Harrisons & Crosfield. No. 124,725; Mar. 11; v. 260; p. 387.
Tea. Park & Tilford. No. 124,872; Mar. 18; v. 260; p. 557.
Tea, coffee, rice. Berdan and Company. No. 124,812; Mar. 18; v. 260; p. 555.
Tire accessories, Certain named pneumatic-. Ajax Rubber Company. No. 124,648; Mar. 11; v. 260; p. 385.
Tires, Rubber. The National Tire & Rubber Company. No. 124,756; Mar. 11; v. 260; p. 388.
Tobacco-distillate. Lloyd Brothers. No. 124,641; Mar 4; v. 260; p. 197.
Tonic and alterative, Stomach-. D. H. Fulton & Bro. No. 124,709; Mar. 11; v. 260; p. 387.
Tonics and ointments for external use. J. G. Roman. No. 124,939; Mar. 25; v. 260; p. 729.
Tooth-filling materials. Garhart Dental Specialty Company. No. 124,840; Mar. 18; v. 260; p. 556.
Tooth-paste, Antiseptic. Chemists Co. of New York. No. 124,675; Mar. 11; v. 260; p. 386.
Tractors, Farm-. The Columbus Tractor Co. No. 124,688; Mar. 11; v. 260; p. 386.
Trunks and cases for containing and displaying merchandise. The Kaynee Company. No. 124,849; Mar. 18; v. 260; p. 556.
Underwear, Cotton-mesh. Ideal Linen Mesh Company. No. 124,723; Mar. 11; v. 260; p. 387.
Varnish or preservative coating and varnish-reducer. Sealwood Company. No. 124,766; Mar. 11; v. 260; p. 388.
Vehicle-dumping devices. H. Werner. No. 124,804; Mar. 11; v. 260; p. 389.
Vehicles, Certain named. The British Mannesmann Tube Company. No. 124,815; Mar. 18; v. 260; p. 555.
Vehicles, Pleasure-. Brewster & Co. No. 124,668; Mar. 11; v. 260; p. 385.
Velvets, velveteens, woolen piece goods. D. W. Herrman. No. 124,718; Mar. 11; v. 260; p. 387.
Veterinary medicines. The Mirolene Co. No. 124,753; Mar. 11; v. 260; p. 388.
Vises. Velox Vise Co. No. 124,800; Mar. 11; v. 260; p. 389.
Water, Carbonated. Stratford Magnesia Springs Company. No. 124,942; Mar. 25; v. 260; p. 729.
Washing compounds. American Soap & Washoline Co. No. 124,655; Mar. 11; v. 260; p. 386.
Watch-crystals. E. G. Loomis. Nos. 124,855–6; Mar. 18; v. 260; p. 556.
Watches, watch-movements and parts thereof, watchcases. A. Wittnauer Co. No. 124,806; Mar. 11; v. 260; p. 390.
Waterproof and vermin-proof coatings for wrappers of meats, &c. Standard Asphalt & Refining Co. No. 124,893; Mar. 18; v. 260; p. 557.
Waterproof compound for leather. Erwa Chemical Manufacturing Company. No. 124,700; Mar. 11; v. 260; p. 386.
Woven or knitted textile fabric of silk, cotton, &c. Royal Embroidery Works, Naday & Fleischer. No. 124,882; Mar. 18; v. 260; p. 557.
Yarns, Cotton. The Cardinal Mills. No. 124,672; Mar. 11; v. 260; p. 385.
Yarns, Silk. Crane Bros. No. 124,685; Mar. 11; v. 260; p. 386.

ALPHABETICAL LIST OF LABELS.

"Caravel Company, Inc." (For Chemicals and Dyestuffs.) Caravel Company, Inc. No. 21,174; Mar. 18; v. 260; p. 559.
"Cherry Almond." (For Cherry Almond Flavor.) S. Werner. No. 21,177; Mar. 18; v. 260; p. 559.
"Due Frati." (For Domestic Macaroni.) C. Maspero. No. 21,171; Mar. 11; v. 260; p. 391.
"Drum Brand." (For Coffee.) W. A. Stewart. No. 21,172; Mar. 11; v. 260; p. 391.
"Franklin's Original—Snow Flake, 'The Mystic Washing Tablet.'" (For "The Mystic Washing Tablet.") Franklin Products Company. No. 21,175; Mar. 18; v. 260; p. 559.
"'Mountain View' Brand." (For Canned Red Raspberries.) H. A. Baker. No. 21,173; Mar. 18; v. 260; p. 559.
"The Star's Palette Outfit." (For Children's Paint Sets.) Star Crayon Manufacturing Company, Inc. No. 21,176; Mar. 18; v. 260; p. 559.
"Valu Gage Field Fencing, Number 9 Series." (For Woven-Wire Field-Fencing.) J. Armstrong. No. 21,168; Mar. 11; v. 260; p. 391.
"Valu Gage Field Fencing, Number 11 Series." (For Woven-Wire Field-Fencing.) J. Armstrong. No. 21,169; Mar. 11; v. 260; p. 391.
"Valu Gage Field Fencing, Number 12 Series." (For Woven-Wire Field-Fencing.) J. Armstrong. No. 21,170; Mar. 11; v. 260; p. 391.

ALPHABETICAL LIST OF PRINTS.

"Approved." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,078; Mar. 25; v. 260; p. 730.

"Discharged from Active Service." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,074; Mar. 25; v. 260; p. 730.

"From Service to Country." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,076; Mar. 25; v. 260; p. 730.

"From War to Peace." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,079; Mar. 25; v. 260; p. 730.

"Measurement Blank." (For Commercial Purposes for the Manufacture of Automobile-Tops.) Buob & Scheu. No. 5,072; Mar. 25; v. 260; p. 730.

"1919." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,075; Mar. 25; v. 260; p. 730.

"Peace." (For Type-Writing Machines.) Underwood Typewriter Company. No. 5,077; Mar. 25; v. 260; p. 730.

"Sammies Sure-Stick." (For Motor-Cycle-Tire Patches.) Sammies Rubber Co. No. 5,073; Mar. 25; v. 260; p. 730.

"Say, what a trick you'll turn for your tongue." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 5,070; Mar. 11; v. 260; p. 391.

"You just get-put with a jimmy pipe brimful of Prince Albert." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 5,071; Mar. 11; v. 260; p. 391.

DISCLAIMER.

Signature-gathering and wire-stitching machine. C. A. Juengst. (Reissue.) No. 13,967; date of patent Aug. 24, 1915; disclaimer filed Mar. 6, 1919; v. 260; p. 211.

CLASSIFICATION OF PATENTS

MARCH, 1919.

NOTE.—First number—class, second number—subclass, third number—patent number.

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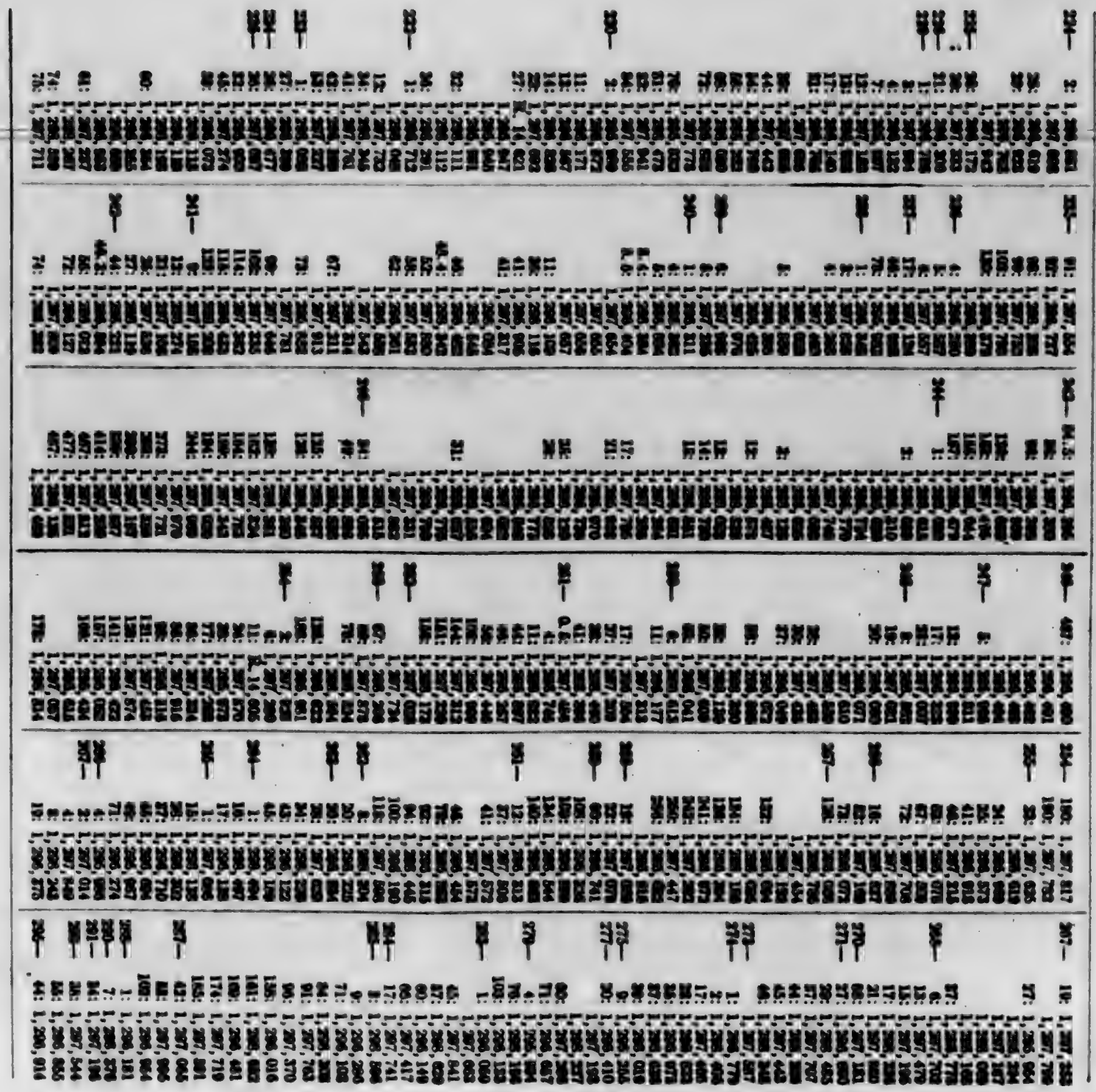
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VOLUME CCLXI.

APRIL,

1919.

WASHINGTON
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1919

ERRATA.

1,298,883, page 16, first claim, line 4, for the word "and" read *said*.

53,156, (Design.) page 185, in heading, name of administratrix and of patentee, second occurrence, for Reifsnyder" read *Reifshyder*.

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Sept. 11, 1919

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HELP THE VICTORY LIBERTY LOAN.

Disclaimer.

12,159. (Reissue.)—*Samuel F. Patterson*, Baltimore, Md. Power-Loom. Patent dated September 29, 1903. Disclaimer filed March 31, 1919, by the assignee, *Rosemary Manufacturing Co.*

Enters its disclaimer as follows:

(*a*) It disclaims the broadening statement introduced into the reissued Letters Patent No. 12,159, and appearing in lines 14 to 37, inclusive, page 4 of said patent, which reads:

"In the foregoing description I have set forth, and I have illustrated in the drawings, one form of mechanism for replenishing the supply of weft thread or yarn, this involving the displacement of an empty bobbin, spindle, or cop from, and the introduction of a filled one into, the shuttle, and such apparatus I deem the most desirable to use in practice. My invention, however, includes the automatic replenishing or renewal of the weft-thread supply by any known form of mechanism when combined with the other features herein set forth. Thus, for instance, it comprehends automatic devices for ejecting a shuttle the weft-thread of which has become broken or exhausted and replacing the same by a shuttle containing a filled cop, bobbin, or spindle, or supplied with weft-thread or yarn. The term 'weft-carrier' is, therefore, used in a somewhat comprehensive sense in some of the claims and includes shuttles supplied with weft-threads, as well as bobbins, cops, or spindles, apart from the shuttles and similarly supplied."

(*b*) As to claim 1, it disclaims any combination of the elements therein recited *except when* the weaving mechanism recited in such claim comprises a lower or picker shaft and a crank shaft geared together, both of said shafts being provided with cranks; and *except when* the intermediate connections between the several mechanisms recited in said claim include rods or pitmen connecting cranks of the respective shafts with the jacquard mechanism and the lay or lathe of the loom, respectively; and *except when* in consequence of breakage or failure of the weft-thread, the weft fork brings into action parts which position in the path of a horn or projection carried by the lay or lathe, a notched block carried by the ejector, so as to bring about through the movement of the lay or lathe a movement of the ejector and a consequent forcing of a filled cop, bobbin or spindle from the magazine or battery into the shuttle of the loom, thereby replenishing the weft and ejecting the spent cop, bobbin or spindle.

(*c*) As to claim 2, it disclaims any combination of the elements or groups of elements therein recited *except when* the weaving mechanism comprises a picker shaft and a crank shaft geared together and both provided with cranks; and *except when* the connections recited in said claim comprise rods or pitmen connecting cranks of the respective shafts with the jacquard mechanism and the lay or lathe respectively.

(*d*) As to claim 3, it disclaims any combination of the elements or groups of elements therein recited *except when* the automatic mechanism for supplying filled bobbins or spindles to the loom shuttle comprises a magazine or battery for containing filled cops, bobbins or spindles, an ejector for forcing a filled cop, bobbin or spindle from such magazine or battery into the shuttle and thereby ejecting the previously contained cop, bobbin or spindle from the shuttle, a contact block carried by the ejector, and a weft fork which determines the position of said block and causes it to be brought into the path of a horn or projection carried by the lay or lathe, when the weft-thread of a cop, bobbin or spindle in the shuttle becomes broken or exhausted, and thus brings into operation the ejector.

(*e*) It disclaims claims 4, 5 and 6 of said reissued Letters Patent No. 12,159 because so broadly drawn as to cover a combination of the recited elements however brought about.

¶ Disclaimer of the broadening statement of the specification hereinbefore recited and of claims 4, 5 and 6, is not to be construed, however, as disclaiming, affecting, abridging or waiving in any manner the full right and claim to the subjects matter of claims 1, 2 and 3 or any of them, as the same are limited or defined by the specific recitals definitely made and applied to these claims as designated by their respective numbers in this disclaimer.

Notice—Marking Drawings for Identification.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 24, 1919.

The attention of the attorneys is called to Rule 52, paragraph (*g*), which reads in part as follows:

* * * "The title should be written with pencil on the back of the sheet."

A compliance with this suggestion will avoid trouble in identifying the application to which the drawing belongs, especially in design cases, where more than one application is filed by the same inventor.

Whenever a substitute or additional drawing is filed, the serial number of the application should be written on the back of the drawing.

J. T. NEWTON,
Commissioner.

12943

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 28, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Feb. 13	Feb. 6	205
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 12	Dec. 14	445
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Nov. 6	Dec. 17	174
254	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 19	Mar. 3	337
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Nov. 27	Nov. 2	171
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Nov. 16	Jan. 14	342
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Jan. 24	Jan. 31	275
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 9	Jan. 28	139
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Sept. 18	Dec. 28	255
225	10. Carriages and Wagons; Motor Vehicles	Jan. 27	Mar. 4	489
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 17	Mar. 6	178
123	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Oct. 1	Sept. 25	...
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 15	Feb. 26	604
323	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 5	Feb. 20	171
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 2	480
112	16. Radiant Energy; Telegraphy; Telephony	Nov. 12	Nov. 13	544
307	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Feb. 10	Feb. 3	87
220	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 4	Dec. 16	567
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Feb. 7	Jan. 18	214
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking	Feb. 28	Feb. 15	191
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spanning; Weaving; Winding and Reeling	Sept. 9	Jan. 6	338
249	22. Aeronautics; Firearms; Ordnance	Jan. 15	Jan. 30	267
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Dec. 31	Jan. 22	190
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 4	341
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 27	Feb. 5	163
105	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Oct. 14	Nov 16	581
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 2	Jan. 9	426
225	28. Internal-Combustion Engines	Sept. 16	Dec. 5	532
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Dec. 3	Dec. 20	514
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 2	Mar. 13	230
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 11	Jan. 11	268
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Sept. 9	Jan. 14	586
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads and Pavements; Roofs.	Nov. 21	Nov. 20	242
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Nov. 20	Jan. 17	224
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Mar. 1	Dec. 16	262
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Feb. 26	Feb. 26	409
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Sept. 21	Oct. 3	686
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice-Harvesting; Stationery; Stone-Working; Wells.	Mar. 1	Feb. 24	119
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Nov. 12	Nov. 21	431
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 8	Feb. 7	353
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 21	Dec. 21	340
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Oct. 23	Nov. 4	441
362	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 14	Feb. 20	104
233	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Sept. 10	Nov. 26	120
379	45. Clutches; Lubrication; Motors; Railway Brakes	Dec. 14	Nov. 18	260
	Oldest new case, Oct. 9; oldest amended, Sept. 25.			
	Total number of applications awaiting action			15,232
163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 19	Mar. 14	220
	Designs	Feb. 3	Mar. 6	228
	Labels and Prints	Feb. 10	Feb. 26	174

PATENTS

GRANTED APRIL 1, 1919.

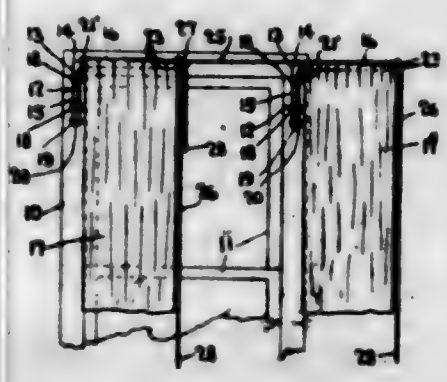
1,296,632. Mass. Claims.

SHAVING SET. SAMUEL ALLAND, Boston, Mass. Filed Oct. 12, 1918. Serial No. 257,837. 7 Claims. (Cl. 132—33.)



5. A toilet article comprising a tubular case open at one end, a second tubular case open at one end and closed at the other end, the open end of the second case being adapted to telescope into the open end of the first case with a snug sliding fit, the open end of the second case being adapted to have a stick of soap secured therein in spaced relationship to the closed end of said second case so as to form a compartment adapted to be filled with powder through the open end of the case before the soap is secured in place, and means for sifting powder from said compartment after the soap is secured in place.

1,298,634. **WINDOW-CURTAIN HANGER.** JOHN D. ALLEN, Washington, D. C. Filed July 16, 1917, Serial No. 180,837. Renewed Feb. 17, 1919. Serial No. 277,648. 3 Claims. (Cl. 156—22.)



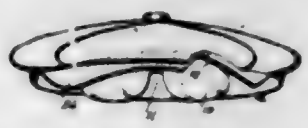
1. In a curtain hanger the combination of a rod bent to form a horizontal and a vertical section, bearings supporting the vertical section for rotation upon a window frame or the like, a cup shaped stop secured below the bearings and receiving the lower end of the vertical section, a collar secured to the inner end of the horizontal section and having an upwardly curved finger for limiting the inward movement of a curtain, a head secured to the outer end of the horizontal section, a pair of oppositely extending fingers formed thereon for limiting the outward movement of the curtain, and cords connected to said fingers whereby the rod may be swung inwardly across the window frame or outwardly to one side thereof.

1,298,635. **PAPER BOX.** WILLIAM R. ALLEN, St. Louis, Mo., assignor to Gereke-Allen Carton Company, St Louis, Mo., a Corporation of Missouri. Filed Dec. 3, 1918. Serial No. 265,135. 2 Claims. (Cl. 229—39.)



1. A folding box having a bottom provided with a part or extension that passes upwardly through the box and is interlocked with one of the walls of the box, said part having a flange or portion that lies under the top or lid of the box when the box is closed.

1,298,636. **PROTECTOR FOR THE EYES.** EMIL ALTMAN, Brooklyn, N. Y. Filed May 9, 1917. Serial No. 167,436. 4 Claims. (Cl. 2—149.)



1. A device of the character described comprising a carrier hinge, a transparent eye protector carried by one member of said carrier hinge, prongs on the other member of said carrier hinge whereby said device is attached to a head covering, a spring exerting a tension tending to swing said hinge members to an open position, means for arresting the opening movement of said hinge members at a predetermined point and a resilient catch whereby said carrier hinge is maintained in its folded condition against the tension of said spring.

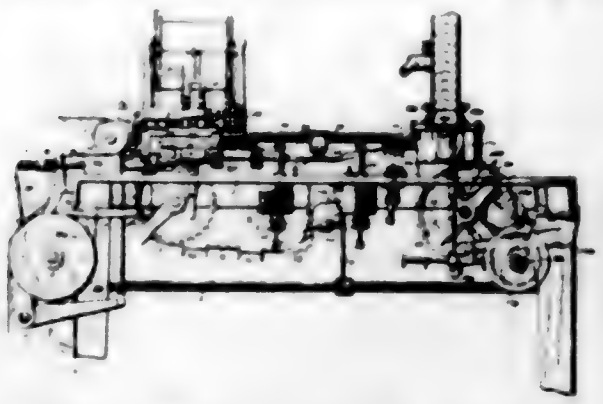
2. The combination of a cap having a vizor arranged to be transversely flexed under the tension produced by the cap when worn, and an eye protector depending from said vizor and having curved edges out of contact with said vizor in its normal condition and arranged to be engaged by said vizor as it is transversely flexed.

3. A device of the character described comprising a first plate, a second plate pivotally connected therewith, a third plate spaced from and substantially parallel to said second plate, an eye protector extending between said second and third plates so as to be carried thereby, means whereby said second and third plates are positively fixed against separation, and prongs on said first plate adapted to pass through a portion of a head covering, whereby said device is detachably connected with said head covering.

1,298,637. **WRAPPING-MACHINE.** HARRY Y. ARMSTRONG, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Nov. 15, 1915. Serial No. 61,557. 10 Claims. (Cl. 93—7.)

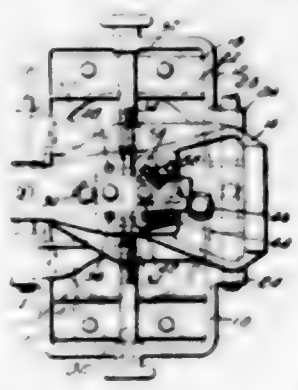
1. In a wrapping machine, the combination with folding mechanism and a reciprocating nipper operative to

advance wrappers one at a time to said mechanism, of means for applying adhesive material to said wrapper adjacent to the point at which it is gripped by said nipper, said applying means being constructed and arranged to



avoid applying adhesive material to said nipper, and means operative after said nipper has released the wrapper to apply adhesive material to the portion of the wrapper previously grasped by the nipper.

1,298,638. THREAD-WAXING DEVICE. FRED ASHWORTH, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 11, 1917. Serial No. 179,976. 3 Claims. (Cl. 91—32.)



1. A thread waxing device having, in combination, a heating member, a supporting member, and a plurality of separate wax receptacles independently mounted on said supporting member for movement relatively to said heating member.

2. A thread waxing device having, in combination, a heating member, a supporting member, a pair of separate wax receptacles, and means for supporting said receptacles on said supporting member at different distances from the heating member.

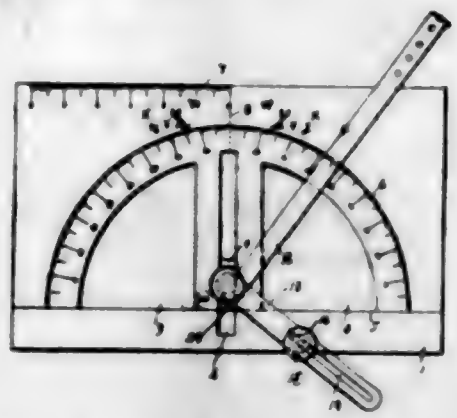
3. A thread waxing device having, in combination, a heating member, a supporting member, a plurality of wax receptacles movable with relation to said heating member, mounted on said supporting member, and a set of thread guiding devices for each wax receptacle mounted on the heating member.

1,298,639. ERASER STRUCTURE. JOHN AULD, Chicago, Ill. Filed Feb. 6, 1919. Serial No. 275,478. 6 Claims. (Cl. 120—36.)



3. A supporting structure for erasers comprising a U-shape frame for clamping an eraser between its ends, a holder hinged to said frame to form an extension thereof, and a brush secured to said holder.

1,928,640. COMBINED PROTRACTOR AND LETTERING INSTRUMENT. WILLIAM BALEHISER, San Francisco, Calif. Filed Nov. 20, 1917. Serial No. 202,931. 4 Claims. (Cl. 33—75.)



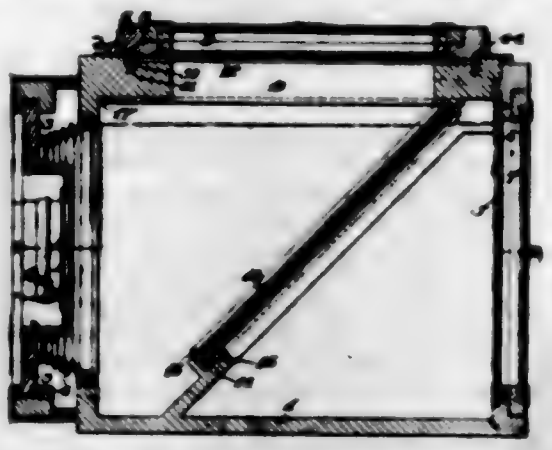
1. A lettering instrument comprising a flat base having a slot extending at right angles to one edge thereof, a block slidable in said slot, a pair of arms pivotally connected with said block, one arm having means for holding the block in a given adjustment in the slot and the other adapted to be used for measuring angles, and means for locking the latter arm in a given position at will.

2. A lettering instrument comprising a flat base having a slot extending at right angles to one edge thereof, a block slidable in said slot, two arms pivotally connected with the block, a fixed screw adapted to secure one of said arms and the block in a given adjustment with respect to the slot, and means to lock the other arm in any angular adjustment with respect to the base edge.

3. A lettering instrument comprising a flat base having a protractor scale and having a slot extending at right angles to one edge thereof, and having a pair of openings therein extending away from a diameter of said protractor scale, a block movable in said slot, two arms pivotally connected to said block, means to secure said arms in a rigid position with respect to the block, and means to secure one of said arms and the block in a rigid position with respect to the base whereby various angles may be measured by moving the other arm, the block being capable of having the center about which both of said arms move brought to the center of the protractor scale on the protractor diameter.

4. A lettering instrument comprising a base having a slot therein, a block movable in said slot, a pair of arms pivotally mounted on said block, means to secure one of said arms and the block in a fixed position with respect to the base, and a series of marks upon which base so positioned as to enable the other arm to be moved from one position to another to produce any one of the inclined elements of a given series of characters.

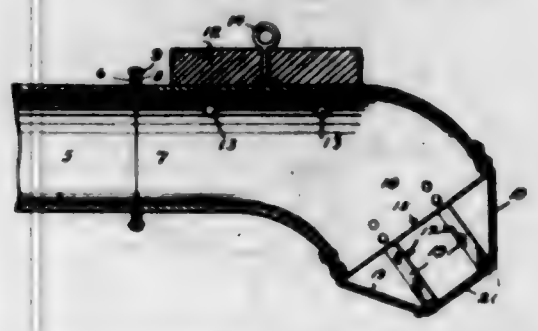
1,298,641. TWO-COLOR-PICTURE CAMERA. FREDERICK W. BARNES and ERNEST C. ALLEN, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 3, 1916. Serial No. 129,265. 7 Claims. (Cl. 95—2.)



1. In a two-color picture camera, the combination with a casing and two holders for sensitive elements carried

thereby and arranged angularly to each other, of a swinging opaque mirror in the casing operable in the angle between the holders and adapted to act, selectively, to reflect an image upon one element or to protect that element during exposure of the other element to the same image.

1,298,642. NOZZLE FOR SAND-PUMPS. GEORGE E. BATTISFORE, Marquette, Mich. Filed Sept. 2, 1914. Serial No. 859,855. 2 Claims. (Cl. 37—45.)



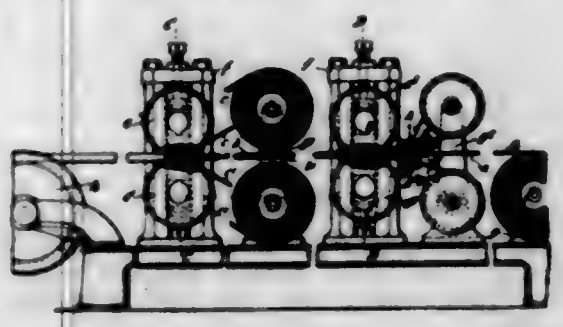
1. The combination with a dredging machine suction nozzle, the inlet end of which is curved along its axis, of a sinking weight fitted and secured snugly over the exterior surface of the nozzle in the line of direct bombardment of rock sections entering through the inlet end of the nozzle in use, said weight part-way circumscribing the nozzle.

1,298,643. METAL CLOTHES-PIN. EDWARD J. BAUMEL, Pomona, Calif. Filed Apr. 18, 1916. Serial No. 91,863. 1 Claim. (Cl. 24—137.)



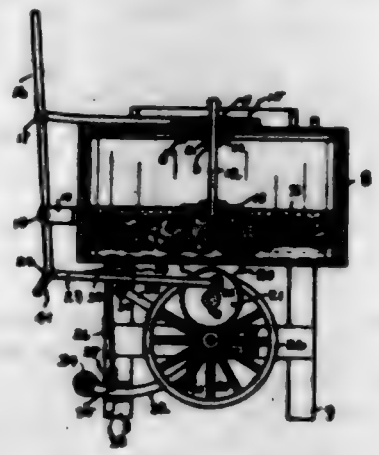
A clothes pin consisting of a spring metal plate bent upon itself to form spaced legs and a connecting bight portion, the legs adjacent to the bight being conformed to the curvature of the bight to closely approximate a circle and having such portions flat, the remaining portions of the legs having spaced longitudinal corrugations and ears struck inwardly at opposite points between the corrugations and a helical contractile spring engaged with the ears.

1,298,644. MANUFACTURE OF ELECTRIC CABLES. CHARLES JAMES BEAVER and ERNEST ALEXANDER CLAREMONT, County of Chester, England. Filed Apr. 4, 1918. Serial No. 226,729. 4 Claims. (Cl. 173—264.)



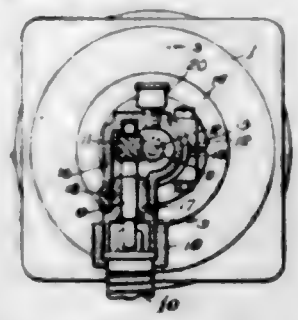
1. A circular or approximately circular electric cable consisting of two conductors, insulation between such conductors composed of rubber or other suitable flexible insulating material in the form of a strip not thicker than necessary to efficiently insulate the same, and an exterior insulation composed of rubber or other material aforesaid in the form of two strips respectively folded half around the cable and the edges of the three strips of rubber or other material caused to adhere and become autogenous by pressure.

1,298,645. WASHING-MACHINE. FRANKLIN B. BECKWITH, Plattsmouth, Nebr. Filed Nov. 11, 1918. Serial No. 262,066. 5 Claims. (Cl. 259—101.)



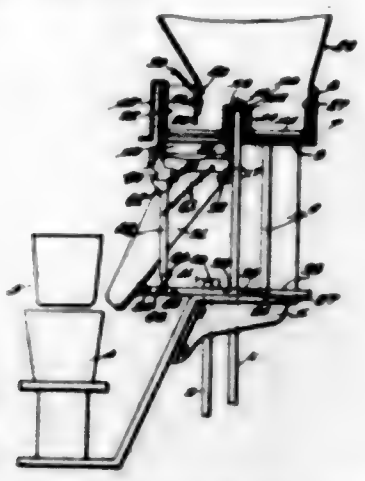
1. In devices for the purposes described, a tub having leg supports and provided with agitating devices including a dasher-shaft having a gear wheel and also including a rack-bar adapted to engage the gear-wheel, a toothed gear in bearings below the bottom and carried by the tub, a pair of pivotally mounted links below the tub each being provided with a segmental arm, an axle having bearings in the pair of links and having wheels rigidly mounted thereon, a pinion rigidly mounted on the axle, a foot-rail connecting the segmental arms and movable for moving the pinion of said axle into engagement with the toothed gear, an actuating-rod connected with the toothed gear, a hand-lever pivotally mounted between its ends and connected with the rack-bar and actuating-rod, and being movable for causing coincident actuation of the wheels of said axle and the gear wheel of the dasher-shaft.

1,298,646. TACHOMETER DRIVE CONNECTION. JOSEPH BERG, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Dec. 22, 1917. Serial No. 208,420. 1 Claim. (Cl. 235—96.)



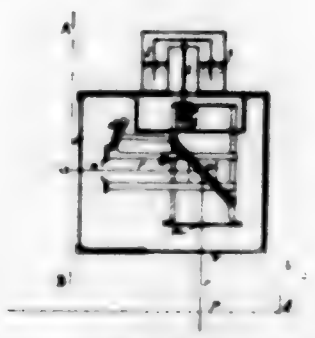
In combination with a tachometer including a casing and a rotary shaft journaled therein, a drive shaft approaching the other shaft transversely, gears operatively connecting the two shafts, a tube projecting from said casing and serving to journal the said rotary shaft and a housing for said gears including a sleeve fitting snugly over said tube, and a second sleeve extending transversely of the first and rigidly associated therewith for journaling the end portion of the drive shaft and its gear, whereby said housing and drive shaft may be rotatively adjusted about the axis of the tachometer shaft by turning of the first sleeve upon the tube of the the casing, and means for securing said sleeve to said tube at any chosen position of such adjustment.

1,298,647. FEEDING MECHANISM. CLAUDE G. BEWLEY, Spokane, Wash., assignor to Spokane Concrete Flower Pot Machine Co., Inc., a Corporation of Washington. Filed Feb. 9, 1918. Serial No. 216,245. 12 Claims. (Cl. 25—103.)



1. In a feeding mechanism for pot, jar or like receptacle molding machine, a receiver for the molding material having a passage for initial discharge of the required amount of material to form the bottom of the product, and said receiver having an outlet for discharge of material to form the wall of the product, a chute movable into a discharging position with respect to the molds for delivering material thereto from said outlet and passage, a dump valve for retaining in said passage the required amount of material to form the bottom of the product, means actuated by movement of the chute into a mold delivery position for releasing said dump valve, and initial valve means for closing said outlet and returning said dump valve to a closed position when said initial valve means is moved into an outlet opening position.

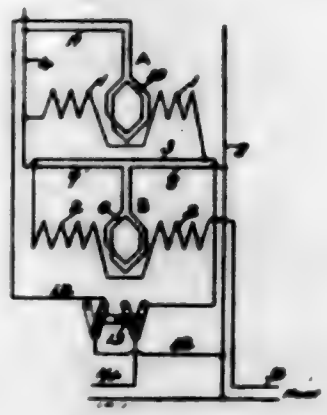
1,298,648. SIGHTING INSTRUMENT FOR AVIATION PURPOSES. CAMILLE BIRAULT, Paris, France. Filed June 29, 1917. Serial No. 177,797. 2 Claims. (Cl. 88—2.2.)



2. In combination with aircraft a sighting instrument constituting a pendulum and comprising a mirror adapted to assume various inclined positions, a netting below said mirror, a movable sighting plate in front of said mirror, graduated slides in coöperation with said sighting plate, a graduated sector, a connecting rod between said sector and said mirror provided with an index, an elastic support for the sighting instrument, and a stabilizer comprising a vessel containing a viscous liquid, and an inverted cylinder dipping into said liquid and a rod connecting said cylinder and the sighting instrument.

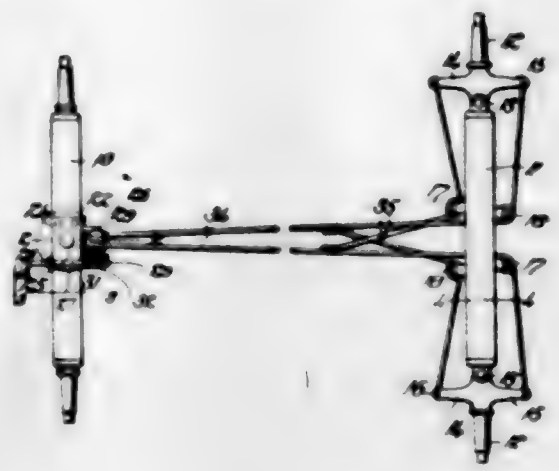
1,298,649. SYSTEM AND MEANS FOR DIFFERENTIALLY METERING ELECTRICITY FOR LIGHTING AND HEATING PURPOSES. LAWRENCE BIRKS and JOHN RICHARD TEMPLIN, Fendalton, Christchurch, New Zealand. Filed July 8, 1916. Serial No. 108,146. 2 Claims. (Cl. 171—268.)

1. In combination, a source of current, a heating circuit, a lighting circuit, a pair of wattmeters having series and shunt windings, one for said lighting circuit and one for said heating circuit, and a circuit controller capable of occupying one extreme position wherein current is supplied to the lighting circuit through the series



windings of the lighting meter, and current is supplied to the heating circuit through the series windings of both of the meters, and another extreme position wherein the lighting circuit is disconnected from the lighting meter, the shunt winding of the latter is on open circuit.

1,298,650. SHORT-TURNING GEAR. ARNOLD BJERKAAS, Long Prairie, Minn. Filed Jan. 24, 1917. Serial No. 144,189. 1 Claim: (Cl. 21—196.)

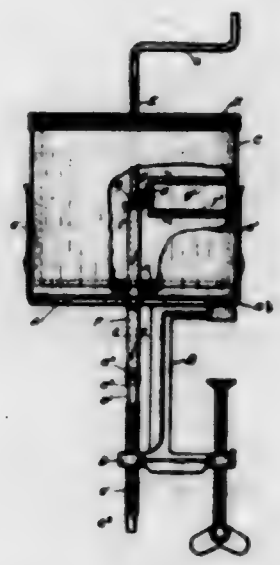


A short turning gear including a front axle and a rear axle, stub axles mounted for pivotal movement on the ends of the rear axle, grooved wheels mounted on the intermediate portion of the rear axle, a bracket mounted on the bolster of the front axle, a winding drum mounted in the bracket, the stub axles having forwardly and rearwardly extending arms, a cable having its intermediate portion engaged several times around the drum and having its ends engaged around certain of the grooved wheels and connected to certain of the arms of the stub axles, additional cables connected to the remaining arms and engaged around the remaining grooved wheels and being secured to portions of the first cable, and means for rotating the said drum.

1,298,651. DEVICE FOR STIRRING VISCOUS MATERIALS. HOWARD E. BOATH, Norwood, Ohio. Filed Dec. 9, 1918. Serial No. 265,829. 4 Claims. (Cl. 259—99.)

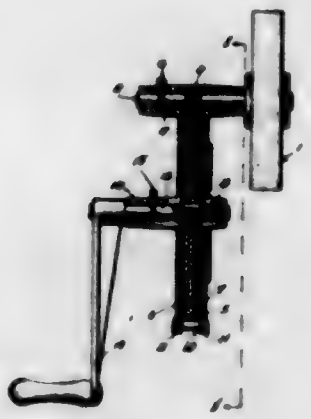
1. In a device for stirring viscous materials the combination of a receptacle, a longitudinal shaft upon the interior of the receptacle, a mixing device mounted re-

ciprocally and rotatively upon the drive shaft, and means for converting a rotating motion of the drive



shaft into a reciprocating and rotating motion of the mixing device.

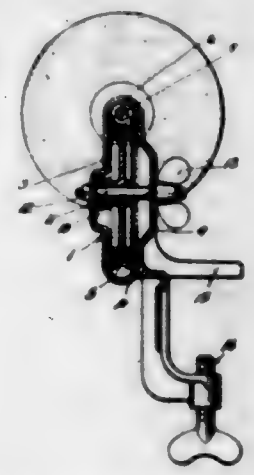
1,298,652. GEAR-CASING FOR TOOL-GRINDERS. ELY BOCKSHS, Milwaukee, Wis., assignor to Modern Grinder Manufacturing Co., Milwaukee, Wis. Filed Apr. 29, 1918. Serial No. 231,365. 2 Claims. (Cl. 74—56.)



1. A one-piece gear case comprising a pair of plates, a peripheral wall formed integrally with the edges of said plates, said wall having an opening at one side, a journal bearing formed integrally with and centrally of each plate, said bearings being alined to receive and support the end portions of a gear axle, and a spindle bearing formed integrally with each plate at the periphery thereof and with the adjacent portion of the pepripheral wall, said spindle bearing being disposed parallel to the axis of the alined journal bearings.

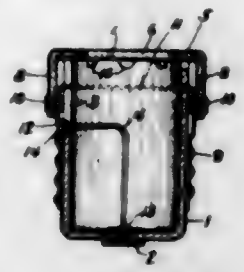
2. A device of the class described comprising a one-piece gear case formed of a pair of spaced plates, a peripheral wall formed integrally with the edges of said plates, said wall having an opening at one side, a journal bearing formed integrally with and centrally of each plate, said bearings being alined, a spindle bearing formed integrally with each plate at the periphery thereof and with the adjacent portion of the peripheral wall, said spindle bearing being disposed parallel to the axis of the alined journal bearings and at right angles to a longitudinal plane of the gear case, a gear disposed between said plates through said opening in the peripheral wall, an axle mounted in the journal bearings and having the gear secured thereto, a spindle journaled in the spindle bearing and engaged with the gear to be rotated thereby, and means connected with the axle for rotating the same.

1,298,653. ADJUSTABLE CASING FOR GRINDERS. ELY BOCKSHS, Milwaukee, Wis., assignor to Modern Grinder Manufacturing Co., Milwaukee, Wis. Filed Apr. 29, 1918. Serial No. 231,366. 2 Claims. (Cl. 74—56.)



1. In a device of the class described, a gear case comprising a movable housing portion and a stationary cover for the housing portion, a gear in the housing portion, means for rotating the gear, a shaft carried by the housing portion to be driven by said gear, and a clamping screw extending through the housing portion and cover to draw the same together, whereby to secure the former in adjusted positions with respect to the latter.

1,298,654. FUSE-PLUG. DAVID E. BOWN, Pittsburgh, Pa. Filed Apr. 25, 1918. Serial No. 230,654. 5 Claims. (Cl. 175—277.)

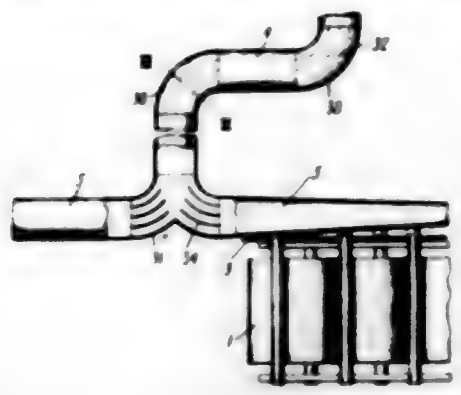


1. A fuse plug comprising a cup-shaped body, a center contact carried by the bottom thereof, a cover for said body provided with a window and with depending flanges telescoping the body, a screw shell secured to said flanges and provided with an opening, and a fuse wire secured to the center contact and extending through the opening in the shell and secured thereto.

2. A fuse plug comprising a cup-shaped body, a center contact carried by the bottom thereof, a cover provided with a window and with depending flanges telescoping the body, a screw shell secured to said flanges, the upper end of said screw shell being bent inwardly and provided with prongs to engage the outer face of the body, and a fuse wire secured to the center contact and to the screw shell.

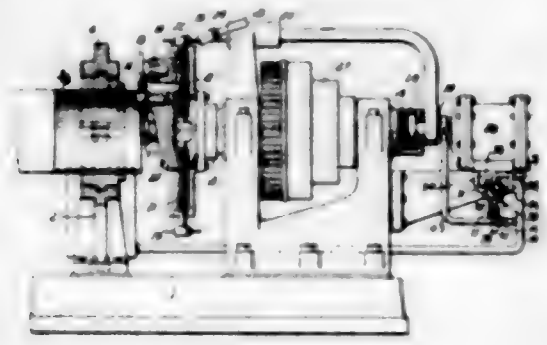
3. A fuse plug comprising a cup-shaped body slotted from its upper end downwardly, a center contact carried by the bottom of said body, a cover provided with a window and with depending flanges telescoping the body, and a screw shell secured to said flanges and provided with an opening for the passage of the fuse wire, the upper end of said screw shell being contracted and firmly engaging the outer surface of said body.

1,298,655. SYSTEM OF AIR DISTRIBUTION. EMIL A. BRINER, East Orange, N. J. Filed Aug. 8, 1916. Serial No. 113,841. 10 Claims. (Cl. 34—48.)



1. In a system of air distribution, the combination of a pipe, having a longitudinal slot therein and a series of deflectors arranged transversely in said slot.

1,298,656. APPARATUS FOR FLANGING PIPES. LOUIS H. BRINKMAN, Glen Ridge, N. J. Filed Mar. 29, 1917. Serial No. 158,169. 8 Claims. (Cl. 153—27.)



1. In pipe flanging apparatus, the combination with a support for the pipe of a chuck carrying rolls for forming a flange on the pipe, said chuck being movable longitudinally with relation to said support, and means controlled by the relative positions of said chuck and pipe support for relatively moving the chuck and support.

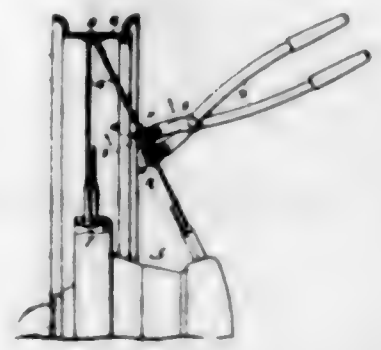
3. In a pipe flanging apparatus, the combination with a pipe support, of means for flanging the pipe, a fluid pressure cylinder and piston for relatively moving the flanging means and support, a pressure fluid supply connection for said cylinder, an exhaust connection for said cylinder, valve mechanism for controlling the supply and exhaust to and from said cylinder, and means moving with one of the moving parts for controlling the exhaust.

4. In pipe flanging apparatus, the combination with a pipe support of flanging means for operating upon the pipe, a fluid pressure cylinder and piston for moving the said flanging means with relation to the pipe, a fluid supply connection for said cylinder, an exhaust connection for said cylinder, said exhaust comprising a main exhaust and a restricted exhaust or bleed, a valve controlling the main exhaust, and means actuated by one of the moving parts for operating said valve.

5. In pipe flanging apparatus, the combination with a pipe support comprising a clamp operable to secure the pipe, flanging means for operating upon the pipe, means for operating the clamp, means for moving the flanging means and means for simultaneously controlling the clamp operating and the flanging apparatus moving means.

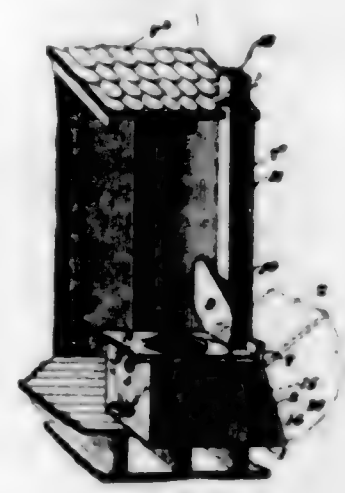
8. In a pipe flanging apparatus, the combination with a pipe support comprising a clamp, of a fluid pressure clamp operating means, flanging means for operating upon the pipe, a fluid pressure operated cylinder and piston for moving said flanging means against said pipe, fluid supply connections for said cylinder, exhaust connections for said cylinder, said exhaust connections comprising a main exhaust and a restricted exhaust or bleed, and valve mechanism controlling in common the fluid connections and exhausts of the clamp operating fluid pressure means and the fluid pressure means for operating the flanging means, a valve controlling the said main exhaust and means moving with the said flanging means and engaging with the last mentioned valve to actuate it.

1,298,657. METHOD OF ADJUSTING WIRE SPOKES OF WIRE-SPOKED WHEELS. EDWARD G. BUDD, Philadelphia, Pa., assignor to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Virginia. Original application filed July 19, 1916, Serial No. 110,113. Divided and this application filed Mar. 29, 1917. Serial No. 158,411. 4 Claims. (Cl. 29—174.)



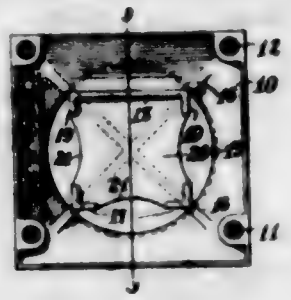
4. The method of truing up wire spoked wheels which consists in securing the ends of the spokes to the hub and rim, respectively, of the wheel, in approximately the required lengths of the spokes, and then compressing the metal of individual spokes lengthwise thereof at successive portions of their lengths to vary the tension of their lengths to vary the tension thereof relatively to other spokes of the wheel.

1,298,658. SANITARY DRY CLOSET. LEONARD BUTTON, Birmingham, Ala. Filed Aug. 13, 1917. Serial No. 186,015. 2 Claims. (Cl. 4—20.)



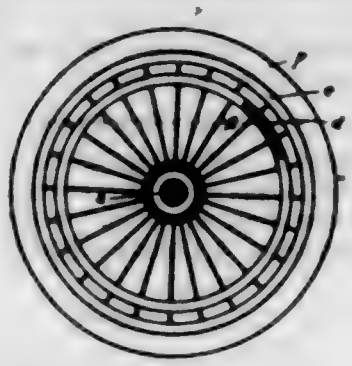
2. In a sanitary dry closet, a closet seat having a screened top opening and a seat opening, a box thereunder having screened venting means, a stack rising vertically above said screened opening in the seat, a cover for the seat opening hinged to said stack, a transverse reinforcing batten adapted to engage the stack and arrest the opening movement of the seat cover before it reaches a vertical position, and a rear door for the box adapted for the insertion and removal of a bucket, substantially as described.

1,298,659. STAND FOR PHONOGRAPH-RECORD PRESSES. FRANK L. CAPPS, Brooklyn, N. Y., assignor to Pathe Freres Phonograph Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 22, 1917. Serial No. 187,710. 6 Claims. (Cl. 18—1.)



5. In a stand of the class described, the combination of a hopper provided with a central discharge opening, diagonal cross members in said hopper and extending above said opening, a knocking block, and means on said members for removably supporting said knocking block and holding it against lateral displacement.

1,298,660. ELASTIC VEHICLE-WHEEL. ADELINO CARDOSO, Milan, Italy. Filed Nov. 25, 1916. Serial No. 136,355. 3 Claims. (Cl. 152—29.)



1. A resilient wheel comprising a rigid central disk, said disk being provided with a rim, a tread supporting rim concentric therewith, adjustable naves on each side of the central disk, and cords connecting the tread supporting rim to said naves and guided by the rim of the central disk.

1,298,661. TIRE-CASING AND METHOD OF MANUFACTURE. ARTHUR LYNN CASE, Plainfield, N. J. Filed Apr. 25, 1917. Serial No. 164,444. 8 Claims. (Cl. 154—14.)



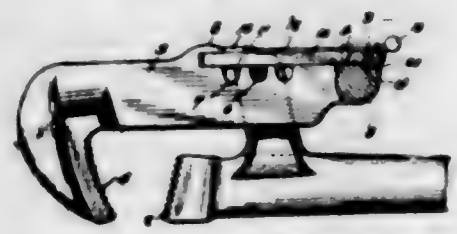
3. In a tire casing, a carcass consisting of a pair of beads, an inner series of fabric plies extending uninterruptedly from one bead to the other and vulcanized together, and an outer series of plies vulcanized together and also extending uninterruptedly from one bead to the other, said inner and outer series being vulcanized together with the exception of their tread portions, and said portions being entirely disconnected to permit the inner plies to yield inwardly upon passage of a sharp object through the outer plies, and a tread vulcanized on said outer plies.

1,298,662. LIFTER. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Metal Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 6, 1916. Serial No. 102,064. 2 Claims. (Cl. 65—26.)



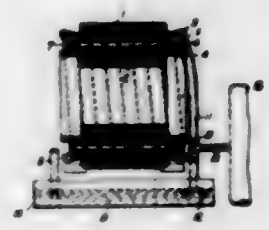
2. A lifter comprising a single piece of wire, a ferrule connecting the ends of the wire together and to an intermediate portion of the wire, thus forming a loop at each end, the loop at one end being shaped to form a handle, and the loop at the other being formed to constitute a neck embracing portion that is at substantially right angles to the mean plane of the handle, the neck-embracing portion being substantially U-shaped and having its ends spaced apart and turned toward the handle at substantially right angles, the portions of wire between such right angled portions and the handle diverging from said portions and then reversing and approaching each other as they approach the handle, the central part of the neck embracing portion being bent slightly toward the handle in an inclined plane with respect to the plane of the other portion thereof.

1,298,663. PIPE-WRENCH. JOSEPH FRANCIS CHEVALIER, Lakeland, Ky. Filed Jan. 18, 1919. Serial No. 271,811. 2 Claims. (Cl. 81—110.)



1. A wrench comprising a handle having a jaw; a pivot element carried by the handle; an auxiliary member having a jaw coöperating with the jaw of the handle and provided in one edge with seats in any one of which said pivot element may be mounted; a slide mounted for right line reciprocation on the auxiliary member and bridging the seats to hold the pivot element therein; and means for securing the slide releasably against retraction.

1,298,664. VACUUM-PUMP. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 18, 1915. Serial No. 2,889. 8 Claims. (Cl. 172—36.)



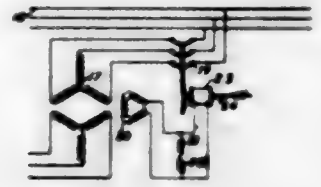
1. A fluid pump comprising means dependent upon a rotating magnetic field for imparting movement to an electrically conducting liquid and an ejector adapted to be operated by the said liquid.

5. The combination with means for producing a revolving magnetic field, of a helical tube disposed in the said

field, and means for introducing an electrically conducting liquid into the said tube, whereby the said liquid is caused to traverse the said tube by the dragging effect of the said revolving field.

7. The combination with means for inducing a revolving magnetic field comprising spaced concentric primary and secondary cores, of two concentric tubes of electrically non-conducting material disposed in the space between the said cores, a helical partition of non-magnetic electrically-conducting material disposed between the said tubes and forming a helical passage, and means for introducing an electrically conducting liquid into the said passage.

1,298,665. TERTIARY COILS FOR TRANSFORMERS. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 26, 1917. Serial No. 144,774. 13 Claims. (Cl. 175—294.)



1. In a transformer, the combination with three groups of three-phase coils two of which are star-connected and the other of which is delta-connected, of means for permitting alternating currents of a selected frequency only to flow non-reactively through said delta-connected winding while the flow therethrough of alternating currents of other frequencies is offered high impedance.

10. In a system of distribution, the combination with n-connected windings that are connected to a common point, of n-auxiliary windings severally associated with said first windings, the n-auxiliary windings being connected in a closed circuit, and means for establishing therethrough a resonant circuit for the non-reactive flow of alternating currents of n-frequency.

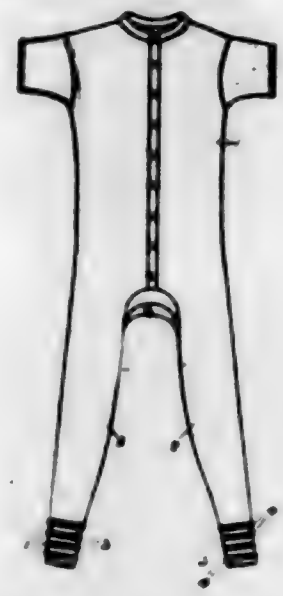
13. The combination with distributing mains for three-phase currents, Y-connected windings, and a circuit interrupter for connecting said windings to said mains, of auxiliary coils severally inductively related to said Y-connected windings and adapted for connection in delta-formation, means connected in series with said auxiliary coils for establishing therethrough a resonant circuit for the non-reactive flow of alternating currents having triple normal distributing frequency, and means for actuating said circuit interrupter when alternating currents of normal distributing frequency tend to flow through said auxiliary coils.

1,298,666. CURTAIN-FASTENER. EDMUND S. CHURCH, Chicago, Ill., assignor to Automatic Carburetor Co., Chicago, Ill., a Corporation of Illinois. Filed June 13, 1917. Serial No. 174,461. 4 Claims. (Cl. 24—211.)



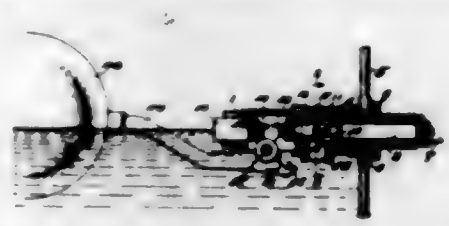
1. In a fastener for curtains and the like, the combination of a hollow stud provided with means whereby it may be secured to a support and having a transverse slot at its outer end, a latch movably sustained in the hollow stud, having its outer portion extending through said slot and projecting from said stud to hold a part on the stud and movable in the slot to release said part, and a plate secured at the back of the hollow stud and having a tongue acting as a spring for normally holding the latch in operative position.

1,298,667. UNDERWEAR. EILERT ALFRED CLEMENTS, Grand Rapids, Mich. Filed Aug. 28, 1918. Serial No. 251,129. 1 Claim. (Cl. 2—122.)



A garment having legs, and a plurality of outstanding ribs located around and one above the other a short distance and positioned in substantially parallel horizontal planes, substantially as and for the purposes described.

1,298,668. VALVE. WILLIAM E. COARLEY, Cleveland, Ohio, assignor to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 7, 1917. Serial No. 206,092. 5 Claims. (Cl. 137—104.)

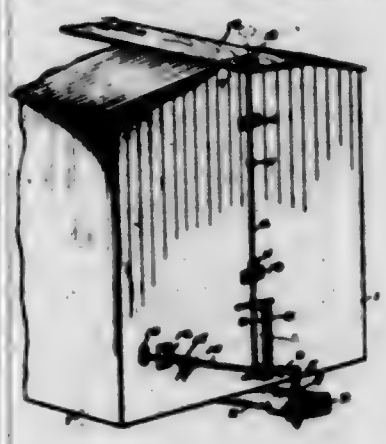


5. A valve comprising, in combination, a casing having a bore and a valve seat disposed at one end thereof, a member movable within the bore toward and from the valve seat, the end of said member adjacent the valve seat having a recess, a cylindrical valve plug fitting loosely within the recess and having its opposite ends correspondingly tapered inward from the diameter of the plug, the valve plug and member having aliining apertures, a pin fitting loosely within said apertures and retained therein by the wall of the bore, a pivotal member carried by the casing, and an actuating member removably carried thereby and having a portion extending into the casing for inter-engagement with the aforesaid member thereby to actuate the member and retain the same against withdrawal from the bore.

1,298,669. UNCOUPLING DEVICE. LUELLA CORNELL, Toledo, Ohio. Filed Jan. 13, 1919. Serial No. 270,937. 1 Claim. (Cl. 213—59.)

In an uncoupling device, a draw bar, a coupling pin located in the draw bar, an angular rod supported on the end of the car the body portion of the rod extending vertically along the end of the car and the laterally extending portion of the rod extending over a coupling pin, means connecting the coupling pin with the laterally extending portion of the rod, guide members located on each side of the laterally extending portion of the rod and at a point remote from the end of the car, the rod having

adjustable collars for limiting the movements of the rod and the pin relative to the draw bar and so located as to



prevent the withdrawal of the lower end of the pin out of the draw bar.

1,298,670. CHEWING-GUM. STUART W. CRAMER, Charlotte, N. C. Filed June 11, 1915. Serial No. 33,494. 8 Claims. (Cl. 99—11.)

1. A chewing gum having incorporated therein caffein in such an amount that pieces of said gum suitable for chewing will each contain an amount of caffein sufficient to produce approximately the bracing effect equal to that obtained from a cup of coffee.

2. A chewing gum having incorporated therein citrate of caffein.

3. A chewing gum having incorporated therein caffein.

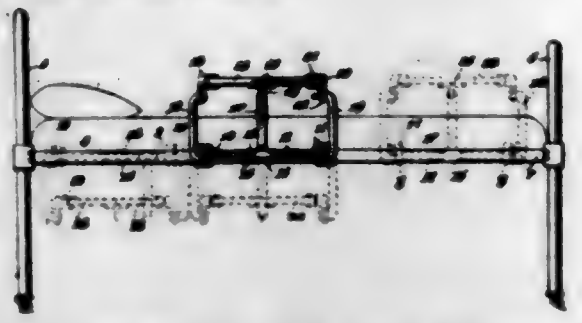
1,298,671. VENTILATOR. FRANK E. CRAMPTON, Cleveland, Ohio. Filed Oct. 4, 1917. Serial No. 194,641. 4 Claims. (Cl. 98—3.)



3. In a ventilator, a funnel, a shell arranged longitudinally within the funnel in spaced relation thereto forming an air passage between the two, the shell having an open end and a closed end, the open end of the shell terminating short of the open end of the funnel, a neck extending from the shell through the wall of the funnel for establishing communication from the outside to the inside of the shell, the wall of the shell being provided with openings near its open end, the openings being tapering and larger near the open end of the shell, pockets covering said openings, the pockets being inclined from the inner side of the funnel to the outer side of the shell, and the larger ends of the pockets being open for receiving air entering between the funnel and the closed end of the shell, substantially as described.

1,298,672. BED-TRAY AND DRESSING-TABLE. CLYDE DAVIS and CHARLES E. HARDING, Sioux Falls, S. D. Filed Feb. 23, 1918. Serial No. 218,524. 5 Claims. (Cl. 45—62.)

1. A tray and dressing table, which comprises spaced supports rotatably connected with the rail of a bed, a slidable article supporting member mounted in guides carried by the supports, means for limiting the travel of the supporting member, means for retaining said member in a plurality of positions, and a rotatable brace extending beneath the supporting member and operatively connected with the spaced supports, said member being supported horizontally in each position.



2. A tray and dressing table, which comprises clamps adapted to be connected with the rail of a bed, spaced supports rotatably mounted in the clamps, said supports being rotatable in a vertical plane, guide elements rotatably connected to and carried at the free ends of the supports, a supporting member slidably mounted in the guides, stops for limiting the movement of the member in the guides, locking means for preventing rotation of the guide elements, and a rotatable arm serving as a support and lock for the slidable supporting member coöperatively connected with the clamps, the rotatable mounting of the supports permitting the supporting member to be positioned over the bed and beneath the bed in a horizontal plane.

4. A bed tray and surgical dressing table, which comprises spaced clamps adapted to be removably secured to the rail of a bed, a bar extended therebetween, a support rotatably mounted in each clamp and capable of swinging in parallel vertical planes, guides rotatably mounted adjacent the upper ends of the supports for movement in vertical planes independently of the movement of the supports, an arm rotatably mounted on the bar and provided with an engaging end, a supporting member slidably mounted in the guides adapted for coöperation with the engaging end of the arm when in a plurality of positions, spaced stops on the supporting member for limiting the travel of said member, means carried by the guides for preventing their rotation on the support, said supports upon rotation being adapted to position the supporting member in a spaced relation to the upper surface of the bed in an operative position or spaced beneath it in an inoperative position.

1,298,673. DENTAL PLATE. CARLO DE-FELICE, New York, N. Y. Filed Dec. 27, 1915. Serial No. 68,654. 1 Claim. (Cl. 32—4.)

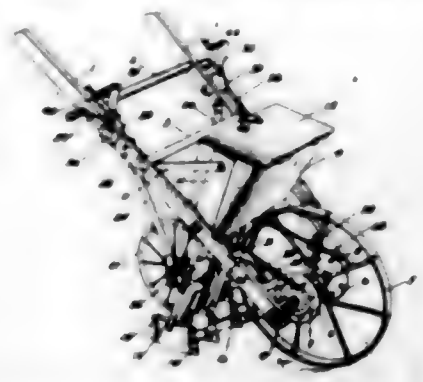


A dental plate comprising a teeth holding portion adapted to be mounted around the gums, suction means around the edges of said teeth holding portion, and a bridge portion comprising a suction cup and arms connecting said suction cup to said teeth holding portion.

1,298,674. WALKING DRILL OR PLANTER. JOSEPH DICARLO, Kalamazoo, Mich. Filed Aug. 8, 1918. Serial No. 248,848. 8 Claims. (Cl. 111—52.)

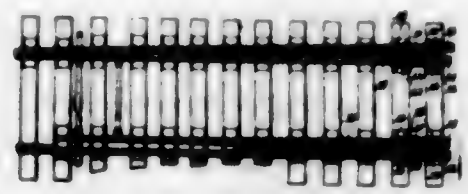
4. In a walking planter or drill, the combination of a main wheel, an axle therefor, a frame provided with handles, a hopper mounted at the rear of said main wheel, furrow openers, grain chutes, feed mechanisms, tappet disks mounted on each side of said main wheel provided with laterally projecting tappet pins, tappet bars connected to said feed mechanism and adapted to coact with said tappet pins, return springs for said feed mechanisms, adjustable supports on which the front ends of the tappet bars are slidably mounted, adjusting levers for said supports mounted at the rear of the hopper and

provided with detents, and links connecting said supports to said levers whereby said supports may be inde-



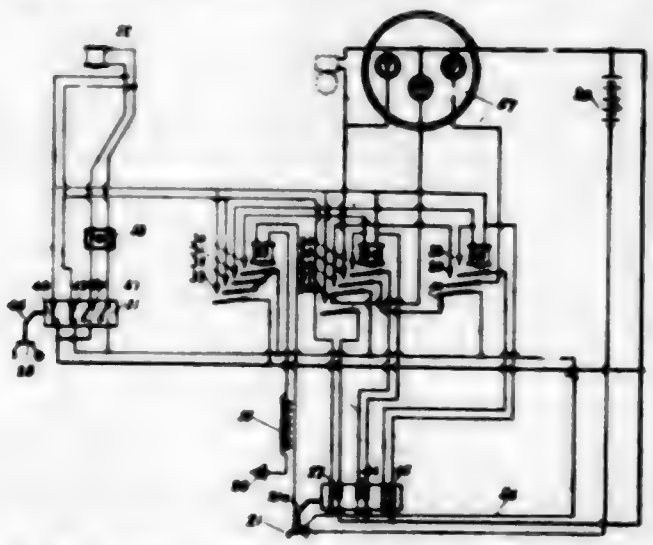
pendently adjusted to swing the tappet bars to and from their operative positions.

1,298,675. RAIL-JOINT. JOHN DOBROWOLSKI, Chicago, Ill. Filed May 6, 1918. Serial No. 232,778. 6 Claims. (Cl. 246—435.)



1. The combination of a stationary rail; a switch tongue arranged in alinement with said rail; and resilient means extending between and connecting said rail and tongue for yieldingly holding the latter in a fixed position, substantially as described.

1,298,676. TRAIN-CONTROL SYSTEM. ADIEL YEAMAN DODGE, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 815,010. 17 Claims. (Cl. 246—182.)



1. In a train control system, the combination with a plurality of signals, of a plurality of ramps forming distant and home signal points, a member carried by the train, and adapted to make contact with said ramps, a circuit breaker mechanically operated by said member, an open circuit relay in series with said member and actuated at every live ramp, and a plurality of self retaining relays excited by said first mentioned relay and coöperating to operate said signals, said self retaining relays being deenergized, by said circuit breaker under desired conditions.

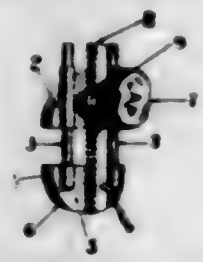
5. In a train control system, the combination with a normally closed circuit including an electromagnetic train stop, of proceed, caution and danger signals, a plurality of ramps forming distant and home signal points, a member carried by the train and adapted to make contact with said ramps, a circuit breaker mechanically operated by the displacement of said member by said ramps, means including said circuit breaker for causing the proceed signal to be given at every live distant ramp and the caution signal at every dead distant ramp, said home ramps being arranged to break said normally closed circuit, means including said circuit breaker for causing the danger signal to be displayed if said ramp is dead, the break in the circuit causing the stop to operate, and a branch circuit to maintain said stop magnet energized and to cause the proceed signal to be displayed if said ramp is alive.

9. In a train control system, the combination with a normally energized electromagnetic train stop, of means for breaking the normal circuit of said stop at desired times, a speed controlled device, and two pair of contact members associated therewith and included in the operating circuits of said stop magnet, one pair of said contacts being closed to retain said magnet energized as long as the train travels at speeds between a predetermined maximum and minimum, and the other pair being closed likewise to retain said magnet energized while the train travels at speeds below said minimum.

11. In a train control system, the combination with a plurality of ramps forming distant and home signal points, of a member carried by the train and adapted to make contact with said ramps, means for causing a proceed signal to be displayed when a distant ramp is electrically alive, and a caution signal when said ramp is dead, means for causing a proceed signal to be displayed when a home ramp is alive and danger signal when it is dead, and means for automatically stopping the train when said danger signal is being displayed if the speed of the train exceeds a predetermined maximum.

16. In a train control system, the combination with a plurality of ramps forming distant and home signal points, of a member for engaging said ramps, a circuit breaker operated by the displacement of said member, a normally closed circuit, including an electromagnetic train stop, broken at every home ramp, a relay energized at every energized distant ramp, two other relays energized by said first relay to display a proceed signal, means whereby said first named relay is deënergized and said last named relays remain energized after a distant ramp is passed, a normally open circuit for said electromagnetic train stop closed by said first named relay when said normally closed circuit is broken at a home ramp, if the latter is energized, means whereby one of said two relays opens if a distant ramp is dead to display a caution signal, and means whereby all three relays are deënergized at a dead home ramp, thereby to display a stop signal and to operate said automatic stop.

1,298,677. RIM-STRETCHER. CHARLES W. DOLLSCHECK, Philadelphia, Pa., assignor of one-half to Marcus Rothschild, Philadelphia, Pa. Filed Oct. 31, 1917. Serial No. 199,421. 4 Claims. (Cl. 81—3.)

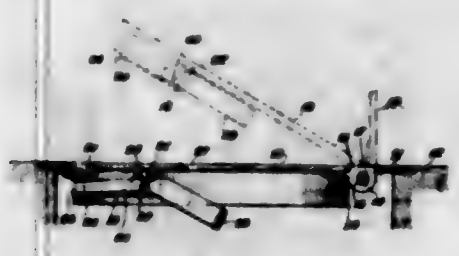


1. A rim stretcher comprising a wheel-like form having a circular flange at one side, divided diametrally into two sections, guides slidably connecting the sections and turning means for separating the sections.

1,298,678. COVER. ABRAHAM DRUIEN, New York, N. Y. Filed Nov. 15, 1918. Serial No. 262,691. 2 Claims. (Cl. 94—36.)

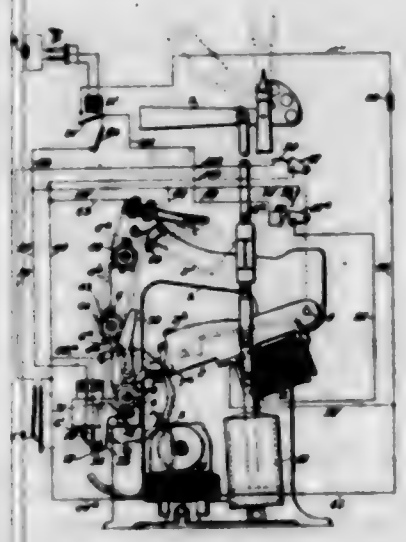
1. The combination with a casing of a cover hinged thereto and having a key opening therein, an overweighted

arm pivoted on the underside of the cover and formed in a loop disposed beneath said key opening in operative relation thereto, to be engaged by a key inserted through



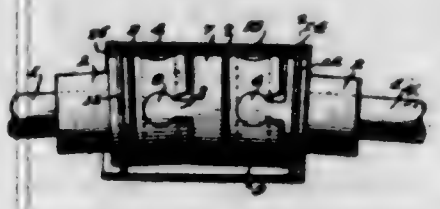
said opening, and a locking element adapted to be operated by the weight of said overweighted arm to engage said casing and interlock therewith.

1,298,679. RAILWAY-SIGNAL. CHARLES W. DUNHAM, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 115,162, filed Aug. 16, 1916. This application filed June 6, 1918. Serial No. 238,560. 10 Claims. (Cl. 246—242.)



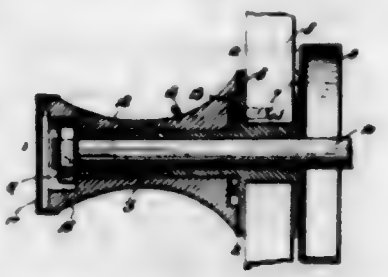
1. In combination, a signal biased to one position, an arm operatively connected with said signal, a motor, a chain operated by said motor and having a projection adapted to engage said arm to move the signal to another position whereupon the projection passes out of the path of the arm, a latch for catching and holding said arm as the projection leaves the arm, and means controlled by said chain for deënergizing said motor after the projection has passed out of the path of the arm.

1,298,680. FLEXIBLE COUPLING. JOHN R. DUNHAM, New Brunswick, N. J. Filed Feb. 16, 1918. Serial No. 217,586. 5 Claims. (Cl. 64—30.)



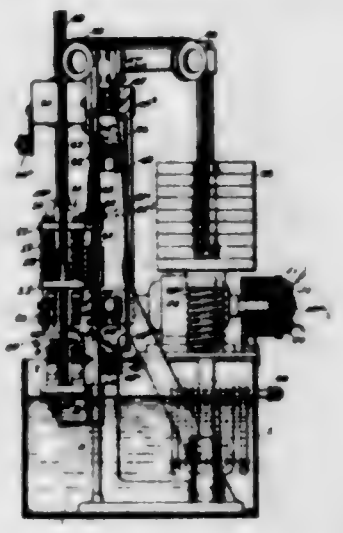
1. A device of the class described comprising male units, a rib provided upon each end of each unit, female units provided with a groove in each end thereof, said ribs of the male units adapted to be received in the grooves in the female units and said ribs being adapted to interlock with one another in the female units.

1,298,681. HAULING ATTACHMENT FOR AUTOMOBILES. HENRY EWOLDT, Grand Island, Nebr. Filed Nov. 8, 1918. Serial No. 261,685. 2 Claims. (Cl. 242—86.)



1. The combination with the drive-wheel hub of a motor vehicle and its axle shaft; of a winding drum loosely mounted on the hub body, a pawl-and-ratchet driving connection between the hub and the drum, and a retaining member for the hub carried by the outer end of the axle shaft, said member being opposite the outer end of the drum for holding the drum on the hub body.

1,298,682. APPARATUS FOR SHAPING AND TEMPERING METAL. THOMAS J. FAY, Brooklyn, N. Y., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 11, 1915. Serial No. 44,875. 31 Claims. (Cl. 266—6.)



1. A plate forming device comprising a pair of opposed relatively movable members each member comprising a pair of laterally spaced plates having their edges suitably shaped, a grid at one side of one of the plates of one of said members, and a grid at one side of the opposite plate of the other member.

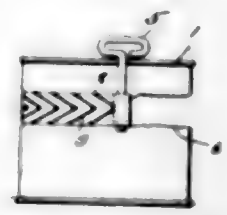
3. In an apparatus of the character described, the combination of a plate forming device comprising laterally spaced clamping members adapted to engage an interposed plate along lines substantially parallel with the length of the plate, and controllable means for discharging a quenching liquid between opposite ends of the clamping plates and longitudinally of the members clamped therebetween.

16. In an apparatus of the character described, the combination of plate clamping and forming means, a quenching tank, means for immersing a plate clamped by said means in the liquid in said tank, means operative by the immersing movement for automatically controlling the period of immersion of the plate in the liquid in the tank, and means whereby such quenching period may be varied.

31. In an apparatus of the character described, the combination of a plate forming member, a quenching-liquid member, means connected with one of said members whereby the plate-forming member will be placed in operative relation to the quenching-liquid member, means for automatically breaking the driving connection be-

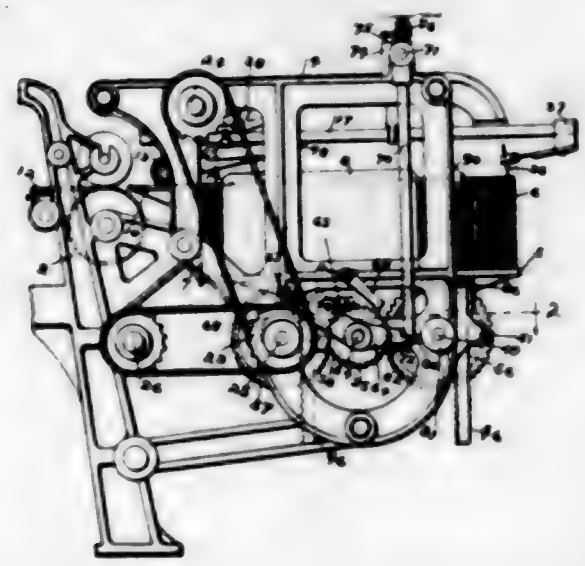
tween the driven member and its operating means, means for thereafter operating the driven member in the reverse direction, and means for thereafter automatically breaking the driving connection between the driven member and its operating means.

1,298,683. CAN-CLOSURE. CLARK E. FINCH, West Palm Beach, Fla. Filed Aug. 28, 1918. Serial No. 251,787. 1 Claim. (Cl. 220—69.)



A can closure, including a can body, a strip formed in the can body and adapted to be tron from the body to open the can, and scorings arranged diagonally of the strip.

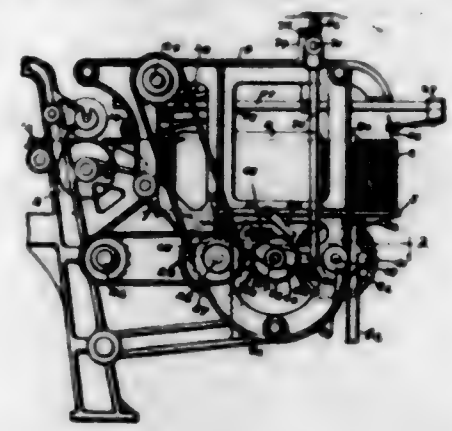
1,298,684. PAPER-FEEDING MECHANISM. HERMANN O. FISCHER, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 6, 1917. Serial No. 141,022. 7 Claims. (Cl. 271—62.)



1. In a sheet feeding mechanism, the combination with a table for supporting a stack of sheets and means for feeding the sheets from the top of the stack one at a time, of power driven mechanism constructed and arranged to elevate said table step by step, means acting automatically to throw said mechanism into and out of operation in response to changes in the height of the top of said stack, and additional means constructed and arranged to render said mechanism inoperative when said table has been raised to substantially a predetermined height.

1,298,685. PAPER-FEEDING MECHANISM. HERMANN OTTO FISCHER, Springfield, Mass, assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Original application filed Jan. 6, 1917, Serial, No. 141,022. Divided and this application filed June 19, 1918. Serial No. 240,760. 7 Claims. (Cl. 271—43.)

1. In a sheet feeding mechanism, the combination with a support for a stack of sheets, of a reciprocating feeder operative by frictional engagement with the topmost sheet in the stack to feed the sheet forward, a spring having one end connected to said feeder and acting to press the feeder against the topmost sheet in the stack, a movable member supporting the other end of said spring, and a part in the path of movement of said member op-



erative to move the member in a direction to tension said spring while the feeder is near the rearward limit of its stroke.

1,298,686. HEAD-MIRROR. WILLIAM G. R. FLANDERS, Burlington, Vt. Filed Apr. 23, 1917. Serial No. 163,915. 3 Claims. (Cl. 88—22.)



1. The combination with a light reflector having a peep opening; of a circular plate smaller than said reflector and turnably supported at its axle on the reflector, said plate having a plurality of spaced concentrically arranged openings therethrough adapted to be successively brought into alinement with the opening of the reflector, one of said openings being unobscured and lenses in the remaining openings, of different values.

3. In a head mirror, the combination with a concavo-convex disk having a reflecting surface on its concaved side and having a central peep opening, said disk comprising the usual head reflector adapted to be supported on the head at the back or convexed side thereof, and having an internally threaded collar between said peep opening and the peripheral edge thereof at the back portion, a circular plate of smaller diameter than the disk and having an opening at the axis thereof adapted to engage said collar for turnably supporting the plate, said plate having spaced concentrically arranged openings therein adapted to aline with the central peep opening of the disk when the plate is turned, one of said openings being unobscured and the other openings having lenses mounted therein, and a thumb screw engaged with the screw threads of said collar to retain the circular plate in a desired position on the disk.

1,298,687. PIPE-COUPLING. VAL F. FRANCK, Louisville, Ky. Filed June 21, 1918. Serial No. 241,178. 1 Claim. (Cl. 285—86.)

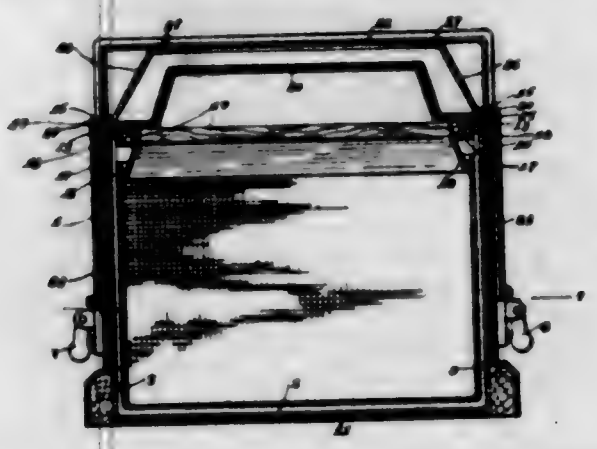
In a pipe coupling, the combination of a soft metal pipe having an annular flange extending outwardly at right angles thereto, the inner portion of said pipe being beveled outwardly contiguous to the base of said flange, a ferrule including a neck having an enlarged externally threaded portion thereon, said neck projecting beyond

said enlarged portion and being externally beveled to be reduced toward its end, said neck being engaged with the beveled portion of said pipe, whereupon said flange will bear upon said enlarged portion and terminate slightly short of the threaded portion of said enlarged portion, a hard metal bearing ring having an outwardly extending flange on one end engaging the flange of the soft metal pipe, a collar having threads formed internally and terminating short of one end thereof thus having a slight unobstructed inner surface, a rib formed on said collar at



the outer end of the unobstructed surface, said rib engaging said ring, while said collar is being screwed into engagement with the enlarged threaded portion of said neck, thus drawing said ring toward the enlarged threaded portion whereby the ring will be drawn nearer to the beveled surface of said neck to tightly jam the soft metal of said pipe and flange along the beveled portion of said neck, while excess metal of said flange of the soft metal pipe may pass toward the unobstructed surface of said collar thus forming a liquid tight joint.

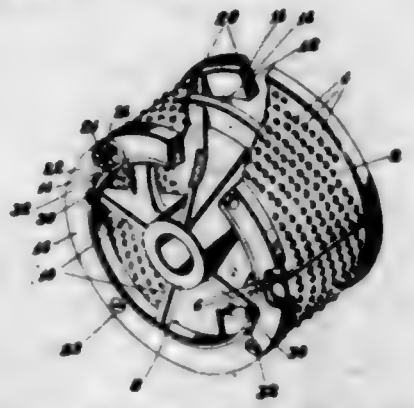
1,298,688. COMBINED CASKET AND GRAVE-VAULT. JOSEPH W. FREEMAN, Columbus, Ohio, assignor of one-half to Colonel E. Bright, Columbus, Ohio. Filed July 24, 1916. Serial No. 110,859. 2 Claims. (Cl. 27—7.)



1. A combined casket and grave vault comprising a casket body, a lid thereon, smaller than the top of said body to thereby form a peripheral shoulder around said body, and a hood having depending sides and ends and an open bottom to be placed in position over the outside of the casket body, said sides being formed with an inward bend adjacent their tops to form a coöperating shoulder and then bent upwardly and a top adapted to rest upon the upwardly bent sides of said hood.

2. A combined casket and grave vault comprising a casket body, a lid thereon smaller than the top of said body to thereby form a peripheral shoulder around said body, and a hood having depending sides and ends and an open bottom to be placed in position over the outside of the casket body, the top portion of said hood being of corrugated material and the depending sides and ends lying adjacent the sides and ends of the casket body being of flat material, the sides being formed with an inward bend where the top joins them to form a coöperating shoulder and then an upwardly inclined bend to rest against the underside of the corrugated top.

1,298,689. ABRADING DEVICE. JOSEPH BROOKS GILBERT, Beverly, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 17, 1918. Serial No. 245,316. 10 Claims. (Cl. 12—68.5.)



1. In a device of the class described, the combination with a rotatable support and an abrading strip encircling said support, of a holding ring having a flange to encircle the marginal edge of said strip, the support having a lateral surface against which the ring abuts when in holding position, a member on the support constructed and arranged to overlap a portion of the outer lateral surface of the ring and spaced from said lateral surface of the support a distance substantially equal to the width of the abutting portion of the ring, the ring having a recess arranged to register with said member in one position of the ring to permit the ring to be moved axially of the support into or out of holding position, coöperating screw holes formed respectively in the ring and the support and arranged to register only when the ring has been turned to displace said recess from said member, and screws constructed to be applied in said holes to secure the ring in place.

5. In a device of the class described, the combination with a rotatable support, of an abrading strip encircling said support, a detachable ring for holding said strip in position, locking and releasing devices substantially at opposite sides of the axis of said support and each operative independently of the other to prevent the ring from turning except when fully advanced to holding position, and means constructed to secure the ring in place only after the ring has been turned from the position which it occupies as it is moved into holding position.

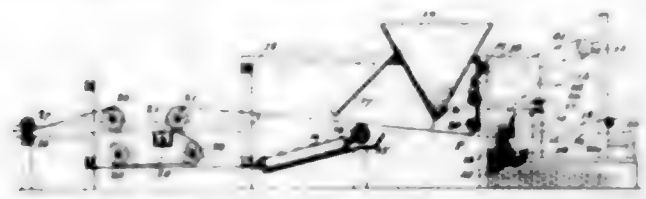
7. In a device of the class described, the combination with a substantially cylindrical abrading strip and a rotatable support for said strip, of a holding member having a portion constructed to encircle substantially the marginal edge of said strip, locking and releasing means constructed to permit said member to be moved axially of the support into or out of holding position and to prevent said member from turning until after it has been fully advanced to holding position, and means constructed to secure the member in place only after it has been turned from the position which it occupies as it is moved into holding position.

10. In a device of the class described, the combination with a rotatable support and an abrading strip encircling said support, of a member having a substantially annular flange to overlie the marginal edge of said strip, means for detachably securing said member in operative position, and means constructed to prevent the application of said securing means if any portion of the marginal edge of the strip is improperly positioned relatively to the flange of said member.

1,298,690. MECHANISM FOR PRODUCING ROOFING MATERIAL. SOLOMON H. GOLDSMITH, Chicago, Ill., assignor to The West Coast Roofing and Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Dec. 20, 1912, Serial No. 738,612. Divided and this application filed May 25, 1914, Serial No. 840,854. Renewed Aug. 5, 1918. Serial No. 248,461. 10 Claims. (Cl. 154—39.)

1. In machinery for coating roofing material, the combination of means for supporting the roofing material and

for causing travel thereof, means for applying adhesive substance to one surface thereof, a receptacle for surfacing material, a pattern roll disposed before said surfacing material receptacle and after said means for applying the adhesive substance, means for effecting unrolling of said pattern rolls at a rate corresponding to the rate of travel of said roofing material whereby said pattern material is progressively applied to the sticky surface of the coating material and whereby surfacing material as fed from said receptacle will adhere only to exposed sticky areas of said roofing material.



4. In machinery for surfacing a strip of roofing material, the combination of means for propelling the roofing material strip, means for feeding surfacing material to said roofing length, means in advance of said surfacing material feeding means for coating the surface of said roofing strip with adhesive substance, a supporting structure between said surfacing material feeding means and said adhesive substance applying means, a continuous pattern strip supported on said structure, means for effecting progressive feed of said pattern strip to the adhesive surface of said roofing strip whereby nonadhesive lines or areas are interposed between said adhesive surface and the surfacing material applying means and whereby the surfacing material will adhere only to the exposed adhesive surfaces, and means for controlling the feed of said pattern strip.

6. In machinery for surfacing a strip of roofing material, the combination of means for propelling the roofing material strip, means for feeding surfacing material to said roofing length, means in advance of said surfacing material feeding means for coating the surface of said roofing strip with adhesive substance, a supporting structure between said surfacing material feeding means and said adhesive substance applying means, a continuous pattern strip supported on said structure, means for effecting progressive feed of said pattern strip to the adhesive surface of said roofing strip whereby non-adhesive lines or areas are interposed between said adhesive surface and the surfacing material applying means and whereby the surfacing material will adhere only to the exposed adhesive surfaces, means for adjusting the rate of feed of said pattern strip to conform with the rate of travel of said roofing material, and means for effecting bodily adjustment of said supporting structure to enable transverse adjustment of said pattern strip and accurate alinement thereof with said roofing strip.

9. In a machine for making ornamental flexible roofing material, the combination with means for applying a coating of adhesive material to a sheet of backing material, of means for delivering a pattern sheet to the adhesive surface of the backing material, and means for applying surface material to the portions of the adhesive surface intermediate the portions covered by said pattern sheet.

10. In a machine for making ornamental flexible roofing material, the combination with means for applying a coating of adhesive material to a sheet of backing material and means for supplying surfacing material to the adhesively coated surface of the backing material, of means for delivering a pattern sheet to the adhesively coated surface of the backing material for preventing the surfacing material adhering to portions of the coated surface of the backing material corresponding to the pattern sheet.

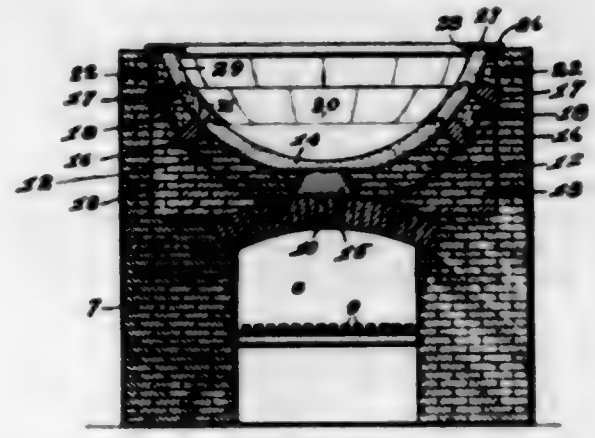
1,298,691. HOSE-SUPPORTER. ROBERT BALIS GOLDMON, Hineston, La. Filed June 28, 1918. Serial No. 242,402. 2 Claims. (Cl. 241—6.)

1. In a hose supporter, the combination with a triangular wire frame having means at its lower angle for attachment to the hose, and means connected with its upper angles for attachment to the limb; of a triangular fabric sheet covering the frame and having hems embracing its several side bars, the lower edge of the sheet being cut off above the hose-attaching means.



2. In a hose supporter, the combination with a triangular frame having a hook at one upper corner, a loop at the other upper corner, and a notch at its lower corner, and a triangular fabric sheet sewed on said frame excepting at its several corners; of an elastic sewed into said loop and adapted to be passed around the leg, and a ring carried by the free end of the elastic and adapted to be engaged by said hook.

1,298,692. ZINC-KETTLE. JOHN G. GRANBERG, Beckemeyer, Ill. Filed Mar. 11, 1918. Serial No. 221,679. 4 Claims. Cl. 263—11.)



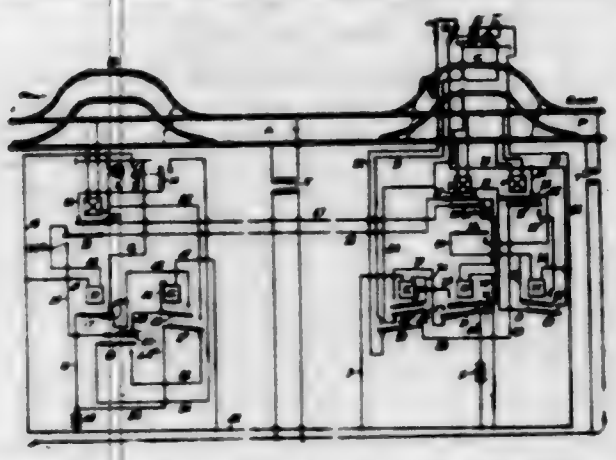
1. A zinc kettle comprising a supporting wall, a combustion chamber, an arch provided with openings positioned above the combustion chamber, a division wall mounted on said arch, two circular rows of supporting walls, having a heat passage between them, mounted above said arch, and a receptacle of ceramic material mounted on said supporting walls.

3. A zinc kettle comprising a dish shaped bottom section made out of ceramic material, a top section composed of a series of interlocking tongue and groove sections, an intermediate section likewise composed of a series of tongue and groove sections, the top, intermediate and bottom sections when assembled forming a bowl shaped kettle, a metallic ring provided with a depending flange mounted on the top edge of the top section, and a support for said assembled section comprising a series of circular walls spaced apart and formed of fire proof material, and a support for said circular walls.

1,298,693. RAILWAY SIGNALING. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 4, 1912. Serial No. 681,606. 13 Claims. (Cl. 246—39.)

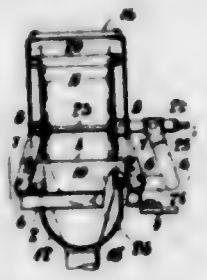
1. In combination, a stretch of railway track, a signaling device adjacent one end of the stretch, a track relay normally energized but opened by the presence of a car or train in the stretch adjacent the said end, and relay including a front and a back contact, a relay controlled by the front contact of the said track relay, and having a front contact which, when the relay is de-

energized by the opening of the track relay, remains closed until after the back contact of the track relay has closed, a caution indication relay for the control of the signaling device, an energizing circuit for the caution relay including the back contact of the track relay and the said front contact of the second relay whereby when a car or train enters the stretch from the said end the caution indication relay is energized during the interval



between the opening of the track relay and the opening of the second named relay, means controlled by the second named relay for holding the caution indication relay energized as long as the second named relay remains open, and means controlled by the entrance of a car or train upon the stretch from the opposite end for opening the second named relay but not closing the caution indication relay.

1,298,694. TEAT-WORKING MECHANISM OF MILKING-MACHINES. CARL JACOB JOHAN HÄGG, Stockholm, Sweden. Filed Mar. 25, 1918. Serial No. 224,589. 9 Claims. (Cl. 31—96.)



1. A milking machine comprising a pair of removable teat-engaging members capable of occupying one extreme position wherein they are in parallelism, an intermediate position wherein they are disposed in convergent relation, and another extreme position which is determined by the shape of the teat and means for successively actuating said members to the three different positions.

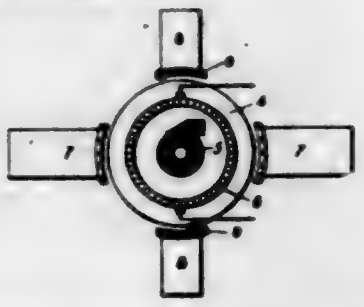
3. A milking machine comprising a pair of teat-engaging members biased to predetermined positions and pivotally mounted for swinging movement in opposite direction against their bias, and means for actuating said members simultaneously.

5. A milking machine comprising a pair of teat-engaging members pivotally mounted at a plurality of points and biased to predetermined positions, and mechanism for actuating said members against their bias to first grip the root of a teat and to then successively compress the teat from its root to the outer end thereof, and to simultaneously increase the grip of the members on the root.

1,298,695. DAMPING DEVICE FOR DYNAMO-ELECTRIC MACHINES. FLOYD T. HAGUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 29, 1915. Serial No. 69,255. 6 Claims. (Cl. 171—123.)

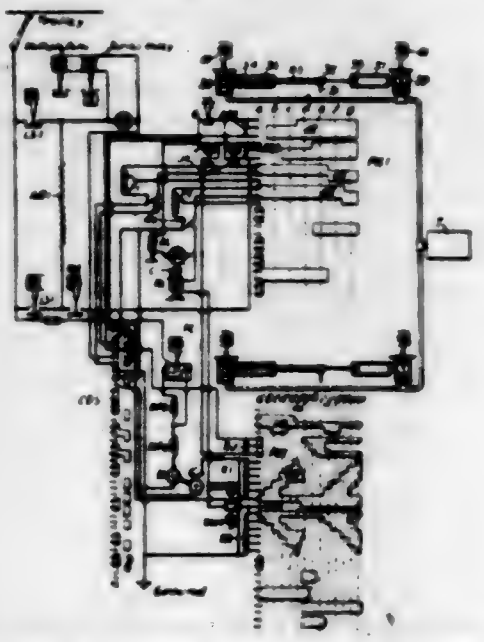
1. The combination with a dynamo-electric machine, of damping means associated therewith and comprising a plurality of superposed sheets of conducting material substantially covering a pole face thereof.

2. The combination with a dynamo-electric machine provided with cross-field poles, of damping means associated therewith and comprising a continuous body of conducting material substantially covering the face of one of said cross-field poles.



6. The combination with a rotary converter provided with commutating interpoles, of means for neutralizing the pulsating armature reaction flux at all points under said interpoles.

1,298,696. SYSTEM OF CONTROL. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 4, 1916. Serial No. 70,261. 15 Claims. (Cl. 172—179.)



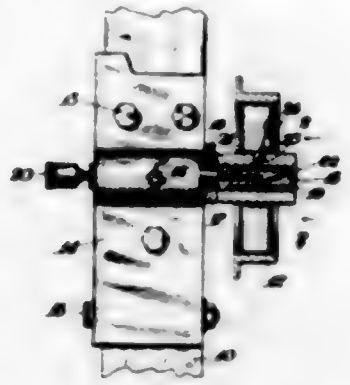
1. In a system of control, the combination with a supply circuit, and a plurality of dynamo-electric machines adapted for both acceleration and regeneration, of plural-position, power-operated means for arranging certain circuits in accordance with the one or the other machine operation, a plurality of switching means for acting in selected conjunction with said power-operated means to complete said circuits, a single means for governing said power-operated means and said switching means, and means for preventing one type of operation of said machines when said power-operated means occupies a non-corresponding position.

5. In a system of control, the combination with a supply circuit, and a plurality of dynamo-electric machines adapted for both acceleration and regeneration, of a plural-position, electrically-controlled switching device for arranging certain machine circuits in the one or the other position in accordance with the one or the other machine operation, a plurality of supply-circuit-connecting switches, an accelerating resistor adapted to be short-circuited by the simultaneous closure of said switches, means for successively closing said switches during the initial accelerating period, and means associated with said switching device for effecting the simultaneous closure of said switches during the initial regenerative period.

10. In a parallel-series system of regenerative control, the combination with a supply circuit, and a plurality of

dynamo-electric machines adapted for both acceleration and regeneration, of a plurality of field-regulating resistors, step-by-step means for gradually excluding said resistors from circuit during both parallel and series regeneration in accordance with predetermined main-circuit-current conditions, contact means associated with said step-by-step means for effecting the actuation thereof independently under predetermined conditions, and means for permitting said independent actuation only when said machines are connected in series relation.

1,298,697. BEARING. FRANK HAMACHEK, Kewaunee, Wis. Filed June 6, 1918. Serial No. 238,585. 6 Claims. (Cl. 64—39.)



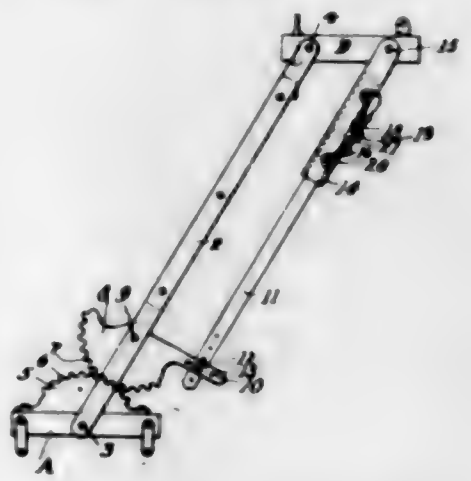
6. A bearing for supporting-rollers of pea separator drums and the like, comprising a bracket member having an opening, a pin removably fitting within the opening and provided with a reduced portion forming a race-way, a supporting-roller mounted on the pin with its hub surrounding the race-way, bearing rollers in the raceway, a grease cup threaded in one end of the pin, there being a passageway through the pin leading from the grease cup and terminating in an opening leading to the raceway, an inclined passageway through the other end of the pin communicating with said opening through which a solvent may be injected into the bearing, the hub of said supporting roller being provided with an opening leading from the raceway through which the solvent may be ejected from the bearing, and a screw plug fitting in the last mentioned opening.

1,298,698. AUTOMATIC COUPLING. PAUL HANSMANN, Long Prairie, Minn. Filed Apr. 23, 1917. Serial No. 163,892. 3 Claims. (Cl. 21—137.)



1. The combination with a plurality of vehicles and a coupling between said vehicles consisting of an extension projecting rearwardly from one vehicle and having two spaced pivots operative in a horizontal plane, a coupling connection journaled at one end in said pivots and located between the rear end of said extension and the next rear vehicle and pivotally connected at its other end with the latter holding said vehicles normally in relatively offset positions and causing the succeeding vehicle to be swung opposite to the front vehicle in the turning of a corner.

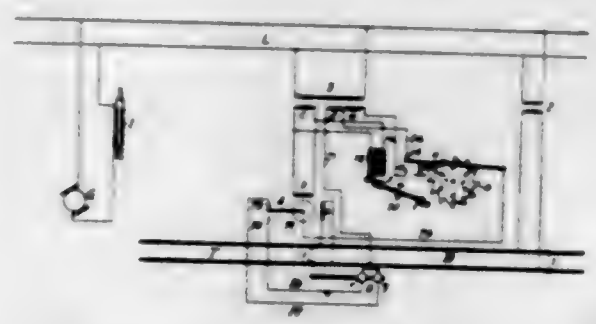
1,298,699. COUPLING MECHANISM. PAUL HANSMANN, Long Prairie, Minn. Filed Apr. 30, 1917. Serial No. 165,573. 4 Claims. (Cl. 21—137.)



1. In combination with vehicles arranged in series, a draft member connecting said vehicles, said draft member being pivotally connected with each vehicle, means for maintaining said draft member in position holding said vehicle relatively off-set consisting of a cross bar member pivotally supported by said draft member, a lever actuatable adjusting connection between one end of said cross bar member and one vehicle and an operative connection between said cross member and the other vehicle.

4. In combination with vehicles arranged in series, a draft member connecting the vehicles and being pivoted to each vehicle, means for controlling the travel of one vehicle from the next consisting of a cross member pivotally supported by said draft member, a lever arm connection between said cross member and one vehicle, lever actuated means for adjusting the length of said connection and a gear tooth connection between said cross member and the other vehicle.

1,298,700. REMOTE-CONTROL MEANS. CLINTON O. HARRINGTON, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 11, 1915. Serial No. 50,183. 7 Claims. (Cl. 246—38.)



1. In combination, a constant voltage transmission line, a track circuit fed from said line, means for temporarily changing the voltage of said line by an amount not interfering with the proper functioning of said track circuit, means controlled by said change of voltage, and a signal controlled by said last-mentioned means and by said track circuit.

1,298,701. MAGNETIC DEVICE. CLINTON O. HARRINGTON, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 13, 1916. Serial No. 103,415. 6 Claims. (Cl. 175—345.)



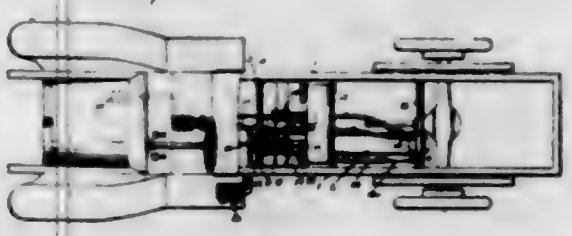
1. A pivoted armature of a required cross sectional area of iron for the passage of flux therethrough, so formed that the iron is largely disposed adjacent the pivotal axis of the armature, whereby the dead weight torque and the moment of inertia of the armature are minimized.

1,298,702. GRAPPLE. JOHN H. HARSHAW, Atkins, Ark. Filed Aug. 3, 1918. Serial No. 248,193. 2 Claims. (Cl. 57—9.)



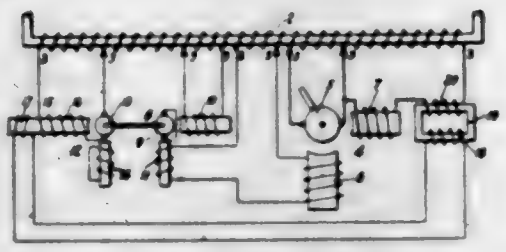
2. A grapple comprising two opposed resilient shanks contacting with and attached to and lying flat against each other at their upper ends, the shanks at their lower ends being formed with inwardly projecting grappling jaws, a spreader disposed between the lower ends of the shanks comprising arms pivoted to each other and at their outer ends pivoted to the lower end portions of the shanks, whereby when the arms are turned into alinement the lower ends of the shanks will be spread apart, the arms being provided with means preventing the movement of said arms beyond a center when the lower ends of the shanks are spread, a bolt passing through the shanks below the point of attachment thereof and having a nut thereon whereby the angle of divergence of the upper ends of the shanks may be adjustably limited, and a sleeve surrounding the shanks just below said bolts and having sliding movement on the shanks when the shanks are shifted toward each other.

1,298,703. AUXILIARY PROPELLER FOR MOTOR-VEHICLES. IRA C. HAVENS, Kalamazoo, Mich. Filed Feb. 11, 1918. Serial No. 216,500. 8 Claims. (Cl. 180—8.)



5. The combination with the chassis of a motor vehicle, of a storage tank, means for supplying air under pressure to said storage tank, a propeller cylinder adjustably mounted on said chassis, a propeller provided with a piston reciprocating in said cylinder, means independent of the operation thereof for raising and lowering said cylinder to and from operative position, a connection for said cylinder to said storage tank, and means for controlling the delivery of air to said cylinder.

1,298,704. SYSTEM OF CONTROL. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 29, 1915. Serial No. 24,736. 7 Claims. (Cl. 172—274.)



1. The combination with a source of alternating current, of an alternating-current motor of the commutating type provided with a main field winding, connections from a portion of said source to the armature of said motor, circuits including both a portion of said source and an auxiliary source of alternating current for energizing said main field winding, and means whereby the voltage supplied by said auxiliary source is increased upon an increase in the motor load.

4. The combination with a source of alternating current, of an alternating-current motor of the commutating type provided with a main field winding, connections from a portion of said source to the armature of said motor, circuits including both a portion of said source and an auxiliary alternating current generator of the commutating type supplying current of like frequency to the main source but differing therefrom in phase, an auxiliary motor for driving said auxiliary generator provided with a differentially wound main field, means for energizing the predominating portion of said main field with substantially constant current, and means for energizing the subordinate portion of said main field in direction and in magnitude in proportion to the main motor current, whereby, upon an increase in the motor load, there results a more nearly complete neutralization of the dominant portion of the auxiliary motor field, a weakening of the resultant auxiliary motor field, an increase in the auxiliary motor speed and auxiliary generator voltage, a strengthening of the main motor field and a decrease in the main motor speed.

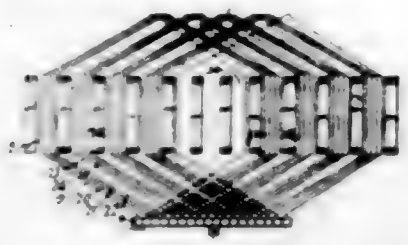
7. The combination with a source of alternating current, of an alternating-current main machine of the commutating type provided with a main field winding, connections from a portion of said source to the armature of said machine, circuits including an auxiliary generating machine for energizing said main field winding, auxiliary dynamo-electric driving means for said generating machine, and means whereby the speed of said driving means is varied in accordance with the main-machine load.

1,298,705. ARMATURE-WINDING. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 4, 1915. Serial No. 32,158. 4 Claims. (Cl. 171—206.)

1. An armature winding having two coils per slot, each coil comprising an even multiple of two turns, three-fourths of said turns traversing a second slot and the remaining turns traversing a third slot.

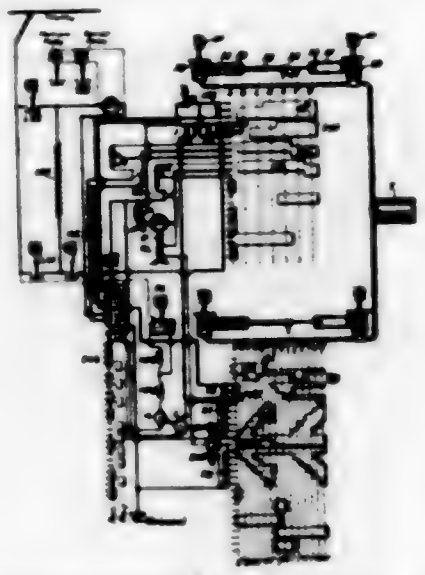
4. In a dynamo-electric machine of the commutator type, the combination with an armature core member provided with m winding slots, of an armature winding mounted in said slots and comprising $4m\ n$ turns, where n is any positive integer, whereby portions of $8m\ n$ turns lie in each slot, the turns having portions lying in any one slot form-

ing a winding group whereof 6m n turns have a pitch of P slots and 2m n turns have a pitch of P + 1 slots, a connection from corresponding portions of each winding to



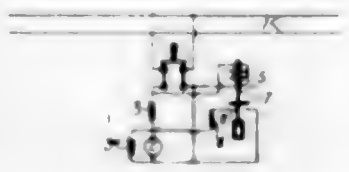
an appropriate segment of the commutator cylinder of said machine, and a brush bearing upon said commutator cylinder of sufficient width to successively short-circuit each of said winding turns.

1,298,706. SYSTEM OF CONTROL. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 9, 1915. Serial No. 44,443. 13 Claims. (Cl. 172—179.)



11. In a regenerative system of control, a plurality of dynamo-electric machines having armature and field windings, unitary means for jointly varying the excitation of said machines in accordance with the line voltage, and means for severally varying the excitation of the machines in accordance with the load current.

1,298,707. ELECTRICAL APPARATUS. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 26, 1913, Serial No. 808,719. Renewed Oct. 30, 1917. Serial No. 199,381. 13 Claims. (Cl. 171—223.)



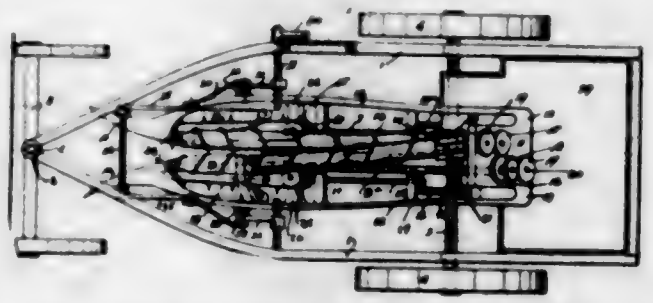
1. The combination with a compound-wound dynamo-electric machine having an armature winding and a main and a shunt field winding, of a translating device and means dependent upon an interruption of current for connecting said device in parallel with the armature winding and in series with the main field winding upon resumption of current.

3. The combination with a dynamo-electric machine having an armature winding and a series and a shunt field winding, of a translating device and means dependent upon an interruption of current for connecting said device in parallel with the armature winding to effect substantially normal flux relations between the armature and the field windings upon a resumption of current.

4. The combination with a supply circuit and a dynamo-electric machine having armature and field windings, of means connected across the supply circuit and dependent upon an interruption of current for temporarily changing the connections of a portion of the machine circuit to maintain substantially normal flux relations between said armature and said field windings upon the resumption of current, and for automatically reverting to the original connections under predetermined subsequent conditions.

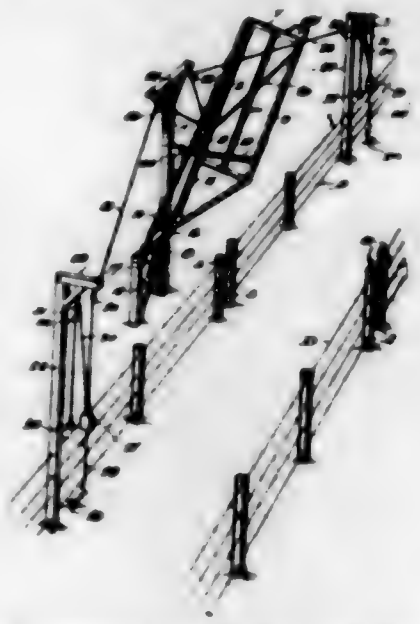
8. The combination with a dynamo-electric machine, of a supply circuit therefor, a translating device, electro-responsive means dependent upon an interruption of current from said supply circuit for inserting said device in circuit relation with the armature winding of said machine, and means including said first means for disconnecting said device after the resumption of current.

1,298,708. BEET-PULLER. OLOF HERMANN, Burlington, Wash. Filed June 20, 1917, Serial No. 175,743. Renewed Jan. 16, 1919. Serial No. 271,508. 3 Claims. (Cl. 55—106.)



1. In a device of the class described, the combination of a wheeled vehicle, side spring members pivotally mounted upon said vehicle frame, a bearing block integral with said side springs, spring guides integral with the free ends of the said side springs, spiraled rollers revolubly mounted intermediate the said bearing block and spring guides and transmission means connecting the said rollers rotatively with the axle of the said vehicle, whereby the rollers are caused to revolve when the vehicle is drawn over the surface of the ground.

1,298,709. GATE-OPERATING MECHANISM. JOSEPH C. HERRMANN, Milwaukee, Wis. Filed July 30, 1918. Serial No. 247,370. 4 Claims. (Cl. 39—64.)

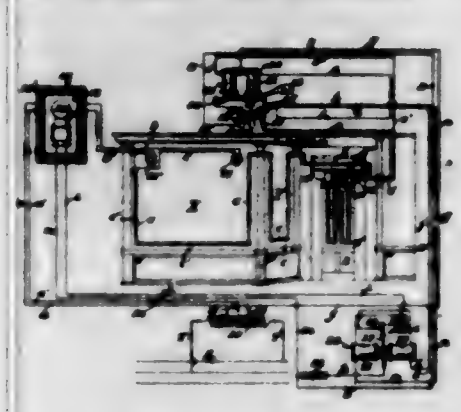


1. A gate operating mechanism comprising a pair of spaced posts, hinges on said posts in horizontal alinement,

a gate body, a rail extending from one end portion of the gate body and secured to one of the hinges, a second rail extending from the other end portion of the gate body divergently with respect thereto toward said first named end portion and projected therepast and secured to the other hinge, means connecting the intermediate portions of the second named rail with the gate body and means for raising and lowering the gate body on said hinges.

8. A gate operating mechanism comprising a pair of spaced posts, a pair of horizontally alined hinges carried by said posts, a gate body, a rail extending from one end portion of the gate body substantially in alinement with the top of the gate and secured to one of the hinges, a diagonal brace bar extending from the bottom of said end portion of the gate body and connected with the first named rail, a rail extending from the upper corner of the other end portion of the gate body divergently with respect to the gate body toward the first named end portion and projected therepast and secured to the other hinge, brace bars extending from the remaining corner portions of the gate body to the intermediate portion of said second named rail and means for raising and lowering the gate body.

1,298,710. BURGLAR-ALARM SYSTEM. SIMON B. HAAS, New York, N. Y. Filed May 17, 1915. Serial No. 28,792. 16 Claims. (Cl. 177—314.)



2. In an alarm system, the combination with public service electric mains, of a resistance connected between two of said mains, two alarm circuits connected to said resistance, separate visible signaling means in each alarm circuit, each normally operative to indicate that its alarm circuit is intact, each visible signaling means being rendered inoperative when its alarm circuit is tampered with, and audible signaling means adapted to be energized when both said alarm circuits are deenergized.

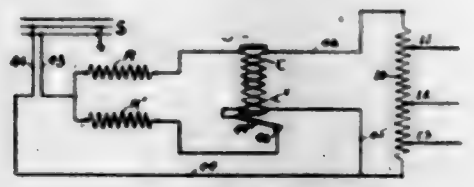
6. In an alarm system, the combination with two alarm circuits of two visible signaling means, each associated with a separate one of said alarm circuits, and an audible signaling means, each of said visible signaling means being normally operative to indicate that the associated alarm circuit is intact and being rendered inoperative when said alarm circuit is deenergized, and said audible signaling means being energized when both alarm circuits are deenergized.

11. In an alarm system, the combination with an alarm signaling means, an alarm circuit controlling said means and adapted to trip said means to cause a continuous alarm, and means for resetting said alarm signaling means, said resetting means comprising an armature associated with said alarm signaling means, an electromagnet therefor, a switch, and a circuit for said electromagnet controlled by said armature and said switch.

12. In an alarm system, the combination with two alarm circuits of an alarm signaling means, said alarm signaling means being energized only when both alarm circuits are tampered with.

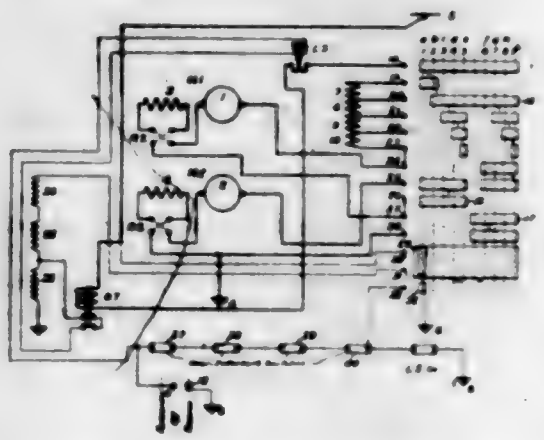
16. In an alarm system, an electric signaling means, a first electromagnet for closing the circuit of said electric signaling means, and a second electromagnet for opening the circuit of said signaling means, each electromagnet being adapted to close the circuit of the other electromagnet and to open its own circuit.

1,298,711. ELECTRIC DISTRIBUTION SYSTEM. SIMON B. HAAS, New York, N. Y. Original application filed May 17, 1915, Serial No. 28,792. Divided and this application filed July 30, 1917. Serial No. 183,482. 8 Claims. (Cl. 175—294.)



1. In an electric system, the combination with electric mains one of which is grounded, of a resistance connected between the grounded main and one of the other mains, work circuits connected to intermediate points on said resistance, and means for automatically disconnecting said mains when said work circuits are grounded.

1,298,712. CONTROL SYSTEM. LLOYD J. HIBBARD, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 2, 1917. Serial No. 151,945. 11 Claims. (Cl. 172—179.)

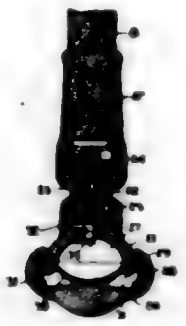


1. In a system of control, the combination with a supply circuit, a motor, a controller for governing the operation of the motor, and a line switch for connecting the motor across the supply circuit, of a plurality of independently operable switch segments for preventing the operation of the line switch under predetermined conditions when the motor is connected for operation in a forward direction, and means for establishing a shunt circuit around said switch segments when the motor is connected for operation in a reverse direction.

4. In a system of control, the combination with a supply circuit, a motor, and a controller for governing the operation of the motor, of a line switch for connecting the motor across the supply circuit and adapted to prevent the acceleration of the motor when the controller is moved rapidly through its first operative position and the motor is connected for operation in a forward direction, and means for permitting the operation of the line switch in any operative position of the controller when the motor is connected for operation in a reverse direction.

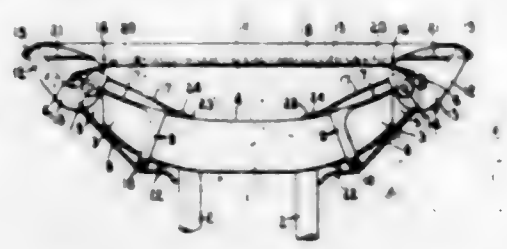
11. In a system of control, the combination with a supply circuit, a motor, a controller for governing the operation of the motor, a reversing switch for reversing the direction of rotation of the motor, and a line switch for connecting the motor across the supply circuit, of a contact segment associated with the controller for establishing an energizing circuit for the line switch in the first position of the controller when the motor is connected for rotation in a forward direction, and a second contact segment associated with the reversing switch for insuring the energization of the line switch in all positions of the controller when the motor is connected for rotation in a reverse direction.

1,298,713. CRUTCH. GEORGE HIPWOOD, Boston, Mass. Filed July 17, 1916. Serial No. 109,634. 1 Claim. (Cl. 16—159.)



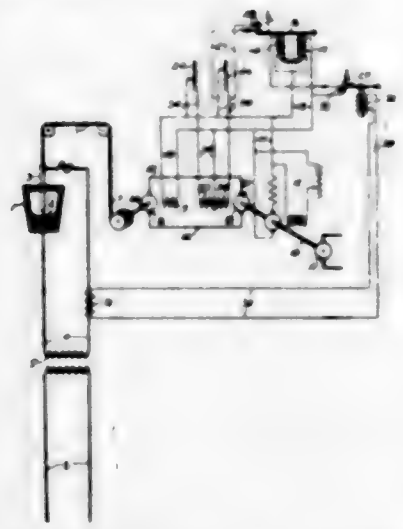
In a crutch the combination with a foot portion of a crutch body, of a tip secured to the foot, and a pneumatic cushion device separate from the tip and interposed between the tip and the foot.

1,298,714. ARM-REST ATTACHMENT FOR CRUTCHES. GEORGE HIPWOOD, Boston, Mass. Filed Jan. 12, 1918, Serial No. 211,529. Renewed Aug. 3, 1918. Serial No. 248,212. 9 Claims. (Cl. 135—52.)



3. In a crutch attachment, the combination with two clip members adapted to be applied to the ends of a crutch head, of a lever pivoted to each clip member, and a longitudinally-resilient arm-supporting member connecting the ends of the levers.

1,298,715. ARC-REGULATING SYSTEM. HARRY HOLLIS, Lebanon, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1917. Serial No. 190,506. 18 Claims. (Cl. 204—64.)



1. In an electric arc furnace, an electrode, means normally active for actuating the electrode, and independent means responsive to variations in the length of the arc for controlling the normally active means.

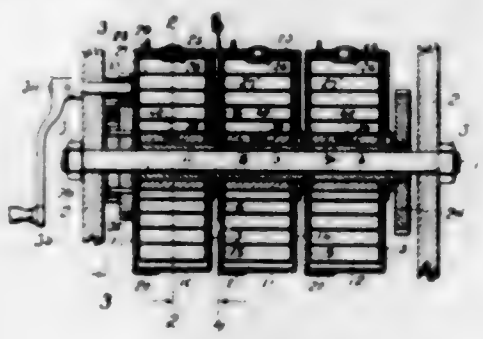
5. In an electric furnace, the combination with a movable electrode and a motor for actuating the electrode, of a differentially-wound generator for supplying power to the actuating motor, and means responsive to the current traversing the electrode for controlling the effectiveness of the windings of the generator.

10. The combination with a movable electrode and a motor for actuating the electrode, of a generator having two windings so connected that, when no current traverses the electrode, the motor is actuated by the generator to move the electrode to its arc-striking position, and means for so neutralizing one of the windings that the electrode is maintained in a predetermined position when current traverses the same.

14. In an electric apparatus, the combination with a movable member and means for actuating said member and normally in operative relation thereto, of governing dynamo-electric means for rendering said actuating means active in accordance with predetermined electrical conditions of said apparatus, said governing means embodying normally balanced controlling means.

18. In an electric furnace, an electrode, a motor for moving the electrode, a generator for supplying power to the motor, and means for varying the excitation of the generator in accordance with the current flowing through the electrode.

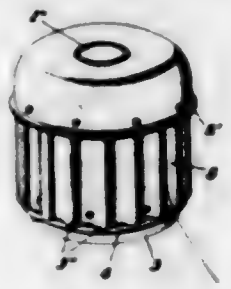
1,298,716. SPRING-MOUNTING. GEORGE A. HOOVER, Sallisaw, Okla. Filed Oct. 16, 1918. Serial No. 258,475. 12 Claims. (Cl. 185—45.)



1. In a spring mounting, a support, an arbor revoluble thereon and having a ratchet tooth, a drum revoluble on the axis of the arbor, a coiled spring having one end attached to the drum, a sleeve revoluble on the arbor and having a circumferential slot therethrough, and a pawl attached to the other end of the spring and pivoted to the sleeve in said slot and adapted when the spring is being wound to engage said ratchet tooth and to rotate said arbor and adapted to slip over said tooth when the spring is being unwound relatively to the arbor.

7. In a spring mounting, a drum comprising a cylinder having an open end and a closed end and a slip cover for the open end, a reinforcing member on the periphery of the cylinder having means for engaging and holding the cover from circumferential movement on the cylinder, and means connected with the cylinder and the reinforcing member for engaging and holding one end of a coil spring adapted to be mounted in said cylinder.

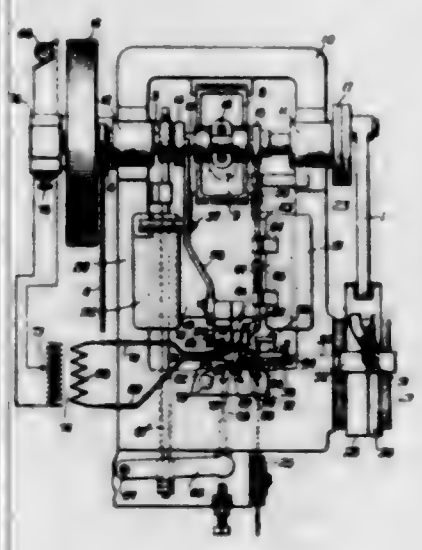
1,298,717. METHOD OF MAKING CUPS OR CASINGS FOR ELECTRIC-LIGHT FIXTURES. WILLIAM M. HORTON, Cleveland, Ohio, assignor to Adams-Bagnall Electric Company, Cleveland, Ohio. Filed Feb. 25, 1918. Serial No. 219,078. 2 Claims. (Cl. 113—116.)



1. The method of making a cup or casing for an electric light fixture, which consists in drawing a metal dome-shaped member, passing a strip of sheet metal

through corrugated rolls thereby to form therein when assembled air passages from edge to edge thereof, then bending the same into an annular member with overlapping edges, then passing a strip of metal through rolls to form a beaded annular member, then assembling the several members by inserting the upper edge of the annular corrugated member into the dome-shaped member, and then inserting the annular beaded member into the lower edge of the corrugated member whereby the corrugations will form air passages leading from the outside of the annular beaded member into the inside of the dome-shaped member and connecting said members together.

1,298,718. MACHINE FOR METAL-WORKING. WILLIAM F. HOSFORD, Oak Park, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,606. 4 Claims. (Cl. 219—3.)



1. In a device of the character described, the combination with a stationary and movable die, of electrical terminals for heating a blank prior to forming it in said dies, a secondary circuit including said terminals, said circuit being completed by said blank, a primary circuit for energizing said secondary circuit, and a switch associated with said primary circuit whereby the completion of said primary circuit will be properly timed to prevent the flow of current in said secondary circuit when the blank is being inserted or removed from said terminals.

1,298,719. WIND-SHIELD. EDWARD P. HOVEY, East Quogue, N. Y. Filed Apr. 22, 1918. Serial No. 230,152. 1 Claim. (Cl. 206—36.)



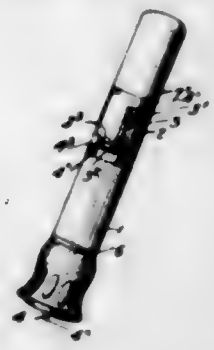
A device of the class described comprising a cylinder open at one end and elliptical in cross section, an overhanging ventilating skirt carried by the other end thereof and spaced laterally from the side walls of the cylinder with openings in the side wall of said cylinder communicating with the space formed between it and the skirt, a scratching surface on the inner face of one side wall of said cylinder, and a slot formed in the opposed side wall thereof.

1,298,720. COMBINED TYPE-WRITING AND COMPUTING MACHINE. RICHARD F. HOYT, Philadelphia, Pa., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 19, 1915. Serial No. 3,081. 11 Claims. (Cl. 235—60.)



4. In a combined typewriting and computing machine, the combination with a traveling carriage and a motor for returning the carriage, of computing mechanism on which a number is adapted to be set up, connections whereby the motor may operate the computing mechanism to compute the number so set up, a tappet settable to cause the automatic operation of the computing mechanism by the motor, at a time determined by the travel of the carriage, a separately-settable device to cause the carriage to be automatically returned by said motor, and a finger-piece adapted to be operated to inhibit the operation of said device.

1,298,721. CRUTCH, WALKING-STICK, AND THE LIKE. GARFIELD JOSEPH HUGHES, Toronto, Ontario, Canada. Filed Dec. 16, 1918. Serial No. 266,899. 1 Claim. (Cl. 135—53.)

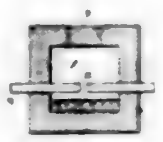


In a crutch, walking stick and the like, the combination with a stick having a bore extending through the lower end, the inner end of said bore terminating in an enlargement thereof, of a metal ferrule surrounding the stick and having an aperture registering with the bore, a recess in the stick, a plate fitting into said recess and provided with a substantially reverse Z-shaped slotted aperture corresponding to the enlargement, said enlargement being provided with branches at right angles thereto registering with the extremities of the Z slot, a rod extending through the bore and central opening of the ferrule and having a spicular end and a stem connected to the upper end of the rod through the slot in the plate and provided with a knob.

1,298,722. METHOD OF REFINING VOLATILE METALS. SVAN HULDT, Stockholm, Sweden. Filed Aug. 7, 1916. Serial No. 113,538. 6 Claims. (Cl. 204—64.)

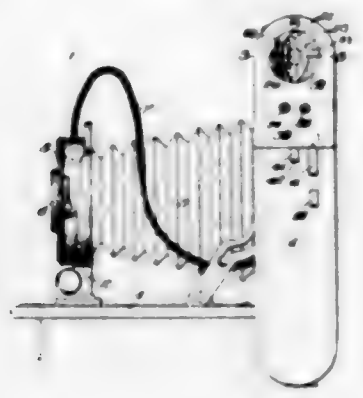
1. The method of refining volatile metals, consisting in continuously introducing the metal to be refined in a

molten condition into an electric radiating furnace out of contact with air, exposing the surface of the metal



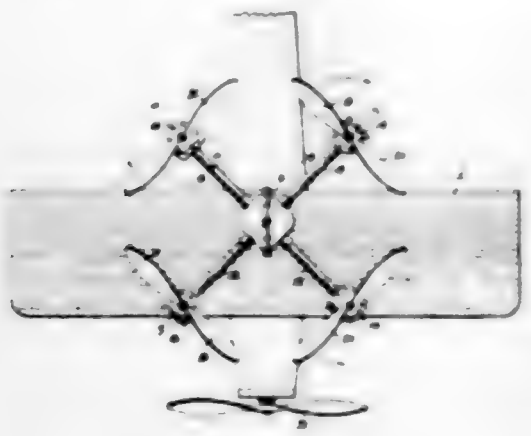
bath thus formed to the radiating heat of the electric source, and exhausting the metal vapors continuously for condensation.

1,298,723. PHOTOGRAPHIC EXPOSURE MECHANISM. DAVID M. HURLBURT, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 20, 1917. Serial No. 197,532. 9 Claims. (Cl. 95—32.)



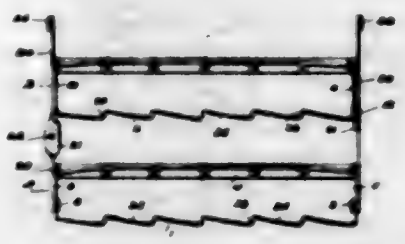
1. In a camera, the combination with a film winding device, a shutter and a shutter operating device, of means under the control of one of said devices for rendering the other inaccessible to the operator.

1,298,724. AEROPLANE-PROPELLING DEVICE. NELSON LESLIE HYATT and HARVEY LLOYD, Dresden, Ontario, Canada. Filed Dec. 10, 1917. Serial No. 206,526. 2 Claims. (Cl. 244—15.)



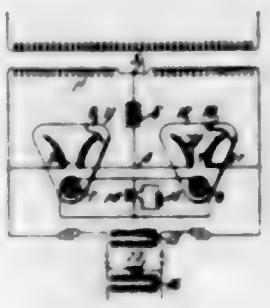
1. The combination with an aeroplane embodying a fuselage, a motor, and aerofoils, of a standard supported on the fuselage and extending upwardly therefrom, a plurality of shafts radiating from said standard above the uppermost aerofoil, a helicopter propeller arranged near the outer end of each shaft, means for rotating said propellers from said motor, said means arranged to rotate the diametrically opposed pairs of propellers in the same direction and the propellers of the pairs upon each side of the longitudinal axis of the aeroplane in opposite directions to maintain lateral stability of the aeroplane and impart an ascensional effort thereto.

1,298,725. DISH-HOLDING BASKET. ALFRED HARRIS INSINGER, Philadelphia, Pa.; Catharine L. M. Insinger, executrix of said Alfred Harris Insinger, deceased, assignor to The Insinger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 8, 1917. Serial No. 147,292. 1 Claim. (Cl. 141—11.)



A dish holding basket comprising a plurality of relatively narrow thin strips of sheet material extending in directions parallel with two opposing sides of said basket, said strips each being provided with downwardly gradually inclined portions terminating in upwardly extending shoulders, said portions being arranged in succession longitudinally of the said strips, said strips being provided at their opposite ends with upwardly projecting portions, a frame member of rectangular shape secured to the said upwardly projecting portions and being spaced a distance from said strips, said frame consisting of a relatively thin narrow strip of sheet metal, parallel rods extending in directions substantially at right angles to the first named strips and secured at their ends to opposing sides of the frame member, said rods being situated in substantially vertical alinement with said shoulders, one or more rods extending substantially at right angles to the last mentioned rods and having rigid connection therewith and being connected at their opposite ends to opposing ends of said frame member, the said second named rods being situated in vertical planes intermediate said first mentioned strips, substantially as described.

1,298,726. RECTIFIER. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,822. 12 Claims. (Cl. 175—363.)



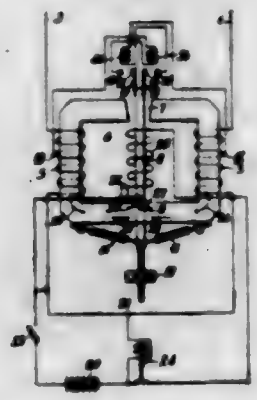
1. A rectifying system comprising a source of alternating current, two horn gaps of variable length, a connection from one terminal member of each gap to a terminal of said source, respectively, a connection from each of the remaining gap terminals to substantially the mid point of said source through a load circuit, means permitting only waves of one polarity to traverse one horn gap and waves of the other polarity to traverse the other gap, and means for continuously ionizing each gap.

3. A rectifying system comprising a source of alternating current, two horn gaps connected in series between the terminals of said source, means for producing unidirectional magnetic flux, transverse to each gap, means for continuously ionizing said gaps and a direct-current load circuit connected from a point between the two horn gaps to the mid point of the source of alternating current.

6. A rectifying system comprising a source of alternating current, two horn gaps connected in series between the terminals of said source, the horns of said gaps being of high-resistance material, means for producing unidirectional magnetic flux, transverse to each of said horn gaps, a source of high-frequency current for continuously ionizing said gaps, and a direct-current load circuit connected from a point between the two horn gaps to the mid point of the source of alternating current.

7. A rectifying system comprising a source of alternating current, means for producing unidirectional magnetic fields, two horn gaps placed in said magnetic fields and connected in series across the terminals of said source, a direct-current circuit connected from a point between said units to the mid point of said source, and means for reversing the direction of the direct-current flow by reversing the unidirectional magnetic fields.

1,298,727. VIBRATING RECTIFIER. RAY P. JACKSON, Edgwood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 25, 1914. Serial No. 840,724. 15 Claims. (Cl. 175—365.)



1. In a vibratory rectifier, an auto-transformer comprising a core member provided with a winding, a portion of the primary and secondary sections of said winding being spaced away from the remainder of said primary and secondary sections, rectifying contact members arranged to alternately close a circuit through each portion of said secondary section, whereby the magnetic flux traversing each portion of the auto-transformer winding periodically exceeds that traversing the other portion thereof and a pivotally mounted member of magnetic material arranged in proximity to said core member so as to be traversed by the difference in the magnetic flux traversing the two winding sections, said member being caused to vibrate by the interaction between the flux therein and the alternating flux in said core member and in turn, causing the relative movement of said rectifying contact members.

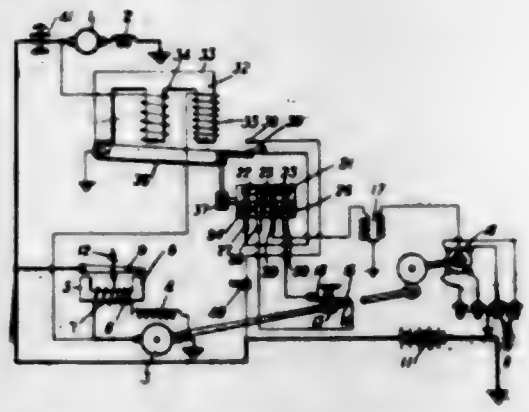
2. In a vibratory rectifier, the combination with a winding connected across the terminals of a source of alternating current and in inductive relation to a nearly closed magnetizable core, of a pivotally mounted member of magnetizable material, one portion of which is free to be vibrated in the gap in the magnetizable core and another portion of which is in proximity to another portion of the magnetizable core, said winding being symmetrically disposed on said core with respect to said pivoted member, two fixed contact members, contact members carried by the pivotally mounted member and arranged to be oscillated between said two fixed contact members, a connection from said source of alternating current to one of said fixed contact members, a connection from the other terminal of the source of alternating current to the other fixed terminal, and a connection from the movable contact members to an intermediate point of the source of alternating current.

12. In a vibratory rectifier, means for rectifying an alternating magnetic flux and for employing said rectified flux in driving said rectifier.

13. In a vibratory rectifier, means for producing a rectified magnetic flux which varies with the load by the rectification of an alternating flux and for employing said flux in driving said rectifier.

14. In a vibratory rectifier, means for producing a rectified magnetic flux which varies with the load by the rectification of an alternating flux and for employing said flux to modify the amplitude of vibration of said rectifier so as to substantially eliminate sparking.

1,298,728. ELECTRICAL SYSTEM. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1916. Serial No. 76,029. 12 Claims. (Cl. 123—165.)



1. In an electrical system, the combination with an electric motor, and an ignition circuit comprising an interrupter, of electro-responsive means actuated in accordance with circuit conditions of said motor for controlling the electrical connections of said interrupter.

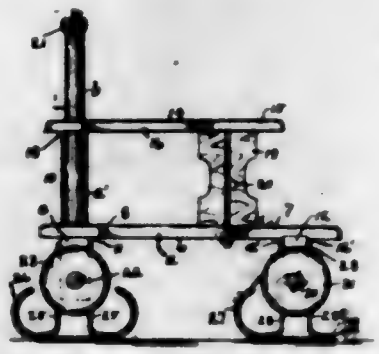
2. In an electrical system, the combination with a starting motor and an ignition circuit comprising an interrupter, of means controlled in accordance with conditions in the starting motor circuit for reversing the electrical connections of said interrupter.

3. In an electrical system, the combination with an electric motor, and an ignition circuit comprising an interrupter, of a reversing switch for controlling the electrical connections of said interrupter, and electro-responsive means in circuit with said motor for actuating said reversing switch.

4. In an electrical system, the combination with an electric motor, and an ignition circuit comprising an interrupter, of an electric generator, and electro-responsive means controlled in accordance with circuit conditions of said motor and said generator for controlling the electrical connections of said interrupter.

5. In an electrical system, the combination with an electric motor, and an ignition circuit comprising an interrupter, of an electric generator, and an electro-magnet for controlling the electrical connections of said interrupter, said electromagnet comprising a coil in parallel-circuit relation to said motor and a coil in shunt relation to said generator.

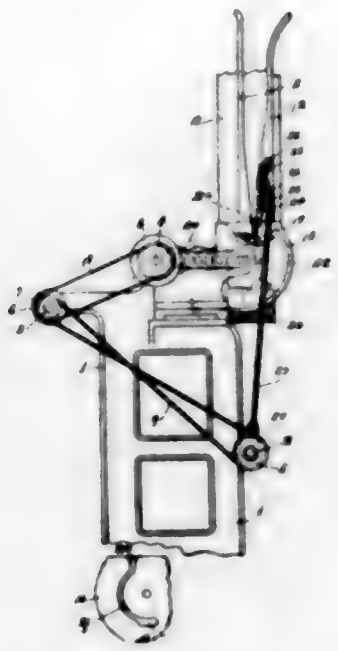
1,298,729. COMBINED WHEEL-COASTER AND SLEIGH. ALBERT O. JENSEN, Omaha, Nebr. Filed May 20, 1918. Serial No. 235,717. 4 Claims. (Cl. 21—94.)



1. In combination with a plate provided below its rear end with axially mounted wheels and a pair of removably

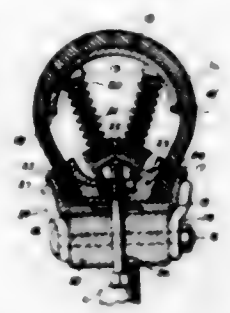
mounted sleigh-runners below said wheels, a second plate above the first named plate, and a steering-shaft disposed at right-angles to and journaled in said plates, said steering-shaft having a part below the first named plate provided with axially mounted wheels and a removably mounted sleigh-runner, the latter being disposed in a plane midway between said last named wheels.

1,298,730. GRASS-FEEDING MECHANISM FOR GRASS-TWINE MACHINES. THOMAS W. JEREMS, St. Paul, Minn., assignor of one-half to Emil H. Steiger, Oshkosh, Wis. Filed Jan. 6, 1911. Serial No. 601,097. 7 Claims. (Cl. 28—21.)



1. A primary grass feeding mechanism for grass twine machines, comprising the combination with a grass holder, of a feeding head having a segmental feed throat with a V-shaped mouth, a toothed rotary disk traversing the mouth of said feed throat, and a toothed auxiliary bar having an up and down and in and out motion in said grass holder and the mouth of said feed throat, said auxiliary feed bar being constructed and arranged to engage the stems of grass at one point only and to coöperate with said notched disk to feed the stems of grass substantially as described.

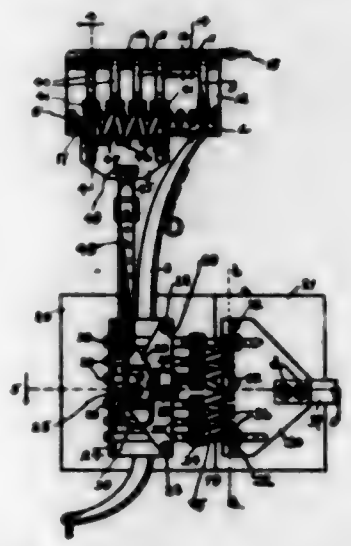
1,298,731. AUTOMOBILE TIRE. GEORGE W. JOHNSON, Three Forks, Mont. Filed Jan. 25, 1918. Serial No. 213,750. 2 Claims. (Cl. 152—8.)



1. The combination with a wheel including a felly and a rim carried thereby, of a band positioned about the rim and having seats formed therein, anchoring plates positioned in the seats of the band and provided with threaded openings, securing screws extending through the felly and rim and having threaded inner end portions extending through the threaded openings of the anchoring plates, collars carried by the securing screws and engaging the band to hold the screws against longitudinal movement, a tire casing having its side portions clamped between the band and rim, tread plates within the tire casing, and springs positioned between the tread plates and anchoring plates.

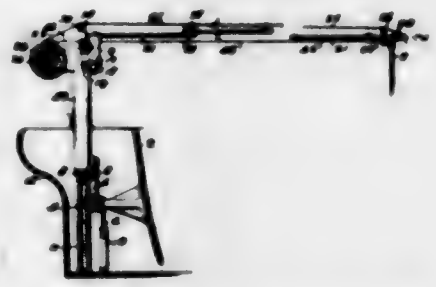
2. The combination with a wheel rim and tire casing, of a plurality of longitudinally extending anchoring plates mounted interiorly of the casing and each having sockets adjacent each end thereof directed outwardly at an angle and away from each other, means for securing the anchoring plates in position, tread plates engaging the tread portion of the casing interiorly thereof, studs projecting from the tread plates, and a plurality of pairs of coil springs, the springs of each pair being disposed at an angle to each other and each spring having one end received in a socket in an anchoring plate and the opposite end surrounding one of the studs of a tread plate.

1,298,732. HORSE-COLLAR. GUSTAV A. JOHNSEN, Emerson, Nebr. Filed Jan. 26, 1918. Serial No. 214,009. 11 Claims. (Cl. 54—18.)



1. A horse collar, comprising, in combination with a pair of hames, an elongated saddle member provided with recesses near its ends and opening on its sides, a strap slidably disposed in a recess near one end of the elongated saddle for connecting the upper ends of the hames, side sections mounted on the hames, and a plurality of straps slidably disposed in the recesses near the opposite end of the elongated saddle and provided with devices for a connection with and between the ends of said hames.

1,298,733. EXTENSIBLE COVER FOR AUTOMOBILES. PERCIVAL F. KING, Vancouver, British Columbia, Canada. Filed June 13, 1917. Serial No. 174,551. 8 Claims. (Cl. 21—62.)



1. An extensible cover for an automobile or the like comprising a horizontally disposed lazy-tong system of levers adapted to project over the top of the vehicle and connected at one end to members which are slidable endwise on a bar that is disposed horizontally across the rear of the vehicle, said lazy-tong levers at the other end having provision for connecting it to the wind shield, a flexible fabric wound on a roller mounted across the rear of the vehicle, the free end of the fabric being connected to the front end bar of the lazy-tong system, means operative on the lazy-tong levers for extending the same, means for

retracting said levers, and means for winding the fabric on the rollers as said lazy-tong levers are being retracted.

2. An extensible cover for an automobile or the like, comprising a lazy-tong system of levers connected at one end to members slidable endwise on a bar across the rear of the vehicle and having at the other end provision for connecting it to the wind-shield, a cover supporting strip connected to each mid-pivot of the lazy-tong levers and extending across the width of the vehicle, flexible lines connected to the end bars of the lazy-tong levers and passing through the ends of the supporting strips, a flexible fabric wound on a roller mounted at the rear of the vehicle the free end of the fabric being connected to the front end bar of the lazy-tong system of levers, means for projecting the lazy-tong frames to the front end of the vehicle, means for securing it at that end, means for retracting the frame, and means for winding the cover on the roller as the frame is retracted.

3. An extensible cover for an automobile or the like, comprising in combination, a frame connected to the rear of the vehicle body and susceptible of being lifted thereabove, two members slidably mounted to move endwise on the upper rail of the frame, a lazy-tong system of levers pivotally connected at one end to the members slidable on the bar, and at the other end pivotally connected to similar members slidable on a front bar, a spring-actuated roller rotatably mounted on the rear frame, a flexible cover wound on the roller the free end of the cover being connected to the front end bar of the lever system, means for simultaneously moving together the slidable members on the rear frame to project the front end bar, means for latching the front end bar to the wind-shield, and means for moving apart the slidable members to retract the front end bar.

6. An extensible cover for an automobile or the like, comprising an open rectangular frame vertically slidable in a casing secured to the after end of the body of the vehicle, levers pivotally mounted on the body at the rear of the vehicle and link-connected on each side of the lower part of the frame, by which levers the upper part of the frame may be projected above the body, an extensible supporting frame connected to the upper part of the frame and susceptible of extension and attachment to the front end of the vehicle, a roller rotatably mounted in the slidable frame, a flexible cover mounted on the roller the free end of which cover is connected to the front end of the extensible frame, a spring-actuated roller rotatably mounted to turn on a vertical axis parallel and adjacent each side member of the slidable frame, side curtains mounted on these rollers, provision extending along the body supporting the lower edge of each curtain, and provision connected to the extensible supporting frame for supporting the upper edge of each curtain.

8. An extensible cover for automobiles and the like, comprising a lazy-tong system of levers connected at one end to members slidable endwise on a bar horizontally disposed across the rear of the vehicle and having at the other end provision for connecting it to the wind shield, said slidable members having guide rollers, and a guide rail disposed parallelly to said cross bar and engaged by said rollers to sustain the lazy-tong levers in a horizontal position and a flexible fabric covering supported by the aforesaid structure.

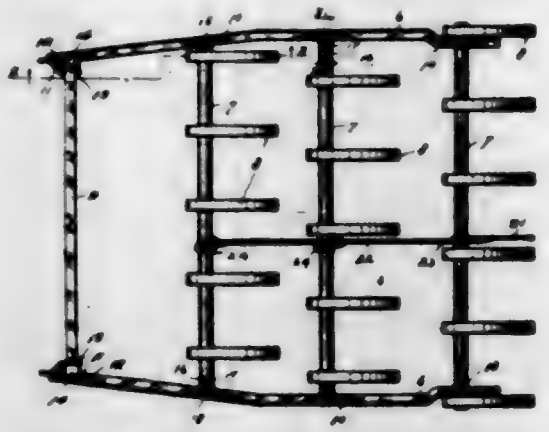
1,298,734. JOURNAL-BEARING. THOMAS W. KIRKMAN, New York, N. Y. Original application filed May 8, 1917, Serial No. 167,300. Divided and this application filed Aug. 13, 1917. Serial No. 186,040½. 2 Claims. (Cl. 64—24.)



1. The combination of a shaft having a cylindrical journal, a bearing holder, and a bearing member axially adjustable on said holder and formed with an axial, cylindrical bearing hole for said journal and a transverse communicating hole located at the inner end of said bearing hole and embracing the entire diameter of the latter.

2. The combination of a shaft having a cylindrical journal at one end, a support apertured in line therewith, and a bearing block axially adjustable in the aperture of said support and formed with a transverse hole covered by the support, and an axial, cylindrical bearing hole for said journal opening into the transverse hole and of smaller diameter than the latter.

1,298,735. SPRING-TOOTHED HARROW. JOSEPH J. KOVAR, Owatonna, Minn. Filed May 13, 1918. Serial No. 234,066. 3 Claims. (Cl. 55—104.)

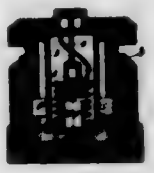


1. A harrow including a drag bar having a bracket with a bearing eye, a tooth-equipped rock shaft inserted through said bearing eye, and a lock engageable with opposite sides of the bracket for securing the rock shaft to the bracket against endwise movement, but with freedom for horizontal and vertical angular movements with respect to said drag bar.

2. A harrow including a drag bar having a bracket with a bearing eye, a tooth-equipped rock shaft inserted through said bearing eye, and a saddle plate detachably secured to said rock shaft and having interlocking engagement with opposite sides of said bracket to prevent endwise movement of said rock shaft with respect to the drag bar, but permitting vertical and horizontal angular movements with respect thereto.

3. A harrow including a drag bar having a bracket with a bearing eye, a tooth-equipped rock shaft telescoped through said bearing eye, a saddle plate, and means for detachably securing said saddle plate to the rock shaft, said saddle plate having a pair of laterally spaced forwardly and rearwardly diverging flanges embracing said bracket for holding the rock shaft against endwise movement with respect to the drag bar, but permitting horizontal and vertical angular movements thereof.

1,298,736. CIRCUIT-BREAKER. JEAN KÜNTZIGER, HERMAN CHAUVIN, and FÉLIX FONTAINE, Liege, Belgium. Filed Sept. 7, 1916. Serial No. 118,915. 2 Claims. (Cl. 175—273.)



1. In a circuit-breaker, the combination of an insulating tube closed by a metal bottom plate connected with one end of the circuit to be broken, and by a cap, a plate being adapted to move inside said tube: of means for connecting said movable plate with the other end of the circuit to be broken, a wire made of a metal having a high tensile strength and a limit of elasticity approximately coincident with the breaking point, with little

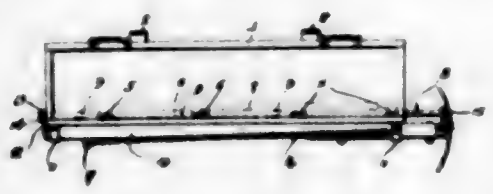
elongation when breaking, means for securing one of the ends of said wire to the said base plate and the other end to the movable plate and a very strong spring tending to force the said plates apart.

1,298,737. CUTTER-HEAD. FRANKLIN L. LAMB and FRANK R. WEAVER, Beloit, Wis., assignors to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Filed Aug. 2, 1917. Serial No. 184,187. 5 Claims. (Cl. 144—230.)



2. A tool mounting comprising a cutter head having formed in its face a slot with rearwardly diverging walls, a knife disposed in said slot against one of the walls thereof, an inwardly thickened wedge shaped gib lying in the slot alongside the knife, an inwardly thickened wedge block disposed in the slot alongside the gib and knife and bearing against the opposite wall of the slot, and a screw threaded in the cutter head and bearing upon the base of the wedge block from the rear, whereby the wedge block may be forced forwardly to exert lateral wedging action upon the knife through the gib, and means to counteract any tendency of the gib to move forwardly with the wedge block.

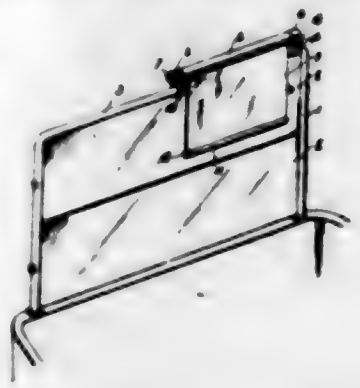
1,298,738. SEEDER. JOHN LANGE, Chippewa Falls, Wis. Filed Aug. 26, 1918. Serial No. 251,499. 5 Claims. (Cl. 221—122.)



5. A seeder comprising a box having a restricted space provided in its bottom, a cable passing through the said space, means to permit a quantity of the contents of the box to pass into the said space and be received on the said cable, and means to actuate the said cable for carrying the material received in the space to another point within the said space, the bottom of the said box being provided with outlet openings to receive the said material after being removed by the cable and means to move the cable back to normal position.

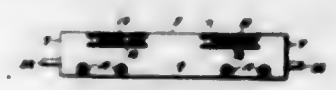
1,298,739. AUTO-SHADE. ATLAS T. LANGFORD, Jackson, Tenn. Filed Mar. 9, 1918. Serial No. 221,489. 1 Claim. (Cl. 21—148.)

As a new article of manufacture, a shade for use upon wind shields of vehicles comprising a casing, a translucent shade carried by said casing, a clamp secured to each end of said casing and provided with a depending finger extending directly below the central axis of said casing, a rearwardly extending bridge portion extending substantially at right angles to said first mentioned finger, a depending finger secured to the outer end of said bridge portion and extending substantially parallel with respect to said first mentioned finger, an adjusting screw threaded through said last mentioned finger, a curved



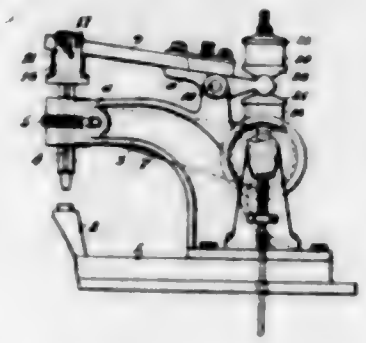
clamping plate secured to the inner end of said adjusting screw and adapted to firmly engage the frame of a windshield for detachably and adjustably holding said clamp and casing in engagement with said windshield.

1,298,740. WATER-TOP FOR GAS-STOVES. ALEXANDER LECKEY, Camden, N. J. Filed Aug. 20, 1918. Serial No. 250,742. 4 Claims. (Cl. 126—53.)



1. A device of the character described having a downwardly tapering combustion box; a burner plate within said box and having its peripheral edge bearing against the inner surface of said box, whereby the tapered inner surface of said box supports said burner plate within the height thereof; and means for supplying fuel below said burner plate; substantially as described.

1,298,741. RIVETING-MACHINE OR HAMMER. PHILIP H. LECKINGER, Rochester, N. Y., assignor to The High Speed Hammer Company, Inc., Rochester, N. Y., a Corporation of New York. Filed Mar. 19, 1918. Serial No. 223,455. 3 Claims. (Cl. 78—53.)

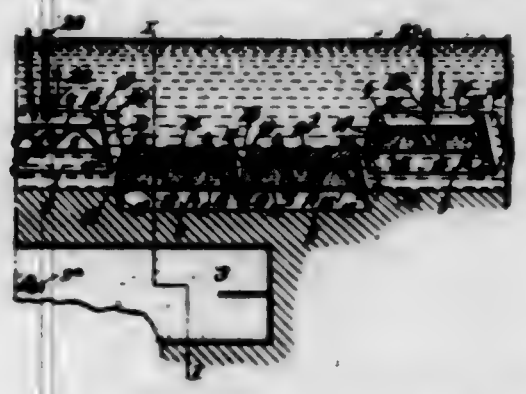


1. A riveting machine comprising a hammer, a helve, a member to which the helve is secured having bearings on opposite sides thereof, a pitman extending loosely through said member, cushions carried by the pitman on opposite sides of the member, and movable abutments for the cushions formed with bearings coöperating with the bearings of the member.

2. A riveting machine comprising a helve, a hammer having a surrounding flange, a cushion interposed between said hammer and the helve, and a flexible strap having an opening through which the hammer extends, said strap being passed about the helve and under the flange.

3. A riveting machine according to claim 2, combined with a washer surrounding the hammer between the flange and the strap.

1,298,742. SUBAQUEOUS TUNNELING. FRANK D. LEFFINGWELL, Montclair, N. J. Filed Sept. 30, 1914. Serial No. 864,217. 15 Claims. (Cl. 61—42.)



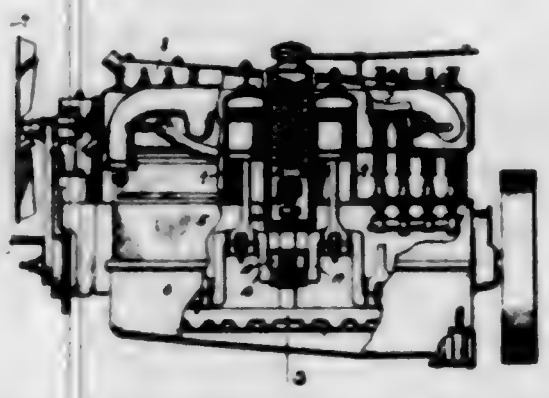
1. Means for protecting a tunnel heading employing compressed air from damage by the destructive effect of the air escaping therefrom comprising an impervious diaphragm adapted to be positioned upon the soil overlying the tunnel heading and to contact superficially therewith throughout the overlying area, means for weighting said diaphragm to produce distributed pressure directly upon said soil, and means for preventing the free movement of air beneath said diaphragm consisting of a plurality of baffles downwardly projecting from said diaphragm and adapted to penetrate the surface of said soil over and about said heading.

1,298,743. ROTARY CONCRETE-MIXER. ERICH H. LICHTENBERG, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis., a Corporation. Filed Nov. 28, 1916. Serial No. 133,890. 1 Claim. (Cl. 83—73.)



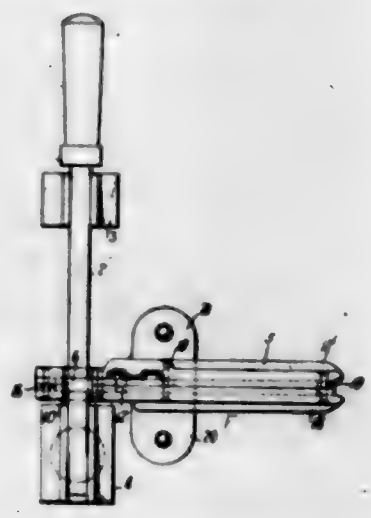
A concrete mixer consisting of a cylindrical drum having peripheral runways near its ends, each provided with a beveled side in combination with rollers supporting said drum and each having a beveled face engaging a beveled side of one of said respective runways; the said drum having interior lifting and deflecting blades extending substantially in the direction of the beveled contact of said rollers with said runways.

1,298,744. ENGINE. STANISLAW J. LUKASZEWSKI, Detroit, Mich. Filed Apr. 11, 1918. Serial No. 227,262. 6 Claims. (Cl. 123—174.)



1. In an internal combustion engine, the combination of two groups of cylinders longitudinally separated, a crank case on which the cylinders are mounted, a heating coil mounted between the two groups of cylinders, a burner beneath the coil and a shell inclosing the coil, said shell comprising two thicknesses with a water space between them so as to constitute a part of the heating system of the engine.

1,298,745. ELECTRICAL PROTECTIVE DEVICE. WALTER O LUM, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 23, 1913. Serial No. 796,886. 5 Claims. (Cl. 70—128.)

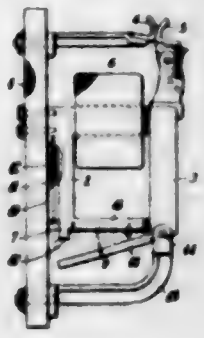


1. A locking device comprising a non-pivoted slidable bolt having a projection extending laterally therefrom, resilient means for moving the bolt in one direction, and a non-rotatable key adapted to coöperate with the projection to move the bolt in the opposite direction, said key having a notch therein for engaging the projection to retain the same in a predetermined position.

2. A locking device comprising a housing, a bolt disposed in the housing, a spring for moving the bolt in one direction, and a key having two bearing portions and a connecting handle, one bearing portion of the key being adapted to be inserted in the housing to actuate the bolt and the other bearing portion being adapted to extend in a channel on the outer surface of the housing.

3. A locking device comprising a bolt having a projection thereon, a spring for actuating said bolt in one direction, and a non-rotatable key adapted to engage the projection to actuate the bolt in the opposite direction, said key having a notch therein for engaging the projection to retain the bolt in a predetermined position.

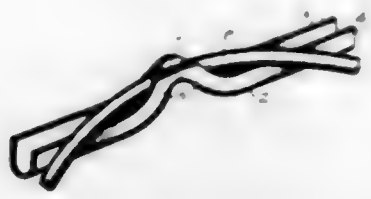
1,298,746. ELECTRICALLY-OPERATED SWITCH. WALTER O. LUM, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 21, 1914. Serial No. 826,246. 2 Claims. (Cl. 175—281.)



1. A magnet comprising a base, a stationary magnetizable member mounted thereon and having a magnetizable arm, an armature pivotally mounted on said base near the

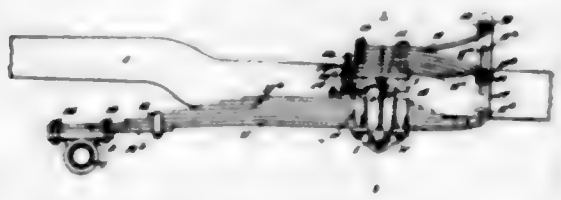
outer end of said arm and having a main body portion for coacting with said stationary member to constitute a main magnetic circuit and a projecting portion for coacting with the inner end of said arm to constitute an auxiliary magnetic circuit, said projecting portion extending substantially parallel to said arm when said armature occupies one extreme position and at an angle to said arm when said armature occupies its other extreme position, means for magnetically insulating said projecting portion from said arm except at said inner end of said arm, and a magnetizable member adjustably mounted on said base near said inner end and separated from said projecting portion to vary the reluctance of said auxiliary magnetic circuit.

1,298,747. UPHOLSTERY SPRING CONSTRUCTION. WILLIAM D. MCCULLOUGH and THOMAS MAHONEY, Detroit, Mich., assignors to Premier Cushion Spring Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 27, 1918. Serial No. 268,529. 5 Claims. (Cl. 155—25.)



1. In a spring upholstery construction, a U-section strip offset in the plane of the flange portions, and a spiral spring resting on a flange edge and lying between the offset portions of both flanges which are inbent to retain it.

1,298,748. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 7, 1915. Serial No. 26,492. 23 Claims. (Cl. 267—27.)



2. The combination, with a vehicle frame and axle, of a spring comprising a main plate, an auxiliary plate at one side of the main plate and a plurality of auxiliary plates at the other side of the main plate, the first mentioned auxiliary plate being of such length as to be overlapped by one of the other auxiliary plates, means pivotally connecting the body of said spring to the frame, and means connecting longitudinally spaced portions of the main plate and the first mentioned auxiliary plate to the axle.

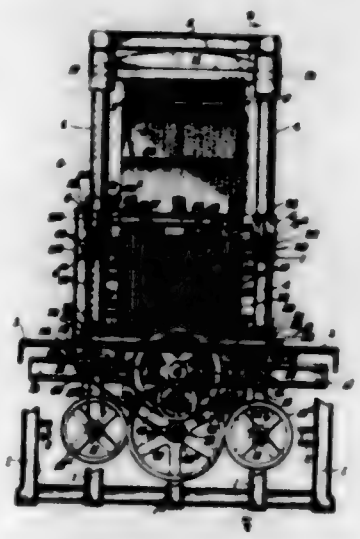
5. The combination, with a vehicle frame and axle, of a spring connected at one end to the axle and pivotally connected to the frame, a second spring pivotally connected to the frame above the first mentioned spring and having an end extending in substantially the same direction as the other end of the first spring, means connecting such corresponding ends of said springs, and means whereby the second spring may be adjusted with reference to its pivot.

11. The combination, with a vehicle frame and axle, of a spring connected at one end to the axle and having an intermediate portion pivotally connected to the frame with a second end portion extending beyond such pivotal connection, an auxiliary spring connected to the frame and comprising a pair of diverging plates extending above the end of the second portion of the main spring, means connecting one of said plates to the last mentioned end of the main spring, and a lost motion connection between the other plate and said end of the main spring.

17. The combination, with a vehicle frame and axle, of a spring connected at one end to the axle, a pivotal connection between the body portion of said spring and said frame, an auxiliary spring having its body pivotally supported by the frame, means connecting the end of the auxiliary spring with the adjacent end of the main spring, and means for adjusting the auxiliary spring with reference to its pivot.

19. The combination, with a vehicle frame and axle, of a spring connected at one end to the axle and having an intermediate portion pivotally connected to the frame with a second end portion extending beyond such pivotal connection, an auxiliary spring connected to the frame and comprising a pair of diverging plates extending above the end of the second portion of the main spring, shackle links connecting such end of the main spring with the uppermost diverging leaf of the auxiliary spring, said shackle links being provided with elongated slots in their sides, and a pin extending through an eye of the other leaf of the auxiliary spring and having its ends mounted in said slots.

1,298,749. COMPRESSING AND PACKING MACHINE. CHARLES E. MCMANUS, New York, N. Y. Filed Jan. 22, 1916. Serial No. 73,515. 34 Claims. (Cl. 100—57.)



1. In a machine of the character described, a plurality of plungers adapted to enter a chamber to compress material therein, said plungers having different extent of movement within the chamber, and means for causing said plungers to successively enter said chamber.

12. In a machine of the character described, means adapted to propel a plurality of tubular chambers, a plurality of plungers in fixed relation to each other and of successively varying lengths, and means for moving said propelling means to bring the tubular chambers carried thereby successively in line with said plungers.

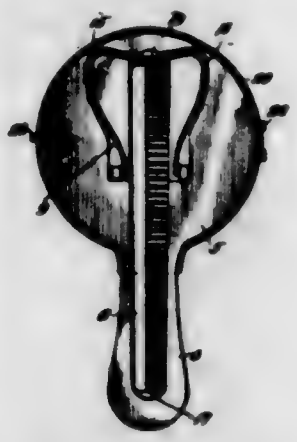
18. In a machine of the character described, means adapted to propel a plurality of tubular chambers and support the same, a feeding hopper, measuring devices adapted to receive material from the hopper and deliver it individually to said chambers, and a plurality of plungers, of successively decreasing lengths adapted to individually compress the material in the chambers.

27. In a machine of the character described, a plurality of plungers adapted to individually enter a chamber to compress the material therein, a hopper for the material, a telescopic flask intermediate the hopper and the chamber, means for shifting the flask into and out of register with the hopper and the chamber, spaced slide plates each supporting one member of the telescopic flask, a plurality of adjusting screws adapted to vary the distance between the said slide plates, and means for operating the adjusting screws simultaneously.

33. In a machine of the character described, a plunger adapted to enter a chamber to compress material therein, means for leading a supply of the material to ports at opposite sides of the plungers, an agitator above each of said ports, an actuator for said agitators, a plurality of

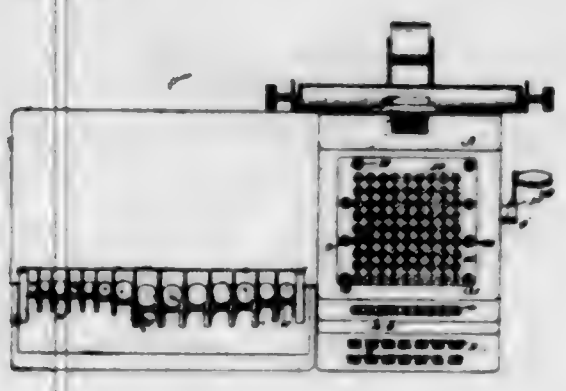
measuring flasks, means for simultantously moving an empty flask out of register with said chamber and into register with one of said ports and thereafter shifting the flask in filled condition into register with said chamber and a second empty flask into register with a second of said ports, and means for operatively connecting an agitator with said actuator only when an empty flask is below said agitator.

1,298,750. TOILET ARTICLE. STANISLAW MACKIEWICZ, Wortman, Colo. Filed June 13, 1918. Serial No. 239,784. 1 Claim. (Cl. 132—35.)



A combination toilet article including a brush whose back and handle are flat on their rear faces, a mirror whose back and handle are also flat on their rear faces but provided with a longitudinal channel for a comb and a recess around the upper end of the channel, a mirror support pivoted within said recess, and means for holding the elements together with their flat faces in contact.

1,298,751. CALCULATING AND MONEY-PAYING MACHINE. MILES H. MANN and AMOS H. HAWLEY, Terre Haute, Ind., assignors, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Filed Sept. 1, 1915. Serial No. 48,544. 114 Claims. (Cl. 133—4.)

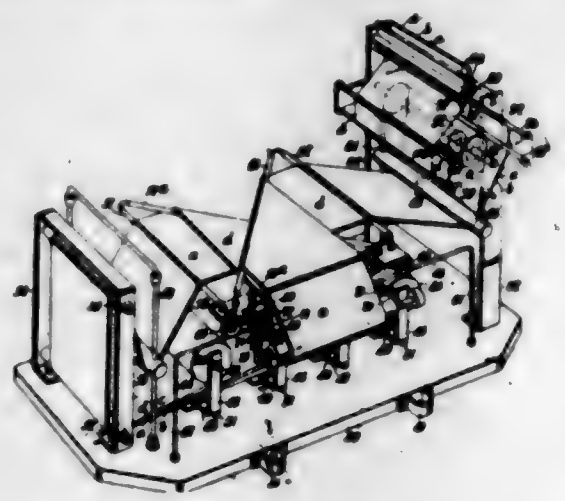


1. In a machine of the class described, the combination of accounting means including accumulating and printing mechanisms, operating levers intermediate said mechanisms, indexing means controlling differential action of said levers whereby to control the accumulating and printing operations, a denominational registering mechanism for making calculations related to items accumulated and printed by the aforesaid mechanisms, and means for differentially controlling the denominational registering mechanism from said levers.

23. In combination, an adding machine, a calculating mechanism codperative therewith for performing special calculations in respect to each transaction set up on the adding machine, controlling and actuating instrumentalities for the adding machine, operative connections intermediate said instrumentalities and the calculating mechanism including registers, a clearing device, means intermediate said clearing device and the accumulator and registers aforesaid by which to cause simultaneous clearing of the same, a key for disabling the calculating mechanism in respect to the adding machine instrumentalities, and means intermediate the clearing device and said disabling key to cause the same to assume an inactive position to perform its disabling functions if it has previously assumed an operative position for performing such functions.

75. The combination with an accounting machine, operating means therefor and a speed governor, of a calculating mechanism associated with said machine and including registers, actuating devices for said registers, clearing mechanism for the registers, and means intermediate said speed governor and the actuating devices and the clearing mechanism whereby the latter are controlled by said governor.

1,298,752. TYPE-WRITING MACHINE. FRANK MANNING, Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 7, 1916. Serial No. 124,213. 47 Claims. (Cl. 197—133.)



1. In a typewriting machine, the combination with a carriage, of means providing a web course over which webs are guided to the carriage and comprising a stationary guide for the webs, and means interposed between said guide and the carriage for maintaining a continuous tension on the webs as the carriage travels toward and from said guide.

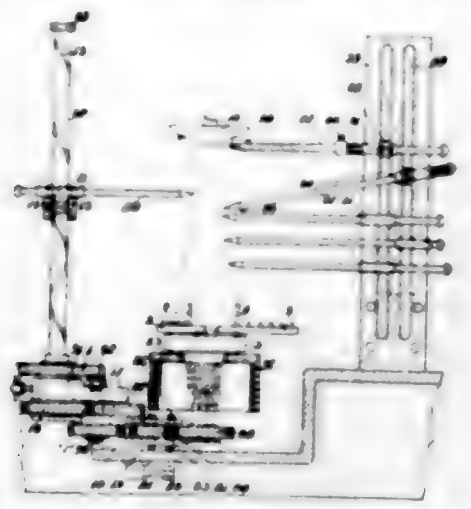
2. In a typewriting machine, the combination with a carriage, of means providing a web course over which webs are guided to the carriage and comprising a stationary guide for the webs, and a tension and take-up device interposed between the carriage and said guide.

47. In a typewriting machine, the combination with a carriage, of a platen thereon, means to feed a work-piece over the platen, automatic winding means for winding said work-piece, a slip connection between said winding means and the carriage to prevent excessive tension, and tension-maintaining means adapted to maintain a tension on the work-piece whenever the winding means is ineffective to wind the work-piece.

1,298,753. MACHINE FOR DRAWING COLORED LINES ON CRYSTAL OR GLASS OBJECTS. MAURICE MATHY, Flemalle Grande, Belgium. Filed July 15, 1915. Serial No. 40,074. 8 Claims. (Cl. 33—21.)

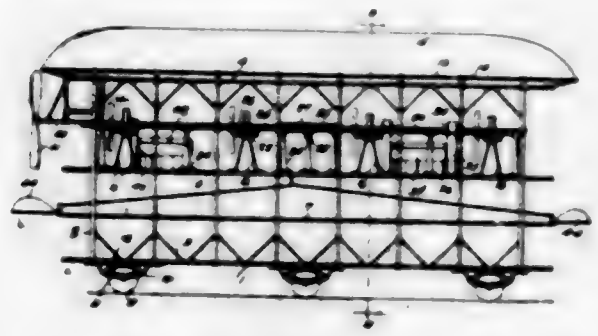
2. A machine for tracing colored lines on crystal or glass objects, comprising a horizontal table, a chuck arranged in the center of said table, a plurality of clamps mounted on said chuck, means for moving said clamps toward and away from the center of the chuck, a plurality of tracing devices arranged around said chuck, a

frame secured to said table, a buffer held by said frame above the chuck, a spring pressing the buffer against the



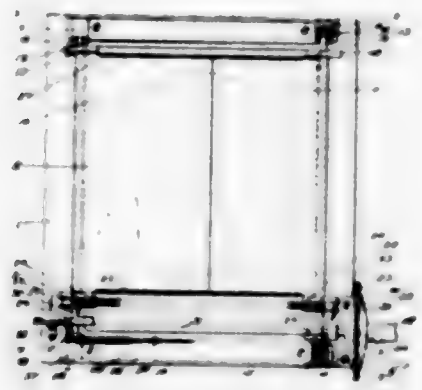
upper end of the object, and means for permitting the buffer to rotate together with the object.

1,298,754. AIRSHIP. LEONARD MATLOCK, Ralph, Ark. Filed Oct. 23, 1918. Serial No. 259,359. 2 Claims. (Cl. 244—25.)



1. In an airship the combination with superposed planes, and wings forming side extensions of one of the planes, of slidable and revoluble transverse shafts supported by the wings, a shaft extending transversely of and movable with each of said transverse shafts, a propeller thereon, means for driving the propeller shafts, means for simultaneously rotating the slidable and revoluble shafts to adjust the propeller shafts angularly, and yielding means for retarding the sliding movement of the shafts to hold the driving means taut.

1,298,755. SILENT CAMERA-SHUTTER. ALBERT J. MATTER and FRED V. CONLEY, Portland, Oreg. Filed May 18, 1917. Serial No. 169,597. 6 Claims. (Cl. 95—58.)



1. A silent camera shutter comprising a shutter-board having rigidly mounted pivotal shutter bearings in combination with resiliently mounted pivotal shutter bearings, shutter plates pivotally mounted in and between said rigid and resilient bearings in such manner as to prevent rattling movement in the bearings, means connecting the several shutter plates for simultaneous operation, a spring mounted so as to close the shutter and also create a tension in the bearing ends of said connecting means so as to take up lost motion, an operating engine having a flexible diaphragm, pneumatic means for distending said diaphragm and means operatively connecting said diaphragm with said shutter-plates, all substantially as described and intended to provide a silently operable shutter.

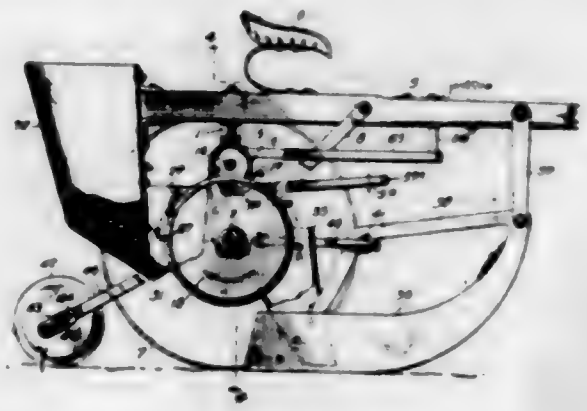
2. In a silent shutter of the character described, a silent operating engine comprising a perforated front plate, a concave back-plate having a tube connection, a diaphragm of sheet rubber interposed between said front- and back-plates which are so disposed as to form a chamber for the diaphragm, means for fastening the front- and back-plates with the diaphragm interposed therebetween and a slidably mounted operating shaft having a head held in juxtaposition to said diaphragm but not in contact with said diaphragm chamber and operatively connected at its opposite end with said shutter.

3. The combination with a shutter comprising plates carried by pivotally mounted shafts, one of which is provided with a crank-disk, of an operating shaft having one end pivotally mounted in said crank-disk and its other end slidably mounted in a padded bearing and provided with a button head, and means for exerting pressure against said button head tending to operate the shutter plates.

4. The combination with a shutter comprising plates carried by pivotally mounted shafts, one of which is provided with a crank-disk, of an operating shaft having one end pivotally mounted in said crank-disk and its other end slidably mounted in a padded bearing and provided with a button head, and an operating engine comprising a concave perforated front plate, a concave back plate having a tube connection, a diaphragm of sheet rubber interposed between said front- and back-plates which are so disposed as to form a chamber for the diaphragm, means for fastening and front- and back-plates with the diaphragm interposed therebetween and so disposed as to permit the said diaphragm to operate against said button head when air is forced in through the tube connection.

5. The combination with a shutter comprising plates carried by pivotally mounted shafts, one of which is provided with a crank-disk, of an operating shaft having one end pivotally mounted in said crank disk and its other end slidably mounted in a padded bearing and provided with a button head, an operating engine comprising a concave perforated front plate, a concave back plate having a tube connection, a diaphragm of sheet rubber interposed between said front- and back-plates which are so disposed as to form a chamber for said diaphragm, means for fastening the front- and back-plates with the diaphragm interposed therebetween and so disposed as to permit the said diaphragm to operate against said button head when air is forced in through the tube connection, and means for engaging and locking said operating mechanism when the shutter is in open position.

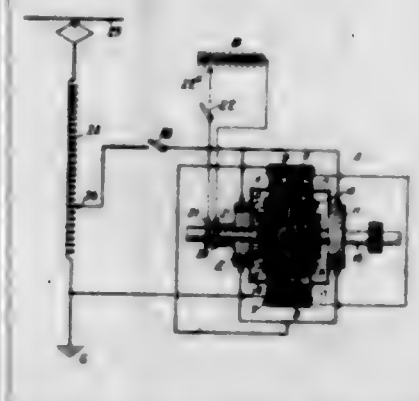
1,298,756. POTATO-PLANTER. FRANK E. MENDENHALL, Kilgore, Nebr. Filed Jan. 23, 1917. Serial No. 143,027. 2 Claims. (Cl. 111—52.)



2. In a potato planter, an axle, wheels on the ends of the axle, an arch bar having bearings in its arms, an axle

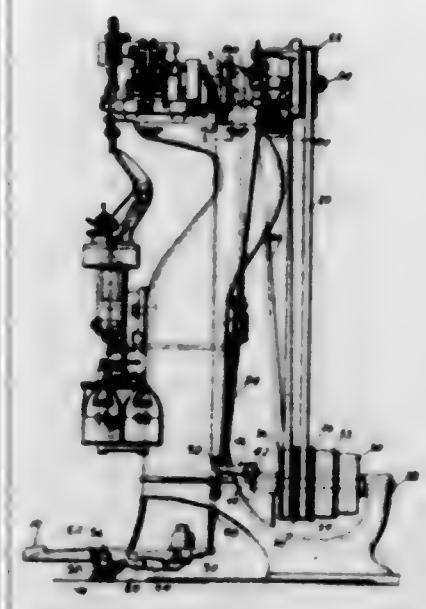
journaled in the bearings, a tongue secured to the body of the arch bar and extending beyond the arch bar at its rear end, a hopper for holding potato cuts secured to the said rear end of the tongue, a dropping wheel on the axle between the arms of the arch bar, the dropping wheel having means for engaging the potato cuts in the hopper.

1,298,757. DYNAMO-ELECTRIC MACHINE. FRIEDRICH W. MEYER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 24, 1915. Serial No. 16,674. 5 Claims. (Cl. 172—237.)



1. In a dynamo-electric machine, the combination with a stationary magnetizable field structure, and a rotatable armature coöperating therewith and embodying a magnetizable core, a plurality of commutator cylinders and windings connected thereto, of an auxiliary rotor disposed within said core and a magnetizing winding associated with said core and adapted to effect the electro-magnetic locking of said rotor to said core.

1,298,758. DRIVING AND STOPPING MECHANISM. WILLIAM C. MEYER, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Original application filed July 29, 1913, Serial No. 781,785. Divided and this application filed Feb. 28, 1916. Serial No. 80,908. 27 Claims. (Cl. 74—46.)

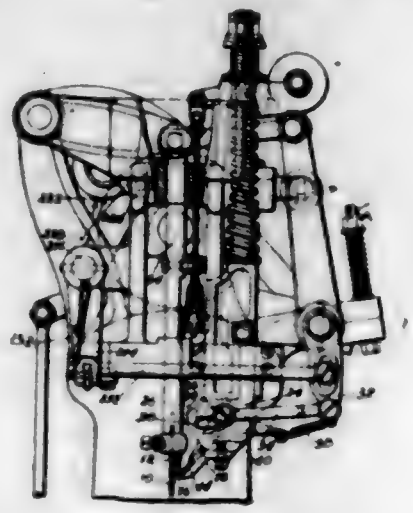


1. A driving and stopping mechanism, having in combination, a shaft, high speed driving mechanism therefor, a slow speed driving member for the shaft, means for disconnecting the shaft from the high speed driving mechanism and connecting it with the slow speed driving member, means for actuating the slow speed member, and means for disconnecting the slow speed member from its actuating mechanism and arresting its rotation while the shaft remains in connection with the slow speed member to stop the rotation of the shaft.

21. A driving and stopping mechanism, having, in combination, a shaft, a driving member for the shaft, means for connecting the driving member with and for disconnecting it from the shaft, means for actuating the driving member, and mechanism for disconnecting the driving member from its actuating mechanism and arresting its rotation while it remains in connection with the shaft to stop the rotation of the shaft.

27. A driving and stopping mechanism having, in combination, a shaft, high and low speed driving mechanism for the shaft, means for throwing the low speed mechanism into and out of operation comprising a normally inoperative cam, a lever normally oscillated idly by the cam, a lock bolt carrier, a lock bolt movably mounted in the carrier for locking the lever to the carrier to render the cam operative, a latch for preventing the engagement of the lock bolt with the lever, and a block adjustably mounted on the latch and arranged when in one position to be engaged by the lever to throw out the latch, and when in another position to lie out of the path of the lever.

1,298,759. FEED MECHANISM FOR SHOE-SEWING MACHINES. WILLIAM C. MEYER, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Original application filed July 29, 1913, Serial No. 781,785. Divided and this application filed Feb. 28, 1916. Serial No. 80,909. 17 Claims. (Cl. 112—20.)



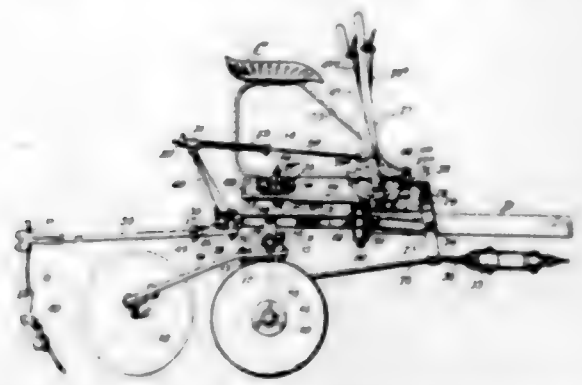
1. A sole sewing machine, having, in combination, stitch-forming devices comprising a straight hook needle, a work supporting horn, a vertically and laterally movable feed point, mechanism for moving the feed point laterally to feed the work, means operated by the lateral movement of the feed point for moving the feed point into and out of engagement with the work, and means for supporting the feed point and for controlling the position thereof constructed and arranged to maintain the angular position of the feed point unvaried during its advancing movement in the direction of feed to feed the work.

1,298,760. LISTED CULTIVATOR. CLEMENT W. MICHAEL, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation of Wisconsin. Filed June 26, 1916. Serial No. 106,045. 6 Claims. (Cl. 97—31.)

1. In a device of the class described, a pair of cultivator units, an arm mounted to swing in a horizontal plane on each unit, a cross beam extending between the units, a vertical pivot between each end of the cross beam, and the corresponding arm on the cultivator unit, and a spring yieldingly holding the cross beam from tilting relatively to said pivot.

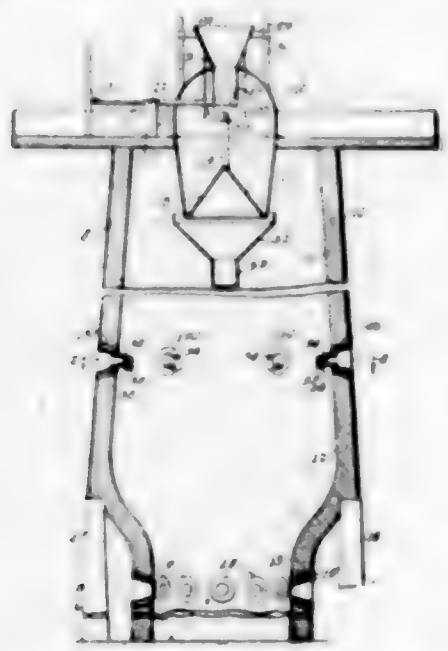
5. In a device of the class described, a pair of cultivator units, a cross beam for connecting said units, a

bar mounted for lateral movement relative to one of said units, a plate connected to the cross beam and resting upon said bar, a bolt forming a pivotal connection be-



tween said plate and bar and a spring compressed between an abutment on said bolt and said plate and tending to maintain the normal relation between said plate and bar.

1,298,761. BLAST-FURNACE. FRANK OSKAR MILLER, Portsmouth, Ohio. Filed Aug. 8, 1918. Serial No. 248,801. 7 Claims. (Cl. 266—30.)



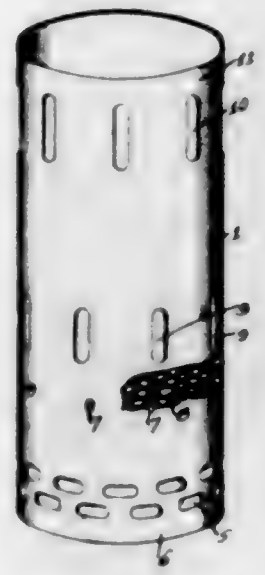
1. As an article of manufacture, a twyer for blast furnaces and the like, said twyer having a main section through which the blast enters and a discharge opening at an angle to said main portion, said twyer being provided on the interior thereof with an insert of refractory material at the place where the direction of the blast is deflected into the discharge opening.

1,298,762. CAMP-STOVE. JAMES S. MILLIGAN, Detroit, Mich. Filed June 15, 1917. Serial No. 174,827. 4 Claims. (Cl. 126—29.)

1. A stove of the character described consisting of a single piece of sheet metal arranged in cylindrical form and adapted to stand with equal facility on either end, a series of apertures formed in the body adjacent either end, and a grate positioned between the apertures and nearer one end of the body than the other.

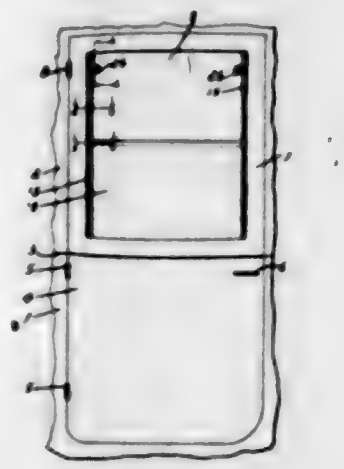
2. A stove of the character described consisting of a single piece of sheet metal adapted to be releasably secured in cylindrical form, the body thus formed being adapted to stand with equal facility on either end and having a series of apertures formed in the body adjacent either end, a grate positioned between the apertures and nearer one end of the body than the other, and a series of apertures adjacent the grate on the longer side of the body.

3. A stove of the character described consisting of a single piece of rust proofed sheet metal cylindrical in form and adapted to stand with equal facility on either end, said body having a series of apertures of considerable area formed in the body adjacent one end, a series of apertures considerably less in area formed adjacent the opposite end, a grate positioned nearer the smaller apertures, a series of removable rods for supporting the grate, and a series of apertures adjacent the grate on the longer side of the body.



4. A camp stove formed of a single sheet of metal adapted to be rolled to cylindrical form and detachably secured in said form, the said cylinder thus formed being adapted to stand on either end and having a series of apertures formed in the body adjacent each end, a grate positioned nearer one end of the body than the other, the said body having a series of alined apertures, a series of rods in the said apertures for supporting the said grate, and the body further having a series of apertures adjacent the grate on the longer side.

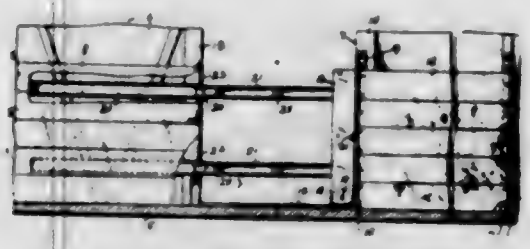
1,298,763. DOOR AND WINDOW FOR VEHICLE-BODIES. CHARLES A. MINER, Kalamazoo, Mich., assignor to Limousine Top Company, Kalamazoo, Mich. Filed Feb. 20, 1917. Serial No. 149,740. 2 Claims. (Cl. 20—52.1.)



1. In a structure of the class described, the combination of a frame provided with opposed grooves adapted to receive panes, upper and lower panes, the upper pane being adjustable and arranged to overlap and slide past the outer side of the lower pane, inner stops shouldered to receive the lower pane, the portion of said stops above the lower pane being rabbeted on their inner sides and notched to provide keepers, thin metal parting strips disposed on the outer side of said lower plane to support the same, and channeled metal slides arranged on the ends of the upper pane and disposed in said grooves, said slides being provided with inner and outer fabric facings and with

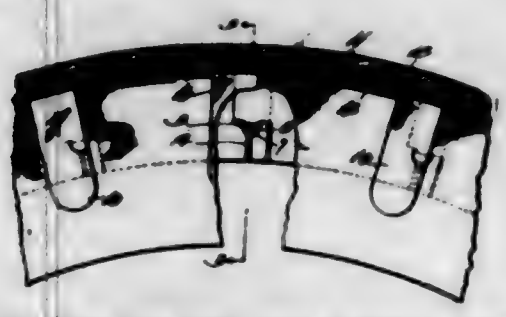
spring catches engaged under spring tension with the rabbeted portions of said stops and adapted to coact with said keepers to adjustably support the upper pane.

1,298,764. CAR-DOOR. RAYMOND WILLIAM MONK, Pittston, Pa. Filed Sept. 16, 1918. Serial No. 254,235. 2 Claims. (Cl. 20—31.)



1. In combination with a car having a door opening in its side wall, a horizontally sliding door to close said opening, a wall mounted at one side of the door opening and in spaced relation to the side wall to constitute a boxing to receive the door when in its open position, spaced channel members extending across the door opening, anti-friction rollers arranged in said channel members for engagement by the outer face of the door to resist the forward thrust of the car contents, means for removably holding the channel members in their operative positions, and means extending horizontally along the side wall of the car at one side of the door opening to receive said channel members and retain the same in an inoperative position.

1,298,765. TIRE-LINER. JOHN JOSEPH MOORE, South Charleston, Ohio. Filed Feb. 18, 1918. Serial No. 217,850. 6 Claims. (Cl. 152—18.)



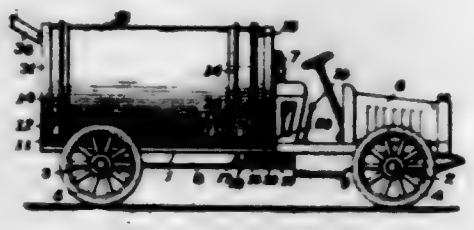
1. A tire liner and inner tube protector comprising a pair of arched sections disposed adjacent the tread of the tire and overlapping at one end, the outer end of the one section having slots and the inner end of the other section having lateral projections receivable in said slots when the two sections are relatively moved to position their longitudinal axes at an angle, said projections lying transversely of said slots when the sections are again moved into alinement.

2. A tire liner comprising a pair of arched sections overlapping at one end, the outer end of the one section having a pair of openings near its edges and having a pair of narrow slots leading from said openings through said edges, the inner end of the other section having near its edges a pair of flat lateral necks provided on their outer ends with heads, said necks being insertible into said openings through said slot when the two sections are suitably angled and lying transversely of said slots and in said openings when said sections are moved into alinement.

5. A tire liner comprising a plurality of one piece channel shaped metal sections extending circumferentially and loosely connected at their ends, layers of soft pliable material on the outer and inner sides of said sections, a fabric lining on the inner side of the innermost of said layers, and transverse areas of elastic material incorporated with said fabric lining and located opposite the joints between said sections.

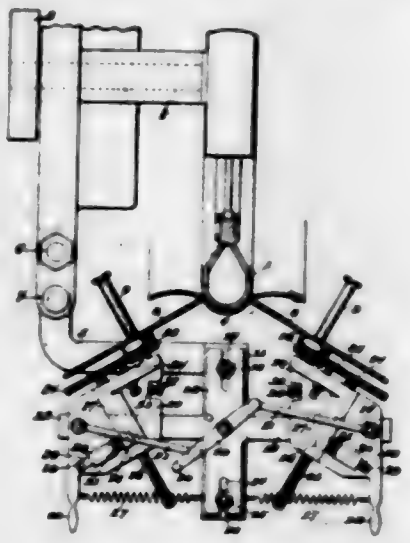
6. A tire liner comprising a pair of arched sections overlapping at one end, the outer end of the one section having a pair of openings near its edges and having a pair of narrow slots leading from said openings through said edges, the inner end of the other section having near its edges a pair of flat lateral necks, said necks being insertible into said openings through said slots when the two sections are suitably angled, and lying transversely of said slots and in said openings when said sections are moved into alinement.

1,298,766. BODY FOR TRUCKS. RALPH L. MORGAN, Worcester, Mass. Filed May 8, 1917. Serial No. 167,307. 3 Claims. (Cl. 214—65.)



3. A truck or vehicle comprising a body portion mounted on wheels, a shell rotatably supported on said body, a shaft beneath said body, means for rotating the shaft, means for operatively connecting said shaft and shell to rotate the shell in opposite directions, a spirally disposed member attached to the interior of said shell and extending from one end to a point adjacent the opposite end, and a hinged member contacting with said spirally disposed member to effect the discharge of the load when the shell is rotated in one direction.

1,298,767. TIRE-BUILDING MACHINE. FREDERIC C. MORTON, New Haven, Conn., assignor of one-half to Fred Burton Carlisle, Cranston, R. I. Filed May 31, 1913, Serial No. 770,873. Renewed Aug. 2, 1918. Serial No. 248,071. 6 Claims. (Cl. 154—10.)



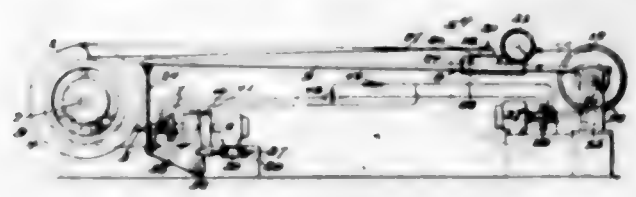
1. In a tire building machine, a rotatable core adapted to receive a strip of fabric, combined with a roll yieldingly held in contact with the fabric on the core; means for rotating the core; and means whereby the rotation of the core is caused to produce a movement of the said roll in a direction toward the axis of the core.

4. The combination with a rotatable core adapted to receive a strip of fabric; of a support movable in a direction parallel to the axis of the core; a spinning-in device consisting of a disk rotatably mounted in said support; and means for moving said spinning-in device with relation to said support in the direction of its own axis.

6. The combination with a rotatable core adapted to receive a strip of tire-fabric; of a disk having a screw-threaded stem; a support for said disk having a guide for said stem and a screw-thread in said guide to coöperate

with said stem; means for yieldingly pressing said support toward said core; and means for disengaging the screw-thread in the guide from the screw-threaded stem.

1,298,768. TIRE-BUILDING MACHINE. FREDERIC C. MORTON, New Haven, Conn., assignor of one-half to Fred Burton Carlisle, Cranston, R. I. Filed June 23, 1913, Serial No. 775,229. Renewed Aug. 2, 1918. Serial No. 248,072. 12 Claims. (Cl. 154—10.)



1. In a tire building machine, the combination with a shaping core adapted to receive on its surface a strip of tire fabric the end of which is attached thereto, of a stretching device adapted to be attached to the said strip; and means for moving said stretching device away from the core to stretch the fabric before the main portion thereof is laid on the core, by the rotation thereof.

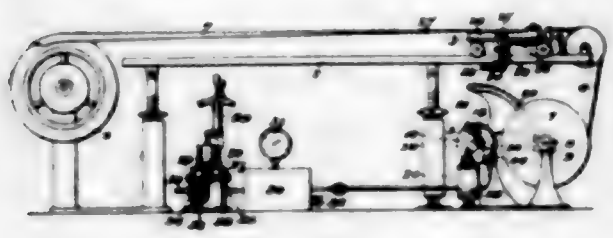
2. In a tire building machine, the combination with a shaping core, of a stretching device, means for moving said stretching device away from the core while a strip of fabric is attached at one end to the core and at the other end to the stretching device; a tension device associated with the stretching device to regulate the extent to which the fabric is stretched; means for rotating the core; and means whereby the stretching device is capable of movement toward the core opposed by the resistance of the tension device.

6. In a tire building machine, the combination with a rotatable shaping core to receive and shape a strip of fabric; of means for stretching the strip of fabric endwise while the core is stationary with the end of the strip adhering thereto; and a dummy strip forming part of the stretching means and constituting means for attaching the strip of fabric thereto.

9. The combination with a core adapted to receive and shape a strip of tire fabric after the end of the strip has been attached to the core by adhesion; of means for rotating said core; a traveling stretching member connected with the strip of fabric; means for operating the said stretching member; and means for alternately controlling the operating means for the stretching member and the rotating means for the core.

12. The combination with a core; of a motor adapted to rotate said core; a longitudinally movable stretching and tension device; a motor adapted to cause the longitudinal movement thereof; and means common to both motors for operatively connecting one and disconnecting the other.

1,298,769. TENSION DEVICE FOR TIRE-BUILDING MACHINES. FREDERIC C. MORTON, New Haven, Conn., assignor of one-half to Fred Burton Carlisle, Cranston, R. I. Filed Apr. 23, 1914, Serial No. 834,029. Renewed Aug. 2, 1918. Serial No. 248,073. 8 Claims. (Cl. 154—10.)



1. In a tire building machine, the combination with a rotatable core; of a stretching device adapted to receive one end of a strip of fabric, the other end of which is secured to the core; and a fluid pressure motor permanently connected with said stretching device whereby the said motor is utilized to perform the stretching operation while the core is stationary, and to maintain tension on the strip while the core is being positively rotated.

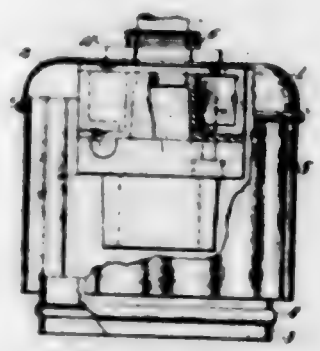
4. In a tire building machine, the combination with a rotatable shaping core, of traveling means for holding one end of a strip of fabric, the other end of which is on the surface of the core said holding means being movable toward the core in line with the periphery thereof as the core rotates; a fluid pressure tension device codperating with said traveling means; and means for regulating the pressure.

5. In a tire building machine, the combination with a rotatable shaping core, of traveling means for holding one end of a strip of fabric, the other end of which is on the surface of the core; and means for applying fluid pressure to said traveling means to resist the movement thereof toward the core and to restore said traveling means to its normal position when released from the core.

6. In a tire building machine, the combination with a rotatable shaping core, of traveling means for holding one end of a strip of fabric, the other end of which is on the surface of the core; means for applying fluid pressure to said traveling means to resist the movement thereof toward the core; a pressure regulator; and a vent to maintain the tension pressre constant.

8. In a tire building machine, a rotatable shaping core, a traveling carriage adapted to hold one end of a strip of fabric, the other end of which is adhered to the core the said carriage being movable in a direction transverse to the axis of the core; a fluid pressure motor connected with the carriage to move said carriage away from the core; an adjustable fluid pressure regulator for the pressure which operates the motor; a dash-pot for checking the speed of the motor when the movement of the carriage is not resisted; and an automatic brake connected with the carriage.

1,298,770. ELECTRIC FIXTURE. EDMUND F. MOULD, Cleveland, Ohio, assignor to The Adams-Bagnall Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 12, 1915. Serial No. 45,197. 8 Claims. (Cl. 240—78.)



1. An electric light fixture, comprising a casing having a dome having a lower or skirt portion and a lower member adapted to receive a shade, and means forming tube-like passageways between the dome and the lower portion, said lower or skirt portion of the dome extending upon the outside of the said means forming tube-like passageways, and means within the casing for supporting an electric lamp.

1,298,771. TELEPHONE-HANDSET. GEORGE HOWARD NASH, Sidcup, and BERTRAM BARNETT GRACE, Upminster, England, assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 2, 1917. Serial No. 178,196. 8 Claims. (Cl. 179—103.)

1. A telephone handset comprising an extensible handle, including two parts movable relative to each other, a transmitter and a receiver mounted thereon, contact springs mounted in one part of said handle, and a member

carried by the other part of said handle arranged to make electrical contact with said contact springs when the



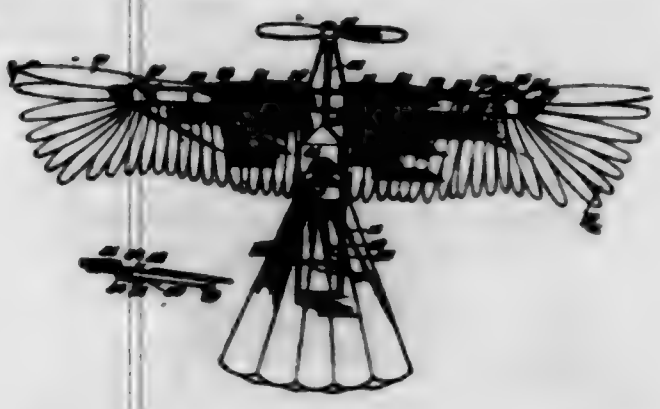
handle is extended and to mechanically engage with said contact springs to hold the handle in its extended position.

1,298,772. SAFETY-RAZOR. ROBERT P. NEIL, Calumet, Mich. Filed Aug. 12, 1918. Serial No. 249,443. 5 Claims. (Cl. 30—12.)



1. A safety razor comprising, in combination, a shank extending longitudinally of the blade, a blade-holder, a guard, means for pivotally mounting said blade-holder against one face of said guard upon a longitudinal axis substantially coincident with that of the shank to permit a half revolution of the holder when the shank is rotated and the guard held against rotation and resilient means located upon the opposite side of said guard from said holder and in operative connection with said holder to yieldingly press the two together.

1,298,773. AEROPLANE. JOSEPH N. G. NESBIT, Atlanta, Ga. Filed Oct. 27, 1917. Serial No. 198,823. 5 Claims. (Cl. 244—20.)

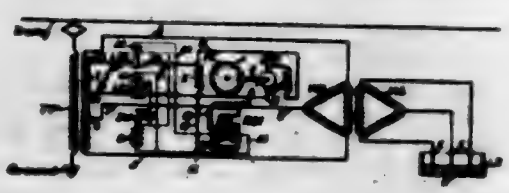


1. In a flying machine, a frame, a rotatably mounted arm at each side of the frame, a system of linkage connected to each rotatable element, means for strapping each system of linkage to an arm of the operator and a plane mounted on each system of linkage whereby the planes may be oscillated vertically, or inclined transversely relatively in opposite directions, or simultaneously in the same direction.

2. In a flying machine, a frame, a system of linkage mounted at each side, the joints of the links being located at points coincident with the joints of the arms, means for strapping each system of links to one of the arms of the operator, a glove mounted at the outer end of each system of linkage, means connecting each system of linkage to the frame to permit rotative axial movement of each system of linkage, and to permit vertical movement of each system of linkage, and a plane mounted on each system of linkage with a portion of each plane carried by one of the gloves.

5. In a flying machine, a tail, means mounting the same for movement vertically and laterally, a pair of oscillatably mounted foot pedals, means operatively connecting each pedal to the tail, to move the same vertically upon oscillation of the pedals, and an auxiliary pedal carried by each of said first mentioned pedals, and means connecting the auxiliary pedals to the tail whereby to oscillate the tail laterally upon oscillation of said auxiliary pedals.

1,298,774. SYSTEM OF STARTING PHASE-CONVERTERS. STANLEY G. NOTTAGE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1916. Serial No. 70,408. 4 Claims. (Cl. 172—288.)



1. In a system of control, the combination with an alternating-current supply-circuit, and a transformer winding energized therefrom, of a phase-converting machine having primary and secondary phase windings, a starting motor for said machine having an operating winding connected in series relation with said primary phase winding across a predetermined portion of said transformer winding, and means dependent upon predetermined machine conditions for connecting said primary phase winding across a materially greater portion of said transformer winding.

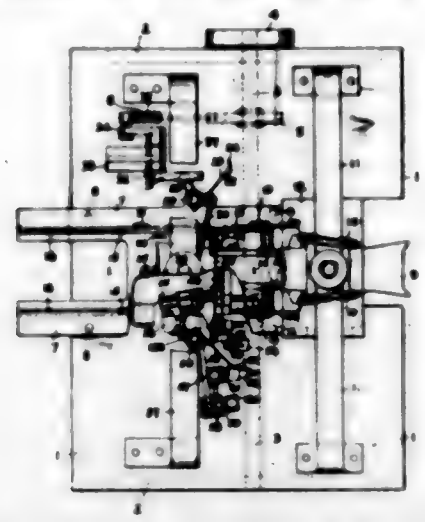
4. In a system of control, the combination with a single-phase supply circuit and a transformer winding energized therefrom, of a phase-converting machine connected to said supply circuit, said machine having primary and secondary phase windings, a starting motor for said machine having an armature and a field-magnet winding initially connected in a series-circuit relation with said primary phase winding across a predetermined portion of said transformer winding, and relay means connected across said secondary phase winding for connecting the primary phase winding across approximately the entire transformer winding when the phase-converting machine has substantially attained synchronous speed.

1,298,775. FOLDING-MACHINE. ABRAHAM NOVICK, New York, N. Y., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed May 31, 1917. Serial No. 171,872. 14 Claims. (Cl. 93—13.)

1. In an envelop folding machine of the class described, a creasing table, means for moving an envelop blank on said table and auxiliary means for continuing the movement of the blank on said table, comprising a pair of studs journaled on each side of the path of the blank, arms carried by said studs and swinging in a plane parallel with the plane of the creasing table, pins carried by said arms engaging marginal indents in the edges of the blank, and means for oscillating said studs in opposite directions.

2. The combination in a machine for folding an envelop blank having side flaps and a front flap with triangular flaps extending from the side flaps upon each side of the front flap, of means for creasing the side flaps and front flap and forming a plait in said triangular flaps, and means for holding said plait until the front flap is folded.

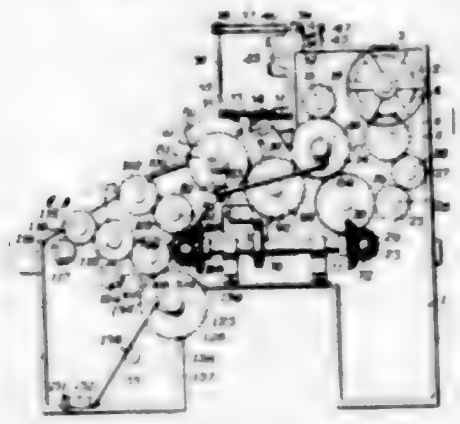
3. In a machine for folding an envelop blank having side flaps, a front flap and triangular flaps extending from said side flaps on each side of said front flap, means for folding the blank, comprising a table having an opening corresponding to the completed envelop, a plunger for forcing the blank through said opening, spreader fingers carried by said plunger and projecting over said triangular flaps, said table having openings for said fingers, and means for folding the front and side flaps of the blank.



4. In an envelop folding machine of the class described, a creasing table, means for squaring and positioning an envelop blank on said table, comprising stops, arms on each side of the blank, means for swinging said arms in opposite directions in a plane parallel with the creasing table, pins carried by said arms for engaging the marginal indents in the edges of the blank to move the blank against said stops.

5. In an envelop folding machine of the class described, a creasing table, means for squaring and positioning an envelop blank on said table, comprising stops, arms on each side of the blank, pins carried by said arms, for engaging the marginal indents of the blank, blades carried by said arms for engaging the straight edges of the blank, and means for swinging said arms in a plane parallel with the table and in opposite directions to move the blank against said stops.

1,298,776. ENVELOP-MACHINE. ABRAHAM NOVICK, New York, N. Y., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Substitute for application Serial No. 859,610, filed Sept. 1, 1914. This application filed July 23, 1917. Serial No. 182,195. 40 Claims. (Cl. 93—62.)



1. In an envelop machine, the combination with means for advancing a blank, of means for arresting the advancement of said blank, reciprocating means for folding the side flaps of the blank, and revoluble means, operable while the blank is at rest, for folding the bottom flap thereof.

35. In an envelop machine, a flap folding mechanism comprising a plate, means for supporting a blank with a flap thereof projecting beyond one edge of said plate, a pair of coöperating rolls normally disposed on the opposite side of said blank from said plate, means for bodily moving said rolls to bring the bight thereof adjacent said edge of said plate, whereby the projecting flap of the blank is folded, and the fold is seized in said bight, means for bodily moving said rolls in the opposite direction, to withdraw said blank from said support and means for rotating said rolls.

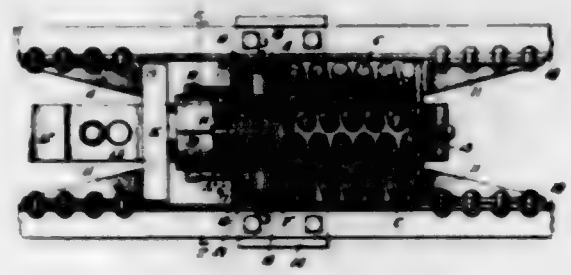
1,298,777. ENGAGING AND DISENGAGING GEAR FOR SHIPS' BOATS. JOSEPH F. O'BRIEN, West New York, N. J. Filed July 26, 1918. Serial No. 246,844. 12 Claims. (Cl. 9—23.)



1. In gear for engaging and disengaging the shackle from ships' boats, the combination with a hook and means for suitably supporting the same on a boat, of a releasing member pivoted at one of its ends to the front of the hook and having a free opposite end extending rearwardly from said pivot, and means at said free end for causing said lever to swing on its pivot and eject the shackle ring from the mouth of the hook when pressure is relieved therefrom.

10. In a gear for engaging and disengaging the shackle from ships' boats, the combination with a hook and means for pivotally supporting the same on a ship's boat, of a releasing lever having one end pivoted at the bill of the hook and its opposite end free and extending rearwardly and a suitable weight at said rear end; a short extension at the front side of said pivot, and mousing means pivoted contiguous to the base of the hook and adapted to engage said extension.

1,298,778. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 21, 1918. Serial No. 255,043. 3 Claims. (Cl. 213—64.)



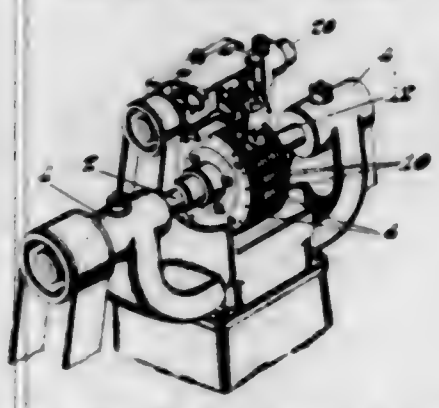
1. In a friction shock absorbing mechanism, the combination with a spring casing open at one end thereof, of a friction shell disposed at said open end of the casing, coöperating shoulders on said shell and casing adapting the shell for a limited amount of movement with respect to the casing, friction elements coöperable with said shell, spring means disposed within the casing, and a follower at the end of said spring means adjacent the shell, said follower having a flange extending through

the open end of the casing and into the shell, said flange preventing accidental disengagement of the shell and casing.

1,298,779. PROCESS FOR REMOVING INK AND COLORING-MATTER FROM PRINTED PAPER. WESLEY MILTON OSBORNE, Carthage, N. Y. Filed Sept. 30, 1918. Serial No. 256,309. 3 Claims. (Cl. 92—3.)

1. A process of removing ink and coloring matter from printed papers, consisting of treating the papers in a digester to the action of sulfurous acid and sodium carbonate, applying heated steam to the solution, causing the papers to circulate, slowly at first, gradually raising the temperature and pressure, and cooking the contents of the digester rapidly.

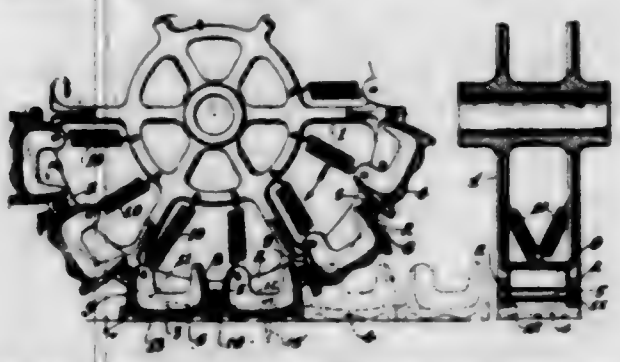
1,298,780. WELT-BEATING MACHINE. JOSEPH A. PAQUIN, Manchester, N. H., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 30, 1917. Serial No. 183,485. 6 Claims. (Cl. 12—51.)



4. A welt beating machine having, in combination, a welt beater, and a narrow work supporting member having a welt supporting face and an end face convex in planes parallel with the welt supporting face, said end face also being inclined backwardly away from the work to adapt it to fit into the welt crease under an overhanging toe or shank of a shoe, and means for imparting to said member impulses toward the lateral surface of the shoe simultaneously with the beating of the welt.

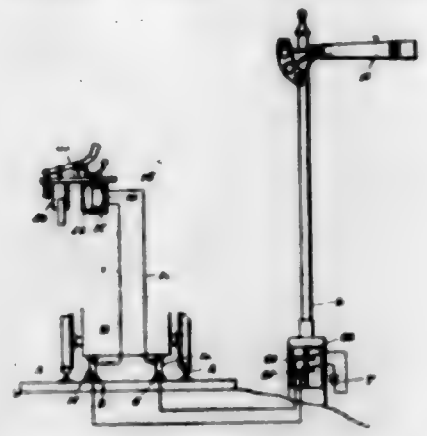
6. A welt beating machine having, in combination, a rotary beater comprising an annular series of beating elements, means for rotating said beater, a shoe positioning member arranged to position a shoe in such relation to the beater as to cause the rotation of the beater to be effected in a plane transverse to the edge of the welt, said member being constructed to engage the shoe in the welt crease and to present to the upper a surface convex in a plane parallel to the welt, and means for imparting to said member impulses directed toward the upper for shaping the upper during the welt beating operation.

1,298,781. TRACTOR. UGO PAVESI and GIULIO TOLOTTI, Milan, Italy, assignors, by mesne assignments, to The P. T. Wheel Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 29, 1915. Serial No. 58,726. 11 Claims. (Cl. 21—230.)



1. In a tructor, the combination, with a wheel, of a plurality of bearing members attached along the rim of the wheel, mechanical engaging means between said bearing members and said wheel, consisting of guide members near the rim of the wheel and engaging faces on said bearing members, springs connecting said bearing members and said wheel and constructed to move an end of said members in a substantially radial direction on said wheel the opposite end having limited gravity movement and each of said members having a substantially flat face on which the rim portions of said wheel ride.

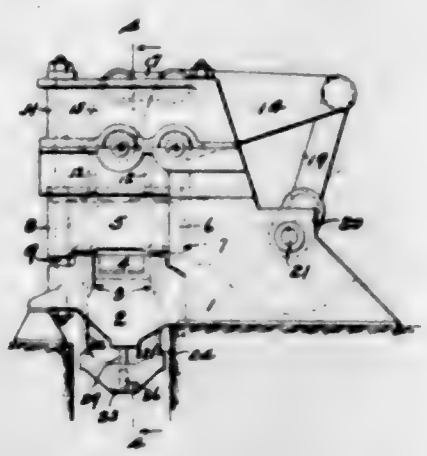
1,298,782. AUTOMATIC TRAIN-STOP. BERT P. PRANKER, Marblehead, Mass. Filed Nov. 3, 1917. Serial No. 200,106. 1 Claim. (Cl. 246—195.)



An automatic train stop comprising track side elements including a source of energy and circuits therefor, vehicle carried elements adapted to contact with the track side elements, including a base, an electro-magnetic element having a movable core therein, a lever pivotally connected with the base intermediate its ends and having a hand engaging part, spring means engaging with one end of said lever for drawing said end toward the base, a valve for controlling the train line pressure connected with said lever, a fork member pivoted to the lever, a latch member pivoted to the base and having a hooked end adapted to engage with the fork member, the other part of said latch member being located above the end of the core and a combined counter weight and a handle on the latch member

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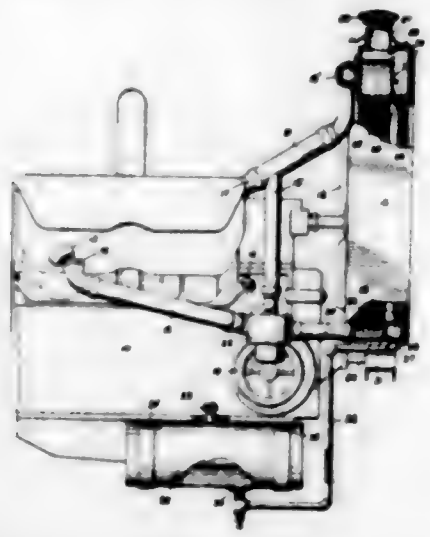
1,298,783. SHEARING-MACHINE. WALTER RACHALS, Boardman, Ohio. Filed Apr. 18, 1916. Serial No. 91,948. 2 Claims. (Cl. 164—57.)



1. A shearing machine comprising a frame including a stationary knife block, a reciprocating knife block having one end working in a guide formed in the frame, a guide post slidably engaging with the reciprocating block at the end opposite the guide formed in the frame, means for operating said knife block comprising a main lever pivotally supported in said frame, power connections at one end of said main lever, a supplemental lever also pivotally supported in said frame, actuating plungers carried by the reciprocating knife block and connecting with the

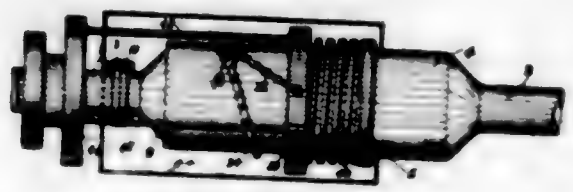
working end of said lever, and means for counterbalancing the weight of said reciprocating knife block located beneath the stationary knife-block and projecting therethrough to engage with the reciprocating knife block.

1,298,784. HYDROCARBON-MOTOR. DWIGHT T. RANDALL, Detroit, Mich., assignor to General Motors Company, Detroit, Mich, a Corporation of New Jersey. Filed Apr. 11, 1917. Serial No. 161,228. 14 Claims. (Cl. 123—174.)



1. In an internal combustion engine, in combination, a cylinder jacket, a cooling device, and connections therebetween, and a condensing device arranged in line with said other device and connected with the upper part thereof, and means for circulating air about said devices whereby said condensing device is subjected to the cooling action of the air which passes over said other device.

1,298,785. TRANSMISSION MECHANISM. FRANCIS LEE RANDALL, Nanaimo, British Columbia, Canada. Filed Feb. 8, 1918. Serial No. 216,009. 13 Claims. (Cl. 192—1.)

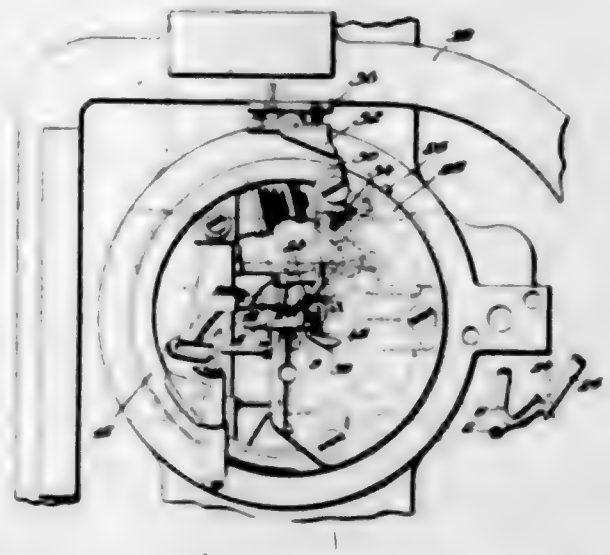


1. In transmission mechanism, a driving shaft provided with a center pin extension swingable in any direction about its axis, and a driven shaft having a recess in which said pin fits so as to rotate free of said driven shaft when centered or to drive said shaft when moved out of center.

4. In transmission mechanism, the combination with a power shaft, of a driven shaft having a longitudinal axially arranged recess extended radially through the shaft as a slot, a ball-and-socket member rotatable with the driving shaft having an axial extension rotatable in the said axial recess, and means for moving said extension from its axial position to an angular position in said slot, said means being adapted to return said extension to its axial position.

13. In transmission mechanism, the combination with a power shaft, of a driven shaft enlarged at the end adjacent the power shaft, said enlargement being provided with a counterbore the bottom of which is reduced in diameter to form a clearance space and having a longitudinal recess axially arranged and extended radially through the enlargement as a slot, a coupling member secured to the power shaft and rotatably fitting the counterbore of the driven shaft, said coupling member being provided with a cup shaped recess in its free end on the inner periphery of which adjacent its mouth are diametrically opposite projections the outer ends of which are beveled, a cup shaped member rotatably fitting said cup shaped recess and movable into said clearance space as it is rotated having on its outer periphery slots in which said projections are slidably engaged and on its inner periphery adjacent its mouth diametrically opposite projections, a ball rotatably fitting said cup shaped member having on its outer periphery slots in which the projections of the cup shaped member are slidably engaged, said ball being provided with an axial extension and a squared sleeve in the bore of which the said extension is rotatable, said sleeve fitting said axial recess and being slidable in said slot, and means for moving said sleeve to swing said extension out of its axial position or to return it thereto.

1,298,786. THREAD SEVERING AND HOLDING MECHANISM. EUGENE J. RAY, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 21, 1916. Serial No. 126,902. 13 Claims. (Cl. 112—33.)



1. A sewing machine having, in combination, stitch-forming mechanism, means for automatically severing the thread below the work, and means for holding the severed end portion beyond the needle above the work.

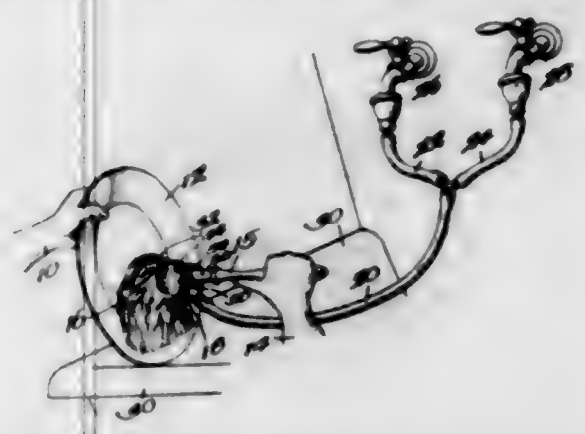
5. A sewing machine having, in combination, stitch-forming mechanism comprising an upper needle and a complementary under thread mechanism, a turret on which the under thread mechanism is mounted, a thread cutter on the turret, a threadholder above the work, and means for operating the thread cutter and threadholder.

11. A sewing machine, having, in combination, stitch forming mechanism comprising an upper needle and a complemental under thread mechanism, a thread cutter for cutting the upper thread only below the work at the completion of the sewing, and a thread holder above the work for holding the end portion of the upper thread beyond the needle.

1,298,787. WATER-SUPPLIED DISH-MOP. WILLARD McC. REID, Evanston, Ill., assignor to Reid-Geisler Manufacturing Co., Chicago, Ill., a Corporation of Illinois. Filed June 8, 1918. Serial No. 238,809. 4 Claims. (Cl. 15—51.)

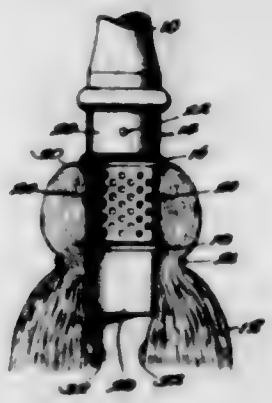
1. In mechanism of the class described, a mop and a handle therefor, a water nozzle, means for conducting

water to said nozzle, and means for suspending said nozzle from the mop handle swingingly connected with the handle



so that it will discharge water against the mop while permitting rotation of the mop with reference to the nozzle.

1,298,788. SANITARY VENTILATED DISH-MOP. WILLARD McC. REID, Evanston, Ill., assignor to Reid-Geisler Manufacturing Co., Chicago, Ill., a Corporation of Illinois. Filed June 8, 1918. Serial No. 238,810. 2 Claims. (Cl. 15—13.)

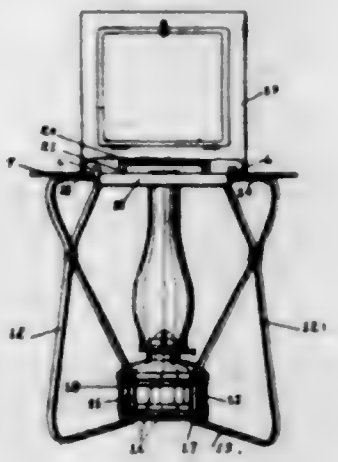


1. In a device of the class described, in combination with a body of mop material, a perforated tubular member inserted inside the body of said mop material in such a way that air can pass through said tubular member and the perforations therein into the mop material for the purpose of obtaining ventilation of the complete mop and a handle device connected to the tubular member, for the purposes set forth.

1,298,789. LAMP-STOVE. WINIFRED B. REININGER, Battle Creek, Mich. Filed June 28, 1918. Serial No. 242,352. 9 Claims. (Cl. 126—260.)

1. In a lamp stove, the combination of a top frame comprising outer side bars secured together at their ends and inner bars disposed in a spaced relation parallel to the side bars and secured thereto at their ends and to each other at their crossing points, the ends of said inner bars being turned upwardly providing top plate engaging lugs, a removable top plate having a central chimney opening therein resting on said top frame and recessed on its sides to receive said lugs, said top plate having downturned flanges between said lugs, legs formed of bars folded to provide horizontal feet portions and horizontal top portions, said legs being disposed radially with their top portions detachably secured to the top frame at the corners thereof and at the crossing points of said inner bars by the securing bolts for the bars, and a center ring detachably secured to said legs and constituting a lamp holder and a brace member for the legs.

5. In a lamp stove, the combination of a top frame comprising outer side bars secured together at their ends and inner bars disposed in a spaced relation and parallel to the side bars and secured thereto at their ends and to each other at their crossing points, a top plate having a central chimney opening therein resting on said top frame, legs formed of bars folded to provide horizontal feet portions and horizontal top portions, said legs being disposed radially with their top portions secured to the top frame at the corners thereof and at the crossing points of said inner bars, a center ring secured to said legs, and a deflector and supporting plate arranged on said top plate above said chimney opening thereof.



8. In a lamp, the combination of a top frame, a top plate arranged thereon, legs formed of bars folded to provide horizontal feet portions with upright portions at the inner ends thereof, and a center ring secured to the upright portions of said legs and adapted to receive a lamp.

9. In a lamp stove, the combination of a top frame, a top plate therefor having a central opening, legs formed of bars folded to provide feet portions and top portions, said legs being disposed radially with their top portions secured to the top frame, and a center ring secured to said legs constituting a brace therefor and adapted to receive a lamp.

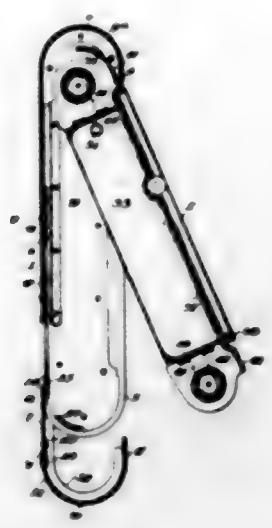
1,298,790. APPARATUS FOR DRYING COPRA AND TREATING OTHER SUBSTANCES. FRANCIS ARTHUR RICH, Sydney, New South Wales, Australia, assignor of one-half to Denis Watkin Kirk, Whakatane, New Zealand. Filed Mar. 18, 1916. Serial No. 85,209. 2 Claims. (Cl. 34—12.)



1. An inclined endless conveyer, a hot air oven inclosing the upper side only of the conveyer, supporting rollers beneath the upper side of the conveyer within and without said oven, walls for said oven having an inlet and an outlet for the hot air and having openings through which said conveyer passes into and out of said oven, and flexible flaps in said openings.

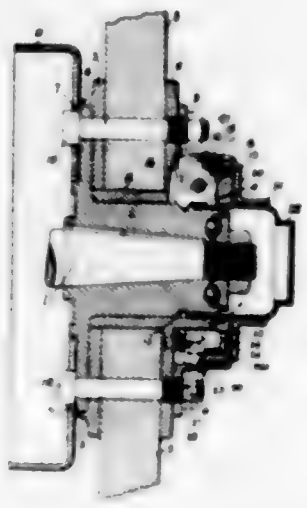
2. An open meshed endless conveyer, a hot air oven inclosing the upper side only of the conveyer, supporting rollers beneath the upper side of the conveyer within and without said oven, walls for said oven having an inlet and an outlet for the hot air and having openings through which said conveyer passes into and out of said oven, and flexible flaps in said openings.

1,298,791. PHOTOGRAPHIC CAMERA. WILLIAM A. RIDDELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 21, 1917. Serial No. 203,201. 9 Claims. (Cl. 95—32.)



1. In a folding camera, the combination with a body having side walls, and an end wall fixed thereto, of a back consisting of a two-part wall, one part of which is fixed to the first mentioned walls and the other part of which is displaceable and carries the other end wall.

1,298,792. DEMOUNTABLE WHEEL. CHARLES T. RIDGELY, Springfield, Ohio. Filed June 18, 1917. Serial No. 175,251. 10 Claims. (Cl. 21—31.)

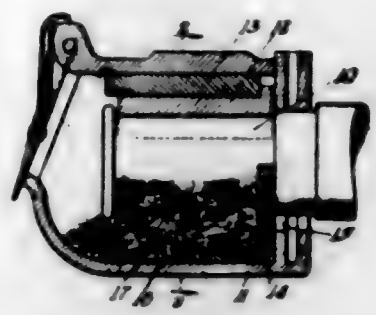


1. In a wheel, a main hub, a supplemental hub, one of said hubs having an annular shoulder, dogs carried by the other of said hubs and constructed to engage said shoulder whereby to cause relative axial movement of said two hubs, and means for positively moving said dogs into engagement with said shoulder and spring actuated means for moving the dogs out of engagement with said shoulder.

1,298,793. EXPLOSIVE. WILLIAM RINTOUL and ERNEST G. BECKETT, Stevenston, Scotland, assignors to Nobel's Explosives Company, Limited, Stevenston, Scotland. Filed Jan. 3, 1919. Serial No. 269,489. 4 Claims. (Cl. 52—1.)

1. An explosive comprising dicyandiamidin perchlorate.

1,298,794. PACKING MATERIAL FOR JOURNAL-BOXES AND THE LIKE. CHARLES TRESCOTT RIPLEY, Chicago, Ill. Filed July 22, 1918. Serial No. 246,218. 3 Claims. (Cl. 64—24.)



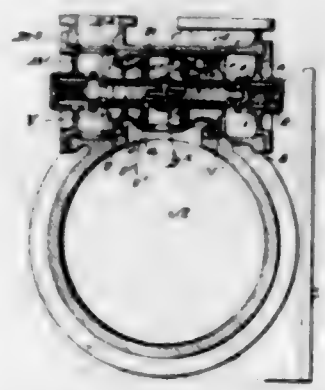
1. A packing material for journal boxes, or the like, comprising a mass of absorbent material having a plurality of open coiled springs interwoven therein.

1,298,795. SPARK-TESTER. FREDRICK A. ROBBINS, Toledo, Ohio. Filed Aug. 2, 1918. Serial No. 248,018. 2 Claims. (Cl. 175—183.)



1. In a spark plug tester, a cylindrical member having an opening formed therein at a point near one end thereof, a conductor extending from the said end of the cylindrical member to the said opening, a second conductor extending transversely through the said cylindrical member and located in the said opening and in proximity to the end of the first named conductor, a spring member electrically connected with the second named conductor for making connection with the core of the spark plug.

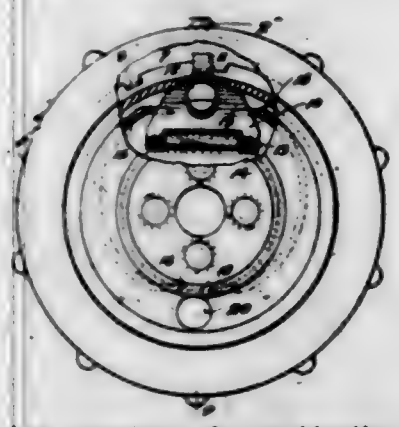
1,298,796. VALVE-GEAR. SIEGFRIED ROSENZWEIG, New York, N. Y. Filed June 3, 1918. Serial No. 237,848. 2 Claims. (Cl. 136—6.)



1. The combination of a steam cylinder; a valve chamber extending crosswise of the cylinder; and a double valve cage formed with end compartments adapted to receive steam admission and exhaust valves respectively and provided with seats to coöperate with said valves, and an intermediate portion between the two valves containing

end compartments adapted to receive and support the valve-operating means common to both valves—said cage being adapted to be fitted into and removed from the valve chamber as a unitary structure.

1,298,797. LOCKING HUB STRUCTURE. CHARLES SCHRANCK, Philadelphia, Pa., assignor to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 13, 1917. Serial No. 185,997. 6 Claims. (Cl. 21—31.)



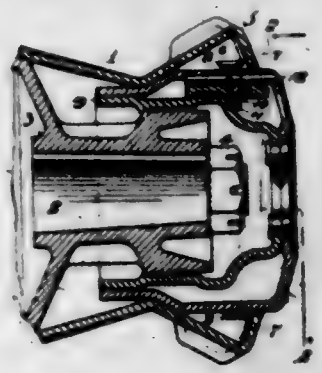
1. In a hub structure, the combination with an outer hub shell, of a cap provided with interior threads, and adapted to hold said outer shell in position, and provided with a substantially square slot through the peripheral wall thereof, a stop plate carried by said outer shell to extend circumferentially around said cap and positioned in the plane of the forward end of said slot, and having laterally extending teeth, a latch located within the interior of said cap and pivotally mounted and provided with a portion extending through said slot, and a pair of springs anchored in said cap and secured to said latch for normally maintaining the portion of said latch which projects through the slot in engaging relation with said stop plate.

6. The combination with an outer shell, flared radially to form a circumferential pocket, a stop plate carried by said shell in said pocket, and provided with projecting teeth, an exterior cap sleeve located within said shell formed with a flare to bear against said outer shell and provided with a longitudinal slot in the plane of the projecting teeth of said stop plate and bent at its end to form a cap face, an interior cap sleeve located within said exterior sleeve provided with interior threads, and bent at its end to form a face parallel with the face of said exterior sleeve, a plate located between the faces of said sleeves, means for securing said sleeves and said plate together, a latch pivotally carried by said plate to extend through said slot in said exterior sleeve to engage the teeth of said stop plate, the face of said exterior sleeve being provided with an opening to accommodate means for rocking said latch out of engaging relation to said stop plate.

1,298,798. HUB STRUCTURE FOR WHEELS. CHARLES SCHRANCK, Philadelphia, Pa., assignor to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 13, 1917. Serial No. 185,998. 10 Claims. (Cl. 21—31.)

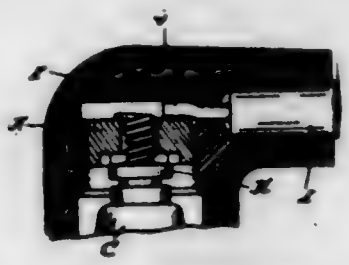
1. In a hub structure, the combination with a hub shell and an outer shell, of a hub cap adapted to fit on said hub shell to hold said outer shell in position thereon, and provided with a slot therein parallel to the plane of the face of said cap, a stop plate carried by said outer shell to extend circumferentially around said cap in the plane of said slot, a latch pivotally mounted in said slot at its approximate center, and provided with a projecting portion at one side of its pivot adapted to extend out of said slot into engaging relation with said stop plate, the portion of the latch on the other side of its pivot being formed into a relatively small tail portion, said cap being provided with a pair of holes, one of said holes, being positioned opposite the tail portion of said latch, and off center, relative thereto, substantially as and for the purpose described.

9. The combination with a wheel and a receiving hub therefor, a cap formed of outer and inner shell portions of relatively different diameters and telescoped the one over the other and secured together at their ends, said outer cap shell having a transversely extending slot through the wall thereof, a latch disposed in the space between said



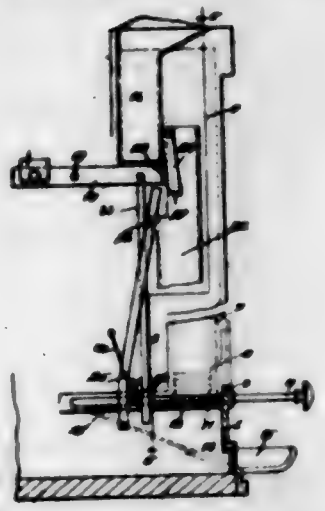
cap shells and pivotally mounted therein and having a portion to project through said slot and engaging device carried by the wheel for coöperation with said latch to detachably lock said cap, said cap engaging the receiving hub and the wheel respectively to detachably retain the latter in place.

1,298,799. WATERPROOF CONNECTION FOR SPARK-PLUGS. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Nov. 22, 1917. Serial No. 203,296. 9 Claims. (Cl. 123—169.)



1. The combination with a spark-plug having a casing, a projecting insulator and electrical contact thereon, of a hood for inclosing said insulator, said hood being detachably mounted on said casing, and contact, an electrical conductor secured to said hood, a terminal contact electrically connected to said conductor and resiliently bearing against said contact on said insulator without direct pressure on said insulator, and means for clamping said hood to said casing.

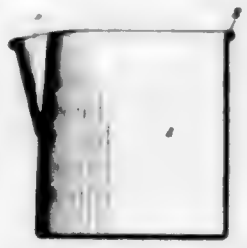
1,298,800. COMBINED VENDING-MACHINE AND GAME APPARATUS. GUSTAV F. W. SCHULTZE, Oakland, Calif. Filed Mar. 19, 1918. Serial No. 223,278. 1 Claim. (Cl. 194—48.)



A coin or token controlled vending apparatus including an article dispensing mechanism, a coin or token receiving

runway coöperating therewith, means operated by a depositing coin or token within said runway for releasing said dispensing mechanism to permit the operation thereof, a plurality of coin or token disposal runways spaced from the discharge end of said coin or token receiving runway, one terminating exteriorly of the apparatus and another interiorly of the apparatus, and means associated with the receiving runway and under the control of the operator of the apparatus for receiving the controlling coin or token discharged from said receiving runway and for projecting the same to one of said discharge runways.

1,298,801. METHOD OF FORMING SPOUTED CONTAINERS. PHILIP H. SERIO, Elmira, N. Y., assignor to National Aluminum Works, Elmira, N. Y., a Corporation. Filed Nov. 29, 1916. Serial No. 134,083. 1 Claim. (Cl. 113—116.)



The method of forming spouted containers from one piece of sheet material, which consists in forming a cupped container from a flat blank, beading the upper edge of the container, and afterward simultaneously contracting the upper portion of the container and forming a spout from the surplus material without destroying the bead.

1,298,802. SAFETY-RAZOR. MATTHEW C. SHARPNACK, Jamison, Nebr., assignor of two-thirds to Wilbur V. Bennett, Omaha, Nebr. Filed Nov. 27, 1917. Serial No. 204,138. 4 Claims. (Cl. 30—12.)



1. In a safety razor, a handle provided with a tubular shank, a base-plate removably mounted on the shank and provided with a recess, a shaft within the shank, said shaft having a cylindrical part disposed in said recess and provided with a cam and a projection, a guard-plate on the base-plate, a rock-lever mounted on the base-plate in engagement with the cam and guard-plate, a shaving blade on the base-plate in engagement with said projection, said cam and projection being non-concentric with the axis of the shaft for causing reciprocation of the guard-plate and shaving blade.

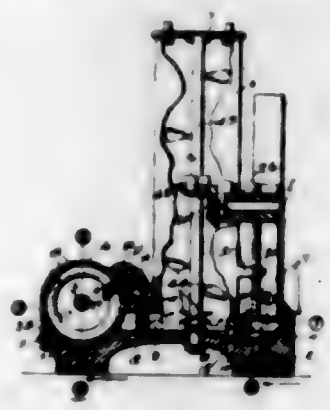
1,298,803. UPHOLSTERY-MOUNTING. HARRY L. SHEPLER, Toledo, Ohio, assignor to The Willys-Overland Company, Toledo, Ohio., a Corporation of Ohio. Filed Mar. 1, 1915. Serial No. 11,128. 3 Claims. (Cl. 155—43.)

1. In a seat back, the combination of a seat back panel, having an upper frame member; an upholstering cushion having a tacking strip secured along the upper edge thereof; a bar secured to said tacking strip and to said upper



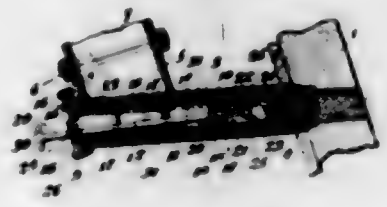
frame members; and a flexible strip extending from said cushion over said bar and concealing the same.

1,298,804. RUBBING DEVICE FOR ANIMALS. CHARLES W. SHERMAN, Peoria, Ill., assignor, by mesne assignments, to R. C. Lowes, Peoria, Ill., doing business as Lowes Manufacturing Co., Peoria, Ill. Filed Aug. 24, 1911. Serial No. 645,768. 16 Claims. (Cl. 119—157.)



14. A device for enabling an animal to apply liquid to its skin including a trough for holding the liquid; and a horizontally mounted roller overhanging a longitudinal side of the trough and projecting into the trough space to enable it, as it is being turned by the animal, to transfer liquid from the trough space to the animal.

1,298,805. GAS-BURNER. HERMAN C. SIEBERT, South Bethlehem, Pa. Filed Dec. 20, 1918. Serial No. 267,680. 6 Claims. (Cl. 158—118.)



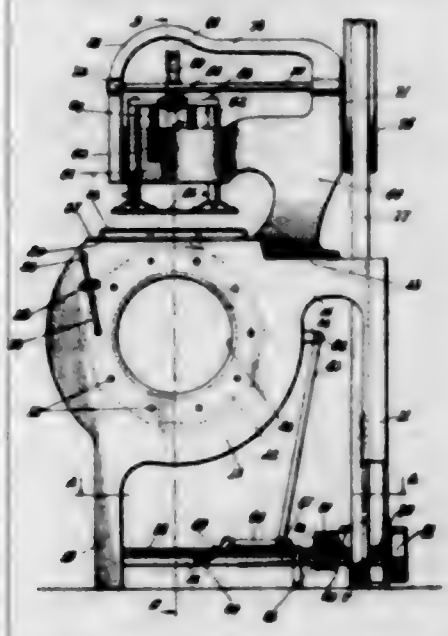
1. A gas burner having an outer tubular gas casing, an air conduit mounted longitudinally therein and adapted to connect with the outer air, the inner end of said air conduit being provided with a door adapted to be adjusted to predetermine the size of the air inlet.

1,298,806. BLANKING-PRESS. WAWRZYNIEC SKRETNECKI, Chicago, Ill. Filed July 1, 1918. Serial No. 242,795. 4 Claims. (Cl. 164—19.)

1. In a blanking press, the combination with a rigid frame, a cylinder rigidly supported therein, a plurality of faces formed externally on said cylinder, cutting dies engageable with said faces, a pair of plungers mounted to reciprocate vertically over said dies, means for moving said plungers, and a guide adjacent which work may be placed arranged over said dies.

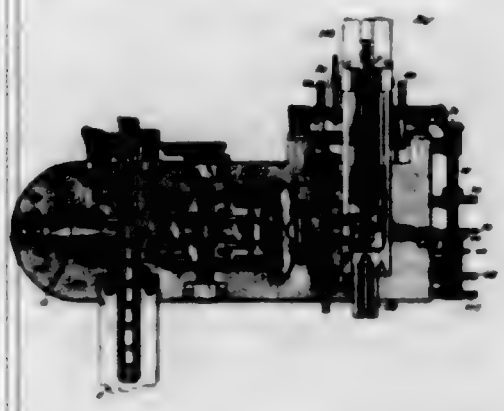
2. In a blanking press, the combination with a rigid frame, a horizontal shaft rotatably mounted at the base thereof, a second horizontal shaft mounted at the upper part of said frame, means for communicating power from

one shaft to the other, a pair of vertical plungers mounted on the upper part of said frame, an eccentric on said upper shaft whereby said plungers are given a reciprocative movement, a cylindrical die holder rotatably mounted in the body of said frame, a plurality of interchangeable dies engaged in said die holder, means for rotating said die holder whereby any selected die may be brought into operative position, and means for locking said die holder when in an adjusted position.



3. In a blanking press, the combination with a rigid frame, a die holder mounted therein, said die holder having a cylindrical central opening extending therethrough, a plurality of cutting dies engageable in said die holder, a ratchet fixed upon said die holder, a pawl engageable with the teeth of said ratchets, a foot lever whereby said pawl may be operated and means for locking said die holder when in an adjusted position.

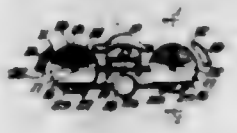
1,298,807. WRAPPING AND BANDING MACHINE. ELMER L. SMITH, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed June 3, 1915. Serial No. 31,913. 18 Claims. (Cl. 216—53.)



1. In a machine for applying bands to packages, the combination of means for positioning individual bands one at a time constructed and arranged to mechanically grip each band at its ends and to hold it stretched for its application to a package and means for relatively moving a band and a package to bring them into contact with each other while the band is stretched.

1,298,608. DOLL'S EYES. MABEL P. SMITH and PUTNAM D. SMITH, Santa Cruz, Calif. Filed Jan. 6, 1917. Serial No. 140,878. 10 Claims. (Cl. 46—40.)

1. The combination with a mask, of a vertically disposed supporting member mounted between the eyes thereof, a yoke pivotally mounted on said supporting member to swing about a horizontal axis, a pair of eyes carried by said yoke, a rigid, U-shaped link rotatably connected with each eye, the connecting axes between said link and said eyes being parallel with the axes of rotation of the eyes upon said yoke, a weight carried by said link below the eyes, and means for limiting the rotative movements of said eyes.



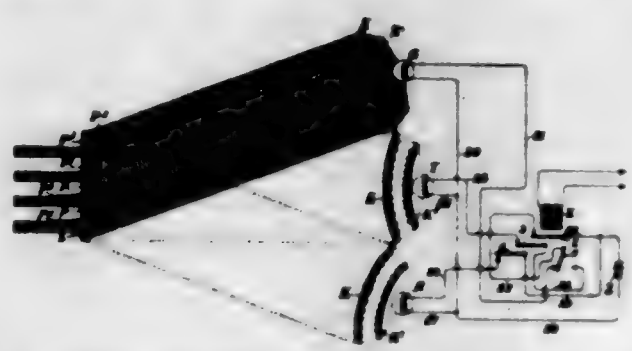
2. The combination with a mask, of a support disposed between the eye holes therein, a yoke pivoted on said support and having upturned parallel portions, a pair of eyes rotatably mounted upon said portions, a link comprising a pair of portions rotatably connected with said eyes about axes parallel with the axes of rotation of the eyes upon the yoke, a weight carried by said link whereby the eyes are rotated vertically and horizontally, means including the yoke for limiting the vertical rotation of the eyes, and means including the link for limiting the horizontal rotation of the eyes.

3. The combination with a mask, of a yoke pivotally mounted upon a horizontal axis, and having vertically disposed portions upon which a pair of eyes are rotatably mounted, a link rotatably connecting said eyes rearwardly of the rotatable connection between the eyes and yoke, and a weight carried by said link, the eyes and link being constructed to provide coöperating abutments to limit the horizontal movements of the eyes.

4. The combination with a support, of a pair of artificial eyes mounted thereon for rotation about parallel axes, a link pivoted to the eyes at points eccentric to said axes, and stops upon said link adapted to engage the eyes to limit their rotation in each direction.

5. The combination with a support, of a pair of artificial eyes mounted thereon for rotation about parallel axes, a link pivoted to the eyes at points eccentric to said axes, and oppositely offset stops formed on the link and adapted to engage the respective eyes to limit their rotation in each direction.

1,298,809. LIGHT-SIGNAL. CLARENCE S. SNAVELY, Pittsburgh, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation in part of application Serial No. 175,611, filed June 19, 1917. This application filed July 29, 1918. Serial No. 247,179. 9 Claims. (Cl. 240—1.)

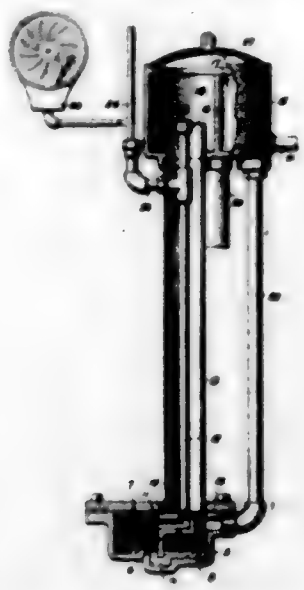


1. A signal comprising a plurality of sources of light, means for projecting parallel rays of different colors from said sources to a common area, and means located in said common area for receiving and projecting rays from each of said sources of light in one common direction.

1,298,810. DENSITY-METER. CHARLES NEVILLE SOWDEN, Caracas, Cuba. Filed Apr. 20, 1918. Serial No. 230,783. Renewed Feb. 19, 1919. Serial No. 278,060. 8 Claims. (Cl. 265—44.)

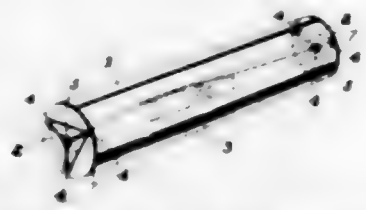
1. A density meter comprising a mercury cup, a partition in said cup which, with the mercury in the bottom

of the cup, is adapted to divide said cup into two independent chambers, a pair of rising concentric conduits, one in communication with one of the chambers and the other, with the other chamber, indicators associated with the inner conduit, a head secured to the outer conduit, a



partition in said head dividing the same into two chambers into one of which the outer conduit enters, a drain from said chamber, a conduit from the other chamber of the head to the chamber in the cup with which the outer conduit communicates, and means for supplying fluid to said other chamber.

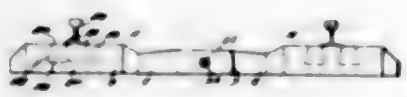
1,298,811. MEANS FOR HOLDING ROLLS OF MATERIAL. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed May 31, 1918. Serial No. 237,509. 6 Claims. (Cl. 206—59.)



2. In combination with a roll of material, one piece clips of angular form bearing upon the end faces thereof and having prongs at its corners engaging between the layers of the roll, said clips having cup-shaped centers to enter the roll space and perforated substantially centrally and a connection threaded through the openings in the clips and having enlargements bearing on the outer faces of the clips to hold the clips together, substantially as described.

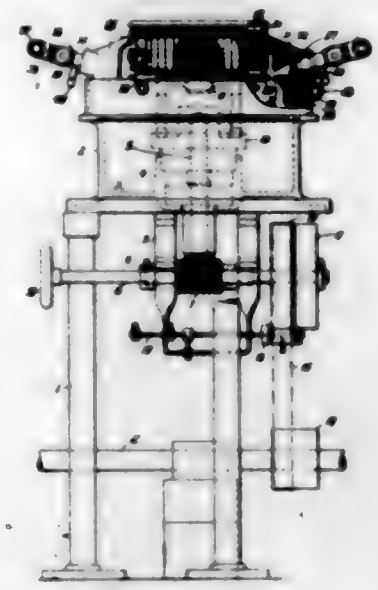
4. In combination with a roll, disks of flexible material extending over the end faces of the roll, clips having points extending through the disks and into the ends of the roll and means for connecting the clips together, extending through the center of the roll, substantially as described.

1,298,812. RAILWAY-TIE. RUSSELL U. STALEY, Spokane, Wash. Filed Nov. 13, 1918. Serial No. 262,288. 9 Claims. (Cl. 238—3.)



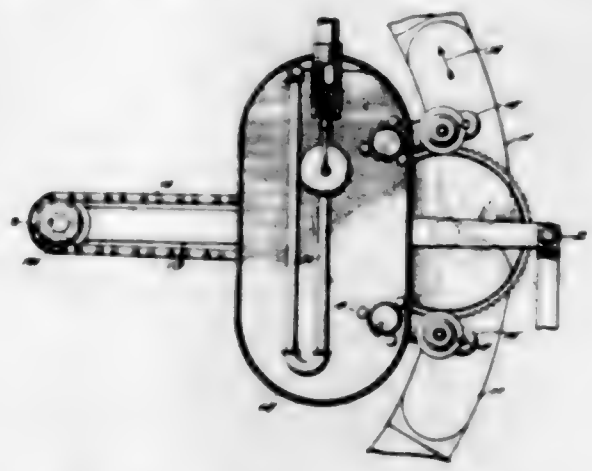
3. A railway-tie composed of molded mating sections having their inner ends in lapped relation, means uniting the said lapped ends, and each section having a reinforcing rod extending longitudinally thereof and connected with said means.

1,298,813. FURNACE. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 3, 1917. Serial No. 184,250. 8 Claims. (Cl. 263—9.)



1. The method of operating a welding furnace comprising a rotatable work-carrying mandrel and a plurality of burners surrounding said mandrel which consists in continuously rotating said mandrel while supplying a combustible gaseous mixture to all of said burners and then rotating said mandrel in steps while supplying only a certain number of said burners.

1,298,814. LIQUID-MEASURING DEVICE. CLARENCE E. STEERE, Chicago, Ill., assignor to Sprague Canning Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1915. Serial No. 44,595. 16 Claims. (Cl. 226—9.)



1. The combination with a reservoir having an opening in its bottom, and a container outside of said reservoir having an opening in its bottom, of a fitting comprising a conduit connecting said openings, a conduit leading from said container, valve means controlling both of said conduits supported by said fitting, and means for actuating said valve means also supported by said fitting, said valve means being vertically movable and said actuating means including a cam rotatable about a vertical axis.

1,298,815. MAKING TORPEDO AFTER-BODIES. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Mar. 12, 1918. Serial No. 221,921. 3 Claims. (Cl. 113—116.)

1. The method of producing hollow thin metal bodies tapered in one direction only and at a gradually increasing rate which consists in using a mandrel so tapering, forming from thin ductile metal a conical frustum adapted

to fit that portion of the mandrel approximately midway betwen its ends, when placed thereon with its axis coincident with the axis thereof, applying inwardly directed



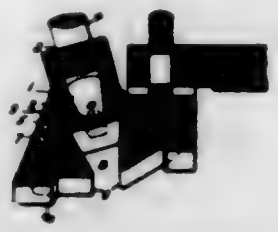
pressure to the frustum beginning at the circle of contact and passing progressively in opposite directions therefrom, causing the shell to fit the mandrel throughout.

1,298,816. ROTATABLE MACHINE ELEMENT. WILLIAM D. STEVENSON, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 20, 1916. Serial No. 121,292. 13 Claims. (Cl. 74—41.)

1. A molded gear of the indurated type and of the character described, said gear being formed from commingled and entangled fibers impregnated with condensation products of phenol and formaldehyde, with the teeth and body portion molded as a unit.

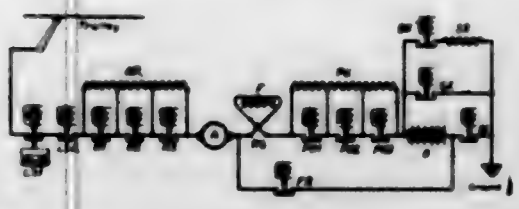
2. As an article of manufacture, a molded gear of the indurated type, said gear being formed from commingled and entangled fibers impregnated with condensation products of phenol and formaldehyde, pressed and molded to form the teeth and body portion as a unit and in one operation.

1,298,817. BURNER FOR GAS-FURNACES. WILBUR W. STEVENSON, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 1, 1917. Serial No. 189,338. 4 Claims. (Cl. 158—99.)



1. A burner for a furnace comprising a curved metallic trough having diverging walls within which are removably located members of refractory material arranged to provide a passage therebetween, different portions of which are of different widths.

1,298,818. CONTROL SYSTEM. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 23, 1915. Serial No. 23,413. 2 Claims. (Cl. 172—179.)



1. In a system of control, the combination with a supply circuit, an electric motor having an armature and a field magnet winding, of an energy accumulator disposed in series-circuit relation with said motor at starting and adapted to be charged by the motor current, and subsequently excluded from circuit to cause acceleration of the motor, a variable resistor, means for regeneratively connecting the motor to said supply circuit, with said accumulator connected in parallel with the field winding and said resistor when the armature voltage exceeds the supply-circuit voltage by a predetermined value, and means for varying said resistor as the motor speed decreases to maintain a substantially constant regenerated current.

1,298,819. FUEL-MAGAZINE. ARCHIE O. STRICKLAND, Winfield, Kans. Filed May 16, 1918. Serial No. 234,999. 1 Claim. (Cl. 126—7.)



In an attachment for a stove which has in its top a double pot-hole having straight sides and semicircular ends, said top having a depressed lid supporting shoulder surrounding said double pot-hole; a fuel chamber having an open lower end of greater length than said pot-hole whereby the extremities of said lower end rest upon the stove top, said lower end being also provided with straight depending elements adapted to drop into and be supported by said depressed shoulder, said straight depending elements of said fuel chamber being of a length approximately equal to the length of the straight sides of the double pot-hole, whereby the ends of said straight depending elements coact with the semicircular ends of the double pot-hole to prevent shifting of the receptacle longitudinally of the double pot-hole, and means carried by the lower part of the fuel chamber and adapted to extend through the pot-hole and engage with the under side of the stove-top, to prevent tilting of the chamber.

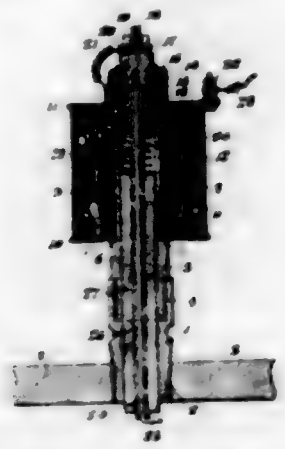
1,298,820. TIRE-TOOL. GEORGE A. STROBECK, Red Lion, Pa. Filed Feb. 14, 1918. Serial No. 217,165. 1 Claim. (Cl. 157—6.)



In a tire tool of the character described, the combination with a prying off lever having a ratchet face and a longitudinal slot, a hook member coöperative with the prying off lever, said hook member having pivotal con-

nection relatively to the said prying off lever, which connection consists of a bearing block to which the hook member is pivotally joined, the said block having a stem slidable within the slot in the prying off lever and a threaded stub, a clamp nut that engages the threaded stub and is provided with a conical bearing for engaging the prying off lever, the said block having oppositely disposed edge pawls for engaging with the ratchets in the prying off lever.

1,298,821. SPARK-PLUG. JACOB REYMER SUTTON, Uniontown, Pa. Filed Jan. 25, 1918. Serial No. 213,722. 5 Claims. (Cl. 123—154.)



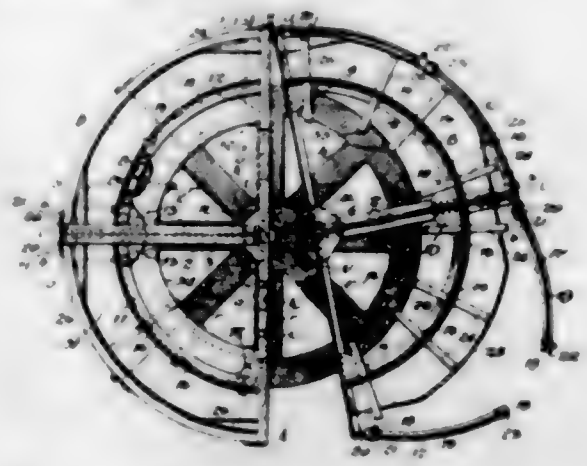
1. A spark plug having substantially concentric spark terminals, with the inner terminal fixed to the spark plug and the outer terminal movable along and insulated from the inner terminal, and a solenoid on the spark plug electrically connected to one of the terminals, with the outer spark terminal entering the solenoid and constituting the core or armature thereof.

3. A spark plug comprising a fixed terminal in the form of a rod with a sparking extremity, insulating material surrounding the rod, a tubular member surrounding the insulating material and movable therealong and having one end adjacent to the sparking extremity of the rod to constitute the other sparking terminal of the spark plug, and a solenoid coil traversed by the rod and entered by the tubular member, with the latter constituting the core or armature of the solenoid.

5. A spark plug comprising a threaded carrying member, a sleeve constituting a prolongation of the threaded member and having a shouldered enlargement adjacent to the threaded member, a plug closing the other end of the sleeve, a solenoid coil or winding surrounding the sleeve between the shoulder and the plug and held on the sleeve by the plug, a rod in fixed relation to the plug and extending axially through the sleeve and threaded member, and beyond the latter having an extremity constituting a sparking terminal, insulating material surrounding the rod to the sparking extremity, a tubular member about the insulating material and within the sleeve and threaded member and movable lengthwise with respect thereto, said tubular member entering the solenoid coil and constituting the core or armature thereof, and a spring interposed between the tubular member and the plug.

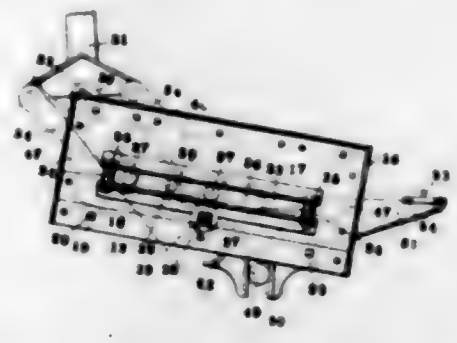
1,298,822. REVOLVING SHOW-CASE. LOUIS SZOLD, Valparaiso, Ind. Filed Mar. 17, 1915. Serial No. 14,887. 3 Claims. (Cl. 211—20.)

1. In a show case of the class described, the combination of a rotary supporting base, a pair of pivotally connected main frames supported by and adapted to rotate with the base, one of said frames forming a swinging section adapted to swing into and out of engagement with the other of said frames at the axis of the structure, an outer casing comprising transparent casing portions supported by the pivotally connected frames and forming outer walls of a display compartment, and an inner casing comprising opposite upright wall portions supported in movable relation to each other by said pivotally connected frames and adapted to form inclosing walls of a storage compartment, said upright relatively movable inner wall portions forming back wall portions of the display compartment.



3. In a case of the class described, the combination of a pair of pivotally connected metallic frames adapted to extend transversely across a supporting base, an outer casing comprising transparent doors supported by and in hinged engagement with the pivotally connected frames and forming outer wall portions of a display compartment, an inner casing comprising opposite upright circumferential wall portions supported in movable relation to each other upon said pivotally connected transversely extending frames and adapted to form inclosing walls of a storage compartment, a portion of said storage compartment being located within and adapted to swing with one of said pivoted frames, and said inner storage compartment being encircled by the display compartment, shelves supported by said inner walls, a rotative frame-supporting base, and means for securing the bottom of one of the pivotally connected frames in fixed relation to said base, whereby said storage compartment is adapted to be opened and closed without opening or closing said doors of the display compartment.

1,298,823. CAR-SEAT. CALVIN C. TAYLOR, St. Louis, Mo., assignor to Scarritt Car Seat and Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 26, 1918. Serial No. 259,737. 9 Claims. (Cl. 155—2.)

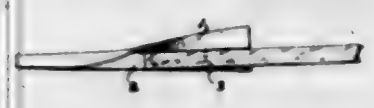


1. In a car seat, the combination with a back carrying member, of a pair of links pivoted at their upper ends to said member, shifting pivots for the lower ends of said links, a connecting bar for said shifting pivots, and guiding means maintaining said connecting bar in horizontal position during the shifting movement of said pivots.

1,298,824. TYPE-WRITER RIBBON. CHARLES M. TAYLOR, Jr., Maple Shade, N. J. Filed June 20, 1918. Serial No. 240,964. 1 Claim. (Cl. 197—172.)

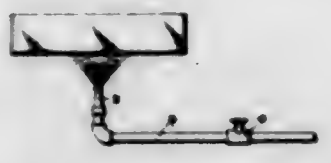
A bodkin for typewriter ribbons consisting of a tapered strip of folded paper gummed on the inside and

adapted to cover and adhere to both inked faces of the end of a ribbon and to provide a two-ply tapered thread-



ing point beyond the end of the ribbon, substantially as described.

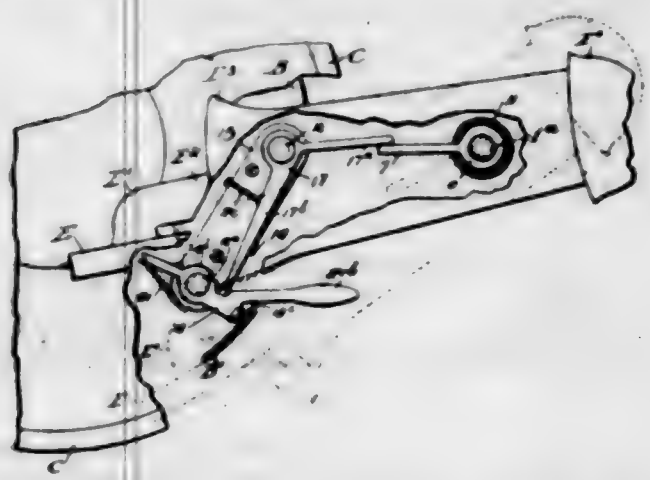
1,298,825. PROCESS FOR MAKING METAL INGOTS. LEWIS B. TARBETTS, 2d, St. Louis, Mo. Filed Dec. 4, 1917. Serial No. 205,860. 2 Claims. (Cl. 22—212.)



1. The process of casting ingots having smooth surfaces and suitable for rolling into sheets consisting in pouring the molten metal into open flat molds and cooling the same by applying a cooling agent at a point substantially at the center of the bottom of the mass.

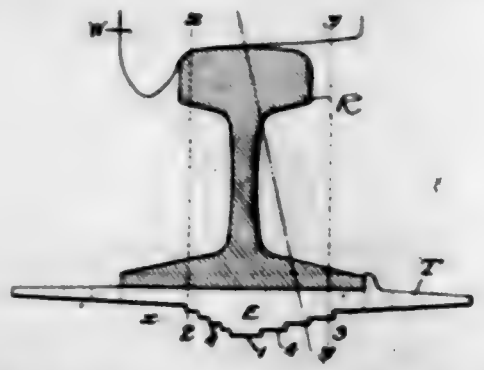
2. The process of casting metal ingots having smooth surfaces and suitable for rolling into sheets which consists in pouring the molten metal into an open top flat mold, allowing the impurities to rise to the top of the mold, and then applying a cooling agent to the center of the bottom of the mass whereby the same is cooled from the center outwardly.

1,298,826. STOP MECHANISM FOR PHONOGRAPHS. REINHOLD THOMAS, Chicago, Ill. Original application filed Mar. 15, 1917, Serial No. 154,910. Divided and this application filed June 4, 1917. Serial No. 172,593. 3 Claims. (Cl. 74—46.)



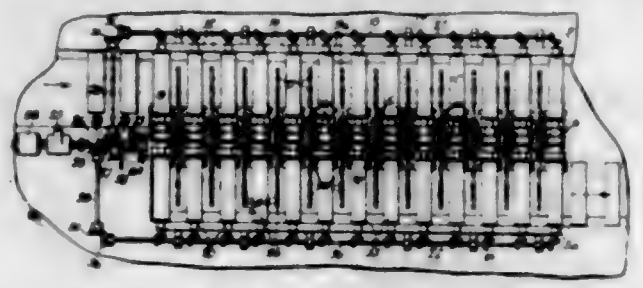
1. In a phonograph, in combination with the sound-box-carrying member, a pivot support therefor mounted for turning about a vertical axis; a trip finger mounted on said pivot support for turning relatively thereto; means for frictional engagement of said trip finger with said pivot support, adapted to cause them to turn together or relatively to each other; a friction brake for the record carrier; a trigger for locking the brake out of braking position, said trigger having a finger extending in the path of the first mentioned trip finger, and adapted upon encounter thereby to be moved for disengaging the trigger from the brake, and independent springs for actuating the brake and the trigger.

1,298,827. THRUST-EQUALIZING RAIL-PLATE. WILLIAM PATON THOMSON, New York, N. Y. Filed Sept. 17, 1918. Serial No. 254,427. 36 Claims. (Cl. 238—2.)



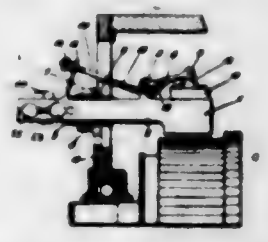
1. A rail plate provided with a medially crowned base adapted to have a lateral progressive seating engagement with the tie.

1,298,828. COOLING AND CONVEYING MECHANISM. WILLIAM J. TOOHUNTER, Chicago, Ill. Filed Dec. 5, 1917. Serial No. 205,500. 6 Claims. (Cl. 193—1.)



1. In a device of the class described, a roller delivery table and a roller feed table, and transfer means therebetween, said means including a shaft, a plurality of wheels thereon arranged with spokes projecting between the rollers of said tables, shafts for rotating said rollers, a source of power, connections therebetween and with said transfer shaft, and means for alternately connecting the shafts with a source of power.

1,298,829. BRUSH-GEAR FOR DYNAMO-ELECTRIC MACHINES. JAMES CLAUD TODMAN, Acton, THOMAS LANCELOT REED COOPER, Ealing, and ARTHUR ANDERSON LYON, Harrow, London, England. Filed Oct. 15, 1918. Serial No. 258,256. 4 Claims. (Cl. 200—24.)

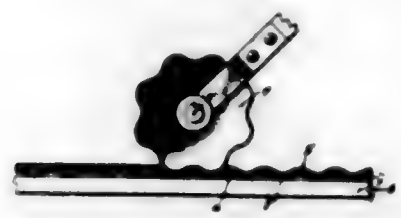


3. A brush gear for electrical machines comprising a spindle extending axially of the machine and adjustable longitudinally thereon, a bracket formed at one end of the spindle, a brush in said bracket, and tension mechanism arranged longitudinally of the spindle for adjusting the pressure of the brush upon the commutator.

1,298,830. MEANS OF APPLYING SHEATHING TO CORRUGATED ROOFING. ARTHUR G. TOLMAN, Milwaukee, Wis. Filed Nov. 23, 1918. Serial No. 263,868. 1 Claim. (Cl. 108—1.)

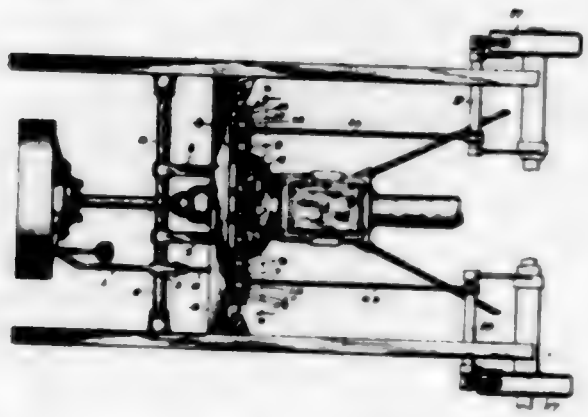
That improved method of applying sheathing to corrugated roofing which consists in applying a coat of plastic

adhesive material to the roofing and then applying a flexible cover sheet to the roofing, and in finally pressing the cover sheet against the roofing by a pressure member having undulations conforming to the undulations of the surface of the roofing said undulations of the pressure member being successively engaged in the channels formed



by the undulations of the roofing surface, each undulation of the pressure member when engaged in the channel of the roofing surface serving to retain the cover sheet in place against the tension exerted by the action of a succeeding pressure undulation in forcing the cover sheet into a succeeding roofing channel.

1,298,831. BRAKE-EQUALIZING DEVICE. FRED I. TONE, Indianapolis, Ind. Filed May 7, 1913. Serial No. 766,222. 4 Claims. (Cl. 21—8.)



1. In combination with separate power transmitting lever arms for a plurality of load-receiving devices, a common lever arm for applying power to said transmitting arms, a horizontal longitudinally movable tension rod, means to connect said power transmitting arms rigidly to said tension rod, a hollow rotatable member in which said rod is mounted and on which said arms are mounted, said arms being movable in vertical planes for the purpose of applying and transmitting the power to said devices.

2. In combination with separate power transmitting lever arms for a plurality of brakes, a power applying lever arm, a hollow shaft on which all of said arms are mounted and the axis of which forms the common axis for said arms, said arms being movable in vertical planes, a tension rod extending through said hollow shaft and movable freely longitudinally thereof and means carried by said shaft for forcing said transmitting lever arms against the ends of said rod to rigidly connect said arms to thereby transmit an equal force to their respective brakes.

3. In combination with separate operating radius arms for a plurality of brakes, a rotatable arm-operating tube, oppositely directed screw threads on the opposite ends of said tube engaged by the respective arms, a rod extending through said tube, caps mounted against said arms, and adjustable means mounted on said rod at each end thereof and operable to exert pressure on said caps, substantially as described.

4. In combination with separate oscillatory brake operating arms, a common member having screw threads thereon at each end to receive threaded portions of the respective arms, a tension rod extending through said member, adjustable arm-clamping means through which said rod extends said rod having threaded portions, and adjustable nuts engaging said threaded means and operable to exert pressure on said clamping means to move said rod and rotate the arms on the supporting member, substantially as described.

1,298,832. APPARATUS FOR DYEING AND THE LIKE. JAMES J. TRACY, Cleveland, Ohio. Original application filed Mar. 12, 1914, Serial No. 824,126. Divided and this application filed Feb. 7, 1916. Serial No. 76,510. 5 Claims. (Cl. 8—19.)



1. A container for use in vats, comprising a suitable cylindrical frame, foraminous material covering the sides of said frame, a foraminous partition separating said container into two chambers, said partition being disposed horizontally, an impervious vertical partition mounted in said frame, and hinged end covers for said frame, whereby either of two chambers may be opened.

2. A container for use in vats, comprising a cylindrical vertically disposed frame, foraminous covering material for said frame, a bail pivotally attached to opposite sides of said container at the longitudinal center of the same, said bail being provided with a suitable connection for engagement by a hoist, and means adapted to attach said bail to said frame parallel with the longitudinal axis of the same.

3. A container for use in vats, comprising a cylindrical vertically disposed frame, foraminous covering material for said frame, a bail pivotally attached to opposite sides of said container at the longitudinal center of the same, said bail being provided with a suitable connection for engagement by a hoist, and detachable means adapted to attach said bail to said frame parallel with the longitudinal axis of the same.

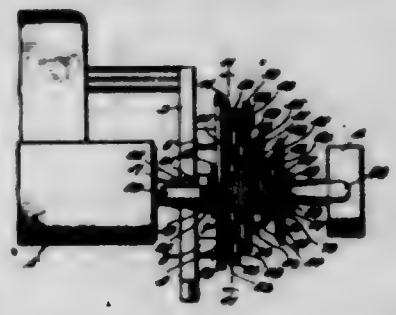
5. A container for use in vats, comprising a cylindrical frame, a foraminous partition disposed horizontally in said frame, and an impervious vertical partition disposed in said frame parallel to the axis of said frame.

1,298,833. SAFETY DEVICE FOR RAILWAYS. GEORGE H. TREADGOLD, Port Huron, Mich., assignor of one-half to William B. Robeson, Port Huron, Mich. Filed Jan. 28, 1918. Serial No. 214,226. 1 Claim. (Cl. 246—67.)



In a signal for electrically operated railways, the combination with a track having danger zones, a main trolley wire and cars adapted to receive power from said main trolley wire and enter said zones, of an independent source of electrical energy on each car adapted for signal circuits including said track, audible signals and normally closed switches adapted to be in said circuits, an auxiliary trolley wire having gaps, an auxiliary trolley pole and wheel for each car adapted to complete signal circuits when two cars enter a single zone, said auxiliary trolley wheel being adapted to travel on said auxiliary trolley wire and through the medium of the gaps in said wire causing a circuit to be successively broken for various periods of time to indicate to the operators of said cars a predetermined signal, and a rheostat on each car adapted to control the operation of said audible signal

1,296,824. PAPER-FEED ATTACHMENT FOR TYPEWRITERS. EUGENE VAN NOTE, Trenton, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 26, 1916. Serial No. 106,025. 37 Claims. (Cl. 197—117.)



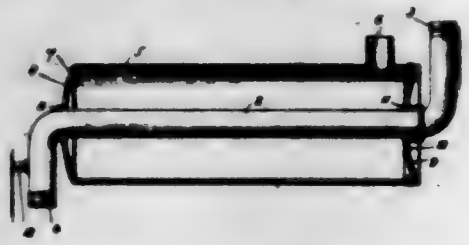
1. In a typewriting machine the combination with the carriage having a platen, its shaft and the usual turning knob, of mechanism for controlling the rotation of the platen including a member fixed to rotate with the shaft, a lever normally free to rotate around said shaft, a normally inactive clutch mechanism interposed between the lever and said member to lock said member to turn with the lever when the latter is moved in one direction, a second clutch mechanism to lock said member to turn with the lever when the latter is turned in the opposite direction, and a normally inactive double brake mechanism interposed between said member and the carriage, said brake mechanism permitting a predetermined degree of movement of said member and shaft under the action of the lever in either direction before becoming active.

2. In a typewriting machine the combination with the carriage having a platen, its shaft and the usual turning knob, of mechanism for controlling the rotation of the platen including a member fixed to rotate with the shaft, a second member loosely mounted to rotate on the shaft, a lever normally free to rotate around said shaft, a double clutch mechanism between said lever and said fixed member including clutch elements carried by the second member and engaging said first member, pivotally mounted dogs carried by said lever and operable on the turning of said lever in either direction to engage the clutch elements of said second member and thereby lock said lever to said fixed member, and a normally inactive double brake mechanism interposed between said fixed member and the carriage, said brake mechanism permitting a predetermined degree of movement of said member and shaft under the action of the lever in either direction before becoming active

3. In a typewriting machine the combination with the carriage having a platen, its shaft and the usual turning knob, of mechanism for controlling the rotation of the platen including a gear fixed to rotate with the shaft, a second member loosely mounted on the shaft, a lever normally free to rotate around said shaft, a double clutch mechanism between said lever and said fixed gear including rotatable pinions carried by said second member and meshing with said fixed gear, said pinions having clutch faces, pivotally mounted clutch dogs carried by the lever and operable on the turning of the lever in either direction to engage the clutch faces of said pinions and thereby lock said lever to said fixed member, and a normally inactive double brake mechanism interposed between said fixed gear and the carriage, said brake mechanism permitting a predetermined degree of movement of said gear and shaft under the action of the lever in either direction before becoming active.

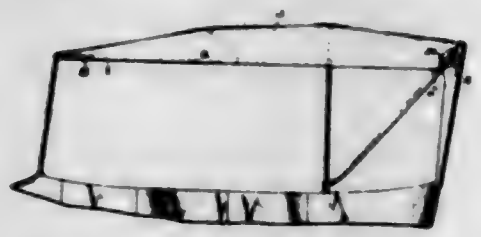
1,296,835. FUEL-HEATER FOR INTERNAL-COMBUSTION ENGINES. EDGAR A. VAUGHAN, San Antonio, Tex. Filed June 12, 1917. Serial No. 174,296. 1 Claim. (Cl. 257—241.)

The combination, with the inlet pipe for the combustible charge, of a drum encircling the inlet pipe and provided with ends secured on the inlet pipe and each having a multiplicity of relatively small outlet openings for the exhaust, said drum having also an inlet for the exhaust on one side and being of relatively large area in proportion



to the said inlet pipe, whereby the exhaust is not blown suddenly from the inlet through the said outlet openings.

1,296,836. AUTOMOBILE-TOP. JOSEPH VETTER, Toledo, Ohio. Filed May 6, 1918. Serial No. 232,792. 8 Claims. (Cl. 21—62.)



1. In a top of the class described, a frame bow having a channel formed therein longitudinally thereof and having an edge recess, a plurality of beads removably disposed in said recess and having material extending from each without the recesses, and means removably seating in said channel and serving to retain the beads in the recess.

1,296,837. PLOW. SIMEON A. WARE, Tignall, Ga. Filed Jan. 4, 1919. Serial No. 269,550. 1 Claim. (Cl 97—11.)

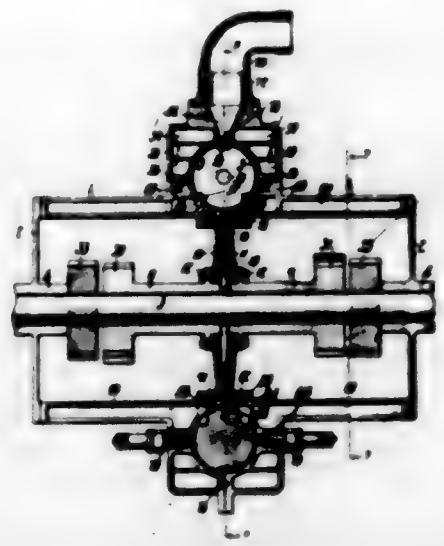


In a plow, the combination with the point and the standard, said point having a longitudinally extending slot near its upper end and an extension plate adapted to lap at one end upon the upper end of the point and having a slot registering with that of the point for receiving a securing means to connect the plate to the standard, said plate having a lip at its upper end for engaging the standard and a lug at its lower end for engaging the upper end of the slot of the point.

1,296,838. ROTARY EXPLOSIVE-ENGINE. HOWARD L. WEED, Detroit, Mich. Filed Sept. 7, 1915. Serial No. 49,153. 16 Claims. (Cl. 123—11.)

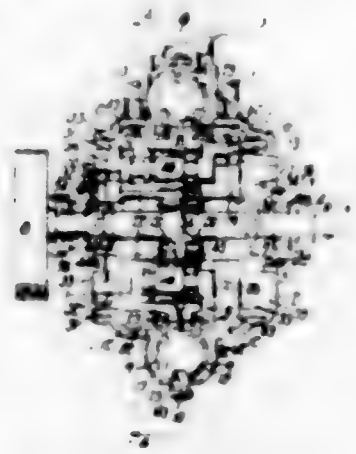
1. A rotary device comprising a casing, a main shaft mounted therein, said casing including a cylinder, a pair of rotors concentric with and loose on the main shaft, each of said rotors including a pair of pistons arranged to travel in the cylinder, a counter shaft for each rotor, an eccentric gear fixed to each counter shaft, a gear rigid with each of the rotors and meshing with the eccentric gear on the corresponding counter shaft, gears fixed on the main shaft, and other gears fixed on the counter shaft whereby the gears on the main shaft are driven, and means for supplying fluid to the space between adjacent pistons.

8. A rotary internal combustion engine comprising a casing, an engine shaft mounted therein, said casing including a cylinder, a pair of rotors, concentric with and loose on the engine shaft, each of said rotors including a pair of pistons arranged to travel in the cylinder, the pistons of the two pairs alternating, means for supplying a charge of combustible mixture to the space between two adjacent pistons, means for igniting the charge, means whereby the expansion of the charge is thereupon made to force the pistons forward at different speeds, the



speed of the forward piston being for a time greater than that of the rear piston, means for causing the rotor of which the forward piston is a part to turn the engine shaft, said casing having an exhaust port which is uncovered by the forward piston as it approaches the end of its relatively faster movement, said piston having an air passage therein, and means whereby the burned gas escaping through the exhaust port is made to cause a circulation of air through the air passage to cool the piston.

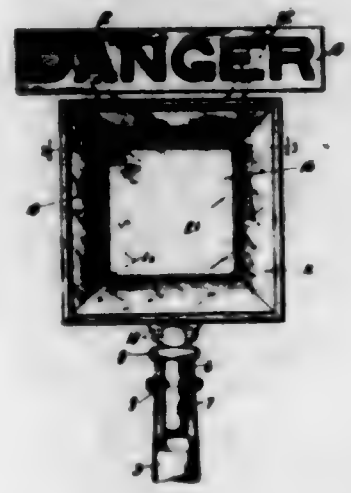
1,298,839. ROTARY ENGINE. HOWARD L. WARD, Detroit, Mich. Filed May 11, 1917. Serial No. 167,993. 24 Claims. (Cl. 123—11.)



1. A rotary engine comprising a casing, a main shaft mounted therein, said casing including an annular cylinder, a pair of rotors loose on the shaft, each of the rotors including a pair of pistons arranged to travel in the cylinder, the pistons of the two pairs alternating, means for transmitting force from the rotors to the main shaft, said last named means including countershafts mounted to rotate about axes parallel to but removed from the axis of the main shaft, the rotors being slotted to allow angular movement in respect to the countershafts, said countershafts passing through the slots, and means associated with the countershafts whereby the pistons of one rotor are so constrained as to alternately approach and recede from the pistons of the other, and whereby a pressure of fluid between the pistons may cause the main shaft to rotate.

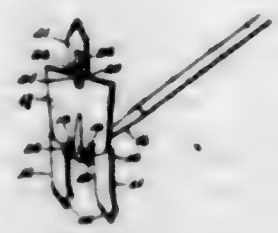
12. A rotary engine comprising a casing including an annular cylinder, a main shaft rotatable in the casing, alined rotors coaxial with said shaft and having pistons thereon located in the cylinder, sealing means between the faces of the rotors and the corresponding faces of the cylinder, the rotors being rotatable about the axis of the main shaft whereby lubricant in the casing is thrown outwardly along the sealing means as the rotors revolve, and means for creating a suction between the adjacent ends of the rotors whereby the lubricant is thereafter drawn in toward the axis of the main shaft and whereby the rotors are caused to tend to approach each other.

1,298,840. SIGNALING DEVICE. JOHN A. WERTZ and PARKE G. MYERS, Canton, Ohio. Filed Oct. 4, 1917. Serial No. 194,757. 6 Claims. (Cl. 88—1.)



1. In a signaling device the combination of a suitable support, a frame mounted on the support, central and surrounding reflecting surfaces located in said frame and disposed to concentrate the reflected light rays, a transparent plate overlying the reflecting surfaces, and a light ray coloring medium located between the reflectors and the transparent plate, substantially as set forth.

1,298,841. CULTIVATOR. THOMAS E. WEST, Oak Park, Ill. Filed June 1, 1918. Serial No. 237,752. 4 Claims. (Cl. 55—39.)



1. A cultivating attachment for hoe blades having a member for arrangement in contact with one surface of the hoe blade, and a spring clamping member for engagement with the opposite surface of said blade, and means for adjusting said clamping member.

2. A cultivating attachment for hoe blades having elements for engagement respectively with opposite surfaces of said blade, stops for limiting the relative movement of the attachment with reference to the blade, and means for relatively adjusting said elements to clamp the hoe blade therebetween.

3. A hoe blade attachment having a cross bar and a plurality of blades connected therewith, said cross bar being provided with a hoe shank seat, and clamping means for coöperation with the cross bar to engage a hoe blade.

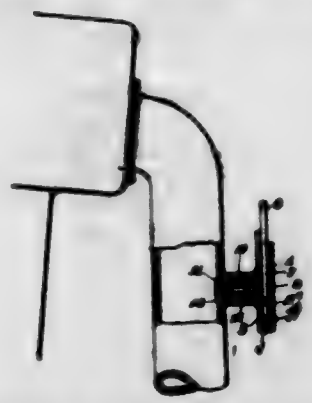
4. A hoe blade attachment having a plurality of blades and a connecting cross bar, arched clamp plates carried by the cross bar in coöperative relation with the same to engage an interposed hoe blade, and means for adjusting said clamp plates relative to the cross bar.

1,298,842. OVERALL-SUSPENDER FASTENER. CRAIG HUGH WESTCOTT, Seneca, Kans. Filed Dec. 17, 1918. Serial No. 267,121. 10 Claims. (Cl. 24—215.)



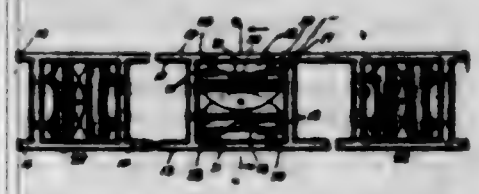
1. A fastener for overalls and the like comprising a member attached to the suspender, and another member housed in the garment to which the suspender is to be secured and having an opening for the entrance of the member attached to the suspender, whereby those portions of both members of the fastener in engaged relation are wholly within the garment.

1,298,843. STARTING ATTACHMENT FOR ENGINES. JAMES WHITCOMB, Golden, Colo., assignor of one-fourth to Charles Espy Byers, Hastings, Nebr., one-half to Ralph S. Buchtel, and one-fourth to Benjamin F. Heffner. Filed Apr. 2, 1918. Serial No. 226,252. 1 Claim. (Cl. 123—180.)



A starting attachment for internal combustion engines, comprising a casing including disk-shaped inner and outer walls, the outer wall having an inlet opening therein for injection of a supply of liquid fuel, a cut off contained within said casing between said walls and adapted to cover and uncover the inlet opening thereof, a tubular nipple projecting from said casing, absorbent material encircling said nipple, and retaining means for said absorbent material.

1,298,844. LEVEL. ANAND WICHMATJEE, Chicago, Ill. Filed May 13, 1918. Serial No. 234,046. 6 Claims. (Cl. 33—213.)



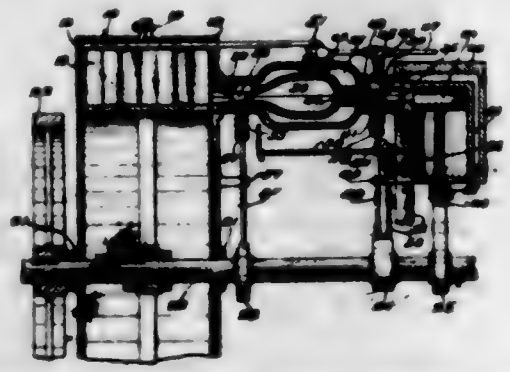
1. In a level, the combination with a frame having opposite straight edges, of a bubble-glass holder for each edge, said holders being inter-connected for adjustment relative to said frame in the plane thereof, and four set screws by means of which only said holders are retained within the frame.

1,298,845. LINED GARMENT AND PROCESS OF MAKING THE SAME. ADAM J. WILLIAMS, Utica, N. Y. Filed June 16, 1917. Serial No. 175,066. 3 Claims. (Cl. 2—61.)



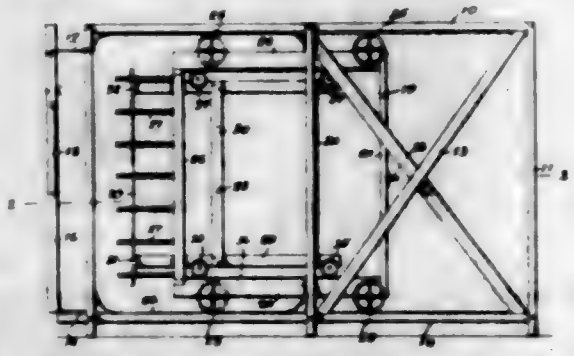
1. As a new article of manufacture, a lined garment having the edges of its corresponding pieces of cloth and lining inclosed within a relatively narrow piping and held together by rows of stitches through said four thicknesses only, namely said cloth and lining and both thicknesses of piping and relatively close to the edge of the cloth and having the adjacent garment portions composed of said cloth and lining secured to each other solely by a main row of stitches spaced back from the edges of said portions with the strips of said portions beyond said main row of stitches within the garment and turned back in opposite directions, each upon the lining of its own portion but free from the adjacent main portion of lining and cloth, a zone of the face of the cloth being left on the exposed side of each of said turned-back strips between the main row of stitches and its binding of piping.

1,298,846. COMBUSTION-ENGINE OF THE ROTARY TYPE. GEORGE T. WILLIAMS, Oakland, Calif. Filed May 1, 1918. Serial No. 231,875. 2 Claims. (Cl. 60—42.)



1. A combustion engine, comprising a rotor, a series of combustion chambers connected therewith, a compression cylinder connected with each of said combustion chambers, a means connected with each of said compression cylinders for feeding fuel into the same, a plurality of means engaging each combustion chamber to limit the movement of gases therein, a shaft engaging the rotor, means carried by said shaft for operating the first and second mentioned means, means in close proximity with the rotor and engaging the combustion chamber whereby a liquid may be discharged into the rotor and combustion chamber, a means connected with last mentioned means for limiting the movement of said liquid and means connected with the shaft for operating the last mentioned means.

1,298,847. APPARATUS FOR TUFTING MATTRESSES. WILLIAM H. A. WILLIAMS, Bennettsville, S. C. Filed May 29, 1918. Serial No. 237,268. 5 Claims. (Cl. 112—24.)

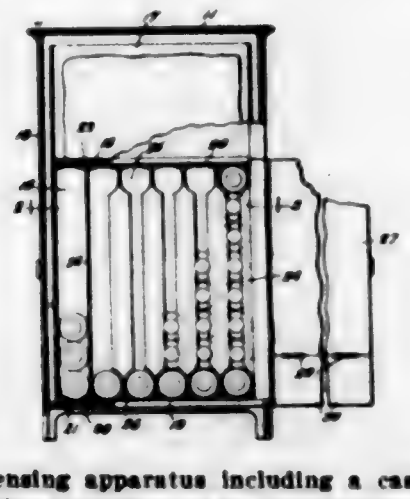


1. A mattress tufting machine comprising a main frame having vertically disposed spaced bars, a mattress clamp-

ing frame having spaced bars and hingedly mounted upon the main frame in front of the first named bars, a needle supporting frame mounted within the main frame for shifting movement toward or from said bars and carrying a plurality of forwardly extending needles, and rearwardly shiftable needle supporting means mounted on the needle supporting frame.

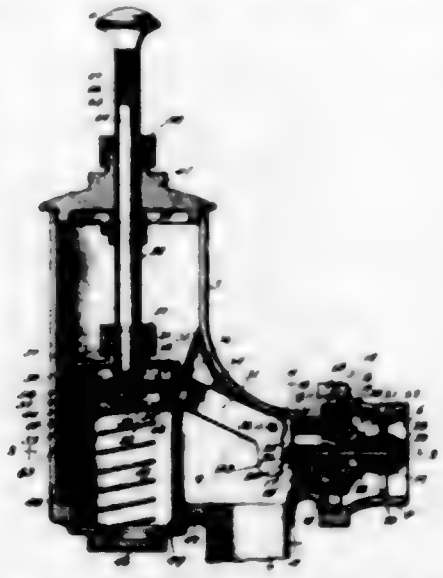
5. A machine of the character described comprising a longitudinally movable carriage having a plurality of needles projecting from it, a mattress clamp disposed in front of said carriage, and needle supporting guides operatively mounted upon the carriage for rearward movement and having notches in which said needles slidingly engage.

1,298,848. ICE-CHEST. WILLIAM J. P. WINBERG, Vancouver, Wash. Filed Mar. 1, 1918. Serial No. 219,806. 2 Claims. (Cl. 211—7.)



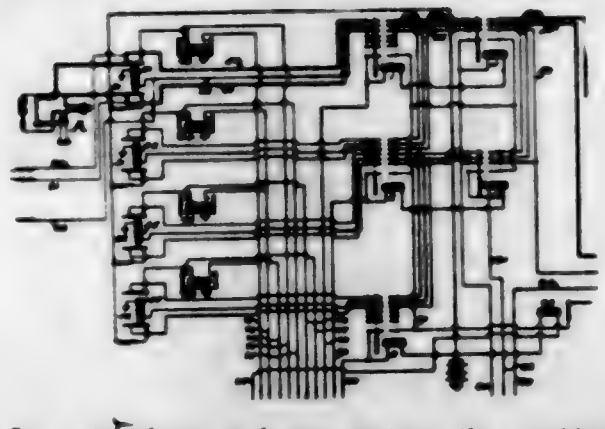
1. A dispensing apparatus including a casing, a horizontal partition providing an ice compartment above and a cooling compartment below it, strips secured to the top and bottom of the cooling compartment and having adjacent edges bent away from said top and bottom and then toward each other to define guide ways, upright partitions within this compartment, transverse flanges along their upper and lower ends adapted to be slid into said guide-ways, and means at the front edges of said partitions to retain articles between them.

1,298,849. FLUSHING DEVICE. FRANKLYN J. WOLFF, Chicago, Ill., assignor to L. Wolff Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1914. Serial No. 868,307. 7 Claims. (Cl. 137—62.)



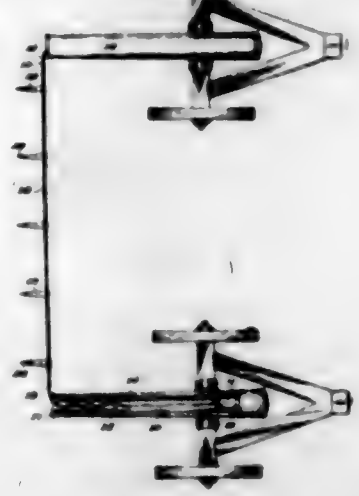
4. A flushing valve comprising: a single chamber casing having inlet and outlet openings, and open at its top and bottom, a valve for closing one of said openings, a lever disposed within the casing for operating said valve, closures for the open top and bottom of said casing, one of said closures carrying a retarding device within the casing, said retarding device being connected with said lever and for delaying the closing action of said valve.

1,298,850. TELEPHONE-EXCHANGE SYSTEM. JOSEPH L. WRIGHT, Cleveland, Ohio, assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed May 7, 1918. Serial No. 766,096. 16 Claims. (Cl. 179—27.)



3. In a telephone exchange system, the combination with a plurality of calling subscribers' lines, of a plurality of key-sets, and means comprising primary, secondary and tertiary selecting devices whereby any calling subscriber's line is connected to the first idle one of said key-sets, said primary, secondary and tertiary selecting devices comprising groups of tens and units relays, substantially as set forth.

1,298,851. PROJECTILE DEVICE. MICHAL ALEKSANDROWICZ, New Brighton, Pa. Filed May 28, 1918. Serial No. 237,162. 3 Claims. (Cl. 102—22.)



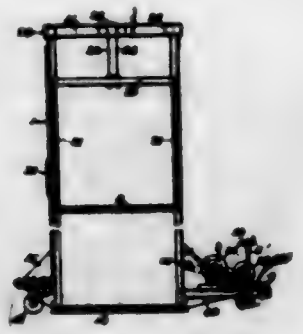
1. A device of the class described comprising projectiles, a flexible connector between said projectiles, a slack adjuster for the connector, and a plurality of explosive hooks carried by the latter.

1,298,852. PORTABLE PACKAGE-ELEVATOR. THOMAS J. ALEXANDER, Seattle, Wash. Filed June 3, 1918. Serial No. 237,861. 4 Claims. (Cl. 187—11.)

1. A portable package elevator comprising a frame having upwardly extending guide posts and a platform guided in vertical movement by said posts, supporting wheels and a hoisting plant at one side of said frame, a single steering and supporting wheel at the opposite side of the frame, steering cables extending from said wheel beneath the frame to the hoisting plant at the opposite side of the frame, and means for raising and lowering said wheel to permit resting the frame on the floor.

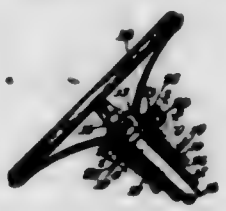
3. A portable hoisting device comprising a frame having vertical guide posts and a hoist operating mechanism, a

hoisting platform guided by said posts, two sheave wheels supported centrally of and at the tops of said posts, a platform hoisting rope passing over one of said sheave wheels and to the platform, a counterweight, a counter-



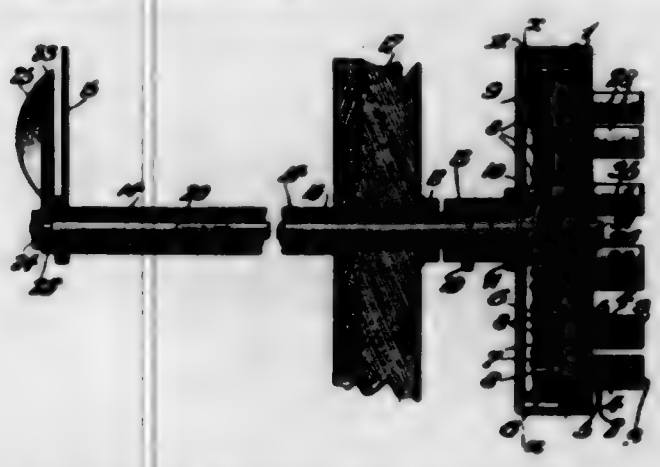
weight line extending over the other of said sheave wheels and connecting the counterweight with the hoisting platform, and a third line extending from the counterweight to the hoist operating mechanism.

1,298,853. AUTOMOBILE-STEERING-WHEEL LOCK. ALLEN C. ALLAN, Chicago, Ill., assignor of one-half to William A. Diffenbaugh, Chicago, Ill. Filed Oct. 6, 1917. Serial No. 195,024. 1 Claim. (Cl. 70—129.)



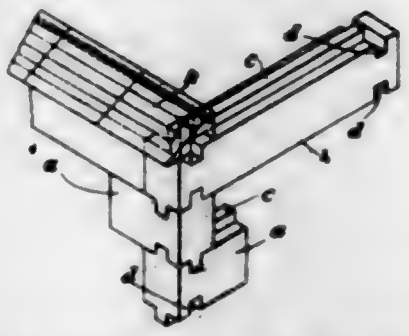
In an appliance of the character described for the locking of a vehicle steering-wheel to its column, the combination of a stationary steering-column, a steering-wheel associated with said column and equipped with a recessed hub, supporting-means fixedly secured to said column, a member slidable on said supporting-means toward and from said steering-wheel hub but held from turning on said column, coöperating means on said supporting-means and member preventing upward removal of the latter from the former, and a lock on said member having a key-retracted visible bolt spring-pressed toward said hub and adapted to engage the hub recess when brought into register therewith, thus locking the steering-wheel against rotation and also against upward removal from the column, substantially as described.

1,298,854. LIGHTING-SWITCH. FORREST E. ALTEMUS, Philadelphia, Pa. Filed Oct. 28, 1915. Serial No. 58,384. 5 Claims. (Cl. 175—282.)



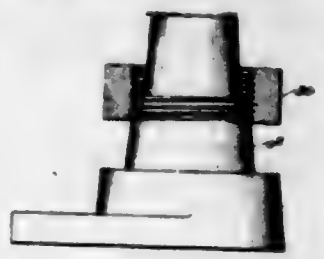
1. An electric lighting switch comprising in combination, stationary sets of contacts, a stationary contact, a second stationary contact, rotatable contacts to selectively engage said first or second stationary contacts, rotatable sets of contacts in electrical connection with said first mentioned rotatable contacts and adapted to close a selected circuit through said stationary set of contacts and said first or second stationary contacts.

1,298,855. TOY BUILDING-BLOCKS. WILLIAM GEORGE ANDERSON, Whitehead, Ireland. Filed June 5, 1918. Serial No. 238,249. 6 Claims. (Cl. 46—85.)



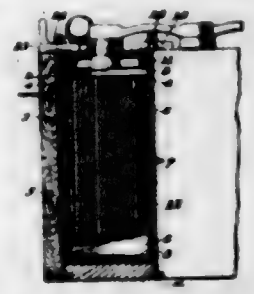
1. For use in building toy houses and buildings, interlocking blocks for uniting the walls, having on their upper and under sides a longitudinal tongue and a transverse groove.

1,298,856. BATTERY-SEAL. CHESTER M. ANGELL, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 12, 1918. Serial No. 262,120. 2 Claims. (Cl. 204—29.)



1. A battery seal between the cover plate and a terminal post extending therethrough, comprising a shoulder on the post, a packing between the said shoulder and the lower surface of the cover plate and a nut of acid-resisting, non-freezing metal screwed onto the post above the cover plate.

1,298,857. BATTERY. CHESTER M. ANGELL, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 3, 1919. Serial No. 269,458. 4 Claims. (Cl. 204—29.)



1. In an accumulator battery the combination with the casing, the plates and ribs at the bottom of the casing for supporting the plates, of means on the walls of the casing for supporting the plates and means for rigidly holding the plates to said supports.

1,298,858. CONNECTOR. STANLEY ANTHONY, Boston, Mass. Filed Mar. 10, 1915. Serial No. 13,468. 2 Claims. (Cl. 173—328.)

1. A connector comprising two members, one of which has a body of insulating material and an inclosing shell that extends beyond the end of the body and is formed

in its extended portion with catch-engaging surfaces, and the other of which members is constructed to enter said extended portion of the shell and is provided with catch-receiving recesses, a contact element carried by each member, and resilient catches secured to the second member and occupying said recesses, said catches being situated on the inside of the shell and constructed to have interlocking engagement with the catch-engaging sur-



faces, thereby to lock the two members positively together, said catches having portions other than those that engage said surfaces that project outwardly from the exterior of the connector, whereby when such projecting portions are pressed inwardly the catches will be forced inwardly and disengage from the catch-receiving surfaces.

1,298,859. INDEX. STANLEY ANTHONY, Boston, Mass. Filed Aug. 5, 1916. Serial No. 113,311. 1 Claim. (Cl. 40—10.)



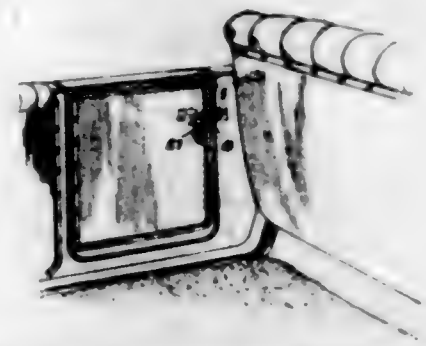
An indicator strip for indexes comprising a sheath of transparent resilient material and an index strip contained therein, said sheath presenting front and rear sides connected at the bottom edge but separated at the top edge, the rear side having its upper edge bent outwardly and the front face having extended rearwardly from its upper edge a lip which overlies the upper edge of the rear side but is separated therefrom to present a strip-receiving slot extending from one to the other end of the sheath.

1,298,860. MECHANISM FOR AUTOMATICALLY CHANGING SHUTTLES IN LOOMS. MAX AUERBACH, Bremen, Germany, assignor to the Firm Exploitatie Maatschappij voor Textielindustrie Auerbach en Co., Utrecht, Netherlands. Filed Nov. 21, 1917. Serial No. 203,223. 3 Claims. (Cl. 139—85.)



1. In a mechanism for automatically changing shuttles in looms, including a pivotally mounted shuttle box rear wall and slidable shuttle box front wall, a cross-beam, guide rollers thereon, a cord passing over said guide roll, a catch, a shaft, a pulley mounted thereon, further pulleys on the same shaft, and cords for connecting said pulleys with the slidable front wall and guiding provisions incasing said front wall for permitting the same to move in a vertical direction.

1,298,861. LATCH FOR AUTOMOBILE-DOORS. WILLIAM A. BABBITT, Lockport, N. Y., assignor of one-half to Margaret C. Babbitt and one-half to Mary C. Passage, Lockport, N. Y. Filed Feb. 26, 1917. Serial No. 151,093. 8 Claims. (Cl. 70—42.)

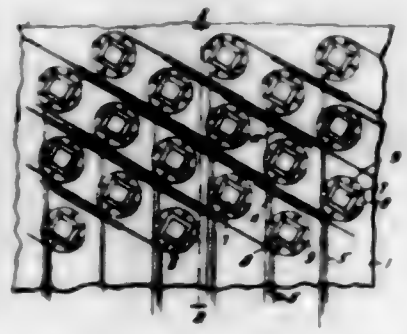


1. In a latch, the combination of a keeper having a notch in one side and having the corners at the outer ends of the walls of said notch beveled, a slidably mounted bolt having an annular head adapted to engage said notch and provided with a tapered surface extending from the edge of the head to the surface of the stem around the entire periphery thereof and adapted to ride on the beveled surface of the keeper and engage beyond the notched wall of the same, and yieldable means holding the head of the bolt in such engagement.

2. The combination of a frame having a recess in one edge and having the walls of said recess beveled at their ends, a keeper secured to the said frame and having a member extending over said recess, said member having a notch and having the side walls of said notch beveled at their ends, a member movable relative to the frame, a bolt slidably mounted on said member and adapted to engage and ride on the beveled walls of the recess and the beveled surfaces of the keeper and provided with a head adapted to pass within the recess in the frame and rockingly engage behind the keeper, and yieldable means for holding the bolt in such engagement.

3. A latch mechanism comprising a keeper having a seat formed on its inner surface, a housing comprising a single integral structure presenting three transverse webs, a bolt slidably mounted in the said webs and provided with an annular head adapted to engage the seat in the keeper, the surfaces of the bolt between the stem of the same and the edge of the head being beveled whereby rocking of the head on the keeper is permissible, means between two of the transverse webs of the housing for retracting the bolt and holding the head of the same to the seat in the keeper, and a stop at the inner end of the bolt to limit the retracting movement thereof and movable to project the bolt and release it from the keeper.

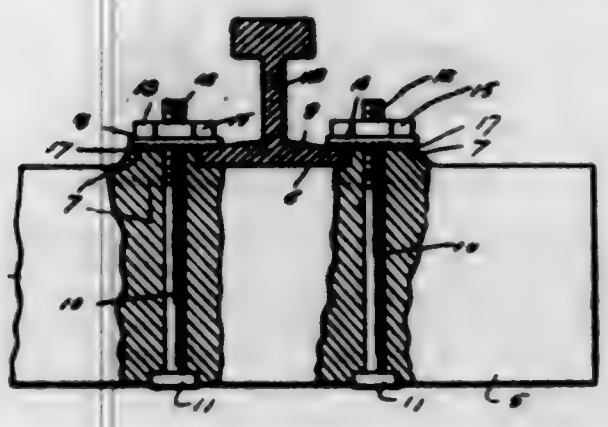
1,298,862. DEVICE FOR MAINTAINING INSTRUMENT-STRINGS UNDER TENSION. GEORGE T. BACHMAN, Johnson City, Tenn. Filed Aug. 20, 1918. Serial No. 250,700. 3 Claims. (Cl. 84—105.)



1. The combination with the pins in a stringed instrument, each pin having a string attached thereto, coupling members extending between two pins and comprising turnbuckles to tension the said coupling members, and means mounted on each pin to receive the ends of the coupling

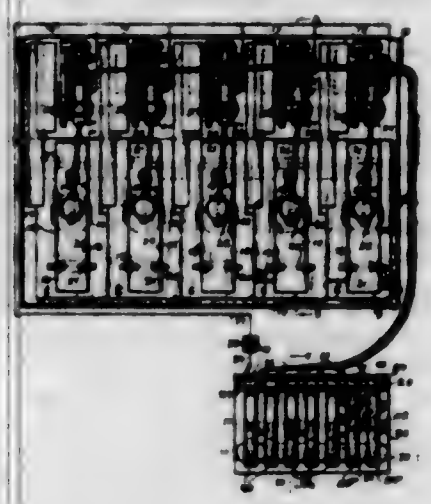
members whereby the tendency of the pin having a string of a higher tension will tend to pull the corresponding pin in a rotary direction to maintain the string of a lesser tension under its proper relative tension.

1,298,863. RAIL-FASTENER. GEORGE M. BAKER, Bath, N. Y. Filed July 19, 1918. Serial No. 245,701. 1 Claim. (Cl. 238—4.)



The combination of a railway tie having spaced enlargements upon the upper surface thereof forming a recess therebetween, a rail having its base flange mounted in said recess, bolts extending through said tie and the enlargement thereof adjacent said base flange, and lock nuts mounted upon said bolts and having ratchet teeth upon their under surfaces adapted to engage the upper surfaces of said enlargement and said base flange, whereby to secure the rail in position.

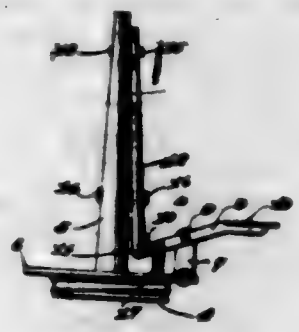
1,298,984. ELECTRICALLY-OPERATED MUSICAL INSTRUMENT. DANIEL W. BARTON, Oshkosh, Wis. Filed Sept. 16, 1916. Serial No. 120,455. 3 Claims. (Cl. 84—81.)



1. A musical instrument, comprising a plurality of sound producing units arranged in proper musical relation with each other in all combinations in which they may be played to produce only harmonious sounds when a plurality of the units are electrically vibrated, and means distant from the units for controlling the actuation of the units.

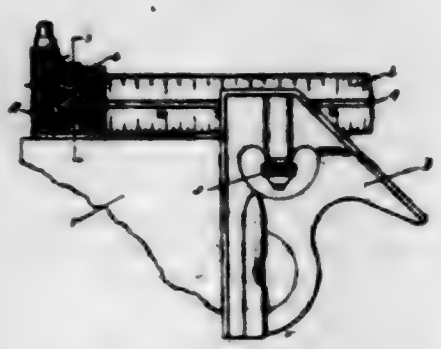
1,298,985. OIL-CAN ATTACHMENT. EARL M. BASTIAN, Highmore, S. D. Filed Jan. 16, 1918. Serial No. 212,977. 2 Claims. (Cl. 221—57.)

1. In a device of the character described, a nozzle, a cleaning rod slidably mounted thereon and extending longitudinally of the nozzle, said nozzle being provided at its base with a supporting flange, means mounted on said flange and connected to the rod for moving the rod upwardly so as to project beyond the outer end of said



nozzle, and means carried by the flange for normally holding said rod in retracted position.

1,298,866. LAY-OUT TOOL. JOHN A. BEACH, Muskegon, Mich. Filed Nov. 4, 1918. Serial No. 260,923. 7 Claims. (Cl. 33—95.)



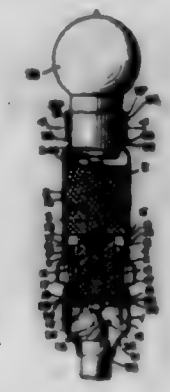
1. The combination with a scale and square and center heads adapted to be interchangeably and adjustably associated with said scale, of a punch head provided with a punch and having a vertical scale socket and a horizontal rectangular scale seat having a longitudinal edge, the center plane of the socket and the longitudinal edge of the seat being in the same plane and radial to said punch, a removable clamp for securing said scale in said seat, and clamping screws for securing said scale in said socket.

1,298,867. FOLDING HORSE OR TRESTLE. FRANK BELAND, Cairo, Ill. Filed Feb. 17, 1917. Serial No. 149,291. 1 Claim. (Cl. 20—33.)



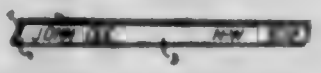
A folding horse comprising bars having reduced, adjustably connected lapping portions forming a beam having notches for the reception of connecting bars, there being oblique recesses in opposite faces of each bar of the beam, legs arranged in pairs and receiving the beam between the upper ends thereof, said ends being detachably seated in the oblique recesses, bolts extending through the beam and recesses and detachably engaging the end portions of the legs, there being a bolt receiving bore and a counterbore in each leg, each bolt being loosely mounted in its bores, each bolt having a head at one end, a nut on the other end of each bolt, washers fitted snugly in the counterbores to hold the bolts centered in the bores, said washers being held by the heads and nuts on the bolts, said washers being removable from the

in its extended portion with catch-engaging surfaces, and the other of which members is constructed to enter said extended portion of the shell and is provided with catch-receiving recesses, a contact element carried by each member, and resilient catches secured to the second member and occupying said recesses, said catches being situated on the inside of the shell and constructed to have interlocking engagement with the catch-engaging sur-



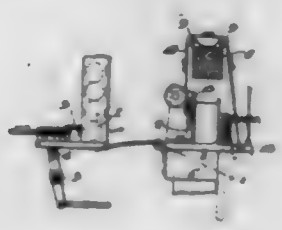
faces, thereby to lock the two members positively together, said catches having portions other than those that engage said surfaces that project outwardly from the exterior of the connector, whereby when such projecting portions are pressed inwardly the catches will be forced inwardly and disengage from the catch-receiving surfaces.

1,298,859. INDEX. STANLEY ANTHONY, Boston, Mass. Filed Aug. 5, 1916. Serial No. 113,311. 1 Claim. (Cl. 40—10.)



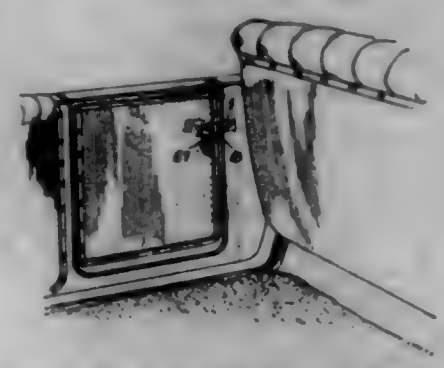
An indicator strip for indexes comprising a sheath of transparent resilient material and an index strip contained therein, said sheath presenting front and rear sides connected at the bottom edge but separated at the top edge, the rear side having its upper edge bent outwardly and the front face having extended rearwardly from its upper edge a lip which overlies the upper edge of the rear side but is separated therefrom to present a strip-receiving slot extending from one to the other end of the sheath.

1,298,860. MECHANISM FOR AUTOMATICALLY CHANGING SHUTTLES IN LOOMS. MAX AUERBACH, Bremen, Germany, assignor to the Firm Exploitatie Maatschappij voor Textielindustrie Auerbach en Co., Utrecht, Netherlands. Filed Nov. 21, 1917. Serial No. 208,228. 3 Claims. (Cl. 139—85.)



1. In a mechanism for automatically changing shuttles in looms, including a pivotally mounted shuttle box rear wall and slidable shuttle box front wall, a cross-beam, guide rollers thereon, a cord passing over said guide roll, a catch, a shaft, a pulley mounted thereon, further pulleys on the same shaft, and cords for connecting said pulleys with the slidable front wall and guiding provisions incasing said front wall for permitting the same to move in a vertical direction.

1,298,861. LATCH FOR AUTOMOBILE-DOORS. WILLIAM A. BABBITT, Lockport, N. Y., assignor of one-half to Margaret C. Babbitt and one-half to Mary C. Passage, Lockport, N. Y. Filed Feb. 26, 1917. Serial No. 151,093. 8 Claims. (Cl. 70—42.)

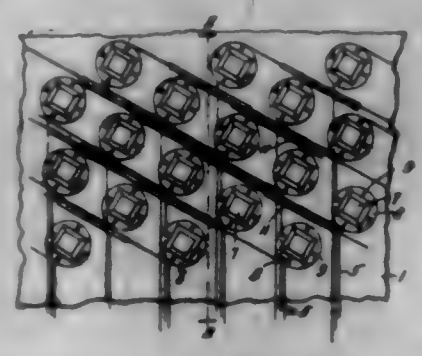


1. In a latch, the combination of a keeper having a notch in one side and having the corners at the outer ends of the walls of said notch beveled, a slidably mounted bolt having an annular head adapted to engage said notch and provided with a tapered surface extending from the edge of the head to the surface of the stem around the entire periphery thereof and adapted to ride on the beveled surface of the keeper and engage beyond the notched wall of the same, and yieldable means holding the head of the bolt in such engagement.

2. The combination of a frame having a recess in one edge and having the walls of said recess beveled at their ends, a keeper secured to the said frame and having a member extending over said recess, said member having a notch and having the side walls of said notch beveled at their ends, a member movable relative to the frame, a bolt slidably mounted on said member and adapted to engage and ride on the beveled walls of the recess and the beveled surfaces of the keeper and provided with a head adapted to pass within the recess in the frame and rockingly engage behind the keeper, and yieldable means for holding the bolt in such engagement.

3. A latch mechanism comprising a keeper having a seat formed on its inner surface, a housing comprising a single integral structure presenting three transverse webs, a bolt slidably mounted in the said webs and provided with an annular head adapted to engage the seat in the keeper, the surfaces of the bolt between the stem of the same and the edge of the head being beveled whereby rocking of the head on the keeper is permissible, means between two of the transverse webs of the housing for retracting the bolt and holding the head of the same to the seat in the keeper, and a stop at the inner end of the bolt to limit the retracting movement thereof and movable to project the bolt and release it from the keeper.

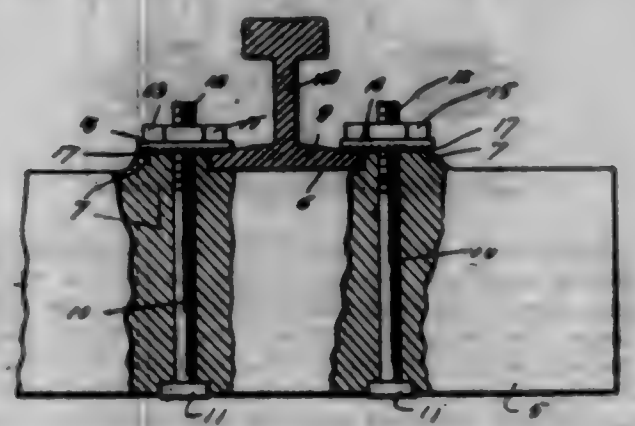
1,298,862. DEVICE FOR MAINTAINING INSTRUMENT-STRINGS UNDER TENSION. GEORGE T. BACHMAN, Johnson City, Tenn. Filed Aug. 20, 1918. Serial No. 250,700. 3 Claims. (Cl. 84—105.)



1. The combination with the pins in a stringed instrument, each pin having a string attached thereto, coupling members extending between two pins and comprising turn buckles to tension the said coupling members, and means mounted on each pin to receive the ends of the coupling

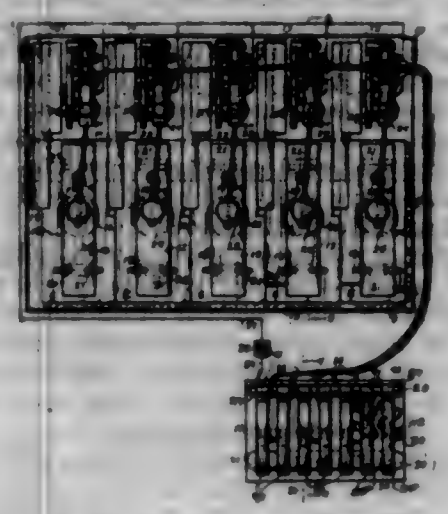
members whereby the tendency of the pin having a string of a higher tension will tend to pull the corresponding pin in a rotary direction to maintain the string of a lesser tension under its proper relative tension.

1,298,863. RAIL-FASTENER. GEORGE M. BAKER, Bath, N. Y. Filed July 19, 1916. Serial No. 245,701. 1 Claim. (Cl. 238—4.)



The combination of a railway tie having spaced enlargements upon the upper surface thereof forming a recess therebetween, a rail having its base flange mounted in said recess, bolts extending through said tie and the enlargement thereof adjacent said base flange, and lock nuts mounted upon said bolts and having ratchet teeth upon their under surfaces adapted to engage the upper surfaces of said enlargement and said base flange, whereby to secure the rail in position.

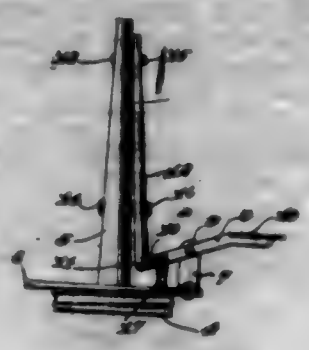
1,298,864. ELECTRICALLY-OPERATED MUSICAL INSTRUMENT. DANIEL W. BARTON, Oshkosh, Wis. Filed Sept. 16, 1916. Serial No. 120,455. 3 Claims. (Cl. 84—81.)



1. A musical instrument, comprising a plurality of sound producing units arranged in proper musical relation with each other in all combinations in which they may be played to produce only harmonious sounds when a plurality of the units are electrically vibrated, and means distant from the units for controlling the actuation of the units.

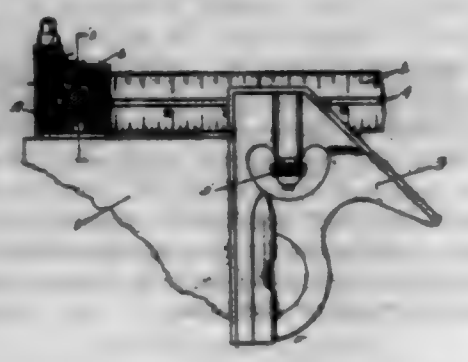
1,298,865. OIL-CAN ATTACHMENT. EARL M. BARTIAN, Highmore, S. D. Filed Jan. 16, 1918. Serial No. 212,077. 2 Claims. (Cl. 221—57.)

1. In a device of the character described, a nozzle, a cleaning rod slidably mounted thereon and extending longitudinally of the nozzle, said nozzle being provided at its base with a supporting flange, means mounted on said flange and connected to the rod for moving the rod upwardly so as to project beyond the outer end of said



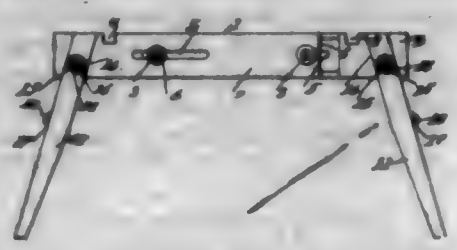
nozzle, and means carried by the flange for normally holding said rod in retracted position.

1,298,866. LAY-OUT TOOL. JOHN A. BEACH, Muskegon, Mich. Filed Nov. 4, 1918. Serial No. 260,928. 7 Claims. (Cl. 33—95.)



1. The combination with a scale and square and center heads adapted to be interchangeably and adjustably associated with said scale, of a punch head provided with a punch and having a vertical scale socket and a horizontal rectangular scale seat having a longitudinal edge, the center plane of the socket and the longitudinal edge of the seat being in the same plane and radial to said punch, a removable clamp for securing said scale in said seat, and clamping screws for securing said scale in said socket.

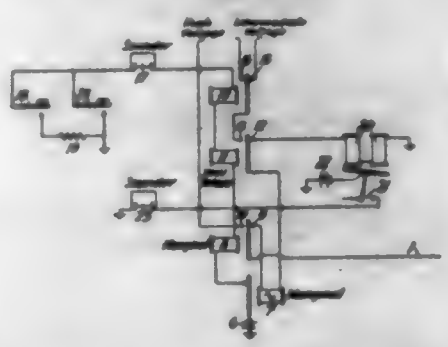
1,298,867. FOLDING HORSE OR TRESTLE. FRANK BELAND, Cairo, Ill. Filed Feb. 17, 1917. Serial No. 149,291. 1 Claim. (Cl. 20—33.)



A folding horse comprising bars having reduced, adjustably connected lapping portions forming a beam having notches for the reception of connecting bars, there being oblique recesses in opposite faces of each bar of the beam, legs arranged in pairs and receiving the beam between the upper ends thereof, said ends being detachably seated in the oblique recesses, bolts extending through the beam and recesses and detachably engaging the end portions of the legs, there being a bolt receiving bore and a counterbore in each leg, each bolt being loosely mounted in its bores, each bolt having a head at one end, a nut on the other end of each bolt, washers fitted snugly in the counterbores to hold the bolts centered in the bores, said washers being held by the heads and nuts on the bolts, said washers being removable from the

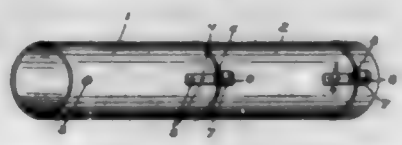
counterbores without detaching the nuts, to permit the legs to be withdrawn from the recesses and to be swung against the sides of the beam, and links connecting the legs of each pair, said links being movable against the beam to limit the swinging of the legs relative to the beam during the folding of the horse.

1,298,868. TELEGRAPH SYSTEM. JOHN H. BELL, East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,764. 4 Claims. (Cl. 178—71.)



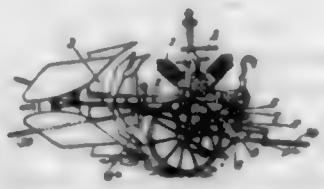
1. In a telegraph system, a transmitting apparatus, a line associated therewith, a source of normal operating current, a source of abnormal operating current, a relay in circuit with said transmitter, said relay being responsive only to abnormal current, circuit breaking means between said line and said sources of current and controlled by said relay, and means for impressing abnormal current on said relay to operate said current breaking means and put abnormal current on the line.

1,298,869. STOVEPIPE-COUPLING. LOUIS BERNIER, Montreal, Quebec, Canada. Filed July 28, 1917. Serial No. 183,292. Renewed Jan. 16, 1919. Serial No. 271,511. 2 Claims. (Cl. 285—185.)



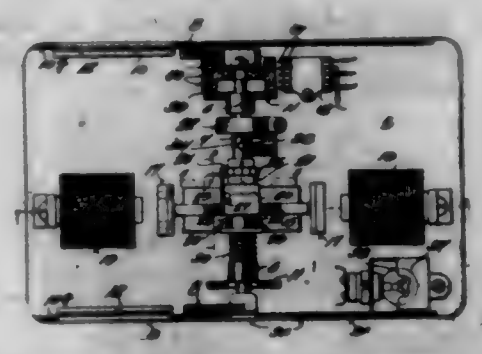
2. A pipe section unit provided adjacent one end with a laterally-projecting, beveled pin, and adjacent the other end with a longitudinally-disposed, resilient clip which is secured thereto at its inner end and has its free outer end bent outwardly and then turned inwardly to form a U, the inner member of which has a slot therein to receive the pin on the adjacent end of the next pipe section when the ends of the two sections are telescoped, the outer member of the U-bend extending in front of the inner member so as to cover the pin end and form a guard therefor.

1,298,870. PLOW OR ANALOGOUS FARM-MACHINE FOR ENABLING IT TO BE OPERATED BY MOTOR. ADOLPHE BLANCHARD, Varennes, France. Filed Feb. 8, 1918. Serial No. 216,056. 1 Claim. (Cl. 104—169.)



A plow including a source of power, a cable, means mounted upon a shaft and driven from said source of power, said means being adapted to engage the cable, and guide means for said cable mounted upon said shaft.

1,298,871. INDICATING DEVICE. BORNEY L. BORROW, Milwaukee, Wis., assignor, by mesne assignments, to Edward Dillmann and Henry J. Turck, trustees, Milwaukee, Wis. Filed June 16, 1917. Serial No. 175,287. 8 Claims. (Cl. 40—52.)



1. An indicator of the class described comprising a pair of sliding members having similar indicating symbols thereon, means for simultaneously advancing the sliding members predetermined distances to selectively display the same symbols thereon, means independent of the advancing means for retaining both of said sliding members in any of their advanced positions, and means for returning the members to normal position.

2. An indicator of the class described comprising a supporting base, a shaft journaled in said supporting base, a symbol carrying member disposed adjacent one end of said shaft and movable transversely thereof, means mounted upon said shaft and engaging said movable member, and means engaging said shaft for advancing the movable member step by step whereby to display the desired symbol carried thereby.

3. A device of the character described comprising a supporting base having a shaft journaled therein, a sliding indicating member connected with one end of said shaft, magnetic means for partially rotating said shaft in one direction whereby to move the sliding members, means for retaining the shaft in its rotated position, and a second magnetic coil adapted to return said shaft to normal position.

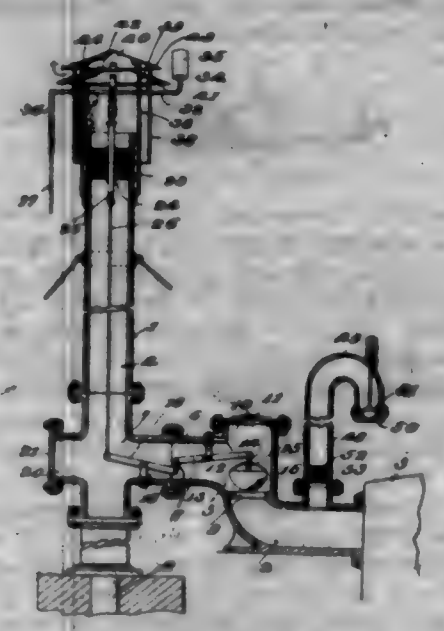
4. A device of the class described comprising a supporting base, a stationary lamp on said base, an indicating member having a plurality of indicating symbols thereon, said member also having a plurality of openings therein, each of said openings corresponding with one of said indicating symbols, and means for moving said member to selectively position any one of said openings in alinement with the stationary lamp and simultaneously display the corresponding indicating symbol.

5. A device of the class described comprising a supporting base, a shaft, a symbol carrying member connected with said shaft, a collar secured to the shaft and movable therewith, a loose collar rotatable and slidable on said shaft, co-acting clutch teeth on said collars, means engageable with the loose collar to rotate the same on the shaft when said clutch teeth are disengaged and to revolve the shaft in one direction when the teeth are interlocked, said symbol carrying member being movable by rotation of the shaft to selectively display the symbols thereon, means to automatically disengage said clutch teeth when the shaft has been revolved a predetermined distance in one direction, and means to return the shaft to its normal position.

1,298,872. SAFETY-VENT FOR OIL-STORAGE TANKS. WILLIAM M. BOWLES, Shawnee, Okla., assignor to International Crude Oil Storage Company, Inc., Sapulpa, Okla. Filed Mar. 5, 1918. Serial No. 220,531. 8 Claims. (Cl. 220—121.)

1. The combination with a vent pipe for an oil storage tank provided interiorly with a valve seat, a valve for coaction with the seat, a fusible element located adjacent the outlet from the vent pipe, and connection between the fusible element and the valve normally holding the valve in open position, of a hood surrounding the outlet from the vent pipe and inclosing the said fusible element, the said hood being open at its bottom and being spaced from

the vent pipe whereby to provide for a rising draft of air currents through the hood in the direction of the said fusible element.

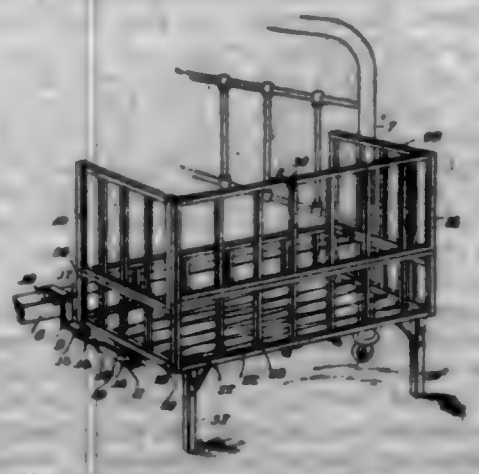


3. The combination with a vent pipe for oil storage tanks having a branch leading substantially horizontally from the tank and a branch leading substantially vertically from the first-mentioned branch and having an outlet, of a valve seat within the first-mentioned branch of the pipe, a valve arranged to lower by gravity onto the said seat, a fusible element located adjacent the discharge end of the said vertical branch of the pipe, and connection between the said fusible element and the said valve.

5. The combination with a vent pipe for oil storage tanks having a substantially horizontal branch provided interiorly with a valve seat, a valve located within the branch for coaction with the seat, and fusible means for holding the valve normally in open position, the said valve comprising a body provided in its upper side with a receiving concavity, and the said branch being provided with an opening whereby access may be had to the interior of the valve body.

8. In a device of the class described, a vent pipe, spaced foraminous heads in the upper portion of the said pipe, a tubular guide extending through the heads, a valve seat within the vent pipe, a valve within the pipe, an element having connection with the valve, a rod slidably fitted through the tubular guide and to which the said element is connected, fusible means normally supporting the rod in elevated position whereby to hold the valve in open position through the medium of the connecting element, and an abutment upon the rod engageable, in the lowering movement of the rod, with the upper end of the tubular guide whereby to limit the said movement of the rod.

1,298,873. BED. FREDDIE J. BOYD, Gary, Ind. Filed Sept. 28, 1918. Serial No. 256,040. 2 Claims. (Cl. 5—59.)



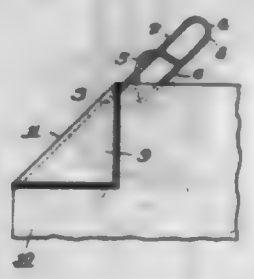
1. In combination with an elevated support comprising an angle iron, of angle brackets, having one of their ends hooked, arranged on said angle iron, said brackets having the lower ends offset outwardly and arranged below the lower edge of the angle iron, centrally twisted arms, one pivotally connected to each of the said extensions of the said brackets, a member pivotally secured to the outer end of each of said arms, a collapsible baby bedstead, straps on the lower ends thereof swiveled to the referred to pivoted members, and a swinging leg for the outer side of the baby bedstead, all as and for the purpose set forth.

1,298,874. CHECK-PROTECTOR. RUSSEL WILSON BRANSON, Kansas City, Mo., assignor of three-fourths to Mrs. Mayme Becker, Kansas City, Mo. Filed Oct. 12, 1918. Serial No. 257,881. 3 Claims. (Cl. 101—22.)



1. A device of the character specified, comprising a casing having a removable cover, and a carriage mounted to move in the casing, said carriage carrying a roller provided with a roughened surface, and the casing having an ink pad over which the roller moves when it is extended beyond the casing, the casing carrying a plane surface provided with a monogram, the letters of which are formed in points or spurs for coöperating with the roller.

1,298,875. PAPER-FASTENING DEVICE. ORSON W. BRENNEMAN, Philadelphia, Pa., assignor of one-half to Andrew V. Groupe, Philadelphia, Pa. Filed Mar. 12, 1918. Serial No. 221,879. 6 Claims. (Cl. 24—261.)



1. A paper fastener comprising a pin adapted to be inserted into the corner folds of sheets of paper, and a loop connected to said pin and embracing the same and adapted to embrace the folds into which the pin is inserted, said pin having a free end permitting it to be inserted into and withdrawn from said folds.

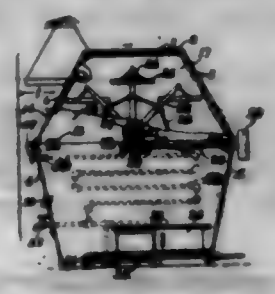
4. A paper fastener comprising a pin adapted to be inserted into the corner folds of sheets of paper, and a loop connected to said pin and embracing the same and having terminal portions opposite to each other in a direction transversely of said pin, said loop being adapted to embrace the folds into which the pin is inserted, and said pin having a free end permitting it to be inserted into and withdrawn from said folds.

6. A paper fastener formed of a single piece of wire and comprising a pin having a free end and a return bend formed on the other end thereof, a loop formed on the return bend and embracing said pin, and an arm extending from said loop laterally adjacent to said return bend and having a free end facing a direction opposite to that faced by the free end of said pin, said loop being adapted to embrace the folds into which the pin is inserted, and said pin having a free end permitting it to be inserted into and withdrawn from said folds.

1,298,876. PORTABLE COMBINATION REVOLVING BAKER'S GAS-OVEN. DAVID BRICKMAN, Pasadena, Calif. Filed Sept. 5, 1917. Serial No. 189,866. 2 Claims. (Cl. 107—50.)

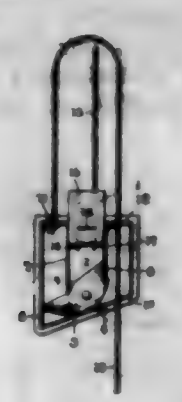
1. A portable gas oven comprising end frames constructed of angle iron, lower side walls removably bolted

to the angle iron; said walls being flaring in end elevation and extending more than half way to the top, upper side walls removably bolted to the angle iron; said upper side walls being inclined inwardly from the upper edges of the lower side walls; a top plate removably bolted to the angle iron, lower end plates removably bolted to the angle iron and extending to the upper



edges of the lower side walls, upper end plates connected to the upper edges of the lower end plates by hinges and removably bolted to the angle iron; there being a door opening between the lower edge of one upper side wall and the upper edge of the corresponding lower side wall and extending the length of the side walls; and a door hinged to the upper edge of the lower side wall for said door opening.

1,298,877. PACKAGE-TIE. HENRY S. BAILL, New York, N. Y. Filed Dec. 11, 1918. Serial No. 266,320. 5 Claims. (Cl. 24—30.5.)



4. A package tie including a plunger, a socket arranged to receive and interlock with the plunger, a fastening cord having one end secured within the socket and a portion passed through the socket to form an adjustable loop, its other end slidable in the plunger with a return bend to form a hight and means for permanently fastening the cord to the plunger after the length desired for a certain wrapping has been provided.

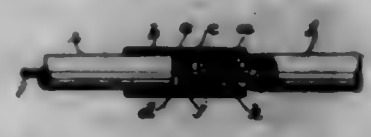
1,298,878. CONDUIT. HAROLD P. BROWN, New York, N. Y. Filed Mar. 1, 1917. Serial No. 151,737. 4 Claims. (Cl. 193—10.)



1. A conduit comprising a pipe having a lining formed of coils of a hard material spaced apart and a filling of cementitious material between and substantially flush with the interior surface of the coils, the interior surface of the coils being exposed as part of a wearing surface.

4. A conduit comprising a pipe composed of hard material, said pipe having a lining formed of coils of hard material spaced apart and a filling of cementitious material between and substantially flush with the interior surface of the coils, the interior surface of the coils being exposed as part of a wearing surface.

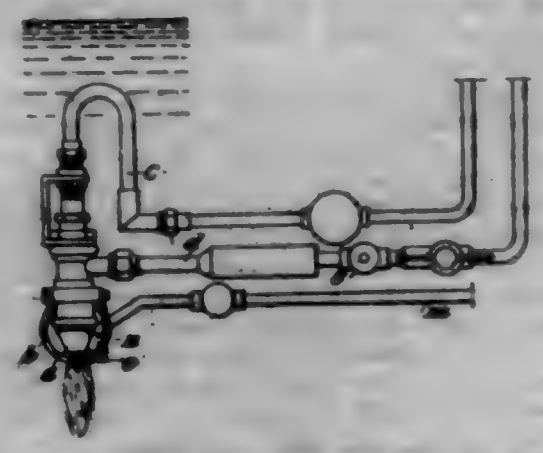
1,298,879. ELECTRIC CONNECTION. WILLIAM H. BROWN, Philadelphia, Pa., assignor to Philips-Brinton Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1917. Serial No. 206,894. 3 Claims. (Cl. 173—269.)



1. An electrical connector comprising a wire-containing cable, a terminal member exteriorly threaded and a cap open at both ends and provided with an apertured partition between its ends to form two chambers, one chamber being interiorly threaded to receive the terminal and the other adapted to receive the cable, the terminal member having a longitudinally extending groove intersecting its threads and adapted to receive the wire extending beyond the cable through the apertured partitions and bend it laterally and also feed it along the groove as the cap is threaded upon the terminal member.

3. An electrical connector comprising a tubular cap provided between its ends with a perforated partition, one hollow end of the cap being adapted to receive an insulated wire cable the uncovered end wire of which is adapted to extend through the perforated partition, the other hollow end of the cap being interiorly threaded, and a terminal exteriorly threaded to engage the threaded end of the cap and provided with a longitudinally extending groove adapted to receive the projecting wire end and bend it laterally to confine it between the terminal and the cap as the cap is screwed to position on the terminal.

1,298,880. SUBAQUEOUS TORCH AND METHOD OF IGNITING. FRIEDRICH WILHELM BAUSCH and WALTER FRANZ JOSEF BEYER, Dortmund, Germany, assignors to Deutsche-Luxemburgische Bergwerks- und Hütten-Aktiengesellschaft, Bochum, Germany. Filed July 31, 1915. Serial No. 42,977. 8 Claims. (Cl. 158—27.4.)

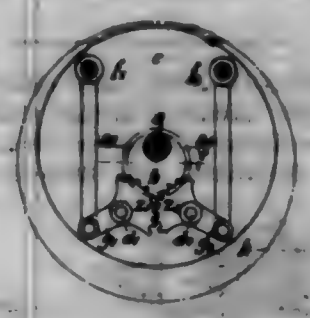


1. The hereinbefore described method of controlling submerged sub-aqueous torches, in particular the flame of apparatus for autogenous cutting and welding under water by means of a mixture comprising a combustion gas and oxygen, which consists in first producing for the ignition a large difference between the rate of combustion of the gas mixture and the rate of issuance of said gas mixture from the burner directly into a body of water at the existing sub-aqueous pressure in favor of the rate of flow of said gas mixture, igniting the gas mixture, and during the working proper adequately decreasing the difference between the rate of combustion and the rate of issuance of the gas mixture while maintaining the water displaced at the burner solely by gas pressure.

8. In a burner for flames intended for autogenous cutting and welding of metals under water, the combination with supply pipes for the heating gases and for the oxygen, said supply pipes leading by a common outlet into the free mass of water surrounding the submerged torch and metallic work; of means for momentarily causing a reduction of the oxygen supply to the respective supply pipe while maintaining a pressure sufficient to keep the water

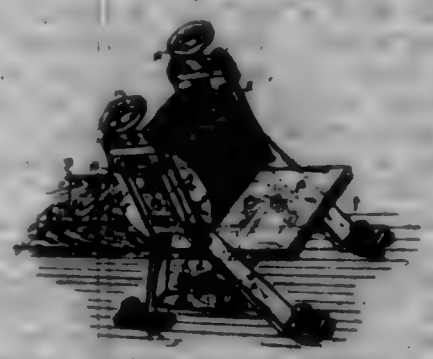
displaced from the burner, means for leading a compressed gas into the free mass of water in proximity to the outlet of said supply pipe so as to form a dry space adapted for ignition of the gas mixture in proximity to said outlet of the supply pipes and adjacent to the work-piece, means for igniting the gases escaping from the outlet of said pipes, and means for increasing during the working period the supply of oxygen in such a proportion that the rate of combustion of the gas mixture becomes almost equal to the rate of issuance of said gas mixture, though the rate of combustion remains somewhat lower than the rate of issuance.

1,298,881. SHAFT-COUPLING. JACOB BUCHLI, Baden, Switzerland, assignor to A. G. Brown Boveri & Cie., Baden, Switzerland. Filed Nov. 22, 1917. Serial No. 203,349. 5 Claims. (Cl. 64—26.)



1. In a coupling for a driving and a driven shaft located out of line with each other, the combination of two crank pins on one shaft, two interengaging toothed segments fulcrumed one on each of said crank pins, two crank pins on the other shaft, and two rods of equal length connecting said toothed segments to the second mentioned crank pins, whereby the coupling in its normal position is symmetric to a plane extending through the eccentric center lines of said two shafts, but is non-symmetric to the plane located at right angles to the aforesaid plane.

1,298,882. IMITATION-GRAINING TOOL. ARTHUR JOHN BULL, Mayfield, Newcastle, New South Wales, Australia. Filed Apr. 20, 1918. Serial No. 229,706. 2 Claims. (Cl. 101—24.)

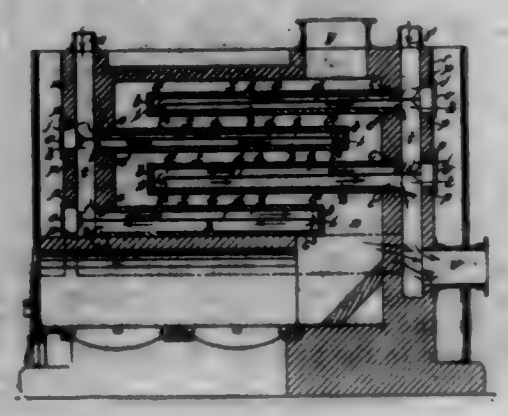


1. An imitation graining tool consisting of a roller comprising in combination a plurality of disks having interrupted cutting edges, a plurality of blades arranged in non-parallel relation to said disks, a central core about which said blades are disposed, means for holding said blades in position and means for clamping the whole together.

1,298,883. SUPERHEATER FOR AIR, VAPOR, OR GAS. FREDERICK GATTEY BEDOE, Twickenham, England. Filed July 1, 1918. Serial No. 242,690. 8 Claims. (Cl. 263—20.)

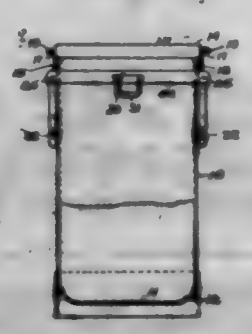
1. An air, vapor or gas superheater chamber characterised in that it is of oblong or rectangular shape divided into two compartments by a removable sliding diaphragm placed at a slant to provide a passage of gradual increasing sectional area from inlet to outlet, substantially as described.

4. A superheating furnace having opposite intake flues formed in opposite walls thereof, a plurality of superheater units closed at one end and having their free ends secured in the furnace structure and opening into said flues, the said superheater units being arranged in oppo-



site superimposed relation within the heating chamber above the fire box of the furnace and being of gradually increasing size from the top of the heating chamber toward the bottom thereof, a removable diaphragm carried by the furnace structure for dividing the superheater units into passages of varying width.

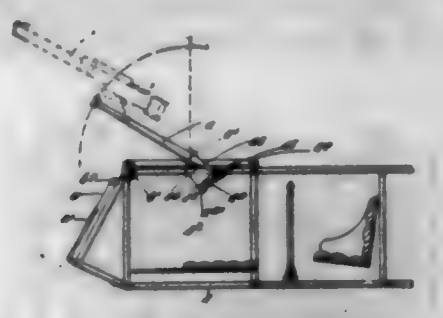
1,298,884. MILK-CAN. FRANK CHALFANT, Fort Wayne, Ind. Filed Aug. 18, 1916. Serial No. 115,641. 2 Claims. (Cl. 220—10.)



1. The combination of a can body having a seat at its mouth, a cover for the body having a flat top and adapted to engage the seat, an apertured member projecting laterally from the side of the cover, a lever pivotally mounted on the cam body, and having an opening therein extending from its pivotal point toward its opposite end and a latch pivotally connected to the lever forwardly of the pivotal point of the lever and adapted to be engaged in the apertured member when the lever is moved upwardly and to be drawn downwardly by the lever when the latter is moved downwardly for seating the cover, the latch being also adapted to be moved downwardly into the opening in the lever when disengaged from the apertured member.

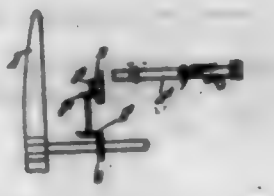
2. The combination of a can body having a seat in its mouth, a cover for the body adapted to be engaged on the seat, an apertured member projecting laterally from the side of the cover, a ring secured to the exterior of the can body and below the said seat, a lever having one end bifurcated and pivotally connected to the ring and a latch pivotally connected to the lever forwardly of the pivotal point of the lever and adapted to be engaged in the apertured member when the lever is moved upwardly and to be drawn downwardly by the downward movement of the lever for tightening the cover on the seat, the latch being also adapted to be moved within the bifurcated end of the lever when disengaged from the apertured member, and means to seal the lever in active position.

1,298,885. MOUNTING FOR GUNS CARRIED BY AEROPLANES AND SIMILAR AIRCRAFT. GEORGE HENRY CHALLENGER, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed July 6, 1917. Serial No. 179,073. 7 Claims. (Cl. 89—40.)



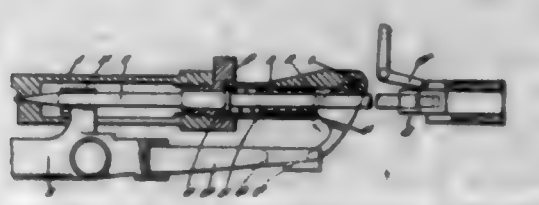
4. In a mounting for a gun carried by an aircraft, means for exerting upon the gun a training turning moment opposite and substantially equal to the training turning moment due to the pressure of the air.

1,298,886. BULLET-DEFLECTOR FOR THE PROPELLERS OF AEROPLANES AND SIMILAR AIRCRAFT PROVIDED WITH GUNS. GEORGE HENRY CHALLENGER, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed July 6, 1917. Serial No. 179,074. 6 Claims. (Cl. 89—40.)



1. In a gun-carrying aircraft, the combination with a gun for firing between the blades of the aircraft propeller, of a displaceable member and means for moving said member into the line of fire when the projectiles fired by the gun would otherwise hit the propeller blades.

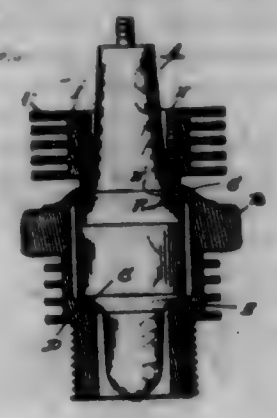
1,298,887. AUTOMATIC GUN. GEORGE HENRY CHALLENGER, Westminster, London, and HAROLD ARTHUR SAVAGE, Bexley Heath, England, assignors to Vickers Limited, Westminster, England. Filed July 6, 1917. Serial No. 179,090. 8 Claims. (Cl. 42—3.)



1. In an automatic gun, the combination with the breech bolt, of a member for operating said bolt, a spring actuated striker loosely carried by said member and a device carried by the bolt and operated by said member for energizing the spring during the forward movement of said member.

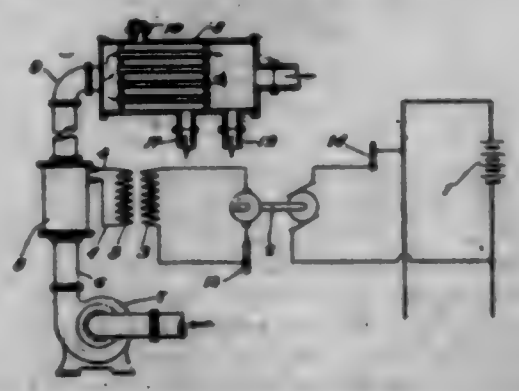
1,298,888. SPARK-PLUG. ALBERT J. CHAMPION, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed July 13, 1917. Serial No. 180,260. 1 Claim. (Cl. 123—169.)

In a spark plug, the combination with a casing and an insulator seated therein, provided with an inclined shoulder and with an outwardly-extending portion, of means for applying a clamping pressure to said inclined shoulder, including a member in heat conducting contact therewith, having an outward extension, said member being spaced from said outwardly-extending portion of



the insulator, and radiating fins on said outward extension.

1,298,889. METHOD AND APPARATUS FOR THE OXIDATION OF COMBUSTIBLE GASES. EDWIN M. CHANCE, Wilkes-Barre, Pa. Filed Aug. 14, 1917. Serial No. 186,161. 6 Claims. (Cl. 204—32.)



1. The method of oxidizing a combustible gas which consists in subjecting said combustible gas in admixture with atmospheric oxygen, to the action of the silent discharge produced by a high tension electric current, in permitting said silent discharge to cause the oxidation of said combustible gas by said atmospheric oxygen, and in removing the products of combustion thus formed from the region of said silent discharge.

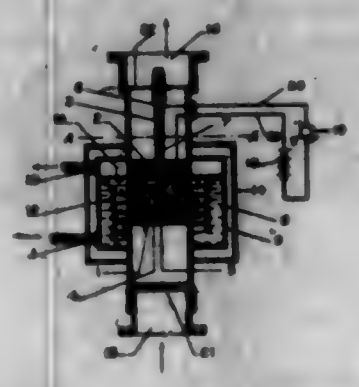
3. The method of oxidizing hydrogen which consists in subjecting said hydrogen in admixture with atmospheric oxygen, to the effect of the silent discharge produced by a high tension electric curent, in permitting said silent discharge to cause the oxidation of said hydrogen by said atmospheric oxygen, in removing the products of combustion thus formed from the region of said silent discharge, and in recovering the water produced by the oxidation of said hydrogen.

6. Apparatus for the oxidation of poisonous gases comprising in combination a source of electrical energy, means for producing a silent discharge connected thereto and arranged to produce said discharge within a combustible chamber and means for passing the gas to be oxidized in admixture with atmospheric oxygen through said combustible chamber.

1,298,890. METHOD AND APPARATUS FOR THE DIFFERENTIAL DETECTION OF COMBUSTIBLE ATMOSPHERES. THOMAS M. CHANCE, Wilkes-Barre, and EDWIN M. CHANCE, Philadelphia, Pa. Filed May 1, 1917. Serial No. 165,722. 6 Claims. (Cl. 73—51.)

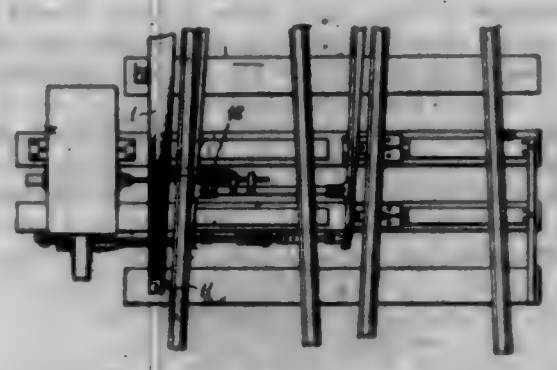
1. The method of detecting changes in the constituent gases of the atmosphere which consists in maintaining a temperature responsive element in operative relation to an oxidizing agent and to a source of heat, said element being operatively connected to signaling means; in causing said element to operate said signaling means when the temperature of said element reaches a predetermined limit; and in permitting variations in the heat received

from said source of heat, due to the chemical reduction of said oxidizing agent caused by changes in said constituent gases, to cause the temperature of said element to reach said limit; whereby said signaling means are operated and a warning of said changes given.



5. Apparatus for the detection of changes in the constituent gases of the atmosphere, comprising in combination an oxidizing agent, a source of heat in operative relation thereto, a temperature responsive element in operative relation to said agent, and signaling means operatively connected to said temperature responsive element.

1,298,891. DISTRIBUTER FOR VAPOR-BURNERS. WILFRID G. CHAUSSE, Detroit, Mich., assignor to Chausse Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 11, 1917. Serial No. 161,381. 5 Claims. (Cl. 246—428.)



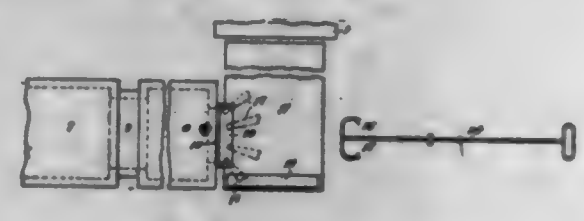
1. In a railway switch heater, the combination of a vapor burner, a casing adapted to receive a burner nozzle at one end and closed at the other end, the casing being provided with regulatable openings along one wall, means in said casing for deflecting heated gases through the openings of the casing wall, and means for controlling the inlet of air at the burner nozzle end of said casing.

1,298,892. FASTENER. EDMUND S. CHURCH, Chicago, Ill., assignor to Automatic Carburetor Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1918. Serial No. 237,453. 6 Claims. (Cl. 24—211.)



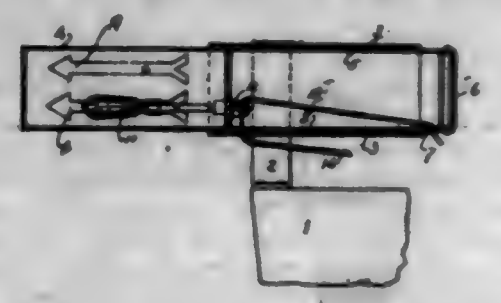
1. In a fastener, the combination of a hollow stud having a transverse slot at its outer end, a latch movably sustained in and having its body inclosed by the hollow stud, having a portion extending through said slot and projecting from said stud to hold a socket, a hollow rivet secured to the base of the stud and secured to a part to be fastened, and a socket on another part to be fastened adapted to pass around said stud.

1,298,893. METHOD OF CASTING PLATE-GLASS. WILLIAM L. CLAUSS, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed Jan. 12, 1912. Serial No. 670,740. 1 Claim. (Cl. 49—87.)



The herein described process of casting plate glass from a tank having an outlet spout adjacent the surface of the glass, which consists in engaging a body of glass in the tank at a point remote from the outlet spout with a raking tool, and drawing such body of glass to the outlet spout and therethrough upon a casting table, and then spreading and rolling the glass, heat being applied to the said spout to prevent chilling of the glass before its application to the casting table.

1,298,894. VEHICLE SIGNAL DEVICE. MARTIN J. CLAUSEN, Seattle, Wash., assignor of one-half to Hans Pederson, King county, Wash. Filed Apr. 23, 1918. Serial No. 230,212. 1 Claim. (Cl. 116—31.)



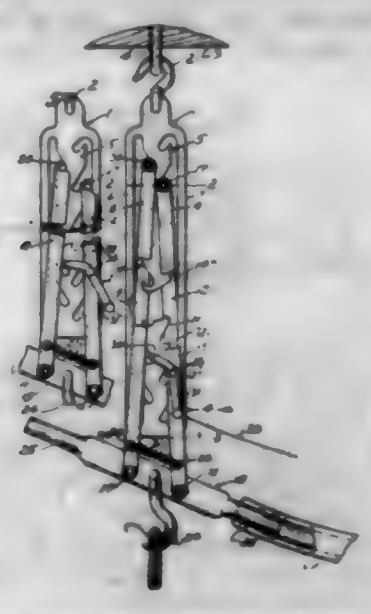
A manually operable signal comprising a fixed horizontal casing open at both ends, a hollow signal casing mounted to slide within the fixed horizontal casing closed at its outer end, a pair of oppositely resilient arms extending from the inner end of the signal casing and engaging the inner walls of the fixed casing and projecting beyond the inner end of said fixed casing, a handle connecting the resilient arms, a stop on one of the arms to limit the outward movement of the signal casing, the signal casing having a signal indicated on its outer surface, the tension of the resilient arms serving to hold the signal casing projected from the outer end of the fixed casing or retracted therein, when moved by the handle.

1,298,895. LIFTING-JACK. WILLIAM CLEMENS, San Fernando, Cal. Filed Jan. 6, 1919. Serial No. 269,861. 6 Claims. (Cl. 254—72.)

1. A lifting jack comprising, a suspended supporting bar, said supporting bar consisting of a middle two edged rack bar and two parallel guide bars in spaced relation to the edges of the rack bar; a catch acting along and in engagement with each of the two notched edges of said rack bar between said guide bars and said rack bar; a lever adapted to be operated at either end; links operatively connecting said catches to said lever bar; means for suspending said supporting bar; and means for attaching the load to said lever bar.

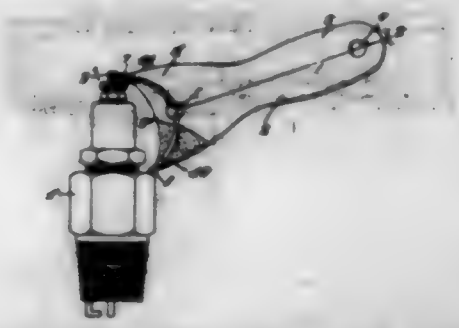
3. A lifting jack comprising, a suspended supporting bar, said supporting bar consisting of a middle two edged rack bar and two parallel guide bars in spaced relation to the edges of the rack bar; a catch acting along and in engagement with each of the two notched edges of said rack bar between said guide bars and said rack bar; a lever bar adapted to be operated at either end; links operatively connecting said catches to said

lever bar; means for suspending said supporting bar; means for attaching the load to said lever bar; and a



throw-off lever pivotally connected to one link and adapted to engage the other link.

1,298,896. SPARK-PLUG TESTER. WALTER G. CLINK, Danville, Ill. Filed Mar. 26, 1917. Serial No. 157,490. 1 Claim. (Cl. 175—183.)



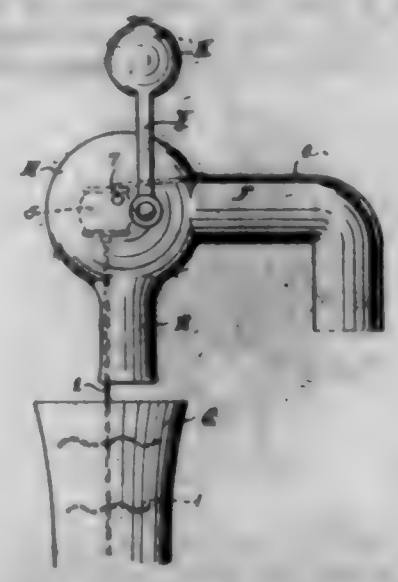
The herein described spark plug tester comprising a pair of arcuate wires standing in a single arc with their contiguous ends slightly separated, and a handle composed of two strips of leather of like configuration having holes near their front ends adapted to register when the strips are superposed upon each other, the front ends of said strips being shaped into acute-angled horns adapted to overlie said wires with the exception of their outer extremities when the holes expose their contiguous extremities and this end of the strips being dished between said horns, and cementitious matter connecting the strips of leather face to face, with the wires interposed between their forward ends.

1,298,897. DRINK-MIXER. CURTIS W. COFFIN, Holly, Colo. Filed. Feb. 28, 1918. Serial No. 219,677. 8 Claims. (Cl. 259—24.)

1. In a drink mixer, the combination with a faucet having a handle, and a shaft carried by said faucet and having a stirrer disposed near and subjacent to the faucet-nozzle; of means for controlling the action of said shaft by the movements of said handle.

2. In a drink mixer, the combination with a faucet having a handle, and a rotary shaft carried by said faucet and having a stirrer disposed near and subjacent to the faucet-nozzle; of driving mechanism for said shaft controlled automatically by the opening and closing movements of said handle.

3. In a drink mixer, the combination with a faucet having a handle, and a rotary shaft carried by said faucet and having a stirrer disposed near and subjacent to the faucet-nozzle; of driving mechanism for said shaft, means for supplying energy to said mechanism from a remote source, and means for automatically controlling the supply of such energy by the movements of said handle.



4. In a drink mixer, the combination with a faucet having a handle, and a rotary shaft carried by said faucet and having a stirrer disposed near and subjacent to the faucet-nozzle; of a motor for driving said shaft, the motor being carried by the faucet, means for supplying energy to said motor, and switch mechanism for applying or cutting off said energy automatically by the movements of the faucet-handle to open position and back to closed position.

5. In a drink mixer, the combination with a faucet having a swinging handle, and a stirrer mounted on an upright shaft; of an electric motor mounted on said faucet and connected to said shaft, wires leading to said motor, and a circuit closer controlling said wires and disposed to be actuated by the movements of the faucet-handle.

1,298,898. CHECK-WIRE FOR PLANTERS. EDWARD M. COLLIER, Petersburg, Va. Filed June 14, 1918. Serial No. 240,002. 3 Claims. (Cl. 24—114.5.)



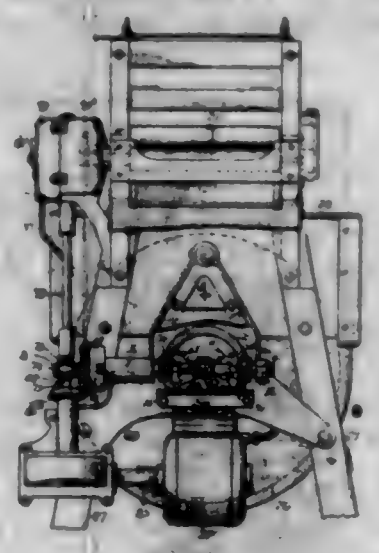
3. A check wire for planters having a plurality of wire sections detachably connected in series by terminal hooks, and buttons located at and housing the connected terminals of said wire sections, and each consisting of male and female detachable members having longitudinal bores for receiving and transversely confining the terminal hooks of the wire sections.

1,298,899. WASHING-MACHINE. WALTER J. CONLON, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,783. 13 Claims. (Cl. 74—50.)

1. In combination, a shaft having two pinions loosely mounted thereon, a second shaft having a gear meshing with both pinions, a sleeve for connecting one or the other of said pinions with said first shaft, an engaging member on the sleeve and a cam member controlled by the second shaft to move into the path of the engaging member, said engaging member being adapted to be rotated into contact with the cam member to shift the sleeve.

5. In combination, a shaft arranged for continuous rotation in the same direction, a second shaft positioned normal to said first named shaft, a beveled gear on said second shaft, two pinions loosely mounted upon said first named shaft, one of said pinions meshing with said gear on one side thereof and the other pinion meshing with said gear on the other side thereof, a sleeve carried by said first shaft between said pinions, a clutch pin at each end of said sleeve, a clutch pin on each of said pinions adapted for coöperation with the corresponding clutch

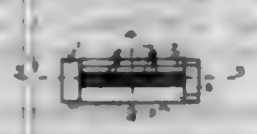
pin on said sleeve, one pair of clutch pins being out of engagement when the other pair are in engagement, a reciprocating member having threaded engagement with said second shaft, a pair of cams carried by said reciprocating member, one cam being disposed on each side of said first named shaft, a cam follower for each of said cams carried by said sleeve, said cams being alternately carried into engagement with their respective followers by the reciprocation of said reciprocating member, engagement by either of said cams with its follower causing the shifting of said sleeve to reverse the connections between the sleeve and said pinion to reverse the direction of rotation of the second shaft, said sleeve rotating with said first named shaft.



9. In combination, a driving shaft, a driven shaft, a pair of pinions on one shaft, a gear meshing with the pinions on the other shaft, a pair of cam members adapted to be moved alternately toward and away from said one shaft, a shiftable clutching member keyed to the one shaft, said clutching member having means for engaging the cam members alternately to cause alternate clutching of said member with said pinions, said shiftable clutching member rotating at all times with said one shaft.

12. In combination, a driving shaft having a pair of pinions loosely mounted thereon, a driven shaft having a gear meshing with said pinions, cam means controlled by the motion of the driven shaft to move into alternative positions corresponding to the direction of rotation of the driven shaft, and means moving rotatably with the driving shaft and adapted to engage said cam means for controlling the alternate clutching of said pinions to the driving shaft.

1,298,900. MATRIX FOR STRIP-MATERIAL FACES. WALTER R. COATES, Oakland, Calif., assignor of one-half to James H. Brady, San Francisco, Calif. Filed Sept. 17, 1918. Serial No. 254,305. 6 Claims. (Cl. 199—63.)



1. A compound matrix comprising a holder having in its face a longitudinally extending recess and a face liner and side packing pieces extending longitudinally in said recess, said holder being provided with means for retaining said liner and packing pieces in said recess, and an end of the holder having the surface which is most nearly in the same plane as the casting face of the face liner sufficiently near the opposite side of the holder to permit the rule face cast by said face liner to pass in a longitudinal direction by said portion of the surface without contacting therewith.

1,298,901. BRAKE-BEAM HANGER. WILLIAM F. CREMEAN, Frankfort, Ind. Filed Apr. 1, 1918. Serial No. 225,978. 9 Claims. (Cl. 188—70.)



1. A hanger arm provided with pin openings, means located on the arm adjacent one opening for restraining a pin against turning movement in the opening, and means located on the arm adjacent the other opening for restraining a pin against sliding movement in said opening.

5. A brake beam hanger comprising two hanger arms both of said arms being identical in form but one inverted with respect to the other, an opening formed near the upper and lower ends of said arms, a projection across one of said openings in each arm and a pin adapted to pass through the openings in the upper ends of said arms, one of said arms being first turned to an angular position and then swung downwardly to lock said arms with respect to each other, and a second pin adapted to pass through the lower openings in said arms when said arms are swung slightly toward each other and to lock the arms after said pin is revolved and the arms again swung outwardly.

6. A brake beam hanger comprising an arm provided near its upper end with a circular opening and an angular recessed portion registering with said opening, a circular opening near its lower end and a projection extending across the lower portion of said opening, a second arm similar to said first-mentioned arm but in an inverted position with respect thereto, a pin having an enlarged head seated in said recessed opening in the first mentioned arm and a lip on the opposite end of said pin and adapted to pass behind the projection on the face of the opening on the second arm, and a second pin similar to the first mentioned pin and having its enlarged head seated in the recess in the second mentioned arm and the lip formed on the outer end of said pin extending over the projection formed across the opening on the first mentioned arm.

7. A brake beam hanger comprising two arms identical in form but oppositely arranged and means for passing through openings in the upper ends of said arms when one of said arms is in an angular position and to lock the upper ends of said arm when said arm is again swung downwardly, and means passing through the lower ends of said arms when the lower ends of said arms are swung inwardly and to lock said arms when the lower ends of said arms are again swung outwardly.

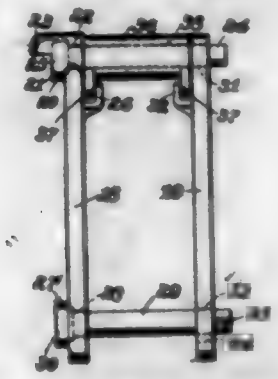
9. A brake beam hanger comprising in part a hanger arm provided with a rib extending substantially from end to end thereof and terminating in two circular projections, one of said projections having an angular recess formed therein and an opening registering with said recess, and the lower projection having formed therein an opening and a projection extending partly across the face of said opening.

1,298,902. BRAKE-BEAM HANGER. WILLIAM F. CREMEAN, Frankfort, Ind. Filed Apr. 8, 1918. Serial No. 226,399. 8 Claims. (Cl. 188—70.)

1. A brake beam hanger comprising two hanger arms and means connecting said hanger arms at their lower ends, a bracket provided with downwardly extending lips, a pin carried by the bracket and engaging the arms and means carried by the arms and disposed behind said lips for retaining the hanger arms in position when said hanger arms are in their normal set position.

2. A brake beam hanger comprising two hanger arms and means connecting the lower ends of said arms, up-

wardly extending lugs on the inner surface of said arms and arranged near the upper portion thereof, a bracket provided with downwardly extending lips and the said lugs extending behind the said lips when the said arms are in a suspended vertical position and a pin carried by the bracket and engaging the arms.

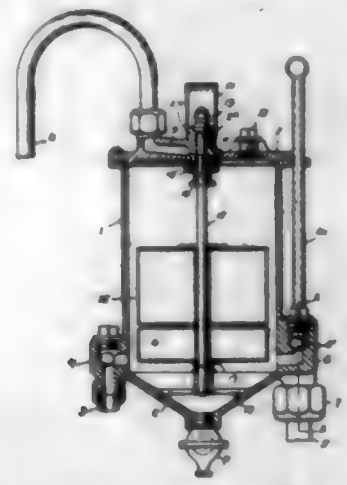


6. A brake beam hanger comprising two hanger arms provided with upwardly extending lug portions on the inner surfaces of said arms, a bracket provided with downwardly extending lips and said lugs adapted to extend behind said lips when said arms are in a suspended vertical position, a recessed portion in the upper end of one of said arms and provided with a cap extending partly over said recessed portion, and a pin adapted to be angularly held with regard to said arm when it is to be inserted, and said cap portion preventing said pin from being removed unless said pin is held in an angular position, openings formed in the lower ends of said arms and one of said openings provided with a recessed portion registering therewith, and a pin adapted to pass through the openings in the lower ends of said arms when said pin is held in a certain position and the lower ends of said arms are forced inwardly, and said pin to be rotated and to lock said arms when said arms are again forced outwardly.

7. A brake beam hanger comprising two hanger arms and a bracket coöperating with said arms to hold said arms in their set position when said arms are in a suspended vertical position, the lower ends of said arms adapted to be swung inwardly, and means connecting said arms and to lock said arms when the lower ends of said arms are again forced outwardly.

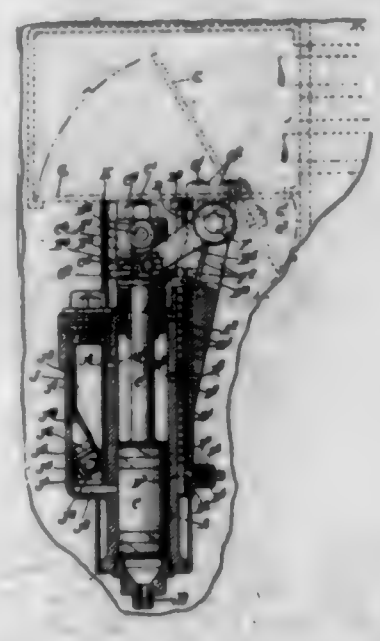
8. A brake beam hanger comprising in part a hanger arm provided with an opening adapted to receive a pin and a recessed portion registering with said opening and adapted to receive the head of the pin and an outwardly and downwardly extending cap disposed over a part of said recessed portion.

1,298,903. VACUUM SYSTEM. CARL R. DAELLENBACH, Ellwood City, Pa., assignor of one-half to Harry H. Hancher, Ellwood City, Pa. Filed Apr. 9, 1917. Serial No. 160,770. 2 Claims. (Cl. 158—36.)



1. A vacuum feeding system comprising a receptacle connected to the storage tank and with the intake manifold of the engine to create a vacuum in the receptacle to cause fuel to flow into the receptacle from the tank, a rod slidably mounted in said receptacle, a valve thereon controlling the connection with the manifold, upper and lower stops on said rod, a float slidably mounted upon said rod, and a receptacle always containing fuel to constitute a weight connected to said float and slidably mounted upon said rod for transmitting movement to said rod when the liquid in the first named receptacle attains a low level and the second named receptacle engages with the lowermost stop to move said valve away from the connection with the manifold, for setting up another vacuum.

1,298,904. DAMPER-CONTROLLER. CHARLES W. DAKE, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 4, 1916. Serial No. 113,082. 14 Claims. (Cl. 236—8.)

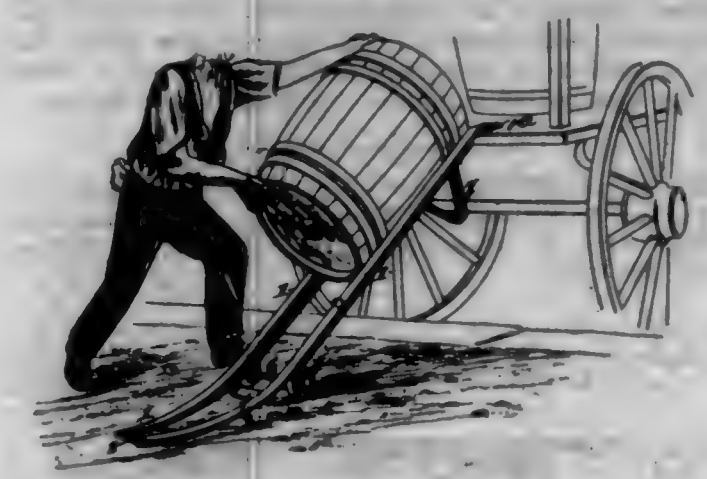


1. A damper controller comprising a cylinder, a piston therein, a discharge outlet communicating with one side of the piston, connections from the piston to the damper whereby the latter is moved responsive to the movement of the former, means whereby the steam when flowing is supplied to the inlet side of the piston to move the piston to the damper opening position and to close the discharge outlet from the outlet side of the piston, means for supplying such steam to the outlet side of the piston near the limit of its damper opening excursion, and means for discharging the steam from the outlet side of the piston when the latter has moved to the limit of its closing excursion.

7. A damper controller comprising a cylinder, a piston adapted to reciprocate therein, operative connections between said piston and the damper, said cylinder being provided with a steam inlet, and means for admitting steam therethrough on one side of the piston, a steam passage from the inlet to the outlet side of the piston, and a steam outlet passage on the side of the piston opposite the steam inlet passage, a controlling valve in said steam outlet passage, and means for opening said valve near the limit of the damper opening excursion of the piston.

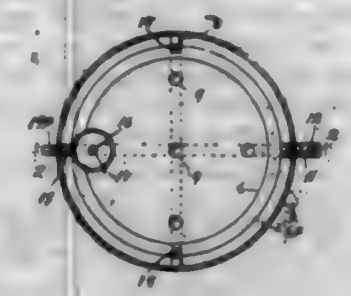
11. A damper controller comprising a cylinder, a piston adapted to reciprocate therein, operative connections between said piston and the damper, a steam inlet passage on one side of the piston and means for introducing steam therethrough, a steam passage from the inlet side of the piston to the outlet side of the piston, said passage normally closed and uncovered only near the limit of the damper opening excursion of the piston, a check valve in said passage, the cylinder being provided with an outlet passage on the outlet side of the piston, a valve therein, and means whereby said valve is opened near the limit of the damper closing excursion of the piston, and closed near the limit of the damper opening excursion of the piston.

1,298,905. UNLOADING-SKID. CHARLES FRIEDRICH DALLMAN and FRANK SCHOEPKE, Antigo, Wis. Filed Apr. 28, 1915. Serial No. 23,346. 3 Claims. (Cl. 57—18.)



3. A skid including side members each formed from a length of L-angle iron, the members being disposed with their depending wings located at their relatively adjacent sides, the said side members having their rear portions straight and inclined upwardly in parallel relation, the lower portions of the side members being gradually curved downwardly and forwardly from the lower ends of the straight portions to the forward extremities of the said members and the said lower portions of the said members being gradually curved inwardly toward each other with their said forward extremities slightly spaced, the depending wing of each side member throughout its curved portion being gradually turned laterally outwardly and at and adjacent its forward end lying flat against the underside of the horizontal wing of the said member whereby the extreme forward portions of the members will be substantially flat and horizontally disposed, and a cross bar secured to the undersides of the members at their forward extremities and extending between and connecting the same and also affording a support for the forward end of the skid.

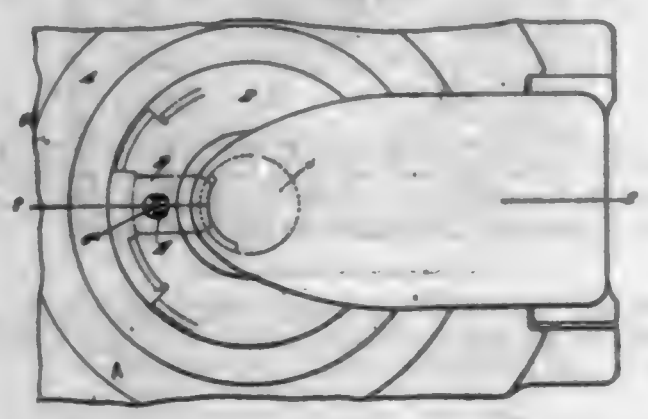
1,298,906. LIQUID-TEMPERING DEVICE. ALFRED J. DAVIS, Minneapolis, Minn. Filed Nov. 25, 1916. Serial No. 133,515. 3 Claims. (Cl. 257—243.)



1. A tempering apparatus comprising outer, inner and intermediate tanks telescoped one into the other, the said inner and intermediate tanks being spaced apart to form an attenuated tempering chamber, and the said intermediate and outer tanks being spaced apart to afford the water jacket, said inner tank being removable and having a pipe extended therethrough to the bottom of said tempering chamber, said intermediate tank having a discharge pipe extending outward through said outer tank at a point below the top thereof, the said outer tank having an overflow pipe leading from its lower portion upward and outward therefrom, at least one of the said tanks that form said attenuated tempering chamber having a bulged bead in the plane of the discharge pipe of said intermediate tank, for affording a free flow from the upper portion of said tempering chamber to the said discharge pipe.

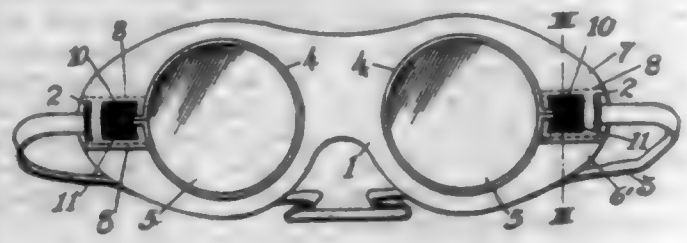
3. A tempering apparatus comprising outer, inner and intermediate tanks telescoped, one into the other, the said inner and intermediate tanks being spaced apart to form an attenuatel tempering chamber and the said intermediate and outer tanks being spaced apart to form a water jacket, said inner tank being removable and having a feed pipe extending therethrough to the bottom of said tempering chamber, said intermediate tank having a discharge pipe extending outward through said outer tank at a point below the top thereof, said outer tank having an overflow pipe leading from the lower portion, upward and outward thereof, the said inner and intermediate tanks having reversely bulged beads in the plane of the discharging pipe of said intermediate tank, for affording a free flow from the upper portion of the tempering chamber to the said discharge pipe, the said inner and intermediate tanks being extended materially above said beads and the said inner tank having as out-turned upper edge that overlaps the upper edge of said intermediate tank.

1,298,907. ORDNANCE BREECH MECHANISM. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Apr. 18, 1918. Serial No. 229,473. 8 Claims. (Cl. 89—20.)



1. In ordnance breech mechanism, the combination with the breech screw mounted to move angularly upon a spigot of the carrier, of a breech-screw retaining member mounted to move transversely in the breech screw and adapted to engage with a recess in the spigot and a device for moving said member said device having its actuating part situated at the rear face of the breech screw.

1,298,908. EYE-PROTECTOR. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Sept. 6, 1916. Serial No. 118,749. 8 Claims. (Cl. 2—149.)



6. An eye protector, including flexible side shields having apertures formed therein and flexible transparent protecting members within the apertures, as and for the purpose set forth.

1,298,909. TOWEL-SERVICE MACHINE. ROMAIN DE BERSAQUES, Seattle, Wash. Filed Dec. 7, 1914, Serial No. 875,827. Renewed Nov. 4, 1918. Serial No. 261,169. 2 Claims. (Cl. 45—82.)

1. In a towel service machine of the class described, the combination with a casing that is provided with slots in its front side, of a towel roller rotatably mounted in the upper portion of said casing, another towel roller rotatably mounted in the lower portion of said casing, idler rollers disposed below each of said towel rollers, a motor con-

nected with said lowermost towel roller, means connecting said lowermost towel roller with each of said idler rollers, whereby all of said idler rollers may be caused to rotate at the same rate of speed to unwind a towel from



said uppermost towel roller at the same rate of speed that said towel is wound upon said lowermost towel roller, and means for breaking the circuit of the motor when the towel is completely wound on the receiving roller.

1,298,910. INDIVIDUAL-TOWEL HOLDER. PATRICK FRANCIS DENNING, Cleveland, Ohio. Filed May 1, 1917. Serial No. 165,690. 4 Claims. (Cl. 40—10.)



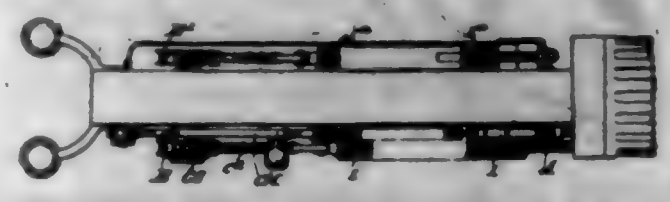
1. A single self-contained device for holding a towel, hat, coat or other article, having means for displaying in full view a card or name plate indicating the proprietorship of the article so held comprising a casing having article holding means mounted within the lower portion thereof, and having its side walls flared outwardly at their upper ends and connected by an inclined upper wall providing a relatively wide card supporting platform, which is disposed at the top of the casing beyond the range of the article holding means, a card-holding frame having a sight-opening to expose a card contained therein, and means for locking the card holding frame in position upon the platform.

1,298,911. MACHINE-GUN. VICTOR V. DIDOVSKY, Kingsway, London, England. Filed Apr. 10, 1918. Serial No. 227,774. 3 Claims. (Cl. 89—8.)



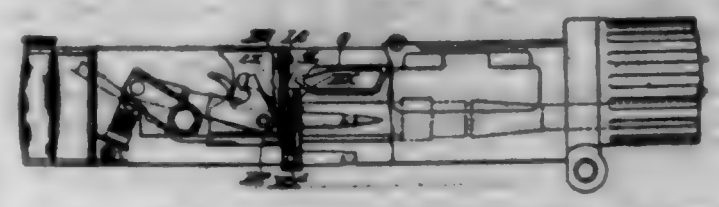
1. In an automatic machine gun of the Vickers type, the combination with the crank adapted to be rocked at each recoil movement of the barrel, of a buffer, comprising a coiled spring arranged inside of the casing in rear of the crank, said buffer being supported on the casing at its lower end and extending in an upwardly and forwardly inclined direction, in the line of recoil movement of the gun barrel, to be directly struck by the crank during the last movements of the recoil movement thereof to check such movement and accelerate return movement thereof.

1,298,912. BUFFERING DEVICE FOR MACHINE-GUNS. VICTOR V. DIDOVSKY, Kingsway, London, England. Filed Apr. 10, 1918. Serial No. 227,776. 3 Claims. (Cl. 89—8.)



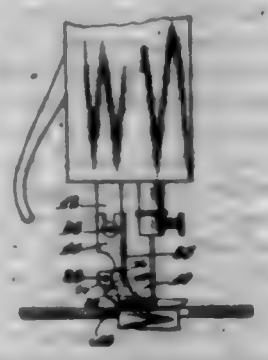
1. In an automatic machine gun including a crank that is rocked at each firing operation, the combination with the crank, of a spring, and connections between the spring and crank adapted to act with gradually increasing leverage on the crank during recoil of the gun and oppositely during the return movement, whereby the initial return of the crank and connected parts to firing position will be accelerated.

1,298,913. MACHINE-GUN. VICTOR V. DIDOVSKY, Kingsway, London, England. Filed Apr. 10, 1918. Serial No. 227,777. 4 Claims. (Cl. 89—8.)



1. In a machine gun, the combination with a lock casing, an extractor carried thereby, and means for guiding said extractor in the direction of the length of the gun, said extractor being movable relative to the casing when disengaged from the guiding means, of a spring carried by the lock casing and cooperating with the extractor to accelerate movement thereof relative to the casing when disengaged from said guiding means.

1,298,914. SEWING-MACHINE ATTACHMENT. AARON AUSTER, New York, N. Y. Filed Nov. 3, 1917. Serial No. 200,149. 5 Claims. (Cl. 112—16.)



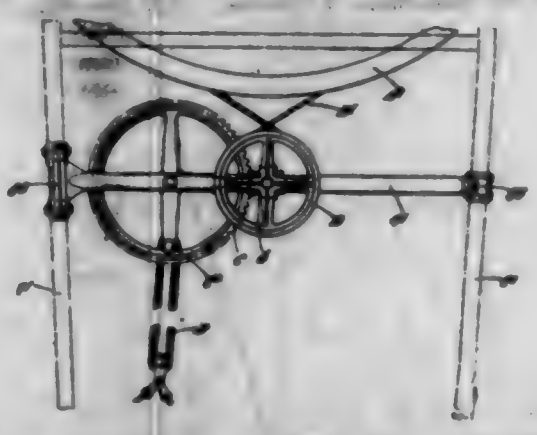
1. A sewing machine attachment comprising a main presser foot having an attaching shank, an undercut operating face, and a movable supplemental foot pivotally attached to the shank of said main foot and formed to engage said undercut face in one of its positions so that its operating surface will register with the operating surface of said main foot.

1,298,915. VEHICLE-TIRE. ALBERT CRUSAN, Lawrence, Kans. Filed July 5, 1916. Serial No. 107,527. 2 Claims. (Cl. 152—16.)



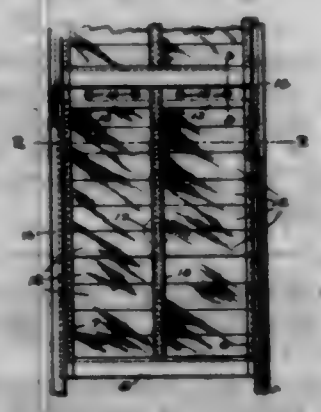
2. In a tire, a flexible casing comprising layers of fabric, a tread portion, and a resilient layer intermediate of the fabric and the tread portion, anchor members embedded in and supported wholly by said fabric, each anchor member having an outwardly extending cylindrical hollow neck having a rigid inner end and having at its outer end an inwardly extending peripheral lip, and studs having heads resting against the outer side of said tread portion and having each a shank which extends through the tread portion and the intermediate layer, said shanks each having at its inner end a head, the last named heads being respectively slidable in said necks and normally spaced apart from the closed inner ends of said necks and having their outward movement limited by said lips, and limited on their inward movement by the closed ends of said necks.

1,298,916. MOUNTING FOR GUNS CARRIED BY AEROPLANES AND SIMILAR AIRCRAFT. THOMAS SMITH DUNCAN, London, England, assignor to Vickers Limited, Westminster, England. Filed May 24, 1917. Serial No. 170,621. 4 Claims. (Cl. 89—40.)



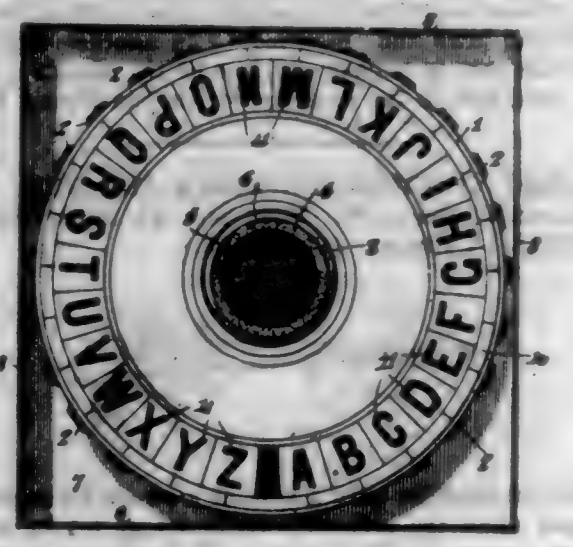
1. In an aircraft gun mounting, the combination of a crank member, a spring connected to the pin of this member, a rotary member moving in training with the gun, a pulley interposed between said crank member and the rotary member and a flexible member passing around said rotary member and pulley.

1,298,917. COLOR MEDIUM. CARL O. ELLIS, Tacoma, Wash. Filed Mar. 26, 1918. Serial No. 225,128. 4 Claims. (Cl. 46—70.)



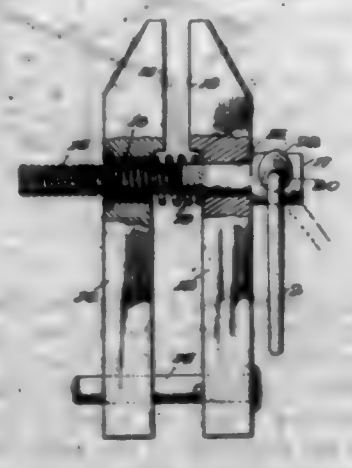
2. A color medium of the class described comprising an open internally grooved frame, a bar provided with longitudinal grooves in the opposite side edges thereof and extending across the medial portion of said frame, a plurality of sections of colored glass having their adjacent edges in contacting relation and their ends slidably positioned in the grooves of said frame and said bar, and means to removably hold said glass sections in position.

1,298,918. TOY PRINTING-WHEEL. HERBERT E. BUCK, Ashland, Ohio, assignor to Improved Manufacturing Company, Ashland, Ohio. Filed Jan. 11, 1918. Serial No. 211,896. 2 Claims. (Cl. 206—47.)



1. A package, comprising a disk having a circular series of designating characters arranged on one flat face and adjacent to the periphery thereof, and having a central opening, impression characters carried by the periphery of the disk in registering relation to the said designating characters, and a box adapted to surround and to hold said disk and having an inking pad secured thereto and adapted to be housed within the said central opening.

1,298,919. QUICK-ACTION VISE. CHARLES A. ERICKSON, Oswego, N. Y. Filed May 28, 1918. Serial No. 236,990. 4 Claims. (Cl. 81—25.)



1. A vise including relatively stationary and movable jaws, a clamping pin having one end thereof threaded in the stationary jaw and its other end passing loosely through the movable jaw and provided with an enlarged head, a spring interposed between said jaws and encircling the pin, a stub shaft extending transversely through the head and having one end thereof bent at substantially right angles thereto to form an operating handle, and a cam rigidly secured to the stub shaft and adapted to bear against the adjacent face of the movable jaw for forcing said jaws together against the tension of the spring.

4. A vise including relatively stationary and movable clamping jaws, a bushing threaded in the stationary jaw, a pin having one end thereof engaging threads on the bushing and its other end devoid of the threads and pass-

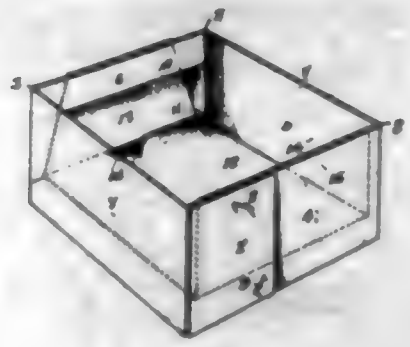
ing loosely through the movable jaw and provided with an enlarged head, one side of which is cut away to form a flat bearing surface spaced from the adjacent longitudinal edge of the movable jaw, a spring encircling the clamping pin and interposed between the jaws, a stub shaft extending transversely through the enlarged head of the pin at the flat bearing face thereof and having one end thereof bent at substantially right angles thereto to form an operating handle, and a cam rigidly secured to the stub shaft and having one side thereof engaging the flat bearing surface of the head of the pin and its other side disposed substantially flush with the adjacent longitudinal edge of the movable jaw, said handle when moved in one direction serving to rotate the clamping pin to effect the clamping of the jaws and when moved in another direction to cause the cam to engage the face of the movable jaw and force said jaw in the direction of the stationary jaw.

1,298,920. COMBINATION KNIFE AND GUN. JOSEPH FARAGO, Clarence, Pa. Filed Sept. 21, 1918. Serial No. 255,018. 1 Claim. (Cl. 42—53.)



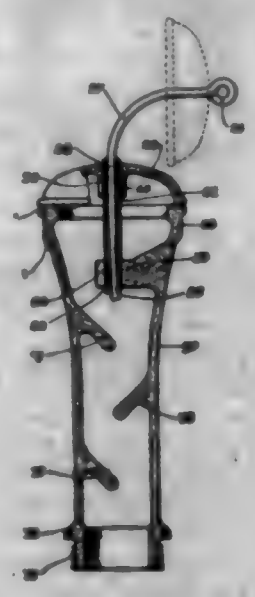
The combination with a gun, of a sword blade pivotedly engaged upon the side thereof, a detent set in said gun having a part extending into a recess formed in the butt of said sword, and means for retracting said detent whereby said sword may be turned at an angle to the barrel of said gun.

1,298,921. COLLAPSIBLE VENEER BERRY-BOX. ORIN C. FERGASON, Raymond, Wash. Filed May 8, 1917. Serial No. 167,177. 1 Claim. (Cl. 229—23.)



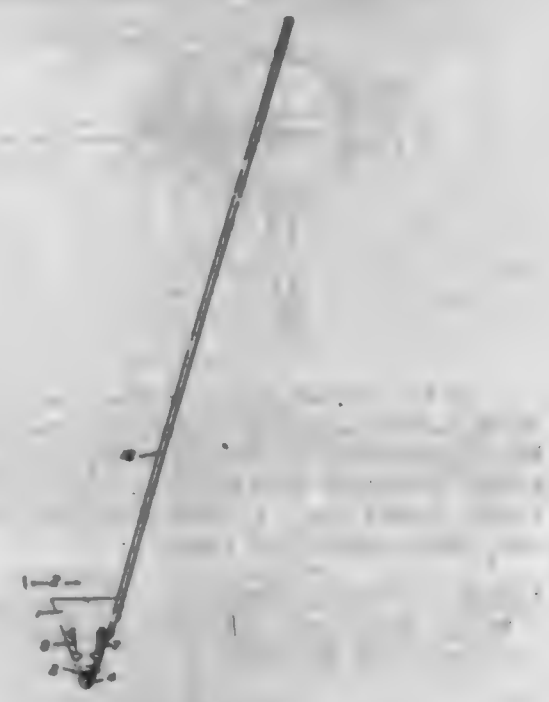
A veneer box comprising a body member scored transversely at intervals to form the corners of the box, said body member constituting the sides thereof and having the ends of the member overlapped and stitched together, said body member having a pair of parallel longitudinal slits spaced apart in the direction of the height of the box, each slit having a length corresponding to one of the side walls of the box and extending from one score line to the other, with no portion of the box removed when forming the slits, whereby said slits are made at the same time and by the same machine that is used to cut the body member from the sheet of veneer, and a separate bottom member scored transversely to form end flaps, one of said flaps having tapered sides to pass through the top slit and lie on the outside of the side wall above said slit with its end edge substantially flush with the upper edge of said side wall, and a V-shaped tongue cut from the bottom member and having its base located at the juncture of the flap and bottom, said tongue being passed through the bottom slit so as to engage the outer face of the side wall and cause the bottom member to rest upon the bottom wall of the slit on each side of the tongue.

1,298,922. BREATHER-TUBE AND CAP THEREFOR. JAMES BLAINE FISHER, Waukesha, Wis., assignor to Waukesha Motor Company, Waukesha, Wis., a Corporation of Wisconsin. Filed May 16, 1917. Serial No. 168,997. 13 Claims. (Cl. 220—120.)



8. In a breather of the kind described, a tubular body, a lug on the inner face of the body, fixed closure-retaining means extending axially from said lug, a closure freely movable on said retaining means and normally seating on said tubular body.

1,298,923. WALNUT-PICKER. JOHAN FRIEDRICH FRANKE, Santa Ana, Calif. Filed Sept. 19, 1918. Serial No. 254,856. 3 Claims. (Cl. 56—99.)

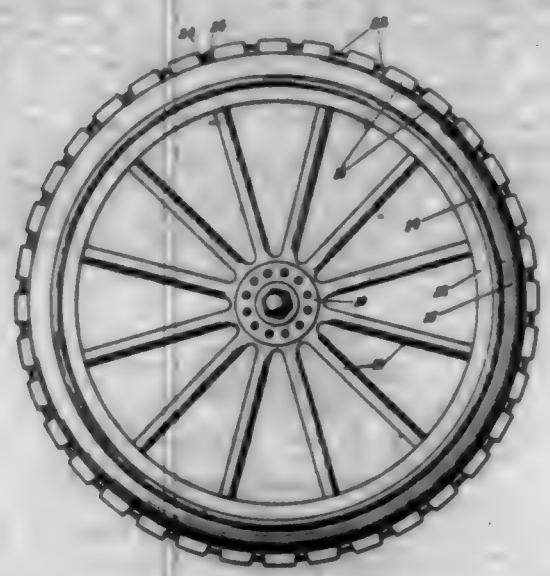


1. A walnut picker comprising a container having a picking mouth at its bottom when in operating position, and handle for manipulating the container, and spring fingers mounted in the mouth to allow walnuts to pass upwardly through the mouth and to hold the walnuts from passing downwardly.

1,298,924. TRACTION-TREAD. HILARY FUDCZKO, Philadelphia, Pa. Filed June 8, 1918. Serial No. 238,856. 2 Claims. (Cl. 21—214.)

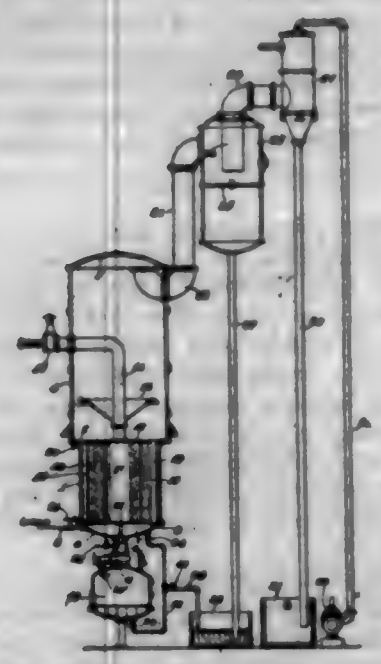
1. In a traction device, the combination with a tread of a wheel, of a plurality of rectangular metallic blocks adapted to extend transversely of said tread, said blocks having openings extending therethrough, cables passing

through the mentioned openings, shanks having sockets with which one end of each of said cables are rigidly affixed, a spring hook formed with one of said shanks, an



arm formed with the other of said shanks adapted to be contained in said spring hook, and means for securing said arm therein.

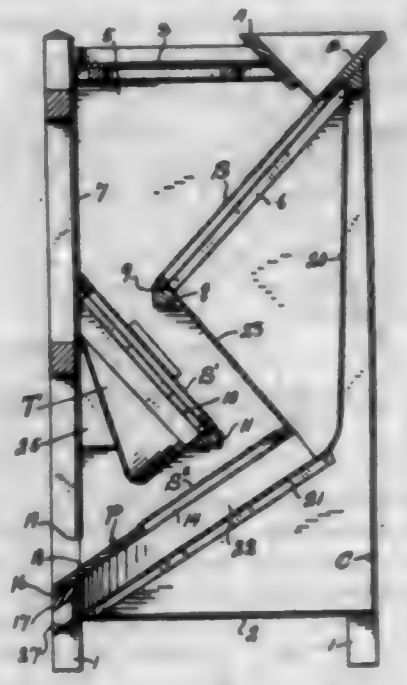
1,298,925. EVAPORATOR. WILLIAM B. GARRIGUES, New Orleans, La., assignor to William Garrigue & Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 28, 1917. Serial No. 193,757. 6 Claims. (Cl. 257—208.)



1. In an evaporator, the combination of a calandria having upper and lower heads, a bottom sloping downwardly and inwardly toward the center, below the inner head, a plurality of inner and outer tubes extending between and through said heads, means for introducing a heating medium into the space between said tubes between said heads, centrally thereof, means for causing the heating medium thus introduced to circulate around the inner tubes and thence around the outer tubes, successively, an outwardly slanting dash plate arranged centrally above the upper head to deflect outwardly liquid rising from the inner tubes, and means for introducing liquid to be evaporated into the space into which the tubes open, the arrangement being such as to cause movement of liquid downwardly in all the outermost tubes, upwardly in the inner tubes, and toward the center in the space below the lower head.

6. In an evaporator, the combination of a calandria having an outer casing, upper and lower heads and a bottom arranged to provide a space below the lower head, means for introducing a heating medium between said heads at a point at some distance from the outer casing, a plurality of tubes surrounding the space into which the heating medium is directly introduced, arranged at different distances from the said space, and extending between and through said heads, said bottom having means for the removal of precipitated matter at a point below that at which the heating medium is introduced, and baffle means arranged between said tubes, and above said upper head, to cause the heating medium to circulate around the same, in such manner that the heating effect will progressively diminish from the point of first application of the heating medium to the tubes most distant therefrom, and circulation of liquid will be caused downwardly in said most distant tubes, upwardly in the tubes surrounded thereby, and toward the point at which precipitated matter may be removed, in the space below the lower head.

1,298,926. SIFTER. EDWIN GENTZLER, York, Pa. Filed Sept. 25, 1918. Serial No. 255,714. 7 Claims. (Cl. 83—60.)

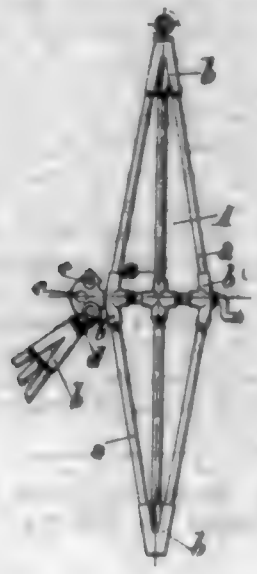


1. A sifter of the class described comprising an inclosed housing provided adjacent its lower end with two discharge openings, and with a receiving opening in its upper portion, three screening elements vertically arranged within the housing and disposed in reverse direction, each of the upper elements discharging upon the element immediately therebelow, and the lowermost of said elements being in communication with one of the discharge openings at the lower portion of the housing, the receiving opening discharging upon the uppermost element, an imperforate partition within the housing disposed rearwardly of the uppermost element and underlying the lowermost element and leading to the second discharge opening, an imperforate partition bridging the space between the lower portion of the uppermost element and the upper portion of the lowermost element and discharging upon the first named partition, and a trough underlying the intermediate element and discharging upon the first named partition.

1,298,927. ELEMENT FOR CONSTRUCTIONAL PURPOSES. PAUL GOIFFON, Lyon, France. Filed June 19, 1917. Serial No. 175,629. 4 Claims. (Cl. 189—84.)

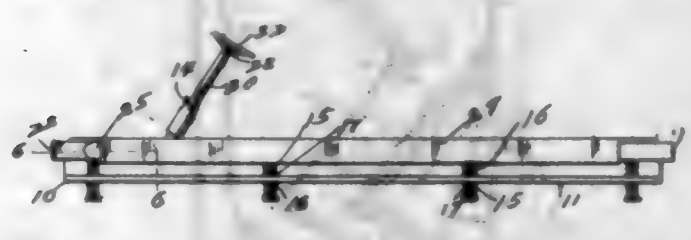
1. An element for constructional purposes comprising a metal cross socket member, rods fixed in two opposite sockets of said cross socket to form a longitudinal straight bar, rods of shorter length than said first mentioned rods fixed in the other two opposite members of said cross socket member so as to form a cross bar to said longitudinal bar, three way socket members fixed at the respective ends of said longitudinal bar and cross bar, rods connect-

ing said three way socket members so as to form a frame of substantially lozenge shape and connecting members on



said three way socket members to connect one element to another, or to the ground.

1,298,928. AUTOMOBILE CONSTRUCTION. VENYARD E. GREGORY, Adolphus, Ky. Filed July 20, 1917. Serial No. 181,770. 1 Claim. (Cl. 21—182.)



A chassis construction, comprising a substantial rectangular shape base frame, longitudinally disposed spaced bars above the sides of the base frame, vertical yieldable resilient connections between said bars and the sides of the base frame, end cross bars fixed to said longitudinal bars and having inwardly directed arms, side members outside of the longitudinal bars and having socket ends receiving the arms of the end bars, coiled springs mounted within the sockets in said bars and working against the arms, and anti-friction means surrounding the arms and working within the sockets.

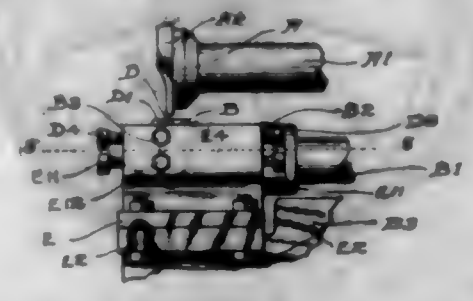
1,298,929. PRODUCING ISOPRENE. OTTO GRAUL and GOTTFRIED HANSCHKE, Ludwigshafen-on-the-Rhine, and FRANZ WERKL, Mannheim, Germany, assignors, by mesne assignments, to Alien Property Custodian. Filed Feb. 5, 1912. Serial No. 675,656. 2 Claims. (Cl. 23—24.)

1. The process of producing isoprene which consists in treating isopentane with a halogenating agent until a mono-halogen compound thereof is obtained, treating the mono-halogen compound with a body which is capable of splitting off halogen hydrid, then treating the product with a halogen, so as to produce dihalogen isopentane, then treating this product with a body capable of splitting off halogen hydrid.

2. The process of producing isoprene by monochlorinating isopentane, isolating the monochlor isopentane from unaltered isopentane, then heating the monochlor isopentane with an excess of caustic lime, then treating the trimethyl-ethylene with bromin, and then passing the trimethyl-ethylene dibromid over heated barium chlorid.

1,298,930. MACHINE FOR CUTTING SHEET METAL. CHARLES B. GRAY, Knoxville, Tenn. Filed May 8, 1918. Serial No. 233,192. 22 Claims. (Cl. 164—49.)

1. In a machine for cutting sheet metal, the combination of a body having a horizontal, upward-directed supporting face close to the below-mentioned reciprocatory cutter path, a reciprocatory cutter perpendicular to and above said supporting face and having lateral cutting edge portions extending to two lines which are parallel to each other and to the course of the sheet, and two members, standing in opposition to each other and adapted to receive a metal sheet between them and one being driven, for supporting and feeding said metal sheet and forming a turning point therefor near the path of the reciprocatory cutter, and a stationary cutter having its working part receiving support from said supporting face and being close to the path of the reciprocatory cutter, and means for positioning and securing said stationary cutter, substantially as described.



6. In a machine for cutting sheet metal, the combination of a body having a horizontal, upward-directed supporting face close to the below-mentioned reciprocatory cutter bar, a foundation bar resting on said supporting face close to said path, a reciprocatory cutter perpendicular to and above said supporting face and having lateral cutting edge portions extending to two lines which are parallel to each other and to the course of the sheet, and two members, standing in opposition to each other and adapted to receive a metal sheet between them and one being driven, for supporting and feeding said metal sheet and forming a turning point therefor near the path of the reciprocatory cutter, and a stationary cutter having its working part resting upon said foundation bar close to the path of the reciprocatory cutter, and means for positioning and securing said stationary cutter, substantially as described.

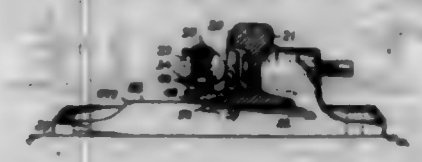
11. In a machine for cutting sheet metal, the combination of walls forming an upright chamber, a lower roller located in said chamber, walls forming a horizontal channel adjacent said roller, a foundation bar located in said horizontal channel and having a channel in line with the path of the below-mentioned reciprocatory cutter, walls forming an upright channel having its upper end communicating with the channel of the foundation bar and having its lower end open, and an upright reciprocatory cutter, and a stationary cutter working in conjunction with the reciprocatory cutter, substantially as described.

17. In a machine for cutting sheet metal, the combination of a body, a chair seated on said body and having a horisontal, upward-directed supporting face close to the below-mentioned reciprocatory cutter bar, a foundation bar resting on said supporting face close to said path, a reciprocatory cutter perpendicular to and above said supporting face and having lateral cutting edge portions extending to two lines which are parallel to each other and to the course of the sheet, and two members, standing in opposition to each other and adapted to receive a metal sheet between them and one being driven, for supporting and feeding said metal sheet and forming a turning point therefor near the path of the reciprocatory cutter, and a stationary cutter having its working part resting upon said foundation bar close to the path of the reciprocatory cutter, and means for positioning and securing said stationary cutter, substantially as described.

22. In a machine for cutting sheet metal, the combination of a body, a chair on the body, the body and the chair having bearings adjacent to and in alinement with each other, a drive shaft extending through said two bearings, a lower roller on said shaft, an upper feed member adapted to work in conjunction with said roller

for feeding a sheet, a reciprocatory cutter perpendicular to the sheet plane and having lateral cutting edge portions extending in two lines which are parallel to each other and to the course of the sheet, and a stationary cutter adapted to work in conjunction with the reciprocatory cutter close to the place of engagement of the members, substantially as described.

1,298,931. RAILROAD-SWITCH OILING AND CLEANING MEANS. CLARICE ELLEN GRAY, Hamilton, New South Wales, Australia. Filed Sept. 26, 1918. Serial No. 255,835. 4 Claims. (Cl. 246—444.)



1. In railroad switch points, the combination with the switch rails and supporting chairs, of lubricators supplying lubricant to the surfaces of said chairs at each movement of the switch rails thereon, and scrapers bearing on the surfaces of certain of said chairs for the purpose specified.

1,298,932. PROCESS OF PRODUCING MAGNESIUM CARBONATE. BERTRAND B. GRUNWALD, Alameda, Calif., assignor, by mesne assignments, to Alfred J. Merle, Alameda, Calif. Filed July 5, 1918. Serial No. 243,382. 4 Claims. (Cl. 23—13.)

4. The process of producing magnesium carbonate, comprising adding a material containing sodium carbonate and sodium bicarbonate to bittern containing magnesium sulfate and magnesium chlorid, whereby carbon dioxid is released which reacts with the magnesium salts to form magnesium carbonate which precipitates.

1,298,933. DUSTING APPARATUS. ALBERT W. GUTHAT, Chicago, Ill. Filed Jan. 26, 1918. Serial No. 213,926. 2 Claims. (Cl. 15—8.)



1. In a dusting apparatus, a rotatable drum having dust escape openings, a casing in which the drum is housed, said casing having a dust outlet, brushes carried by the drum and engageable with the casing wall to sweep the same, and a brush extending into the casing into contact with the drum and located in the path of the first mentioned brushes.

2. In a dusting apparatus, a rotatable drum having dust escape openings, a casing in which the drum is housed, said casing having a dust receiving pit, brushes carried by the drum and engageable with the casing wall to sweep the same, and a brush extending from the pit into the casing into contact with the drum, and located in the path of the first mentioned brushes.

3. In a dusting apparatus, a rotatable drum having dust escape openings, a casing in which the drum is housed, said casing having a dust outlet, a brush extending into the casing and into contact with the drum, and means carried by the drum for agitating said brush.

1,298,934. SPRING-LIFTER. CLYDE C. HALE, Pontiac, Mich. Filed Apr. 16, 1918. Serial No. 228,929. 3 Claims. (Cl. 81—3.)



1. A device of the character described comprising a pair of slotted hingedly connected levers, a post carried by one of said levers, and extending loosely through the other lever, and an adjusting member freely movable along the length of said post for engagement with the inner face of said last mentioned lever.

2. A device of the character described comprising a pair of levers hingedly connected together, one of said levers provided intermediate of its ends with an elongated longitudinal slot, a threaded post rigidly carried by the remaining lever and extending loosely through said slot, and an adjusting member freely movable along the length of said post and confined between the inner opposing faces of said levers.

1,298,935. AUXILIARY AIR-VALVE FOR INTERNAL-COMBUSTION ENGINES. JOHN HANMAN, Bayswater, London, England, assignor to Pierre Bernard Bausch and Frank Frederick Pershke, trading under the firm name of Price Service & Company, London, England. Filed Sept. 29, 1917. Serial No. 194,026. 2 Claims. (Cl. 251—145.)

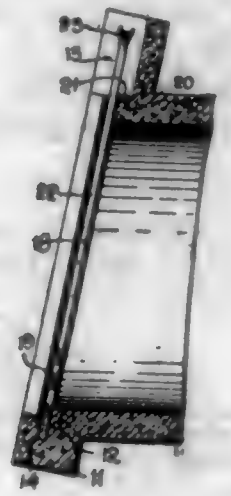


1. An air heating unit for internal combustion engines including a casing having a hollow wall portion and an interior air heating chamber surrounded thereby, a heated air outlet nipple formed on the casing and having its axis coincident with the longitudinal axis of the air heating chamber, radially disposed heated fluid conducting pipe connections leading into the hollow wall portion of the casing, and an air regulating device detachably fitted to the casing at the side of the air chamber opposite the heated air outlet nipple and constituting one of the walls of the air heating chamber.

1,298,936. FLUME-GATE. WILSON POLK HARLAN, Yuma, Ariz. Filed Apr. 1, 1918. Serial No. 226,037. 1 Claim. (Cl. 251—86.)

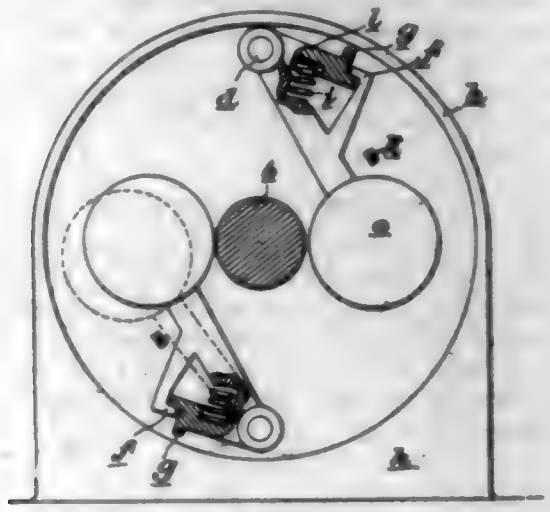
A flume gate comprising a concrete body having a passage for the flow of water, vertical grooves on opposite sides of the passage and forming a slideway, and a groove below the passage and connecting the lower ends of the vertical grooves and forming a sand pocket across the bottom of the slideway; a gate mounted to be moved

up and down in the slideway and to extend into the sand pocket; and means at the top of the gate for limit-



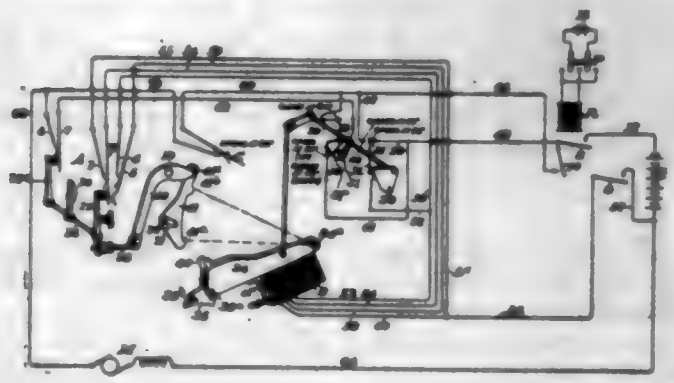
ing the downward movement of the gate so as to protect the sand pocket from the weight of the gate.

1,298,937. SUBMARINE MINE. FRÉDÉRIC AUGUSTE HENRI HARLÉ, Paris, France, assignor to Harlé & Co., Paris, France, a Corporation of France. Filed June 11, 1914. Serial No. 844,500. 7 Claims. (Cl. 102—8.)



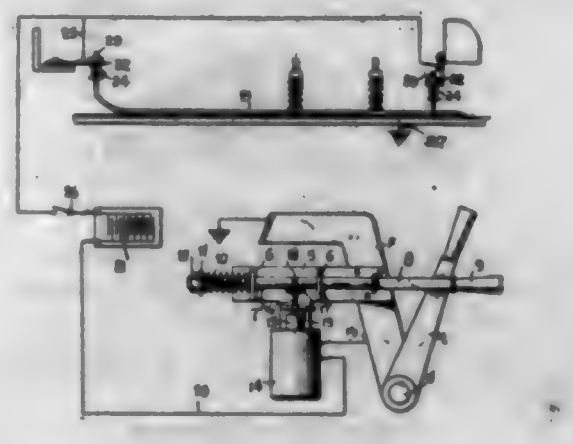
1. In a submarine mine, an anchor provided with a rope drum and a brake drum, in combination with a brake shoe and means actuated by centrifugal action for increasing or diminishing the pressure of the brake shoe on the brake rim according to the speed of the rope drum.

1,298,938. RAILWAY-SIGNAL. CLINTON O. HARRINGTON, Swissvale, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 14, 1918. Serial No. 254,102. 9 Claims. (Cl. 246—223.)



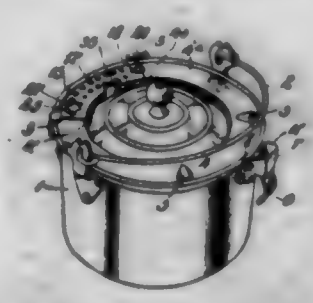
1. A signal comprising a semaphore biased to one position, means for moving it to one or more other positions, mechanism for operatively connecting said semaphore and said means and for holding said semaphore in the position or positions to which it has been moved by said means, said mechanism including a magnet having two coils, and means for connecting said two coils in series when the semaphore is at rest in the position or one of the positions to which it has been moved by said moving means, and for connecting the coils in multiple at other times.

1,298,939. AUTOMATIC STOP DEVICE. CHARLES C. HARRIS and NORMAN L. MCLEOD, Seattle, Wash. Filed Sept. 6, 1917. Serial No. 189,973. 2 Claims. (Cl. 74—46.)



1. In combination with the clutch shifting lever and the movable blank holder, of an axially shiftable rod having a loop on one end in which said lever is engaged, the lever being movable with respect to said loop to its inoperative position, a spring urging the rod in one direction to move the lever to an inoperative position, a solenoid having a core provided with means to co-act with said rod and hold the same against movement under the action of the spring, and a circuit for the solenoid automatically closed upon an abnormal movement of the blank holder, whereby said rod is released and moved by the spring to throw the clutch lever to an inoperative position.

1,298,940. CULINARY VESSEL. GEORGE L. HARRISON, East Cleveland, Ohio, assignor to The Cleveland Metal Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 19, 1916. Serial No. 110,256. 8 Claims. (Cl. 53—8.)



2. The combination with a cover having a flat portion, a plate that is adapted to normally rest upon said flat portion, one end of the plate being provided with a notch and the other with a slot, connecting means rising from the cover and adapted to be received by the aforesaid notch, said means having an enlargement spaced from the cover a distance somewhat greater than the thickness of the plate, and further connecting means swiveled within the cover and having an elongated enlargement that is adapted to be passed through the slot of the plate and turned transversely thereof, the slot and notch being of sufficient extent to permit a movement of the plate, the plate and cover being provided with openings that are adapted to register when the plate is in a given position with respect to the cover.

3. The combination with a cover having an annular flat portion adjacent its edge that is offset from the central portion of the cover by a substantially vertical

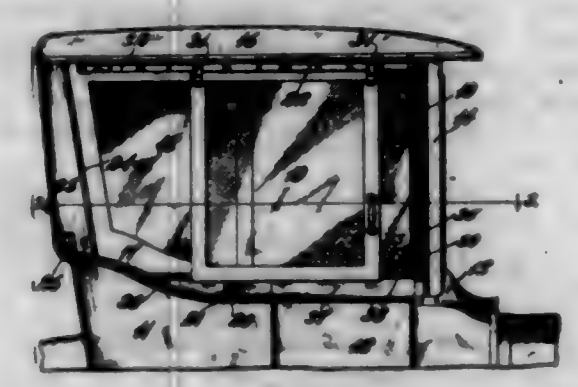
portion, a segmental slide that is adapted to normally rest upon the annular portion of the cover and having a flange depending alongside the aforesaid vertical portion thereof, one end of the slide being provided with a notch and the other with a slot, connecting means rising from the cover and adapted to be received by the aforesaid notch, said means having an enlargement spaced from the cover a distance somewhat greater than the thickness of the slide, and further connecting means swiveled within the cover and having an elongated enlargement that is adapted to be passed through the slot of the slide and turned transversely thereof, the slot and notch being of sufficient extent to permit a movement of the slide, the slide and cover being provided with openings that are adapted to register when the slide is in a given position with respect to the cover.

1,298,941. FORM FOR CONCRETE STRUCTURES. SAMUEL JAMES HARRY and WILLIAM EDWARD KELLY, Connellsville, Pa. Filed July 29, 1918. Serial No. 247,197. 8 Claims. (Cl. 25—131.5.)



7. A collapsible concrete form unit consisting of a plurality of metallic sections, means carried by the side of each section for connecting with the side of an adjacent section, a releasable joint formed between the lateral edges of certain of said sections, means at the end of each section for connecting the entire form unit with an adjacent form unit, and means for connecting the central portion of the end of one section with an adjacent section consisting of a chord plate carried by each end of the section, an anchor plate carried by said chord plate, and braces connected with the anchor plate of one section and also with the anchor plate of an adjoining section to thereby brace the joint therebetween.

1,298,942. CLOSED TOP FOR VEHICLES. REGINALD HEINZELMAN, Belleville, Ill., assignor to Koupet Auto Top Company, Belleville, Ill., a Corporation of Illinois. Filed Oct. 8, 1915. Serial No. 54,710. 6 Claims. (Cl. 21—62.)



1. A knock-down top adapted for attachment to automobile bodies, said top comprising side and rear wall sections having means for supporting them from the side brackets of the automobile body, corner posts loosely fitting between said side and rear wall sections and having means for supporting them from the rear corner brackets of the body, said corner posts being adjustable with respect to said side and rear wall sections, means for securing said side and rear wall sections to said corner posts to hold them in adjusted position, and strips for concealing the gaps between said corner posts and wall sections.

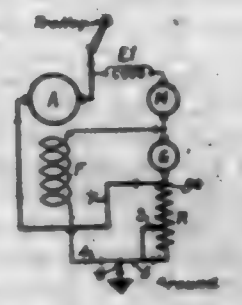
2. A closed vehicle body having a door divided into a lower portion and an upper portion, the lower portion being hinged to the body to swing outward and the upper portion being suspended from a track to slide endwise to one side of the door opening, an inverted track section at one side of the door opening near the lower edge of said sliding door; a second inverted track section on the top edge of said swinging door adapted to line up with said first inverted track section in closed position of said swinging door, and means on said sliding door coöperating with said inverted track sections for clamping said sliding door to said tracks in any position lengthwise thereof.

4. A knock-down attachable top for vehicle bodies, said top comprising a plurality of side wall sections adjustable with respect to each other to fit the body, a roof section adapted to be secured to said side wall sections, the roof section having a frame with a flat under surface resting on and projecting over the top edges of the side wall sections whereby the latter may be adjusted laterally to fit the body without displacing said roof section, and means for concealing the joints between said side wall sections.

5. A knock-down attachable top for vehicle bodies, said top comprising a plurality of side wall sections and intermediate sections adjustable with respect to each other to fit the body and adapted to be secured together at their ends in adjusted position, means for closing the gaps between said wall sections, and a roof section covering said side wall sections, the roof section having a frame with a flat under surface resting on and projecting over the top edges of the side wall sections, and means for securing the top edges of said side wall sections to said roof frame in any desired position of lateral adjustment.

6. A knock-down attachable top for vehicle bodies, said top comprising a plurality of side wall sections adapted to be adjusted to a vehicle body and secured together at their ends in adjusted position, strips for concealing the gaps between the ends of said side wall sections, and a roof section covering said side wall sections, the roof section having a frame projecting over the top edges of the side wall sections and adjustable laterally with respect thereto, and means for securing the top edges of said side wall sections to said roof frame in any desired position of lateral adjustment.

1,298,943. SYSTEM OF CONTROL. RUDOLF E. HELLMUND, Pittsburgh, and RALPH E. FENNIA, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 4, 1915. Serial No. 25,714. 7 Claims. (Cl. 172—179.)

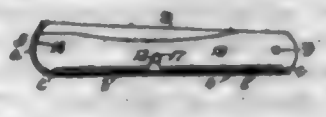


7. In a system of control, the combination with a supply circuit, and a main dynamo-electric machine having an armature and a field-magnet winding, of a resistor, a dynamotor driven from said supply circuit and having its generating armature winding connected to the machine through said resistor to impart a negative compound characteristic thereto during regeneration, the excitation of the dynamotor being of such character as to insure a constant ratio of the generated voltage thereof to the supply-circuit voltage.

1,298,944. POCKET-CUTLERY. OTTO L. HEMMING, New Haven, Conn. Filed July 23, 1918. Serial No. 246,274. 2 Claims. (Cl. 30—10.)

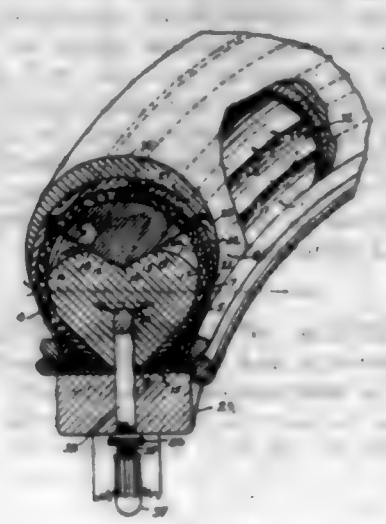
1. In a knife of the character described, having a handle formed of a one piece sheet metal blank whose sides are

inwardly curved to worm the butt of the handle, blades, springs for the blades and a fulcrum pin for the springs, of a central partition having a rearwardly inclined slot in its inner edge embracing the fulcrum pin to locate and maintain the rear end of the partition at the apex of the butt of the handle.



2. In a knife of the character described, having a handle formed of a one piece sheet metal blank with an inwardly curved and closed butt end, blades, springs underlying the blades and a fulcrum pin for the springs, of a central partition having a rearwardly inclined slot in its inner edge to embrace the fulcrum pin and locate and maintain the rear end of the partition at the apex of the butt of the handle, the rear end of said partition so shaped with respect to the curved butt end of the handle as to prevent its outward movement, and the central portion of the inner edge of said partition cut away to form bearing points near its ends.

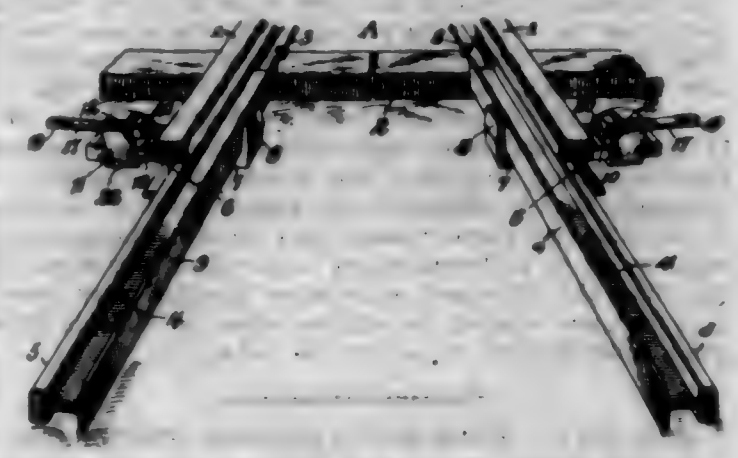
1,298,945. INNER TIRE. HENRY M. HENNING, Hinkley, Calif. Filed Jan. 30, 1915. Serial No. 214,544. 2 Claims. (Cl. 152—5.)



2. An inner tire comprising a tread having a curved outer face adapted to fit the inner face of a casing and extending substantially sixty degrees each way from a vertical central plane and having flat faces extending radially inwardly from the outer edges of the curved face and meeting at the axial center, and a tread support having a V-shaped annular groove fitting the inner halves of the flat faces and having curved faces extending outwardly from the flat faces and from the groove; the outer ends of the curved faces being on a line with the axial center; and having second curved faces extending from the outer edges of the first curved faces and adapted to fit the inner face of the casing and having a face connecting the lower edges of the second curved faces and adapted to fit the outer face of a tire rim upon which the casing is mounted.

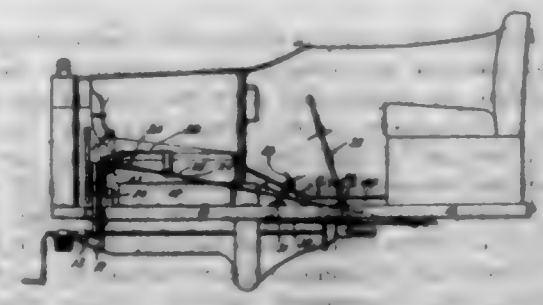
1,298,946. ADJUSTABLE CLAMP FOR SLIDE-RAILS IN MINES. HENRY FRIED HEUMANN, Marissa, Ill. Filed Dec. 6, 1918. Serial No. 265,580. 5 Claims. (Cl. 238—8.)

1. Means for holding slide rails to the main rails of mine tracks, comprising a toothed bar with a flange at one end to engage the base of a slide rail, a clamp block on the toothed end of the toothed bar and provided with a tooth to engage the teeth of the bar, and a clamp screw carried by the block in position to engage the web of a permanent



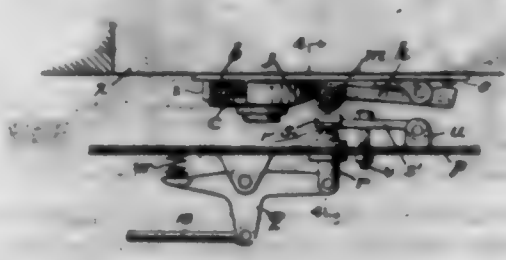
rail of the track on the face thereof remote from the slide rail.

1,298,947. AUTOMOBILE-ENGINE STARTER. WILLIAM D. HICKS, Los Angeles, Calif., assignor of one-fourth to R. M. Doyle, Los Angeles, Calif. Filed June 19, 1918. Serial No. 239,175. 5 Claims. (Cl. 74—55.)



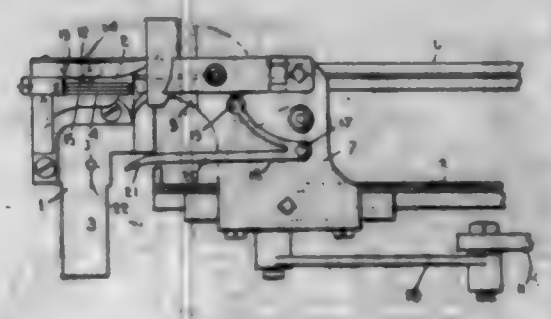
1. An engine starter, comprising a frame, a foot pedal and a hand lever pivoted thereon, mechanism connected with the engine shaft, movement of which mechanism causes rotation of the engine shaft, and means connecting the foot pedal and the hand lever to said mechanism so that movement of the pedal and lever in opposite directions causes movement of said mechanism.

1,298,948. ELEVATOR INTERLOCKING DEVICE. FRANK C. HOLZBOG, Jr., Philadelphia, Pa., assignor to Jenkins Interlock Manufacturing Company, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 13, 1918. Serial No. 270,776. 6 Claims. (Cl. 187—49.)



1. In elevator locking mechanism, the combination with the landing gate, of a turnable member, means on the gate adapted, as the gate is moved from its closed position, to turn the turnable member, and a stop adapted to arrest the turning movement of the turnable member and thereby hold the gate from further opening, said turnable member being movable in the direction of its axis into position to enable it to clear the stop and thereby permit its turning movement to continue until the gate is released.

1,298,949. PILE-FABRIC LOOM. HERBERT J. HOPE, Sanford, Me. Filed Aug. 31, 1917, Serial No. 189,055. Renewed Feb. 3, 1919. Serial No. 274,301. 4 Claims. (Cl. 139—64.)



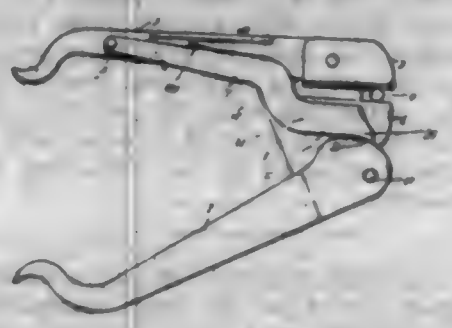
4. In a pile fabric loom, the combination with means for withdrawing and inserting a pile wire, of pattern mechanism for controlling the operation of said means to render the said means inoperative to insert a wire at predetermined times whereby a pattern will be produced in the fabric.

1,298,950. CIRCUIT-CLOSER. GEORGE E. HULL, Minneapolis, Minn., assignor to Hickok Construction Co., Minneapolis, Minn., a Corporation of Minnesota. Filed Dec. 4, 1918. Serial No. 265,234. 4 Claims. (Cl. 200—27.)



3. In a grain bin circuit closing device, a grain actuable paddle, means pivotally hanging said paddle at a point with respect to its center of mass so as to cause said paddle to assume a position by gravity disposing its lower end in a projecting position with respect to a vertical line intersecting the pivot axis of said paddle, and a circuit closing rod extending vertically upwardly from the top of said paddle, and means connecting the lower end of said rod in pivotal supported relation with the top of said paddle on that side of the pivotal axis thereof opposite from which the lower end of the paddle projects.

1,298,951. CUTTING OR PRESSING TOOL. GEORGE HUTCHINSON, Chicago, Ill. Filed Apr. 15, 1918. Serial No. 228,768. 4 Claims. (Cl. 81—197.)



1. In a device of the character described, the combination of coöperating tool elements in opposition to each other, a handle and a lever respectively for said tool elements, said lever being pivoted to the handle at a distance from the tool elements, guiding straps secured to the handle and between which the lever and the tool element combined therewith are guided, an actuating handle for said lever and pertaining tool element, said second handle being movable between said straps and guided thereby, and lug portions projecting laterally from the planes of said straps and adapted to prevent bending of the work in predetermined direction while said tool elements are operating on the same.

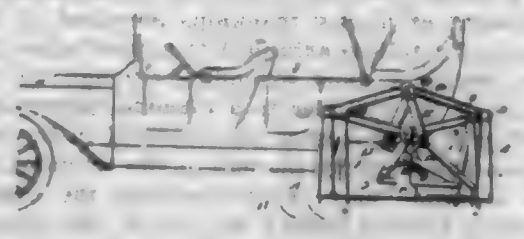
3. In a device of the character described, the combination of a stationary handle, a tool element firmly secured thereto on one side thereof, a strap firmly attached thereto at the other side thereof, another strap detachably secured to the other side of said tool element, a second handle pivoted between said straps, an intermediate lever pivoted to said first named handle at a distance from the tool element, a companion tool element carried by said intermediate lever, said combined intermediate lever and tool element being guided between said straps, a lug projecting laterally from the second strap below the axis of the work to be operated on, and a second lug firmly secured to the movable tool element, the first named strap having an opening through which said second lug projects, and said second lug being placed to project over the body of the work.

1,298,952. WHEEL ATTACHMENT. WILLIAM HENRY JAMES, Philadelphia, Pa. Filed Aug. 5, 1918. Serial No. 248,364. 3 Claims. (Cl. 105—215.)



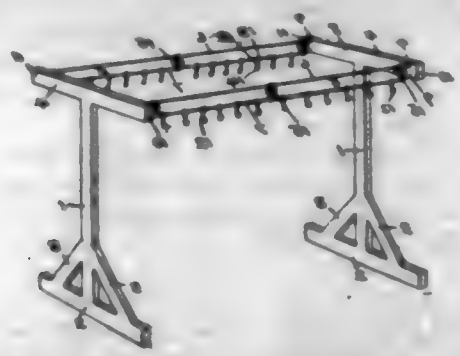
1. An attachment for car wheels consisting of a supplemental wheel applied to the axle inside the main wheel; and a carriage underlying the supplemental wheel and dished on its upper edge to conform with the curvature thereof, and means for supporting said carriage from the car truck so as to be normally out of contact with the periphery of the supplemental wheel.

1,298,953. WALKING ATTACHMENT FOR MOTOR-VEHICLES. OLE EDWIN JENSON, Rosebeg, Alberta, Canada. Filed June 5, 1918. Serial No. 238,301. 3 Claims. (Cl. 180—8.)



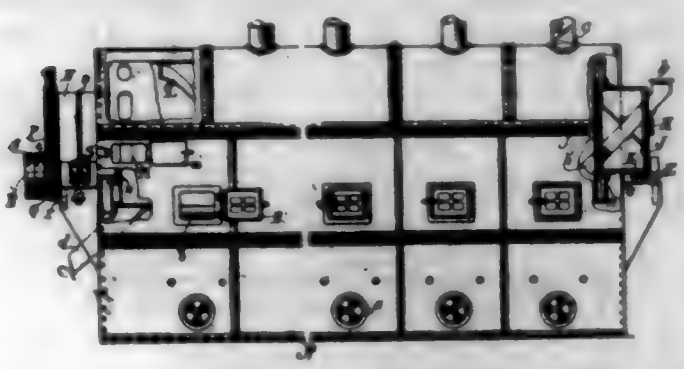
2. A device of the character specified, comprising similar sections adapted for connection with the ends of the rear axle of the vehicle, each section comprising a supporting frame, shafts journaled at the ends of the frame, a series of levers journaled on each shaft and extending inwardly toward each other, a crank shaft journaled transversely of the frame below the connected ends of the levers and having a crank for each pair of levers, a pitman connecting the adjacent ends of each pair of levers to the adjacent crank, a link depending from each lever near the adjacent shaft, a shoe arranged below the frame and extending longitudinally thereof and supported by each pair of links, and a link connecting each crank with the adjacent supporting link for the shoe at the rear of the section.

1,298,954. CLOTHES-HANGING DEVICE. JOSEPH W. JOHNSHOY, Tracy, Minn. Filed July 7, 1917. Serial No. 179,164. 5 Claims. (Cl. 68—12.)



1. A hanger including in combination, a support, spaced supporting lines extending from said support, hooks by one line and adapted for clamping engagement over the other line, and means for tensioning said lines against said hooks.

1,298,955. ROTARY OVEN AND DRIER. ADOLPH JOHNSON, Battle Creek, Mich. Filed Apr. 28, 1918. Serial No. 230,266. 2 Claims. (Cl. 34—5.)

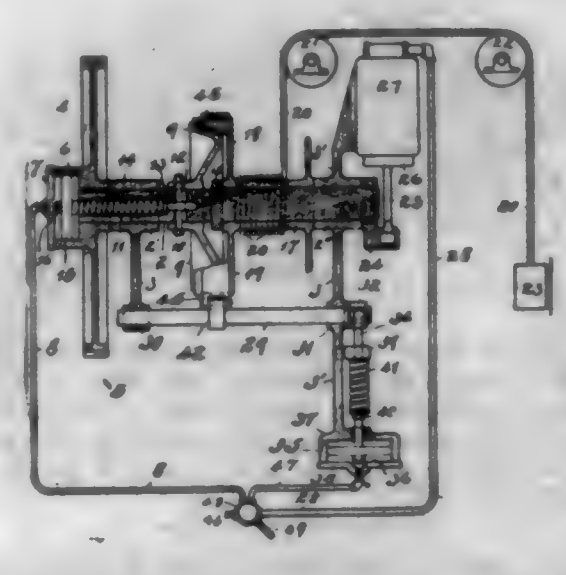


1. In a rotary oven and drier, the combination with an oven cylinder, of hollow trunnions arranged at the ends of the cylinder, rollers arranged to support the trunnions, a hopper having a spout extending through one of the said trunnions in a diagonally downward direction, a circular heat barrier plate located within the outer end of the trunnion whereby the end of the trunnion is closed and the trunnion may revolve around the edge of said plate, means located beyond the end of the trunnion for supporting the said hopper and plate, and a plate attached to and supported by the spout near the lower end thereof and projecting radially beyond the sides of the trunnion in the said cylinder to close the inner end of the revolving trunnion.

2. In a rotary oven and drier, the combination with an oven cylinder, of hollow trunnions arranged at the ends of the cylinder, rollers arranged to support the trunnions, a hopper having a spout extending through the trunnion at one end of the cylinder in a diagonal downward direction, a circular heat barrier plate located in the outer end of the trunnion whereby the end of the trunnion is closed and the trunnion may revolve around the edge of the plate, means located beyond the end of the trunnion for supporting the said hopper and plate, a heat barrier plate attached to and supported by the said spout near the lower end thereof and projecting radially beyond the sides of the trunnion in the said oven cylinder to close the inner end of the revolving trunnion, the said cylinder having discharge openings near the second trunnion, and a heat barrier plate arranged to close the inner mouth of the said second trunnion adjacent to the said openings.

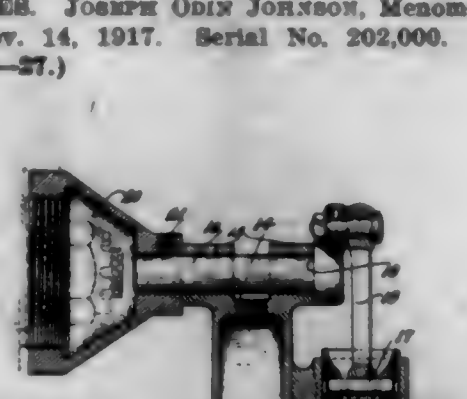
1,298,956. MEANS FOR OPERATING AND CONTROLLING BRAKES, CLUTCHES, &c. CHARLES SUNDERLAND JOHNSON, Galesburg, Ill. Filed May 29, 1917. Serial No. 171,716. 4 Claims. (Cl. 74—46.)

1. In combination, mating clutch members, means for rotating one clutch member, means normally holding the other clutch member stationary, fluid actuated means adapted to release said stationary clutch member, means normally forcing the clutch members out of engagement,



fluid actuated means adapted to force the clutch members into engagement, and means for controlling the two stated fluid actuated means.

1,298,957. PUMPING ATTACHMENT FOR MOTOR-VEHICLES. JOSEPH ODIN JOHNSON, Menomonie, Wis. Filed Nov. 14, 1917. Serial No. 202,000. 1 Claim. (Cl. 230—27.)

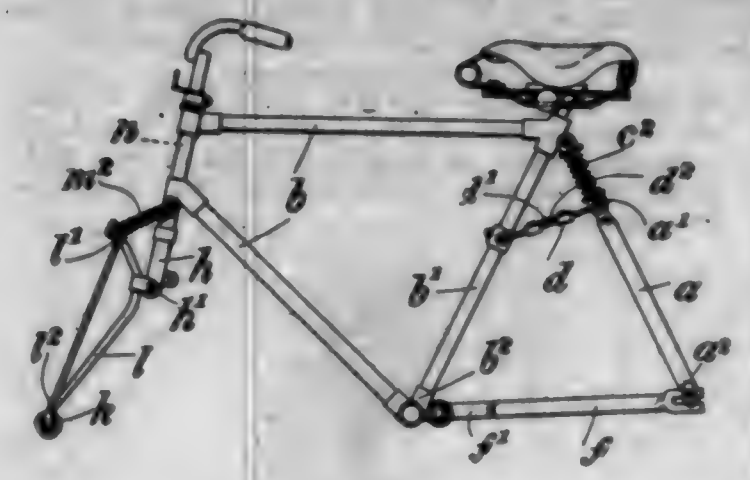


A pumping attachment for motor driven vehicles adapted for connection with the driving axle thereof, comprising a body having a cylinder at one side, a piston mounted therein and a pressure chamber at the other side, said body having inlet and discharge ports, a crank shaft on which the body is swingingly supported and connected to the piston, a connecting member threaded at one side for connection with the vehicle axle and engageable with the crank shaft at its other side, and means for fixing the crank shaft to the connecting member for actuation thereby.

1,298,958. BICYCLE-FRAME. WILLIAM JOHNSTON, Belfast, Ireland. Filed Oct. 11, 1917. Serial No. 195,884. 1 Claim. (Cl. 208—97.)

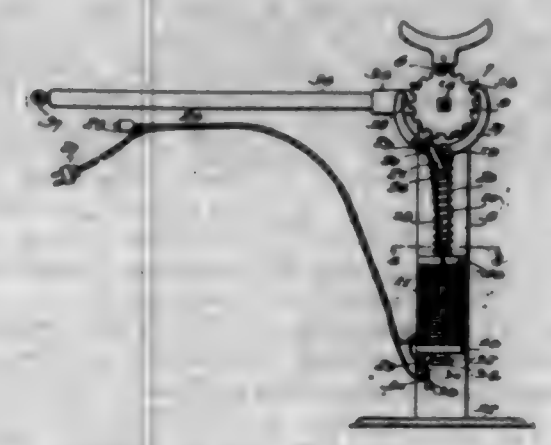
In a frame for bicycles, a back fork, a duplex parallel spring cushioning device connected at its upper end with the head of the seat pillar tube of the frame and at its lower end with the top of the back fork, duplex pivotal

stays connecting the top end of the back fork with the seat pillar tube for retaining the back fork against lateral



movement, and a plate connecting together the duplex pivotal stays to strengthen same.

1,298,959. LIFTING-JACK. CHARLES MASON JONES, North Yakima, Wash. Filed Apr. 1, 1918. Serial No. 226,086. 4 Claims. (Cl. 254—103.)

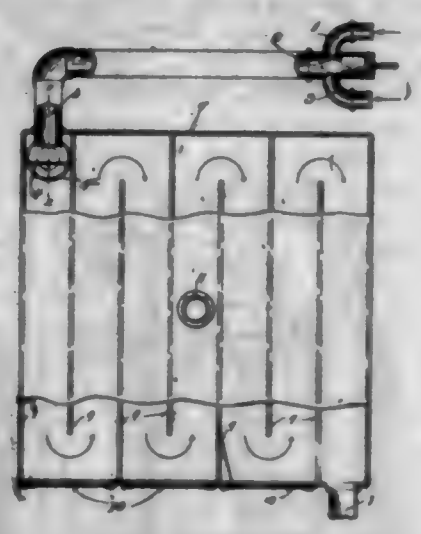


2. An electrically operated jack comprising a standard, a vertically movable lifting element, mechanism supported by the standard for raising said lifting element, a reciprocatory device operable to actuate said mechanism, means for moving said reciprocatory device in one direction; an electro-magnet for moving said reciprocatory device in the opposite direction, an electric conductor adapted to be in and out of circuit with said electro-magnet, and a switch adapted to be opened and closed by movement of said reciprocating device and to throw said conductor in and out of circuit with said electro-magnet, whereby said means moves said reciprocating device when the same has been freed from its control by said electro-magnet.

4. An electrically operated jack comprising a standard, a vertically movable lifting element, mechanism supported by the standard for raising said lifting element, a reciprocatory device operable to actuate said mechanism, means supporting and guiding said reciprocatory device on and parallel with said standard, and a solenoid supported by and axially parallel with said standard and operable to actuate said reciprocatory device.

1,298,960. CONTINUOUS PROCESS OF FORMING FERTILIZER MATERIAL. VICTOR H. KADISH and HALBERT L. KADISH, Milwaukee, Wis. Filed Apr. 27, 1918. Serial No. 231,250. 6 Claims. (Cl. 71—6.)

1. The continuous method of recovering fertilizer material from tannery liquor waste which consists in adding together predetermined quantities of waste and precipitating liquid, agitating the liquid and waste to thoroughly co-mingle the same, running the co-mingled liquid and waste into a separation chamber, causing said co-mingled liquid and waste to assume a tortuous ppassage through said chamber to permit the precipitating liquid and waste to re-act on one another and to permit the resultant solid material to precipitate.



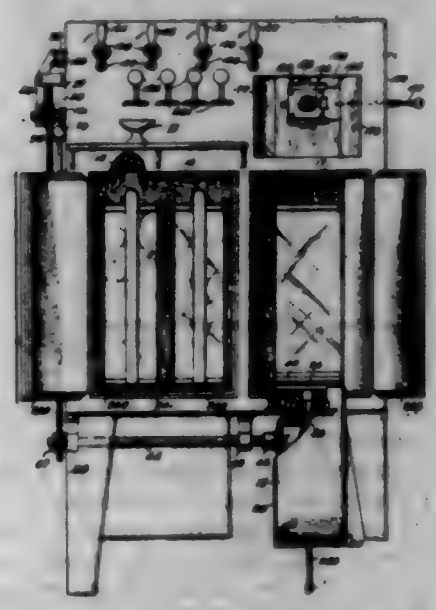
6. The continuous method of recovering fertilizer material from tannery sulfid liquor waste which consists in continuously running waste into a mixing chamber at a predetermined rate of flow, continuously running precipitating acid into said mixing chamber at a predetermined rate of flow, agitating the fluid formed of the waste and the acid at its point of discharge from the mixing chamber to thoroughly co-mingle the same, allowing the solid constituents of the fluid to separate from the liquid portions thereof, and recovering the resultant hydrogen sulfid gas created by the chemical re-action between the waste and acid.

1,298,961. COLLAPSIBLE ICE-PICK. ARTHUR THOMAS KELLY, Oklahoma, Okla. Filed June 8, 1918. Serial No. 238,865. 1 Claim. (Cl. 83—62.)



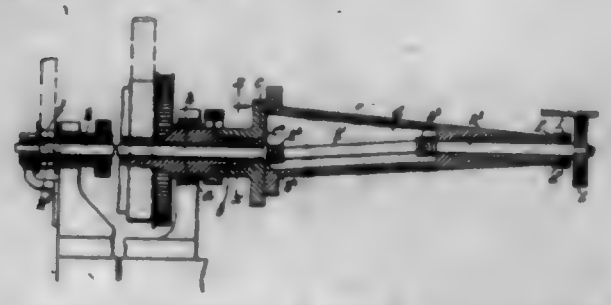
A device of the character specified comprising a handle, a bearing head at the outer end of the handle, a pick pivoted in said bearing head and adapted to fold in against the handle, means comprising a right angled locking member pivoted to the bearing head for securing the pick in either extended operative position or folded inoperative position, a spring tending to hold the locking member in inoperative position and a clip or keeper engaging the longer arm of the locking member for securing the latter in locking position.

1,298,962. APPARATUS FOR STORING AND DISPENSING ICE-CREAM. JAMES W. KENNEDY, Canton, Ohio, assignor, by direct and mesne assignments, of one-fourth to John H. Dungan, Canton, Ohio, one-fourth to Walter S. Bryson, one-sixteenth to Benjamin F. Bone, one-sixteenth to Frank M. Howard, one-sixteenth to James A. Schaub, and one-sixteenth to Allen C. Scroggins, Jr., Moundsville, W. Va., and one-fourth to G. William Way, Wheeling, W. Va. Filed Dec. 17, 1917. Serial No. 207,601. 15 Claims. (Cl. 107—1.)



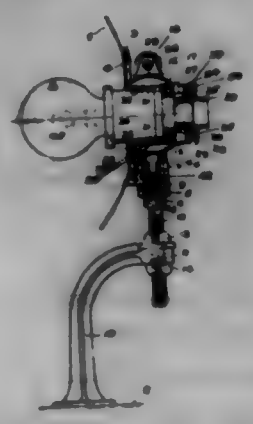
10. In a machine for dispensing ice cream, a box formed with heat insulating walls, a vertical chamber arranged within the said box and adapted to have placed therein a collapsible container filled with ice cream, a plunger fitting within the said chamber, a screw connected to said plunger, means coöperating with the said screw to move the said plunger vertically within the said chamber and to collapse the said container during its upward movement, an electric signal system arranged to signal the operator of the machine when the said plunger is at either the limit of its upward or downward movement.

1,298,963. INTERNAL GRINDER OR MILL FOR USE IN LATHES, BORING, DRILLING, AND OTHER MACHINE TOOLS. HARRY KERSHAW, Manchester, England. Filed Mar. 2, 1918. Serial No. 220,087. 3 Claims. (Cl. 51—4.)



1. An internal grinder or mill for use in solid mandrel lathes, boring, drilling and other machine tools, comprising a slow-moving member consisting of a back or nosed member and a sleeved front member carrying a spindle rotatably mounted therein, said back and front members being pivotally connected together so as to be set in eccentric relation to one another, means for varying the eccentricity of said back and front members, a grinding wheel or other cutter carried by said spindle, a bearing located in the bore of the back or nosed member, a spindle rotatably mounted in said bearing and in the hollow mandrel, flexible means connecting said two spindles, said flexible means being located in the sleeved slow-moving member, a pinion fixed to the spindle mounted in the back or nose member, a pinion loosely mounted in and carried by the body of said nose member and engaging the aforesaid pinion and an internally toothed ring or pulley engaging said second pinion, said toothed ring or pulley being mounted exteriorly of the boss of the back member and carried on ball bearings.

1,298,964. FOCUSING DEVICE. JOHN KIRBY, Jr., Dayton, Ohio, assignor to The United States Head-Light Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 23, 1918. Serial No. 259,316. 7 Claims. (Cl. 240—44.)



1. In a device of the character described, the combination of a spherical element having a central opening therethrough and constituting a support and guide for a lamp socket without the intervention of other elements, a sleeve fixed to said spherical element and forming a laterally disposed extension thereof, a lamp socket movable in and longitudinally of said opening, a retaining band encircling and constituting a support for said spherical element, means by which said band may be caused to contract and expand to tighten and loosen said spherical element therein, and means carried by said sleeve adapted to control the movement of said socket.

1,298,965. METHOD OF APPLYING INSULATED PIECES TO CARBON BRUSHES. CECIL YOUNG KNIGHT and WILLIAM NORMAN WILSON, Battersea, London, England, assignors to The Morgan Crucible Company, Limited, Battersea, London, England. Filed Nov. 30, 1918. Serial No. 264,809. 3 Claims. (Cl. 200—25.)



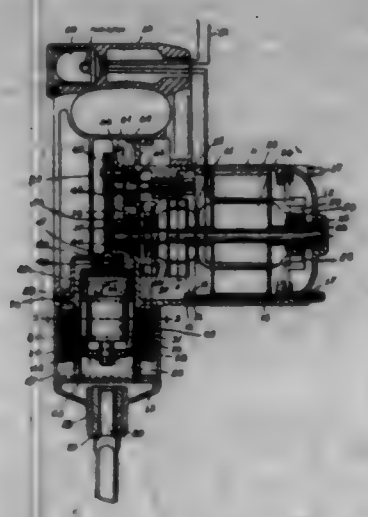
1. A method of applying an insulated piece to a carbon brush, which consists in providing the carbon brush with keying means, placing the insulated piece on said brush in plastic condition and interlocking the same to the keying means, and permitting said insulated piece to harden.

1,298,966. ELECTRICALLY-OPERATED TOOL. JAMES S. KNOWLSON, Oak Park, Ill., assignor to Electro-Magnetic Tool Company, Chicago, Ill., a Corporation of Illinois. Filed June 16, 1915. Serial No. 34,528. 12 Claims. (Cl. 172—240.)

1. In apparatus of the character described, the combination of an electro-magnet and armature therefor; means for producing a shifting of the magnetic field flux which carries the armature with it; and a generator driven by said means for energizing said magnet.

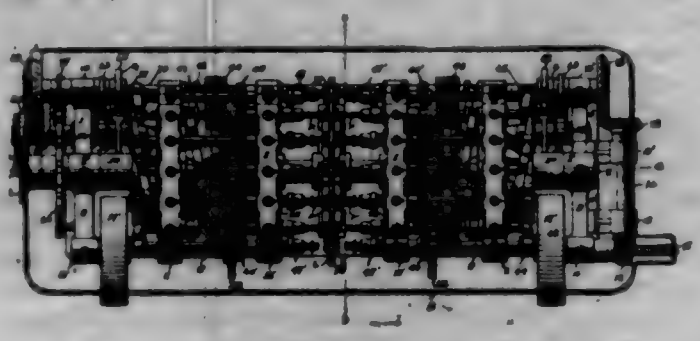
7. In apparatus of the character described, the combination of an electro-magnet; a sleeve of magnetizable metal arranged within said magnet and formed so as to provide a pair of spaced pole pieces; a floating core in said sleeve; a series wound universal motor; a gear wheel on the armature shaft of said motor; a gear wheel meshed with the first named gear wheel provided with a

wrist pin; a connecting rod which connects the sleeve with said wrist pin; and a generator, the armature of which is carried on the armature shaft of the motor having a commutator, the brushes of which are in circuit with said electro-magnet, the field of the generator being in shunt with said commutator.



11. In apparatus of the character described, the combination of an electro-magnet, an armature core therefor, a magnetizable sleeve interposed between the coil of the magnet and the core, means for reciprocating the sleeve, magnetizable disks at opposite ends of the core movable with the core within the sleeve, and means for arresting the movement of the disks as the core reaches the ends of its stroke in opposite directions so that magnetic tension is produced between the disk and the core which resists the tendency of the core to get out of step with the sleeve.

1,208,967. MANUFACTURER'S LATHE. ANDERS KRAMER, New York, N. Y., assignor of one-half to A. N. Van Deman, New York, N. Y.; said Kramer now by judicial change of name Ivan M. Prokofieff. Filed June 13, 1916. Serial No. 103,364. 6 Claims. (Cl. 29—38.)

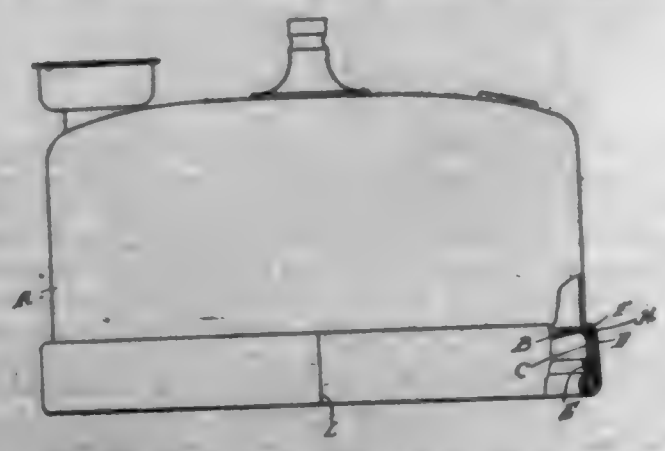


1. In a device of the class described, a rotating-chuck-carrier; a plurality of holding-chucks carried by such chuck-carrier; means for moving the chuck-carrier step-by-step; and a plurality of reversely rotating tools facing one another in pairs adapted to simultaneously and in sequence tool the plurality of blanks carried by the chuck at opposite ends or faces exteriorly and interiorly, and screw-thread the same; the alternating tools rotating at different speeds, but each opposed pair rotating at substantially the same speed; and means for rotating the alternating tools at different speeds.

4. In a device of the class described, a main-shaft; a chuck-carrier rigidly secured upon such shaft; a plurality of chucks supported by the chuck-carrier; a front and a rear supporting circular-frame located upon either side of such chuck-carrier; a plurality of directly opposed tool-shafts supported in such frames, two for each chuck; a train of gear-wheels rigidly secured together or integrally formed but revolubly mounted upon the main-shaft between such supports comprising three gear-wheels of different diameters; gear-pinions mounted upon each alternate tool-shaft meshing with the larger gear-wheel, to bring about high speed thereof; an idler-pinion meshing with the smallest gear-wheel of the train meshing with gear-pinions on the shafts of the remaining alternately arranged tool-shafts; annularly-slotted throw-collars rigidly secured to each of the tool-shafts; a drive-shaft extending longitudinally of both tool train mechanisms; means for constantly rotating such drive shaft; a double-cam-wheel vibratorily mounted upon the main-shaft; the step-by-step, locking and vibrating means being in actuating connection with the drive-shaft; vibrating throw-levers in actuating connection at one end with the annularly slotted throw-collars of the high-speed tool-shafts, and in connection at the other end with the cam-slots of one member of the double cam-wheel; like throw-levers in actuating connection with the cam-slots of the other-member of the double-cam-wheel, and with the throw collars of the slow-speed tool-shafts; means for rotating the main-shaft step-by-step so as to bring the chucks successively and in sequence into registry with each of the respective reciprocating-tool-shafts; means for locking such main-shaft against rotation between each step-by-step movement; and means for vibrating the double cam-wheels during the locked dwell of the main-shaft; each pair of opposing tools being reversely rotated.

6. In a device of the class described, a main-shaft; a chuck-carrier rigidly secured upon such shaft; a plurality of chucks supported by the chuck-carrier; a front and a rear supporting circular-frame located upon either side of such chuck-carrier; a plurality of directly opposed tool-shafts supported in such frames, two for each chuck; a train of gear-wheels rigidly secured together or integrally formed but revolubly mounted upon the main-shaft between such supports comprising three gear-wheels of different diameters; gear-pinions mounted upon each alternate tool-shaft meshing with the larger gear-wheel, to bring about high speed thereof; an idler-pinion meshing with the smallest gear-wheel of the train meshing with gear-pinions on the shafts of the remaining alternately arranged tool-shafts; annularly-slotted throw-collars rigidly secured to each of the tool-shafts; a double cam-wheel vibratorily mounted upon the main-shaft; vibrating throw-levers in actuating connection at one end with the annularly slotted throw-collars of the high-speed tool-shafts, and in connection at the other end with the cam-slots of one member of the double cam-wheel; like throw-levers in actuating connection with the cam-slots of the other-member of the double-cam-wheel, and with the throw-collars of the slow-speed tool-shafts; means for rotating the main-shaft step-by-step so as to bring the chucks successively and in sequence into registry with each of the respective reciprocating-tool-shafts; means for locking such main-shaft against rotation between each step-by-step movement; and means for vibrating the double cam-wheels during the locked dwell of the main-shaft; each pair of opposing tools being reversely rotated.

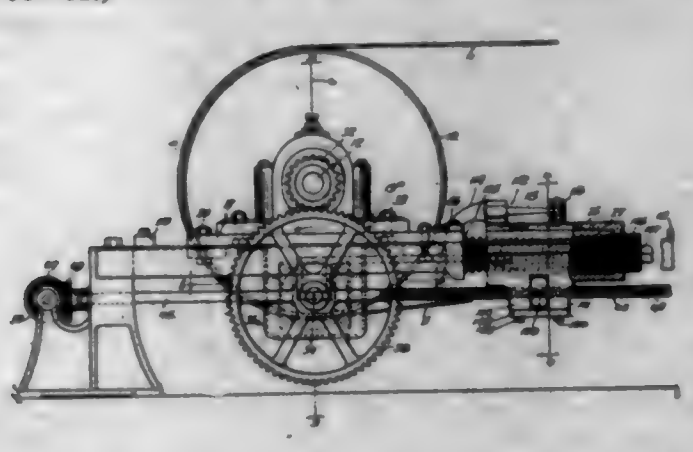
1,298,968. PROTECTING-BASE FOR FLUID-HOLDING TANKS. CHARLES R. LAMBERT, Detroit, Mich., assignor to Clayton & Lambert Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 5, 1917. Serial No. 146,620. 2 Claims. (Cl. 220—137.)



1. The combination with a fluid-holding tank comprising a body portion enlarged at the base and a bottom portion

with a depending flange fitting within said enlargement and forming a seamed connection therewith, of a protecting member formed of a sheet-metal band surrounding said enlarged base portion, the upper end of said band being crimped over the shoulder at the upper end of said enlargement, and the base of said band being beaded and forming a support for the tank.

1,298,969. TAKE-UP MECHANISM. SIDNEY J. LA MONTAINE and CLARENCE A. MONEY, Chicago, Ill. Filed Dec. 17, 1917. Serial No. 207,574. 6 Claims. (Cl. 64—52.)



1. A device of the character described comprising a pulley or sheave; an overrunning belt or cable; yielding means for exerting a given limited tension of the belt in contact with the pulley and automatic means for bodily moving said belt, when the tension becomes subnormal or abnormal, due to the expansion or contraction of the belt, respectively, and reëstablishing the tension.

1,298,970. SHORING DEVICE. HENRY H. LAMPERT, Chicago, Ill. Filed July 22, 1916. Serial No. 110,765. 23 Claims. (Cl. 254—100.)

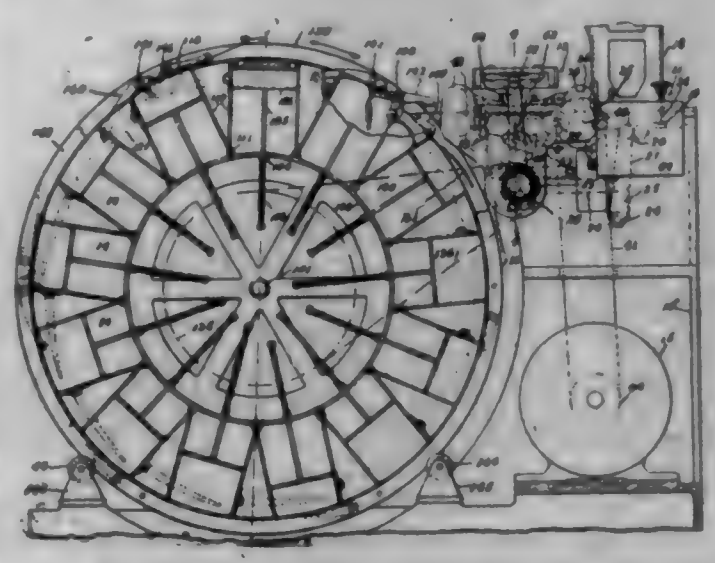


4. In a shoring device, an extensible strut comprising two members longitudinally adjustable relatively to each other, and a jack comprising two clamping members adapted to embrace opposite sides of one of said strut members, tying means connecting said clamping members, and a longitudinally movable screw having threaded engagement with one of said clamping members, and adapted to support and longitudinally move the other strut member.

11. In a shoring device, an extensible strut comprising two members longitudinally adjustable relatively to each other, and a jack comprising means including a wedge for clamping opposite sides respectively of one of the strut members, and a screw longitudinally adjustable on said clamping means and adapted to support and longitudinally move the other strut member.

13. In a shoring device, an extensible strut comprising two members longitudinally adjustable relatively to each other, and a jack comprising two clamping members adapted to respectively embrace opposite sides of one of the strut members, two links pivotally connected on transverse axes with said clamping members, one of the links having means for detachable engagement with one of the clamping members, and a screw longitudinally adjustable on one of the clamping members and adapted to support and longitudinally move the other strut member.

1,298,971. ROTARY CARD-SORTER. WILLIAM W. LASKER, Brooklyn, N. Y., assignor to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 29, 1917. Serial No. 188,718. 19 Claims. (Cl. 83—92.)



1. In a card sorter, the combination of a circular series of compartments; a conveyer for conveying cards to all the compartments; means for feeding cards to said conveyer; card-record-controlled means carried by said conveyer and adapted to be set for controlling the discharge of the cards from the conveyer, and deflecting means controlled by the last mentioned means for deflecting the cards from the conveyer into the compartments.

5. In a card-sorter for sorting record-cards having perforations thereon, the combination of a plurality of sorting stations, means comprising operating levers located in accordance with the perforations on the cards; a conveyer for said cards; and adjustable means on said conveyer actuated through the instrumentality of a card for operating the aforesaid means to discharge the cards from the conveyer into said sorting stations.

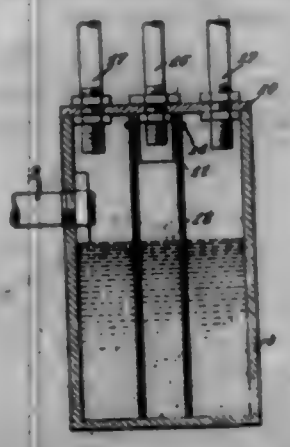
9. In a card-sorter, the combination of a card analyzing means; an endless series of compartments; a series of conveyers adapted to receive cards from the card analyzing means and successively to pass said compartments; means for opening each conveyer as it reaches a certain point in its travel and immediately closing it; means for feeding cards from the analyzing means into the opened conveyer; a plurality of settable means associated and traveling with the conveyer, the different settable means of each conveyer traveling in different paths; a deflector gate for each compartment and each provided with an operating cam lever disposed near the path of the settable means corresponding to such compartment and adapted to be tripped by said settable means to cause the inflector gate to deflect a card from the conveyer into the compartment; setting means adapted to be operated by the analyzing means in accordance with the card therein and adapted to set the settable means associated with the conveyer which is to receive said card, and corresponding to the cam lever associated with the compartment which is to receive said card; means for holding the set settable means in set position until it has tripped the corresponding cam lever and caused the deflector gate to deflect the

card from the conveyer into the compartment; and means for causing the holding means to release the set settable means after it has caused the deflector gate to deflect the card.

13. In a card-sorter, the combination of an analyzer; a series of compartments; a revolving conveyer comprising clamping jaws; means for opening said jaws when they are in position to receive cards from the analyzer; settable means for deflecting cards from the jaws into said compartments; and means operated by said analyzer for setting said settable means before said jaws arrive at said position.

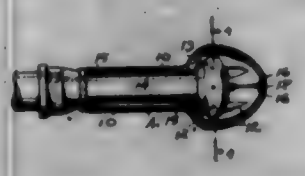
17. In a card-sorter, the combination of a plurality of circularly disposed compartments; outwardly spring pressed, radially disposed follower rods mounted in said compartments; followers on said rods; and means for analyzing cards and forcing them into said compartments.

1,298,972. DISINFECTING DEVICE. ISAAC N. LATCHAW and CHARLES F. LATCHAW, Findlay, Ohio. Filed Nov. 1, 1918. Serial No. 260,660. 1 Claim. (Cl. 167—3.)



A disinfecting device comprising a tank including a top provided with a depending tubular sleeve; a depending tubular wick surrounding the sleeve and extended downwardly into the tank; a pipe assembled with the top portion of the tank and communicating with the interior of the sleeve and with the interior of the wick; and an air inlet for the tank external to the wick and the sleeve.

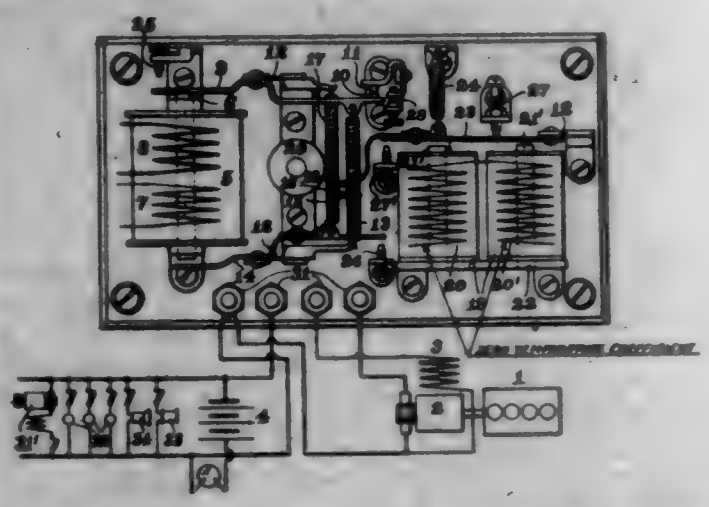
1,298,973. MILK-CAN CLEANING AND SPRAYING DEVICE. PATRICK T. LEAHY, Brooklyn, Ohio. Filed July 15, 1918. Serial No. 244,878. 3 Claims. (Cl. 137—155.)



1. A medium for cleansing milk cans and the like, comprising a tubular spindle having a head with tangential jet openings about its side, a sleeve rotatably mounted on said spindle having a cone shaped hollow end surrounding said head and apart therefrom and provided with a series of pockets on its inside in working relations with said jet openings and having a central discharge slot across its front and side.

1,298,974. METHOD AND MEANS FOR CONTROLLING ELECTRIC ENERGY. HARRY WARD LEONARD, Bronxville, N. Y.; Carolyn G. Leonard, administratrix of said Harry Ward Leonard, deceased, assignor to H. Ward Leonard Incorporated, a Corporation of New York. Filed July 22, 1914. Serial No. 852,340. 12 Claims. (Cl. 171—313.)

1. The combination of a dynamo, a magnetic winding having a movable element automatically movable to change the field strength of the dynamo when the current through said winding reaches a certain value, and a second magnetic winding automatically responsive to a condition of a circuit supplied by said dynamo for changing the reluctance of said first magnetic winding and thereby automatically changing the output of the dynamo.

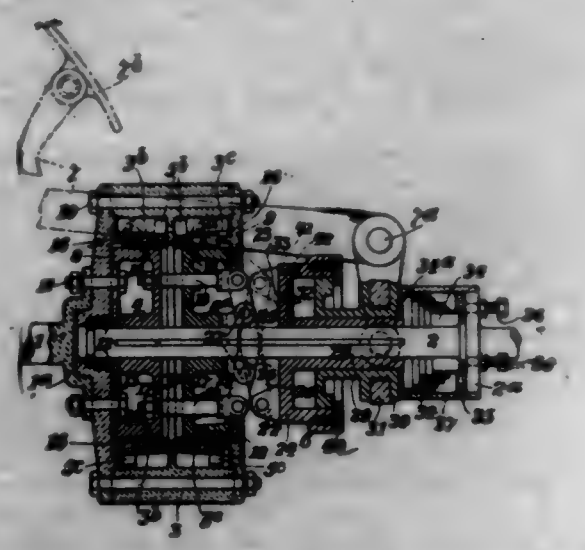


4. The combination with an electric circuit, of a magnetic winding, a movable magnetic element controlled thereby, a spring tending to move said element in a direction opposite to that in which the magnetism of said magnetic winding tends to move it, a stop for limiting the movement of said element when moved by said spring, a second magnetic winding, a core therefor, an armature narrowly spaced from the poles of said core and carrying said stop, and front and back stops for said armature whereby said first mentioned stop is controlled to stand at one of two definite alternative positions.

9. A storage battery, a dynamo for charging said battery, and automatic means for controlling the output of the dynamo comprising a vibratory regulator, a back stop therefor adjustable to either of two positions only, and a voltage winding to control said back stop, the current in which is substantially independent of temperature changes.

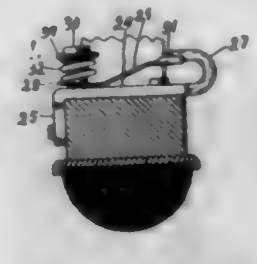
12. The combination with an electric circuit, a magnetic device for controlling the current in said circuit and having a copper winding, a second magnetic device having a winding of low temperature co-efficient, and means for causing the second winding to effect the performance of said first winding when the voltage upon said circuit reaches a certain value.

1,298,975. CLUTCH. WILLIAM H. LINDSAY, Johnstone, Scotland. Filed Sept. 17, 1917. Serial No. 191,760. 10 Claims. (Cl. 192—14.)



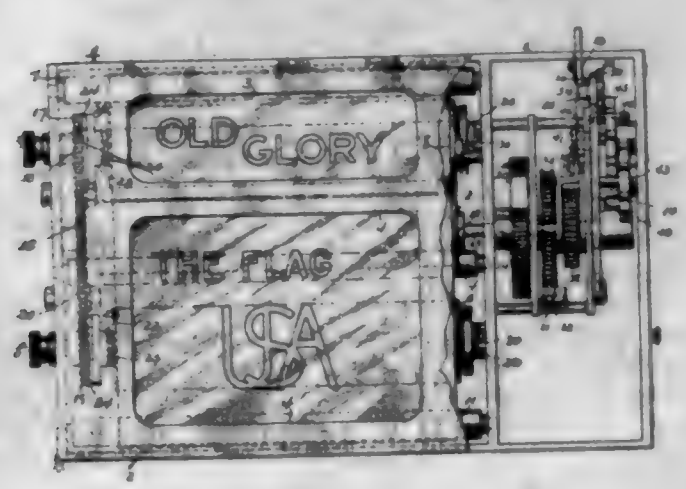
1. A clutch comprising two inner members, an outer member, two coils located within and loosely attached to the outer member and means for causing the inner members to move simultaneously in opposite directions to engage said coils.

1,298,976. FASTENING DEVICE. JAMES E. LENDSEY, Louisville, Ky., assignor of one-half to William B. O'Neil, Louisville, Ky. Filed Oct. 12, 1918. Serial No. 257,822. 4 Claims. (Cl. 24—236.)



3. In a device as characterized, a base plate, a hook projecting from an edge thereof and curving upward and inward, terminating a spaced distance above and in a plane parallel with the base, a guard member comprising an upstanding body and a bottom section extended at an angle therefrom, said angle contacting with the base, said bottom section having a perforation therethrough, a post having a head erected on the base and passing freely through said perforation, and a spring bearing respectively against the bottom section and the head of the post and serving to hold the upper end of the guard member normally in contact with the end of the hook.

1,298,977. ADVERTISING APPARATUS. ALBERT W. LINN, Memphis, Tenn. Filed Oct. 25, 1916. Serial No. 127,608. 8 Claims. (Cl. 40—94.)



1. In an advertising device the combination of a band, winding rolls to which the ends of the band are secured, two positively driven push rolls intermediate the winding rolls and between which two thicknesses of the band pass so that both faces of the band will be exposed at the front, and slip gearing connecting the pinch rolls and winding rolls whereby the latter are free to slip so as to take up the band as it is fed to the latter from the pinch roll.

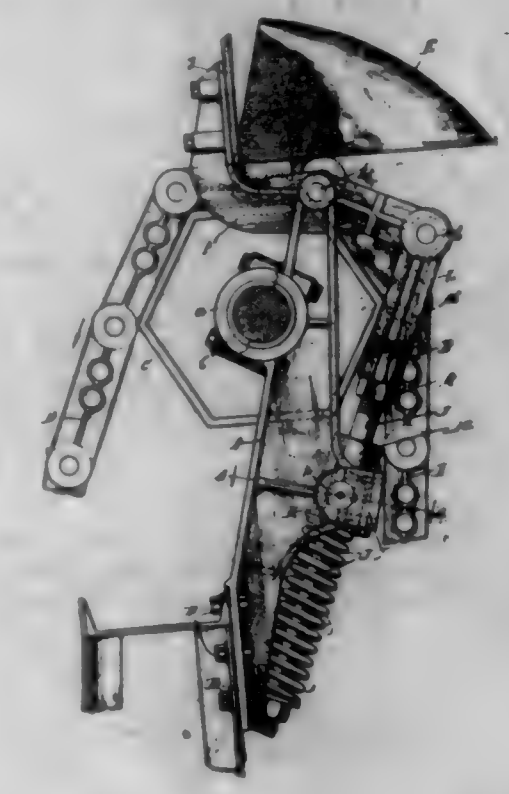
2. In an advertising device the combination of a band, winding rolls to which the ends of the band are secured, two positively driven pinch rolls intermediate the winding rolls and between which two thicknesses of the band pass so that both faces of the band will be exposed at the front, gearing between the pinch rolls and winding roll shafts, and friction brake mechanism acting against the winding rolls for controlling the unwinding movement of the latter.

3. In an advertising device the combination of a band, winding rolls to which the ends of the band are secured, two positively driven pinch rolls intermediate the winding rolls and between which two thicknesses of the band pass so that both faces of the latter will be exposed at the front, slip gearing connecting the pinch and winding rolls whereby the latter will be free to slip so as to take up the band as it is fed from the pinch rolls, and friction brake device engaging each winding roll for controlling the unwinding movement of the latter.

4. In an advertising device, the combination of a casing having an open face, two positively driven pinch rolls located intermediate the upper and lower ends of the opening in the face, an idle roll at the upper end of the opening, an idle roller at the lower end of the opening, two winding rolls located in a plane to the rear of the pinch rolls, a band secured at its ends to said winding rolls, the said band being so disposed with relation to the rolls, that a double thickness of belt passes between the pinch rolls, one thickness of belt passing over the upper idle roll and the other under the lower idle roll, a drive shaft, and reversing mechanism located intermediate the drive shaft and the driven pinch roll whereby the direction of movement of the belt will be reversed at regular intervals.

5. The combination with a driving gear, a tripping frame carrying intermeshing gears either of which may be moved into mesh with said driving gear, a gear wheel in mesh with one of said gears on the tripping frame, and driven thereby, pawls for holding the tripping frame in its two positions and automatically actuated means for disengaging the holding pawl so as to permit the tripping frame to be shifted.

1,298,978. EXCAVATOR-BUCKET CLEANER. TRULS LOKEN, Kenosha, Wis., assignor to Frederick C. Austin, Chicago, Ill. Filed Feb. 24, 1915. Serial No. 10,204. 2 Claims. (Cl. 37—24.)

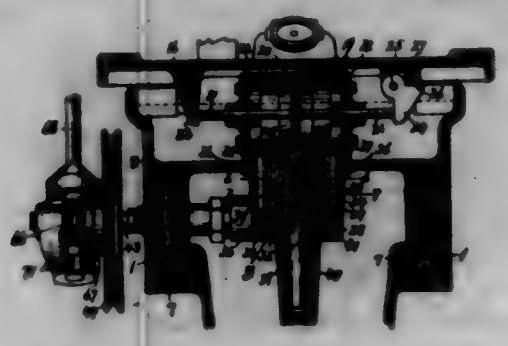


1. In an excavator, the combination of an endless series of buckets, a pivoted cleaner disposed in position to pass through said buckets, an arm rigid with said cleaner, an oscillating bearing, a rod to reciprocate in said bearing, a spring on said rod below said bearing, means on said rod to engage the lower end of said spring, an element pivoted on said arm, and screw threaded means to adjustably connect said element with the upper portion of said rod.

1,298,979. EDGE-GRINDING MACHINE FOR LENSES. ELI M. LONG, Geneva, N. Y., assignor to The Standard Optical Company, Geneva, N. Y., a Corporation of New York. Original application filed June 2, 1916, Serial No. 101,282. Divided and this application filed Mar. 18, 1918. Serial No. 223,040. 9 Claims. (Cl. 60—52.)

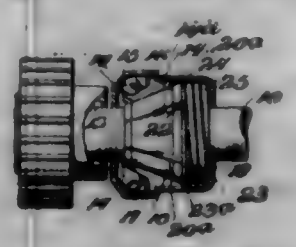
1. In hydraulic power-transmission, the combination of a piston motor, an impeller for circulating fluid to and from the motor for operating the piston, a rotary

valve actuated by the impeller for reversing the flow of fluid to the motor to reciprocate the piston, and means



actuated by the motor for alternately and periodically stopping and releasing the valve.

1,298,980. BEARING FOR LAWN-MOWERS. JOHN M. LONTZ, Richmond, Ind. Filed June 23, 1916. Serial No. 105,492. 4 Claims. (Cl. 64—36.)



4. In combination, a rotary member, bearing elements for said member, a spring arranged to move one of said elements with relation to the other, a collapsible sleeve interposed between said spring and its associated element for controlling the application of power of said spring, the said sleeve having longitudinal slots at one end and being circumferentially continuous at the other end, a pin secured to the shaft and extending into one of the said slots, and a ring closely fitting the continuous end of the sleeve and movable therewith.

1,298,981. TUBULAR TAG. MATTHEW H. LOUGHRIDGE, Bogota, N. J. Filed Dec. 15, 1917. Serial No. 207,333. 9 Claims. (Cl. 40—19.)



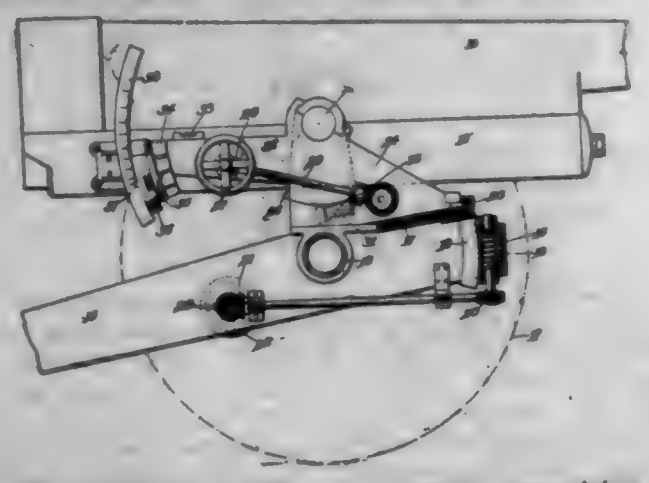
1. A marking system for electric wires consisting of a wire, an insulating covering for a portion of said wire, a one piece tubular sleeve of resilient insulating material and having a longitudinal slot, said sleeve placed on said wire by means of said slot near the end of said insulation and fitting it snugly.

3. A marking system for electric wires consisting of a wire, a soft rubber insulation for said wire, a one piece tubular sleeve of hard fiber having a longitudinal slot less than a semi-circle, said sleeve placed on said wire by means of said slot and having an embossed designation to distinguish said wire.

6. A marking system for electric wires consisting of a wire, an insulating covering for said wire, a one piece tubular tag embossed with a designation distinguishing said wire, said tag fitting onto said wire and being partially embedded in said insulating covering.

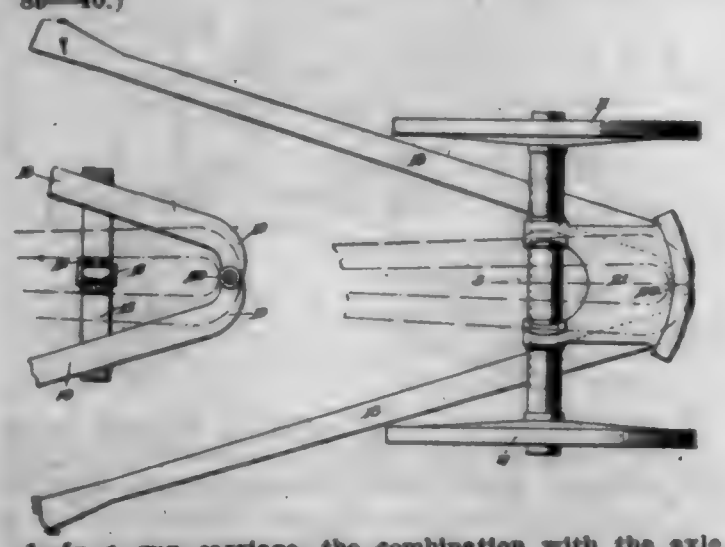
9. A device for marking electrical wires consisting of a one piece cylindrical sleeve of insulating material and having a longitudinal slot, said sleeve marked with the designation of said wires and placed in position by means of said slot.

1,298,982. ELEVATING AND SIGHTING MECHANISM FOR GUNS. JOHN LUND, Bethlehem, Pa., assignor to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1916. Serial No. 89,902. 3 Claims. (Cl. 89—41.)



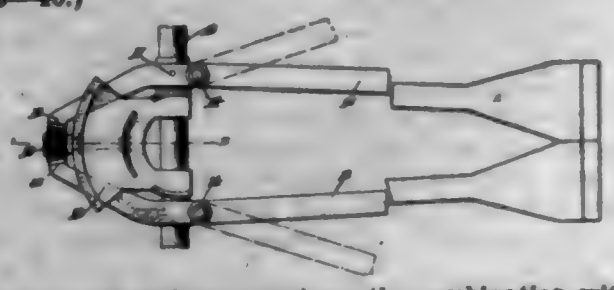
1. The combination with a gun carriage comprising an axle and suitable wheels, a support for a top carriage suitably mounted on the axle, means for adjusting said support about the axle, a top carriage on said support, a gun having bearings in the top carriage and independent means for adjusting the gun angularly about said bearings, the top carriage and gun each having a scale, and an index device carried by one of said parts and cooperating with both scales, for the purpose set forth.

1,298,983. GUN-CARRIAGE. JOHN LUND, Bethlehem, Pa., assignor to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1916. Serial No. 89,903. 7 Claims. (Cl. 89—40.)



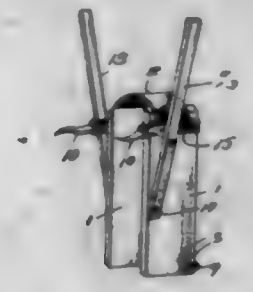
1. In a gun carriage, the combination with the axle, of two trail members extending forward of the axle and having their forward ends pivotally connected together, the pivotal axis being vertical, permitting the members to swing relatively in a substantially horizontal direction.

1,298,984. GUN-CARRIAGE. JOHN LUND, Bethlehem, Pa., assignor to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Apr. 15, 1916. Serial No. 91,376. 8 Claims. (Cl. 89—40.)



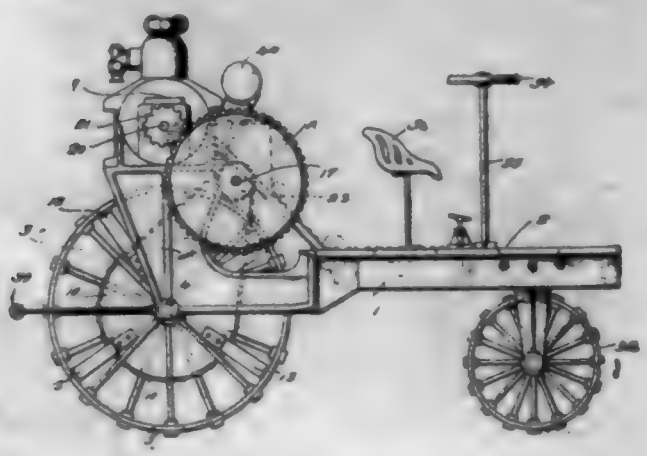
1. In a wheeled gun carriage, the combination with the axle of two trail members, one of said members being rigid with the axle and the other movably connected therewith.

1,298,985. ANIMAL-POKE. LESLIE J. LYNCH, Lorena, Okla. Filed Oct. 16, 1917. Serial No. 196,934. 1 Claim. (Cl. 119—138.)



An animal poke, comprising a pair of spaced flat side members, flexible webbing having its ends fixed to the upper ends of the side members for connecting the same together, means adjustably engaged in the side members near the opposite ends thereof, straps disposed transversely of said side members near their outer ends and having inwardly extending portions forming bearings, prongs pivoted in said bearings for movement at right-angles to said side members, levers disposed in outwardly divergent relation to each other and pivoted for rocking movement exteriorly on the side members, connections between the rear ends of said prongs and the levers, and coiled retractile springs connected with the prongs at their rear ends and also connected with the side members.

1,298,986. TRACTOR. ANGUS L. MCTAGGART, Pittsburgh, Pa. Filed Feb. 24, 1918. Serial No. 750,208. 3 Claims. (Cl. 180—17.)

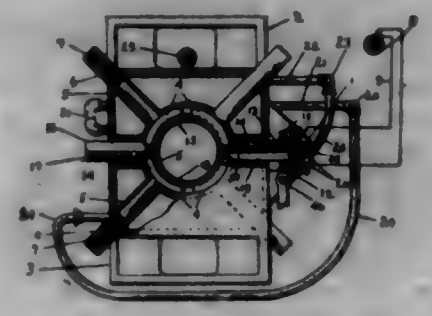


1. In a tractor, a frame, an engine mounted on the rear portion of the frame above the tractor wheels thereof and having its driving shaft projecting therefrom extending laterally of the frame, a driving pinion on said shaft, a counter-shaft extending parallel with the engine shaft, a gear on the counter-shaft meshing with the said pinion, a plurality of closely assembled and independently rotatable tractor wheels, and mechanism including means carried on the counter-shaft for independently driving said wheels.

1,298,987. GLASS-CUTTING MECHANISM. GEORGE P. MACNICHOL, Toledo, Ohio, assignor, by mesne assignments, to John N. Willys, Toledo, Ohio. Filed Apr. 11, 1914. Serial No. 831,155. 11 Claims. (Cl. 49—50.)

1. A device of the class described, comprising the combination of a holder for the ware comprising sections adapted to embrace the ware and hinged together; a wire carried by each section and disposed to engage the surface of the ware in the holder; contacts connected with said wires and disposed to automatically close the circuit through said wires when said sections are brought into operative engagement; and means for rotating the ware in the holder.

4. A device of the class described, comprising the combination of a ware holder formed of a plurality of hollow sections adapted to extend circumferentially around the ware, a cooling fluid circulating system connected with said hollow sections, and heating means disposed between said hollow cooling sections and around said ware for heating the latter.

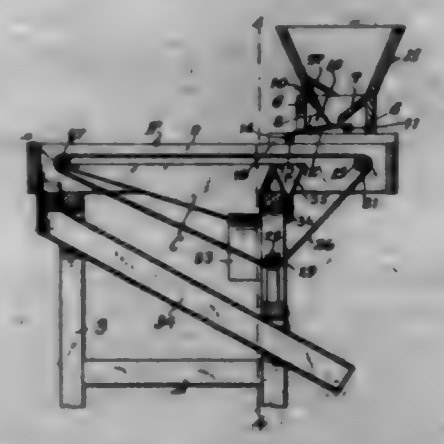


6. A device of the class described, comprising the combination of a ware holder formed of a plurality of hollow sections adapted to extend circumferentially around the ware and having yieldable gripping members engaging the ware, a cooling fluid circulating system connected with said hollow sections, a heating element disposed between said gripping members and around the ware, and means for rotating the ware within said holder.

8. A device of the class described, comprising the combination of a ware holder, including a plurality of hollow sections adapted to extend circumferentially around the ware and forming fluid circulating chambers, the inner walls of which are provided with hollow cooling extensions projecting into said chambers, gripping members between the ware and said sections having stems projecting into the extensions, means engaging said extensions to hold the gripping members in yielding engagement with said ware, and heating means interposed between said gripping members and around the ware.

10. A device of the class described, comprising a ware holder formed of a plurality of yieldingly connected sections adapted to extend circumferentially around the ware and each provided with one or more radial sleeves, gripping members for the ware having stems projecting into said sleeves, and springs yieldingly forcing said gripping members in contact with the ware.

1,298,988. BEAN-ASSORTING MACHINE. AUGUSTUS A. MARTUS, Brown City, Mich. Filed June 12, 1918. Serial No. 239,628. 3 Claims. (Cl. 180—18.)

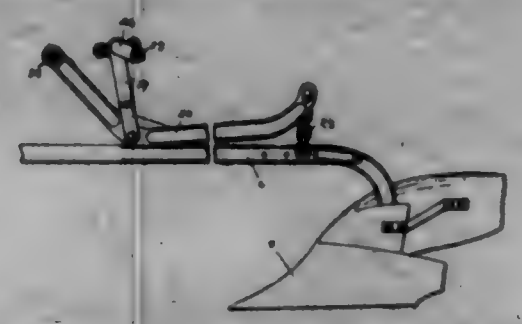


1. A device of the character described comprising an assorting member consisting of a pair of endless members, rods connecting said members, coil springs encircling the rods and interposed between the members, and flexible strands extending in the same general direction as the endless members and threaded through the convolutions of the springs.

1,298,989. TRACTOR-PLOW. JASON B. MASON, Kalamazoo, Mich., assignor to Reed Foundry & Machine Co., Kalamazoo, Mich. Filed Nov. 14, 1918. Serial No. 262,541. 3 Claims. (Cl. 97—70.)

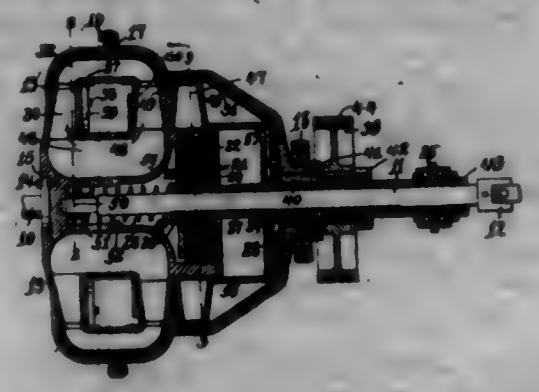
1. The combination with a frame, of a draw bar pivotally mounted thereon, means for adjustably supporting the rear end of said draw bar, a plow provided with a

beam pivotally connected to said draw bar, a crank shaft on said frame disposed above said beam, a lifting lever



pivotally mounted at its forward end to the frame and connected at its rear end to said beam, and a link connecting said lever to the crank of said shaft.

1,298,990. GEARLESS POWER TRANSMISSION. WILLIAM H. MASON, South Orange, N. J. Filed Apr. 12, 1917. Serial No. 161,430. 23 Claims. (Cl. 60—54.)



1. In a gearless power transmission, a rotary casing having fluid impelling means therein, a turbine in said casing having reaction forward drive means and reaction reverse drive means, said turbine being movable in said casing, and control means for moving the turbine from the exterior of the casing.

20. In a gearless power transmission, a driving shaft, a casing rotating therewith, a driven shaft, forward and reverse hydraulic driving means in said casing, and means in the casing for clutching the driving and driven shafts together so that they rotate in unison.

1,298,991. RAIL-TIE AND COUPLING. WALTER W. MEEK, Lynnville, Tenn. Filed Apr. 2, 1918. Serial No. 226,182. 1 Claim. (Cl. 238—5.)



In a railway tie and fastening, a tie having integral elevations at the ends and a depressed longitudinally channeled connecting portion, the end portions of the tie being formed with longitudinal passages, the inner ends of which enter the channeled portion of the tie, the outer ends of the tie having countersunk recesses disposed at the outer ends of the said passages, bolts disposed in the passages and having heads engaging the bases of the rails, said elevations being formed with recesses to receive the bases of the rails and bearing against the rails, and clamping nuts carried by the bolts and disposed within the countersunk recesses.

1,298,992. CONTAINER LABEL AND GUARD. WILLIAM HENRY MERKLER, Union Hill, and JAMES HARRIS GRAGHTY, Bogota, N. J. Filed Nov. 22, 1917. Serial No. 203,389. 3 Claims. (Cl. 40—4.)

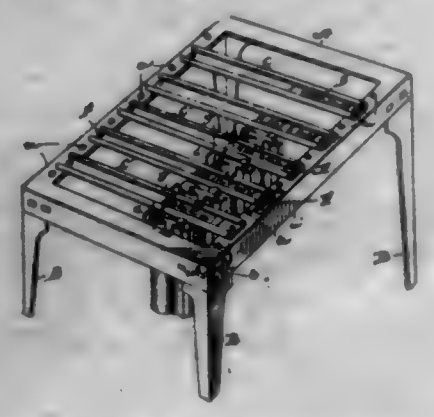
1. A guard of the character described comprising a body having a projection at one end and a notch at the opposite end, and a tab secured to said body so as to cover said notch, said tab being arranged with the adhesive side facing the same direction as the front of said body.



2. A guard of the character described comprising a body having a recess or notch in one end and a projecting member at the opposite end in line with said notch, an opening spaced from the end through which the label may be seen when the guard is in position, and a tab secured to the notched end of the body, said tab overlapping said notch so that a central line through the notch will extend centrally through the tab, said tab being provided with an adhesive.

3. A guard of the character described comprising a body formed with a sanded front and having an opening spaced from the end through which a label may be seen, a notch at one end, a tab having adhesive thereon at said notch, said tab being arranged with the adhesive side facing the same direction as the front of the body and a tab on the end opposite said notch, said last mentioned tab being adapted to fit into said notch.

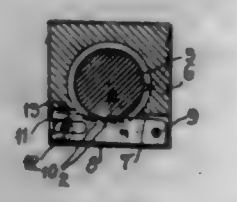
1,298,993. HAND-STAMP RACK. ALBERT C. MEYER, San Diego, Calif. Filed June 18, 1918. Serial No. 240,566. 6 Claims. (Cl. 211—41.)



8. A hand stamp rack comprising an open rectangular frame having parallel stamp supporting bars spaced apart according to the thickness of the stamps, and spacers having guides at their upper ends shaped to slide endwise upon the bars to adjust the stamp receiving spaces to the width of the stamps inserted endwise therein.

4. A hand stamp rack having openings for the endwise insertion and removal of the stamps and hand stamp supports, each comprising a plate having prongs to enter the end of a stamp, and depending legs at opposite sides of the middle of said plate and adapted to be bent apart to receive stamps of different thicknesses and at the same time support the stamp.

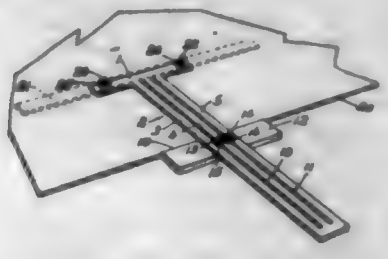
1,298,994. NUT-LOCK. ROBERT FRANCIS MICHAEL, Mainville, Pa. Filed Apr. 8, 1918. Serial No. 227,818. Renewed Jan. 11, 1919. Serial No. 270,752. 2 Claims. (Cl. 151—26.)



1. A nut lock including a nut having a slot in one side face, the medial portion of which opens into the nut bore, a locking member pivoted at one of its ends

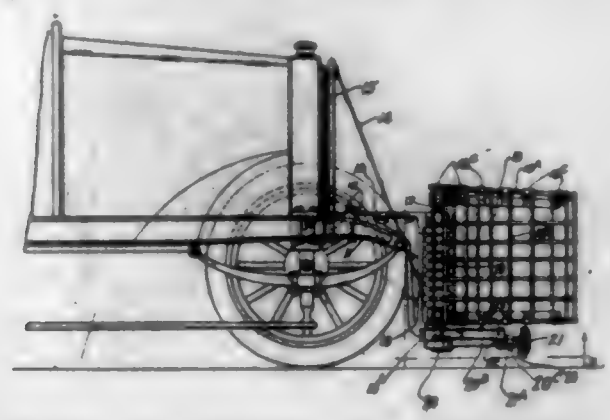
in said slot, the other end of said member being bifurcated, said locking member having a toothed edge to project into the nut bore, and a rotatable actuating element mounted in the nut and having a part disposed in the bifurcation of said member to coact with the locking member and urge the toothed edge thereof into binding engagement upon the bolt threads.

1,298,995. GLAZIER'S T-SQUARE GAGE. JACOB MICHALOVITS, Los Angeles, Calif. Filed Dec. 30, 1918. Serial No. 268,962. 4 Claims. (Cl. 33—75.)



1. A glazier's T square gage comprising a rigid head, a blade extending from one side of the head and having longitudinally extending parallel slots, a movable head fitting against the blade, studs fixed in the movable head and extending through the slots, and clamping nuts upon the studs.

1,298,996. VEHICLE-FENDER. FREDERICK MILIAN, Chicago, Ill. Filed Aug. 1, 1917. Serial No. 183,987. 2 Claims. (Cl. 293—16.)

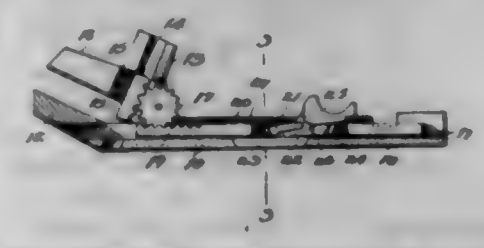


1. The combination with a vehicle, of a fender comprising a stationary base, a pair of pivotally mounted side walls, resilient means comprising coiled springs concentric with the pivots of said walls for moving said side walls, trippers arranged to retain said walls in the extended open position, and a release bar supported on said base and arranged to move said trippers to release said arms.

2. The combination in a vehicle fender of a pair of frames, a stationary interlaced web extending between said frames, an upwardly disposed triangular interlaced web, a pair of pivotally mounted arms, an interlaced wall supported on each of said arms, resilient means comprising coiled springs concentric with the pivots of said arms tending to move said arms toward each other, a pair of trippers mounted to retain said arms and walls in extended positions against the action of said resilient means, and a release bar supported on said base adapted to actuate said trippers to release said arms and walls to permit an inward movement of same.

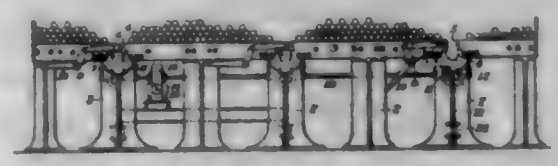
1,298,997. WRENCH. THOMAS ELCANAH MILLER, Tacoma, Wash. Filed July 31, 1918. Serial No. 247,665. 6 Claims. (Cl. 81—133.)

1. A wrench comprising a handle having a stationary jaw and a slotted extension at right angles to said jaw, a movable jaw having an extension shiftable in the slot of the handle extension and provided with teeth along its said extension, a toothed wheel journaled in the angle between the handle and its said extension and engaging the toothed extension of the movable jaw, an adjusting slide movable longitudinally of the handle and having a toothed portion also engaging the said toothed wheel, a ratchet piece carried by the handle, and a tiltable spring controlled ratchet member carried by the said slide and engaging the said piece and having a projection extending laterally beyond one side of the handle and forming a finger piece, as described.



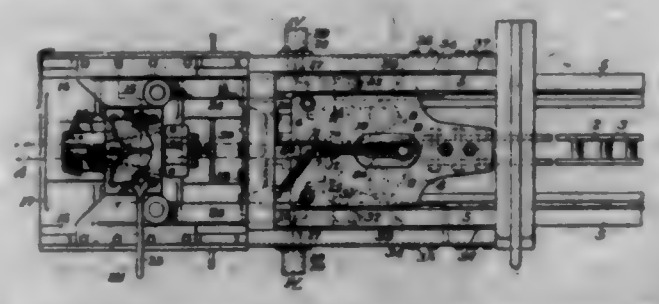
6. A quick acting and adjusting wrench comprising a longitudinally slotted handle having a rigid jaw, a movable jaw shiftable in a portion of the handle toward and away from the rigid jaw, means for adjusting the movable jaw, including a slide operatively connected to the movable jaw and shiftable in the slot of the handle, a thumb piece pivoted to the said slide and having a portion projecting beyond the handle, an extension at one side of its pivot provided with ratchet teeth and with a cut away portion, a ratchet member movable in said cut away portion and also having ratchet teeth, a rigid ratchet piece carried by the handle and with which ratchet teeth of said thumb piece and said ratchet member are engageable, the teeth of said ratchet member being spaced apart from the teeth of the thumb piece a distance equal to a tooth and a half of the ratchet piece.

1,298,998. FEED-TABLE FOR RODS, BARS, PIPES, &c. JAMES T. MOLTRUP, Beaver Falls, Pa. Filed July 5, 1918. Serial No. 243,380. 7 Claims. (Cl. 193—55.)



1. A feed table for rods, bars, pipes and the like comprising a plurality of spaced apart posts or standards, each of said posts or standards having therein an open-top pocket in line with a similar pocket in each of the other posts or standards; horizontally extending frame members carried by said posts or standards and extending at right angles to the line of feed, said frame members forming supports at the side of the pocket for the articles to be fed, and feeding means coöperating with said pockets to move the articles endwise therethrough, substantially as described.

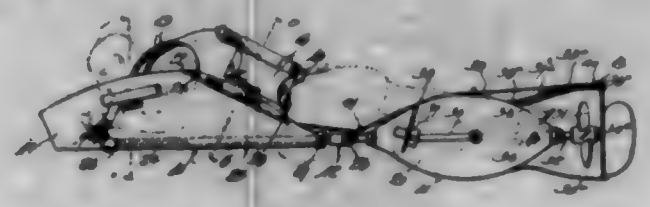
1,298,999. APPARATUS FOR DRAWING RODS. JAMES T. MOLTRUP, Beaver Falls, Pa. Filed July 5, 1918. Serial No. 243,381. 9 Claims. (Cl. 205—1.)



6. Rod-drawing apparatus, comprising a reducing die, a reciprocating draw head for pulling the rods through such die, main grips mounted on the draw head, studs also carried by the draw head, an auxiliary grip carriage mounted in front of the reducing die and movable toward and away from the same, auxiliary grips on said carriage, means for opening and closing the auxiliary grips, links connected to said carriage and having means for engaging

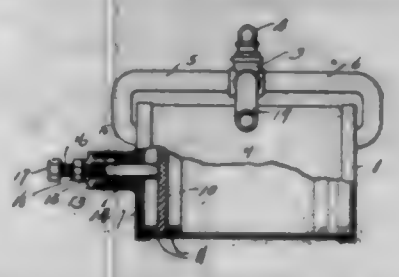
the studs on the draw head, and trip means for automatically disengaging the links from said studs at a predetermined point in the travel of the draw head, substantially as described.

1,299,000. SWIMMING-MACHINE. ALONZO A. MOORE, Winthrop, Mass. Filed July 11, 1918. Serial No. 244,409. 2 Claims. (Cl. 9—18.)



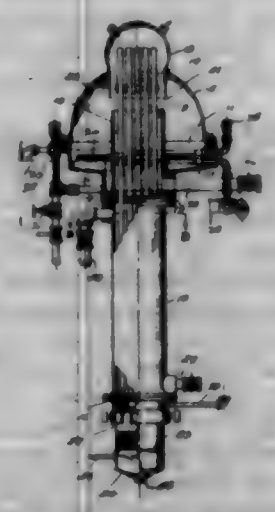
1. A swimming device comprising a prow member, a propelling mechanism connected to said prow member, auxiliary floats, and flexible members secured to opposite sides of said prow member and carrying said auxiliary floats and operable to secure the body of a person on the prow member.

1,299,001. MEASURING AND DISPENSING DEVICE. CLIFTON E. MOORE, Spokane, Wash. Filed Oct. 30, 1918. Serial No. 260,334. 2 Claims. (Cl. 221—103.)



1. The combination with a fluid pump and its supply hose, of a dispensing medium consisting of a horizontal cylinder, a movable piston therein, an adjustable stem supported in one of the heads of the cylinder movable longitudinally thereof and engaging with the piston to limit movement of said piston, a screw engaging the stem and adjusting it in the desired position, a two-way valve member connected to the source of supply and to branch pipes entering opposite ends of the cylinder and directing the flow of the liquid alternately through said branch pipes, a delivery pipe joining with the valve member and an open passageway therefrom through one of the branch pipes when the other branch pipe is receiving the flow of liquid from the pump.

1,299,002. APPARATUS FOR FURNISHING DRINKING-WATER ON OCEAN-SHIPS. IRA H. JEWELL, Chicago, Ill. Filed Mar. 1, 1919. Serial No. 280,053. 18 Claims. (Cl. 203—5.)



1. Apparatus for distilling fresh water and condensing salt water vapor comprising a complete operative evaporator and condenser for distilling the fresh water, including heating means for the evaporator and provided with a vapor connection independent of said heating means adapted to deliver salt water vapor to the apparatus to condense the vapor.

1,299,003. SHADE-HOLDER. THEODORE H. MORRIS and FRANK T. GRUBBS, Gary, Ind. Filed June 29, 1918. Serial No. 242,677. 8 Claims. (Cl. 156—22.)



1. A curtain support comprising a pair of members, each consisting of a screw threaded rod, a sleeve thereon, clamping members pivoted to the sleeve and a yoke carried by the rod and engaging said members.

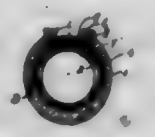
2. A curtain support comprising a pair of members, each consisting of a screw threaded rod, a sleeve thereon, a pair of clamping members pivoted to said sleeve, a yoke swiveled to the rod and engaging said members, and a supporting arm pivoted to the sleeve.

3. A curtain supporter comprising a pair of members, each consisting of a screw threaded rod, a sleeve thereon, a pair of clamping members pivoted to the sleeve, a yoke swiveled to the rod and engaging said members, a supporting arm pivoted to the sleeve and a pair of pivoted fingers on said rod.

1,299,004. PROCESS FOR THE PRODUCTION OF CATALYTIC MATERIAL AND THE SATURATION OF FATTY ACIDS OR THEIR GLYCERIDS WITH HYDROGEN. HARLEY J. MORRISON, Cincinnati, Ohio, assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 11, 1912. Serial No. 719,761. 5 Claims. (Cl. 23—28.)

1. The method of preparing a metal catalyzer and hydrogenising fatty acids and their esters in one operation, which consists in agitating a heated mixture of the material to be hydrogenized and a substantially non-catalytic compound of a catalytic metal, the process being conducted in an atmosphere containing hydrogen and at a temperature substantially from two hundred and fifty degrees centigrade to two hundred and ninety degrees centigrade, said compound reducible under the conditions of the process.

1,299,005. TIRE-SHOE. HENRY B. MOTL, Houston, Tex. Filed Nov. 4, 1918. Serial No. 260,979. 1 Claim. (Cl. 152—24.)



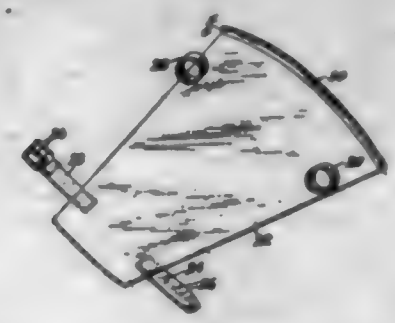
In a device of the character described, the combination with an outer casing and an inner inflatable tube, of a shoe formed of flexible material and fitted within the casing, and surrounding said tube, each of the free edges of the shoe being provided with perforations, a protecting strip formed of layers of flexible material, fitted between said inner tube and the free edges of said shoe, each layer being narrower than the preceding inner layer, the layer adjacent said free edges being formed with loops, and a lace passing through said perforations and also through said loops, and securing the free edges together, and also securing the strip in position against the free edges of the shoe.

1,299,006. CURVED-LINE SCRIBER. THEODOR MÜLLER, Zurich, Switzerland, assignor of one-half to Oscar Häfeli, Zurich, Switzerland. Filed Sept. 6, 1918. Serial No. 252,907. 5 Claims. (Cl. 33—27.)



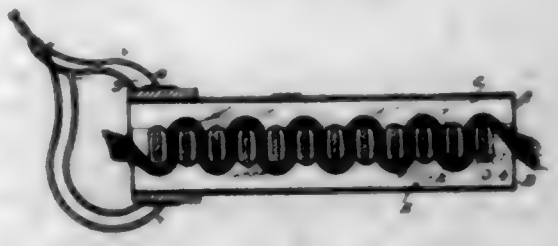
1. A curved-line scriber, comprising a guide-rail having a guide-groove, a second guide-rail also provided with a guide-groove and pivotally connected in such a manner to said first mentioned guide-rail that it is adapted to be adjusted with regard to the middle position assumed by it when the two rails are set at right angles with regard to each other to the right or left respectively, two slide-pieces each of them being mounted in a guide-groove of one of said guide-rails, a bar provided with a slot, said slide-pieces being adapted to be adjusted in said slot, means for fixing the slide-pieces in the slot of said bar, means for securing a pencil on the bar and securing or stopping means carried partly by the pivotally mounted guide-rail and partly by the other guide-rail for securing a proper adjustment of the pivotally mounted guide-rail as well in the position of the two rails in which they are set at right angles with regard to each other as in the position in which the pivotally mounted guide-rail is set into an inclined position with regard to the other guide-rail.

1,299,007. SWIMMING-GLOVE. WLADYSLAW NARUSEWICZ, North Andover, Mass. Filed Oct. 5, 1918. Serial No. 256,980. 1 Claim. (Cl. 9—21.)



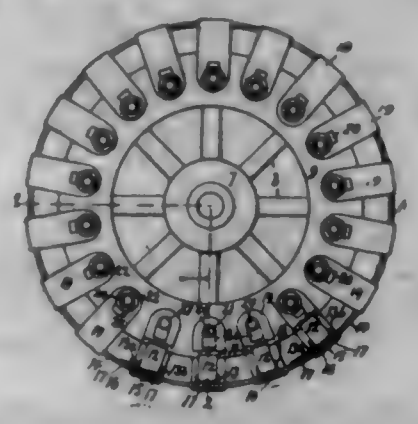
In a swimming device, the combination with a segmental shaped web, means for securing said web, at the smaller end thereof, rings fastened upon said web along its lateral edges, a turned edge at the larger end of said web, a tube secured at one end within said edge, and a rod secured at the other end, said rod being enterable within said tube whereby said web may be collapsed.

1,299,008. HAIR-WAVING DEVICE. AUGUST NEYER, San Francisco, Calif. Filed Aug. 13, 1918. Serial No. 249,618. 4 Claims. (Cl. 219—24.)



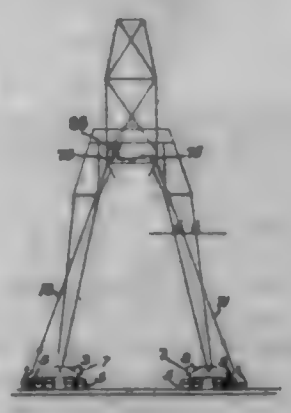
1. A hair waving device comprising opposed telescoping members, forms within said members for the reception of the hair, and means for heating the forms.

1,299,009. RESILIENT TIRE. ANDREW J. NOBLE, St. Paul, Minn. Filed June 17, 1918. Serial No. 240,336. 3 Claims. (Cl. 152—8.)



1. The combination with a felly, of a tire comprising a series of resilient elements spaced about the face of the felly, a tread ring bearing against the radially outer sides of said elements and having lateral notches, a series of U-shaped clips crossing the face of the tread ring and having arms placed in said notches and straddling the resilient elements and the felly, said arms being secured to the felly in a manner allowing the arms to slide in radial directions of the wheel as the resilient elements are compressed and expanded.

1,299,010. CONVEYING STRUCTURE. ALMON B. NORRIS, Cambridge, Mass. Filed May 3, 1916. Serial No. 95,241. 78 Claims. (Cl. 188—48.)



18. The combination with a rail clamp of controlling means therefor including a cable, a winding drum, a motor for said drum, a brake, and controlling means for said brake including a main lever, a support, a link pivotally connected to said main lever and support, cable-engaging means fulcrumed on said main lever, a brake lever connected to said brake and fulcrumed on said main lever, a floating lever, a link pivotally connecting the latter with said brake lever, speed-responsive means connected to one end of said floating lever, and cable-winding limiting means connected to the opposite end of said floating lever.

41. The combination with a rail clamp, of controlling means therefor including a weight, a drum, a cable connecting said weight and drum, a motor, and means responsive to the speed of the cables for controlling the speed of the motor.

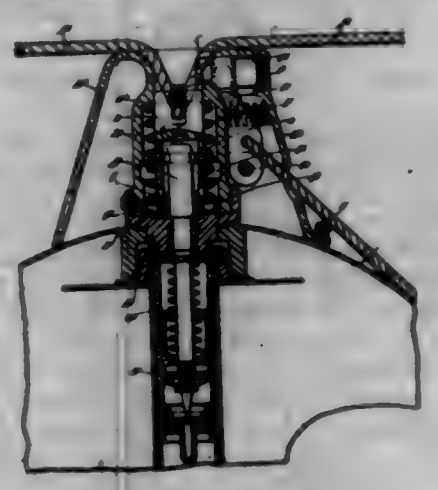
58. A rail clamping device comprising a shoe for engagement with a rail, and means to press said shoe against said rail including a member having a tooth connection with said shoe and adapted to rock relatively thereto to increase its pressure against said rail.

64. A rail clamp device for securing a traveling structure to a rail, comprising opposed clamping jaws carried by said structure and arranged when applied to grip a portion of the rail between them, one of said jaws having a shoe, means for moving said jaw to place said shoe in frictional contact with the rail, said shoe when applied to the rail being adapted to be displaced by frictional

contact therewith when the structure starts to move, automatic gripping means on the jaw for forcing the shoe into closer frictional contact with the rail when the shoe is displaced by movement of the structure, and connection between the jaws to cause such closer frictional contact to draw said jaw into closer gripping relation to the rail.

70. In a traveling bridge, the combination with a rail clamp of a weight for applying said clamp, means for lifting said weight, including a cable, a rope winding drum and a motor, an electric circuit for holding the clamp released, said circuit being automatically closed when the clamp is released, a propelling motor, an electric circuit for the propelling motor, a switch for the propelling motor circuit, and electromagnetic means in the clamp holding circuit for closing said switch when the clamp holding circuit is closed.

1,299,011. SUBMARINE MINE. THOMAS KEPPEL NORTH, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed June 21, 1917. Serial No. 176,061. 7 Claims. (Cl. 102—8.)



1. In a submarine mine of the connected type, the combination with the firing mechanism, of a member to which the connecting cable is attached, and means interposed between said member and the firing mechanism whereby said member will actuate the firing mechanism only after the connecting cable has been subjected to a predetermined tension.

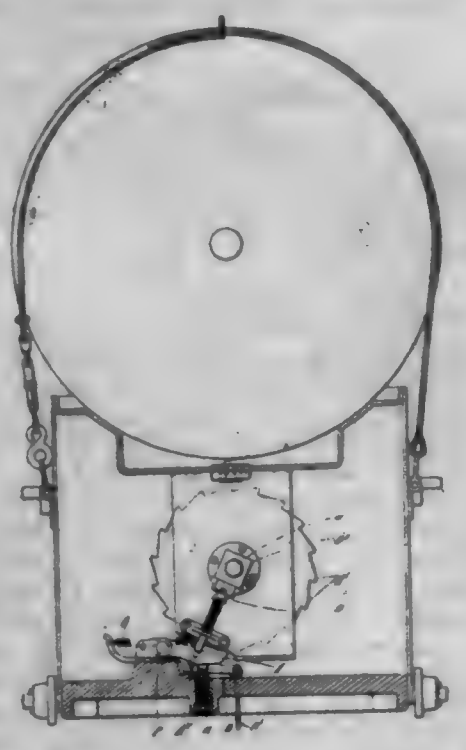
2. In a submarine mine of the connected type, the combination with the striker rod of the firing mechanism, of a spring controlled member to which the connecting cable is attached, and means interposed between said member and the striker rod whereby said member will actuate the striker rod only after the connecting cable has been subjected to a predetermined tension.

3. In a submarine mine of the connected type, the combination with the striker rod of the firing mechanism, of a spring controlled member to which the connecting cable is attached, an abutment on said member and another abutment on said striker rod, said abutments being situated some distance apart so that they will come into contact to effect the actuation of the striker rod only after the connecting cable has been subjected to a predetermined tension.

4. In a submarine mine of the connected type, the combination with the striker rod and the striker head of the firing mechanism, of a spring controlled member to which the connecting cable is attached, means interposed between said member and the striker rod whereby said member will actuate the striker rod only after the connecting cable has been subjected to a predetermined tension and means for liberating the striker head from the striker rod after the latter has been retracted a predetermined distance.

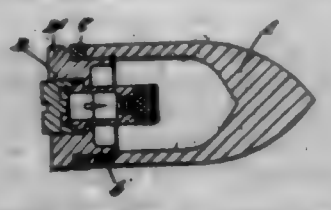
5. In a submarine mine of the connected type, the combination with the striker rod of the firing mechanism, of a spring controlled member to which the connecting cable is attached, a device normally connecting said member to its spring, means for disconnecting the device from said member after the latter has been moved through a predetermined distance, and means for enabling a certain movement of the said member relatively to the striker rod to occur before the latter is retracted by said member.

1,299,012. SUBMARINE MINE. THOMAS KEPPEL NORTH, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed June 21, 1917. Serial No. 176,064. 6 Claims. (Cl. 102—8.)



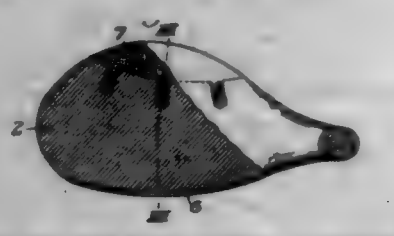
1. In a submarine mine comprising a flotation chamber constituting the mine proper, an anchor cable drum and a plummet for determining the depth at which the flotation chamber is to be anchored beneath the surface of the water, the combination of a member for engaging with the said drum, and a retaining device which is connected to the plummet and holds said member out of engagement with the drum until the plummet touches the sea bed.

1,299,013. DRIVING-BAND OF PROJECTILES. THOMAS KEPPEL NORTH, Westminster, London, England, assignor to Vickers Limited, Westminster, London, England. Filed Nov. 22, 1917. Serial No. 203,471. 2 Claims. (Cl. 102—40.)



1. In a projectile having a cavity for a charge, the combination of a base plug which is connected by screw threads to the projectile to close the cavity and has an integral portion thereof constituting a driving band, the sense of the screw threads being such that the action of the rifling of the gun barrel upon the driving band portion causes the plug to be held more firmly in position on the projectile.

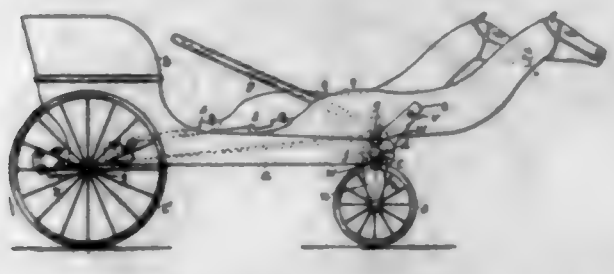
1,299,014. GOLF-CLUB. PETER O'HARA, Ohara township, Allegheny county, Pa. Filed July 5, 1917. Serial No. 178,554. 5 Claims. (Cl. 46—4.)



1. A wooden golf club head having a playing face bulged both longitudinally and transversely, the back side of

the head having a weight extending for a distance at least approximately equal to the intermediate portion of the playing face, substantially as described.

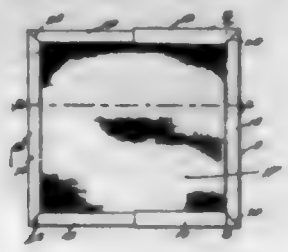
1,299,015. TOY VEHICLE. JOHN W. OLSSON, Portsmouth, Va. Filed Apr. 6, 1918. Serial No. 227,121. 5 Claims. (Cl. 208—42.)



1. In combination, a frame structure, a seat therein, wheel-supports arranged in the frame therein in fore and aft arrangement, one wheel-support having a crank rotative therewith, and means to rotate the crank including a fulcrumed figure pivoted at one end thereof to the crank, and means in said structure to guide the fulcrum of said figure in an overreaching arc.

4. In combination, a frame structure, a rear wheel-support journaled therein and including a crank, a steering wheel-support arranged in the frame forward of the rear-wheel support, and means to drive the rear wheel-support including an upstanding rocking arm fulcrumed in the frame and a connecting member pivotally connected to said crank and arm, the radius from the fulcrum of said arm to the point of pivotal connection of said member therewith exceeding the radius of the crank.

1,299,016. ADJUSTABLE WINDOW-SCREEN. HERMAN M. ORTTS, Norwich, Conn. Filed Mar. 11, 1918. Serial No. 221,781. 2 Claims. (Cl. 156—14.)



1. A blank for a window screen section including an elongated strip of metal having longitudinal parallel fold lines, the opposite sides of the strip being formed with right angular notches which divide the strip into end and intermediate sections, the end sections being formed with longitudinal slots and the intermediate section being formed with serrations on its opposite longer edges, fold lines connecting the angles of the notches.

2. A blank for a window screen section including an elongated strip having longitudinal parallel fold lines, the opposite longer sides of the strip having opposite disposed right angular notches which divide the strip into three sections, the intermediate section having struck up lugs adjacent its ends, the end sections each having a struck up lug adjacent its outer end, the strip having transverse fold lines connecting the inner angles of the notches.

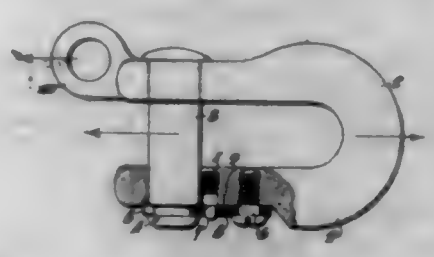
1,299,017. METAL AND ITS MANUFACTURE. ALADAR PACZ, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed May 25, 1914. Serial No. 840,721. 17 Claims. (Cl. 176—132.)

1. An agglomeration for use in the manufacture of tungsten bodies consisting of a mixture of substantially pure tungstens derived from different chemical compounds of tungsten.

3. The process of producing tungsten and like metal bodies having the property of retaining to a high degree their original characteristics when subjected to severe physical stresses which consists in agglomerating metals of substantially the same chemical composition but differing in molecular physical characteristics and then mechanically working the bodies so formed.

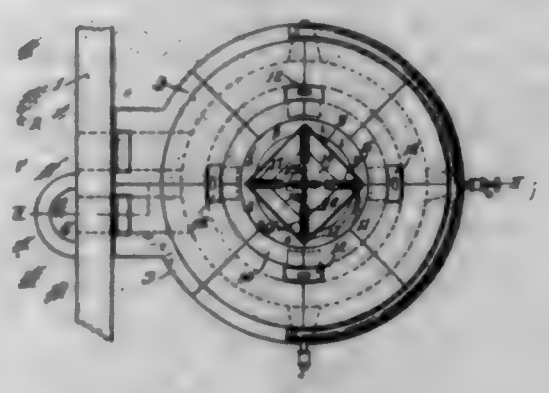
17. An electric incandescent lamp composed of tungsten containing substantially no non-metallic material or other metal, and capable of continued use without becoming substantially brittle.

1,299,018. CLEVIS. NELS PEARSON, Vancouver, British Columbia, Canada, assignor to Oscar Lindgren, Vancouver, British Columbia, Canada. Filed Jan. 10, 1919. Serial No. 270,555. 3 Claims. (Cl. 24—241.)



2. A main line clevis, comprising in combination, a bent shackle having eyed ends, a headed shackle pin, the end of which opposite the head has a circumferential groove outside the shackle eye, a retaining hook adapted to fit the circumferential groove of the shackle pin and pivotally mounted on the shackle to turn in the plane of the outer side of the shackle eye, a shouldered retaining pin inserted in an aperture in the shackle and adapted to pass into an aperture in the hook member and positively retain that member in the position for securing the pin against displacement, and a spring pressing the retaining pin outward.

1,299,019. APPARATUS AND PROCESS FOR DRAWING GLASS. ROGER S. PEASE, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 5, 1915. Serial No. 32,364. 15 Claims. (Cl. 49—17.1.)



1. In combination in a glass drawing apparatus, means for drawing a glass tube from a body of molten glass, and means for forming it into a polygonal tube comprising a plurality of forming members engaging the walls of the tube at spaced points only and adapted to flatten the said walls as the tube is drawn past the forming members.

11. In combination in a glass drawing apparatus, means for drawing a glass tube from a body of molten glass, means for forming it into a polygonal tube comprising a plurality of spaced forming members engaging the walls of the tube at remote points only and adapted to flatten the said walls as the tube is drawn past the forming members, and means for varying the relative position of the flattening members with respect to the surface of the molten glass.

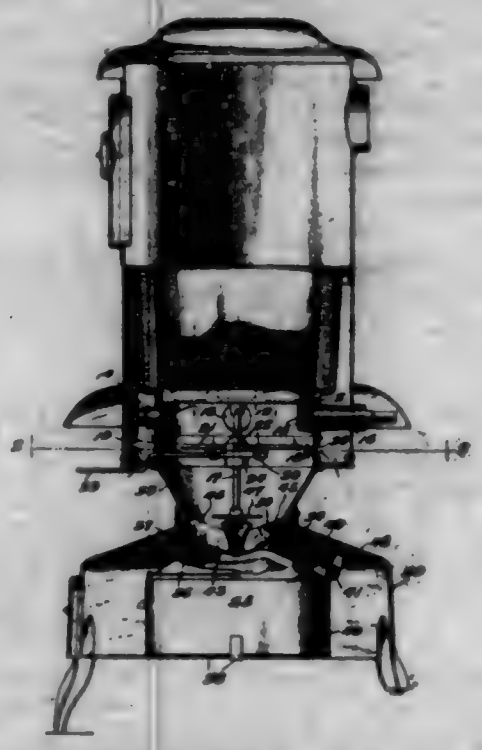
12. In combination in a glass drawing apparatus, means for drawing a glass tube from a body of molten glass,

means for forming it into a polygonal tube comprising a plurality of forming members engaging the walls of the tube at remote points only and adapted to flatten the said walls before the glass has become set and as the tube is drawn past the forming members, and a shield for regulating the temperature of the glass adjacent the forming members.

13. The herein described process of forming window glass, which consists in drawing from a body of molten glass a glass tube and then in forming the tube into a polygonal tube by drawing it over a plurality of stretching members engaging the walls of the tube at separate remote points only to flatten the glass between such points before the glass in the tube sets.

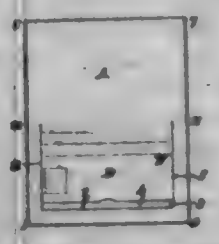
15. In combination in a glass drawing apparatus, means for drawing a glass cylinder from a body of molten glass, and means for forming the cylinder into a polygonal tube comprising a plurality of spaced forming members engaging the walls of the cylinder at remote points only and adapted to flatten the walls thereof extending between the forming members as the tube is drawn past the said forming members.

1,299,020. STOVE. WILLIAM EATON PERRYCLEAR, Savannah, Ga., assignor of one-half to Luther W. High, Wilson, N. C. Filed Mar. 18, 1918. Serial No. 222,141. 13 Claims. (Cl. 126—163.)



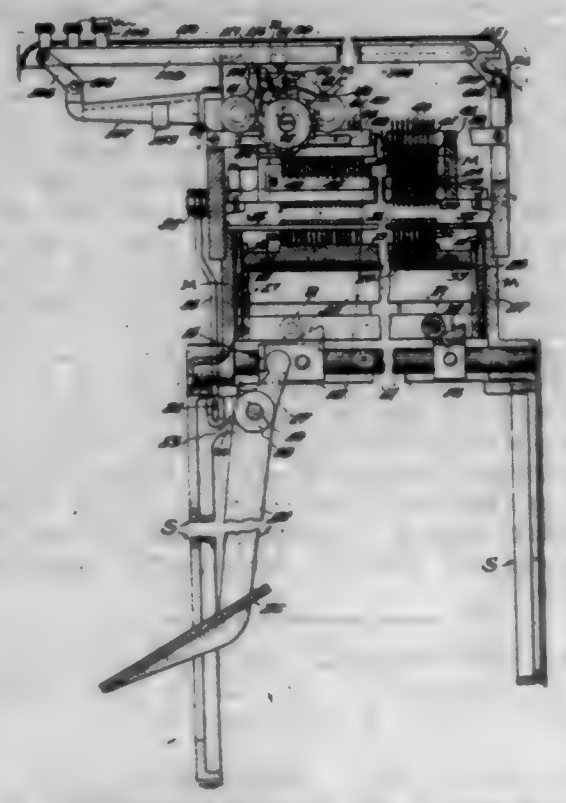
1. A grate comprising outer and inner concentric rotatably mounted sections and means for rotating said sections either independently or together; said means consisting of an oscillating, longitudinally movable lever and means on the grate sections for engaging and adapting said lever in one position to rotate said sections simultaneously and in another position to rotate one section independently of the other.

1,299,021. LETTER-CARD AND THE LIKE HAVING AN OPENING DEVICE. LÉON PLANCHE, Paris, France, assignor to Louis Charles Mauger, Rouen, France. Filed Feb. 22, 1915. Serial No. 10,061. 3 Claims. (Cl. 229—92.1.)



1. A letter card consisting of a rectangular sheet folded at its middle, one of the halves having parallel weakened lines for tearing which extend continuously from a point of the fold to another point of the fold following the two edges of said half adjacent to the fold and the edge opposite to this fold, and the other half of the latter card being free from means for tearing.

1,299,022. PERFORATING-MACHINE. JAMES POWERS, New York, N. Y., assignor to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 18, 1916. Serial No. 71,819. 38 Claims. (Cl. 164—112.)



1. In a perforating machine, the combination with a frame, of a plurality of rows of settable pins, a carriage disposed to move transversely of said settable pins, a single row of setting pins on said carriage adapted successively to register with the several rows of settable pins, means for actuating said setting pins, the settable pins being moved and set by said setting pins when the setting pins are actuated, a pin box, means for vertically reciprocating said pin box, a plurality of punches carried by said pin box, and a card support on said pin box, the punches of said pin box being actuated by the actuated settable pins when said pin box is raised thereby to perforate a card supported on said card support.

8. In a perforating machine, the combination with a plurality of punches, of a plurality of settable pins for obstructing the path of movement of the punches designed to perforate, there being recesses in the sides of said settable pins, cam faces adjacent to said recesses, locking plates, lugs on one of the faces of said plates to be engaged by the cam faces of the recesses of those settable pins which are set, means for normally maintaining the plates in a position where the lugs are in the path of movement of said settable pins, and means for releasing said plates thereby to permit the settable pins to be retracted.

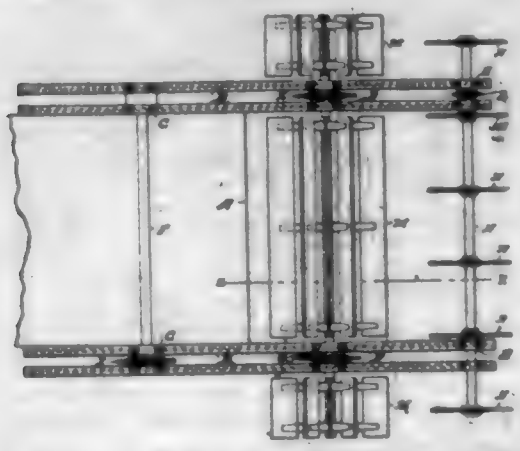
13. In a perforating machine, the combination with a frame, of a plurality of rows of settable pins, a carriage disposed to travel transversely of said settable pins, a single row of setting pins on said carriage corresponding to a row of settable pins, a stationary keyboard having a plurality of keys corresponding in number to the number of setting pins, and means for operatively connecting said keys with said setting pins only while said setting pins are positioned above the several rows of settable pins.

28. In a perforating machine, the combination with a frame, of a plurality of rows of settable pins, a carriage disposed to travel transversely of said settable pins, a single row of setting pins on said carriage corresponding to a row of settable pins, a stationary keyboard having a plurality of pins corresponding in number to the number of setting pins, means for operatively connecting said

keys with said setting pins while said setting pins are successively positioned above the several rows of settable pins, a bearing on said frame, a rod slidably mounted in said bearing and extending parallel to the path of movement of said carriage, one end of which may be disposed to limit or obstruct the movement of said carriage so that the row of setting pins may be moved into registration with certain rows of settable pins, there being graduations on said rod, and a pin resiliently mounted in such bearing to engage said graduations whereby said rod may be set in any of a series of predetermined positions to limit the movement of said carriage.

38. In a perforating machine, the combination of a plurality of rows of settable pins; a plurality of rows of punches; means for actuating the punches into engagement with the settable pins, whereby punching may be effected; a carriage above said settable pins and adapted to move step-by-step into association with the successive rows of settable pins; a single row of setting pins carried on the carriage and adapted to register with successive rows of settable pins, and to move and set the registering setting pin; a set of keys, each key corresponding to a setting pin; said keys being adapted to remain disconnected from the setting pins as the setting pins move from registry with one row of setting pins to another; key operated means operatively connecting each key with the corresponding setting pin; means for propelling said carriage in one direction step-by-step; means for anchoring said carriage against movement; a skip key mechanism for releasing said anchoring means so the carriage may travel free.

1,299,023. ICE-BREAKER. THOMAS L. PRATI and RAY BIAGINI, Charleroi, Pa. Filed May 3, 1918. Serial No. 232,395. 1 Claim. (Cl. 114—42.)



An ice breaking device, consisting of a suitable frame attached to a boat, said frame being provided with bearings C, D, and E; a main driving-shaft journaled in the bearings C, an intermediate shaft journaled in the bearings D, and an auxiliary shaft journaled in the bearings E; sprocket-wheels carried on said shafts, which are adapted to be rotated by means of sprocket-chains, heavy paddle-wheels carried on the shaft G, and a series of circular saws carried on the auxiliary shaft H; said saws being adapted to cut the ice and the paddle-wheels for breaking the same up, all substantially as and for the purposes shown and described.

1,299,024. STOCK-QUOTATION PROJECTOR. BARTON A. PROCTOR, New York, N. Y., assignor to Henry C. Meyer, Brooklyn, N. Y. Filed Mar. 23, 1918. Serial No. 224,145. 5 Claims. (Cl. 88—24.)

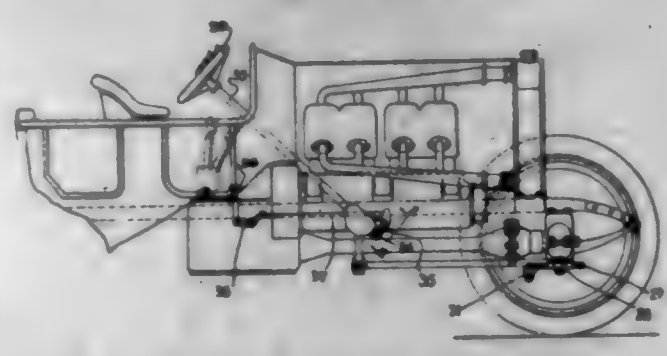
1. A stock quotation projector comprising in combination, a vertical cabinet, a closed box contained therein, an open ventilating passage extending vertically through the cabinet and including the closed box, a tape guide, a tape feeding mechanism and a source of light all contained within the said box, a lens in the wall of the box for enlarging and projecting the reflected images of printed characters on the tape out through the wall of the box and reflecting surfaces for projecting such images onto a surface from which they may be read by bystanders.

2. In a stock quotation projector, the combination with a tape guide and means for throwing the images of the printed quotations onto a surface from which they may be read, of a motor mechanism for feeding the tape through the guide, a lever bearing on the tape and an escapement device controlling the motor and adapted to be brought into operation to stop the motor when the tension on the tape increases and raises said lever, whereby the progress of the tape will be in proportion to the rate at which it issues from a ticker mechanism.



5. A stock quotation projector, comprising, in combination, a case, a closed box therein, a ventilating passage from the bottom to the top of the case including the closed box, a tape guide, tape feeding mechanism, and lamps contained in the closed box and a projecting lens in the wall of said box.

1,299,025. AUTOMOBILE STEERING MECHANISM. MARTIN PSIK, Chicago, Ill. Filed Aug. 25, 1916. Serial No. 116,856. 5 Claims. (Cl. 180—43.)



1. In an automobile steering mechanism, means for transmitting propelling power to the steering wheel continuously during the angular movement thereof, embracing in combination, a power driven shaft, pivotally mounted steering wheels, a gear rigid with each wheel, a pair of slidably mounted bevel gears at each end of said shaft, one or both of same continuously engaging said gear rigid with the wheel, a bevel pinion slidably mounted at each end of said shaft, rotated by said shaft, and maintained in fixed relative position to said bevel gears for transmitting power thereto.

2. In an automobile steering mechanism, means for continuously transmitting propelling power to the steering wheel during the pivotal angular movement of same, including in combination, a power driven shaft, pivotally mounted steering wheels, a slidable block at each end of said shaft, a pair of bevel gears mounted on said block, a bevel pinion slidably mounted at each end of said shaft, rotated by said shaft and maintained in fixed relative position to said bevel gears for transmitting power thereto, and a gear rigidly connected with each wheel and propelled by both or either one of said bevel gears.

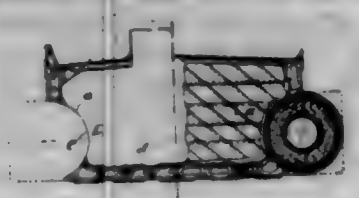
3. In an automobile steering mechanism, means for continuously transmitting propelling power to the steering wheel during the pivotal angular movement of same, including in combination, a power driven shaft, pivotally

mounted steering wheels, a slidable block at each end of said shaft, a pair of bevel gears mounted on said block, a bevel pinion slidably mounted at each end of said shaft, rotated by said shaft and maintained in fixed relative position to said bevel gears for transmitting power thereto, and a gear rigidly connected with each wheel, and means for constantly maintaining said gear mounted on each wheel in engagement with both or either one of said bevel gears.

4. In an automobile steering mechanism, the combination with a power driven cross drive shaft, of a bevel pinion slidably mounted at each end of said shaft, a slidable block movable with each bevel pinion, a pair of oppositely rotatable bevel gears carried by said block and constantly engaging said bevel pinion, a frame, steering knuckles pivotally mounted on said frame, wheels mounted on said knuckles, a drive gear rigid with each wheel, and means for maintaining one or both of said gears in constant engagement with said gear rigid with each wheel.

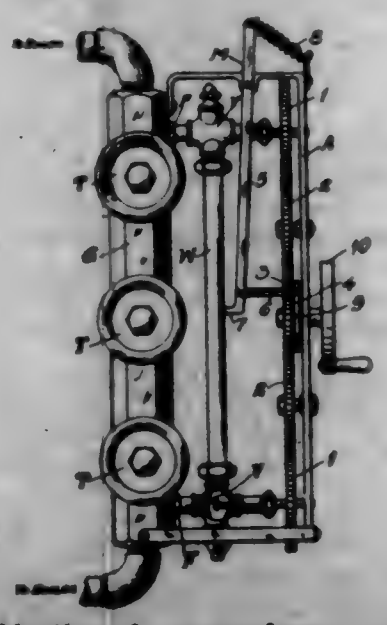
5. In an automobile steering mechanism, means for transmitting propelling power to the steering wheel continuously during the angular movement thereof, embracing in combination, a power driven shaft, pivotally mounted steering wheels, a gear rigid with each wheel, a pair of movably mounted bevel gears at each end of said shaft, one or both of same continuously engaging said gear rigid with the wheel, a bevel pinion slidably mounted at each end of said shaft, rotated by said shaft, and maintained in fixed relative position to said bevel gears for transmitting power thereto.

1,299,026. PROTECTING STRUCTURE FOR SHIPS. UMBERTO PUGLIESE, Rome, Italy. Filed July 5, 1917. Serial No. 178,780. 4 Claims. (Cl. 114—12.)



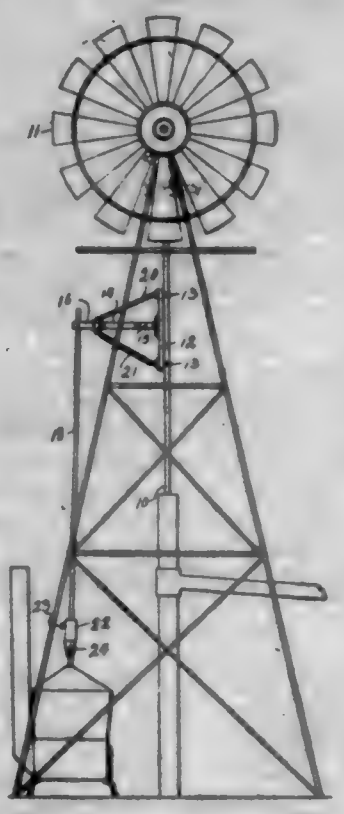
4. In protecting means for vessels, the combination, with a ship's hull, having concave recesses extending lengthwise exteriorly thereof, of a fluid containing outer cylindrical shell seated in each recess, and an inner shell inclosed by each outer shell, in spaced relation therewith, the inner shell containing compressible shock absorbing material, and being more susceptible to rupture than the outer shell.

1,299,027. WATER-GAGE. MICHEAL W. RADKE, San Bernardino, Calif. Filed May 25, 1918. Serial No. 236,610. 3 Claims. (Cl. 73—54.)



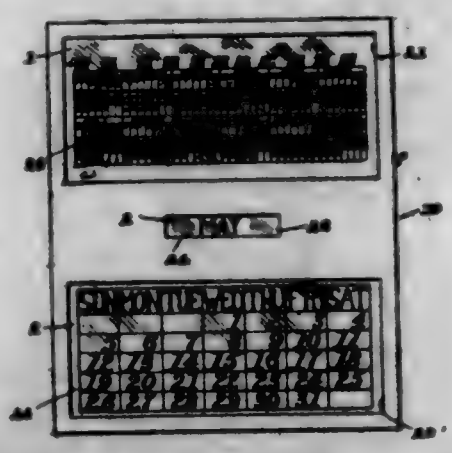
1. The combination of a gage-column, a water glass in communication therewith at opposite ends and valves for controlling the communications between the water glass and the gage-columns; of a frame carried by the gage-column, a driving member supported by the frame between the valves and operatively connected therewith for closing the valves, a rod pivotally supported intermediate its length with the frame and having an end portion adapted to contact with the glass, said end portion being provided with a lateral extension engaging the driving member for holding said member against operation when the rod is in contact with the glass, and a spring secured to the opposite end portion of the rod and to the frame for disengaging the lateral extension of the rod from the driving member upon breaking of the glass to permit the driving member to close the valves.

1,299,028. POWER-TRANSMITTING ATTACHMENT FOR WINDMILLS. PAUL A. RECORDS, Ochiltree, Tex. Filed Aug. 17, 1918. Serial No. 250,337. 7 Claims. (Cl. 74—48.)



2. A wind-mill attachment comprising a base adapted to be detachably engaged with the piston rod of a wind-mill, an arm extending from the base, a pitman having pivotal engagement with the extremity of the arm, and means yieldingly resisting upward movement of the arm relative to the base.

1,299,029. CALENDAR. HUGH T. REED, Chicago, Ill. Filed June 20, 1918. Serial No. 240,924. 4 Claims. (Cl. 40—122.)



3. In a calendar of the character described, the combination with a calendar pad, of a casing therefor, a cover having an opening registering with the pad, a pane covering said opening and having perforations out of line therewith, a frame having an opening registering with the

opening in the cover and perforations registering with the perforations in the pane, and solder in said perforations in the pane and frame for securing them to the cover.

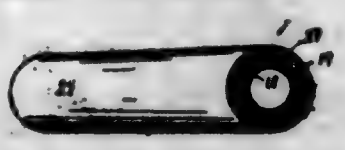
1,299,030. DISTANCE-FINDER FOR CAMERAS. FRANK C. REYNOLDS, Columbus, Ohio, assignor to John B. Moore, Columbus, Ohio. Filed Apr. 3, 1915. Serial No. 18,996. 2 Claims. (Cl. 88—1.5.)



1. The combination in a distance finder including a camera frame and a fixed bracket thereon, a second bracket pivoted on the first bracket and capable of horisontal adjustment, a housing and a weighted pendulum pivoted therein and the pivotal support for the pendulum connecting the housing and second bracket, a scale in the housing, and a needle on the pendulum coacting with the scale, whereby the position of the finder may be adjusted.

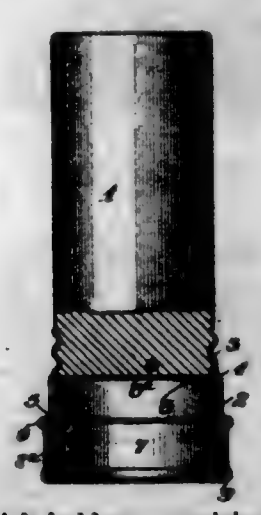
2. The combination with a camera and an image finder carried thereby having an indicator, of a distance finder including an angle bracket secured on the camera, a second bracket horizontally pivoted in the first for adjusting the finder, a housing and a weighted pendulum pivoted therein and the pivotal support for the pendulum connecting the housing and second bracket, a scale in the housing, and a needle on the pendulum coacting with the scale.

1,299,031. FIBER CONTAINER. RICHARD SAMUEL REYNOLDS, Louisville, Ky. Filed Oct. 12, 1918. Serial No. 257,832. 14 Claims. (Cl. 93—94.)



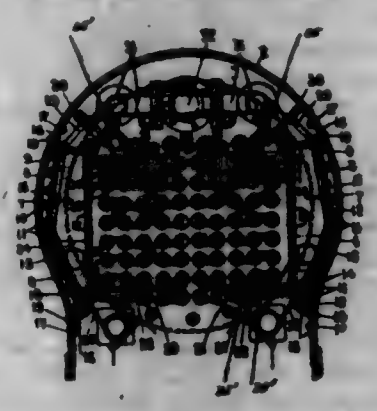
2. In a cylindrical receptacle, a plurality of adherent spirally wound strips forming a tube of even diameter throughout its length and an outer convolute layer adherent to and covering substantially the entire surface of said tube.

1,299,032. SHAVING-STICK HOLDER. WILLARD G. RICH, Rochester, N. Y. Filed June 7, 1918. Serial No. 238,658. 3 Claims. (Cl. 206—56.)



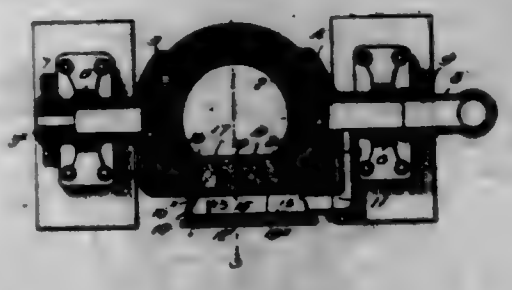
1. A shaving stick holder comprising a tubular member having substantially straight side walls and provided with an upper end of inner diameter forming an annular shoulder and provided with an interior screw thread, an inner cup-shaped member slipping within the interior of the tubular member and limited in its inward movement by engagement with said shoulder, and having a bottom closing the outer member at the bottom of the screw thread, said members having an interlocking engagement at their lower ends to prevent withdrawal of the inner member.

1,299,033. STEAM-SUPERHEATER. JOHN GEORGE ROBINSON, Manchester, England. Filed Aug. 9, 1915. Serial No. 44,588. 2 Claims. (Cl. 122—462.)



1. The combination, with a boiler having fire-tubes and a smokebox, said smokebox having an opening in its side wall, of a header arranged in the smoke box and provided with an extension having a fastening flange which is secured to the smokebox around its said opening and which forms the main portion of a dead air chamber, superheater pipes secured in holes in the inner side of the said header and extending within the boiler fire-tubes, said header having openings in its outer side opposite the ends of the superheater pipes to afford access to them, cover plates closing the said header openings and arranged in the said dead air chamber, and a closing plate for the said opening in the smokebox which completes the said dead air chamber.

1,299,034. BESSEMER CONVERTER. ALBERT ROMELAERE, South Vancouver, British Columbia, Canada. Filed Apr. 2, 1918. Serial No. 226,198. 4 Claims. (Cl. 266—36.)



1. A Bessemer converter comprising a casing, a refractory lining within the casing, said casing having a cut-away portion, a knockout section of the refractory lining disposed adjacent to said cut-away portion, a plurality of twyers carried by said knock-out section, and a wind box arranged to communicate with said twyers and having a detachable front for permitting access to the knock-out section.

1,299,035. NON-GROUNDED SPARK-PLUG. JAMES A. ROSS, St. Louis, Mo. Filed Jan. 11, 1918. Serial No. 211,851. 1 Claim. (Cl. 123—169.)

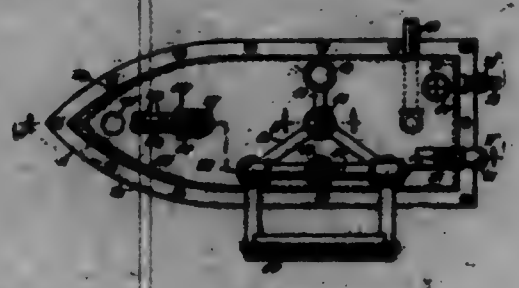
An improved spark-plug, composed of a metallic casing, a body of insulation seated in said casing and having at one end a flat extension which projects a sufficient distance to act as a shield and brace for the terminals of the plug; metallic terminal caps set on opposite sides of said extension and provided with suitable terminal clamps to receive the magneto or battery wires; and

two opposite point wires embedded in said insulation and extending through the same from end to end, said having ends which project beyond the ends of said body of insulation, and form at one end spark-points, the opposite ends of said wires being connected to said terminal-caps



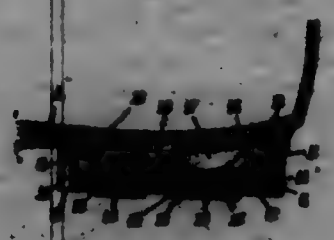
on opposite sides of the said extension of said body of insulation, and the said wires being provided with circular bends or kinks intermediate of their ends, to prevent their withdrawal from said insulation in which they are embedded.

1,296,036. PRESSING APPARATUS. HYMAN ROSENAGLE, New York, N. Y. Filed Sept. 6, 1916. Serial No. 119,185. 1 Claim. (Cl. 68—8.)



In a pressing apparatus, a pressure head with a hollow body partitioned to provide a water chamber for generating steam as well as providing a heating chamber under the water chamber, an auxiliary chamber under the heating chamber for receiving steam from the water chamber and the auxiliary chamber having a series of outlets for the distribution of the steam, a pipe leading from a source of water supply to the water chamber, a valve-controlled pipe leading from the water chamber to the auxiliary chamber for conveying steam, a heater in the heating chamber, and a valve-controlled perforated pipe adjustably arranged on the water chamber so as to protrude from the body of the pressure head.

1,296,037. RESILIENT HEEL FOR FOOTWEAR. ARTHUR L. RUTTAN, Omaha, Nebr. Filed Oct. 18, 1917, Serial No. 197,378. Renewed Dec. 31, 1918. Serial No. 268,176. 4 Claims. (Cl. 36—30.)



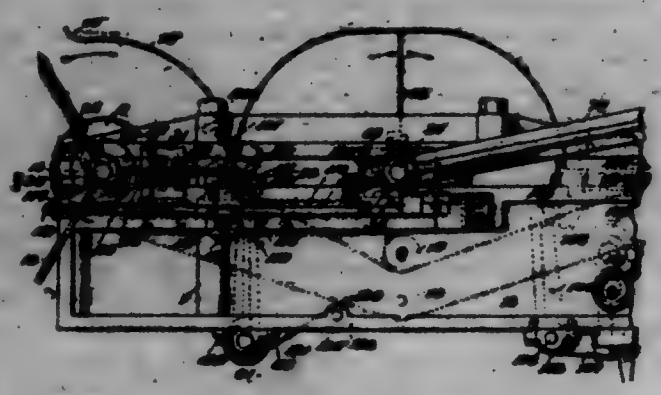
1. A resilient heel having an opening enlarged at the upper portion, and a cuff fitted in the opening and having an enlarged upper resilient portion provided with pneumatic cushion forming means, the lower portion of the cuff being relatively inelastic and guided in the lower portion of the opening.

1,296,038. METHOD OF INSERTING HAT-LININGS. ISIDOR SYRACK, Brooklyn, and LOUIS WOLF, New York, N. Y., assignors to Isidor Syrack, Louis Wolf, and Solomon Lewis, Copartners doing business as National Hat Lining Company, New York, N. Y. Filed July 22, 1917. Serial No. 182,149. 4 Claims. (Cl. 2—118.)



1. The method of inserting hat linings in hats consisting of fastening an adhesive band between the lining and the head-rim of the hat, and applying means thereto to cause the lower portion of the lining and the head-rim to adhere to it.

1,296,039. MACHINE FOR TURNING, READING, AND PRESSING CUFFS, COLLARS, AND THE LIKE. GEORGE A. SAGUE, Albany, N. Y. Filed May 25, 1916. Serial No. 99,367. 60 Claims. (Cl. 223—55.)



1. In a machine of the class described, means for turning a cuff, collar or like work and simultaneously bending an edge thereof, means for pressing the work, and means for delivering the work from the turning means to the pressing means.

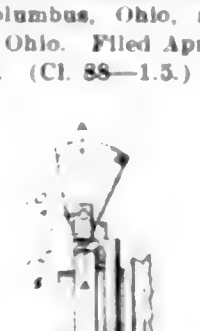
1,296,040. SPARK-PLUG. EDMUND O. SAUBERT, Berkeley, Calif. Filed July 6, 1917. Serial No. 178,959. 1 Claim. (Cl. 123—169.)



A device of the character described including a shell, a ground electrode connected thereto, a porcelain mounted upon the shell and provided with a recess, a main electrode mounted upon the porcelain, a neutral electrode carried by the porcelain in alignment with the main and ground electrodes and provided with a crimped upper terminal received within said recess, a filler within said recess and engaging the said crimped terminal for rigidly connecting the neutral electrode with the porcelain.

opening in the cover and perforations registering with the perforations in the pane, and solder in said perforations in the pane and frame for securing them to the cover.

1,299,030. DISTANCE-FINDER FOR CAMERAS. FRANK C. REYNOLDS, Columbus, Ohio, assignor to John B. Moore, Columbus, Ohio. Filed Apr. 3, 1915. Serial No. 18,996. 2 Claims. (Cl. 88—1.5.)



1. The combination in a distance finder including a camera frame and a fixed bracket thereon, a second bracket pivoted on the first bracket and capable of horizontal adjustment, a housing and a weighted pendulum pivoted therein and the pivotal support for the pendulum connecting the housing and second bracket, a scale in the housing, and a needle on the pendulum coacting with the scale, whereby the position of the finder may be adjusted.

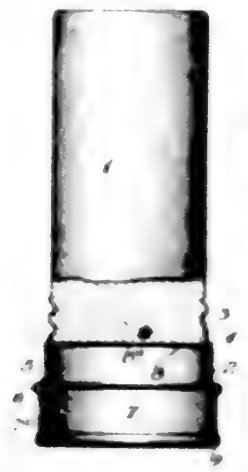
2. The combination with a camera and an image finder carried thereby having an indicator, of a distance finder including an angle bracket secured on the camera, a second bracket horizontally pivoted in the first for adjusting the finder, a housing and a weighted pendulum pivoted therein and the pivotal support for the pendulum connecting the housing and second bracket, a scale in the housing, and a needle on the pendulum coacting with the scale.

1,299,031. FIBER CONTAINER. RICHARD SAMUEL REYNOLDS, Louisville, Ky. Filed Oct. 12, 1918. Serial No. 257,832. 14 Claims. (Cl. 93—94.)



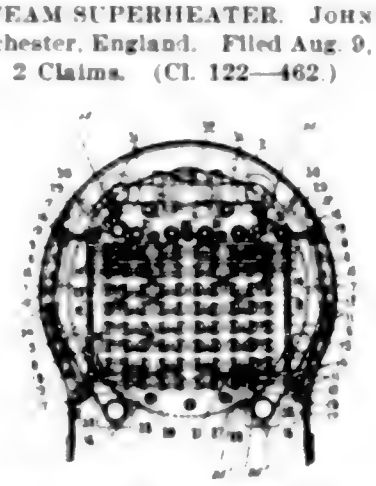
2. In a cylindrical receptacle, a plurality of adherent spirally wound strips forming a tube of even diameter throughout its length and an outer convolute layer adherent to and covering substantially the entire surface of said tube.

1,299,032. SHAVING-STICK HOLDER. WILLARD G. RICH, Rochester, N. Y. Filed June 7, 1918. Serial No. 238,658. 3 Claims. (Cl. 206—56.)



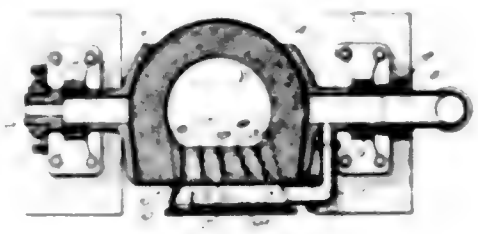
1. A shaving stick holder comprising a tubular member having substantially straight side walls and provided with an upper end of lesser diameter forming an annular shoulder and provided with an interior screw thread, an inner cup-shaped member slipping within the interior of the tubular member and limited in its inward movement by engagement with said shoulder, and having a bottom closing the outer member at the bottom of the screw thread, said members having an interlocking engagement at their lower ends to prevent withdrawal of the inner member.

1,299,033. STEAM SUPERHEATER. JOHN GEORGE ROBINSON, Manchester, England. Filed Aug. 9, 1915. Serial No. 44,588. 2 Claims. (Cl. 122—462.)



1. The combination, with a boiler having fire-tubes and a smokebox, said smokebox having an opening in its side wall, of a header arranged in the smoke box and provided with an extension having a fastening flange which is secured to the smokebox around its said opening and which forms the main portion of a dead air chamber, superheater pipes secured in holes in the inner side of the said header and extending within the boiler fire-tubes, said header having openings in its outer side opposite the ends of the superheater pipes to afford access to them, cover plates closing the said header openings and arranged in the said dead air chamber, and a closing plate for the said opening in the smokebox which completes the said dead air chamber.

1,299,034. BESSEMER CONVERTER. ALBERT ROMMELAERE, South Vancouver, British Columbia, Canada. Filed Apr. 2, 1918. Serial No. 226,198. 4 Claims. (Cl. 266—36.)

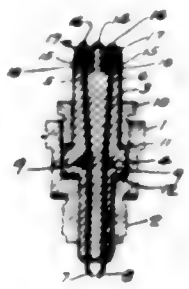


1. A Bessemer converter comprising a casing, a refractory lining within the casing, said casing having a cut-away portion, a knockout section of the refractory lining disposed adjacent to said cut-away portion, a plurality of twyers carried by said knock-out section, and a wind box arranged to communicate with said twyers and having a detachable front for permitting access to the knock-out section.

1,299,035. NON-GROUNDED SPARK-PLUG. JAMES A. ROSE, St. Louis, Mo. Filed Jan. 11, 1918. Serial No. 211,351. 1 Claim. (Cl. 123—169.)

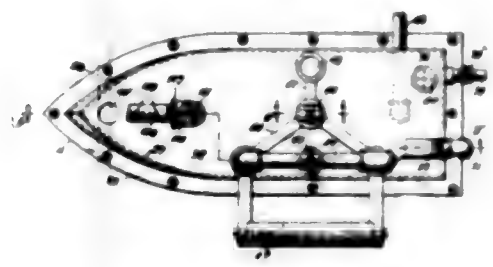
An improved spark-plug, composed of a metallic casing, a body of insulation seated in said casing and having at one end a flat extension which projects a sufficient distance to act as a shield and brace for the terminals of the plug; metallic terminal caps set on opposite sides of said extension and provided with suitable terminal clamps to receive the magneto or battery wires; and

two separate point wires embedded in said insulation and extending through the same from end to end, and having ends which project beyond the ends of said body of insulation, and form at one end spark-points, the opposite ends of said wires being connected to said terminal-caps



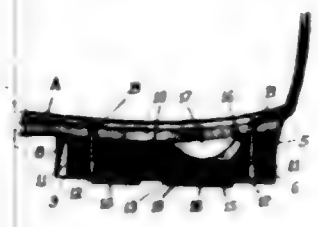
on opposite sides of the said extension of said body of insulation, and the said wires being provided with circular bends or kinks intermediate of their ends, to prevent their withdrawal from said insulation in which they are embedded.

1,299,036. PRESSING APPARATUS. HYMAN ROTNAGLE, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,185. 1 Claim. (Cl. 68—9.)



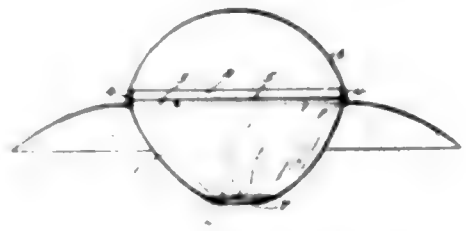
In a pressing apparatus, a pressure head with a hollow body partitioned to provide a water chamber for generating steam as well as providing a heating chamber under the water chamber, an auxiliary chamber under the heating chamber for receiving steam from the water chamber and the auxiliary chamber having a series of outlets for the distribution of the steam, a pipe leading from a source of water supply to the water chamber, a valve-controlled pipe leading from the water chamber to the auxiliary chamber for conveying steam, a heater in the heating chamber, and a valve-controlled perforated pipe adjustably arranged on the water chamber so as to protrude from the body of the pressure head.

1,299,037. RESILIENT HEEL FOR FOOTWEAR. ARTHUR L. RUNYAN, Omaha, Nebr. Filed Oct. 18, 1917, Serial No. 197,274. Renewed Dec. 31, 1918. Serial No. 269,175. 4 Claims. (Cl. 36—59.)



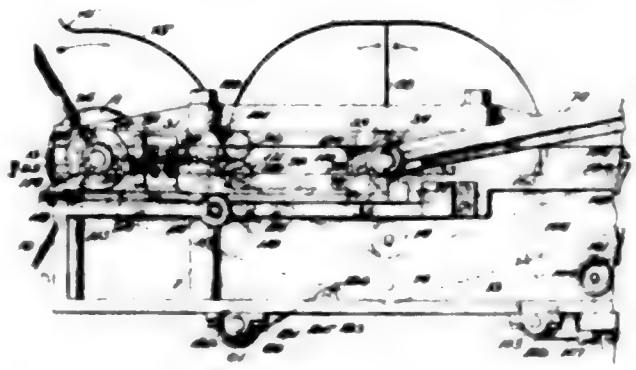
1. A resilient heel having an opening enlarged at the upper portion, and a calk fitted in the opening and having an enlarged upper resilient portion provided with pneumatic cushion forming means, the lower portion of the calks being relatively inelastic and guided in the lower portion of the opening.

1,299,038. METHOD OF INSERTING HAT-LININGS. ISIDOR RYBACK, Brooklyn, and LEON WOLF, New York, N. Y., assignors to Isidor Ryback, Leon Wolf, and Soloman Lewis, Copartners doing business as National Hat Lining Company, New York, N. Y. Filed July 23, 1917. Serial No. 182,149. 4 Claims. (Cl. 2—113.)



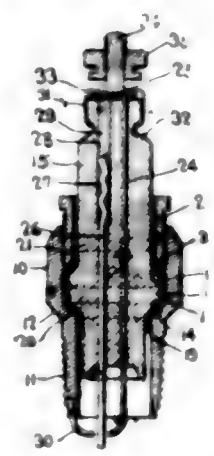
1. The method of inserting hat linings in hats consisting of fastening an adhesive band between the lining and the head-size of the hat, and applying means thereto to cause the lower portion of the lining and the head-size to adhere to it.

1,299,039. MACHINE FOR TURNING, BEADING, AND PRESSING CUFFS, COLLARS, AND THE LIKE. GEORGE A. SAGER, Albany, N. Y. Filed May 25, 1916. Serial No. 99,867. 60 Claims. (Cl. 223—55.)



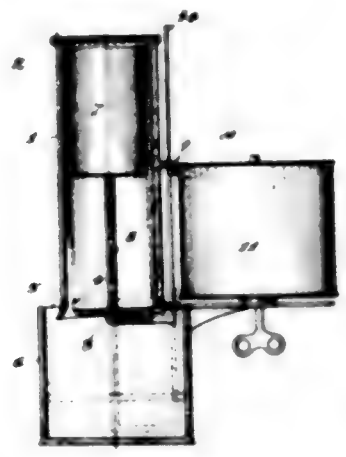
1. In a machine of the class described, means for turning a cuff, collar or like work and simultaneously beading an edge thereof, means for pressing the work, and means for delivering the work from the turning means to the pressing means.

1,299,040. SPARK-PLUG. EDMUND O. SATHER, Berkeley, Calif. Filed July 6, 1917. Serial No. 178,959. 1 Claim. (Cl. 123—169.)



A device of the character described including a shell, a ground electrode connected thereto, a porcelain mounted upon the shell and provided with a recess, a main electrode mounted upon the porcelain, a neutral electrode carried by the porcelain to coöperate with the main and ground electrodes and provided with a crimped upper terminal received within said recess, a filler within said recess and engaging the said crimped terminal for rigidly connecting the neutral electrode with the porcelain.

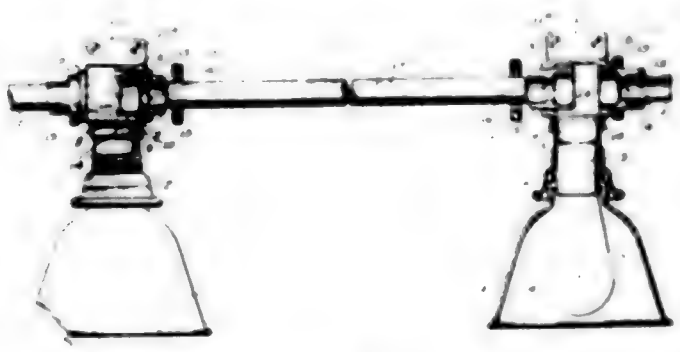
1,299,041. **RECORDING-EVAPOROMETER.** DETALMO DI BRAZZA SAVORGNAN, S. Margherita, Italy. Filed Nov. 1, 1916. Serial No. 128,844. 6 Claims. (Cl. 234—10.)



1. An evaporometer of the type set forth, comprising a liquid container; an inverted vessel mounted above said container in such a way that its bottom edge dips into the liquid in the container; and a float inclosed in said vessel and provided with a recording rod that extends freely around the lower edge of said vessel.

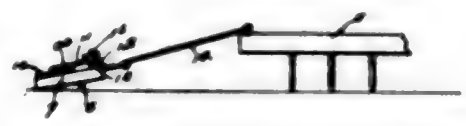
6. An evaporation-measuring apparatus including a reservoir containing liquid the rate of evaporation of which is to be measured, said reservoir being open at its mouth portion to permit access of the atmosphere to the liquid and evaporation thereof; an inverted vessel containing some of said liquid and having its lower end inserted in the mouth portion of said reservoir and normally dipping slightly into the liquid therein and formed with an opening for the passage of air into said vessel and of liquid therefrom into said reservoir, said opening being momentarily sealed against the admission of air to said vessel through the mouth portion of said reservoir by the liquid in the same into which the lower end of said vessel dips and being arranged to be unsealed by the fall of the level of the liquid in the mouth portion of said reservoir due to the evaporation loss therefrom and thereupon to permit the ingress of air to said vessel and the flow of liquid through said opening from said vessel into said reservoir and to renew momentarily the liquid seal of said opening; a buoyant member fitted to float in the liquid in said vessel; and means for measuring the fall of said buoyant member.

1,299,042. **FIXTURE.** LINDSLEY SCHERMERHORN, Hasbrouck Heights, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Nov. 3, 1916. Serial No. 129,259. 3 Claims. (Cl. 247—12.)



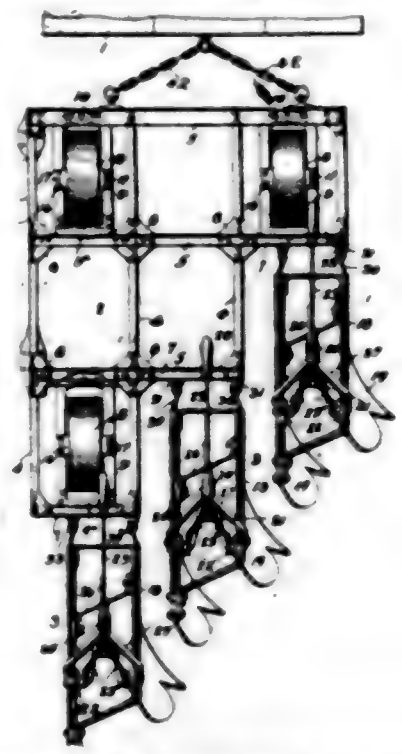
3. In combination with a plurality of junction-boxes and means for securing the same in spaced-apart relation, a conduit for connecting the boxes, and coupling means between the boxes and the conduit including a plurality of rotary devices capable of right-line movements during their rotation, whereby to join the boxes and the conduit, and means for locking the rotary devices from right-line movement.

1,299,043. **DRAG ATTACHMENT FOR HARROWS.** CHARLES D. SCHREIBER, Yellowstone Park, Wyo. Filed Dec. 11, 1917. Serial No. 206,623. 4 Claims. (Cl. 55—22.)



3. A drag attachment for harrows consisting of a beam, plates loosely connected at corresponding ends with the beam and adapted at their opposite ends for connection with a harrow, spring means normally urging said plates and beam apart, and means for adjusting said plates against the tendency of said spring means to regulate the depth of cut of the beam.

1,299,044. **ENGINE GANG PLOW.** MAX SKLOVSKY, Moline, Ill., assignor to Deere & Company, a Corporation of Illinois. Filed Dec. 3, 1908. Serial No. 465,875. 8 Claims. (Cl. 97—67.)



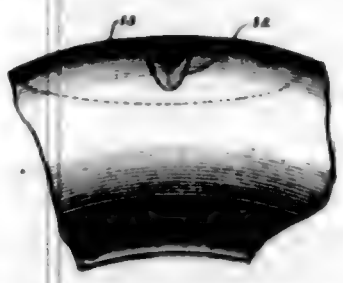
1. In a gang plow, the combination of a draft frame, a series of plow beams each having a body at its rear end and a hinge at its front end, the beam being rigid from the body to the hinge and the hinge being vertically but adjustably fixed directly on the frame, and held by it after adjustment at fixed distance from the ground, and being independent of the hinges of the other beams, means mounted on the frame for vertically adjusting each hinge independently of the others while the frame and the bodies are in motion to vary and fix the line of draft of the body while moving, a pressure and depth regulating wheel carried by the beam and situated adjacent to the body, and means for varying and fixing the relative position of said wheel to correspond to the varying positions of the beam hinge, said parts being constructed and arranged as described whereby each beam and its body independently of the others can be bodily raised or lowered at both the front end and the rear end of the beam while in operation to maintain proper relations between the line of draft and the suction of the body.

7. In a gang plow of the class set forth, the combination of a main draft frame, a series of individual beams, one or more plow bodies secured to each beam, a pair of relatively widely spaced couplings between each of the individual beams and the main frame, each of said couplings comprising a draft member rigidly supported from the main frame and movable up and down relative thereto

and means for adjusting said members up and down, a ground wheel movably mounted on each individual beam, and means for raising and lowering said ground wheel relative to its beam, said frame being pivoted directly to the draft members, whereby the raising and lowering of the ground wheel lowers and raises the plow body or bodies.

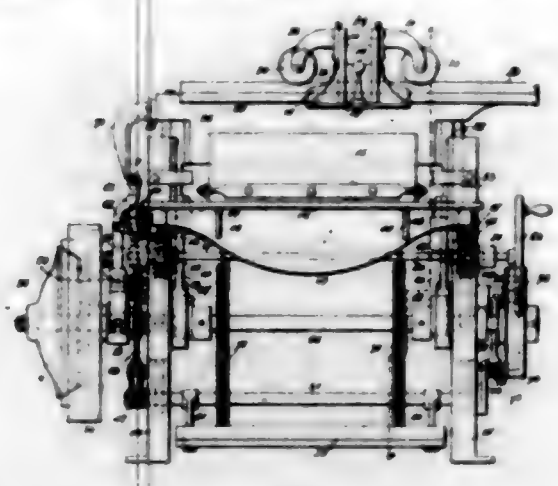
8. In a gang plow of the class set forth, the combination of a main draft frame, a series of individual beams, one or more plow bodies secured to each beam, a pair of relatively widely spaced couplings between each individual beam and the main frame, each of said couplings comprising a bracket rigidly secured to the main frame, a vertical screw spindle rotatably mounted to slide vertically relative to the bracket and a nut on the spindle engaging the clevis, a ground wheel movably mounted on each individual beam, and means for raising and lowering each ground wheel in relation to its beam, said beam being pivoted directly to the clevices, whereby the raising and lowering of the ground wheel lowers and raises the plow body or bodies.

1,299,045. EXPANSIBLE CORE FOR VULCANIZING TIRES. JOHN PAUL SMITH, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Aug. 8, 1917. Serial No. 185,155. 4 Claims. (Cl. 18—45.)



1. An expansible core for curing tires under pressure comprising an annular inflatable bag, of rubber and fabric, a permanent depression formed in the surface of the bag during curing thereof and a shield to cover said depression.

1,299,046. DIE-PRESS. WILLIAM H. SNEESTON, Somerville, Mass., assignor to Nelson H. Seelye, Winchester, Mass. Filed June 26, 1918. Serial No. 241,928. 8 Claims. (Cl. 164—25.)



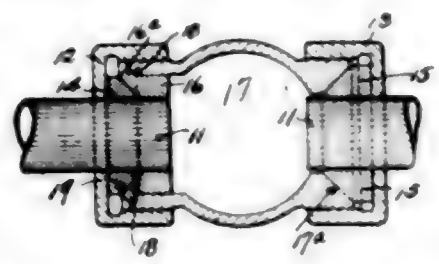
1. A dieing-out machine comprising a table for supporting the work, a horizontal beam arranged in the rear of the table and lengthwise thereof, mechanism for vertically reciprocating the beam, and an arm or hammer projecting forwardly from the beam to overlie the table, and movable bodily lengthwise of the beam.

2. A dieing-out machine comprising end standards having vertical guideways, a frame arranged to be reciprocated therein and including a horizontal beam arranged lengthwise of the machine, an arm or hammer arranged transversely of the beam and slidable lengthwise of the beam, and having a die-engaging portion projecting forwardly from the beam, and a die-block table supported by said standards in front of the beam.

5. A dieing-out machine having a table, a die block thereon on which the work may be supported, a beam in the rear of the die block, a hammer having its rear portion mounted on the beam to move lengthwise thereof, and having its die-engaging front portion projecting forwardly from the beam to overlie the die block, means under manual control for vertically reciprocating said beam, and work-guiding means located in the rear of the die block and below the beam.

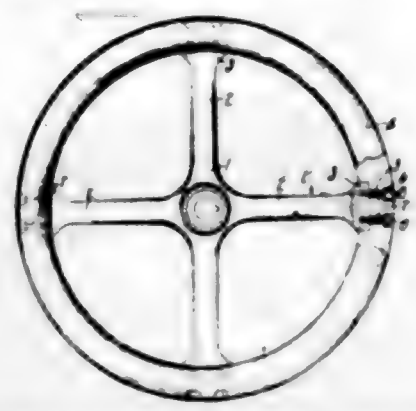
8. A dieing-out machine comprising a table, a non-oscillatory hammer projecting forwardly across said table and supported at its rear end in the rear of the table, said hammer being bodily movable only in rectilinear lines transversely of its length and longitudinally of the table, and slides located adjacent and in the rear of the ends of the table for reciprocating said hammer.

1,299,047. PIPE-COUPLING. CHARLES W. SNYDER, Altoona, Pa. Filed Nov. 21, 1918. Serial No. 263,544. 3 Claims. (Cl. 285—13.)



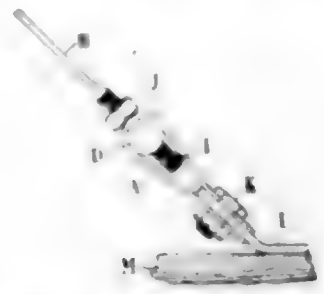
3. A pipe coupling, including a body provided at one end with an interior bevel and exterior threads, a yielding packing washer having a cone face and a clamping nut for engaging said threads and forcing the cone face of the washer against the said interior bevel, and the other end of said coupling body being formed with a relatively large opening, a filler ring adapted to fit in said opening and having means for abutting with the end of the pipe body to prevent its being pushed within the same and also having a bevel face, a resilient washer adapted to coöperate with said beveled face of the filler member, and a clamping nut for engaging the exterior of the coupling body, and also the yielding washer.

1,299,048. STEERING-WHEEL. O K SNYDER, Onaway, Mich. Filed Feb. 25, 1916. Serial No. 80,339. 2 Claims. (Cl. 74—33.)



1. The herein described method of combining a solid non-metallic rim and a spider having substantially dished arms to form a steering wheel, consisting in forming in the solid non-metallic rim a series of recesses opening through the inner surface of the rim and otherwise of solid wall limitation, forming the terminals of the spider arms to accurately correspond in size and shape to the recesses, and at right angles to the axis of the spider, arranging the spider with the formed terminals in line with the recesses, and spreading the arms of the spider to force the terminals into the recesses to completely fill the same.

1,299,049. DEVICE FOR THE ATTACHMENT OF CABLES, WIRES, AND THE LIKE UPON AIRCRAFT. THOMAS SOPWITH, Kingston-on-Thames, England, assignor to The Sopwith Aviation Company Limited, Kingston-on-Thames, England, a Corporation of Great Britain. Filed July 7, 1917. Serial No. 179,207. 4 Claims. (Cl. 189—36.)



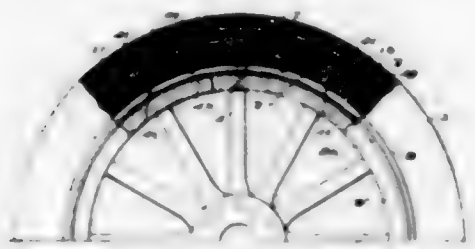
1. A device for the attachment of cables, wires, or the like upon air craft, comprising a trunnion pin, a carrier for the trunnion pin provided with means for permitting angular movement of the trunnion pin therein, and means for securing a cable, wire or the like to the trunnion pin.

1,299,050. CIGARETTE-MAKER. CHARLES GOODRICH SOUTHMAYD, Aurora, Ontario, Canada. Filed Sept. 17, 1918. Serial No. 254,450. 3 Claims. (Cl. 131—5.)



3. A cigarette maker comprising a funnel portion and a tubular portion split throughout the length of both portions with the edges of the split portion of the funnel overlapping.

1,299,051. CUSHION-TIRE. THEODORE A. SPRAGUE, Pittsburgh, Pa. Filed Dec. 16, 1916. Serial No. 137,389. 10 Claims. (Cl. 152—5.)

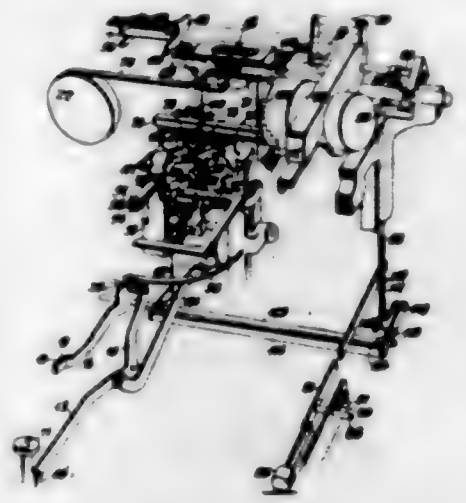


1. In a tire, a casing comprising a hollow cylindric body, and a series of transverse radially disposed partitions within the casing, the edges of the said partitions being partially separated from the casing.

6. In a tire, a filler comprising an annular member, and a series of equi-distant filler members attached to and projecting from said annular member, said filler members being recessed in their sides and equally spaced apart, said filler members having enlarged bases and enlarged outer heads, said annular member having an annular groove, and air ducts in the base of the annular member communicating with said groove.

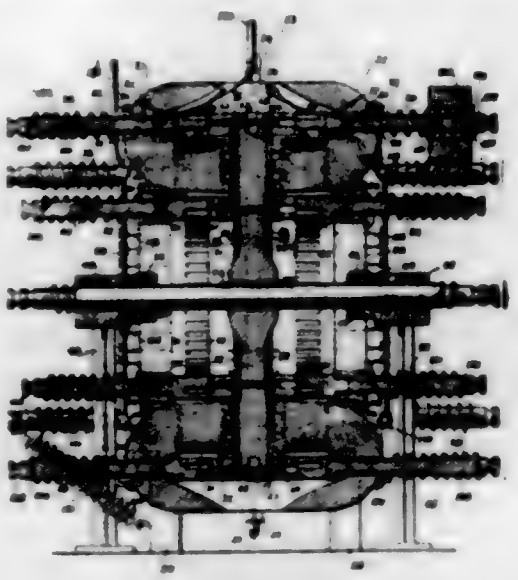
9. A tire comprising a casing having a series of inwardly projecting partitions spaced apart to accommodate filler members, and a series of outwardly projecting filler members adapted to be engaged with the casing and spaced apart to accommodate the partitions, said filler members and partitions alternating in the central part of the tire, and said filler members being recessed on their outer sides to form air spaces between adjacent partitions.

1,299,052. COMBINED TYPE-WRITING AND COMPUTING MACHINE. ANDREW W. STRIEBE, Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 30, 1916. Serial No. 87,672. 13 Claims. (Cl. 235—60.)



1. In a combined typewriting and computing machine, the combination of a carriage, a variable feed escapement for said carriage, a tabulator stop, means controlled from said tabulator stop for permitting double space letter-feed movements of the carriage at predetermined positions in its travel, computing mechanism, and means for simultaneously rendering said double-space permitting mechanism and said computing mechanism inoperative.

1,299,053. DYNAMO-ELECTRIC MACHINE. ALBERT A. E. STERZING, New York, N. Y. Filed Mar. 25, 1914. Serial No. 827,043. 27 Claims. (Cl. 171—212.)



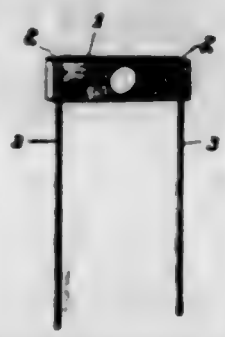
1. A dynamo-electric machine comprising a hollow annular field-magnet having relatively massive inner portions and thinner outer portions, magnetic coils intermediate of said inner and outer portions, a laterally wired discoidal armature mounted in said field-magnet with its rim projecting outwardly between the massive parts thereof beyond said coils, and axially extending brushes engaging the projecting portion of said armature.

1,299,054. PERCUSSION-FUSE. JAMES NOEL STEUART, Bayswater, London, England, assignor to G. Beaton & Son Limited, Holland Park, London, England. Filed Sept. 30, 1918. Serial No. 256,274. 6 Claims. (Cl. 102—39.)



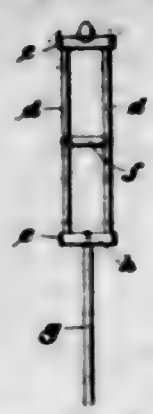
2. A percussion fuse for grenades or shells comprising a firing pin, a safety device associated with said pin which while allowing it to move a predetermined distance on shock of discharge prevents said pin coming into contact with the detonator of the fuse, means for returning the firing pin to its initial position to release the safety device to allow the said pin to perform its full firing stroke on impact with an object.

1,299,055. WICKET OR ARCH FOR PLAYING CROQUET AND THE LIKE. SYLVESTER N. STEWART, Marietta, Ohio. Filed Oct. 3, 1918. Serial No. 256,735. 5 Claims. (Cl. 46—15.)



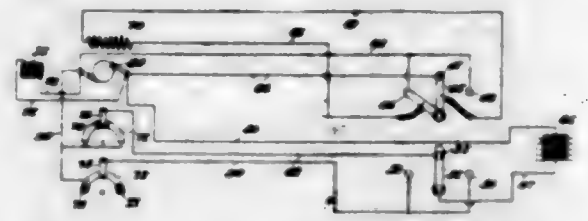
1. A wicket for playing croquet or the like consisting of a wire member having legs and a cross portion at the top thereof and a target member connecting the legs at the upper part thereof below the cross portion, substantially as described.

1,299,056. CADRE OR JUGGLER'S FRAME. SYLVESTER N. STEWART, Marietta, Ohio. Filed Oct. 5, 1918. Serial No. 257,029. 2 Claims. (Cl. 46—70.)



1. A device for use in athletic games comprising an object holder having parallel bars with pieces at the ends, a central handle between the bars and a supporting pole, substantially as described.

1,299,057. SIGNAL. EDWIN L. STORER, Tulsa, Okla. Filed Aug. 10, 1917. Serial No. 185,542. 5 Claims. (Cl. 177—337.)

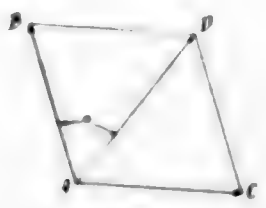


1. In a device of the character described, the combination with a movably mounted signal, electroresponsive means having operable connection therewith and adapted to move the same in either direction, a pole changing switch connected with said electroresponsive means and adapted to control the direction of the movement of the same, a main circuit including said electroresponsive means, commutators connected with said main circuit and having gaps therein adapted to open said main circuit, the gaps of each of the said commutators being spaced to open the circuit therethrough when the circuit through another of said commutators is closed, and a multi-point switch in said main circuit adapted to close the same through another one of said commutators.

2. In a device of the character described, the combination with a movably mounted signal, electroresponsive means having operable connection therewith and adapted to move the same in either direction, a pole changing switch connected with said electroresponsive means and adapted to control the direction of the movement of the same, a main circuit including said electroresponsive means, commutators connected in parallel in said main circuit and having gaps therein adapted to open said main circuit, the gaps of each of the said commutators being spaced to open the circuit therethrough when the circuit through another of said commutators is closed, a multi-point switch in said main circuit adapted to close the same through any one of said commutators, and means having operable connection with said pole changing switch and said multi-point switch, said means being adapted to operate said pole changing switch to reverse the direction of said electroresponsive means to move the signal to the desired position.

5. In a device of the character described, the combination with a movably mounted signal, electroresponsive means having operable connection therewith and adapted to move the same in either direction, a pole changing switch connected with said electroresponsive means and adapted to control the direction of the movement of the same, a main circuit including said electroresponsive means, commutators connected in parallel with each other in said main circuit and having gaps therein adapted to open said main circuit, the gaps of each of the said commutators being spaced to open the circuit therethrough when the circuit through another of said commutators is closed and so disposed that the main circuit is open through alternate commutators as the signal is moved from one end of its moves to another, a multi-point switch in said main circuit adapted to close the same through any one of said commutators, and having the contact points thereof arranged to close the circuit through said commutators in the same alternate order as said switch is moved from one end of its operable movement to the other, means having a fixed driving connection with said multi-point switch for moving the same to its various positions, and a slip driving connection between said means and said pole changing switch whereby said pole changing switch is operated to reverse the direction of said electroresponsive means upon the initial reverse movement of said means.

1,299,058. METHOD FOR DETERMINING RELATIVE SPEED OF MOVING BODIES. CARLOS A. SUNDT, Santiago, Chile. Filed Mar. 23, 1918. Serial No. 224,156. 4 Claims. (Cl. 33—1.)



1. The herein described method for determining the relative speed of two bodies which consists in determining the angular relation between the real stream lines produced only by the motion of one of the bodies relative to the other and the apparent stream lines resulting from a combination of the said real stream lines and artificial stream lines produced by an instrument mounted on one of the bodies and adapted to move in a predetermined direction at a predetermined speed, and from the angular relation between the real and apparent stream lines, and the direction and speed of said artificial stream lines determining the relative speed of the bodies.

2. The herein described method for determining the relative speed of two bodies which consists in determining the angular relation between the real stream lines produced only by the motion of one of the bodies relative to the other and the apparent stream lines resulting from a combination of the said real stream lines and artificial stream lines produced by an instrument mounted on one of the bodies and adapted to move in a predetermined direction at a predetermined speed, and from the angular relation between the real and apparent stream lines, and the direction and speed of said artificial stream lines forming a parallelogram of velocities showing the relative speed of the bodies.

3. The herein described method for determining the relative speed of two bodies which consists in determining the angular relation between the real stream lines produced only by the motion of one of the bodies relative to the other and the apparent stream lines resulting from a combination of the said real stream lines and artificial stream lines produced by an instrument mounted on one of the bodies and adapted to move in a predetermined direction at a predetermined speed and from the angular relation between the real and apparent stream lines and the direction and known speed of movement of such instrument, and the distance separating the bodies, forming a parallelogram of velocities showing the relative speed of the bodies.

4. The herein described method of determining the relative speed of two bodies which consists in determining the angular relation between the real stream lines produced only by the motion of one of the bodies relative to the other and the apparent stream lines resulting from a combination of the said real stream lines and artificial stream lines produced in the field of a telescope mounted on one of the bodies, by means of a member associated with said telescope and adapted to move in a predetermined direction at a predetermined speed, and from the angular relation between the real and apparent stream lines, and the direction and speed of said artificial stream lines determining the relative speed of the bodies.

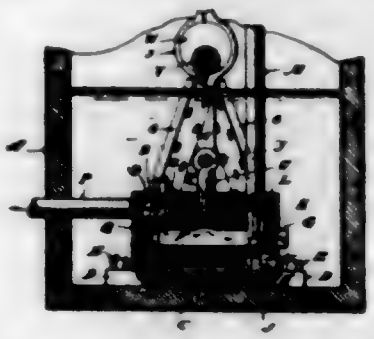
1,299,059. DEVICE FOR THE AERATION AND EMULSIFYING OF PULP FOR FLOTATION. CHARLES TAYLOR, Nogales, Ariz. Filed Nov. 8, 1917. Serial No. 200,890. 10 Claims. (Cl. 261—78.)

1. An aerator and emulsifier for flotation concentration comprising a pipe through which the pulp to be treated is adapted to pass, and means for admitting air to the pipe at points throughout the length thereof so as to



cause mixture of air with the pulp throughout the entire passage of the latter through the pipe.

1,299,060. LUBRICATING MECHANISM. WILLIAM M. TEMPLETON, Peoria, Ill. Filed Oct. 16, 1916. Serial No. 125,914. 4 Claims. (Cl. 184—36.)



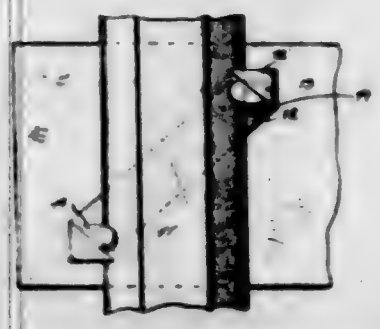
1. In a device of the class described, in combination, a receptacle for containing a lubricant, means for discharging the lubricant from the receptacle including a part within the latter spaced from its walls, a rock-shaft, an agitator suspended therefrom at each side of said part and terminating at its lower end in close proximity to the bottom of said receptacle and adapted for stirring the lubricant in the movements of said rock-shaft, said agitators being disposed in planes lying at an angle to one another.

4. In a device of the class described, in combination, a receptacle for containing a lubricant, means for ejecting the lubricant from the receptacle including a part spaced from the walls of the latter whereby the lubricant can have free movement entirely around said part, a rocking portion, an agitator-plate depending therefrom, one at each side of said part, each terminating at its lower end in close proximity to the bottom of said receptacle, the plane of each being inclined at an angle to the axis of its movement and both being spaced at their lower ends in opposite directions from a plane lying parallel to the axis of movement of the rocking portion, and each being provided with an opening extending through it.

1,299,061. RAILWAY SPIKE-RETAINER. MATTHEW THIMGAN, Murdock, Nebr. Filed Mar. 15, 1918. Serial No. 222,648. 1 Claim. (Cl. 238—2.)

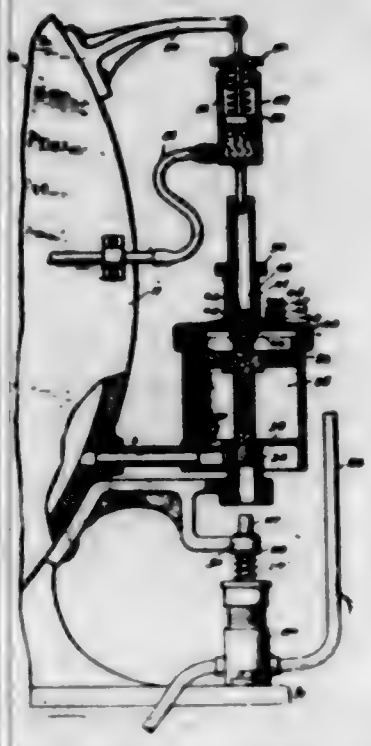
A spike retainer formed from a single length of metal and including an elongated body having rectangular openings in the end portions thereof, the diagonals of said openings being respectively in lines at right angles to the

longer side edges of the body and coincident with the longitudinal median line of the body, the ends of the body being cut off obliquely in parallel relation to each other



and each in parallel relation to one of the sides of an opening, to form tapered wings adapted to be folded over the heads of spikes, the shanks of which are engaged through the openings.

1,299,062. OPERATING MECHANISM FOR FUEL-PUMPS OF INTERNAL-COMBUSTION ENGINES. ARTHUR W. THOMPSON, Ottawa, Ontario, Canada. Filed June 4, 1918. Serial No. 238,283. 17 Claims. (Cl. 123—139.)



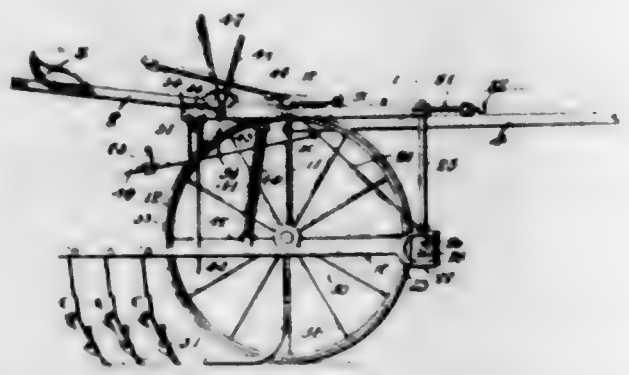
1. The combination with an internal combustion engine and a fuel feed pump therefor provided with a reciprocatory plunger, of a cylinder, a free floating piston therein, and pneumatic connections between said engine and said cylinder for effecting the reciprocation of said piston and delivery of hammer blows to said plunger.

1,299,063. SANITARY-CAN END. IVAN D. THORNBURGH, Oakland, Calif., assignor to American Can Company, San Francisco, Calif., a Corporation of New Jersey. Filed May 17, 1916. Serial No. 98,166. 5 Claims. (Cl. 220—58.)



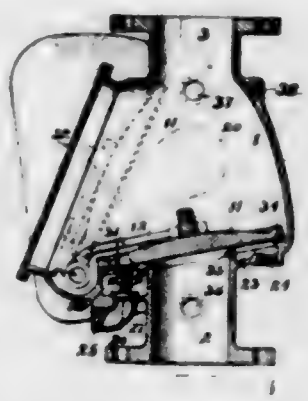
1. In combination, a can end for the closure of sanitary cans having an outwardly projecting flange for the seaming thereof to a can body, said flange being bounded by a shoulder having a peripheral recess, said shoulder and flange providing an unobstructed angular seat for the can top, and an inelastic ring liner held in said recess and adapted to lie upon said flange, the inner diameter of said liner being less than the greatest diameter of said shoulder.

1,299,064. CULTIVATOR. SANFORD L. TIMMONS, Des Moines, Iowa. Filed Sept. 21, 1915. Serial No. 51,855. 1 Claim. (Cl. 97—35.)



In a three-row cultivator, a frame, a plurality of plow beams, means connecting the forward ends of said beams to the frame for horizontal and vertical motion, each plow beam having a vertical opening formed therein, a bar, a plurality of brackets mounted on the frame to support the bar for longitudinal and rotary movement, a plurality of vertical rods depending from said bar, and entering at their lower ends the openings of the plow beams a pair of vertically movable foot pedals mounted on the frame, pulleys mounted on the frame, flexible elements trained over said pulleys, and connecting the foot pedals with the bar, whereby to shift said bar longitudinally in one direction or the other upon a movement of the pedals in opposite directions, to move all the plow beams simultaneously and laterally, and means for moving the plow beams individually or simultaneously in a vertical direction.

1,299,065. VALVE FOR FIRE-EXTINGUISHING SYSTEMS. CHARLES H. TOWNSEND, Yonkers, N. Y. Filed May 6, 1918. Serial No. 232,784. 6 Claims. (Cl. 169—23.)



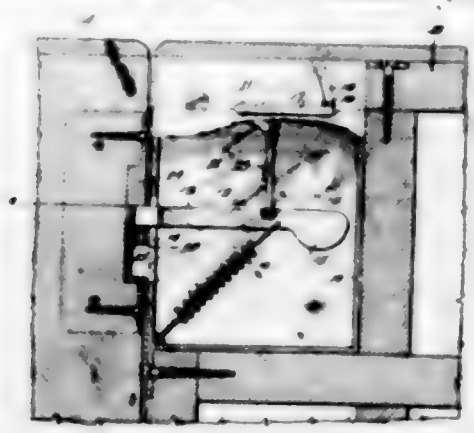
1. A device of the class described comprising a casing, an opening leading into said casing, a valve adapted to cover said opening, a pivot for said valve, a gear on said pivot, a pivoted weight and a gear on said weight engaging the valve pivot gear.

2. A device of the class described, comprising a casing, an opening in the same, a valve for said opening, an oscillating shaft, means connecting said shaft with the valve, a segmental gear on said shaft, a weight and a segmental gear on said weight engaging the segmental gear on said shaft.

3. A device of the class described, having a casing, said casing being provided with an inlet opening, a valve

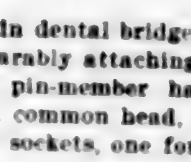
adapted to cover said opening, a rotatable shaft connected to said valve, a spring bearing on one end of said shaft, a conical head adjacent the other end of said shaft, a bearing supporting said end, said bearing having a complementary seat for said head, a segmental gear on said shaft, and a weight having a segmental gear adapted to engage the segmental gear on said shaft.

1,299,066. AUTOMOBILE-DOOR LATCH. TORVAL N. ULEVOO, Earl Grey, Saskatchewan, Canada. Filed Sept. 30, 1918. Serial No. 256,314. 5 Claims. (Cl. 70—49.)



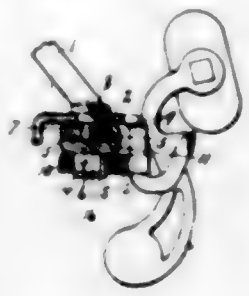
1. In a latch, the combination of a latch lever, means for normally urging the lever to swing in one direction for yieldingly holding the free end thereof in a raised position, and a keeper having a slot to receive the free end of the lever and provided in the outer portion of the slot with a downwardly and inwardly inclined guiding face terminating in a projection and having at the inner portion of the slot an upwardly inclined shoulder against which the latch lever is adapted to be yieldingly held and which terminates at its lower end in a vertical flat face to receive the latch lever thereagainst and retain the same from movement out of the slot.

1,299,067. DENTAL BRIDGEWORK. CHESTER J. UNDERWOOD, Elgin, Ill. Filed Dec. 16, 1918. Serial No. 266,971. 1 Claim. (Cl. 32—12.)



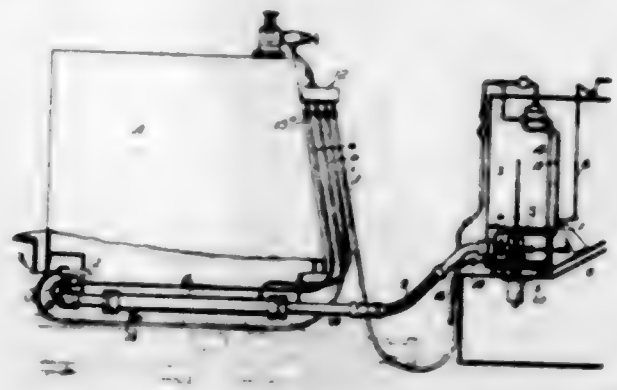
The improvement, in dental bridgework, on the pin-and-socket device for separably attaching a bridge to an abutment, comprising a pin-member having a plurality of pins provided with a common head, and a socket-member having a plurality of sockets, one for each pin.

1,299,068. LENS MOUNTING FOR EYEGLASSES. JOHN R. VAN TASSEL, Geneva, N. Y., assignor to The Standard Optical Company, Geneva, N. Y., a Corporation of New York. Filed Mar. 18, 1918. Serial No. 223,078. 0 Claims. (Cl. 88—50.)



1. In a lens-mounting for eyeglasses, the combination with a bridge, of a nose-guard, pivoted thereto, and a block slidable lengthwise of and upon the bridge and provided with a retracting spring for the nose-guard.

1,299,069. OIL-BURNER FEED AND HEATER. GEORGE B. VON BOSEN, San Francisco, Calif. Filed Mar. 27, 1918. Serial No. 225,033. 8 Claims. (Cl. 158—36.)



1. The combination with a burner and a fuel tank for supplying oil thereto, of a heating box within the tank, a pipe connection between the heating box and the burner, means forming a communication between the heating box and the main fuel tank, valve means within the box to control the passages of said first means and pipe, and means for heating the oil contained in the heating box before it enters the pipe which delivers the oil to the burner.

1,299,070. MANUFACTURE OF BLUE TO GREENISH-BLUE COLORING-MATTERS OF THE GALLOCYANIN SERIES. EMIL WALDER, Basel, Switzerland, assignor to Chemical Works formerly Sandoz, Basel, Switzerland. Filed Dec. 13, 1916. Serial No. 136,742. 10 Claims. (Cl. 8—1.)

4. Process for the manufacture of a leuco condensation product of the gallocyanin series, comprising condensing a gallocyanin dye with aminobenzamid other than o-aminobenzamid in presence of an oxidizing agent and reducing the resulting condensation product.

1,299,071. WAGON-BRAKE. MARION L. WALKER, Gordo, Ala., assignor of one-half to James M. Freeman, Gordo, Ala. Filed June 27, 1917. Serial No. 177,247. 1 Claim. (Cl. 21—8.)



The combination with a wagon gear, of a supporting body mounted on the hounds of said gear, said body being positioned in advance of the rear wheels of the wagon gear, oppositely directed levers pivotally secured adjacent their outer ends on the supporting body, said levers being formed of strap metal and having their outer end portions disposed substantially at right angles to the body of the lever and bent into U-shape to form a brake shoe receiving member, brake shoes secured in said members for engagement with the rear wheels of the wagon gear, and means connected to the inner ends of said levers for causing simultaneous rocking movement thereof about their pivotal axes so as to move the brake shoes into or out of engagement, optionally, with the rear wheels of the wagon gear.

1,299,072. PRODUCING STEEL AND HIGH-PHOSPHORUS SLAG. WILLIAM R. WALKER, New York, N. Y. Filed Oct. 7, 1914. Serial No. 865,504. 8 Claims. (Cl. 75—46.)

1. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron without substantially reducing the percentage of phosphorus and refining the desiliconized metal with a basic slag, and removing the slag before the end of the refining operation and when it contains the greater part of the phosphorus to be extracted.

4. The process of producing steel and a slag rich in phosphates which consists in smelting the ore and forming pig iron, desiliconizing such iron to reduce the silicon content without substantially reducing the percentage of phosphorus, thoroughly separating all silicious slag from the desiliconized metal, and refining the desiliconized metal with a basic slag, removing the slag before the end of the refining operation and when it contains the greater part of the phosphorus to be extracted, adding slag-forming materials to complete the refining operation and transferring the final slag to the charge in the smelting furnace.

8. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron without substantially reducing the percentage of phosphorus, removing the resulting high silica slag and refining the desiliconized metal with a basic slag, and removing the slag before the end of the refining operation and when it contains the greater part of the phosphorus to be extracted.

1,299,073. WHEEL-CULTIVATOR. HAYS WARDLOW, Naylor, Mo., assignor of one-half to Louie Hering, Naylor, Mo. Filed July 27, 1918. Serial No. 246,998. 9 Claims. (Cl. 97—34.)



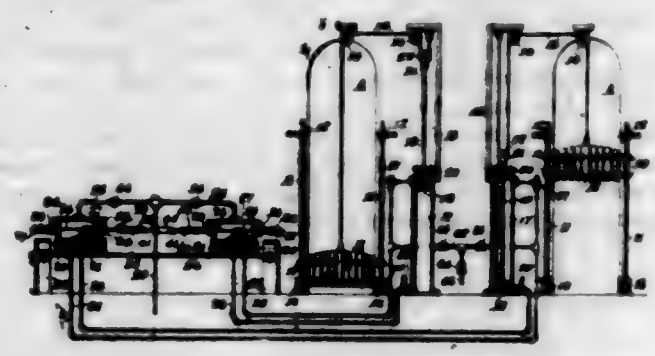
1. A cultivator comprising a frame mounted on wheels, said frame consisting of a front and a rear tubular arch member, stub axles, each of which is provided with an upright and a forwardly inclined integral socket member, said arms adjustably secured within said sockets and the front and rear arch members.

2. A cultivator comprising a frame mounted on wheels, said frame consisting of stub axles provided with an upright and a forwardly inclined integral tubular socket member, a tubular front and a tubular rear arch member, and arms adjustably secured within said socket members and said tubular arch members.

3. A cultivator comprising a frame mounted on wheels, said frame consisting of a front and a rear tubular arch member, stub axles, each of which is provided with an upright integral socket member and a forwardly inclined integral tubular socket member, arms adjustably secured within said socket members and the front and rear arch members, and brace rods connected with the front and rear arch members.

1,299,074. AUTOMATICALLY-OPERATED MINE-GATE. SAMUEL W. WARMAN, Brownsville, Pa., assignor of one-third to Reuben M. Fry, Uniontown, Pa., and one-third to Charles Oppermann, Orient, Pa. Filed Aug. 31, 1917. Serial No. 189,179. 15 Claims. (Cl. 39—8.)

1. The combination with a cylinder, a piston within the cylinder, means for connecting a gate with the piston so as to actuate the same, a pair of pipes connected with the opposite ends of the cylinder, a valve chest to which the other ends of the pipes connect and communicate, a slide valve in said valve chest, means for alternately reciprocating the slide valve so as to either bring the ends of the two pipes remote from the cylinder in communication with each other through the valve, or cut off communication with one pipe and open communication with the other, a check valve provided in one of said pipes and a relief valve located in the other.



13. The combination with a plurality of cylinders, a piston operating in each cylinder, means for connecting a gate or barrier to each of the pistons, a pair of pipes communicating with each of the cylinders at opposite ends for supplying motive fluid thereto, valve means between the ends of the pipes remote from the cylinder, a transverse pipe connecting one of the pipes of each pair, a pair of check valves in said transverse pipe, a branch pipe connected to the transverse pipe between the check valves, said branch pipe being open at its outer end, a stop cock in said branch pipe, and means for connecting the stop cock to the hand brake of the hoisting engine.

1,299,075. GAS-MASK. PANKRACY WASYLOWICH, Chelsea, Mass. Filed June 1, 1918. Serial No. 237,749. 1 Claim. (Cl. 128—141.)



A filter for gas masks consisting of a shank, a block at one end thereof having a concaved outer entrance end provided with air receiving perforations therethrough, a block at the opposite end of the shank having a recessed outlet end with perforations through said last named block, a resilient covering overlying both of said blocks adapted for maintaining the outlet block upon said shank and having an outlet neck portion adjacent said recessed end, and gas filtering medium within the said covering and surrounding said shank.

1,299,076. LIQUID-DISCHARGING GUN. PANKRACY WASYLOWICH, Chelsea, Mass. Filed July 17, 1918. Serial No. 245,338. 3 Claims. (Cl. 137—67.)

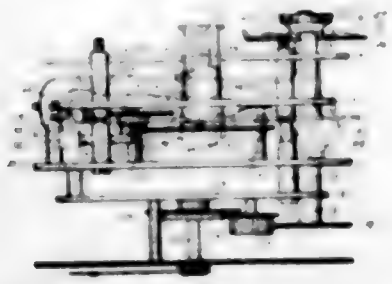
1. A fluid spray device comprising a cylinder, a discharge nozzle at the forward end thereof, a reciprocating piston within said cylinder, an operating rod for the piston, a handle attached to the outer end of said rod, a hinged cap at the forward end of the cylinder adapted for closing over said nozzle when the device is not in use, and automatic closing means slidably attached to the side of the cylinder operatively connected to the said handle for simultaneous movement with the said piston.

2. A fluid spray device comprising a cylinder, a discharge nozzle at the forward end thereof, a reciprocating piston within said cylinder, an operating rod for the piston, a handle attached to the outer end of said rod, a hinged cap at the forward end of the cylinder adapted for closing over said nozzle when the device is not in use, parallel guide stripe upon said cylinder at opposite sides of one point of connection with said cap, a closing block for the cap slidably mounted upon the cylinder with oppositely projecting flanges, positioned within said guide stripe and having an arcuate inclined forward end adapted for engaging the cap when open during the forward movement of the block, a connector parallel with said piston rod attached between the said block and handle, the said block being adapted for positioning overlying the forward end of the cylinder and the adjacent portion of the cap in locking relations with respect to said cylinder and cap when said piston and handle are substantially at the forward end of their travel.



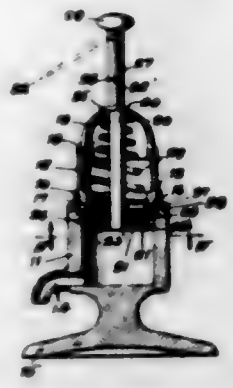
3. In combination with a squirt-gun having a reciprocating piston rod and a discharge nozzle, a cap adapted to cover said nozzle, hinge connections between said cap and cylinder at the bottom of the cylinder, a block slidably attached to the bottom of the cylinder having a curved inclined end adapted for engaging the cap when open for closing the same and further having a bottom groove adapted for accommodating the said hinge during the forward movement of the block, a rearwardly extending rod attached to said block and an operating handle secured to the rear ends of both of said rods, the said block being adapted for overlying the portions of the cylinder and cap adjacent the said hinge for locking the cap closed when the device is not in use.

1,299,077. CLOCK FOR CONTROLLING MECHANICAL DEVICES. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Apr. 19, 1918. Serial No. 229,482. 7 Claims. (Cl. 58—17.)



1. In a clock for controlling mechanical devices, the combination with the time and controlling-trains thereof, of a pivotal warning-and-releasing lever coacting directly with the said controlling-train for warning the same, means operated by the time-train and co-acting directly with the said lever during short intervals only for intermittently rocking the same, and locking means coacting with the lever for normally restraining the controlling-train.

1,299,078. CONDIMENT-DISPENSER. HENRY WEISS, New York, N. Y. Filed Aug. 12, 1916. Serial No. 114,517. 1 Claim. (Cl. 65—45.)



The combination, in a condiment dispenser, of a container composed of two interfitting sections, one serving as a lower chamber with an open top, and having an outlet at its lower end, and the other section serving as an upper chamber with an apertured bottom to provide a closure for the top of the lower section, and having an open top, a lid closing the open top of the upper chamber, and having an opening in register with the aperture of the bottom of the upper chamber, a piston in the lower chamber, having a stem extending through the aperture of the bottom of the upper chamber as well as extending through the opening of the lid, so that the stem may be manually forced for reciprocating the piston to cause the contents of the lower chamber to be discharged through its outlet, a spring in the upper chamber engaging the stem of the piston for normally forcing the piston toward the top of the lower chamber, and a clamp on the part of the stem above the lid to releasably lock the stem and the piston against accidental operation.

1,299,079. AUTOMOBILE-SIGNAL. ORVAL A. WEVER, Forest, Ontario, Canada. Filed Apr. 19, 1917. Serial No. 163,202. 3 Claims. (Cl. 40—77.)

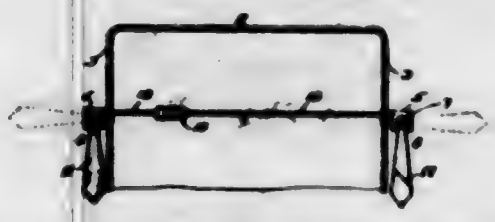


1. In an automobile signal, the combination with a casing, a sign rotatably mounted therein and having a plurality of legends on its periphery, and a pulley carried by the sign within the casing and having a groove in its body provided with a shoulder at its mid-length; of yielding means for turning the sign and pulley in one direction, a flexible element wound on the pulley and leading forward to within reach of the driver for turning the pulley in the other direction, a pawl engaging said groove for limiting the action of said flexible element, and means for tripping the pawl to permit the complete action of said element.

1,299,080. AUTOMOBILE-SIGNAL. CHARLES E. WICKHAM, Oakland, Calif. Filed May 5, 1915. Serial No. 25,942. 5 Claims. (Cl. 116—31.)

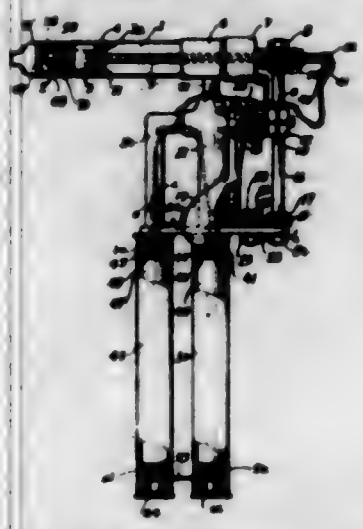
3. An improved automobile signal comprising a supporting member having means whereby it may be attached to a support, levers pivotally attached to said

supporting member, two spaced-apart signal devices each having means whereby it may be attached to a wind shield or similar support distant from the supporting member, tubular guides interposed between and supported by both of said signal devices, flexible connections between the levers and the signal devices and working in said guides, and adjustable bracing means connecting said supporting member and said tubular guides.



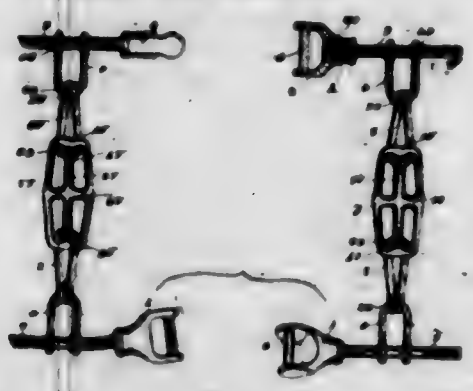
5. An improved automobile signal comprising a supporting member having means whereby it may be attached to a support, levers pivotally attached to said supporting member, two spaced-apart signal devices each having means whereby it may be attached to a wind shield or similar support distant from said supporting member, rigid guides interposed between and supported by both signal devices, flexible connections between the levers and the signal devices and passing through said guides, a bar rigidly connected with said guides, and a second bar telescoping with the first mentioned bar and pivotally connected with said supporting member.

1,299,081. ASPIRATOR FOR SURGICAL USE. JOSEPH FRANCIS F. WILLETTS, Seattle, Wash. Filed Oct. 11, 1918. Serial No. 257,693. 12 Claims. (Cl. 128—297.)



1. A surgical aspirator comprising an orificed chamber, means for drawing fluid thereinto or expelling fluid therefrom, a source of radiant energy within the chamber in position to direct rays to the orifice.

1,299,082. ANTISKID DEVICE. FREEMAN R. WILLSON, Worthington, Ohio. Filed Feb. 11, 1918. Serial No. 216,479. 5 Claims. (Cl. 152—14.)



1. In a non-skid structure, a center non-skid link formed of a pair of outside transverse bars, end bars connecting said transverse bars, an intermediate transverse bar joining said end bars, said intermediate bar having a recess in its tread surface at each end adjacent to its connections with said end bars, said end bars having a pair of recesses in their under surfaces, and side links straddling said intermediate bars to seat themselves in said recesses.

1,299,083. PUMP. ELIHU CLEMENT WILSON, Los Angeles, Calif., assignor to William W. Wilson, Los Angeles, Calif. Filed Feb. 16, 1916. Serial No. 78,625. 14 Claims. (Cl. 103—80.)



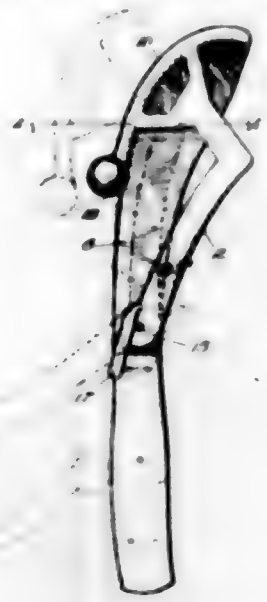
1. In a pump, a working barrel provided with a seat, a tubular plunger mounted to reciprocate within the barrel, packing means surrounding the plunger and resting upon the seat of the barrel, and means for utilizing a portion of the force incident to each stroke of the pump to hold the packing means in position upon the seat.

13. In a pump, a working barrel provided with an annular seat, a tubular plunger mounted to reciprocate within the barrel, a tubular sheath loosely surrounding the plunger and provided at its end with a foot adapted to engage the seat of the barrel, interior shoulders being provided at opposite ends of the sheath, packing arranged within the sheath at opposite ends thereof, a spring engaging the packing and coöperating with the shoulders to expand the same into a tight engagement with the plunger, and yielding means for transmitting a portion of the force incident to the descent of the plunger to the sheath to hold the foot thereof in engagement with the seat.

1,299,084. GUTTER'S KNIFE. HOWARD M. WILSON, South St. Paul, Minn., assignor to Swift and Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1918. Serial No. 248,567. 8 Claims. (Cl. 17—30.)

1. As a new article of manufacture, a knife for the purpose specified, comprising in combination a handle, a curved blade connected thereto and having its cutting edge on the convex side thereof, and a guard for said blade, said guard comprising a bifurcated member having a connecting piece of curvature generally similar to the end portion of the cutting edge of the blade, and a pair of bifurcated arms in conjunction with said connecting portion and lying at the sides of the blade, a pivotal connection between the inner ends of said arms and that portion of the blade adjacent to the handle, a finger piece on the inner end of one of the arms in position for manipulation by the thumb of the hand grasping the

handle, and an enlargement on the inner end of the connecting portion, all for the purpose specified.



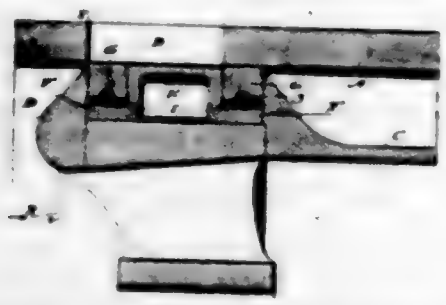
2. As a new article of manufacture, a knife for the purpose specified, comprising in combination a handle, a blade connected thereto, and a guard in conjunction with said blade, said guard comprising a connecting member adapted to lie in front of the end portion of the connecting edge of the blade, a pair of bifurcated arms connected to said member and lying at opposite sides of the blade, and a pivotal connection between the inner ends of said arms and that portion of the blade adjacent to the handle, all for the purpose specified.

4. As a new article of manufacture, a knife for the purpose specified, comprising in combination a blade, a member adapted to lie in front of the end portion of the cutting edge of the blade, a pair of L-shaped arms connected to said member and lying on opposite sides of the blade, and a pivotal connection between the inner ends of said arms and the inner end portion of the blade, the concave angles of said arms facing in the same direction as the blade, all for the purpose specified.

6. As a new article of manufacture, a knife for the purpose specified, comprising in combination a blade and a guard for the end portion of the cutting edge thereof, said guard including a member adapted to overlie the end portion of the cutting edge of the blade, and an arm connected at one end to the member and having its other end pivoted to the blade, all for the purpose specified.

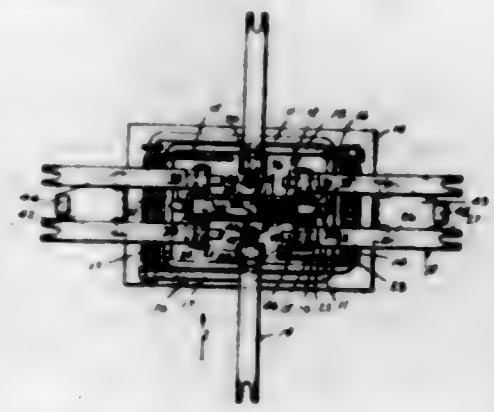
8. As a new article of manufacture, a guard for the cutting edge portion of a knife, comprising a member adapted to overlie a portion of the cutting edge of a blade to which it is to be applied, and an arm connected at one end to said member and having its other end adapted for pivotal attachment to the blade aforesaid, substantially as described.

1,299,065. PACKING FOR PISTONS AND PISTON-VALVES. JOHN T. WILSON, Alameda, Calif. Filed Feb. 6, 1918. Serial No. 215,683. 2 Claims. (Cl. 121—108.)



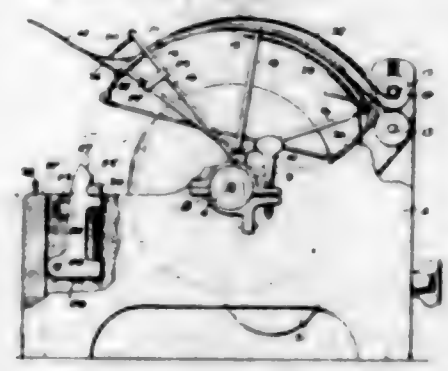
1. An integral cut resilient metallic packing ring having each free end fashioned to form bearing surfaces 5 at opposite sides of the end of the ring and a bearing surface 6 at the extreme end of the ring in a plane parallel with the planes of said bearing surfaces 5, a joint piece provided with the exterior curved bearing surface 4 adapted to frictionally engage the curved bearing surface of a cage or cylinder and also having at the opposite ends the surfaces 7 and 8 the surfaces 7 matching the surfaces 5 at the ends of the ring and the surfaces 8 matching the surfaces 6 at the ends of the ring, and means for holding the joint piece in place.

1,299,086. TRAP. WUN WING, Santa Barbara, Calif. Filed Oct. 24, 1918. Serial No. 259,535. 2 Claims. (Cl. 43—21.)



1. An animal trap comprising a base block, a pair of loop members pivotally attached thereto, actuating springs attached to said loop members and said base block, a multiplicity of coöperative arms also pivoted to said base block in operative relation to said loop members, and trigger controlled mechanism for holding said loops in a locked position when the trap is set and for quickly releasing them when the trap is operated.

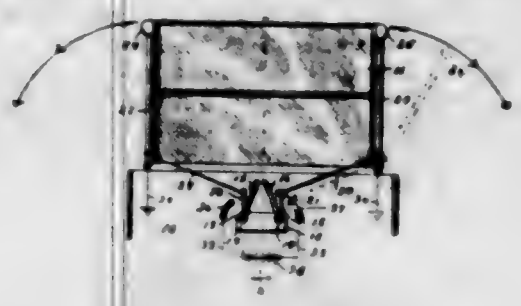
1,299,087. PAPER-ROLL RACK. FREDRICK WINTERHALTER and FREDRICK T. WINTERHALTER, Bayonne, N. J. Filed May 14, 1918. Serial No. 234,492. 10 Claims. (Cl. 211—32.)



1. In a paper-roll rack, a support, a paper guide movable to the support by the pull of the paper on the guide, means normally tending to move the guide from the support, a catch for retaining the guide at the support and a cutter on the carrier movable to the catch but normally prevented from moving to the catch by the paper extending from the carrier over the support by severing the paper on the cutter the same is allowed to move toward the catch whereby the guide is disengaged.

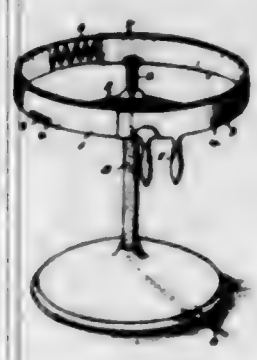
10. In a paper-roll rack, a revoluble core for a roll of paper, a paper guide mounted to oscillate in the axis of the core, means normally resisting the oscillatory movement of the guide, a retainer adapted to engage the paper on the guide and prevent the return of the paper when the guide is returned to its initial position, an apron pivotally connected to the front edge of the guide, means for retaining said apron at substantially right angles to the proximate edge of the guide until said guide is moved through a predetermined angle, and a cutter associated with the guide and disposed in proximity of the apron.

1,299,088. TURNING-SIGNAL FOR AUTOMOBILES. FRIEDRICH W. WITTKOWSKI, Des Moines, Iowa. Filed Feb. 20, 1917. Serial No. 149,801. 2 Claims. (Cl. 116—31.)



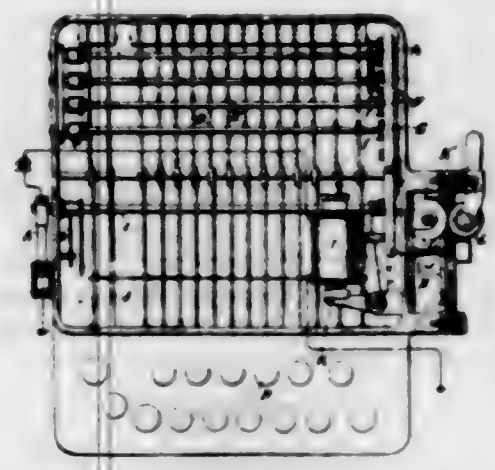
1. A turning signal for automobiles, comprising a support, a channel bracket mounted thereon, shafts journaled in said bracket and extending across the channel therein, signal arms pivoted on opposite sides of the support, operating levers connected with said shafts, crank arms on the shafts, and links pivotally connecting said crank arms to the signal arms.

1,299,089. APPARATUS FOR INSERTING HAT-LININGS. LEON WOLF, New York, and ISIDOR RYBACK, Brooklyn, N. Y.; said Wolf assignor to William Wolf. Filed Dec. 6, 1917. Serial No. 205,820. 7 Claims. (Cl. 223—27.)



1. A device of the character described comprising: an expansible member adapted to support a hat and a lining therefor, means for contraction of said member, and means for applying heat to the hat by conduction through the expansible member.

1,299,090. PUNCHED-CARD-CONTROLLED MECHANISM. JOHN EDWARD WRIGHT, New York, N. Y. Filed Apr. 25, 1917. Serial No. 164,584. 3 Claims. (Cl. 164—113.)



1. In a punching device of the kind described, the combination with a series of keys and bars connected therewith and adapted to be moved longitudinally by the depression thereof, of a series of cross-bars one or more of which is engaged by lugs or stops on said bars, pivoted levers constituting a frame for the support of the cross bars, and punch operating mechanism controlled by the engagement therewith of those levers which are moved by the keys and their connected bars.

2. In a punching mechanism of the kind described, the combination with a series of keys and bars adapted to be moved longitudinally by the depression thereof, of a series of cross-bars one or more of which are engaged by lugs or stops on said bars, pivoted levers supporting said cross-bars, slides with parts lying in the path of said levers and punches adapted to be operated by the slides engaged by the moved lever.

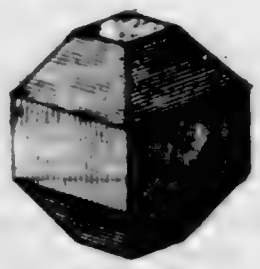
3. In a punching mechanism of the kind described, the combination with a series of keys and bars adapted to be moved longitudinally by the depression thereof, of a series of cross-bars one or more of which are engaged by lugs or stops on said bars, pivoted levers supporting said rods, a series of sliding bars with pivoted ends adapted to be shifted longitudinally by the movement of said pivoted levers, a series of punches in the planes of the paths of movement of the sliding bars, and an electromagnet and armature engaging the pivoted ends of the slide bars and operating the punches by such bars as are moved with relation to the punches.

1,299,091. POULTRY DRINKING-FOUNTAIN. WILLIAM D. WYGAL, El Segundo, Calif. Filed Feb. 10, 1917. Serial No. 147,953. 2 Claims. (Cl. 119—77.)



1. A drinking fountain for poultry, comprising a frusto-conical water reservoir having an open upper end and a closed lower end and a water outlet near its lower end, a trough encircling said reservoir in position to receive water from said outlet, pins diametrically located and extending outwardly from the reservoir a short distance above the bottom of the trough, and a closed cover having a frusto-conical lower portion adapted to fit around and over the reservoir with its lower edge upon the bottom of the trough; there being bayonet slots extending upwardly and laterally from the lower edge of the cover and forming air vents for the cover and the pins extending from the reservoir fitting in said bayonet slots to hold the reservoir to the cover.

1,299,092. HAND-BALL. JACOB ABRAHAMSON, Asbury Park, N. J. Filed Dec. 2, 1916. Serial No. 134,582. 3 Claims. (Cl. 46—4.)

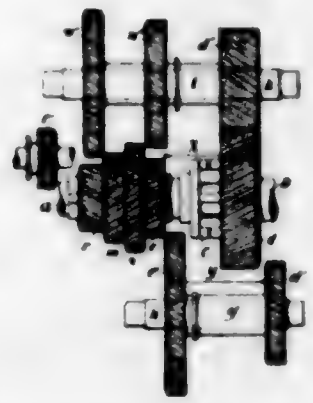


1. A hand ball provided with a plurality of substantially plane faces, whereby, when the ball strikes a rigid surface, it rebounds in an uncertain and unexpected direction.

2. A hand ball substantially in the form of a polyhedron, whereby, when the ball strikes a rigid surface, it rebounds in an uncertain and unexpected direction.

3. A toy composed of rubber or other resilient material and having upon its exterior surface one or more flat faces arranged and adapted to prevent the toy when thrown against a stationary surface from returning in a predetermined direction.

1,299,093. CHANGE-SPEED GEARING. ALBERT AICHELE, Baden, Switzerland. Filed May 31, 1917. Serial No. 171,819. 6 Claims. (Cl. 74—58.)



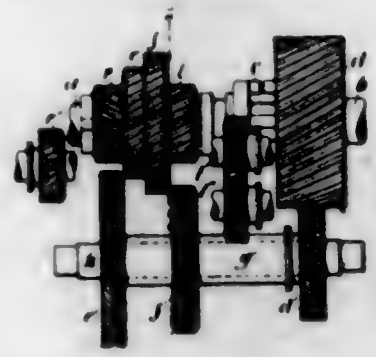
1. A change speed gearing, comprising a driving shaft, a driven shaft, a single gear on one of said shafts, a plurality of gears on the other of said shafts, a countershaft having a plurality of rigidly connected, axially movable gears, one of which is permanently maintained in mesh with said single gear, a second counter-shaft, and a plurality of rigidly connected gears thereon bodily movable to complete unmeshing position.

3. A change speed gearing, including a driving shaft, a driven shaft, a single gear on one of said shafts, a plurality of gears on the other of said shafts, a counter-shaft, and a pair of rigidly connected, axially movable gears on said countershaft, one of said gears movable into mesh with said single gear upon the movement of the other of said gears into mesh with one of said plurality of gears, said gears having their teeth inclined in respect to their respective axes, the extent of the inclination being such that the trigonometrical tangents of the angles of inclination are proportional to the pitch diameters of the gears and the direction of inclination being the reverse for the drive to and from the counter-shaft so that the axial thrust of one gear thereon is substantially compensated by that of the other gear thereon.

6. A change speed gearing, including a drive shaft, a driven shaft, a counter-shaft, a gear on the driving shaft, a pair of gears on the counter-shaft and axially movable together, and a gear on the driven shaft, the extent of axial movement of the gears on said counter-shaft being such as to bring them into or completely out of mesh with said gears on the driving and driven shafts and all of said gears having their teeth inclined in respect to their axes, the general direction of inclination of the teeth being in reverse directions for the drive to and from the counter-shaft, whereby the axial thrust of one gear on the counter-shaft is counteracted by the opposite axial thrust of the other gear on the counter-shaft, and the axial distance between the gears of the counter-shaft being such in respect to the axial distance between the gears on the driving and driven shafts that one gear on said counter-shaft comes into mesh slightly in advance of the other during endwise movement.

1,299,094. CHANGE-SPEED GEARING. ALBERT AICHELE, Baden, Switzerland. Filed May 31, 1917. Serial No. 171,820. 7 Claims. (Cl. 74—58.)

1. The combination of a driving shaft, a driven shaft, a counter shaft, a toothed gear on said driving shaft, and a pair of rigidly connected toothed gears on said counter shaft bodily movable into and out of power transmitting engagement with said first mentioned toothed gears, the gears on said counter shaft having their teeth inclined in the same general direction and to extents varying with the diameters of said gears, whereby the end thrusts on the toothed gears on said counter shaft are substantially equal and in opposite directions, in combination with a plurality of intermediate gears bodily shiftable together to operative or inoperative position, one of said intermediate gears when in operative position meshing with a gear on the counter-shaft and another of said intermediate gears when in operative position meshing with a gear on one of the other shafts.



3. A change gear comprising a pair of main shafts, a counter-shaft, a gear on one of said main shafts, a plurality of gears on the other of said main shafts, a plurality of gears on said counter-shaft, and axially movable together to maintain one of them in constant meshing engagement with said first mentioned gear and to bring another of them into or out of engagement with said second mentioned gears, and a plurality of intermediate gears movable to operative or inoperative position to transmit power between said counter-shaft and the second mentioned main shaft, one of said intermediate gears being rotatable about one axis and adapted to engage with the gear on the counter-shaft and another of said intermediate gears being drivingly connected thereto and rotatable about a different axis and adapted to mesh with one of said first mentioned plurality of gears.

5. A change speed gear including a pair of main shafts, a plurality of gears on one of said shafts, a single gear on the other of said shafts, a counter-shaft having a gear meshing with said single gear and having a gear movable axially into mesh with one of said plurality of gears, and a pair of intermediate gears rotatable about parallel axes and one serving to drive the other, said intermediate gears being bodily movable to bring one into engagement with the second mentioned gear on the counter-shaft and the other into mesh with one of said plurality of gears.

7. The combination of a driving shaft, a driven shaft, a counter shaft, a pair of toothed gears, one on said driving shaft and the other on said driven shaft, a pair of toothed gears on said counter shaft, one meshing with one of said first mentioned pairs in combination with three intermediate gears, two of which are rigidly connected and rotatable about the same axis and the other meshing with one of said two and rotatable about a different axis, and means for shifting said intermediate gears to bring one into mesh with the other gear of said first mentioned pair and the other into mesh with the other gear of said second mentioned pair.

1,299,095. MAGNETIC RAZOR. BUTLER AMES, Lowell, Mass. Filed June 6, 1917. Serial No. 173,110. 12 Claims. (Cl. 30—12.)



1. In a device of the character described, the combination of a supporting member adapted to support a cutting

blade along one side thereof, the supporting member being composed of magnetic material, means for passing a magnetic flux through the cutting blade to hold it against the supporting member, and means for obstructing the shunting of flux from the blade through the supporting member.

1,299,096. MAGNETIC RAZOR. BUTLER AMES, Lowell, Mass. Filed June 9, 1917. Serial No. 173,841. 9 Claims. (Cl. 30—12.)



1. A razor comprising magnet means having an elongate member of magnetic material, and a magnetic pole piece fitting over one end of the elongate member, the pole piece being adapted to maintain a cutting blade in position thereon by the magnetic action of the magnet means.

1,299,097. MAGNETIC RAZOR. BUTLER AMES, Lowell, Mass. Filed June 11, 1917. Serial No. 173,923. 10 Claims. (Cl. 30—12.)



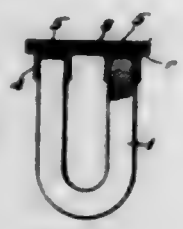
1. In a device of the character described, the combination of magnet means having an elongate magnetic member, at least one end face of the elongate member being oblique to the axis of the member, and a cutting blade adapted to be held along said oblique end face by the magnetic action of the magnet means.

1,299,098. SAFETY-RAZOR. BUTLER AMES, Lowell, Mass. Filed Aug. 8, 1917. Serial No. 185,174. 5 Claims. (Cl. 30—12.)



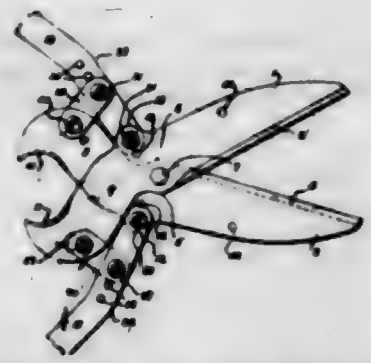
1. A safety razor comprising a base member and a cap member separate from the base member, said members having coöperating faces of similar contour adapted to hold a cutting blade therebetween, the base member having teeth disposed along at least one side of its said face so as to guard the blade, and one of the members constituting a bar magnet adapted to attract the other member so as to hold the blade firmly in position between the members during operation of the razor.

1,299,099. SAFETY-RAZOR. BUTLER AMES, Lowell, Mass. Filed Apr. 13, 1918. Serial No. 228,338. 15 Claims. (Cl. 30—12.)



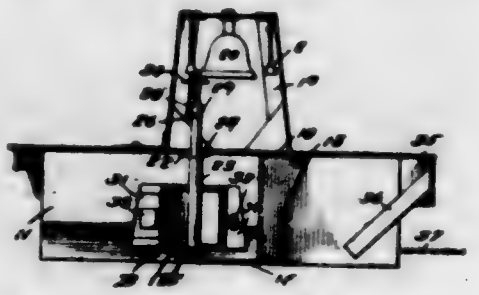
1. A safety razor comprising a guard member, a blade surmounting the guard member, and magnetic means arranged to direct a magnetic flux through said blade in such manner as independently to hold the blade against the guard when shaving.

1,299,100. SHEARS. AXEL ANDERSON, Clifton, N. J. Filed May 1, 1918. Serial No. 231,826. 12 Claims. (Cl. 30—11.)



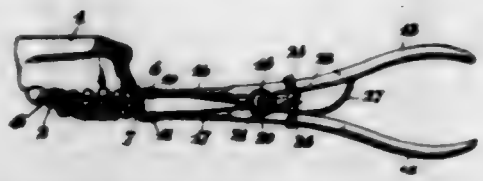
1. An implement of the nature set forth including a plurality of members provided with cutting edges on opposite sides thereof, said members being fulcrumed intermediately of their said edges, and operating means separately pivoted to the members and capable while so connected of being coupled with the members on either side of said fulcrum.

1,299,101. BELL-BUOY. WILLIAM B. ANDERSON, West Brighton, N. Y. Filed June 8, 1915. Serial No. 31,960. 1 Claim. (Cl. 116—13.)



In a bell buoy, the combination with a horizontal current motor having a vertical shaft extending above the motor, of a support above the motor, a bell mounted in the support, clappers pendant from the support and arranged about the bell, a second shaft arranged coaxially with the motor shaft, clutch connections between the shafts for rotation of the second shaft with the motor shaft in one direction, and a cross arm carried by the second shaft and arranged for movement therewith when said shaft is moved with the motor shaft to initially engage a clapper and shift it away from the bell and to subsequently disengage itself from said clapper to permit movement of the clapper into engagement with the bell.

1,299,102. ORTHODONTIC IMPLEMENT. EDWARD H. ANGLE, Pasadena, Calif. Filed Jan. 25, 1918. Serial No. 213,731. 3 Claims. (Cl. 32—10.)



1. An implement of the class described, comprising a pair of handles having slotted ligature engaging beaks intermediately pivoted, means tending to separate said handles, a yoke slidable on said handles operative to lock said beaks separated, and a tension button projecting from said implement, to which said ligature may be engaged.

1,299,103. ORTHODONTIC IMPLEMENT. EDWARD H. ANGLE, Pasadena, Calif. Filed Sept. 7, 1918. Serial No. 253,002. 2 Claims. (Cl. 32—10.)



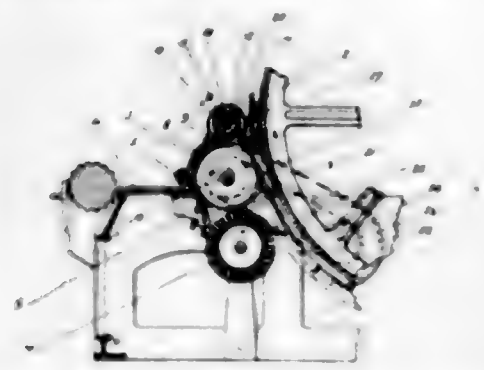
1. A pair of orthodontic adjusting pliers, having its beaks grooved transversely adjacent to their forward ends, and provided with slots intersecting said grooves.

1,299,104. SHEARS AND SCISSORS. ELISHA J. ARNOLD, Rensselaer, N. Y., assignor to Scissors Appliance Co. Inc., a Corporation of New York. Filed May 20, 1918. Serial No. 235,510. 1 Claim. (Cl. 30—13.)



A pair of shears or scissors having blades pivotally connected at one extremity by a screw rigidly attached to one of them; a sliding connection centrally disposed between the pivot and the points of the blades and designed to hold the cutting edges together; a spiral spring, designed to keep the blades normally separated, coiled about the pivoting screw having one end secured in a slot therein and the other end secured to a pin in that blade to which the pivoting screw is not attached; and projections on the outer edges of the blades near the points forming finger grips, all substantially as described.

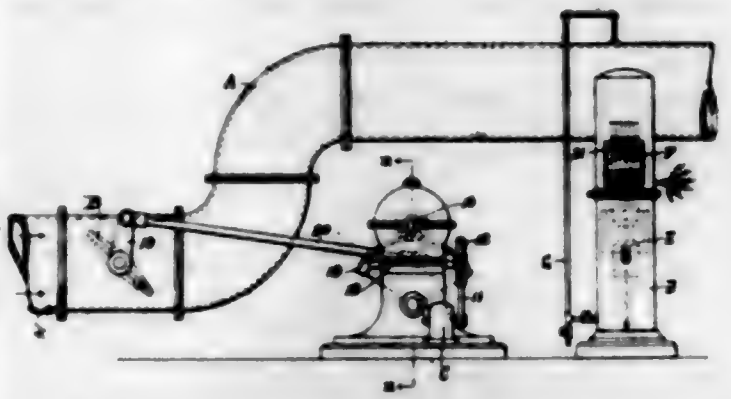
1,299,105. CARDING-MACHINE. LUTHER ATHERTON and OSCAR MEEK, Tallassee, Ala. Filed May 31, 1918. Serial No. 237,433. 3 Claims. (Cl. 19—15.)



3. The combination, with a carding cylinder, a licker-in, and mote knife devices arranged below the licker-in; of a stationary housing secured over the licker-in and provided with a longitudinal slot, stationary brackets secured to the housing at the ends of the slot, a stationary cover arranged over the said slot and secured to the said brackets, an adjustable cleaning roll arranged under the said cover and above the licker-in and projecting through the said slot, and means for revolving the cleaner roll.

1,299,106. PRESSURE-REGULATING APPARATUS. HERMAN BACHARACH, Pittsburgh, Pa., assignor to Bacharach Industrial Instrument Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 3, 1918. Serial No. 226,378. 16 Claims. (Cl. 50—28.)

1. In combination in a pressure regulator for a gas conduit, a valve in the conduit, motor operating means for the valve, and controlling means for the motor governed by the pressure in the conduit whereby the speed of movement of the motor increases with increasing surplus pressure in the conduit or increasing deficiency of pressure therein.



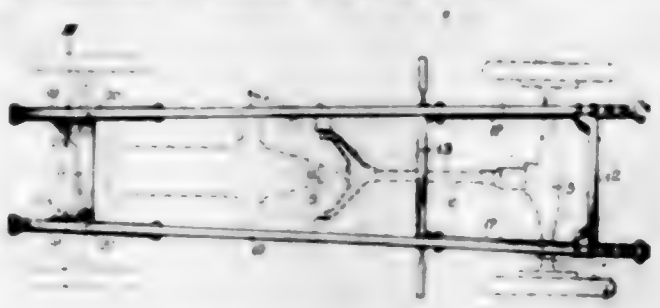
4. In combination in a pressure regulator for a gas conduit, a valve in the conduit, a motor for operating the valve, and means including a float controlled by pressure from the conduit whereby the speed of movement of the valve from one position of rest or equilibrium toward another such position is increased as the change in the controlling pressure is increased.

9. In combination in a pressure regulator for a gas conduit, a valve in the conduit, an electric motor for operating the valve back and forth from its positions of rest or equilibrium, resistance means therefor, and means operated by the pressure in the conduit and arranged, upon an increasing change in pressure, to throw in said resistance in steps to cause the motor to operate at a step by step increasing speed as the valve is moved from one of its positions of rest, and to cut out said resistance in steps to cause the motor to operate at a step by step decreasing speed as the valve approaches another position of rest.

13. In combination in a gas pressure regulator, a valve in the conduit, an electric motor for operating the valve, a float whose vertical position is governed by the pressure on the outlet side of the valve, a resistance for the motor, and a movable contact member, operated by the float and carrying on one side a plurality of contact cups and on the other side a plurality of contact fingers of varying length, a set of fixed contact cups for receiving said fingers and a set of fixed contact fingers of varying length adapted to engage the first mentioned contact cups, the said cups and fingers being arranged to throw in said resistance step by step as the float moves in one direction from normal position and to cut out said resistance step by step as the float moves back from extreme position to normal position, and being arranged to cause the reversal of the movement of the motor as the float moves from one side of normal position to the other.

15. In a gas regulator, a governing bell float, having a hollow central portion of two diameters, the part of less diameter lying normally in the liquid carrying the float and the part of greater diameter lying above the surface of the liquid.

1,299,107. MOTOR-VEHICLE FRAME. OLIVER E. BARTHEL, Detroit, Mich. Filed Sept. 23, 1914. Serial No. 863,072. 3 Claims. (Cl. 21—182.)



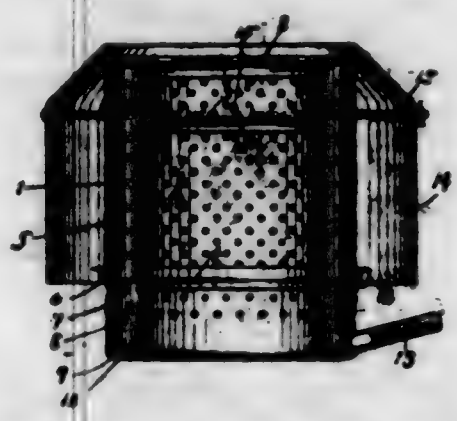
1. A frame for motor vehicles comprising longitudinal side members and cross members connecting the side mem-

bers, said cross member at the forward end of the frame being formed from a single piece of sheet metal with a bridge portion secured at its ends to the side frame members and integral angle plates at the forward side of the bridge secured along one edge to the side frame members and forming angle braces in the angles between the bridge and side members.

2. A frame for motor vehicles comprising longitudinal side channel members and cross members connecting the side members, the cross members at the forward end of the frame being formed from a single sheet of metal with end portions secured in the channels of the side members, a bridge portion connecting the end portions, said bridge being depressed between the end portions to form a seat for a radiator, and a forwardly extending flange integral with the bridge and having end portions secured at one edge to the channel side members to form angle plates in the angles between the bridge and said members.

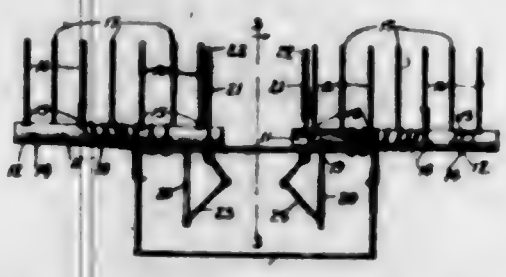
3. In a motor vehicle, the combination of a frame having a pair of longitudinal side members which are straight in plan view of the frame and curved in side elevation, and cross members of different lengths rigidly connecting the side members and holding the same in forwardly convergent relation, and springs for supporting the rear ends of said side members directly connected thereto and extending longitudinally thereof in the longitudinal vertical plane of said members.

1,299,108. HYDROCARBON-BURNER. WILLIAM J. BAER, Detroit, Mich. Filed June 22, 1918. Serial No. 241,407. 3 Claims. (Cl. 158—86.)



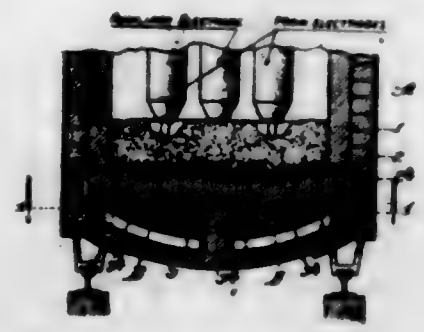
3. A burner having perforated outer and inner chimneys in sections, a vaporizer below the chimneys and integral with the lower ends of both of them, a wick resting upon the bottom of the vaporizer, the inner side of the vaporizer being of less diameter than the upper end of the inner chimney, and a support ring mounted upon the upper edge of the section of the inner chimney which is integral with the vaporizer to support the remainder of the inner chimney.

1,299,109. MOLE-TRAP. DOUGLAS E. BLACK, Sumner, Wash. Filed Nov. 18, 1918. Serial No. 263,071. 2 Claims. (Cl. 43—21.)



1. A mole trap including a supporting frame, a stationary shaft mounted on the frame, a rock shaft mounted in the first shaft, resilient means carried by the first shaft and connected at one end to the frame, coöperating gripping jaws carried by the shafts, the other end of the spring being connected to one of the jaws of the rock shaft, a depending arm carried by the rock shaft, a disk pivotally mounted on the frame adjacent the innermost of the jaws, and a detent carried by the disk and engageable with the said arm to hold the rock shaft and jaws thereof away from the first shaft and the jaws thereof.

1,299,110. ELECTRIC FURNACE. WILLIAM K. BOOTH, Chicago, Ill., assignor to Booth-Hall Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 4, 1918. Serial No. 226,589. 15 Claims. (Cl. 204—64.)



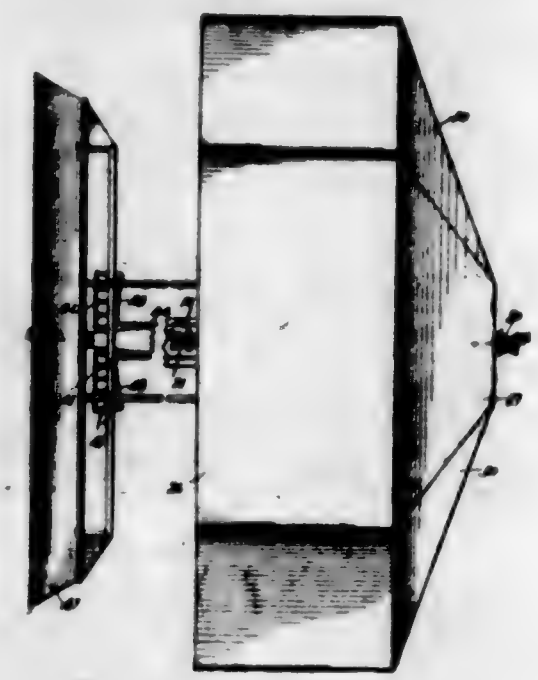
1. In an electric furnace, a wall-contact comprising a skeleton grid and conductive refractory material in which said grid is embedded.

4. The combination with a furnace provided with a refractory wall, of an open-work metal grid having a shank extending through said wall, said grid and shank being composed of sections of small area.

9. In an electric furnace, a wall-contact comprising silicon carbid forming a hard matrix, and a facing of silica.

15. The method of forming an acid furnace with a wall-contact, which consists in mixing silica and carbonaceous material in quantities sufficient to furnish an excess of carbon, and subjecting the materials to the action of an electric arc at such a temperature as to form silicon carbid in a monolithic mass as a matrix carrying the excess carbon.

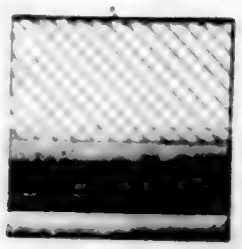
1,299,111. AEROPLANE. OVILA W. BOYEA, Barre, Vt. Filed Jan. 15, 1918. Serial No. 211,924. 2 Claims. (Cl. 244—16.)



1. An aeroplane comprising a plurality of carrying planes, said planes having rearwardly-depressed inclined sections; a protective structure disposed above said inclined sections; and means for varying the resistance of

said inclined sections, said means embodying a plurality of slats pivotally mounted for closing one upon the other to produce a solid wall, and means manually controlled for opening said slats.

1,299,112. RESILIENT TIRE. THOMAS BRADSHAW, Oakland, Calif. Filed Apr. 28, 1917. Serial No. 165,140. 1 Claim. (Cl. 152—16.)



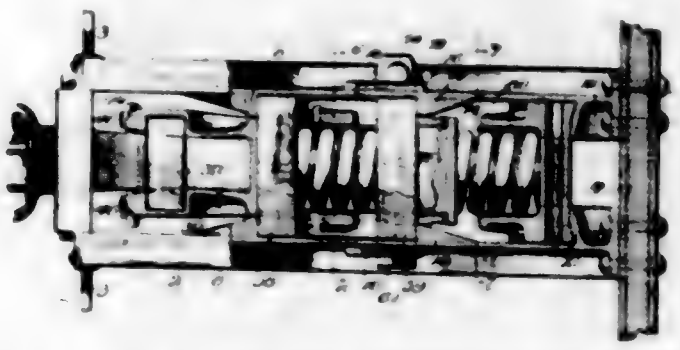
A tread for a pneumatic tire composed of narrow strips, each of the general form of a prolate semi-ellipse and of flexible sheet material, arranged in contact with one another in planes oblique to the circumferential direction of the tread, their exposed outer surfaces being oblique to the planes of the respective strips and continuous with one another to form a smooth continuous tread surface.

1,299,113. STRAP-TIGHTENING TOOL. EDWARD J. BROOKS, East Orange, N. J. Filed Oct. 29, 1918. Serial No. 259,909. 3 Claims. (Cl. 254—51.)



1. A strap tightening tool comprising: a support for overlapped strap ends and strap tightening means including a rotatable member, a segment slidingly mounted on said rotatable member, and means for imparting a sliding movement to the segment and a rotating movement to the rotatable member.

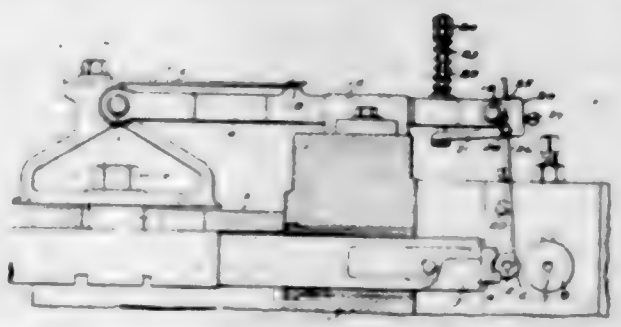
1,299,114. DRAFT-RIGGING. PERRY BROWN, Coraopolis, Pa. Filed Aug. 5, 1915. Serial No. 43,881. 10 Claims. (Cl. 213—42.)



1. In a draft rigging and in combination with the draw bar and draft irons having abutments, a container comprising an integral member having two sets of springs vertically disposed therein at one end of the container, and a socket at the other end of the container to receive the shank of the draw bar, horizontal plates or bars on opposite ends of said two sets of springs coacting with the abutments on said draft irons, and projections on the exterior of said container located between the abutments of the draft irons and adapted to contact with said abutments to prevent the springs from being driven beyond their capacity.

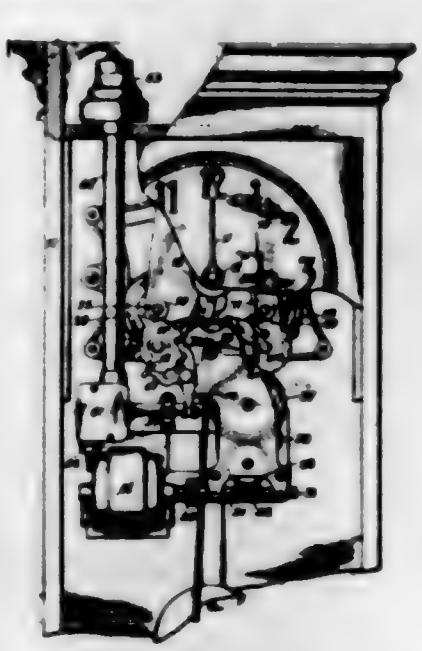
10. In a draft rigging, a container comprising an integral casting having two sets of vertically disposed pockets therein for the reception of springs, two sets of horizontal slots for the passage of bars, and two sets of projections on the sides of said container adapted to co-act with abutments on the draft irons to prevent the springs from being driven beyond their capacity, the ends of the aforesaid slots being farther apart than the said projections.

1,299,115. STOCK CUTTING AND TRANSFERRING MECHANISM FOR HEADING-MACHINES. CHARLES T. BRENNAN, Waterbury, Conn., assignor to The H. J. Manville Machine Company, Waterbury, Conn., a Statute Corporation of Connecticut. Filed Oct. 7, 1918. Serial No. 257,151. 5 Claims. (Cl. 10—11.)



1. The combination with the reciprocatory cutter-bar and cutter of a heading machine, of a bracket secured to and movable back and forth with the cutter-bar, an arm with one end pivoted to the bracket and extending across a portion of the frame, a leaf spring with one end secured to the bracket and the other end bearing down upon the arm, a hand articulated to the free end of the arm, a spring controlling the turning movements of the hand, and a finger projecting downwardly from the articulated hand and terminating adjacent to the cutting edge of the cutter.

1,299,116. CLOCK-WINDING MECHANISM. JAMES W. BRYCE, Bloomfield, N. J. Filed July 31, 1917. Serial No. 183,668. 8 Claims. (Cl. 58—41.)



1. A device of the class described, comprising in combination, a clock driving motor in which power may be stored to drive the clock, means for restoring power therein from time to time, said means comprising an electric motor, and a gear train connecting said electric motor and the clock driving motor, said gear train com-

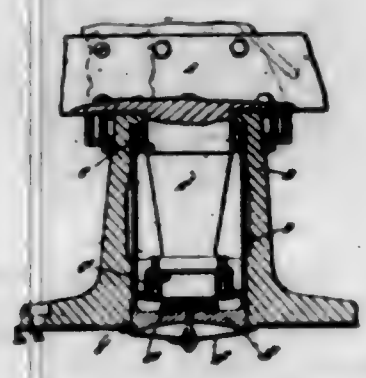
prising in part a differential gear having different numbers of teeth thereon at the opposite sides thereof, whereby the electric motor may rotate at a high speed and the clock motor may be rewound at a comparatively slow speed.

1,299,117. AIRPLANE. GEORGE TELLMAN BUCHANAN, Winnsboro, S. C. Filed June 21, 1918. Serial No. 241,173. 3 Claims. (Cl. 244—12.)



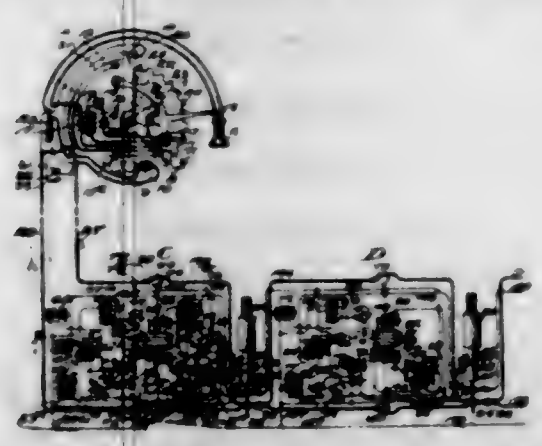
1. An airplane comprising a body frame, main supporting means including a spar, a plurality of wings extending from said frame and grouped around said supporting means, the vertical space between the leading and trailing edges of one wing being approximately equal to the space between the trailing edge of one wing and the leading edge of an adjacent wing, and means at the ends of the supporting means providing an attachment for said wings.

1,299,118. PEDESTAL GUN-MOUNTING. GEORGE THOMAS BUCKHAM, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed July 20, 1917. Serial No. 181,926. 2 Claims. (Cl. 89—37.)



1. In a pedestal gun mounting the combination with the upper and lower side pressure bearings interposed between the pivot of the gun carriage and the pedestal, of means whereby said bearings can be withdrawn simultaneously from the pedestal in a downward direction for inspection or repair without the necessity of raising or removing the gun carriage from the pedestal.

1,299,119. NON-GROUNDED OR METALLIC LINE-CIRCUIT SYSTEM. RAYMOND H. BURFEIND, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Apr. 18, 1907. Serial No. 369,021. 61 Claims. (Cl. 179—18.)



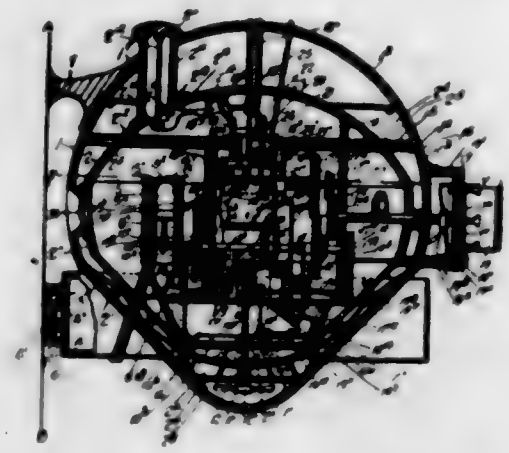
1. A telephone exchange system comprising a telephone line, an automatic switch provided with a switch shaft supported for both endwise and rotary motion, means for closing the two sides of the line together to move the shaft endwise, means including a line relay responsive to such closing of the line for giving the shaft a step-by-step endwise motion, suitable means for rotating the shaft after it has been moved endwise, means for cutting off the line relay while the shaft is in its rotated position, and means for restoring the shaft to normal position by the opening of the line.

1,299,120. HOLDER FOR SANITARY OR SINGLE-SERVICE CUPS OR OTHER RECEPTACLES. ASHTON BURGESS, Regina, Saskatchewan, Canada. Filed May 13, 1918. Serial No. 234,813. 4 Claims. (Cl. 65—61.)



2. A holder for a single service or sanitary receptacle having a receptacle holding portion into which the receptacle is adapted to fit snugly and formed with a space below the receptacle holding portion, in combination with means for rarefying the air in said space so that the receptacle will adhere to the holder.

1,299,121. LIFTING-BUOY. JOHN PERCIVAL BURTON, Oakville, Ontario, Canada. Filed Dec. 3, 1918. Serial No. 265,124. 2 Claims. (Cl. 61—69.)



1. A lifting buoy comprising a casing, a pair of horizontally extending cylindrical members carried by the lower portion of the casing, a suction pad carried by the cylinder and having suction orifices communicating with the interior of the cylinder, and means for exhausting the water from the interior of the cylinder to produce a vacuum therein.

1,299,122. PARACHUTE. EVERARD R. CALTHROP, London, England, assignor to E. R. Calthrop's Aerial Patents Limited, London, England. Filed July 31, 1918. Serial No. 247,510. 8 Claims. (Cl. 244—21.)

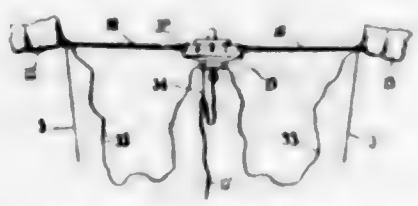
2. In aerial craft, the combination of a sustaining element, a passenger containing device, means for securing said passenger containing device to the sustaining element, means for securing a parachute to the sustaining

element, said passenger containing device and parachute being sustained in air by the sustaining element, means for releasing said passenger containing device and para-



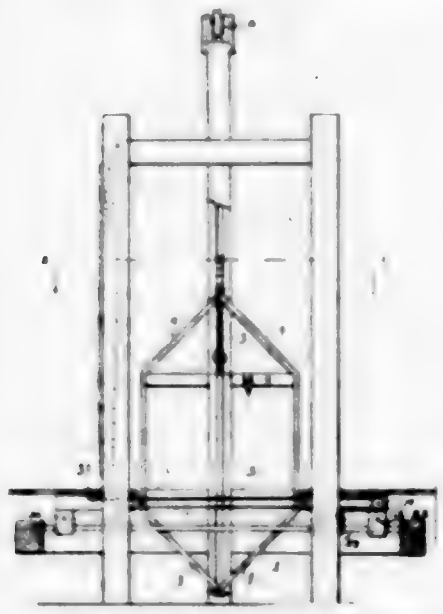
chute from the sustaining element; means for launching the parachute so as to insure its eventual complete expansion, and means for controlling the speed of descent of the parachute and passenger containing device.

1,299,123. PARACHUTE. EVERARD RICHARD CALTHROP, London, England, assignor to E. R. Calthrop's Aerial Patents Limited, London, England. Original application filed Apr. 19, 1918, Serial No. 229,628. Divided and this application filed Nov. 9, 1918. Serial No. 261,825. 5 Claims. (Cl. 244—21.)



1. In a parachute and launching device the combination with a parachute body of a centrally disposed releasing device and restraining tapes adapted to connect said body with said releasing device and supporting said device and means convenient to the parachutist for operating said releasing device.

1,299,124. BUILDING-ELEVATOR. JOHN E. CARRUTHERS, Auburn, Me., assignor of one-half to William A. Paul, Auburn, Me. Filed Feb. 1, 1919. Serial No. 274,504. 6 Claims. (Cl. 187—51.)



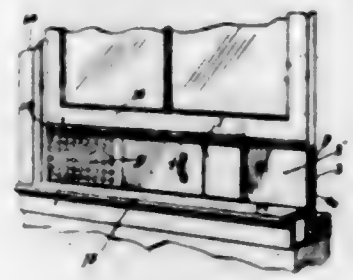
1. In a device of the character described, an elevator well, a vertically movable gate, horizontally movable trap doors, a cable connecting said gate and doors and an elevator provided with wedge-shaped trap door openers.

1,299,125. CUTTING-TOOL. ALFRED E. CARTER, Providence, R. I., assignor to Pratt & Whitney Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 11, 1918. Serial No. 216,640. 4 Claims. (Cl. 29—100.)



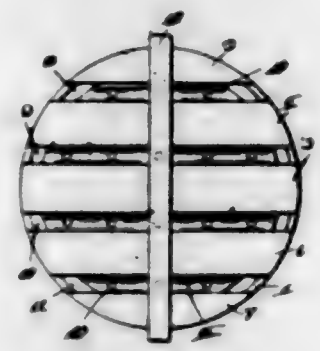
1. A metal cutting tool having a cutting face with a predetermined contour differing from a single straight line, and having relief faces at an angle to the cutting face, the cross sectional contour of the tool being the same as the said predetermined contour at a plurality of surfaces of intersection back of the initial cutting face and the tool at one side having markings thereon for guidance in grinding along any one of the said surfaces.

1,299,126. WINDOW-VENTILATOR. HENRY M. CASE, Cincinnati, Ohio, assignor to Dilla C. Linnemann, Covington, Ky. Filed Apr. 6, 1918. Serial No. 227,001. 1 Claim. (Cl. 98—31.)



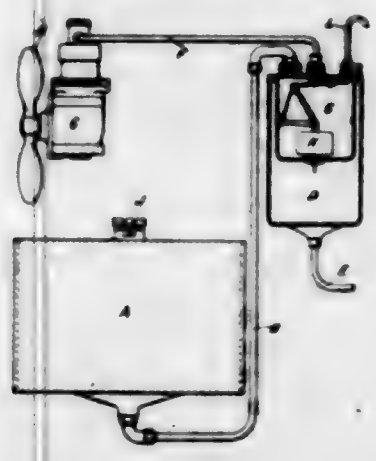
As a new article of manufacture the ventilator adapted to be inserted in the window frame underneath the lower sash, comprising two telescopic tubular sections provided with openings in the outer wall at one end of one section and in the inner wall at the opposite end of the other section, each section provided with an upwardly extending flange to fit over the sash and a bead underneath the flange to serve as a guide for the telescopic sections, with the bead and flange cut away at their outer ends to permit the insertion of the ends of the ventilator between the sash stops.

1,299,127. COVER. RAYMOND P. CLARK, Rochester, N. Y. Filed Apr. 22, 1918. Serial No. 230,169. 3 Claims. (Cl. 217—124.)



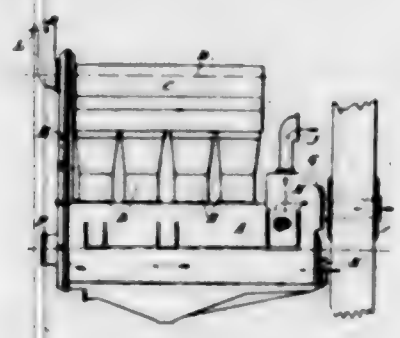
1. In a cover the combination of a rim, cross slats fastened to one side of said rim, a cushion fastened on the under side of said cross slats and centrally of said rim ventilating holes leading through said cushion and between said cross slats.

1,299,128. FUEL-FEED SYSTEM FOR AERIAL MACHINES. LOUIS COATALEN, Wolverhampton, England, assignor of one-half to Sunbeam Motor Car Company Limited, Wolverhampton, England. Filed May 23, 1917. Serial No. 170,539. 2 Claims. (Cl. 158—36.)



1. In a fuel feed system for aerial machines, a subsidiary tank adapted to feed a carbureter, a main tank supplying the subsidiary tank, float operated mechanism in the subsidiary tank, a vane wheel and a suction pump driven thereby and connected to the float operated mechanism.

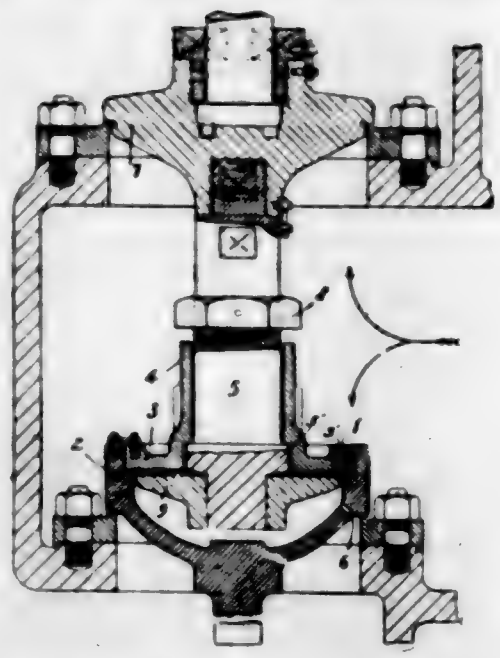
1,299,129. COOLING INTERNAL-COMBUSTION ENGINES. LOUIS COATALEN, Wolverhampton, England, assignor of one-half to Sunbeam Motor Car Company Limited, of Wolverhampton, England. Filed May 23, 1917. Serial No. 170,540. 4 Claims. (Cl. 123—171.)



1. In an internal combustion engine for use in aerial machines, a crank casing having holes therein, a casing projecting upwardly from said crank casing and containing the gear driving the overhead cam shaft and means for causing air to pass through the holes and out through the top of the upwardly projecting casing.

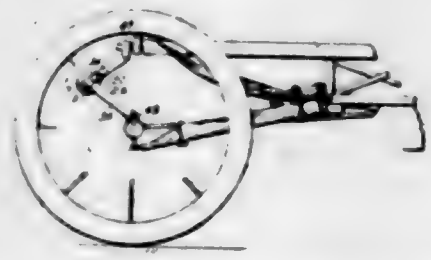
1,299,130. VALVE. DAVID COCKBURN and DONALD MACNICOLL, Cardonald, near Glasgow, Scotland, assignors to Cockburns Limited, Cardonald, near Glasgow, Scotland. Filed May 16, 1918. Serial No. 234,949. 2 Claims. (Cl. 251—82.)

2. In a double beat valve, in combination with two valve elements, a valve spindle between said elements, said spindle provided with screw threads, a covering member secured to one of said elements and formed with a sleeve-like extension surrounding said spindle and slidable thereon, said covering member affording in conjunction with the valve elements to which it is secured a diaphragm cell, a flexible diaphragm carried by said spindle, said diaphragm being imprisoned in said cell and held at its periphery between said covering member and the last mentioned valve element, a backing member secured to said spindle at the back of said diaphragm, and a nut



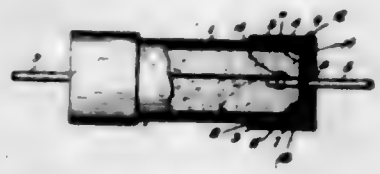
threaded on said spindle and adapted to be rotated into jamming engagement with said extension.

1,299,131. VIBRATION-CHECK FOR VEHICLES. STEPHEN L. CHAUNCEY COLEMAN, Fredericton, New Brunswick, Canada, assignor of forty-nine one-hundredths to Charles W. Whelpley, Fredericton, New Brunswick, Canada. Original application filed Sept. 13, 1916, Serial No. 119,934. Divided and this application filed Sept. 13, 1916. Serial No. 119,937. 26 Claims. (Cl. 21—105.)



1. A device of the class described, including a cylinder, a partition separating the cylinder into a piston chamber and a relief chamber at one side thereof, a radial abutment wall in the piston chamber, an oscillating piston in the piston chamber, one of said parts being provided with an opening and a valve permitting the flow of liquid through the opening in one direction, said partition being open to provide a passage between the piston chamber and the relief chamber, said passage decreasing in size as the piston advances on its compression stroke.

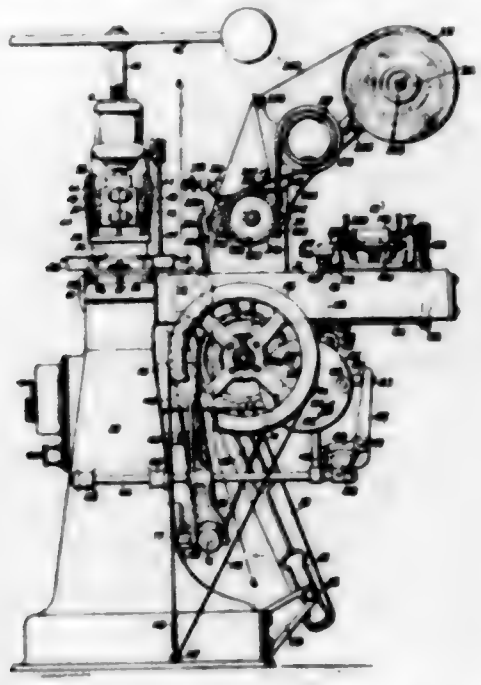
1,299,132. RENEWABLE FUSE. FRANKLIN N. CONANT, Newburyport, Mass., assignor to Chase-Shawmut Company, Newburyport, Mass., a Corporation of Maine. Filed Mar. 9, 1918. Serial No. 221,344. 8 Claims. (Cl. 175—273.)



1. In an electric fuse, an inclosing casing having a terminal portion, said terminal portion having an in-

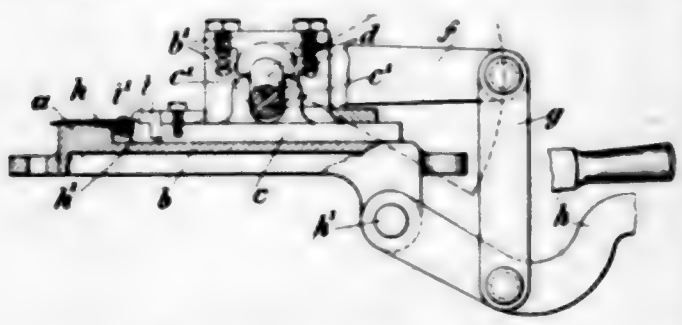
wardly extended flange with a recess therein, a terminal plate extended in said casing in detachable engagement with said flange for restraint against longitudinal movement in said casing, an end plate engageable with said terminal plate having a projection engageable with the recess in said flange to prevent rotational movement of said terminal plate, and an end cap detachably connected with said terminal portion to lock said terminal blade in position.

1,299,133. EMBOSSING AND PRINTING MACHINE. BENJAMIN R. CORLEY, Brooklyn, and ROBERT TURNER, New York, N. Y. Filed Apr. 24, 1918. Serial No. 230,490. 19 Claims. (Cl. 101—165.)



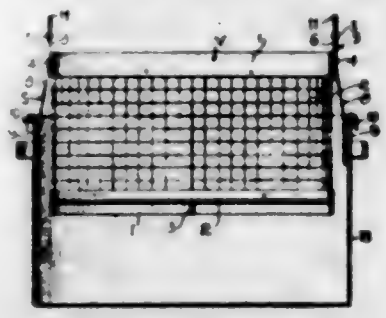
3. In an embossing and printing machine, a reciprocating carriage adapted to support a printing die, a wiping roller, a wiping web passing around the said roller and adapted to move into contact with the face of the said printing die, a stud on which the said wiping roller is journaled, a cam controlled lever, a spring-pressed arm adjustably connected with the said cam controlled lever and carrying the said stud, and means rotating the said wiping roller while the web is in contact with the face of the die.

1,299,134. DEVICE FOR REMOVING AND FASTENING THE RIVETS SECURING THE KNIVES OF REAPING AND LIKE MACHINES. SAMUEL CROMPTON, Belfast, Ireland, assignor of one-half to Arthur Gregg, Belfast, Ireland. Filed Dec. 7, 1917. Serial No. 206,009. 2 Claims. (Cl. 29—89.)



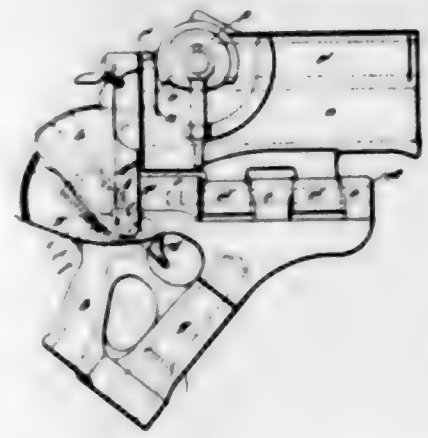
1. A device for removing the blunt knives from the knife bars of reaping and like machines comprising a sole plate with upwardly projecting support for the knife bar thereon, a slide, a crank for reciprocating the slide, means for operating the crank, and a tool secured to the slide and reciprocated thereby to operate on the knife to remove it from the bar.

1,299,135. DRAINING VESSEL. EARL H. CUMMINGS, Bismarck, N. D. Filed Feb. 18, 1918. Serial No. 217,012. 1 Claim. (Cl. 68—30.)



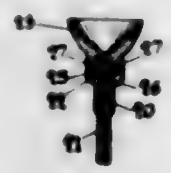
In combination with a draining vessel, a supporting member coacting with the opposite ends thereof, each of said supporting members being formed from a single length of material having a central portion substantially straight with the extremities of said portion continued by right angular extensions, said extensions being continued by outwardly directed right angular portions pivotally engaged with the vessel, said last named portions being continued by downwardly directed elongated portions inclined outwardly relative to the right-angular extensions at the opposite ends of the straight portions, said last named portions being provided with downwardly facing hook members.

1,299,136. PROJECTION OF EXPLOSIVE SHELLS, BOMBS, OR GRENADES. SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed June 26, 1917. Serial No. 177,013. 4 Claims. (Cl. 89—1.)



1. In a breech loading hand or tripod howitzer, a stock, a breech block fixed to the stock, a barrel part pivoted to said stock, a vent in said barrel part disposed adjacent to the propelling charge, and an adjustable plug valve in said barrel part for regulating the size of the vent.

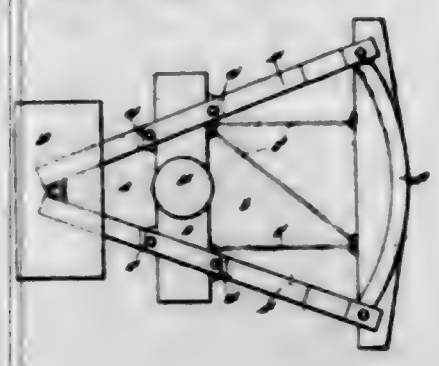
1,299,137. DENTAL TOOL. CHARLES H. DAVIS, Worcester, Mass.; Bertha B. Davis, executrix of Charles H. Davis, deceased. Filed Feb. 2, 1915. Serial No. 5,790. 2 Claims. (Cl. 32—13.)



1. In a device of the class described, a tool provided with a projecting hub, a mandrel having a socket formed therein to receive the projecting portion of said hub, the walls of said socket being indented, and means for expanding said hub within said socket.

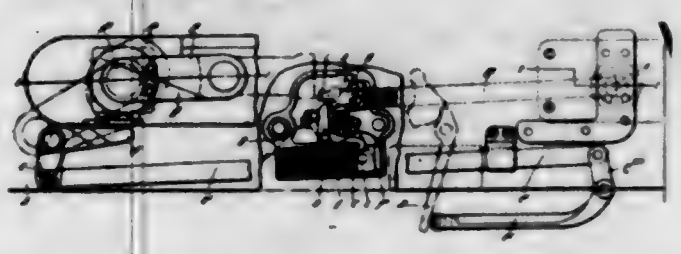
2. As an article of manufacture, a tool, a mandrel provided with an axial perforation, a headed pin adapted to pass through said tool and have its forward portion held within said perforation to secure said tool to said mandrel, and means projecting from the binding face of said mandrel for maintaining the head of such pin at an interval from said face when the tool is in its bound position in the mandrel.

1,299,128. SIEGE-GUN MOUNTING. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed June 21, 1917. Serial No. 176,109. 3 Claims. (Cl. 89—37.)



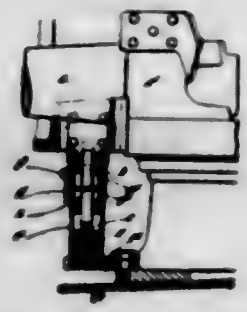
1. A siege gun mounting having a bed-plate adapted to be sunk or embedded in the ground and comprising in combination a number of beams connected together to form a triangular structure whose apex lies in the direction of the gun muzzle.

1,299,139. FIRING MECHANISM OF BREECH-LOADING GUNS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, London, England. Filed June 21, 1917. Serial No. 176,110. 6 Claims. (Cl. 89—27.)



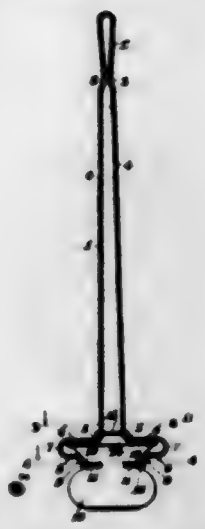
1. An automatic gun having firing mechanism comprising a spring controlled member which, when released, transmits movement to the striker sear for releasing the striker, and provided with means whereby the said member is automatically re-cocked during recoil of the barrel in "single fire" operation.

1,299,140. GUN-MOUNTING. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, Westminster, London, and ERNEST F. ELLIS, Purley, England. Filed July 7, 1917. Serial No. 179,269. 4 Claims. (Cl. 89—37.)



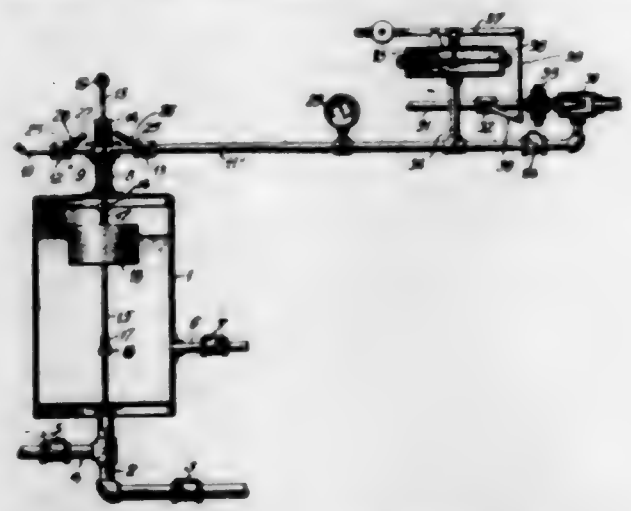
1. In a naval gun mounting, the combination of training mechanism for shifting the gun a predetermined maximum speed and a retarding mechanism for the gun, said retarding mechanism being designed to allow free movement of the gun at speeds less than said predetermined maximum speed but to prevent movement of the gun in excess of said predetermined maximum speed.

1,299,141. CUSPIDOR-LIFTER. ADAM DENNIS, Findlay, Ohio. Filed Dec. 19, 1916. Serial No. 137,827. 1 Claim. (Cl. 57—111.)



A cuspidor lifter comprising a spring member formed from a single length of resilient wire bent intermediate of its ends to form an elongated loop-like handle, the sides of which converge outwardly and downwardly to form divergent side arms, diametrically opposite vertically disposed loops extending laterally from the lower ends of the arms and consisting of an outwardly extending substantially horizontal portion, a downwardly curved portion and a lower inwardly extending portion, said loops being adapted to extend over the top and around and under the flared rim of the cuspidor, the wire below the loops being extended downwardly at an incline so as to bear flat against the rim above the neck, horizontally disposed arcuate grips connected at an intermediate point to the ends of the wire, and arranged in a plane at right angles to the plane of the arms, each grip being of a length to partially encircle the neck of a cuspidor, and means applied to said arms for releasing or gripping the lifter.

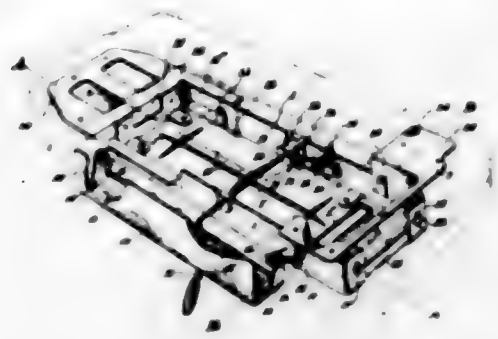
1,299,142. CONDENSATION-RETURN FOR VACUUM HEATING SYSTEMS. ALEXANDER DES ROCHER, Detroit, Mich. Filed June 2, 1917. Serial No. 172,890. 2 Claims. (Cl. 137—108.)



1. In a heating system, a tank adapted to receive condensate from the system and return the condensate to a boiler, air and steam pipes communicating with said tank so that steam may be supplied to said tank for driving the condensate therein to a boiler, an ejector in connection with the air pipe adapted for removing air from said tank, valves in connection with the steam and

air pipes, and a float mechanism in said tank adapted for simultaneously actuating said valves, so as to alternately place said steam and air pipes in communication with said tank.

1,299,143. DRIP-PAN FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 17, 1917. Serial No. 149,371. 8 Claims. (Cl. 112—29.)

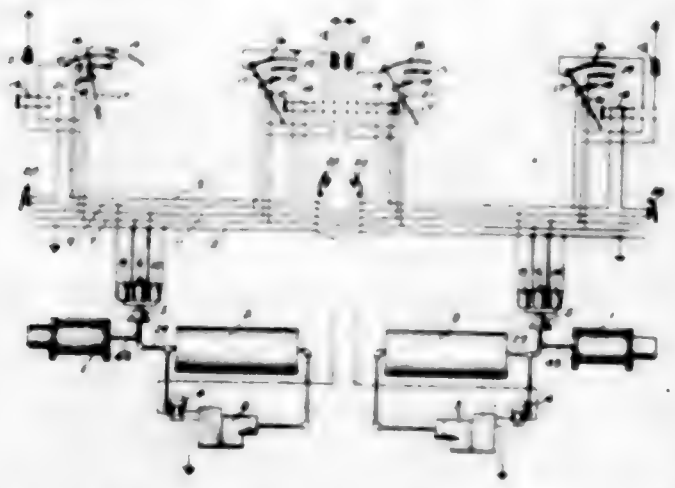


1. In a power-table of the class described, in combination, a sewing machine having a bed-plate and a superimposed cloth plate, means on which the machine is seated and by which it is supported with its bed-plate below the top of the table, and adjustable connections permitting bodily displacement of said means in order to level the cloth-plate flush with the table.

3. In a power-table of the class described, in combination, a sewing machine, a supporting pan, means for sustaining said supporting pan in position below the plane of the table-top including a pair of brackets arranged at opposite ends of the pan and supported from opposite sides of the table-top.

8. In a power-table of the class described provided with a recess, in combination, a drip-pan, a sewing machine having a bed-plate, said bed-plate being seated upon said drip-pan within said recess, a rock-shaft extending across the drip pan above the bed-plate of the machine, a knee shift depending from the forward end of said rock-shaft, an arm on the rear end of said rock-shaft, a lever pivoted to said drip-pan in juxta-position to said arm and adapted to be connected with a movable element of the sewing machine, whereby force applied to the knee shift will actuate the lever pivoted to the drip-pan, and means carried by the rock shaft and coöperating with the drip-pan to limit the rotation of the rock-shaft in one direction.

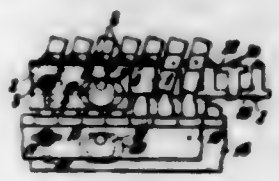
1,299,144. ELECTRICALLY-CONTROLLED PNEUMATIC BRAKE. EDWARD H. DEWSON, New York, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed June 1, 1916. Serial No. 101,043. 10 Claims. (Cl. 188—4.)



1. In an electro-pneumatic brake, the combination with an electrically controlled valve device for effecting an application of the brakes, of electrically controlled means for varying the area of the passageway through which said valve device supplies fluid to apply the brakes.

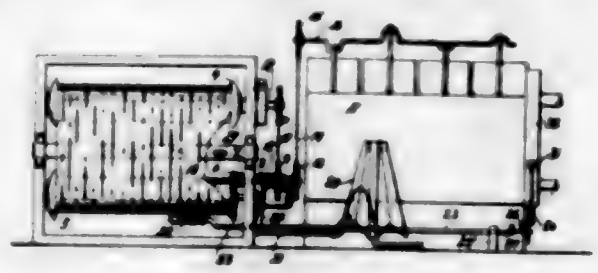
10. In an electro-pneumatic brake, the combination with a brake cylinder, of a valve device having one position for supplying fluid to the brake cylinder and another position for releasing fluid from the brake cylinder, magnet controlled relay valves for varying the pressure on said valve device to effect the movement of the valve device to said positions respectively, a valve device for varying the opening through which fluid is supplied to the brake cylinder, and a magnet controlled relay valve for effecting the operation of the last mentioned valve device.

1,299,145. EMBROIDERING-MACHINE. IDA DIEM-BRUTLER, St. Gallen, Switzerland. Filed Dec. 23, 1916. Serial No. 138,670. 5 Claims. (Cl. 112—7.)



1. In an embroidering machine including tiers of normally alined complete stitching units, means for displacing certain of these complete units relative to certain others in the same tier without altering their operative distance from the fabric operated on, for the purpose of obtaining in each tier parallelly superposed rows of simultaneously operable complete stitching units.

1,299,146. MUSICAL INSTRUMENT. JOHN J. DOLL, New York, N. Y. Filed Apr. 1, 1913. Serial No. 758,147. 1 Claim. (Cl. 84—166.)



In an apparatus of the class described, a music spool and a take-up roll, a pneumatic motor and transmission therebetween, an air duct supplying air to said motor and a valve in said air duct, a U-shaped bar having one leg connected to said valve and the other leg provided with a roller adapted to bear upon the face of said take-up roll whereby as said take up roll fills, said valve reduces the supply of air to said motor.

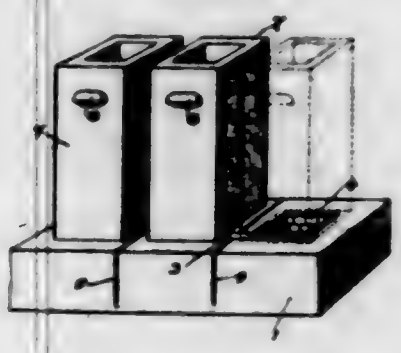
1,299,147. CIRCUIT-CONTINUING DEVICE. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich., a Corporation of Michigan. Filed July 23, 1917. Serial No. 182,196. 6 Claims. (Cl. 173—328.)



1. A circuit continuing device including a contact carrier; a jacket for the carrier comprising cap and body portions, said body and carrier having interengaging bayonet pin and channel formations permitting said body and carrier to be slid into engagement by their relative

longitudinal movement and preventing their relative longitudinal movement when they are relatively turned after being slid into engagement, the cap and body having intercngaging formations permitting their relative longitudinal movement and preventing their relative turning movement; and means for fastening the cap and carrier together to prevent their relative turning movement to prevent the body and carrier from turning relatively and to prevent relative longitudinal movement of the carrier and cap to hold the cap and body in assembly.

1,299,148. APPARATUS FOR CASTING STEEL INGOTS. FREDERICK J. DARSEE, Covington, Ky. Filed Dec. 24, 1917. Serial No. 208,587. 4 Claims. (Cl. 22—141.)



1. In an apparatus of the kind specified, the combination with a bed plate, provided with a series of sockets to form a part of the mold and lined with fire clay or other refractory material, of ingot molds vertically arranged and mounted on said refractory material, the refractory base portion forming a substantial continuation of the ingot molds of fifteen to twenty per cent. of the length of the mold, and gates connecting adjacent molds with each other near the bottom whereby a plurality of molds may be filled from a central mold.

2. In an apparatus of the kind specified, the combination with a bed plate, provided with a series of sockets to form a part of the mold and lined with fire clay or other refractory material, with a series of passages connecting adjacent sockets of ingot molds vertically arranged and mounted on said refractory material and supported by the bed plate, the refractory base portion forming a substantial continuation of the ingot molds of fifteen to twenty per cent. of the length of the mold, and gates in the passageways connecting adjacent molds near the bottom with each other whereby a plurality of molds may be filled from a central mold.

3. In an apparatus of the kind specified, the combination with a plurality of cast metal molds open at both ends, with extensions therefor of refractory material forming the lower portion and bottom of the molds, with passages between adjacent molds near the bottom, one of the cast metal molds serving as a gate for filling the adjoining molds.

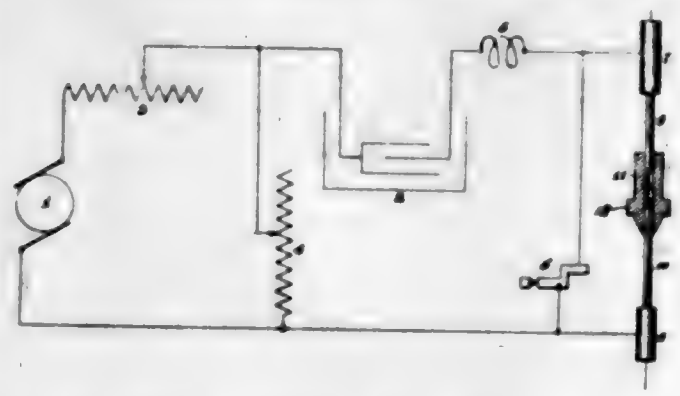
4. In an apparatus of the kind specified, the combination with a bed plate, provided with a series of depressions lined with fire clay or other refractory material, of ingot molds vertically arranged and mounted on said refractory material, the refractory bed portion forming a continuation of the ingot molds, and gates connecting adjacent molds near the bottom with each other whereby a plurality of molds may be filled from a central mold, with transverse slots in the bed plate for severing the ingots from each other before removal from the bed plate.

1,299,149. BATTERY-TERMINAL. STANLEY A. DUVALL, Chicago, Ill. Filed Sept. 21, 1918. Serial No. 256,073. 4 Claims. (Cl. 204—52.)

2. In a dry cell, a chambered carbon element therefor, a flexible conductor having one end fixed to the carbon in electrical contact therewith and the remainder removably inclosed within the chamber, and a frangible seal of insulating material arranged to cover and hold said conductor within the recess.



1,299,150. METHOD OF MANUFACTURING SPARK-PLUGS. FRANK L. DYER, Montclair, N. J. Filed Aug. 16, 1918. Serial No. 250,116. 2 Claims. (Cl. 219—10.)



1. The method of securing two metal sections within a spark plug porcelain which consists in welding said sections *in situ* by percussion welding, substantially as and for the purposes set forth.

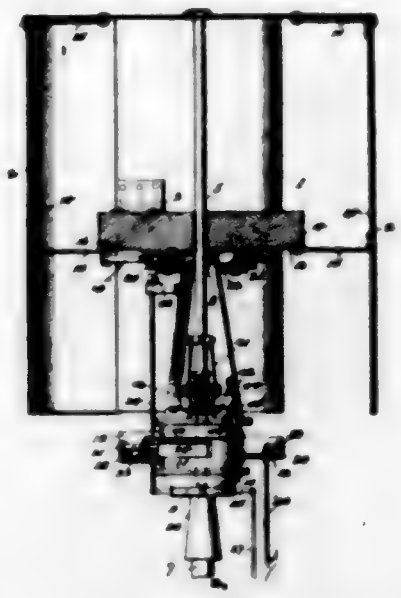
2. The method of securing two metal sections within a spark plug porcelain which consists in welding said sections *in situ* by percussion welding, the pressure being sufficient to cause the metal extruded by the weld to form a tight seal with the porcelain, substantially as and for the purposes set forth.

1,299,151. COMBINED WINDMILL AND AIR-COMPRESSING MECHANISM. JOHN D. EBERT, Kinsley, Kans. Filed Aug. 14, 1917. Serial No. 186,145. 7 Claims. (Cl. 170—14.)

3. A wind motor of the class described including in combination arcuately arranged revoluble vanes having air receiving pockets therebetween, and relatively movable arcuately and concentrically arranged air breaking members for closing the air receiving pockets.

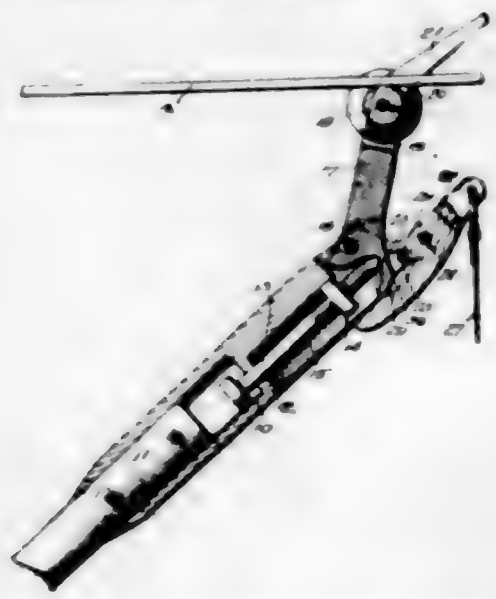
7. A wind motor of the class described including in combination vertically arranged revoluble vanes, a flywheel connected to said vanes, relatively movable air shielding vanes normally positioned against the revoluble vanes, a movable member connected to said air shielding

vanes and frictionally movable with the fly-wheel, means for interrupting the frictional movement of the fly-wheel and movable member for shifting the positions thereof



relatively to each other for changing the position of the air shielding vanes, and means for returning said air shielding vanes to their normal position.

1,299,152. TROLLEY-HARP. ALBERT JACKSON EDWARDS, Washington, D. C., assignor of one-half to Ines W. Jennings, Crawford, Ga. Filed July 12, 1917. Serial No. 180,108. 2 Claims. (Cl. 191—82.)



1. A trolley harp provided with a spring actuated wheel supporting arm pivoted thereto and having a projection, a manually controlled connection for the harp, and a latch member fulcrumed on the harp and to which said manual connection is joined, said latch member having a portion engageable with the said projection of the wheel supporting arm to lock the arm against movement when the harp is manually shifted, and a spring carried by the latch member and normally engaging the said projection to hold the latch member in inactive position.

1,299,153. METHOD OF PRODUCING SOUND-RECORDS. VICTOR HUGO EMERSON, New York, N. Y., assignor to Emerson Phonograph Co., Inc., a Corporation of New York. Filed July 24, 1915. Serial No. 41,635. 5 Claims. (Cl. 274—46.)

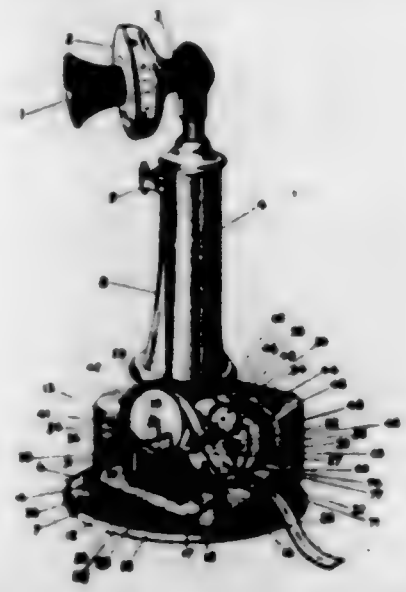
1. In producing sound records, the herein described method of making male matrices which consists of, first, preparing a blank having an electro-conductive base and a layer of record material thereon, then making an original sound record by cutting a groove of uniform depth in said record material by means of a laterally vibratile recording stylus and exposing for electrolytic action the surface of said base at the bottom of the groove thus formed; then forming a matrix thereon by electrolysis; and finally separating said matrix from said base material.



2. The process of producing sound records which consists of first preparing a record blank having a base portion of electro-conductive material and a layer of suitable record material superimposed thereon; then forming an original sound record on said blank by cutting an undulatory groove in said superimposed layer and exposing the surface of said base at the bottom of said groove, said exposed surface having undulations corresponding to and representative of sound vibrations; then forming a male matrix thereon by electrolysis, and thereupon employing said matrix for reproducing copies of the original sound record.

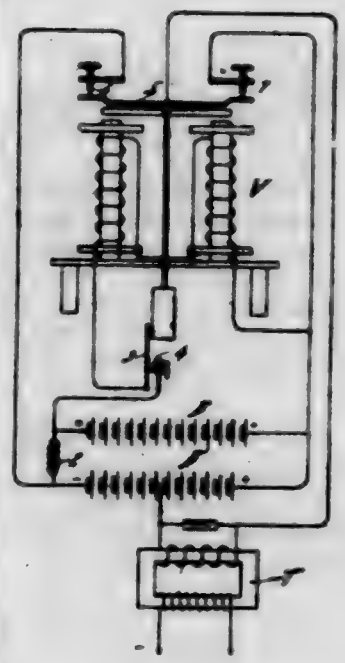
3. The process of producing sound records which consists of first preparing a record blank having a plurality of layers, one of said layers constituting a base of electro-conductive material with another layer superimposed thereon comprising a wax-like record material, then forming an original sound record by cutting a groove in said superimposed layer having undulations corresponding to and representative of sound vibrations, and exposing the surface of said base at the bottom of said groove; then forming a male matrix thereon by electrolysis; and thereupon employing said matrix for reproducing copies of the original said record.

1,299,154. TELEPHONE. ARTHUR ENGELBERG, Oakland, Calif. Filed Aug. 9, 1917. Serial No. 185,288. 3 Claims. (Cl. 294—33.5.)



2. A recording device for telephones, comprising a comparatively small base plate adapted to be attached to the standard of the telephone instrument adjacent the base thereof, a telegraphic receiving magnet, a reel of record tape and a spring motor mounted, respectively side-by-side on said base plate, a spring controlled lever pivotally mounted on said base and carrying an armature thereon arranged over said magnet and having an angularly extended end carrying a recording means to engage the tape, means operated by the motor for feeding the tape from the reel, and controlling means for the motor arranged adjacent thereto and including a pivoted releasing lever extending across the base plate to the proximity of the lever, and to be engaged thereby, when the magnet is energised, for temporarily releasing the motor.

1,299,155. CIRCUIT FOR POLE-CHANGERS. CHARLES J. ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 11, 1917. Serial No. 174,021. 4 Claims. (Cl. 175—352.)



1. In a pole changer, the combination with a transformer, of two batteries connected in parallel through an impedance coil, a vibrator and a circuit therefor including one of said batteries, and circuit connections including a lead from either end and also from an intermediate point of said other battery controlled by said vibrator for producing pulsations of current from the other battery in the primary winding of said transformer.

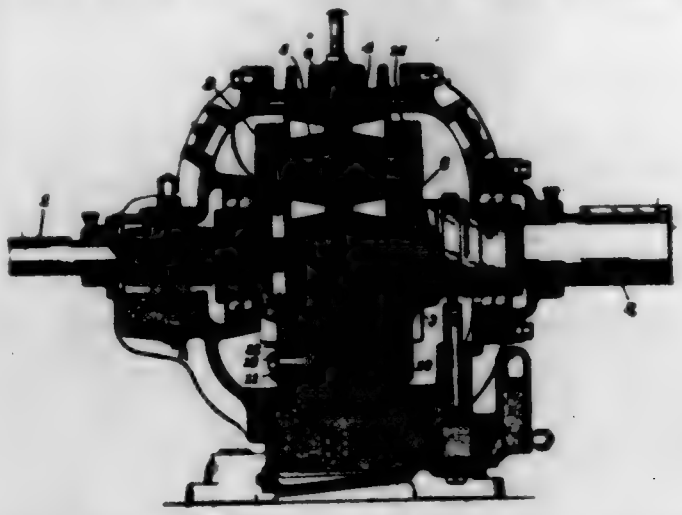
2. In a pole changer, the combination with a transformer, of two batteries, parallel connections between said batteries including an impedance coil, a vibrator and a circuit therefor including one of said batteries, a connection from one terminal of primary winding of said transformer to the middle point of the other battery, and connections controlled by said vibrator for alternately connecting the positive and negative poles of said other battery to the other terminal of said winding.

3. In a pole changer, the combination with a transformer, of a battery having a fixed and even number of cells, a second battery having a variable number of cells, the said batteries being connected in parallel through an impedance coil, a vibrator and a circuit therefor including the said second battery, a connection from one terminal of the primary winding of said transformer to the middle point of said first battery, and circuit connections controlled by said vibrator for connecting the other terminal of said winding alternately to the positive and negative poles of said first battery.

4. In a pole changer, the combination with a transformer, of a battery having a variable number of cells, a second battery having a fixed and even number of cells equal to or less in number than the minimum number of cells in said first battery, connections whereby said second battery is connected to "float" in parallel with said first battery, a vibrator and an energizing circuit therefor, a connection from one terminal of the primary winding of said transformer to the middle point of said second battery, and circuit connections controlled by said vibrator for alternately connecting the positive and negative poles of said second battery to the other terminal of said winding.

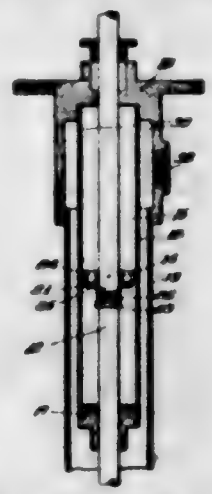
1,299,156. POWER-TRANSMISSION APPARATUS. GUSTAVE FAST, Mount Washington, Md. Filed Feb. 19, 1918. Serial No. 218,106. 8 Claims. (Cl. 74—34.)

1. In power transmission apparatus and in combination a fixed casing, shafts in alinement, gearing for driving one shaft from the other consisting of a central gear on one shaft, an internal gear stationary and mounted on the fixed casing, planetary gears between the central gear and the internal gear and meshing therewith, spindles on which the planetary gears are mounted, a cage comprising heads in which the spindles are held and connecting means between the heads disposed at different



points about the same and extending in the spaces between the planetaries and holding the heads in fixed relation to each other, said cage having a hollow journal at one end surrounding one of the shafts, a bearing in the fixed casing for said journal, the other end of said cage having a journal surrounding the other shaft, substantially as described.

1,299,157. PUMP. FRANK A. FAY, Caldwell, N. J., assignor to William E. Quimby, Inc., New York, N. Y., a Corporation of New York. Filed May 1, 1917. Serial No. 165,688. 1 Claim. (Cl. 103—62.)

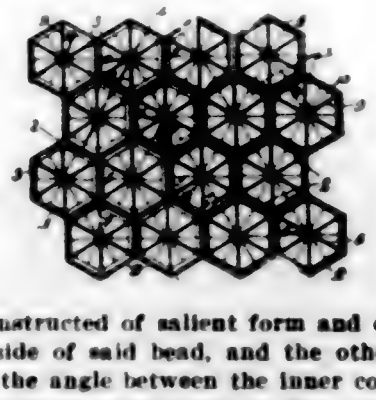


In a pump having a reciprocating piston, a well pipe, a piston rod operating therein, operating means for the piston rod, and a cushioning means adapted to cushion the return stroke of the parts comprising a cylindrical fluid check, a casing supported within the well pipe, a buffer piston affixed to the piston rod and operating within the cylindrical casing, a yielding valve coacting with the buffer piston and adapted to permit comparatively free passage of the fluid on the lift stroke of the piston rod and to restrict the passage of the fluid on the return stroke, said buffer piston being arranged to operate below the outlet passage of the well pipe and openings from the well pipe into the casing substantially as described.

1,299,158. RADIATOR UNIT. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Apr. 20, 1918. Serial No. 229,666. 2 Claims. (Cl. 257—128.)

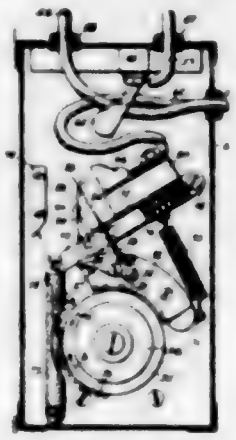
1. A radiator unit comprising a tubular body, and a radiating device arranged within said body and compris-

ing a diametrical member extending diametrically across the space within said body and provided midway of its width with a longitudinal bead of concavo-convex form, and two V-shaped members arranged on opposite sides of said diametrical member, one of which has the outer side of the angle between the inner connected inner edges of



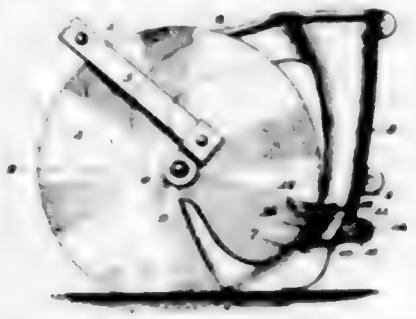
its flanges constructed of salient form and engaging with the concave side of said bead, and the other having the outer side of the angle between the inner connected inner edges of its flanges constructed in the form of an outwardly receding seat and engaging with the convex side of said bead.

1,299,159. ELECTRICAL WATER-HEATER. JOSEPH C. FELDMAN, New York, N. Y., assignor to Tillie K. Feldman, New York, N. Y. Filed Sept. 23, 1918. Serial No. 255,287. 5 Claims. (Cl. 175—282.)



1. In switch devices for automatic water heaters, the combination of relatively fixed and movable switch members, a tumbler to which the movable member is attached, said tumbler including a telescopic bolt, a member acting against the bolt to move the tumbler, and means to cause movement of the bolt in and out of the tumbler during the movements of the tumbler.

1,299,160. DISK DRILL. WILLIAM FUTZER, Springfield, Ill. Filed Aug. 19, 1914. Serial No. 857,543. 7 Claims. (Cl. 111—87.)



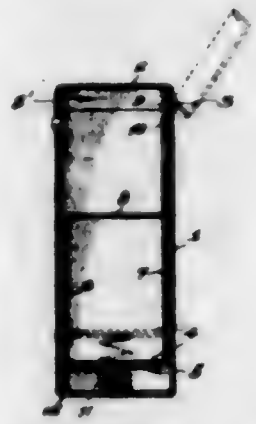
7. In a disk drill, the combination with an opening and pulverizing disk disposed at an angle to the line of draft, of a seed boot, and a metal piece for the seed boot having a shin and spreading wings extending from a common forward edge of the shin rearwardly in opposite diagonal directions from said shin, and a scraper extending forwardly from said shin.

1,299,161. SHIP. ANTOINE PADOUE FILIPPI, Paris, France. Filed Aug. 6, 1917. Serial No. 184,778. 3 Claims. (Cl. 115—0.5.)



1. In a ship or vessel as described means for diminishing the water resistance on the hull comprising a revoluble member with double walls including an outer wall with jet apertures and an inner wall spaced therefrom the whole being adapted to fit over the forward end of the hull, a hull shaped to fit in the revoluble member, a shaft adapted to carry the revoluble member, means for revolving said member and a water inlet in said member.

1,299,162. CIGARETTE-CASE. GEORGE L. FISHER, Attleboro, Mass., assignor to Marathon Company, Samuel M. Einstein, proprietor, Attleboro, Mass. Filed Feb. 13, 1918. Serial No. 216,876. 1 Claim. (Cl. 206—41.)



In a cigarette case having a hinged cover, a false bottom, a member having a lower part engaged beneath the bottom and secured thereto and having upwardly extending side members the outer of which is turned at right angles and secured to the inner member to form a partition for dividing the cigarettes into two divisions, the inner member extending upwardly to a point below the hinge of the cover in closed position of the latter, a spring seating on the bottom of the case and against the under face of the false bottom for normally urging the latter upwardly, and an arm rigidly secured at one end to the cover and having its other end offset and pivoted to the upper end of the extension of said inner side member.

1,299,163. TWO-TONED AUTOMOBILE-HORN CONTROL. GEORGE W. FLEMING, Springfield, Mass. Filed Apr. 27, 1918. Serial No. 231,075. 6 Claims. (Cl. 200—27.)

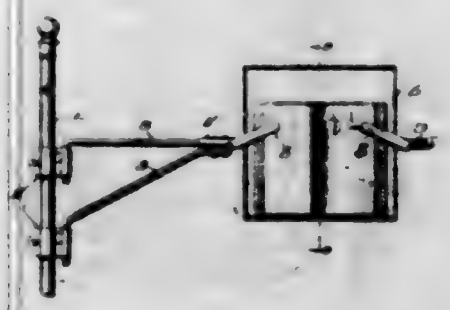


1. In a switch for the purpose described, the combination with a base piece, annular arranged terminals in the base piece, a rotatable and depressible cap mounted on the base piece, a terminal in the cap designed to contact with one of the terminals in the base piece when the cap is rotated and simultaneously depressed, means for normally retaining the cap elevated and the terminals separated, but designed to be brought into contact when the cap is

only depressed for sounding one horn, means to permit the cap to be moved into a position for bringing the terminal in the cap into contact with a second or different terminal in the base piece for sounding a second horn of greater loudness than is sounded when the cap is only depressed, and means for automatically returning the cap to its original position.

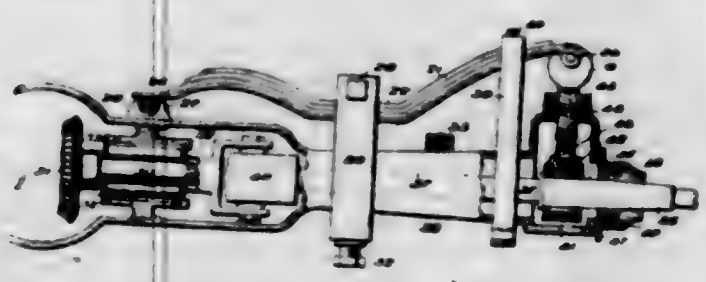
6. A switch for the purpose described, comprising a base piece having an arc-shaped cut away portion, a rod secured in said portion, a cap rotatably mounted on the base-piece and having a piece thereon which enters the cut away portion and an opening therethrough to receive the rod, a spring on the rod and located between the segmental piece and a shoulder of the base-piece for maintaining the cap in position for sounding a horn of usual loudness and permitting rotation of the cap into a position for sounding a horn of greater loudness, contacts in base and cap for closure when the cap is depressed, and means for normally maintaining the cap elevated and the contacts separated.

1,299,164. COMBINATION TRAY AND BOOK-RACK. WILLIAM C. FRAZER, Milwaukee, Wis. Filed Mar. 18, 1918. Serial No. 223,108. 1 Claim. (Cl. 45—82.)



In a device of the class described, clamps adapted to be secured to a bed-post, a main supporting bar pivoted in one of said clamps and extending at right angles to its pivotal line of axis, a sleeve provided with a notched end mounted upon said supporting bar centrally of its ends, a strut rod pivoted in the other one of said clamps and extending obliquely toward the sleeve, securing members passed through said sleeve and strut rod and the main supporting bar, a tray supporting sleeve slidably and pivotally mounted upon said supporting bar and having one of its ends notched for engagement with the notched end of the first sleeve, a tray secured to said supporting sleeve and yieldable means for holding the supporting sleeve into locking engagement with the fixed sleeve.

1,299,165. SHOCK-ABSORBER. GEORGE W. FULKERSON, Hagerstown, Ind. Filed Feb. 10, 1917. Serial No. 147,848. 15 Claims. (Cl. 21—187.)



2. In a suspension mechanism for vehicles, an axle provided with a resilient element fastened at one end to a movable support carried by the axle, the other end of the resilient element being unconfined, an anti-friction device to support the unconfined end of the resilient element, and means to regulate the tension of the resilient element.

1,299,166. AUTOMOBILE-SIGNAL. THOMAS J. GAFFNEY, Albany, N. Y. Filed Oct. 31, 1917. Serial No. 199,490. 3 Claims. (Cl. 40—28.)

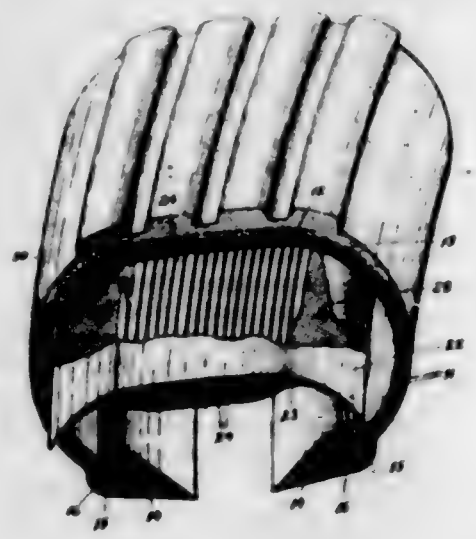


1. An indicating device for automobiles comprising a signal plate, a grip band extending from one end of the signal plate whereby said plate may be manually wielded, and clip portions carried by the handle and adapted to embrace the edge of an automobile body to detachably secure the device thereon.

2. An automobile indicator comprising, a sheet metal signal plate, a wire binding member for edge portions of the plate, a portion of said wire member being bent to form a grip handle extending from one end of the plate, and said wire member being further bent to form clip arms engageable over the edge of an automobile body for detachably securing the device thereon.

3. An indicating device for automobiles, comprising in combination, a plate to be manually extended from the side of the car, said plate being shaped as a direction signal, a handle extending rearwardly from the plate, means for engaging the device over the edge of an automobile body, and a second plate hinged to the first plate to be swung from one side to the other, and bearing selective indicia upon its opposite sides for exposure when the device is extended from the side of a car.

1,299,167. PNEUMATIC TIRE. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed July 30, 1915. Serial No. 42,742. 5 Claims. (Cl. 152—18.)

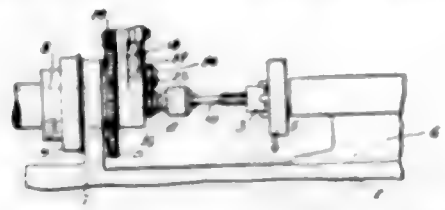


5. An endless substantially-inextensible tread-band for insertion between the casing and air tube of a pneumatic tire, said band having a transversely-flat relatively-thick middle body comprising rubberized circumferentially-extending cord elements, and rubberized woven-fabric cover plies forming relatively-narrow tapered margins.

1,299,168. METAL-WORKING MACHINE. CLARENCE L. GOODRICH, Hartford, Conn., assignor to Pratt & Whitney Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 14, 1917. Serial No. 191,342. 18 Claims. (Cl. 10—129.)

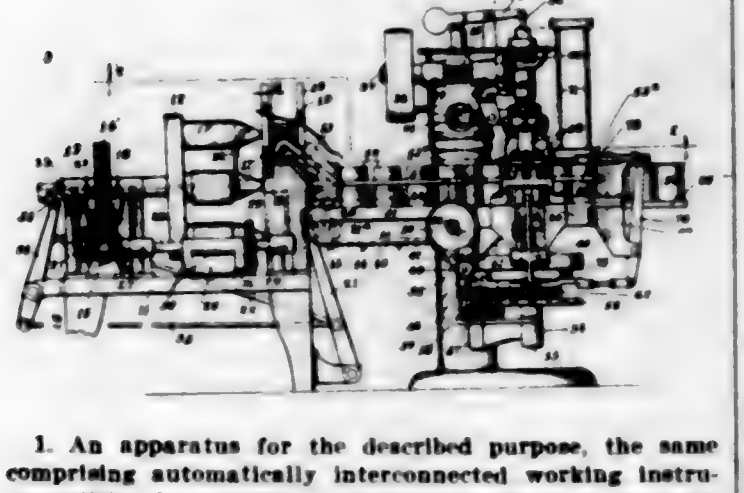
12. In a machine of the class described, the combination of a tool spindle and a work holding means in codperative relation, an arm revoluble with respect to the spindle, a

pinion rotative with the spindle, a stationary spur gear, a shaft supported for rotation by the arm and provided with a pinion in mesh with the spur gear and also pro-



vided with a crank portion, a sector supported for oscillation by the arm and having teeth which are in mesh with the teeth of the first mentioned pinion, and a connecting link between the crank and the sector.

1,299,169. APPARATUS FOR RE-FORMING CAN-BODIES AND UNITING CAN ENDS TO THE SAME. JAMES A. GRAY, San Francisco, Calif., assignor to American Can Company, San Francisco, Calif., a Corporation of New Jersey. Filed Nov. 11, 1915. Serial No. 60,967. 15 Claims. (Cl. 113—1.)



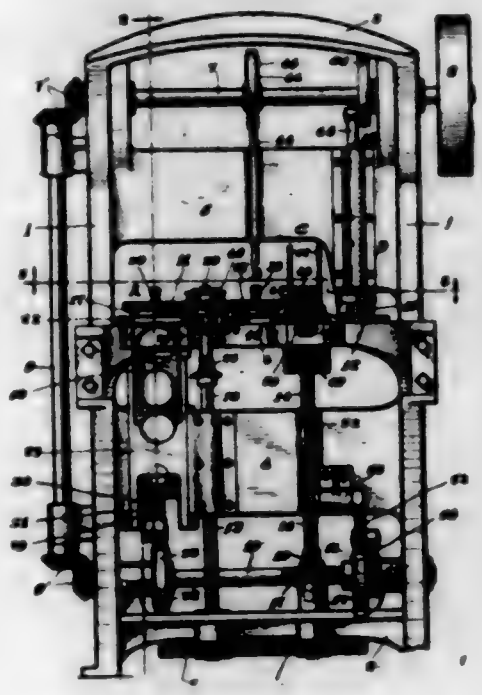
1. An apparatus for the described purpose, the same comprising automatically interconnected working instrumentalities for receiving a deformed unflanged can body, means engageable within said body from end to end for restoring the same to substantially original form, means for flanging the ends of the reformed body, and mechanism associated therewith for applying and permanently securing a can cover to the flanged end of said reformed can body.

3. An apparatus for the described purpose, the same comprising means for receiving and holding a deformed can body, a member associated therewith for engaging with the surface of a can body held by said means for the ironing thereof to restore the same to substantially original form, means for outwardly flanging one end of said reformed can body, and mechanism associated therewith for applying and permanently uniting a can end cover to said flanged end of the reformed can body.

11. An apparatus for the described purpose, the same comprising a holder adapted to contain a stack of deformed can bodies, a mandrel for receiving the deformed can bodies, means for removing the deformed can bodies successively from within the holder and positioning the same onto the said mandrel, a device for engaging with the surface of the deformed can body on said mandrel for the ironing thereof to restore the same to substantially original form, devices for ejecting the reformed can body from said mandrel, and associated interworking instrumentalities for receiving the reformed can body and flanging one end thereof, applying an end cover thereto and permanently uniting the applied cover to the flanged end of the said reformed can body.

15. An apparatus for reshaping distorted unflanged can bodies preliminary to attaching ends thereto, having in combination mechanism for receiving and reshaping said can bodies, said mechanism having a series of horizontally arranged mandrels and a movable carrier for the same, ejectors for removing the reshaped can bodies over the ends of said mandrels, end applying mechanism, a carrier for delivering reformed cans to the same, and means for receiving the cans removed by said ejectors and turning them into vertical position for delivery to said end applying mechanism.

1,299,170. CAN-END-LINER CUTTING AND ASSEMBLING MACHINE. JAMES A. GRAY, San Francisco, Calif., assignor to American Can Company, San Francisco, Calif., a Corporation of New Jersey. Filed Mar. 8, 1917. Serial No. 153,309. 12 Claims. (Cl. 113—80.)



1. In a machine for the described purpose, the combination with mechanism for cutting a ring liner from flat-liner material the same comprising spaced cutting members arranged in axial alinement on opposite sides of flat liner material and having relative movement for cutting can end liners therefrom and leaving said cut liners within the control of one of said cutting members, a horizontally movable orificed alining member the orifices of which are provided with ring liner supports, means for transferring the last mentioned cutting member with the cut liner held thereby from the cutting station of the apparatus to a position in axial alinement with the orifice of the alining member, devices for ejecting the cut ring liner into an axially alined orifice of the said alining member, an assembling means and station, and mechanism associated with said alining member for causing the axial alinement of said ring liner and a can end at said assembling station.

8. In an apparatus for the described purpose, the combination with opposed spaced cutting members arranged for axial alinement on opposite sides of flat liner material and having relative movement for the cutting of a ring liner therefrom and leaving the same within the control of one of said cutting members, a horizontally movable orificed alining member, means for transferring one of said cutting members with the cut ring liner under the control thereof from a cutting station to a position in axial alinement with the orifice of the alining member, means for ejecting the ring liner from the said cutting member and depositing the same within the orifice of the alining member, mechanism for positioning a flanged can end for axial alinement with the positioned ring liner, and devices for moving the deposited ring liner from within the orifice and applying the same to the flange of the axially alined can end.

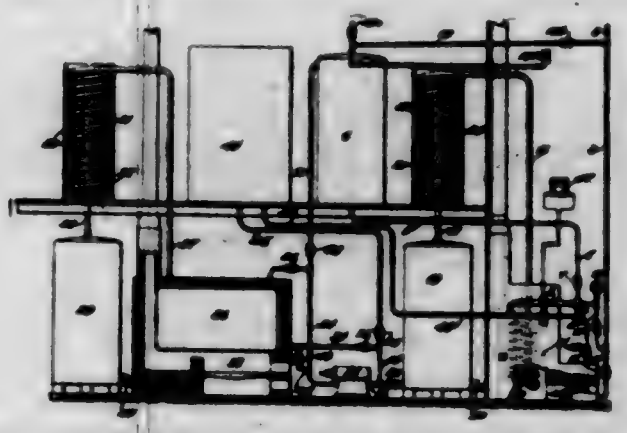
12. The combination of two carriers intersecting at a common ring liner transferring station, the first of said carriers being provided with composite ring liner forming and carrying cutters at the under side of said first carrier and the second of said carriers being arranged below

the first carrier and provided with orifices having ring liner supporting and carrying means, ring liner discharging means operable downward at said transferring station, an assembling means and station beyond said transferring station, and means for causing a can end to be in alinement with the ring liner at said assembling station.

1,299,171. MANUFACTURE OF PICRIC ACID. ARTHUR GEORGE GREEN, Leeds, England. Filed Jan. 29, 1916. Serial No. 75,023. 5 Claims. (Cl. 23—24.)

1. A process for the manufacture of picric acid, comprising nitrating dinitrophenol in presence of concentrated sulfuric acid with about one molecular proportion of nitric acid.

1,299,172. PROCESS OF TREATING MINERAL OILS. CHARLES JASON GREENSTREET, Webster Groves, Mo., assignor to Gasoline Corporation, New York, N. Y., a Corporation of Delaware. Filed Mar. 31, 1913, Serial No. 757,789. Renewed Aug. 10, 1918. Serial No. 249,230. 8 Claims. (Cl. 196—25.)



1. The process of treating heavy hydrocarbon oil which consists in rapidly running the same commingled with steam through a continuous unobstructed coil of pipe kept at a temperature of from nine hundred to twelve hundred degrees Fahrenheit, the oil being exposed to the heat long enough to break down the solid and semi-solid ingredients thereof without affecting a material quantity of the liquid ingredients, as hereinbefore described.

2. The process of treating heavy hydrocarbon oil which consists in running the same commingled with steam through a continuous unobstructed coil of pipe kept at a temperature of from nine hundred to twelve hundred degrees Fahrenheit, the oil being exposed to the action of the heat for such time as would be required for a barrel of fifty-two gallons to pass through a pipe one and one-half inch diameter and one hundred feet long in from six to nine minutes.

3. The process of treating heavy hydrocarbon oil which consists in running the same commingled with steam through a coil of continuous unobstructed pipe kept at a temperature of from nine hundred to twelve hundred degrees Fahrenheit, the oil being run at such a rate that a barrel of fifty-two gallons will pass through a pipe one and one-half inches in diameter and one hundred feet long in from six to nine minutes.

4. A hydrocarbon oil of a specific gravity of forty-eight degrees Baumé or heavier volatile at ordinary atmospheric temperature without residue, said oil being produced from an oil of very slightly heavier specific gravity by the breaking down of its non-liquid ingredients and being characterized by the presence of olefin therein in larger quantity than in said heavier oil.

5. As an article of manufacture, the product resulting from the treatment of grease-containing kerosene at a temperature high enough to convert the grease in grease-less oil, but low enough to prevent the formation of naphtha and gasoline in appreciable amounts, as hereinbefore specified, said article being characterized by the absence of grease and by being of only slightly lighter specific gravity than the initial kerosene.

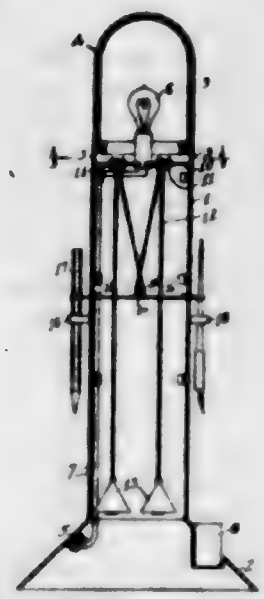
1,299,173. KNIFE. CHARLES E. GREY, Thermopolis, Wyo. Filed June 27, 1918. Serial No. 242,137. 2 Claims. (Cl. 7—11.)



1. In a knife, the combination with a lining plate provided with fixed bolsters having inwardly projecting lugs one of which is constructed with a beveled end, one of said bolsters having beveled undercut recesses on opposite sides of its lug, of a hollow scale member having recesses at its opposite ends adapted to receive said lugs, and having also beveled projections on opposite sides of said recesses, a sharpening stone secured to the inner side of said scale member, and a spring catch for retaining said scale member in place but permitting of its ready removal, when desired.

2. In a knife, the combination with a lining plate provided with fixed bolsters having inwardly projecting lugs one of which is constructed with a beveled end, one of said bolsters having beveled undercut recesses on opposite sides of its lug, of a hollow scale member having recesses at its opposite ends adapted to receive said lugs, and having also beveled projections on opposite sides of said recesses and a concave pocket at one end, a sharpening stone secured to the inner side of said scale member, and a spring catch for retaining said scale member in place but permitting of its ready removal, when desired, said catch comprising a rounded spring-pressed member held in one of said bolsters but projecting slightly therefrom and thus adapted to engage said concave pocket in said scale.

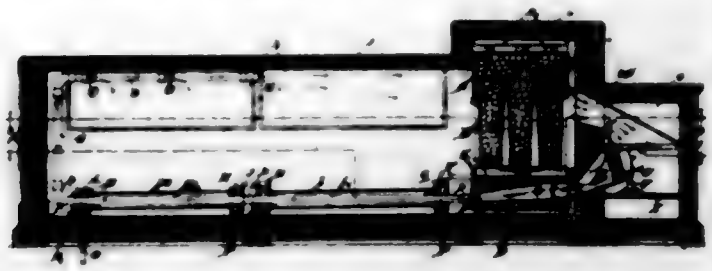
1,299,174. PEN AND PENCIL HOLDER. CLIEL L. GRIMM, Detroit, Mich. Filed Nov. 8, 1916. Serial No. 130,122. 3 Claims. (Cl. 120—27.)



1. In a device of the character described, a rectangular body having a comparatively wide base in the form of a truncated pyramid, the body extending vertically above the base, two opposite sides of the body being apertured, a shaft supported centrally between the other walls of the body and extending at a right angle to a line passing through the said apertures, a second shaft above said first named shaft positioned at a right angle thereto and at one side of a vertical plane passing through the said apertures, a pair of pulleys on the upper shaft, each positioned adjacent the end thereof and a pair of pulleys positioned centrally of the lower shaft, a pair of weighted cables each running over one of the upper pulleys, thence

about a lower pulley and extending through an aperture, a pen or pencil attached to the end of each cable, and a holder therefor secured to each apertured side of the body member.

1,299,173. **REFRIGERATOR.** GUSTAV J. GRUENDLER, St. Louis, Mo. Filed Mar. 24, 1917. Serial No. 157,163. 15 Claims. (Cl. 62—72.)



1. A refrigerator comprising a casing, a container for ice and salt, a plurality of sections arranged in tandem and adapted to receive brine from said container, each of said sections having two headers connected by one or more double tubes, each double tube comprising an inner and an outer tube, said outer tube connecting the adjacent walls of said headers and said inner tube extending through said headers, means whereby the inner tubes of one section are connected to the inner tubes of its adjacent sections so as to afford a continuous passage for air through said sections.

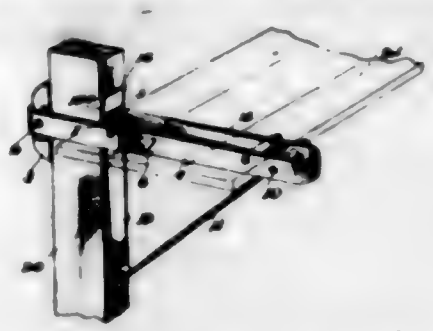
4. A refrigerator comprising a casing, a container for ice and salt, a tank adapted to receive brine from said container, a section adapted to receive brine from said tank, one or more air tubes extending through said tank, one or more air tubes extending through said section, means whereby the said tubes through said section are connected to the said tubes through said tank so as to afford a continuous passage for air through said tank and said section, and a fan whereby air is made to circulate through said tubes.

9. A refrigerator comprising a casing inclosing a compartment for food and a refrigerant chamber whose top is on a higher level than that of said compartment, a container for ice and salt in said chamber having two opposite sides spaced from the walls of said chamber so as to form passages for the circulation of air between the walls of said container and said chamber, means whereby a circulation of air is allowed from one of said passages to the other through the upper part of said container, and one or more air tubes adapted to be cooled by brine from said container and arranged in a substantially horizontal position near the bottom of said casing and in such relation with respect to said container that the circulation of air through said tubes is in a direction opposite to that through the upper part of said container.

13. A refrigerator comprising a casing inclosing a compartment for food and a refrigerant chamber whose top is on a higher level than that of said compartment, a container for ice and salt in said chamber having two opposite sides spaced from the walls of said chamber so as to form passages for the circulation of air between the walls of said container and said chamber, means whereby a circulation of air is allowed from one of said passages to the other through the upper part of said container, one or more air tubes adapted to be cooled by brine from said container and arranged in a substantially horizontal position near the bottom of said casing, and a fan whereby air is made to circulate in one direction through the upper part of said container and in an opposite direction through said air tubes.

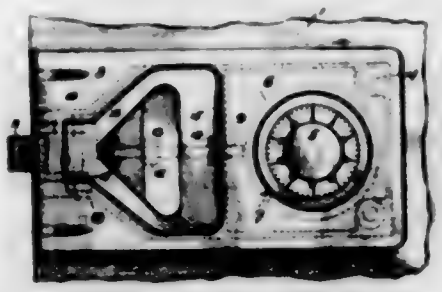
1,299,176. **SCAFFOLD-BRACKET.** CHRISTIAN HADLER, Washington, D. C. Filed Nov. 20, 1918. Serial No. 264,716. 6 Claims. (Cl. 20—84.)

1. A clamp comprising pivoted members, one of which is provided with a pivoted jaw, an adjustable bolt carried by one member and located out of the plane of the pivot connecting the members to engage said pivoted jaw, and



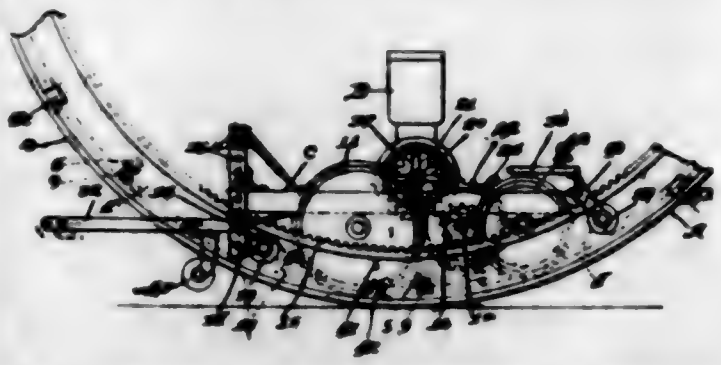
a pivoted latch coöperating with said pivoted jaw to lock the two members in clamped position.

1,299,177. **LOCK.** GEORGE HALINKA, Detroit, Mich. Filed Sept. 14, 1918. Serial No. 254,067. 1 Claim. (Cl. 70—53.)



The combination with an angle plate and a permutation mechanism at one end thereof, of a handle casing carried by said plate intermediate the ends thereof, bearings on the inner face of said handle casing, a latch bar slidable in said bearings and having one end thereof at said permutation mechanism and the movement of said bar controlled in a radial direction thereby, a yoke at the opposite end of said bar, a stirrup shaped handle pivotally supported by said angle plate with said handle normally in said handle casing and adapted to be swung outwardly away from said permutation mechanism, and a lug carried by the pivoted end of said handle engaging in the yoke of said latch bar and adapted to shift said bar toward said permutation mechanism.

1,299,178. **TRACTOR.** VICTOR RICHARD HANSON, Minneapolis, Minn. Filed Aug. 30, 1915. Serial No. 47,994. 8 Claims. (Cl. 180—10.)



1. A tractor, comprising, in combination, a prime mover, a rotatable drum in two cylindrical sections adjoining their ends having inwardly extending broad faced clearance flanges revolubly joined endwise together, said cylindrical portions providing tread surfaces at the ends of said structure upon the surface of ground and driven independently by said prime mover, whereby one of said sections may be caused to revolve about the bearing point of the other section on the ground, and an endless guide secured to and concentric with one of said sections having a shouldered outer surface and driving means engaging said inner surface for revolving said guide and engaging said

shouldered inner surface to prevent the detachment of said driving means from said guide.

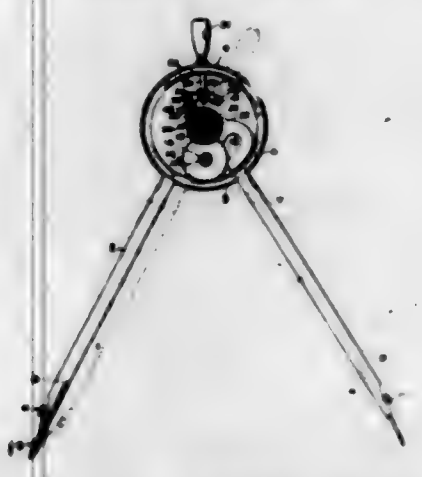
2. A tractor, comprising, in combination, rotatable drum elements independently journaled together by their peripheries and adapted to roll upon the ground, an endless guide secured in the rim of one of said drum elements having a toothed inner surface and a shouldered outer surface, a carriage having a wheel riding upon said guide and a guide roller engaging freely below the shoulder on said guide to prevent the detachment of said carriage from said guide and a prime mover on said carriage having a driving gear the teeth of which mesh with the teeth of said guide.

3. A tractor, comprising, in combination, a plurality of cylindrical drums having broad faced inwardly tapering flanges, said flanges having their adjacent ends movably joined by antifriction bearings, each of said cylindrical drums having rolling contact with the surface of the ground, an endless guide mounted within said drums and concentric therewith, a carriage movably mounted upon said guide, a prime mover upon said carriage having actuating connection with said drums for propelling the latter and means carried by said carriage and engaging freely below said guides for holding said carriage against detachment from said guides.

4. A tractor, comprising, in combination, a plurality of cylindrical drums concentrically arranged, a pair of clearance elements carried between said drums and having adjacent ends swiveled together, spaced parallel guides mounted within said drums and concentric therewith, a carriage movably mounted upon said guides, a prime mover upon said carriage having driving connection with said drums for propelling the latter, means for coupling said carriage with a load, and guide rollers carried by said carriage and engaging freely below said guides to prevent detachment of said carriage from said guides under the pulling action of the carriage upon a load.

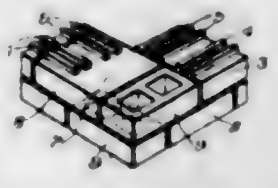
5. A tractor, comprising, in combination, a plurality of endless broad faced rims concentrically arranged and independently journaled, said rims having rolling contact with the surface of the ground and being formed with inwardly tapering broad faced adjacent flanges to permit the rims turning freely in a curve, an endless guide carried concentrically within said rims having an endless toothed rack, a carriage movably mounted upon said guide in close proximity to the point of contact between said rims and the surface of the ground, and guide rollers carried by said carriage and engaging freely below said guides to prevent detachment of said carriage from said guides under the pulling action of the carriage upon a load and a prime mover upon said carriage having a gear actuating connection with said rack for the purposes specified.

1,299,179. DRAWING INSTRUMENT. ALADAR S. HARCOS, San Francisco, Calif. Filed Mar. 26, 1918. Serial No. 224,701. 2 Claims. (Cl. 33—148.)



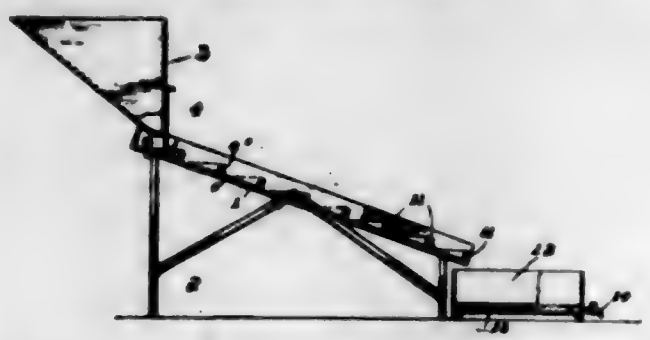
1. An instrument of the character described comprising legs, a pivot therefor, a circular rack having internal gear teeth and movable with one of said legs, an idler gear wheel rotatably carried by the other leg and meshing with said rack, a rotary pinion meshing with said gear wheel, an indicating dial rotatable about said pivot and adapted to rotate with said pinion and having a graduated circular line on said dial concentric with said pivot, and also having a mark fixed in relation to the other leg in proximity to which said circular line moves in its rotation.

1,299,180. WALL CONSTRUCTION. ARTHUR HARDONCOURT, Jr., Brooklyn, N. Y. Filed July 16, 1915. Serial No. 40,251. 4 Claims. (Cl. 72—89.)



3. Wall construction comprising two angularly disposed walls formed of channel brick laid horizontally forming a corner at which the alternate channel brick extend partially across and overlap adjacent angularly disposed channel brick and a header filling the space formed between the ends of adjacent channel brick and closing the openings in such ends.

1,299,181. CLEANING DEVICE. ELMER HARKNESS HARRY, Gibson City, Ill., assignor of one-half to Gale Whitehead, Gibson City, Ill. Filed Dec. 2, 1918. Serial No. 265,065. 1 Claim. (Cl. 130—82.)



A device of the character specified comprising an inclined trough having an unbroken plane surface, a feed hopper at the high end, a separating tank at the low end, means for supplying water to the trough above and behind the feed hopper, means in connection with the feed hopper for varying the rate of feed, and riffles secured transversely to the bottom of the trough, each riffle being in the form of a tray having the bottom lying flat upon the bottom of the trough and connected to the trough and having an upstanding front wall, and end walls inclining from the front wall to the bottom.

1,299,182. TREAD DEVICE FOR SHOES. WILLIAM HANSTRIDGE, Sorrento, British Columbia, Canada. Filed July 20, 1918. Serial No. 245,883. 1 Claim. (Cl. 36—59.)



A tread device for shoes adapted to be used by gardeners for preventing the compression of the loose top soil in

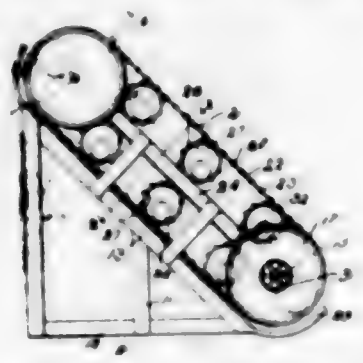
garden planting, comprising two parallel runner like members extending longitudinally of the shoe and beyond the toe portion, the members having tapering walls inclining upwardly, substantially as described.

1,299,183. **SASH-CENTER.** CHARLES V. HETTS, Detroit, Mich. Filed Jan. 13, 1919. Serial No. 270,831. 1 Claim. (Cl. 16—142.)



In a sash center the combination of a block adapted to be fixed in position to the jamb, a secondary block adapted to be fixed in position to the sash, one of said blocks having a longitudinal perforation a third block adapted to be held in position by a spiral spring and a bolt, said spring and bolt, said third block projecting into the perforations in one of said first mentioned blocks, friction rollers impinging against said third block of a diameter larger than the perforations in said block, means for holding said bolt and spring and the three blocks in position when assembled, substantially as described.

1,299,184. **MECHANICAL MOVEMENT AND DEVICE.** CHARLES F. HOVER, Conrad, Mont. Filed Apr. 23, 1917. Serial No. 163,926. 2 Claims. (Cl. 193—2.)

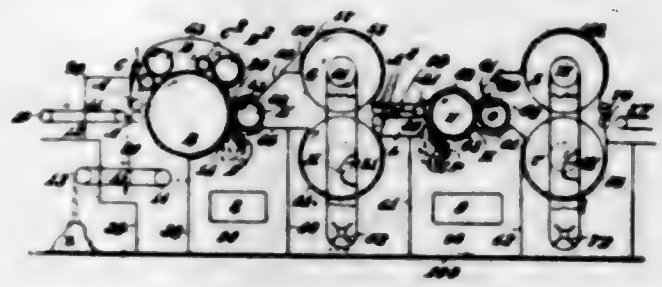


1. A conveyer including a support, parallel spaced sprockets mounted at the ends of the support, an endless chain engaged around the sprockets, a rack member extending longitudinally between the laps of the chain, open-ended carrier drums disposed between the laps of the belt and the rack member and provided with circumferential series of teeth engaging simultaneously with the chain and the rack member and means for driving the sprockets.

2. A mechanical device including an endless driving element, rolling open ended carrier elements disposed within and contacting with the driving element and a stationary driving element disposed within the endless driving element and contacting with the rolling elements.

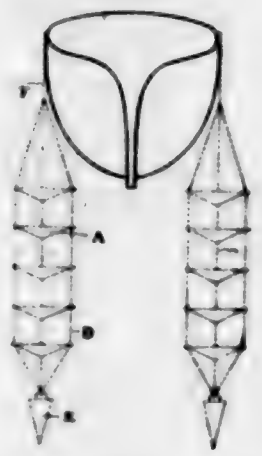
1,299,185. **PICKER-WASTE-SEPARATING MACHINE.** THOMAS E. HOWORTH, Nashua, N. H. Filed Mar. 6, 1917. Serial No. 152,624. 14 Claims. (Cl. 19—9.)

5. The combination in a cotton picker waste separating machine of preparing means which include feed mechanism, a forward running Garnett roll, Garnett opening rolls above and in operative relation therewith, a wire brush roll running backward and faster than the Garnett roll in such manner as to brush the stock therefrom, and a series of knives in the opening of an otherwise closed compartment closely set proximate to and under the receiving side of the brush roll, and cages adapted to receive stock from the brush roll, together with finishing mechanism which includes feed rolls, a backward running Gar-



nett roll, a series of knives in the opening of an otherwise closed compartment closely set proximate to and under the Garnett roll, a forward running brush roll in engagement with such Garnett roll and revoluble cages from which the air is adapted to be drawn, all parts being suitably cased.

1,299,186. **SHIP-STABILIZER.** TATSUJIRO IMAISUMI, Seattle, Wash. Filed Nov. 18, 1918. Serial No. 262,944. 2 Claims. (Cl. 114—122.)



1. Ship stabilizing apparatus comprising a plurality of water resisting units adapted to be suspended from the sides of a ship to offer resistance to lifting movement each of said units comprising a plurality of shallow cone shaped pans arranged one above another in spaced apart relation, the peripheral edges of each pan being connected at three equally spaced points with flexible suspension members that extend upwardly and are secured to the sides of the ship and the lowermost pan having a weight connected therewith.

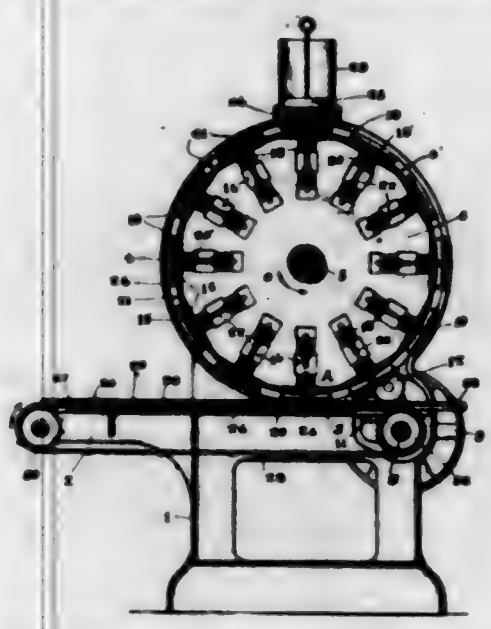
1,299,187. **STOP-MOTION FOR COMBS.** CHARLES E. JEWETT, North Andover, and FRED FITZGERALD, Lawrence, Mass. Filed Sept. 20, 1918. Serial No. 254,921. 6 Claims. (Cl. 19—25.)



5. In a comb having means for stopping and starting, a sliver receiving guide part of which is revoluble with the comb, and sliver delivery means, the combination of a faller wire so pivoted as to be held back by the sliver as it passes from the sliver delivery means to the sliver receiv-

ing guide, and mechanism engageable when the faller wire drops forward and operative by the revoluble part of the sliver receiving guide to cause the stopping means to stop the comb.

1,299,188. APPARATUS FOR APPLYING RING-LINERS TO CAN ENDS. AXEL JOHNSON, Oakland, Calif., assignor to American Can Company, San Francisco, Calif., a Corporation of New Jersey. Filed Jan. 4, 1916. Serial No. 70,226. 43 Claims. (Cl. 113—80.)



1. An apparatus for the described purpose, comprising a holder adapted to contain a stack of ring liners, means for engaging circumferentially interiorly and exteriorly and removing a liner from said stack and applying the same to the flange of a continuously moving can end, and means for moving said can end.

2. An apparatus for the described purpose, comprising a holder adapted to contain a stack of ring liners, means for removing the lowermost liner of said stack within the holder and an ejector carried with said removing means for applying the same to the flange of a continuously moving can end, and means for moving said can end and removing means continuously together while the ring liner is being so applied.

5. An apparatus for the described purpose, comprising a holder adapted to contain a stack of ring liners, a rotary ring liner carrier to which the ring liners are successively transferred from said holder in a direction toward the axis of the carrier, and means for removing said ring liners in a direction away from the axis of the carrier.

7. A rotary carrier for ring liners having on its peripheral side recesses for the reception of ring liners, means for inserting ring liners in said recesses in a direction which is radial inward relative to the axis of the carrier, and means for ejecting ring liners in an outward radial direction.

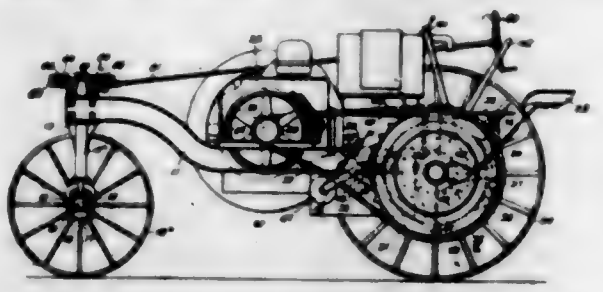
9. A rotary carrier for ring liners having recesses for the reception of ring liners and radially movable ejectors for expelling said liners, and means for inserting ring liners in said recesses.

1,299,189. LOCKING MECHANISM FOR FIREARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Jan. 10, 1919. Serial No. 270,496. 1 Claim. (Cl. 42—44.)



In a locking mechanism for firearms, the combination with a locking bolt provided with a rearwardly extending arm, of a spring exerting a constant effort through the said arm to move the locking-bolt forward, and a one-piece locking bolt-lever comprising a finger-piece, a bearing-hub, a combined guide and cam-stop, a supporting and retaining collar, and an operating shoulder adapted to co-act with the locking-bolt and produced by a transverse cut formed between the said hub and the combined guide and cam-stop.

1,299,190. TRACTOR. EDWARD A. JOHNSTON and EDMUND J. KANE, Chicago, Ill., assignors, by mesne assignments, to International Harvester Company, a Corporation of New Jersey. Filed Feb. 11, 1915, Serial No. 7,470. Renewed May 17, 1918. Serial No. 235,207. 4 Claims. (Cl. 180—72.)



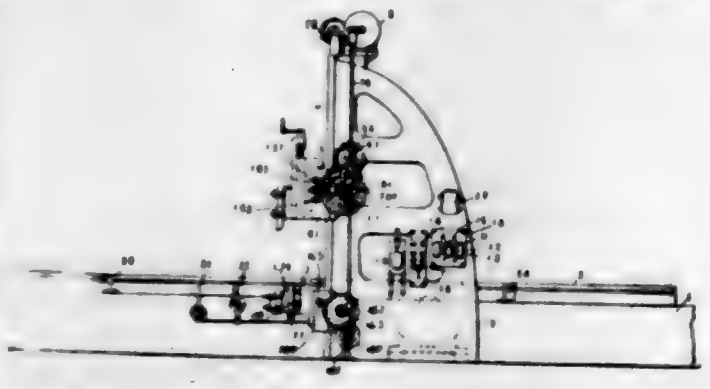
1. In a tractor, a frame including side members, a rear axle sleeve member connecting said side members, a brake including a brake band, and brackets secured to one of said side frame members and to said sleeve for supporting said brake band.

1,299,191. POWDER-PUFF. BERNARD HENRY KARMEN, New York, N. Y. Filed Oct. 16, 1916. Serial No. 256,354. 4 Claims. (Cl. 15—72.)



3. A powder puff including a body formed of a pair of sections compressed together in interlocking relation, a disk in the body, and a supporting member having a portion extending out of the body acting as a handle and a portion within the body, said latter portion being clamped into frictional-holding relation with said disk by the compression of the sections of the body.

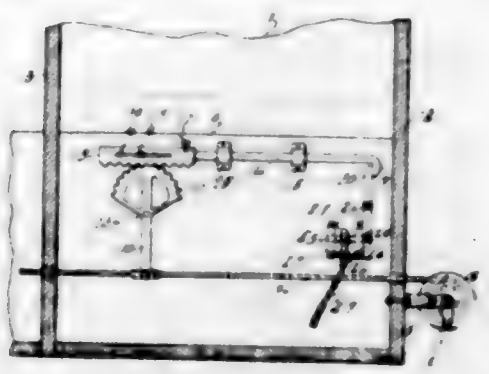
1,299,192. MACHINE-TOOL. SAMUEL H. KEEFER, deceased, Plainfield, N. J., by Mae A. Keefer, administratrix, Plainfield, N. J., and George E. Greenleaf, Plainfield, N. J., assignors to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 26, 1913, Serial No. 769,859. Renewed Apr. 15, 1918. Serial No. 228,809. 48 Claims. (Cl. 90—49.)



24. In a planer or other machine having a regularly reciprocating table and an adjustable tool, the combina-

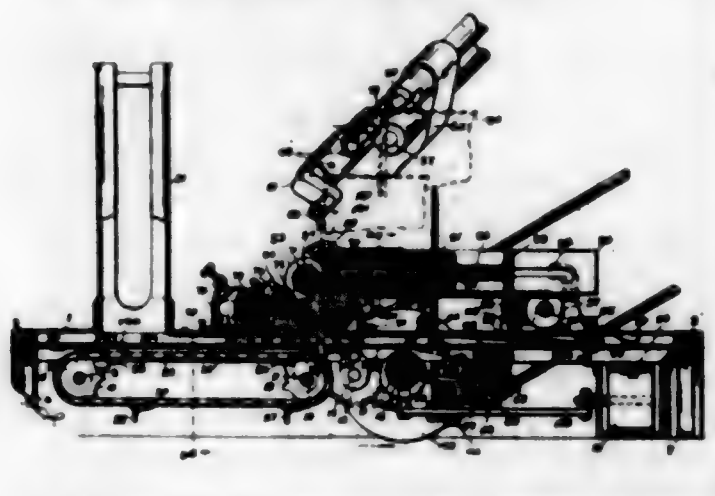
tion with the table and the tool, of an electric tool feeding motor, a relay switch for closing and opening the motor circuit, a pilot-switch normally operated by the table to close the relay circuit and thereby start the motor at regular intervals as the table reciprocates, a motor operated switch normally serving to open the relay circuit and thereby stop the motor after rotation to a predetermined extent, and a switch adapted to close the relay circuit independently of either of the aforesaid switches.

1,299,193. ANIMAL-RELEASING DEVICE. JOHN KIURU, Fairburn, S. D. Filed Aug. 21, 1918. Serial No. 250,799. 2 Claims. (Cl. 119—115.)



1. In an animal releasing device, a pull rope, pivotally supported segments operatively connected to said pull rope, sliding racks in mesh with said segments, sliding bars connected to and movable with said sliding racks, sliding links, connection between said links and said sliding bars for transmitting motion from the latter to said links, and means for yieldingly retaining said connection in a predetermined position.

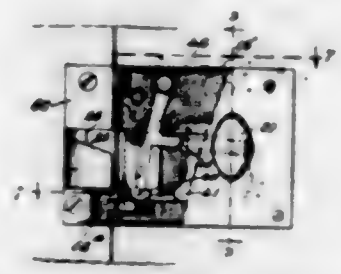
1,299,194. LABELING-MACHINE. RUDOLPH KNOPP and JOSEPH G. BIEHLER, Rochester, N. Y., assignors of one-fifth to Frank Keiper. Filed Dec. 10, 1913. Serial No. 805,745. 30 Claims. (Cl. 216—9.)



2. In a machine the combination of a hopper for labels, a sucker for selecting the end label in said hopper, means for clamping the balance of the labels in said hopper, means for feeding the selected label, means for applying paste thereto, and means for feeding a package into contact with said label, said clamping means oscillating on a single fixed axis, having its bearing outside of and at one side of the magazine.

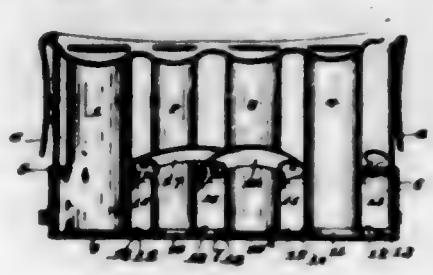
1,299,195. LOCK. JACOB KOHN, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,019. 19 Claims. (Cl. 70—64.)

1. A lock comprising a casing, a slide movable rectilineally up and down therein, a bolt carried by said slide so as to always project exteriorly of said casing, means movably connected with said casing for locking said slide against vertical movement, manually operated means for operating said locking means to release said slide and for vertically moving the latter independently



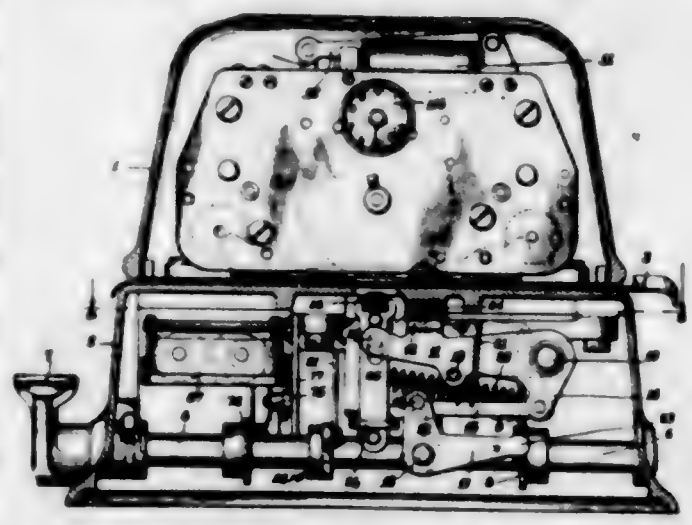
of said locking means and key actuated means operating independently of said manually operated means to move said locking means to an inoperative position and to vertically move said slide.

1,299,196. COIN-DELIVERER. AUBIN A. LAFORREST, Washington, D. C. Filed Nov. 10, 1917. Serial No. 201,287. 3 Claims. (Cl. 133—4.)



1. In a coin deliverer, a plurality of coin barrels, a coin ejector for each barrel, levers for operating the ejectors, a semicircular finger plate joining two of said levers upon the outside of one of the barrels, and a bowed finger plate attached to another of said levers and having free engagement with the other finger plate for simultaneously ejecting coins from all of said barrels.

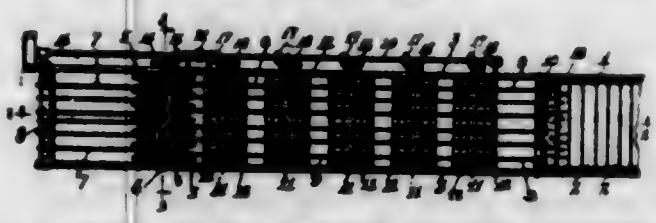
1,299,197. COUNTER. CLINTON EUGENE LARRABEE, Binghamton, N. Y., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed June 20, 1918. Serial No. 240,928. 8 Claims. (Cl. 234—43.)



1. In a time recording apparatus of the kind described, the combination with a main shaft and hand lever for rocking the same, of a movable printing bar or platen, a spring actuated lever connected therewith with provision for lost motion, means connected with the shaft for moving said lever against the force of its spring, and a connection between the lever and the said means which is broken by the movement and engagement therewith of the lever to thereby release the lever and permit it to throw the printing pad and cause it to operate, as set forth.

8. In a time recording machine, the combination with a series of timing disks and means for operating the first of the series step by step, of a printing mechanism, an inking ribbon feed lever operated thereby, and a locking lever normally held out of operative condition by said feed lever, but adapted to be released therefrom while the printing mechanism is operating and to engage with and lock the means for moving the first of the timing disks, whereby the said disks cannot be moved while the printing mechanism is operating.

1,299,198. FEEDER ESPECIALLY ADAPTED FOR ASPARAGUS-HANDLING MACHINES. DAVID LOW and ALBERT R. THOMPSON, San Jose, Calif.; said Thompson assignor to said Low. Filed Nov. 26, 1918. Serial No. 264,271. 8 Claims. (Cl. 198—1.)



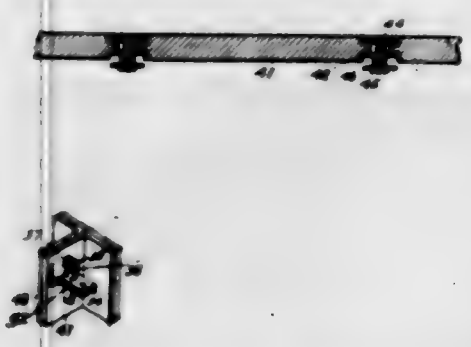
1. A feeder for the described purpose comprising a traveling carrier on which the material rests and by which it is advanced; a series of cross-lines of rotating spreaders disposed to act upon the advancing material on the carrier to separate its component parts; and means for imparting to successive lines of spreaders an increased speed of rotation, whereby the separation of the advancing material is increasingly effected.

1,299,199. LOCK. STEPHEN LYPKA, Langenburg, Saskatchewan, Canada. Filed Nov. 2, 1918. Serial No. 260,791. 2 Claims. (Cl. 70—14.)



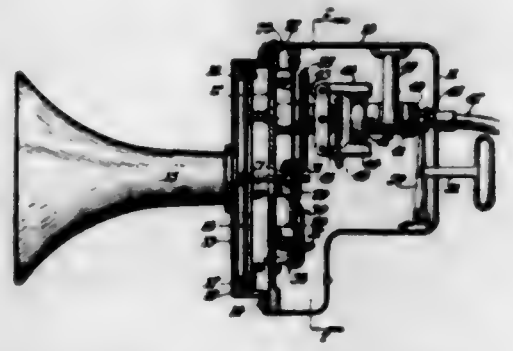
1. In a lock of the class described, the combination with a casing and a keeper, of a bolt slidable within said casing, rack teeth formed upon one side of said bolt, a spindle mounted to rotate transversely in said casing, a spur gear on said spindle, said gear engaging with the teeth of said rack, a ratchet wheel mounted on said spindle, a spring detent engageable with the teeth of said ratchet, said spring detent being removable by the intrusion and manipulation of a key and a knob on the exterior of said spindle, whereby said bolt may be actuated.

1,299,200. CONCRETE-FORM. STEWART R. MCKAY, East Cleveland, Ohio, assignor to McKay Concrete Form Company, Sewaren, N. J., a Corporation of New Jersey. Filed June 12, 1915. Serial No. 33,799. 5 Claims. (Cl. 25—131.)



6. In a form of the character described, a plurality of units each of said units comprising side members and end members to which the side members are permanently secured, means for securing the side members of adjacent units together, the side members of each unit having inwardly extending flanges, panels having tongues at their ends the said tongue portions coöperating with the flanges of the side members, and means for holding each panel independently in engagement with the flanges of the side members.

1,299,201. DIAPHRAGM-HORN. ALDEN L. MCMURTRY, Sound Beach, Conn., assignor to Lovell-McConnell Manufacturing Company, Newark, N. J., a Corporation of Delaware. Original application filed Feb. 6, 1912, Serial No. 675,800½. Divided and this application filed July 22, 1915. Serial No. 41,239. 3 Claims. (Cl. 116—1.)



1. In a signaling device, the combination of a sound producing diaphragm, a rotary member for mechanically agitating said diaphragm, a prime mover, a shaft continuously revolved thereby, connections for driving said member from said shaft, said connections including a multiplying gearing connected to said member, a manually operable, positive clutch, and slip connections between said gearing and said clutch for limiting the speed of said gearing and said rotary member by the vibratory speed of the diaphragm when the speed of said prime mover exceeds said vibratory speed.

2. In a signaling device, the combination of a diaphragm, a shaft adapted to be secured and continuously driven by a prime mover, a friction disk, a positively acting controllable clutch for connecting said disk and said shaft, a rotary member for agitating said diaphragm, and connections between said disk and said member and including a pair of opposed friction shoes engaging with said disk, and a spring for pressing them against said disk and resisting the tendency of centrifugal force to separate them from the latter.

3. In a signaling device, the combination of a diaphragm, a shaft adapted to be driven at varying speeds by a prime mover, a rotary member for agitating said diaphragm and connections between said rotary member and said shaft including a member operatively connected to said rotary member and a spring for holding it in gripping relation to said shaft, said member acting against said spring by centrifugal force and permitting increased speed and slipping of the said shaft when the speed of said rotary member exceeds a predetermined limit.

1,299,202. RAILWAY-TIE. JAMES P. MANLEY, Anderson, Ind. Filed Mar. 26, 1917. Serial No. 157,480. Renewed Feb. 28, 1919. Serial No. 279,456. 1 Claim. (Cl. 238—5.)



A rail chair comprising a malleable base plate having near one end a pair of opposed elongated notches in its side edges formed with undercut ends, the edge portions of said plate between said notches and said end of the

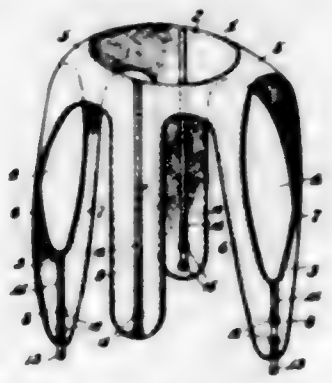
plate being bent upwardly on lines parallel with said edges of the plate, the edge portions of said plate at the other end of the notches being bent upwardly on oblique lines leading from the inner edges of said notches to the edges of the plate, all of said upwardly bent portions constituting abutments whose inner ends are formed by said undercut ends of the notches.

1,299,203. PIANO SOUNDING-BOARD. CARL CHRISTIAN MEINZOLT, Paddington, New South Wales, Australia. Original application filed July 21, 1914, Serial No. 852,295. Divided and this application filed Apr. 20, 1916. Serial No. 92,377. 5 Claims. (Cl. 84—30.)



1. An upright piano comprising a sound-board which is flat throughout its major portion and which is bent rearward in a reverse curve adjacent to an edge thereof so that the said edge is located in a different plane from the said major portion.

1,299,204. SUSPENDER-WAIST. FLORENCE BIRDSALL MILLER, South Bend, Ind. Filed Jan. 20, 1919. Serial No. 272,188. 4 Claims. (Cl. 241—12.)



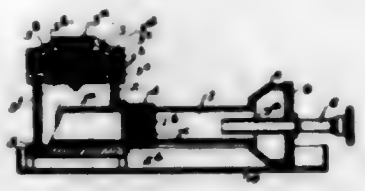
1. A reversible suspender waist having a shoulder portion, side sections depending therefrom, and supporting tabs depending from the shoulder portion between and wholly free of the side sections, the side sections being duplicates and the supporting tabs identical, and of like form in any reversal of position, and garment supporting means carried by both sides of the side sections and the tabs.

1,299,205. DEMOUNTABLE RIM FOR VEHICLE-TIRES. RALPH L. MORGAN, Worcester, Mass. Filed June 3, 1916. Serial No. 101,611. 3 Claims. (Cl. 152—21.)



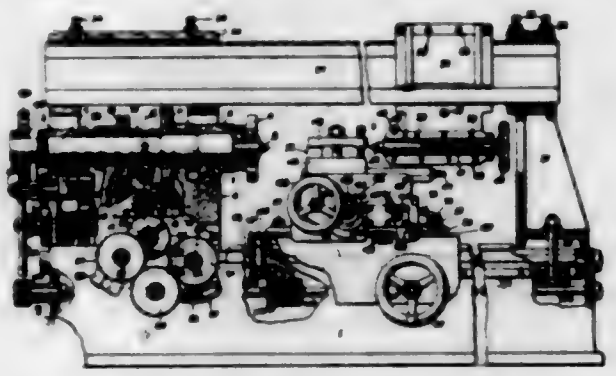
1. In a demountable rim for vehicles, the combination with a beveled felly rim having a series of spaced transverse grooves extending from one edge partially across its periphery and having radial recesses in said edge, communicating with said grooves, a series of straight bolts resting in said grooves and provided with unilateral heads fitting said recesses, a tire rim fitting the beveled surface of said felly rim and provided with transverse holes extending partially through said tire rim and in alinement with the grooves in said felly rim, nuts carried by said bolts, and means for holding said bolts from longitudinal movement.

1,299,206. OIL-BURNER. THOMAS MUEHLEISEN, San Diego, Calif. Filed Mar. 6, 1918. Serial No. 220,701. 3 Claims. (Cl. 158—61.)



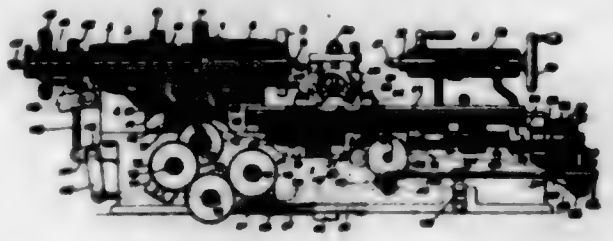
1. In a hydrocarbon burner a main tube, an adjustable air damper mounted thereon, a fuel conducting tube extending some distance into said main tube, a gas forming coil mounted around said main tube, a plurality of slots in said main tube forming a burner for heating said coil, a super mixer adjustably secured on the extended end of said main tube, and a burner mounted on the upper end of said super mixer.

1,299,207. RELIEVING-LATHE. FRIEDRICH MÜLLER, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Dec. 30, 1916. Serial No. 139,838. 64 Claims. (Cl. 82—2.)



8. In a relieving lathe, the combination of means for holding and rotating a cutter, a tool holding means comprising a horizontal turntable and a horizontal slide on the turntable, a cam mounted coaxially with the turntable and rotatable in timed relation with the rotation of the cutter, cam actuated means operable for all positions of the turnable for moving the slide toward and away from the cutter, and means operable while the slide is in motion for adjusting the moving means and automatically locking it in adjusted position thereby varying the extent of slide movement.

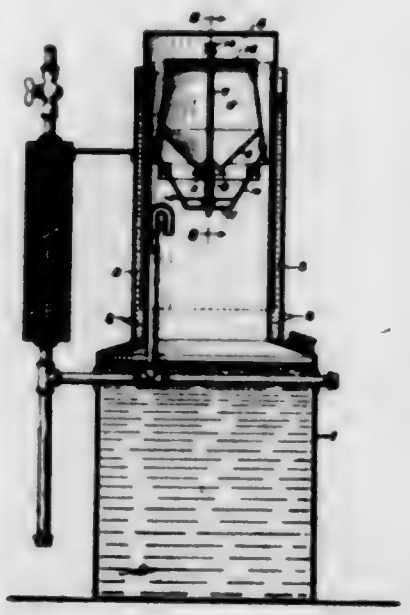
1,299,208. RELIEVING-LATHE. FRIEDRICH MÜLLER, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 27, 1917. Serial No. 144,024. 12 Claims. (Cl. 82—2.)



10. In a relieving lathe, the combination of means for holding and rotating a cutter, a tool holder, means for moving the tool holder toward and away from the cutter in timed relation to the rotation thereof, a device for

giving the tool holder a feeding movement supplemental to the aforesaid normal movements, automatic means comprising a pawl and a ratchet wheel for intermittently operating the feeding device, and a manually controllable device supplemental to the said automatic means for preventing the engagement of the pawl with the ratchet wheel whereby the feeding device is made free for manual movement in either direction.

1,299,209. ACETYLENE-GAS GENERATOR. JAMES A. MUSE, Cleburne, Tex. Filed Nov. 26, 1915. Serial No. 63,430. 1 Claim. (Cl. 48—52.1.)



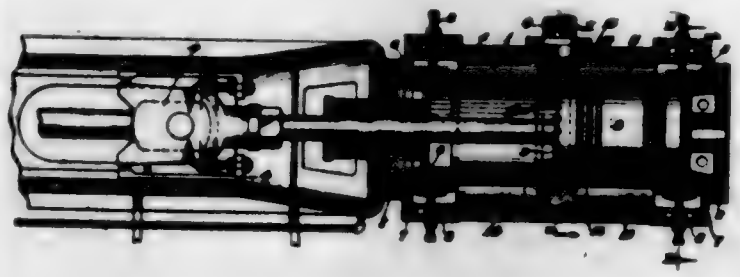
In an acetylene gas generator, a carbid hopper, a conical valve closing the lower outlet end of said hopper, a strap at the upper end of the hopper, a strap carried by the hopper below the outlet, a stem for the valve extending above and below said valve and traversing both straps and a spring coiled about that portion of the stem extending below said valve and interposed between the under face of the valve and the lower strap, in combination with a gas bell and water sealing chamber inclosing the carbid chamber, said gas bell arranged to impinge upon the upper end of the valve stem and depress the valve stem against the tension of said spring to open the valve when said bell descends in the water sealing chamber.

1,299,210. GROMET-PUNCH. PERIN J. MYERS, Jeffersonville, Ind., assignor to Jeffersonville Manufacturing Company, Jeffersonville, Ind. Filed Dec. 18, 1918. Serial No. 266,588. 5 Claims. (Cl. 164—119.)



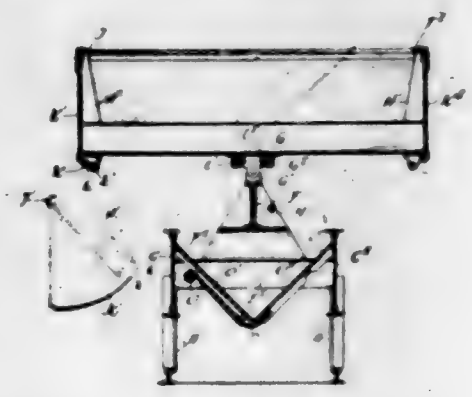
1. In a gromet punch, the combination of a handle device, said handle-device having a slotted portion in communication with the hollow portion of a center punch, a hollow center punch, and an annular series of spaced awls arranged about the center punch and carried by the handle device.

1,299,211. GAS-COMPRESSOR. CHARLES R. NELSON, New Rochelle, N. Y., assignor to De La Vergne Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1917. Serial No. 140,678. 7 Claims. (Cl. 230—27.)



1. A reciprocating gas compressor, comprising in combination with the cylinder, piston, normal suction valve and induction pipe to supply the same and an auxiliary inlet port also supplied from said pipe and through which auxiliary port an additional charge of gas is delivered into the cylinder, this extra charge moving into the cylinder under the momentum imparted to it by the suction stroke of the piston, as distinguished from a suction charge.

1,299,212. CENTER AND SIDE DUMP CAR. JOHN O. NEIKIRK, Lombard, Ill., assignor to Rodger Ballast Car Company, a Corporation of Maine. Filed June 4, 1917. Serial No. 172,637. 9 Claims. (Cl. 105—250.)



1. A dump car, comprising a tilting body for discharging the load to either side of the track, and means for discharging the load centrally of the track, substantially as described.

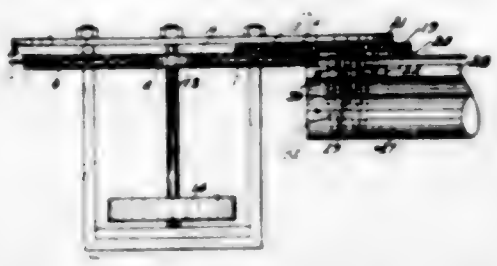
2. A flat bottom dump car, comprising pivotally mounted floor means for discharging its entire load by gravity to the center or to either side of the track, substantially as described.

3. A dump car, comprising a tilting body for discharging the load to either side of the track, and means supported below and independently of the body for directing the discharge of the load to the center of the track, substantially as described.

4. In a dump car, the combination with a body, comprising sides hinged to swing outwardly, and a bottom formed of sections hinged to drop away from the longitudinal center of the body, and means for tilting said body about a longitudinal axis, substantially as described.

5. In a dump car, the combination with a body, comprising sides hinged to swing outwardly, and a bottom formed of sections hinged to drop away from the longitudinal center of the body, means for tilting said body about a longitudinal axis, and a hopper supported centrally below and independently of the car body, substantially as described.

1,209,213. AUTOMATIC CABLE-HANGER DISTRIBUTER. WILLIAM NICK, Minneapolis, Minn. Filed May 16, 1918. Serial No. 235,217. 6 Claims. (Cl. 247—23.)



1. In an automatic cable hanger distributer adapted to travel on a messenger strand, means for carrying a quantity of cable hangers and means operated by said messenger strand for distributing said cable hangers along said messenger strand.

1,299,214. ALIPHATIC ACIDS CONTAINING AN ARSENOARYLAMIN GROUP. KARL J. OECHSLIN, Paris, France. Filed Mar. 4, 1915. Serial No. 12,086. 5 Claims. (Cl. 23—24.)

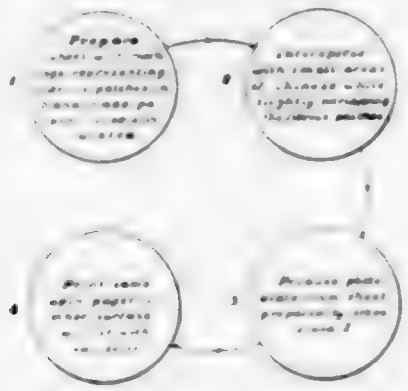
4. As new products, the light yellow stable formaldehyde derivatives of p-arse-noaryl-α-aminoaliphatic acids, such as can be obtained by the action of formaldehyde on said acids

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1,299,215. ALIPHATIC ACIDS CONTAINING AN ARSENOARYLAMIN GROUP. KARL J. OECHSLIN, Paris, France. Filed Mar. 4, 1915. Serial No. 12,087. 4 Claims. (Cl. 23—24.)

1. As new products of manufacture, the stable N-acylated arsenoaryl derivatives of α-aminoaliphatic acids.

1,299,216. PROCESS FOR PARTIALLY SIMULATING HAND-MADE PAPER. LOUIS H. ORR, New York, N. Y. Filed Jan. 3, 1916. Serial No. 70,058. 2 Claims. (Cl. 41—26.)



2. The within described process, which consists in, first, placing upon a sheet of light color dark lines representative of fiber patches in certain kinds of paper; then laying on brushes of white wash colors intermediate said fibrous patches and slightly overlapping the edges thereof; then making a half tone plate thereof by photographic process; making an impression upon suitable paper by said photo plate; then overlaying said impression in blank ink with a tint or color as desired.

1,299,217. ROCKET. HENRY J. PAIN, New York, N. Y. Filed Nov. 21, 1916. Serial No. 132,531. 2 Claims. (Cl. 102—23.)

1. A rocket comprising a tubular body, a firing charge in one end thereof which when ignited causes the rocket to rise in the air, a transverse wall at the inner end of the firing charge, a second transverse wall spaced from the aforesaid transverse wall and having a recess in one surface thereof, a detonating charge within the tubular body between the said transverse walls, a signaling device in the opposite end of the tubular body, an ejecting charge beneath the signaling device and within the recess in the second aforesaid transverse wall, a fuse making communication between the firing charge and the said ejecting charge for the signaling device, and a fuse extending through one of the said transverse walls for igniting the detonating charge.



1,299,218. BALL-RACK. WILLIAM W. PECK, Duncan, Nebr. Filed May 14, 1918. Serial No. 234,489. 3 Claims. (Cl. 46—6.)



1. A ball rack for pool tables comprising a casing having a series of slots in its sides, shelves hinged at one edge to the casing and having trunnions on their ends at the other edge projecting through said slots, a yoke connected with said trunnions, spring means for holding the yoke with the shelves in normal position, a lever for moving the yoke downwardly to tilt the shelves, and means engaging the upper end of the yoke for forcing the same outwardly when the yoke is moved downwardly.

2. A ball rack for pool tables comprising a base having its upper end extended and provided with a groove in its edges, a casing on said base having slots in its sides, shelves in said casing having trunnions thereon pro-

jecting through said slots, a yoke having side members extending on each side of the casing and engaging said trunnions, a coil spring engaging the groove in the base and having its ends secured to the side members of the yoke, and a lever for moving said yoke downwardly for tilting the shelves.

8. A ball rack for pool tables comprising a casing having slots in its sides, shelves pivoted in said casing and having trunnions engaging with said slots, a yoke having side members located on each side of the casing engaging the trunnions, spring means for holding the yoke with the shelves in normal position, an inclined guide member at the upper end of the casing engaging with the upper end of the yoke for forcing the same outwardly on the downward movement thereof, and a bell crank lever at the lower end of the casing engaging with the lower end of the yoke for moving the same downwardly.

1,299,219. HEADLIGHT. AUGUST HERMAN PFUND, Baltimore, Md. Filed July 7, 1917. Serial No. 179,149. 8 Claims. (Cl. 240—48.4.)



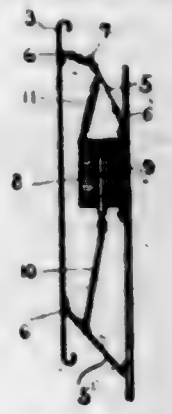
1. In a headlight in combination, a condenser, a source of illumination, a lens having an optic plane, and means for obstructing a portion of the rays, said means terminating in an edge in the optic plane of said lens whereby an image of said obstructing means with a well-defined edge separating an intensely illuminated field from a dark field without intervening penumbra, is projected forward in place of the usual field of illumination.

2. In a headlight in combination, a source of illumination, a reflector, a cylindrical lens, a non-reflecting surface below the light, terminating at its upper edge, substantially in the optical plane of said lens, the reflector, source of illumination and the lens being arranged to project a well-defined image of said edge, serving to divide an intensely illuminated field and an adjacent dark field the illuminated field being below the image.

3. In a headlight in combination, a source of light, a condenser, a cylindrical image-forming lens, an edge substantially parallel to the elements of the lens near the principal focus, a non-reflecting surface extending downward from said edge and shading the reflector below the optic plane of the lens whereby a well-defined image of the straight edge is projected forward, the same separating an intensely illuminated field below from a dark field above.

1,299,220. ELEVATOR-GATE SHOE. HOWARD PHILLIPS, Detroit, Mich. Filed Nov. 4, 1918. Serial No. 261,009. 2 Claims. (Cl. 187—52.)

1. A device of the class described, comprising a shoe, a pair of arms hinged to the car and pivotally connected with the shoe, one of said arms being formed of two parts, a knuckle joint connecting the two parts together, a solenoid carried by the car and having its coil electrically connected with the starting means of the car, a core for the solenoid, a link connecting the same



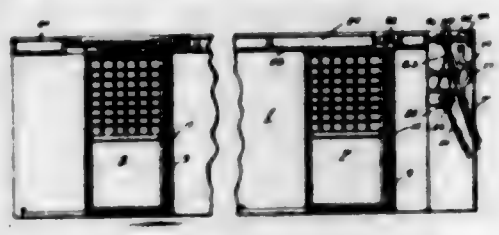
with the solid arm and a coil spring connecting one of the parts of the sectional arm with a part of the solenoid.

1,299,221. ARCH-SUPPORT FOR SHOES AND METHOD OF MAKING THE SAME. HENRY PIEUSSENS, Philadelphia, Pa. Filed Dec. 18, 1918. Serial No. 267,338. 4 Claims. (Cl. 36—71.)



1. A shoe comprising an insole, a shank and a metallic arch support, the shank being temporarily secured to the insole at its end and the metallic arch support being temporarily secured to the insole and lying between the insole and the shank.

1,299,222. CELL-DOOR-LOCKING DEVICE. EMILIO POZZO, Albany, Calif. Filed May 17, 1916. Serial No. 98,185. 5 Claims. (Cl. 189—7.)



1. The combination with a plurality of sliding doors, a shaft slidably and rotatably mounted above said doors, selectors attached to said shaft adjacent each door, wards on said selectors, fingers extending from said doors, means for rotating said shaft to bring the wards into engagement with said fingers, and means for longitudinally shifting said shaft to impart movement to the door by means of the engagement of the wards and fingers.

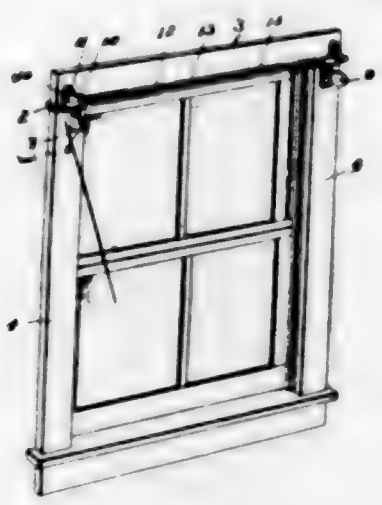
2. The combination with a plurality of sliding doors, of abutments for said doors each having a longitudinal channel, latch bars slidably mounted in said channels, catches on the doors adapted to engage the latch bars, a shaft slidably and revolubly mounted above said doors, selectors attached to said shaft adjacent each door, wards on said selectors, fingers extending from said doors, means for rotating said shaft to bring the wards into engagement with said fingers, and means for longitudinally shifting said shaft to impart movement to the doors by means of the engagement of the wards and fingers.

3. The combination with a plurality of sliding doors, a latch for each of said doors, a shaft revolubly and slidably mounted above said doors, selectors on said shaft each having a common ward and a selector ward, the common wards of all of the selectors being disposed in the same angular relation and the selector

wards of the selectors being disposed at different angles with respect to the common wards, means on each of said doors adapted to be engaged by said wards by rotation of said shaft, and means for shifting said shaft longitudinally to impart movement to the selected door or doors by means of engagement of the wards with respect to the doors.

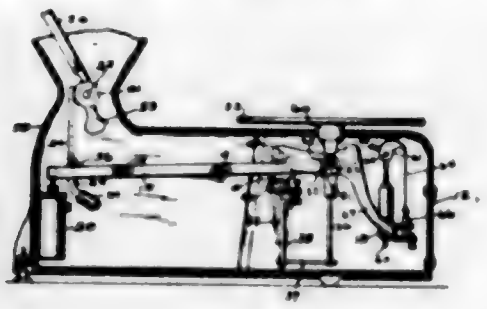
4. The combination with a plurality of sliding doors, a shaft slidably and revolubly mounted above said doors, selectors attached to said shaft, radially extending wards on each of said selectors, one ward of each selector being in alinement, and the other ward being at a different angle on each selector, fingers extending outwardly from said doors adapted to be engaged by said wards, and means for rotating the shaft to selectively engage the wards with the doors, and means for sliding the shaft longitudinally to impart movement to the doors by means of the engagement of the wards therewith.

1,299,223. CURTAIN-SUPPORTING BRACKET. CARLON MARION PRIMM, Long Beach, Calif. Filed Dec. 13, 1918. Serial No. 266,618. 3 Claims. (Cl. 156—24.)



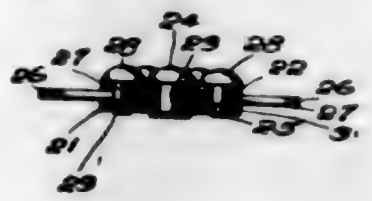
1. A device of the character specified, formed of sheet metal and comprising an arc shaped portion adapted to fit over the molding between the upper cross facing plate and the side facing plates of a casement, and having spurs or lugs for engaging the junction between the said plates, said portion carrying a depending bearing for the trunnion of a shade roller and an upstanding bearing for the end of a curtain pole, the last named bearing consisting of similar curved sections spaced apart from each other.

1,299,224. WEIGHING-SCALE. WILLIAM C. PRITCHARD, Lancaster, Pa., assignor to The National Store Specialty Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed Aug. 27, 1917. Serial No. 188,456. 3 Claims. (Cl. 265—62.)



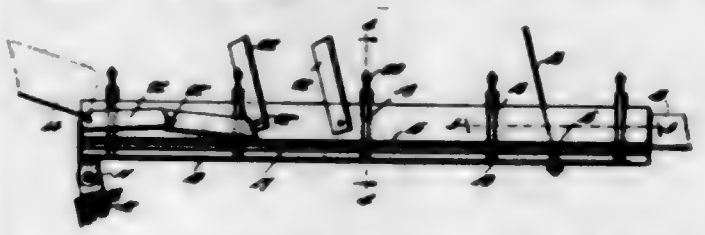
1. A weighing scale including a weighing beam, a swinging indicating means, a weighted operative connection between the indicator and one end of the weighing beam for the beam to control the indicator, an adjustable pendulum connected with the other end of the beam and arranged to afford a variable resistance to the movement of the beam under the influence of an applied load, a housing entirely inclosing said beam, indicator operating means and pendulum, said housing having an opening in one side wall thereof through which said parts may be introduced into the housing, and an opening in one end thereof to give access to the pendulum for its adjustment, and a removable cover for said end opening.

1,299,225. PROTECTIVE ARMOR FOR PNEUMATIC TIRES. ROBERT C. PURVIS, Seaford, Del. Continuation of application Serial No. 850,476, filed July 11, 1914. This application filed June 27, 1917. Serial No. 177,200. 12 Claims. (Cl. 152—16.)



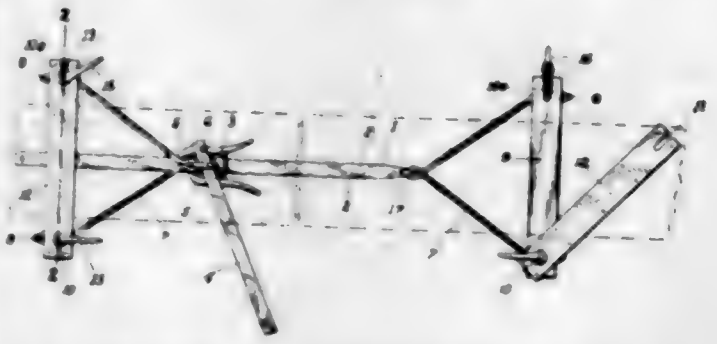
1. In a device of the class described, a plurality of disks, each of said disks being composed of an outer plate and an inner plate, a master rivet connecting said outer and said inner plate together so as to leave a gap between said plates, eye links inserted in said gap connecting adjoining disks, and stud rivets passing through said plates and eye links.

1,299,226. DEVICE FOR GRADING AND WASHING SAND AND GRAVEL. LABON F. RECTOR, Columbus, Nebr. Filed Mar. 14, 1918. Serial No. 222,388. 4 Claims. (Cl. 83—56.)



2. In a separating and washing device, means for conducting a stream of water and of granular material within the water, a screen within said means, and a plurality of chutes each pivotally mounted adjacent to said screen in position to receive the material and discharge the same either on said screen or on another of said chutes according to the will of the operator.

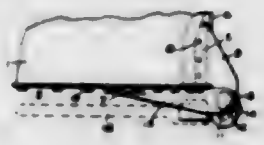
1,299,227. BELT STRETCHER AND CLAMP. CHARLES W. REED, Modesto, Calif., assignor to Bennie J. Reed, Modesto, Calif. Filed Aug. 17, 1918. Serial No. 250,359. 2 Claims. (Cl. 241—68.)



2. A belt clamp and stretcher comprising a pair of clamping members, each clamping member including a V-shaped rod, one of said rods being swivelly connected at its apex to a stretcher bar and the other rod similarly connected to the movable member of the stretcher, a lower clamping bar, an eye bolt seated in each end of

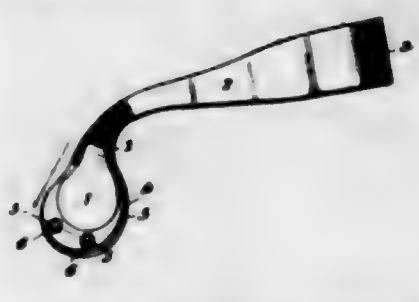
the bar, the ends of the V-shaped rod being parallel and passing through the bar and the eyes of the bolts therein, an upper bar turnably mounted on one of said bolts, a slot in the other end of the upper bar, the lower bar being provided with a recess inclining from the seat of the bolt at that end whereby the same may rest at an angle and the slot end of the upper bar being cut away on its under surface to permit of the bar passing over the inclined bolt, and hand nuts on the bolts adapted to clamp the two clamping bars together.

1,299,228. HINGE FOR BOILER-FRONTS. WILLIAM E. RICKERSON, New York, N. Y., assignor of one-fourth to Frederick W. Murphy, one-fourth to Raymond W. Ritterer, and one-fourth to Daniel J. Mullen, Indianapolis, Ind. Filed Dec. 26, 1917. Serial No. 209,004. 2 Claims. (Cl. 16—11.)



1. A hinge structure for boiler fronts including a horizontal cylindrical circular boiler, a boiler head at right angles thereto, stud bolts carried by the boiler for cooperation with said head and arranged in circular formation, a hinge leaf attached to the boiler, a pair of ears on said leaf, a leaf attached to said head and normally at right angles to the boiler leaf, ears on the latter leaf adapted to rest upon the ears of the first leaf, the ears of the boiler leaf having elongated slots and the ears of the leaf attached to the head having circular openings, a pivot bolt passing through the openings in both sets of ears, a pair of cams surrounding said bolt between the upper ear of the leaf attached to the boiler and the lower ear of the leaf attached to the head, a bar connecting said cams and integral therewith whereby both of said cams will be operated simultaneously, and an operating shank integral with the connecting bar and midway between its ends.

1,299,229. DEVELOPING APPLIANCE FOR PHOTOGRAPHIC PRINTS. GLEASON W. ROMER, Lake Helen, Fla. Filed June 15, 1918. Serial No. 240,183. 5 Claims. (Cl. 81—5.)



1. An appliance of the character described composed of a single piece of material bent upon itself to form an upper and a lower resilient arm, clamping members formed upon the terminals of the arms, one clamping member being of greater length and width than the other member, the body portion of each arm being provided with a downwardly curved portion, and each arm being curved laterally with respect to the body portion near its terminal end portion for the purposes described.

2. An appliance of the character described comprising a single piece of material bent upon itself to form two arms, clamping members formed upon the terminals of said arms, the lower one of said members having an enlarged clamping end portion extending at all points beyond the reduced clamping end portion of the upper member, and both arms having a downward curved body portion and a lateral curved portion near its terminal end for the purposes described.

5. An appliance of the character described comprising a single piece of material formed into two resilient clamping members, each member formed with a lateral curve near its outer end portion, the end portion of one member being larger than the other and provided with a beveled outer edge, and a plurality of depressions formed therein near its outer end for the purposes set forth.

1,299,230. GOVERNING DEVICE FOR INTERNAL-COMBUSTION ENGINES. GUNNAR ROOS, Stockholm, Sweden. Filed June 1, 1917. Serial No. 172,281. 2 Claims. (Cl. 123—140.)



1. A fuel feeding and governing device for multi-cylinder internal combustion engines comprising a fuel tank, injectors, pipes connecting said tank and injectors, an overfloow pipe common to all of said injectors, branch pipes connecting said injectors and said overflow pipe, check valves in each of said branch pipes for preventing passage of fuel from said overflow pipe to said injectors, a valve in said overflow pipe, a speed responsive device controlling said valve, and a return pipe connecting said tank and overflow pipe.

2. A fuel feeding and governing device for multi-cylinder internal combustion engines comprising a plurality of fuel injectors, an overflow pipe common to all of said injectors, a valve in said overflow pipe, branch pipes connected to said injectors, means for successively connecting and subsequently disconnecting said branch pipe from said overflow pipe, and a speed responsive device controlling said valve.

1,299,231. VALVE-GRINDER. CHARLES D. ROSECRANS, Honolulu, Hawaii. Filed June 13, 1918. Serial No. 239,764. 2 Claims. (Cl. 51—4.)



1. A valve grinder including a vacuum cup adapted to be applied to a valve, a holder carrying said cup, a yoke having opposite arms formed with inturned ends pivotally engaging said holder at opposite sides, a handled shank having a slot therein at the front end, in which the yoke is received at its approximate center, and a pivot pin at right angles to said pivoted arms of the yoke and connecting the latter with said shank.

2. A valve grinder including a vacuum cup adapted to be applied to a valve, a stem on said cup at the back, a

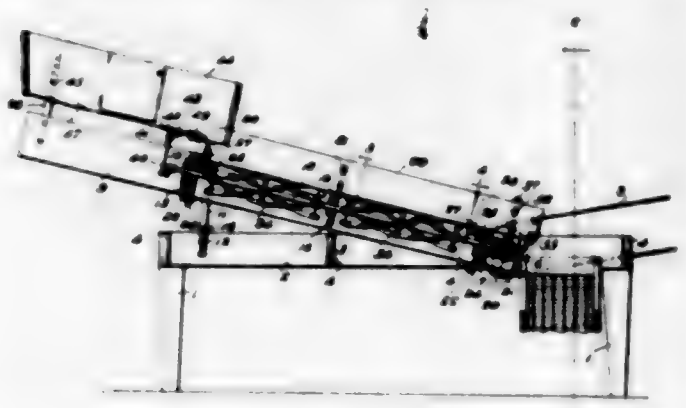
tubular holder having threaded engagement with said stem, a handled shank, and means loosely securing said holder at its rear end to the front end of said shank.

1,299,232. ART OF FASTENING SHEETS TOGETHER. HEYMAN ROSENBERG, New York, N. Y. Filed Apr. 16, 1917. Serial No. 162,488. 7 Claims. (Cl. 85—46.)



7. In the art of fastening together sheets of metal, forming an entering opening through a plurality of such sheets in contact with each other, placing in said opening the tip of a screw conforming generally in body and thread contour with that of a wood screw and having the thread hardened and extending substantially from the tapered tip to the head of the screw, the entering opening being of substantially no greater diameter than the body of the screw, and forcibly rotating the screw until the hardened thread thereof cuts its way in the material of the sheets to a point of contact of the head of the screw with one of the sheets.

1,299,233. ONION-TOPPING MACHINE. DAVID H. ROYSE, Hartville, Ohio. Filed May 18, 1918. Serial No. 235,252. 13 Claims. (Cl. 146—11.)



1. In an onion topper, a hopper pivotally mounted and designed to be filled with untopped onions, an opening designed to discharge onions from the said hopper, a rotary shaft arranged beneath the said hopper, a crank carried by said shaft and a link connecting the said hopper with the said crank whereby the said hopper will be rocked upon its pivots when the shaft rotates.

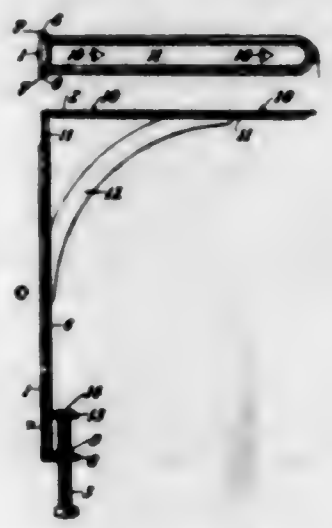
2. In an onion topper, a frame, a pair of inclined support members pivoted upon the said frame, adjustable brackets secured to the said inclined support members by which the angle of incline of the said support members can be increased or decreased and means carried by the said support members for removing the tops from onions.

3. In an onion topper, a frame, a drive shaft carried by said frame, a pair of spaced inclined support members pivotally mounted upon said drive shaft, cross members connecting the said inclined supports, a second shaft rotatably mounted in journals carried by said cross members, a pinion mounted upon said second shaft, said pinion meshing with a similar pinion carried by the said drive shaft whereby the said second shaft will rotate as the drive shaft is rotated, knives mounted upon the said second shaft and designed to rotate therewith, a trough mounted in vertical alinement above the said knives, said trough designed to receive untopped onions, a slot formed in the bottom of the said trough through which the tops of the onions within the said trough are designed to project, said rotary knives being designed to remove the said onion tops as they project through the said slot.

4. In an onion topper, an inclined V-trough designed to receive untopped onions, a slot formed in the bottom of said trough, the side members of said trough being adjustably secured, and designed to be moved to increase or decrease the width of said slot, agitating means connected to the said trough and designed to agitate the trough to cause the onions to roll downwardly therein and project their tops through said slot the said agitating means being provided with an adjustment to increase or decrease the degree of agitation, rotary knives mounted beneath the said trough and designed to remove the onion tops projecting through the said slot.

5. In an onion topper, an inclined V-shaped trough designed to receive untopped onions, journals secured to said trough, bearings slidably mounted and designed to receive the said journals, rocking means attached to the said trough and designed to rock the trough upon the said bearings, knives mounted beneath said trough and means for moving the slidable bearings to adjust the trough away from or toward the said knives.

1,299,234. BRACKET. MITCHELL W. RUSSELL, Springfield, Mass. Filed Feb. 4, 1918. Serial No. 215,251. 3 Claims. (Cl. 248—19.)



1. The combination, in a bracket, of a sheet-metal wall support bent forward at the bottom to form a lug, a threaded member tapped into and through said lug, and a sheet-metal shelf support arranged in sliding relation to said wall support, and also bent forward at the bottom to form a lug which extends over said threaded member.

1,299,235. FIRE-EXTINGUISHER. WILLIAM G. SANDERSON, Chicago, Ill. Filed May 15, 1916. Serial No. 97,473. 3 Claims. (Cl. 169—17.)



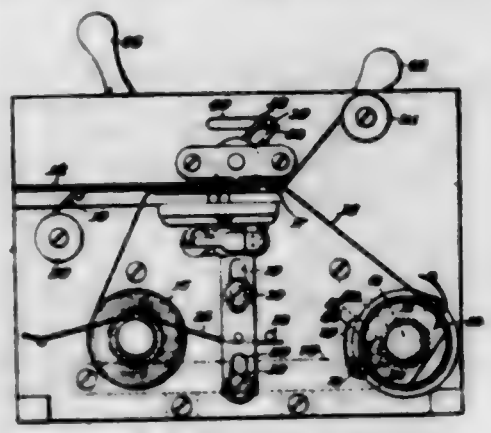
1. In a hand operated fire extinguisher, the combination of a fluid containing tube, an imperforate piston re-

ciprocable therein, a closure head for one end of the tube, a plurality of telescoping inter-engaging screw members, one of said members being secured to the piston, a casing carried by the said head and inclosing the screw members when in telescoped position, and means projecting through said casing for rotating one of the screw members not connected with the piston.

2. In a hand operated fire extinguisher, the combination of a fluid containing tube, an imperforate piston reciprocable therein, means for preventing rotation of the piston with respect to the tube, a threaded rod concentric with the tube and rotatable with respect thereto, means for preventing axial movement of the rod, a plurality of inter-engaging tubes telescoping one within the other, the inner being in threaded engagement with the rod, and means for securing the outer of said tubes to the piston.

3. In a hand operated fire extinguisher the combination of a fluid containing tube, an imperforate piston reciprocable therein, means for preventing rotation of the piston with respect to the tube, a head for one end of the tube, an axially disposed cylindrical casing projecting outwardly from the head, a threaded rod positioned axially within the casing, a plurality of internally and externally threaded tubes adapted to telescope within each other, the inner tube being in threaded engagement with the said rod and all of the tubes, when in telescoped position lying within the casing, means connecting the outer of the tubes with the piston, and means carried by the outer end of the casing for preventing axial movement of the threaded rod.

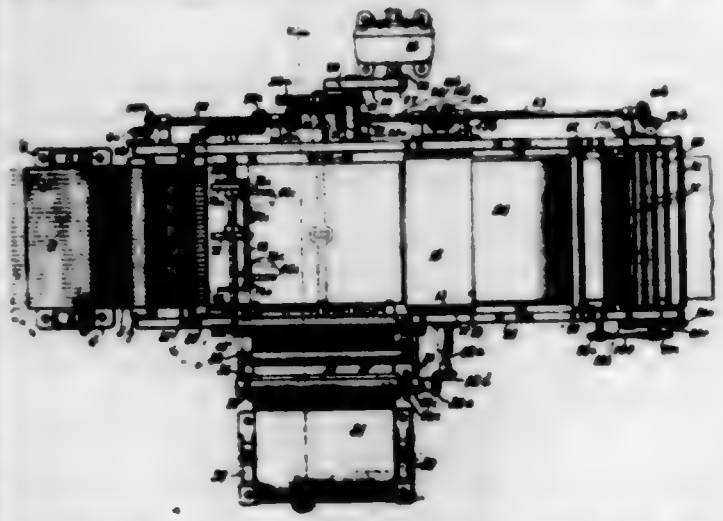
1,299,236. SERVICE TIME-CHECKER. EDWIN M. SCHANTZ, Chicago, Ill. Filed Oct. 22, 1917. Serial No. 197,813. 23 Claims. (Cl. 224—44.)



2. In a service time checker, the combination of signal means, chance means whereby the signal may be given at an indeterminate time, and means for automatically varying the effect of said chance means.

1,299,237. MACHINE FOR MAKING MULTIPLY PAPER. THEODORE SCHERR, Cleveland, Ohio, assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 12, 1917. Serial No. 148,204. 24 Claims. (Cl. 154—1.)

1. In a machine of the character described, the combination, with pressing means, of a series of feed rollers, driving means for said rollers for feeding a web of paper to said pressing means, means for applying adhesive material to said web while in transit to said pressing means, a spool frame, means for supplying reinforcing threads from the spools on said frame to said pressing means, a table having spaced supports for sheets of paper and arranged in operative relation to said pressing means, means for reciprocating said table to bring the supports thereof alternately in operative relation to said pressing means, a paper roll, continuously operable feed rollers through which the paper from said roll is passed, a gravity roller under which the web from said roll is passed, additional feeding rollers through which the last mentioned paper web is passed and by which it is delivered to the supports on the table with its fibers at substantially right angles to the fibers of the first web, means for intermittently operating the last mentioned rollers, a knife interposed between the last mentioned rollers and the table, means for operating said knife, in-



termittently operable means associated with said table for feeding sheets consecutively from the supports thereof to the said pressing means, means additional to the pressing means for further uniting the sheets of paper to the web and the interposed reinforcing threads, and means for feeding an adhesive-coated web to the last mentioned name.

1,299,238. WOODEN PAVING-BLOCK. AUGUST E. SCHUTTE, Northboro, Mass. Filed July 27, 1915. Serial No. 42,203. 1 Claim. (Cl. 99—12.)

A wooden paving block having a maximum of expansion and filled with a hygroscopic agent whereby the block is rendered non-contracting.

1,299,239. RAZOR-BLADE SHARPENER. CLINTON A. SCOTT and ALEXANDER G. HUO, Chicago, Ill., assignors to National Manufacturing and Specialty Company, Chicago, Ill., a Corporation of Illinois. Original application filed Nov. 9, 1914, Serial No. 870,947. Divided and this application filed Nov. 26, 1917. Serial No. 203,941. 3 Claims. (Cl. 51—16.)

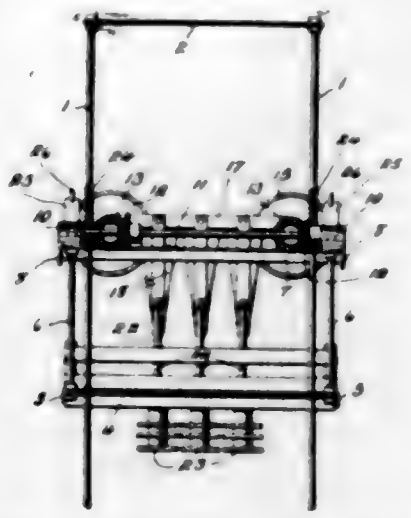


1. A device for holding a razor blade that is to be sharpened including a handle; a blade holder; a connection between the handle and blade holder affording an axis of swinging movement for the blade holder which is normally substantially fixed with respect to the handle, and which axis of movement is located with reference to the blade holder to have the blade edge that is to be sharpened disposed upon one side of said axis; and two relatively fixed engaging parts on the blade holder extending laterally of the blade holder in opposite directions on the other side of said axis whereby one of said engaging parts is engageable with a sharpening element simultaneously with one side of the blade and the other engaging parts is engageable with the sharpening element simultaneously with the other side of the blade to define the angle of the blade to the sharpening element.

1,299,240. MOLDING-MACHINE. WILLIAM F. SCOTT, Johnstown, Pa. Filed June 23, 1916. Serial No. 105,500. 3 Claims. (Cl. 22—41.)

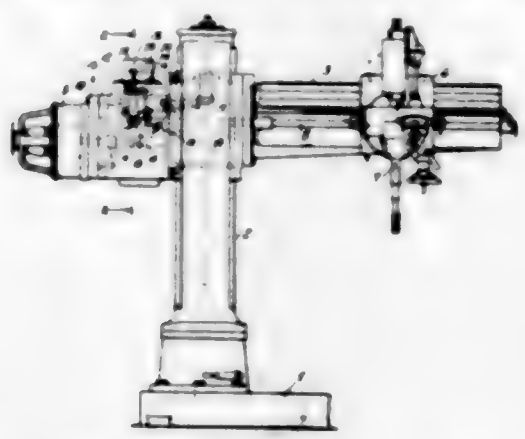
1. In a molding machine, a steel frame comprising vertical rods, an angle-iron mounted slidably on each pair of

vertical rods of the frame, transverse angle-irons connecting together similar ends of the first-mentioned angle-irons, rods, extending through registering perforations in both sets of angle-irons, and extending upwardly therefrom, said last-mentioned rods being the means whereby the angle-irons are held together, angle-irons, arranged directly above the above-mentioned angle-irons their connecting ends being held in such position by the upper ends of said last-mentioned rods, a shaft or spindle rotatably mounted upon adjacent ends of the transverse angle irons of said upper angle irons, beveled gears keyed to said shaft or spindle adjacent its ends, crank shafts arranged at right-angles to said spindle, beveled gears



provided at the forward ends of the crank-shafts intermeshing with respective beveled gears of the shaft or spindle, power being transmitted to said crank shafts through the medium of said shaft or spindle and said beveled gears, each of said crank shafts being provided with a plurality of cranks those of one crank shaft being directly opposite those of the other, means interposed between each pair of cranks and rotating or traveling therewith, reciprocating means depending from each of the first-mentioned means, feet provided upon the lower end of each reciprocating means.

1,299,241. TAPPING MECHANISM FOR DRILLING-MACHINES. WILLARD T. SEARS, Brooklyn, N. Y., assignor to Niles-Bement-Pond Company, New York, N. Y., a Corporation of New Jersey. Filed June 8, 1918. Serial No. 238,872. 5 Claims. (Cl. 10—129.)



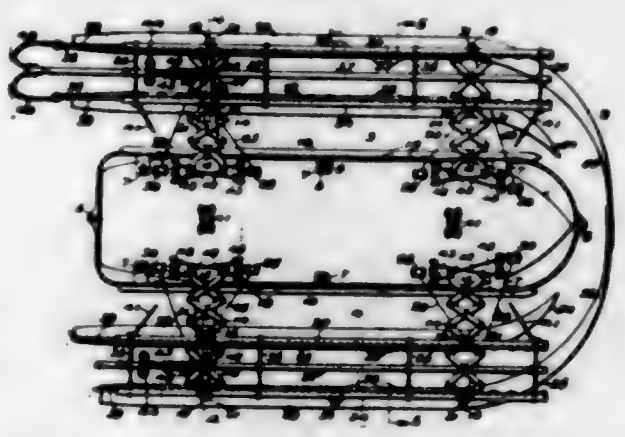
5. In a machine of the class described, the combination of a tap driving spindle, an electric spindle driving motor, a motor reversing mechanism comprising a rotatable element, and motor operated means for turning the said element always in the same direction irrespective of the direction of rotation of the motor, whereby the reversing mechanism serves to successively reverse the motor to cause it to drive the spindle alternately forward to a predetermined extent and backward to a lesser extent.

1,299,242. NEEDLE-CLAMP FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1918. Serial No. 245,366. 1 Claim. (Cl. 112—37.)



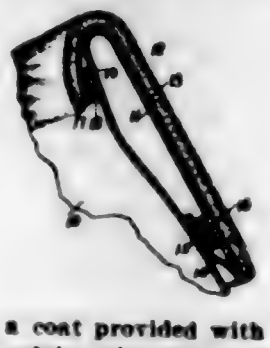
The combination with a needle bar having a plurality of pairs of needle sockets formed therein, the distance between the sockets of one pair being different from the distance between the sockets of the other pair, a sleeve surrounding the needle bar and having a fixed position relative thereto, a clamping screw mounted in said sleeve for each socket, said sleeve having recesses formed therein registering with the sockets spaced a greater distance apart, said sleeve between each adjacent pair of set screws having a thread groove formed therein.

1,299,243. TORPEDO AND MINE DEFENSE FOR VESSELS. HARRY S. SHUBANSKY, Atlantic City, N. J. Filed Sept. 5, 1917. Serial No. 189,745. 9 Claims. (Cl. 114—240.)



1. A torpedo and mine defense for vessels, comprising a plurality of floatable members spaced from each other and extending longitudinally of the vessel and attachable thereto, said floats having a receiving and launching platform for aeroplanes, propellers carried by said floatable members, and means to operatively connect said propellers with the driving mechanism of said aeroplanes.

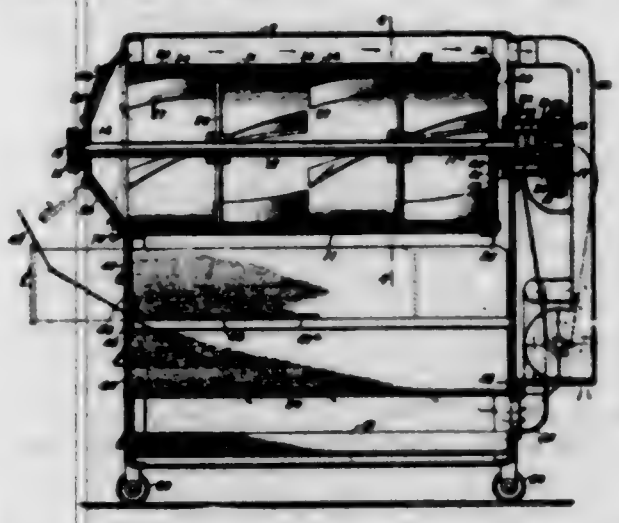
1,299,244. DETACHABLE FUR COLLAR FOR COATS. AARON HERMAN SHERWIN, New York, N. Y. Filed May 18, 1918. Serial No. 234,240. 1 Claim. (Cl. 2—62.)



In combination, a coat provided with a permanent collar, a fur collar overlying the said permanent collar, the

fur collar having at its back a marginal pocket into which pocket fits the edge of the said permanent collar, fastening devices detachably fastening the said pocket to the back of the permanent collar, and fastening devices detachably connecting the inner margin of the fur collar with the inner face of the neckband portion of the permanent collar.

1,299,245. COFFEE-ROASTER. EVERETT T. SHORTT, Dallas, Tex. Filed May 6, 1918. Serial No. 232,793. 9 Claims. (Cl. 34—5.)



3. In an apparatus of the class described, a rotary roasting drum having a central roasting chamber and an annular series of air chambers about the drum outside of said roasting chamber, a longitudinal series of separate electric heating elements in the separate air spaces, said elements being removable through one end of the drum; and means to detachably fasten said elements separately at the opposite end of the drum.

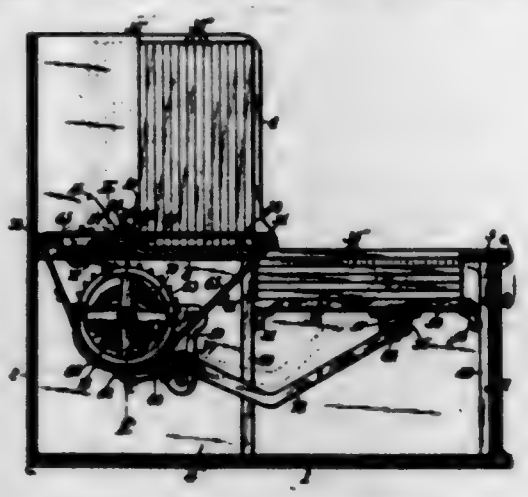
9. An apparatus of the class described, a drive shaft, a fixed clutch element, a sliding clutch element engageable with the first element or disengageable therefrom, a spring normally tending to maintain the sliding clutch element in engaged position, a clutch fork adapted to move the sliding clutch element to disengaged position against the action of said spring, and a lever fulcrumed at one end and pivotally connected between its ends with said fork, said lever being movable to a position to permit the spring to engage the clutch elements, or to a position approximately in line with the fork and acting to lock the fork against movement under the action of the spring.

1,299,246. FILING APPLIANCE. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (Incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Dec. 8, 1913. Serial No. 805,219. 16 Claims. (Cl. 45—2.)

1. A filing appliance including a stationary platform having longitudinal guideways, a vertically movable table, a plurality of leaves normally arranged uprightly in a rectangular pack upon the stationary platform, and having hinge connections movable in the guideways, and means operable to cause the leaves to move from upright position upon the stationary platform over the forward edge thereof to reclined position upon the movable table and vice versa.

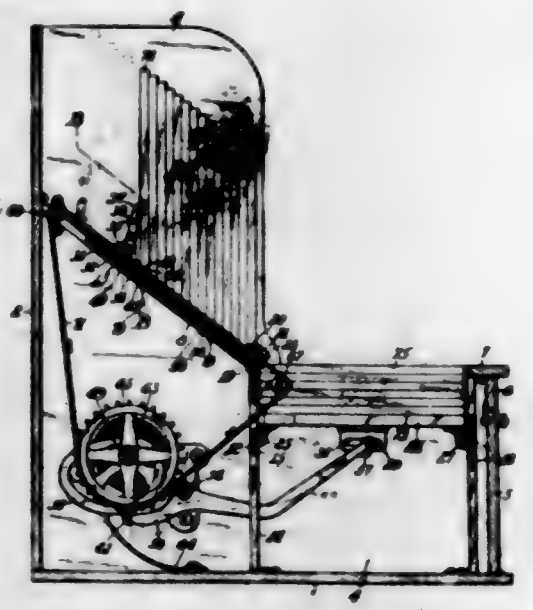
6. A filing appliance including a casing having a platform, a plurality of filing leaves hingedly connected together and movably supported uprightly upon the platform, a table adjustably guided in the casing forward of the platform to receive the leaves in prone position, and operating and controlling mechanism mounted in the casing and operatively connected with one of the leaves and also with the table.

12. In a filing appliance, the combination of a casing, a shaft rotatably mounted in and extending through the casing, a crank connected to the shaft, a hub rotatable on the shaft, a spring secured to the hub and connected to the casing, a ratchet wheel secured to the shaft, a pawl mounted on the hub in contact with the ratchet wheel, a sprocket wheel secured to the shaft, a traveling head guided in the casing, a sprocket chain connected to the sprocket wheel, guides for the chain, a lug secured to the head and connected to the chain, filing leaves connected together and guided in the casing, and a device connecting the rear one of the leaves to the head.



14. In a filing appliance, the combination of a casing, a plurality of filing leaves guided in upright position in the casing, means for connecting the lower ends of the leaves together, a traveling head for moving the leaves forward, means for connecting the head to the rear one of the leaves for moving the leaves rearward, a table adjustably guided in the casing to move downward or upward and support the leaves adjustably in prone position, and operating and controlling means mounted in the casing and controlling the head and the table in synchronism.

1,299,247. FILING APPLIANCE. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (Incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Feb. 4, 1914. Serial No. 816,420. 18 Claims. (Cl. 45—2.)



1. A plurality of normally upright leaves, hinging devices movably connected to the leaves and pivoted to adjacent leaves, and an inclined guide movably supporting the leaves and the devices in echelon.

4. A filing appliance including a plurality of leaves, means for connecting the leaves together for relative longitudinal and pivotal movement, and means for movably supporting the leaves in echelon and guiding them down-

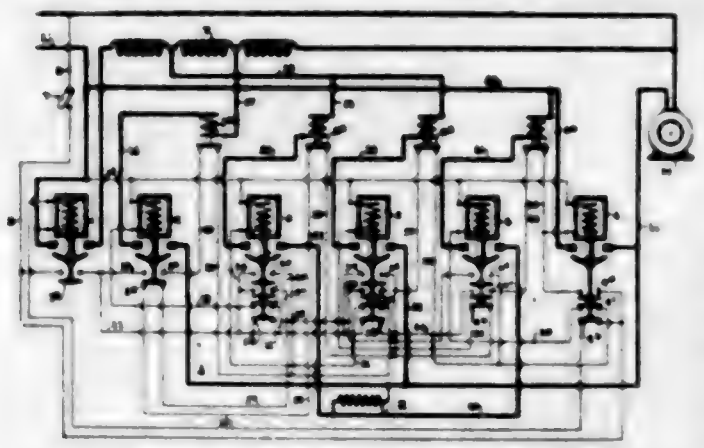
wardly forward and also downward and causing the relative longitudinal and pivotal movement.

9. A filing appliance including an inclined guide, a plurality of leaves normally supported uprightly and movably in echelon upon the guide, pivotal connections between the leaves enabling the leaves to be pivotally moved to prone position to form a rectangular pack, the connections permitting longitudinal movement of the leaves relatively to adjacent leaves, and means for stopping the leaves when moved down the inclined guide and thereby enabling the leaves to automatically move longitudinally as they are moved from upright to prone position.

15. In a filing appliance, the combination with a plurality of leaves, means for hingedly connecting the leaves together and permitting relatively longitudinal movement of the leaves, a rotatably supported shaft, and means operatively connected with the shaft and one of the leaves for moving and controlling the movement of the leaves, of means adapted for uprightly supporting the leaves movably on an inclined plane and guiding them to or from the lower end of the plane, said means being capable of forcing the leaves to assume echelon arrangement when pivotally moved on their connecting means to upright position.

18. In a filing appliance, the combination of a casing, a supporting guide mounted in inclined position in the casing, a table adjustably guided forward of the lower end of the guide and provided with two bearing seats adjacent to the end of the guide, and a plurality of leaves hingedly connected together for relative longitudinal movement and normally supported uprightly in echelon upon the guide, the foremost one of the leaves having rollers thereon seated in the bearing seats and permitting pivotal movement of the leaf.

1,299,248. MOTOR-CONTROLLER. ARTHUR SIMON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 20, 1914. Serial No. 839,795. 20 Claims. (Cl. 172—289.)



1. In a controller for alternating current motors, the combination with a transformer, of a plurality of separately actuated switches automatically operable in progression, a resistance, the first switch of the progression completing circuit to one tap of the transformer, the second completing circuit to another tap of the transformer through said resistance and the third completing a circuit for the latter tap exclusive of said resistance.

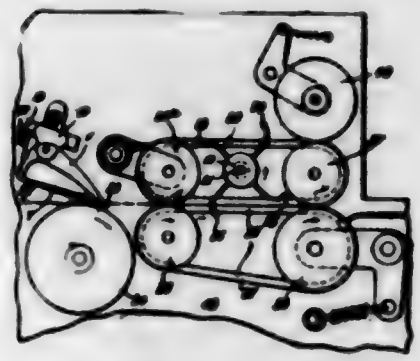
2. In a controller for alternating current motors, the combination with a transformer, of a plurality of separately actuated switches automatically operable in progression, a resistance, the first switch of the progression completing circuit to one tap of the transformer, the second completing circuit to another tap of the transformer through said resistance and the third completing a circuit for the latter tap exclusive of said resistance, and means to check the progressive operation of said switches under abnormal electrical conditions.

4. In a controller for alternating current motors, the combination with a transformer, of a plurality of separately actuated switches operable in progression, a resistance, the first switch of said progression completing circuit to one tap of the transformer, the second completing circuit to another tap of the transformer, through said resistance, and the third completing circuit to said second tap exclusive of said resistance, said first switch being restored to initial position upon operation of said second switch and said second switch being restored to initial position upon operation of said third switch and means to check the progressive operation of said switches under abnormal electrical conditions.

17. In a controller for alternating current motors, in combination, a transformer, a plurality of switches operable automatically and progressively to connect said transformer in circuit, then establish motor connections to said transformer and finally to the line, means to establish temporary motor connections in the intervals between the establishment of the aforesaid connections, and means whereby the switch controlling the transformer circuit is restored to initial position upon establishment of the motor connections to the line.

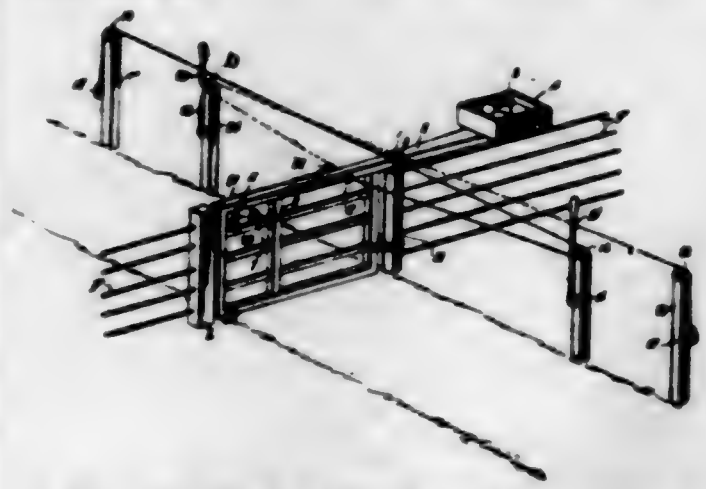
20. In a motor controller, in combination, three switches, means effecting automatic closure thereof progressively, opening of the first subsequent to closure of the second and opening of the second upon closure of the third and connections established by said second switch to maintain the continuity of the motor circuit during the change of connections by said first and third switches.

1,299,249. POSTMARKING-MACHINE. RICHARD MIDDLETON SIMPSON, Wellington, New Zealand. Filed Feb. 21, 1916. Serial No. 79,792. 15 Claims. (Cl. 271—36.)



2. A mail separating device comprising in combination a friction roller and a retarding device coöperating therewith consisting of a supporting member having a plurality of flexible bands stretched between spaced points of said member to provide a flexible surface said surface being substantially tangential to the surface of said roller.

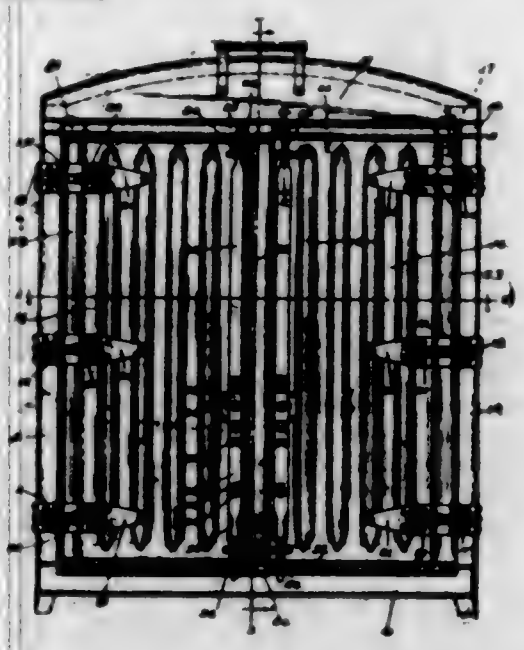
1,299,250. GATE. TURMAN L. SIPES, Freeport, Pa. Filed July 16, 1918. Serial No. 245,192. 4 Claims. (Cl. 39—41.)



1. In a gate hinged to swing across the roadway, the combination with two posts at each side of the gate

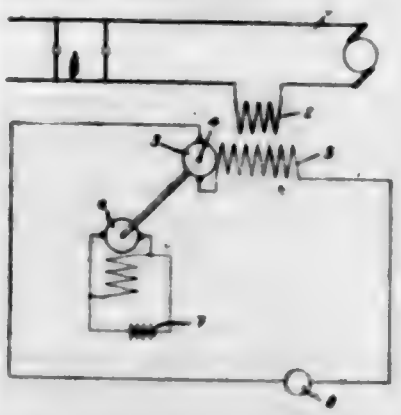
alongside said roadway, and pulleys on the posts; of two ropes whereof each is connected with the top beam of the gate and led along the road around the pulley of one post, thence back across said beam and over the pulley of the other post at the opposite side of the road to a weight, and a lever pivoted to each inner post and connected to the rope which leads to the opposite side of the gate.

1,299,251. SHEET-METAL END-WALL CONSTRUCTION FOR RAILWAY-CARS. VINTON E. SISSON, Chicago, Ill., assignor to Walter P. Murphy, Chicago, Ill. Filed May 11, 1914. Serial No. 837,744. 1 Claim. (Cl. 189—46.)



In a railway box car, the combination with an end frame having therein a longitudinal groove adjacent the frame opening, of a sheet metal panel hinged to said frame beyond said longitudinal groove and having a longitudinal rib along its vertical edge adapted to seat into said groove when said panel is in closed position.

1,299,252. MEASURING DEVICE. JOSEPH SLEPIAN, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1918. Serial No. 226,612. 7 Claims. (Cl. 175—183.)



1. A measuring system comprising a series generator having primary and secondary field-magnet windings, a direct-current ammeter connected in series with the armature and the secondary field-magnet winding of the generator, and means for connecting the primary field-magnet winding to the circuit the current of which is to be determined.

2. A measuring system for a high-voltage, direct-current circuit comprising a series generator having primary and secondary field-magnet windings, an ammeter connected in series with the secondary field-magnet winding, and means for connecting the primary winding to the direct-current circuit.

3. A measuring system for a direct-current circuit comprising a series generator, oppositely-acting field-magnet windings therefor, a meter connected in series with the armature of the generator and one of the field-magnet windings, and means for connecting the other field-magnet winding to the direct-current circuit.

4. A measuring system for a direct-current circuit comprising a series generator, oppositely-acting field-magnet windings therefor, a meter connected in series with the armature of the generator and one of the field-magnet windings, and means for connecting the other field-magnet winding in series with the direct-current circuit.

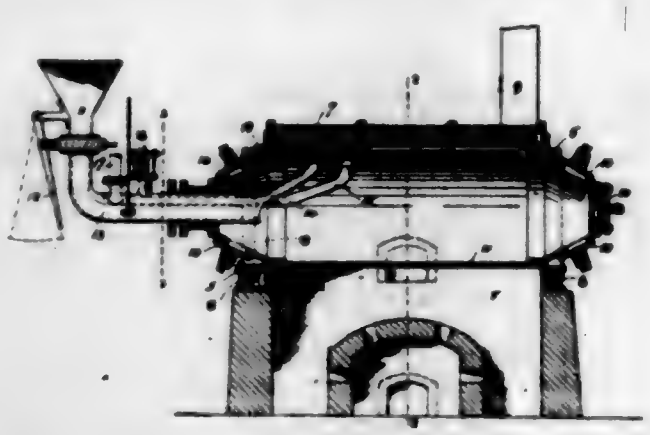
5. A measuring system for a direct-current circuit comprising a series generator, two field-magnet windings therefor, an ammeter connected in series with the armature of the generator and one of the field-magnet windings, and means for supplying the other field-magnet winding with current proportional to the current traversing the direct-current circuit.

1,299,253. RETAINING SCREW-CLAMP. JOHN A. SOWELL and ERNEST E. SOWELL, Sacramento, Calif. Filed Jan. 8, 1917. Serial No. 141,118. 4 Claims. (Cl. 152—21.)



1. A half ball bearing screw clamp comprising three members, two members provided with semi-circular grooves disposed in reverse position with respect to each other, each groove being threaded and the threads in register with each other, and the third member comprising a tapered screw arranged to be screwed into the said threads to expand the clamping members with respect to each other, one of said clamping members having a retaining flange on its end provided with a central orifice to receive said threaded member, a cup shaped bearing member disposed around said orifice, the screw having a half ball shaped head arranged to fit into the said bearing.

1,299,254. DESICCATING-MACHINE. JOHN W. STAMP, Melbourne, Victoria, Australia. Filed July 15, 1918. Serial No. 244,991. 10 Claims. (Cl. 34—5.)



1. In a desiccator, a horizontally mounted vacuum cylinder for containing the material to be dried, a fixed heated container wherein the cylinder is revolved, means for feeding the material to the cylinder as it revolves,

means for discharging the dried material through an end or ends of same and for withdrawing and condensing the vapors therein generated, as herein described.

1,299,255. COLLAR-HOLDER. JOHN T. STEINBAUGH, Kansas City, Kans. Filed June 11, 1917. Serial No. 173,926. 1 Claim. (Cl. 24—101.)



A collar holder comprising a body having two reversely disposed transverse bends, one above the other, a vertical portion intermediate of said bends, and two arms, one of which extends upwardly from the lower bend and terminates above the upper bend, the other arm extending downwardly from the upper bend, inclining toward the intermediate portion, and terminating below the lower bend, the intermediate portion and the arms being in different planes.

1,299,256. MICROMETER. WILLEBALD C. STENGER, Chicago, Ill. Filed Apr. 27, 1917. Serial No. 164,886. 2 Claims. (Cl. 33—164.)



1. In a micrometer, the combination of a shank, a barrel, a spindle movable in said barrel, an anvil, and a yoke connecting the anvil with said barrel, the inner edge of the yoke being shaped so as to determine the insertion of cylindrical bodies between said spindle and anvil when said cylindrical bodies are held transversely to a line connecting the centers of said anvil and said spindle in a position in which a diameter of the cross-section of said cylindrical bodies will be located in said connecting line.

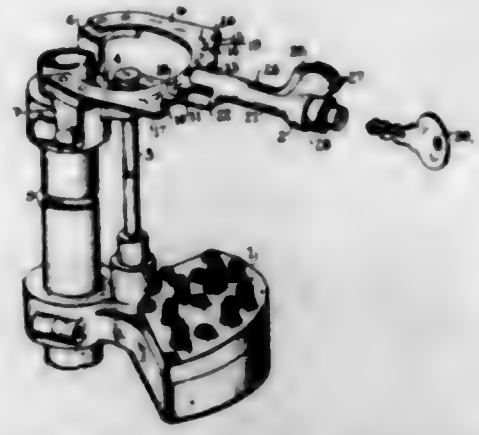
2. In a micrometer, the combination of a shank, a barrel surrounding said shank, a spindle movable in said barrel, an anvil in axial alinement with said spindle but spaced therefrom, and a yoke connecting the anvil with said shank, the inner edge of said yoke, as seen in side view, having the shape of a curved tangential to circles which have their centers on the common axis of said anvil and spindle, and which have one point in contact with the center of the surface of the anvil directed toward said spindle.

1,299,257. GEAR-SHIFT CONTROLLER. WILLIAM C. STEVENS, Milwaukee, Wis., assignor to the Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 25, 1918. Serial No. 246,629. 11 Claims. (Cl. 123—165.)

1. In a controller for gear shifting mechanisms for automobiles and the like, in combination, a gear shift selector device and ignition control means associated therewith.

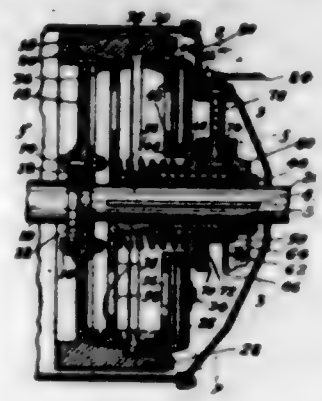
3. In a controller for gear shifting mechanisms for automobiles and the like, in combination, a gear shift selector device, ignition control means associated therewith and operable thereby to render the controlled ignition system inoperative upon setting of said device in a predetermined position and means for locking said device in said predetermined position.

5. In a controller for gear shifting mechanisms for automobiles and the like, in combination, a gear shift selector device having forward and reverse operative positions and a plurality of neutralizing positions, ignition control means associated therewith and operable thereby to render the controlled ignition system inoperative upon setting of said device in one of said neutralizing positions and operative upon setting of said devices in all other aforesaid positions and means for locking said device in said latter neutralizing position.



7. In a controller for electromagnetic gear shifting mechanisms for automobiles and the like, in combination, a gear shift selector switch, ignition control means associated therewith and operable thereby to render the controlled ignition system inoperative in a predetermined position of said switch, an operating lever for said switch and locking means associated with said lever to provide for locking said switch in said predetermined position.

1,299,258. CLUTCH. GEORGE T. STRIFE, Minneapolis, Minn. Filed May 8, 1918. Serial No. 233,264. 2 Claims. (Cl. 192—7.)



1. A clutch comprising a driving shaft, a clutch member secured thereto having two coned surfaces, two clutch members coöperating with said first mentioned clutch member, a driven shaft upon which said coöperating clutch members are non-rotatably and slidably mounted, a spring interposed between said coöperating clutch members for normally holding the clutch members in engagement, opposed annular members connected respectively to said coöperating clutch members and forming an annular groove, a housing surrounding all of the clutch members, a rod rotatably mounted in said housing, and means secured to the end of said rod and positioned in said annular groove to cause the coöperating clutch members to approach each other in opposition to the tension of said spring when said rod is turned.

1,299,259. METHOD OF FORMING SEALING-RINGS FOR COVERS. THOMAS L. TALIAFERRO, Chicago, Ill. Filed Mar. 7, 1916. Serial No. 82,563. 1 Claim. (Cl. 113—80.)

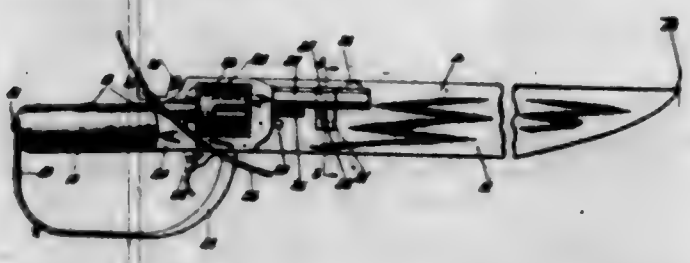
The method of forming a sealing ring on a cover, having a peripheral flange substantially at right angles to the body of the cover, which consists in presenting the edge of the flange to a surface thinly coated with a sealing material of relatively thin viscosity, supporting said cover

so that the sealing material is caused to flow from said surface on to the inner face of the flange and the body of the cover and so that the horizontal level of the sealing material flowed on to the cover determines the inner and outer limits of the sealing ring, and shifting the point



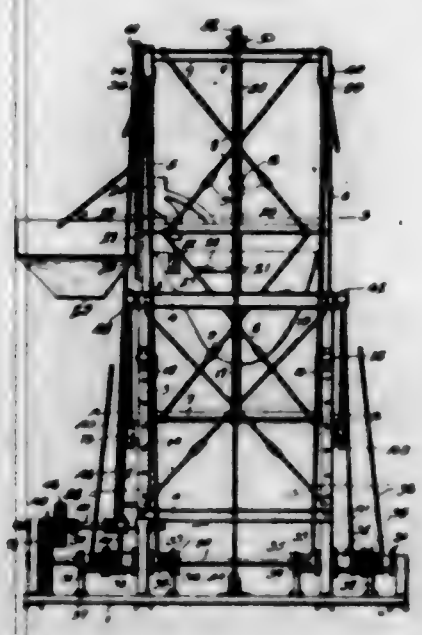
of contact between the edge of the flange and coated surface progressively about the entire peripheral edge of the cover for distributing the sealing material so as to form a sealing ring extending entirely about the peripheral edge of the cover.

1,299,260. WEAPON. JOHN TALPA and JACOB BENDARZ, Detroit, Mich. Filed Sept. 27, 1918. Serial No. 255,904. 1 Claim. (Cl. 42—53.)



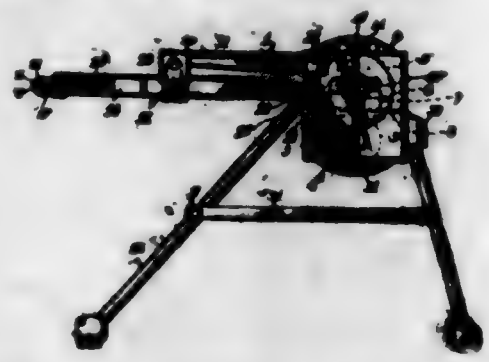
In a weapon, the combination with a saber blade and a handle rigidly engaged in offset relation at the rear thereof, of a lateral loop formed in said blade adjacent to said handle, a gun frame secured in said handle, a revolvable cylinder rotatably mounted in said gun frame, said cylinder projecting into said loop, a barrel extending from said frame, a clip secured to said saber blade engageable with said barrel, a convex shield secured to said gun frame between said handle and said revoluble cylinder, said shield having an opening through which the gun sight may be seen, and a guard secured to said gun frame and to said handle.

1,299,261. CONSTRUCTION OF TOWERS. GEORGE R. TAYLOR, Urbana, Ill., assignor of one-half to Spencer E. Huff, Urbana, Ill. Filed Sept. 6, 1916. Serial No. 116,728. 3 Claims. (Cl. 189—12.)



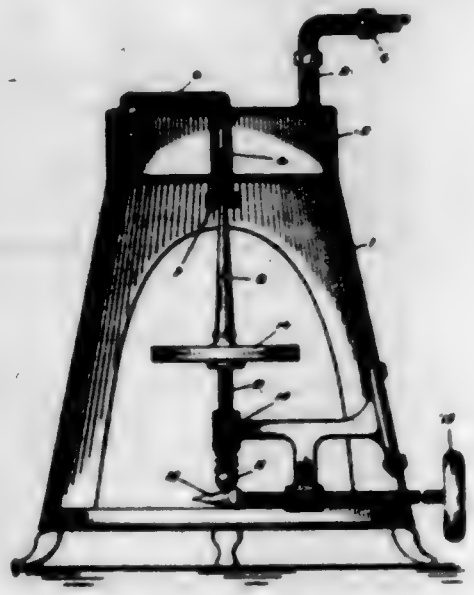
1. The method of constructing a tower in sections which consists in raising a given section to a suitable height, and adding successive sections in vertical alinement therewith, below the section first named.

1,299,262. POWER-RIDDLE. FREDERICK P. TESSMER, Detroit, Mich. Filed Aug. 15, 1918. Serial No. 249,967. 1 Claim. (Cl. 83—56.)



A power riddle comprising a main frame with a yoke extending therefrom, riddle supporting means oscillatory on the yoke, means on the yoke for deflecting and returning matter ejected from the riddle carried by the supporting means when the latter is oscillated, means on the frame for oscillating the supporting means, and means for supporting the frame in operative position.

1,299,263. HYDROCARBON-BURNER. LOUIS E. TESTER, Sacramento, Calif. Filed Apr. 13, 1918. Serial No. 228,353. 3 Claims. (Cl. 158—53.)



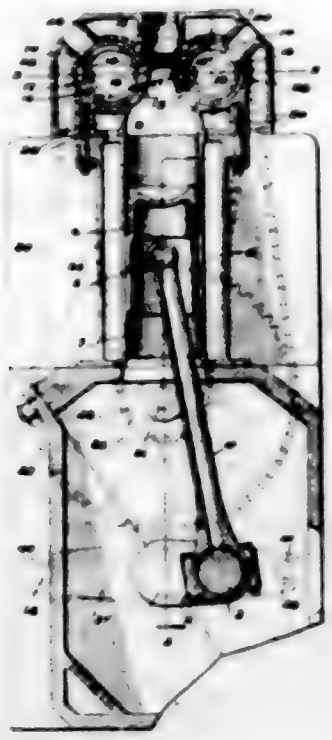
1. A hydrocarbon burner comprising a burner, a liquid fuel retort positioned to be subjected to the heat of the burner, and a passageway leading from the top of the retort and passing over said top and then down through the retort and terminating below the same, whereby the fuel vapors generated in the retort will discharge onto the burner before being subjected to any heat greater than the heat of the liquid fuel in the retort.

1,299,264. EXPLOSION-ENGINE. HENRY W. THAYER, New York, N. Y. Filed Apr. 4, 1916. Serial No. 88,891. 13 Claims. (Cl. 123—80.)

1. The combination with the cylinder of an internal-combustion engine, of a valve-casing having a port communicating with said cylinder, a plurality of concentric rotary valve-members located in said casing and provided with diametric ports adapted to register with each other and with said casing-port, and means intermittently moving said valve-members in the same direction but at different speeds respectively.

2. The combination with the cylinder of an internal-combustion engine, of a valve-casing having a port communicating with said cylinder, a plurality of concentric rotary valve-members located in said casing and provided with diametric ports adapted to register with each other and with said casing-port, and means intermittently moving said valve-members in the same direction

but at different speeds respectively, the ports of the more-rapidly driven member being larger circumferentially than the other ports.



3. The combination with the cylinder of an internal-combustion engine, of two separate valve-casings each having a port communicating with said cylinder for inlet and for exhaust respectively, a plurality of concentric rotary valve-members located in each casing and each provided with a diametric port adapted to register with each other and with their own casing-port, and intermittently-acting means for moving the valve-members of each set in the same direction but at different speeds respectively.

4. The combination with the cylinder of an internal-combustion engine, of two separate valve-casings each having a port communicating with said cylinder for inlet and for exhaust respectively, a plurality of concentric rotary valve-members located in each casing and each provided with a diametric port adapted to register with each other and with their own casing-port, and intermittently-acting means for moving the valve-members of each set in the same direction but at different speeds respectively, the ports of the more-rapidly driven members being larger circumferentially than the other ports.

1,299,265. ZIGZAG CARBON ELECTRIC RESISTER. JOHN THOMSON, New York, N. Y. Filed May 28, 1918. Serial No. 236,967. 9 Claims. (Cl. 219—69.)



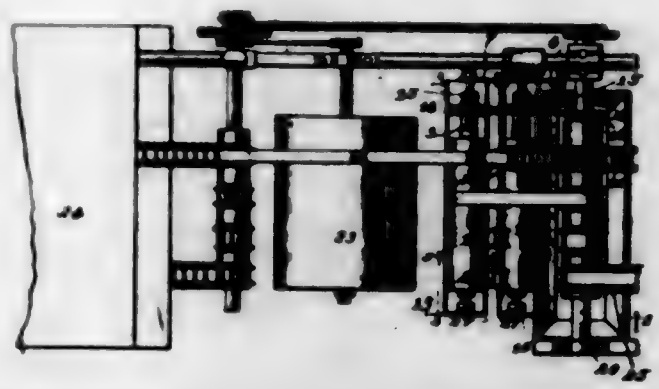
1. A zig-zag carbon resister having a cross-section in the form of a compound trapezoid, whose side-angles are presented to the surfaces, or in the directions, where the radiated heat is to be utilized.

3. A zig-zag carbon resister formed by a plurality of plates transversely interlocked and secured together.

6. A carbon resister having a plurality of zig-zag members, adjacent ends of which are overlapping, joining portions that are transversely interlocked and that are maintained together by means engaging the overlapping portions.

9. In the forming of carbon resisters the method which comprises providing transversely interlocking portions upon adjacent ends of zig-zag members which are to be connected in series and fitting said ends to each other, compressing said fitted ends and maintaining them in intimate physical contact and while thus maintained securing the ends by suitable means which become a part of the final resister structure.

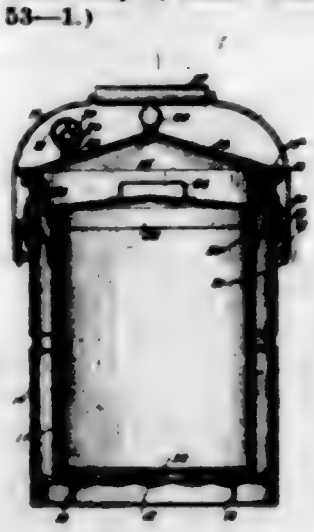
1,299,266. FILM-WIPING APPARATUS. FREDRICK B. THOMPSON, Chicago, Ill. Filed Aug. 16, 1915. Serial No. 45,845. 12 Claims. (Cl. 34—1.)



1. Apparatus for treating photographic film tape after such tape has been passed through liquids, and before passing the same through a drying chamber, means for removing surface liquid from said film preparatory to drying the same, said means including a roller having a smooth non-abrasive absorbent surface over which the film tape is adapted to travel, and a wringer roll associated with said roller for extracting therefrom liquid collected from said film tape.

2. Apparatus for treating photographic film tape after such tape has been passed through liquids, and before passing the same through a drying chamber, means for removing surface liquid from said film preparatory to drying the same, said means including a roller having a smooth non-abrasive absorbent surface over which the film tape is adapted to slide, means for rotating said roller to cause the surface thereof contacting with said film tape to move in the direction of travel of the latter, and means associated with said roller for removing therefrom liquid collected from the film tape.

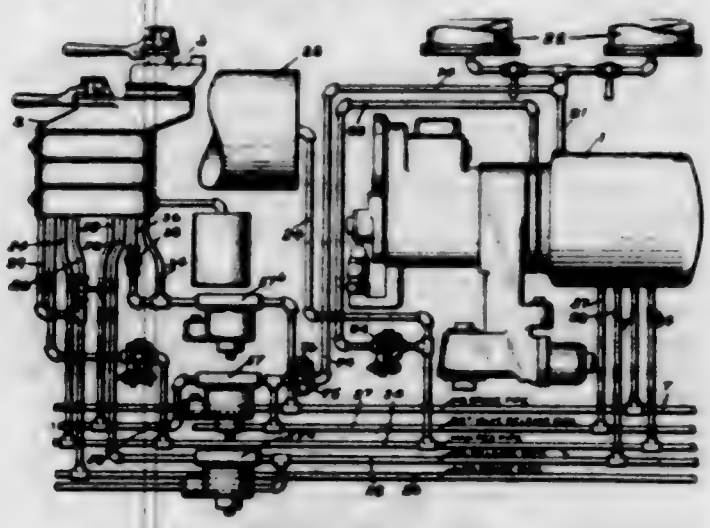
1,299,267. COOKING UTENSIL. CLARENCE V. TIMM, Oakmont, Pa. Filed May 6, 1918. Serial No. 232,818. 1 Claim. (Cl. 53—1.)



The device as herein characterized, including an outer vessel and a removable cover therefor having a downwardly depending annular flange adapted to fit within the upper end of the said vessel, a removable foraminous stand in said vessel and constituting a false bottom therefor, an inner food receptacle adapted to rest on said stand and presenting an annular space between the outer vessel and said food receptacle, a removable cover fitting within the upper end of the food receptacle, elongated resilient handles projecting from the sides of the upper

end of the food receptacle at diametrically opposite points, said handles projecting above the cover of the food receptacle and bearing laterally against the inner face of the depending annular flange of the cover of the outer vessel, whereby the food receptacle is held centered within the outer vessel and the cover retained thereon, and whereby the food receptacle may be removed from the outer vessel by a single upward pull, and the hands protected from injury by heat from the food receptacle.

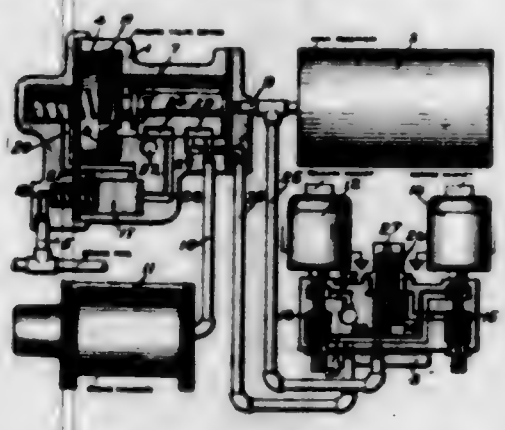
1,299,268. LOCOMOTIVE-BRAKE EQUIPMENT. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1916. Serial No. 126,869. 18 Claims. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with an automatic brake pipe normally charged with fluid under pressure, of an independent brake pipe and an independent brake valve having a position for charging the independent brake pipe with fluid under pressure from the automatic brake pipe and adapted upon movement from said position to another position to vent fluid solely from the independent brake pipe for effecting an independent application of the brakes.

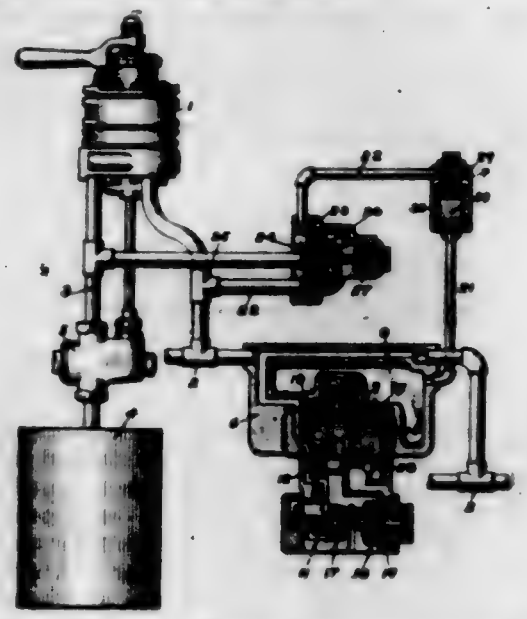
2. In a fluid pressure brake, the combination with an automatic brake pipe normally charged with fluid under pressure, of an independent brake pipe and an independent brake valve for venting fluid solely from the independent brake pipe to apply the brakes and for supplying fluid from the automatic brake pipe to the independent brake pipe for releasing the brakes.

1,299,269. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 4, 1918. Serial No. 232,439. 3 Claims. (Cl. 188—4.)



1. In a fluid pressure brake, the combination with a brake pipe and a valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of means for supplying fluid to said valve device to effect the release movement thereof and a double check valve operated by the flow of fluid from said means for cutting off communication from the brake pipe to said valve device.

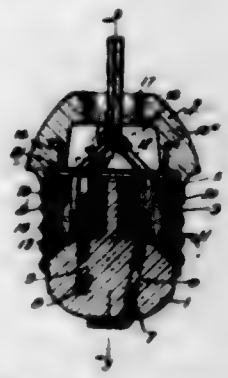
1,299,270. FLUID-PRESSURE BRAKE DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 4, 1918. Serial No. 232,440. 5 Claims. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a valve device subject to the opposing pressures of the brake pipe and a chamber, and valve means operated according to the pressure in said chamber for venting fluid from said chamber, of means for automatically preventing the operation of said valve means.

5. In a fluid pressure brake, the combination with a brake pipe, a brake valve, a main reservoir adapted to be connected to the brake valve, a valve device subject to the opposing pressures of the brake pipe and a chamber for venting fluid from the brake pipe, and valve means for venting fluid from said chamber to the brake pipe, of means normally subject to main reservoir pressure and operated upon cutting off the supply of fluid from the main reservoir to the brake valve for closing communication from said valve means to the brake pipe.

1,299,271. ATTACHMENT-PLUG. CLARENCE A. VETTER, Pittsburgh, Pa. Filed Apr. 10, 1915. Serial No. 20,426. 9 Claims. (Cl. 173—359.)



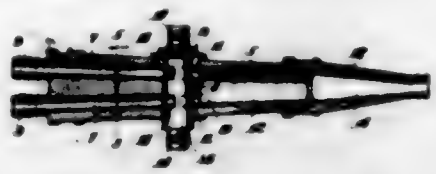
1. An attachment plug comprising a base having a central end terminal molded therein, a cap having a screw shell molded therein, a second terminal member molded in the base and adapted to normally contact the screw shell, binding screws on the terminal members, and means to hold the cap and base together.

5. An attachment plug comprising a base having two terminal current conducting members molded therein, one of said members forming an end contact, oppositely disposed cavities in the base, extensions from the two ter-

minal members into the two cavities respectively, binding screws on the extensions, and a cap carrying a screw shell adapted to slip over the base and to electrically connect the screw shell and the terminal member in the base not forming the end contact.

7. An attachment plug comprising a cap carrying an integral screw shell, a base carrying an end contact molded therein, and a resiliently interlocked projection and depression between the base and screw shell providing a swiveling engagement between the cap and base.

1,299,272. PROCESS OF AND APPARATUS FOR EXTINGUISHING FIRE. WILLIAM W. WALKER, Camden, N. J., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 29, 1916. Serial No. 139,444. 5 Claims. (Cl. 169—9.)



1. The herein described process for extinguishing fire wherein the extinguishing medium is formed from two normally-separated solutions which, when commixed, produce a foam-extinguishing compound, said process consisting in delivering the separated solutions under pressure to a nozzle-carried chamber having a length insufficient to produce complete commixture of the solutions, discharging the chamber contents from the nozzle in stream form and under pressure, completion of the commixture and of the reaction occurring during stream travel to the point of application.

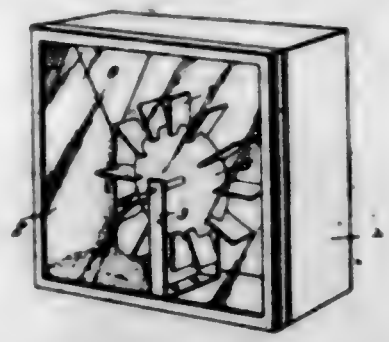
2. In apparatus for extinguishing fires by an extinguishing compound of the foam-extinguishing type formed from a plurality of solutions and wherein the solutions are normally maintained separate and are brought together to permit chemical reaction to produce the compound, and in combination, a stream-discharging nozzle having a chamber, sources of solution supply, and independent conduits connecting said sources with the chamber for concurrently delivering the solutions to the chamber under pressure to unite the separately-delivered solutions into stream formation and place the solution components in general reacting relation, said nozzle chamber having a length and cross and longitudinal sections to permit free passage of the composite stream therethrough with the stream form and solution pressure maintained and with the time of passage insufficient to permit complete reaction commixture of the combined solutions in advance of reaching the nozzle discharge, said nozzle providing a stream discharge under pressure tending to maintain the stream form until the point of application is reached, whereby solution reaction will proceed during stream travel to such point to deliver stream components in foam-extinguishing condition.

1,299,273. PUNCTURE-HEALING COMPOSITION. MARIE R. WEAVER and HERMANN CLEMENS, El Paso, Tex., assignors of one-half to Otto Weydemeyer, El Paso, Tex. Filed July 13, 1918. Serial No. 244,812. 4 Claims. (Cl. 134—17.5.)

4. A puncture healing compound including beeswax 1 ounce, paraffin 2 ounces, rosin 2½ ounces, linseed oil ½ ounce, ground cork 2 ounces and disintegrated asbestos 2 ounces.

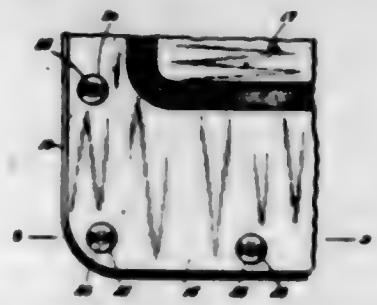
1,299,274. TOY. ANDREW H. WEHLING, Wichita, Kans. Filed Apr. 17, 1917. Serial No. 162,665. 1 Claim. (Cl. 46—37.)

In a toy, the combination with a substantially closed rectangular receptacle having sand therein and having a transparent face, a U-shaped frame having the connecting element for the arms thereof secured in the receptacle, a disk having a shaft journaled in bearings between the arms of the said U-shaped member, said disk having peripheral slits, blades inserted in said slits, a funnel-shaped member secured in the corner of the inner wall of



the receptacle opposite that to which the U-shaped member is connected and designed to deliver the sand therefrom to the blades of the wheel, and said funnel-shaped member, at the upper and outer edge thereof being provided with a transverse opening forming an inlet for the receptacle.

1,299,275. RIVETED JOINT. RALPH WHITE, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1918. Serial No. 223,008. 1 Claim. (Cl. 78—54.)



A box like structure such as an automobile door, consisting of outer and inner side plates, the inner plate being provided with end slits and an integral intermediate hump having curved deflecting portions, and a split and headed rivet having its prongs passing through a leather lining and into the slits, the ends of the prongs being deflected and clenched by the deflecting portions of the hump by the act of driving the rivet.

1,299,276. LOOSE-LEAF BOOK. [illegible] G. WHITLOCK, Los Angeles, Calif. Filed [illegible], 1918. Serial No. 227,602. 5 Claims. (Cl. 129—[illegible].)

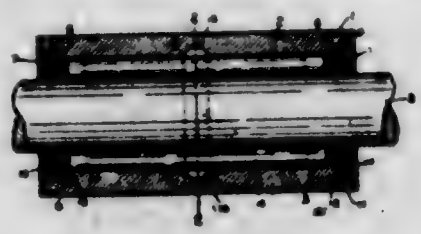


1. In a loose leaf book a cover member having upturned overhanging ends and lugs struck therefrom pro-

jecting toward the overhanging ends, said member being adapted to be bound in the cover with the lugs and overlapping ends projecting above the lining.

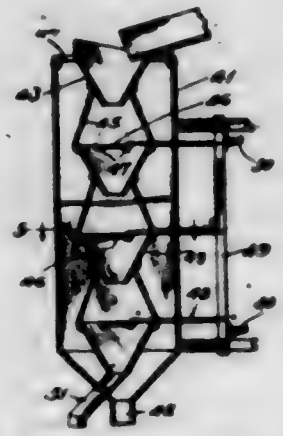
5. In a loose leaf book a ring plate having portions of the edges thereof turned to form bearings; a plurality of pairs of half ring members movably mounted in the bearings on one side, and a plurality of coacting ring members mounted in the bearings on the other side, said last members to be stationary with reference to said plate; means to connect the pairs of movable half ring members; means to move said movable members; and means to lock said movable members in their closed position.

1,299,277. BEARING STRUCTURE. WILLIAM R. WILSON, Terre Haute, Ind. Filed Jan. 12, 1918. Serial No. 211,519. 3 Claims. (Cl. 64—24.)



3. In a bearing structure, a hollow bearing, bearing rollers within the bearing, said bearing having a peripheral channel for the reception of lubricant, and longitudinally extending inclined breakers at intervals in said channel adapted to cause the lubricant in the channel to move on to the bearing rollers when the bearing rotates slowly.

1,299,278. BEAN-CLEANING DEVICE. HARRY E. WOOLNER, Los Angeles, Calif. Filed Dec. 28, 1915. Serial No. 69,129. 5 Claims. (Cl. 130—18.)



1. A bean cleaning device comprising a series of surfaces upon which the beans are dropped, whereby the beans will be permitted to bound from the same and the inert dirt will remain upon them and means for removing the dirt from said surfaces.

2. A bean cleaning apparatus comprising a series of funnels suitably spaced apart, substantially horizontal plates supported in said funnels and adapted to receive the beans to be cleaned whereby the beans will bound from the plates, and means for scraping the dirt from the plates into said funnels.

3. A bean cleaning apparatus comprising a series of plates arranged one above the other in substantially horizontal position, dirt collecting members below the said plates, with a space left between them and the said plates, and scrapers operating upon the said plates for removing the dirt which collects thereon.

4. A bean cleaning apparatus comprising a series of funnels arranged one above the other, and framing for supporting the same, substantially horizontal plates spaced within the upper flaring portions of said funnels, laterally arranged members moving upon the said plates and means for moving said laterally arranged members back and forth whereby the materials collecting upon the plates will be scraped into the funnels, and an outer casing for collecting the beans.

5. A bean cleaning apparatus comprising a framing, a succession of funnel shaped collectors arranged one above the other, substantially horizontal members spaced in the said funnel shaped members, an outer casing spaced outside the funnel shaped members whereby the materials rebounding from the plates will be collected therein, scrapers moved back and forth over said plates for pushing the dirt therefrom, mechanism for vibrating said scrapers and separate discharge means for the beans and the dirt.

1,299,279. WIRE-CUTTER. STANLEY WYTRWAL, Scranton, Pa., assignor of one-half to Dmytre Ilcsuk, Scranton, Pa. Filed Oct. 22, 1918. Serial No. 259,203. 4 Claims. (Cl. 42—90.)



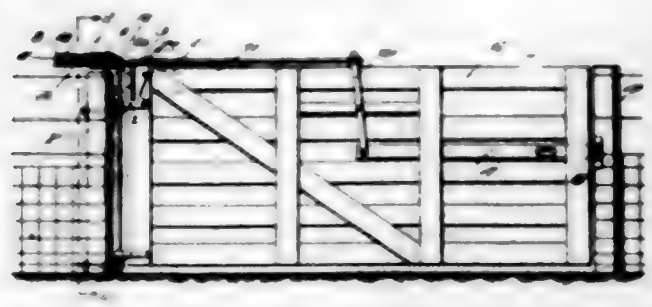
1. A device of the class described comprising a blade member having a handle, a guard of sheet metal surrounding the blade member and secured thereto, a circular head upon one end of the guard having a side notch provided with a cutting edge, the blade member having a curved cut-away portion within the said guard, a cutting disk centrally pivoted to the head positioned within the cut-away portion of the blade member and having a notch provided with a cutting edge adapted for coöperating with the edge of the notch of said head and an operating handle for said disk.

1,299,280. ELECTRICAL CONDUIT. CHAUNCEY W. ABBOTT, Pittsburgh, Pa., assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1915. Serial No. 22,175. 3 Claims. (Cl. 247—8.)



2. An electrical conduit comprising a base member in the form of a substantially flat plate having laterally projecting edges and provided intermediate its edges with means for spacing the edges from the supporting surface, and a cover formed of resilient metal of general bow-shape in cross section, and having portions adapted to resiliently interlock with the laterally projecting edges of the base member, such interlocking of the base member and cover being at intervals only.

1,299,281. GATE OPERATING AND LATCH MEANS. OTIS ADAMS, Rio, Ill., assignor of one-half to Fred Cooper, Rio, Ill. Filed Aug. 8, 1918. Serial No. 248,937. 2 Claims. (Cl. 39—34.)



2. A latch releasing and gate operating device comprising a vertical attaching plate adapted to be secured to one side of the gate at the hinged end thereof, a horizontally elongated base formed integrally with the upper end of said attaching plate and extending from the latter to a point beyond the hinge line of the gate, a peripherally grooved segment formed integrally with the extended end of said base, said segment having a radial notch elongated in the same direction as said base, a tubular guide formed integrally with said segment in line with said notch, the end of said guide adjacent the notch being open and the other end of said guide being closed with the exception of a central opening, a forked slide mounted in the aforesaid notch and having between its arms a rotatable shoe normally positioned beyond the peripheral edge of said segment, the inner end of said slide being provided with a cylindrical extension slidably received in said tubular guide, a coiled spring in said guide between said extension and the closed end of the guide to normally force said slide outwardly and dispose said shoe at the aforesaid normal position, a pair of cables secured to the ends of said segment and trained oppositely around the latter and around said shoe, whereby a pull on either cable will first shift the slide inwardly and then swing the segment and gate, an apertured lug rising from the end of the base remote from the aforesaid segment, and a rod passing slidably through said lug and through the opening of the aforesaid guide, the one end of said rod being connected to the extension of the slide and the other end thereof being adapted to release the gate latch when said rod is shifted by a pull on either cable.

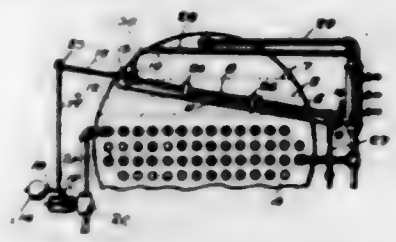
1,299,282. LIFE-BOAT. JOHN E. ALLEN, San Francisco, Calif., assignor of one-half to John J. Crosby, Jersey City, N. J. Filed Dec. 11, 1917. Serial No. 206,663. 3 Claims. (Cl. 9—4.)



1. A boat having bifurcated keels on its hull, false sides on the hull above the water line, a super-structure having its base disposed between said false sides and the hull, and inclined stabilizing fins on the hull inclining upwardly and forwardly from the water line.

1,299,283. FEEDING WATER TO BOILERS. ROGER W. ANDREWS, Erie, Pa., assignor to Northern Equipment Company, Erie, Pa., a Corporation of Pennsylvania. Filed Nov. 8, 1915. Serial No. 60,455. 12 Claims. (Cl. 236—13.)

1. A method of feeding water to boilers consisting in causing the inflow to substantially equal the outflow while the load is constant, in causing the rate of change of the inflow to lag behind the rate of change of the outflow while the outflow varies, and in causing the amount of said lag at certain water levels to be unlike the amount at other levels.

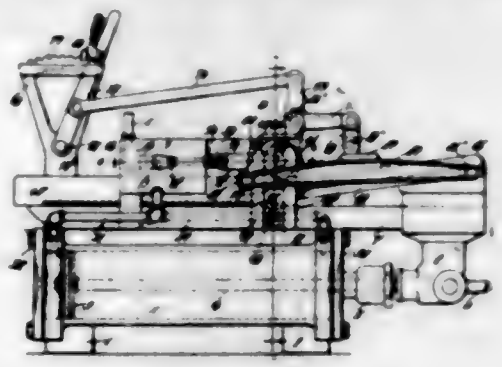


5. A method of feeding water to boilers consisting in causing the change in rate of the inflow to lag behind the change in rate of the outflow when the rate of outflow varies, and in causing the amount of said lag to vary as the load varies.

7. A boiler feed water system comprising two regulators, each of said regulators being connected to said boiler above and below the average water level, one of said regulators being at a higher elevation than the other regulator.

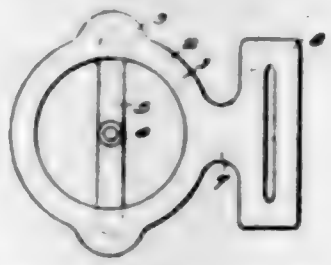
12. A method of feeding water to boilers consisting in causing the rate of inflow to the boiler with reference to the rate of outflow therefrom to gradually increase as the outflow increases.

1,299,284. REVERSING-GEAR MECHANISM. STEPHAN BAADER, Philadelphia, Pa., assignor, by mesne assignments, to Percy E. Donner, Pittsburgh, Pa. Filed Nov. 4, 1916. Serial No. 129,430. 14 Claims. (Cl. 121—98.)



1. A valve reversing gear having a fluid pressure motor, a reversing rod operated thereby, a mechanical locking means for locking the rod in various positions, valvular mechanism for controlling the motive fluid supply to and from the motor, and camming means for operating the valvular mechanism and the lock arranged to positively cam the locking means out of engagement with the rod and to actuate the valvular mechanism to admit motive fluid to the motor.

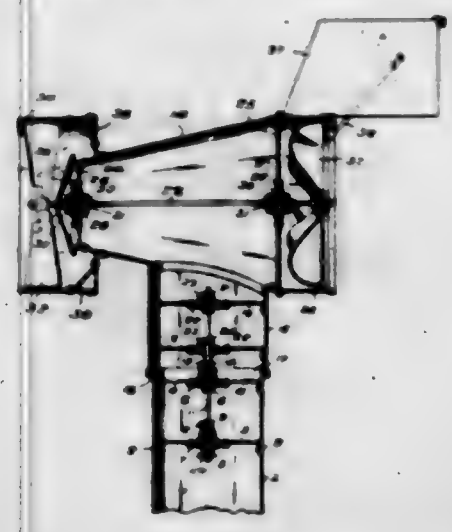
1,299,285. REIN-BUCKLE. WILLIAM O. BACKLUND, Stromsburg, Nebr. Filed Jan. 3, 1918. Serial No. 210,203. 1 Claim. (Cl. 24—176.)



A check rein connector including a ring-like body portion, a tongue extending laterally therefrom in the same plane therewith, a guide loop on the outer end of said tongue disposed at an angle oblique to the body portion,

a diametrically opposed bar carried by said body portion and arranged below the same, said bar being arranged in parallelism to the guide loop, and a vertically disposed pin carried by the bar intermediate its ends.

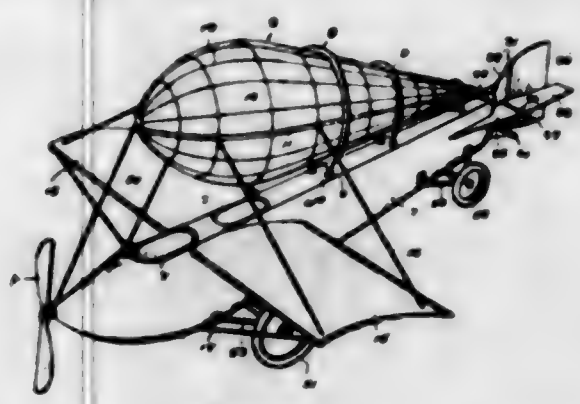
1,299,286. VENTILATOR. WARD A. BARTHOLOMEW, Buffalo, N. Y. Filed Apr. 22, 1918. Serial No. 229,977. 2 Claims. (Cl. 98—2.)



1. A ventilator comprising a frusto-conical hood having its smaller end closed and its larger end open, a shaft mounted longitudinally and rotatively in and through said hood, a drive fan secured to the shaft outside of the hood adjacent said smaller end, a suction fan secured to the shaft within said larger hood end, a neck depending from the lower side of the hood having pivotal supporting connection with the structure to be ventilated, and a wind directing vane mounted upon said hood.

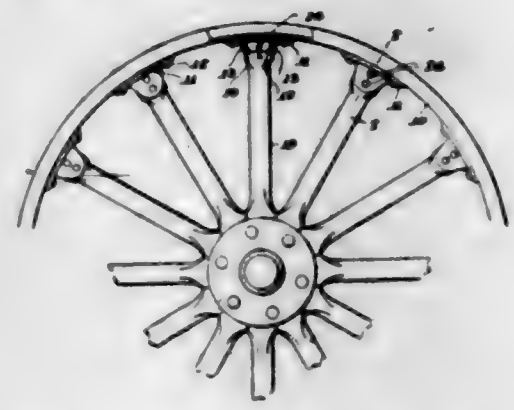
2. The herein described ventilator comprising a tapering hood a conical cap closing the smaller end thereof, a cylindrical jacket secured to the hood near its smaller end and projecting beyond said end, a second cylindrical cap secured to the larger end of the hood, a vertical pivot on which the structure is mounted, a suitable vane attached to the hood, a drive fan mounted on the end of the shaft outside of the closure and within the cylindrical jacket, and a suction fan mounted on the opposite end of the shaft within the other cylindrical jacket.

1,299,287. FLYING-MACHINE. JOHN BARTO, Cleveland, Ohio. Filed Jan. 19, 1918. Serial No. 212,691. 1 Claim. (Cl. 244—6.)



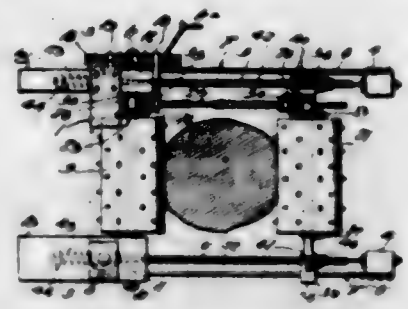
In a flying machine, the combination of a body, wings extending on opposite sides of the body, an aerostat of dirigible balloon formation arranged above and in spaced relation to said body, connecting means between said aerostat and body, propelling means, directional means, each wing comprising a plurality of spars having pivotal connection with the body of the machine whereby the wing is adapted to be folded like a bellows and lashed to the body of the machine for transportation, and gears connecting the inner ends of said wing spars and controlling the relative folding and unfolding movements thereof.

1,299,288. SPOKE-LOCK. GEORGE BATE, Flint, Mich. Filed Oct. 16, 1918. Serial No. 258,348. 1 Claim. (Cl. 21—171.)



In a wheel including a rim and a plurality of spokes, means for connecting the outer ends of the spokes with the rim, comprising a plurality of bracket members secured at spaced intervals upon the inner periphery of the rim, each bracket member comprising an arcuate plate conformingly engaging the inner periphery of the rim, a pair of spaced inwardly extending inclined flanges on the inner side of the plate, an inwardly extending ear formed at one longitudinal edge of said plate and forming a closure for one end of the space between said flanges, each spoke being provided adjacent its outer end upon all its faces with inclined recesses, opposite of said recesses being engageable upon said flanges, and inclined lugs formed on said ear and engaging within another of said recesses, a plate disposed against the other longitudinal edge of the bracket and having its inner face provided with an inclined lug engaging within the remaining one of said recesses in the spokes, and bolts passing through said plate, the end of the spoke and through said ear.

1,299,289. POLE-CLIMBING SCAFFOLD. AUGUST BUSO, Brownsville, Wash. Filed Feb. 5, 1918. Serial No. 215,557. 4 Claims. (Cl. 20—61.5.)

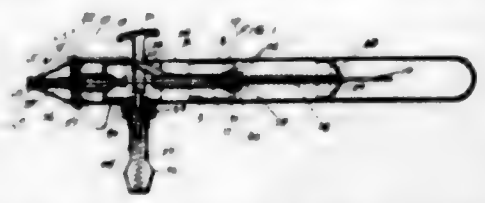


3. A pole-climbing scaffold comprising a frame structure and climbing means mounted thereon, said climbing means including upper and lower rollers to engage one side of the pole, and means for steering one of said rollers.

1,299,290. AIR-BRUSH. JOHANNES BERG, Chicago, Ill., assignor of one-third to Reidar Berg and one-third to Jacob Berg, Chicago, Ill. Filed Apr. 21, 1916. Serial No. 92,621. 7 Claims. (Cl. 91—45.)

1. An air brush comprising a handle, a main barrel and pigment reservoir, a needle passing through said reservoir, a pigment cup, connections therefor, a compressed air tube connected to said main barrel, means whereby air may be admitted within said brush and quick detachable means for uniting said connections to said main barrel, said means including a locking cam mounted on said connection.

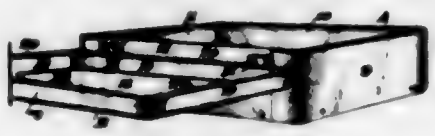
3. An air brush comprising a handle, a main barrel, a pigment reservoir, a needle passing through said reservoir, a pigment cup, connections therefor, a compressed air tube with connections therefor whereby air may be admitted within said brush and combined cam and wedge bayonet joint connections securing said parts together.



4. An air brush comprising a handle, a main barrel, a pigment reservior, a needle passing through said reservoir, a pigment cup, connections therefor, a compressed air tube connected to said main barrel, means whereby air may be admitted within said brush, quick detachable means for uniting said connections to said main barrel and eccentric means for locking said needle in different adjusted positions.

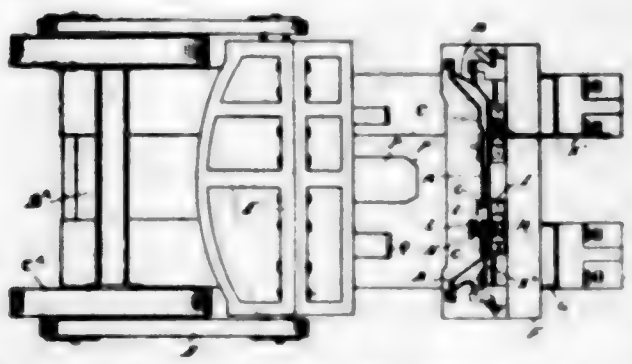
7. An air brush comprising a handle, a main barrel, a pigment reservoir, a needle passing through said reservoir, a pair of pigment cups one within the other in open communication with said reservoir, the interior of said pair of cups being readily removable from the outer cup and in open communication therewith.

1,299,291. SUITCASE. CYRUS F. BLANKS, St. Louis, Mo., assignor to St. Louis Tin & Sheet Metal Working Co., St. Louis, Mo., a Corporation of Missouri. Filed Dec. 7, 1917. Serial No. 205,967. 1 Claim. (Cl. 220—5.)



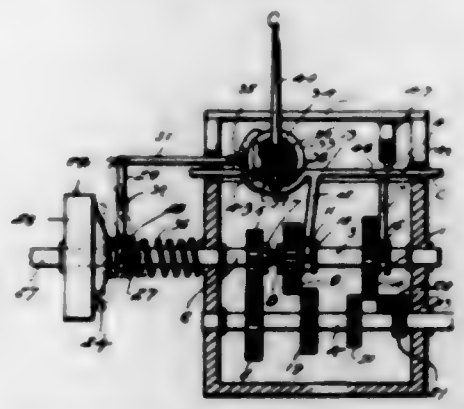
In a suit case, the combination with a rectangular body frame formed of sheet metal with four unbroken corners or angles, said body frame having one wall formed of a separate strip of less length than said wall and joined by seams to the remaining portion of said frame, of two sides forming the top and bottom of the case, each side being stamped from sheet metal to provide a marginal flange with solid corners, with an outwardly offset bead at the free edge of said flange, the said body having its free edges fitting within the flanges of said sides and bearing flat against the inner faces of said flanges, rivets securing the free edge of the body to the flange of the side forming the bottom below the bead thereof, and hinges connecting the flange of the side forming the top to the separate strip of the body contiguous to said seams.

1,299,292. AXLE-STRETCHING MACHINE. STEPHEN F. ROURKEY, Flint, Mich. Filed Feb. 28, 1918, Serial No. 219,560. Renewed Feb. 20, 1919. Serial No. 278,237. 6 Claims. (Cl. 78—1.)



1. An axle-stretching machine, comprising a bed, work-engaging members, one of said members being movable transversely of said bed, and means movable longitudinally of said bed for actuating said movable member away from said other member to effect the stretching of the portion of work therebetween.

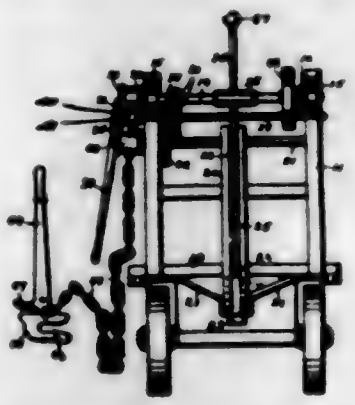
1,299,293. TRANSMISSION AND AUTOMATIC CLUTCH-CONTROL MECHANISM. CHARLEY LUTHER BROWN, Chandler, Okla. Filed Jan. 18, 1918. Serial No. 212,469. 3 Claims. (Cl. 74—58.)



1. The combination with a clutch and a transmission mechanism including a plurality of speed changing gears, of a pivotally mounted controlling lever, shifting rods slidably mounted and connected to the gears, said rods having arcuate shaped offset portions provided with notches, an extension formed on the shifting lever and adapted to engage either of the notches upon lateral movement of the shifting lever, and means disengaging the clutch upon lateral movement of the lever and permitting engagement of the clutch after the forward and rearward movement of the lever.

3. The combination with a clutch and a transmission mechanism including a casing and a plurality of speed changing gears, of a stub shaft secured in the casing, a controlling lever pivotally mounted on said shaft, an extension formed on said controlling lever, shifting rods slidably mounted in said casing and connected to the gears, offset portions formed on said shifting rods and having notches adapted to receive the extension upon lateral movement of the lever so that upon forward or rearward movement of the lever the shifting rods will be slid in the casing, a cam wheel on said shaft, spaced cam portions on said cam wheel, a rod slidable in said casing, a roller secured to the second named rod and in engagement with the cam wheel, means connecting the second named rod with the clutch, a pinion connected to the cam wheel, and a segment on the controlling lever and in mesh with the pinion for engaging and disengaging the clutch upon forward and rearward movement and lateral movement respectively of the lever.

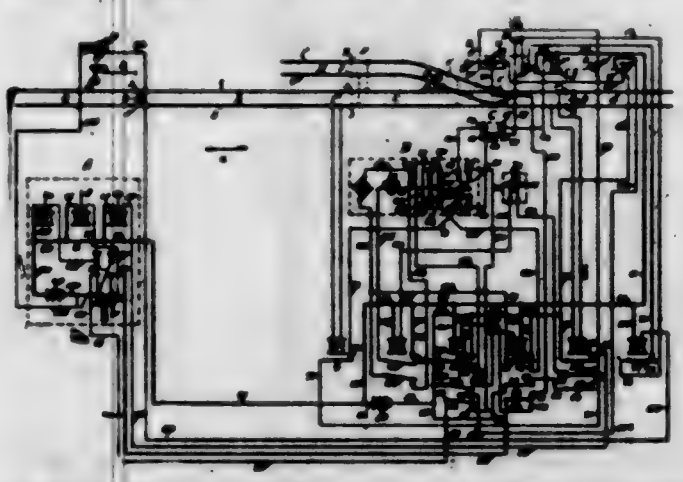
1,299,294. STAKE-PULLING MACHINE. FRED BUCHANAN, Des Moines, Iowa. Filed Apr. 28, 1917. Serial No. 165,213. 3 Claims. (Cl. 254—166.)



2. In a machine of the class described, a frame, power operated means, a gripping device comprising a head, and a manipulating handle extending rigidly from the head, said head having means on its opposite sides for

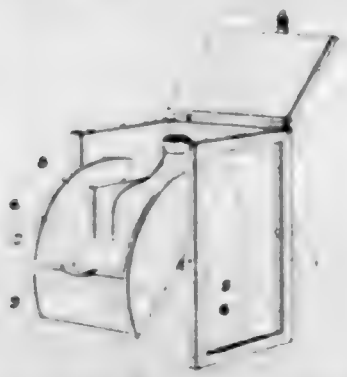
engaging a stake by manual manipulation of the handle, and power operated lifting means pivotally connecting the gripping device between its ends to the power operated means for vertical and horizontal pivotal action, whereby the head may be manually engaged with a stake and held in operative position by manual pressure on said handle during and throughout the lifting operation of the power operated means.

1,299,295. RAILWAY-TRAFFIC-CONTROLLING SYSTEM. CHARLES S. BUSHNELL, Sydney, New South Wales, Australia, assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 14, 1917. Serial No. 161,971. 12 Claims. (Cl. 246—23.)



1. In a traffic controlling system for railways, in combination: a stretch of track divided into blocks; a switch associated with one of said blocks; an electrically operated switch machine; circuits for operating said switch machine to its normal and reverse positions; means controlled alternately from a remote point or station for governing said circuits separately; and other means controlled automatically by the track circuit for the block adjacent to said switch for checking the circuits governed by said last mentioned means.

1,299,296. ROCKER-HOLDER FOR LIQUID-CONTAINERS. MORTIMER BYE, Indianapolis, Ind. Filed Aug. 9, 1917. Serial No. 185,398. 10 Claims. (Cl. 248—57.)

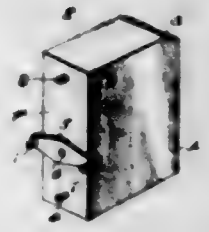


1. A holder for liquid containers having a pivoted member carrying curved segmental rockers along its edges, the plane of the base of said member from which said rockers extend perpendicularly being parallel to the vertical plane of the front wall of the holder when the member is in either closed position within the holder or swung out to supporting position, the pivot line of the member being below the upper level of the holder.

4. A holder for liquid containers having a vertical wall thereof divided into a lower fixed section and an upper hinged section, the hinge being below the level of the top of the holder, and curved segmental rocker means carried on said hinged section, the sectors of which lie in the vertical plane of the said movable wall section, whereby the rocker supporting sector base lies in vertical planes in both the closed and open positions.

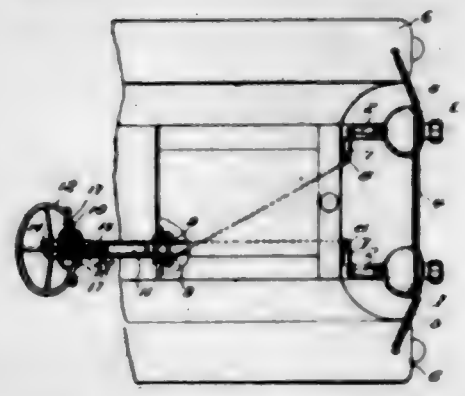
10. In a holder for liquid containers, in combination with a lid hinged to the body of the holder, the front of the body at the free end of said lid being divided into a lower fixed section and an upper hinged section, rockers carried by said member along the side edges thereof and extending the length of said front wall, said rockers being movable into and out of the holder with said member.

1,299,297. COMBINED HAND-ANVIL AND SET-GAGE. ALFRED C. CARLISLE, Lakeside, Ohio. Filed Mar. 13, 1918. Serial No. 222,068. 1 Claim. (Cl. 33—202.)



A tool of the class described comprising a body having gage studs on one side near the opposite ends, a pivotally mounted arm on the same side at a point between said gage studs, and gage studs on the ends of said pivotally mounted arm.

1,299,298. DIRIGIBLE HEADLIGHT. ANDREW H. CHALMERS and WELCOME A. CHALMERS, Rockport, Tex. Filed June 21, 1918. Serial No. 241,232. 5 Claims. (Cl. 240—61.)



1. A device of the class described comprising a pair of lamps pivotally supported, a drum on the steering post, a flexible connection connecting each lamp with said drum, means for detachably connecting said drum with the steering wheel and a pair of hand levers movable on the drum for actuating said connections by hand.

1,299,299. LEATHER WELT-STRIP. GEORGE A. CHAMBERLIN, Abington, Mass., assignor of one-half to Warren B. White, Abington, Mass. Filed Apr. 30, 1918. Serial No. 231,606. 3 Claims. (Cl. 36—78.)



2. A pieced welt consisting of sections each formed of two wedge shaped pieces of substantially equal width laid one upon the other with the thicker part of each extending along the thinner part of the other, and united by adhesive; such sections being joined together end to end.

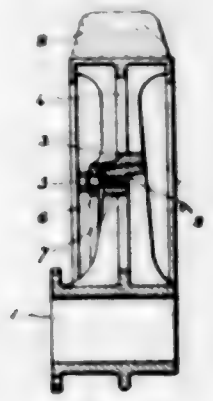
1,299,300. MANUFACTURE OF CHAINS. WILLIAM B. CHILLCOTT, Pittsburgh, Pa., assignor, by direct and mesne assignments, of three-sixteenths to William Milligan, three-sixteenths to Charles W. Gray, and three-sixteenths to Daniel Evans, Pittsburgh, Pa. Original application filed Feb. 14, 1918, Serial No. 217,172. Divided and this application filed June 20, 1918. Serial No. 240,999. 2 Claims. (Cl. 59—35.)



1. A chain link blank comprising a cast metal structure having curved separated end portions having opposing faces, said faces directly opposing each other whereby they may be welded together by pressure applied to the sides of the end portions.

2. A chain link blank comprising a cast metal structure including an integral stud and having curved separated end portions and opposing faces, said faces directly opposing each other whereby they may be welded together by pressure applied to the sides of the end portions.

1,299,301. VEHICLE-WHEEL. JAMES R. CHURCHILL, Sheffield, England. Filed Mar. 27, 1918. Serial No. 225,052. 3 Claims. (Cl. 21—69.)

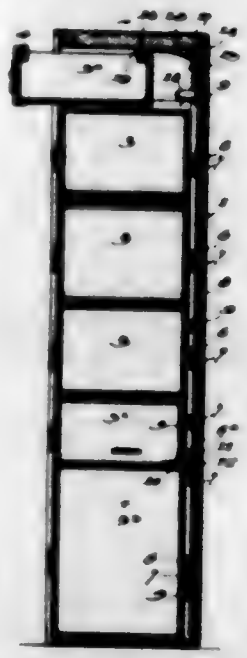


1. An all metal wheel for motor vehicles comprising; an outer portion, including a rim, an outer ring disposed inwardly of the rim in concentric relation thereto and having a conical portion provided with an inwardly projecting annular flange at its reduced end, and spokes connecting the rim and outer ring; an inner portion including a hub, an inner ring surrounding the hub in spaced concentric relation and having a conical face adapted for insertion within the outer ring, and spokes connecting the hub and inner conical ring; and bolts carried by the annular flange and engaging the inner ring to draw the two rings together.

2. An all metal wheel for motor vehicles comprising; an outer portion, including a rim, a male ring arranged inwardly of the rim in concentric relation thereto and having inner and outer conical faces, spokes connecting the rim and male ring; an inner portion including a hub, a female ring surrounding the hub in spaced concentric relation and having inner and outer conical faces, and spokes connecting the hub and female ring; and bolts passing through the male and female rings to draw them together.

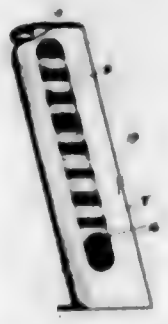
1,299,302. DRAWER-LOCKING MEANS. HENRY W. COTTRELL, Richmond, Va., assignor to H. W. Rountree & Brother Trunk and Bag Co., Richmond, Va. Filed June 3, 1918. Serial No. 237,957. 2 Claims. (Cl. 45—94.)

1. In combination with a cabinet and superimposed drawers therein, a locking bar slidable endwise at the inner ends of said drawers and movable upwardly to locking position, locking means on said bar for all of said drawers with the exception of the uppermost, the upper end of said bar having an opening, a flat one-piece spring for coaction with the weight of said bar in shifting the latter downwardly to released position, said spring being received loosely at its rear end in said opening and anchored at its



front end to the upper end of the cabinet, said spring inclining downwardly and rearwardly and being located in the inward path of the upper edge of said upper drawer, whereby closing of the latter will raise said spring to similarly raise said bar to locking position, and a lock for said upper drawer.

1,299,303. CARTRIDGE-MAGAZINE FOR AUTOMATIC PISTOLS. WILLIAM CHARLES WALTER COWLES, Sydney, New South Wales, Australia. Filed Oct. 16, 1916 Serial No. 125,960. 2 Claims. (Cl. 42—7.)

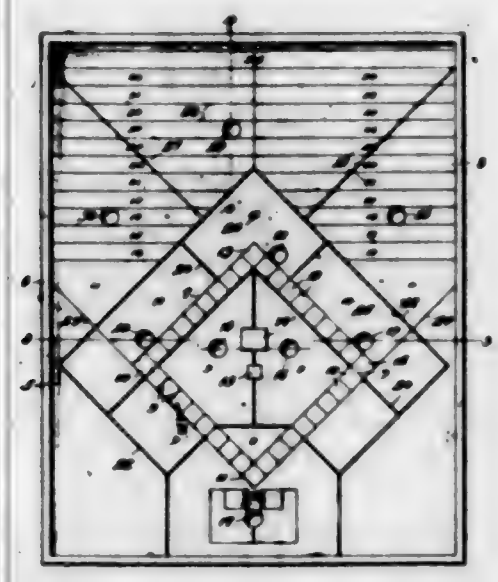


1. Magazine for automatic pistols, comprising a metallic casing having slots in the side walls thereof, a platform movable within said casing, spring means tending to elevate said platform, a member extending through an aperture provided in said platform and grip members connected to the opposite ends of said member and lying within said slots.

1,299,304. BASE-BALL GAME. FRED CRAMER, Forest, Ohio. Filed May 14, 1918. Serial No. 234,436. 1 Claim. (Cl. 46—61.)

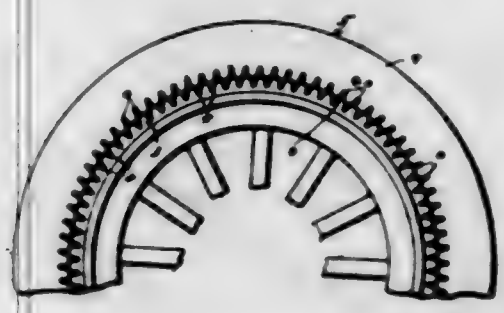
A game having disks to represent the players and a smaller disk to represent the ball, the disk representing the ball being projected by contact with the disk representing the player when a manual impact of force is delivered to the said disk, a field for the disk representing the players having a diamond shaped figure thereon to simulate the infield of a base ball ground, said field being divided into a plurality of squares, the field having a pitcher's box and a ball box in the diamond and pockets at the opposite sides of the pitcher's box, said field being further provided with pockets adjacent to the squares rep-

resenting the first, second and third bases, said field having batters' boxes, and a pocket to the rear of and between the said boxes, the outfield being divided by spaced



transverse lines and the spaces between the lines each having imprinted thereon a separate designating means, and said outfield having pockets to the right, left and center thereof, all as and for the purpose set forth.

1,299,305. TIRE-CASING CONSTRUCTION. WILLIAM G. DUANN, Niagara Falls, N. Y. Filed Jan. 28, 1919. Serial No. 278,520. 4 Claims. (Cl. 152—17.)

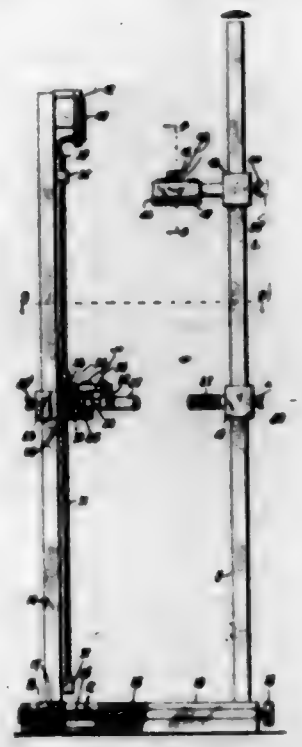


4. In a tire casing construction, the combination of a casing body, side flaps carried by the marginal portions of the casing body, a tread member bearing against the bight of the casing body, and means detachably connecting the said tread member with said side flaps.

1,299,306. RESPIRATION-INDICATOR. BERTRAND DE BUANTE, New York, N. Y. Filed June 15, 1918. Serial No. 240,187. 4 Claims. (Cl. 33—147.)

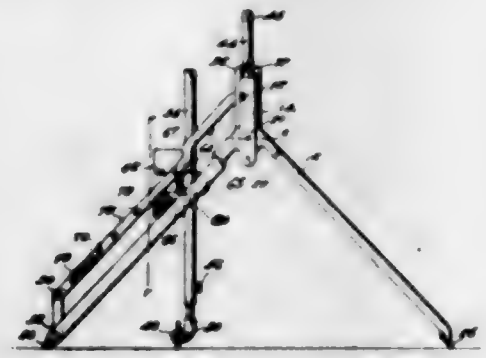
1. A respiration indicator, comprising a base, a stationary post rising therefrom, a movable post on said base, means for adjusting the position of said movable post in relation to said stationary post, a member on said stationary post adapted to abut against the back of the person whose respiration is to be tested, a block upon said movable post, a spring-pressed member adapted to abut against the abdomen of the person and shiftably disposed upon said block, a graduated dial on said movable post, a hand cooperating with said dial, and a gearing between said spring-pressed member and said hand.

2. A respiration indicator, comprising a base, a stationary post rising therefrom, a movable post on said base, means for adjusting the position of said movable post in relation to said stationary post, a member on said stationary post adapted to abut against the back of the person whose respiration is to be tested, a block upon said movable post, a spring-pressed member adapted to abut against the abdomen of the person and shiftably disposed upon said block, a graduated dial on said movable post, a hand cooperating with said dial, and a gearing between said spring-pressed member and said hand, said member



on said stationary post and said block on said movable post being adjustably mounted to fit persons of different heights.

1,299,307. FRACTIONAL DIVIDERS. CLARENCE N. DE WITT, Kimberly, Idaho. Filed Oct. 12, 1917. Serial No. 196,266. 5 Claims. (Cl. 33—192.)



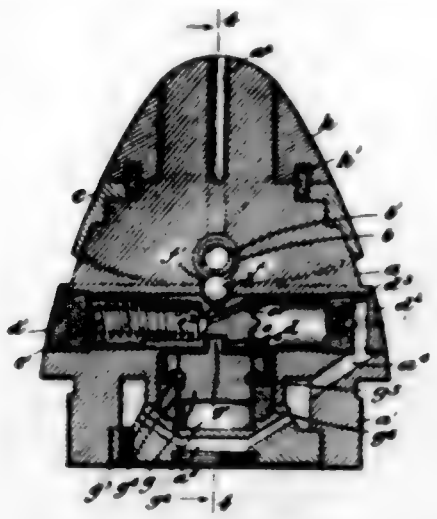
1. A divider comprising a pair of legs pivotally connected, a third leg maintaining a vertical position within the limit of movement of the legs first named, and a fraction guide graduated for setting the third leg at the required point for dividing proportionally the distance between the legs first named when in any adjusted position within the aforesaid limit, and mounting means for effecting pivotal connection of the third leg with one of the other legs and with the fraction guide.

1,299,308. FUSE FOR PROJECTILES. THOMAS B. DOE, Lowell, Mass. Filed May 4, 1918. Serial No. 232,459. 7 Claims. (Cl. 102—36.)

1. In a fuse, the combination of a hammer and a detent therefor subject to the action of centrifugal force in one direction, the fuse being formed with an air channel opening from the forward end whereby the detent is subject in the other direction to the action of air pressure due to the flight of the projectile.

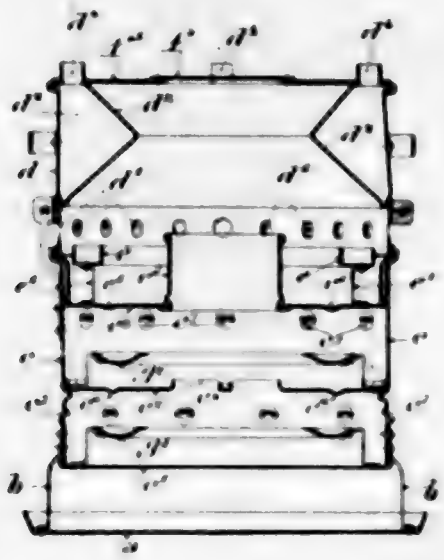
4. In a fuse, the combination of a body having a chamber for a hammer and a transverse chamber for a detent, an air channel opening from the forward end of the fuse to the transverse chamber, a hammer mounted movably in the chamber therefor, a detent mounted movably in the transverse chamber and subject to the action of cen-

trifugal force to move it in one direction and to the action of air pressure to move it in the opposite direction,



and means to regulate the escape of air from the transverse chamber behind the detent.

1,299,309. APPARATUS FOR THE PRODUCTION OF GERMICIDE, INSECTICIDE, AND LIKE GASES. LÉON DURAND, Paris, and GEORGES BOTTIN, Rue Turpin-Romans, France. Filed Apr. 17, 1918. Serial No. 229,142. 2 Claims. (Cl. 167—3.)



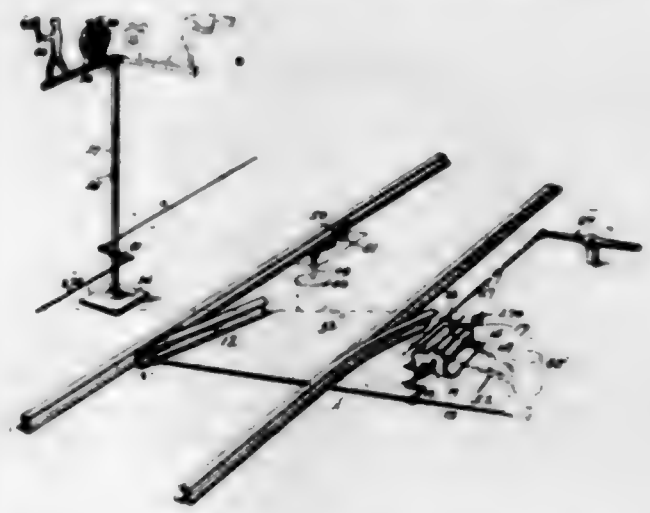
1. In an apparatus for germicidal and insecticidal purposes comprising a chamber closed at the base and open above and having air admission orifices arranged in three stages in its side wall, removable annular trays in said chamber between first and second and between the second and third air orifice stages respectively, said trays having each a row of small orifices in their bases, and annular troughs below said orifices substantially as and for the purpose set forth.

1,299,310. TOY. CHARLES H. EDWARDS, Saginaw, Mich. Filed Dec. 9, 1918. Serial No. 265,975. 2 Claims. (Cl. 46—14.)

1. A wind toy comprising a wheel formed of two flat rectangular blades which lap at the central portions thereof, one of said blades having spaced slits through which the other blade passes, both of said blades being punctured at the said lapping portions, each of the blades being centrally formed with an out-bulged portion providing a hub, a shaft received through said hub, an angle handle on said shaft, said blades, outward of their lapping portions having pairs of longitudinal and transverse slits, and the metal bounded by said slits being bent angularly with respect to the blades to provide adjustable vanes therefor.



1,299,311. RAILWAY-SWITCH-OPERATING MECHANISM. ISAAC L. EDWARDS, Aurora, Ill. Filed June 5, 1909, Serial No. 500,395. Renewed Jan. 25, 1919. Serial No. 273,171. 2 Claims. (Cl. 246—257.)

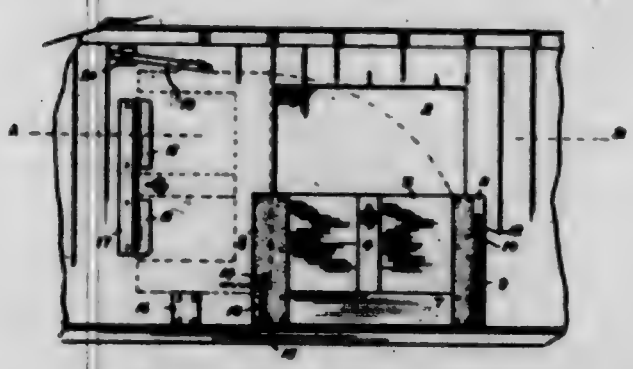


1. In a railway switch, the combination of a switch point-moving fluid pressure motor, a pipe leading from a supply of fluid under pressure to said motor, a valve in said pipe to open and close the same, a piston valve alternately opening and closing communication between said supply pipe at opposite sides of the motor to cause the latter to move alternately in opposite directions, means to open and close the pipe valve, and a connection between the pipe valve and the piston valve acting to shift the piston valve to one or the other of its positions to place the supply pipe in communication with its respective ports while the supply pipe valve is open.

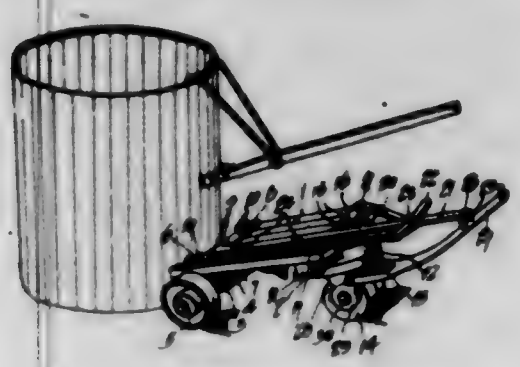
1,299,312. CAR-DOOR. HENRY D. EHLE, Duluth, Minn., assignor of one-half to Robert R. McFarlane, Duluth, Minn. Filed June 10, 1918. Serial No. 239,134. 2 Claims. (Cl. 20—29.)

2. The combination with a pivotally supported car door of the character described requiring bodily vertical movement at its initial opening action, of an L-shaped

slot coöperating with the pivotal support for holding the door against horizontal movement when open, and supporting means necessitating the door being moved vertically bodily at the commencement of its closing action.



1,299,813. TRUCK. HERMAN WALLACE ELROD, Nashville, Tenn. Filed Aug. 16, 1917. Serial No. 186,626. 4 Claims. (Cl. 21—121.)

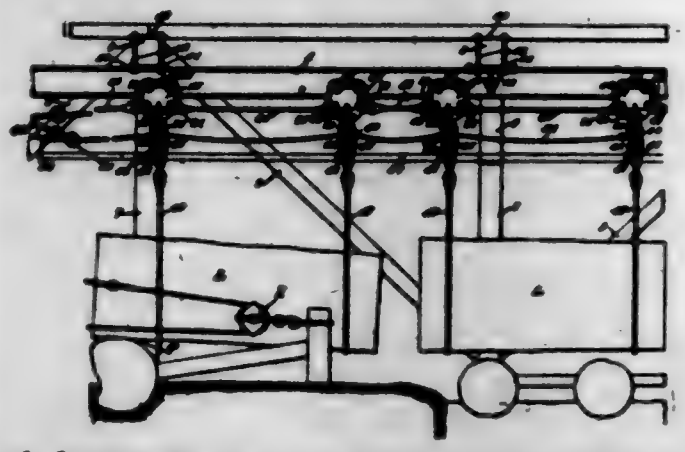


1. In a truck, the combination of a body, rear wheels supporting the rear end of said body, a fifth wheel secured to the front part of the body, a front wheel pivotally connected to said fifth wheel, a handle pivotally connected to said fifth wheel and operable to turn the latter and a bar secured to the front end portion of said body and extending forward and rearward beyond the front end of the body, the front end of said bar being provided with a depending flange having a downwardly facing notch adapted to engage with said handle, whereby the said bar and handle are coöperative to lift the front of the truck and turn the truck on its rear wheels while preventing the turning of said fifth wheel.

2. In a truck, the combination of a body, rear wheels supporting the rear end of said body, a fifth wheel secured to the front part of the body, a front wheel pivotally connected to said fifth wheel, a handle pivotally connected to said fifth wheel and operable to turn the latter, and a resilient bar secured to the front end portion of said body and extending forward and rearward beyond the front end of the body, the front end of said bar being provided with a depending flange having a downwardly facing notch adapted to engage with and be supported by said handle, and an upwardly concaved bar adapted to support one end of the hogshead and secured on and extending transversely of the first said resilient bar at a point between said flange and the front end of said body, whereby the portions of the resilient bar between the transversely extending bar and the handle will cushion the shock from the handle.

4. A truck comprising a body, rear supporting wheels therefor, a fifth wheel structure at the front end of the body including upper and lower sections having pivot openings, a king bolt extending through said pivot openings, shock-absorbing tubes in said pivot openings and around the king bolt, and a front supporting wheel mounted on the lower section of the fifth wheel.

1,299,814. AERIAL TRANSPORTING SYSTEM. LOUIS EVEBDING, Arcata, Calif. Filed July 18, 1918. Serial No. 245,561. 11 Claims. (Cl. 188—24.)



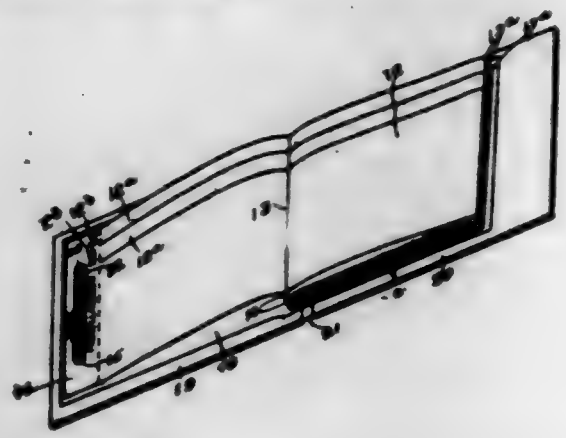
1. In an overhead carrier system the combination with a rail, and carriages mounted to travel therealong, of load supporting means suspended from the carriages, means operated by the supported load for frictionally engaging the rail to retard the movement of the carriage down an incline, a haul cable, and means operated by the cable when drawn taut for releasing the rail from the retarding means.

1,299,815. AUTOMOBILE-BUMPER. JAMES E. FAGET, Chicago, Ill., assignor to South Side Buick Sales Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1917. Serial No. 186,966. 5 Claims. (Cl. 293—55.)



1. A vehicle bumper comprising a bar, a pair of arcuate-shaped spring-metal arms adapted to support said bar on a vehicle, the outer ends of said arms lying along and having limited sliding connection with said bar, said arms having their normal curvature such that after connection to said bar and before attachment to the vehicle the inner ends of said arms are disposed non-perpendicularly to said bar, said bar being adapted to be supported on the vehicle by having said arms flexed so that the inner ends thereof are shifted into positions substantially parallel to each other and perpendicular to said bar, and means for attaching the inner ends of said arms in said flexed positions to the vehicle frame.

1,299,816. ACCOUNT-PAD. ELMER S. FARRINGTON, Hardwick, Vt. Filed Jan. 16, 1918. Serial No. 212,111. 4 Claims. (Cl. 281—2.)



1. An account pad formed by an elongated flexible record strip having transverse creases adapting the strip

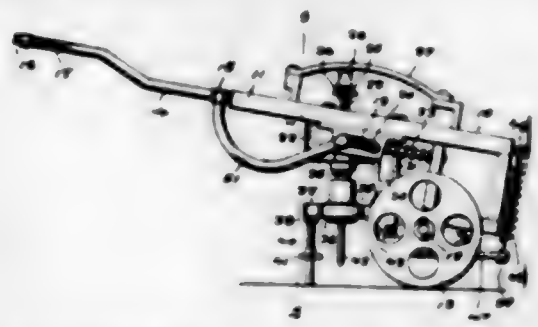
to be folded into a series of connected leaves arranged bookwise, one side of the strip forming a series of blank pages, and being provided with headings forming suitable page-identifying indicia, one of the end leaves being elongated to form a head which is exposed when the pad is folded, said head being provided with pad-identifying indicia.

1,299,317. TROLLEY. CHARLES M. FRIST, Sioux City, Iowa. Filed June 14, 1918. Serial No. 240,061. 7 Claims. (Cl. 64—26.)



1. A bearing for wheels comprising an axle embodying sections of like form and dimensions, each section having a concave peripheral surface extending from the outer to the inner end thereof and the united sections providing a peripheral concave surface extending fully from the one outer end to the opposite outer end of the axle, a wheel having a central eye with a convex surface continuous from one end to the opposite end, and lubricating plugs held by the axle sections.

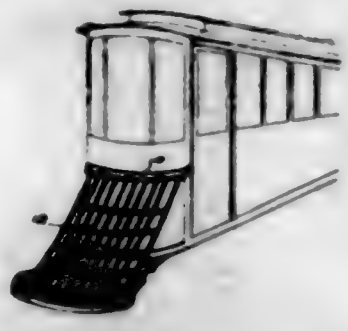
1,299,318. DRILL. EDGAR L. FOGLEMAN, Balboa, Canal Zone. Filed June 8, 1918. Serial No. 238,883. 11 Claims. (Cl. 77—6.)



1. In a motor driven drill for the purpose set forth, a drill, supporting means for the drill including a leg depending therebeyond which is arranged in longitudinal alinement with said drill bit, a frame, supporting fulcrum members therefor, weighted means for retaining the fulcrum members in one position, when the frame is swung thereon and the drill moved to operative position, means between the frame and drill for influencing the latter when the frame is tilted, and spring means for normally retaining the frame in one position and the drill in inoperative position.

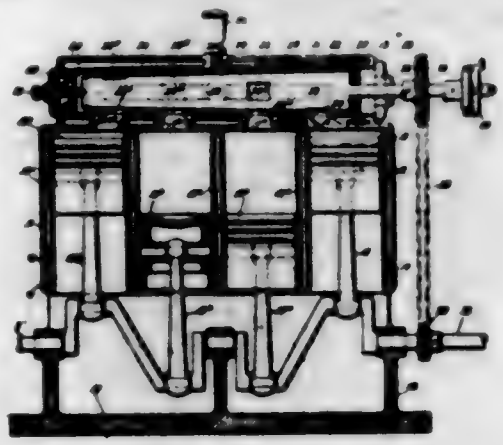
1,299,319. CAR-FENDER. FRANCIS FORTUNY, New York, N. Y. Filed Feb. 13, 1918. Serial No. 216,918. 2 Claims. (Cl. 293—45.)

1. In a car fender, the combination with the dash of a car, of horizontally disposed arms secured to the bottom thereof and projecting therebeyond, a frame hingedly connected to said arms, said hinges having lugs thereon contacting when the frame is in one position with respect to the arms for retaining the frame in longitudinal alinement with said arms, an angularly disposed net secured to the outer edge of the frame and to the dash of the car,



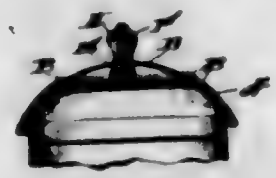
and said net being constructed of spring members designed, when a weight is imposed thereon to yield inwardly and to swing the frame to an upward inclination.

1,299,320. INTERNAL-COMBUSTION MOTOR AND VALVE THEREFOR. FRANK G. FISHER, Aldan, Pa. Filed Mar. 2, 1918. Serial No. 219,999. 1 Claim. (Cl. 123—59.)



In an internal combustion engine, including a plurality of cylinders, a valve casing associated with the cylinders and provided with ports communicating with the interior of said cylinders, said valve casing being formed to provide a central tapered sleeve portion and enlarged portions at the sides thereof constituting inlet and exhaust chambers, said sleeve portions being provided with ports communicating respectively with said inlet and exhaust chambers, a tapered rotary valve disposed within said sleeve portion and provided with ports adapted to register with said first and second named ports, a plug disposed within the smaller end of said sleeve portion, a screw threaded through said plug and engaging the smaller end of said valve, a plug threaded into the larger end of said sleeve portion, and a plurality of compression rings disposed between said last named plug and the larger end of said valve whereby to hold said valve in close fitting relation within said sleeve portion.

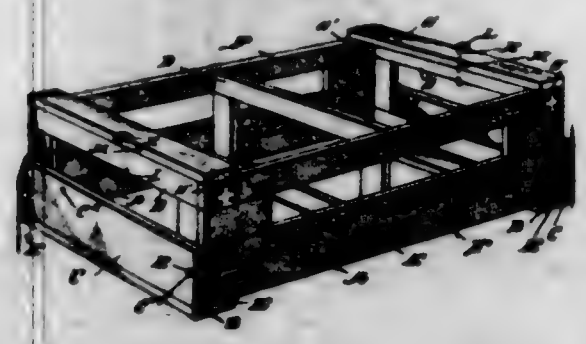
1,299,321. DEVICE FOR KEEPING LIDS COOL. FREDERICK J. GERRARD, Monroe, Nebr., assignor of one-half to Carl O. Hart, Monroe, Nebr. Filed Dec. 3, 1918. Serial No. 265,121. 1 Claim. (Cl. 53—8.)



In combination with convexed lid having a circumferential flange, a portion of the lid intermediate the flange and its upper portion being bent upon itself to form an overhanging flange of circular outline, an apertured bowed strip, the ends of which engage underneath said flange, a

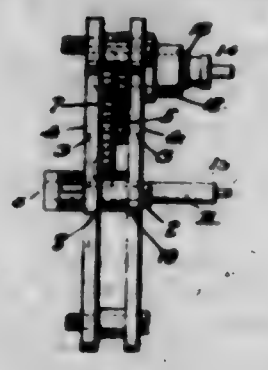
longitudinally apertured knob, a nut positioned underneath said strip and having a contracted portion passing through the aperture of the strip, and a screw engaging a threaded aperture in said knob and nut.

1,299,322. FOLDING CHICKEN-CRATE. FREDERICK J. GERRARD, Monroe, Nebr., assignor of one-half to Carl O. Hart, Monroe, Nebr. Filed Dec. 3, 1918. Serial No. 265,122. 1 Claim. (Cl. 217—47.)



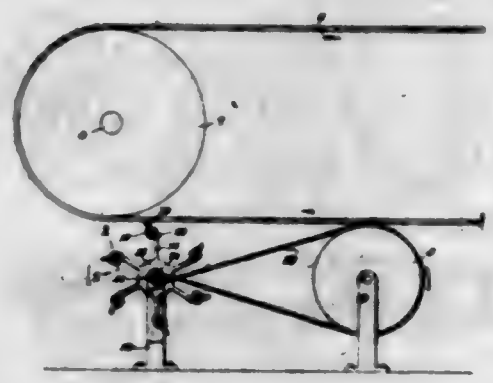
A folding crate having opposite longitudinal side bars with end pieces fastened thereto and projecting above the side bars, slats underneath the latter and secured to the side bars, sides having pintles pivotally connected to the end pieces above and adjacent to the upper edges of said side bars, folding partitions having pintle ends pivotally connected to the side bars adjacent to said slats and designed, when opened, to bear against the inner faces of said end pieces, cross pieces hinged at their ends to the upper edges of said sides and adapted to fold between said end pieces when the crate is closed, and pins passing through said hinged cross pieces and holes in said partitions.

1,299,323. MOTION-PICTURE CAMERA. GEORGE R. GOODWIN, Washington, D. C. Filed Apr. 2, 1918. Serial No. 226,338. (Filed under the act of Mar. 3, 1883, 22 Stat. L., 625.) 1 Claim. (Cl. 74—7.)



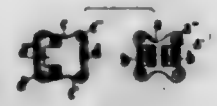
In a motion picture camera, an attachment consisting of a back plate, two gears, one of which carries one small and one large gear member, a front plate, a pinion, and one large and one small handle shaft secured to the other gear and the pinion, respectively, said back plate being adapted to be secured to the side of the camera, said gears being inclosed within the gear case, comprising the front and the back plate and adapted to be secured to the side of the camera as aforesaid, said gears being adapted to operate said pinion, said front plate forming the outer covering for said two gears, said pinion passing through the front and back plates and adapted to engage the shaft of the camera mechanism and to engage the teeth of the said large gear member, the small handle shaft being adapted to operate the camera at normal speed, the large handle shaft being adapted to operate the camera at an increased speed, said attachment being adapted to take motion pictures at rates of speed as high as 128 pictures a second.

1,299,324. SCRAPER FOR BELTS. FRANK A. GOODYKOONTZ, Miami, Ariz. Filed Apr. 12, 1918. Serial No. 228,282. 2 Claims. (Cl. 74—21.)



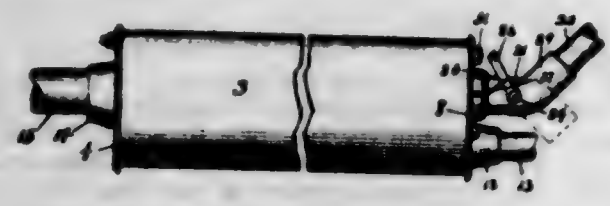
1. In combination with an endless belt, a shaft arranged therebeneath and operated thereby, drums on said shaft, radial arms projecting from said drums having flat flanged ends, plates secured to said ends, and elastic scraper plates adjustably connected to said last mentioned plates and disposed to contact with the belt.

1,299,325. SNAP-FASTENER. FLORIS GOUBERT, Paris, France. Filed Mar. 28, 1918. Serial No. 225,373. 3 Claims. (Cl. 24—213.)



1. A snap fastener, comprising co-acting male and female members each consisting of a plate of resilient material; the male member having a portion which is rolled upon itself toward the center of said member to form a straight, cylindrical spring tongue, and the female member providing a bearing having an opening formed in its surface through which said tongue is adapted to be inserted to permit its engagement with the bearing.

1,299,326. MUFFLER-VALVE. EMMET P. GRAY, Detroit, Mich. Filed Oct. 8, 1917. Serial No. 195,256. 3 Claims. (Cl. 121—116.)

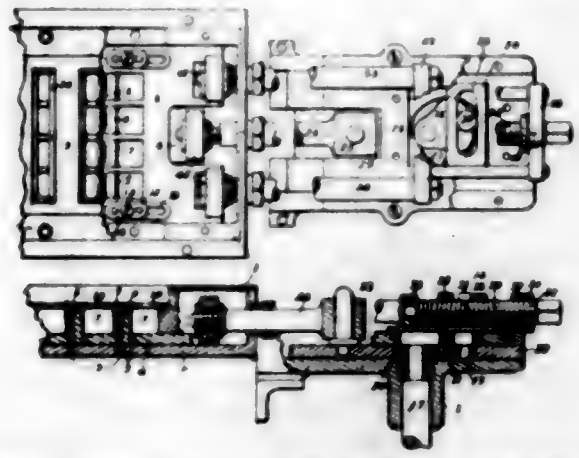


1. In a muffler valve, the combination with the head of a muffler having an opening connecting to that portion of the muffler which receives the direct exhaust of the engine, said head having a circular flange around the opening, a valve body rotatably mounted in said flange, and a discharge pipe attached to said valve body and extending at an oblique angle from the head, which pipe may be caused to extend at any desired angle by turning the valve body.

1,299,327. DROP-MOLDING ATTACHMENT FOR MACHINES. BENJAMIN F. GREENE, Pittsburgh, Pa. Filed June 7, 1918. Serial No. 238,720. 10 Claims. (Cl. 107—39.)

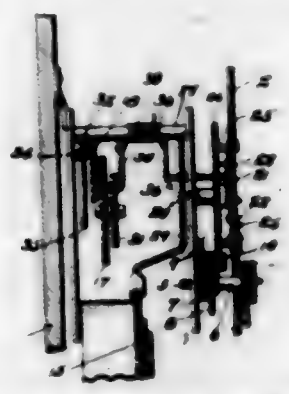
1. A drop molding attachment for candy machines comprising, a casing having discharge openings, a plate slidably mounted in the casing and having discharge openings adapted to register with the discharge openings in

the casing in a predetermined position of the plate, and a second plate movable over the first plate and having candy



receiving pockets communicating with the discharge openings in said first plate.

1,299,328. INTERMITTENT TRAIN MECHANISM. MILFRED L. GREENSTREET and SILVANUS F. LUMM, Lebanon, Mo., assignors to G. L. Time Switch Company, Lebanon, Mo., a copartnership. Filed May 28, 1917. Serial No. 171,418. 1 Claim. (Cl. 161—27.)



In a time controlled mechanism, the combination of a frame, a spring-actuated shaft mounted therein, a wheel on said shaft, a rocking staff, a counting arm carried by said staff and arranged to engage said wheel, a tripping staff mounted in the frame, a lifting arm carried by said tripping staff and having a portion adapted to engage the counting arm and a tripping portion extending exterior of the frame, a dial forming a covering for said parts, said dial being provided with an opening, a rotatably mounted setting dial positioned within said opening, means for rotating said setting dial, a pair of independently operable setting arms mounted for rotation with said setting dial, each arm being disposed behind said dial and having a frictional contact with the rear face thereof under spring tendency whereby each arm will retain its adjusted position upon the dial, the extremity of each arm being bent about the periphery of the dial and over a portion of the front surface thereof to form a manipulative indicator whereby the arm may be moved rearwardly from the dial to permit its adjustment, the front surface of the setting dial being provided with indicia disposed in operative association with the indicators, and a tripping lug on each arm for engaging the tripping portion of the lifting arm to lift the counting arm upon suitable rotation of the setting dial.

1,299,329. WEARING-APPAREL. JACOB K. GRIFFITH, Pittston, Pa. Filed Apr. 24, 1918. Serial No. 230,418. 6 Claims. (Cl. 2—118.)

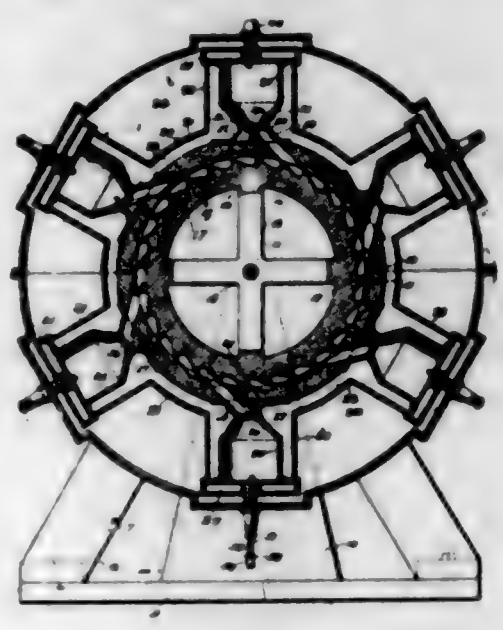
1. A hood made from a single rectangular piece of sheet material folded to receive the wearer's head, and provided at its back with adjustable means adapted to cause said material to snugly fit said head, said material also rolled to form a portion adapted to be secured under the wearer's chin, substantially as described.

3. A hood made from a single rectangular piece of sheet material folded to form a pocket to receive the wearer's head and an open slit like space at the back, and provided with an integral portion adapted to be secured under the chin of the wearer as well as at its front and back with adjustable means adapted to cause said material to snugly fit said head, substantially as described.



6. A hood made from a single rectangular piece of sheet material folded to receive the wearer's head, provided at its back with adjustable means adapted to cause said material to snugly fit said head; and provided on its inside with a detachable warmth retaining piece, substantially as described.

1,299,330. INTERNAL-COMBUSTION TURBINE. FRANK L. GROVES, Butte, Mont. Filed Mar. 10, 1916. Serial No. 83,397. 3 Claims. (Cl. 60—41.)

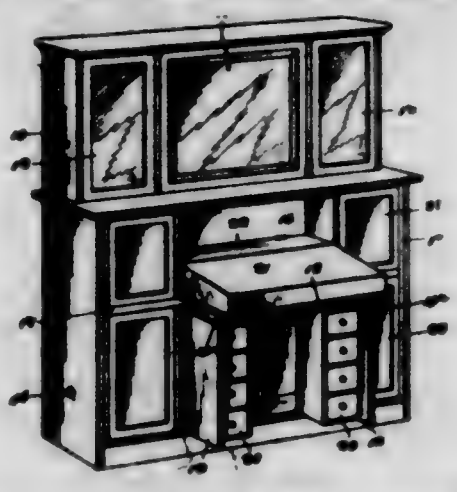


1. In an internal combustion motor, a rotor, a stator an explosion chamber having an air intake port and also having a discharge passage directed through the stator and to the rotor, a compressed air chamber with which the air intake port of the explosion chamber communicates, means to supply the compressed air chamber with compressed air, a valve coacting with said port to admit air to the explosion chamber, a fuel pump, to supply fuel to the explosion chamber for mixture with the compressed air to form an explosive charge, a discharge valve in the duct leading from the explosion chamber to the working face of the rotor and means including a rotor driven shaft having cams to respectively operate the air admitting valve, the fuel pump, and the discharge valve, and to cause said air valve to open both prior and subsequent to an explosion.

1,299,331. COMBINATION FURNITURE. HANS C. GYDESEN, Brooklyn, N. Y. Filed Feb. 16, 1917. Serial No. 149,089. Renewed Feb. 8, 1918. Serial No. 275,929. 2 Claims. (Cl. 45—6.)

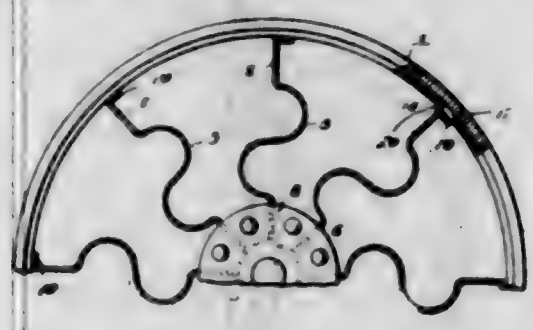
1. An article of furniture comprising a boxlike structure, a swinging desk member hinged thereto and adapted to be nested therein, a pair of doors hinged to the lower side thereof, means provided on the doors and adapted to co-

act with the desk member to support the same in its open position, and a ledge hinged to the rear wall of the box-



like structure and adapted to be swung downwardly to contact with the rear edge of the desk member.

1,299,332. WHEEL. PATRICK J. HAMILL, Boswell, Pa. Filed May 15, 1918. Serial No. 234,743. 1 Claim. (Cl. 153—50.)



In a wheel comprising a hub, a felly, and resilient spokes, means for connecting the outer ends of said spokes with the felly comprising a right angularly bent portion on the outer end of each spoke extending circumferentially of the felly, and a lug stamped from the felly and extending inwardly thereof in lateral relation thereto, said angular portion of the spoke engaging behind said lug whereby outward movement of the felly with respect to the spoke will be prevented, and said spoke being provided adjacent said angular portion with shoulders abuttingly engaging the inner periphery of the felly at the sides of the opening left by the lug whereby inward movement of the felly with respect to the spoke will be prevented.

1,299,333. TIRE. PATRICK J. HAMILL, Boswell, Pa. Filed June 12, 1918. Serial No. 239,595. 1 Claim. (Cl. 152—9.)



A tire comprising in combination a rim having clencher flanges, one of which is provided with an opening, a plurality of tire blocks adapted to enter the opening and be engaged by said flanges and a plate for closing the opening shaped to be arranged in contact with the inner peripheral surface and the radial sides of the rim and a single element for clamping the plate in engagement with the rim.

1,299,334. ROPE-CARRIED TRIP DEVICE. SAMUEL L. HANSON, Albert Lea, Minn. Filed Oct. 13, 1917. Serial No. 196,556. 9 Claims. (Cl. 24—114.5.)

8. A device of the character described, comprising a cage having terminal heads with openings therethrough connecting bars for the heads spaced apart circumferentially of the cage and spacing the heads, whereby a rope may be introduced into the cage through a head and the strands of the rope be moved out of the cage through



openings between the bars, and means introducible into the cage between the spreadout strands of the rope and the interior of the cage to expand the rope to a greater extent than the opening through the head of the cage through which the rope may be introduced.

1,299,335. TRIMMING-MACHINE. REGINALD HASELTINE, Chicopee Falls, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed Nov. 5, 1918. Serial No. 261,203. 8 Claims. (Cl. 164—38.)



1. In an edge trimmer, supporting means adapted for placing adjacent the edge of the material to be trimmed, devices carried by said supporting means for shifting movement with respect thereto, and a blade and an abutment carried by said devices and means for adjusting the distance between said blade and abutment in a line crosswise of the material and for fixing the blade and abutment in adjusted position, said abutment being adapted for contact with the edge of said material, substantially as described.

1,299,336. ELECTRIC-FURNACE APPARATUS FOR ORES OR MINERALS. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 29, 1917. Serial No. 209,576. 5 Claims. (Cl. 204—64.)



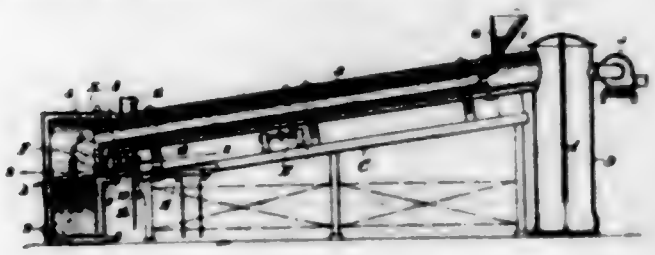
1. In an apparatus of the class described, the combination with an electric furnace, of a mixing chamber communicating therewith and forming an extension thereof, a horizontally inclined rotary kiln connected with the mixing chamber and having a charge inlet distant from the mixing chamber and through which kiln a charge of ore or rock is adapted to be fed to said chamber, means independent of the kiln for supplying coke

to the mixing chamber where it is mixed with the ore or rock to form a furnace charge, and stoker mechanism operating in the mixing chamber for feeding the charge therein into the electric furnace.

3. In an apparatus of the class described, the combination with a furnace, of a mixing chamber communicating therewith and forming an extension thereof, a rotary kiln leading to the mixing chamber and having a charge inlet distant from the mixing chamber and a discharge outlet at the mixing chamber, a coke hopper independent of the kiln also leading to the mixing chamber, and stoker mechanism operating in the mixing chamber to feed a charge therefrom into the furnace.

5. In an apparatus of the class described, the combination with a furnace, of a mixing chamber communicating therewith, a rotary kiln for feeding certain constituents of a furnace charge to the mixing chamber, said constituents traveling substantially throughout the length of the kiln, means for separately feeding other constituents of the charge to the mixing chamber, means for feeding the complete charge from the mixing chamber to the furnace, and means associated with the kiln for oxidizing the gases passing from the furnace to the kiln.

1,299,337. METHOD OF TREATING GASES. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 29, 1917. Serial No. 209,577. 5 Claims. (Cl. 204—64.)



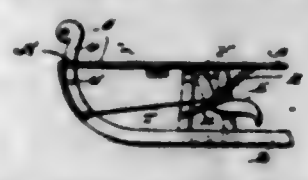
1. The herein described method which comprises subjecting a mixture of phosphate rock, a silicious mineral containing potash and a carbonaceous substance to the heat of an electric furnace to volatilize the same, then oxidizing the resultant gases, and then removing or eliminating certain impurities of the gases such as SiO_2 and SiF_4 while maintaining the potash and phosphate substances in gaseous form.

3. The herein described method which comprises mixing phosphate rock and feldspar and passing the same along a relatively long path to an electric furnace, the said mixture being preheated in its passage to the furnace, mixing coke with the preheated mixture of phosphate rock and feldspar at the point of entrance of the latter to the furnace, subjecting the charge to the heat of the furnace to volatilize the same, then oxidizing the resultant gases, and then removing or eliminating certain impurities of the gases while maintaining the potash and phosphate substances in gaseous form.

5. The herein described method which comprises heating a mixture of phosphate rock, a silicious mineral containing potash and a carbonaceous substance in an electric furnace to volatilize the same, oxidizing the resultant gases, then passing said gases through a rotary kiln and maintaining the gases at such a temperature as to remove or eliminate certain impurities such as SiO_2 and SiF_4 while maintaining the potash and phosphate substances in gaseous form, freeing the gases from the dust, and then subsequently condensing the potash and phosphate gases.

1,299,338. BRAKE FOR SLEDS. PAUL HECHKOVECH, Burnham, Pa. Filed Feb. 27, 1918. Serial No. 219,460. 1 Claim. (Cl. 21—46.)

A sled having runners curved upwardly at their forward ends and a top recessed at its forward end, with flat contracted portions upon either side of the recess, and a round connecting the forward ends of the contracted portions, knees mounted upon the runner supporting the top and provided with an inclined bar connecting the knees and recessed on its edge next the knees, a brake member pivotally mounted between said knees and guided



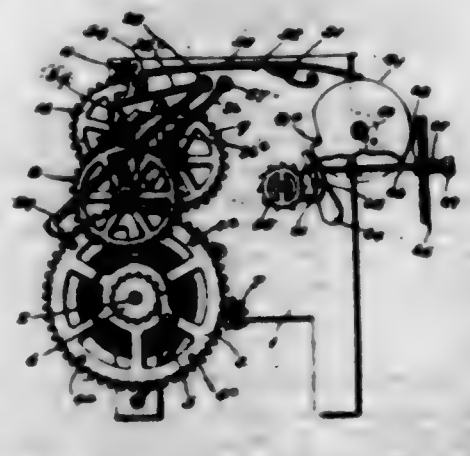
in the recess of said bar, a spring fastened at one end to the brake member and secured at its other end to a fixed part of the sled, a lever pivotally connected to the forward curved portion of one runner underneath the contracted portion of the top, and a rod pivotally connecting said lever and brake member.

1,299,339. CLINICAL THERMOMETER. LAWRENCE GRANT HEDNER, Man, W. Va. Filed Nov. 10, 1917. Serial No. 202,358. 1 Claim. (Cl. 73—52.)



A thermometer including a main portion and a neck portion having a diameter greater than that of the main portion of the thermometer, said neck portion terminating in a thumb member, an annular rib surrounding the thermometer at a point between the portion of greater diameter and the main portion, and said thumb member providing an outwardly extending portion adjacent to the opposite end of the neck portion, a sleeve of elastic material surrounding the neck portion and engaging the annular rib, and a receptacle receiving the thermometer and provided with a neck portion the walls of which are engaged by the sleeve, said rib insuring the outward movement of the sleeve when the thermometer is removed.

1,299,340. TIME-CONTROLLED MECHANISM. WALTER A. HEINRICH, St. Louis, Mo., assignor to W. N. Matthews and Brother, Inc., St. Louis, Mo., a Corporation of New Mexico. Filed June 15, 1917. Serial No. 174,888. 2 Claims. (Cl. 161—27.)

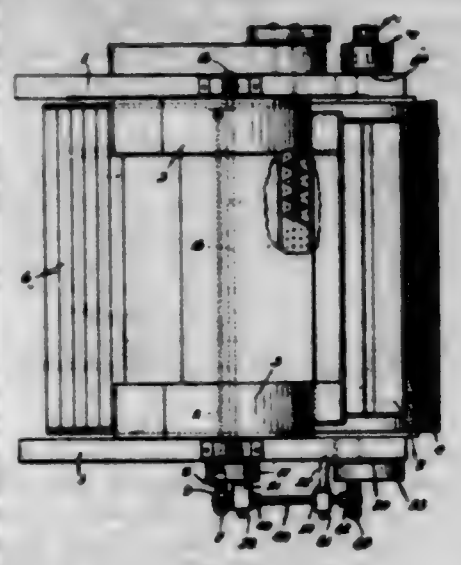


1. In a time controlled mechanism, the combination with a periodically operated train, of a constantly re-

tated wheel, a rotatably mounted shaft, a Geneva wheel loosely mounted on said shaft and adapted to be periodically actuated by the constantly rotated wheel, means for locking the Geneva wheel to the shaft, a cam carried by said shaft, a locking member controlled by said cam and adapted to engage a part of the periodically operated train, said cam capable of being arranged in different positions with respect to the Geneva wheel, and means for guiding the operation of the cam positioning means.

2. In a time-controlled mechanism, the combination of a periodically operated train, a constantly rotated wheel, a driven wheel actuated thereby in different ratio, a staff member, a cam member mounted for rotation and to move bodily lengthwise carried by said staff, a locking lever controlled by said cam member and adapted to coöperate with the periodic train to hold it against operation, and means for adjustably securing said staff for movement with said driven wheel, said last mentioned means including a perforated disk coöperating with the driven wheel, an arm carried by the staff, and a pin carried by said arm, which pin is adapted to enter any one of the perforations in said disk.

1,299,341. GRAIN-SEPARATOR. THOMAS O. HELGERSON, Minneapolis, Minn. Original application filed Mar. 17, 1915, Serial No. 14,911. Divided and this application filed Sept. 20, 1917. Serial No. 192,390. 3 Claims. (Cl. 74—14.)



1. The combination with a vibratory body, of a driving shaft, a driven shaft, coöperating face and peripheral friction wheels connecting said driving shaft to said driven shaft, the said driven shaft being yieldingly mounted for angular movements and provided with an eccentric, and a pitman connection between said eccentric and said vibratory body.

2. The combination with a vibratory body, of a driving shaft, a driven shaft, coöperating face and peripheral friction wheels connecting said driving shaft to said driven shaft, the said driven shaft being yieldingly mounted for angular movements and provided with an eccentric, and a pitman connected at one end to said vibratory body and at its other end having a head pivoted thereto for lateral swinging movements and journaled on said eccentric.

3. The combination with a vibratory body, of a face friction wheel, a shaft having a peripheral friction wheel coöperating with said face friction wheel, an eccentric on said shaft, a pitman connection between said eccentric and vibratory body, and a spring supported bearing for said shaft arranged to cushion the shocks produced in said shaft by the reversal of the movement of said body.

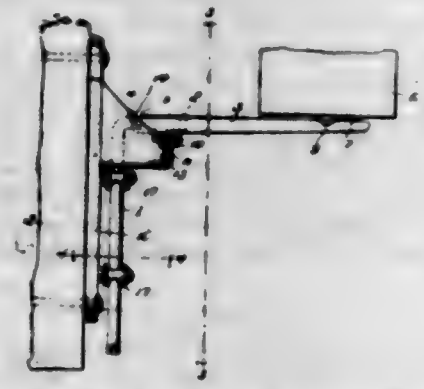
1,299,342. EMERGENCY-TIRE. MARTIN HINES, Brooklyn, N. Y. Filed Apr. 24, 1918. Serial No. 230,522. 4 Claims. (Cl. 152—28.)

1. An emergency tire comprising a circular body split transversely at one point in its circumference to provide relatively adjustable ends, a rack bar carried by one of said ends, means carried by the other end and including



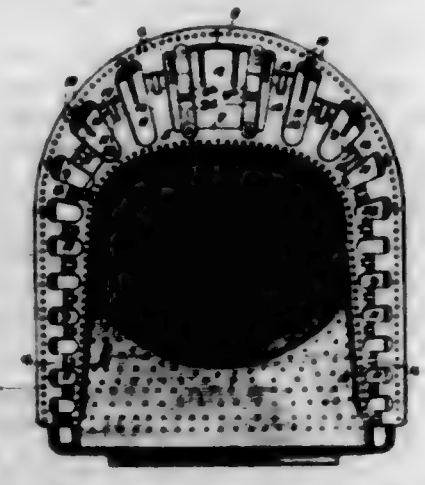
gearing co-acting with said rack-bar, and means engaging said co-acting members to secure same against relative movement.

1,299,343. MAIL-BOX SUPPORT. WILLIS M. HOAG, Kirwin, Kans. Filed Aug. 2, 1918. Serial No. 248,010. 3 Claims. (Cl. 232—40.)



1. The combination of a support, a track carried by the support and having inclined planes and a depression between the lower ends of said planes, circumferentially grooved spools mounted on the support and disposed below said track, and a swinging element comprising an upright portion of circular form in cross-section movable vertically and about its axis between the said spools and a horizontal portion reaching forwardly from the vertical portion and equipped with an anti-friction roller superimposed and movable on the track.

1,299,344. BOILER STAY-SHEET. ALLAN R. HODGES, Memphis, Tenn., assignor of one-half to Cyrus A. McAllister, Memphis, Tenn. Filed Feb. 23, 1917. Serial No. 150,512. 5 Claims. (Cl. 122—58.)



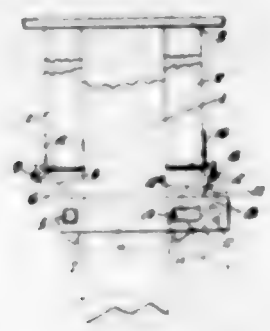
1. A stay sheet for locomotive boilers comprising an inner arch member for attachment to the fire-box shell, an outer arch member for attachment to the outer shell and a series of radially disposed flexible joints connect-

ing said members at regular intervals and effective to permit outward movement of the inner member and inward movement of the outward member and to stay said members relatively to one another, the outer member against outward movement and the inner member against inward movement, each of said joints comprising a pair of engaging companion members and having its said members formed as parts of the respective arch members.

3. A stay sheet for locomotive boilers comprising an inner arch member for attachment to the fire-box shell, an outer arch member for attachment to the outer shell, the outer member being made in sections adapted for individual assembly, said members having correspondingly arranged radial fingers projecting toward one another and defining circulation openings between which said fingers provide webs, and a flexible joint between the fingers of each web effective to stay the fire-box shell and outer shell against movements away from one another while permitting movements thereof toward one another.

5. A stay sheet for locomotive boilers comprising an inner arch member for attachment to the fire-box shell, an outer arch member for attachment to the outer shell, a series of radially disposed flexible joints connecting said members at regular intervals and effective to permit outward movement of the inner member and inward movement of the outer member and to stay said members relatively to one another, the outer member against outward movement and the inner member against inward movement, each of said joints comprising a pair engaging companion members and having its said members formed as parts of the respective arch members, said arch members being constructed to provide the usual stay sheet man-hole, and sling stays bracing said sheet across said man-hole, said sling stays being each made in sections and having a flexible joint between the sections of similar character to the flexible joints between the stay sheet members.

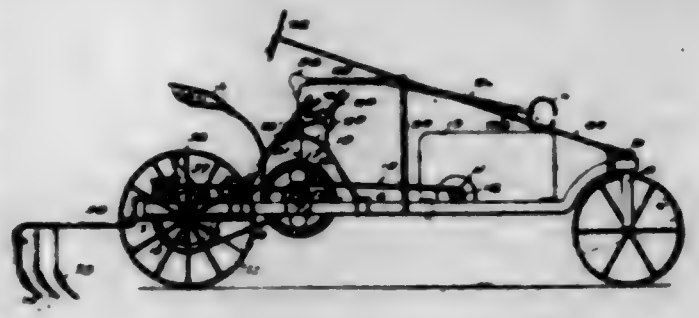
1,299,345. ADJUSTABLE SHORE. JESSE E. HOUGHS, Covington, Ky. Filed Oct. 31, 1917. Serial No. 199,433. 6 Claims. (Cl. 248—3.)



3. An adjustable shore comprising a central column, and adjustable side supports, means for holding said side supports against slipping downwardly along said column, comprising a member for engaging the column, and a pair of cam devices pivoted in said column engaging member, and having cam faces against the central column one on each side thereof, and load supporting faces beneath the side supports, with the load supporting points on said latter faces being located outside of the pivot of the cam devices whereby the load will force the cam faces against the column and lock the side supports permanently in place, one of the cam devices being slidable laterally to permit of withdrawing it from engaging position when desired.

1,299,346. COMBINED HOEING AND COTTON-CHOPPING MACHINE. ARLEY L. HOSMAN, Carterville, Mo. Filed Sept. 28, 1917. Serial No. 193,730. 4 Claims. (Cl. 97—46.)

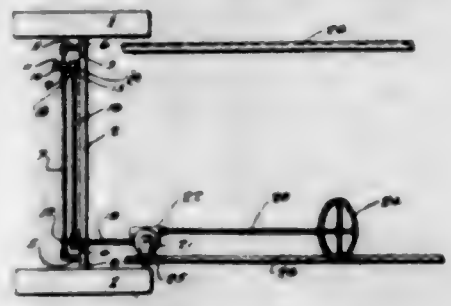
1. In a machine of the character described, a wheeled frame, a driven shaft intergeared with certain of the wheels of said frame, a bevel gear fixed thereto, a second driven shaft carrying a pinion meshing with the bevel gear, said second driven shaft being slidably mounted, means for imparting sliding movement to the second driven shaft, a portable shaft, a flexible shaft jointed to



said portable shaft, a universal joint for connecting the second driven shaft to said flexible shaft, and a cutting implement carried upon the free end of the portable shaft.

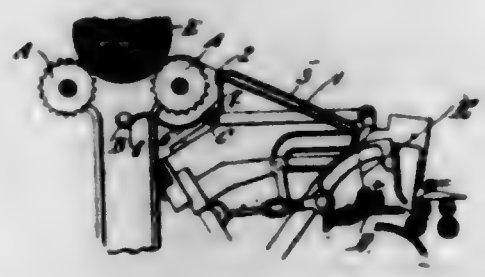
1,299,347. [WITHDRAWN.]

1,299,348. MEANS FOR CONVERTING STEERING MEANS FOR MOTOR-VEHICLES INTO RIGHT OR LEFT HAND DRIVES. ISIDOR M. JACOBS, Kansas City, and WILLIAM CRAMER, St. Louis, Mo., assignors, by mesne assignments, to Truck, Tractor and Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 26, 1917. Serial No. 198,642. 1 Claim. (Cl. 21—199.)



A steering mechanism of the type described, including stub-wheel axles pivotally connected to the intermediate axle proper, a rod-member having knuckle-connection with said stub-axles, a controlling rod, a clamp between said rods, a third rod, a hand-actuated shaft, said clamp and said third rod having ball and socket connections with said controlling rod at its opposite ends, said hand-actuated shaft and said third rod being intergeared together, the intergeared mechanism comprising a pinion whose shaft is fast to said third rod, and a worm integral with said hand-actuated shaft, the shaft of said pinion together with said intergeared mechanism forming a right-angled connection between said third rod and said hand-actuated shaft.

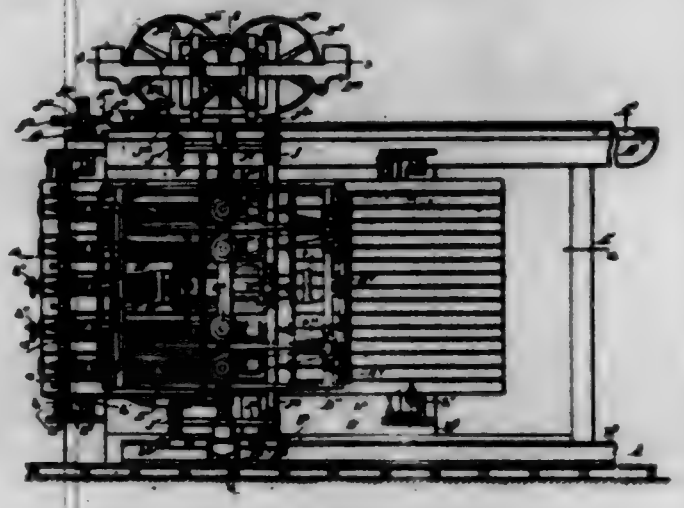
1,299,349. CONDUCTOR FOR COMBERS. CLYDE MARK JAXON, Pawtucket, R. I., assignor of one-half to Frank Marc Aurele, Pawtucket, R. I. Filed June 6, 1918. Serial No. 238,524. 3 Claims. (Cl. 19—6.)



2. The combination with the lap rolls and feed roll of a comber, of supporting members spaced apart and below the lap rolls, an inclined conductor plate, arms extending

therefrom and seated on one of said members and bearing upwardly against the other member to detachably support the conductor plate, a lap guide below and spaced from the conductor plate and adjacent the feed roll for receiving the lap from the conductor plate, and guide wings upon said lap guide and extended toward the feed roll.

1,299,350. WOOD-CARVING MACHINE. JOSEPH JAMES, Cambridge, Mass., assignor, by direct and mesne assignments, to James Wood Carving Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 22, 1916. Serial No. 121,534. 24 Claims. (Cl. 90—13.4.)



1. In a machine of the kind described, work-supporting means, a carriage, means for reciprocating said carriage, an oscillatory frame mounted on said carriage, means for maintaining said frame in horizontal position, tool supports and a follower mounted at the two ends of said frame to oscillate therewith, and a pattern mounted on said work support to be engaged by said follower.

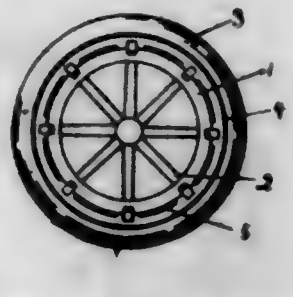
1,299,351. TRACTOR. ALFRED C. JOHNSON, Winters, Calif., assignor to Yuba Manufacturing Company, San Francisco, Calif., a Corporation of California. Original application filed Feb. 2, 1914, Serial No. 816,034. Divided and this application filed Aug. 26, 1916. Serial No. 117,036. 3 Claims. (Cl. 212—67.)



1. The combination with a tractor frame having a hollow bearing, and a draft member to be secured thereto, of means for securing said members together comprising an inner bearing mounted upon the draft member and movable relative thereto in the direction of draft, a heavy spring interposed between the draft member and said inner bearing, resisting relative movement thereof in the direction of draft, the draft member having a cam surface, and a locking dog carried by the frame bearing adapted to engage said inner bearing and having a portion adapted to engage said cam surface and releasable thereby upon an abnormal pull on the draft member.

1,299,352. REMOVABLE WHEEL-RIM. LINWOOD F. JORDAN, Portland, Me. Filed Oct. 18, 1915. Serial No. 56,790. 4 Claims. (Cl. 152—21.)

1. A vehicle wheel rim comprising two members capable of lateral separation, the adjacent edges of said members having a mutual projection and notch engaging structure extending entirely across the base of the members and provided with a plurality of wheel engaging flanges.



1,299,353. TRANSFER-SIGN. DANIEL KARNS, Cleveland, Ohio. Filed Aug. 2, 1915. Serial No. 43,104. 1 Claim. (Cl. 40—125.)



A paper sign, comprising a backing sheet of embossed paper, paper sign characters temporarily secured to said embossed sheet by a layer of adhesive material lying between the sign characters and the embossed sheet, and a coating of adhesive material upon the exposed face of the sign characters.

1,299,354. CALENDAR. CHARLES A. KAUFFMAN, Pittsburgh, Pa. Filed July 8, 1918. Serial No. 243,798. 2 Claims. (Cl. 40—107.)

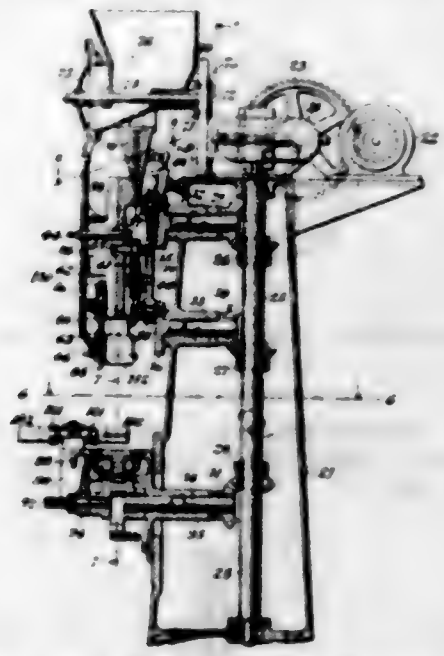


1. A calendar comprising a plurality of calendar leaves having printed thereon advertising spaces, a clip binding the upper edges of the leaves together and a hook projecting from said clip, each of said leaves being formed with an opening for the passage of said hook when a leaf is folded to the rear.

1,299,355. BOTTLE-CAPPING MACHINE. CARL WALKER KENDALL, Edgewater Heights, N. J., assignor to Columbia Machine & Stopper Co. Inc., New York, N. Y., a Corporation of New York. Filed Jan. 18, 1918. Serial No. 212,516. 16 Claims. (Cl. 113—2.)

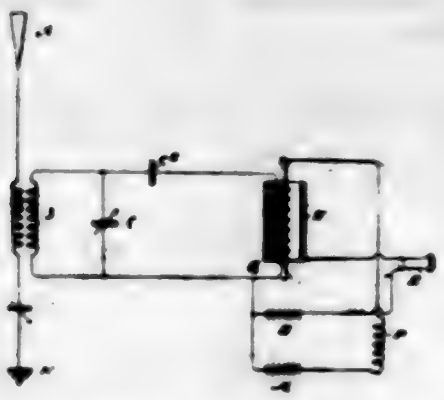
1. A bottle capping machine comprising means including a bottle carriage for imparting to the bottles a continuous rectilinear bottle progressing movement transversely of the length of the bottles, a capping head, and

means for moving the capping head to and from the bottle carriage to apply the bottle caps and for concur-



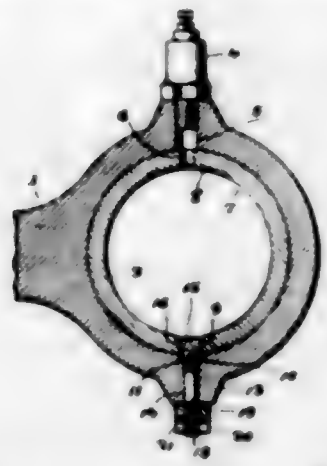
rently moving the capping head transversely with the bottles during the capping operation.

1,299,356. APPARATUS FOR USE IN RADIOCOMMUNICATION. LEE DE FOREST, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 11, 1916. Serial No. 136,252. 11 Claims. (Cl. 250—27.)



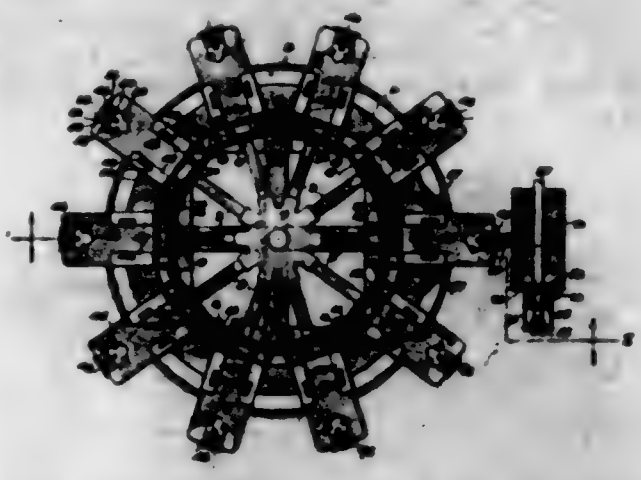
1. An open air audion comprising a hot electrode and a plurality of cold electrodes all exposed to atmospheric conditions.

1,299,357. BEARING. EDWIN J. KUETTNER, Raleigh, N. C. Filed May 15, 1917, Serial No. 168,874. Renewed Jan. 7, 1919. Serial No. 270,097. 8 Claims. (Cl. 64—10.)



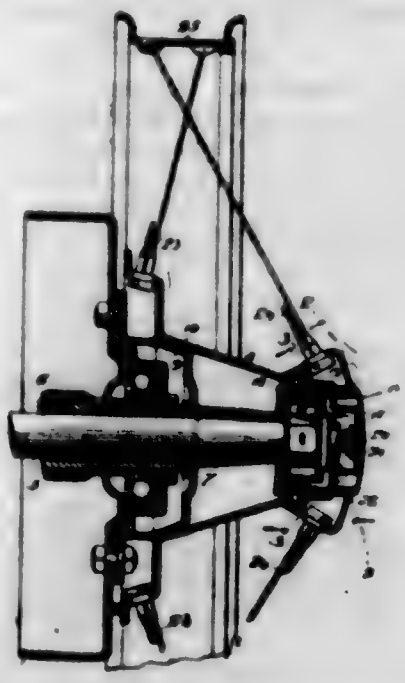
1. In a device of the character described, the combination with a bearing housing, of a split bushing in said housing and having the opposing ends thereof convergent, and a wedge engaging said opposing ends to tightly clamp said bushing in engagement with said housing.

1,299,358. UNIVERSAL SEALING-MACHINE FOR KNOCKDOWN BOXES AND THE LIKE. JAMES QUINCY LEAVITT, Ogden, Utah. Filed May 23, 1918. Serial No. 236,212. 11 Claims. (Cl. 93—36.)



8. In a mechanism of the class described, the combination with a frame, of a carrier mounted upon said frame, and a forming device carried by said carrier, said forming device including a carton receiving and supporting means adjusted bodily transversely of the carrier.

1,299,359. RETAINING DEVICE FOR WHEEL-HUB CAPS. JOSEPH LEDWINKA, Philadelphia, Pa., assignor by mesne assignments, to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed July 19, 1916. Serial No. 110,199. 6 Claims. (Cl. 21—81.)



1. In a demountable wheel, the combination with the wheel hub sleeve and the axle sleeve on which it is mounted, and clamping means for detachably clamping the wheel hub and sleeve including a cap or nut, of a friction device disposed within the cap or nut and engaging the latter to rotate therewith but free for independent movement axially with respect thereto, for retaining the nut in applied position.

2. In a demountable wheel, the combination with the wheel hub sleeve and the axle sleeve on which it is mounted, and clamping means for detachably clamping the wheel hub and sleeve including a cap or nut, of a friction member disposed within the cap or nut and en-

gaging the same to rotate therewith but free for independent movement axially with respect thereto, and a relatively fixed coöperating friction member, said friction members operative to retain the nut in applied position.

5. In a demountable wheel, the combination with the wheel hub sleeve and the axle sleeve on which it is mounted, and clamping means for detachably clamping the wheel hub and sleeve including a cap or nut, said nut having wrench sockets formed therein, of a disk having notches to receive said wrench sockets whereby said disk rotates with but is free to move axially with relation to said nut, a friction member carried by said disk, a relatively fixed coöperating friction member and a spring operating to press the first named friction member axially with respect to said nut and into frictionally engaging relation with its coöperating friction member.

1,299,380. PRESSED-STEEL WHEEL. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 21, 1917. Serial No. 150,606. 7 Claims. (Cl. 21—31.)



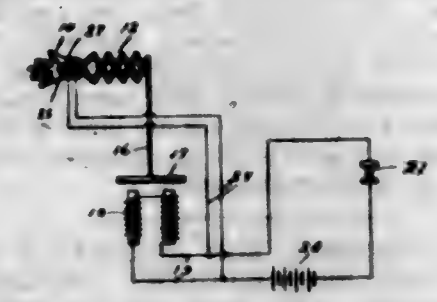
1. A pressed steel wheel having a central tubular portion forming the hub sleeve, and spoke portions formed integrally with the ends of said tubular portion, and an annular rim structure including a member channel shaped in cross section to the outer surfaces of the side portions of which the outer ends of the spoke portions are secured, and independent tire engaging ring members applied against the outer sides of the spoke ends, one of said ring members being detachable.

3. The combination with a pressed steel wheel structure including a tubular sleeve and spoke portions integral with the ends thereof, of an annular rim structure including a central channel shaped member, and independent tire engaging rings secured to the outer surfaces of the side portions of said channel member, the ends of the spokes being secured between said channel member sides and the tire engaging rings.

5. The combination with a pressed steel wheel structure including a tubular sleeve and a set of spokes formed integral therewith at the respective ends thereof, of an annular rim structure including a central member, channel shaped in cross section, and independent tire engaging rings, the free ends of said sets of spokes being respectively secured against the outer sides of the channel member and between the same, and adjacent tire engaging ring, one of said tire engaging rings being detachable.

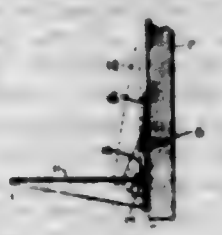
1,299,381. DIRECTION-SIGNAL. HYMAN LIEBERMAN, Marinette, Wis. Filed May 29, 1918. Serial No. 237,269. 1 Claim. (Cl. 177—329.)

In a signal device including a movable signal member and an actuating rod; means for moving the rod comprising a casing, an electro-magnet disposed within one end of said casing, said casing being provided with an opening for the passage of said rod, an armature disposed within the other end of said casing and movable longitudinally thereof, said armature being pivotally connected at its center with said rod and positioned for



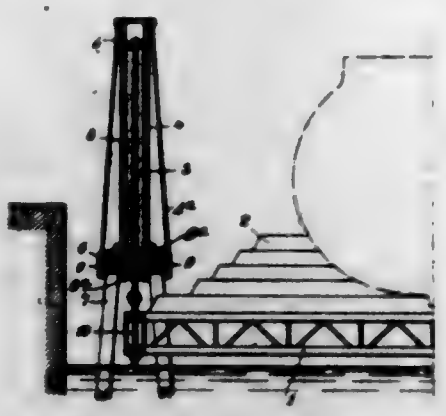
attraction by said magnet, and rollers carried by said armature at its ends and bearing against the inner walls of said casing.

1,299,382. BED-SPRING HANGER. JAMES F. LINN, Minneapolis, Minn., assignor to Minneapolis Bedding Company, Minneapolis, Minn., a Corporation. Filed Aug. 1, 1917. Serial No. 183,884. 1 Claim. (Cl. 5—4.)



A bed spring hanger comprising a plate having a rear portion to be seated against and secured to a bed rail, the longitudinal edges of said plate being outwardly turned to form substantially parallel flanges and having opposing sockets formed therein, a supporting arm consisting of a plate folded longitudinally to form depending flanged edges and having its middle portion at one end folded transversely to form a pivot pin, the ends of said pin extending beyond said flanged edges to enter the sockets in the flanges of said plate and rock therein, the edges of the flanges of said arm extending under said pivot and engaging the lower portion of said supporting plate and limiting the downward movement of said arm.

1,299,383. APPARATUS FOR LAUNCHING OF SHIPS. KARL WILHELM LJUNGDELL, Malmö, Sweden. Filed Apr. 10, 1918. Serial No. 227,755. 3 Claims. (Cl. 61—46.)



1. A launching apparatus comprising girders, frames at the ends of the girders, said girders being vertically guided in the frames, means containing sand on the frames to support the girders, said means also including a universal connection to prevent binding when the girders are lowered, and means for controlling the lowering of the girders.

3. A launching apparatus comprising a girder, a frame at adjacent ends of the girder, cylinders mounted on the

frame and containing granular material, pistons in the cylinders, said pistons supported on the granular material, piston rods extending from the pistons and below the cylinders, rods extending from the girders toward the piston rods and in alinement therewith, the ends of the piston rods and the rods extending from the girders having interlinked eyes to form loose connections to prevent binding when the pistons are lowered, and means for controlling the passage of the granular material to regulate the lowering of the girder.

1,299,364. FASTENING FOR REMOVABLE DENTAL BRIDGES AND BRIDGE-PLATES. CHARLES W. LOXEY, Birmingham, Ala. Filed July 16, 1917. Serial No. 180,702. 5 Claims. (Cl. 32—12.)



1. In a dental fastening, in combination, a keeper having a head and a vertically elongated shank which tapers in width toward one end, and an anchor having sides which straddle the shank behind the head and clamp between them the widest portion thereof, clearance being left between the sides and narrow end of the shank to permit only a limited rocking movement of the shank in the anchor and of the anchor on the shank.

4. In a dental fastening, a keeper formed of an elongated body of hard metal having in its opposite side faces longitudinal grooves which shape the body into front and back walls connected by a longitudinal and relatively narrow central web which tapers toward both end edges of the keeper.

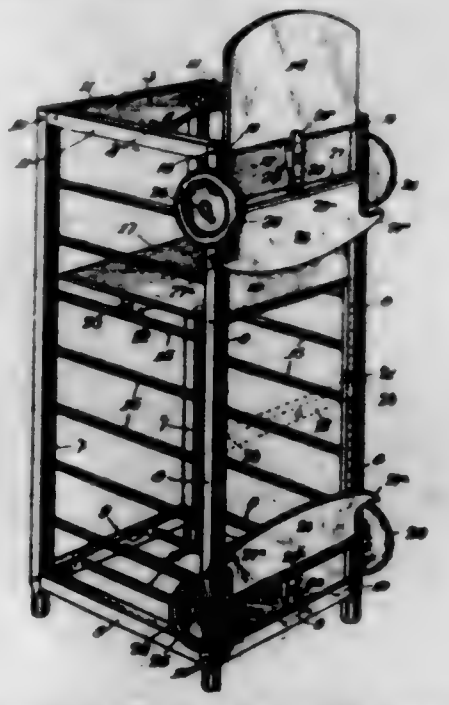
5. In a dental fastening, an anchor formed of hard metal wire having a portion thereof adapted for attachment to the bridge or bridge plate, and having portions thereof spaced from said attachment portion and bent at an angle thereto into closely spaced parallelism to form a clasp eye for engagement with a keeper, one of the sides of said eye being bent to contract its end adjacent to the bridge or bridge plate.

1,299,365. ATTACHMENT FOR GRAIN-BINDERS. VERNE E. MCINTYRE, Hinsdale, Mont. Filed Dec. 7, 1917. Serial No. 206,119. 1 Claim. (Cl. 193—18.)



An elevator attachment for binders comprising brackets, a shaft journaled therein, a conveyer frame having its end pivoted to said shaft, said shaft being located slightly below the upper end of the elevator of the binder, a reel adjacent the driver's seat, uprights on the upper end of the elevator, a pulley carried by said uprights, a cable connected with the outer end of the conveyer frame and extending over said pulley to said reel, studs on the sides of the conveyer frame, notched brace bars pivotally mounted to the binder frame, with the notches engaging said studs, springs for holding said notches in engagement with the studs and operating means for disconnecting the braces from the studs from the driver's seat.

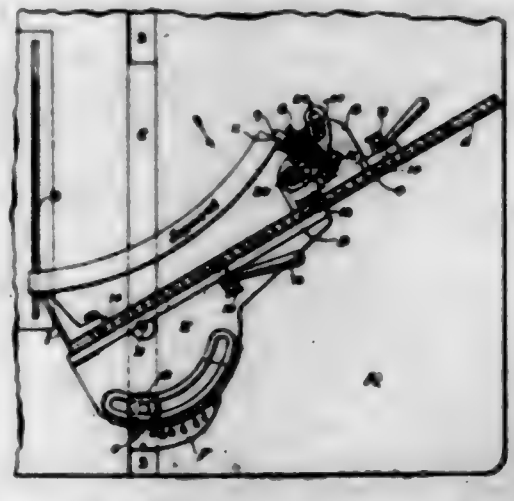
1,299,366. CONVERTIBLE HIGH CHAIR. WILLIAM H. MCLAREN, Chicago, Ill. Filed June 28, 1918. Serial No. 242,233. 6 Claims. (Cl. 155—6.)



5. In a device of the class described, the combination with a frame having an opening extended from end to end thereof, a closure located opposite said opening, a rocker transversely and pivotally mounted on the closed portion of the frame near each end thereof, each of said rockers having a flanged base on its edge adjacent to the closure, and a fastening button pivotally mounted on the closure near each end thereof and having extensions at its ends, one of said extensions adapted to engage flanges of said rockers to hold them in their operative positions and the other of said extensions adapted to abut against the flanges or bases of the rockers to hold them in their inoperative positions.

6. In a device of the class described, the combination with a rectangular frame adapted to be supported in an upright position, of a sectional closure for one of the walls of said frame, the intermediate section of said closure pivotally mounted on the frame and adapted for movement therein, means mounted on said section to engage parts of the frame to support said section in a transverse and horizontal position, a sectional closure for the upper end of the frame, each of said last named sections being pivotally secured near their opposite ends to the frame, and means carried by the frame to hold one of said pivoted sections in an upright position.

1,299,367. SEGMENT-JOINTING ATTACHMENT FOR SAW-BENCHES. JAMES D. MCMICHAEL and FRANK H. CLEMENT, Rochester, N. Y. Filed July 22, 1918. Serial No. 246,001. 8 Claims. (Cl. 142—169.)



1. In a segment jointing attachment for saw tables, the combination with a tongue slidably mounted on the

table, of a gage pivoted to said tongue, a scale secured to the gage, a stop head adjustable on said scale and having an index coöperating therewith, a support for a work piece on the gage, and a coöperating support for the work piece on the stop head.

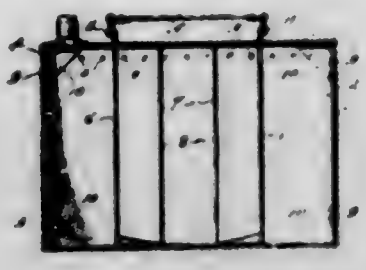
1,290,265. PACKING STRUCTURE. PATRICK H. MACK, Bradford, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 31, 1915. Serial No. 48,294. 14 Claims. (Cl. 166—10.)



1. In combination, a tubular member, a packing member external of the tubular member and adapted to be set between opposing surfaces having a spaced distance greater than the thickness of the member, means for expanding the member by compression in the direction of member length, and rigid means loosely carried by the packing and rendered operative by the compressing action of the member for establishing substantially uniform resistance substantially throughout the length of the packing member.

2. In a well packer, a tubular body member, a compressible packing element embracing the body, means for compressing and expanding the packing, a plurality of rigid ring members loosely carried by the packing, said rings rendered operative to effect a wedging action by the compressing action of the packing for establishing substantially uniform resistance throughout the length of the packing.

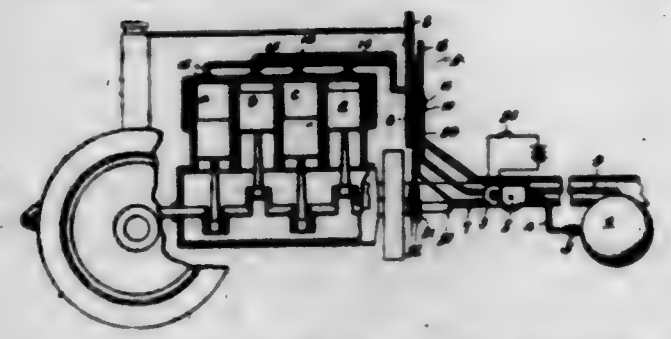
1,290,269. RECEPTACLE. JAMES P. MAUSEY, Prosser, Wash. Filed Nov. 10, 1917. Serial No. 201,831. 4 Claims. (Cl. 220—135.)



1. A rectangular receptacle, hollow reinforcing members located therein, said members being of rectangular shape and having their walls bearing against the two side walls and the top and bottom of the receptacle and having perforations therein.

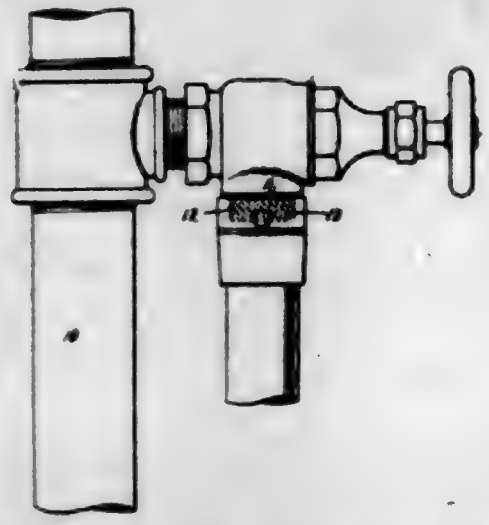
4. A canteen comprising a receptacle and a hollow reinforcing member therein having its side walls secured to the walls of the receptacle and one of its other walls having perforations therein and a longitudinal opening in its other wall.

1,290,270. ENGINE-STARTER. ELTON F. MAYERS, New York, N. Y. Filed Aug. 17, 1917. Serial No. 186,201. 3 Claims. (Cl. 60—16.)



1. The combination with an internal combustion engine embodying a plurality of cylinders and pistons, said pistons being mounted for movement in groups so that one group moves in one direction while another group is concurrently moving in the opposite direction, of a compressed air tank, an air compressor for supplying said tank, a compressed air delivery pipe leading from said tank and having a plurality of branches which connect with the cylinders of the engine, a spring seated valve in each of said branches, and a manually operable lever arranged between said valves and adapted to open said valves alternately to admit compressed air first to one group of cylinders and then to another group.

1,290,271. PIPE-COUPLING. JONATHAN C. MELOON, Providence, R. I., assignor to General Fire Extinguisher Company, Providence, R. I., a Corporation of New York. Filed Jan. 2, 1918. Serial No. 209,885. 5 Claims. (Cl. 285—75.)

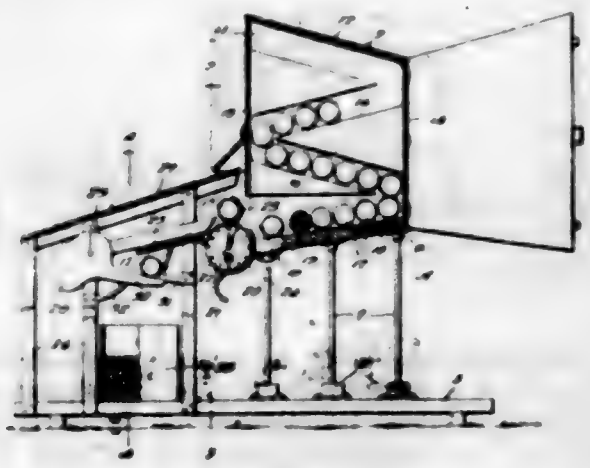


5. A pipe coupling having a member comprising a base tube, a connecting tube, fast to the base tube, and a swivel tube mounted on the connecting tube and adapted to be secured to the other member of the coupling and thereby to hold the two members of the coupling tightly together; the said connecting tube being screwed unstretched into the base tube and having externally thereof two flanges of larger diameter than the swivel, one of which is engaged and concealed within it and the other of which is outside it; and there being an annular lip of the base tube surrounding said outside flange; the said base and swivel being made of relatively inexpensive material, and the said connecting tube being made of different material of a nature not to adhere thereto.

1,290,272. INSECT-DESTROYING DEVICE. ANTON C. MEYER, Myrtle Grove, La., assignor of one-fourth to Charles J. Lafitte and one-fourth to Albert W. Short, Myrtle Grove, La. Filed Aug. 14, 1917. Serial No. 186,170. 4 Claims. (Cl. 43—82.)

1. An insect destroying device comprising a hopper, adhesive coated baits therein, a receptacle containing in-

secticide, means for conveying the baits from the hopper to the receptacle, said means including a drum, fingers thereon for engaging the baits, means for rotating the



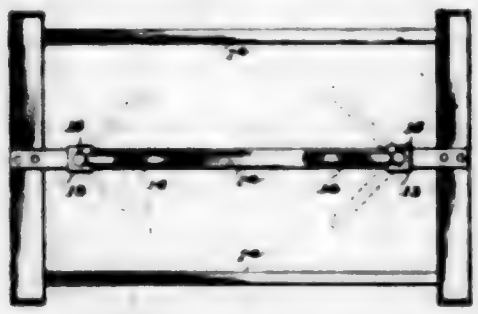
drum and means for regulating the speed of said drum, and means associated with the conveying means for causing each bait to pause for a limited period.

1,299,373. DOOR-CLOSER. PEDER MIKKELSEN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Aug. 26, 1918. Serial No. 251,458. 4 Claims. (Cl. 72—49.)



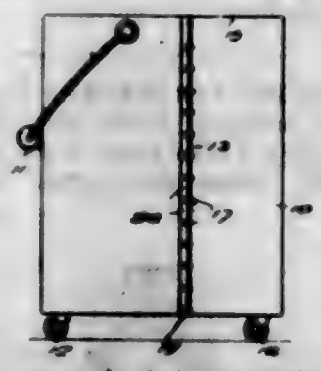
1. The combination of a door closer having a stop, a lever arm having a longitudinally movable dog, a spring for yieldingly holding the dog in position to engage the stop, a bolt passing through the lever arm and spring, a two part seat resting on the head of the bolt, the two parts of the seat being held together by a fusible alloy, and means resting on the said seat and bearing against the underside of the lever arm for holding the bolt against movement while the seat remains intact.

1,299,374. MUSIC-HOLDER. BENJAMIN G. MILLER and FLORENCE HAZEN MILLER, Crete, Nebr. Filed Apr. 27, 1918. Serial No. 231,198. 1 Claim. (Cl. 45—61.)



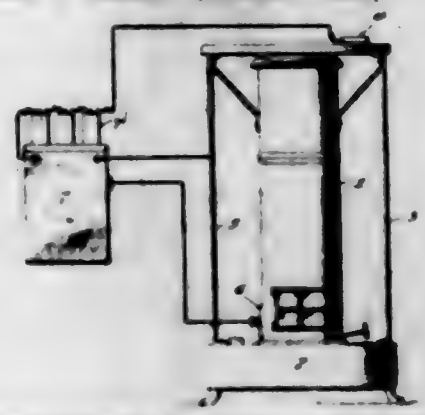
A music holder comprising a frame including bars, sleeves slidably engaged upon said bars, and disposed at opposite sides of said frame, a spring clamping finger associated with each sleeve, and a thumb screw extending through each finger and the associated sleeve whereby said fingers will be pivoted upon the sleeves, said thumb screws being engageable with the bars whereby said sleeves may be secured in adjusted positions upon said bars.

1,299,375. SANITARY SPUTUM CAN OR BUCKET. RUCKER MOORE, Atlanta, Ga., assignor of one-half to J. C. Moore, Birmingham, Ala. Filed Aug. 31, 1918. Serial No. 252,165. 4 Claims. (Cl. 220—111.)



1. A sanitary sputum bucket comprising a receptacle having a slot in one side and a guide at the inner wall thereof, and a plurality of cup holders arranged in said bucket, said holders having handle portions projecting through the slot, and lugs projecting to the opposite sides thereof, and a guide way receiving said lugs.

1,299,376. AUTOMATIC STOVE-LIGHTER. WILLIAM J. MULVANEY, Lisle, Ill. Filed Oct. 20, 1917. Serial No. 197,659. 1 Claim. (Cl. 175—115.)



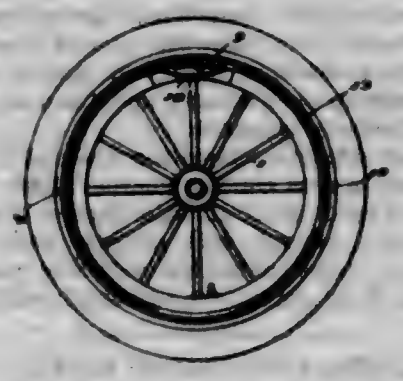
An automatic lighter for stoves comprising a perforated plate connected with the top of the stove, a thermostat on the plate and insulated therefrom, a cap connected with the thermostat and having its edges contacting with the plate in the contracted position of the thermostat, a spark plug adjacent the wick and electric means controlled by the thermostat for causing a spark at the plug.

1,299,377. TOY. WILLIAM MYERS, Philadelphia, Pa. Filed Aug. 28, 1918. Serial No. 251,808. 3 Claims. (Cl. 46—40.)



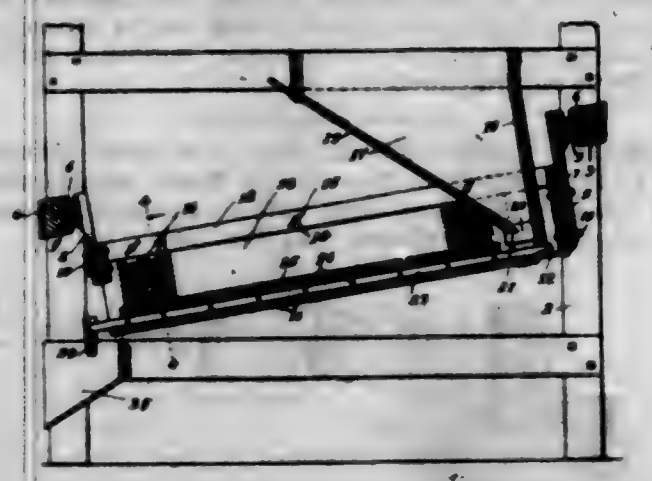
2. As a new article of manufacture, a toy comprising a figure, foot gear, and strings attached to the foot gear and connected to the figure to dependingly support the foot gear in spaced relation to the figure.

1,290,278. WHEEL-RIM. STEVE C. NELSON, Finley, N. D. Filed Dec. 21, 1917. Serial No. 208,269. 1 Claim. (Cl. 152—21.)



A device of the character described including complemental rim sections adapted to be fitted one over the other, spaced circumferentially disposed lugs having their opposite sides formed oblique arranged on said sections adjacent the inner sides thereof, said lugs being adapted to be interengaged by rotating one of said sections on the other, locking means on said rim sections for preventing relativey rotary movement between said rim sections subsequent to interengagement of the lugs, a tool receiving loop carried on the side of one of said sections, a demountable rim received on said rim sections a transverse apertured rib formed on the lower side of said demountable rim adjacent the valve receiving opening therein, and spaced transverse guide elements on the upper portion of one of said rim sections for slidably receiving said apertured rib therein, the adjacent portion of said rim section being formed with an opening for permitting the valve stem of a tire engaged on the demountable rim to pass therethrough.

1,290,279. WILD-OAT AND BARLEY SEPARATOR. ROBERT J. OWENS, Minneapolis, Minn. Filed July 26, 1918. Serial No. 246,842. 5 Claims. (Cl. 130—18.)



1. A separator comprising a sieve having means for delivering a mixture of wild oats and other grains thereto, a series of slats mounted near the bottom of said sieve for spreading the grain thereon in a thin sheet, said sieve having openings therein to allow wild oat kernels and other imperfect kernels of grain to fall through while the fuller, plumper kernels slide over said sieve and said sieve and slats having a relative, oscillatory movement.

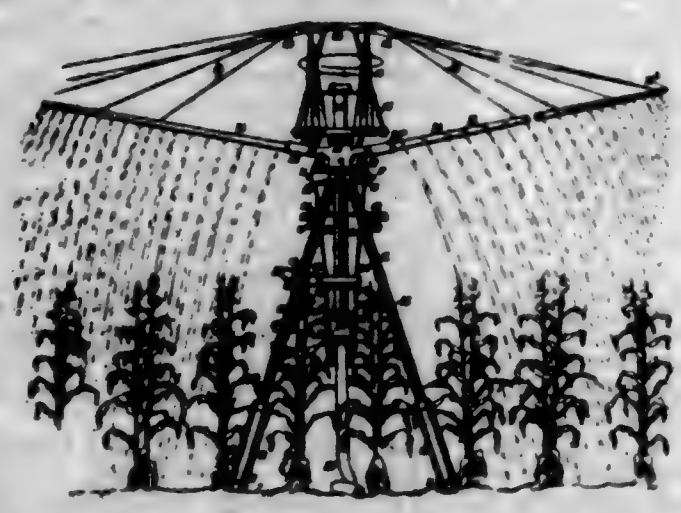
2. A grain separator comprising a frame, a sieve substantially semi-cylindrical in form mounted in said frame and having slots therein of sufficient size to allow the passage of wild oat kernels and imperfect seed grain kernels, but too small to allow the passage of the full plump kernels of grain, means mounted above said sieve and in close proximity thereto for spreading out the grain in a thin sheet thereon and holding the kernels in contact with the sieve, said means and said sieve having a relative oscillatory movement.

3. A grain separating and grading machine comprising a sieve substantially semi-cylindrical in form, arranged at an incline to oscillate on a longitudinal axis and having means for delivering a mixture of wild oats and barley or other grain on the upper end of said sieve, said sieve having openings therein of sufficient size to allow wild oats and imperfect seed kernels to fall therethrough while the full, plump kernels slide to the lower end of said sieve, and means mounted in said sieve and adjacent the surface thereof for spreading the grain in a thin sheet thereover and forcing each kernel into contact with the sieve.

4. A grain separating machine comprising a frame, a sieve mounted for transverse oscillation on a longitudinal axis and arranged at an incline and having a series of slots formed therein of sufficient size to allow wild oat kernels and imperfect seed grains to fall therethrough but too small to allow the passage of full, plump, kernels of grain, a stationary bar mounted above the middle portion of said sieve and near the same and a series of stationary slats supported by said bar and spaced therefrom and from each other and forming therewith a grating which lies close to the surface of the sieve, said sieve and slats being arranged at an incline and means for delivering the mixed grain on the upper end of said sieve, said slats operating to spread the grain in a thin sheet over the sieve and forces each kernel into contact therewith.

5. A grain separator comprising a sieve having means for delivering a mixture of wild oats and other grains thereto, means mounted near the bottom of said sieve for spreading the grain thereon in a thin sheet, said sieve having openings therein of sufficient size to allow wild oat kernels and imperfect kernels of grain to drop sidewise therethrough while the fuller, plumper kernels of grain slide over said sieve and said sieve and said means having a relative oscillating movement.

1,290,280. SPRAYER. JAMES TAYLOR PLUMER, Pontiac, Mich. Filed Sept. 25, 1917. Serial No. 193,110. 5 Claims. (Cl. 137—87.)

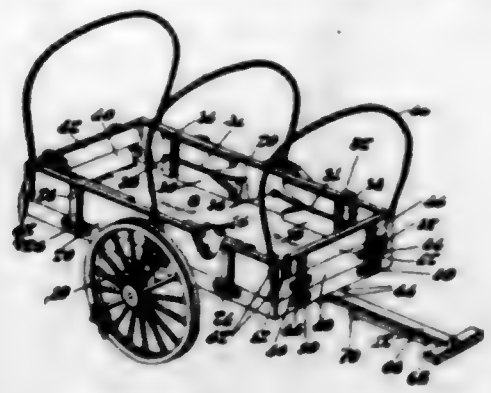


1. A spraying apparatus including a frame composed of side sections, means to adjust the angular positions of the said frame sections, a saddle at the top of the frame, means establishing a universal connection between the saddle and the frame, a stand pipe supported by the saddle and depending therefrom, means to connect the stand pipe at its lower end with a source of water supply, laterally extending distributing arms in communication at their inner ends with the said stand pipe above the saddle, a bearing collar surrounding the stand pipe below the saddle, and means to adjustably anchor the said bearing collar to one of the frame sections.

2. An apparatus of the class described including a support, a stand pipe on said support, a distributing head on the stand pipe, sprayer arms, flexible connections between the sprayer arms and the distributing head, and yokes connecting the distributing head and sprayer arms, said yokes being pivoted at one end.

3. An apparatus of the class described including a supporting frame, a saddle, means establishing universal connection between the saddle and the frame, a stand pipe, sprayer arms above the saddle, means establishing communication betwen the sprayer arms and the stand pipe above the saddle, means supporting the stand pipe on the saddle, said stand pipe extending downwardly through the saddle, means to supply the lower end of the stand pipe with water, a bearing collar surrounding the stand pipe below the saddle, braces pivotally connected with the bearing collar, and means establishing an adjustable connection between the said braces and a side of the frame.

1,299,381. VEHICLE HAVING A CONVERTIBLE BODY. LEONARD S. RANKIN, Cambridge, Mass. Filed May 23, 1916. Serial No. 99,403. 10 Claims. (Cl. 21—7.)



1. In a vehicle of the class described, a body bottom, body side pieces having means for attachment to the body bottom, members hinged near each end of the side portions arranged to fold inwardly toward each other flat against the sides and to open outwardly into positions at a substantial angle to the side portions whereby the side portions, when removed from the body, may be converted into benches.

3. In a vehicle of the class described, a removable body having side and end portions detachable from the body bottom, each end portion being separable into two parts each of which forms a leg to support the bottom as a table.

5. In a vehicle of the class described, an axle and a body comprising a bottom portion having sockets and end portions, and means for detachably securing the bottom to the axle, the end portions each comprising two parts and each part having a reduced end to fit one of the sockets in the bottom portion whereby the end parts may constitute legs for converting the bottom into a table.

8. In a vehicle of the class described, a body bottom, end pieces adapted to form supports for the body bottom to form a table, removable body side portions for the bottom, and supports permanently attached to the side portions and enabling them to constitute benches when removed from the body bottom.

10. In a vehicle of the class described, a body bottom, removable end pieces adapted to constitute legs for the body bottom to form a table, removable side portions for the bottom, and leg pieces of the same width as the side portions attached thereto adjacent to each end so that the side portions may be removed and stood upon the leg pieces to form benches.

1,299,382. RAZOR ATTACHMENT. HENRY RAYMOND, Ottawa, Ontario, Canada. Filed Dec. 29, 1917. Serial No. 209,538. 6 Claims. (Cl. 30—12.)



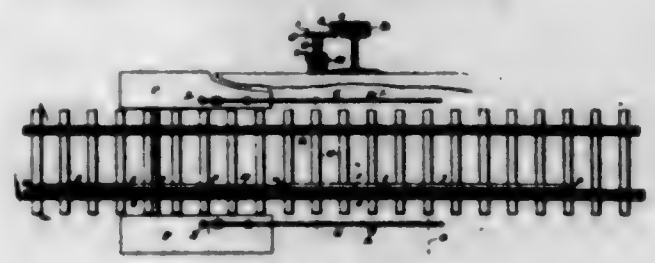
1. A razor attachment comprising a plurality of clamps, and adjustably connected guards adjustably mounted on said clamps.

2. A razor attachment comprising a plurality of resilient clamps, adjustably connected guards movably mounted on said clamps and means operable to move said guards on said clamps.

3. A razor attachment comprising a plurality of resilient clamps, guards movably mounted on said clamps, means on said clamps contacting with said guards operable to move said guards on said clamps, and a rod on which said guards are adjustably mounted.

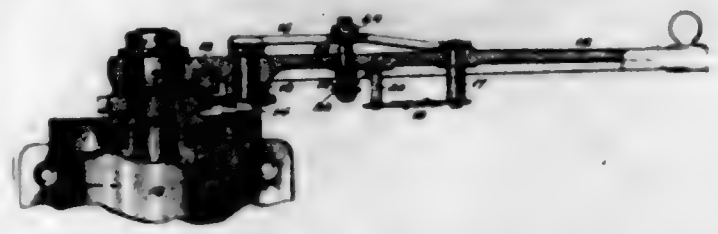
4. A razor attachment comprising a plurality of clamps, resilient fingers on said clamps, guards within which said clamps are arranged, seats on said fingers, stems on said clamps extending beyond said guards, nuts adjustably mounted on said stems contacting with said guards, and a rod with which said guards are adjustably connected.

1,299,383. RAILWAY-CROSSING SIGNAL. CALEB C. REID, New Burnside, Ill. Filed Nov. 16, 1917. Serial No. 202,394. 4 Claims. (Cl. 246—126.)



1. The herein described track instrument for railway signals and the like, the same comprising two metallic members of L-iron spaced from each other at their contiguous ends, their upright leaves lying along the inner side of a rail and their horizontal leaves projecting inwardly and adapted to be depressed by the flange of a wheel passing over them, circuit-closing devices carried by said members and actuated by the depression thereof, and outwardly and inwardly deflected spring tongues at the respectively outer and inner ends of each member whereby the flange on the forward wheel of an approaching train passes over the first member reached and depresses it to close the circuit through said wires, and is directed between the rail and the second member reached so that the latter is not depressed.

1,299,384. DOOR-CLOSER. PAUL C. RICHTER, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Aug. 26, 1918. Serial No. 251,453. 10 Claims. (Cl. 188—49.)



1. The combination of a door closer having a stop, a lever arm, a dog mounted in said lever arm and engaging the stop for holding the door open, a spring bearing at one end against the dog for yieldingly holding the latter against movement, means engaging the other end of the spring for fixedly securing it to the lever arm, a bolt engaging the spring intermediate its ends for adjusting its tension, a support for said bolt, and fusible means for holding said support in position.

1,299,385. TREATMENT OF EMULSION-OILS. FRANCIS M. ROGERS, Whiting, Ind., assignor to Standard Oil Company, Whiting, Ind., a Corporation of Indiana. Filed Jan. 20, 1918. Serial No. 214,013. 7 Claims. (Cl. 196—26.)

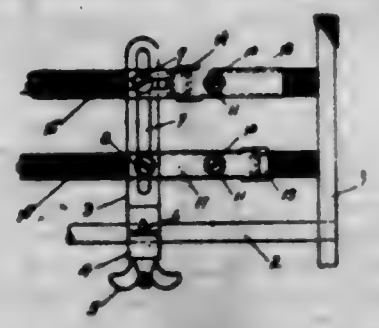
1. The method of treating emulsions of mineral oil and water which consists in adding thereto a water-soluble

salt of sulfonic acid and maintaining the mixture at an elevated temperature until stratification takes place.

5. The method of treating emulsions of mineral oil and water which consists in adding thereto the alkali metal salt of a sulfonic acid produced by the sulfonation of mineral oil and maintaining the mixture at an elevated temperature until stratification takes place.

7. The method of treating bottom settlings which consists in adding thereto from ½ to four pounds per barrel of the sodium salt of a sulfonated mineral oil, and maintaining the mixture at an elevated temperature until stratification takes place.

1,290,288. GUIDE FOR JOB-FOLDING MACHINES. HARRY F. SCHRECK, Davenport, Iowa. Filed Dec. 27, 1918. Serial No. 268,514. 2 Claims. (Cl. 271—45.)



1. In a guide for job folding machines, the combination with a supporting bar, of a spring having one end suitably secured to the bar, a roller secured to the free end of the spring, and a set screw secured in the bar adapted to bear upon and regulate the tension of the spring and roller.

1,290,387. FUSE DEVICE. EDMUND O. SCHWEITZER and NICHOLAS J. CONRAD, Chicago, Ill. Filed Dec. 31, 1914. Serial No. 879,828. 18 Claims. (Cl. 175—278.)



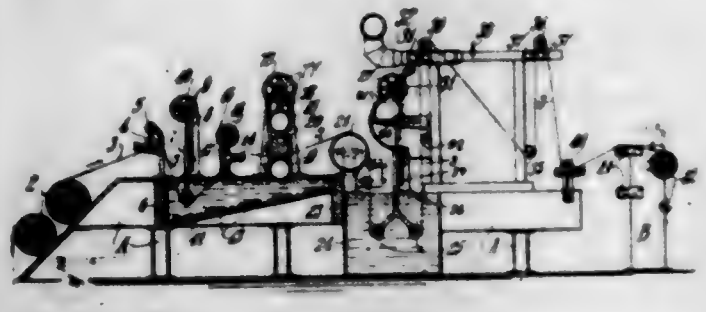
3. The combination of a metallic head having a fuse chamber, said head also having an opening across which a fuse is extended, a terminal located in said opening and secured to said fuse, a removable venting member normally closing said fuse chamber, and fuses extended from said terminal to said venting member, said latter fuses being secured to said terminal by low melting point solder, said venting member being electrically connected to said metallic head.

11. In combination, a liquid director comprising a short cylindrical block of insulating material having a central aperture therethrough, a short rod or stud passing through said director and connected thereto, the lower end of the rod or stud being threaded, a spring below said liquid director, a connecting member having a threaded socket therein for receiving the end of the rod or stud, said member being mounted on the end of the spring substantially axially of said spring, and a flexible conductor connected to said member.

18. In a fuse device, a metallic terminal of high conductivity, a metallic fuse, said terminal and fuse being joined by solder which melts at a substantially lower temperature than the body of the fuse, and means tending to separate the terminal and the fuse.

18. A fuse device provided with a metallic fuse soldered directly to a metallic terminal of relatively large carrying capacity by solder of lower melting point than that of the body of the fuse or of the terminal, said junction between said fuse and said terminal being adapted to be heated solely by the passage of current through said parts, said device being so organized that on moderate overload said solder will soften and cause operation of the device and upon excessive overload, said fuse will melt to cause operation of the device.

1,299,388. COATING-MACHINE. WILLIAM H. SCOTT, Holyoke, Mass., assignor to Amherst Waxed Paper Mills, Holyoke, Mass., a Corporation of Massachusetts. Filed June 19, 1916. Serial No. 104,409. 9 Claims. (Cl. 91—31.)



1. In a coating machine having means to coat a web of paper with heated wax or the like, means to finish and polish said coating and a water bath arranged to harden the finished coating, guiding means arranged to carry the web vertically upward from the water bath, and devices to prevent the passage of globules of water with the web beyond a predetermined point in its vertical travel, all constructed and arranged so that the water adhering to each side of the web may fall therefrom by gravity.

4. A coating machine, comprising, in combination, means to coat a web of paper with melted wax or the like, devices to finish and polish said coating, a water bath to harden the polished coating, guiding means to lead the web from said devices vertically downwardly into and through said bath, whereby each side of the web is equally and simultaneously acted upon, guiding means to carry the web vertically upward from said bath, whereby the water adhering to the web may roll therefrom, and devices adjacent each side of the web at a predetermined point in its vertical travel to direct a blast of air thereon, said last-named devices arranged to prevent the passage of small drops of water with the web, other guiding means to lead the web downwardly and again vertically upward and other devices adjacent each side of the web at a point in its vertical travel to direct a blast of air thereon to dry the web.

6. In a coating machine, having means to surface coat a web of paper with melted wax or the like and means to cool and harden the coating, mechanism intermediate said means arranged to impregnate the surface coating into the web, comprising a series of rolls stacked one above another in contiguous relation, alternate rolls of the series adapted to be heated, adjustable devices to apply pressure to said rolls arranged so that two or more of the rolls may be forced into contact as desired and means to drive said rolls, all constructed and arranged so that the web may be passed between two or more rolls of said series to impart various finishes to the web, substantially as described.

8. In a coating machine having means to coat a web of paper with heated wax or the like, means to finish and polish said coating and a water bath arranged to harden the finished coating, guiding means to carry the web vertically upward from the water bath, a device arranged adjacent the vertical travel of the web to periodically vibrate the latter, whereby drops of water adhering to the web may be shaken therefrom and prevented from passing beyond a predetermined point in the vertical travel of the web, and a plurality of devices located beyond said

point and arranged to direct blasts of air on said web whereby any moisture remaining thereon may be evaporated.

1,299,389. AIR AND GERM PROOF COVER FOR SEALING BOTTLES. WILLIAM ELLIOTT STEDMAN, Haywards Heath, England. Filed Feb. 4, 1919. Serial No. 275,017. 1 Claim. (Cl. 154—45.5.)

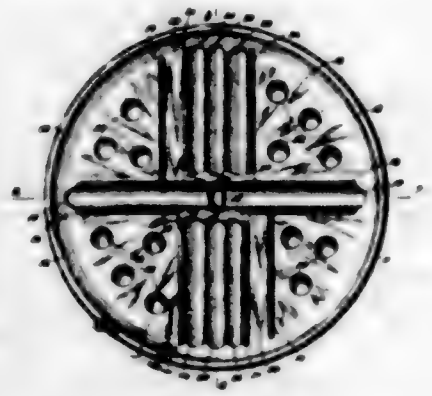
An air and germ proof cover for sealing bottles and the like consisting of two layers of grease proof paper secured together by a binder therebetween comprising 66% gums of vegetable origin and 33.5% of albuminoid matter, the said binder being of such density as to exclude air and the said joined papers being externally coated with the said binder composition.

1,299,390. GARMENT-HANGER. HILMA S. SWANSON, New Rochelle, N. Y. Filed July 16, 1918. Serial No. 245,150. 3 Claims. (Cl. 211—16.)



2. A garment hanger comprising a roller adapted to travel along a suitable support, a wire suspension yoke upon which said roller is mounted, said yoke embracing the support and depending below the latter, a collar at the lower portion of the yoke, a connecting bolt swiveled in the collar, a garment holding member connected with the lower end of the connecting bolt, and laterally extending gripping bars connected with, and extending from, the bolt and adapted to be gripped by the fingers of a person to turn the bolt and the garment holding member relative to the yoke.

1,299,391. WAR-GAME APPARATUS. THOMAS J. SYLVESTER, Philadelphia, Pa. Filed May 4, 1918, Serial No. 232,536. Renewed Feb. 15, 1919. Serial No. 277,303. 2 Claims. (Cl. 46—61.)



1. In a game apparatus, a playing board comprising a board body having an annular flange or rim forming a circular run-way, with the surface of the board body inclined toward the center, a diametrically extending trough provided with a depression at its center, said trough being formed in the body to form the dividing line of the game board, a series of depressions in the surface of the board body and extending at right angles to the central trough in opposed directions from each other, stop flanges bordering certain of said depressions and said central trough, circular depressions in the inclined surface of the board body, between the rim thereof and the central trough and the other depressions in the board body, a figure for removable disposal in the depression of the central trough, and a playing ball to be whirled around the annular run-way of the board body and dispose itself in one of the parts or depressions in the surface, when the speed of the ball around the run-way has decreased to the extent that will cause the ball to gravitate toward the center of the playing surface.

1,299,392. WELL-TOOL. JAMES S. TAYLOR, Eureka, Kans. Filed Aug. 5, 1918. Serial No. 248,429. 3 Claims. (Cl. 57—9.)

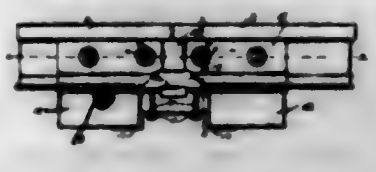


1. A device of the class described comprising a socket member, having a pair of diametrically arranged slots, a movable member in said socket member, having its edges stepped, jaws carried by said member and latch members located in said slots and engaging the steps for holding the members in adjusted position.

2. A device of the class described comprising a socket member having a pair of diametrically arranged slots, a movable member in said socket member, having its edges stepped, jaws carried by said member, latch members located in said slots and engaging the stepped sides of said member for holding the same in adjusted position, and springs on said latch members for normally holding the same out of engagement with the member.

3. A device of the class described comprising a socket member having a pair of diametrically arranged slots, a movable member in said socket member composed of a plurality of disks bolted together and having beveled edges, jaws carried by said member and latch members engaging the beveled edges of the disk for holding the member in adjusted position.

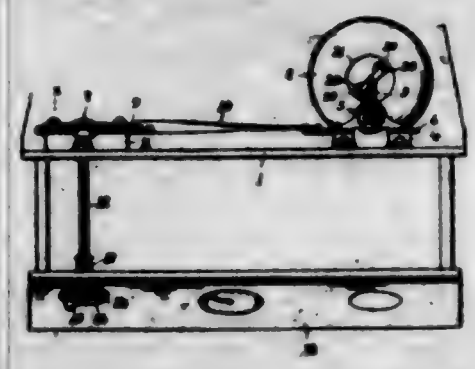
1,299,393. RAIL-JOINT. JOSEPH W. TROTTER, Birmingham, Ala. Filed Dec. 23, 1918. Serial No. 268,051. 4 Claims. (Cl. 238—6.)



1. A rail joint formed in longitudinal half sections, a tie bar slipped endwise on and adapted to lock said sec-

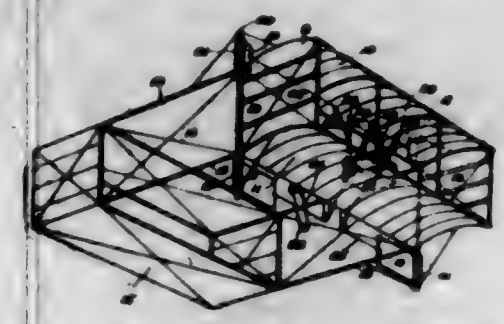
tions together, and means to make the sections fast to the cross ties on each side of said tie bar, comprising a bracket engaging under the ties and tie bolts connecting the joint to the bracket.

1,300,804. CARBURETER-ADJUSTER. WILLIAM BARBOUR, Everett, Mass. Filed Aug. 22, 1917. Serial No. 187,626. 3 Claims. (Cl. 180—77.)



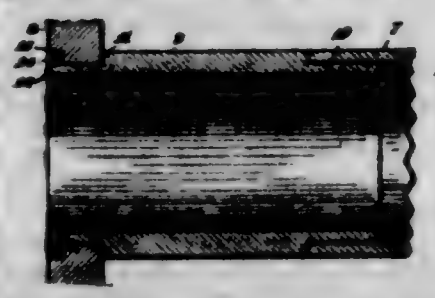
1. The combination with an automobile or the like having a carburetor, of an operative shaft rising from the latter, a pinion on the upper end of said shaft, a pinion having a spindle for its support, an indicater carried by said spindle, and an elongated connection between said pinions including rack teeth meshing with each pinion.

1,300,806. FLYING-MACHINE. HENRY HELM CLAYTON, Canton, Mass. Filed Feb. 21, 1916, Serial No. 545,113. Renewed Oct. 17, 1918. Serial No. 258,617. 5 Claims. (Cl. 244—23.)



1. In a flying apparatus, the combination of a main supporting surface with relatively small stabilising retarding surfaces located on opposite sides of the center of the apparatus and adjustable relative to said center, said retarding surfaces being maintained substantially normal to the line of flight, and means for adjusting one of said surfaces to produce a different retardation from another.

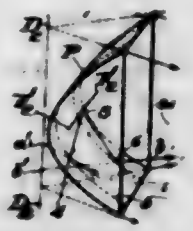
1,300,808. BOILER-TUBE CONNECTION. CHARLES S. COLEMAN, Los Angeles, Calif., assignor to The Coleman No-Leak Boiler Tube Company, Los Angeles, Calif., a Corporation of California. Filed Apr. 14, 1917. Serial No. 162,162. 2 Claims. (Cl. 285—45.)



1. A boiler tube and end plate connection comprising an end section of an outside diameter equal that of a boiler tube and thickness greater than that of the tube, said end section having reduced ends forming flat annular shoulders, a boiler tube within which one end of the end section is inserted, a boiler end plate having an opening in which the other reduced end portion of the end section is inserted with the shoulder abutting throughout its surface against the end plate, and an annulus of metal welded to the outer end of the end section and to the boiler end plate, said annulus arranged in a channel in the outer face of the end plate and coöperating with the shoulder abutting against the opposite side of the end plate to hold the end section against displacement and effect a tight joint.

2. A boiler tube and end plate connection comprising an end section of an outside diameter equal that of a boiler tube and having a wall thickness greater than that of the tube, said end section having reduced ends forming flat annular shoulders, a boiler tube within which one end of the end section is inserted, a boiler end plate having an opening in which the other reduced end portion of the end section is inserted with the shoulder abutting throughout its surface against the end plate, a metallic gasket interposed in the joint between the end section and the wall of the opening in the boiler end plate, and an annulus of metal welded to the outer end of the end section and to the boiler end plate, said annulus arranged in a channel in the outer face of the end plate and cooperating with the shoulder abutting against the opposite side of the end plate to hold the end section against displacement and effect a tight joint.

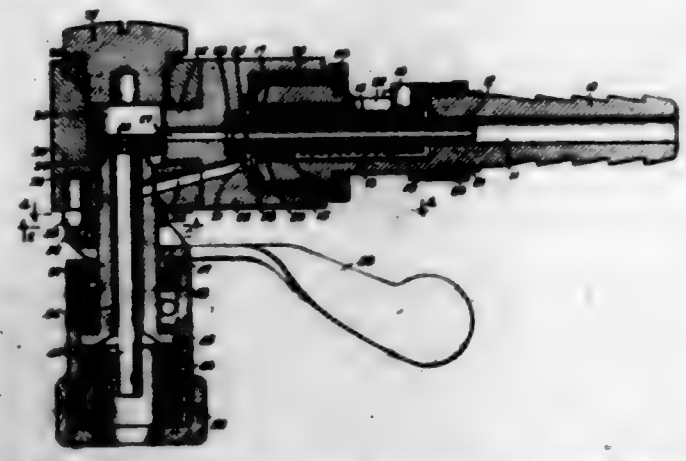
1,299,397. LIGHT-PROJECTION APPARATUS. OLIVER EARLE CONKLIN, Boston, and HERBERT PERCIVAL HOLLNAGEL, West Newton, Mass. Filed May 12, 1917. Serial No. 168,147. 12 Claims. (Cl. 240—41.)



1. Light projection apparatus comprising a substantially parabolic cylindrical reflector, and light deflecting means having a focus substantially in the directrix of the central parabolic element of the reflector for redirecting a portion of the light reflected from the cylindrical reflector.

12. Light projection apparatus comprising a cylindrical reflector having a horizontal focal region, end reflectors disposed to deflect a portion of the light reflected from the cylindrical reflector in such manner as to control the horizontal spread of the beam, and refracting means for refracting another portion of the light reflected from the cylindrical reflector so as also to control the horizontal spread of the beam.

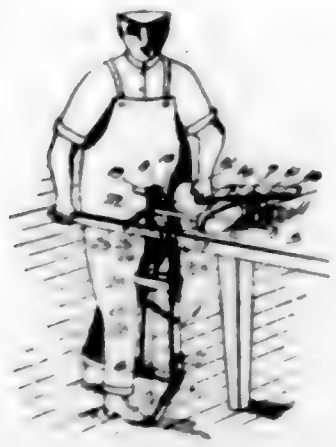
1,299,398. COMBINED BLOW-OFF AND HOSE CONNECTION FOR TIRES. SAMUEL KAHN, Newark, N. J. Filed Aug. 8, 1918. Serial No. 248,122. 6 Claims. (Cl. 137—68.)



5. In a device of the class described, a nipple clutch having a flexible sleeve constituting the clutching element,

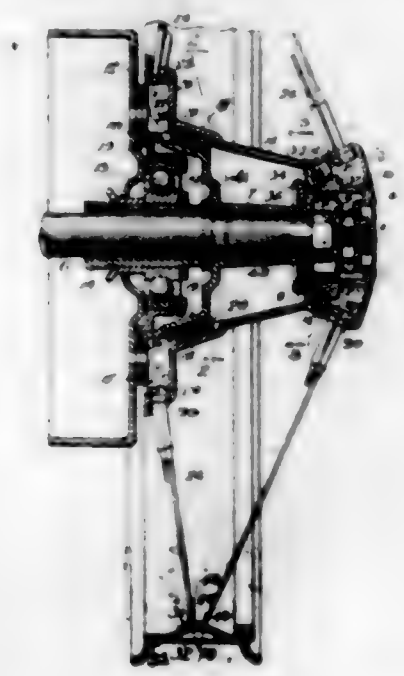
spring-pressed means normally tending to compress the clutch to effect the clutching engagement, and means to relieve the sleeve of the spring pressure to release the clutch.

1,299,399. BOOT-STRIPPING DEVICE. JOHN J. KRAMER and HERMAN SMEBLING, La Crosse, Wis., assignors to La Crosse Rubber Mills Company, La Crosse, Wis. Filed Aug. 12, 1918. Serial No. 249,537. 14 Claims. (Cl. 12—1.)



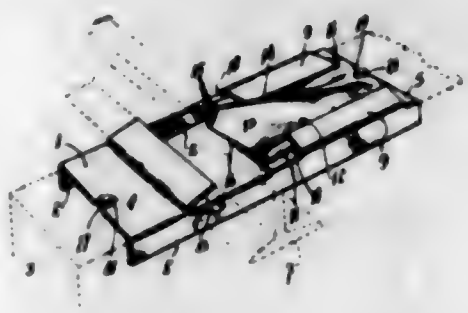
2. A device for removing lasts from boots comprising a leg adapted to rest on the floor, a boot support extending from said leg and adapted to rest on a table, means for holding a boot on said support, a vertical arm pivoted at its lower end to said leg and adapted for connection at its upper end with the last, and means for operating said arm to withdraw the last.

1,299,400. DETACHABLE WIRE-SPOKED WHEEL. EDWARD G. BUDD, Philadelphia, Pa., assignor to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed July 19, 1916. Serial No. 110,112. 1 Claim. (Cl. 21—31.)



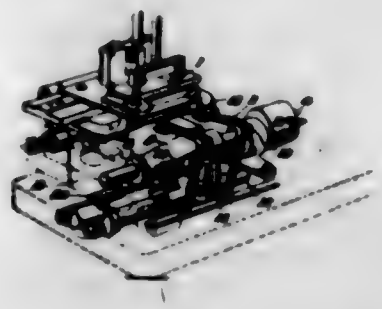
In a wire spoked wheel structure, an inner hub sleeve and an outer hub sleeve, means for detachably clamping the latter to the former, including a screw cap for the threaded end of the inner hub sleeve, said inner hub sleeve having a fluted end surface, studs carried by said cap, and a spring pressed plate having a correspondingly fluted edge to coöperate with the fluted end surface of the inner hub sleeve, said plate being carried loosely by said studs to rotate with said cap.

1,299,401. FASTENER FOR RAILS. FRANK CHAMBERS, Huntington, Ind., assignor to Tony Spatt, Huntington, Ind. Filed Jan. 28, 1919. Serial No. 273,044. 1 Claim. (Cl. 238—4.)



The combination with a tie, of a frame having side flanges adapted to embrace the sides of said tie, plates connecting the ends of said flanges, notches formed in the outer edges of said plates, a clip formed integral with one of said plates, inwardly directed flanges formed integral with the upper edges of the side flanges and extending longitudinally thereof, a clamping member slidably engaged by the flanges, said clamping member having an upwardly inclined rib, the inner edges of which being adapted to engage the side of a rail, a notch formed in one end of the clamping member and securing devices adapted to engage said notches to hold the frame upon the rail and to prevent accidental withdrawal of the clamping member.

1,299,402. LOOPER MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to the Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 1, 1916. Serial No. 134,254. 9 Claims. (Cl. 112—8.)



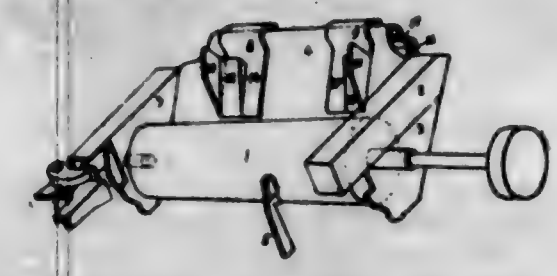
1. In a sewing machine, in combination, a reciprocating needle, a looper, actuating means for imparting operative movements to said needle and looper, means whereby said looper may be shifted from normal operative position to a position favoring easy threading thereof and operable during at least a considerable part of a stitch-forming cycle, and means acting to lock said actuating means against movement at a predetermined period in a stitch-forming cycle.

4. In a sewing machine, in combination, a main-shaft, a reciprocating needle, a movable looper coöperating with said needle, a looper-support, actuating connections between said main-shaft and said looper-support, means whereby said looper-support may be moved from normal to abnormal position, shiftable means for so moving said looper-support, connections between said shiftable means and said main-shaft for locking the latter against rotation when said looper is in easy threading position and including means actuating the locking connections to prevent operation of the machine when the main-shaft arrives at a predetermined position.

8. In a sewing machine, in combination with stitch-forming mechanism comprising a needle and looper, actuating means for said looper, means for moving said looper from its normal path including a lever, a plate mounted

movably on said lever, means operated through said plate for locking said actuating means against movement, and means for moving said plate upon said lever.

1,299,403. TYPE-WRITING MACHINE. HERMANN V. FRICKEN, West Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Original application filed July 9, 1915, Serial No. 38,853. Divided and this application filed July 16, 1917. Serial No. 180,729. 5 Claims. (Cl. 197—142.)



1. The combination with a rotary platen and a paper table at the introductory side of the platen, of two double level spacing guides mounted on said table in position to support the margins of a record sheet and space it from the table to facilitate the introduction or removal of narrower work-pieces between said table and said spacing guides, said guides being relatively adjustable along the table to accommodate sheets of different widths, and the same having each a vertically extending surface adapted to guide the side edges of the record sheet.

2. The combination with a platen, of a paper shelf cooperating with said platen, and a pair of guides coöperating with said shelf, to direct work-sheets to said platen, said guides facing inwardly toward each other, and each having two inclined steps with supporting surfaces at different levels and with vertical surfaces extending upwardly from said supporting surfaces, whereby work-sheets of different widths are held separated from each other and said shelf at their tail edges, so as to enable one of the sheets to be replaced while the other remains on said platen.

3. The combination with a revoluble platen, of a wide chute having an open face toward the platen and arranged at the introductory side thereof, and a narrow chute opening out of the wide chute and also arranged at the introductory side thereof and included between the sides of the wide chute, to enable a work-sheet to be laid in the narrow chute through the open face of the wide chute.

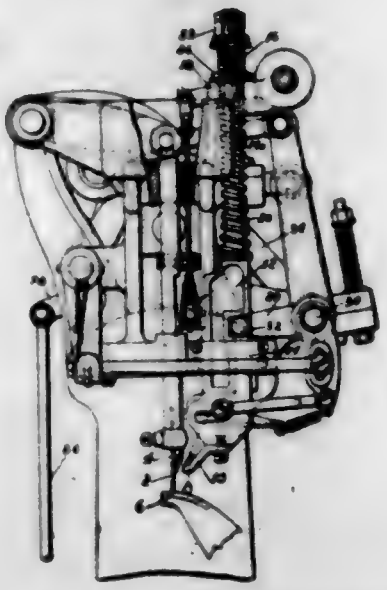
4. The combination with a revoluble platen, of a narrow chute at the introductory side thereof, a wide chute also mounted at the introductory side of the platen, and a table into which said chutes merge together in the vicinity of the platen.

5. The combination with a revoluble platen, of a collating-board at the introductory side thereof, comprising an open-faced narrow chute having a floor and side-guides, and also comprising an open-faced wide chute, said wide chute having floor portions bordering upon said side-guides and extending outwardly therefrom, and side-gages at the outer edges of said floor portions.

1,299,404. WROUGHT-METAL ARTICLE. ELWOOD HAYNES, Kokomo, Ind., assignor to The American Stainless Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 12, 1915. Serial No. 13,920. 4 Claims. (Cl. 75—1.)

1. A wrought metal tool having polished surfaces of the incorrodible characteristics of surfaces of noble metal and composed of an alloy of iron and chromium, with carbon in amount between 0.1 per cent. and 1.0 per cent., said alloy being malleable at high temperatures, hard, stiff and strong at ordinary temperatures and capable of taking and retaining a cutting edge.

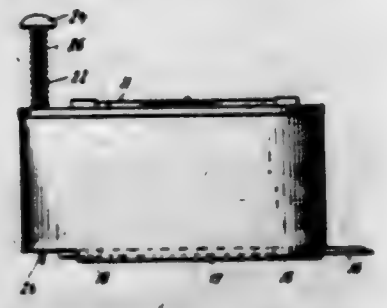
1,299,405. PRESSER-FOOT MECHANISM FOR SHOE-SEWING MACHINES. WILLIAM C. MEYER, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Original application filed July 29, 1913, Serial No. 781,785. Divided and this application filed Feb. 26, 1916. Serial No. 80,910. 4 Claims. (Cl. 112—20.)



1. A sewing machine, having, in combination, a needle, mechanism for actuating the needle, a work support, a presser-foot, means for lifting the presser-foot during each cycle of operations comprising a variable friction clamp connection, a spring for locking the parts of said clamp, and means for unlocking the parts of said clamp to permit a relative adjustment of the parts thereof.

2. A sewing machine, having, in combination, a needle, mechanism for actuating the needle, a work support, a presser-foot, mechanism for lifting the presser-foot during each cycle of operations, comprising an actuating member, a member through which the presser-foot is actuated from said first member, a variable friction clamp connection between said members, said clamp including a series of friction leaves connected with one of said members, a series of friction plates interfitting with and arranged to slide between said friction leaves and connected with the other of said members, a spring for clamping said friction plates between said leaves, and means for releasing said leaves and plates from clamping engagement.

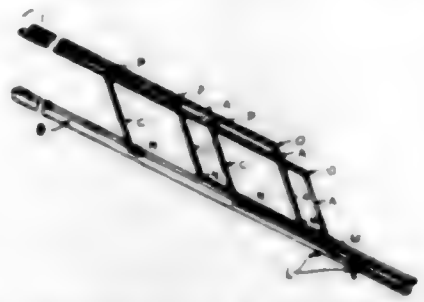
1,299,406. WEED-DESTROYER. ALFRED TYSON, Sappington, Mo. Filed June 19, 1918. Serial No. 240,857. 1 Claim. (Cl. 47—37.)



A weed destroyer comprising a liquid receptacle having opposite sides converging toward one another at an acute angle and merging into one another in an arcuately curved wall, a cylinder extending vertically within the receptacle at the point of junction of the said converging sides and fitting closely against the said arcuately curved wall and having its bottom end co-incident with the bottom of the receptacle, said cylinder having an opening in the inwardly facing portion of its side wall adjacent to the bottom thereof leading into the receptacle, a

plunger in said cylinder, an operating handle for said plunger, resilient means holding said plunger above the said opening in the cylinder, a needle extending downwardly from the plunger through the bottom of the receptacle, said needle having a longitudinal groove in its side normally positioned entirely above the bottom of the receptacle and adapted to be entered into the weed to be eradicated when the plunger is depressed.

1,299,407. REINFORCING-BAR FOR CONCRETE WORK. IRWIN ROBERT HENRY CORMACK, Toronto, Ontario, Canada. Filed July 15, 1918. Serial No. 245,103. 1 Claim. (Cl. 72—113.)



An integral reinforcing bar for concrete work consisting of longitudinal members in adjacent horisontal planes connected to a parallel base member by alternate web members, the web members on one side being mid-way betwen the corresponding web members on the opposite side, and projecting supporting members detached on two sides and one end of the base member.

1,299,408. INFUSIBLE SOLIDIFIED LIQUID FUEL AND PROCESS OF MAKING THE SAME. FRANK E. POULTON, Boston, Mass., assignor, by mesne assignments, to S. Sternau & Co. Inc., Brooklyn, N. Y., a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,874. 15 Claims. (Cl. 44—1.)

1. As an article of manufacture, a solid, inflammable and infusible alcohol fuel.

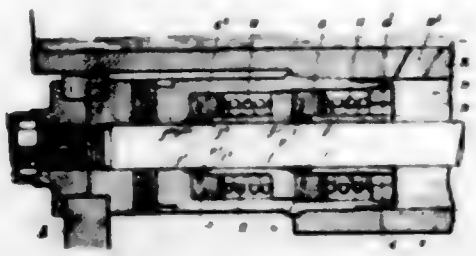
2. A solid infusible fuel comprising pyroxylin, ether and alcohol.

3. A solid infusible, slowly-inflammable and completely combustible fuel comprising pyroxylin and alcohol.

4. As an article of manufacture, a solid infusible alcohol fuel of uniform consistency and free from lumps.

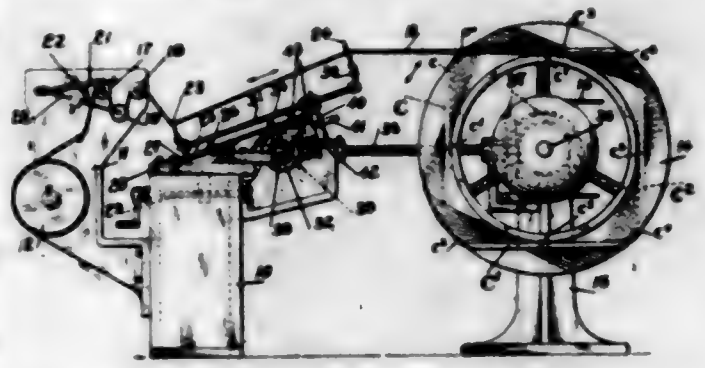
5. As an article of manufacture, a solid infusible fuel comprising an alcohol and colloidal pyroxylin, the pyroxylin being in sufficient quantity to retain the alcohol under normal conditions of commercial handling and use.

1,299,409. BRAKE OR RECUPERATOR FOR GUNS. EUGÈNE SCHNEIDER, Le Creuzot, France, assignor to Schneider & Cie., Paris, France, a Limited Joint-Stock Company of France. Filed May 15, 1917. Serial No. 168,859. 2 Claims. (Cl. 286—1.)



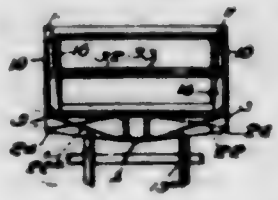
1. In brakes or recuperators for guns, the combination of an elastic ring confined radially between rigid walls and subjected to pressure within the brake or recuperator, with a packing ring having a bearing surface to form a packed joint, said packing ring being located in one of the said rigid walls in contact with said elastic ring and fixedly confined at the front and rear.

1,299,410. TIRE-BUILDING MACHINE. WILLIAM J. STEINLE, Elmhurst Heights, N. Y., assignor to Morgan & Wright, a Corporation of Michigan. Filed Mar. 20, 1916. Serial No. 85,298. 3 Claims. (Cl. 154—11.)



2. A tire building machine, comprising a revoluble support of substantially the form of the cavity of the casing, a pivoted shaft mounted for swinging movement transversely of the support, means for swinging the shaft on its pivot, a guide eye offset from the shaft for directing material to the support, and means for rocking the shaft on its axis during its transverse stroke to cause the guide eye to move at a faster speed at the center of stroke than at the ends of stroke.

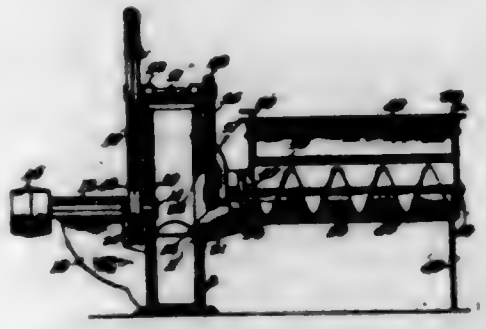
1,299,411. CONCRETE CAR. JOSEPH B. STRAUSS, Chicago, Ill. Filed July 29, 1918. Serial No. 247,168. 22 Claims. (Cl. 105—406.)



1. A concrete car comprising two frames, one frame consisting of a central longitudinal metal member, and transverse metal members connected thereto, the other frame being an exterior bounding frame, a connection between the two frames, a concrete floor and concrete walls integral therewith, the bounding frame being on the exterior of the concrete.

REISSUES.

14,622. PORTABLE ELEVATOR. HUGH J. CARSON, Fairfax, Minn., assignor to John Rocke, Pontiac, Ill. Filed Mar. 25, 1918. Serial No. 224,678. Original No. 1,189,063, dated July 4, 1916, Serial No. 833,861, filed Apr. 23, 1914. 19 Claims. (Cl. 198—10.)



17. In a device of the character described, the combination with a casing having a peripheral wall and side walls, of a rotary material-receiving chamber within the casing having an inlet and provided with a plurality of communicating discharge members for material, respectively

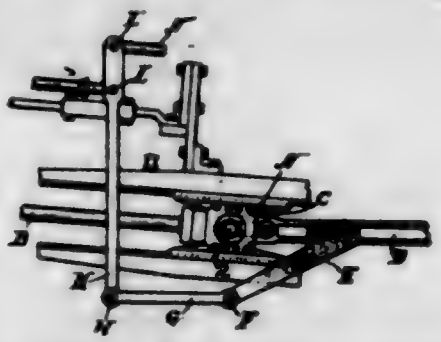
extending approximately to the peripheral casing wall, except for clearance sufficient to permit rotation within said casing, an outlet communicating with said casing, and means operative during rotation of said chamber for creating back pressure adjacent the peripheral casing wall in excess of the pressure on the material within said discharge members, to prevent contact of said material with the peripheral casing wall.

14,622. WINDOW-LOCK. EMORY S. ENSIGN, East Orange, N. J., assignor to Rose Ensign, East Orange, N. J. Filed Feb. 26, 1918. Serial No. 219,329. Original No. 1,255,398, dated February 5, 1918, Serial No. 152,420, filed Mar. 3, 1917. 6 Claims. (Cl. 16—18.)



1. A window lock comprising a spring, and means for so attaching said spring to a window sash and frame that the opening of said window will tax the resiliency of said spring; in combination with a noise-producer adapted for operation by said opening movement.

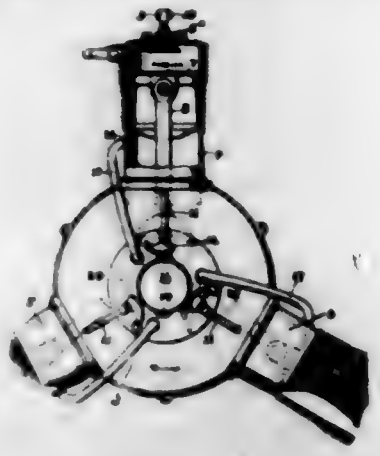
14,624. DEVICE FOR VALVE-GEAR. JAMES B. KINGAN and HUGO F. RIPKEN, Minneapolis, Minn. Filed Dec. 20, 1915. Serial No. 67,934. Original No. 1,023,520, dated Apr. 16, 1912, Serial No. 658,256, filed Nov. 2, 1911. 1 Claim. (Cl. 121—98.)



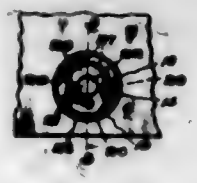
A valve gear regulating apparatus for locomotives, etc., comprising in combination with a cross head, a frame in which the same reciprocates, a piston rod projecting from one side of the cross head and rigidly connected thereto, a pitman projecting from the other side of the cross head and pivotally supported therein, an arm fastened to the pitman and projecting downwardly and forwardly below the cross head, a lever, a radius rod with which one end of said lever is connected, a pivotal link connection between the opposite end of said lever and said arm, and a rod pivotally connected with said lever intermediate of its ends.

14,625. ROTARY-CYLINDER GAS-ENGINE. ROBERT S. MOORE, Washington, D. C., assignor, by mesne assignments, to Emile Berliner, Washington, D. C. Filed Sept. 3, 1915. Serial No. 48,933. Original No. 1,093,249, dated Apr. 14, 1914, Serial No. 790,948, filed Nov. 8, 1913. 4 Claims. (Cl. 123—44.)

1. A rotary gas engine including a plurality of cylinders, a piston for each cylinder, an intake port for each cylinder adapted to be uncovered by the piston during the intake period, means forming a passage connecting the intake port of each cylinder with a supply chamber, a rotating member for closing the passages leading to the intake ports, said rotating member having means for uncovering one of said passages at a time, and means for rotating said member in the same direction as the cylinders and at a differential speed relative thereto, whereby said intake passages are uncovered substantially during the period of intake for the respective cylinder.

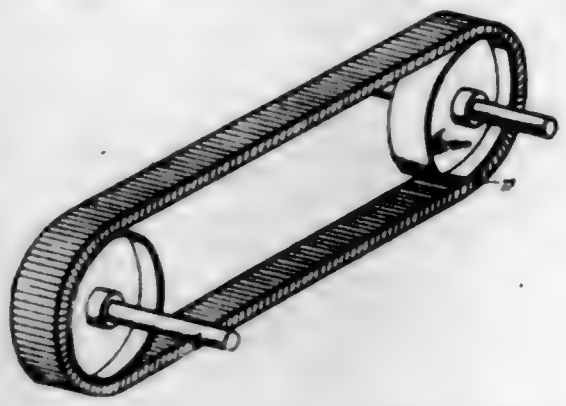


14,626. VEHICLE-CURTAIN FASTENER. FRED A. NEIDER, deceased, Augusta, Ky.; by the assignee, Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Nov. 26, 1918. Serial No. 264,249. Original No. 1,234,791, dated July 31, 1917, Serial No. 130,449, filed Nov. 9, 1916. 10 Claims. (Cl. 24—211.)



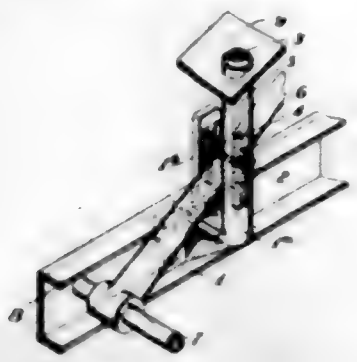
9. In a snap fastener, a casing, a jaw element slidable longitudinally therein and spring elements on opposite sides of said jaw element and providing lateral guiding surfaces for said jaw element.

14,627. SELF-ADJUSTING BELT. EDWARD J. RICHARDSON and JAMES ROY RICHARDSON, Chamberlain, S. D., assignors to George R. Warner, Chamberlain, S. D. Filed Aug. 12, 1918. Serial No. 249,549. Original No. 1,215,196, dated Feb. 6, 1917, Serial No. 97,142, filed May 12, 1916. 4 Claims. (Cl. 74—62.)



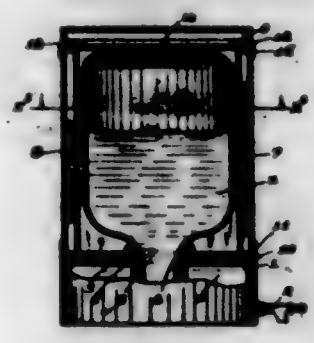
1. In a belt of the character described, a plurality of tension springs, a plurality of leather strips provided with alined openings for receiving the springs, the springs having apertured extensions at their ends, the apertures of all the springs being disposed in alinement, and a coupling rod extending through said apertures.

14,628. LOCKING DEVICE FOR MOTOR-VEHICLES. WILLIAM W. SABIN, Portland, Oreg., assignor to Norris B. Gregg and J. C. Harralson, Portland, Oreg. Filed Feb. 10, 1919. Serial No. 276,185. Original No. 1,215,871, dated Feb. 13, 1917, Serial No. 126,357, filed Oct. 18, 1916. 5 Claims. (Cl. 70—128.)



3. In a locking device for a motor vehicle, a lock casing adapted to be applied in generally upright position to extend from above to below the vehicle floor, a lock carried by the upper end of said casing, a bolt arranged to work transversely through said casing and operatively connected with the lock; a guard spaced from, and substantially parallel to and with its bottom connected with, said casing, said guard being apertured to receive said bolt when the latter is projected to locking position, whereby said casing, guard and bolt may freely surround a space for the reception of a lever of the automobile; and means for supporting said casing and guard.

14,629. TRANSPARENT VACUUM-JACKET FOR LIQUID-DISPENSING BOTTLES. EDWARD T. WARDELL, St. Paul, Minn. Filed Nov. 13, 1917. Serial No. 201,856. Original No. 1,161,093, dated Nov. 23, 1915, Serial No. 836,093, filed May 4, 1914. 4 Claims. (Cl. 215—3.)



1. A vacuum jacket including wall sections, channel standards, arranged to telescopically receive the vertical edges of said wall sections, and tie bars permanently connecting said standards for holding said wall sections removably assembled.

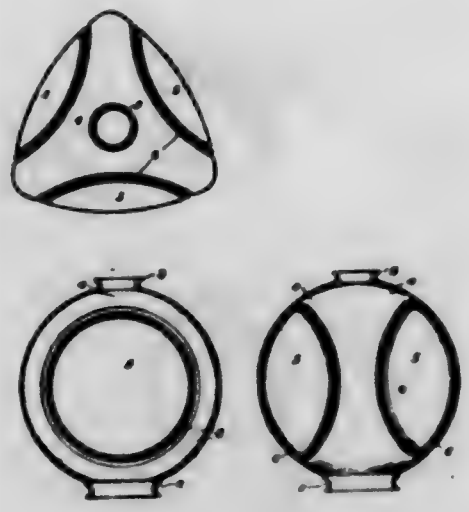
DESIGNS.

58,144. FOB, PENDANT, OR SIMILAR ARTICLE. Carl Bonnen, St. Paul, Minn. Filed Aug. 5, 1918. Serial No. 248,481. Term of patent 7 years.



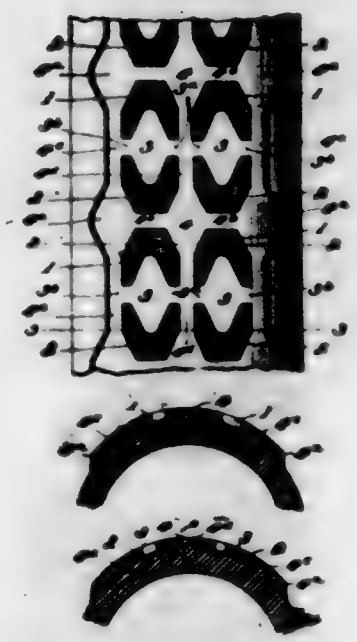
The ornamental design of a fob, pendant or similar article as shown.

58,145. GLOBE FOR LIGHTING-FIXTURES. Raymond Crowdes, Edgewood, Pa., assignor to Guarantee Liquid Measure Company, Rochester, N. Y., a Corporation of Delaware. Filed Mar. 8, 1918. Serial No. 221,216. Term of patent 14 years.



The ornamental design for a globe for lighting fixtures, as shown and described.

58,146. NON-SKID TIRE. Elmer N. Downes, Charlotte, N. C., assignor to J. & D. Tire Company, Charlotte, N. C., a Corporation of Delaware. Filed Jan. 27, 1919. Serial No. 273,485. Term of patent 14 years.



The ornamental design for a non-skid tire substantially as shown and described.

58,147. PORCELAIN PULL-SOCKET BODY. Edgar H. Freeman, Trenton, N. J., assignor to E. H. Freeman Electric Company, Trenton, N. J., a Corporation of New Jersey. Filed Oct. 28, 1915. Serial No. 58,499. Term of patent 14 years.



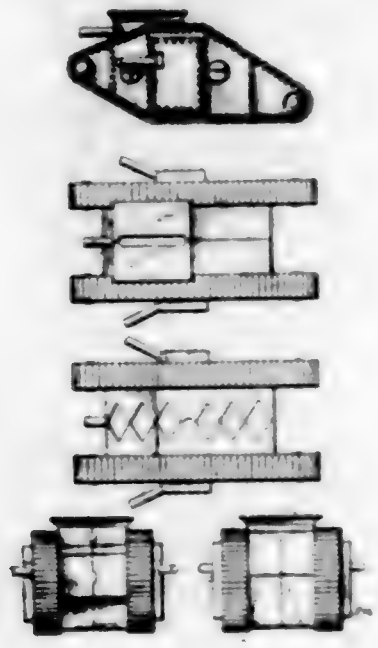
The ornamental design for a porcelain pull socket body as shown.

53,148. PORCELAIN PULL-SOCKET BODY. EDGAR H. FREEMAN, Trenton, N. J., assignor to E. H. Freeman Electric Company, Trenton, N. J., a Corporation of New Jersey. Filed Oct. 28, 1915. Serial No. 58,500. Term of patent 14 years.



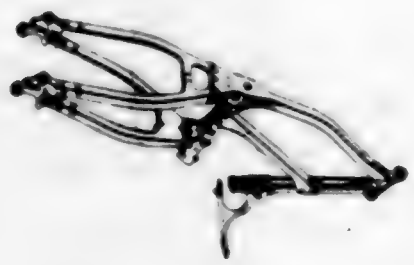
The ornamental design for a porcelain pull socket body as shown.

53,149. TOY BANK. NELSON T. HASENPFLUG, Geneva, Ohio. Filed May 6, 1918. Serial No. 232,949. Term of patent 7 years.



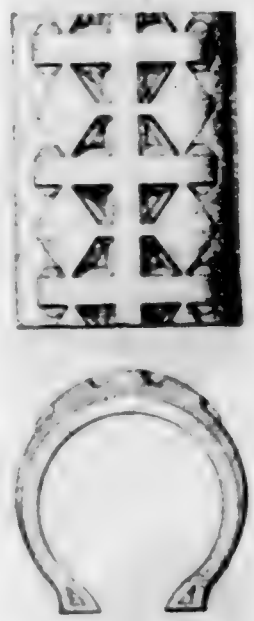
The ornamental design for a toy bank, substantially as shown.

53,150. MOTOR-CYCLE FRAME. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Filed Feb. 19, 1918. Serial No. 218,175. Term of patent 14 years.



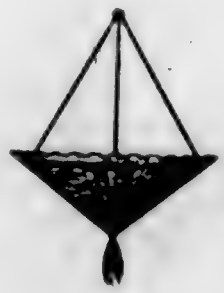
The ornamentl design for a motor-cycle frame, as shown.

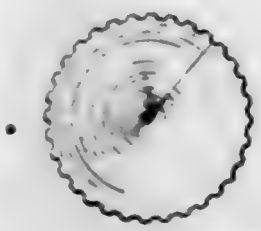
53,151. TIRE-CASING. CHARLES P. L. HUSTON, Plainfield, N. J. Filed Nov. 22, 1918. Serial No. 263,261. Term of patent 14 years.



The ornamental design for a tire casing, as shown.

53,152. LIGHT-FILTER. BEATRICE LEWIS, New York, N. Y. Filed Jan. 11, 1919. Serial No. 270,766. Term of patent 7 years.





The ornamental design for a light filter substantially as shown.

53,153. DOLL. GENEVIEVE PFEFFER, San Jose, Calif. Filed Dec. 28, 1918. Serial No. 268,168. Term of patent 7 years.



The ornamental design for a doll, as shown.

53,154. DOLL. GENEVIEVE PFEFFER, San Jose, Calif. Filed Dec. 28, 1918. Serial No. 268,194. Term of patent 7 years.



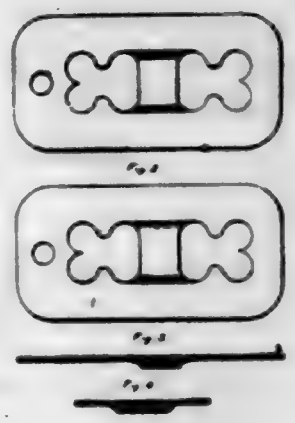
The ornamental design for a doll, as shown.

53,155. COOKING KIT. ISAAC C. POPPER, New York, N. Y. Filed Feb. 26, 1918. Serial No. 219,818. Term of patent 14 years.



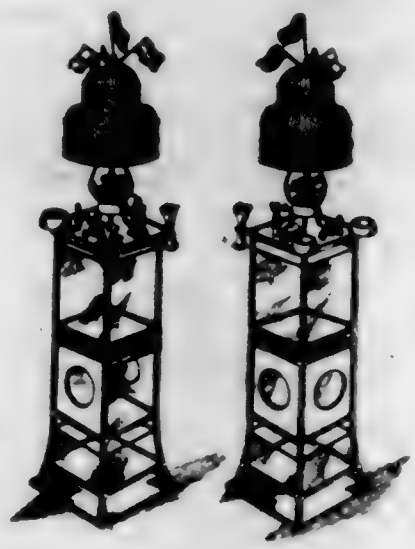
The ornamental design for a cooking kit, as shown.

53,156. TAG. CHARLES C. REIFSNYDER, Des Moines, Iowa; Rose A. Reifsnyder, administratrix of said Charles C. Reifsnyder, deceased. Filed Dec. 30, 1918. Serial No. 268,990. Term of patent 14 years.



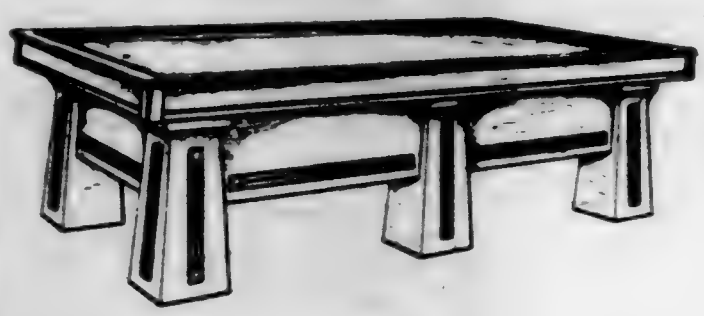
The ornamental design for a tag, as shown.

53,157. COMBINED BIRD-CAGE AND AQUARIUM. ANDREW STROCKI, Detroit, Mich. Filed Feb. 10, 1919. Serial No. 276,243. Term of patent 14 years.



The ornamental design for a combined bird cage and aquarium, as shown.

53,158. GAME-TABLE. LAWRENCE G. THEURER, Milwaukee, Wis. Filed Dec. 2, 1918. Serial No. 265,072. Term of patent 7 years.



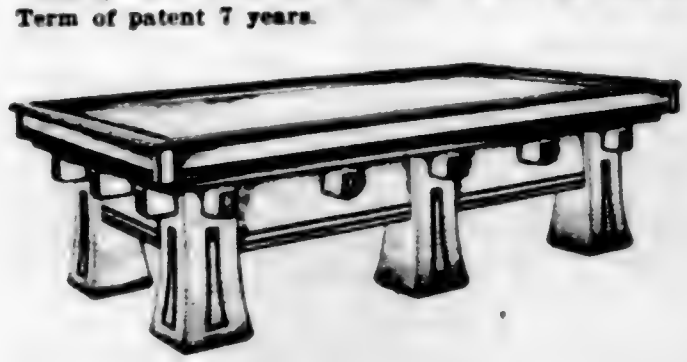
The ornamental design for a game table as shown.

53,159. GAME-TABLE. LAWRENCE G. TILSNER, Milwaukee, Wis. Filed Dec. 2, 1918. Serial No. 265,073. Term of patent 7 years.



The ornamental design for a game table as shown.

53,160. GAME-TABLE. LAWRENCE G. THEURER, Milwaukee, Wis. Filed Dec. 2, 1918. Serial No. 265,074. Term of patent 7 years.



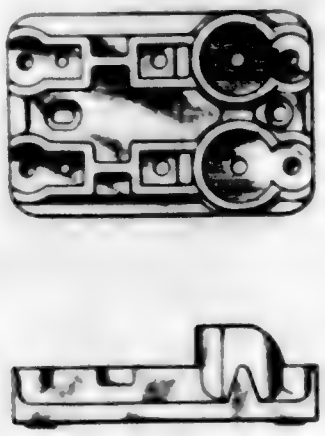
The ornamental design for a game table as shown.

53,161. COMBINATION-TOOL. JOSEPH VICARIO, New York, N. Y. Filed Oct. 21, 1916. Serial No. 127,025. Term of patent 14 years.



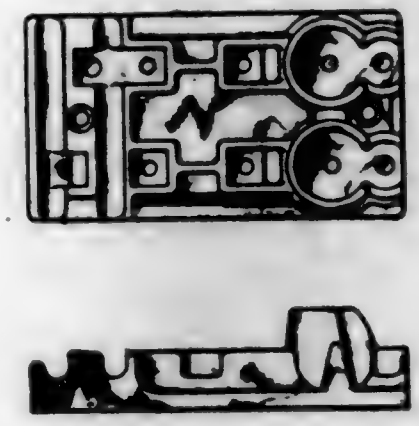
The ornamental design for a combination tool, as shown.

53,162. TWO-POLE ENTRANCE-SWITCH BASE. TORJUS A. BOTH, Stratford, Conn., assignor to The Connecticut Electric Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 2, 1918. Serial No. 248,087. Term of patent 7 years.



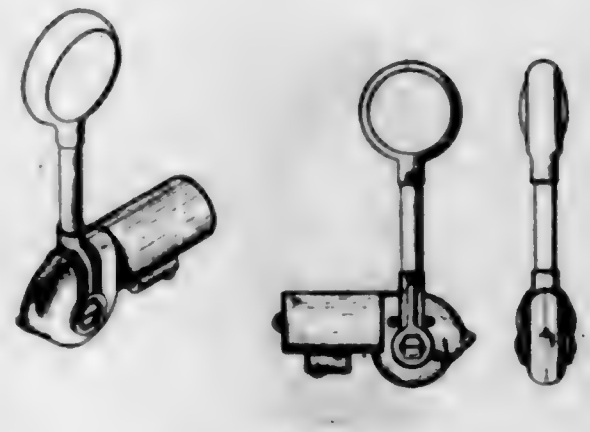
The ornamental design for a two pole entrance switch base, as shown.

53,163. TWO-WIRE SINGLE-BRANCH PANEL-SWITCH BASE. TORJUS A. BOTH, Stratford, Conn., assignor to The Connecticut Electric Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 2, 1918. Serial No. 248,089. Term of patent 7 years.



The ornamental design for a two wire single branch panel switch base, as shown.

53,164. ELECTRIC AUTOMOBILE-SIGNAL. HARRY J. HANKER, Minneapolis, Minn. Filed Jan. 23, 1918. Serial No. 213,423. Term of patent 7 years.



The ornamental design for an electric automobile signal as shown.

53,165. COMBINED SPOON, FORK, AND KNIFE. WENDEL JANOSIK, Maynard, Ohio. Filed Jan. 22, 1919. Serial No. 272,775. Term of patent 7 years.



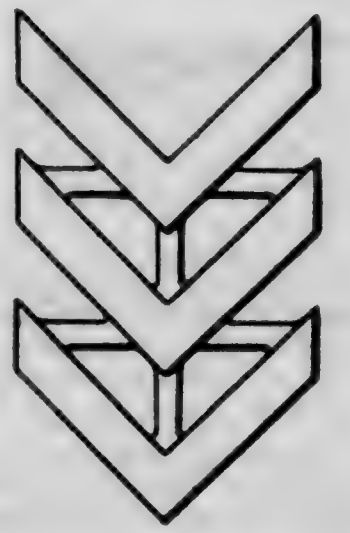
The ornamental design for a combined spoon, fork, and knife, as shown.

53,166. FLAG, BANNER, SIGN, POSTER, PENNANT, BADGE, EMBLEM, PIN, BUTTON, RING-TOP, OR SIMILAR ARTICLE OF MANUFACTURE. WALTER H. SIMONSON, New York, N. Y. Filed Jan. 13, 1919. Serial No. 270,978. Term of patent 3½ years.



The ornamental design for a flag, banner, sign, poster, pennant, badge, emblem, pin, button, ring top, or similar article of manufacture, as shown.

53,167. FLAG, BANNER, SIGN, POSTER, PENNANT, BADGE, EMBLEM, PIN, BUTTON, RING-TOP, OR SIMILAR ARTICLE OF MANUFACTURE. WALTER H. SIMONSON, New York, N. Y. Filed Jan. 13, 1919. Serial No. 270,979. Term of patent 3½ years.



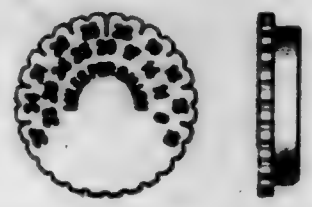
The ornamental design for a flag, banner, sign, poster, pennant, badge, emblem, pin, button, ring top, or similar article of manufacture, as shown.

53,168. ICE-CREAM CONE. JACOB L. SNYDER, Boston, Mass., assignor to The Columbia Ice Cream Horn Company, a Corporation of Massachusetts. Filed Jan. 28, 1919. Serial No. 272,774. Term of patent 7 years.



The ornamental design for an ice cream cone, as shown in the drawing.

53,169. CARBURETER ADJUSTER-DIAL. HENRY NEWTON WHITTELSEY, Greenwich, Conn. Filed Mar. 19, 1915. Serial No. 15,626. Term of patent 3½ years.



The ornamental design for a carbureter adjuster dial, as shown.

53,170. COMBINED SPOON AND FORK. JACOB WOLSTEIN, Newark, N. J. Filed Aug. 24, 1918. Serial No. 251,326. Term of patent 14 years.



The ornamental design for a combined spoon and fork as shown.

53,171. COMBINED SPOON AND FORK. JACOB WOLSTEIN, Newark, N. J. Filed Aug. 24, 1918. Serial No. 251,327. Term of patent 14 years.



The ornamental design for a combined spoon and fork as shown.

53,172. DUST-CAP. CARL WOODBURY, Los Angeles, Calif. Filed Jan. 11, 1919. Serial No. 270,744. Term of patent 14 years.



The ornamental design for a dust cap, as shown.

TRADE-MARKS

OFFICIAL GAZETTE, APRIL 1, 1919.

[PUBLISHED APRIL 22, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 91,021. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE STANDARD BEDDING CO., Milwaukee, Wis. Filed Nov. 29, 1915.



No claim being made to the word "Standard" apart from the mark shown in the drawing.

Particular description of goods.—Bedding—Namely, Mattresses and Pillows.

Claims use since Sept. 1, 1906.

Ser. No. 100,030. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE VAN DORN & DUTTON COMPANY, Cleveland, Ohio. Filed Dec. 18, 1916.



The trade-mark comprising an autographic signature of T. B. Van Dorn, president of the applicant company.

Particular description of goods.—Gears.

Claims use since Aug. 1, 1916.

Ser. No. 107,467. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JAMES MANUFACTURING COMPANY, Fort Atkinson, Wis. Filed Nov. 19, 1917.

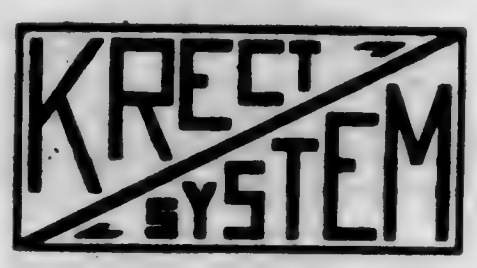


All words appearing in the mark excepting the words "Mer-Milk" being disclaimed apart from the mark shown in the drawing.

Particular description of goods.—Barn Equipment Made of Metal and Metal Parts of Such Equipment—Namely, Stall-Posts, Upper and Lower Fittings for Stall-Posts, Stop Swing-Post Fittings, Bolts, Eyebolts, Fence-Fittings, Bent-Pipe Partitions, Flanges, Clamps, Fence and Partition Anchors, Cow-Alinement Adjusters, Chain-Guides, Washer-Plates; Plumbing Supplies for Stables, Including Stock Drinking-Cups and Gravity and Pressure Systems and Metal Valves for Same and Regulating-Tanks for These Systems; Gate Parts, (Not Including Latches and Locks;) Fence-Posts, Gate-Posts, Fencing, Stock-Pens Consisting of Metal Gates and Metal-Partition Sections Similar to Heavy Metal Fencing, Chains, Harness-Hooks, Stall-Guards, Metal Mangers, Metal Partition for Mangers, Manger-Lifting Springs, and Manger-Division Holders.

Claims use since Oct. 17, 1917.

Ser. No. 107,964. (CLASS 12. CONSTRUCTION MATERIALS.) EARLE P. PRESS, Chicago, Ill. Filed Dec. 14, 1917.



No claim is made to the exclusive use of the word "System" apart from the mark as shown on the drawing.

Particular description of goods.—Head-Supports and Bar-Spacers for Reinforced Concrete Constructions.

Claims use since Jan. 1, 1917.

Ser. No. 108,192. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY D. BEDDINGTON, Los Angeles, Calif. Filed Dec. 28, 1917.



Particular description of goods.—A Substitute for and Containing the Constituents of Eggs and Baking-Powder.

Claims use since the 7th day of December, 1917.

Ser. No. 108,758. (CLASS 17. TOBACCO PRODUCTS.) STANDARD TOBACCO COMPANY, INC., New York, N. Y. Filed Feb. 1, 1918.



No claim is made to the word "Fairfax" except in association with the other features of the trade-mark shown in the drawing.

Particular description of goods.—Cigarettes.

Claims use since about Aug. 10, 1916.

Ser. No. 108,853. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUTHERFORD CO. CREAMERY ASSN., Murfreesboro, Tenn. Filed Feb. 6, 1918.



Comprising the word "Magnolia."

Particular description of goods.—Creamery-Butter.

Claims use since about Mar. 1, 1914.

Ser. No. 109,409. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. L. BRINKHOUS COMPANY, Pittsburgh, Pa. Filed Mar. 7, 1918.

HARVEST TIME

Particular description of goods.—Corn Remedy.

Claims use since May 17, 1917.

Ser. No. 109,821. (CLASS 38. PRINTS AND PUBLICATIONS.) ALBERT WISS, Peekskill, N. Y. Filed Mar. 26, 1918.

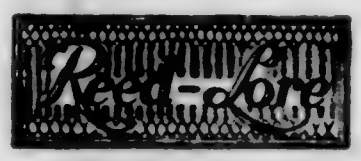


No claim is being made as to the word "Wisservice." The horizontal lining appearing on the drawing is intended for the purpose of shading only.

Particular description of goods.—Trading Stamps or Coupons.

Claims use since the 20th day of March, 1918

Ser. No. 110,537. (CLASS 32. FURNITURE AND UPHOLSTERY.) KEITH-O'BRIEN COMPANY, Salt Lake City, Utah. Filed Apr. 29, 1918.



Particular description of goods.—Articles of Furniture.—Household Chairs, Beach-Chairs, Settees, Divans, Couches, Day-Beds, Chaise-Longues, Davenports, Library-Tables, Breakfast-Tables, Side-Tables, Buffets, Sideboards, Tea-Wagons, Muffin-Stands, Serving-Trays, Bedsteads, Bureaus, Chiffonniers, Dressers, Dressing-Tables, Writing-Desks, Bookcases, Hall-Racks, Costumers, Wooden Umbrella-Stands, Sewing-Stands, Fern-Stands, Telephone-Stands, Millinery-Stands, Wooden Pedestals, Footstools, Taborets, Music-Racks, Magazine-Racks, Porch-Swings, Bassinets, Children's Cribs, Wooden Jardinières, Window-Seats, Wooden Radiator-Covers for House-Radiators.

Claims use since the 1st day of July, 1917.

Ser. No. 111,330. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ADVANCE-RUMELY CO., Laporte, Ind. Filed June 8, 1918. Under ten-year proviso.

RUMELY

Particular description of goods.—Agricultural Machinery — Namely, Tractors, Grain-Separators and Attachments, Clover-Hullers and Attachments, Corn-Huskers, Horse-Powers, and Plows.

Claims use since prior to 1863.

Ser. No. 111,812. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY JOSEPHSON, Elizabeth, N. J. Filed June 26, 1918.

STA-WITE

The exclusive use of the word "Sta-White" being disclaimed except in association with the remainder of the mark.

Particular description of goods.—A Powdered Cleaner for White Shoes.

Claims use since February, 1914.

Ser. No. 112,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LLOYD BROTHERS, Cincinnati, Ohio. Filed July 15, 1918. Under ten-year proviso.

ASEPSIN

Particular description of goods.—A Product of Methyl Salicylic Acid for the Treatment of Sores, Ulcers, Flesh-Wounds, and for Wetting Bandages in Antiseptic Surgery.

Claims use since 1880.

Ser. No. 112,852. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARMANDO BOSA, New York, N. Y. Filed Aug. 6, 1918.



Said trade-mark including a portrait of myself.

Particular description of goods.—A Dandruff-Destroyer and Hair-Grower.

Claims use since May 7, 1918.

Ser. No. 113,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LETTAUNE OIL COMPANY, Guttenberg, N. J. Filed Aug. 14, 1918.



Particular description of goods.—An Edible Cotton-Seed Oil.

Claims use since the year 1910.

Ser. No. 113,097. (CLASS 37. PAPER AND STATIONERY.) S. D. WARREN COMPANY, Boston, Mass. Filed Sept. 9, 1918.

LIBRARY TEXT

Particular description of goods.—Printing-Paper.

Claims use since about July 1, 1912.

Ser. No. 113,342. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE AVALON FARMS COMPANY, Chicago, Ill. Filed Sept. 23, 1918.

HOG-TONE

Particular description of goods.—Tonic and Conditioner for Use in Hogs Only.

Claims use since Nov. 15, 1915.

Ser. No. 113,640½. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) APEX STEEL CORPORATION, New York, N. Y. Filed Oct. 9, 1918.



Particular description of goods.—Iron and Steel Welding-Wire, High-Speed Steel, Superior High-Speed Steel, and Tool-Steel.

Claims use since Mar. 28, 1916.

Ser. No. 113,928. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CINCINNATI LATHE AND TOOL COMPANY, Cincinnati, Ohio. Filed Oct. 29, 1918.

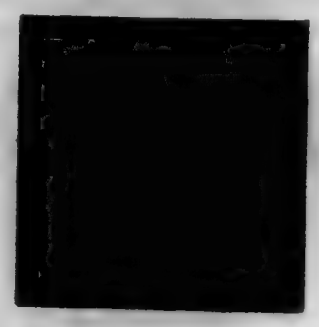


No claim being made to the word "Lathe" apart from the mark as shown in the drawing.

Particular description of goods.—Metal-Working Engine-Lathes.

Claims use since July 24, 1918.

Ser. No. 114,123. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATKINSON AND UTECH, Inc., New York, N. Y. Filed Nov. 11, 1918.



The lining representing blue.

Particular description of goods.—Steel Bars and Billets.

Claims use since Jan. 15, 1918.

Ser. No. 114,157. (CLASS 38. PRINTS AND PUBLICATIONS.) ALVIN A. BRATTON, Columbus, Ohio. Filed Nov. 14, 1918.



Particular description of goods.—Articles Appearing in Bulletins or Lessons Issued from Time to Time.
Claims use since July 1, 1917.

Ser. No. 114,173. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SKINTEX CO., New York and Forest Hills, N. Y. Filed Nov. 14, 1918.

SKINTEX

Particular description of goods.—Face-Cream.
Claims use since on or about Oct. 19, 1918.

Ser. No. 114,478. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HOOVER STEEL BALL COMPANY, Ann Arbor, Mich. Filed Dec. 4, 1918.

Micro-Chrome

No claim is made to the exclusive use of the word "Chrome" apart from the mark as shown in the drawing.
Particular description of goods.—Antifriction-Balls.
Claims use since the 1st day of October, 1914.

Ser. No. 114,551. (CLASS 38. PRINTS AND PUBLICATIONS.) YALE DAILY NEWS, New Haven, Conn. Filed Dec. 7, 1918.

Yale Daily News

The parallel lines on the drawing do not indicate color.
Particular description of goods.—Newspapers.
Claims use since on or about the 28th day of January, 1878.

Ser. No. 114,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BASIL G. MAKRIS, New York, N. Y. Filed Dec. 20, 1918.

UNCLE SAM

Particular description of goods.—Salad-Oil Consisting of a Compound of Cotton-Seed and Olive Oil.
Claims use since September, 1918.

Ser. No. 114,880. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY PROPPER, New York, N. Y. Filed Dec. 26, 1918.



Particular description of goods.—Laundry Blue.
Claims use since Sept. 18, 1918.

Ser. No. 115,116. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BANCOS EXPORTING & IMPORTING CO., INC., New York, N. Y. Filed Jan. 11, 1919.

BHS

Particular description of goods.—Canned Condensed Milk.
Claims use since Sept. 22, 1918.

Ser. No. 115,120. (CLASS 10. FERTILIZERS.) THE HUBBARD FERTILIZER COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Jan. 11, 1919.



No claim is made by the applicant to the representation of a bag and to the words "The Hubbard Fertilizer Co.," "Baltimore," "The Original House of This Name," "Established 1871," and "Hubbard Brands Guarantee Quality Condition and Service" except in association with the mark as shown in the drawing.
Particular description of goods.—Fertilizers.
Claims use since Dec. 16, 1918.

Ser. No. 115,138. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTAWA MILLING COMPANY, Kansas City, Mo., and Ottawa, Kans. Filed Jan. 11, 1919.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 14, 1918.

Ser. No. 115,141. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ENGINEERING MAGAZINE COMPANY, New York, N. Y. Filed Jan. 13, 1919.

THE
ENGINEERING INDEX

Particular description of goods.—Printed Publications Issued Monthly and a Section of a Magazine Issued Monthly, and Also Annual and Five-Yearly Editions of Said First-Mentioned Publications.
Claims use since October, 1895.

Ser. No. 115,154. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAGIC MANUFACTURING CO., Chicago, Ill. Filed Jan. 13, 1919.

MAGIC

Particular description of goods.—Dyes Combined with Soap Flakes.
Claims use since Sept. 20, 1918.

Ser. No. 115,178. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MARBLES BROTHERS, INCORPORATED, New York, N. Y. Filed Jan. 14, 1919.



Particular description of goods.—Cane-Knives, Corn-Knives, Machetes, Axes, Hatchets, Bolo-Knives, Scythes, Sickles, Hatchets, Hoes, and Shovels.
Claims use since on or about Jan. 2, 1919.

Ser. No. 115,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. EARL NARDGAN, Los Angeles, Calif. Filed Jan. 14, 1919.

MEMBROTONE

Particular description of goods.—An Ointment Used Externally as an Anodyne, Deodorant, Germicide, and Antiseptic.
Claims use since January, 1915.

Ser. No. 115,246. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FEDERAL SNAP FASTENER CORPORATION, New York, N. Y. Filed Jan. 17, 1919.

KISSING KIDS

Particular description of goods.—Snap-Fasteners and Placket-Fasteners.
Claims use since Jan. 9, 1919.

Ser. No. 115,314. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT W. CLOTHIER, Washington, D. C. Filed Jan. 20, 1919.

KOLBOMB

Particular description of goods.—Medicinal Preparations for Colds, Catarrh, Hay-Fever, and Bronchitis.
Claims use since Dec. 1, 1918.

Ser. No. 115,368. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Jan. 21, 1919.

LADY DAINTY

Particular description of goods.—Hair-Pins.
Claims use since February, 1912.

Ser. No. 115,362. (CLASS 37. PAPER AND STATIONERY.) UNITED DRUG COMPANY, Boston, Mass. Filed Jan. 21, 1919.

Sorority

Particular description of goods.—Writing-Paper.
Claims use since February, 1911.

Ser. No. 115,419. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. B. DAVIS COMPANY, Hoboken, N. J. Filed Jan. 25, 1919.

OK

Particular description of goods.—Baking-Powder.
Claims use since July 1, 1886.

Ser. No. 115,423. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE HYDRAULIC PRESSED STEEL COMPANY, Cleveland, Ohio. Filed Jan. 25, 1919.

STEELCRAFT

Particular description of goods.—Automobile-Frames.
Claims use since about Jan. 11, 1919.

Ser. No. 115,459. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JACOB H. KRAILING, East Haven, Conn. Filed Jan. 27, 1919.

THE WESTERN FRONT

Particular description of goods.—Game-Boards.
Claims use since Jan. 6, 1919.

Ser. No. 115,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MIAMI BUTTERINE CO., Cincinnati, Ohio. Filed Jan. 27, 1919.

MIOLO

Particular description of goods.—Oleomargarin.
Claims use since Jan. 10, 1919.

Ser. No. 115,538. (CLASS 27. HOROLOGICAL INSTRUMENTS.) I. OLLENDORFF COMPANY, New York, N. Y. Filed Jan. 30, 1919.

IOCO

Particular description of goods.—Watches and Watch-Movements.
Claims use since Jan. 1, 1917.

Ser. No. 115,548. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. FISCHER & CO., INC., New York, N. Y. Filed Jan. 31, 1919.

Community

Particular description of goods.—Coffee.
Claims use since Jan. 15, 1919.

Ser. No. 115,560. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ATTERBURY COMPANY, Chicago, Ill. Filed Feb. 1, 1919.

Sweet Heart

Particular description of goods.—Powder-Puffs.
Claims use since the 6th day of January, 1919.

Ser. No. 115,585. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 3, 1919.

Commodore

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,586. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 3, 1919.

Loomcraft

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,587. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 3, 1919.

Maid of Orleans

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,632. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FREDERICK MONDEM ALLCOFF, Letchworth, England. Filed Feb. 5, 1919.

MONDENITE

Particular description of goods.—Artificial Leather.
Claims use since July 4, 1918.

Ser. No. 115,698. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 5, 1919.

Superspun

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,724. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 10, 1919.

Heraldic

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,795. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HUGH L. S. TOOMER, Louisville, Ky. Filed Feb. 11, 1919.

HUTSL[redacted]

Particular description of goods.—A Liquid Medicine for External Application for Corns, Bunions, and Calluses.
Claims use since Jan. 10, 1918.

Ser. No. 115,954. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 18, 1919.

Centurion

Particular description of goods.—Silk Piece Goods.
Claims use since the 29th day of January, 1919.

Ser. No. 115,976. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 19, 1919.

Marvella

Consisting of the word "Marvella."
Particular description of goods.—Woolen Piece Goods.
Claims use since Feb. 1, 1919.

Ser. No. 116,031. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Feb. 20, 1919.

Chillma

Particular description of goods.—Pile Fabrics in the Piece.
Claims use since the 12th day of November, 1918.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 1, 1919.

124,946. CHOCOLATE CANDIES. Max J. Ahrens, New York, N. Y.
Filed November 5, 1918. Serial No. 114,049. PUBLISHED DECEMBER 17, 1918.

124,947. CANNED SALMON. Alaska-Pacific Herring Co., Seattle, Wash.
Filed October 31, 1918. Serial No. 113,954. PUBLISHED DECEMBER 17, 1918.

124,948. ACETYLENE AND OIL AUTOMOBILE-LAMPS. American Auto Lamp Co., Inc., New York, N. Y.
Filed September 11, 1918. Serial No. 113,113. PUBLISHED DECEMBER 17, 1918.

124,949. FINISHING WELTS OR BINDING USED IN UPHOLSTERING VEHICLE-BODIES, FURNITURE, &c. The Backstay Machine and Leather Co., Union City, Ind.
Filed April 13, 1918. Serial No. 110,159. PUBLISHED NOVEMBER 5, 1918.

124,950. PREPARATION FOR THE TREATMENT OF HAIR FOR USE AS A TONIC AND POMADE. Susie Anne Berkley, Clarksdale, Miss.
Filed October 1, 1918. Serial No. 113,505. PUBLISHED DECEMBER 24, 1918.

124,951. COMPOUNDED GROUND FEED, AND MORE PARTICULARLY FOR A MASH KNOWN AS LAYING-MASH FOR POULTRY. Blatchford Calf Meal Company, Waukegan, Ill.
Filed August 22, 1918. Serial No. 112,837. PUBLISHED DECEMBER 17, 1918.

124,952. BUTTER. Borden's Farm Products Company, Inc., Wyoming and New York, N. Y.
Filed July 30, 1918. Serial No. 112,428. PUBLISHED DECEMBER 17, 1918.

124,953. CURTAIN-FIXTURES, STAIR-CARPET FASTENERS, AND SASH-HOLDERS. James H. Bote Manufacturing Company, Chicago, Ill.
Filed June 28, 1918. Serial No. 111,905. PUBLISHED DECEMBER 17, 1918.

124,954. CERTAIN NAMED HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES. The British Mannesmann Tube Company Ltd., London, England.
Filed June 1, 1918. Serial No. 111,201. PUBLISHED DECEMBER 17, 1918.

124,955. MOTION-PICTURE FILMS. California Packing Corporation, San Francisco, Calif.
Filed September 20, 1918. Serial No. 113,278. PUBLISHED DECEMBER 17, 1918.

124,956. WHEAT-FLOUR. The Chapman Milling Co., Sherman, Tex.
Filed October 28, 1916. Serial No. 86,836. PUBLISHED NOVEMBER 21, 1916.

124,957. CANNED TOMATO SAUCE. The Contadina Canning Co., San Jose, Calif., and Chicago, Ill.
Filed October 31, 1918. Serial No. 113,959. PUBLISHED DECEMBER 17, 1918.

124,958. COTTON PIECE GOODS. Converse & Company, New York, N. Y.
Filed October 26, 1918. Serial No. 113,807. PUBLISHED DECEMBER 10, 1918.

124,959. WOOL PIECE GOODS AND PIECE GOODS MADE OF WOOL AND COTTON, WOOL PREDOMINATING. Thomas Campbell Cullen, Bradford, England.
Filed August 14, 1918. Serial No. 112,705. PUBLISHED DECEMBER 3, 1918.

124,960. CONDENSED SKIMMED MILK. Dewart Milk Products Co. Inc., Dewart borough, Pa.
Filed August 12, 1918. Serial No. 112,668. PUBLISHED DECEMBER 17, 1918.

124,961. EXPANSION-BOLTS, EXPANSION-SHIELDS, AND SCREW-ANCHORS. Diamond Expansion Bolt Co., New York, N. Y.
Filed September 4, 1918. Serial No. 113,013. PUBLISHED DECEMBER 17, 1918.

124,962. CERTAIN NAMED KNITTED, NETTED, AND TEXTILE FABRICS. Ely & Walker D. G Co., St. Louis, Mo.
Filed September 27, 1918. Serial No. 113,446. PUBLISHED DECEMBER 17, 1918.

124,963. COTTON PIECE GOODS. Fabrikk Co. Inc., New York, N. Y.
Filed September 11, 1918. Serial No. 113,124. PUBLISHED DECEMBER 3, 1918.

124,964. FEEDS FOR HORSES, MULES, AND OTHER ANIMALS. Golden Grain Milling Company, East St. Louis, Ill.
Filed October 2, 1918. Serial No. 113,520. PUBLISHED DECEMBER 17, 1918.

124,965. FRESH CITRUS FRUIT—NAMELY, LEMONS. Goldenwest Citrus Ass'n, Tustin, Calif.
Filed October 31, 1918. Serial No. 113,962. PUBLISHED DECEMBER 17, 1918.

124,966. FRESH CITRUS FRUIT—NAMELY, LEMONS. Goldenwest Citrus Ass'n, Tustin, Calif.
Filed October 31, 1918. Serial No. 113,964. PUBLISHED DECEMBER 17, 1918.

124,967. CANNED SARDINES, CANNED PILCHARDS, CANNED TUNA FISH, AND CANNED SALMON. Griffith-Durney Co., San Francisco, Calif.
Filed October 31, 1918. Serial No. 113,965. PUBLISHED DECEMBER 17, 1918.

124,968. VINEGAR. Haarmann Vinegar & Pickle Co., Omaha, Nebr.
Filed October 31, 1918. Serial No. 113,970. PUBLISHED DECEMBER 17, 1918.

124,969. COFFEE, TEA, SPICES—NAMELY, PAPRIKA, GINGER, CLOVES, ALLSPICE, CINNAMON, BLACK PEPPER, WHITE PEPPER, AND COCOA. Gmoser H. Hathaway, Chicago, Ill.
Filed October 31, 1918. Serial No. 113,968. PUBLISHED DECEMBER 17, 1918.

124,970. MASKS AND RESPIRATORS. The Hygeia Respirator Co., Passaic, N. J.
Filed November 5, 1918. Serial No. 114,095. PUBLISHED DECEMBER 17, 1918.

124,971. CERTAIN NAMED HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES. Interstate Iron & Steel Co., Chicago and Grand Crossing, Ill.
Filed October 31, 1917. Serial No. 107,047. PUBLISHED DECEMBER 17, 1918.

124,972. CAKES, COOKIES, DOUGHNUTS, CRULLERS, AND PASTRY—VIZ., PIES AND TARTS. Jackson & Veney, New York, N. Y.
Filed July 13, 1918. Serial No. 112,114. PUBLISHED DECEMBER 17, 1918.

124,973. BOILER AND PIPE COVERING. H. W. Johns-Manville Co., New York, N. Y.
Filed November 14, 1918. Serial No. 114,166. PUBLISHED DECEMBER 17, 1918.

124,974. CHOCOLATE CANDIES. THE WILLIAM C. JOHNSON CANDY COMPANY, Cincinnati, Ohio.
Filed September 25, 1918. Serial No. 113,861. PUBLISHED DECEMBER 17, 1918.

124,975. FRESH CITRUS FRUITS—NAMELY, ORANGES, GRAPE-FRUIT, AND TANGERINES. LEE & EDWARDS, Thonotosassa, Fla.
Filed October 31, 1918. Serial No. 113,975. PUBLISHED DECEMBER 17, 1918.

124,976. BISCUITS, CAKES, CRACKERS, COOKIES, WAFERS. THE MERCHANT'S BISCUIT CO., Denver, Colo.
Filed August 29, 1917. Serial No. 105,947. PUBLISHED MARCH 26, 1918.

124,977. COTTON PIECE GOODS. JOHN H. MEYER & CO. INC., New York, N. Y.
Filed June 8, 1918. Serial No. 111,444. PUBLISHED DECEMBER 17, 1918.

124,978. BROAD SILK IN THE PIECE AND COTTON PIECE GOODS. J. A. MIGEL, INC., New York, N. Y.
Filed November 1, 1918. Serial No. 114,004. PUBLISHED DECEMBER 10, 1918.

124,979. NUT-MARGARIN. JOHN MORRELL & COMPANY, Ottumwa, Iowa.
Filed November 1, 1918. Serial No. 114,000. PUBLISHED DECEMBER 17, 1918.

124,980. PEANUT-BUTTER. WM. T. MULLIKIN CO., INC., Philadelphia, Pa.
Filed July 11, 1918. Serial No. 112,069. PUBLISHED DECEMBER 17, 1918.

124,981. JOURNAL-BOX FOR RAILWAY-VEHICLES, COILED-SPRING JOURNAL-BOX FOR RAILWAY-VEHICLES. THE NATIONAL MALLEABLE CASTINGS COMPANY, Cleveland, Ohio.
Filed April 8, 1918. Serial No. 110,050. PUBLISHED DECEMBER 10, 1918.

124,982. LIQUID-LEVEL INDICATORS. NEW STANDARD ADDING MACHINE COMPANY, St. Louis, Mo.
Filed June 22, 1918. Serial No. 111,757. PUBLISHED DECEMBER 17, 1918.

124,983. TOILET POWDER. THE NEW YORK SHIELD COMPANY, New York, N. Y.
Filed July 28, 1917. Serial No. 105,347. PUBLISHED DECEMBER 24, 1918.

124,984. HOG-SPRAYER, OSCILLATING SEEDER, STAPLE-PULLER. NU-WAY MANUFACTURING CO., Kewanee, Ill.
Filed October 1, 1917. Serial No. 106,542. PUBLISHED DECEMBER 17, 1918.

124,985. AUTOMOBILES. PAIGE-DETROIT MOTOR CAR COMPANY, Detroit, Mich.
Filed October 24, 1918. Serial No. 113,874. PUBLISHED DECEMBER 10, 1918.

124,986. WOVEN HAMMOCK FABRICS. THE I. E. PALMER CO., Middletown, Conn.
Filed September 28, 1918. Serial No. 113,316. PUBLISHED DECEMBER 3, 1918.

124,987. TEA. PARK & TILFORD, New York, N. Y.
Filed September 21, 1918. Serial No. 113,803. PUBLISHED NOVEMBER 5, 1918.

124,988. WOOLEN, COTTON, SILK, AND MIXED PIECE GOODS. SAMUEL PEARSALL, New York, N. Y.
Filed July 22, 1918. Serial No. 112,263. PUBLISHED DECEMBER 17, 1918.

124,989. FIRE-BRICK CEMENT. REFRACTORIES COMPANY, New York, N. Y.
Filed October 19, 1918. Serial No. 113,816. PUBLISHED DECEMBER 17, 1918.

124,990. DRESSED POULTRY. HARVEY S. REYNSBURGER, Oskaloosa, Iowa.
Filed April 16, 1918. Serial No. 110,262. PUBLISHED DECEMBER 17, 1918.

124,991. COTTON, LINEN, AND WOOL PIECE GOODS AND MIXTURES OF THESE VARIOUS MATERIALS. RICH-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed September 9, 1918. Serial No. 113,062. PUBLISHED DECEMBER 10, 1918.

124,992. ROTARY SCRAPERS FOR SHIPS' HULLS, DRILLS, AND PARTS THEREOF. ROTARY SCRAPER COMPANY, INC., New York, N. Y.
Filed June 8, 1918. Serial No. 111,448. PUBLISHED DECEMBER 17, 1918.

124,993. METAL SAVINGS-CHECKS. THE SAVINGS CHECK COMPANY, INCORPORATED, Pittsburgh, Pa.
Filed April 5, 1915. Serial No. 86,723. PUBLISHED OCTOBER 1, 1918.

124,994. ICE-SKATES. SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed June 14, 1918. Serial No. 111,579. PUBLISHED DECEMBER 17, 1918.

124,995. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES. SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed June 14, 1918. Serial No. 111,580. PUBLISHED DECEMBER 17, 1918.

124,996. TEXTILES—NAMELY, COTTON GOODS, WOOLENS, DUCK, GINGHAMS—IN THE PIECE. SNOWS, LTD., New York, N. Y.
Filed September 25, 1918. Serial No. 113,230. PUBLISHED DECEMBER 17, 1918.

124,997. COTTON PIECE GOODS AND WOOL PIECE GOODS AND COTTON AND WOOL PIECE GOODS, MIXED. SOLAR TEXTILE CO., INC., New York, N. Y.
Filed September 13, 1918. Serial No. 113,171. PUBLISHED DECEMBER 3, 1918.

124,998. RAZORS. SOL ESKENAS & CO., San Francisco, Calif.
Filed September 30, 1918. Serial No. 113,985. PUBLISHED DECEMBER 17, 1918.

124,999. COTTON PIECE GOODS. ROBERT A. SUTTON, New York, N. Y.
Filed August 21, 1918. Serial No. 112,617. PUBLISHED DECEMBER 10, 1918.

125,000. ALL-METAL FURNITURE-NAILS AND UPHOLSTERY-NAILS. THE H. C. TACK COMPANY, Cleveland, Ohio.
Filed February 16, 1916. Serial No. 93,993. PUBLISHED DECEMBER 17, 1918.

125,001. CANNED VEGETABLES—NAMELY, CANNED STRING-BEANS AND TOMATOES WITH PUREE FROM TRIMMINGS. TAMAL PACKING CO., San Francisco, Calif.
Filed October 31, 1918. Serial No. 114,091. PUBLISHED DECEMBER 17, 1918.

125,002. CERTAIN NAMED FOODS. GEORGE P. THOMPSON, New Orleans, La.
Filed September 17, 1914. Serial No. 81,312. PUBLISHED DECEMBER 17, 1918.

125,003. ORANGES. TUSTIN HILLS CITRUS ASSOCIATION, Tustin, Calif.
Filed April 13, 1917. Serial No. 102,975. PUBLISHED DECEMBER 11, 1917.

125,004. CIGARETTES. THE UNITED KINGDOM TOBACCO COMPANY, LIMITED, London, England.
Filed October 30, 1918. Serial No. 113,949. PUBLISHED DECEMBER 17, 1918.

125,005. RENNET, AN INGREDIENT OR ARTICLE USED IN MAKING CHEESE. VIKING RENNET COMPANY, Hoboken, N. J.
Filed September 23, 1918. Serial No. 113,522. PUBLISHED DECEMBER 17, 1918.

125,006. IRON AND STEEL BARS. EDGAR T. WARD'S SONS COMPANY, Boston, Mass.
Filed October 16, 1918. Serial No. 113,760. PUBLISHED DECEMBER 10, 1918.

125,007. WHEAT-FLOUR. THE WARRENSBURG MILLS, Warrensburg, Mo.
Filed September 7, 1918. Serial No. 113,072. PUBLISHED DECEMBER 17, 1918.

125,008. BREAKFAST FOOD MADE FROM RYE-WHEAT. WHEAT MEAL CO., Le Mars, Iowa.
Filed October 30, 1917. Serial No. 107,067. PUBLISHED DECEMBER 17, 1918.

125,009. COFFEE. JOHN H. WILKINS COMPANY, Washington, D. C.
Filed March 26, 1918. Serial No. 109,820. PUBLISHED DECEMBER 17, 1918.

125,010. GINGHAM IN THE PIECE. YORK MFG. CO., Saco, Me., and Boston, Mass.
Filed June 27, 1918. Serial No. 111,864. PUBLISHED DECEMBER 10, 1918.

125,011. CHEWING-GUM. SAMUEL ZIMSTBAUM, New York, N. Y.
Filed September 5, 1918. Serial No. 113,048. PUBLISHED DECEMBER 17, 1918.

TRADE-MARK REGISTRATIONS RENEWED.

16,316. FANCY SOAPS AND TOILET PERFUMERY. LEVER BROS., Warrington, county of Lancaster, England; Lever Brothers Company, assignee.
Registered February 26, 1889. Renewed February 26, 1919.

16,487. ICE-CREAM FREEZERS. THE WHITE MOUNTAIN FREEZER COMPANY, Nashua, N. H.
Registered April 9, 1889. Renewed April 9, 1919.

16,490. SOAP. CURTIS DAVIS & COMPANY, Boston, Mass.; Lever Brothers Company, assignee.
Registered April 16, 1889. Renewed April 16, 1919.

16,508. MEDICINAL LOTION. THEODORE ANGELO, New York, N. Y.
Registered April 23, 1889. Renewed April 23, 1919.

16,529. PETROLEUM LUBRICATING OIL. VACUUM OIL COMPANY, Rochester, N. Y., now New York, N. Y.
Registered April 23, 1889. Renewed April 23, 1919.

16,551. BEER OF ALL DESCRIPTIONS. BASS RATCLIFF & GRETTON, Limited, Burton-on-Trent, county of Stafford, England.
Registered July 23, 1889. Renewed July 23, 1919.

LABELS

REGISTERED APRIL 1, 1919.

21,178.—*Title:* "MADAM TEMPIA WILLIAM'S T. W. HAIR BEAUTIFIER." (For a Preparation Which Beautifies and Improves the Hair and Aids Its Growth.) TEMPIA WILLIAMS, Ford City, Pa. Filed February 19, 1919.

100

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HANSON.

Decided July 25, 1905.

ESTOPPEL—COPYING CLAIMS FROM A PATENT.

An applicant is not estopped from copying the claims of a patent under the doctrine of *Winstroath v. Chapman* (248 O. G., 1004; 47 App. D. C., 426) where claims to the same subject-matter were always in the case.

APPEAL from Examiners-in-Chief.

COMBINED TYPE-WRITING AND COMPUTING MACHINE.

Mr. B. C. Stickney for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 3, 4, and 110, of which claims 3 and 110 are examples:

3. In a computing machine, the combination with computing mechanism, numeral keys, indexing devices controlled by said keys, and actuating mechanism for moving said computing mechanism in one direction under the control of said indexing devices; of subtraction mechanism settable to control said computing mechanism and said indexing devices so as to enable subtraction to be performed on the operation of the keys corresponding to the number to be subtracted and the operation of said actuating mechanism.

110. In a combined typewriting and computing machine, the combination of an actuator, a register, a traveling carriage, a device adjustable to set the mechanism for addition and subtraction, a spring for normally holding said device at addition, a latch for holding said device at subtraction, and means operated by the travel of said carriage for tripping said latch.

The reference cited is Richmond, 505,960, August 29, 1893.

The invention relates to an adding-machine wherein subtraction is performed by adding a complementary number, and so far as the mechanisms covered by claims 3 and 4 are concerned applicant's invention, but not those claims, is distinguishable functionally from the device of Richmond in that when applicant's subtraction-key is operated it so sets the mechanism that by the operation of the numeral-keys alone a complementary number up to the capacity of the machine will be added, resulting in the subtraction of the desired number, and the correct difference will be shown.

The Richmond device will not always show a correct result by simply pressing the numeral-keys representing the subtrahend, for after pressing the keys representing the number to be subtracted, if there are any digital wheels on the machine to the left of the number-wheels operated, the zero-key must be depressed once for each of the digital wheels to the left of the last digital number in order to show the correct result on the machine. To repeat, in applicant's machine it is not necessary to press the zero-key to the left of the last digital number to show the correct difference. The mere depression of his subtraction-key so arranges and locates his mechanism that the correct result is obtained without necessity of the operator pressing the keys to the left of the last digital number. This is quite a desirable result. It saves both time and care of the operator.

Present claim 3, however, reads on Richmond in a way, as follows:

Computing mechanism T, numeral-keys; (apparent) indexing devices, (cylinder E', etc.;) actuating mechanisms K for moving the computing mechanism in one direction; subtraction mechanism, (key S, bell-crank N, etc.,) so as to enable subtraction to be performed on the operation of the keys.

At the hearing, therefore, applicant agreed that to distinguish from Richmond this claim should be amended to read as follows:

3. In a computing machine, the combination with computing mechanism having denominational orders, numeral keys, indexing devices controlled by said keys, and actuating mechanism for moving said computing mechanism in one direction under the control of said indexing devices; of subtraction setting mechanism to control said computing mechanism and said indexing devices so as to enable the subtraction of any number, up to the denominational capacity of the computing mechanism solely by the operation of the keys corresponding to the number to be subtracted and the operation of said operating mechanism.

It will be noted that this claim now specifies that by the setting of the subtraction mechanism the operator is enabled to subtract—

any number up to the denominational capacity of the computing mechanism solely by the operation of the keys corresponding to the number and operation of the operating mechanism.

which is not true of the Richmond device for reasons above pointed out.

Claim 4 has been similarly amended, and it, with proposed claim 3, may be allowed unless better references are found.

Claim 110 has been rejected on the doctrine announced in *Winstroath* v. *Chapman and Chapman*, (248 O. G., 1003, 1004,) it having been copied from the Taylor patent, with which this application was once in interference and priority awarded applicant after said interference had terminated.

Applicant points out that his present claim 101, which formed the issue of the *Hanson* v. *Taylor* interference, was very much the same as Hanson's

appealed claim 110 and his original claims 71 and 72, the last two having been in the Hanson case July 9, 1912, when the Taylor patent issued. That on January 26, 1916, about a year after the termination of the *Hanson* v. *Taylor* interference, he made his present claims 141, 142, 145, 148, 151, 153, 154, 157, 177, 178, and 182, which were also very similar to present claim 110, and contends that the broad subject-matter of present claim 110 being always in this case the *Wintroath* v. *Chapman and Chapman* decision, *supra*, should not apply.

I am convinced that applicant's contention is correct and that he is not estopped from making appealed claim 110, because the broad subject-matter of that claim has always been in applicant's case. It would be absurd to allow Hanson the above-mentioned claims and hold him estopped from making claim 110.

The decision of the Examiners-in-Chief is affirmed as to claims 3 and 4, subject to the allowance of these claims, as amended, unless better references are found, and their decision as to claim 110 is reversed.

EX PARTE MCBEAN.

Decided October 23, 1918.

DOUBLE PATENTING—DOUBTS RESOLVED IN FAVOR OF APPLICANT.

Where the Primary Examiner required division between claims for an article and a mold for producing the same and the applicant canceled the claims for the article and took out a patent for the mold and shortly after such patent was granted filed an application for the article, any doubt upon the question of the independence of the inventions should be resolved in favor of the applicant.

APPEAL from Examiners-in-Chief.

ROOFING-TILE.

Messrs. Strong & Townsend and *Mr. Royce A. Eucs* for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 1 to 7, of which claims 1 and 5 are examples:

1. The method of manufacturing roofing tiles from plastic material, which consists in forcing the plastic material through a mold or die so as to produce simultaneously in cylindrical form a number of mutually supporting tiles which are joined along laterally weakened lines of juncture, severing the molded plastic material into units of tile length, the tile sections of a unit having their inside and outside surfaces lying in arcs of the same radius, but the inside and outside surfaces of each tile being described from different axes, and baking the tile sections.

5. As an article of manufacture, a structure composed of a plurality of crescent shaped tiles, the outer and inner peripheries of which are formed to fit and nest with each other.

The references are: Freund, No. 604,035, May 17, 1898; Daniel, No. 726,144, April 21, 1903; McBean, No. 1,184,254, May 23, 1916.

The invention covered by claim 1 is a method of making roof-tiles by forcing the plastic material of the tiles through a mold or die A B, these parts having projections 2, Figure 4, to make weakened lines 3 3, Fig. 6, in the tile cylinder. The tile comes from the die in approximately a cylindrical form, the interior and exterior sides of the die being of the same radius, so that when the cylinder is slit along the weakened part the completed tiles will nest into each other perfectly, the radii of the interior and exterior surfaces of the tiles being the same.

The invention of claim 5 is the crescent-shaped tile having inner and outer peripheries of the same radii. Since tiles must be transported, it is of importance to have them nest perfectly. This saves room and tends to prevent breakage.

The Examiners-in-Chief have based their rejection mainly on the McBean patent, which covers the apparatus, claim 2 of which is as follows:

2. In the art of tile manufacture, means for forming a hollow integral cylindrical tile, means for shaping the inner face of said tile to form same with a series of segments having the same radius as that of the tile periphery and with their centers of curvature eccentric to the tile periphery, and means for forming lines of weakening, at the respective segment ends to allow the tile to be separated into sections which perfectly nest.

When the patented application was filed, it contained claims for the apparatus and also for the tile. The Primary Examiner required division between the apparatus and the article claims on the ground that it was—

perfectly obvious that the article defined can be made by other means than the apparatus,

whereupon applicant eliminated from the patented case all claims except for the apparatus.

The Primary Examiner rejected the claim for the apparatus on the ground that the invention resided solely in the shape of the article; but the Examiners-in-Chief overruled this rejection, holding that—

where an article is given a new shape in order to facilitate the production of the same by a mold, it is difficult to find any ground for the conclusion that the invention of this shape pertained rather to the article produced than to the mold. In such cases it would seem that the applicant should be allowed to choose the form of his claim, or to have both mold and product claims, providing that both are taken in the same patent.

Applicant's patent on the apparatus or mold issued May 23, 1916, and the present application was filed January 8, 1917.

From the foregoing facts it appears that one tribunal of the Office has required division between the invention claimed in applicant's patent and the invention claimed in the instant application because they could not be included in the same case, and while the other tribunal did not have to pass specifically on this point it did state that applicant might have both apparatus and article claims "providing that both are taken in the same patent."

If there is a doubt as to whether the instant claims are for the same invention as the apparatus claims, the doubt should be resolved in favor of applicant under the foregoing circumstances.

It will be noted that applicant's article can be made by entirely different apparatus from that shown in his patent. Indeed, it can be made by hand, since claim 5 only calls for the crescent shape, with the inner and outer peripheries having the same radii.

The process claims are still farther away from applicant's apparatus case. Hence it is held that the inventions of the instant claims are for different inventions from those of the patented claims and must fall under either class 2 or 3 of the decision in No. 1.]

ex parte Mullen and Mullen, (50 O. G., 857; C. D., 1890, 9,) and where one tribunal of the Office has required division on the lines above discussed it is held that the Office should place the claims in the third class of *ex parte Mullen and Mullen* where there is doubt on the subject, and since applicant has filed his present application without unreasonable delay the claims should be allowed, and the decision of the Examiners-in-Chief is reversed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE BIRKIGT.

Decided February 3, 1919.

1. PATENTABILITY—WATER-JACKET FOR INTERNAL-COMBUSTION ENGINES. A water-jacket for internal-combustion engines having a coating applied to the inner surface thereof and the process of making the same *Held* unpatentable in view of the prior art.

Mr. J. L. Norris, *Mr. C. A. Bateman*, and *Mr. W. G. Henderson* for the appellant.

Mr. T. A. Hostetler for the Commissioner of Patents.

SMYTH, *C. J.*:

Marc Birkigt applied for a patent covering a process for protecting the interior of a water-jacket of an internal-combustion engine from corrosion by applying thereto a liquid medium under a pressure sufficient to cause the same to penetrate the walls of the jacket and, after removing the surplus liquid, heating the jacket to dry the coating. He made five claims. Claims 4 and 5 relate to the process and 1, 2 and 3 to the water-jacket after it has been subjected to the coating. Claims 3 and 4 illustrate them all:

3. A water jacket for internal combustion engines composed of aluminum having the surface of the interior walls of its water chamber and the pores of the aluminum adjacent to said interior walls protected and closed, respectively, by a non-corrosive medium.

4. The herein described process of treating the interior walls of the water chamber of a water jacket composed of porous metal, which consists in filling the interior water chamber of the water jacket with a liquid medium capable of preventing corrosion of the metal and which is capable of drying, subjecting the said liquid medium while contained in said chamber to a pressure sufficient to cause said medium to penetrate the pores of the interior walls of the chamber, removing said liquid medium from the water chamber and then heating the water jacket to dry the liquid medium in the pores and on the surface of the interior walls of the water chamber.

All the claims were rejected on reference to patents 77,186 to Greene, 126,909 to Sterling, and 705,506 to Lapp.

The Lapp patent discloses a method of forming a protective coating on iron vessels.

The vessels may be placed in a bath of the protecting liquid and kept there at a high temperature for a considerable period of time and the film of oil which adheres to the metal allowed to cool.

It is also stated in that patent—

that the oil may be applied with a brush and the articles then submitted to the action of heated air under pressure and that the process may be varied by first submitting the oil-coated surfaces to the action of hot air without pressure and then to hot air under pressure and finally to hot air without pressure.

The patent to Sterling describes the process of—

forming a non-oxidizing coating on iron articles and forcing paraffin into the pores of the metal. By this process the articles are submerged in melted paraffin in a vessel which should be hermetically closed, and pressure is applied thereto.

From this it must appear that—

Lapp discloses the entire process except the driving of the liquid into the pores of the metal by pressure on the liquid bath.

But with respect to this the Sterling method of dipping under pressure could be substituted without invention for the brushing or dipping method employed by Lapp.

While the water-jacket may be commercially novel, this is not enough to render it patentable—it must contain invention. We have seen that the process of protecting the surface of iron is old in the art and, this being so, there is nothing patentable in utilizing it in protecting the surface of the water-jacket, for it is neither asserted nor shown that there is more difficulty involved in protecting an aluminum surface than in doing the same thing for an iron surface.

The decision of the Commissioner of Patents in rejecting the claims is affirmed.

Court of Appeals of the District of Columbia.

HUTCHINSON VAPOR HEATING CORPORATION AND GEORGE H. ZELLERS, TRADING AS ZELLERS & CO., *v.* MOUAT.

Decided March 3, 1919.

1. INFRINGEMENT—NOT AVOIDED BY ADDITION OF IMMATERIAL ELEMENT. The essential elements of plaintiff's patent having been appropriated, infringement is not avoided by the addition of an element which is not necessary to the operativeness of the combination.

2. SAME—SLIGHT CHANGES WILL NOT AVOID INFRINGEMENT. The Mouat patent, No. 987,686, for a pressure-regulating apparatus, claims 7 and 10, which involve combinations including a steam-boiler and a receptacle connected thereto by a pipe above the water-level in the boiler, which affords an equalization of steam-pressure on the water in the receptacle and in the boiler and keeps the receptacle filled by water of condensation, is infringed by a similar apparatus in which such a connecting-pipe is employed to perform the same functions, although arranged slightly different from that shown in the patent.

Mr. C. L. Sturtevant and *Mr. E. G. Mason* for the appellants.

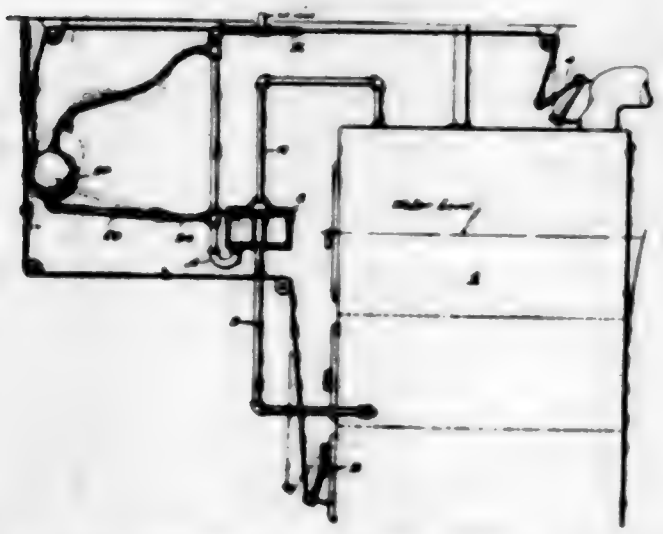
Mr. Chas. E. Brock and *Mr. Harold E. Smith* for the appellee.

ROBB, *J.*:

This is an appeal from a decree in the Supreme Court of the District sustaining the validity of claims 7 and 10 of appellee's patent, (No. 987,686, granted October 19, 1909, to Thomas G. Mouat,) holding these claims to be infringed by appellants and ordering an injunction and accounting.

The patent embraces a pressure-regulating device capable of maintaining substantially constant pressure and temperature of the heating fluid used in a low-pressure heating system. In the ordinary heating system, which constitutes the prior art in this case, the pressure varies from five to ten pounds and runs as high as twenty or twenty-five pounds. This is called the high-pressure system. About the

time Mouat, the appellee, entered the field, the low-pressure or vapor-heating system came into use. In this system, while the water is evaporated and conveyed in the form of steam to the radiators, it is carried at a pressure of only two to seven or eight ounces, instead of from five to twenty-five pounds, as in the high-pressure system. In the high-pressure system, the control of the fuel-supply very easily may be effected by the ordinary pressure-regulator, such as a diaphragm-valve, in which the movable part of the diaphragm is raised or lowered as the pressure of the steam rises or falls. There is sufficient fluctuation in this system to insure the success of such a regulator. For example, if a normal pressure of five pounds is to be carried in the system, a variation of 20 per cent or one pound, either above or below the normal, will operate the diaphragm. It is obvious, however, that in a vapor-heating system, where the pressure varies from two ounces to not more than seven or eight ounces and the fluctuations are correspondingly small, the high-pressure regulator would be inoperative. Mouat's device was intended to solve that problem, by supplying a sensitive apparatus in which the level of the water in the boiler could be disregarded. The following diagram shows the essential features of the Mouat apparatus:



We now reproduce the claims involved:

7. The combination, with a boiler and means for heating the same, of means for maintaining substantially constant the pressure of steam generated thereby, said means comprising a receptacle, a pipe connecting said receptacle with the water space in the boiler, and extending above the bottom of said receptacle, a pipe connecting the upper portion of said receptacle with the steam space of the boiler and arranged to drain toward said receptacle, a movably supported receptacle communicating with the former receptacle, and connections between said receptacle and the means for heating said boiler.

10. The combination, with a boiler and means for heating the same, of means for maintaining substantially constant the pressure of steam generated by said boiler, said means comprising a receptacle extending above the water line of the boiler, a pipe connecting said receptacle with the boiler and extending above the bottom of said receptacle, a pipe connecting said receptacle with the steam space of the boiler and arranged to drain toward said receptacle, a movably supported receptacle communicating with the former receptacle and arranged to drain into the former receptacle, and connections between the latter receptacle and the means for heating the boiler.

It will be noted that these are combination claims and the elements of the combination easily may be identified in the diagram. Thus, "1" is the steam-boiler, "6" the receptacle, "9" the pipe connecting—

said receptacle with the water space in the boiler and extending above the bottom of said receptacle.

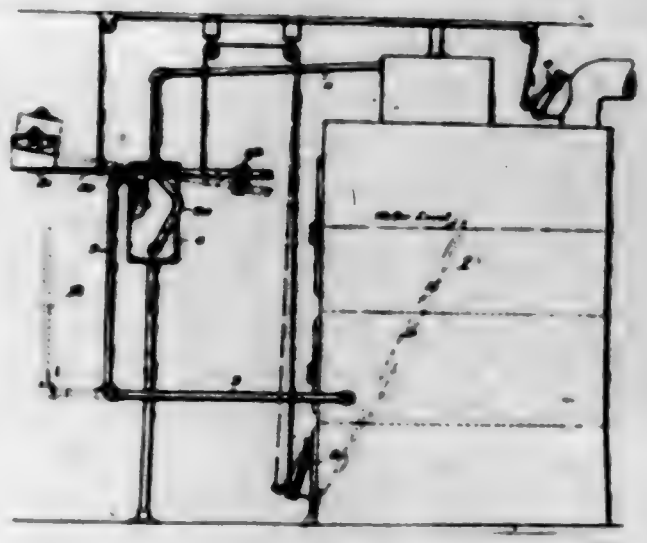
Pipe "11" connects the upper portion of the receptacle "6" with the steam-space of the boiler. "21" is the—

movably supported receptacle communicating with the former receptacle,

or "6." It is essential to have a normal or fixed water-level in receptacle "6," regardless of the water-level in the boiler. This is accomplished by having pipe "9" enter receptacle "6" above the bottom of that receptacle and also above the normal water-level in the boiler, the result being that when the water in receptacle "6" reaches the level of pipe "9," it falls out by gravity into the boiler. Any variation in the water-level of the boiler cannot affect the level in receptacle "6," because there is the same pressure on the surface of the water in that receptacle, exerted through pipe "11," as there is on the surface of the water in the boiler. Therefore, when steam has been generated in the boiler, whatever pressure is exerted must be communicated to receptacle "6," in the manner described, and that pressure will force an amount of water through pipe "34" into movable receptacle "21" and thereby regulate the draft appliance or damper "2."

Steam necessarily is condensing in pipe "11" and the water of condensation is forced or dropped into receptacle "6," so that a constant level is maintained in that receptacle.

Appellants' apparatus is illustrated by the following diagram:



It readily will be seen that there is very little difference between the two devices. The top portion of appellants' pipe "11" is horizontal and it is contended that the pipe drains largely through receptacle "6" and into pipe "9." In appellants' device the water of condensation from the radiators passes through receptacle "6."

The validity of the claims involved is not challenged, the defense being non-infringement—

when these claims are read in accordance with the exact meaning of the language embodied therein.

Specifically, appellants contend that the words in the claims "and arranged to drain toward said receptacle," are words of limitation. This contention is based upon the theory that the prior art discloses practically all that the Mouat patent shows. This theory we cannot accept. The patent most relied upon is that to Roy, No. 714,942, dated September 5, 1899. That patent appellants' expert admitted—

is one that is obviously intended to be used with a system of heating wherein there is considerable steam pressure.

Roy uses a diaphragm and his system differs in several material respects from Mouat's. His damper-regulator primarily depends upon the control of the admission of live steam to his movable receptacle. A different problem confronted him and he solved it in a different way. As to the Shurtleff patent, (No. 781,467, dated January 31, 1905,) appellants' expert admits that water is forced directly from the boiler itself into the bulb used by Shurtleff. Without further analysis of the patent of the prior art we conclude that Mouat has accomplished a new result in a new way. He has worked out the idea of maintaining a substantially constant pressure within a boiler through the medium of a water-trap in which the water is kept at a constant level through condensation. And Mouat also is the first to employ a movable draft-control receptacle which is operated by water forced into it from the water-trap by the steam-pipe connection with the steam-space of the boiler.

It is evident, therefore, that pipe "11" performs a double function. Primarily, it permits the same pressure to be exerted on the surface of the water in trap "6" as there is upon the surface of the water in the boiler,—and it is through this pressure that the movable damper-receptacle is made to operate. Pipe "11" also is made to serve the secondary purpose of keeping trap "6" supplied with water through condensation. Once having conceived the idea that these two purposes might be combined in pipe "11," it would be a comparatively simple matter so to vary the construction of that pipe as to affect the objects desired. In other words, had it been found that there was not sufficient condensation, pipe "11" could have been made a little larger or the vertical portion a little longer. Appellants' expert admitted this, saying that should pipe "11" prove inadequate it might be extended "so as to furnish an ample condensing surface." Moreover, the steam-pressure being toward and not away from receptacle "6," it is apparent that even though the upper portion of pipe "11" should be horizontal, the apparatus still would be operative. But, even disregarding what is common knowledge and indulging in the extremely technical interpretation insisted upon by appellants, pipe "11" still would be "arranged to drain toward said receptacle," even though its upper section should be horizontal, because a substantial portion of it is vertical and the vertical section is connected with receptacle "6." We are fully convinced, however, that the words just quoted should be given such an interpretation as will adequately protect this patentee. In using them he merely was describing a particular construction, or, as he says in his specification, "one exemplification." Having in mind the scope of his invention, the double function of pipe "11," and the end to be attained, we are clearly of opinion that appellants have taken an altogether too technical view of these claims. And there is authority for this view. (*Winans* v. *Denmead*, 15 How., 330; *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274; *Hoyt* v. *Horne*, 145 U. S., 302; *Metallic Extraction Co.* v. *Brown*, 104 Fed., 345; *Adam* v. *Folger*, 120 Fed., 280; *Schlz Mfg. Co.* v. *Russell & Co.*, 180 Fed., 61.)

Mention is made in appellant's brief of the file-wrapper, but that paper was not made a part of the record by exhibit or otherwise, nor is to be found in the files of the case. However, appellee answering says that claim "7" of the patent in suit originally was claim "12" of the application as filed.

It is of no consequence that appellants have conducted the returning water from the radiators through the water trap-receiver, because they have not eliminated and could not eliminate pipe "11." In other words, appellants have appropriated the essential elements of the Mouat combination and it is immaterial, in our view, whether they have added an element not necessary to the operativeness of the combination. Whether much or little water in appellants' construction drops into receptacle "6" is not important in view of the admitted fact that pipe "11" is indispensable to the success of appellants' apparatus and is capable of performing the same functions performed in the Mouat apparatus. There may be a distinction but there is no essential difference in the two combinations, and to refuse protection to this patentee would be entirely to ignore the purpose of the patent laws.

The decree is affirmed, with costs.

Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 18, 1919.

Thomas J. Duffy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered April 13, 1915, No. 102,841, to Thomas J. Duffy, of 1204 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Thomas J. Duffy at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Thomas J. Duffy, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 18, 1919.

Jones & Dudley, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Boyer Chemical Laboratory Co., of 12 West Kinzie street, Chicago, Ill., for registration of a trade-mark and trade-mark registered July 30, 1889,

No. 16,282, to Jones & Dudley, of 140 Monticello avenue, Jersey City, N. J., and a notice of such declaration sent by registered mail to said Jones & Dudley at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Jones & Dudley, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 29, 1919.

The heirs, assigns, or legal representatives of John Baker, Jr., deceased, take notice:

An interference existing between the applications for patent of Michael A. Popkess and James E. Black, care of Bituminized Road Company, 405 Reliance Building, Kansas City, Mo., and John Baker, Jr., of 17 Battery Place, New York, N. Y., was on February 6, 1919, suspended for a period of thirty days in order that the legal representatives of Baker might intervene, the Office having been notified of the death of said Baker. The time referred to has expired, but no response has been made on behalf of the heirs, assigns, or legal representatives of Baker. Notice is therefore hereby given that unless said heirs, assigns, or legal representatives of Baker shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 1, 1919.

C. Schmitz & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Anacortes Fisheries Co., of 1912 L. C. Smith Building, Seattle, Wash., for registration of a trade-mark and trade-mark registered October 22, 1907, No. 65,811, to C. Schmitz & Co., of 83–86 Wall street, New York, N. Y., and a notice of such declaration sent by registered mail to said C. Schmitz & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said C. Schmitz & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Patents Nos. 1,299,412 to 1,300,232.

THE OFFICIAL GAZETTE

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Issue of April 8, 1919.

Patents	836—Nos.	1,299,413 to No. 1,300,232,	inclusive.
Designs	19—Nos.	52,173 to No. 52,191,	inclusive.
Trade-Marks	105—Nos.	126,012 to No. 126,117,	inclusive.
Labels	20—Nos.	21,170 to No. 21,189,	inclusive.
Prints	3—Nos.	5,089 to No. 5,091,	inclusive.
Reissues	9—Nos.	14,083 to No. 14,091,	inclusive.
Total	979		

You agree with the man on the W. S. S. whenever you buy one. He said:

"If you would be wealthy think of saving as well as getting."

—Ben Franklin.

Notice—Marking Drawings for Identification.

Department of the Interior,
United States Patent Office,
Washington, D. C., March 24, 1919.

The attention of the attorneys is called to Rule 52, paragraph (*g*), which reads in part as follows:

* * * "The title should be written with pencil on the back of the sheet."

A compliance with this suggestion will avoid trouble in identifying the application to which the drawing belongs, especially in design cases, where more than one application is filed by the same inventor.

Whenever a substitute or additional drawing is filed, the serial number of the application should be written on the back of the drawing.

J. T. NEWTON,
Commissioner.

Notice—Attorney's Address.

Department of the Interior,
United States Patent Office,
Washington, D. C., April 1, 1919.

Many letters are being returned to this Office for lack of street address. The attorney's full post-office address should be given in every power of attorney. The prompt delivery of communications will thereby be facilitated.

J. T. NEWTON,
Commissioner.

Notice.

Department of the Interior,
United States Patent Office,
Washington, D. C., June 26, 1918.

In order that the public may have the benefit of the full time in trade-mark cases, the date of actual publication of the Official Gazette will be the effective date from which the thirty-day period prescribed by the Trade-Mark Act will be computed. The actual date of publication will be found in each weekly number under the date of issue on the first page.

J. T. NEWTON,
Commissioner.

Changes in Classification.

(Order No. 2,678.)

Department of the Interior,
United States Patent Office,
Washington, D. C., April 1, 1919.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 21, Carriages and Wagons, (Division X,) abolish subclass—

154. Convertible road and rail vehicles.

The patents formerly contained in this subclass have been placed in various subclasses in classes 104, Railways; 105, Railway Rolling-Stock, and 295, Railway Wheels and Axles.

In class 295, Railway Wheels and Axles, (Division XXXIV,) establish the following subclass and definition:

Wheels—

8.5. Convertible road and rail.

8.5. WHEELS, CONVERTIBLE ROAD AND RAIL. Includes means for changing the wheel-tread, so as to adapt it for running on a roadway or a railway, generally by providing a removable rim or tread.

The patents contained in this subclass have been taken from class 21, Carriages and Wagons, subclass 154, Convertible road and rail vehicles, hereinbefore abolished.

J. T. NEWTON,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 4, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unwanted Trees, Plants, and Flowers.	Feb. 13	Feb. 6	202
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Preservation; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 13	Dec. 31	448
173	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Mar. 10	Dec. 17	189
234	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 19	Mar. 5	239
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Dec. 30	Nov. 6	189
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Nov. 20	Jan. 14	223
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Jan. 21	Feb. 5	278
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 14	Jan. 23	165
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Sept. 15	Dec. 23	230
235	10. Carriages and Wagons; Motor Vehicles	Jan. 27	Mar. 13	402
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 17	Mar. 6	178
222	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Oct. 1	Oct. 31	993
229	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 23	Mar. 4	413
223	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 17	Mar. 1	184
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 3	Jan. 3	433
113	16. Radiant Energy; Telegraphy; Telephony	Nov. 23	Dec. 3	895
307	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Mar. 1	Feb. 3	84
220	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 28	Dec. 16	389
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Feb. 7	Jan. 24	214
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 1	Feb. 15	210
313	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 2	Jan. 6	269
249	22. Aeronautics; Firearms; Ordnance	Jan. 16	Jan. 20	224
317	23. Accounting; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Jan. 15	Feb. 7	135
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 4	329
215	25. Agitating; Butchering; Centrifugal Bowl Separators; Milk; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 27	Feb. 17	149
108	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Oct. 17	Dec. 9	895
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 20	Jan. 28	626
236	28. Internal-Combustion Engines	Nov. 20	Dec. 16	893
147	29. Boring and Drilling; Chucks or Sockets; Coopering, Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Dec. 3	Jan. 3	254
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 18	Mar. 13	228
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 28	Jan. 20	208
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Sept. 10	Feb. 7	872
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads and Pavements; Roofs.	Nov. 21	Nov. 20	242
104	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Dec. 20	Jan. 17	288
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Mar. 4	Feb. 21	289
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Mar. 3	Feb. 4	417
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Oct. 15	Oct. 16	670
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice-Harvesting; Stationery; Stone-Working; Wells.	Mar. 13	Mar. 14	117
285	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Nov. 13	Dec. 3	430
278	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 7	Feb. 17	288
188	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 28	Dec. 28	287
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Oct. 28	Dec. 7	437
302	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 14	Mar. 1	160
352	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Sept. 27	Dec. 3	176
279	45. Clutches; Lubrication; Motors; Railway Brakes	Dec. 14	Jan. 7	249

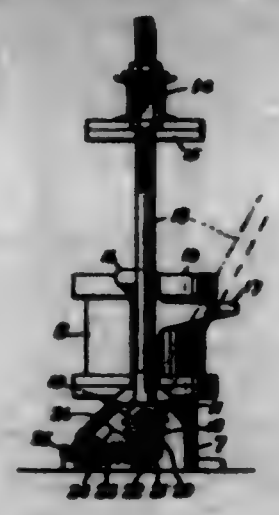
Oldest new case, Sept. 10; oldest amended, Oct. 16.
Total number of applications awaiting action..... 16,201

168	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 27	Mar. 17	295
	Designs	Feb. 17	Mar. 13	249
	Labels and Prints	Mar. 15	Mar. 25	61

PATENTS

GRANTED APRIL 8, 1919.

1,299,413. COUNTERBALANCE DEVICE FOR MOLDING-MACHINES. ARNOTT ALLEN, Dunellen, N. J., assignor to R. H. Mumford Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Mar. 1, 1917. Serial No. 151,841. 8 Claims. (Cl. 22—44.)



1. In a molding machine, the combination of a base, a shaft trunnioned therein, a ramming yoke mounted on said shaft, a pair of spaced downwardly depending arm-like members on said shaft within the base, and a counterbalance compression spring engaging each of said members and mounted within the base and interposed between the base and each of said members.

2. In a molding machine, the combination of a base, a shaft trunnioned therein, a ramming yoke carried by said shaft, two spaced, downwardly extending arms on said shaft, a spring-engaging member pivotally mounted on each arm, and a compression spring adapted to engage each spring-engaging member.

4. In a molding machine, the combination of a base, a shaft trunnioned therein, a ramming yoke carried by said shaft, two spaced, downwardly extending arms on said shaft, a spring-engaging member pivotally mounted on each arm, a second pair of spring-engaging members loosely supported in the base in alinement with the first pair of spring-engaging members, and a compression spring between each pair of members.

6. In a molding machine, the combination of a base, a shaft trunnioned in the base, a ramming yoke mounted on the shaft, an offset downwardly projecting arm on said shaft, a spring-engaging member pivotally mounted on said arm, a second spring-engaging member supported in the base, and a compression spring between said members.

8. In a molding machine, the combination of a base, a shaft trunnioned in said base, a ramming yoke mounted on said shaft, a pair of collars non-rotatively mounted on said shaft at spaced intervals, each collar being provided with a downwardly extending arm offset with respect to the center line of the shaft, a cup-shaped spring-engaging member pivotally mounted on each arm, a second cup-shaped member in opposition to each of the aforesaid cup-shaped members, a compression spring between each pair of cup-shaped members, and means whereby the second pair of cup-shaped members are loosely supported in the base.

1,299,414. SERVING APPARATUS. CLARENCE EDWARD ANABLE, Sacramento, Calif. Filed Aug. 3, 1918. Serial No. 248,985. 2 Claims. (Cl. 211—81.)

2. In a roll holder, the combination of a support, a mandrel or core having end pins bearing in said support and mounted off-center in the mandrel and provided with annular grooves, one of said pins being at each end of the mandrel and the pins being readily separable endwise from said support and being pushed through the support and ends of the mandrel from the outside after the roll of paper is positioned on the mandrel, and a spring plate fixed to the mandrel and normally projecting toward each



end thereof and beyond the circumference of the mandrel, said mandrel having narrow transverse slots, one near each end, intersecting the bore of the pins, and said spring having bent end portions depressible into said slots and adapted to be locked into engagement with the grooves of the pins when the mandrel is inserted into the open center of a roll of paper or other fabric.

1,299,414. ELECTROLYTIC REFINING OF METALLIC ZINC-BEARING MATERIALS. CHARLES H. ALDRICH and JOHN K. BRYAN, Baltimore, Md., assignors to Electrolytic Zinc Company, Inc., New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,350. 9 Claims. (Cl. 204—1.)

1. As a step in the electrolytic separation of metallic zinc-bearing materials in anode form, keeping the cadmium content of such materials out of solution during the electrolysis.

6. In the electrolytic separation of metallic zinc-bearing materials in a number of tanks in series circuit, the step which consists in removing the cathode deposits including co-deposited impurities, from the first tank or tanks of the series, and commingling the cathode deposits from the later tanks of the series, relatively free from such impurities.

9. In the electrolytic separation of metallic zinc-bearing materials, including cadmium, in a number of tanks in series circuit, the method of recovering substantially cadmium-free cathode zinc which consists in co-depositing cadmium in a number of the first tanks of the series, the number depending upon the amount of cadmium present, whereby the solution coming to later tanks is relatively cadmium-free and relatively pure zinc is deposited in the later tanks, and segregating the deposits from the first tank or tanks and those from the later tanks.

1,299,415. SHEET-METAL ARTICLE. AXEL E. ANDERSON, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed May 2, 1917. Serial No. 166,031. 7 Claims. (Cl. 86—32.)

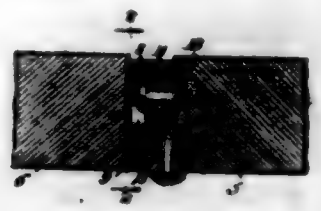


1. A sheet metal article comprising a single-piece shell open from end to end and composed of an inner and an outer side wall-portion and a connecting wall-portion,

each of said side wall-portions presenting a free edge adjacent the free edge of the other, the said edge of the inner wall-portion providing an interior abutment and the said edge of the outer wall-portion providing a retaining flange, said article also comprising a cap received upon said abutment and held thereon by said flange; substantially as described.

2. A sheet metal article of the character indicated, comprising a shell having inner and outer side walls, one of said walls having therein a recess adapted to receive a tool; substantially as described.

1,299,416. AUTOMOBILE-DOOR BUFFER. JAMES T. ATWOOD, Rockford, Ill. Filed Apr. 23, 1918. Serial No. 230,215. 4 Claims. (Cl. 16—77.)



1. A buffer device comprising a cylindrical bushing, a roller buffer freely rotatable thereon, and means for fixedly clamping said bushing to a frame or the like and permitting radial adjustment of said bushing and buffer upon said clamping means without detachment from said frame.

2. A buffer device comprising a roller, and a fastener for rotatably securing said roller to a frame or the like, said fastener including means to permit radial adjustment of said roller in any direction upon the fastener.

3. A buffer device comprising a rotatable buffer having an opening therethrough, a bushing in the opening in the roller and projecting at opposite faces thereof, the buffer being rotatable upon the bushing, and a headed fastening extending through the bushing, the shank of the fastening being of less diameter than the internal diameter of the bushing, and the head of the fastening exceeding the internal diameter of the bushing to lie against the adjacent end thereof and clamp the bushing rigidly between the head and the support to which the buffer is applied, whereby, when the fastening member is loosened, the bushing and the rotatable buffer may be adjusted radially in any direction upon the fastener.

4. A buffer device of the character described, comprising a roller, a bushing through the roller and about which the roller is freely revoluble, and fastening means of less diameted than the bushing and passing loosely through the bushing for securing the same to a part of a closure or its casing, and when loosened, allowing the bushing and its roller to be adjusted radially in any direction relatively to the fastening means.

1,299,417. GARDEN-TOOL. WILLIAM ELMER BAILEY, Columbus, Ohio. Filed July 30, 1918. Serial No. 247,363. 1 Claim. (Cl. 97—39.)



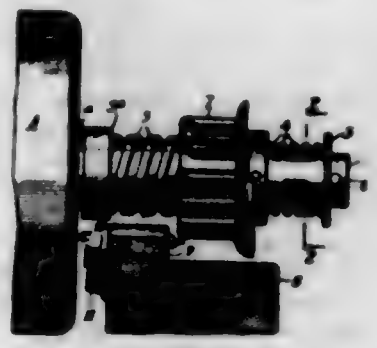
A garden tool having a thin entirely flat rectangular blade with a straight side and end cutting edges and sharp right angled chopping corners, a handle member attached to the back of the blade in the longitudinal center line at an acute angle therewith, and short teeth depending from and scattered over the lower surface of the blade, said teeth being shorter along the side edges and longer along the longitudinal center line of the blade, permitting of freer use of the side edges of the blade and providing only slight agitation of the ground by the teeth along the side edges of the blade and greater agitation along the longitudinal center line.

1,299,418. ENGINE-STARTER. VINCENT BENDIX, Chicago, Ill. Filed June 29, 1917. Serial No. 177,757. 22 Claims. (Cl. 74—7.)



1. In combination with a wheel, a gear ring mounted to slide peripherally thereon, and a plurality of springs cooperating with said wheel and ring to resist sliding movement of the ring and for holding such ring in place against outward movement on the wheel.

1,299,419. ENGINE-STARTER. VINCENT BENDIX, Chicago, Ill. Filed June 29, 1917. Serial No. 177,758. 7 Claims. (Cl. 74—7.)



1. A rotatable driving shaft, a screw shaft directly connected to and driven thereby and having a longitudinal movement in respect thereto and a rotary movement therewith, a driving member mounted on the screw shaft for longitudinal movement thereon and rotary movement therewith, in combination with a wheel of the engine to be started, said wheel having a yielding peripheral portion with which said member is adapted to have driving engagement when advanced longitudinally on its shaft.

3. A rotatable driving shaft, a hollow screw shaft mounted thereon for rotary movement therewith and longitudinal movement thereon and directly and positively driven thereby, a driving member mounted on the screw shaft for longitudinal movement thereof and rotary movement therewith, in combination with a wheel of the engine to be started, said wheel having a yielding peripheral portion with which said member is adapted to have driving engagement when advanced longitudinally on its shaft.

5. A rotatable driving shaft, a hollow screw shaft mounted thereon for rotary movement therewith and longitudinal movement thereon and directly and positively driven thereby, a driving member mounted on the screw shaft for longitudinal movement thereof and rotary movement therewith, a spring for holding the screw shaft in a normal position longitudinally, in combination with a wheel of the engine to be started, said wheel having a yielding peripheral portion with which said members is adapted to have driving engagement when advanced longitudinally on its shaft.

7. A rotatable driving shaft, a hollow screw shaft mounted on and splined to the driving shaft, a pinion screw-threaded on the screw shaft, a spring bearing against the screw shaft for holding it to a normal longitudinal po-

sition on the driving shaft, in combination with a wheel of the engine to be started, said wheel having a yielding peripheral portion with which said member is adapted to have driving engagement when advanced longitudinally on its shaft.

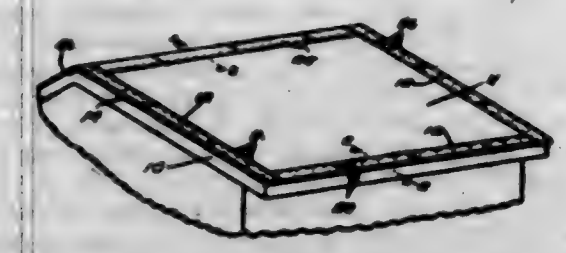
1,299,420. CAR-DOOR-OPERATING DEVICE. WILLIAM A. BOCK and RICHARD G. BOCK, Chicago, Ill. Filed Mar. 25, 1918. Serial No. 224,552. 7 Claims. (Cl. 268—6.)



1. A door operating device for car doors and the like including, in combination: a member adapted to be supported in a depending position from a door hanger track of a type having either a horizontal or vertical supporting section; door engaging means movably supported from said member; and means mounted on and co-acting with said member adapted to grip either of said types of track when the device is applied thereto.

7. In a door operating device of the character described, the combination with a supporting member adapted to engage with a door hanger track, of means coöperable with said member adapted to grip a track, an operating lever pivotally attached to said member, said lever being adjustable lengthwise of said member in addition to its pivotal attachment, and coöperating means on said member and lever adapted to engage when said lever is shifted with respect to said member to thereby lock said lever and member together and facilitate application of the device to a track.

1,299,421. METAL ROOF-EDGING. WILLIAM BOSS, St. Paul, Minn. Filed Nov. 5, 1915. Serial No. 59,767. 1 Claim. (Cl. 108—28.)



An edging for roofing comprising a sheet metal strip having a flat top portion and a turned-over portion at the lower edge, the flat portion being adapted to engage the roofing and to be secured to the roof and the turned-over portion comprising a portion formed parallel with the top portion and spaced therefrom, and a right-angled flange turned up from said parallel portion and adapted to fit closely against the roof edge, the ends of said parallel portion being inwardly mitered and the ends of the right-angled portion being cut off straight at the termination of the mitered cuts to permit the edging strips to be joined either in alinement or at right angles to one another.

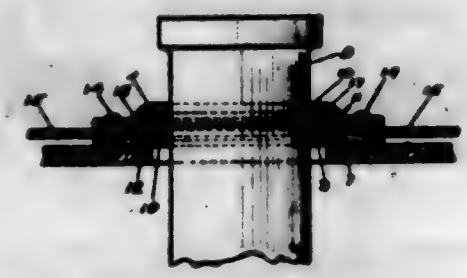
1,299,422. COASTER-BRAKE. FENELON B. BROCK, Washington, D. C. Filed Feb. 20, 1915. Serial No. 9,008. 4 Claims. (Cl. 206—57.)



3. In a coaster brake the combination with the axle, hub, driver and stationary brake holding member of a unitary expansible longitudinal split driving and braking sleeve adapted at one end to coöperate with the stationary braking member and at the other end to engage a part of the hub and coöperating wedge-like screw threads on the driver and sleeve.

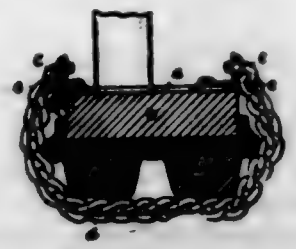
4. In a coaster brake, a combined driving and braking sleeve interiorly threaded throughout its length diametrically resilient and split longitudinally.

1,299,423. ROOF-FLASHING. JAMES BROPSON, Cleveland, Ohio. Filed Jan. 30, 1919. Serial No. 274,063. 3 Claims. (Cl. 285—31.)



1. A flashing comprising upper and lower rings, the upper ring having a channel in its under side, and the lower ring having a rib fitting in said channel, packing between the rib and the channel, and a roof plate having an opening receiving said rings, the edge of the plate around said opening being clamped between said rings.

1,299,424. HOOK. ANSON E. CARLTON, Paterson, N. J. Filed Oct. 17, 1918. Serial No. 258,546. 2 Claims. (Cl. 24—241.)

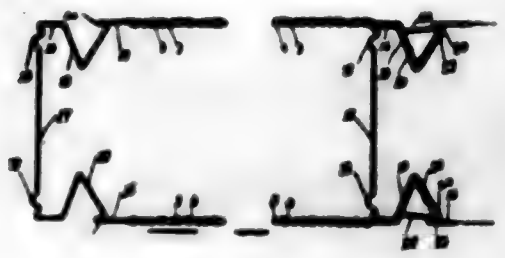


1. In combination, with a link, a hook with which it is coupled, a collar slipped onto the free end of the hook, the periphery of the collar and the opposed face of the shank of the hook forming a link-receiving space converging away from the bend of the hook and of less width at its narrowest portion than the link is thick, and a removable stop device carried by the hook between its extremity and the collar.

1,299,425. WALL STRUCTURE. AMOS M. CARPENTER, Kalamazoo, Mich. Filed July 7, 1913. Serial No. 777,646. 5 Claims. (Cl. 72—117.)

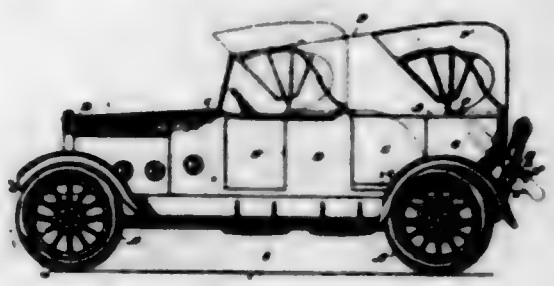
5. In a wall structure, the combination with a plurality of sheet metal units each comprising spaced side mem-

bers united at one edge by a cross member each side member having a female joint member adjacent the cross member and a male joint member at its outer edge engaging the female joint members of adjacent units and



whereby the side members are supported in spaced relation with cross members at the joints thereof, the outer edges of the side members being capable of being swung apart to permit the engaging of the joint members with a lateral movement.

1,299,426. AUTOMOBILE-BODY. BAZEL E. CARRM, St. Louis, Mo., assignor to American Motors, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 20, 1917. Serial No. 163,517. 12 Claims. (Cl. 21—42.)

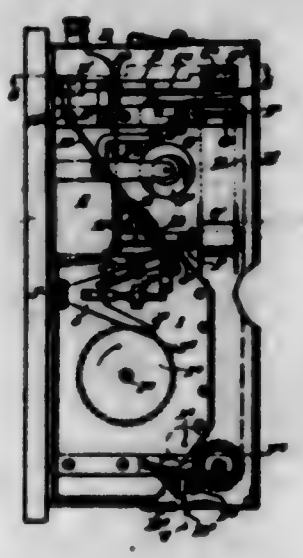


1. A convertible automobile body embodying a front passenger compartment having a permanently located seat and back therefor and a rear passenger compartment formed by a rear seat section hinged in proximity to the floor level at its lower forward edge to fold with its upper side edges against the rear side edges of the back of the seat of the front compartment and its front edges against the floor sills, inwardly folding door jamb sections movable into position to bridge the bottom of the space between the said rear side edges of the back and the front edges of the sides of the rear seat section to form a brace between the same and outwardly opening doors carried by the jamb sections, said jamb sections and doors closing the sides of the rear passenger compartment.

1,299,427. RECORDING INSTRUMENT. CHARLES F. CHAPMAN, Philadelphia, Pa., assignor to The Brown Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 29, 1916. Serial No. 117,393. 13 Claims. (Cl. 234—3.5.)

11. In an instrument of the type described the combination with a pivoted needle element of a weighted deflector extending over the needle and tending to move into the position in which it deflects the latter, a clock mechanism including a continuously rotating toothed wheel, a weighted member riding on the teeth of said wheel, a resetting connection between said member and deflector, and a latch normally holding said deflector in an inoperative position and intermittently tripped by said member.

13. In a recording instrument of the type described, the combination with the needle element, of a loaded deflector tending to move said element into a recording position, a clock mechanism including a toothed wheel, a weighted member riding on the teeth of said wheel and thereby given successively rising and falling movements and adapted to trip said lock as it nears the end of each rising movement, a member connected to said deflector, a lock normally engaging said member and thereby holding said deflector in an inoperative position but adapted to be tripped by said weighted member as the latter nears



the end of each rising movement, and a lost motion connection between said members operative to reset the deflector during each falling movement of the weighted member without preventing the operation of the deflector when said lock is tripped.

1,299,428. VALVE. JOHN R. CRESKA, Pittsburgh, Pa., assignor of one-half to Henry L. Schaack, Pittsburgh, Pa. Filed Nov. 3, 1917. Serial No. 200,060. 7 Claims. (Cl. 251—158.)

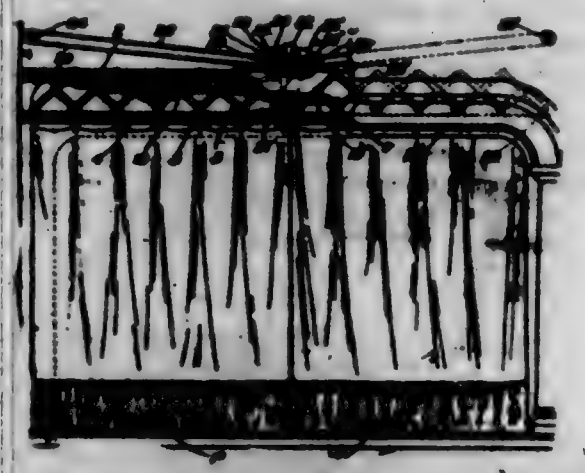


1. In a valve, the combination of a suitable shell or body having an inlet and outlet, a tapered valve-plug engaging a seat formed for same in said shell or body having an opening therein, a cap engaging an opening in said shell or body and bearing against the upper end of said valve-plug and extending outside said shell, and said cap having an opening through which the valve-stem passes.

4. In a valve, the combination of a shell or body having an inlet and outlet, a tapered valve-plug engaging a tapered seat in said valve-body, a cap engaging a threaded opening in said valve-body, the inner end of said cap having a rounded edge engaging the upper end of said valve-plug and having an opening extending through it for the valve-stem.

7. In a valve, the combination of a suitable shell or valve-body having an inlet and outlet, a tapered plug engaging a tapered seat in said valve-body, a hardened metal ring in the upper end of said valve-plug, a cap engaging an opening in said valve-body having a conical inner end portion of hard metal engaging said ring, and said cap having an opening through which the valve-stem extends.

1,290,420. THEATER-CURTAIN. George W. Curtiss, Kansas City, Mo. Filed June 11, 1918. Serial No. 239,404. 9 Claims. (Cl. 156—46.)



1. In combination with separate curtain members, a hanger for each curtain member, and common means for extending and returning said hangers to effect synchronous movement of the curtain members.

1,290,480. TOY. Arthur V. Da Costa, Arlington, N. J., assignor to The Imsi Company, Newark, N. J., a Corporation of New Jersey. Filed May 13, 1918. Serial No. 234,130. 6 Claims. (Cl. 46—46.)



1. A child's toy, in the form of a rattle, comprising in combination a spiral spring of celluloid material, a handle connected to said spring at one end thereof and a hollow bulbous member containing a loose member or loose members, which bulbous member is connected to the spring at the other end thereof.

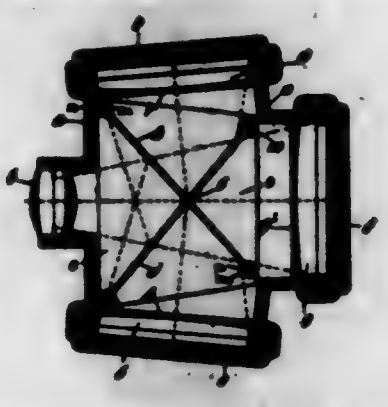
2. A child's toy, comprising in combination a hand member, a swinging bulbous rattle member containing a movable member or movable members, and a spiral spring member connecting the hand member and the swinging bulbous rattle member.

3. A child's toy, comprising in combination a hollow bulbous member of celluloid containing loose pieces or members, a hand member of celluloid, and a flexible celluloid member formed of a celluloid rod wound in the form of a spiral and having one end of the spiral connected to the hand member and the other end of the spiral connected to the bulbous member.

1,290,431. PHOTOGRAPHIC CAMERA. Alfred Dawson, Kent, England. Original application filed Feb. 21, 1913, Serial No. 749,877. Divided and this application filed Dec. 30, 1916. Serial No. 139,913. 8 Claims. (Cl. 95—2.)

1. In a photographic camera for use in the production of negatives in natural color the combination, with a single objective or lens, of two plane-parallel light-transmitting and reflecting elements arranged obliquely to each other, so that the planes thereof bisect one another on the optical axis of the lens.

4. In a photographic camera for use in the production of negatives in natural color the combination, with a single objective or lens, of a plurality of pockets for sensitive plates, two plane-parallel light-transmitting and reflecting elements whereof the planes bisect one another on the optical axis of the lens and a plano-concave corrector disposed between the light-transmitting and reflecting elements and each sensitive plate.



7. In a photographic camera for use in the production of negatives in natural color the combination, with a single objective or lens, of a plurality of pockets for sensitive plates, two plane-parallel light-transmitting and reflecting elements whereof the planes bisect one another on the optical axis of the lens, channeled posts for embracing the edges of the said elements, elastic packing in said posts in contact with said element edges, grooved plates for receiving the edges of said elements not embraced by said channeled posts and for securing the said channeled posts and elements in position and a plano-concave corrector disposed between the said light-transmitting and reflecting elements and each pocket for the sensitive plate.

1,290,482. FISH-BAIT. John W. Dickens, Fort Wayne, Ind. Filed July 18, 1917. Serial No. 181,298. 6 Claims. (Cl. 43—30.)



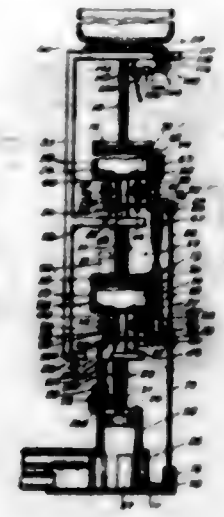
1. In a device of the class described, a floating body having a vertical opening extending therethrough at right angles to its axis; a hook-cluster; an anchor for detachably securing the hook cluster at either end of the opening accordingly as the anchor is positioned; and means at the head end of the body for the attachment of the line.

1,290,433. INTERNAL-COMBUSTION ENGINE. Kennedy Dougan, Minneapolis, Minn. Filed Sept. 1, 1911, Serial No. 647,175. Renewed Jan. 10, 1918. Serial No. 211,317. 26 Claims. (Cl. 123—2.)

2. A power pumping apparatus embodying successively acting motive fluid actuated pistons, and admission and exhaust valves for the actuating fluid for each piston, a pump for delivering fluid under pressure embodying a pump piston connected with the motor pistons, means operated by the fluid pressure created by the pump piston for opening the exhaust valves of the motor pistons and means operated by the actuating pressure for one motor piston for closing the exhaust valve for the motive fluid of the other motor piston.

6. A power pumping apparatus embodying successively acting motive fluid actuated motor pistons, and admission and exhaust valves for the actuating fluid of each piston, a pump for delivering fluid under pressure embodying a pump piston connected with the motor pistons to deliver fluid during the exhaust strokes of the motor pistons, means operated by the fluid pressure created by the pump piston for opening the exhaust valves of the motor pistons alternately, one during each delivery stroke of

the pump piston and means operated by the motive fluid pressure of each cylinder for closing the exhaust valve and opening the admission valve for the motive fluid of the other motor piston.



11. An explosive engine comprising a plurality of engine units each connected to and adapted to operate a common member, and said common member, an exhaust valve and an intake valve on each engine unit, a cam shaft and cams for operating each set of valves on each engine unit, and means to rotate both cam shafts simultaneously a quarter turn in the same direction at each explosion and compression stroke of the engine.

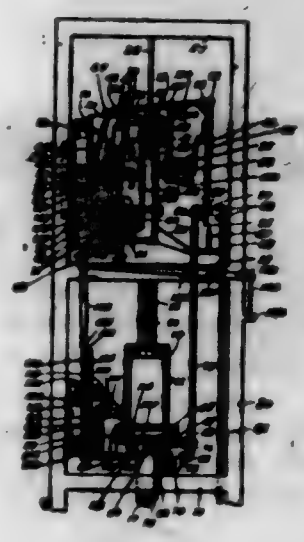
20. An explosive engine comprising a plurality of engine units each connected to and adapted to operate a common member, and said common member, an exhaust valve and an intake valve on each engine unit, a cam shaft and cams for operating each set of valves on each engine unit, supplemental cylinders provided with open passageways connecting said cylinders with the cylinders of the different engine units, respectively, a piston working in each of said supplemental cylinders, a single rod connected to both of said pistons, a ratchet fast on each cam shaft, a swinging pawl operating therewith, and links pivotally connecting said rod and said swinging pawls.

24. An explosive engine comprising an inlet valve, a shaft, a cam thereon movable between fixed limits independently of said shaft, means to rotate the shaft and thereby move the cam into active position positively to open the valve, an oil-filled receptacle comprising a cylindrical chamber, a piston in said chamber, a rod connecting said piston and said cam, by which actuation of said cam will elevate the piston, means actuating said rod to withdraw said cam from its active position, a pair of pipes connecting the upper and lower portions of said chamber having valves to permit flow of oil through said pipes in opposite directions only, and a choke valve in one of said valves to regulate flow of oil therethrough and retard downward movement of said piston.

1,299,434. INTERNAL-COMBUSTION ENGINE. KENNEDY DOUGAN, Minneapolis, Minn. Filed Aug. 17, 1911, Serial No. 644,504. Renewed Sept. 6, 1918. Serial No. 252,954. 23 Claims. (Cl. 123—2.)

1. An explosive engine comprising a plurality of engine units, a weight connected with the pistons of said engine units and adapted to be lifted by any of them, a pump having the piston thereof connected with said weight so that pumping action will be effected by the descent thereof, a valve in the pump discharge and means controlled by the pressure in the pump receiver to actuate said valve for rebulating the rate of reciprocation of the engine.

3. An explosive engine comprising a plurality of engine units, a weight connected with the pistons of said engine units and adapted to be lifted by any of them, a pump having the piston thereof connected with said weight so that pumping action will be effected by the descent thereof, means for controlling the intake valves of the engine units so that when the weight is raised by an explosion in one engine unit a charge will be drawn into the cylinder of another engine unit, an enlarged chamber being formed around the lower portion of the pumping cylinder and said lower portion being provided with elongated openings into said chamber forming a by-pass around the pumping piston in the lower portion of its descent to permit the final movement of the descending weight to operate wholly to compress said charge.



8. An explosive engine comprising a plurality of engine units, a weight-operating member connected with the pistons of said engine units and adapted to be lifted by any of them, an oil receptacle comprising a cylinder, a piston working in said cylinder connected with said weight-operating member, means for trapping oil beneath said piston including a second piston movable by pressure of said trapped oil to release the same, an exhaust valve and valve gear on each engine unit, a pivoted lever and connections to said second piston for operating said valves, means connected with said lever for selecting which valve shall be operated, and a second piston in said cylinder above and independent of said first piston connected with said lever and operable by return movement of said first piston in said cylinder to actuate said selecting means.

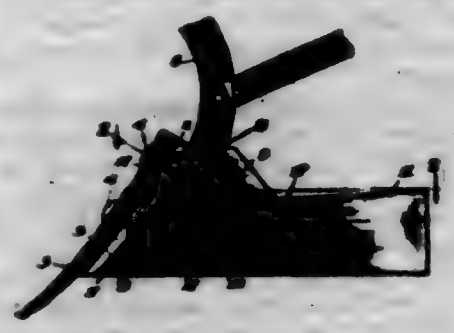
17. An explosive engine comprising a weight-operating member connected to and reciprocated by the piston of said engine, an intake valve and valve gear comprising a weighted arm positively to open the valve, a roller on said arm, a pair of rollers on said reciprocating member, a slide between said pair and said roller on the arm, a lever pivoted to the reciprocating member and having pivotal connection with said slide, a spring for holding said lever and slide in normal position, and a cam portion on said slide positioned to permit said arm to swing by gravity and open the valve when the reciprocating member approaches the end of its return stroke.

20. An explosive engine comprising a weight-operating member connected to and reciprocated by the piston of said engine, a rotary member operated by movement of said reciprocating member, an ignition system including an electric circuit having two contact bars spaced apart to break said circuit, a centrifugal member on said rotary member, and a switch carried by said centrifugal member and positioned thereby to engage said contact bars and close said circuit when the reciprocating member ceases movement at the end of the return stroke.

1,299,486. PLOW ATTACHMENT. SAM PINKNEY DENKINS, Saluda, S. C. Filed Jan. 5, 1918. Serial No. 210,582. 3 Claims. (Cl. 97—36.)

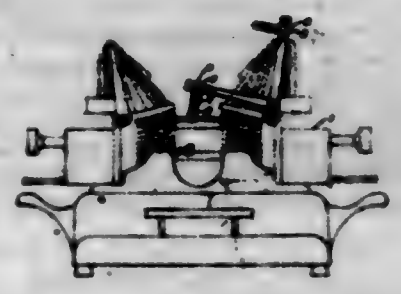
1. A plow blade supporting attachment comprising a bed-plate provided at one side with a rearwardly extending land-side wing and an off-set projecting forward of the

bed-plate on the land side, the bed-plate being formed with a socket made in its rear face to receive a plow-stock, the



wall of the socket next to the land-side and the opposite wall serving to brace the stock.

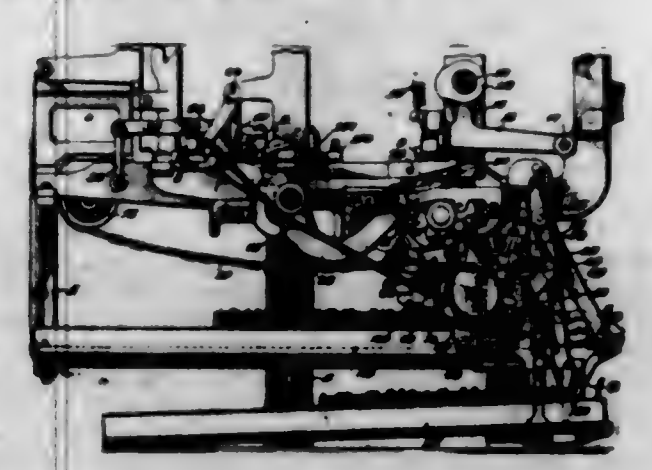
1,299,436. RULING ATTACHMENT FOR TYPEWRITERS. JAMES M. DUDLEY, Bessemer, Ala. Filed Sept. 14, 1917. Serial No. 191,424. 13 Claims. (Cl. 197—113.)



1. A typewriter ruling attachment, comprising a roll having a ruling edge, a spring frame comprising flexible arms in which the roll is journaled, and a movable ribbon interposed between the roll and the surface to be ruled.

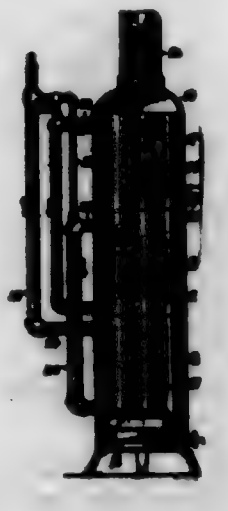
2. A typewriter ruling attachment, comprising a roll having a ruling edge, a U-shaped frame in the open end of which said roll is journaled, a ribbon guide in the frame, and an endless ribbon working about the roll and guide, said frame opposite the ends of said roll being widened to form side guides for the ribbon.

1,299,437. PRINTING-DEVICE SEPARATOR FOR ADDRESSING-MACHINES. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1917. Serial No. 184,767. 20 Claims. (Cl. 101—58.)



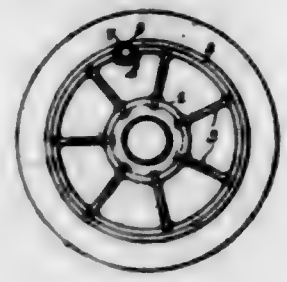
5. In a printing machine, a platen, a magazine, means for moving printing devices from said magazine to and from printing position beneath said platen, a plurality of receptacles to receive said printing devices, and means adapted to engage said printing devices before they reach printing position and influenced by the characteristics of individual printing devices to control the delivery thereof to one or the other of said receptacles.

1,299,438. WATER-HEATER. ANTOINE BEDERMANN DU PONT, Cleveland, Ohio. Filed Aug. 20, 1917. Serial No. 187,057. 1 Claim. (Cl. 122—406.)



A water heater comprising a plurality of water-circulating units arranged one above the other and a fuel burner at the bottom of said units in heating relations therewith, the said units having open pipe connection running from the top of one unit to the one next beneath for the downward flow of the gradually heated water, a hot water discharge pipe for all said units connected at its lower end with the upper portion of the bottom unit and by branch pipes with the upper portions of the superposed units, and a safety pipe from the top of each of said branch pipes having pipe connection with the said discharge pipe.

1,299,439. TENSION-WHEEL AND METHOD OF PRODUCING SAME. ERNEST E. EINFELDT, Davenport, Iowa, assignor to G. Watson French, Nathaniel French, Joseph L. Hecht, and W. H. Stackhouse, Davenport, Iowa, composing the Firm of French & Hecht, Davenport, Iowa. Original application filed Nov. 13, 1915, Serial No. 61,232. Divided and this application filed July 12, 1916. Serial No. 108,825. 2 Claims. (Cl. 29—174.)



1. The method of placing under uniform tension all the spokes of an all-metal wheel in which said spokes extend radially and are fixedly connected to the hub and rim, which method consists in expanding the rim to enlarge the diameter thereof, thereby causing a tension pull to be exerted radially on all the spokes uniformly, and maintaining the rim in expanded condition to retain the spokes under tension.

1,299,440. SUBMARINE MINE. GIOVANNI EMANUELE ELIA, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed Sept. 6, 1917. Serial No. 190,095. 5 Claims. (Cl. 102—3.)

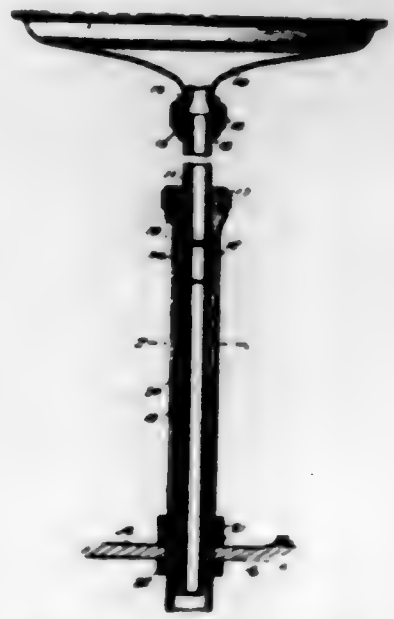
1. A submarine mine comprising an anchor connected to the flotation chamber or mine proper by a mooring cable and provided with a slidable weight on the mooring cable which is connected to a buoy or float in such a man-

ner that when the pull exerted by the buoy or float after launching the mine no longer prevails the said weight



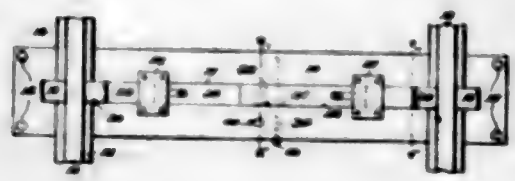
becomes released and in falling actuates a device in the anchor for stopping the paying out of the mooring cable.

1,299,441. WASTE-FITTING FOR FOUNTAIN-CUSPIDORS. EDWARD ENNIS, North Cambridge, Mass. Filed May 4, 1918. Serial No. 232,460. 6 Claims. (Cl. 187—75.)



3. A waste fitting for fountain cuspidors, comprising a pair of telescoping pipes in spaced relation of which the outer pipe is stationary and the inner pipe is movable, a telescoping extension pipe at the inner end of the movable inner pipe, and means for limiting the movement of the extension pipe with respect to the inner pipe for the purpose described.

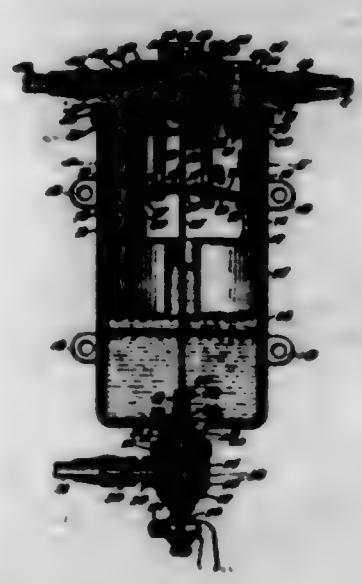
1,299,442. RAILWAY-TIE AND RAIL-FASTENER. ANDREW ENRICO and JOHN ENRICO, Chisholm, Minn. Filed June 20, 1918. Serial No. 240,954. 5 Claims. (Cl. 238—5.)



1. A tie and rail fastener comprising an elongated support having a longitudinal recess therein adapted for the transverse seating of rails thereon overlying the ends of the recess, movable fasteners for rails positioned adjacent the ends of said recess, toggle-locking means shiftably positioned within the recess engaging the said fasteners, securing means for the said locking members when depressed within the recess, inwardly shifting means for the fasteners, and elevating means for the locking members carried by the support.

5. A tie and rail fastener comprising superposed slabs, with the upper slab having a central longitudinal recess therein, inwardly projecting jaws carried by the upper slab adjacent its opposite ends adapted for overlying the adjacent bases of rails when transversely mounted upon the tie, the lower slab having walls therein beneath the opposite end portions of the recess forming opposite shoulders, movable fasteners engaging the opposite inner base flanges of rails mounted upon the tie and also having oppositely projecting feet positioned beneath the said shoulders, retracting means for said fasteners carried by the end walls of the recess in normal engagement with the fasteners, straps upon the top of the tie spanning said recess, blocks slidably positioned within said recess beneath the straps in abutting engagement with said fasteners, toggle levers hinged to the inner ends of said blocks having complementary interengaging free ends, whereby said levers are adapted to be depressed within said recess simultaneously with the lateral shifting movements of the blocks against said fasteners, a bolt lock carried by the upper slab adapted for securing engagement with one of said levers when depressed, and automatic elevating means for said levers carried by the lower slab beneath the levers adapted for automatically shifting the levers upwardly upon their hinges simultaneously with the inward releasing movement of said blocks and fasteners upon releasing the said block.

1,299,443. VACUUM FUEL-FEED SYSTEM FOR MOTOR-VEHICLES. WRAY FALWELL, Fitchburg, Mass. Filed June 28, 1918. Serial No. 241,955. 5 Claims. (Cl. 158—36.)

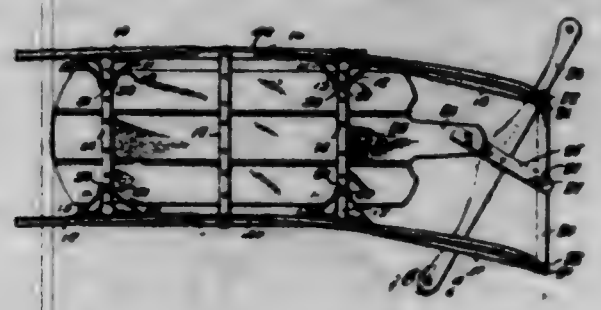


8. In a device of the class described, opposed valve seats, valves therefor, means connecting the valves in a relation for alternate seating engagement, a third seat, presented in the direction corresponding to that of one of the first named seats, a third valve therefor, a lost motion connected between the last named valve and said means connecting the first named valves, and a resilient element connected between said means and said third valve.

1,299,444. SLED. WRAY FALWELL, Fitchburg, Mass., assignor to Brown Bag Filling Machine Company, Fitchburg, Mass. Filed Jan. 26, 1917. Serial No. 144,487. 12 Claims. (Cl. 21—94.)

10. In a sled of the character described, a body, a flexible tiltable runner mounted thereon, means to limit

tilting of the runner, and means to move the runner for tilting to its limit and beyond, including a laterally mov-



able member connected pivotally to the runner above the axis of its tilting movement.

1,299,445. METHOD OF PRODUCING BLUE POWDER. FREDERICK F. FARNHAM, Fairmount, Pa., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1916. Serial No. 135,921. 2 Claims. (Cl. 75—153.)



2. The method of producing blue powder from highly heated zinc fume, consisting of continuously condensing in a closed chamber a stream of such fume to blue powder, cooling the blue powder to a temperature below that at which it will ignite when exposed to the atmosphere, thereafter continuously removing the cooled blue powder from the condensing chamber, and simultaneously with such removable agitating the blue powder to free it of entrapped carbon monoxid.

1,299,446. SYSTEM OF AUTOMATIC TRAIN CONTROL. GEORGE P. FINNIGAN, Philadelphia, Pa., assignor to George A. Holden, New York, N. Y. Continuation of application Serial No. 574,426, filed July 29, 1910. This application filed Feb. 9, 1915. Serial No. 6,990. 48 Claims. (Cl. 246—66.)



5. A system for automatically inductively controlling or producing an indication upon a vehicle comprising the combination with a moving vehicle, of a permanent magnet disposed in the path of travel of said vehicle, a closed vehicle circuit, a source of current and an electro-magnetic winding normally energized by said source of current included in said circuit, and a member normally held by said electro-magnetic winding, said electro-magnetic winding releasing said member in response to inductive effects produced in said circuit by said permanent magnet.

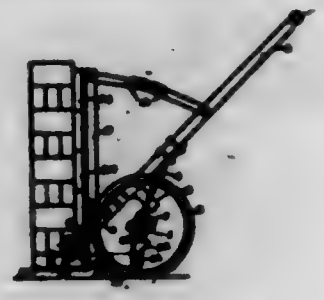
11. The combination with a moving vehicle, of a permanent magnet and an electro-magnetic coil disposed in the path of travel of said vehicle, a vehicle circuit, a translating device controlled thereby, means for energizing said coil, said permanent magnet and said coil being so disposed that their magneto-motive-forces are opposed with respect to said circuit, said translating device being unresponsive to said coil and permanent magnet when said coil is energized.

17. The combination with a moving vehicle, of a plurality of circuits thereon, a translating device controlled by one of said circuits, means disposed in the path of travel of said vehicle for inductively affecting said vehicle circuits, and means controlled by a second of said vehicle circuits for allowing response of said translating device to electro-motive-force of predetermined direction only when succeeding electro-motive-force of opposite direction induced in said vehicle circuit.

28. In a railway signaling system, a closed track circuit, a coil in said track circuit, a circuit on a moving vehicle, means for producing uni-directional magnetic flux threading said coil and said vehicle circuit when adjacent to each other, movement of said circuit with respect to said coil generating electro-motive-force in said track circuit, and signaling means controlled by said electro-motive-force.

41. In a system of the character described, the combination with a moving vehicle, of a vehicle circuit, means disposed in the path of travel of said vehicle for inductively influencing said circuit, means controlling said means to determine the direction of an initial electro-motive-force impulse induced in said circuit, a magnet in said vehicle circuit, a second magnet subjected to electro-motive-force induced by said first named means, the circuits of said magnets having different time constants, and translating means controlled by said magnets, said magnets cooperating to effect said control only in response to an initial impulse of electro-motive-force of predetermined direction.

1,299,447. BRICK-HANDLING TRUCK. ROBERT A. FOUNTAINE, Roanoke, Va. Filed Apr. 26, 1918. Serial No. 230,285. 2 Claims. (Cl. 21—118.)



1. A brick-handling truck having a wheel-supported axle, a frame rotatably mounted upon the axle, a portion of said frame being adapted to accommodate a back of bricks, and means actuated upon the rotation of the frame about the axle for retaining the bricks upon the frame, said means including inwardly-acting clamping means adapted to engage a portion of the back of bricks, said clamping means being formed to react vertically against a portion of the truck and against a portion of the back of bricks to actuate the same.

1,299,448. WINDOW CONSTRUCTION. GEORGE H. FORSYTH, Chicago, Ill. Original application filed Oct. 5, 1906, Serial No. 458,289. Divided and this application filed Nov. 30, 1914. Serial No. 874,751. 4 Claims. (Cl. 189—78.)



1. In a sash construction, the combination with a sash member having its side walls held against spreading at the inner edge of the sash by a transverse wall, the sash member providing a seat for the glass and an integral bead or abutment at one side of the glass seat, and a recess along the other side of the glass seat, of removable glazing means comprising a strip seated within the recess of the sash, the strip having its upper portion arranged as a lateral support for the glass margin and fulcrumed in its medial portion upon a wall of the recess with its lower portion extending into the recess and frictionally inter-

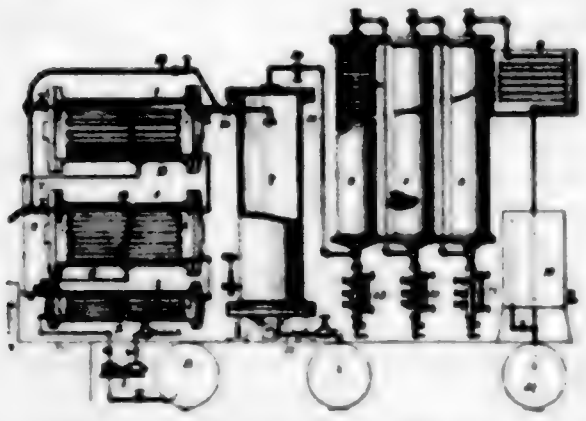
locked with a portion of the sash member to preclude accidental displacement.

2. In sash construction, the combination with a tubular sash member having its side walls held against spreading at the inner edge of the sash by a transverse wall serving as a seat for the glass and providing an integral bead or abutment at one side of the glass seat for laterally supporting the glass along one margin thereof and having formed therein a recess along the other side of the glass seat, of removable glazing means comprising a spring strip seated within the recess of the sash, the strip having its upper portion arranged as a lateral support for the glass margin and fulcrumed in its medial portion upon a wall of the recess with its lower portion extending into the recess and offset into interlocked engagement with a portion of the sash member to preclude displacement of the said strip without temporary distortion thereof.

3. In sash construction, the combination with a sash member having its side walls held against spreading at the inner edge of the sash by a transverse wall, the sash member providing a seat for the glass and an integral bead or abutment at one side of the glass seat, and a recess along the other side of the glass seat, of removable glazing means comprising a strip seated within the recess of the sash, the strip having its upper portion arranged as a lateral support for the glass margin and fulcrumed in its medial portion upon a wall of the recess with its lower portion extending into the recess and frictionally interlocked with a portion of the sash member to preclude accidental displacement, and spring means disposed between the glass and the lateral support therefor to exert constant outward pressure of the glass upon the removable glazing strip.

4. In sash construction, the combination with a sash member having its side walls held against spreading at the inner edge of the sash by a transverse wall, the sash member providing a seat for the glass and an integral bead or abutment at one side of the glass seat and a recess along the other side of the glass seat, of removable glazing means comprising a strip seated within the recess of the sash, the strip having its upper portion arranged as a lateral support for the glass margin and fulcrumed in its medial portion upon a wall of the recess with its lower portion extending into the recess and offset into frictional interlocking engagement with a portion of the sash member to preclude accidental displacement, and spring means disposed between the edge of the glass and its seat and extending on both sides of the glass margin between the glass and the integral support on one side and the upper edge of the removable glazing strip on the other side, whereby to permit the strip to yield out of engagement with the sash and to be removed from the recess.

1,299,449. METHOD FOR REFINING OIL. CHAUNCEY B. FORWARD, Urbana, Ohio. Filed Dec. 6, 1917. Serial No. 205,813. 3 Claims. (Cl. 196—25.)



1. A method of refining oil, consisting in subjecting a flowing body of oil to steam superheated to a temperature below 500° Fahrenheit; then subjecting the heated oil while still flowing to a higher temperature than as stated but not exceeding a temperature which would coke the oil or any part thereof; and finally reheating the product preliminary to discharging the oil in a volatilized state with steam into a still.

1,299,450. DEMOUNTABLE RIM. HENRY J. FOSTER, Cleveland, Ohio, assignor to Hydraulic Pressed Steel Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 12, 1918. Serial No. 239,623. 10 Claims. (Cl. 152—21.)



1. A one piece tire carrying rim, divided transversely at one point, lugs connected to said rim ends, one of said lugs projecting beyond the dividing line, and a link pivotally connected to said members, the pivot points of said link being at different distances from the center of the rim, said link being shaped for engagement with means for turning it upon its inner pivot.

5. A one piece tire carrying rim, divided transversely at one point, lugs connected to the rim, one at the end thereof and the other adjacent the other end, and a link pivotally connected to said lugs, the pivot in the remote lug being nearer the center than the other pivot, said link having an inwardly projecting stud adjacent the dividing line.

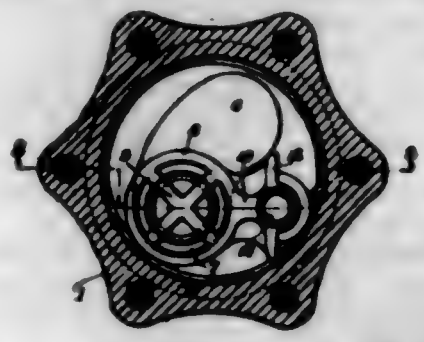
1,299,451. DEMOUNTABLE RIM. HENRY J. FOSTER, Cleveland, Ohio, assignor to Hydraulic Pressed Steel Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 13, 1918. Serial No. 239,698. 9 Claims. (Cl. 152—21.)



1. A transplit demountable tire carrying rim having inwardly projecting lugs connected thereto, said lugs being constructed for engagement with a tool, and so positioned with reference to the split in said rim that the initial movement of the tool will cause a circumferential separation of the ends of the rim.

5. A one-piece tire carrying rim transplit at one point, lugs connected to the ends of said rim, one of said lugs extending beyond the dividing split, both of said lugs having transverse openings adapted to receive spaced members of an operating lever.

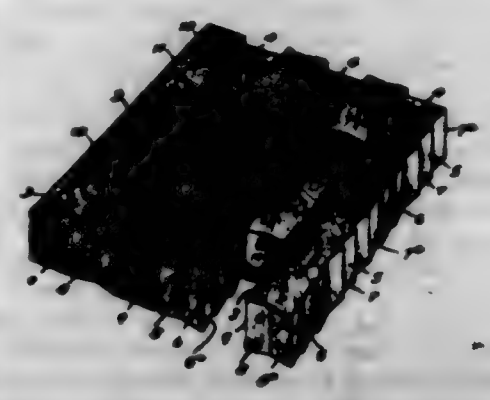
1,299,452. BLOW-OFF VALVE. RALPH W. FOSTER, Boston, Mass., assignor to Crosby Steam Gage & Valve Company, Boston, Mass., a Corporation. Filed Mar. 10, 1915. Serial No. 13,470. 1 Claim. (Cl. 251—18.)



A valve of the character described comprising, in combination, a casing having induction and eduction ports; a

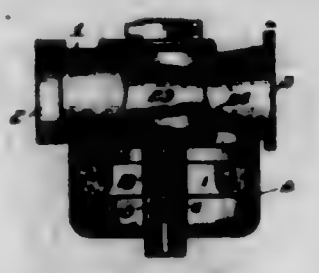
valve seat within the casing and adjacent the eduction port; an oscillatory stirrup disposed in the casing and spaced from the adjacent walls thereof and furnished with wings adapted to engage the casing and limit such oscillatory movement; a valve for said seat loosely disposed in the stirrup; a spindle mounted in the casing and rigidly affixed to the stirrup; and means for oscillating the spindle and thereby the stirrup and the valve disposed therein.

1,299,453. PAVING-BLOCK. GEORGE W. FREY, Cincinnati, Ohio, assignor to The Compressed Wood Preserving Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 26, 1918. Serial No. 230,878. 2 Claims. (Cl. 94—14.)



2. A paving block of substantially rectangular shape having a plane side, the side opposite the plane side being provided with a series of projections shaped like saw teeth, a plane end and an end opposite the plane end having an obtuse central groove extending across it.

1,299,484. CARBURETER. LEVI S. GARDNER, Detroit, Mich. Filed Feb. 15, 1917. Serial No. 148,722. 8 Claims. (Cl. 261—64.)



1. A carbureter having a main air passage, a hollow valve extending across said air passage and having a tunnel extending therethrough for the passage of the main charge of air, a source of fuel supply communicating with the interior of said hollow valve, and there being a series of ports extending through the wall of said valve in proximity to one end of said tunnel.

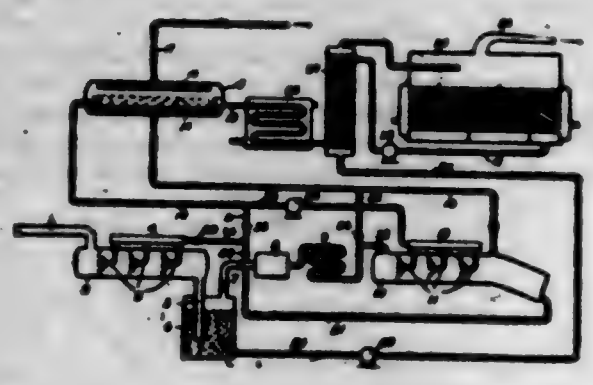
2. A carbureter having a main air passage, a hollow valve extending across said air passage and having a tunnel extending therethrough for the passage of the main charge of air, a chamber for liquid fuel communicating with the interior of the hollow valve by means of a passage opening into the chamber at a point above the liquid level and by another passage opening into the chamber at a point below the liquid level, means controlled by an inwardly opening check valve for admitting air into said chamber above the liquid therein, and said hollow valve having one or more ports extending through the wall thereof in the vicinity of one end of said tunnel.

3. In a carbureter, a body member containing a main air passage open at both ends and having its axis horizontal, a post projecting downwardly from said body member, a fuel chamber surrounding said post, there being a passage in said post communicating at its upper end with the main air passage, there being a port leading from a point in the interior of the fuel chamber below the liquid level therein to a point in said passage in the post lying below said liquid level, and there being also an air inlet in the lower end of the passage in the post, and a check valve located in the fuel passage and controlling said air inlet.

5. In a carbureter, a body member containing a main air passage open at both ends, a post projecting downwardly from said body member, a fuel chamber surrounding said post, there being a passage in said post communicating at its upper end with the main air passage, there being a port communicating with the interior of the fuel chamber at a point below the liquid level therein and opening into the passage in the post at a point below said level, and there being also a passage leading into said main air passage from the top of said chamber, said chamber having an air inlet, a check valve located in the fuel passage and controlling said air inlet, and means including an inwardly-opening check valve for admitting atmospheric air into the passage in said post.

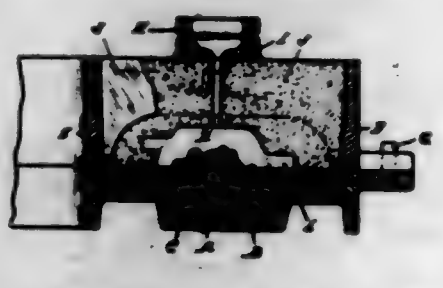
6. A carbureter having a main air passage and a well opening at its upper end into the aforesaid passage, a fuel chamber having a restricted delivery outlet into said well, there being a port leading from said well to atmosphere at a point below said delivery outlet, and an inwardly opening check valve located in said well and controlling said port.

1,299,455. PROCESS OF OBTAINING GASOLENE FROM HYDROCARBON GASES. JAMES B. GARNER, Pittsburgh, Pa., assignor to Hope Natural Gas Company, Pittsburgh, Pa., a Corporation of West Virginia. Filed Jan. 18, 1917, Serial No. 143,105. Renewed Aug. 26, 1918. Serial No. 251,542. 4 Claims. (Cl. 196—25.)



1. The process of obtaining gasolene from hydrocarbon gases containing it, which consists in subjecting the gas under a pressure substantially greater than atmospheric pressure to a gasolene-absorbing menstruum; thereafter, for the removal from the menstruum of the lighter constituents absorbed thereby, exposing the menstruum to the gas at a pressure substantially lower than said first named pressure and prior to said higher pressure subjection of the gas to the menstruum; and thereafter removing the gasolene from the menstruum.

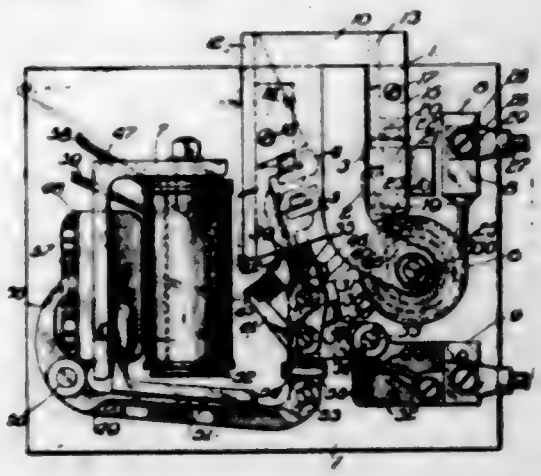
1,299,456. APPARATUS FOR FORMING TIRE-MOLDS. BERNARD GRANVILLE, New York, N. Y. Filed Jan. 18, 1917. Serial No. 143,194. 1 Claim. (Cl. 22—126.)



An apparatus for forming duplicate metallic molds, comprising an annular master mold having a polished surface corresponding to the molding surface of each of the duplicate molds, a plate in heat conducting contact with said master mold and of sufficient mass to form therewith a chill, a flask for forming a sand mold to complete the

mold cavity around said master mold, and means permitting relative movement of portions of the master mold to compensate for contraction of the cast-metal in contact therewith.

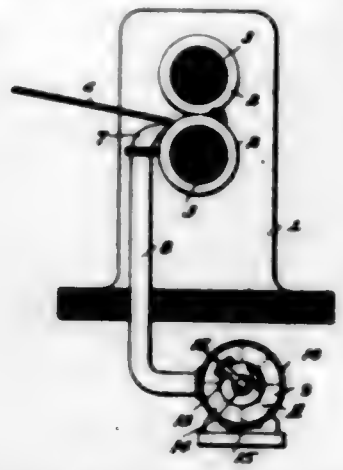
1,299,457. CONTACTOR. DAVID E. GRAY, Chicago, Ill., assignor to Railway Utility Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 12, 1917. Serial No. 148,280. 4 Claims. (Cl. 175—281.)



1. A contactor of the class described comprising a stationary main contact and a stationary auxiliary contact, a movable main contact, a movable auxiliary contact, a pivoted main arm, a contact arm pivoted thereto and carrying the main movable contact, a second contact arm pivoted to the first said contact arm and carrying the auxiliary movable contact, the pivots of the three said arms being parallel, and yielding means for normally maintaining the main arm and said contact arms in fixed relation to each other and permitting a wiping action between the pairs of contacts as the switch closes.

4. In a device of the class described, a stationary main contact, a stationary auxiliary contact, a main arm, a first contact arm pivoted to the main arm, an auxiliary contact arm pivoted to the first contact arm, the pivots of the arms all being parallel, an extension 41 on the main arm, a spring between said extension and the auxiliary contact arm for maintaining the last mentioned arm yieldingly in fixed relation to the first mentioned contact arm, and the latter in fixed relation to the main arm, the construction being such that as the switch closes the spring yields to permit a wiping action between the members of the respective pairs of contacts.

1,299,458. METHOD OF AND APPARATUS FOR EXTRACTING SUGAR FROM CANE, &c. GUYON F. GREENWOOD, Georgeville, Quebec, Canada. Filed Dec. 4, 1917. Serial No. 205,345. 3 Claims. (Cl. 100—47.)



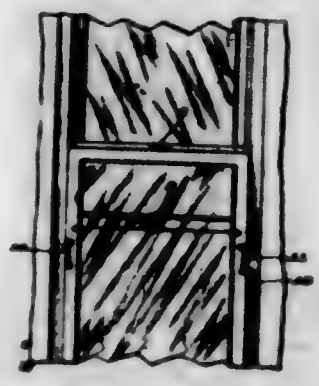
2. Apparatus for carrying out the method of claim 1, comprising, in combination, means for expressing the juice and means for immediately withdrawing the juice to prevent its re-absorption by the cane.

1,299,459. PANORAMIC RANGE-FINDER. GRAVES GRIFFITH, San Francisco, Calif. Filed July 5, 1918. Serial No. 243,230. 5 Claims. (Cl. 88—2.7.)



1. In a range-finder of the character described, two similar optical systems in co-axial alinement and oppositely disposed, comprising initial ray-receiving prisms, means for the simultaneous rotation around the said co-axis, in the same direction and at equal speed, of the said initial ray-receiving prisms, refracting and reflecting prisms in coöperation respectively with the said initial ray-receiving prisms, means for the simultaneous rotation around the said co-axis, in the same direction and at equal speed, of the said refracting and reflecting prisms, the said refracting and reflecting prisms rotating in the same direction as and simultaneously with, but at half the angular speed of, the said initial ray-receiving prisms, objectives in coöperation respectively with the said refracting and reflecting prisms, refracting prisms in coöperation respectively with the said objectives, means for the simultaneous rotation around the said co-axis, in opposite directions and at equal speed, of the said refracting prisms, oppositely disposed eyepiece prisms cooperating respectively with the said refracting prisms, and an ocular system in coöperation with and common to both the said similar and co-axially alined optical systems.

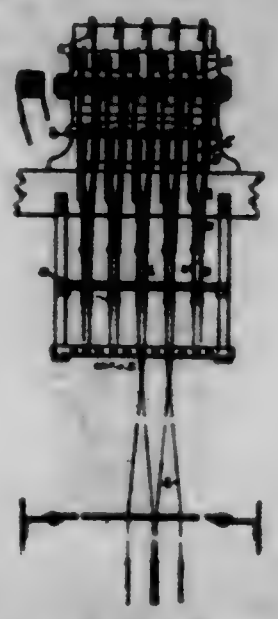
1,299,460. GRIP-LATCH. WALTER R. GROTJOHANN and OSCAR D. GREEN, Baltimore, Md. Filed Apr. 6, 1916. Serial No. 89,263. 2 Claims. (Cl. 70—49.)



1. A fastening device for windows, doors and the like, consisting of a grip and a pivot securing the same to the member to be fastened, the grip being curved forming a loop substantially in a plane including the axis of the pivot, the grip having a shoulder at the end opposite the pivot, a slotted socket in the said member to be fastened, the socket containing the shouldered portion, the loop passing through the slot and a latch secured to the grip adjacent the shouldered portion and projecting through the meeting surfaces of the members to be fastened, the latch moving back and forth through the plane of the meeting surfaces of the two members to be fastened and at right angles to the said plane of the pivot axis and grip as the gripping member is swung back and forth about its pivot.

2. A fastening device for holding a swinging member in a casing, the same consisting of a grip pivoted on the swinging member to swing toward and from the edge surface of the swinging member, and a latch carried by the grip and disposed at right angles to the grip and said edge surface so as to move back and forth in the direction of its length and through said plane of the edge of the swinging member as the grip swings about its pivot.

1,299,461. DOUBLE-LIFT JACQUARD-MACHINE. HENRY HANING, Union, N. J., assignor to Adolf T. Hunze, North Bergen, N. J. Filed Dec. 7, 1917. Serial No. 206,668. 8 Claims. (Cl. 139—16.)



1. In combination, with the depending hooked portions of a complementary pair of hooks of a double-lift jacquard machine, a harness cord coupling device including a pair of stiff upright portions, harness cord attaching means at the lower end thereof, said upright portions having their upper ends bent laterally and penetrating said hooked portions, and a transverse rigid connection between the bent-off upper ends of said upright portions.

1,299,462. CATTLE-GUARD. CHARLES FURNESS HATHEY, Chicago, Ill., assignor to National Surface Guard Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 25, 1917. Serial No. 198,434. 7 Claims. (Cl. 256—18.)



1. A cattle guard comprising a plurality of spaced bars, each provided with a longitudinal row of upstanding main teeth, and said main teeth carrying upwardly inclined auxiliary teeth struck out from the sides of said main teeth and merging their bases with the latter.

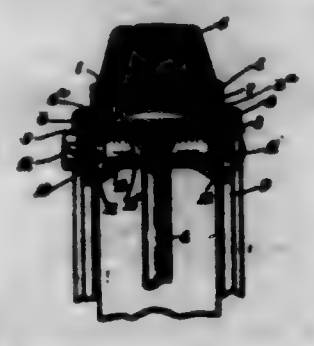
2. A cattle guard comprising a plurality of spaced bars, each provided on a longitudinal margin thereof with a row of substantially vertical main teeth, and said main teeth carrying flat auxiliary teeth struck out from the sides of said main teeth and merging at their bases with the latter and lying in a plane forming an acute angle with the portions of said main teeth above the bases of said auxiliary teeth.

4. A cattle guard comprising a plurality of separated spaced bars, each formed with parallel vertical flanges and a connecting web, each of said vertical flanges having on its upper edge a row of vertical teeth struck upwardly from said web, and said web carrying an additional row of vertical teeth struck upwardly therefrom, and also a series of substantially horizontal prongs created by the striking up of said rows of teeth.

6. A cattle guard comprising a plurality of spaced bars, each provided on the longitudinal margins thereof with rows of upstanding teeth carrying outwardly and upwardly projecting auxiliary teeth, and with an additional longitudinal row of teeth between said marginal rows.

7. A cattle guard comprising a plurality of spaced bars, each provided on the longitudinal margins thereof with rows of upstanding teeth carrying outwardly and upwardly projecting auxiliary teeth, and further provided with an intermediate row of shorter teeth struck up from the intermediate portion of the bar.

1,299,463. DEMOUNTABLE RIM FOR WHEELS. JOSEPH L. HECHT, Davenport, Iowa, assignor to G. Watson French, Nathaniel French, Joseph L. Hecht, and W. H. Stackhouse, Davenport, Iowa, composing the firm of French & Hecht, Davenport, Iowa. Filed July 18, 1916. Serial No. 109,290. 8 Claims. (Cl. 152—7.)



1. In combination with a fixed rim and connected spokes, a detachable rim surrounding the same, a wedging fastening member between the rims movable axially therebetween to bind the detachable rim on the fixed rim, and a locking device for the fastening member comprising a detachable fulcruming member disposed inward of the fastening member and independent of the fixed rim and spokes, a clamping member fulcruming on said fulcruming member and engaging the fastening member to shift it axially, and means acting on the clamping member to cause it to fulcrum and to shift the fastening member axially.

1,299,464. METAL WHEEL. JOSEPH L. HECHT, Davenport, Iowa, assignor to G. Watson French, Nathaniel French, Joseph L. Hecht, and W. H. Stackhouse, Davenport, Iowa, composing the Firm of French & Hecht. Filed Apr. 22, 1916. Serial No. 229,950. 3 Claims. (Cl. 21—69.)

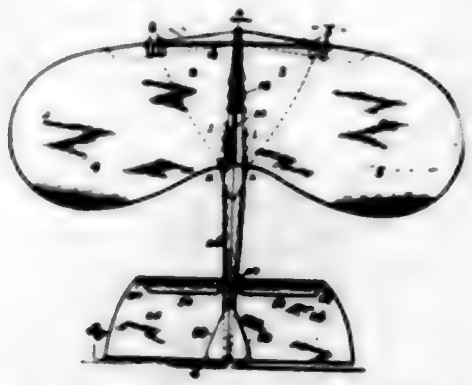


1. In a wheel, the combination of a rim, hub, and connected spokes, the said rim comprising two annular sections disposed edgewise and provided on their adjacent edges with outwardly extending annular flanges connected together to form an anti-skid member.

2. In a wheel, the combination of a rim, hub, and connected spokes, the said rim comprising two annular sections disposed edgewise and provided on their adjacent edges with outwardly extending annular flanges connected together to form an anti-skid member, and provided at their outer edges with inwardly extending annular flanges to stiffen the rim.

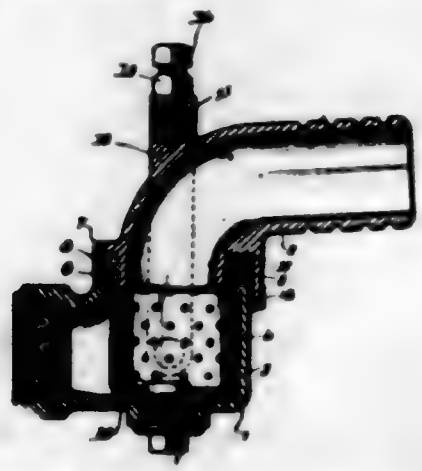
3. A wheel rim comprising two annular sections provided each with edge flanges extending respectively outwardly and inwardly, said sections being disposed edgewise with the outwardly extending flanges connected flatly together to form an anti-skid member.

1,299,465. TOY AEROPLANE. HARRY F. HENLEY, Richmond, Ind. Filed Dec. 7, 1918. Serial No. 265,697. 5 Claims. (Cl. 244—12.)



1. A toy aeroplane comprising a two-part telescoping fuselage, a pair of wings extending out laterally from the sides of the front member of the fuselage, a stem-plate located between the sides of the forward end of the fuselage, an upper guy preventing the wings from turning downward, a lower guy preventing the wings from turning upward, a tail plane carried by the rear member of the fuselage, and fins extending divergently from above the tail plane.

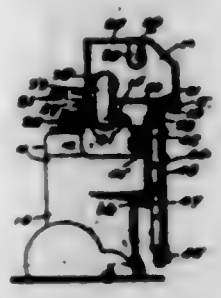
1,299,466. LOCOMOTIVE-TANK HOSE CONNECTION AND STRAINER. GEORGE ELSEWORTH HEYSER, Manchester, Ga. Filed Jan. 10, 1919. Serial No. 270,565. 2 Claims. (Cl. 210—16.)



1. A locomotive tank hose connection and strainer, comprising a hose connection section and a strainer section, said last named section having a strainer chamber, a strainer held in the chamber, said strainer being cup shaped and having at its top end a marginal laterally extending flange, said flange being received between the sections, means for clamping the sections on the flange, the strainer section having a drain opening at the center of the strainer and the strainer having an opening registering therewith, and a drain plug having threaded engagement with the opening of the casing section and engaging the opening of the strainer.

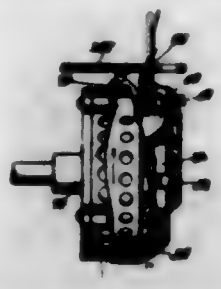
1,299,467. AUXILIARY COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. FRANK HINDS and WALTER H. FILWALL, Early, Iowa, assignors of one-third to Scott Rutledge, Early, Iowa. Filed Feb. 15, 1918. Serial No. 217,366. 2 Claims. (Cl. 123—174.)

1. A device of the character described comprising a motor having a water jacket provided with inlet and outlet, a plurality of resilient brackets carried by the motor, a reservoir mounted thereon, having inlet and outlet, flexible connections between the outlet of the motor and the inlet of said reservoir, a coil element pivotally mounted upon said motor and having terminal portions of different radii extending in a common direction concentric to the pivot of the coil, an outlet and inlet fitting on said reservoir and water jacket of the motor adapted to aline with respective terminals of the coils, and flexible connections between said fittings and respective ends of the coil, the lower arm of said coil being disposed beneath the inlet of the water jacket and having a drain cock thereon.



2. In a device of the character described a bracket mounting for reservoirs of the character described comprising a portion of strap metal having a horizontal part, one end portion being bent closely inward thereunder and extended downwardly therebeneath diagonally, the other end of the device being extended downwardly, and both ends constructed for attachment to a support, a tank yoke having screw threaded end portions engaged slidably through the horizontal part of said bracket and said inturned portion closely adjacent the point of bend, and nuts engaged upon the yoke ends at the under part of the bracket, for the purposes described.

1,299,468. ROTARY-HOOK SEWING MECHANISM. RICHARD K. HOHMANN, Sioux City, Iowa. Filed Dec. 14, 1916. Serial No. 136,986. 20 Claims. (Cl. 112—15.)



6. In a rotary hook sewing mechanism, a bobbin casing having a projecting finger arranged to deliver the bobbin thread at the operator's right of the needle.

10. In a sewing mechanism, the combination of a reciprocating needle, a needle plate having an aperture for the needle and threads, a rotary hook device having a bobbin casing therein, and means for delivering the bobbin thread through the aperture to the material being sewed without bending the same around the edges of the aperture, said means including a finger carried by a stationary part of said device and extending to a point radially outside of the path of the hook, said point being on a substantially straight line passing through said aperture.

19. In a sewing mechanism, in combination, a needle plate having an aperture for the needle, a rotary hook, a bobbin, and means for delivering the bobbin thread at a point radially outside the path of the hook, said point being on a substantially straight line passing through the said aperture.

1,299,469. FILM AND FILM-SPROCKET. OSCAR J. HOLMES, Chicago, Ill. Filed May 27, 1918. Serial No. 236,670. 3 Claims. (Cl. 88—17.)

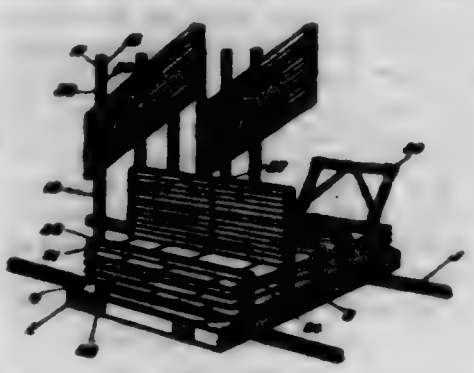
1. In a motion picture mechanism, the combination of a motion picture film formed with rows of outer marginal

sprocket orifices and with a row of inner sprocket orifices arranged between pictures of the series on the film, an intermittent film feeding drum having sprocket teeth corresponding with and adapted for operative engagement with said outer rows of orifices of the film, and a film supply drum having sprocket teeth corresponding with and adapted for operative engagement with the inner row of orifices of the film, substantially as set forth.



2. In a motion picture mechanism, the combination of a motion picture film formed with rows of outer marginal sprocket orifices and with a plurality of rows of inner sprocket orifices arranged between pictures of the series on the film, an intermittent film feeding drum having sprocket teeth corresponding with and adapted for operative engagement with the outer rows of orifices of the film, and a film supply drum having sprocket teeth corresponding with and adapted for operative engagement with the inner rows of orifices of the film, substantially as set forth.

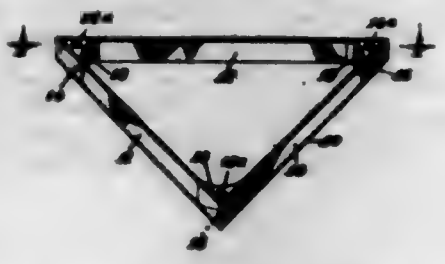
1,299,470. DRYING APPARATUS. JOHN T. HOPE, Kansas City, Mo., assignor to John Frank Hope, Kansas City, Mo. Filed July 18, 1917. Serial No. 181,275. 7 Claims. (Cl. 21—122.)



1. In combination with a standard having upwardly opening notches, a slotted rack bar movable vertically and transversely along the standard and having a supporting member at one side of the center of the bar, engageable in the standard notches to support the bar in an inclined plane.

1,299,471. POOL-BALL TRIANGLE. FREDERICK HORNBOSTEL, Brooklyn, N. Y. Filed July 19, 1917. Serial No. 181,551. 1 Claim. (Cl. 46—6.)

A pool ball triangle with a triangular frame having crosswise blocks arranged within its corners, comprising two sockets one in the underside and one in the top of each block, a freely rotatable ball in each socket so as to protrude below and above the frame for preventing the frame when guided over a surface from contacting therewith, and means on the underside and on the top of



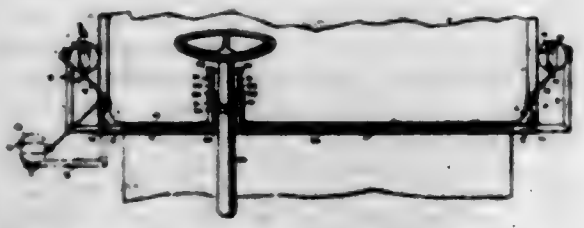
each block at each of the sockets whereby the balls are revolubly held in the sockets against accidental displacement.

1,299,472. DEMOUNTABLE TIRE-RIM. EDWARD C. HORST, Dayton, Ohio. Filed Aug. 26, 1918. Serial No. 251,423. 3 Claims. (Cl. 152—21.)



1. In a device of the type specified, the combination with a felly band provided with slots in its periphery, of a tire rim provided with projecting elements on its inner periphery adapted to enter said slots which terminate near the middle of the felly band, wedged shaped members on the felly band at the side of said slots, adapted to be engaged by said tire rim elements to force the tire inwardly as it is turned circumferentially, means on said tire rim and felly band adapted to wedge the former firmly on the latter as said tire rim is forced inwardly, a plunger on said tire rim, a felly to which said felly band is fixed, and a member pivotally secured to said felly, adapted to engage said plunger in the direction of its length, to hold said tire rim in its wedged position on said felly band.

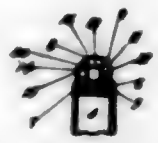
1,299,473. SIGNAL DEVICE. SAMUEL D. HOWELL, Oklahoma, Okla. Filed Mar. 12, 1917. Serial No. 154,126. 1 Claim. (Cl. 116—31.)



A signal device comprising an L-shaped bracket casing, a pair of pulleys mounted in said casing in spaced vertical alinement, an L-shaped tubular gravity signal arm having its inner end provided with a pair of spaced ears pivotally connected to the lower corner of said casing bracket, a lamp casing projecting laterally from the outer end of said tubular signal arm and having communication with the interior of said signal arm, a cable having one end fixed to said lamp casing and trained

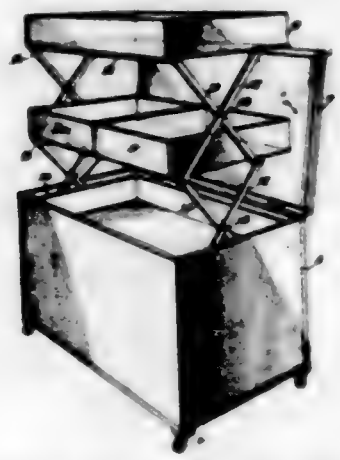
over and under said pulleys and through said bracket casing, and means connected to said cable whereby the tubular signal arm may be raised and lowered.

1,299,474. ANTIFRICTION-BEARING AND SEPARATOR THEREFOR. FREDERICK G. HUGHES, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed July 11, 1917. Serial No. 179,803. 6 Claims. (Cl. 64—59.)



2. A separator for antifriction members composed of two mating sides, each presenting a series of spaced antifriction-member-pocket-sides, one of the separator sides having the material intermediate certain of its pocket-sides presenting means for connecting struts thereto, and the other separator side presenting struts intermediate certain of its pocket-sides, projecting cross-wise of the separator, and connected to the said means of the other side, one of said separator sides being somewhat resilient and having the marginal circle defined by one of the peripheral edges of the material intermediate its pocket-sides substantially coincident with that defined by the ends of the rotational axes of the antifriction members to be received in said pockets, the pocket-sides of such separator side projecting beyond the circle defined by the intermediate material for substantially one-half of their respective radial lengths; substantially as described.

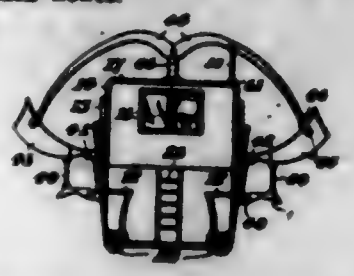
1,299,475. TRAY-LIFTING DEVICE. ROSS HUNTER, Milwaukee, Wis. Filed Oct. 15, 1917. Serial No. 196,607. 1 Claim. (Cl. 190—34.)



The combination with a trunk comprising a body portion and a vertically swinging cover, of a plurality of trays fitting within said body portion, sets of lazy tongs supported within the trunk at the opposite sides of the trays, the front lower ends of the sets of tongs being pivotally supported adjacent the front and the bottom of the trunk, means secured within the trunk against which the rear lower ends of the sets of lazy tongs engage to hold the tongs in upwardly extended position, a pair of rods connecting corresponding members of the sets of tongs upon which is supported a tray, and means for detachably supporting the front of the tray by and without sliding movement relative to the front supporting rods and permitting the tray to slide relative to the rear supporting rod during the raising and lowering of the trays.

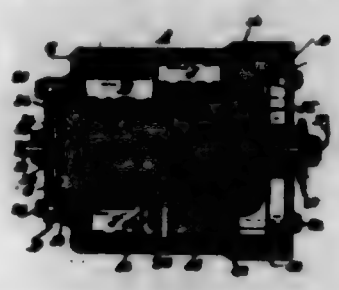
1,299,476. LIFE-BOAT. STEPHEN KATKO, South Brownsville, Pa. Filed Oct. 9, 1917. Serial No. 195,360. 2 Claims. (Cl. 9—4.)

1. A life boat comprising a hull having a cabin, main arcuate floats arranged at opposite sides of the hull, auxiliary floats connected to the hull beneath said main floats, a link connection between the respective main floats and auxiliary floats, and a yoke centrally secured to the boat, with its opposite ends secured to the upper sides of the main floats.



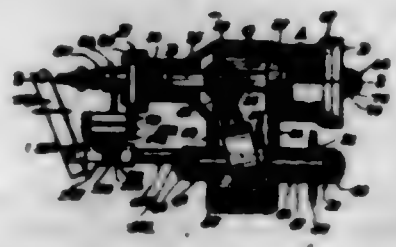
2. A life boat comprising an inclosed hull having a deck, a post arranged upright on the said deck, main floats connected to the opposite sides of the boat and arranged at an angle thereto and being of arcuate formation in cross section, a yoke centrally connected to the said post with its free ends having connections to the upper sides of said main floats, auxiliary floats connected to the boat beneath the main floats, link connections between the main and auxiliary floats, and a removable stay connection between the yoke and the deck of the boat, whereby the floats and yoke are further held against movement.

1,299,477. FLUID-MOTOR. JAMES BLAINE KENDALL, Chicago, Ill., assignor, by direct and mesne assignments, to Newstarter Manufacturing Company, Chicago, Ill, a Corporation. Filed Nov. 29, 1916. Serial No. 134,046. 5 Claims. (Cl. 121—26.)



1. In a multi-cylinder motor, a casing, a series of cylinders in said casing, each of said cylinders being longitudinally slotted at its free end, a longitudinally disposed central shaft in said casing, a swash plate fixedly secured to said shaft, said swash plate being a cup-shaped body the rim of which has its marginal edge inclined to the axis of said shaft, said rim being constructed to rotate in said longitudinal slots, pistons in said cylinders, there being on said pistons arms, rollers rotatably mounted on said arms, said rollers being constructed to act upon said marginal edge of the swash plate to effect its revolution, and means on said pistons constructed to prevent rotation of said pistons, said means comprising plates secured to said arms, said plates being constructed to reciprocate in the said slots in the cylinders.

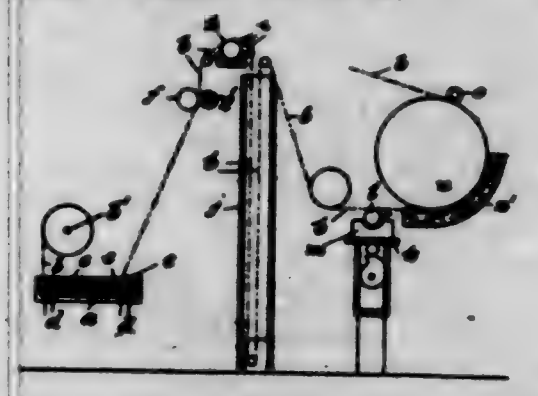
1,299,478. AIR-COMPRESSOR. JAMES B. KENDALL, Chicago, Ill., assignor to Newstarter Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 17, 1917. Serial No. 191,813. 9 Claims. (Cl. 230—27.)



1. The combination, with a motor, of an air compressor, said air compressor having two means for com-

necting the same to said motor, viz. a pivotal connection, and an adjustable connection, said connections comprising two bars and a boss projecting rearwardly from the air compressor, a bolt mounted in said bars, a link mounted at one end to said bolt and at the other end to an element on said motor to afford a pivoted connection between said air compressor and the motor, there being in screw-threaded connection with said boss a screw-eye, said screw-eye engaging a screw-bolt on said motor to afford adjustable means for connecting said air compressor to the motor for taking up slack in the connection between the driving element of the motor and the driven element of the air compressor, said motor having a driving element, and said air compressor having a driven element operatively connected to said driving element, manually operated means for initiating the operation of said air compressor, and automatically operated means for stopping the air compressor when a predetermined air compression has been attained.

1,299,479. TRANSFER PROCESS. FRANK WILLIAM KENT, Clapham, London, and THOMAS PERCY MIDDLETON, Farnham, England, assignors to Kerotype, Limited, London, England. Filed June 17, 1916. Serial No. 104,228. 4 Claims. (Cl. 95—8.)



1. Process of making photographic printing and transfer paper which comprises completely saturating with wax a sheet of paper, coating the paper with a nitrocellulose solution giving on drying a film of porous nitrocellulose as a substratum to a sensitive stratum, and over said film coating with a sensitive stratum.

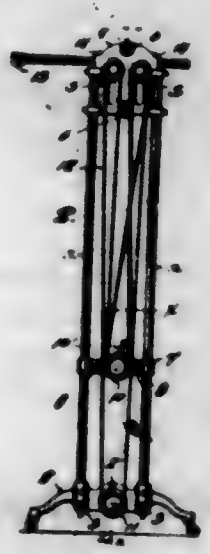
1,299,480. DRAIN-COCK. JAMES B. KIRBY, Cleveland, Ohio. Filed July 18, 1917. Serial No. 180,273. 2 Claims. (Cl. 251—159.)



1. In a device of the character described, a casing having a cylindrical bore, a seat at one end of said bore, a lateral outlet intersecting said bore, and an axial inlet through said seat, in combination with a hollow, cup-shaped, cylindrical, sheet metal member rotatably and slidably fitting in said bore, the inner end of said member being closed and adapted to engage said seat and the outer end being formed with an integral corrugated lip whereby it may be grasped, and interfitting means carried by said member and casing whereby the former may be held against said seat.

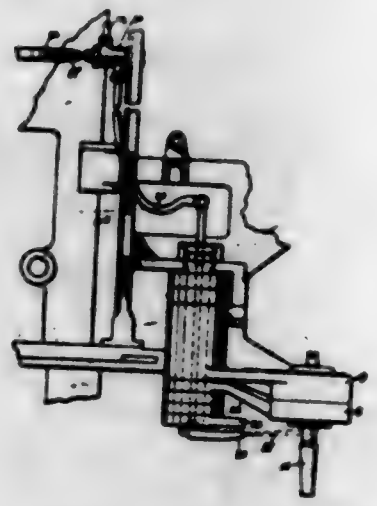
1,299,481. BACKGROUND-CARRIER. HENRY S. KLEIN, Milwaukee, Wis. Filed May 11, 1918. Serial No. 233,918. 2 Claims. (Cl. 211—23.)

1. A display rack comprising connected standards, uprights carried by said standards, connected brackets adjustably mounted upon said uprights, a pair of rollers journaled in the brackets, a roller adjustably secured to the uprights, a compensating roller in slidable engagement with the standards, an endless curtain mounted upon the rollers and means for transmitting movement to the curtain.



2. A display rack comprising connected standards having vertical grooves formed therein, a floating roller guided in said grooves, uprights carried by said standards, connected brackets adjustably mounted upon said uprights, a pair of supporting rollers journaled in said brackets, a drive roller adjustably mounted upon said uprights and an endless curtain mounted upon the supporting rollers, the endless curtain having one of its stretches engaged by the floating roller and the other by the driving roller.

1,299,482. GLASS-FORMING MACHINE. RICHARD LA FRANCE, Toledo, Ohio, assignor to The Owens Bottle Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 20, 1916. Serial No. 132,243. 17 Claims. (Cl. 49—20.)

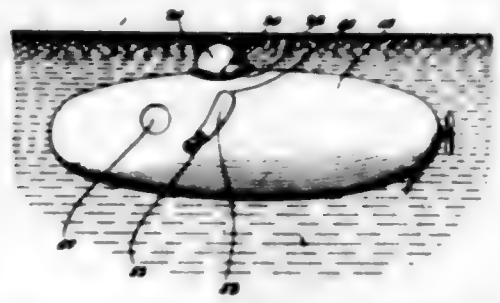


9. In a glass forming machine, the combination of means for forming a blank, means for suspending the blank and transferring it to a finishing mold, and means to counteract a tendency of the blank to swing comprising a device for cooling one side of the blank while thus suspended.

1,299,488. UNDERSEA DESTROYER. KAZIMERAS LAPINSKAS, Union City, Conn. Filed Oct. 3, 1918. Serial No. 256,650. 1 Claim. (Cl. 114—17.)

In a device of the class described, the combination with a hollow submergible casing, having a plurality of water tight compartments formed therein, a plurality of bombs carried in one of said compartments, said bombs having magnets formed thereon, and impervious flexible sleeve-

like attachments formed through the sides of said casing permitting an operator to manually extract one or more



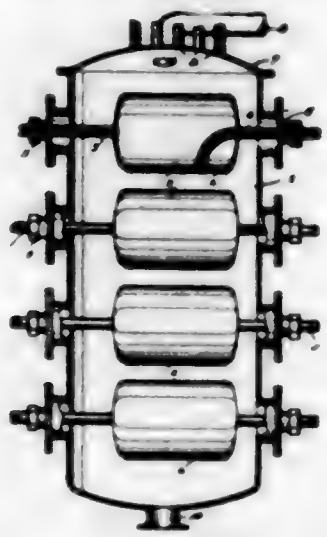
bombs from said compartment and attach the magnet formed thereon to the hull of an adjacent ship.

1,299,484. INTAGLIO PRINT. HOMER LEE, New York, N. Y. Filed June 18, 1915. Serial No. 34,822. 3 Claims. (Cl. 91—67.95.)



1. A bank note, bond or other security, consisting of a sheet of paper having an underlying printing of light lines in intaglio and in a pigment of a relatively invisible character, and a superposed or overlying printing of heavier lines in intaglio and in strongly pronounced color designating the nature of the security, said printing including the border vignettes and such other matter as may be required and in all parts underlaid by the first stated printing in the pigment of relatively invisible character.

1,299,485. PROCESS FOR MAKING HYDROGEN PEROXID. DAVID LEVIN, Buffalo, N. Y., assignor to Commercial Electrolytic Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 2, 1916, Serial No. 76,033. Renewed Aug. 14, 1918. Serial No. 249,883. 6 Claims. (Cl. 204—9.)

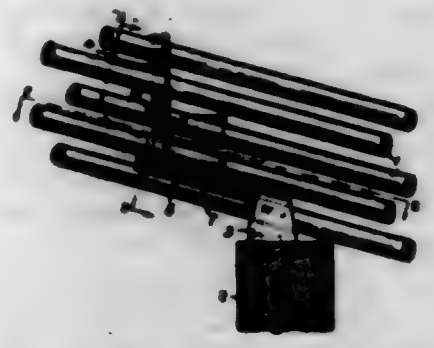


1. The process of producing hydrogen peroxid which consists in purifying a solution containing the radical of persulfuric acid by filtering and separating the peroxid.

3. A continuous process of manufacturing hydrogen peroxid which consists in separating the hydrogen peroxid from an electrolyte and then purifying the electrolyte with hydrogen sulfid before reelectrolyzing it.

6. A continuous process of manufacturing hydrogen peroxid which consists in electrolyzing a solution of sodium bisulfate to produce a 15% solution of sodium persulfate, separating the hydrogen peroxid, purifying the electrolyte with hydrogen sulfid and reelectrolyzing the electrolyte.

1,299,486. BAFFLE FOR STEAM-BOILERS. NATHAN E. LEWIS, Plainfield, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Nov. 17, 1917. Serial No. 202,494. 7 Claims. (Cl. 110—66.)



1. A water tube boiler having rows of water tubes and a baffle placed between two of said rows and extending parallel therewith, said baffle being composed of a plurality of layers of tile pieces so arranged that the tile pieces of one layer break joints with those of the other layers in both directions.

4. A water tube boiler comprising rows of water tubes, a furnace bridge wall, and a baffle between two of the rows of water tubes extending from the bridge wall, said baffle being composed of two lines of special tile pieces so placed with respect to each other as to break joints and extending from the bridge wall to the cross baffle which comes at the rear of the first pass.

7. A water tube boiler having two rows of water tubes staggered relatively to each other, and a baffle between said rows, said baffle being made up of a plurality of courses of tile pieces, the tiles of one of said courses having joints at one set of water tubes and the other course having joints between said rows of water tubes, the outer faces of one course being shaped to fit one set of tubes and the outer faces of another course being shaped to fit the other set of tubes, the courses breaking joint in both directions.

1,299,487. DEVICE FOR DISPENSING LIQUID OR PLASTIC MATERIALS. GUSTAVE A. LOEBEN, Philadelphia, Pa., assignor to The De Luxe Brush Company, Wilmington, Del., a Corporation of Delaware. Filed Sept. 18, 1918. Serial No. 254,686. 9 Claims. (Cl. 221—78.)

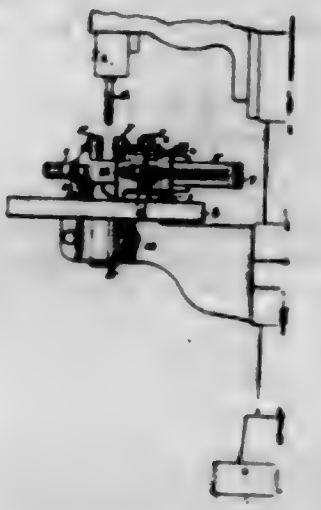


1. In a device for dispensing liquid, semiliquid and plastic material, the combination of a receptacle for holding said material, a discharge tube leading from the interior of said receptacle and projecting a distance beyond the forward end thereof, the said material being discharged through said tube, a tube into which the forward, projecting part of said discharge tube extends and into which the said material escapes from the latter, and means interposed between the said tubes for preventing any of said material from escaping rearwardly through said second named tube.

1,299,488. AUTOMATIC MACHINE-VISE. JOHN R. LOMO, East Akron, Ohio. Filed Nov. 12, 1917. Serial No. 201,413. 5 Claims. (Cl. 77—62.)

1. A machine vise comprising a main jaw having a body provided with a tubular vertical bearing at its side and split across said body into said bearing, and a post over which said bearing is seated, a nut in said body behind said split, a movable jaw in said main jaw and an operating screw through the same engaged in said nut, whereby

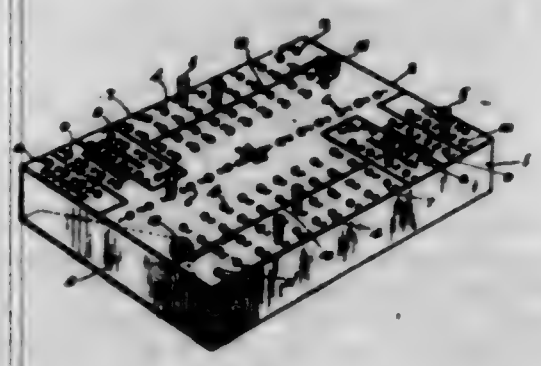
when the screw is tightened the parts are automatically clamped on said post.



3. A vise having a split body provided with a post opening and a work-holding jaw, a supporting post for said body fitting snugly within said opening, a movable jaw and an operating screw therefor connected with one of the split portions of said body permitting clamping of said body upon said post through the clamping pressure placed upon the work held between the jaws, and a clamping device for the split portions of said body permitting clamping effects to be obtained upon the post independently of said operating screw.

5. A machine vise as described comprising an inner jaw member having a tubular bearing at one side of the body thereof and split transversely into said bearing and having a downward extension at its bottom beneath the jaw thereon and adapted to take the downward pressure upon the vise and a base for the vise in supporting relations to said extension, an outer jaw slidably mounted in said inner jaw member, an operating screw therefor and a nut engaged by said screw and located behind the said transverse split, and the said outer jaw having an adjustable support adapted to rest on said base, whereby when the operating screw tightens the work in the jaws the said jaws are clamped on the post and the down pressure on both jaws is sustained.

1,299,489. CARD-SCORER. ADONIS GEORGE EDWARD LOWMAN, Winnipeg, Manitoba, Canada. Filed Mar. 1, 1917. Serial No. 151,779. 1 Claim. (Cl. 235—90.)



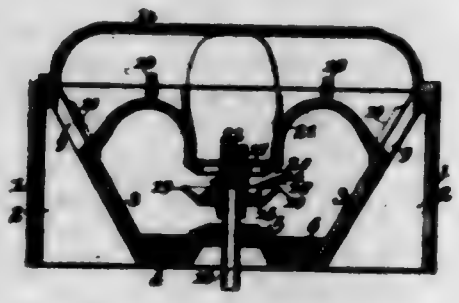
As a new article of manufacture, a cardboard box having a series of centrally arranged, lengthwise extending, consecutively numbered perforations, therein indicating games, horizontal rows of perforations at opposite sides of the game-perforations and numbered consecutively from 1 to 9, there being four perforations in each row, a series of consecutively numbered perforations above the ninth row of horizontal perforations in each instance and indicating hundreds, a series of consecutively numbered perforations above the latter perforations and indicating thousands, a series of consecutively numbered perforations above the latter perforations and indicating "rubbers", a divisional line passing lengthwise of the box at each side and centrally between the horizontal rows of perforations and a single designated perforation at each end of the box indicating a negative score.

1,299,490. BIT. ELMER T. MCPHERSON, Wilmington, Ohio, assignor to The Irwin Auger Bit Company, Wilmington, Ohio, a Corporation of Ohio. Filed May 10, 1918. Serial No. 233,616. 4 Claims. (Cl. 145—117.)



1. In a bit, a solid center having an integral twist ending in a cutting edge and an integral partial twist also ending in a cutting edge, the partial twist being cut away on a plane substantially at right angles to the axial plane in which the main cutting edge lies and intersecting said cutting edge at its juncture with its solid center.

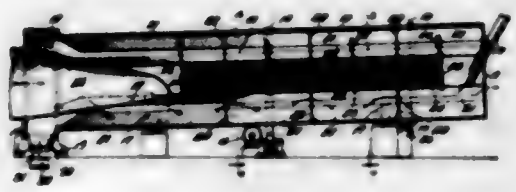
1,299,491. OIL-BURNER. FLOYD E. MACK, Lockport, N. Y., and FREDERICK R. FOSTER, Jonesboro, Tenn., assignors to Mack-Foster Co., Norristown, Pa., a Corporation of Delaware. Filed July 18, 1918. Serial No. 245,542. 8 Claims. (Cl. 158—91.)



5. The combination of an air outlet having a beveled edge and a combined stop and deflector spanning the mouth of the outlet, an oil supply pipe fixed in relationship with said deflector, and an oil nozzle adjustable on the end of the pipe and limited in its adjustment toward the air outlet by said stop, said oil nozzle comprising an oil pan with a convex bottom, a head with a convex top extending beyond the body of the nozzle to cause unvaporized oil to drip to the convex bottom, and an annular flange surrounding the pan with an inner surface parallel to said beveled edge.

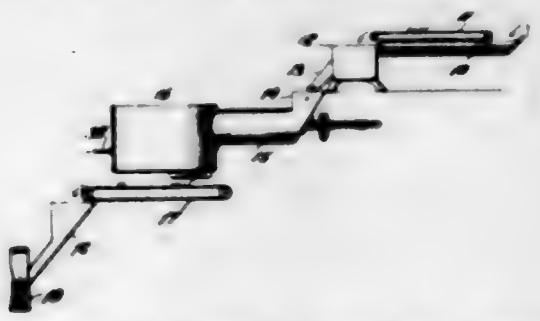
7. Means in an oil burner for insuring a tight joint between a manifold and a burner base regardless of the amount of expansion of the manifold, comprising burner base ends with inwardly inclined surfaces provided with openings, a manifold having corresponding openings of a V-shape and formed on a slope corresponding to the inclination of said burner base end surfaces, enabling the riding up of the ends of said manifold upon said surfaces in the expansion of the manifold and still maintaining a tight joint, and crotches at the sides of the openings in said burner ends normally supporting the manifold.

1,299,492. APPARATUS FOR DEHYDRATING. MAX F. MANGELSDORFF, Union Hill, N. J., assignor to Harry BENTZ, Montclair, N. J. Filed Nov. 15, 1917. Serial No. 202,187. 16 Claims. (Cl. 34—6.)



1. Apparatus for dehydrating vegetable material and the like, comprising an elongated rotary cylindrical casing affording a drying chamber and inclined to effect the travel of said material through the same by gravity, means for supplying said material to the higher end of said casing, a discharge therefor at the lower end of said casing, means within said casing for lifting and turning over the pieces of material, means for retarding the travel of the same through said casing, and means for delivering heated air into the discharge end of said casing and causing the same to flow through the casing and against the pieces of material traveling therethrough.

1,299,493. PROCESS OF AND APPARATUS FOR PREPARING POTATOES FOR DEHYDRATION. MAX F. MANGELSDORFF, Union Hill, N. J., assignor to Harry Bentz, Montclair, N. J. Filed Dec. 14, 1917. Serial No. 207,037. 4 Claims. (Cl. 99—5.)



1. The method of preparing potatoes for the dehydration of the same, which comprises reducing raw potatoes into pieces, partly cooking these pieces in the presence of steam, delivering the partly cooked pieces to a body of water and moving them through the same, and then removing the pieces from said body of water and allowing the water to drip from them.

2. The method of preparing potatoes for the dehydration of the same, which comprises reducing raw potatoes into pieces, agitating these pieces in the presence of steam until they have become partly cooked, and then subjecting the same to a water bath.

3. A method of preparing potatoes for the dehydration of the same, which comprises the reduction of raw potatoes into pieces and the discharge of these pieces as formed into a chamber, effecting the constant agitation of said pieces within and their travel through said chamber, delivering steam within said chamber for partly cooking the pieces of potato traveling therethrough, and delivering the partly cooked pieces leaving said chamber to a water-bath, whence they are removed after becoming cool.

4. Apparatus for preparing potatoes for dehydration, comprising a cooling tank for the partly cooked potatoes, said tank comprising a bottom portion adapted to hold relatively cold water, into which the potatoes are to be delivered, and having at one side a raised discharge for the pieces, in combination with means for moving the potatoes out of the water and to said discharge.

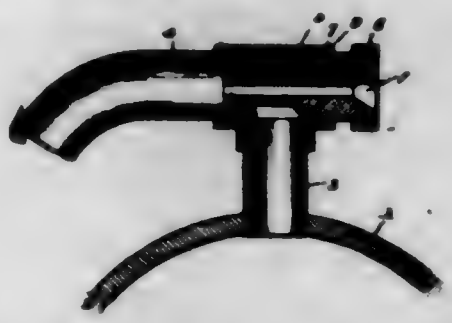
1,299,494. FLOORING-BLOCK. WILLIAM MASILLAN, Raymond, Wash. Filed May 16, 1917. Serial No. 169,056. 1 Claim. (Cl. 20—75.)

In improvements in floor construction, the combination with a plurality of elongated tongues in parallelism and spaced apart, of a plurality of blocks arranged in rows in the spaces between the tongues, the opposite longitudinal edges of said blocks being provided with grooves, the centers of the under walls of said grooves having notches, said grooves adapted to receive the tongues, the under parts of said tongues being provided with uniformly spaced



projections to enter said notches, means passing through said tongues and through said projections for securing the tongues to a floor base, the ends of the under walls of the grooves having L shaped notches, which, when the blocks are in rows form notches similar to the first notches, to receive other of said projections.

1,299,495. SAND-BOX VENTILATOR. CHARLES F. MATHER, Erie, Pa. Filed Aug. 16, 1918. Serial No. 250,261. 2 Claims. (Cl. 291—40.)



1. The combination with the sand dome of a locomotive, of an upstanding suction conduit rising from the top thereof, an air outlet nozzle at the top of said conduit and at an angle thereto, and an air inlet nozzle of smaller diameter extending into the receiving end of said outlet nozzle and across and beyond the upper end of said suction conduit.

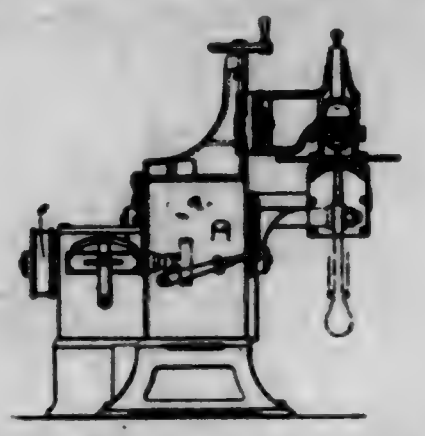
2. The combination with the sand dome of a locomotive, of an upstanding suction conduit rising from the top thereof, an air outlet nozzle at the top of said conduit and at an angle thereto, and an air inlet nozzle of smaller diameter extending into the receiving end of said outlet nozzle and across and beyond the upper end of said suction conduit, said inlet nozzle being adjustable to give greater or less overhang thereof in relation to the suction conduit.

1,299,496. VALVE-SPRING LIFTER. MURDOCK WILLIAM MELROSE, North Bellingham, Mass. Filed Mar. 18, 1918. Serial No. 223,095. 3 Claims. (Cl. 29—37.1.)



1. A valve spring lifting jack which comprises a lever having longer and shorter arms, the shorter arm including two spaced apart members, a valve-spring-engaging stirrup pivoted to the outer ends of the shorter arm members, fulcrum studs connected with said lever between the shorter and longer arms thereof, and a thrust member having bearings supporting said fulcrum studs, said jack being characterized by the fact that the thrust member is composed of two parallel standards carrying said bearings, transverse connecting means rigidly connecting said standards and maintaining the same in spaced relation, and offset spaced apart feet rigidly connected with the lower ends of the standards and adapted to bear on a support at opposite sides of a fixed guide in alinement with a valve stem, and engage said guide to position the jack and prevent it from slipping sidewise.

1,300,497. MACHINE FOR THE MANUFACTURE OF TIRE-COVERS. FRANK HOLT MINCER and HERBERT FREDERICK HARGALL BIRKIN, Melksham, England. Filed June 20, 1917. Serial No. 175,000. 1 Claim. (Cl. 154—10.)



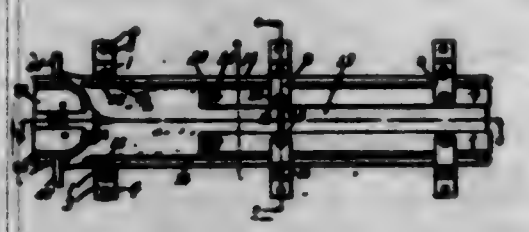
A machine for shaping on a core disposed on a shaft, tire covers, composed of fabric coated with rubber provided with beads or projections adapted to fit the rim of a wheel, said machine comprising a rocking member, carriers on said rocking member, rollers mounted on said carrier, means for pressing said rollers against the fabric, means for oscillating said rocking member about the center of the shaft on which the core is mounted, and means for moving said carriers individually and collectively toward and away from the center of said core.

1,300,498. NECKTIE. WILLIAM K. MEYER, New York, N. Y. Filed June 16, 1917. Serial No. 175,096. 5 Claims. (Cl. 2—11.)



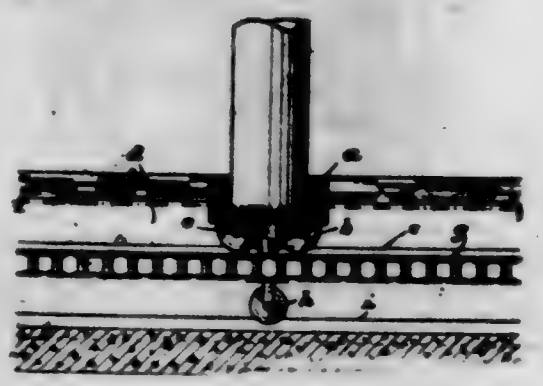
1. As an article of manufacture, a four-in-hand tie comprising a larger knot-tying end having a seam, a neck band portion and smaller tying end, said neck band portion and said smaller tying end consisting of a seamless strip of material secured to the said larger knot-tying end.

1,300,499. SEALING-MACHINE. WILLIAM H. MILLER, Goblesville, Mich. Filed July 11, 1918. Serial No. 244,349. 11 Claims. (Cl. 93—2.)



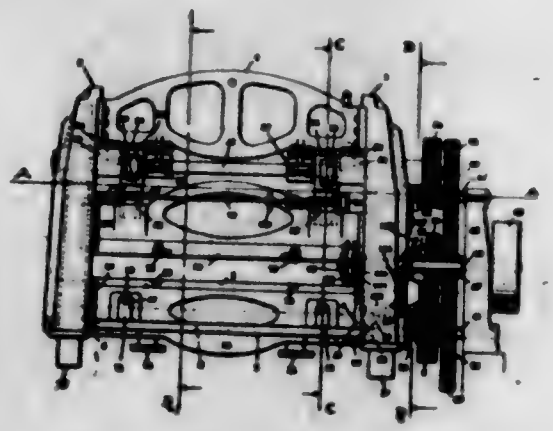
1. A sealing machine comprising spaced transverse base members, a pair of longitudinal base bars, uprights having inwardly projecting arms at their upper and lower ends disposed in opposed coacting pairs with their lower arms upon said transverse base members, said longitudinal bars being disposed upon such arms, the superimposed parts being secured together by bolts therethrough, an inverted channel-shaped heating plate disposed between said uprights and having its arms secured thereto, a heating element mounted on said longitudinal bars below said heating plate, a cooling plate disposed on said longitudinal bars at the rear of said heating plate, the surfaces of said heating and cooling plates being in the same plane, yielding slide bars supported by rods slidably arranged through said uprights and having springs thereon, said rods being provided with pins limiting their inward movement, and yielding top bars supported on the upper arms of said uprights by rods reciprocating through said arms and having springs thereon, said rods being provided with pins limiting their inward movement.

1,300,500. MACHINE FOR TREATING EXPLOSIVE MATERIAL. ARTHUR J. MORHAM, New York, N. Y. Filed Dec. 17, 1917. Serial No. 207,435. 6 Claims. (Cl. 64—28.)



1. In machines for treating explosive material, the combination with the means for directly operating upon such material, of actuating mechanism for said means, and a body of liquid in which are immersed parts of said actuating mechanism whose frictional action would otherwise tend to produce sparks.

1,300,501. PRESS. ROBERT NAWRATH, Newark, N. J. Filed Oct. 8, 1915. Serial No. 54,704. 17 Claims. (Cl. 153—21.)

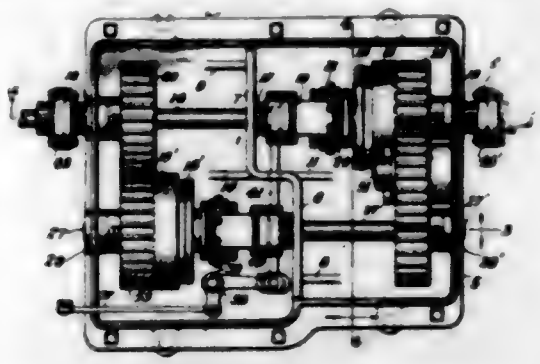


16. In a press, the combination with spaced housings, a top leaf connecting said housings, a hammer extending between said housings next said top leaf, a die holder extending between said housings on the opposite side of said hammer from the top leaf, and means connecting the housings at the opposite side of the hammer and die holder from the top leaf and supporting said die holder at spaced points intermediate its ends, said die holder being otherwise free to move away from the hammer.

1,300,502. CLUTCH MECHANISM. OLOF WILLIAM OLSEN, Woodhaven, N. Y. Filed Apr. 16, 1917. Serial No. 162,267. 3 Claims. (Cl. 192—1.)

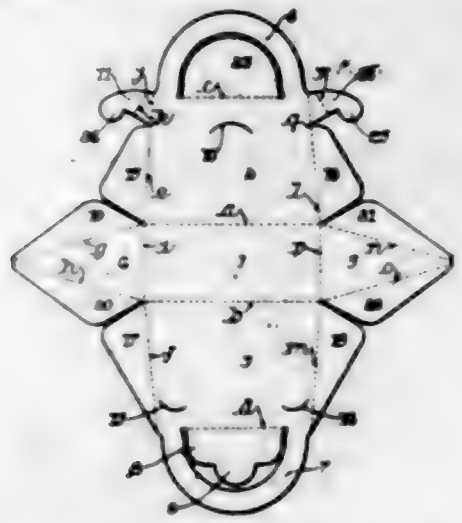
1. In clutch mechanisms, a pair of clutch assemblies of like construction mounted parallel with each other but in different vertical planes from each other so that the clutch members of one assembly are diagonally situated from the clutch members of the other assembly, the clutch members of each of said clutch assemblies being adapted to connect with and separate from each other, a pair of shafts for each clutch assembly, one clutch member being rigidly connected to one shaft and the other clutch member being slidably connected to the other shaft but held against rotation on said shaft, and means for sliding said slidable

clutch member so as to engage with and be separated from said other clutch member, and means for connecting said clutch assemblies with each other so as to simultaneously



move one clutch member of one assembly toward the other clutch member of said assembly, and one clutch member of the other assembly away from the other clutch member of said assembly.

1,299,503. PAPER BOX. WILLIAM PENTE, Chicago, Ill., assignor of one-half to Andrew E. Bueschel, Chicago, Ill. Filed Jan. 13, 1917. Serial No. 142,292. 6 Claims. (Cl. 229—54.)

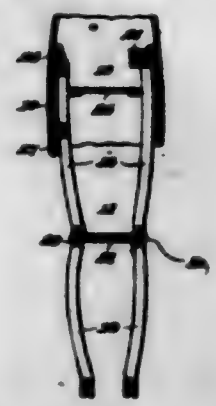


1. A blank for forming a paper box cut and scored to form a rectangular bottom portion, rectangular sides joined to the bottom along its side edges and adapted to be formed up with their free edges in contact to form a box, triangular end portions joined at their bases to the ends of the bottom portion, and adapted to be formed up to close the ends of the box, a handle formed on the outer edge of each side portion, the two handles being adapted to coöperate to form a complete handle member when the sides are formed up with their outer edges in contact, a locking flap within one handle, and a coöperative slot in the other side member, whereby when the box is formed, said locking flap can embrace the outer edge of the opposite side member to interlock with same to hold the free edges of the sides together, a locking strap at each end on one of the side members, adjacent to its outer edge and a coöperative slot in the opposite side member at each end for interlockment with said straps, whereby when the box is formed the straps can embrace the tops of the end members and lock the two sides of the box together.

3. In a paper box, two side members having their adjacent edges in contact, and said side members extending at an acute angle to each other, a tongue integral with one side, bent over the adjacent edge of the other side, and the free end of the tongue tucked into a slot in the other side, thereby retaining said flap bent over said edge of the opposite member and retaining the box closed.

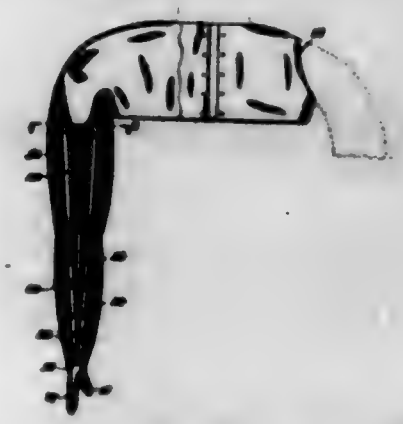
6. A triangular shaped paper box having sides extending at an acute angle to each other and provided with integral handles on their contacting edges, means within the handles for locking said sides together, integral triangular shaped ends for the box, and means integral with the box and independent of the lock within the handles for locking said triangular ends in box closing position.

1,299,504. ARTIFICIAL LIMB. ANTHONY K. PETSON, Amsterdam, N. Y. Filed Oct. 4, 1917. Serial No. 194,091. 3 Claims. (Cl. 3—2.)



1. An artificial limb comprising a frame having upper and lower portions, a spring hinge connection between the said portions, an encircling spring for the upper portion of the frame, an envelop surrounding the frame provided with an attaching portion.

1,299,505. ARTIFICIAL ARM. ANTHONY K. PETSON, Amsterdam, N. Y. Filed Oct. 21, 1918. Serial No. 258,978. 1 Claim. (Cl. 3—12.)

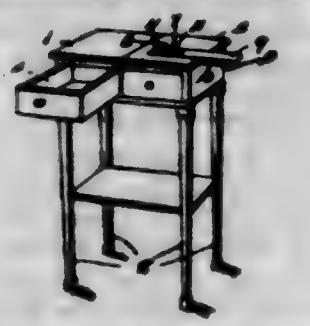


An artificial arm comprising an upper frame formed of side bars, a lower frame having side bars hinged to the side bars of the upper frame, spring connections between said frames whereby the latter are normally maintained outstretched, inwardly projecting lugs spaced from the upper ends of the bars of the upper frame, a plate connecting the said lugs, the upper ends of the bars of the upper frame being beveled adapted for the reception of the stump of an arm therebetween for seating upon said plate, a hand member pivoted to the lower end of the lower frame, closely coiled springs encircling the upper and the lower frames, securing means between the said springs and frames, a resilient packing surrounding the said springs, an envelop covering said packing with a glove portion surrounding the said hand, and a jacket attached to said envelop adapted for attachment to the human body.

1,299,506. TELEPHONE-CABINET. WILLIAM J. PHILLIPS, Brooklyn, N. Y., assignor to Arthur L. Benfield, Brooklyn, N. Y. Filed Dec. 21, 1917. Serial No. 208,373. 4 Claims. (Cl. 45—31.)

1. A telephone stand having an inclosure in which a key box may be supported directly below the top of the stand, a portion of the top being removable whereby access may be had to said key box, and the bottom of said inclosure having an opening through which said key box may be introduced into the inclosure without disconnecting the wires.

2. A telephone stand having a top, an inclosure in which a key box may be supported directly below said top, means of access to said key box through the top, and a



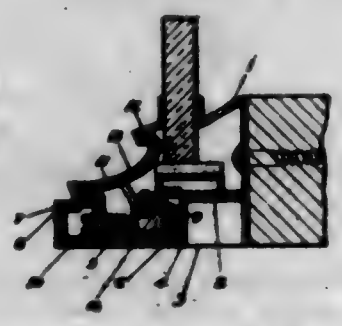
drawer arranged below the top and at one side of the key box inclosure for concealing apparatus connected with an inter-communicating telephone system.

1,299,507. VALVE MECHANISM. FRANK PILLEY, Kansas City, Mo. Filed Jan. 11, 1918. Serial No. 211,404. 5 Claims. (Cl. 141—7.)



1. In a machine of the character described, a valve comprising a fixed hub member provided at one end with a socket for receiving a fluid supply pipe and having a discharge port opening into the said socket, a sleeve revolubly mounted on the hub having channeled arms extending therefrom in the same plane and engageable by articles advanced through the machine to advance the sleeve to open and close communication between the supply pipe and arm channels.

1,299,508. STORE-FRONT CONSTRUCTION. FRANCIS J. FLYNN and IVOR G. BARCLAY, Niles, Mich., assignors to Kawneer Manufacturing Company, Niles, Mich., a Corporation of Michigan. Filed June 4, 1915. Serial No. 32,045. 3 Claims. (Cl. 189—78.)

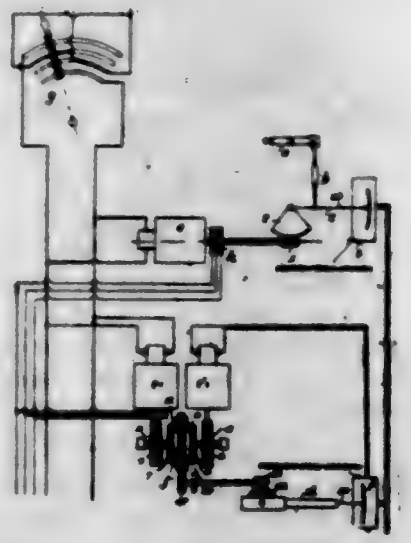


1. In a store front construction, a cam surface member inclosed therein, an outer retaining strip, a resilient tongue connected with said strip, the free end of which being adapted to coöperate with said cam surface member, and means operable from the exterior of the store front for drawing the outer retaining strip toward the glass.

2. In a store front construction, a retaining strip having a downwardly extending resilient tongue provided with a cam head at its free end, a cam surface member adapted to coöperate with said tongue and means operable from the exterior of the store front for forcing the cam head on the tongue against said cam surface for the purpose set forth.

1,299,509. MECHANISM FOR CONTROLLING MOVEMENT. JEAN ALEXANDRE RAY, Paris, France. Filed Nov. 30, 1914. Serial No. 874,837. 16 Claims. (Cl. 172—239.)

1. In a mechanism for controlling movement at a distance, the combination with two or more movable elements normally moving in a predetermined relation and synchronized motors for moving the same, of means for correcting deviations from said predetermined relation com-



prising an auxiliary motor geared to one of said elements and electrical devices under the control of said elements for starting and stopping said auxiliary motor upon the occurrence and correction respectively of a deviation.

1,299,510. WRENCH. ROBERT A. ROSANDER, Brooklyn, N. Y., assignor to Rosaro Machine and Tool Company, a Corporation of New York. Filed Dec. 29, 1916. Serial No. 139,518. 4 Claims. (Cl. 81—139.)



1. In a tool of the character set forth, a bar having a jaw thereon, a screwthreaded sleeve slidably mounted on said bar and having a slot, a jaw on said sleeve, a dog received in said slot and having a head thereon with an inclined outer face, and a nut engaged with said sleeve and having a circumferentially extending chamfer and a circumferentially extending recess, said chamfer adapted to co-act with such inclined face when said nut is turned in one direction and force said dog into engagement with said bar to lock said sleeve to said bar, and said recess arranged to receive said head when said nut is turned in the opposite direction to free said dog from said bar.

4. In a tool of the character set forth, a bar having a jaw thereon, a screwthreaded sleeve slidably mounted on said bar and having a slot, a jaw on said sleeve, a dog received in said slot and having a head with an inclined outer face, and a nut engaged with said sleeve and having a circumferentially extending chamfer and a circumferentially extending recess, said chamfer adapted to co-act with such inclined face when said nut is turned in one direction and force said dog into engagement with said bar and lock said sleeve to said bar, and said recess arranged to receive said head, said dog having a spur adapted to be acted upon by said nut and tilt said dog to force said head into said recess when said nut is turned in the opposite direction.

1,299,511. FRUIT-JAR WRENCH AND HOLDER. NANNIE M. SCHARENBERG, Michigan City, Ind. Filed Jan. 21, 1919. Serial No. 272,274. 2 Claims. (Cl. 65—26.)

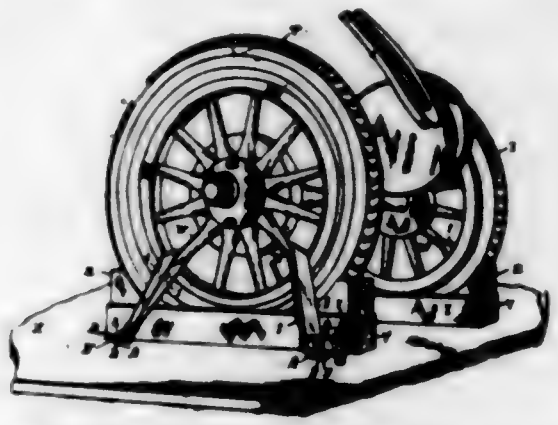
1. A jar cap removing wrench comprising a pair of pivoted members having hand engaging portions at one of their ends, a flexible cap engaging member having its ends secured to one of said pivoted members and the other

member being so pivoted that one o fits ends will engage the peripbery of the jar cap between the securing points



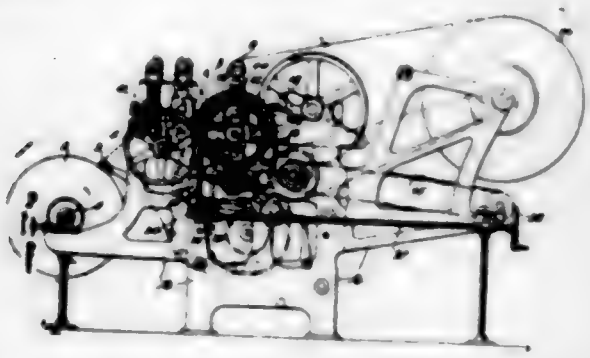
of the ends of the flexible cap engaging band when a squeezing action is applied to the hand engaging ends of the pivoted members.

1,299,512. ANCHOR-STRAP. GEORGE E. SNIDER, Richmond, Ind. Filed Aug. 12, 1918. Serial No. 249,478. 2 Claims. (Cl. 21—8.)



1. An anchor strip comprising a strap of flexible material adapted to form a loop with its ends brought near together, an angular plate secured to each end of the flexible material and each having an aperture therethrough, said plates being adapted to be nested together with the said apertures thereof in registering alinement with each other whereby a bolt may be inserted through the apertures to secure the plates to a floor.

1,299,513. MACHINE FOR OPERATING UPON WEBS OF MATERIAL. CHARLES R. SEYMOUR and OTTO M. HOCH, Rochester, N. Y., assignors to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed May 28, 1916. Serial No. 99,453. 3 Claims. (Cl. 74—84.)



1. In a machine of the class described, the combination with a feed roll and a main drive shaft, of an intermediate drive shaft, gearing between the roll and intermediate shaft, a gear loosely mounted on the intermediate shaft and having internal and external teeth, gearing between the main drive shaft and external teeth, a cage loosely mounted on said intermediate shaft, pinions carried by the cage, a gear rigid with the intermediate shaft, pinions rigid with the first mentioned pinions, the first mentioned pinions intermeshing with the aforementioned internal teeth and the second mentioned pinions intermeshing with the last metioned gear and means for normally holding the cage stationary but capable of rotating it in either direction.

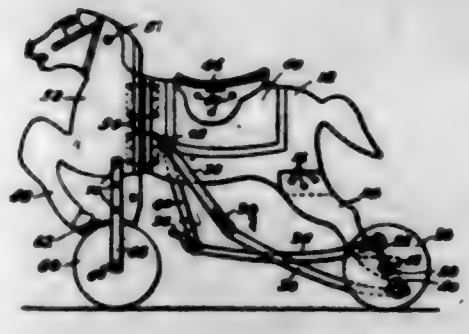
1,299,514. STOCK FOR NECKWEAR. JOHN EDGAR SIPPERLY, Troy, N. Y., assignor to United Shirt & Collar Company, Troy, N. Y., a Corporation of New York. Filed Aug. 14, 1917. Serial No. 186,100. 6 Claims. (Cl. 2—67.)



1. A stock for neckwear, comprising a stock body having a loop on its under-face and flexible strings connected to the ends of said body, one of said strings coöperating with said loop.

5. A stock for neckwear, comprising a stock body having a continuous outer ply, a loop on the underside of said body, said loop being formed by a strip located at the lower portion of said body and extending transversely of said body, and flexible strings connected to the ends of said body, one of said strings coöperating with said loop.

1,299,515. CHILD'S VEHICLE. MAX SKOLNIK, Minneapolis, Minn. Filed Dec. 14, 1918. Serial No. 266,662. 1 Claim. (Cl. 208—165.)



A child's vehicle comprising a main body member shaped to simulate an animal, rear leg members attached to said body member, a crank shaft rotatably mounted in the lower ends of said leg members, driving wheels secured upon the ends of said shaft, a saddle on said body member, links pivoted to said body portion at a place below and in front of said saddle, operating bars pivoted near their front ends to the lower ends of said links and attached at the rear ends to the cranks of said crank shaft, pedals on the front ends of said operating bars, a head and front member hinged to said main body member, a guiding wheel upon which said head and front member is supported, and handles secured to said last mentioned member for swinging the same.

1,299,516. VEHICLE-DUMPING MECHANISM. LEWIS L. STRUCUM, Plankinton, S. D., assignor of one-third to Charles A. Earl and one-third to Wilbert M. Chase, Plankinton, S. D. Filed Feb. 8, 1918. Serial No. 275,710. 9 Claims. (Cl. 214—60.)

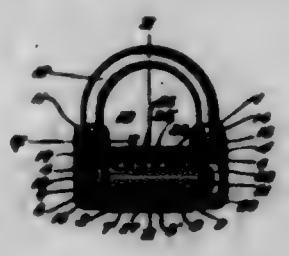
1. A vehicle-dumping mechanism for relatively long and short vehicles, including a vehicle-supporting plat-

form, two members pivoted thereon to swing vertically, and adapted, respectively, to tilt long and short vehicles, and actuating means under the front portions of said



members and shiftable from one to the other of said members, whereby one of said members may be actuated independently of the other.

1,299,517. PERMUTATION-LOCK. MATHEW SPINELLO, Kansas City, Mo., assignor to Harry Clements, Kansas City, Mo. Filed Jan. 22, 1918. Serial No. 218,122. 2 Claims. (Cl. 70—118.)



1. A permutation lock comprising a slotted barrel having threaded ends, keeper members threaded on the ends of the barrel, a shackle slidable in one of the keeper members and having a bolt receiving recess, one end of the shackle engaging a recess in the other keeper member, a longitudinally movable bolt in the barrel having outstanding pins, one end of the bolt adapted to engage the recess in the shackle, the other end of the bolt being provided with a head, a coil spring wound on the bolt, one end of which bears against the end of the barrel and the other against the head on the bolt, ring tumblers sleeved on the barrel and having notches adapted to aline with the pins on the bolt, one of said tumblers having a cam face to engage a pin to shift the bolt against the action of the spring to move the bolt into engagement with the recesses in the shackle, the spring being effective when all of the notches in the tumblers are in alinement to retract the bolt from the recess in the shackle.

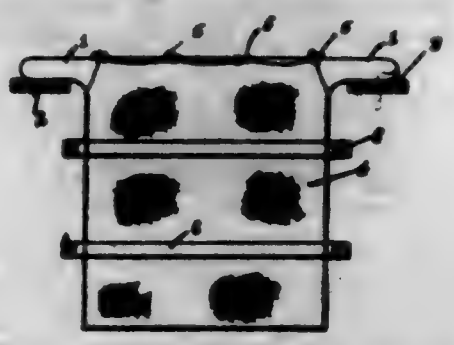
1,299,518. EMBOSSING-DIE. CHARLES A. STICKNEY, Chattanooga, Tenn., assignor, by direct and mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1918. Serial No. 227,268. 5 Claims. (Cl. 101—23.)



1. A die for embossing characters in addressing plates having a die face with a character forming groove therein, and with a projection adjacent each of the four corners of said face extending above the same and with recesses below the plane of the die face between the pairs of projections at the sides of said face, substantially as described.

5. A die having a face with a character forming groove therein, a pair of projections extending above said face, the latter extending in between said projections, substantially as described.

1,299,519. METHOD OF HANDLING ANODES IN ELECTROLYTIC BATHS. HERBERT M. STUART, Baltimore, Md., assignor to Electrolytic Zinc Company, Inc., New York, N. Y., a Corporation of New York. Filed July 26, 1916. Serial No. 111,267. 6 Claims. (Cl. 204—1.)

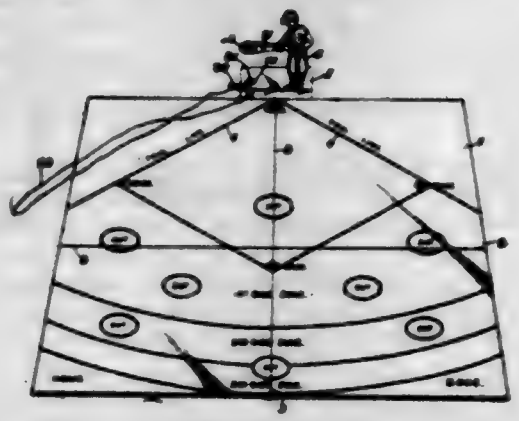


1. The method of handling a soluble anode in an electrolytic bath for the separation of metals, which consists in surrounding the anode with a closely fitting envelop of material pervious to the electrolyte but through which the slimes, etc., resulting from the disintegration of the anode will not pass and maintaining the tight fit of the envelop as disintegration of the anode proceeds.

4. A soluble anode provided with a closely fitting envelop of material pervious to solution to be electrolyzed but through which the slimes, etc., resulting from the disintegration of the anode will not pass, and non-conducting current-shields on the envelop protecting the surfaces of the anode therebeneath from electrolytic action.

6. A soluble anode relatively thin in cross-section, and provided with a closely fitting envelop of material pervious to solution to be electrolyzed but through which the slimes, etc., resulting from the disintegration of the anode will not pass, and a pair of non-conducting strips, one on each side of the envelop, pressing the latter and the contained envelop between them.

1,299,520. GAME. ERNEST OSCAR THALINGER, St. Louis, Mo. Filed May 25, 1918. Serial No. 236,453. 5 Claims. (Cl. 46—30.)

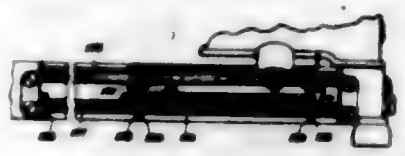


2. A game, comprising a game board for determining the value of the play by the position at which a ball comes to rest after having been projected thereupon, an actuator comprising a base, a spring operated device for moving the ball vertically, and a spring actuated device for striking the ball laterally from the path of movement imparted thereto by the said first-named device whereby the ball is projected upon the board.

1,299,521. CHECKWRITER. LIBANUS M. TODD, CHARLES G. TIBBEL, and ARTHUR C. LA MAY, Rochester, N. Y., assignors, by mesne assignments, to Todd Protectograph Company, Rochester, N. Y., a Corporation of New York. Filed July 19, 1915. Serial No. 40,657. 25 Claims. (Cl. 197—6.2.)

2. In a printing apparatus, a supporting frame including a base portion and an upper portion supported on the base portion and separated therefrom through a part of its

extent to form a work receiving space between said casing portions; a type carrier supported in the upper casing portion; a platen supported by the base portion of the casing; a pivotal connection between said casing portions by means of which the carrier and platen may be swung apart for access thereto and to the work; and securing means for fastening said casing portions together.



8. In a check writer, the combination with a bed having a guide for the check, a rotary printing cylinder having a type form thereon, and a platen adapted for rolling contact with said type form to impress and feed a check placed therebetween, said type form and platen having cooperating means for advancing the check a spacing distance at the end of each impression, of a roller journaled in said bed, means for adjustably inclining its axis relatively to said guide, a pressure foot holding the check against said roller, and means for adjusting the pressure between said foot and roller, for guiding the check in its passage through the machine and controlling said spacing distance.

10. In a check writer, the combination with a bed, a guide thereon, and means for feeding a check over the bed, of a roller journaled in a plate pivoted at one end to the bed and guided for movement thereon, means for pressing a check against said roller, a lug on the other end of said plate, a screw in said bed having a recessed head, said lug engaging in said recess, whereby the turning of said screw turns said plate about its pivot and inclines the axis of the roller to said guide for maintaining the check in contact with the guide during the feeding movement.

22. In a printing apparatus, a casing; a carrier therein provided with type, said carrier having a shifting movement to bring said type selectively to printing position and having also a printing movement; a rotary platen adapted for rolling coaction with a selected type, each of said type and the platen having means adapted to coöperate in registration with each other to print and feed the work; supporting means for said platen; and an adjusting device cooperating with said platen supporting means and with said casing and adapted to adjust the platen axially to maintain said coöperating means of the type and platen in register.

24. In a printing apparatus, the combination with a casing; a carrier therein provided with a type form; and a platen coöperating with the type form to impress the work; of indicating devices including a scale for indicating the size of the work, and a second scale upon which said size indication may be read to indicate the proper location of the work in the machine.

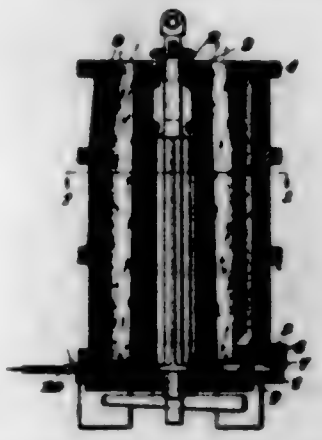
1,299,522. PROCESS FOR DRYING SAND MOLDS. JOHN B. WALKER, Birmingham, Ala. Filed Aug. 4, 1917. Serial No. 184,468. 4 Claims. (Cl. 22—192.)

1. The hereindescribed process for the drying of sand molds for casting ingot molds and like tubular bodies, which consists in assembling cheek, drag and core, and burning gas at the base of the mold cavity to dry all three of said mold elements.

2. The hereindescribed process for the drying of sand molds for casting ingot molds and like tubular bodies, which consists in forming the core about a hollow arbor open at the top, assembling the sand core in the sand cheek, leaving the flue between the cheek and core open for the exhaust of gases, and burning gases about the base of said flue to simultaneously dry the cheek and the core.

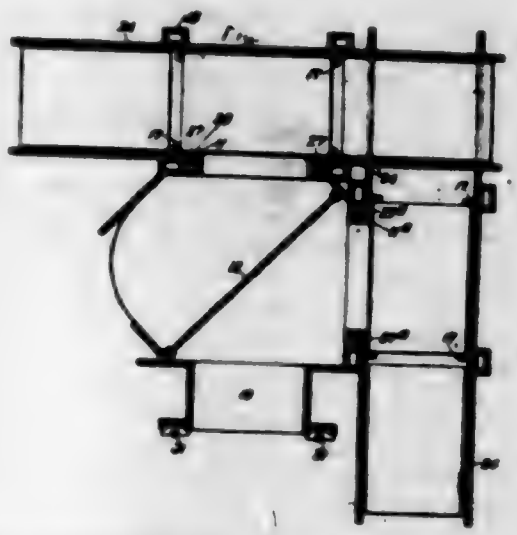
3. The hereindescribed process for the drying of sand molds for casting ingot molds and like tubular bodies, which consists in assembling the rammed cheek and core on the drag so as to form a flue between them, and burning gas at the base of said flue, substantially as described.

4. The hereindescribed process for the drying of green sand molds for the casting of ingot molds and like tubular articles, which consists in assembling the cheek and



core on the drag, lifting the cheek slightly above the drag to form a bottom air inlet, and burning gas around the base of the flue formed between the cheek and the core.

1,299,523. EXHIBITION DEVICE. ALEXANDER WAYSICH, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 26, 1917. Serial No. 176,988. 13 Claims. (Cl. 88—1.)



1. The combination with a frame offering a common viewpoint, of a plurality of compartments arranged to be substituted for each other in a position in register with said frame, so as to offer successive stage-settings or scenes, three of said compartments being mounted for vertical movement and others of said compartments being mounted for horizontal movement relative to said frame, two moving together as a unit, the third moving separately to permit the horizontal intrusion of the others of said compartments between the vertical compartments, and thereby minimise space.

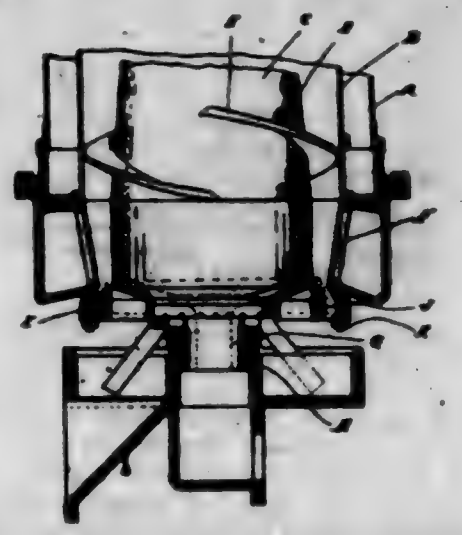
2. The combination with a frame, of a deflecting screen for said frame, at times transparent, at times opaque, according to whether the greatest light is in front or in back of the frame, a plurality of compartments disposed for horizontal movement between the position to one side of the frame and in back of the frame, truck rails for said compartments, trucks for said compartments mounted on said truck rails, a plurality of compartments mounted for vertical movement past the frame, so as to be brought into individual register with said frame, and hoisting means for said vertically moving compartments, some of said vertically moving compartments moving together as a unit and another moving separately.

3. In a device of the class described, the combination with a frame having an opening, of a compartment having walls around an open side adapted to fit said frame

closely, a pair of rails on which said compartment may be carried horizontally to and from the opening, a second compartment adapted to slide vertically between said rails and also adapted in sliding to fit closely said frame, and means for raising and lowering said second compartment to and from said frame.

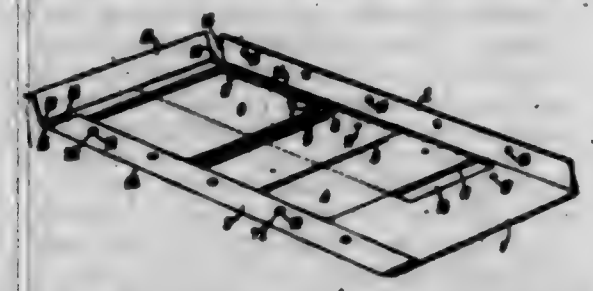
13. In a device of the class described, the combination with a frame having an opening and compartments adapted to be selectively positioned behind said frame, of a second frame having an opening, a second set of compartments adapted to be selectively positioned behind said second frame, tracks having rails spaced farther apart than the depth of the compartments for supporting certain compartments to enable them to be moved horizontally, vertical tracks crossing said horizontal tracks and similarly spaced adapted to permit compartments to be selectively spaced vertically, a second set of horizontal and vertical tracks for the second opening, and counterweights connected to the vertically moving compartments to enable them to be moved easily.

1,299,524. PULP-PRESS. ANTONY WERTEBRUCH, Detroit, Mich., assignor to The Larrowe Construction Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 18, 1918. Serial No. 229,255. 5 Claims. (Cl. 100—48.)



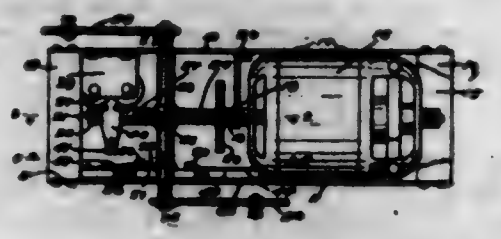
5. In a press, the combination with spaced screens, of means spaced from and movable into the space between said screens for variably restricting the space, and means for forcing the material between said screens toward said restricting means.

1,299,525. SHEET-HOLDER FOR TYPE-WRITING MACHINES. JOHN A. WHEMAY, New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 17, 1917. Serial No. 155,280. 13 Claims. (Cl. 282—29.)



1. A collating sheet adapted to be inserted in a typewriter around a curved platen, said sheet comprising a flexible body portion and a flexible side flap, one of said parts being provided with an opening, and the other with a boss so positioned as to register with said opening when said flap is in folded position, and coöperating therewith to form means for attaching a work-sheet to said collating sheet by gripping a portion of the inserted margin of the work-sheet between said boss and the part of said collating sheet surrounding said opening.

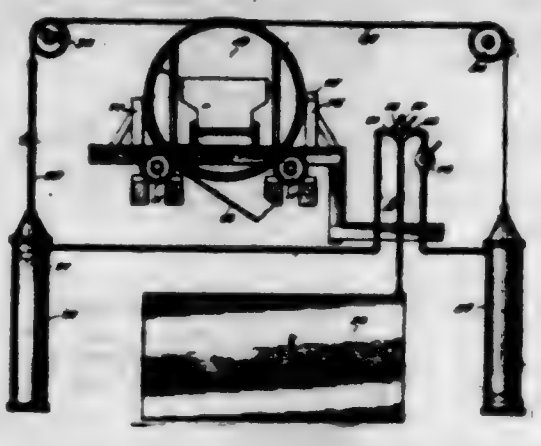
1,299,526. DAMPER-OPERATING MOTOR. EVERETT H. WHITE, St. Paul, Minn. Filed Jan. 10, 1916. Serial No. 71,349. 6 Claims. (Cl. 236—4.)



2. A damper controlling device comprising a shaft, a plurality of fixed contact members radially positioned about the shaft, a corresponding number of yielding contact members positioned over and each normally in contact with the fixed contact member which is correlated therewith, an arm on said shaft adapted to raise said yielding contact members, means for driving the shaft in one direction, and circuits connecting said contact members, some of said contact members operating in series to open the circuits at certain positions of the damper from either of two positions of the shaft.

6. A damper operating device comprising a shaft, a motor driving said shaft, a catch for quickly stopping said shaft, an electromagnet for disengaging the catch from the shaft, and electrically-operated means for impressing the total voltage upon the electromagnet when starting the device and for reducing the same when said catch has been released.

1,299,527. CAR-TIPPLE. ALEXANDER H. WOOD, Kildav, Ky., assignor to Wood Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed June 21, 1917. Serial No. 176,126. 1 Claim. (Cl. 214—52.)



An operating mechanism for rotary tipples and the like, comprising a source of fluid pressure, two pressure cylinders, with a piston in each, the two pistons being connected by a rope, a 4-way valve connecting the source of fluid pressure with the two cylinders and with an outlet whereby fluid may be diverted to either cylinder and exhausted from the other cylinder, and a 3-way valve between the 4-way valve and one of the cylinders.

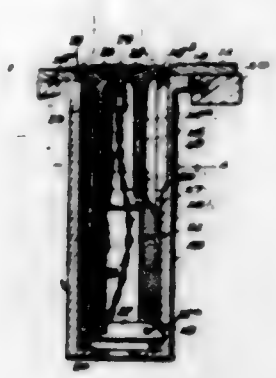
1,299,528. CAR-WHEEL JOURNAL. HAYDEN YEAGER, Cincinnati, Iowa. Filed May 20, 1918. Serial No. 235,714. 3 Claims. (Cl. 105—228.)



1. A car wheel journal, comprising a frame provided with a main recess and supplied with secondary recesses projecting in opposite directions from the main recess and

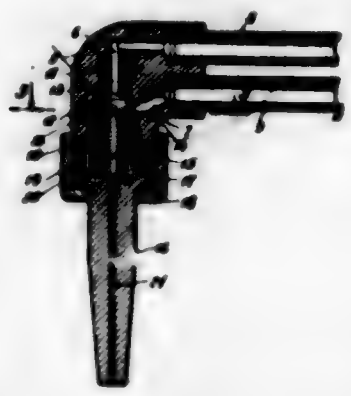
communicating therewith; and a journaling block in the main recess, the journaling block being provided with oppositely projecting lugs, the upper edges of the lugs being spaced from the upper surface of the block, the lugs being received in the secondary recesses, the ends of the block coöperating with the walls of the main recess above the lugs.

1,299,529. DECK-CLEAT. HARRY W. YOUNG, Whitehall, Mich. Filed Apr. 30, 1917, Serial No. 165,470. Renewed Jan. 31, 1919. Serial No. 274,383. 4 Claims. (Cl. 114—218.)



1. The combination of a tubular housing having an internal longitudinal groove provided with a shoulder intermediate its ends, a pin seating in the housing and slidable to project therefrom, said pin having a key seating in the groove, and a latch for locking the pin in the housing, said latch being engageable with the aforesaid shoulder when the pin is withdrawn from the housing to retain the pin in withdrawn position.

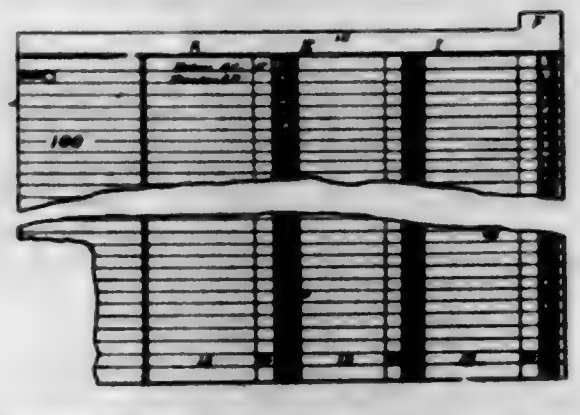
1,299,530. BLOWPIPE. GEORGE H. ZOUCK, Orange, N. J., assignor to Air Reduction Company, Inc., a Corporation of New York. Filed Dec. 4, 1918. Serial No. 265,196. 7 Claims. (Cl. 158—27.4.)



1. A blow pipe comprising a head, having passages for oxidizing and combustible gases and a mixing chamber communicating therewith and a removable tip having a discharge passage and means for controlling the flow of one of said gases to said mixing chamber, said tip and head having respectively, coöperating conical sealing surfaces whereby escape of said gases other than through said discharge passages is prevented.

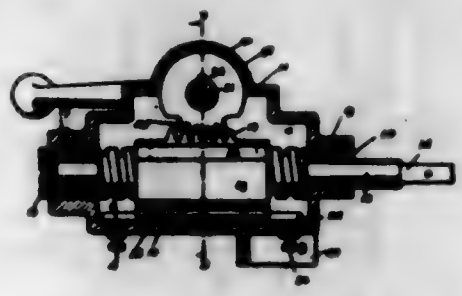
1,299,531. BLANK FORM. CHARLES C. ABEL, Harriman, Tenn. Filed Apr. 14, 1917. Serial No. 162,022. 5 Claims. (Cl. 283—36.)

1. In an account system, index sheets and account sheets arranged in groups alphabetically, the account sheets being of two kinds, and the index sheets comprising a column of name spaces and two columns of account reference spaces located adjacent and parallel to the column of name spaces and in horizontal alinement, and means for distinguishing the two columns, whereby one



is adapted to receive references to accounts of one class and the other to receive references to accounts of the other class, substantially as described.

1,299,532. UNIVERSAL COMPOUND WORM STEERING-GEAR. FRANCIS B. ALLDREDGE, Des Moines, Iowa. Filed May 6, 1918. Serial No. 232,977. 5 Claims. (Cl. 74—79.)



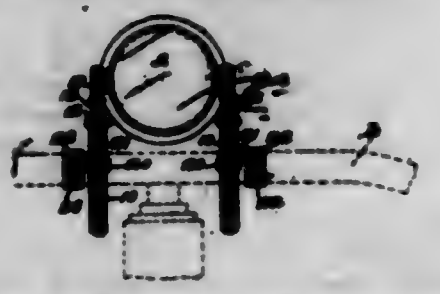
1. In a device of the class described, a casing having formed at one end thereof a bearing, a plug adjustably mounted in the opposite end of said casing, forming an alined bearing, a shaft mounted in said bearings, having a screw-threaded portion within the casing, an internally screw-threaded sleeve split on one side, mounted on said screw-threaded portion of said shaft, having teeth on one surface, flanges formed on said sleeve adjacent to the split therein, adjustable means for drawing said flanges together, a bar inset in said flanges, set screws for adjustably holding said bar in position, bars inset in the upper and lower surfaces of said sleeve, set screws for adjustably holding said last described bars in position, and means for operatively connecting said sleeve with a steering arm.

2. In a device of the class described, a casing having formed at one end thereof a bearing, a plug adjustably mounted in the opposite end of said casing, forming an alined bearing, a shaft mounted in said bearings, having a screw-threaded portion within the casing, an internally screw-threaded sleeve split on one side, mounted on said screw-threaded portion of said shaft, having teeth on one surface, flanges formed on said sleeve adjacent to the split therein, adjustable means for drawing said flanges together, a bar inset in said flanges, set screws for adjustably holding said bar in position, bars inset in the upper and lower surfaces of said sleeve, set screws for adjustably holding said last described bars in position, said bars having cup-shaped recesses, cup-shaped washers interposed between said set screws and said bars, and means for operatively connecting said sleeve with a steering arm.

5. In a device of the class described, a casing, a shaft rotatably mounted therein, having a worm formed thereon within the casing, an internally screw-threaded sleeve mounted on said worm, having teeth on one side, a segmental gear having teeth meshing with said first teeth, means for affording limited adjustment of said sleeve on

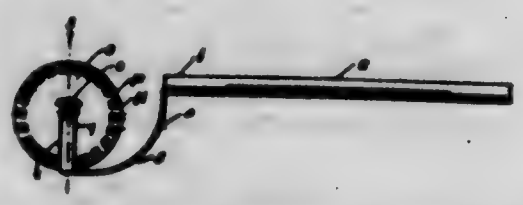
said worm toward said segmental gear, and means for affording limited adjustment of said sleeve on said worm at right angles to the direction of said first described adjustment, whereby any rocking of the sleeve on the shaft may be prevented, and any play of the parts may be taken up.

1,299,533. LAMP-SUPPORT. PERCY ALWEN, Vernon, British Columbia, Canada. Filed Nov. 20, 1917. Serial No. 202,962. 3 Claims. (Cl. 240—60.)



3. In a lamp support, the combination of a cylindrical member bent to form substantially a U-shape, rods yieldably supported by the parallel portion of the cylindrical member and adapted for connection with a lamp, a supporting bracket for said member comprising a bracket arm, a substantially U-shaped portion formed upon the outer end of said arm, and grooved to snugly fit said substantially cylindrical member, collars formed integrally upon said grooved member near the free end thereof and embracing the substantially parallel portions of the substantially cylindrical member, the bight portion of said bracket carried member having its upper surface concaved or grooved for receiving therein the lower portion of the bight portion of the U-shaped substantially cylindrical member.

1,299,534. TOY. HOHANNIS A. ANANIAN, Paterson, N. J. Filed Feb. 20, 1918. Serial No. 218,290. 3 Claims. (Cl. 46—37.)



1. A toy of the class described comprising a frame formed from a single blank of metal having an arcuate portion, upwardly extending arms formed on the forward end thereof, a shaft journaled between the arms at the upper end thereof, a propeller wheel keyed to the shaft, rotatable figures, means operatively connecting the figures to the shaft, wings formed on the rear end of the arcuate bracket and rolled to form a tubular portion, and a blowing tube arranged to receive the tubular extension.

2. A toy of the class described including a frame having an arcuate portion, upright arms carried by one end of said portion, a tubular member carried by the other end of said portion, said portion and arms and tubular member being formed from a single blank of material, a shaft journaled on said arms, a propeller wheel mounted on said shaft, and a blowing tube having said tubular member removably positioned in one end thereof.

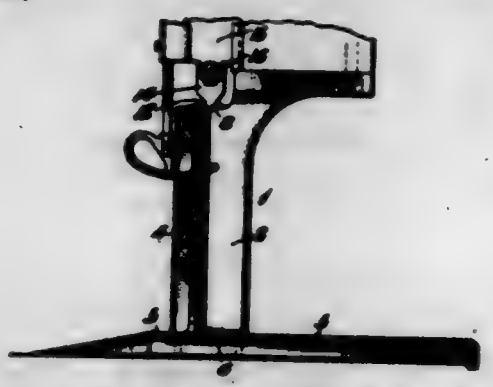
3. A toy of the class described comprising a frame having an arcuate portion, upright arms carried by one end of said portion, bearing members carried by said arms, a tubular member carried by the other end of said portion, said portion and arms and bearing members and tubular member being formed from a single blank of material, a horizontal shaft journaled on said arm, vertical shafts journaled in said bearing members, operative connections between said shafts, a propeller wheel keyed to the horizontal shaft, figures carried by said second named shafts, and a blowing tube having said tubular member removably positioned in one end thereof.

1,299,535. OXYACETYLENE-BLOWPIPE. OSCAR T. ARMSTRONG, Waterloo, Iowa. Filed June 1, 1918. Serial No. 237,681. 4 Claims. (Cl. 158—27.4.)



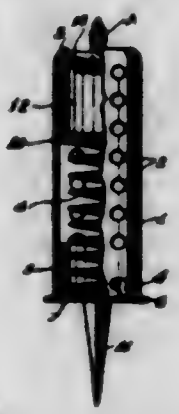
2. In a device of the character described, a shank having capillary channels for the conveyance of gases, and having a conical terminus whose opposite parts have shallow planar faces along the cone thereof leading from the openings of the channels to the apex of the cone, a delivery-nozzle having a capillary orifice into which said shallow planar faces lead, said nozzle being fitted over said conical terminus to provide shallow capillary passages therebetween only at the location of said planar faces, and means for removably securing said nozzle upon said shank.

1,299,536. FABRIC-CUTTING MACHINE. JOSEPH APPELBAUM, Philadelphia, Pa., assignor, by mesne assignments, to Isaac Appelbaum, Philadelphia, Pa. Filed July 8, 1918. Serial No. 243,766. 4 Claims. (Cl. 164—78.)



1. In a fabric cutting machine, a bracket having a runway therein, a channel in the wall of said runway in communication with the latter, a removable and reversible blade slidably occupying said runway, a laterally projecting bar on the side of said blade secured thereto slidably occupying said channel, and means on the machine connected with said bar for reciprocating the latter and consequently said blade.

1,299,537. CANDLE-HOLDER. GROVER CLEVELAND AUWERS, Mansfield, Ohio. Filed July 16, 1918. Serial No. 245,146. 5 Claims. (Cl. 67—27.)



1. In a candle holder, in combination, a casing, a cup shaped member fitted thereto, a candle slidably fitted

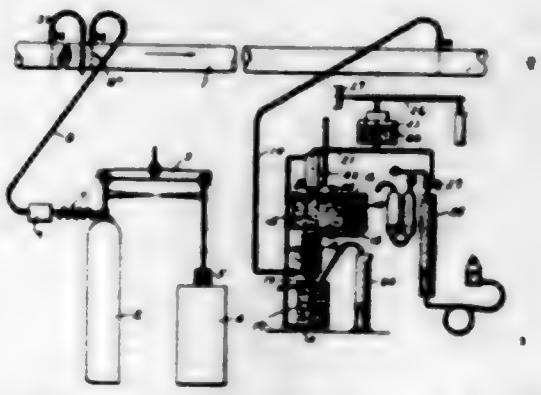
within the casing, means to automatically maintain the candle, while burning, in a predetermined position within the casing, and spike, secured to the cup shaped member, a bayonet slot mechanism formed on the cup shaped member and casing to removably fasten said parts together.

1,299,538. ELECTRIC LAMP. WALTER J. AVERY, Cambridge, Mass. Filed Mar. 11, 1918. Serial No. 221,769. 1 Claim. (Cl. 240—1.)



An electric light comprising a vertically elongated body of substantially uniform size throughout its height and having in its upper end a central recess whose wall is threaded at its upper end, said body having a bore leading from said recess through its lower end, a tube received snugly in said bore, a lamp socket on the upper end of said tube located in said recess and spaced from the wall of the latter, feed wires for said socket passing through said tube, an electric bulb whose lower end is received in said socket, a dome-like globe permeable to light and receiving said bulb therein, said globe resting on the upper end of said body and having a depending flange surrounding said socket and threaded into the upper end of said recess, the lower end of said globe and the upper end of said body being of substantially the same size.

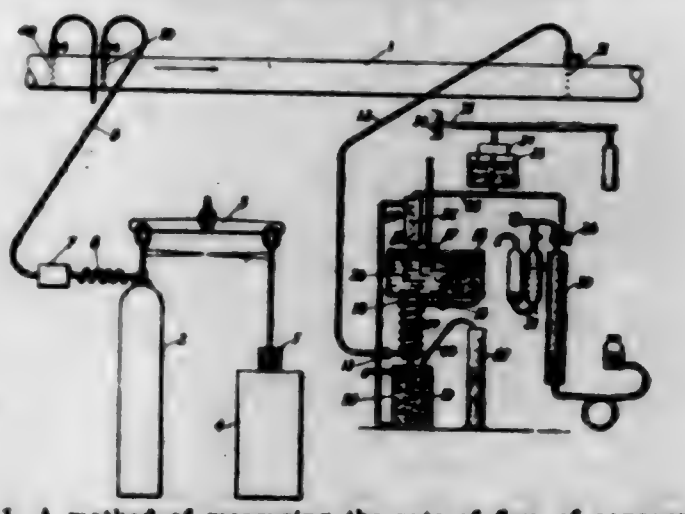
1,299,539. APPARATUS FOR MEASURING THE RATE OF FLOW OF FLUIDS. ERVIN G. BAILEY, Newton Highlands, Mass., assignor to Bailey Meter Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 28, 1917. Serial No. 209,305. 5 Claims. (Cl. 73—167.)



1. An apparatus for measuring the rate of flow of fluids, comprising means for introducing a gas at a known rate into the flowing fluid whereby said fluid and gas are mixed; means for removing a representative sample of the said mixed fluid and gas; means for separating the gas from the fluid in the sample; and means for measuring the relative quantities of the said separated gas and fluid.

4. In an apparatus for measuring the rate of flow of steam in a closed conduit; the combination with means for introducing carbon dioxid gas into the conduit at a known rate whereby said carbon dioxid gas and steam become mixed, of means for extracting a representative sample of said mixed steam and gas; means for condensing said sample; a separating chamber to receive the condensed sample; means for heating said chamber to the boiling point; an outlet for gas from the top of said chamber; means for condensing the steam which would otherwise escape with the gas and returning the condensate thereof to said separating chamber; an outlet for the condensate from the bottom of said chamber; and means for ascertaining the relative amount of gas and condensate when thus separated from one another.

1,299,540. METHOD FOR MEASURING THE RATE OF FLOW OF AQUEOUS FLUIDS. ERVIN G. BAILEY, Newton Highlands, Mass., assignor to Bailey Meter Company, a Corporation of Massachusetts. Filed July 16, 1915. Serial No. 40,238. Renewed Oct. 25, 1918. Serial No. 259,714. 5 Claims. (Cl. 73—167.)



1. A method of measuring the rate of flow of aqueous fluid which consists in adding at a known rate to the flowing aqueous fluid an inert gaseous fluid miscible with said aqueous fluid, and testing the resulting mixture to determine the ratio of aqueous fluid to the gaseous fluid added to it that exists in said mixture.

1,299,541. DEMOUNTABLE CLUTCH-RIM. EARL KING BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 7, 1916. Serial No. 89,701. 13 Claims. (Cl. 152—21.)

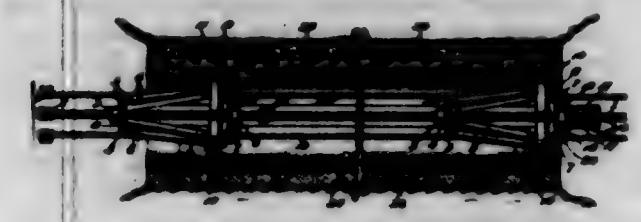


1. The improvement herein described, comprising in combination, a motor vehicle wheel and a complementary tire-carrying demountable rim of greater width than the wheel periphery, a clutch connection therebetween and composed of still narrower complementary circumferential cones and stop ribs, and coacting adjustable stop lugs.

1,299,542. COLLAPSIBLE CORE STRUCTURE. LEMON D. BOWEN and SAMUEL B. BLOOM, Warren, Ohio. Filed Feb. 11, 1919. Serial No. 276,258. 5 Claims. (Cl. 25—131.5.)

1. A collapsible core structure comprising, in combination, a rod member, a collar disposed thereon, lever arms

pivotally secured at one end to said collar, link members secured to the other ends of said lever arms, a second collar slidably arranged on said rod, said link members



being also secured to said movable collar, and form-carrying members disposed on said lever arms intermediate the ends thereof.

1,299,543. ARTIFICIAL HAND. BARTHOLOMEW BOWLES, Toronto, Ontario, Canada. Filed Dec. 18, 1917, Serial No. 207,712. Renewed Feb. 18, 1919. Serial No. 277,818. 6 Claims. (Cl. 3—12.)



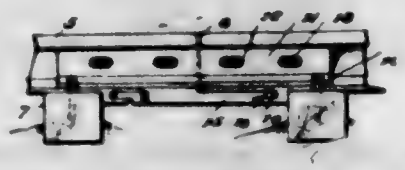
1. In an artificial hand, a shank; a hook formed thereon having the part thereof remote from the shank substantially arc-shaped; a clamp arm pivoted on said hook substantially at the center from which the aforesaid arc is struck; and adjustable connecting means between the clamp arm and the arc-shaped part of said hook.

1,299,544. WELL-BUCKET. WESLEY S. BOWLES, Cedar Creek, Mo. Filed Sept. 19, 1917. Serial No. 192,158. 2 Claims. (Cl. 103—35.)



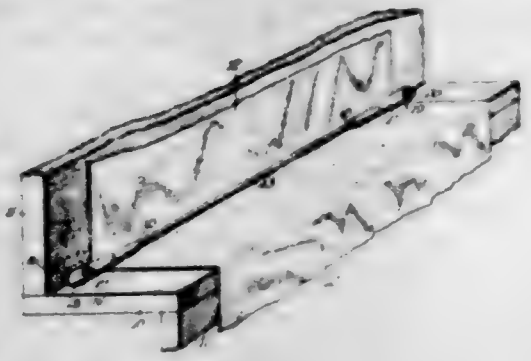
1. A well bucket comprising a tubular body portion open at each end, a U-shaped handle having the extremities thereof engaging outer opposite portions of said body adjacent the upper end thereof and provided intermediate said extremities with a guide opening, a perforated bridge member extending across the upper end of the body and having its end turned down to engage inner opposite portions thereof, common fastening members passing through and securing said handle extremities and bridge member to said body, a bottom plate closing the lower end of said body and having its lower face arranged flush with said end, a marginal flange extending upwardly from said bottom plate and into engagement with the wall of the body, a reinforcing band surrounding the body and secured to the flange to clamp the body therebetween, a valve controlling an opening formed in said bottom plate and equipped with a vertical valve rod, said rod extending through openings in the bridge member and in the bight of said handle and serving to retain the latter in upright position at all times.

1,299,545. RAIL-JOINT. SAMUEL A. BOYD, Sasakwa, Okla. Filed Nov. 21, 1918. Serial No. 263,575. 10 Claims. (Cl. 239—8.)



2. A rail joint including coacting rails having enlargements depending from the base flanges thereof at their abutting ends and provided with interlocking parts, each enlargement being provided with a flat side face adapted to bear against the adjacent side face of a cross-tie.

1,299,546. STAIR-CARPET FASTENER. JAMES H. BOYE, Chicago, Ill., assignor to James H. Boye Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1917. Serial No. 195,240. 7 Claims. (Cl. 16—141.)



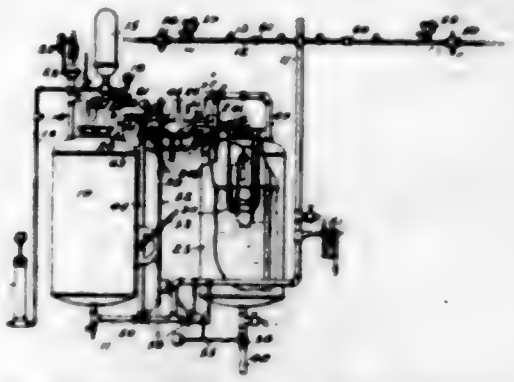
1. In a stair carpet fastener, the combination of a rod adapted to lie in the angle of the carpet, and clamps adapted to be secured in the angle formed by the tread and riser outside the edge of the carpet and overlapping and bearing upon said rod only at points inwardly of the ends of the latter.

1,299,547. VACUUM-CLEANER. HOMER L. BOYLE, Lansing, Mich., assignor of one-half to Samuel H. Davis, Lansing, Mich. Filed Jan. 26, 1915. Serial No. 4,544. 4 Claims. (Cl. 15—60.)



1. In a vacuum cleaner, the combination with bellows-working means, of a bellows having a fixed chambered bellows board, the said board having a hollow interior opening downwardly whereby the board forms the nozzle of the cleaner, the said board having orifices opening into the bellows, inlet valves controlling the said orifices, the said bellows board having openings passing through it, and outlet valves exteriorly controlling the said openings through the bellows board.

1,299,548. AUTOMATIC FIRE-EXTINGUISHING APPARATUS. EDWARD B. BROOKS, Washington, D. C., assignor, by mesne assignments, to Sypho-Chemical Sprinkler Corporation, New York, N. Y., a Corporation of New York. Filed May 23, 1914. Serial No. 840,586. 6 Claims. (Cl. 169—24.)

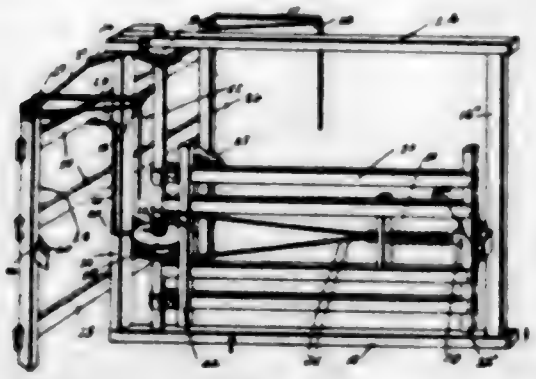


1. In a fire extinguishing system, the combination of a source of supply of an extinguishing fluid, a discharge pipe leading therefrom that has an outlet, the contents of said pipe consisting of said fluid being kept under a pressure tending to cause the efflux thereof from the pipe, means to normally hold the pipe outlet closed against such efflux, a pair of tanks, or holders for separately holding the chemicals, which when brought together generate a pressure-producing gas, one of said holders being contained within the other and having a normally closed discharge orifice, a pivotal support for said inner holder, a stopper for said orifice acting when in the orifice to prevent the turning of the holder, an element connected with the stopper adapted to remove the same from the orifice to uncover the latter and to leave the holder having the stopper free to turn, and means normally holding said element from movement actuated when the pressure in the discharge pipe is reduced by the opening of its outlet.

2. A fire extinguishing system comprising a pair of tanks or holders for separately holding chemicals which when brought together generate a gas, one of said tanks being pivotally mounted within the other and having an orifice, a stopper normally closing said orifice, a lever, a connection between the lever and the stopper by which the movement of the lever in either direction is transmitted to the stopper, said connection permitting limited independent movement of stopper and lever, means to move the lever in the direction to lift the stopper from the orifice, and automatic, heat-operated means to control the operation of said lever moving means.

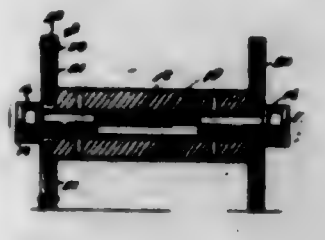
6. A fire extinguishing apparatus, comprising in combination inner and outer tanks, a pivotal support for the inner tank, and means comprising interengaging separable hooks loosely mounting the inner tank upon said pivotal support to one side of the center of gravity whereby when said inner tank turns upon its pivotal support it disengages therefrom.

1,299,549. AUTOMATIC GATE. FRANK BROOKS, Gettysburg, S. D. Filed July 27, 1917. Serial No. 183,146. 2 Claims. (Cl. 39—34.)



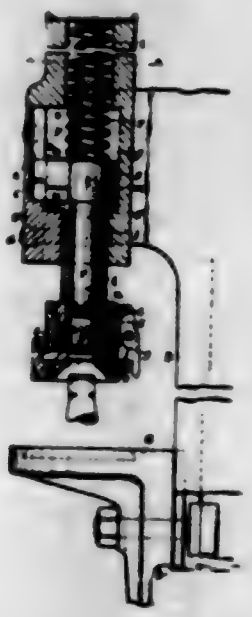
1. The combination with a gate having a latch of a shaft with which the gate is pivotally connected for movement independently thereof, releasable means for holding the shaft against rotation, a spring wound upon the shaft and having one end movable therewith and the other end disposed against the gate to pivotally move the latter when it is released, connections between the latch and shaft for releasing the latch when the shaft is rotated and means for simultaneously releasing the shaft and rotating it.

1,299,550. WIRE-REEL. MILTON E. BUCK, Ematon, Kans. Filed June 10, 1918. Serial No. 239,270. 2 Claims. (Cl. 242—91.)



1. A wire reeling and unreeling device including a wheeled cart, members carried by the cart for detachable connection with the axle of a wagon, a rotatable drum on the cart, the said wheels being carried by the ends of the drum and rotatable therewith, the spokes of one of the wheels being detachable from the felly thereof and foldable to extend longitudinally from the end of the drum to permit the application of a wire spool on the drum.

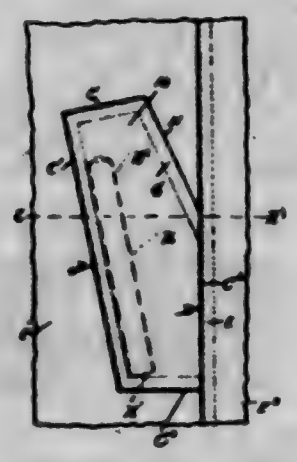
1,299,551. BOTTLE-SEALING MACHINE. AMOS CALLSON, Brooklyn, N. Y. Filed Feb. 10, 1919. Serial No. 276,045. 13 Claims. (Cl. 113—4.)



1. Means to affix a closure to a container by pressure including an abutment member, a closure affixing member upwardly abutting said abutment member but movable laterally to clear the same and being thereupon yieldable upwardly relatively thereto, and means, movable relatively to said closure affixing member and actuated by the work being operated upon, to move said closure affixing member laterally clear of the abutment member.

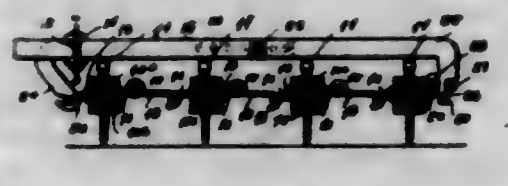
13. In combination, an annular expansible throat-forming series of segments, an annular cushion means for the segments surrounding them and having the portion thereof opposite each segment composed of elastic plastic material, and an annular unyielding abutment means for the cushion means surrounding the latter, each said portion being free on compression thereof between the expanded segments and abutment means to expand lengthwise of the axis of the throat.

1,299,852. OVERALL-POCKET. DAVID S. CARTER, Detroit, Mich., assignor to Larned, Carter & Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 16, 1917. Serial No. 155,175. 2 Claims. (Cl. 2—15.)



1. In a garment, a pocket comprising a pocket member having a rear edge inclined from the vertical line, a front edge arranged in substantially a vertical line, and a completely closed top portion extending but a portion of the way from the rear edge to the plane of the front edge, said closed top portion being arranged at substantially right angles to said rear edge, there being an opening portion positioned between the front end of the upper edge and the upper end of the front edge and diagonally inclined throughout its extent.

1,299,853. HARROW. EARL G. COLLINS, Pembroke, Ky. Filed May 8, 1918. Serial No. 233,276. 3 Claims. (Cl. 55—76.)

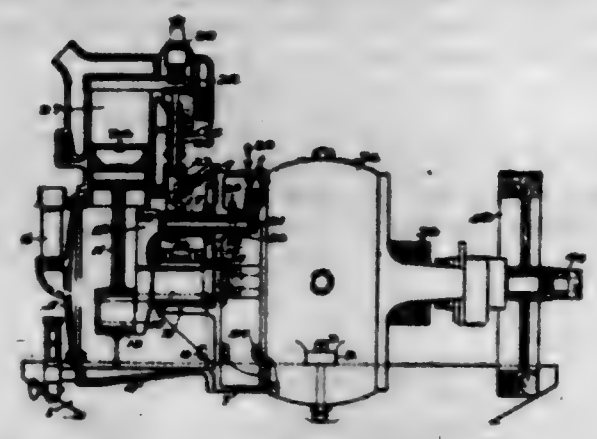


1. A harrow having a plurality of flexibly connected tooth bars and a ridge member for holding said tooth bars in their operative relations, said ridge member consisting of relatively adjustable pivotally connected elements provided at their remote extremities with means for engaging the marginal tooth bars, one of said elements being provided with a clamp for receiving the free inner end of the other element, and a locking device for maintaining engagement of the clamp with said element.

2. A harrow having a plurality of flexibly connected tooth bars of which the marginal bars are provided at their outer sides with a staple and a rocking shackle, and a ridge member consisting of pivotally connected elements, one of which is provided with a depending hook for engagement with said staple on one of the marginal tooth bars, and the other of which is provided with a depending pin for engagement with said rocking shackle, means for securing said pin in engagement with the shackle, and clamping devices for holding the elements of the ridge member in alined relation.

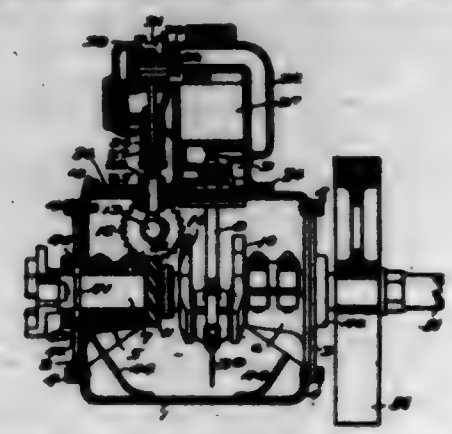
3. A harrow having a plurality of transverse tooth bars provided with forwardly and rearwardly extending staples, hooks loosely connected with the staples on one side of each tooth bar for engagement with the staples on the adjacent bar, the staples on facing sides of adjacent bars being deflected in opposite directions to dispose the shanks of said hooks in parallelism with the plane of the series of toothed bars, a ridge member having adjustably connected elements for engagement at their remote extremities with the marginal tooth bars, and clamping means for securing the elements of the ridge member in their alined relation, the pivotal connection between said elements being adjustable relative to the length of one of the elements.

1,299,854. ENGINE. MARK C. COONRAY, Sandusky, Ohio, assignor to The Mathews Engineering Company, Sandusky, Ohio, a Corporation of Ohio. Filed July 26, 1918. Serial No. 246,942. 4 Claims. (Cl. 123—195.)



1. In an engine, a crank shaft and a cam shaft, a crank shaft casing, a shell removably connected with the casing and having a wall covering the one end of the casing, the shell having bearings for the crank shaft and the cam shaft, an ignition timer located in the shell.

1,299,855. ENGINE. MARK C. COONRAY, Sandusky, Ohio, assignor to The Mathews Engineering Company, Sandusky, Ohio, a Corporation of Ohio. Filed July 26, 1918. Serial No. 246,944. 4 Claims. (Cl. 123—195.)



1. In an engine, a crank shaft casing, end plates closing the crank shaft casing, crank shaft bearings formed on the inner sides of the end plates, a cover plate for closing the top of the casing and cam shaft bearings located on the inner side of the cover plate.

1,299,556. SUPPORTING-POLE AND BRACKET THEREFOR. THEODORE E. CRECELIUS, St. Louis, Mo., assignor to Multiplex Display Fixture Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 26, 1917. Serial No. 208,923. 3 Claims. (Cl. 156—19.)

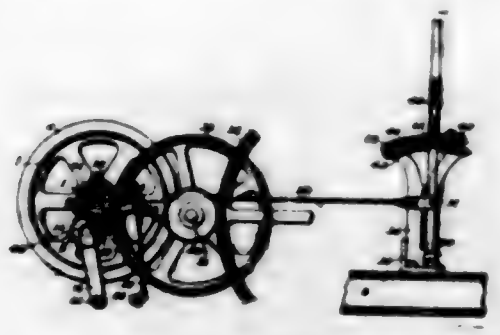


1. A supporting bracket for curtain poles and the like, constructed of a thin plate of sheet metal, having a substantially central, plain, straight, tubular pole-supporting boss struck-up therefrom and projecting on one side of the plate, and fastening spurs also struck-up from the plate and projecting from the opposite side thereof adapted to secure the bracket in place.

2. In combination, a pole, comprising straight pieces of plain tubing of different diameters and adapted to be telescopically and slidably fitted one within the other, means for holding the tubes in adjusted position and supporting brackets for said pole, each comprising a thin plate having

a substantially central, plain, straight tubular boss struck-up therefrom and projecting on one side of the plate, and fastening spurs struck-up therefrom and projecting from the opposite side of the plate to secure said brackets in place, the said bosses adapted to fit and frictionally engage the opposite ends of the tubular members of the pole to support the pole in place.

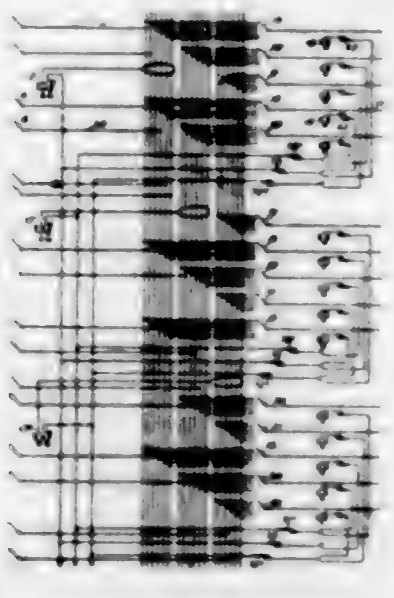
1,299,557. GEAR-SHIFTING MECHANISM. WILMER H. DANIEL, Waterloo, Iowa, assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Filed Apr. 1, 1918. Serial No. 225,936. 3 Claims. (Cl. 74—58.)



1. In a combination, a driving-shaft, a relatively narrow pinion slidably non-rotatably mounted thereon, a gear-wheel, a wide-toothed pinion in mesh with the first-mentioned pinion, the latter being slidable therealong while in mesh therewith, and a cam connected operatively between the said pinions, and movable to shift them simultaneously in different directions relative to said gear-wheel to alternately act thereon to impart opposite directions of rotation thereto.

3. In combination, a driving-shaft, a relatively narrow pinion slidably non-rotatably mounted thereon, a gear-wheel, a wide-toothed pinion in mesh with the narrow-toothed pinion with the latter slidable therealong while keeping in mesh therewith, a rock-body in which said wide-toothed pinion is mounted having an oblique cam-groove, a sleeve rotatably non-slidably mounted on the hub of said slidable pinion having a cam projection extended movably into said cam-groove, and means for rocking said rock-body to either move both pinions out of mesh with said gear-wheel, or alternately move either of them into mesh therewith when the other is out of mesh therewith.

1,299,558. CALL-DISTRIBUTING SYSTEM. GERALD DRAKIN and LIPA POLINKOWSKY, London, England, assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 24, 1917. Serial No. 157,089. 9 Claims. (Cl. 179—27.)



1. The combination with an operator's position of means for selecting the same and extending a call thereto and apparatus actuated when a call has been extended to a trunk at said position to prevent the extension of another call to the position for a definite time interval substantially commensurate with the time employed by an operator establishing an average connection.

1,299,559. METHOD OF EXTRACTING AND RECOVERING MOLYBDENUM FROM ITS ORES AND CONCENTRATES. HENRY ALFRED DOERNER, Denver, Colo. Filed Jan. 18, 1917. Serial No. 143,081. 11 Claims. (Cl. 204—19.)



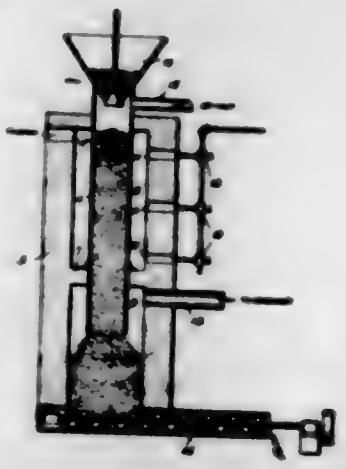
1. The method of recovering molybdenum from its ores, concentrates and other molybdenum-containing materials, which comprises heating the material to a sufficient temperature to form a fused bath and subjecting the fused bath to the action of free chlorin under proper conditions to combine with and to volatilize the molybdenum as chlorid or oxychlorid; substantially as described.

6. The method of recovering molybdenum from its ores, concentrates and other molybdenum-containing materials, which comprises electrolyzing the fused bath containing such material and a chlorid to volatilize the molybdenum as chlorid or oxychlorid; substantially as described.

8. The method of recovering molybdenum from its ores, concentrates and other molybdenum-containing materials, which comprises electrolyzing a fused alkali chlorid bath containing such material, using a fluid metal cathode adapted to form an amalgam with the alkali metal, and thereby combining the molybdenum with chlorin and volatilizing the molybdenum chlorid or oxychlorid thus formed, and at the same time forming an amalgam with the cathode, decomposing the amalgam to form caustic alkali, and returning the impoverished cathode metal for the formation of further amounts of amalgam; substantially as described.

11. The method of recovering molybdenum from its ores, concentrates and other molybdenum-containing materials, which comprises heating the material to a sufficient temperature to form a fused bath and setting free chlorin within said bath to combine with and to volatilize the molybdenum as chlorid or oxychlorid; substantially as described.

1,299,560. METHOD OF EXTRACTING AND RECOVERING MOLYBDENUM FROM ITS ORES AND CONCENTRATES. HENRY ALFRED DOERNER, Denver, Colo. Filed Mar. 15, 1918. Serial No. 222,611. 11 Claims. (Cl. 23—18.)



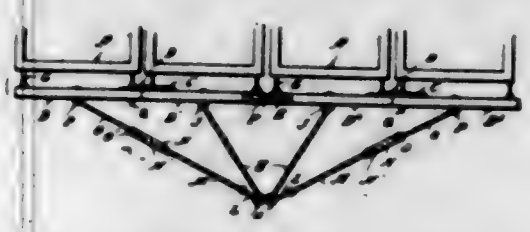
1. The method of treating molybdenum ores, concentrates and other molybdenum-containing materials, which

comprises heating the material under oxidising conditions in the presence of a chlorid and a source of sulfur so that the sulfur reacts to effect the liberation of free chlorin which combines with the molybdenum to form volatile chlorids or oxy chlorids; substantially as described.

8. The method of treating molybdenum ores, concentrates and other molybdenum-containing materials, which comprises feeding such material in combination with a source of sulfur and mixed with a chlorid into the top of a vertical chamber, supplying heat to the upper part of said chamber while maintaining a down draft of air therethrough and thereby liberating chlorin through the interaction of oxygen and sulfur with said chlorid and forming volatile chlorids of molybdenum, and drawing off from the bottom of said chamber the volatile chlorids of molybdenum so formed; substantially as described.

10. The method of treating molybdenum-containing materials, which comprises briqueting the molybdenum-containing material together with a source of sulfur and admixed with sodium chlorid, feeding the briquets into the top of a heated chamber through which a downward draft of air is maintained whereby volatile chlorids of molybdenum are formed and conducted away from the bottom of said chamber, and withdrawing the spent charge from the bottom of said chamber; substantially as described.

1,299,561. DRAFT-BAR FOR HARROWS. PATRICK L. DONOVAN, Toulon, Ill. Filed May 7, 1917. Serial No. 166,885. 9 Claims. (Cl. 55—84.)



1. A draft attachment of the class described including in combination with a draft-bar of hinged sections, a draft connection consisting of two reaches of unequal length each having connection at one end with one of the sections and terminating at their other ends at a common point for attachment to a draft device, the longest of the reaches adapted to be folded with the section to which it is attached, and a part to support said reach in its folded position.

3. In combination with a foldable draft-bar of hinged sections and a draft connection consisting of two reaches of unequal length, each having connection at one end with one of the sections and terminating at their other ends at a common draft point, the section to which the longest reach is attached adapted to fold upon the other section, and a part to support said longest reach when said section to which it is attached is folded.

5. A draft-bar of the character described comprising a plurality of foldable sections and a draft-attachment foldable with them including in its construction a link for attachment to the power, a substantially rigid member connecting the link and one of the said sections, and a part also connecting the link with another of the sections consisting of jointed members, and a support on one of the sections to carry one of the members of said part in the folded positions of the said sections.

6. A draft-bar of the character described comprising a plurality of foldable sections, a draft attachment foldable with them including a link for attachment to the power adapted for a position forward of the middle of the length of the draft-bar, a substantially rigid member connecting the link with one of the said sections, and a part also connecting the link with another of the sections consisting of jointed members, and a support on one of the sections to receive one of the members of said part in their folded position.

8. In combination with a draft-bar, for the attachment thereto of harrow sections, consisting of a plurality of sections adapted to fold upon one another, of a draft attachment comprising a reach connected to each of the said outer sections, and a reach connected to an inner section, all of the reaches at the draft ends thereof terminating at substantially a common point, and all adapted to pull evenly upon their respective sections in the open arrangement of the sections, the outer reaches adapted to automatically slacken in folding of the sections upon one another whereby to remove the draft upon the outer sections to which they are attached.

1,299,562. SAVINGS DEVICE. HOMER S. DUESSLER, Fort Dodge, Iowa. Filed Feb. 15, 1917. Serial No. 148,910. 1 Claim. (Cl. 283—1.)



In a device of the class described for indicating money spent foolishly, the combination of a cover having an interior retaining loop, with a plurality of bound sheets arranged in a book, a member secured to said sheets arranged to cooperate with said loop for holding the sheets in the cover, said sheets having at their upper ends numerals arranged in consecutive order on the various sheets, the words "From" and "To" followed by blanks for dates and a statement that said numeral represents interest on a certain sum unnecessarily spent, and having below said numerals spaced longitudinal and transverse rows of perforations, whereby the lower part of the sheet may be readily detached in small regularly shaped sections, each section having indicating characters thereon, representing such amounts of money that the total amount represented by all the sections on a given sheet and all the sheets thereabove will equal an amount represented by the number at the top of said sheet.

1,299,563. EXPANSIBLE REAMER. DELANO H. DUGAR, Elyria, Ohio. Filed Oct. 23, 1917. Serial No. 198,126. 2 Claims. (Cl. 77—77.5.)



1. In a reamer, the combination of a body formed with a longitudinally tapered portion having its peripheral surface formed with a plurality of angular faces providing inclined blade seats, abutting cutting blades fitting around said tapered portion of the body and engaging throughout their length with said seats to be held upon the body for rotation therewith, means adjustable upon the body and clamping the inner ends of the blades about the blade seats, centering means engaging the outer ends of said blades, and means adjustable axially of the smaller end of the tapered portion of the body and coacting with said centering means for clamping the outer ends of the blades about the blade seats, said first and last mentioned means being operable for adjusting the blades longitudinally of said seats.

2. In a reamer, the combination of a body formed with a longitudinally tapered portion having its peripheral surface provided with a plurality of inclined blade seats each formed with meeting angular faces, cutting blades disposed around the tapered portion of the body and fitting the meeting angular faces of the blade seats to be held thereby upon the body for rotation therewith, means adjustable upon the body and clamping the inner ends of the blades about the blade seats, and means adjustable axially of the smaller end of the tapered portion of the body and clamping the outer ends of the blades about the blade seats, said first and last mentioned means being operable for adjusting the blades longitudinally of the seats.

1,299,564. TORSION-GEAR FOR MARINE PROPULSION. GEORGE EDWARDS, Berkeley, Calif. Filed Jan. 26, 1917. Serial No. 144,628. 11 Claims. (Cl. 60—70.)

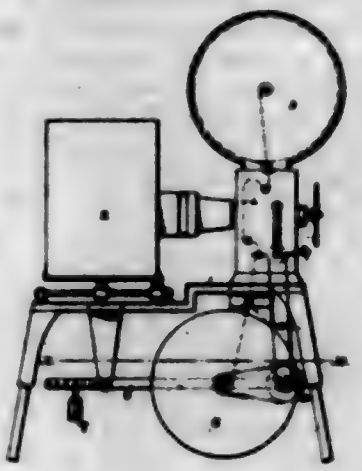
1. In marine propulsion by a screw, two shafts and power transmitting rotary means, carrying teeth, operatively connected with the first shaft, more than two power-transmitting means, carrying teeth, operatively connected with the second shaft, the first teeth intermeshing with the second teeth to transmit said power, means for substantially equalizing upon the teeth of said second means the stress caused by transmitting said power, operative connection between one of said shafts and said screw, said power being supplied by a steam turbine element, sectionally divided, and the amount of power which is supplied to said screw capable of being varied by varying the number of said sections to which steam is supplied.

1,299,565. PROCESS OF ELECTRICALLY PREPARING CATALYSTS FOR HYDROGENATION. CARLETON ELLIS, Montclair, N. J. Filed Nov. 14, 1916. Serial No. 131,253. 2 Claims. (Cl. 204—31.)

1. The process of forming finely-divided spongy nickel by electrical action which comprises passing an electric current of high density from a nickel electrode to a mass of charcoal material, both the nickel electrode and charcoal material being immersed in a liquid electrolyte; whereby metallic sponge in a highly comminuted state adapted for use as a hydrogenating catalyst is deposited on said charcoal material.

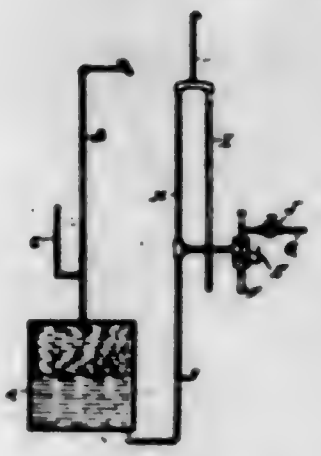
1,299,566. TAKE-UP REEL FOR KINETOSCOPES. ROBERT J. EMORY, Newark, N. J., assignor to Baird Motion Picture Machine Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 29, 1913. Serial No. 787,266. 14 Claims. (Cl. 242—75.)

9. In a device of the class described, the combination of a driving member and a shiftable mechanism including a take-up reel adapted to wind a film thereon, and a horizontally disposed lever controlled by tension on the



film to cause a slipping on the driving of the reel by the driving member.

1,299,567. HYDRAULIC STORAGE AND DELIVERY SYSTEM. FREDERICK G. FASS, Detroit, Mich., assignor to Hydraulic Oil Systems Corporation, Detroit, Mich., a Corporation of Michigan. Filed Jan. 21, 1918. Serial No. 212,918. 3 Claims. (Cl. 221—67.)

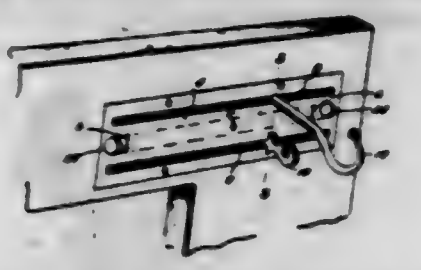


1. In a hydraulic storage and delivery system the combination with a tank and a delivery conduit connected therewith, of a displacement connection having a normal minimum head, a riser from said connection extending to the point of the maximum head desired, and having an overflow provision at said point, means for alternately admitting and discharging liquid to said displacement connection and means for regulating the rate of admission of said liquid

2. In a hydraulic storage and delivery system, the combination with a tank and a delivery conduit rising therefrom, of a displacement connection having a normal minimum head, a riser from said connection extending to a level below the upper end of said delivery conduit, a drain pipe communicating with the upper end of said riser and depending therefrom, and means for introducing the displacement fluid into said connection to effect a gradual rise between the minimum and maximum limits, and a corresponding rise of the fluid in the delivery conduit.

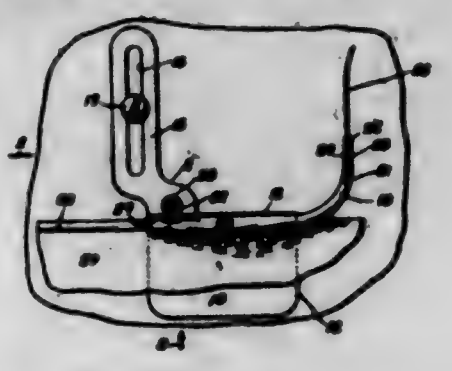
3. In a hydraulic storage and delivery system, the combination with a tank and a delivery conduit rising therefrom, of a displacement connection having a normal minimum head, a riser from said connection to a maximum head, a drain pipe communicating with the upper end of said riser and depending therefrom, a siphon breaker at the junction of said riser and drain pipe, and means for introducing the displacement fluid into said riser to effect a gradual rise between the minimum and maximum limits, and a corresponding rise of the fluid in the delivery conduit.

1,299,568. COMBINED SHADE AND CURTAIN HANGER. JOHN FERKO, Cleveland, Ohio. Filed Feb. 4, 1918. Serial No. 215,838. 3 Claims. (Cl. 156—24.)



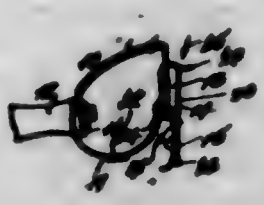
1. A combined curtain and shade bracket, including a base plate having two series of socket openings extending longitudinally thereof, a top plate spaced from the base plate and having longitudinal slots coextensive with the series of socket openings, a curtain bracket slidably keyed in one slot and a shade bracket keyed in the other, and shanks on the curtain and shade brackets to selectively engage in said socket openings whereby to position the brackets, and spring elements normally tending to throw the shanks into engagement with the sockets, and shoulders formed on the shanks to engage said slots when the shanks are received in the sockets, to lock the shanks against rotation.

1,299,569. BINDING ATTACHMENT FOR SEWING-MACHINES. ARTURO DEL GIUDICE, New York, N. Y. Filed July 16, 1918. Serial No. 245,184. 3 Claims. (Cl. 112—187.)



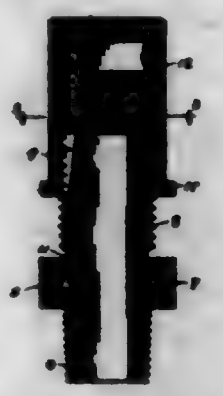
1. A binding attachment for sewing machines, comprising a substantially L-shaped body portion provided with a bracket attachment for connecting the body portion with the table of a machine, a binding strip feeding and folding device consisting of two parts joined at one end, the free end of one of said parts being slidably engaged with said body portion and movable toward and from the free end of the other part secured to the body portion, and tensional means for controlling the movement of said movable part.

1,299,570. SAFETY-RAZOR FRAME. WILLIAM F. GNOSCHOFF, Brooklyn, N. Y., assignor to Kampfe Bros., Brooklyn, N. Y., a Corporation of New York. Filed Aug. 2, 1918. Serial No. 247,916. 12 Claims. (Cl. 30—12.)



5. A safety-razor-frame comprising a guard plate, a resilient spring member secured at one end thereof to the top portion of said guard plate, said member being curved to form a loop normally tending to spring inwardly and downwardly toward the bottom edge of the guard, and a blade engaging latch carried by the spring member at its free end.

1,299,571. AIR-VALVE FOR GAS-ENGINES. GEORGE H. GNOURSE, Chicago, Ill. Filed Apr. 20, 1918. Serial No. 229,796. 5 Claims. (Cl. 251—85.)



2. An air valve for gas engines comprising a tubular threaded stub that is provided upon its exterior with a channel extended longitudinally of said stub and open at the end of said stub, an interiorly threaded cap coöperating with the threads of said stub to control the operative length of said channel, and a threaded lock washer adapted to coöperate respectively with said stub and said cap.

5. An air valve for gas engines comprising a tubular stub, a central enlargement having an angular conformation, an annular groove surrounding said stub adjacent said enlargement, threads provided on said stub between said groove and the end of said stub, said threaded portion having a plurality of progressively increasing longitudinally disposed channels therein, a threaded washer coöperating with said threads and of a width to be accommodated by said groove, and an interiorly threaded cap adapted to coöperate with the threads of said stub and said washer.

1,299,572. GARMENT PROVIDED WITH A NECK-BAND. ANNA J. GRYZIWICZ, Chicago, Ill. Filed Feb. 11, 1918. Serial No. 216,587. 11 Claims. (Cl. 2—145.)



10. A new article of manufacture consisting of a garment provided with a square neck opening and with a neck band secured thereto surrounding said opening, which said neck band the fabric of the garment opposed thereto is severed at a single point transversely of the neck band along a line substantially removed from a corner thereof.

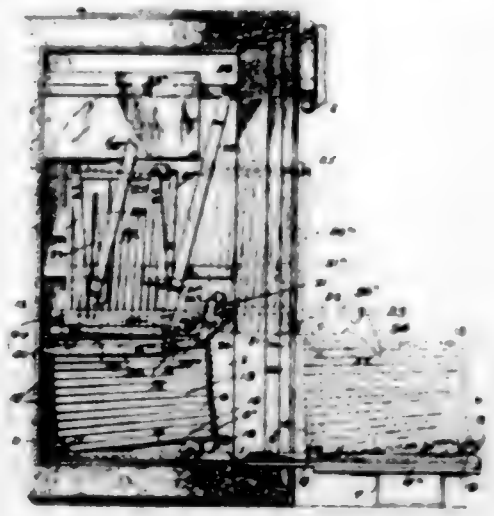
1,299,573. FILING APPLIANCE. HARRY JOSEPH HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 10, 1916. Serial No. 114,157. 23 Claims. (Cl. 45—2.)

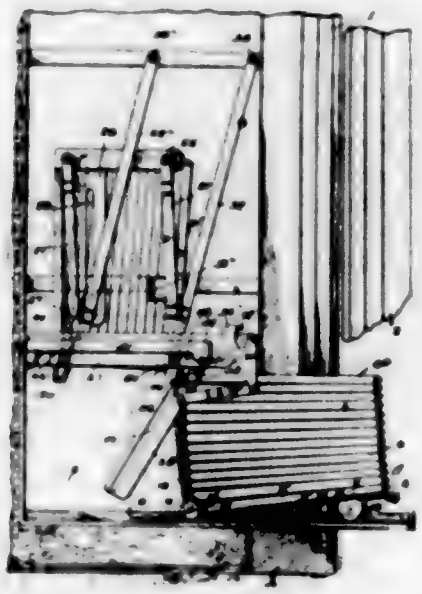
1. A filing appliance including a movable carriage, a series of holders on the movable carriage, an oscillating carriage above said holders, and a second series of holders on the oscillating carriage, the upper holders forming an abutment for the lower holders when in operative position.

3. A filing appliance including a movable carriage, a series of holders on the movable carriage, an oscillating carriage above said holders, a second series of holders on the oscillating carriage, and operative connections between the movable carriage and the oscillating carriage.

10. A filing appliance including a movable carriage, a series of hinged holders on the carriage, a swinging carriage above said holders, a second series of hinged hold-

ers and a pendent plate on the swinging carriage, and means on one of the hinged holders in operative engagement with the pendent plate for counterbalancing the operation of the lower holders by the weight of the upper holders on the swinging carriage.





14. A filing appliance including a support, a series of normally upright holders hinged together and pivotally mounted by the foremost holder upon the support, upright links pivoted on the support, a pendent supporting follower for the rearmost holder pivoted on the upright links, and means on one of the holders in operative engagement with the follower.

23. A filing appliance including a movable carriage, a series of holders on the movable carriage, an oscillating carriage above said holders, a second series of holders on the oscillating carriage, means for locking the oscillating carriage in a predetermined position including a controlling plate pivoted to the carriage, means on the carriage for stopping the controlling plate in locking position, a latch plate on the carriage normally protruding in rear of the same and having a latch pin in the path of the controlling plate, there being a cam edge on the controlling plate for impinging the latch pin and moving the latch plate forward when the controlling plate rotates into locking position and a notch in the controlling plate for receiving the latch pin for stopping the controlling plate in locking position, and there being an abutment at the rear end of the latch plate for disengaging the latch pin from the notch when the oscillating carriage is swung rearward.

1,299,574. LEG-PROTECTOR. THEODORE K. HOFFO, Grand Forks, N. D. Filed May 15, 1918. Serial No. 234,626. 1 Claim. (Cl. 2—23.)

A protector of the character described consisting of a sheet of flexible material having concentrically curved longitudinal edges and convergently disposed end edges, said sheet of material being adapted for engagement around the calf of the leg and adapted to extend at its lower end beneath the shoe top, and a securing tape having its medial portion fixed to one side of the body of the



protector and extending in parallel relation with and adjacent to the longer longitudinal edge thereof, said fixed portion of the tape terminating in spaced relation to the opposite end edges of the protector whereby the ends of the protector may be lapped upon each other, said tape having free end portions adapted to be tied together.

1,299,575. BROOM-HOLDER. HENRY H. HOLMES, Council Bluffs, Iowa, assignor of one-third to Carl F. Nelson and one-third to Ernst V. Gustafson, Council Bluffs, Iowa. Filed May 1, 1918. Serial No. 231,908. 1 Claim. (Cl. 24—257.)



An article holder comprising a body bar having an article receiving recess therein, a flat non-metallic elastic element fixed at its ends to the body bar and extending across the open side of said recess to frictionally clamp and retain an article within the recess, and an inelastic pendant member surrounding the intermediate portion of said elastic element to pull said element outwardly from the recess in the body bar and thereby release the article.

1,299,576. STYLOGRAPHIC PEN. GEORGE N. HOSINGER, Jersey City, N. J. Filed Jan. 24, 1918. Serial No. 213,513. 2 Claims. (Cl. 120—44.)

1. A stylographic pen having an annular air chamber interposed between the ink reservoir section and the point or stylus section, a duct parallel with the axis of the pen and leading from a point adjacent said stylus point to said air chamber, a second duct also parallel with the axis of the pen and leading from said air chamber directly into said reservoir.

2. A stylographic pen having an annular air chamber interposed between the ink reservoir and the point or stylus section, one end of said chamber being open, a duct parallel with the axis of the pen and leading from

a point adjacent said stylus point to the closed end of said air chamber, a cap adapted to fit over the open end of said air chamber to close the same and a duct leading through said cap from the air chamber to the reservoir,

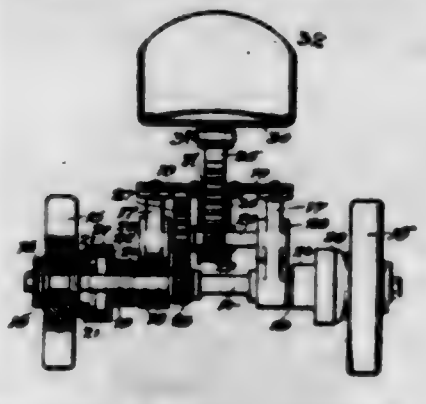


said duct being parallel with the axis of the pen, said cap being rotatable on its axis so that the duct therein may be adjusted to take air from said air chamber at any point in its circumference.

1,299,577. PROCESS FOR TREATING NICKEL SCRAP AND SLUDGE. WOOLSEY McA. JOHNSON, Hartford, Conn. Filed Aug. 3, 1917. Serial No. 184,216. 3 Claims. (Cl. 75—18.)

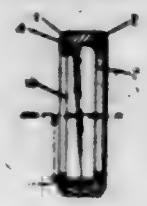
1. The process of treating the residue obtained from the electrolysis of commercial nickel to obtain material comparatively rich in platinum content which comprises subjecting said residue to a suitable separation process to classify it into coarse and fine particles and subjecting the fine particles to a further settling treatment to classify it into heavy sludge and fine slimes and recovering the fine slimes which are comparatively rich in platinum content.

1,299,578. ROLLER-SKATE. CHRAN JORGENSEN and JOHN J. JORGENSEN, Portland, Oreg., assignors of one-third to Willard R. Little, Portland, Oreg. Filed Apr. 6, 1918. Serial No. 227,107. 3 Claims. (Cl. 46—51.)



1. A roller skate including a supporting body, standards depending from the supporting body, an axle journaled in the standards, bearing rollers loosely mounted on the axle and provided with relatively stationary clutch members, threaded sleeves rigidly secured to the axle, longitudinally movable clutch members having threaded portions engaging the threads on the sleeves, a pinion secured to the axle, a stub shaft journaled in the standards and provided with a gear meshing with the pinion on the axle, a pinion on the stub shaft, and a depressible foot piece having a depending rack, the teeth of which mesh with the pinion on the stub shaft for rotating the axle to cause the clutch members to interengage when said foot piece is depressed.

1,299,579. BEARING. GEORGE E. KIRK, Toledo, Ohio, assignor, by mesne assignments, to The Willys-Morrow Company, Inc., a Corporation of Ohio. Filed Sept. 3, 1915. Serial No. 48,793. 11 Claims. (Cl. 64—59.)



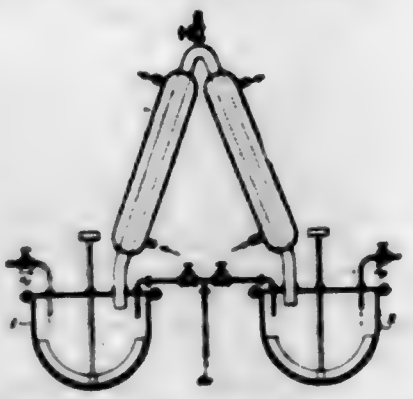
8. A device of the class described comprising the combination of a pair of concentric bearing rings provided with facing ball races; and a plurality of balls disposed in said races; one side wall of one of said races being so formed as to continuously vary in height from zero to a maximum, the point of maximum height being diametrically opposite the point of zero height.

1,299,580. INSECT-DESTROYER. GEORGE D. KRUMLAW, Ashland, Ohio. Filed May 21, 1917. Serial No. 170,038. 2 Claims. (Cl. 43—1.)



1. An insect destroyer, consisting of a rubber body and a handle having a forked end about which the rubber of the body is molded and cured, said body including a thickened support having said forked ends therein and extending to the marginal portions of the latter as a reinforcement and a flexible portion extending from the support and including a thin flexible web which is held in flat relation by the reinforcement in the support and a plurality of longitudinal reinforcing ribs traversing the web.

1,299,581. PROCESS FOR THE MANUFACTURE OF MERCURY OXID. EMIL KUHN, Basel, Switzerland. Filed Jan. 30, 1919. Serial No. 274,083. 1 Claim. (Cl. 23—13.)



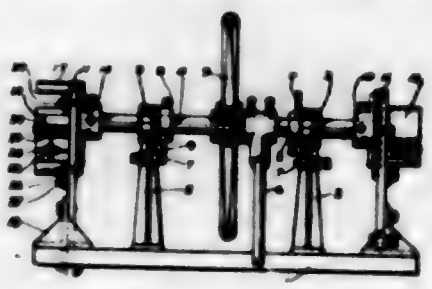
The herein described process for the manufacture of mercury oxid by oxidation of metallic mercury, wherein the oxidation by gases containing oxygen is effected with the aid of dry nitrogen oxids acting as oxygen transmitters.

1,299,582. NECKTIE-VEST. PAUL E. KVISTAD, Matlock, Wash. Filed Aug. 8, 1918. Serial No. 249,009. 2 Claims. (2—89.)



1. A garment of the class described, comprising a body portion decorative and flexible, adapted to embrace the breast of the wearer, consisting of a single piece, unopened front tapering toward the top, an elastic loop located at the neck portion thereof for fastening the same to a collar or shirt button, a band stitched to each side of the neck portion, said bands adapted to encircle the neck as a tie, loops on the front of the garment adjacent the neck portion adapted to hold the tie in place on the front of the body portion, when the tie is made into a bow, and to hold the neck portion close to the neck, inelastic bands extending from the sides of the garment adapted to hold the front of the garment smoothly over the breast of the wearer, means for retaining said bands in place, when worn by the user, the whole constituting a garment of extremely lightweight adapted to be folded and carried in the pocket when not in use.

1,299,583. CORE-WIRE-BENDING MACHINE. JOSEPH A. LACOURSE, Muskegon Heights, Mich. Filed May 10, 1918. Serial No. 233,664. 6 Claims. (Cl. 153—39.)



1. A wire bending machine comprising a support, a shaft rotatably mounted on and above the support, means for limiting the extent of rotation of the shaft, two posts mounted on the support adjacent an end and one at each side of the shaft, means mounted on said end of the shaft, and separate coöperating means adjustably mounted for movements lengthwise of each post for receiving wires and bending the same on rotation of the shaft.

2. A wire bending machine comprising a support, a shaft rotatably mounted on and above the support, means adjustably mounted on the shaft, and coöperating means on the support for limiting the extent of rotation of the shaft, said amount of rotation of the shaft varying with different adjustments of said means thereon, two posts mounted on the support adjacent an end and one at each side of the shaft, means adjustably mounted on said end of the shaft, and coöperating means adjustably mounted on each of the posts for receiving wires and bending the same on rotation of the shaft.

3. A wire bending machine comprising a support, a shaft rotatably mounted on and above the support, means for limiting the extent of rotative movement of the shaft, a post pivotally mounted on the support adjacent an end and at each side of the shaft, said posts being movable toward or away from the shaft, means for fixing said posts in any position to which they are moved, means adjustably mounted on the end of the shaft, and coöperating means adjustably mounted on each post for receiving wires and bending the same on rotation of the shaft.

4. A wire bending machine comprising a support, a shaft rotatably mounted on and above the support, means for limiting the extent of rotative movement of the shaft, a post mounted adjacent an end of the shaft and at each side thereof, a head on said end of the shaft, devices adjustably mounted on and projecting from the head, and coöperating devices mounted on the posts and extending toward the head for receiving wires and bending the same on rotation of the shaft.

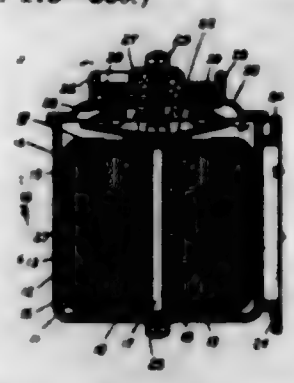
5. A wire bending machine comprising a support, a shaft rotatably mounted thereon, means for limiting the extent of rotative movement of the shaft, a post mounted adjacent an end and at each side of the shaft, a head on said end of the shaft, devices adjustably mounted on the head, a member mounted for adjustment lengthwise of each post, and other members pivotally mounted on each of the first mentioned members and extending toward the shaft, said devices on the head and said other members coöperating to receive wires and bend the same on rotation of the shaft, substantially as described.

1,299,584. LACING-EYELET. JOSEPH O. LANGFORD, El Paso, Tex. Filed Jan. 7, 1918. Serial No. 210,676. 3 Claims. (Cl. 24—141.)



3. A device of the class described comprising a flat elongated body having a curved outer edge and provided with diametrically disposed anchoring projections extending in the same longitudinal plane with the body and provided with square terminals, there being an intermediate lateral projection extending from the inner edge of the body and of substantially the same width as the anchoring projections, said intermediate projection terminating in a substantially elliptical-shaped holding plate having oppositely disposed apertures formed therein and spaced inwardly from the marginal edge thereof, the intermediate projection being bendable to form a closed loop adapted to be positioned wholly on one side of a garment and the anchoring projections being adapted to extend through the apertures in the holding plate to secure the device in position on said garment.

1,299,585. IGNITION-COIL. EARLE P. LEE and THOMAS L. LEE, Rochester, N. Y., assignors to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed July 9, 1917. Serial No. 179,406. 11 Claims. (Cl. 175—300.)



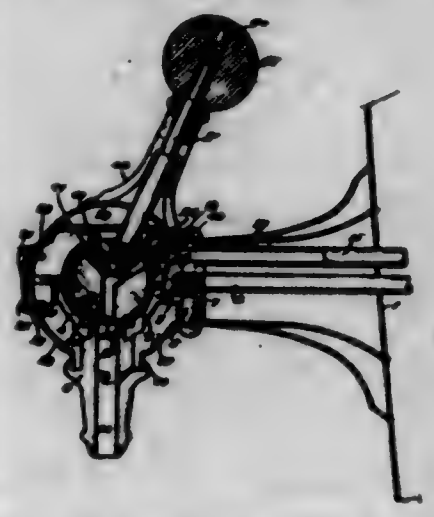
1. An induction coil having, in combination, a straight iron core; windings on said core; an endless yoke-member surrounding said core and magnetically connecting the ends thereof, said yoke-member comprising iron-wire coiled continuously; and clips embracing said wire at each side of the portions adjacent the ends of said core.

8. An induction-coil having, in combination, a straight core; windings thereon; a yoke-member magnetically connecting the ends of said core; and a tie-rod passing longitudinally through the core and through the adjacent portions of said yoke-member to secure the parts together.

7. An induction coil having, in combination, a core, windings thereon; a yoke-member formed of substantially parallel strands of iron wire; means, for securing said core and said yoke-member together, passing between adjacent strands of the wire which constitutes the latter without severance of said strands; and means embracing the yoke-member on either side of the securing-means and holding the strands of wire in close engagement with each other.

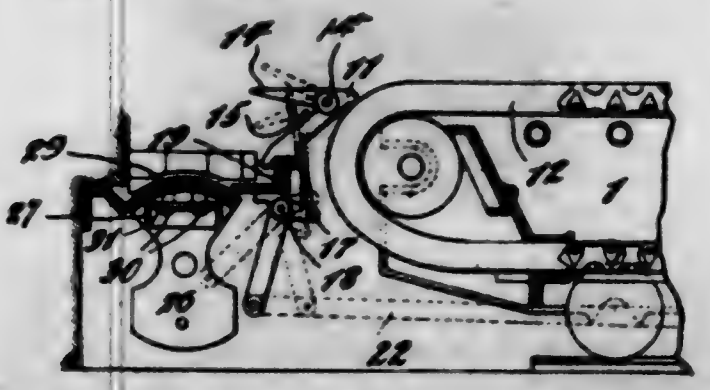
11. An induction coil with a casing having a removable metal head provided with two adjacent openings; in combination with a terminal-block seated on the outer surface of said head and provided with portions depending through said openings and with conductive inserts located in said depending portions and accessible from both inner and outer surfaces of the terminal-block.

1,299,586. DISPENSING-VALVE. WILLIAM H. LEIBING, Oakland, Calif., assignor of one-half to Anton Weber, Oakland, Calif. Filed Feb. 11, 1919. Serial No. 276,814. 18 Claims. (Cl. 226—26.)



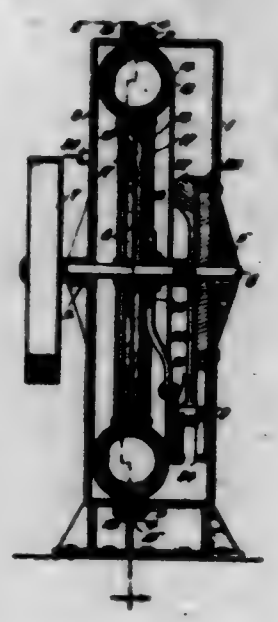
1. A dispensing valve including a valve casing provided with a plurality of fluid inlet ports and a fluid discharge port, a ported ball valve mounted therein and provided with a stem capable of angular movement to and from a central closed position to operate said valve to selectively connect said fluid inlet ports with said discharge port.

1,299,587. ASH-DOOR. ALFRED EDWARD PARKES and CHRISTOPHER SAMUEL DAVY, London, and DUNCAN GRAHAM MEIKLEREID, Lee, England, assignors to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Original application filed Aug. 13, 1918, Serial No. 249,722. Divided and this application filed Oct. 30, 1918. Serial No. 260,280. 7 Claims. (Cl. 110—40.)



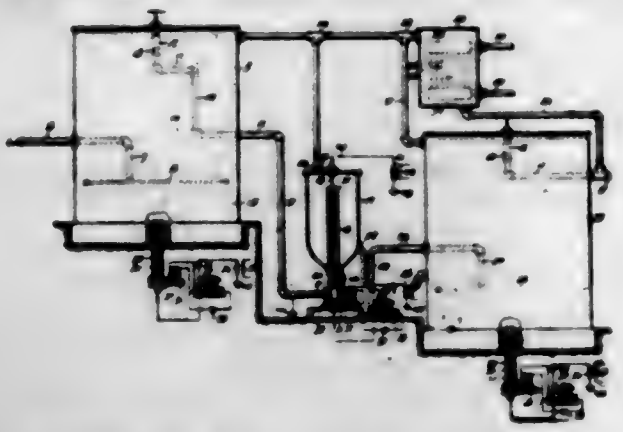
1. An ash door comprising a plurality of independent surface members whose surfaces form the operative surface of the door, said surface members being each independently supported so as to be movable toward and away from each other, the members being provided with projections constructed and arranged to maintain with adjacent sections a substantially continuous operative surface to the door as the surface members are moved apart by changes in temperature.

1,299,588. ROTARY ENGINE. ROY ELMER LUIKART, Sioux Falls, S. D. Filed Jan. 19, 1917, Serial No. 143,316. Renewed Jan. 29, 1919. Serial No. 278,690. 1 Claim. (Cl. 123—11.)



A rotary engine comprising a casing having an annular cylinder, a shaft at the axis of the cylinder, wheels on the shaft, each wheel having diametrically opposite pistons, and the pistons moving in the cylinder, one of the wheels being keyed to the shaft, and a gearing connection between the other wheel and the casing for imparting an irregular motion to the said wheel, said connection comprising a rotary arm on the wheel, a gear wheel on the casing and co-axial with the shaft, an arm keyed to the shaft and carrying at one end a counter-balance, a crank shaft journaled in the other end of the arm, a pinion on the crank shaft and meshing with the gear wheel of the casing, and a link connecting the first named arm with the arm of the crank shaft.

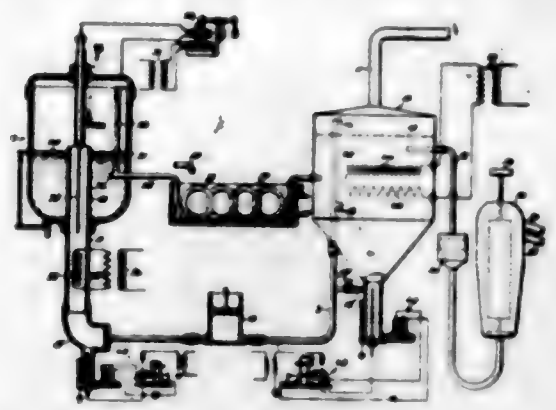
1,299,589. METHOD OF SEPARATING ASSOCIATED LIQUIDS. CHARLES W. MCKIBBEN, Houston, Tex. Filed Dec. 14, 1917. Serial No. 207,174. 5 Claims. (Cl. 204—25.)



1. Improvements in the art of separating liquids, in which small particles of one liquid are suspended in another, one of which liquids is oil, which consists in providing a continuous uninterrupted substantially uniform electric field between electrodes uninterruptedly connected to a source of current supply, within a conduit

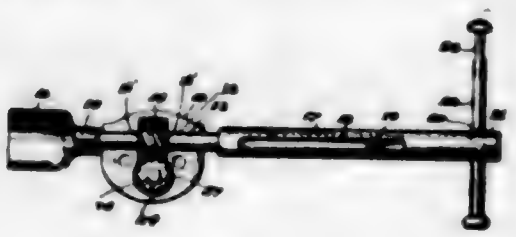
constituting a relatively long path to polarize the water globules tending to chain formation and moving the liquid through said field at a velocity sufficient to break up or prevent persistence of chains of polarized globules of entrapped liquid between said electrodes and conducting the oil away.

1,299,590. METHOD OF AND MEANS FOR SEPARATING WATER FROM HEAVY-OIL EMULSIONS. CHARLES W. MCKIBBEN, Houston, Tex. Filed Oct. 24, 1918. Serial No. 259,500. 6 Claims. (Cl. 204—24.)



1. The art of treating heavy emulsified oils to separate the water content therefrom, which consists in heating the emulsion to a vaporizing point; continuously passing the liquid thereof through an intensified electrical field after being heated; condensing the vapors and cooling the liquids below the vaporizing point and permitting subsidence of the water in a chamber in which the liquids are contained and automatically discharging the water from the chamber.

1,299,591. WRENCH. ALBERT MALCHOW, Phoenix, Ariz. Filed Apr. 15, 1918. Serial No. 228,662. 1 Claim. (Cl. 81—57.)

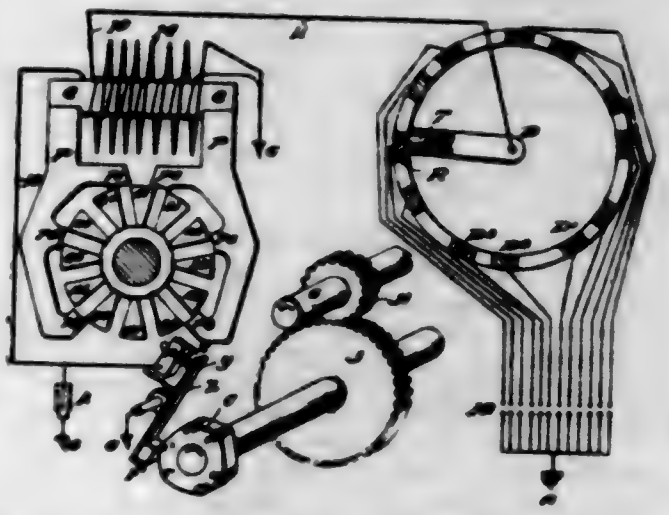


A wrench including a casing, a shaft disposed longitudinally through the casing and having a worm formed thereon and within the casing, a transverse shaft disposed through the casing and having a worm wheel meshing with the said worm, a sleeve slidable on the first-named shaft and rotatable therewith, a work engaging socket arranged for detachable engagement with the end of the first-named shaft and with the ends of the last-named shaft, and means for rotating the said sleeve.

1,299,592. METHOD AND APPARATUS FOR IGNITING THE CHARGE IN INTERNAL-COMBUSTION ENGINES. CHARLES THOMAS MASON, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 9, 1917. Serial No. 201,114. 18 Claims. (Cl. 123—149.)

1. The method of generating ignition current for internal combustion engines which consists in providing a primary magneto motive force, shifting the flux thereof in a symmetrical figure by means controlled by the movement of the engine, collecting the flux from said shifting means through a plurality of paths, and conducting the flux so gathered through a core carrying generating windings.

2. The method of generating ignition current for internal combustion engines, which consists in providing a primary magneto motive force, shifting the flux thereof in a symmetrical figure by means controlled by the movement of the engine, collecting the flux from said shifting means through a plurality of paths, passing the flux so collected through a core carrying generating windings, and interrupting the current so generated for supplying timed sparks.

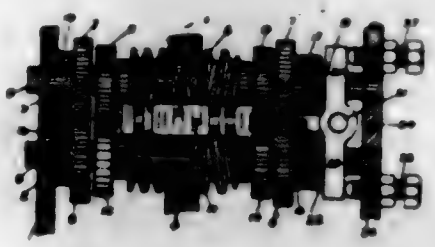


3. The method of generating ignition current for internal combustion engines, which consists in providing a primary magneto motive force, shifting the flux thereof in a symmetrical figure by means controlled by the movement of the engine, collecting the flux from said shifting means through a plurality of paths, passing the flux so collected through a core carrying generating windings, and interrupting the current so generated at its maximum peak for supplying sparks.

4. The method of generating ignition current for internal combustion engines which consists in providing a primary magneto motive force, shifting the flux thereof in a symmetrical figure by means controlled by the movement of the engine, collecting the flux from said shifting means through a plurality of paths, conducting the flux so gathered through a core carrying generating windings, interrupting the current so generated for supplying sparks, said interruptions occurring at long and short increments of time, corresponding to the timing requirements of the engine.

5. The method of generating ignition current for internal combustion engines which consists in providing a primary magneto motive force, shifting the flux thereof in a symmetrical figure by means controlled by the movement of the engine, collecting the flux from said shifting means through a plurality of paths, conducting the flux so gathered through a core carrying generating windings and interrupting the circuit through said windings at intervals corresponding to the ignition timing of the engine.

1,299,593. WORM-GEARING. BURTON M. MATHIAS, Minneapolis, Minn., assignor of one-half to C. D. Knochs, East Shore Park, Minn. Filed Feb. 18, 1918. Serial No. 217,989. 3 Claims. (Cl. 74—36.)



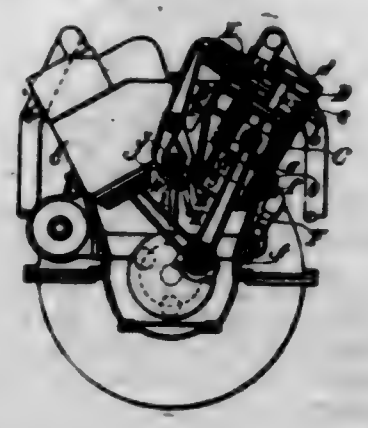
1. In a worm gearing the combination of a worm gear having two sets of gear teeth thereon, a worm co-acting with each of said sets, a driving shaft for one of said worms, and means on said driving shaft for driving the second of said worms.

2. In a worm gearing the combination of a worm gear having two sets of gear teeth thereon, a worm co-acting

with each of said sets, a driving shaft for one of said worms, means on said driving shaft for driving the second of said worms, and an equalizer associated with said shafts for equalizing the pressure between the teeth and threads of co-acting worms and worm gear teeth.

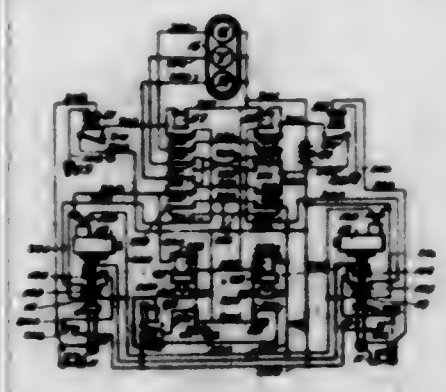
3. In a worm gearing, the combination of a worm gear having two sets of gear teeth thereon, a worm co-acting with each of said sets, a driving shaft for one of said worms, means on said driving shaft for driving the second of said worms, and pressure rollers co-acting with said worms for taking the pressure therebetween.

1,299,594. ENGINE CYLINDER AND CRANK-CASE CONSTRUCTION. CHARLES M. MOHLER, Hagerstown, Ind. Filed July 20, 1917. Serial No. 181,826. 2 Claims. (Cl. 123—173.)



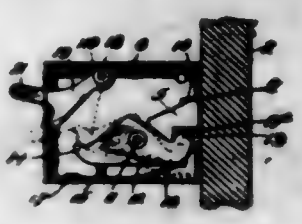
1. In a cylinder and crank case construction, the combination with a cylinder having a head constructed with chambers and projecting at the sides beyond the cylinder, of a crank case having a portion extended upwardly and surrounding the said cylinder whereby a water space is formed about the cylinder, the said water space opening upwardly, the projecting portions of the cylinder head resting upon the said upwardly-extended portion of the crank case at the top thereof, means for forming a water-tight connection between the lower end of the cylinder and the interior of the said surrounding portion of the crank case, the said upwardly-extended portion of the crank case having a gas passage opening upwardly, and the said chambers of the cylinder head having openings in the said projecting portions of the cylinder head arranged in communication with the said water space about the cylinder and with the said gas passage.

1,299,596. CAB-SIGNAL AND TRAIN-CONTROL SYSTEM. MATTHEW H. LOUGHRIDGE, Bogota, N. J. Filed Aug. 24, 1915. Serial No. 47,206. 187 Claims. (Cl. 246—32.)



106. In a railway system, a track, a train, ramps on either side of said track, a shoe on either side of said train engaging said ramps, a block system controlling some of said ramps according to traffic conditions, a timing device operated by each shoe, a train controlling mechanism controlled by said timing devices, said ramps spaced in said blocks and of various lengths and means including said timing device for controlling the speed of said train in accordance with the length of said ramps.

1,299,596. SCREEN-DOOR FASTENING. BENTON MOORE and GARRETT O. STANBURY, Kansas City, Mo. Filed Nov. 25, 1916. Serial No. 133,822. 2 Claims. (Cl. 70—119.)

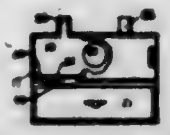


1. A screen door fastener, comprising a casing having an opening in one end wall and cam lug formed on said end wall and projecting into said opening from one side thereof, a catch within and pivoted to the casing and provided with an upturned hook at one end and an upwardly facing shoulder at the other, a spring exerting upward pressure on the hook end of the catch, and a dog pivoted within the casing and provided with a flattened portion closely adjacent a wall of the casing to engage the same and prevent accidental dropping of the dog into the path of upward movement of the shoulder of said catch; said casing being resilient to yield and permit the catch to be forced to a position in the path of upward movement of said shoulder, and said catch having a handle projecting through said opening of the casing in the vertical plane of said cam lug, and adapted when the dog is advanced to position to prevent upward movement of the shoulder end of said catch, to underlie said cam lug and thereby prevent reaction of the resilient casing and the consequent tripping of said dog from the path of the shoulder of said catch.

1,299,597. PROCESS FOR THE MANUFACTURE OF CELLULOSE. EINAR MORTRUD, Torderöd, near Moss, Norway. Filed Dec. 6, 1918. Serial No. 265,553. 2 Claims. (Cl. 92—11.)

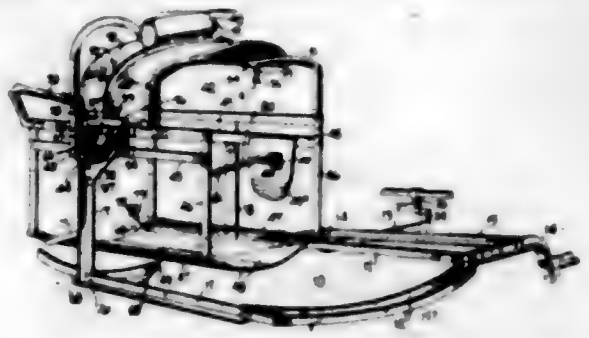
1. Process for the manufacture of cellulose according to the sulfite method comprising the measures of introducing the chemicals required for the digestion operation in a degree of concentration higher than required for the digestion operation and of introducing dilution liquid into the digester in the form of preheated water, waste digestion liquor or other liquid in the quantity necessary to obtain the desired acid concentration.

1,299,598. VAPOR-GENERATING DEVICE. AMBERT M. MYERS, Dayton, Ohio. Filed Dec. 3, 1917. Serial No. 205,147. 2 Claims. (Cl. 167—3.)



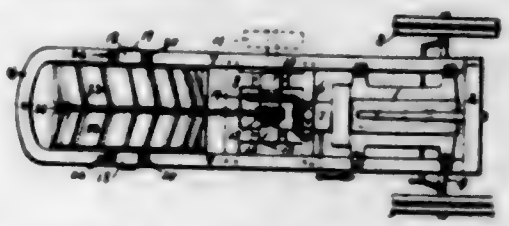
2. In a device of the type described, the combination of a vapor generator, of a vapor distributing cabinet, a hollow vapor-receiving compartment therein having a hole provided in its bottom portion, a conical receptacle below said hole to receive the condensed vapor, a tapering hollow member whose upper enlarged end is secured to the bottom of said compartment around said hole, and whose lower end extends well into said receptacle, said conical receptacle being provided with a pair of triangular slots above the lower end of said tapering member to discharge the condensation after the latter has filled the conical receptacle to a level above the mouth of the tapering member, and a vapor outlet in said compartment above the hole in the bottom of the latter.

1,299,599. GRAIN-SHOCKER. FALTINE NEWBAUER, Valley City, N. D., assignor of one-eighth to Charles J. Lee, three-eighths to Eugene B. Stull, and one-eighth to John Holland, Valley City, N. D. Filed July 29, 1916. Serial No. 112,115. 13 Claims. (Cl. 56—122.)



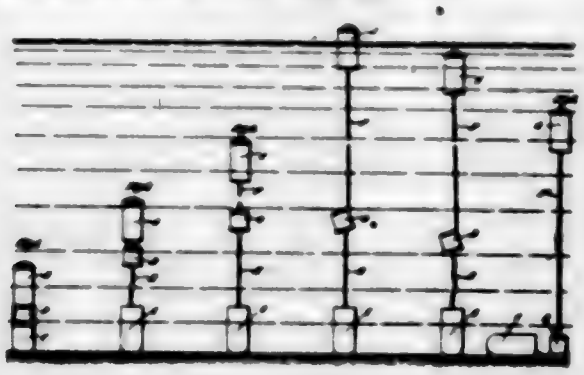
1. A grain shocker including a supporting frame, a shock former pivotally mounted upon the frame and movable from a horizontal receiving position to a vertical discharging position, said former including oppositely disposed side walls, a gate forming the bottom of the former when the former is in its horizontal position and the rear wall of the former when it is in its vertical position, an arm pivotally mounted upon one of said side walls and supporting a shock compressing member in a position opposite the gate, means for causing the raising of said arm and compressing member when the shock former is in its horizontal position and causing the depression of the arm and member when the shock former starts to rotate to its vertical position, and means for again opening the arm and compressing member while the shock former is rotating to its vertical position and holding it open while it is rotating to its horizontal position.

1,299,600. TRACTOR. ROBERT A. NICHOLL, Detroit, Mich. Filed Oct. 12, 1918. Serial No. 257,873. 3 Claims. (Cl. 180—25.)



1. In a tractor, the combination of a chassis comprising a pair of side bars, an axle mounted thereon, a tractor wheel mounted on the axle and having a central circumferential groove, an endless chain passing around the wheel in said groove, and means to drive the chain, said groove being of less depth than the diameter of the chain so that the chain will extend outward beyond the diameter of the wheel.

1,299,601. SUBMARINE MINE. THOMAS KEPPEL NORTH, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed July 2, 1917. Serial No. 178,247. 10 Claims. (Cl. 102—3.)



1. A submarine mine comprising a flotation chamber, means for causing said chamber when launched to sink initially below the depth at which it is to be finally anchored, means for permitting said chamber subsequently to rise toward the surface of the water and means for causing said chamber to be thereafter drawn downward to assume a predetermined depth below the surface.

1,299,602. SERVICE-SWITCH. GRANVILLE E. PALMER, Brookline, Mass. Filed Apr. 23, 1913. Serial No. 763,096. 9 Claims. (Cl. 175—282.)

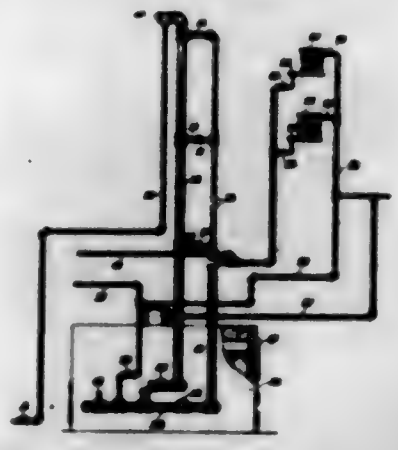


1. A switch box, a plurality of pairs of live contacts and meter contacts therein for a three-wire circuit, a plurality of doors, one for each pair of live and meter contacts, switch members on each door for completing a circuit between a pair of contacts, a pintle, means for so pivotally mounting each door independently of the other on said pintle that when it is opened it interposes a barrier to the corresponding live contact, said outer doors overlapping the middle door, whereby each outer door may be opened independently, but the opening of the middle door causes the opening of the outer doors.

8. A switch box, separated blocks of insulating material thereon, live and meter contacts mounted on said blocks respectively, a cover closing that portion of the box containing the live contact, a door, switch members and an associated fuse on said door, means pivoting said door between its ends to said box and located between the said blocks so that when the door is opened one portion thereof is swung into the box into engagement with the block carrying the meter contact to completely cut off access to the live contact.

9. A switch box, separated stationary contacts therein, a cover, switch members thereon, a stop in the normal path of closing movement of the door, and means for loosely pivoting said door to said box, so that it may be moved bodily, be disengaged from the stop and be completely closed.

1,299,603. HEATING SYSTEM. ANDREW G. PAUL, Boston, Mass. Original application filed Aug. 10, 1912, Serial No. 714,390. Divided and this application filed May 18, 1914. Serial No. 839,265. 3 Claims. (Cl. 100—3.)



1. The combination of a steam boiler, a radiator or heater, a supply pipe connecting the boiler and the radiator, a return pipe for the water of condensation, a reservoir

into the upper end of which the return pipe empties, a pipe connecting the lower end of the reservoir with the boiler, a check valve in said pipe, and a loop for returning the water of condensation to the boiler consisting of a supply leg connected with the upper part of the reservoir, a discharge leg, a connecting pipe at or near the top of the legs, and a cross-over pipe connecting the legs at a lower point, and a check valve in the cross-over pipe.

1,299,604. DIAPHRAGM-MOUNTING. HAROLD D. PENNEY, Pelham, N. Y., assignor to Robert L. McElroy, New York, N. Y. Filed June 28, 1916. Serial No. 106,304. 3 Claims. (Cl. 181—31.)



1. A diaphragm mounting comprising an annular-holder or ring-frame having an annular recess in the inner peripheral wall, a diaphragm disk, and an annular supporting ring of soft, elastic, resilient material, located in said recess and secured thereto and inclosing and secured to the peripheral edge of the diaphragm disk whereby to provide a floating annular support to hold the diaphragm disk in operative position.

2. A diaphragm mounting comprising an annular-holder or ring-frame having a two-walled annular recess in the inner peripheral wall face, a diaphragm disk, and an inside supporting ring of soft, elastic, resilient material, located in said recess and secured thereto and inclosing and secured to the peripheral edge of the diaphragm disk to inclose the entire peripheral edge thereof and hold the diaphragm disk resiliently and in operative position at a predetermined distance from the walls of the annular recess of the annular-holder or ring-frame.

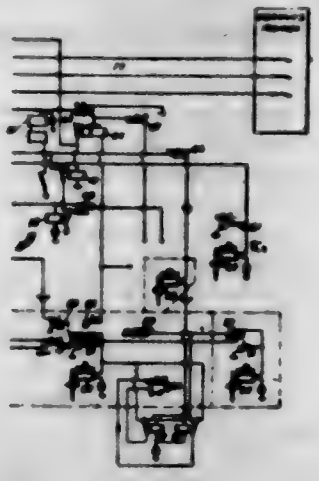
3. A diaphragm mounting comprising an annular-holder or frame-ring having a two-walled annular recess in the inner peripheral wall face, said recess being open toward the face and also toward the center of the annular-holder or ring-frame, the wall from the side face of the recess being substantially at a right angle to the wall leading from the peripheral wall face, a diaphragm disk, and an annular supporting ring of soft, elastic, resilient material, located in said annular recess and secured thereto and inclosing and secured to the peripheral edge of the diaphragm disk, and forming a floating annular support to hold the diaphragm disk by its periphery, without use of other means, a predetermined distance from the walls of said annular recess and in operative position.

1,299,606. BRAKE-HEAD ADJUSTMENT. ARMAND H. PURCELL, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 17, 1917. Serial No. 202,499. 5 Claims. (Cl. 188—28.)



2. In brake mechanism, the combination of a brake head, a hanger associated therewith having a bearing with a serrated portion, and a spring member, one portion of which is anchored and another portion of which is serrated for cooperating with the serrated portion of said hanger for yieldably holding the brake head in a given position.

1,299,606. CALL-DISTRIBUTING SYSTEM. LIPA POLIAKOWSKY, London, England, assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 24, 1917. Serial No. 157,095. 6 Claims. (Cl. 179—27.)



1. In a call distributing system, means for selecting an operator's position and extending a call thereto, means at such position for establishing connections between calling and called lines, and means independent of such connecting means for rendering the position busy to subsequent calls for a normal predetermined time interval after the distribution of a call thereto, and means dependent upon the condition of such connecting means for rendering the position busy for a further predetermined interval.

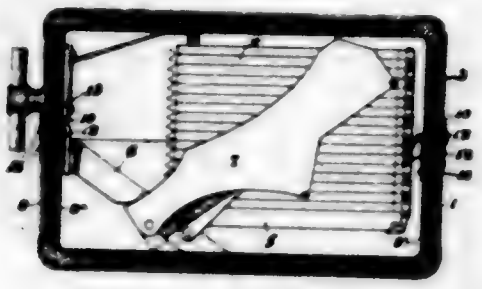
2. In a call distributing system, means for distributing calls to an operator's position, means for associating such distributed calls with connecting circuits at such position, controlling apparatus adapted to be associated with such connecting circuits, a timing device at such position adapted to introduce a time interval between the distribution of successive calls of the connecting circuit at such position, and means controlled by the operative condition of the controlling devices associated with the connecting circuits at the position for modifying the operation of such timing device.

6. In a call distributing system, an operator's position, connecting circuits at such position, calling lines, means for selecting such position and extending such calling lines to such connecting circuits, controlling equipments adapted to be associated with such connecting circuits, equipment selector switches adapted to select idle controlling equipments and associate them with connecting circuits to which calling lines have been extended, a sequence switch adapted to be moved from normal each time a calling line is extended to a connecting circuit at the position to render the position non-selectable to calling lines a timing device for returning such sequence switch to normal to render the position selectable after a time interval, and marginal relays included in the operating circuit of the equipment selector switches for determining the duration of said time interval.

1,299,607. FILING-APPLIANCE CASE. HENRY F. POLLOCK and HARRY J. HICK, Alliance, Ohio, assignors to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Dec. 31, 1914. Serial No. 879,962. 7 Claims. (Cl. 109—2.)

1. A case or cabinet section having spaced walls of metal with intervening heat resisting material, and means for connecting the rim portions of the walls together, including an insulating bar and a plurality of separate connections between the bar and each wall, the several con-

nections being spaced from the other wall and from each other.



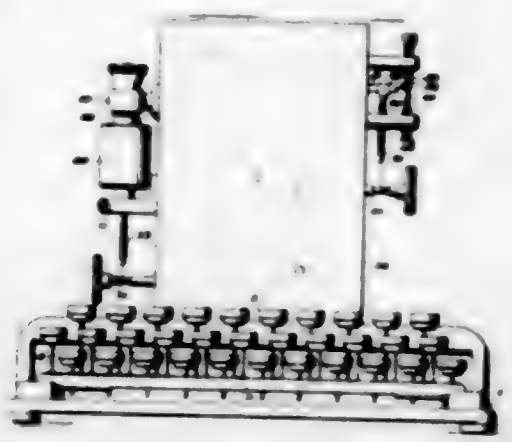
2. A case or cabinet section having spaced walls of metal with intervening heat resisting material, an insulating bar interposed between and spaced from the rim portions of the metal walls, means for securing the insulating bar to the wall including a plurality of separate connections between the bar and each wall, the several connections being spaced from the other wall and from each other, and spacing means between the insulating bar and the walls.

3. A case or cabinet section having spaced walls of metal with intervening heat resisting material, a bar of heat resisting material between the rims of the walls, an L-flange on one of the wall rims contacting with the rim bar, and means for securing the rims together including a plurality of connections between the bar and each wall and an abutment between the wall and the bar for each connection, the several connections being spaced from the opposite wall and from each other.

4. A case or cabinet section having spaced walls of metal with intervening heat resisting material, L-flanges on the rims of the walls, a rim bar of heat resisting material between the flanges, and means for securing the rims together including a plurality of connections between the bar and each wall and an abutment between the wall and the bar for each connection, the several connections being spaced from the opposite wall and from each other.

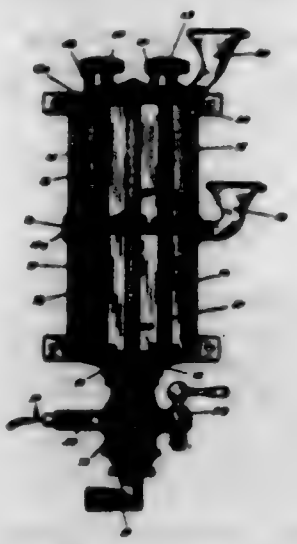
5. A case or cabinet section having spaced walls of metal with intervening heat resisting material, L-flanges on the rims of the walls, a rim bar of heat resisting material between the flanges, and means for securing the rims together including a plurality of connections between the bar and each wall and an abutment between the wall and the bar for each connection, the several connections being spaced from the opposite walls and from each other and the exposed faces of the flanges and the rim bar being arranged in stepped relation.

1,299,608. SELECTIVE SIGNALING APPARATUS. LOUIS MAXWELL POTTS, Baltimore, Md., assignor to Austin McLanahan, Baltimore, Md. Original application filed Oct. 11, 1913, Serial No. 794,633. Divided and this application filed May 9, 1916. Serial No. 96,323. 61 Claims. (Cl. 178—79.)



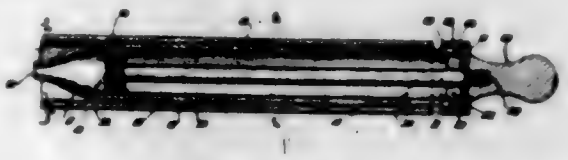
2. Apparatus for electrical signaling, comprising a movable switch contact, a series of mechanical elements common to said contact and arranged to individually operate the same, mechanical means to time the operation of said elements, and electrical means controlled by said switch to control the starting of said timing means.

1,299,609. COMBINATION CARBON-CLEANER. ORVILLE J. PRICE, Chico, Calif. Filed Jan. 9, 1918. Serial No. 211,091. 1 Claim. (Cl. 123—127.)



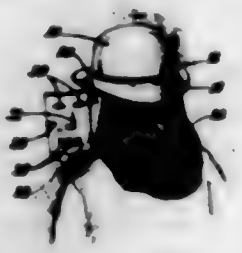
A carbon cleaner for engines comprising a receptacle adapted to hold a cleansing fluid arranged to be heated to pass off a vapor, an outlet from the receptacle adapted to be placed in communication with the engine to admit the vapor thereto, and means for admitting other fluids to the engine through said outlet, such means comprising a receptacle having a plurality of compartments for containing the fluids, and a single outlet communicating with the outlet from the first named receptacle, and valves controlling communication between the compartments and the second named outlet.

1,299,610. FIRE-EXTINGUISHER. FELIX PRZYBYSZ, Joliet, Ill. Filed Mar. 23, 1918. Serial No. 224,297. 2 Claims. (Cl. 169—17.)



1. In a fire extinguisher, the combination with a cylindrical barrel, a plunger operable therein, and a casing engaged by screw-threads to said barrel, of a rigid cap at the outer end of said barrel, a plunger rod passing through said cap, a handle engaged with said rod, and a pliable annulus carried by said handle surrounding the joint between said barrel and said cap.

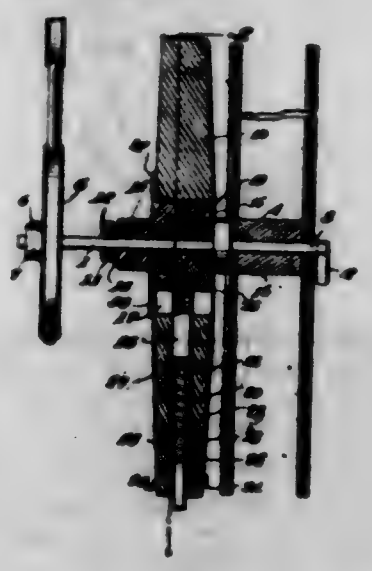
1,299,611. SOLDIER'S HEADWEAR. FELIX PRZYBYSZ, Joliet, Ill. Filed Mar. 23, 1918. Serial No. 224,298. 3 Claims. (Cl. 2—117.)



1. A cap comprising non-puncturable helmet, a brim extending therefrom, side plates rigidly engaged with said brim, a door set in said side plates, openings for the eyes, nose and mouth formed through said door,

means for closing said mouth opening, and a flexible element comprising a plurality of metallic scales, united to said plate below the brim of the helmet at the rear thereof.

1,299,612. ATTACHMENT FOR MOVING-PICTURE MACHINES. JULES F. RENEY, Brandon, Manitoba, Canada, assignor to Baird Motion Picture Machine Co., Newark, N. J., a Corporation of New Jersey. Filed June 25, 1918. Serial No. 776,776. 12 Claims. (Cl. 242—75.)



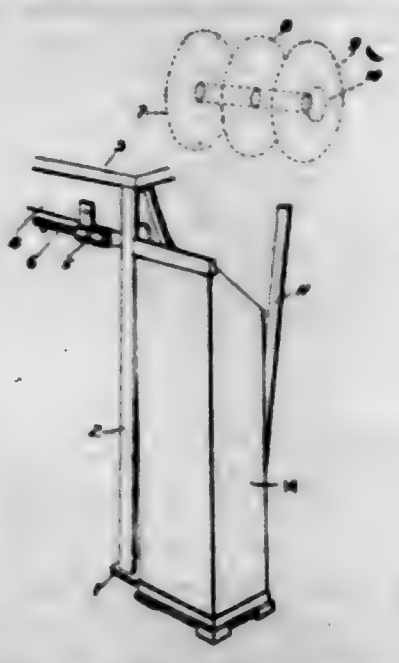
4. In a moving picture machine; the combination with, a shaft, a pulley and a belt used for rewinding films upon a drum, of a supporting structure, a block slidably mounted within an opening in said supporting structure, said shaft journaled through said block and supported thereby, the downward movement of said block controlled by the weight of the drum and film which is being wound thereupon, means for causing said block to assume its normal position after having been pressed downwardly by the weight of a drum the downward movement of said block automatically regulating the tension of said belt.

5. In a moving picture machine; the combination with, a shaft, a pulley and a belt used for rewinding films upon a drum, of a supporting structure, a block slidably mounted within an opening in said supporting structure, said shaft journaled through said block and supported thereby, the downward movement of said block controlled by the weight of the drum and film which is being wound thereupon, the downward movement of said block automatically regulating the tension of said belt.

7. In a moving picture machine; the combination with, a shaft, a pulley and a belt used for rewinding films upon a drum, of a supporting structure, a block slidably mounted within an opening in said supporting structure, said shaft journaled through said block and supported thereby, the downward movement of said block controlled by the weight of the drum and film which is being wound thereupon, a pin removably connected to the lower side of said block, said pin slidably mounted within an opening in said supporting structure, the lower portion of said pin being of smaller diameter than the upper portion of the same, a coil spring mounted about said lower end for causing said block to assume its normal position when a drum is removed from the shaft the downward movement of said block automatically regulating the tension of said belt.

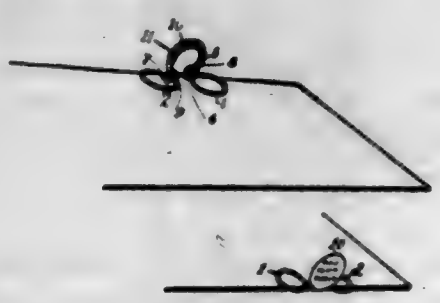
1,299,613. BOBBIN-BOX STAND. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Aug. 5, 1918. Serial No. 248,279. 4 Claims. (Cl. 139—35.)

1. A bobbin box support for automatic filling replenishing looms comprising means for inclining the top of the bobbin box both toward the side of the loom and toward the path of the picker stick, whereby the mouth of the bobbin box will be positioned well beneath the transfer-



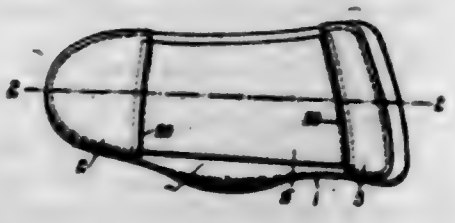
ring mechanism and the aperture in the lay through which the filling carriers are discharged on the entry of the discharged filling carrier into the bobbin box.

1,299,614. BLOTTER-HOLDER. WILLIAM M. RHOADS, Detroit, Mich. Filed Sept. 2, 1915. Serial No. 48,611. 3 Claims. (Cl. 139—24.)



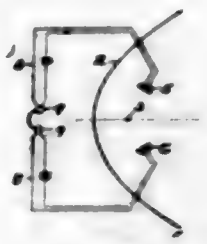
1. A blotter holder consisting of a single piece of spring wire formed near the ends in a pair of spaced coils of more than a single turn positioned in a horizontal plane, the extreme ends of the wire extending forwardly and outwardly therefrom forming guides for the insertion of the blotter between the said turns, a central spring loop portion extending at a right angle to the plane of and between the blotter holding coils, the said central loop being connected with the coils by similar rearwardly and downwardly bent integral parts adapting the loop to be inserted within the shell of a button.

1,299,615. ARCH-SUPPORT. GEORGE H. RICKE, Cincinnati, Ohio, assignor to John W. Allman and Aaron McNeill, Hamilton county, Ohio. Filed Aug. 11, 1917. Serial No. 185,729. 2 Claims. (Cl. 36—71.)



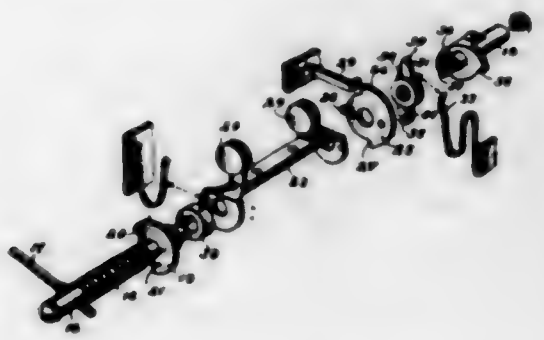
2. In an arch support, a body portion, pockets disposed at the extreme ends of said body portion, said pockets extending entirely across the body portion to form caps at each end, filler blocks for fitting into said pockets, a strap passing from one pocket to the other, and a filler block formed of suitable material and having spring like strips passing over its face, and plates suitably connected at each end thereof for holding said straps in position.

1,299,616. APPARATUS FOR DETERMINING THE DIRECTION OF A SOURCE OF SOUND. FRANK RIEBER, San Francisco, Calif., assignor to Rieber Laboratories, San Francisco, Calif., a Corporation of California. Filed May 7, 1918. Serial No. 233,095. 9 Claims. (Cl. 181—26.)



1. An apparatus for determining the direction of a source of sound comprising a reflector having a focus and sound receiving devices arranged on opposite sides of said focus.

1,299,617. ELECTRIC SWITCH. WILLIAM H. RIPLEY, Orange, N. J., assignor to The Prometheus Electric Company, a Corporation of New York. Filed Apr. 8, 1917. Serial No. 160,829. 7 Claims. (Cl. 175—287.)



1. An electric switch comprising a frame, contacts supported thereon, a shaft rotatably mounted on said frame, a contact rotatably supported upon said shaft, and means carried by said shaft to move said contact into and out of engagement with said contacts when said shaft is rotated, said means comprising a member rotatable with respect to said shaft and to said contact, substantially as specified.

5. An electric switch comprising a frame, contacts supported thereon, a shaft rotatably mounted on said frame, a contact rotatably supported upon said shaft, an actuating member rotatably mounted upon said shaft and free to rotate with respect to said contact, means carried by said shaft to rotate said actuating member for a portion of its movement as said shaft is rotated, means to rotate said actuating member for the remainder of its movement independently of said shaft, and means operatively connected to said contact and adapted to be engaged by said actuating member during its movement independent of said shaft to move said contact into and out of engagement with said contacts, substantially as specified.

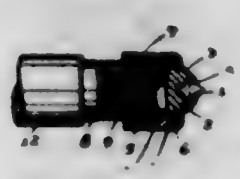
7. An electric switch comprising a frame, contacts supported thereon, a shaft rotatably mounted on said frame, a support rotatably mounted on said shaft and carrying a contact, a member secured to said support and provided with projections, a cam rotatably mounted on said shaft and provided with a lug adapted to engage either one of said projections, said cam having two cam faces, means secured to said shaft to rotate said cam to cause said lug to engage either one of said projections, and a spring co-acting with either one of said cam faces after said lug has engaged either one of said projections to rotate said cam about said shaft, whereby said support will be rotated to move said contact into or out of engagement with said contacts, substantially as specified.

1,299,618. REFRIGERATOR. GEORGE E. ROBISON, Mount Vernon, Ohio. Filed Aug. 30, 1918. Serial No. 252,083. 4 Claims. (Cl. 45—71.)



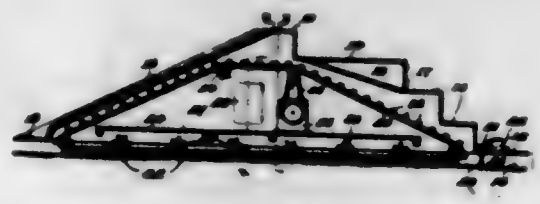
2. A refrigerator including a body provided with a vacuum heat insulating chamber, a door normally closing the body, and means connected with the door and operable thereby for exhausting air from the said chamber.

1,299,619. DIAMOND-TOOL. JOSEPH S. ROSS, Port Chester, N. Y. Filed Dec. 11, 1918. Serial No. 266,292. 2 Claims. (Cl. 125—39.)



1. An industrial stone setting, comprising a plug and socket, in combination with a removable thin metal cap clamped thereby and having an orifice, a matrix of compressed amalgam jacketed by the cap, and a stone embedded in the matrix.

1,299,620. INFANTRY-FORT. GEORGE ROY, Chicago, Ill., assignor of one-half to Pietr Lasnopyski, Chicago, Ill. Filed Nov. 9, 1918. Serial No. 261,811. 3 Claims. (Cl. 89—36.)

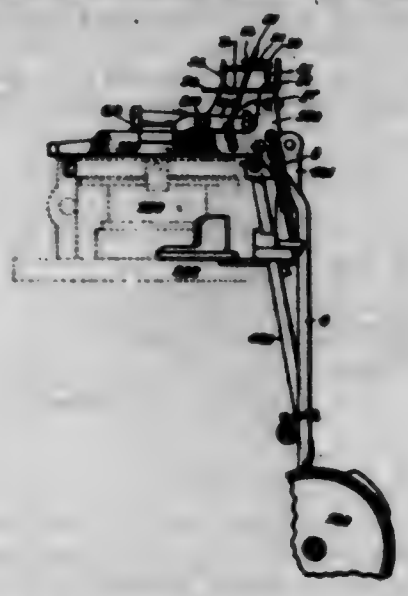


1. A fort comprising a casing having a downwardly inclined curved front side adapted for deflecting bullets and with rearwardly arranged supporting steps, motor driven caterpillar tread traction means for the casing positioned therein and position anchoring means for the casing.

1,299,621. ATTACHMENT FOR KNITTING-MACHINES. JAMES A. RUTH, Marion, N. C., assignor to Scott and Williams, Inc., New York, N. Y., a Corporation of Massachusetts. Filed Aug. 31, 1917. Serial No. 189,092. 3 Claims. (Cl. 66—9.)

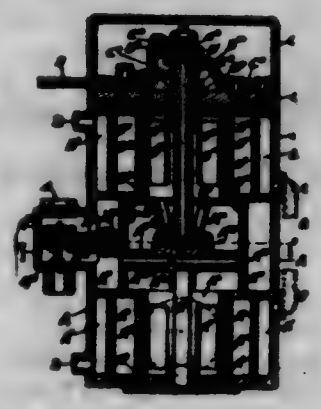
1. A knitting machine, having in combination a knitting cylinder, a series of needles, a movable yarn guide for moving the yarn into and out of feeding relation to the needles, a yarn clamp and a movable take-up device

acting on the yarn on its way to said guide and means for operating said take-up device to automatically take



up the slack of the yarn at said guide, when the latter is returned to the yarn-feeding position.

1,299,612. CARBURETER. ERNEST F. SAYLOR, Ilwaco, Wash. Filed Mar. 4, 1915. Serial No. 11,962. 7 Claims. (Cl. 261—48.)

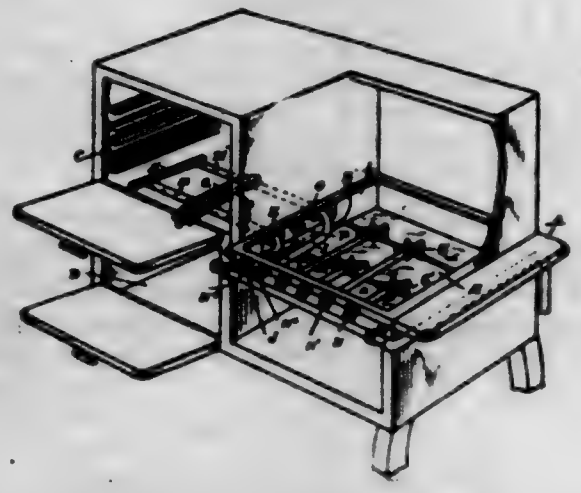


1. A carbureter of the character referred to comprising in combination a two-part casing, the parts of which are adjustable relative to each other about a common axis, an inlet valve in one part of said casing, an outlet valve in the other part of said casing, said valves being arranged concentric with each other, an oil puddle in said casing, means for supplying oil to said oil puddle, an oil valve arranged concentrically with said outlet valve and said inlet valve for controlling the supply of oil to said puddle, an operating member having operating connections for turning said inlet, outlet and oil valves about a common axis to control the passing of air through said casing and the supply of oil to said puddle, and independent means for regulating the movement transmitted by said operating member to said valves without changing the connections therewith, substantially as described.

2. In a carbureter of the character referred to, a casing having a passageway therethrough, a cylindrical inlet valve for controlling the admission of air to said casing, a cylindrical outlet valve arranged concentrically with said inlet valve, said valves having openings through their sides, an operating member with operating connections for simultaneously turning said inlet and said outlet valves in both directions about a common axis to regulate the passage of air through said casing, and means for regulating the relative amount of movement transmitted by said operating member to either or both of said inlet and outlet valves.

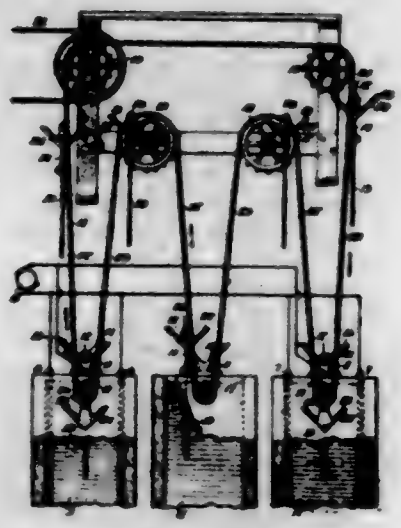
3. In a carbureter, a casing, an inlet valve and an outlet valve for controlling the passage of air therethrough, an oil puddle with means for supplying oil thereto, an oil valve for controlling a supply of oil to said puddle, an operating lever with operating toggle connections therefrom to said inlet, outlet and said oil valves for simultaneously operating the same in either direction by the movement of said operating lever, and means operating on the toggle connections from said operating lever to said valves for changing the movement transmitted to said valves by the movement of said lever without changing the movement of the latter, substantially as described.

1,299,622. GAS-RANGE. HENRY C. SCHALK and RANSOM W. DAVENPORT, Detroit, Mich., assignors to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Jan. 31, 1916. Serial No. 75,417. 6 Claims. (Cl. 126—39.)



5. In a gas range, the combination with an open top section and an oven section adjacent thereto, having compartments respectively above and below said open top section, of a gas conduit extending along the front of the open top, a series of valves connected to said conduit, gas burners in the oven adjacent the juncture of said compartments and connections from said burners to certain of said valves.

1,299,624. APPARATUS FOR ELECTROPLATING. HARRY O. SCHUMELER, Peru, Ill. Filed Jan. 28, 1918. Serial No. 214,006. 10 Claims. (Cl. 204—11.)



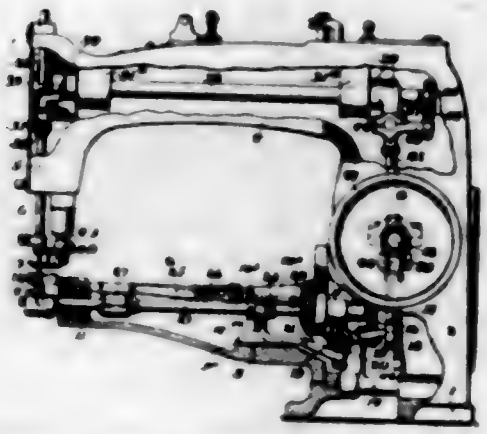
1. Electro-plating apparatus comprising a series of baths, the electrodes of which are normally out of circuit, a plurality of work holders to each of which is adapted to be attached one or more articles to be plated, means for stationarily supporting a work holder in connection with the negative electrode of a bath, in which position the article carried is immersed in the bath and electrolysis ensues, and continuously operating means for

moving intermittently each work holder from the supporting means of one bath to those of another.

6. In an electro-plating apparatus, the combination of a series of baths, work holder supporting means mounted upon each bath, an endless carrier arranged to travel toward and from each bath within the vertical plane of said supporting means, and work holder supporting devices mounted on said carrier and adapted to detachably carry said work holders so that the work holders are automatically deposited upon said supporting means and disconnected from said devices to suspend the work in said baths and are subsequently removed by said devices from said supporting means and conveyed to the next bath.

10. In an electro-plating apparatus, the combination of a bath, a work holder supporting means adjacent thereto, an endless carrier traveling in proximity to said work holder supporting means, and means on said carrier for automatically depositing a work holder on said supporting means and after a predetermined interval automatically removing the same therefrom and transporting said work holder away from said bath.

1,299,625. SEWING-MACHINE. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 29, 1914. Serial No. 879,484. 5 Claims. (Cl. 112—5.)

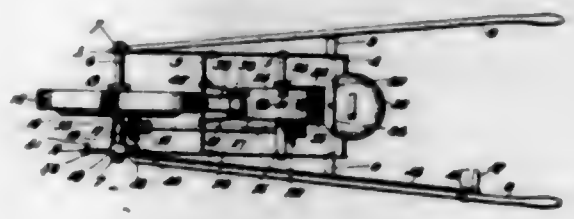


1. A sewing machine including in combination a standard, a work support, an overhanging arm, a main shaft in said standard extending at right angles to the longitudinal axis of said arm, a shaft in said overhanging arm, a link operated by the main shaft and connected to the shaft in the overhanging arm for oscillating the same, an arm projecting laterally from said link at the upper end thereof, a second link connected to said arm at one end and at the other end to a ball stud mounted on the shaft in the overhanging arm and concentric with the axis thereof, a needle bar, a needle carried thereby, and devices for reciprocating the needle bar from said shaft in the overhanging arm.

4. A sewing machine including in combination, a standard, a work support, an overhanging arm, a main shaft in the standard extending at right angles to the longitudinal axis of said arm, a shaft in said overhanging arm extending longitudinally thereof, means for actuating said shaft from said cross shaft in the standard, a needle bar, means for reciprocating said needle bar from the said shaft in the overhanging arm, a needle carried by the said needle bar, a looper shaft in said work support, a looper operated thereby, and means located in the standard for oscillating the looper shaft and for moving the same endwise.

1,299,626. SEED-PLANTER. JOSEPH S. SHAFFER, Independence, Mo. Filed Aug. 20, 1917. Serial No. 187,202. 1 Claim. (Cl. 74—58.)

In a seed planter, the combination of a suitable frame, transverse shafts mounted therein, wheels upon said shafts, a sleeve upon one of said shafts, a spring tending to force said sleeve away from the adjacent wheel, a shaft journaled at one end in said sleeve and at the other at a fixed point in the frame, a gear wheel on each end of the shaft, the gear wheel adjacent the said fixed point in the frame being permanently intergeared with one of said



first-named wheels, a wedge normally guarding against accidental movement of the sleeve in opposition to the spring, and means for sliding the wedge to release and then force the sleeve in opposition to said spring, to dispose the gear-wheel-carrying shaft in operative relation to the other of the first-named wheels.

1,299,627. RULE. HENRY SIMON, Laguna Beach, Calif. Filed May 29, 1917. Serial No. 171,695. 23 Claims. (Cl. 33—161.)



3. An extension rule comprising a series of telescoping members with their longitudinal axes coinciding and with the innermost member having at one end a lateral area corresponding to the cross sectional area of the outermost member and, when the rule is closed, constituting a cover for those ends of the other members presented toward the head.

7. An extension rule comprising a series of telescoping members with the innermost member having a head at one end of a lateral extent corresponding to the cross sectional area of the outermost member, and a marking blade carried by the head flush with the face of the head remote from the body of the rule and normally flush with the margin of the head, said marking blade being eccentrically mounted for the projection of the blade beyond the marginal portion of the head.

13. An extension rule comprising a series of telescoping members with each member smaller than the outermost member provided with a projecting stop and each member larger than the innermost member having a longitudinal slot receiving the stop of the next smaller member, the stops being arranged at different distances from the corresponding ends of the members on which they are located, whereby all the inner members larger than the innermost member may be wholly lodged within the outer member.

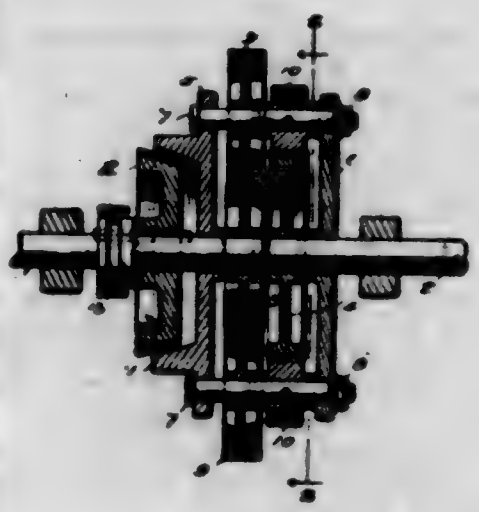
14. An extension rule, comprising a series of telescoping tubes with each tube smaller than the outermost tube provided with a projecting stop near one end and each tube larger than the innermost tube having a longitudinal slot receiving the stop of the next smaller tube, the stops being arranged at different distances from the corresponding ends of the tubes on which they are located, whereby all the inner tubes larger than the innermost tube may be wholly lodged within the outermost tube, and the slots of the inner slotted tubes approaching progressively closer to the opposite ends of said tubes remote from the stops than the slot of the outermost tube.

1,290,628. VEHICLE-WHEEL. JOHN O. SMITH, Moberly, Mo. Filed Apr. 20, 1918. Serial No. 229,740. 12 Claims. (Cl. 152—31.)



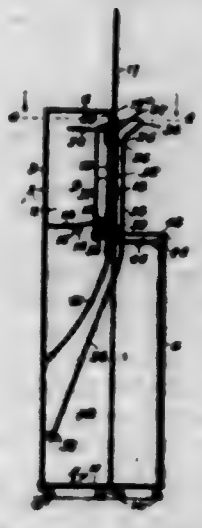
8. In a wheel, a hub, a rim, tubular spokes disposed between and fixed at their ends to the hub and rim, a tubular tire-casing mounted upon the rim, spring-members movable within the spokes and each normally having an end yieldingly pressing upon the inner face of the tire-casing, each of said members including an abutment, a second abutment, a coiled spring disposed between the abutments, a spring-inclosing casing fixed to the first abutment and telescopically fitting over and adapted for engagement with the second abutment, and a ribbed stem having engagement with the second abutment, and means including a spirally ribbed rotative member at the hub having engagement at its rib with the ribs of all said stems for varying the pressure of said spring-members upon the tire-casing.

1,290,629. POWER-TRANSMISSION DEVICE. WARREN L. SYKES, Hot Springs, Ark. Filed June 28, 1918. Serial No. 242,477. 1 Claim. (Cl. 74—34.)



A transmission, comprising in combination with the driving and the driven shafts, gear wheels secured to the adjacent ends of the shafts, a carrying frame mounted to rotate on the shafts and carrying journal pins at opposite sides of the shafts, a pair of pinions on each journal pin meshing with the gear wheels of the two shafts, said pinions and said gear wheels being of unequal diameter, and a single friction clutch arranged between the frame and the driving shaft for connecting the said frame and the driving shaft at varying relative speeds.

1,290,630. TOWEL-CABINET. HARRY SOLOMON, St. Joseph, Mo. Filed July 26, 1915, Serial No. 42,241. Renewed Dec. 12, 1918. Serial No. 266,516. 12 Claims. (Cl. 45—32.)



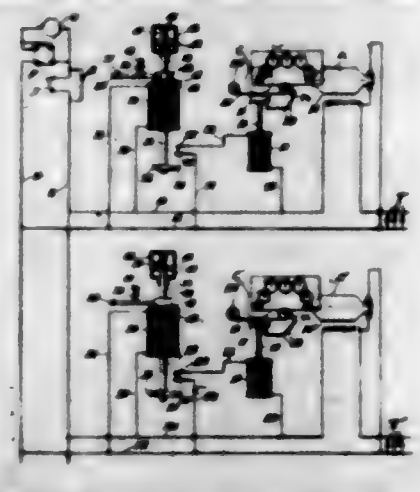
12. A cabinet of the class described including a loader plate having a slot, and a tube adapted to extend through the loader plate and receive a guide rod.

1,290,631. SOCKET-WRENCH AND BOLT-HOLDER DEVICE. JOHN B. SPANGLER, Bismarck, N. D. Filed Apr. 2, 1918. Serial No. 226,180. 1 Claim. (Cl. 81—58.)



A device of the character described comprising a pair of crossed jaw carrying handles pivotally connected to each other, means for holding said jaws in closed position, a fixed socket carried by the lower jaw of one of said handles, said socket being adapted to engage the head of a bolt to hold the same from turning, a rotative socket disposed in alinement with the fixed socket and adapted to engage and rotate a nut upon said bolt, a stem carried by said socket said stem being mounted to turn in the jaw of the other handle, means upon the stem for limiting the downward movement thereof, said stem being of such length as to permit a limited sliding movement thereof through the jaw and a tool engaging extremity upon said stem outwardly of said means.

1,290,632. METERING SYSTEM. RALPH B. STITZER and HARRY E. SOVERSIGN, Brooklyn, N. Y. Filed May 7, 1914. Serial No. 837,004. 12 Claims. (Cl. 171—34.)



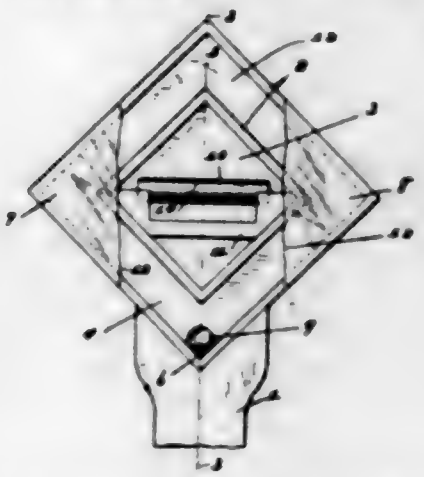
1. In an electrical system, the combination of a source of current, a main circuit connected thereto, a device adapted to be energized from said main circuit, means for controlling the circuit of said device, means whereby the voltage on said main circuit may be momentarily varied, electro-responsive means connected to said main

circuit and adapted to operate said circuit controlling means, said electro-responsive means being arranged to cause the closure of the circuit of said device only when the voltage of the main circuit is weakened and strengthened a plurality of times in quick succession.

4. In an electrical system, the combination with a source of current and feed wires leading therefrom, of an electrical translating device adapted to be connected to said wires to receive energizing current from said source, means whereby the voltage of said current may be varied a plurality of times in succession to produce a series of impulses transmitted over said feed wires, and means connected to be affected by said impulses and rendered effective only by a series of impulses in quick succession to cause a single operation of said translating device.

12. The combination with an electric actuating means, of a circuit including said actuating means, a switch in said circuit, and an electro-responsive device for operating said switch, and means whereby a plurality of impulses may be transmitted to said electro-responsive device, said device being adapted to operate said switch only after more than one impulse has been transmitted thereto.

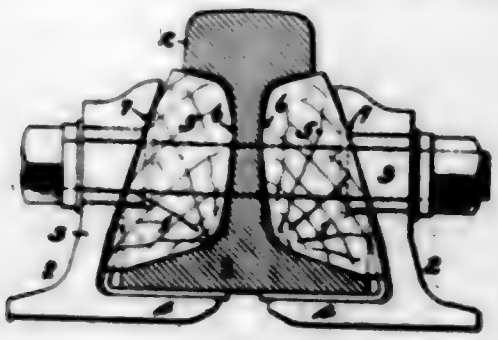
1,299,633. FLYING-MACHINE LEVER. FRANK TRAL, Troy, N. Y. Filed Apr. 19, 1918. Serial No. 229,516. 4 Claims. (Cl. 33—206.)



1. In a device of the class described and in combination, a level-tube; a frame provided with a ball-runway extending in general rectangular path around said level-tube, said level-tube being mounted in fixed relation to said runway and in line with two oppositely disposed angles in said runway; and a ball free to travel around said runway.

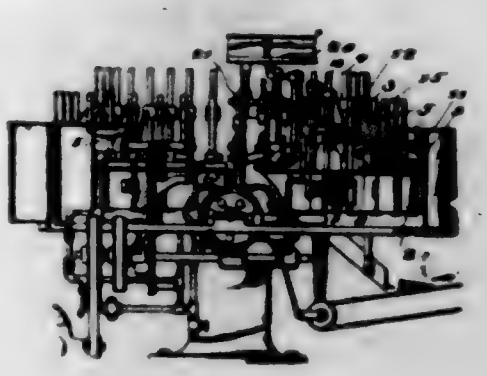
3. The combination; of a level-tube; a frame provided with a ball-runway extending in a general rectangular path around said level-tube, said level-tube being mounted in fixed relation to said frame with said level-tube horizontal and the angles in said runway above, below and at the ends of said tube; and a ball free to travel along said runway.

1,299,634. RAIL-JOINT. WILLIAM P. THOMSON, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed June 20, 1917. Serial No. 175,876. 9 Claims. (Cl. 238—6.)



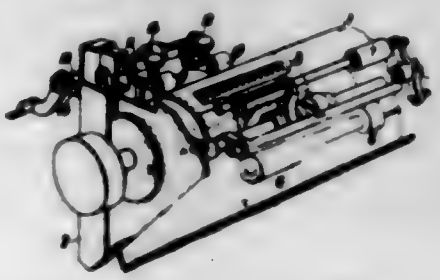
1. A rail joint including in combination with the rail and joint bolts, a shoe angle, and a wooden filler block having its maximum density horizontally and longitudinally thereof in an intermediate portion adjacent to the top of the bolt holes.

1,299,635. MACHINE FOR MAKING ICE-CREAM CONES. WEBB W. TURNBULL, Asheville, N. C., assignor to Turnbull Cone Machine Co., Asheville, N. C., a Corporation of North Carolina. Filed Sept. 1, 1917. Serial No. 189,368. 5 Claims. (Cl. 107—56.)



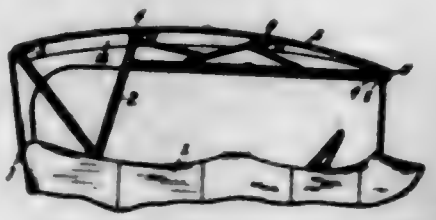
2. In a machine for making ice cream cones, the combination of a mold, a core mounted above the mold, and means for moving the core vertically and simultaneously moving it laterally with respect to the mold.

1,299,636. TYPE-WRITING MACHINE. COLLINS VAN HOOK, Knoxville, Tenn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 28, 1916. Serial No. 138,894. 2 Claims. (Cl. 197—135.)



1. The combination with a revoluble platen and a platen frame, of an arbor fixed at one end upon the end of the platen frame and projecting along the platen, inner and outer brackets journaled upon the projecting portion of said arbor and carrying feed rolls to run upon the front of the platen, the brackets being rotatable about said arbor to release the rolls from the platen, a fixed rod extending from the end of the platen frame along the platen at the rear thereof, and a cross-brace connecting said arbor to said rod, said cross-brace engaging said arbor at a point between said roll brackets, and extending along the arbor clear of the inner bracket and past the inner roll, and bent to extend back to a point of engagement with said rod.

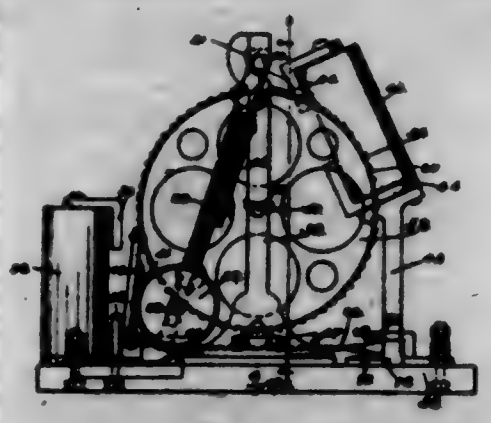
1,299,637. AUTOMOBILE-TOP. ALBERT VETTER, Toledo, Ohio. Filed Apr. 25, 1918. Serial No. 230,635. 4 Claims. (Cl. 21—62.)



1. In an automobile top, the combination with the frame, cross-bows and the top cover, of padding strips for the cover extending over the cross-bows, hooks at the ends

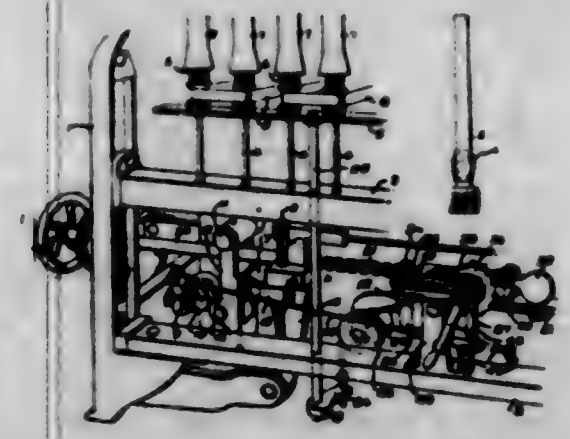
of said strips for releasably engaging the respective front and rear cross-bars, and means on the strips for releasably engaging the intermediate cross-bars.

1,299,638. ELECTRICALLY-OPERATED CONTROLLING APPARATUS. BOWERS W. VOORE, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpenterville, Ill., a Corporation of Illinois. Filed July 8, 1914. Serial No. 849,743. 3 Claims. (Cl. 161—38.)



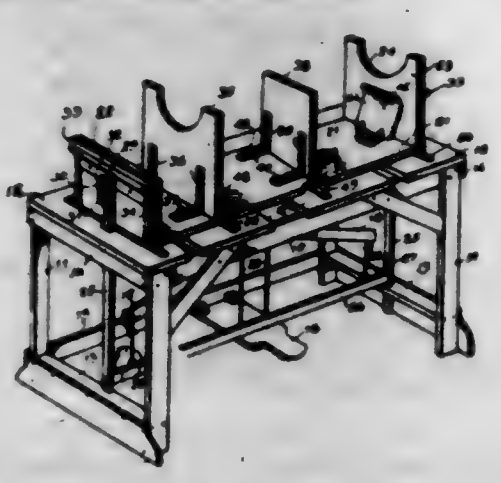
1. In controlling device, the combination with a pendulum, of a retaining device for the same, a magnet which when energized causes said retaining device to release the pendulum, means for momentarily closing a circuit through said magnet to initially energize the same, a circuit making and breaking element adapted to close a second circuit through said magnet, means for holding said second circuit closed for a predetermined period comprising mechanism operated by the movement of said pendulum to move said element in one direction when the pendulum is released and permits its movement in the opposite direction at the expiration of said predetermined period; and a magnet intermittently energized and adapted to momentarily attract said pendulum.

1,299,639. BUILDER MECHANISM FOR SPINNING OR WINDING MACHINES. WILLIAM E. WALSH, Lowell, Mass., assignor to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed June 21, 1918. Serial No. 241,260. 12 Claims. (Cl. 242—43.7.)



1. In a machine of the class described, the combination of a series of spindles for holding yarn receivers, yarn guiding means for directing yarn to the receivers, means for effecting relative service traverse between the yarn guiding means and receivers, means including a cam in the train of mechanism for effecting service winding and means for setting the cam to commence preliminary windings at any desired point longitudinally of the yarn receivers, and means acting automatically through the cam for modifying the traverse.

1,299,640. BOX-HOLDING CLAMP. ANDREW N. WEINBRACH, Mitchell, S. D. Filed June 1, 1918. Serial No. 237,774. 3 Claims. (Cl. 144—295.)



1. A machine of the character described comprising a table, standards mounted upon the table for vertical movement, a box supporting frame mounted upon the standards and having trunnions extending through the standards whereby the supporting frame may be rotated in a plurality of positions with relation to the table, the standards being mounted for vertical movement whereby the box supported in said frame may be rested on the table in any one of the positions to which the supporting frame may be rotated, and means mounted on the standards for yieldingly holding the box supporting frame in a plurality of rotated positions such that the box supporting frame will rest flat upon the table when the standards are lowered.

1,299,641. CATALYZING MATERIAL. HERCHEL WEINTRAUB, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 26, 1918. Serial No. 224,895. 3 Claims. (Cl. 23—23.)

1. A catalyst comprising fibrox and a deposit of catalyzing material on the fibers thereof.

3. A catalyst comprising fibrox and a deposit of nickel on the fibers thereof.

1,299,642. FOUNTAIN-PEN. WILLIAM ALBERT WELTY and HANS PETER RAVN, Waterloo, Iowa. Filed Mar. 28, 1918. Serial No. 224,116. 10 Claims. (Cl. 120—46.)



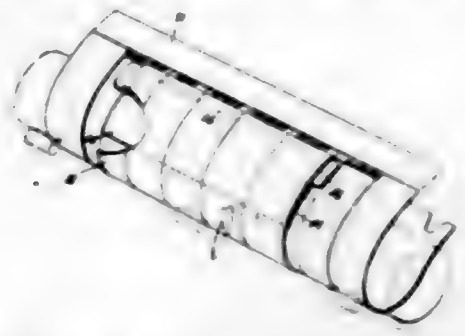
3. In a fountain pen, a slotted barrel, an elastic ink-reservoir therein, a pressure-bar between said reservoir and slot, a resilient element mounted pivotally on said pressure-bar and having engaging-means thereon, and a lever operable through said slot, engaging detachably the said engaging-means, and having a stop projection adapted to engage the barrel to limit its movement in one direction.

1,299,643. SET OF MANIFOLDING-SHEETS. LESTER A. WEAVER, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 9, 1917. Serial No. 201,088. 4 Claims. (Cl. 282—27.)

1. The combination with a main sheet having a form printed thereon, of an auxiliary sheet having a corresponding form printed thereon and provided with projecting tongues, whereby it is secured upon the face of the main sheet with the forms registering, said projecting tongues being gummed upon their under surfaces for attachment to the main sheet.

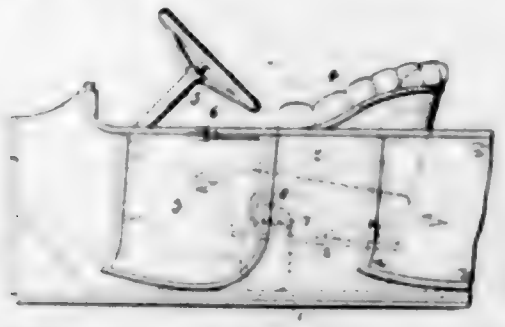
4. The combination with a ledger leaf provided with binding means and having a form printed thereon, of a statement or invoice sheet of substantially less width than the ledger leaf and having a corresponding form

printed thereon, said statement having a heading which is folded under, and also having laterally projecting



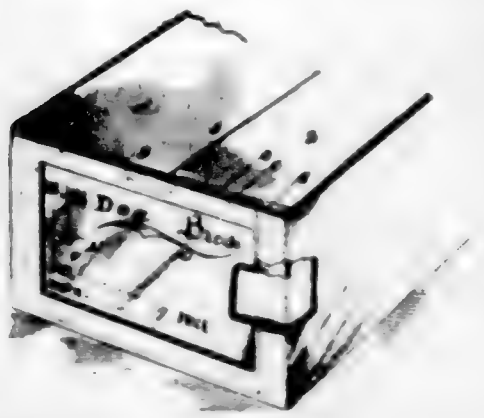
tongues below said heading, whereby it is gummed upon the face of the ledger leaf.

1,299,644. MOUNTING FOR CONTROL-BUTTONS. JOHN V. WHITBECK, Cleveland, Ohio, assignor to Chandler Motor Car Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 14, 1914. Serial No. 831,720. 1 Claim. (Cl. 180—1.)



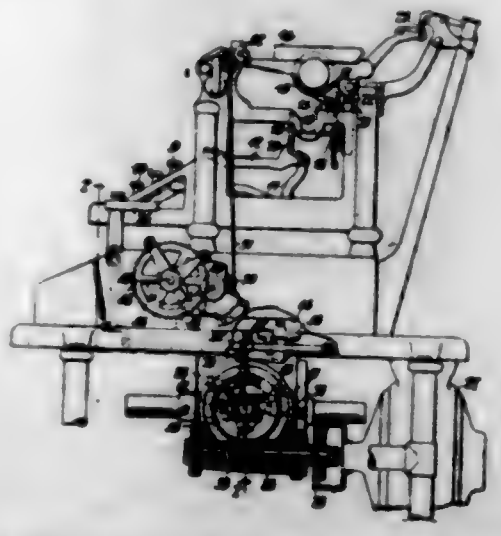
In a motor vehicle, the combination with a vehicle body having a seat therein, and including a side wall, a steering mechanism positioned in advance of said seat, said wall including a swinging side door hinged along one side and disposed in juxtaposition to said seat and extending forwardly of the seat and to one side of said steering wheel, an electric circuit including a push button mounted on the inner side of said swinging door and provided with a relatively large bearing surface positioned to be engaged conveniently by the knee of the person occupying said seat in rear of the steering mechanism, an electric conductor having a portion concealed within the outlines of the vehicle body and another portion concealed within the outlines of the door and connected electrically to said push button, and a bridging connection at the door joint for connecting the two portions of the conductors across the joint when the door is in closed position, whereby all parts of the operative electric circuit will be concealed when the door is closed.

1,299,645. BOX-FRONT. CHESTER L. WHITMORE, Omaha, Nebr. Filed Aug. 5, 1918. Serial No. 248,879. 1 Claim. (Cl. 40—7.)



A cardboard box having side walls provided at their front ends with flaps turned in at the front of the box over the bottom of the same, a front wall held against the inner sides of the flaps, an open frame held against the outer sides of the flaps and spaced by the said flaps from the said front wall, and a label removably fitted in the pocket formed between the said wall and frame and resting on the bottom of the box.

1,299,646. COMBINED TYPE-WRITING AND COMPUTING MACHINE. ALFRED J. WOOD, Brooklyn, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed May 27, 1916. Serial No. 100,179. 8 Claims. (Cl. 172—239.)



1. The combination with a motor and mechanism to be driven thereby, of a rotary driving element and a rotary driven element connected respectively to the motor and said mechanism, a clutch comprising a pawl and ratchet mounted on said elements, a clutch controlling device mounted on the pawl-carrying element and having a limited shifting movement relatively thereto, by which the clutch pawl is controlled, means to shift said controlling device to cause the pawl to engage the ratchet and thereby cause the driven element to be rotated through a complete rotation, and means to shift said controlling device at the completion of a rotation of the driven element into position to release the pawl from its ratchet.

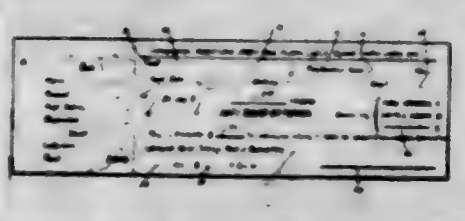
3. In a device of the class described, the combination with a driving member, of a driven member including a shaft on which said driving member is journaled, a fixed base adjacent said driven member, electric terminals on said base normally tending to close, a motor, a driving circuit for said motor including said terminals, a device on said driven member adapted to normally hold said circuit open through said terminals, a pin holding said device in its normal position, a spring normally tending to turn said device from its normal position to permit said terminal to close, a ratchet on said driving member, and pawls on said driven member normally held clear of said ratchet and forming a clutch between said members.

4. In a device of the class described, the combination with an electric motor, and a worm-driven driving member geared thereto, of a ratchet wheel fast to said driving member, a driven member including a shaft on which said driving member is journaled, pawls pivoted on said driven member, a controlling pin for each pawl, a disk on which said controlling pins are fast, a spring connecting said disk and said driven member tending to swing said disk to carry said pins to ineffective position, a starting pin normally holding said disk to keep said first-named pins effective, and a circuit for said motor normally open but closed by the withdrawal of said starting pin and held closed during the rotation of said driven member.

5. In a device of the class described, the combination with an electric motor and a worm-driven driving member geared thereto, of a ratchet wheel fast to said driving member, a driven member including a shaft on which said driving member is journaled, pawls pivoted on said

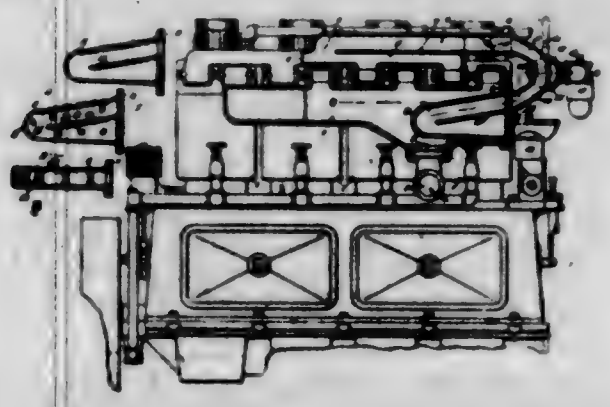
driven member, a controlling pin for each pawl, a disk on which said controlling pins are fast, a spring connecting said disk and said driven member tending to swing said disk to carry said pins to ineffective position, a starting pin normally holding said disk to keep said first-named pins effective, a circuit for said meter including terminals mounted on a fixed bars adjacent said disk, and an arm on said disk normally holding said circuit open through said terminals, the connections being such that movement of said disk upon withdrawal of said starting pin permits said circuit to close and remain closed until said arm again reaches the terminals.

1,299,647. COMBINATION ACCEPTANCE, ORDER, AND PLURAL CHECK BLANK WITH INDEX-KEYS. LEANDER W. WOOD, Fontanelle, Iowa. Filed Mar. 18, 1918. Serial No. 223,069. 1 Claim. (Cl. 283—58.)



A combination blank comprising a stub having thereon indicating characters for recording a transaction including key characters, a body having a date line, and having blanks for the amounts of the transaction, words for indicating any bank or payer, indicating characters for banks, and a blank adjacent thereto, key characters adjacent to said last indicating characters and blank, the words "Pay to the endorser" followed by a blank, characters indicating substantially that the undersigned will pay to holder the amount of this order, a blank line for signature, key characters adjacent to one of the blanks for the amounts, an index key indicating the uses of said key characters, and indicating characters for showing discount agreements.

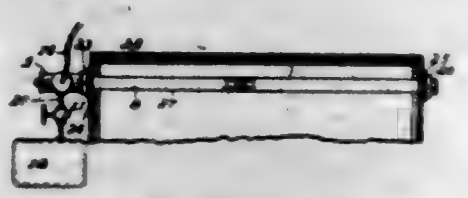
1,299,648. VAPORIZER DEVICE FOR EXPLOSIVE-ENGINES. JOHN S. WRIGHT, Owensboro, Ky. Filed July 9, 1917. Serial No. 179,319. 3 Claims. (Cl. 257—261.)



2. The combination with an exhaust manifold of an explosive engine, a casing member projecting through an opening in said manifold and flanged to provide a closure for said opening, said casing interiorly having an inclined wall providing a return bend passage through said casing, the lower surface of said wall providing a baffle for the incoming products and the upper surface a return drain.

1,299,649. HUMIDIFYING DEVICE FOR OVENS. DANIEL H. YOUNG and WILLIAM L. CASE, Manchester, Iowa, assignors of one-third to Grant Brayton, Manchester, Iowa. Filed June 13, 1918. Serial No. 239,780. 7 Claims. (Cl. 219—40.)

1. In a device of the character described, an elongated longitudinally-orificed chamber, closed at both ends, and bar-electrodes passed through the length of the chamber, spaced and insulated from each other and from the chamber.

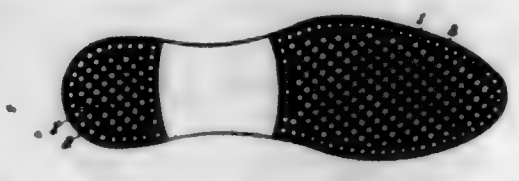


4. In a device of the character described, an elongated horizontal longitudinally-orificed chamber in communication with a source of liquid-supply, a pair of flat bar electrodes passed through the length of the chamber in spaced insulated parallel relation, and means for regulating the height of the liquid in said chamber, relative both to the said electrodes and the said orifices in the chamber.

5. In a device of the character described, an elongated horizontal longitudinally-orificed chamber with open opposite ends, detachable closures for said open ends, and a pair of spaced parallel flat bar electrodes carried through said chamber and conductors connected thereto passed through orifices in the chamber and placed in communication with a source of electrical current.

7. In a device of the character described, an elongated orificed chamber, a pair of electrodes in said chamber having communication with conductors leading through the wall of the chamber to a source of electric current, and means within said chamber located in a plurality of units along the length of said electrodes to support them in spaced and insulated relation to each other and to the chamber walls, comprising for each unit a body with oppositely-directed diminished extensions, forming shoulders therewith, the electrodes having vertically alined openings through which the diminished extensions are passed removably to permit the electrodes to engage said shoulders, said body and its extensions being composed of insulating material, and means for fastening detachably said electrodes upon said extensions in contact with said shoulders.

1,299,650. COMPOSITION FOR SHOE SOLES AND HEELS. DANIEL H. YOUNG and CHARLES O. NOBLE, Manchester, Iowa. Filed May 15, 1918. Serial No. 234,950. 2 Claims. (Cl. 154—52.)



1. A composition of the character described, comprising a plurality of relatively small and rigid spaced blocks having like faces presented in one direction as a tread surface, and a binding body of relatively elastic material in which said blocks are embedded and secured together to permit of their relative movements, said body containing fibrous material, and each of said blocks being formed to engage the surrounding binding body to prevent its endwise displacement therefrom.

2. A composition of the character described, composed of a rubber matrix containing fibrous material, and numerous relatively small pieces of wood embedded therein to present like faces outwardly in a common tread surface, the tread faces of the pieces being presented in a cross-grain of the wood, and each block having re-entrant engaging-means adapted to receive portions of the surrounding matrix.

1,299,651. CLOSURE. ALEXANDER P. ANDERSON, Chicago, Ill. Filed July 11, 1912. Serial No. 708,890. 20 Claims. (Cl. 220—124.)

2. In combination, a container having an opening, a pivoted lid for said opening, a gasket against which the lid seats to seal the opening, means for pressing the lid

against, and releasing the lid from, the gasket independently of the pivotal movement of the lid, and means for tilting the lid when releasing the same independently of its pivotal movement.

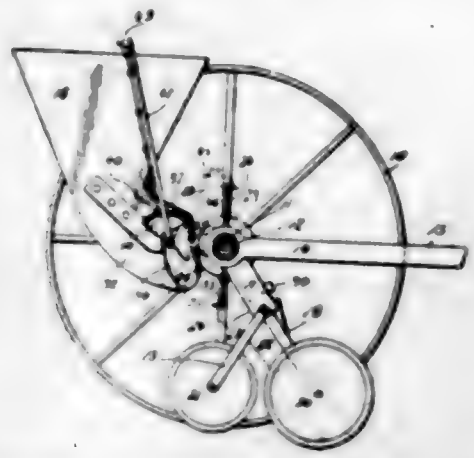


8. In combination, a container having an opening therein and having a plurality of circumferentially-disposed teeth surrounding said opening, a gasket having a plurality of circumferentially-disposed grooves in its lower face for receiving the teeth of said container, and having a plurality of circumferentially-disposed grooves in its upper face, a pivoted lid adapted to be clamped down upon said gasket and having a plurality of circumferentially-disposed teeth adapted to enter the corresponding grooves of said gasket, thereby to effect a tight joint, means for clamping said lid down upon said gasket, and means for tilting the lid independently of swinging the same on its pivot whereby the teeth of the lid are caused to clear the gasket teeth adjacent the lid pivot when the lid is swung open.

17. In combination, a container having an opening, a pivoted lid, means whereby the lid may be released from its closing position prior to opening, and means cooperating with the lid when the same is released for positively tilting the lid independently of its pivotal movement.

20. In combination, a container having an opening, a lid therefor, a pivoted lid carrier for moving the lid into and out of closing position and means for moving said lid with respect to said holder to free the lid from its seat, while the lid holder is secured, and means whereby moving said lid with respect to the holder will cause the lid to tilt with respect to its seat, said lid being hollow, and means for supplying steam to said hollow lid, comprising a conduit movable with said lid.

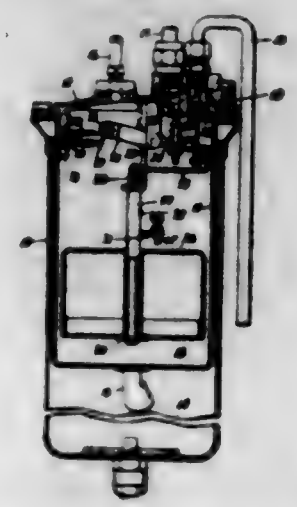
1,299,652. POTATO-PLANTER. ANTON J. ANDERSON, Hopkins, Minn. Filed Oct. 12, 1916. Serial No. 125,218. 4 Claims. (Cl. 221—127.)



3. A mechanism for the purpose set forth including a receptacle for holding seed potatoes having a downwardly and forwardly curved delivery end formed with a straight transversely extending slot in the bottom of said delivery end and a curved slot in the side thereof, its lower end connecting with one end of said straight slot, a shaft, a disk rotatably mounted on said shaft, a clutch member for engaging said disk with said shaft to cause the rotation of said disk, a loose cover extending over the top of said delivery end, a plurality of arms projecting radially from said disk, each provided with an inwardly directed finger terminating in a pointed end projecting at a right angle to said finger, said fingers with their pointed ends being positioned to enter the receptacle through said slots as the disk is rotated and each pointed end adapted to impale a potato and remove the same from the receptacle through the open top thereof below the loose cover, a pivoted stripper mounted on each finger for disengaging the potato from the pointed end and a fixed lug for engaging the stripper to operate the same.

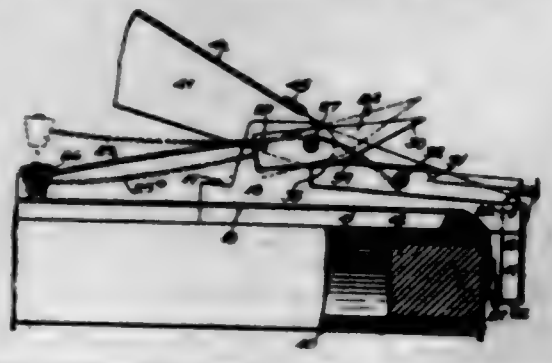
4. In a mechanism for the purpose set forth, a hopper discharging device comprising a rotatable shaft, a disk loosely mounted in said shaft, means for connecting said disk to the shaft for rotation therewith, a plurality of arms projecting radially from said disk, each arm having its outer end bent at a right angle to lie parallel to the axis of said disk, a pointed terminal to the outer end of each of said arms adapted to serve as an impaling means for removing potatoes from a receptacle, a finger pivotally mounted on the outer end of each of said arms having a looped end extending around the pointed terminal thereof and adapted when moved to disengage the object impaled, and a stop to engage said pivoted fingers to operate the same.

1,299,653. VACUUM-TANK FOR FUEL-FEED SYSTEMS. GEORGE A. ARNOLD, Boston, Mass., assignor to James A. Abeles. Filed Nov. 1, 1917. Serial No. 199,748. 6 Claims. (Cl. 158—36.)



1. An auxiliary fuel tank for vacuum feed systems, including upper and lower compartments, the upper compartment having a fuel supply pipe and the lower compartment having a fuel delivery pipe, a float within the upper compartment, valve mechanism operated by said float for alternately establishing communication between said upper compartment and the atmosphere and the source of vacuum, a lever operated by said float for controlling said valve mechanism, and a spring pressed stop in the path of said lever and movable out of said path by the engagement of the lever therewith during the swinging of the latter and serving to hold the lever in either of two limiting positions.

1,299,654. KEYED ZITHER. HARRIS A. BALLARD, Boston, Mass., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Feb. 24, 1917. Serial No. 150,687. Renewed Feb. 25, 1919. Serial No. 279,176. 9 Claims. (Cl. 84—116.)

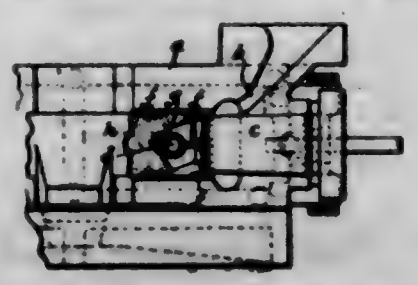


1. The combination with a zither, of a hammer arranged longitudinally of and above one of the strings,

a pivot therefor, a key having its rear end projecting under and engaging the front end of the hammer and constituting a stop to limit the movement of the hammer away from the string, and a pivot therefor located under the front end of the hammer, the depression of the front end of the key effecting the depression of the hammer.

4. The combination with a stringed musical instrument, of a key pivoted between its ends and having its front end adapted to be operated by a player, a hammer member also pivoted between its ends and having its front end overlying and resting upon the rear end of said key, parallel pivots for said key and said member, and a spring engaging the front pivot and said member for holding said key and said member in inactive position.

1,299,635. METAL CASTING AND THE METHOD OR ART OF MAKING SAME. JOSEPH H. BAMBERG, Toledo, Ohio, and HERMAN H. DOEHLER, Brooklyn, N. Y., assignors to Doehler Die-Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 12, 1917. Serial No. 148,026. 4 Claims. (Cl. 22—213.)



1. A semi-finished metallic alloy casting having a cup-like cylindrical structure with projections extending inwardly from the inner surface thereof, the outer surfaces of the casting having a deep chill, permitting surface machining or hand finishing, the casting having no chill at the inner surfaces thereof, with a gradual reduction in the hardness and density of the metal in the casting from all the outer to the inner surfaces.

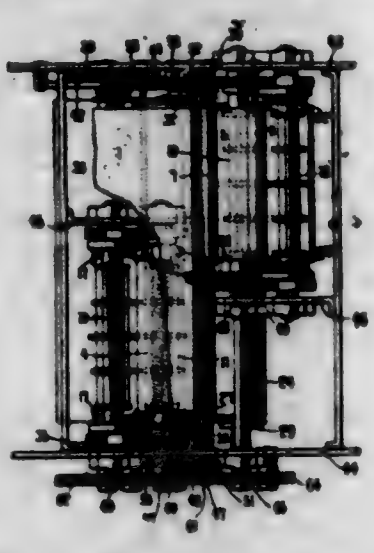
2. A semi-finished metallic alloy casting of a hollow piston for internal combustion engines, having wrist pin bosses extending into the same, the outer surfaces of the casting having a deep chill permitting surface machining or hand finishing, the casting having no chill at the inner surfaces thereof, with a gradual reduction in the hardness and density of the metal in the casting from all the outer to the inner surfaces.

3. The method of making hollow metal castings comprising, flowing molten metal into a metallic multiple part mold having a movable metallic core for forming a portion of the casting, and about a refractory heat insulating yieldable core, drawing said metal core after the initial solidification shrinkage of the metal, allowing the casting to remain in the mold until the metal is conditioned, separating the mold parts, removing the casting with the refractory core from the metallic portion of the mold, and finally removing said refractory core from within the casting.

4. A method or art of making metal castings consisting in flowing molten metal into a metallic multiple part mold, having movable metallic cores for forming portions of and openings in the outer surface of the casting and about a refractory, heat insulating core, drawing said metal cores after the initial solidification shrinkage of the metal, allowing the casting to remain in the mold until the metal is conditioned, separating the mold parts, removing the casting and the refractory or heat insulating core from the metallic portion of the mold and finally removing said refractory or heat insulating core from within the casting.

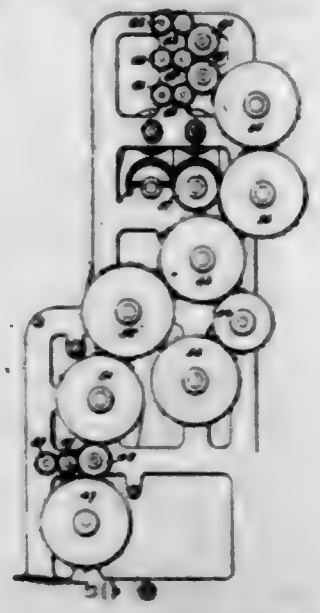
1,299,656. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 30, 1916. Serial No. 104,782. 4 Claims. (Cl. 270—47.)

2. Means for slitting a wide web into narrow webs, separate sheet cutting devices for said narrow webs, means for collecting groups of sheets side by side, cut from said narrow webs, including a rotary carrier having alined sets of independently operating grippers, means for folding said groups of sheets, and means for delivering said folded groups of sheets side by side.



4. Means for slitting a wide web into narrow webs, separate sheet cutting devices for said narrow webs, a combined rotary sheet collecting and folding carrier, a combined folding and delivery carrier, and a rotary sheet transfer carrier, arranged to coact to collect groups of sheets cut from the narrow webs, and fold and deliver the same.

1,299,657. CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Original application filed June 22, 1916, Serial No. 105,178. Divided and this application filed Aug. 16, 1916. Serial No. 115,241. 10 Claims. (Cl. 164—68.)



1. In a machine of the character described, a cutting mechanism and means for positively feeding a group of superimposed webs therethrough, comprising two pairs of endless belts located beyond the sides of the webs and provided with devices for engaging the sides only of the webs.

3. In a machine of the character described, a cutting mechanism and means for positively feeding a group of superimposed webs therethrough, comprising two pairs of endless belts located beyond the sides of the webs and provided with pairs of coacting devices for engaging the sides only of the webs.

5. In a machine of the character described, a cutting mechanism and means for positively feeding a group of superimposed webs therethrough, comprising two pairs of endless belts located beyond the sides of the webs and

provided at regular intervals with pairs of coacting devices for engaging the sides of the webs and means engaging the said devices for positively driving the belts.

7. In a machine of the character described, a cutting mechanism and means for positively feeding a group of superimposed webs therethrough, comprising two pairs of endless belts located beyond the sides of the webs and provided with pairs of coacting inwardly projecting bars arranged to grasp the sides only of the webs between them.

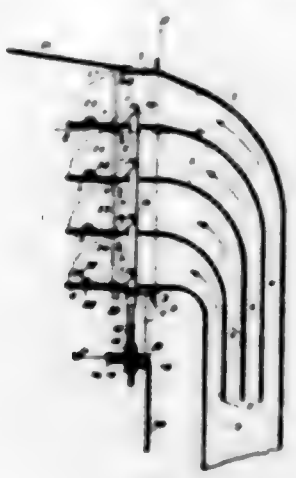
10. In a machine of the character described, a cutting mechanism and means for positively feeding a group of superimposed webs therethrough, comprising two pairs of endless belts located beyond the sides of the webs and provided at regular intervals with pairs of coacting interlocking inwardly projecting bars arranged to grasp the sides of the webs between them and means engaging said bars for positively driving the belts.

1,299,658. PIVOT-HINGE. FRANK A. A. BARRS, Vancouver, British Columbia, Canada. Filed July 13, 1918. Serial No. 244,783. 2 Claims. (Cl. 16—110.)



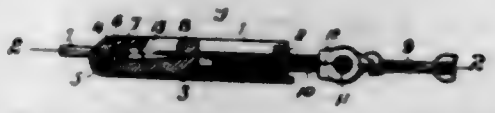
2. A pivot hinge for a window sash which comprises a plate having a pin projecting at right angles thereto, said pin having a reduced diameter bearing section terminating in an enlarged head, a second plate having a split bearing member to engage said pin at the bearing section and be held against longitudinal movement on the pin by engagement with said enlarged head and by engagement with the shoulder formed on the pin opposite the head by the reduced bearing part, said head having a plurality of crossed diametrically extended grooves or slots, a latch plate hinged to said second plate and adapted to lie in said slots, a fork member on said second plate into which said latch plate projects when in the latching position substantially as specified.

1,299,659. AIR DIFFUSER AND REGULATOR. FRANK A. A. BARRS, Vancouver, British Columbia, Canada. Filed Aug. 16, 1918. Serial No. 250,191. 6 Claims. (Cl. 98—54.)



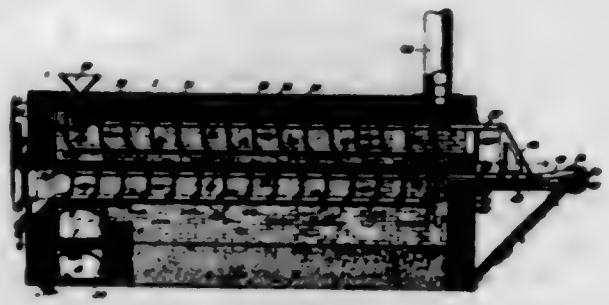
6. An air register, comprising the combination with a duct delivering air to a room, a series of horizontally disposed partitions dividing the outflow apertures of said duct, planes pivotally mounted along the forward bottom edge of each horizontal subdivision, said planes adapted to close the subdivided apertures or direct the inflow angularly upward or downward, a link rod pivotally connected to a spur backwardly projecting from the pivoted edge of each plane, a screw pivotally connected to one end of said link rod, a rope sheave threaded as a nut on the screw, a yoke within which the nut sheave is rotatable but not endwise movable, said yoke trunnion-mounted to a fixed bracket, guide sheaves rotatably mounted in the same bracket in planes tangential to the groove of the rope wheel and an endless rope passing over the guide sheaves and around the rope sheave whereby the sheave may be rotated to close the planes or to adjust them at any desired angle, vanes projecting upward from each plane and pivotally mounted thereon to be laterally angled to either side, and a securing bar passing through an aperture in each vane, and means for clamping the bar to the planes to secure the vanes in any desired position of angular adjustment.

1,299,660. CHAIN-COUPLING. JOHN C. BASCUM, Independence, Mo., assignor of one-half to Mary Bressie, Independence, Mo. Filed June 17, 1918. Serial No. 240,215. 7 Claims. (Cl. 24—69.)



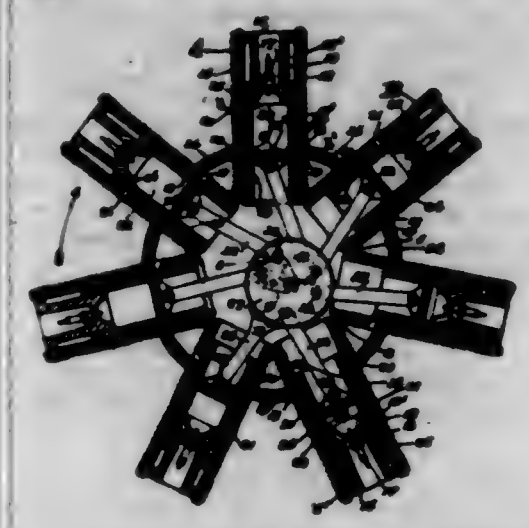
4. A chain coupling comprising a U-shaped body member, means for attaching thereto one link of a chain, and a lever having at one end a hook pivoted between and to the arms of said member, the hook having a seat for supporting another link of the chain, said seat, when the lever is swung from the open to the closed operative position between said arms, crossing a straight line connecting the pivotal point of the lever and the point of attachment of the first named link, the entire outer side of the lever in the closed position being at the inner side of the plane of the adjacent longitudinal edge of the body member.

1,299,661. MUFFLED ORE-CONVERTING APPARATUS. ARON M. BEAM, Denver, Colo., assignor to The American Continuous Retort Company, Denver, Colo. Filed Dec. 10, 1917. Serial No. 206,466. 3 Claims. (Cl. 263—22.)



1. In an apparatus of the character described, the combination with a pair of ovens arranged one above the other and means for applying heat to the under and upper side of each oven, said ovens being connected by a chute at one end, of slideways on opposite sides of each oven, frames slidably mounted on said slideways and connected to move in unison, spaced rods carried by said frames, a pair of depending arms pivotally mounted on each rod, a scraper secured to each pair of arms, the scrapers in one oven being oppositely inclined from those in the other oven, stops on said arms which engage the frames and prevent movement of the arms during the operative movement of the scrapers, a feed hopper at the forward end of the upper oven, a discharge chute at the forward end of the lower oven, and means for reciprocating the frames.

1,290,662. INTERNAL-COMBUSTION ENGINE. Joseph W. Bucos, Winnipeg, Manitoba, Canada. Filed Apr. 16, 1918. Serial No. 228,969. 8 Claims. (Cl. 123—44.)



2. In a multiple cylinder internal combustion engine the combination with a stationary hollow crank shaft for admitting the explosive mixture to the engine, a crank casing rotatably mounted in respect to the crank shaft and receiving the explosive mixture from the crank shaft, an eccentrically located crank pin associated with the crank shaft and a plurality of radiating cylinders secured to the crank casing and rotatable therewith and having air inlet and scavenging exhaust ports therein, of sleeve-like pistons operatively mounted within the cylinders and provided each with an internal cross head and having an exhaust port located at the outer end of the sleeve, an inlet port located in the sleeve to the outer side of the cross head, an outlet port located in the inner end of the sleeve to the inner side of the cross head, a connecting pipe connecting adjacent cylinders and arranged such that in the reciprocation of the pistons the inlet port of a selected piston will be directly in communication with the one end of the connecting pipe when the outlet port of the piston in the adjacent cylinder is communicating with the other end of the connecting pipe, a master connecting rod connecting the crank pin with one of the pistons and connecting rods connecting the other of the pistons to the master rod.

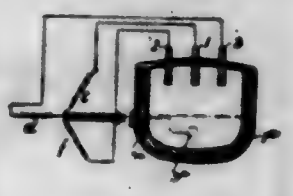
6. In a multiple cylinder engine the combination with a rotatably mounted crank case, of a plurality of radially disposed cylinders carried by the casing and each provided toward the outer end with an exhaust port and toward the inner end, at the side opposite the exhaust port, with a charge inlet port and an air inlet port, and at the inner end, in a location opposing the latter ports, with a charge outlet port, a sleeve-like piston operatively mounted in each cylinder and fitted with an internal cross head and having a scavenging exhaust port located in the outer end of each sleeve and positioned to register in the reciprocation of the piston, with the scavenging exhaust port, a charge inlet port passing through the sleeve in a location to the outer side of the cross head and positioned to register, in the reciprocation of the piston, with the charge inlet port and the air inlet port of the cylinder and a charge outlet port in the sleeve to the inner side of the cross head and designed to register with the charge outlet port of the cylinder in the reciprocation of the piston, a connecting pipe connecting the charge inlet port of one cylinder with the charge outlet port of the adjacent cylinder and means for reciprocating the pistons within the cylinders in the rotation of the crank casing.

1,289,863. SIZING. CLARK H. BENNETT, Chicago, Ill., assignor to Cornell Wood Products Company, Cornell, Wis., a Corporation of Wisconsin. Filed Mar. 15, 1917. Serial No. 155,050. 5 Claims. (Cl. 134—22.)

2. An insoluble sizing made of the following ingredients combined by cooking: A resin sixty parts, wax twelve parts, oil twenty-two parts, drying oxide three parts, and a neutralizing agent for decreasing the acidity of the resin two parts.

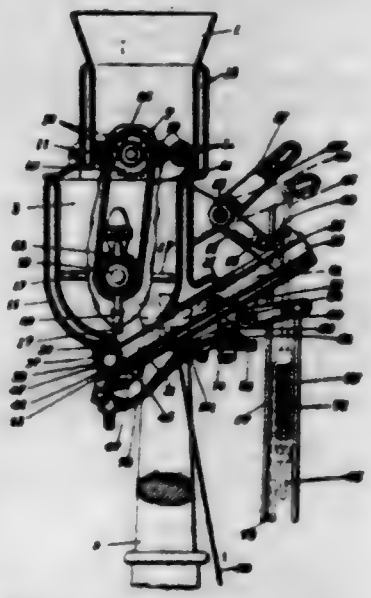
5. A sizing comprising an oil or oils combined with wax, a resin, calcium hydroxid, manganese dioxid and lead oxid.

1,290,604. ELECTRIC FURNACE AND TRANSFORMER FOR USE THEREWITH. FREDERICK EDMUND ENNAT, Hayes, England. Filed Jan. 19, 1918. Serial No. 212,747. 8 Claims. (Cl. 204—64.)



1. A three phase electric furnace having upper electrodes arranged above the furnace charge and lower and laterally arranged electrodes in electrical connection with said charge when the furnace is in operation each of said lower electrodes being of such dimensions and so arranged that it is located wholly at a part of the furnace wall that will be between the top and bottom of the furnace charge when the furnace is in action.

1,290,665. SHOE-FILLING MACHINE. FREDERIC H. BERTRAND, Lynn, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed May 21, 1915. Serial No. 29,594. 11 Claims. (Cl. 18—1.)



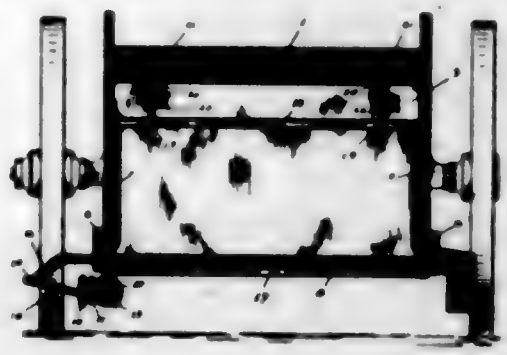
1. A shoe filling machine, having in combination, a receptacle for filling material, a pressure chamber having an inlet from said receptacle and an outlet, a valve controlling said inlet, a second valve controlling said outlet, means for closing the inlet valve, means for applying pressure to the material in said chamber while said inlet valve is closed, and means operated by presentation of a shoe in operative relation to said outlet for opening said outlet valve.

2. A shoe filling machine, having in combination, a receptacle for filling material, a pressure chamber having a normally open inlet from said receptacle and a normally closed outlet, power operated means for closing said inlet and compressing the material in said chamber, and means operated upon presentation of a shoe in position to be filled for opening said outlet.

6. A machine of the class described having, in combination, a receptacle for filling material, a pressure chamber in communication with said receptacle, a valve casing opening at one point into said chamber and being provided at another point with an outlet, a valve in said

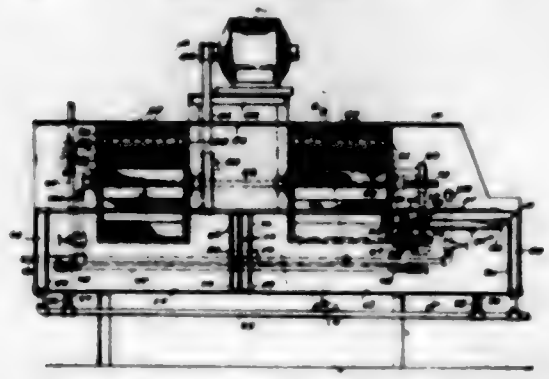
casing having communication at all times with said chamber to receive filling material therefrom, said valve being provided with a delivery opening, means for applying pressure to the material in said pressure chamber, means for moving said valve to cause its delivery opening to register with said outlet, and means for opening and closing said outlet.

1,299,666. SPREADER. WILLIAM H. BINDER, San Luis Obispo, Calif. Filed Nov. 15, 1916. Serial No. 131,562. 1 Claim. (Cl. 83—44.)



A spreader comprising a container having its rear end open, a vertical door plate adjustably and slidably mounted in said open end, downwardly projecting bearings fixed at the sides of the door plate and movable therewith, a shaker rod arranged for reciprocating motion in the bearings immediately under the door plate and adapted to bear against the bottom of the container when the door is at its downmost position, means for reciprocating said shaker rod and teeth on the shaker rod projecting horizontally into the container.

1,299,667. DISH-WASHING MACHINE. GEORGE S. BLAKESLEE, Chicago, Ill. Filed July 2, 1914. Serial No. 848,646. 4 Claims. (Cl. 141—9.)



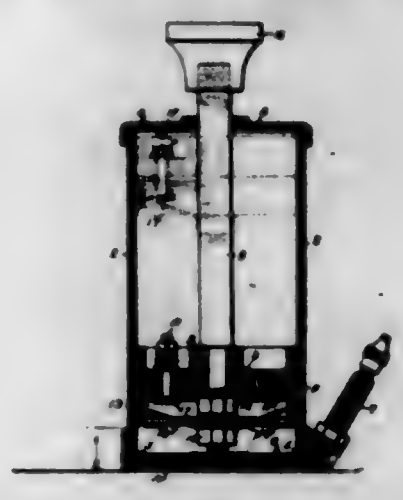
1. A dish-washing machine, comprising a tank adapted to contain water, means for supporting a dish-holding basket as it is moved through the tank over the water therein, a waterwheel at one side of said support, and a series of water distributing fingers disposed between the upper portion of the water-wheel and the path of the dish-holding basket for distributing the water delivered to the dishes.

2. A dish-washing machine, comprising a tank divided transversely by a partition into compartments for washing and rinsing water, means for supporting a dish-holding basket as it is moved thereover, and partitions forming chambers between said washing and rinsing compartments at opposite sides of said first-mentioned partition.

3. A dish-washing machine, comprising a tank, means adapted to support dish-holding baskets as they are moved over said tank, means comprising a water-wheel at one side of said tank for discharging water upon the dishes, a shaft by which said water-discharging means is driven, a conveyer for moving the dish-holding baskets into the tank, and mechanism for driving said conveyer from said shaft comprising a second shaft, a ring secured to said second shaft, and a third shaft alined with said second shaft and having shoes spring-pressed against the inner surface of said ring.

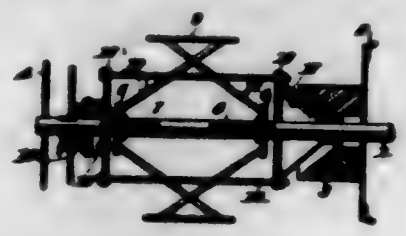
4. A dish-washing machine, comprising a tank, means adapted to support dish-holding baskets as they are moved over said tank, means comprising a water-wheel at one side of said tank for discharging water upon the dishes, a shaft by which said water discharging means is driven, a conveyer for moving the dish-holding baskets into the tank, mechanism for driving said conveyer from said shaft comprising a second shaft, a ring secured to said second shaft, a third shaft alined with said second shaft and having shoes spring-pressed against the inner surface of said ring, and means for varying the pressure of said shoes against said ring.

1,299,668. AIR LIFTING-JACK. AUGUST BLOMQUIST, Vancouver, British Columbia, Canada. Filed Apr. 10, 1918. Serial No. 227,789. 1 Claim. (Cl. 188—9.)



An air lifting jack comprising a tubular cylinder closed at its lower end and having an air delivery aperture through the side of the end, a delivery pipe connection provided with a check valve in the outer end of this aperture, the cylinder having a closed upper end which is centrally apertured, a poston rod passing through said aperture, a piston, said rod having a shank of reduced diameter passing through said piston and providing a shoulder against which the piston rests, a packing ring beneath the piston cupped downwardly, said shank being threaded, a plate on said shank and a nut on said shank for securing said packing to the piston, a second nut on said shank, a spider on said shank, an expansion ring within the packing and sustained by said spider, said piston and said packing plate having an aperture and a one way valve for closing said aperture, all being arranged substantially as shown and for the purposes described.

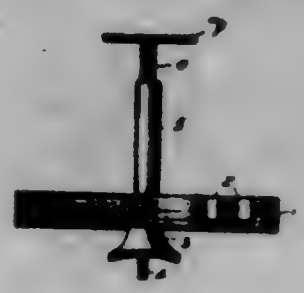
1,299,669. EXPANSIBLE PULLEY. EDGAR R. BOLING, Hannibal, Mo. Filed Mar. 26, 1918. Serial No. 224,781. 2 Claims. (Cl. 64—8.)



1. An expansible pulley, comprising a shaft having portions reversely threaded, a pulley mounted on said shaft, and comprising inner and outer portions, the inner portion consisting of spaced members connected by ties and the outer portion comprising elements mounted upon the reversely threaded portions of the shaft, pulley rim sections, and links connecting the pulley rim sections with the members engaging the reversely threaded portions of the

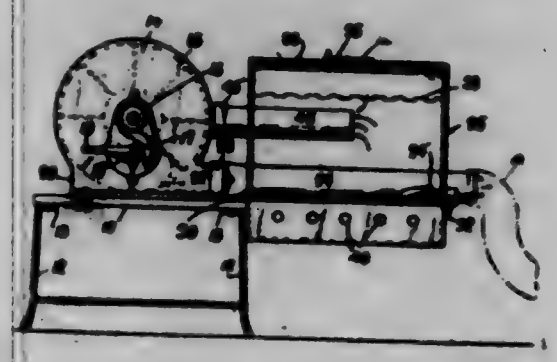
shaft, said links crossing and extending across the path of the ties connecting the spaced parts of the inner portion of the pulley.

1,290,670. EMBALMER'S CHIN-REST. EDWARD ALOYSIUS BRADY, Oregon City, Oreg. Filed June 10, 1918. Serial No. 239,212. 4 Claims. (Cl. 27—12.)



1. A device of the character specified, comprising a bar having a series of openings in its upper side and a transverse base on its underside intermediate its ends, said base having a depending pin near one end, a staff or standard for connection with the bar, said staff or standard comprising a tubular member internally threaded and adapted to engage one of the openings, and an internal member threaded into the tubular member and having a head at its outer end for engaging beneath the chin of the wearer.

1,290,671. DEVICE FOR THAWING DRAIN-PIPES. LEWIS A. BRENNAN, Brandonville, Pa. Filed Feb. 20, 1918. Serial No. 218,262. 3 Claims. (Cl. 137—72.)



1. In a device of the class described, a hot air chamber, an air duct extending therethrough, a blower and a casing therefor connected with one end of said duct, the opposite end of the duct projecting through the opposite side of the casing, and a duct extending from the upper portion of the chamber to the casing of the blower.

2. In a device of the class described, a supporting member, a blower including a casing mounted thereon, means for driving the blower, said casing being provided with an inlet and an outlet, a hot air chamber, a duct extending entirely through said chamber and having connection at one end with the outlet of the blower casing, and a duct connecting the upper portion of the chamber with the inlet of said blower casing.

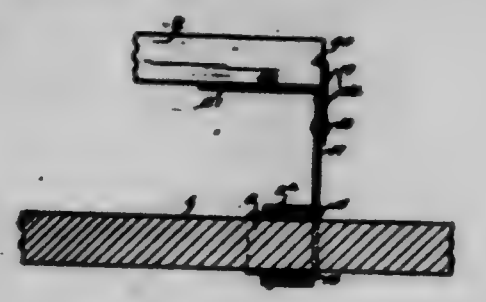
3. In a device of the class described, a hot air chamber provided with air inlets in the lower portion thereof and with an outlet in the upper portion, an air duct extending entirely through said chamber in a substantially horizontal direction and at a point spaced from the lower wall of the chamber, a blower and a casing therefor provided with an inlet and outlet, said outlet being connected with one end of said duct, means for driving the blower, an arm extending along one side of said chamber and around one end thereof and supporting the end of the air duct opposite to that having connection with the blower casing, a hinged cover for the air chamber, and a duct connecting the upper portion of said chamber with the casing of the blower.

1,290,672. LEATHER-STRETCHING MACHINE. PHILIP CARTER BROWN, Dover, N. H. Filed Oct. 7, 1916. Serial No. 124,496. 6 Claims. (Cl. 149—21.)



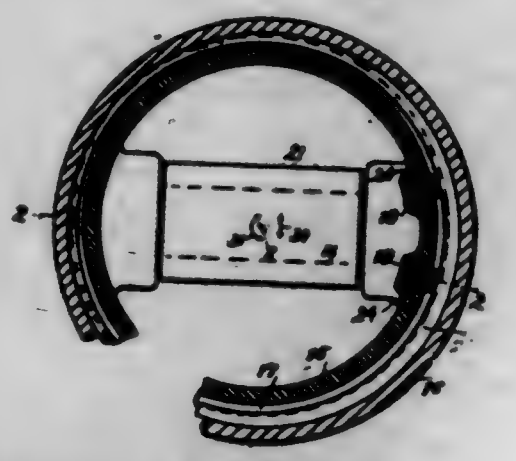
6. In a leather stretching machine, elongated clamps of nickel-bronze having axially disposed complementary flutes whose sections are sinusoidal curves, the rate of curvature of which is such that leather pressed between the faces, while it will be bent to conform with the shape of said faces will nowhere be bent sufficiently to deform the fibers beyond their elastic limit.

1,290,673. CURTAIN-POLE HANGER. JOSEPH BRUCHAS, Chicago, Ill. Filed Nov. 25, 1916. Serial No. 133,233. 3 Claims. (Cl. 156—24.)



1. A curtain pole hanger including a bracket arm, one end of which is adapted for engagement with a support and the opposite end formed to provide an annulus sleeved over the curtain pole, and means associated with said annulus and curtain pole to permit lateral adjustment of the bracket arm.

1,290,674. INTERNAL-COMBUSTION ENGINE. ALANSON P. BRUSH, Detroit, Mich. Filed Feb. 16, 1918. Serial No. 217,652. 2 Claims. (Cl. 121—104.)



1. In an engine, the combination of the cylinder, a piston therein having operative clearance, a connecting rod, a wrist pin which pivotally connects the connecting rod with the piston, and means yieldingly tending to push the piston across the cylinder in the direction of the length of said connecting rod pin.

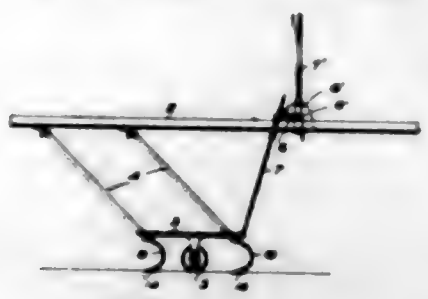
2. In an engine, the combination of the cylinder, a piston therein having operative clearance, a connecting rod, a wrist pin which pivotally connects the connecting rod with the piston, said cylinder having annular piston ring grooves, one of which is adjacent the wrist pin, piston rings in said grooves, and a spring or springs adjacent one end of the wrist pin acting to push the piston ring against the adjacent surface of the cylinder and the piston in the opposite direction lengthwise of the wrist pin.

1,299,675. SAFETY-PIN. HARDY BUSH, Newark, N. J. Filed Nov. 17, 1917. Serial No. 202,648. 1 Claim. (Cl. 24—159.)



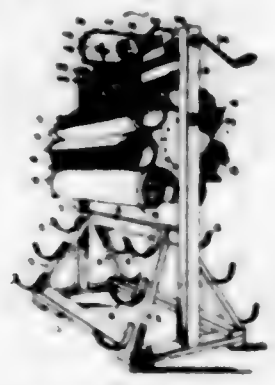
In a wire safety pin, a stiletto, a back bar substantially parallel thereto, a coil at one end of the pin connecting the back bar and stiletto, a hooked portion on the opposite end of the back bar, a ring portion adjacent and substantially parallel to the hook portion, and a cross bar connecting said hooked portion and ring portion, the hooked portion, ring portion and cross bar forming a head of generally coil-like form and the cross bar serving to releasably receive and hold the stiletto point.

1,299,676. CULTIVATOR. HARDY WEBSTER CAMPBELL, Lincoln, Nebr. Filed Feb. 28, 1918. Serial No. 219,657. 3 Claims. (Cl. 97—10.)



3. A cultivator blade having laterally projecting wings with edges converging from the rear toward the front and downwardly inclined slightly toward said edges from the middle portion of said blade, said wings having a socket to receive a supporting shank with recesses upon opposite sides of said socket and concave surfaces upon each side of said socket leading to said recesses, and over which concave surfaces the top soil is directed by said blade.

1,299,677. DISPLAY-STAND. CORNELIUS P. CARROLL, Columbia, La. Filed Nov. 1, 1917. Serial No. 199,649. 2 Claims. (Cl. 211—18.)



1. A display stand comprising a supporting base, standards at opposite sides thereof, a wire roll supporting reel journaled upon and between said standards and embodying opposite spaced head plates, spring loops attached circumferentially to each head plate at spaced intervals and adjacent said standards, a wire roll casing adapted to pass through each alined pair of said loops and provided with a lateral flange at one end to engage one of the loops, and a winding core wound upon said standards in alinement with the axis of said reel.

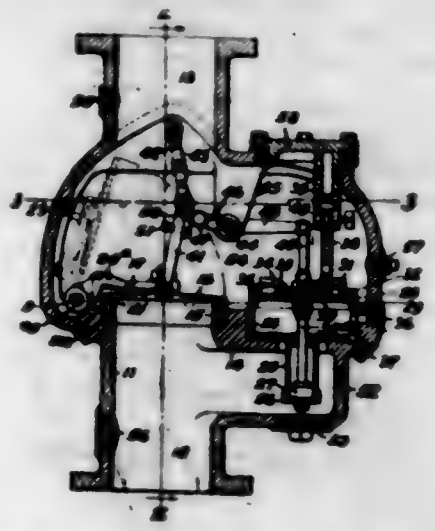
1,299,678. CONTROLLING DEVICE FOR AUTOMOBILES. GUNNAR ELIAS CASSEL, Stockholm, Sweden, assignor to Artur Lorens Olof Abraham Leffler, Djursholm, Sweden. Filed Mar. 26, 1918. Serial No. 224,784. 6 Claims. (Cl. 74—53.)

1. The combination in an automobile, of a driven axle, a number of clutches operating on said axle, a driving shaft, an obliquely-acting thrust-disk connected to said shaft for rotation therewith, a nonrotary thrust-ring loosely mounted on said thrust-disk for operating said clutches, and means for adjusting the said thrust-disk at



different oblique angles with respect to said shaft, said means including a pedal for adjusting the disk so as to increase the speed of movement of the clutches, and another pedal for adjusting the thrust-disk so as to decrease said speed.

1,299,679. DRY-PIPE VALVE. ELMO M. CHANDLER, South Norfolk, Va., assignor, by mesne assignments, to Automatic Sprinkler Company of Canada, Limited, Toronto, Ontario, Canada. Filed May 7, 1917. Serial No. 166,997. 15 Claims. (Cl. 169—22.)



1. In a dry pipe valve, a water valve, toggle mechanism for holding said valve closed, a differential valve, and a lever actuated by the differential valve operatively engaging the toggle mechanism.

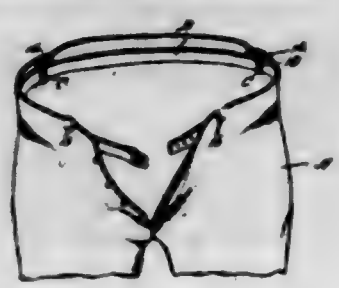
2. In a device of the class described, a water valve, a differential valve, toggle mechanism holding the water valve closed, a lever exerting wedging action on said toggle mechanism to hold the water valve closed, and operative connection between the differential valve and lever.

15. In a device of the class described, a water valve closure means therefor, a differential valve including small and large heads, the large head having a peripheral seating portion and a central portion rigidly connected to the small head and flexibly connected to the peripheral portion, and operative connection between the central portion and the closure means permitting limited movement of the small head and central portion without operative effect on said closure means, and without unseating the peripheral portion.

1,299,680. BELT-SUPPORT. HERBERT M. CHANEY, Sardinia, Ohio. Filed Nov. 1, 1916. Serial No. 128,961. 2 Claims. (Cl. 241—11.)

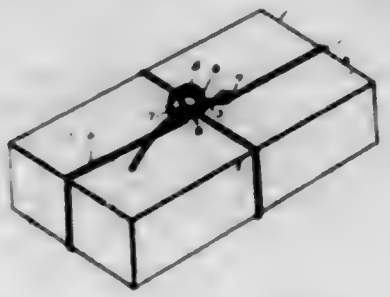
1. The combination with a belt, of a support comprising a hanger for engagement with the belt and formed from a single piece of material bent upon itself and having the folded portions offset to provide a recess therebetween for receiving the belt, the upper portions of said support constituting ears curved upwardly and outwardly from the hanger and provided at their terminals with pin engaging means, and a safety pin engaged by said means and adapted for detachable engagement to a garment.

2. A belt support comprising a hanger formed from a single strip of material folded medially of its ends having one of the folded portions offset to form an open loop for removably receiving a belt, ears continuing from the folded portions and curved upwardly and outwardly therefrom, eyes formed on the opposite edges of the ears near



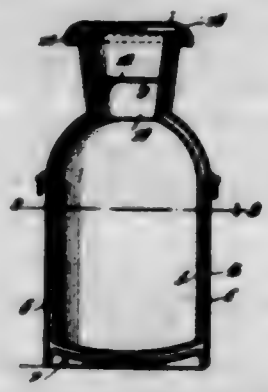
the terminals thereof, the eyes on one of the ears being arranged in close relation and against the adjacent faces of the eyes on the other ear and being alined therewith and a safety pin adapted for detachable engagement with a garment and having its pin member detachably engaged in the eyes for closing the loop and suspending the same from said safety pin.

1,299,681. PACKAGE-TIE. ANDREW C. CLEAVELAND, Spencer, Iowa. Filed Jan. 25, 1916, Serial No. 74,154. Renewed Aug. 16, 1918. Serial No. 250,289. 1 Claim. (Cl. 24—18.)



In a package tie comprising a shank, a lower coil formed on said shank and lying in the same plane therewith, an upper coil formed integrally with the lower coil and lying above the same, a spring finger formed on the end of the upper coil and extending downwardly therefrom across said first named coil and then inwardly toward said shank and lying in the same plane therewith, and a flexible member connected to the end of said shank and adapted to be secured between the upper and lower coils and between the lower surface of the coils and the spring finger, as and for the purpose specified.

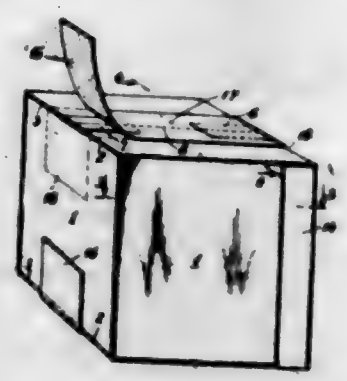
1,299,682. VACUUM-COVER FOR RECEPTACLES. FIRMAN R. CRIST, Pittston, Pa., assignor of one-half to Kenard S. Miller, Pittston, Pa. Filed Jan. 10, 1918. Serial No. 211,247. 4 Claims. (Cl. 220—138.)



1. In a device of the class described, the combination with a container having spaced walls, of a cover for said container adapted to extend into and to fit within the open end of said container and to extend beyond and to overlap the edges thereof, and the body and the overlapping portions of said cover comprising walls spaced apart.

4. In a device of the class described, a double walled body, a nipple comprising a tube communicating with the interior of the said body and being independent of the body, and the said nipple being formed of readily compressible material.

1,299,683. CORRUGATED-PAPER BOX OR OTHER CONTAINER. CHARLES H. CROWELL, Brooklyn, N. Y. Filed June 21, 1917. Serial No. 176,011. 5 Claims. (Cl. 229—45.)

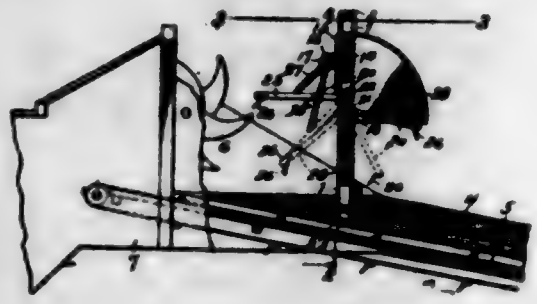


1. The corrugated box board container formed with end flaps having substantially abutting edges, a plurality of end flaps being sealed by an inner sealing strip of tape adhesively secured to the inber faces of the seam between such end flaps and having doubled back locking ends folded around and secured to the outer faces of said seam adjacent its ends and an outer sealing strip of wider tape adhesively secured to the outer faces of said flap seam and overlapping and secured to said locking ends of said inner sealing strip.

3. The container formed with end flaps, one of the pairs of end flaps being sealed by an inner sealing strip of tape adhesively secured to the inner faces of the seam between such end flaps and having a doubled back locking end, folded around and secured to the outer faces of said flaps adjacent the seam.

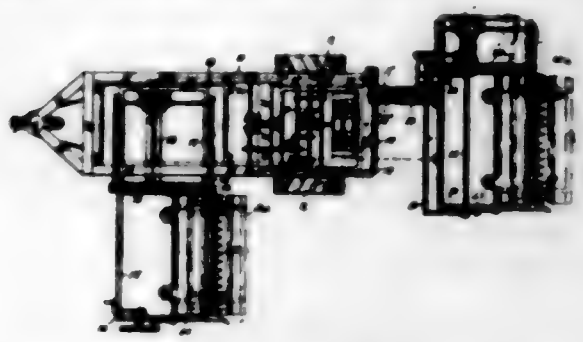
5. The paper box formed with end flaps having substantially abutting edges, one of the outer pairs of end flaps being sealed by an inner sealing strip of gummed tape adhesively secured to the inner faces of the seam between such end flaps and having doubled back locking ends folded around and secured to the outer faces of said seam adjacent its ends.

1,299,684. FEEDING DEVICE FOR THRESHING-MACHINES. JOHN H. CRUMB, Lawrence, Kans. Filed Jan. 19, 1918. Serial No. 212,575. 4 Claims. (Cl. 130—1.)



1. A feed regulator for a threshing machine comprising a frame, a support slidable therein, a member movable in one direction by grain which is being fed into the machine and carried by said support, means for retracting said member, and means actuated by said member, and means actuated by said member for engaging and temporarily restraining a portion of said grain.

1,299,685. HARVESTER-REEL AND ACTUATING MECHANISM THEREFOR. OTTO CZARAN, Glendale, N. Y. Original application filed Mar. 9, 1914, Serial No. 823,601. Divided and this application filed Feb. 10, 1917. Serial No. 147,819. 3 Claims. (Cl. 56—22.)

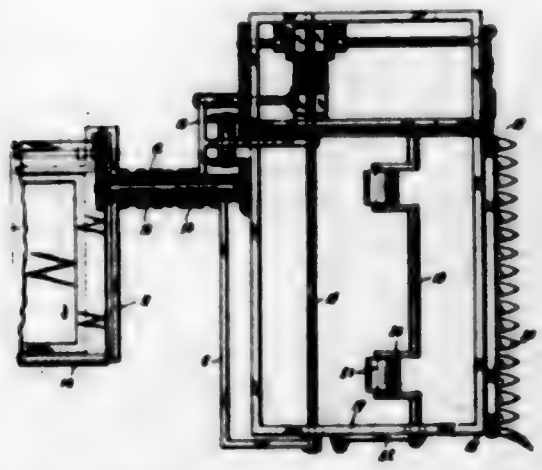


1. In a harvesting machine, a reel comprising a shaft, two disks fixedly attached thereto, fans secured to said disks, a plurality of disks shiftably disposed upon said shaft, fans attached to pairs of said shiftable disks, all of said disks being provided with peripheral notches in registering relation when said fans are brought to their operative positions, and latches engaging the registering notches in said disks to keep said fans in proper relation when in operative positions.

2. In a harvesting machine, the combination with a frame, of two harvesting mechanisms carried thereby, a reel shiftably disposed upon each harvesting mechanism, and means common to both reels for lowering or raising the same at will simultaneously or independently of each other.

3. In a harvesting machine, the combination with a frame, of two harvesting mechanisms carried thereby, a reel shiftably disposed upon each harvesting mechanism, and means common to both reels for lowering or raising the same independently of each other at will.

1,299,686. PLATFORM-ADJUSTING DEVICE FOR HARVESTERS. OTTO CZARAN, Glendale, N. Y. Original application filed Mar. 9, 1914, Serial No. 823,601. Divided and this application filed Feb. 10, 1917. Serial No. 147,820. 2 Claims. (Cl. 56—32.)



1. In a harvesting machine, the combination with a main frame, of a platform hinged thereto, a transverse shaft mounted upon said platform having crank arms intermediate its ends, rollers carried by said arms, each roller having a diameter that is smaller than the length of its respective crank arm, and a single means for varying the angular position of said arms relative to the plane of said platform.

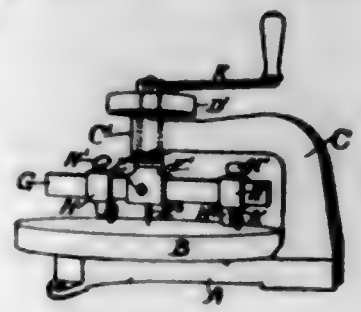
2. In a harvesting machine, the combination with a main frame, of a platform hinged thereto provided with a cutting mechanism, rollers at the front edge of said platform in rear of said cutting mechanism, a transverse shaft mounted upon said platform having crank arms intermediate its ends, rollers carried by said arms, each roller having a diameter that is smaller than the length of its respective crank arm, and a single means for varying the angular position of said arms relative to the plane of said platform, said first-named rollers being smaller than the rollers on said crank arms.

1,299,687. TABLE-SLIDE. FRANK C. DARNEY, Wichita, Kans. Filed May 7, 1917. Serial No. 168,942. 1 Claim. (Cl. 45—115.)



A table slide, including a bridging bar, slide bars mounted on each side of the bridging bar for rectilinear movement longitudinally thereof, the slide bars having cut out portions extending longitudinally thereof, spaced sprocket wheels journaled on a horizontal face of the bridging bar, a chain passing about the sprocket wheels, and racks secured to the slide bars and overlying the cut out portions, there being spaced teeth on the racks adapted to enter the links of the chain.

1,299,688. WASHER-CUTTER. NELSON DU LONG, Chicago, Ill. Filed Apr. 15, 1912, Serial No. 690,992. Renewed Aug. 16, 1918. Serial No. 250,241. 3 Claims. (Cl. 164—71.)



1. The combination with two rolling cutters, and means for causing them to travel about a common center in circles of different diameters and in contact with material to be cut, of pivotal supports for said cutters so arranged that the cutters form bases of cones whose apexes are at or near the common center.

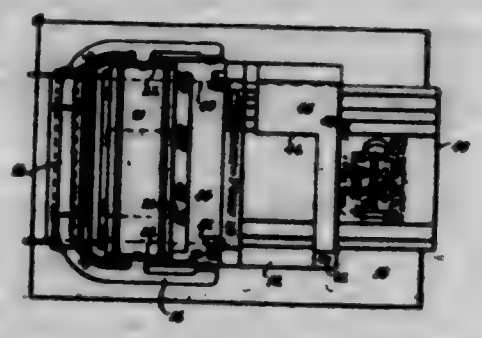
2. The combination with two rolling cutters located on opposite sides of a common center, and means for causing them to travel in circles about such common center and in contact with material to be cut, of pivotal supports of said cutters so arranged that the cutters form bases of cones whose apexes are at or near the common center.

3. A spindle provided with cutters adapted to cause an upward axial thrust on said spindle when the cutters are operated to cut material, a handle by which the spindle is turned, a bearing in the form of a bushing having external threads and located between the handle and a shoulder on the spindle, and a stationary nut in which the bushing is turned to feed the cutters toward material to be cut, said handle having a frictional contact with the end of the bushing which frictional contacts serves to turn the bushing and feed the cutters when the upward thrust of the cutters is reduced to reduce the frictional thrust between the threads of the bushing and the threads of the nut.

1,299,689. CASH-RECORDING DEVICE. WILLIAM L. DEMING, Salem, Ohio. Filed Nov. 3, 1916. Serial No. 129,325. 10 Claims. (Cl. 101—113.)

1. In a recording device, the combination of a support for a record strip, a guideway for the strip on the support, a writing window where a portion of the strip is exposed, a stamp adapted to print on said strip through said win-

dow, a carrier for the stamp, an inking pad, said stamp adapted to be moved from the pad to the strip and returned, and means to feed the strip consequent upon the movement of the stamp.



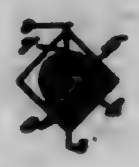
10. In a device of the character described, the combination of means for guiding a record strip, a support for the same, means for guiding a customer's strip over the record strip, a casing having a visible opening over the customer's strip at a point where it is above the record strip and both above the support, whereby writing at this point on the customer's strip may be transferred to the record strip, the casing having an adjacent opening, means for supporting the customer's strip independent of the record strip beneath such portion of the opening, a hand stamp adapted to engage the customer's strip in the last mentioned region, an inking pad, mechanism for moving the hand stamp from the inking pad to the customer's strip and back to the pad, and means for feeding both strips consequent upon such movement of the hand stamp.

1,299,690. TOOL FOR REMOVING AND REPLACING MILK-BOTTLE CAPS. ALEXANDER F. DEMORY, Hagerstown, Md., assignor to Hagerstown Novelty Company, Inc., Hagerstown, Md., a Corporation of Maryland. Filed Apr. 20, 1915. Serial No. 22,615. 1 Claim. (Cl. 65—67.)



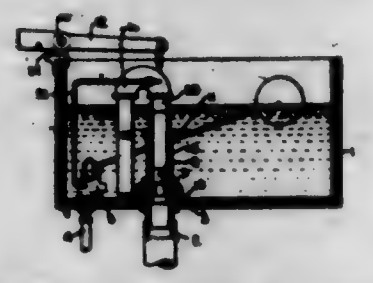
A tool for removing and replacing the disk closures for milk bottles and the like, including a rod formed with a handle at one end, an annular flange on the rod adjacent the handle, a concave-convex member slidable and rotatable on the rod, an attenuated head formed on the rod at that end remote from the handle and having upwardly facing shoulders, and a compression spring surrounding the rod and confined between the flange and the concave-convex member.

1,299,691. NUT-LOCK. HENRY J. DUEY, Detroit, Mich. Filed Dec. 6, 1917. Serial No. 205,839. 1 Claim. (Cl. 151—37.)



In combination with a nut and bolt, said bolt having an annular recess in its threaded portion to provide a reduced portion or shank, a ring like washer of resilient material having a transverse slot therein communicating with the central opening of the ring to space the free ends of the washer, said slot being of slightly less width than the diameter of the reduced portion or shank of the bolt, and said washer having a transverse V shaped groove in its outer periphery opposite a point equidistant between the free ends of the washer to permit the ends of the washer formed by the slot to spread, whereby said ends may spread to pass over the reduced portion or shank of the bolt and assume their normal positions so that the washer may frictionally engage said reduced portion to prevent the outward movement of the nut.

1,299,692. FLUSH-VALVE. EDWARD F. DONNELLY, Malden, Mass. Filed May 20, 1918. Serial No. 235,448. 2 Claims. (Cl. 4—5.)



1. In a flush valve, the combination with a valve seat member having a discharge pipe connected thereto, of a tubular member rising from the valve seat member and provided with a discharge opening adjacent the valve seat, a sleeve slidably mounted on the tubular member, a valve member secured to the lower end of the sleeve and adapted to engage the valve seat member, means for raising and lowering the sleeve thereby to open and close the valve, and a siphon member detachably secured to the upper end of the tubular member whereby the presence of the siphon member will cause the valve to operate as a siphon valve and the absence of said siphon member will cause the valve to operate as a cage valve.

2. In a flush valve, the combination with a valve seat member having a discharge pipe connected thereto, of a tubular member rising from the valve seat member and provided with a discharge opening adjacent the valve seat, a sleeve slidably mounted on the tubular member, a valve member secured to the lower end of the sleeve and adapted to engage the valve seat member, means for raising and lowering the sleeve thereby to open and close the valve, and a siphon member having a short leg adapted to fit into the upper end of the tubular element and a long leg extending substantially to the valve seat whereby the valve will operate as a cage valve when the siphon member is removed and as a siphon valve when the siphon member is in place.

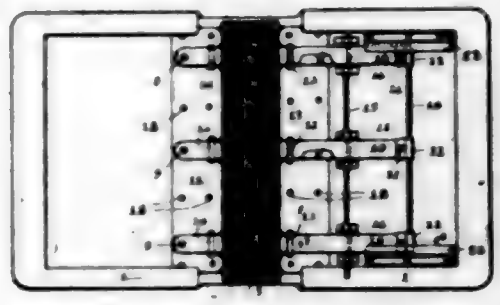
1,299,693. STORAGE BATTERY. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed Aug. 10, 1914. Serial No. 856,625. 28 Claims. (Cl. 204—29.)

22. In a storage battery, a positive element containing nickel, a negative element containing a mixture of finely divided ferrous material, and a small percentage of mercury and a stannic material, and an alkaline electrolyte containing lithium hydroxid, substantially as described.

1,299,694. LOOSE-LEAF BINDER. WILLIAM H. EDWARDS, Grand Rapids, Mich., assignor to The Proudfit Loose Leaf Company, Grand Rapids, Mich., a Corporation of Michigan. Filed May 27, 1915. Serial No. 30,795. 5 Claims. (Cl. 129—41.)

1. In a device of the character described; a pair of covers; a flexible leaf-holding member connecting the covers; adjusting means for said member carried by one cover; and a flexible shield adjacent said member and flexing therewith and having a longitudinal movement relatively to said member and independent of its adjust-

ing movement, and adapted to protect said member in its adjusting and flexing movements.



2. In a device of the character described; a pair of covers; an adjustable flexible leaf-holding member connecting the covers; and a flexible shield adjacent said member and flexing therewith and having a longitudinal movement relatively to said member and independent of its adjusting movement, and adapted to protect said member in its adjusting and flexing movements, and a separating piece adapted to hold said member and its shield apart for a portion of their length along said cover.

3. In a device of the character described; a back; a pair of covers; a pair of links, one between the back and one cover and the other between the back and the other cover; and connections between the back and the links and between the links and the covers, which connections are more flexible than the back or the links or the covers.

4. In a device of the character described; a back; a pair of covers hinged thereto; a covering material extending integrally over and outside the covers and the back; a flexible leaf-holding member extending from cover to cover; rigid plates on the inside of the covers respectively; means for attaching said members to the plates; and rivets extending through the covers, the covering material and the plates to fasten the plates to the respective covers.

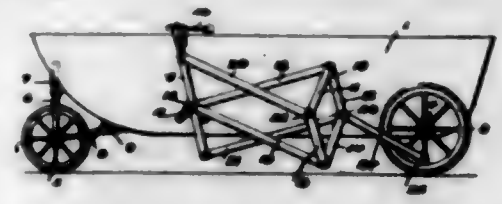
5. In a device of the character described; a pair of covers; a covering material extending integrally over and outside the covers; a flexible leaf-holding member extending from cover to cover; rigid plates on the inside of the covers respectively; means for attaching said members to the plates; and rivets extending through the covers, the covering material and the plates to fasten the plates to the respective covers.

1,299,695. PUZZLE. PHILIP VAN R. EBBEN, Philadelphia, Pa. Filed Dec. 26, 1918. Serial No. 268,326. 4 Claims. (Cl. 46—41.)



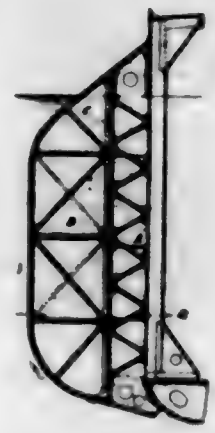
1. A device of the character specified comprising a board having figures represented thereon, one of the figures being provided with a plurality of depressions and the remaining figures having an extended hollow member and game pieces movable on the board and adapted to be projected from the said hollow member and to lodge in any one of the said depressions.

1,299,696. TOY. JOHN H. EVANS, Bridgeport, Pa. Filed Sept. 1, 1917. Serial No. 189,252. 5 Claims. (Cl. 208—41.)



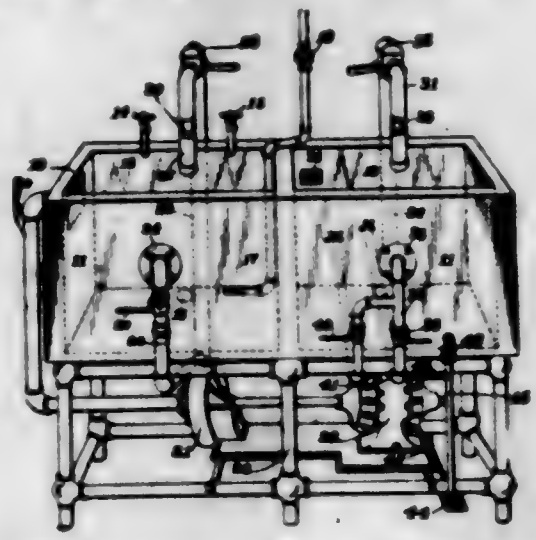
3. A toy of the character described, comprising a body, and driving wheels supporting the body, toggle levers supported by the body, pitmen connecting the toggle levers with the driving wheels, levers pivotally supported by the body, links connecting the last mentioned levers with the toggle levers, and oars operating the first mentioned levers.

1,299,697. MEANS FOR THE PROTECTION OF SHIPS, BOTH MERCANTILE AND NAVY SHIPS, AGAINST SUBMARINE ATTACKS OR MINES. EDGARDO FERRATI, Rome, NINO PECORARO, Spezia, and ALESSANDRO GUIDONI, Rome, Italy, assignors to Societa Anonima Italiana Gio. Ansaldo & C., Cornigliano Ligure, Italy. Filed July 9, 1918. Serial No. 244,106. 2 Claims. (Cl. 114—240.)



1. Improvements in means for the protection of ships against submarine attacks of torpedoes and mines, constituted by a structure fixed to the outside of the ship's hull all along its sides and from the keel up and above the load water line, the said structure comprising a reinforced concrete wall applied to the ship's hull, and an air chamber applied over the said reinforced concrete wall.

1,299,698. DISH-WASHER. WILLIAM FITZGERALD, Memphis, Tenn. Filed Jan. 22, 1917. Serial No. 143,751. 1 Claim. (Cl. 141—9.)



A washing apparatus comprising a receptacle having an overflow to determine the height of water therein and

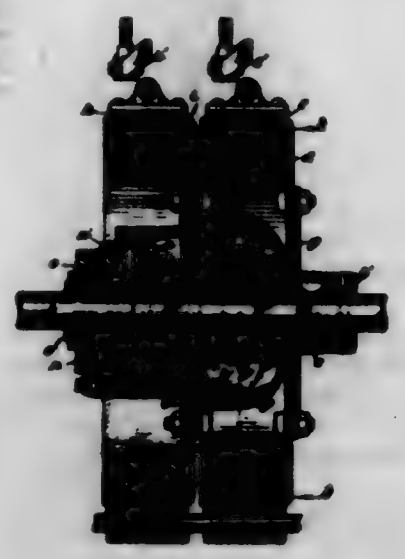
means to direct a stream of water under pressure horizontally into the bath at such a distance below the overflow thereof as to enable the articles readily to be placed in front of said stream while maintained in the hand of the operater, but at sufficient depth to be wholly submerged and subjected to the horizontally surging water, due to the inflowing submerged stream, said apparatus being open at the top to enable the articles, one after the other, to be quickly submerged and removed by hand.

1,299,699. HULL FOR VESSELS IN ARMED CONCRETE. LUIGI GALLINGANI, Genoa, Italy. Filed Aug. 16, 1918. Serial No. 250,249. 3 Claims. (Cl. 114—65.)



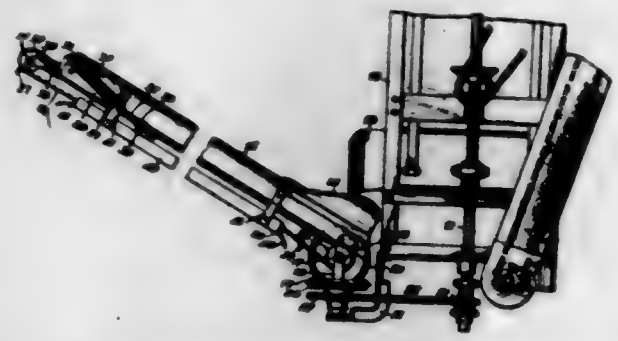
1. In a reinforced concrete vessel including transverse frames of reinforced concrete, a lining of wooden planks extending fore and aft and having their side edges arranged closely adjacent each other, the ends of the planks extending into the transverse frames.

1,299,700. TRANSMISSION-GEARING FOR AUTOMOBILES, &c. PERCIVAL F. GIFFORD, New York, N. Y. Filed Jan. 16, 1918. Serial No. 212,138. 3 Claims. (Cl. 74—24.)



1. Transmission gearing comprising a driving shaft, a driven shaft, two planetary gearings, the intermediate pinions of the second gearing rotating with the secondary gear of the first gearings, means to restrain or permit at will the rotation of the primary gear of the first gearing and means to restrain or permit at will the revolution of the intermediate pinions of the second gearing, the primary gear of the first gearing and the primary gear of the second gearing being mounted to rotate independently of each other.

1,299,701. BELT-TIGHTENER FOR CONVEYERS. JOHN H. GILMAN and ALBERT E. GILMAN, Ottawa, Ill., assignors to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed Mar. 7, 1917. Serial No. 152,122. 3 Claims. (Cl. 64—52.)



1. In a belt tightener, the combination with a stationary member provided with a guide way, of a movable member sliding in said way, an equalizing bar pivoted to the movable member, and a pair of springs acting on the ends of said bar.

1,299,702. LOCK-NUT. LOUINS R. GLASS, Passaic Park, N. J., assignor of one-third to Henry H. Hull and sixteen one-hundredths to Coulter D. Young, New York, N. Y. Filed Aug. 22, 1918. Serial No. 250,951. 2 Claims. (Cl. 151—21.)



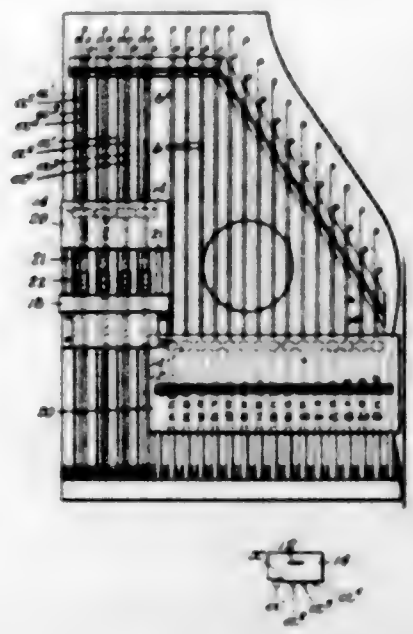
1. A lock nut comprising a nut cut by a slot in a plane substantially parallel to and relatively near the clamping face of said nut, said slot extending across the bore of the nut and having its inner end substantially tangential to the thread curvature at the top of the thread, whereby clamping pressure upon the clamping face of said nut will effect, about said line of tangency as an axis, a relative hinging movement of the parts of said nut upon the two sides of said slot into thread clamping position.

1,299,703. ARTIFICIAL FISH-BAIT. MATTHIAS KING GRAY, Odessa, Oreg. Filed May 4, 1917, Serial No. 166,469. Renewed Feb. 11, 1919. Serial No. 276,423. 3 Claims. (Cl. 43—30.)



1. A spoon bait comprising a shank, a spoon having a bearing through which the shank loosely passes to permit rotation of the spoon and a swing outward of the shank, a longitudinally adjustable abutment on the shank behind the bearing, and a loose connection between the shank and the spoon to limit the outward swing of the latter, said connection and the aforesaid bearing being detachable from the shank.

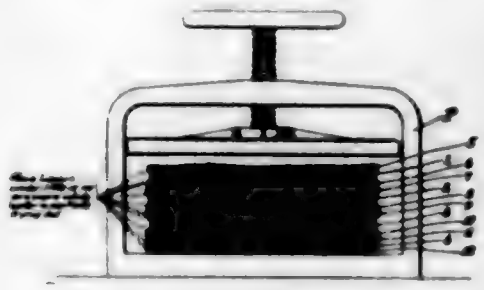
1,299,704. KEYED ZITHER. JOSEPH R. GREEN, Wakefield, Mass., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed May 16, 1916. Serial No. 97,829. Renewed Feb. 25, 1919. Serial No. 279,179. 3 Claims. (Cl. 84—116.)



2. A chord-playing device for a stringed musical instrument having groups of chord-strings of different diameters with the axes of the several strings in the same plane, said device comprising a spring shank and a string-engaging head carried thereby, the string-engaging surface of said head having a stepped formation adapted to compensate for the difference in diameter of the strings to be engaged thereby.

3. The combination with a stringed musical instrument having melody strings, manually operable playing devices arranged to coact therewith, each of said melody-playing devices having a spring shank and a string-engaging head carried thereby, and chord-producing strings arranged in chord groups; of chord-playing devices arranged to coact respectively with said groups of strings, each of said chord-playing devices comprising a spring shank and a string-engaging head thereon, the spring-shanks of said chord-playing devices being substantially shorter than those of said melody-playing devices.

1,299,705. PROCESS OF GLUING WOOD. WILLIAM M. GROSVENOR, New York, N. Y., assignor to Perkins Glue Company, a Corporation of Pennsylvania. Filed Jan. 16, 1918. Serial No. 212,045. 6 Claims. (Cl. 144—309.)

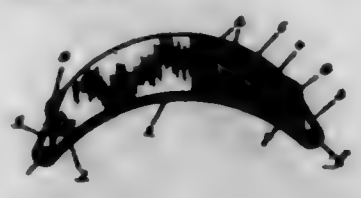


1. In the improved process of gluing wood, the steps which consist in applying to wood a water containing glue made from a starchy carbohydrate base and allowing the glue to remain on the wood for a substantial time without material penetration of the glue into the wood and before completing the pressure of the glue into the superficial wood pores to permit a substantial part of the water in the glue on the wood to dry out of the glue before completing the pressure of the glue into the superficial pores of the wood and then pressing the glue farther into the pores of the wood.

1,299,706. METHOD OF PREPARING RESINOUS COMPOSITIONS. BENJAMIN J. GUDEN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 7, 1917. Serial No. 200,603. 7 Claims. (Cl. 106—81.)

2. The process of preparing molding compositions which comprises coagulating a resinous binder in water substantially free of solid matter and mixing a filler therewith.

1,299,707. FLEXIBLE AUXILIARY TREAD FOR PNEUMATIC TIRES. CHARLES H. GUNN, Lincoln, Calif. Filed May 15, 1917. Serial No. 168,696. 1 Claim. (Cl. 152—16.)



An auxiliary tread for pneumatic tires comprising a plurality of independent tread sections, each tread section comprising a metallic plate curved to conform to the cross section of the tire and with its outer ends bent inwardly for a certain distance to form a V, a wearing block carried on the plate and projecting between the V-shaped portions of the plate, the wearing block being secured to the plate by rivets passing through the block and the sides of the V-shaped portions of the plate, and transverse rivets through the wearing block adjacent the securing rivets whereby the wearing block is reinforced and prevented from splitting.

1,299,708. WATER-CLOSET HIGH-PRESSURE BALL-COCK. MAX HABERBUSCH, Oakland, Calif. Filed July 1, 1918. Serial No. 242,872. 2 Claims. (Cl. 137—104.)

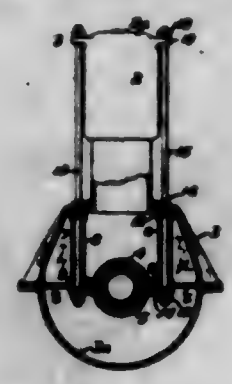


1. In a ball cock, a casing, a valve in the casing having a stem projecting from the casing, a float lever pivoted to the casing, and a U shaped member pivoted at the free end to said float lever and connecting removably with its intermediate portion, the said projecting stem; the said removable connection comprising a slot cut in the stem extending from the side thereof and terminating at the center, the wall of the slot engaging the said intermediate portion at the top and bottom, and a cap slidably fitting the outer end of the stem and having a slot engaging the said intermediate portion at the sides.

1,299,709. INTERNAL-COMBUSTION ENGINE. HERBERT J. HALL, Berkeley, Calif. Filed Mar. 14, 1916. Serial No. 84,062. 2 Claims. (Cl. 121—105.)

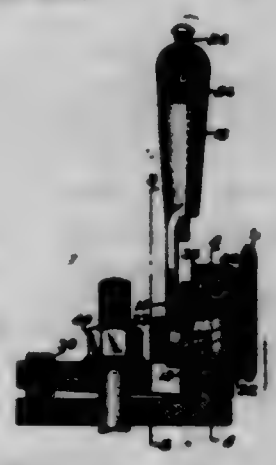
1. In an internal combustion engine, a crank case, a cylinder mounted on said crank case, a crank shaft bearing arranged in said crank case, a boss lying between said bearing and the wall of said crank case, a rod having rigid connection intermediate its ends with the metal of said crank case and passing through said boss

to the far side of said bearing and extending to the head end of said cylinder, and means on each end of



said rod for placing in tension the portion lying between that end and the point of attachment to said crank case.

1,290,710. LATHE-TOOL. FREDERICK HENRY HALSTEAD, Worcester, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Oct. 3, 1916. Serial No. 123,576. 15 Claims. (Cl. 82—34.)



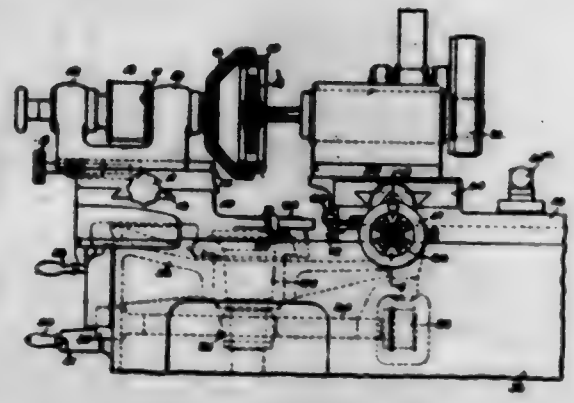
14. In a tool of the class described, the combination of a main oscillatory shaft 18, a cutter disk 11 rotatably mounted on an axis eccentric to and carried by said shaft; means coöperating with said cutter disk and said shaft for imparting step-by-step rotation to said cutter disk when the axis of said cutter disk is moved to and fro through an arc by oscillation of said shaft; a support opposing rotation of said disk during the cutting operation; a handle lever 16 for oscillating said shaft, the axis of said shaft and the axis of said cutter disk being relatively positioned to move said cutter disk away from said support on the initiation of oscillation of said shaft by said lever.

1,290,711. OSCILLATING GRINDER. FREDERICK HENRY HALSTEAD, Worcester, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Nov. 7, 1916. Serial No. 130,062. 20 Claims. (Cl. 51—4.)

1. An oscillating grinder comprising, in combination, a rotatable work spindle, a rotatable grinding wheel spindle; an arcuately oscillatory support for one of said spindles, and constant speed oscillating means for automatically imparting oscillatory movement to said oscillatory support, whereby the work and grinding wheel are arcuately relatively traversed at constant speed throughout the contact of said work and grinding wheel.

2. An oscillating grinder comprising, in combination, a rotatable work spindle, a rotatable grinding wheel spindle, an oscillatory support for one of said spindles, mechanical means for imparting oscillatory movement to said oscillatory support, including means for changing the amplitude of oscillation of said oscillatory support, the relative speed of arcuate traverse of the work and grinding wheel being unaffected by change of the amplitude of oscillation.

3. An oscillating grinder comprising, in combination, a rotatable work spindle, a rotatable grinding wheel spindle, an oscillatory support for one of said spindles, mechanical means for imparting oscillatory movement to said oscillatory support and common means for adjusting both the field of oscillation and the amplitude of oscillation of said oscillatory support.



4. An oscillating grinder comprising, in combination, a rotatable work spindle, a rotatable grinding wheel spindle, an oscillatory support for one of said spindles, and oppositely effective driving elements alternately effective, engaging said oscillatory support to rock it alternately in opposite directions.

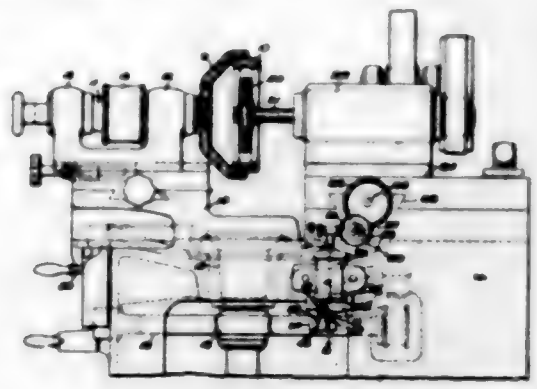
5. An oscillating grinder comprising, in combination, a rotatable work spindle, a rotatable grinding wheel spindle, an oscillatory support for one of said spindles, a driving element effective to impart oscillatory movement to said oscillatory support in opposite directions, two oppositely effective driving connections coupled for alternate engagement with said driving element, and means on the oscillating support for actuating said alternate engagement of said oppositely effective driving connections.

1,290,712. LATHE-TOOL. FREDERICK HENRY HALSTEAD, Worcester, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Nov. 7, 1916. Serial No. 130,063. 20 Claims. (Cl. 82—34.)



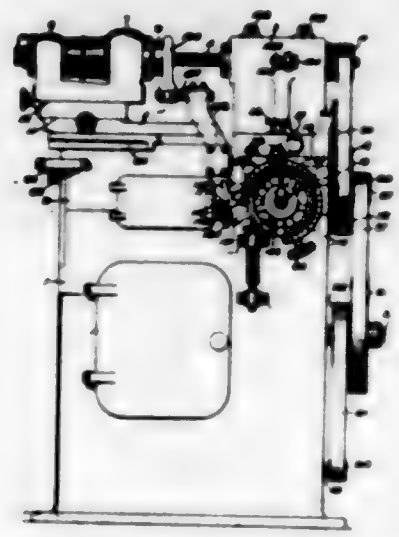
3. In a device of the class described, having a cutter disk, a tool stock, and interposed cutter disk shifting mechanism for moving said cutter disk bodily to and from the work; attachment means for rotatably and removably securing said cutter disk in operative relation to said cutter disk shifting mechanism, said attachment means including an annular aperture axial of said cutter disk, a boss projecting from said cutter disk shifting mechanism, a split ring interposed between said boss and the interior surface of said cutter disk and a retaining element for holding said split ring and said cutter disk in operative relation, each to the other, and to said cutter disk shifting mechanism.

1,299,713. GRINDER. FREDERICK H. HALSTEAD, Worcester, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Mar. 7, 1917. Serial No. 153,192. 14 Claims. (Cl. 51—4.)



1. A grinder comprising in combination an abrasive tool; work rotating means; tool rotating means; traversing means for traversing said tool and the work, one relative to the other; reversing means for said traversing means including two oppositely effective, driving elements, and shifting means providing for alternate engagement of said driving elements; and feeding means actuated by shifting movement of said shifting means.

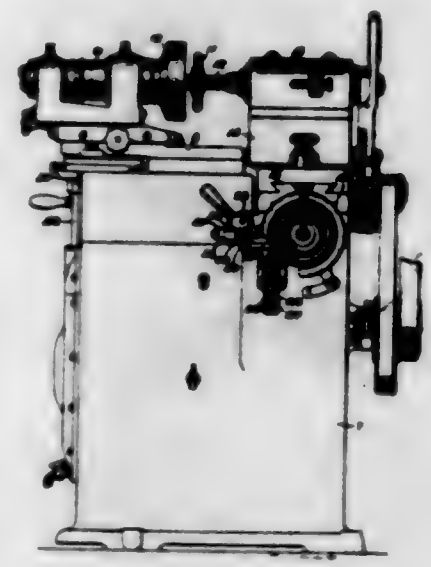
1,299,714. GRINDER. FREDERICK H. HALSTEAD, Boston, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed June 16, 1917. Serial No. 175,142. 48 Claims. (Cl. 51—4.)



1. An oscillatory grinder comprising, in combination, an oscillated spindle carried by an oscillatory support, a fed spindle carried by a feed slide, work retaining means on one of said spindles, grinding wheel retaining means on the other of said spindles, feed mechanism coöperating with said feed slide, and fed spindle positioning means providing for guided movement of said fed spindle in a direction transverse to its axis, while maintaining unchanged the position of said feed mechanism, whereby the work and tool may be separated for gaging the work, and returned to their predetermined relation if further grinding is required.

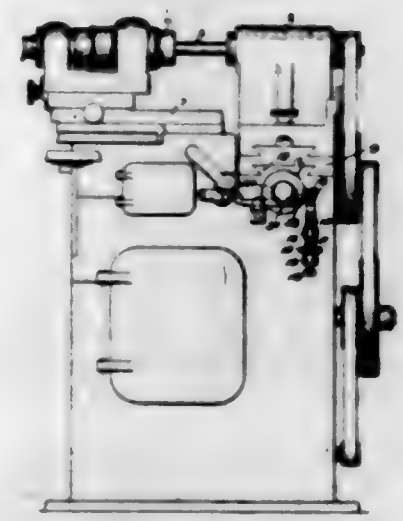
1,299,715. GRINDER. FREDERICK H. HALSTEAD, Boston, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Mar. 12, 1918. Serial No. 221,954. 6 Claims. (Cl. 51—4.)

1. In a grinder having a work support, a tool support and traversing means for moving one of said supports relative to the other, said traversing means including a shiftable element; reverse means for said traversing means comprising in combination, tappet means carried by the moving support, lever means for engagement by said



tappet means, cam means movable by said lever means, and operative connections above said cam means for transmitting power therefrom to shift said shiftable element.

1,299,716. FEED MECHANISM. FREDERICK H. HALSTEAD, Boston, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1918. Serial No. 227,408. 6 Claims. (Cl. 51—4.)

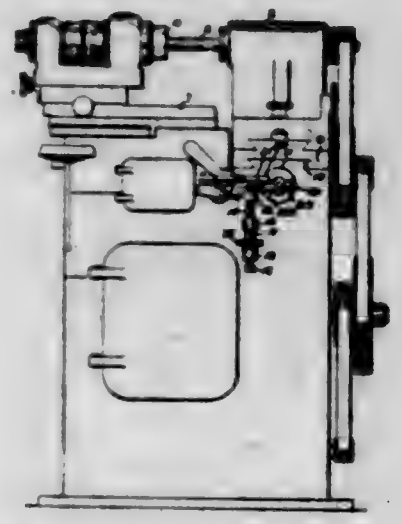


1. In a machine tool, feed mechanism comprising a pawl, means for imparting to said pawl a to-and-fro movement, a ratchet engaged by said pawl, and means driven at a rate slower than the periphery of said ratchet and adapted to control the effective periods of engagement of said pawl with said ratchet.

1,299,717. FEED MECHANISM. FREDERICK H. HALSTEAD, Boston, Mass., assignor to Rivett Lathe and Grinder Company, Faneuil, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1918. Serial No. 227,409. 3 Claims. (Cl. 51—4.)

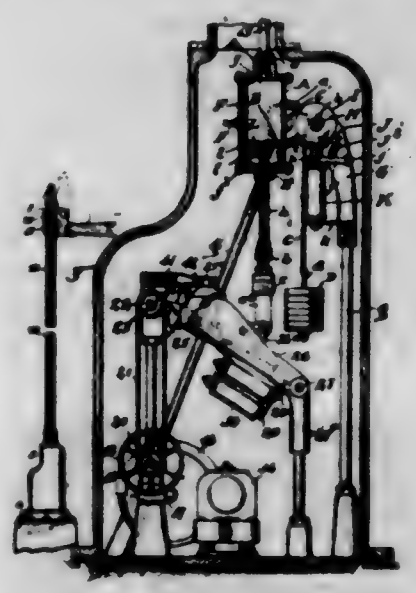
1. In a machine tool, feed mechanism comprising, in combination, a ratchet and pawl, a movably supported

guard and speed-reducing gearing operatively interposed between said ratchet and said guard for moving said



guard into interfering relation between said ratchet and said pawl.

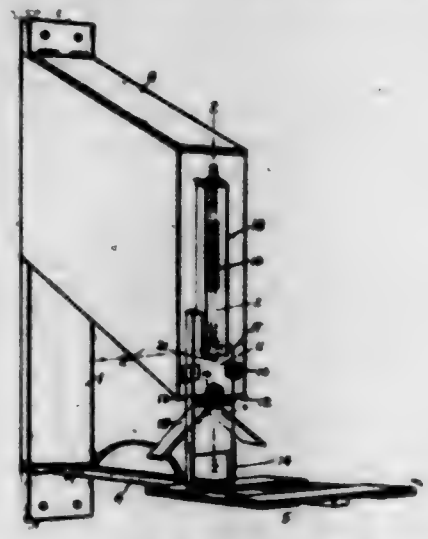
1,299,718. RAILWAY-SIGNAL. JAMES T. HAMRAY, New York, N. Y. Filed Sept. 25, 1912. Serial No. 722,182. 42 Claims. (Cl. 246—258.)



1. In a signal, the combination with a signal blade mounted for movement freely by gravity to one of its indicating positions, and operating means for effecting positively a return movement of said signal blade to another of its indicating positions, of elastic-fluid mechanism for storing energy developed by a rapid gravity movement of said signal blade, said elastic-fluid mechanism codperating with said operating means for accelerating the return movement of said signal blade.

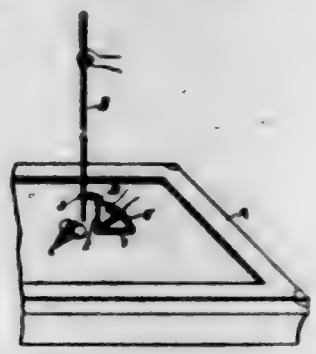
1,299,719. POULTRY FEEDER AND EXERCISER. CHRISTOPHER HARRIS, Ceylon, Minn., assignor to Ceylon Hardware and Furniture Company, Ceylon, Minn. Filed Mar. 19, 1918. Serial No. 223,259. Renewed Feb. 15, 1919. Serial No. 277,358. 6 Claims. (Cl. 119—70.)

1. In a poultry feeder, the combination with a hopper having an inclined bottom and an outlet opening in its front wall near said bottom; of guides on said wall, a slide movably mounted therein and having an opening adapted to register with that mentioned, means for raising said slide with yielding force until said openings register, a feed shelf in front of the opening in the slide,



and a platform carried by said slide on which an approaching fowl may light.

1,299,720. DEVICE FOR USE IN PLAYING POOL OR BILLIARDS. WILLIAM HENRY HARRISON, New York, N. Y. Filed Apr. 19, 1918. Serial No. 229,640. 12 Claims. (Cl. 46—6.)



1. A device for use in playing pool and billiards, said device being adapted to rest on a pool or billiard table, and having a guide whereby the cue may be moved in a substantially vertical direction above and into engagement with a pool or billiard ball.

2. A device for use in playing pool and billiards, said device being adapted to rest on a pool or billiard table, and having a guide arranged to extend substantially more than half way around the cue whereby the cue may be moved in a substantially vertical direction above and into engagement with a pool or billiard ball.

3. A device for use in playing pool and billiards, said device being adapted to rest on a pool or billiard table, and having a guide arranged to extend entirely around the cue and to guide the cue for movement in a substantially vertical direction above and into engagement with a pool or billiard ball.

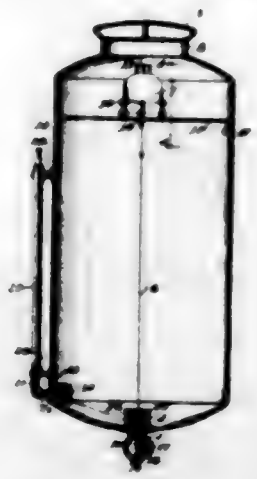
4. A device for use in playing pool or billiards, said device being adapted to rest on a pool or billiard table, and having a plurality of means, each arranged to guide the cue for movement in a substantially vertical direction above and into engagement with a pool or billiard ball.

5. A device for use in playing pool and billiards, comprising an upwardly extending member, means projecting forwardly thereof for guiding the cue to permit movement thereof in a substantially vertical direction and a horizontal base supporting said upwardly extending member.

1,299,721. FIRE-EXTINGUISHER. JAMES T. HARROP, Jr., Chicago, Ill. Filed Sept. 6, 1917. Serial No. 189,926. 12 Claims. (Cl. 169—8.)

1. A fire extinguisher, comprising a receptacle having a discharge opening, a hose connected to said discharge, a

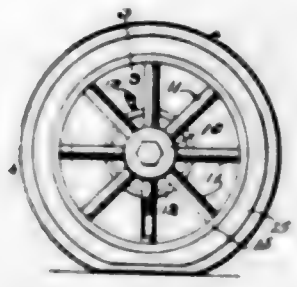
fitting interposed in said hose adjacent to said discharge, a valve for said discharge, a pair of arms hinged together and connected to said fitting and valve respectively, said arms being adapted to retract said valve when said hose is moved into an operative position for directing the discharge of the fire extinguishing compound, and to cause said valve to close said discharge when said hose is moved into an inoperative position.



2. A fire extinguisher, comprising a receptacle having a discharge opening, a hose connected to said discharge, a fitting interposed in said hose adjacent to said discharge, a valve for said discharge, a pair of arms hinged together and connected to said fitting and valve respectively, said arms being adapted to retract said valve when said hose is moved into an operative position for directing the discharge of the fire extinguishing compound and to cause said valve to close said discharge when said hose is moved into an inoperative position, and means coacting with said arms and adapted to guide said hose into and out of its operative position for the purpose of insuring the proper shifting of said valve.

3. A fire extinguisher, comprising a receptacle having a discharge opening, a hose connected to said discharge, a fitting interposed in said hose adjacent to said discharge, a valve for said discharge, a pair of arms hinged together and connected to said fitting and valve respectively, said arms being adapted to retract said valve when said hose is moved into an operative position for directing the discharge of the fire extinguishing compound and to cause said valve to close said discharge when said hose is moved into an inoperative position, and a link connecting said fitting with said receptacle so as to guide said hose into and out of its operative position for the purpose of insuring the proper shifting of said valve.

1,299,722. CUSHION WHEEL AND TIRE. MEEL I. HAULTER, Shippensburg, Pa. Filed May 9, 1917. Serial No. 167,615. 1 Claim. (Cl. 152—29.)



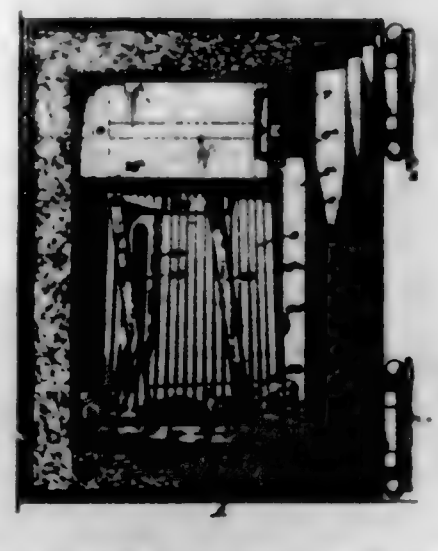
In a resilient wheel having a solid hub, hollow spokes and a rim supported thereby, a tire carried by the rim and having a flexible unbroken annular member therein, a piston mounted in each of the hollow spokes and having a rod connected with the member, an annular hollow tube carried by the spokes concentrically exteriorly of the hub and communicating with said spokes, an air inlet nipple on said tube, a tread on the tire and arranged concentrically of the flexible member, and valves located within the tube at points intermediate of the spokes.

1,299,723. MOUNTING FOR FRAMED ELEMENTS. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Original application filed June 2, 1914, Serial No. 842,502. Divided and this application filed June 12, 1917. Serial No. 174,316. 3 Claims. (Cl. 240—111.)



1. The combination with a frame-like mounting having a seat, a framed element mounted against said seat, the mounting being provided with a circumferential groove adjacent to said element, a divided sheet metal member of a contour substantially similar to that of the groove and resiliently tending to regain said contour against the formation in the approximate plane thereof, said member having a marginal portion to seat in said groove and a flange portion extending inwardly therefrom inclined toward and tensioned against said element to lie substantially flat thereagainst, the flange portion at one end of said member having an extension adapted to overlie inwardly the flat face of the flange portion at the opposite end.

1,299,724. FILING APPLIANCE. HARRY JOSEPH HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 10, 1916. Serial No. 114,156. 4 Claims. (Cl. 45—2.)



1. A filing appliance including a series of holders hinged to swing from upright to reclined position, a yielding support including a floating bar with link plates on its ends, a pivotal support for the rear ends of the link plates, a pivotal connection between the forward ends of the link plates and the hinged end of the foremost holder, and a counterbalance arm extending rearward from the floating bar under the hinged ends of the rearmost holders.

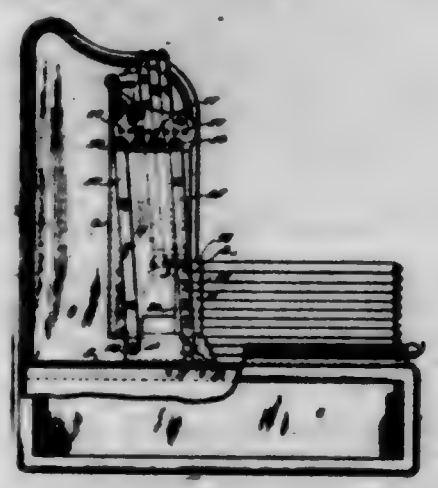
2. A filing appliance including a series of holders hinged to swing from upright to reclined position, a yield-

ing support including a floating bar with link plates on its ends, a pivotal support for the rear ends of the link plates, a pivotal connection between the forward ends of the link plates and the hinged end of the foremost holder, and a counterbalance arm extending rearward from the floating bar under the hinged ends of the rearmost holders, with means for stopping depression of the yielding support.

3. A filing appliance including a series of holders hinged to swing from upright to reclined position, a yielding support including a floating bar with link plates on its ends, a pivotal support for the rear ends of the link plates, a pivotal connection between the forward ends of the link plates and the hinged end of the foremost holder, a counterbalance arm extending rearward from the floating bar under the hinged ends of the rearmost holders, a supporting follower for the rearmost holder, and means actuated by the operation of the holders for controlling the movement of the follower.

4. A filing appliance including a series of holders hinged to swing from upright to reclined position, a yielding support including a floating bar with link plates on its ends, a pivotal support for the rear ends of the link plates, a pivotal connection between the forward ends of the link plates and the hinged end of the foremost holder, a counterbalance arm extending rearward from the floating bar under the hinged ends of the rearmost holders, means for stopping depression of the yielding support, a supporting follower for the rearmost holder, and means actuated by the operation of the holders for controlling the movement of the follower.

1,290,725. FILING APPLIANCE. HARRY JOSEPH HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 6, 1917. Serial No. 184,808. 7 Claims. (Cl. 45—2.)



1. A filing appliance including a series of hinged holders, a pivotal support for one end holder, a movable carrier having an abutment adjustable thereon for the other end holder, there being an upright slideway in the carrier and a coöperating slide pin on one of the holders.

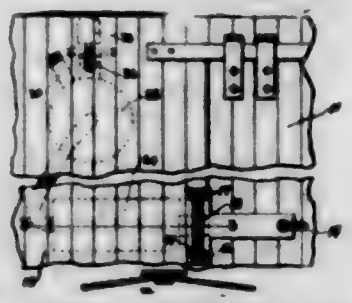
2. A filing appliance including a series of hinged holders, a pivotal support for one end holder, a movable carrier having an abutment for the other end holder, there being an upright slideway in the carrier and a coöperating slide pin on one of the intermediate holders.

4. A filing appliance including a series of hinged holders, a pivotal support for one end holder, a pair of parallel links pivoted at their lower ends at each side of the holders, a pendent carrier pivoted to the upper ends of the links and having an abutment for the other end holder, an upright slideway in the carrier, and a coöperating slide pin on one of the holders.

6. A filing appliance including a series of hinged holders, a pivotal support for one end holder, a pair of parallel links pivoted at their lower ends at each side of the holders, a pendent carrier pivoted to the upper ends of the links and having an abutment for the other end holder, and operating means between one of the holders and the carrier for controlling the movement of the carrier.

7. A filing appliance including a series of hinged holders, a pivotal support for one end holder, a movable carriage having an abutment adjustable thereon for the other end holder, and means actuated by the operation of the holders for controlling the movement of the carriage.

1,299,726. LOCK FOR DOORS AND THE LIKE. CHARLES E. HOBSON and JACKSON VANNOY, Fremont, Iowa. Filed July 22, 1918. Serial No. 246,170. 9 Claims. (Cl. 105—395.)



1. In a fluid pressure controlled lock for doors and the like, the combination of a lock including a pressure controlled locking member, a storage tank from which pressure is supplied to adjust said locking member to operative position, means for releasing the pressure from said tank whereby said locking member will return to its inoperative position, and means for controlling the release of said pressure from the tank to regulate the time required for the locking member to move to inoperative position.

4. In a fluid pressure controlled lock for doors and the like, the combination with the air brake system of a train; of a storage tank supplied with pressure from said system, a locking member connected to said tank and adjusted by the pressure therefrom to a locking position, means for releasing the pressure from said tank whereby said locking member will return to its inoperative position, means for controlling the release of said pressure from the tank to regulate the time required for the locking member to move to inoperative position, and a signal operated by the release of said pressure.

6. In a fluid pressure controlled lock for doors and the like, the combination of a lock including a pressure controlled locking member, a storage tank from which pressure is supplied to adjust said locking member to operative position, an outlet for said tank having apertured branch pipes extending in opposite directions therefrom and through the apertures of which the pressure in the tank is adapted to escape, and means operable from the exterior of the car normally preventing the escape of pressure through said apertures and adjustable to permit of said escape.

9. In a car door construction, the combination of a hasp pivoted to the door and having a transverse plate at one end provided with openings therein, eye bolts carried by the door frame and engageable in said openings, means engaging said eye bolts for locking the door in closed position, a locking plate pivoted to the body of the hasp and adapted to extend transversely therefrom and through the frame of the door, and fluid pressure operated means engageable with said locking plate for also locking the door.

1,299,727. TIRE-RIM. ALBERT HOSCKEN, Collinsville, Ill. Filed Feb. 16, 1918. Serial No. 217,582. 1 Claim. (Cl. 152—21.)

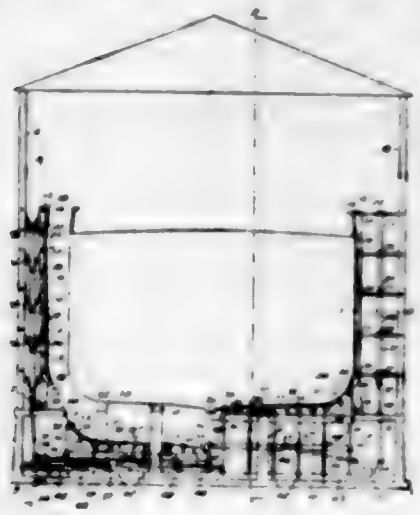
A tire rim comprising a plurality of arcuate rim sections hingedly connected to each other and an additional relatively short rim section permanently hinged to two of the first named rim sections, each of the rim sections being provided with a longitudinal channel in its inner

face, a plate fixed to one end of the shorter rim section and projecting longitudinally beyond the end thereof and over the hinge connection for engagement in the channel of an adjacent rim section to prevent the relative outward



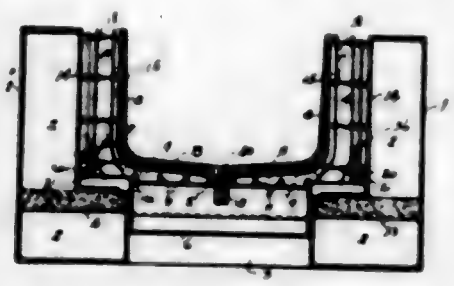
folding movement of said rim sections but permitting of their relative inward movement, and means on the longer rim section to coact with said plate and hold the several rim sections in circumferential alinement when applied to the tire.

1,299,728. FORM FOR CONCRETE HULL CONSTRUCTION. CLARENCE Z. HUBBELL, Spokane, Wash., assignor to Hull Construction Company, Spokane, Wash., a Corporation of Washington. Filed June 10, 1918. Serial No. 239,211. 17 Claims. (Cl. 25—130.



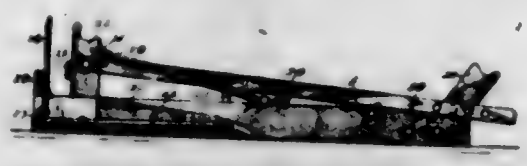
1. A molding form for hull construction, consisting of a plurality of movable sections, means for moving said sections to molding position and for gradually removing each of said sections from the finished hull.

1,299,729. CONCRETE SHIP. CLARENCE Z. HUBBELL, Spokane, Wash., assignor to Hull Construction Company, Spokane, Wash., a Corporation of Washington. Filed June 12, 1918. Serial No. 239,528. 9 Claims. (Cl. 25—130.)



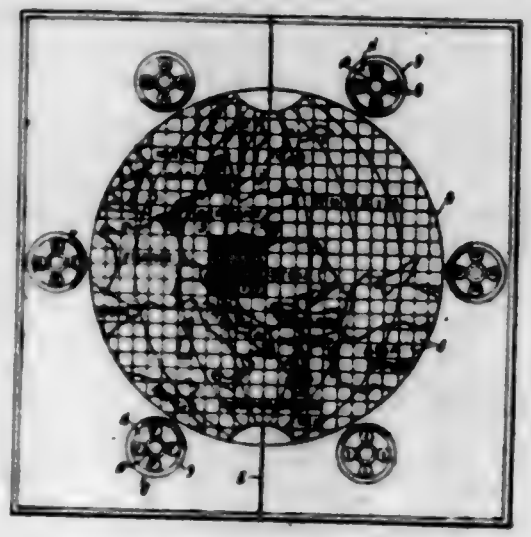
8. In a mold the combination with a floating, submersible, dock having a central well and an independent submersible pontoon in the well, of transversely adjustable mold forms carried by the dock for receiving material for the sides of the vessel, and mold forms carried by the pontoon for receiving material for the bottom of the vessel.

1,299,730. AUTOMOBILE-LIFTER. PETER IDE, McCook, Nebr. Filed Oct. 8, 1917. Serial No. 195,366. 3 Claims. (Cl. 254—89.)



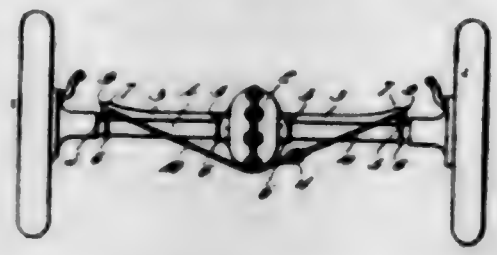
1. In a device of the character described, the combination with elevating means comprising a base frame and elevating side bars, of connecting rods pivoted to the forward end of the elevating side bars, a rock shaft journaled in the base frame and having crank arms, said arms engaging the connecting rods and having a limited sliding movement thereon, and means whereby the rock shaft may be operated to move the rods in one direction.

1,299,731. GAME. ROBERT H. IRELAND, Brooklyn, N. Y. Filed Nov. 2, 1917. Serial No. 199,396. 1 Claim. (Cl. 46—84.)



In combination with a plurality of distinguishable sets of pieces, a board having a circular field indicated thereon with the Eastern Hemisphere indicated within said circle and divided into checker squares, a plurality of squares substantially at the center of said field being designated as an objective point to be protected by one set of pieces and attacked by the other, the protecting set of pieces being movable from the center outward and the attacking set from the perimeter inward, and a plurality of camps arranged on said board outside said field.

1,299,732. AUTOMOBILE-AXLE TRUSS. JAMES L. KELLY, Nowata, Okla. Filed Dec. 1, 1917. Serial No. 204,815. 4 Claims. (Cl. 21—5.)



1. A rear axle truss for automobiles comprising a pair of bars adapted to be positioned longitudinally on the upper side of the axle casing at opposite sides of the differential housing and shaped at their inner ends to abut

said housing, means for securing said bars to said axle casing, abutments on the outer ends of said bars, and a truss for passage under the differential housing, said truss having U-shaped ends for engagement with said abutments.

1,299,733. VANITY-CASE. WILLIAM G. KENDALL, Newark, N. J. Filed Apr. 22, 1918. Serial No. 230,291. 3 Claims. (Cl. 206—15.6.)



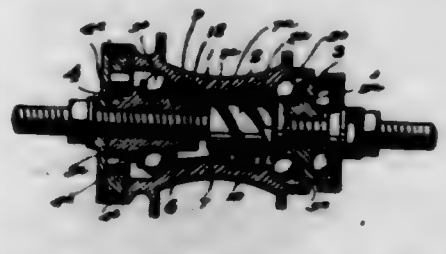
1. The combination with an article container and articles disposed therein, of a retaining member disposed between the articles and comprising a resilient body of sigmoidal form having terminal portions bearing, through the resiliency of the respective body portions, against the said articles in a direction to bind the same against the respective end walls of the container.

1,299,734. BUCKLE. ALLEN HERMAN KRENECOS, Baltimore, Md., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Dec. 31, 1918. Serial No. 269,041. 1 Claim. (Cl. 24—196.)



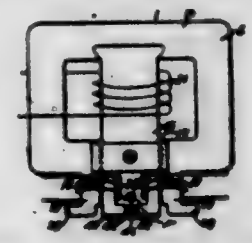
A buckle comprising side bars, end cross bars and an intermediate cross bar connecting the side bars, the side bars depending from the cross bars, one of the end cross bars having a depending flange carrying inwardly directed spurs, and the other end bar being flat and lying wholly inside the side bars, the intermediate cross bar being positioned below the plane of the end cross bars.

1,299,735. COASTER-BRAKE. CHARLES G. KRELLE, Lima, Ohio. Filed Oct. 29, 1917. Serial No. 198,117. 1 Claim. (Cl. 208—67.)



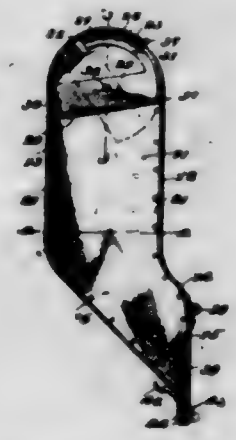
In a coaster brake, a drive axle, a throwing clutch carried by said axle, a driving clutch surrounding said throwing clutch, codperating means upon said throwing and driving clutches whereby said driving clutch will be moved predetermined distances longitudinally of the axle when the throwing clutch rotates, a double clutch face on said driving clutch, a bearing, a clutch face on said bearing, adapted to be engaged by one of the clutch faces on said driving clutch when the latter moves to its limit in one direction, a shell inclosing said clutches and braking mechanism, an annular shoulder formed integral with the shell upon the interior thereof, and teeth on said shoulder adapted to be engaged by the other of said driving clutch faces when the driving clutch moves to its limit in the opposite direction.

1,299,750. ELECTRICAL MEASURING INSTRUMENT. JOHN A. KNIGHT, Hamilton, Ontario, Canada, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 6, 1918. Serial No. 101,932. 18 Claims. (Cl. 171—264.)



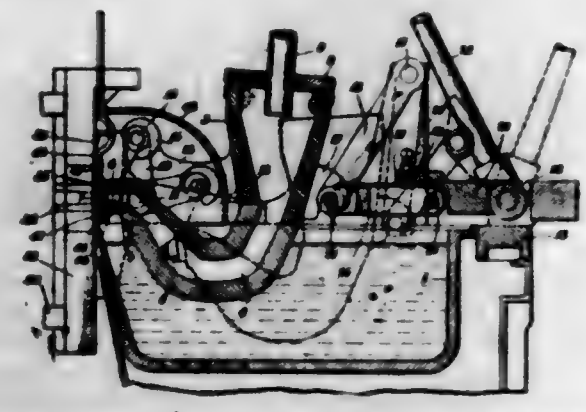
8. A motor-meter having a magnetizable core comprising a central member and side members having polar projections that are separated by air gaps, and saturatable members disposed between and upon the ends of the polar projections of the central member.

1,299,787. MAIL-BOX. WILLIAM F. KOLETA, East Akron, Ohio. Filed Jan. 16, 1918. Serial No. 211,998. 1 Claim. (Cl. 232—49.)



A mail box including a casing having a curved top provided with an opening, a mail receptacle of substantially the same width as the casing pivotally mounted therein at the opening in the cover and having its opposite ends curved to conform to the shape of the cover, segmental supporting members overhanging the top of the receptacle and a closure rigidly secured to the segmental supporting members and adapted to aline the bottom of the receptacle with the opening when the closure is moved to open position and to tilt said receptacle when the closure is moved to closed position.

1,299,788. DIE-CASTING APPARATUS. JOHN KRALUND, Brooklyn, N. Y., assignor to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed July 17, 1918. Serial No. 245,268. 10 Claims. (Cl. 22—69.)



1. In casting apparatus, the combination of a molten metal container, a carrier device having a hollow interior and a mouth communicating therewith, supporting con-

nections pivotally secured to the forward and rear portions of said carrier device, arranged to be moved to cause said mouth to be submerged within the molten metal in said container, at one limit of movement, and to cause said mouth to be raised above and projected over the top of said container, at the other limit of movement, and connections for carrying compressed air into said carrier device, to discharge molten metal from the mouth thereof into a die.

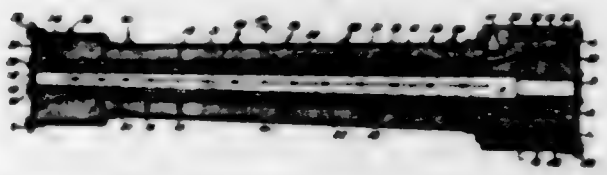
3. In casting apparatus, the combination of a molten metal container, a carrier device having a hollow interior, a mouth at the forward end and a compressed air connection at the rear, and means for supporting said device, and swinging and moving the same bodily laterally of the container, such that said mouth will be submerged within the molten metal in the container in one position, and will be projected horizontally above the edge of said container in another position for registration with a die opening.

4. In casting apparatus, the combination of a molten metal container, a carrier device having a hollow interior, a mouth at the forward end and a compressed air connection at the rear, said device having a web portion extending vertically above its forward end, an arm pivoted at its lower end to said container and at its upper end to the forward part of said web portion, said arm being adapted to swing from a vertical position in which said mouth is above the edge of the container to a lower rearwardly extending position in which said mouth is within the container, and means supporting the rear portion of said device from the container, adapted to move said device forward and back in a plane parallel to that in which said arm swings.

9. In casting apparatus, the combination of a molten metal container, a carrier device having a hollow interior, a mouth at its forward end and a compressed air connection at the rear, a tapering mouthpiece removably secured in said mouth, a gate member having a horizontal opening therethrough above said container, and means for supporting and moving said device to cause said mouthpiece to be submerged in molten metal in said container in one position, and to extend into said opening, in alinement therewith, in another position.

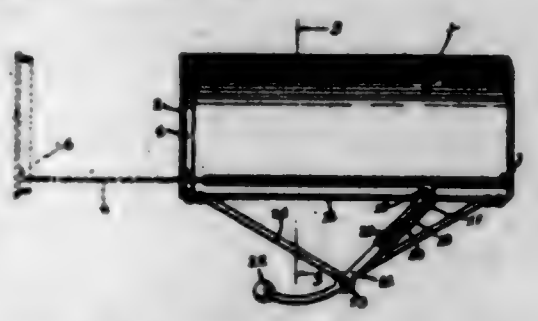
10. In casting apparatus, the combination of a molten metal container, a carrier device having a hollow interior, a mouth at its forward end and a compressed air connection at the rear, a gate member having a horizontal opening therethrough above said container, a bushing movably mounted in said opening and extending beyond the same, toward said carrier device, a lever having a boss fixedly seated on the extended portion of said bushing, and means for supporting and moving said device to carry said mouth from the interior of said container into the end of said bushing and vice versa.

1,299,739. **MOLD FOR REINFORCED-CONCRETE POSTS AND THE LIKE.** HENRY A. LANDWEHR, Los Angeles, Calif., assignor to American Cement Products Company, Los Angeles, Calif., a Corporation of California. Filed Sept. 3, 1918. Serial No. 252,342. 8 Claims. (Cl. 25—131.)



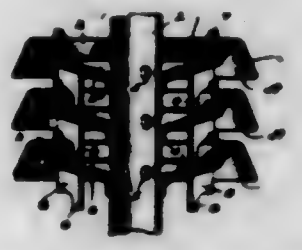
1. In combination, a column mold adapted to receive cementitious material, comprising a mold body and a detachable end closure plate, and an outwardly removable anchor holding box in and extending through the mold wall and detachably secured to the end closure plate, said box having an open end interiorly of the mold to receive and hold a reinforcement anchor which projects into the interior of the mold.

1,299,740. **LETTER-BOX.** LAURI W. LARSON, Canterbury, Conn. Filed Mar. 22, 1917. Serial No. 156,709. 4 Claims. (Cl. 232—35.)



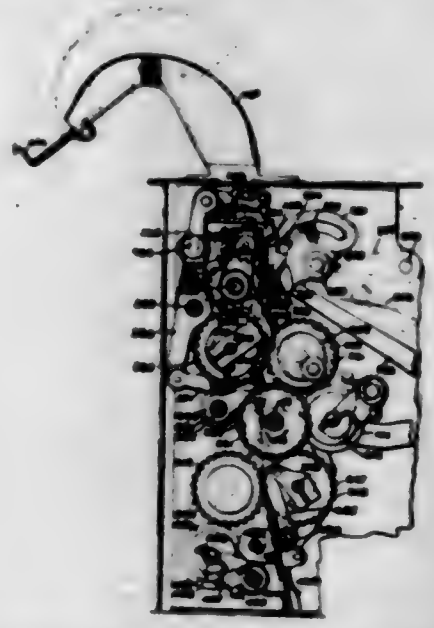
1. A letter box comprising a body having a slotted portion, a draw slidable through one end of said body, means carried by one end of said draw to securely close said end of the body, a draw lever, connections between said lever and said draw, said connections extending through said slotted portion, a signal pivoted to said body, and a trigger arm carried by said draw for engagement with said signal to operate the same and lock the draw against outward movement.

1,299,741. **WELL APPARATUS.** MARLON E. LAYNE, Memphis, Tenn. Filed Sept. 28, 1917. Serial No. 193,747. 12 Claims. (Cl. 166—5.)



1. In apparatus for filtering fluid in wells, the combination of a well pipe, a pan, a grate in the pan, and filtering material on the grate, the pan and its parts coöperating with the pipe in such manner as to filter the fluid before it enters the pipe.

1,299,742. **TICKET-ISSUING MECHANISM.** CHARLES L. LAM, Bridgeport, Conn., assignor to The National Cash Register Company, Dayton, Ohio. Original application filed July 20, 1916, Serial No. 110,317. Divided and this application filed Aug. 5, 1918. Serial No. 248,887. 11 Claims. (Cl. 211—32.)



2. In a machine of the class described, the combination with a driving mechanism, of a plurality of devices for

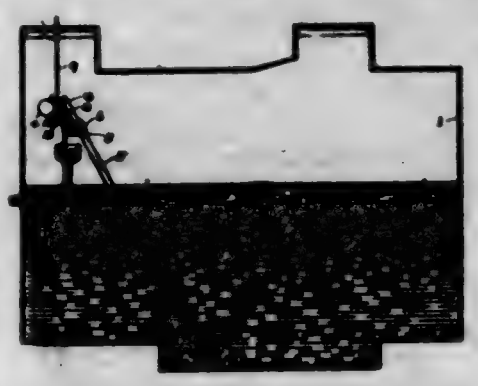
feeding separate ticket strips, an adjustable shaft common to the devices, eccentrics carried by the shaft and controlling the feeding devices, means actuated by the driving mechanism for adjusting the shaft to different positions, and manipulative devices controlling said means.

8. In a machine of the class described, the combination with devices for feeding a plurality of separate ticket strips, of means for determining the strips to be fed, and devices controlled by said means for shifting the strips in either direction independently of the feeding devices.

10. In a machine of the class described, the combination with means for selectively feeding a plurality of separate ticket strips, of manipulative devices controlling said means, devices gripping the ticket strips, and means also controlled by the manipulative devices for moving the gripping devices to adjust the ticket strips relative to the feeding means.

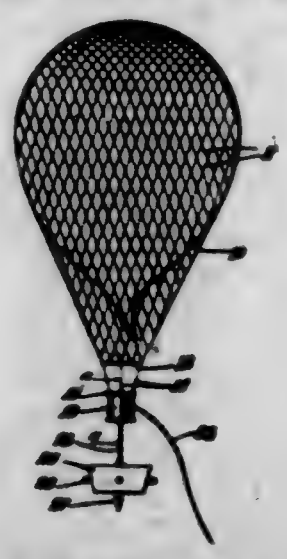
11. In a machine of the class described, the combination with a plurality of sets of ticket strip feeding devices, of an invariably operated severing mechanism common to the strips, manipulative devices for selecting the strip to be fed and severed, and means controlled by the manipulative devices for moving the ticket strips in and out of contact with the severing mechanism.

1,299,743. **DEVICE FOR MEASURING LIQUIDS.** MARCUS S. LEVÉ, Oakland, Calif., assignor to Leopold Benoit De Laitta, San Francisco, Calif. Filed Aug. 6, 1918. Serial No. 248,570. 8 Claims. (Cl. 221—97.)



1. In a device of the character described the combination of a conduit for liquids pivotally mounted upon a shaft, a scoop or spoon carried at one end of said conduit adapted to discharge liquid into said conduit, a measuring device adapted to receive the liquid from said conduit, and means for imparting an oscillating motion to said conduit.

1,299,744. **WAR-BALLOON.** GEORGE LOTYSIEWICZ, Brooking, Saskatchewan, Canada. Filed Apr. 22, 1918. Serial No. 230,142. 3 Claims. (Cl. 244—1.)



2. In an aerial bomb carrier, the combination with a balloon and an explosive bomb pendant therefrom, of a disruptable cylinder fixed in the connections between said bomb and said balloon, a hollow annular element arranged centrally within said disruptable cylinder, said element carrying a powder charge, means for supporting said annular element therewithin, and a time fuse for conducting a spark to the powder charge whereby the supporting connection of said bomb is disrupted.

1,299,745. **DEVICE FOR SUSPENDING AND SECURING TELEPHONE-DIRECTORIES.** WILLIAM H. LUDLOW, Cleveland, Ohio. Filed July 20, 1917. Serial No. 181,921. 2 Claims. (Cl. 248—20.)



1. The combination, with a book, of a U-shaped strap of yielding metal having parallel legs embracing the book, there being alined holes through the book and the two legs of the U, a bolt passing through said holes and provided with a nut, a ratchet detent connection between the nut and strap enabling the elasticity of the book to keep this connection in engagement, an eye swiveled to the crown of the strip, and a flexible supporting member secured to the eye.

1,299,746. **FILING APPLIANCE.** EDGAR SAMUEL LYONS, Toronto, Ontario, Canada, assignor to The McCaskey Register Company, (incorporated in 1914.) Alliance, Ohio, a Corporation of Ohio. Filed Mar. 26, 1918. Serial No. 224,898. 4 Claims. (Cl. 45—2.)



1. A filing appliance including a base having guideways and pivotal bearings, a series of swinging holders having the foremost holder pivoted on the bearings, and arms at the sides of the holders having their foremost ends pivoted to the free end of the foremost holder and the rear ends in sliding engagement with the guideways, and arranged to rest on the forward edge of the base for supporting the holders in reclined position.

2. A filing appliance including a base, a series of normally upright holders mounted on the base for swinging to and from reclined position, and arms having pivotal connection at one end with the foremost holder and guiding engagement at the other end with the base adapted to bear intermediate their ends upon the base for supporting the holders in reclined position.

3. A filing appliance including a base, a series of normally upright holders mounted on the base for swinging to and from reclined position, and means operatively connecting one of the holders and the base adapted to bear upon the base intermediate its connections for supporting the holders in reclined position, said means having pivotal connection with the one and sliding engagement with the other of the connected parts.

4. A filing appliance including a base, a series of normally upright holders mounted on the base for swinging to and from reclined position, and means operatively connecting one of the holders and the base adapted to bear upon the base intermediate its connections for supporting the holders in reclined position, said means having pivotal connection with the one and guiding engagement with the other of the connected parts.

1,299,747. WOOD VENEER. JOHN R. MCCLAIN, Edgewood, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 13, 1918. Serial No. 222,056. 6 Claims. (Cl. 144—309.)



1. The method of making compound lumber which comprises positioning inert binder-impregnated sheet material, between bodies of material to be united and treating the assembled elements to render the binder active.

3. The process of producing compound lumber which comprises interposing an inert binder-impregnated and dried sheet of fibrous material between layers of non-adhesive material to be united, rendering the binder active and applying pressure to cause uniting of the layers.

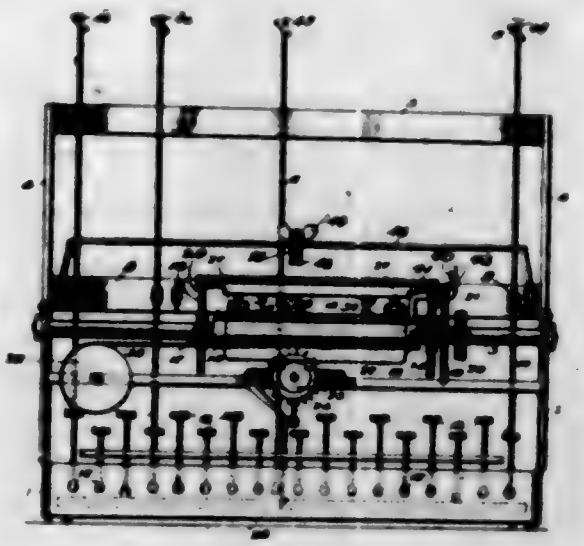
5. The method of uniting a solid non-adhesive body and a binder-impregnated and dried sheet of fibrous material which consists in placing said body and said sheet in surface engagement and then applying heat and pressure to cure and harden the binder and to compact the sheet.

1,299,748. CONTROL MECHANISM FOR MOTOR-VEHICLES. GEORGE J. MCCLOSKY, Washington, D. C. Filed Mar. 28, 1918. Serial No. 225,200. 5 Claims. (Cl. 188—3.)



1. Control mechanism for motor vehicles including with an air compressor continuously actuated during operation of the vehicle, an air cylinder to which said compressor discharges, said cylinder having an air escape opening therein opening to the atmosphere, fluid actuated means in communication with said air cylinder and connected to operate control means of the vehicle when air is supplied thereto, and means to close and partially close the air escape opening of the air cylinder.

1,299,749. MATRIX-MACHINE. JOHN C. MCFARLAND, La Grande, Oreg. Filed Dec. 31, 1917. Serial No. 209,695. 4 Claims. (Cl. 197—6.)



1. In an apparatus for the purpose set forth, the combination of a supporting frame, spaced transverse guides secured thereon, a carrier slidably mounted on said guides, central projections on the upper side of the carrier at the ends thereof, track members fixed to said projections and extending forwardly and rearwardly therefrom beyond the carrier, said track members being free through their entire extent in front of and in rear of the projections, a mold car engageable with said track members over the ends of the same, means for moving the carrier along the transverse guides, and means for moving the mold car along the track members.

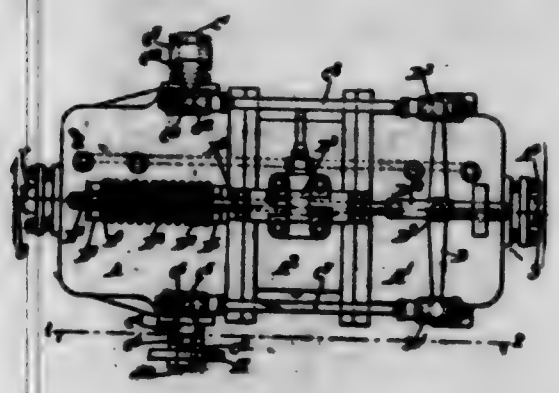
4. An apparatus for the purpose set forth comprising a mold, a plurality of type-forming members mounted in rear of the mold, means for swinging the type-forming members downwardly and forwardly to the mold, a support, a pin mounted therein and provided at its lower end with a stop extending into the path of the type-forming members, means on the upper end of said pin to retain it in the fixed support, and yieldable means between the support and the lower end of the pin to hold the pin normally lowered.

1,299,750. SEPARABLE TELESCOPE OR OPERA-GLASS. HUGH W. MACLACHLAN, Petaluma, Calif. Filed Dec. 21, 1918. Serial No. 267,820. 3 Claims. (Cl. 88—35.)



1. An instrument of the character described including a casing formed in two coacting sections, adapted to be closed upon each other to form a complete casing, and coacting lenses one carried upon and projecting from each section, the lens on each section being housed in the other section of the casing when the sections are closed.
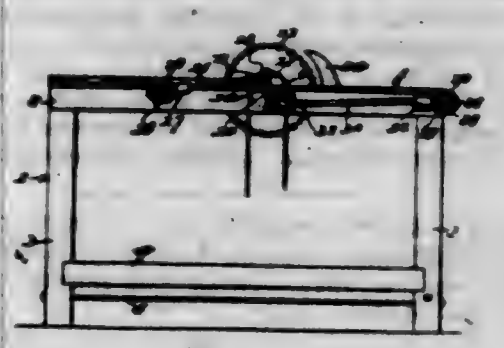
1,299,751. CONTROL-GEAR FOR HYDRAULIC TRANSMISSION. WILLIAM R. MACIE, Evansville, Ind. Filed Oct. 4, 1915. Serial No. 53,861. 17 Claims. (Cl. 60—52.)



4. The combination with a pump of a driving swash plate mounted to rock about an axis perpendicular to the axis of the pump of means for rocking it comprising a lever mounted for movement therewith, a floating lever connected thereto, a hand control member and connection between it and the floating lever and a normally fixed fulcrum for the floating lever.

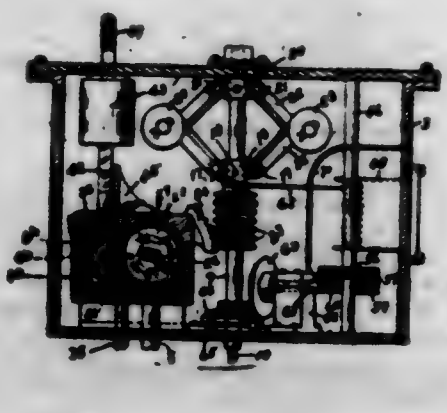
14. In a hydraulic transmission comprising a pump and means for driving it, means for controlling the operation of the transmission mechanism, comprising a manually operated lever, a control lever directly connected to the pump and normally responsive to the manually operated lever, and automatic means responsive to pressure within the pump for varying the response of the control lever to the position of the manually operated lever, said automatic means and the manually operated lever being mutually independent both in operation and in their reaction upon the pump.

1,299,752. LATH-MILL BOLTER. CLYDE C. MALCOMB, Riversville, W. Va. Filed May 25, 1918. Serial No. 236,496. 3 Claims. (Cl. 143—157.)



3. A machine of the character described including a table embodying a frame, supporting legs connected thereto, a top swingingly connected to the frame and formed near one edge with a slot, a cross bar on the frame and arranged in spaced relation to one side edge of the top, a shaft rotatably mounted on the frame, a saw carried by one end of the shaft and operating between the cross bar and the top, means for rotating the shaft, a worm formed on the outer end of the shaft, another shaft journaled in the frame, a serrated feed roller carried by one projecting end of the last shaft and operating in the slot in the top, a motion transmitting shaft, a worm gear on one end of the motion transmitting shaft and meshing with the worm on the saw carrying shaft, means for operably connecting the roller carrying shaft and the motion transmitting shaft so as to insure of the rotation of the roller in a direction toward the saw, another shaft journaled in the frame, a return feed roller carried thereby and having its upper surface positioned slightly below the top, another motion transmitting shaft journaled in the frame, a worm carried by one end of the motion transmitting shaft and meshing with the under surface of the work, and means for operably connecting the last mentioned motion transmitting shaft and the return feed roller shaft for insuring of the rotation of the feed roller in the direction of the saw.

1,299,753. TRAIN-CONTROL APPARATUS. HERBERT R. NEVENS, Dorchester, and RICHARD MARCY, Allston, Mass., assignors to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed June 3, 1915. Serial No. 31,910. 46 Claims. (Cl. 246—182.)



8. In a system of train control, a normally closed pressure system, a trip for opening said system, a speed governed relief mechanism for said system, effective upon actuation of said trip, and voluntarily operable means for utilizing said pressure to reclose said pressure system after an effective actuation of said trip.

11. In train stop mechanism, a speed governed relief mechanism for the pressure in the train line system effective at speeds in excess of a predetermined speed to cause a brake application and including a member rotating at train speed, a centrifugally acting device operatively connected with said member, a member actuated by said centrifugally acting device, a valve controlling the degree of venting of said system, operative connections from said member actuated by the centrifugally acting device to said valve effective to actuate said valve upon an operation of said centrifugally acting device, and a resetting mechanism for said valve ineffective until said train speed is reduced to said predetermined speed.

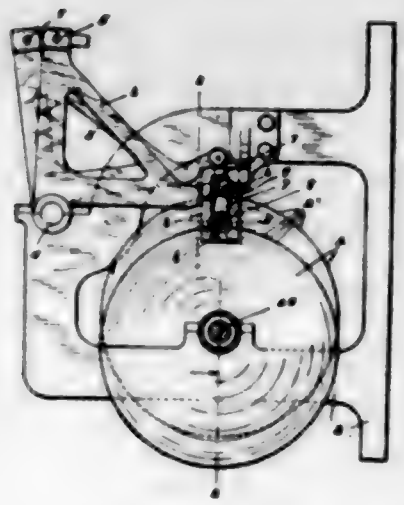
21. In train control mechanism, a normally closed pressure system, a releasable control device therefor, means for reclosing said system after release of said control device, a relief mechanism for said system when opened including a member having an intake chamber communicating with said system, a pair of independent vent passages, and a return passage communicating with said system reclosing means, a control member in said chamber having a minimum venting port normally registering with one of said vent passages, and a maximum venting port disposed for registration with the other venting passage upon actuation of the control member, speed governed means for varying the position of said control member, to bring said maximum venting port into registry with its venting passage and temporarily destroy the venting relation of said minimum venting port only when the train speed exceeds a predetermined maximum and permitting said control member to return to normal position as soon as the train speed is reduced to said predetermined maximum, said minimum and maximum venting ports being so related to their venting passages that one port and one passage are always registered in any position of the control member, and a voluntarily operable device for actuating said system reclosing mechanism having a normal relation effective to establish communication between said minimum venting port and its

passage and arranged upon operation of said device to connect said port with said return passage to the system reclosing means and destroy the venting relation of said minimum venting port and its passage.

33. In train stop mechanism, a trip disposed for actuation by a track obstacle to open the air pressure system of a train at any and all train speeds, and a relief controlling mechanism operatively connected with the exhaust of said system and normally effective to permit a predetermined minimum brake application upon an effective actuation of said trip, and having a positive phase of service application up to a predetermined train speed, and a phase of increasingly effective actuation beyond said predetermined speed, and a voluntarily operable controlling device dominating the automatic relief mechanism up to said predetermined speed, but non-operable above said speed to reset said trip and close said system.

41. In a train control system, a relief mechanism, an automatic speed governed relief control mechanism, and an engineer's relief control device dominated by said speed governed mechanism at speeds above a predetermined minimum speed and dominating said mechanism below said minimum speed.

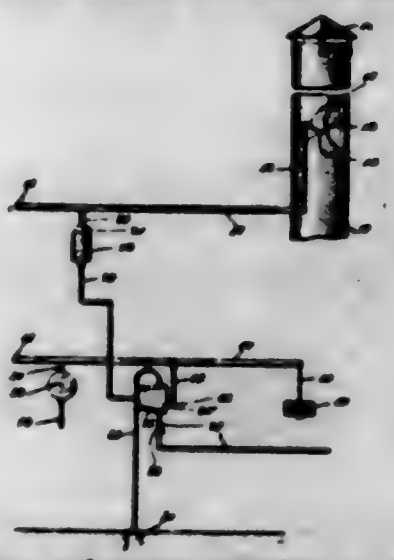
1,299,754. CAM-FOLLOWER MECHANISM. WILLIAM N. MARSDEN, Amsterdam, N. Y., assignor to Fownes Brothers & Co., a Copartnership of London, England, consisting of William Gardiner Rigden, Henry Urwick, W. Fownes Rigden, E. Fownes Rigden, S. Fownes Rigden, and Leslie Alan Spall. Filed Oct. 24, 1918. Serial No. 259,574. 1 Claim. (Cl. 66—33.)



In a device of the class described and in combination, a frame; a cam rotatively mounted upon the frame and having peripherally disposed steps or teeth at different distances from its axis of rotation, said steps or teeth being of equal angular extent measured circumferentially of the cam; a slideway in fixed relation to said frame extending in a direction radial to said cam; a cam-follower-roller engageable with the successive steps or teeth on said cam; an arm carrying said cam-follower-roller, said arm having on its inner end a trunnion concentric with said roller movable rockably and longitudinally in said slideway; and a member having a pivotal connection with the outer end of said arm, whereby said member is actuated by said cam.

1,299,755. DAMPER-REGULATOR. MATHESIAS MATULAITIS, Brooklyn, N. Y. Filed Oct. 3, 1918. Serial No. 256,649. 3 Claims. (Cl. 236—8.)

1. In a damper regulator of the character described, the combination of a damper with a hollow casing, supply and exhaust pipes communicating with said casing, said supply pipe adapted to communicate with a source of fluid pressure, a lever pivoted in said casing, a plunger movable in said supply pipe, said plunger having openings permitting the escape of pressure fluid when in a



raised position, and means controlled by the action of said lever for operating said damper.

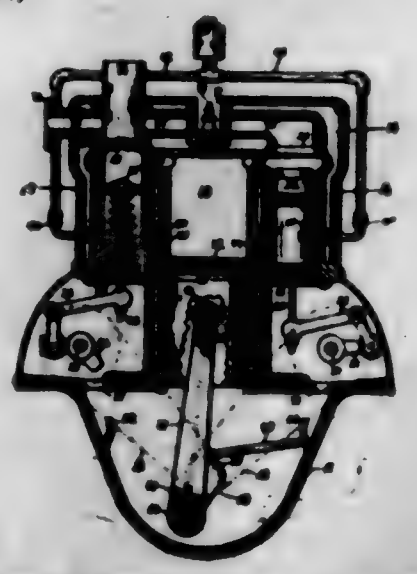
1,299,756. ARTIFICIAL HAND. LEON MAITLAND, Nantes, France. Filed Nov. 27, 1917. Serial No. 204,297. 2 Claims. (Cl. 3—12.)



1. An artificial hand articulated by a lever which immediately and simultaneously produces the opening of the thumb and fingers through the intervention of a cord attached at one end to a counter lever, and at the other extremity to an operating waistcoat having two stems giving fixed points of attachment.

2. An artificial hand as claimed in claim 1 composed of suitable material such as a composition having a glue basis, suitable tissue, and light pulverulent body such as sawdust, pumice powder, magnesia or kieselguhr.

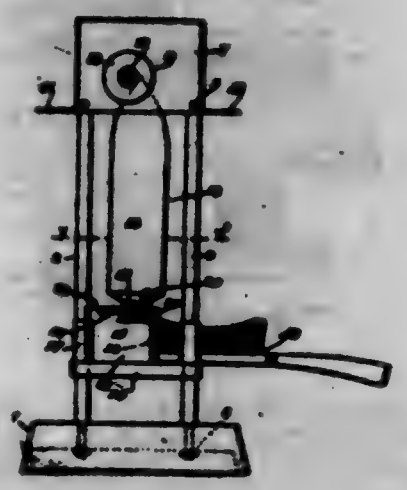
1,299,757. OILING SYSTEM FOR INTERNAL-COMBUSTION MOTORS. DANIEL B. MEDANICH, Buechel, Ky. Filed Sept. 6, 1917. Serial No. 189,953. 2 Claims. (Cl. 184—6.)



1. In a motor as characterized, a valve cylinder having an internal annular groove, means for supplying oil

thereto, a power cylinder having an internal annular groove, means for leading oil thereto from the first named groove, a piston reciprocably mounted in the power cylinder, a tubular pin having a lateral opening extending transversely through the piston, a connecting rod provided with a longitudinal oil passage movably positioned on said pin so that said passage registers with the lateral opening therein.

1,300,755. PASTE STAND AND FEEDER. JOSEPH HENRY MULLALY, Winnipeg, Manitoba, Canada. Filed Sept. 18, 1917. Serial No. 191,268. 9 Claims. (Cl. 221—60.)



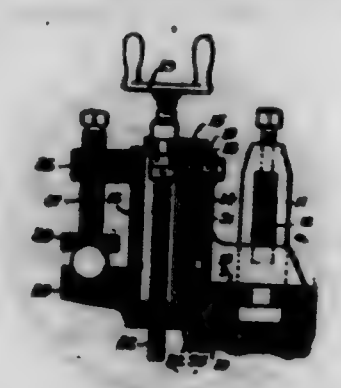
1. The combination with the discharge end of a paste tube and means for receiving and locking the discharge end of the paste tube in a fixed position, of an L-shaped closure plate disposed beneath the discharge end of the tube and having one end pivotally mounted and the other end horizontally disposed and normally directly opposing the discharge end of the tube, a pad mounted on the horizontal end of the plate and engaging the discharge end of the tube and a spring holding the plate with the pad engaging the discharge end of the tube.

7. The combination with a paste tube, of a holder for receiving and suspending the tube and comprising an elevated winding shaft to which the closed end of the tube is secured and on which it is wound, a sliding table and means for releasably fastening the open end of the tube to the table and with the said open end exposed.

9. The combination with a paste tube, of a holder for receiving and suspending the tube and comprising a base, upright guide posts secured to the base, a top piece secured to the upper ends of the posts, a winding shaft rotatably mounted in the top piece and to which the closed end of the tube is secured and on which the said closed end is adapted to be wound, a table slidably mounted on the posts, means carried by and elevated above the table for receiving and locking the open end of the tube to the table and with the said open end normally exposed and means for closing the exposed end of the tube, said means being constructed to pass away from the end of the tube upon the insertion of a tooth brush in a location beneath the open end of the tube.

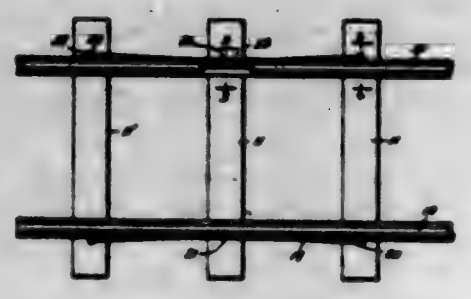
1,300,769. MILLING ATTACHMENT FOR LATHES. ARTHUR R. HOWE, Long Beach, Calif., assignor to Paschall Tool Company, Long Beach, Calif., a Corporation of California. Filed Sept. 3, 1918. Serial No. 252,292. 4 Claims. (Cl. 90—59.)

1. A lathe attachment, embodying a vertical base plate having a vertical front face and a bottom face at right angles thereto, said bottom base adapted to rest upon the upper face of the lathe carriage and said front face adapted to be aligned with the front vertical face of a lathe carriage, a way member movably mounted upon and against said front face of the base, said way member extending on down below the base and bearing against the



vertical face of the carriage, and a work carrying member movably mounted upon said way member.

1,300,780. RAILWAY-TRACK CONSTRUCTION. JAMES DILLON NEEVE, Douglas, Wyo. Filed June 22, 1918. Serial No. 241,235. 3 Claims. (Cl. 238—4.)

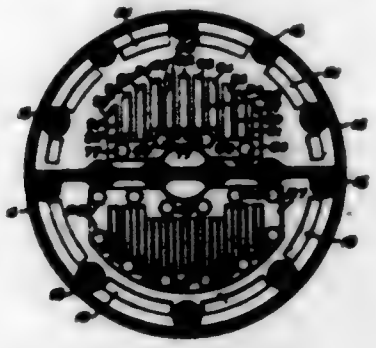


1. In combination with a track including rails and ties, one of the rails having an aperture through its base, an element embedded for anchorage in one of the ties having a projecting end immovably fixed in said aperture to prevent movement of the rail relative to the tie in any horizontal direction, additional elements embedded for anchorage in the adjacent ties and removable links connecting said last mentioned anchorage elements to said first mentioned anchorage element.

2. A construction of the character specified, including in combination, a plurality of ties; a plurality of rails mounted thereon, each rail having an aperture through the base, a socket provided in the tie in alinement with said aperture and an elongated bolt securely mounted in each socket and having its projecting end passing through said aperture to prevent movement of the rail, a socket provided in each adjacent tie, an elongated bolt secured in each of said sockets and having an exposed end, and a removable link member connected to the exposed end of each of said last mentioned bolts and also connected to the exposed end of said first mentioned bolt, whereby the rails are thus securely connected to the ties, so that any movement thereof relative to the ties in any horizontal direction is prevented.

3. A construction of the character specified, including in combination, a plurality of ties, a plurality of rails mounted thereon, each rail having an aperture through its base, a socket provided in the tie in alinement with said aperture, an elongated headless bolt securely mounted in each socket by having a suitable plastic substance in mushy condition in said socket before the bolt is positioned therein; the projecting end of the bolt passing through said aperture to prevent movement of the rail relative to the tie in any horizontal direction; another headless bolt driven into a tie, one on each side of the first mentioned bolt and two links, each having an eye at each of its ends to overlie adjacent bolts.

1,299,761. VALVE. SVEN T. NELSON, Oak Park, Ill., assignor to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 7, 1914. Serial No. 865,581. 37 Claims. (Cl. 230—34.)



1. A valve comprising, in combination, a flat ported seat, a thin, elastic, reed-like metal tongue of greater length than width fixed at one end and free at the other end, adapted to be flexed by fluid pressure and normally resting on said seat without substantial tension, and a stop for said tongue, curved only in the direction of the length of said tongue to receive the same, said stop engaging said tongue at its fixed end, and curving gradually away therefrom toward its free end when said tongue is in normal position.

4. In a compressor valve, in combination, a flat ported seat, a valve comprising a body portion having a plurality of spaced, thin, elastic, reed-like metallic tongues of greater length than width adapted to be flexed by fluid pressure and normally resting on said seat without substantial tension, and stop members curved only in the direction of the length of said tongues and rigidly clamping the same to said seat at a point as far forward as their junction with said body portion and thereafter curving gradually away therefrom when said tongues are in normal position.

10. A valve comprising, in combination, a flat ported seat, a plurality of thin, reed-like tongues of greater length than width fixed at one end and free at their other ends, adapted to be flexed by fluid pressure and normally resting on said seat without substantial tension, and a stop for said tongues having spaced surfaces to receive the backs of said tongues without transverse flexure thereof, said stop engaging said tongues at their fixed ends and longitudinally curving gradually away therefrom toward their free ends when said tongues are in normal position.

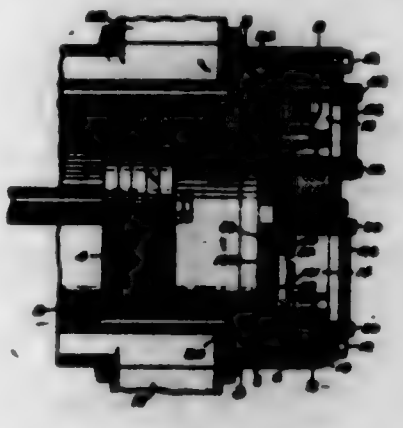
18. A compressor having a main cylinder head and a supplemental head providing between them a cylinder head space subdivided into separate intake and discharge portions by a suitable partition wall, ports in the intake space formed in a plate or body adjacent the cylinder head, elastic tongues held at one end and free at the other end normally closing said ports and adapted to be flexed toward said head, ports in the discharge space, said ports being formed in the head, and similar tongues normally closing said ports and adapted to flex away from said head.

30. As a new article of manufacture, a valve-body consisting of a relatively thin elastic plate of generally segmental form having a marginal portion and provided with a plurality of slots forming a group of tongues entirely surrounded by said marginal portion.

1,299,762. VALVE. SVEN T. NELSON, Chicago, Ill., assignor to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1915. Serial No. 20,077. 18 Claims. (Cl. 230—34.)

1. As a new article of manufacture, a valve-body consisting of a plate of relatively thin elastic material, having marginal portions connected by unbroken portions separated by intermediate broken out or removed portions, whereby when one edge of said plate is held fixed said plate will buckle or flex transversely.

2. In a valve for permitting the flow of fluid in one direction but preventing its flow in the opposite direction, the combination of an elastic valve-body adapted to be flexed by the pressure of the fluid and provided with slots forming bands extending from a marginal portion and joined at their other ends and being separated by said slots; a valve seat provided with apertures which said bands overlie and normally close; and a stop or guard similarly provided with slots forming bands joined at both ends to marginal portions and respectively overlying the bands of the valve-body, the latter being interposed between said seat and said stop.



7. In a valve for permitting the flow of fluid in one direction but preventing its flow in the opposite direction, in combination, an elastic valve-body adapted to be flexed by the pressure of the fluid and provided with slots forming bands extending from a marginal portion and joined at their other ends, said bands being separated by said slots; a valve seat provided with apertures which said bands overlie and normally close; a stop or guard similarly provided with slots forming bands joined at both ends to marginal portions and respectively overlying the bands of the valve-body, the latter being interposed between said seat and said stop; and an apertured mounting for said valve-body and stop, said mounting being recessed to receive said stop.

14. As a new article of manufacture, a valve-body consisting of a relatively thin elastic plate of generally segmental form having a plurality of bands projecting from said marginal portion and joined at their other ends.

17. As a new article of manufacture, a valve-body consisting of a relatively thin elastic plate having a marginal portion and provided with a plurality of slots extending transversely of said plate and forming bands projecting from said marginal portion and connected to cause them to move together in the operation of the valve.

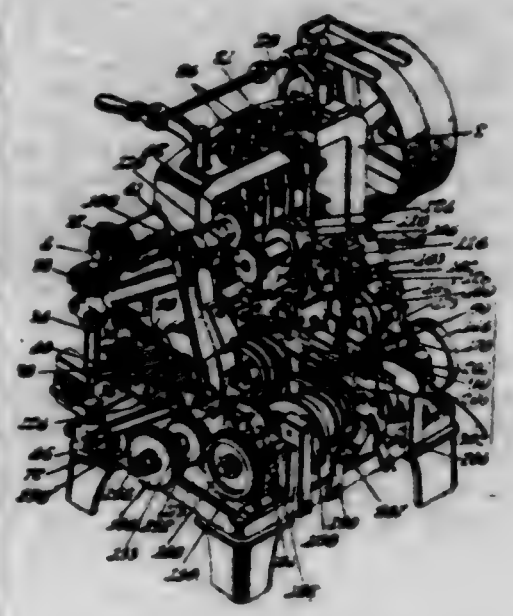
1,299,763. BUTTON-MAKING MACHINE. FRANKLIN G. NEUBERTH, Ansonia, Conn., assignor to The S. O. & C. Co., Ansonia, Conn., a Corporation of Connecticut. Filed July 6, 1915. Serial No. 38,203. 58 Claims. (Cl. 79—8.)

10. A button making machine having, in combination, codperating dies for forming a cupped blank, a device for presenting an eye to the blank so formed, means for feeding the blank from the dies to the eye-presenting device, means for closing the blank upon the eye, and a pair of dies for changing the shape of the closed blank.

29. A button making machine having, in combination, means for moving a series of sheet metal button blanks along a predetermined path, a plurality of eye-forming mechanisms, and means for transferring an eye to each button blank at a predetermined position in its path, said eyes being transferred in alternation from the different eye-forming mechanisms to successive button blanks.

37. A button making machine having, in combination, eye-forming mechanism including a projecting former for an eye, transferring mechanism including a split pin constructed to hold an eye frictionally during the transferring operation, means for forcing an eye upon the retainer, and means for removing the eye at the conclusion of the transferring operation.

61. A button making machine, having, in combination, a stationary shear member having a wire passage, a slide carrier arranged for reciprocation adjacent to the stationary shear member and having a shearing blade and an ad-



justable stop, a wire carrier yieldingly maintained in position to receive the end of the wire passing from the stationary shear member and arranged to be displaced by the stop as the end of the wire is carried out of line with the wire passage in the severing operation.

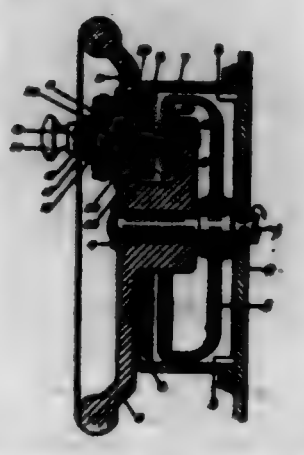
1,299,704. WRENCH. DANIEL J. NORMOYLE, Philadelphia, Pa., assignor to Alert Tool Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 5, 1918. Serial No. 799,277. 3 Claims. (Cl. 81—60.)



1. A device of the class described including a spindle, a sleeve surrounding said spindle and movable longitudinally thereon, a disengageable clutch between said sleeve and said spindle, a spring for normally holding said clutch in locked engagement, said sleeve having a transverse opening therethrough and a handle located through said opening and provided with a plurality of transverse holes, through any of which said spindle may extend to fix the handle to said sleeve in various adjusted positions, said handle adapted to be grasped by the fingers of the hand and said spindle adapted to have pressure applied thereto by another portion of the hand in each adjusted position of the handle.

2. A wrench comprising a spindle, a sleeve surrounding said spindle and longitudinally movable thereon, a removable head on said spindle, a spring interposed between said head and said sleeve, clutch teeth on coacting portions of said spindle and said sleeve normally held in locked engagement by said spring, said sleeve having a transverse opening therethrough, and a handle fitted into said opening with a sliding fit, said handle being provided with a plurality of transverse holes through any of which said spindle may be passed to fixedly secure said handle to said sleeve.

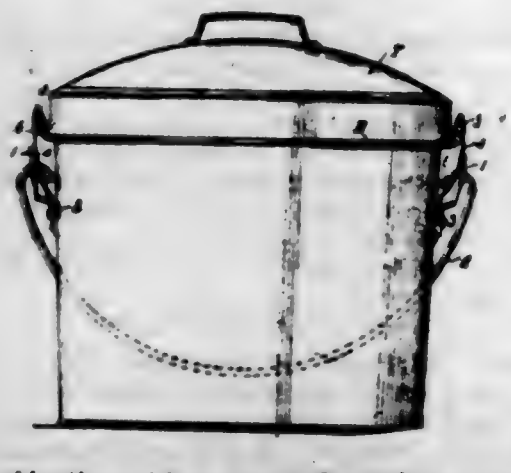
1,299,765. MULTIPLE-SPEED DEVICE. CHARLES H. NORTON and ALBERT TURNER, Worcester, Mass., assignors to Norton Grinding Company, a Corporation of Massachusetts. Filed Sept. 27, 1917. Serial No. 193,600. 14 Claims. (Cl. 74—34.)



1. A multiple speed device comprising a fixed gear, a rotatable gear, a rotatable driving member, pinions revoluble about the axis of said member, one meshing with the fixed gear, the other with the rotatable gear, and means to cause the pinions to rotate synchronously or to lock the rotatable gear with its associated pinion only.

2. A multiple speed device comprising a rotatable gear, a fixed gear axially alined therewith, a driving member, rotatable pinions on said driving member revoluble about the axis of the gears and meshing therewith, said gears and pinions being adapted to produce differential movement, and a clutch mechanism adapted to lock the pinions together for rotating synchronously and driving the rotatable gear at a slow speed or to lock the rotatable gear with its coöperating pinion only, for a direct drive.

1,299,766. TOP-LOCKING MEANS FOR RECEPTACLES. JOHN M. O'DONNELL, New York, N. Y. Filed Nov. 15, 1917. Serial No. 202,223. 1 Claim. (Cl. 220—28.)

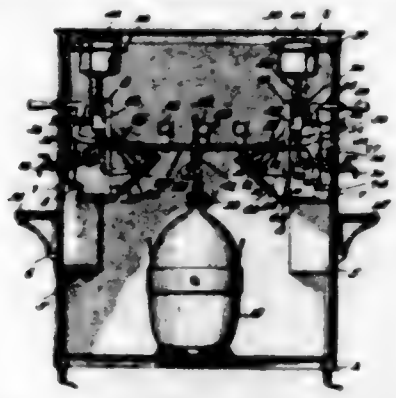


The combination with a receptacle having a removable top provided with a receptacle encircling flange having a laterally extending bead; of bail attaching ears, each having an offset intermediately of its ends, one end being fixed to the receptacle and the other apertured to receive a bail, resilient metal straps each having a rectilinear apertured end, and an outwardly bowed body portion extending upwardly therefrom, said end being arranged between the fixed end of the bail ear and the receptacle, and secured thereby to the receptacle, the free end of said strip extending above said ear and bent inwardly and rolled to provide a bead engaging finger.

1,299,767. SODA-FOUNTAIN. LUTHER B. OLIVER, Mebane, N. C. Filed Jan. 18, 1918. Serial No. 212,457. 2 Claims. (Cl. 225—26.)

1. A device of the class described, embodying a tank for charged fluid; an ingredient container; an outlet; a

first conduit leading from the tank to the outlet; a second conduit leading from the container to the outlet; measuring valves journaled in the second conduit; a valve jour-



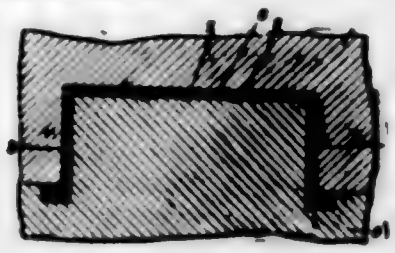
naled in the first conduit; a lever under the control of an operator; a fulcrum for the lever; and links pivotally connected with the lever and operatively connected with the valves.

1,299,768. PHONOGRAPH OR TALKING-MACHINE. JOHN F. OTT, Glen Ridge, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed May 5, 1915. Serial No. 25,885. 14 Claims. (Cl. 274—13.)



1. In a phonograph or talking machine, the combination of a record support, a reproducer in operative relation thereto, a sound conveyer to which said reproducer is connected, said sound conveyer having an exit portion at an angle to the vertical, feeding means for moving said conveyer to cause said reproducer to travel across a record carried by said support, and means applied to the exit portion of said conveyer for rendering said feeding means inoperative without moving said conveyer, substantially as described.

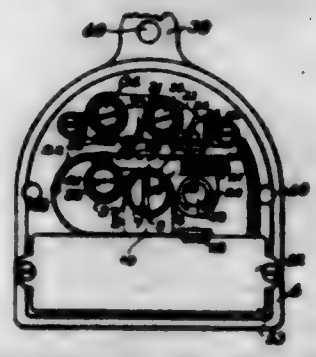
1,299,769. METHOD OF FORMING DIE-CASTINGS. CHARLES PACK, Brooklyn, N. Y., assignor to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed June 6, 1918. Serial No. 238,481. 2 Claims. (Cl. 22—200.)



1. In the method of forming die castings, which comprises forming between rigid dies a metal casting having a wall of considerable extent in proportion to its thickness, with offset portions at the extremities thereof, the step of sub-dividing shrinkage stresses in different sections along the length of the wall between said offset portions, by so forming one of the dies as to provide slight spaced projections on one of the faces of said wall, which projections have no function in relation to the useful purpose of the casting formed, but are provided on a surface which would otherwise be smooth.

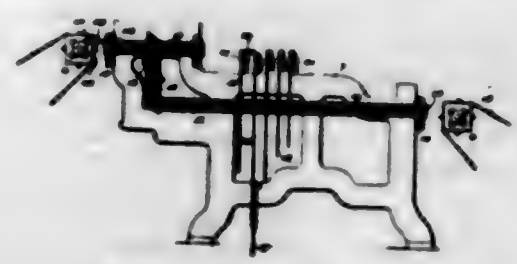
2. In the method of forming die castings, which comprises forming between rigid dies a metal casting having a wall of considerable extent in proportion to its thickness, with offset portions at the extremities thereof, the step of providing ribs of slight height on one of the faces of said wall, at spaced intervals between said offset portions, transversely to the direction of the shrinkage stresses between said offset portions, by so forming one of the dies as to form said ribs on said wall, and thereby sub-dividing the stresses tending to crack said wall between said offset portions, when the casting solidifies in the mold and cools, said ribs being formed on a surface which would otherwise be smooth, being unnecessary for stiffening purposes, and having no relation to the useful purpose of the casting formed.

1,299,770. IGNITION MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GEORGE F. PALDANI, Waukegan, Ill., assignor to Pfanstiehl Company, Inc., North Chicago, Ill., a Corporation of New York. Filed July 20, 1917. Serial No. 181,675. 2 Claims. (Cl. 123—168.)



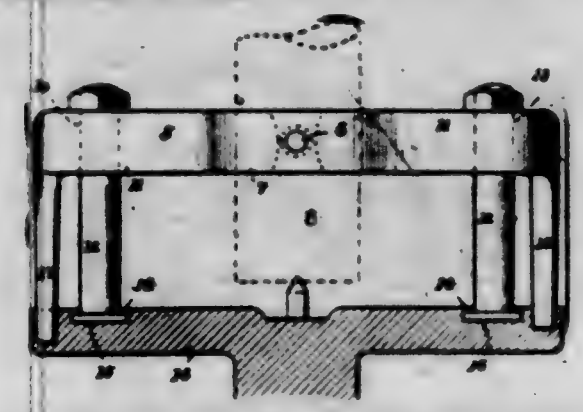
2. Ignition mechanism for internal combustion engines, comprising a base, a lever pivoted thereto, a pair of co-operating contacts one of which is carried by the lever and the other by the base, a rotatable cam for oscillating the lever, a plunger carried by the lever and forming the cam engaging portion thereof, and a spring tending to move the plunger in a direction away from the lever pivot, said plunger being arranged to move relatively to the lever upon rotation of the cam in a backward direction and thus prevent oscillation of the said lever.

1,299,771. JACQUARD. JOHN L. PATTERSON, Roanoke Rapids, and LOUIS S. CANNON, Rosemary, N. C. Filed Aug. 2, 1915. Serial No. 42,255. 14 Claims. (Cl. 139—16.)



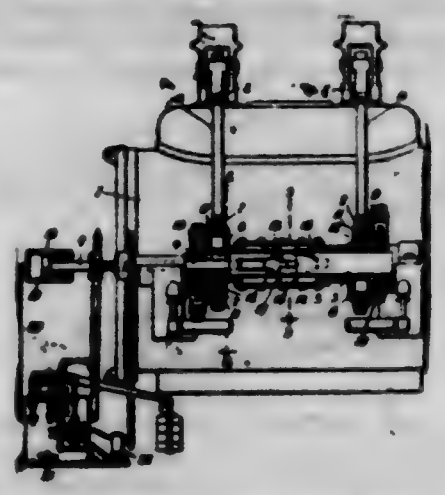
10. The combination with a jacquard having a plurality of pattern needles, and a plurality of pattern uprights normally in engagement with the griff mechanism of the jacquard and operatively connected with their respective needles to be moved out of such relation by the actuation of said needles, of a control upright adapted to be connected to a secondary mechanism to control the operation of the latter, said upright being normally out of engaging relation with the griff mechanism of the jacquard; a control-needle operatively connected thereto to move said control upright into engaging relation with the griff mechanism of the jacquard upon the actuation of said control-needle; and a pattern card series for the jacquard containing one or more cards adapted to actuate said control-needle.

1,299,712. LATHE-DOG. MAXWELL H. PERRIN, Milford, Conn. Filed Oct. 19, 1918. Serial No. 258,217. 3 Claims. (Cl. 82—41.)



1. A lathe dog comprising a body having a central work opening and two oppositely extended portions each provided with a tail disposed at a right angle therefrom and both extended upon the same side, one of said tails being longer than the other, a bolt hole formed in each of said extensions between the opening and the end, and a set screw contained wholly within the dog to engage the stock in the opening.

1,299,772. GOVERNING MECHANISM FOR STEAM-ENGINES. ARTHUR E. PERRIN, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 7, 1918. Serial No. 124,946. 2 Claims. (Cl. 121—101.)

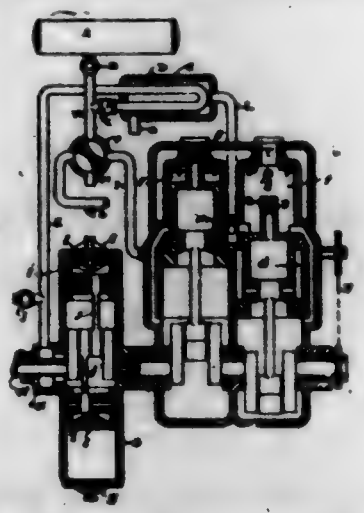


1. In a steam engine governing mechanism, a shaft, an eccentric sleeve thereon, an inlet valve eccentric mounted on said sleeve, a collar on said shaft rotating therewith, an exhaust valve eccentric keyed to said collar, a pin and link driving connection between said collar and inlet valve eccentric allowing limited movement between said collar and inlet valve eccentric, means for rotating the shaft and means for varying the position of the eccentric sleeve on the shaft for varying the throw of the inlet valve eccentric.

2. In a steam engine governing mechanism, a hollow shaft, an eccentric sleeve mounted thereon, an inlet valve eccentric mounted on the sleeve, a collar on said shaft, a pin and link driving connection between said collar and inlet valve eccentric allowing limited movement between the collar and eccentric, a rod in said shaft adapted to rotate with and move laterally in said shaft, and a helical connection between said shaft, rod and sleeve to rotate the sleeve in respect to the shaft as the rod moves laterally in said shaft to vary the throw of the inlet valve eccentric.

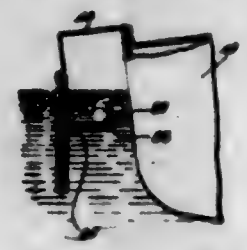
1,299,774. INTERNAL-COMBUSTION ENGINE. RICHARD F. PLATT, Louisville, Ky. Filed Mar. 2, 1916. Serial No. 81,974. 6 Claims. (Cl. 60—17.)

1. An internal combustion engine comprising, in combination, an explosion cylinder, piston, connecting rod, and crank-shaft; a power-transmitting shaft distinct from the engine crank-shaft; an air compressor interposed between the engine crank-shaft and the power-transmitting shaft, and itself provided with a crank-pin; a revolving casing attached to one of said shafts and provided with cylinders; pistons movable within said cylinders; connecting rods connecting said pistons with the crank-pin of the other of



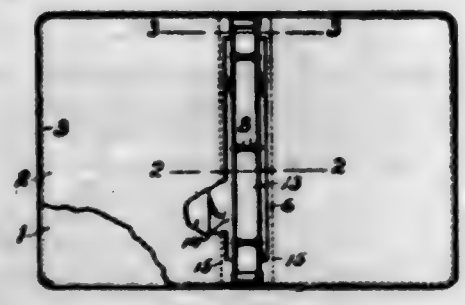
said shafts; an air motor connected with and serving to turn or aid in turning the engine crank-shaft; and an air pipe communicating with the cylinders of the air compressor, and serving to deliver air therefrom to the air motor.

1,299,775. ANTISUBMARINE DEVICE. MARSH PIPPOG, New Aberdeen, Nova Scotia, Canada. Filed July 2, 1918. Serial No. 242,997. 2 Claims. (Cl. 114—240.)



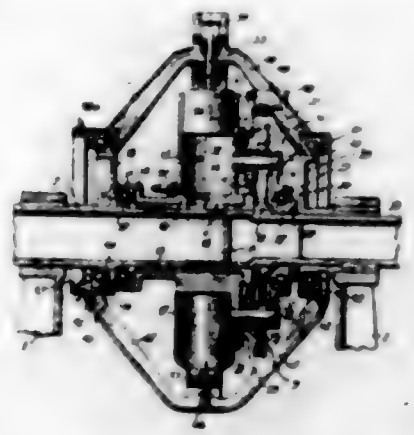
1. In a net support, the combination with a bracket secured to the hull of a ship, said bracket having an outwardly extending horizontal cylinder, a second cylinder engaged telescopically on the first named cylinder, a head formed with said second cylinder, a net having a rigid backing, a rack extending from said backing into the head of the second named cylinder, a spindle mounted transversely in said second cylinder, a gear on said spindle engageable with the teeth of said rack, a threaded sleeve carried by one of said cylinders means combined with said gear for rotating said threaded sleeve, and a screw threaded bolt fixed within the lower end of said bracket engageable within said threaded sleeve whereby, due to the movement of said net, said cylinders are moved one within the other.

1,299,776. BOOKBINDING. WILLIAM P. PITT, Kansas City, Mo., assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Nov. 18, 1916. Serial No. 132,053. 27 Claims. (Cl. 129—24.)



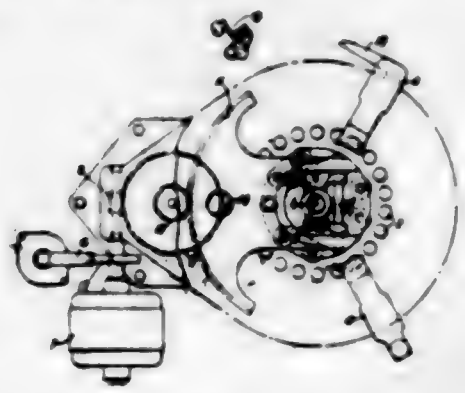
1. A book binding comprising two flexible sheets fastened together side by side and forming the covers and back, one of the sheets having longitudinal weakened portions where the back and covers join.

1,298,777. EXPLOSIVE-ENGINE. FRANK M. PRATHER, Detroit, Mich. Filed June 27, 1917. Serial No. 177,165. 8 Claims. (Cl. 123—44.)



1. In a rotary multi-cylinder engine, a hollow manifold, longitudinal partitions in said manifold providing communicating end water chambers and separate intake and exhaust conduits open intermediate the ends of said manifold, a rotary valve sleeve on said manifold, a cylinder body about said valve sleeve provided with cylinders adapted to receive fuel and exhaust gases through said valve sleeve and said manifold, a power transmission member about said cylinder body and articulated therewith, a gearing mechanism set in motion by a rotary movement of said cylinder body to actuate said rotary valve sleeve, and pistons in the cylinders of said cylinder body articulated with said power transmission member to impart movement thereto.

1,299,778. CONTROLLER MECHANISM. THOMAS S. PUKERUD, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 20, 1916. Serial No. 98,796. 10 Claims. (Cl. 74—7.)

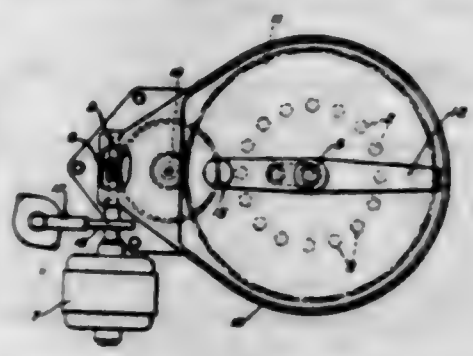


6. The combination with a movable element and means for moving it, of a member pivotally connected to said movable element and adapted to move into and out of operative connection with said moving means, and means for yieldingly maintaining said member in operative connection with said moving means.

1,299,779. OPERATING MECHANISM FOR CONTROLLERS. THOMAS S. PUKERUD, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 28, 1917. Serial No. 158,068. 10 Claims. (Cl. 74—7.)

1. The combination with a rotatable element and a gear wheel rotatably mounted thereon, of a manually operable lever pivotally connected to said element and detachably engaging said gear wheel, and a power device operatively connected to said gear wheel.

8. The combination with a rotatable element and a power device, of gear mechanism for operatively connecting said device to said element, one member of said gear mechanism being rotatably mounted on said element, and a manually operable member movably connected to said element for detachably engaging said gear member.



8. The combination with a member rotatable about an axis and a gear wheel rotatable relatively thereto about said axis, of power mechanism for rotating said gear wheel and means for causing said member to rotate with said gear wheel or independently thereof.

9. The combination with a member rotatable about an axis, power mechanism and means comprising a second member mounted on said axis for operatively connecting said first member to said mechanism, of means for connecting said members to cause them to be rotated together by said mechanism and means for rotating said first member independently of said second member.

10. The combination with a plurality of stationary contact members, of a movable contact member for cooperating therewith and rotatable about an axis, an element rotatable about said axis relatively to said movable contact member, means engaging said element to cause said rotatable member to rotate with said element or independently thereof and power means for rotating said element.

1,299,780. PENCIL-SHARPENER. JACOB REUTIMANN, Lowell, Ariz. Filed Apr. 3, 1918. Serial No. 226,439. 3 Claims. (Cl. 120—87.)



1. In a pencil sharpener and holder a tubular member, a plate mounted thereon and provided with a cutting knife extending through an aperture in said member, and a point sharpener carried by the outer end of said plate and over-lapping the end of said holder.

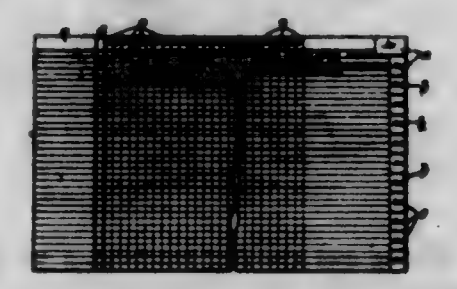
1,299,781. JACK. HENRI D. REY, Avarua, Island of Rarotonga, Cook Islands. Filed July 1, 1918. Serial No. 242,783. 2 Claims. (Cl. 254—126.)



1. A jack comprising a pair of toggle levers, each consisting of pivotally connected similar sections, a base pivotally connecting the pairs at one end, a head pivotally connecting the pairs at the other end, the members of each pair carrying a block at its pivotal connection, said block having a recess in its upper face and a threaded rod having near one end a fixed stop and near the other

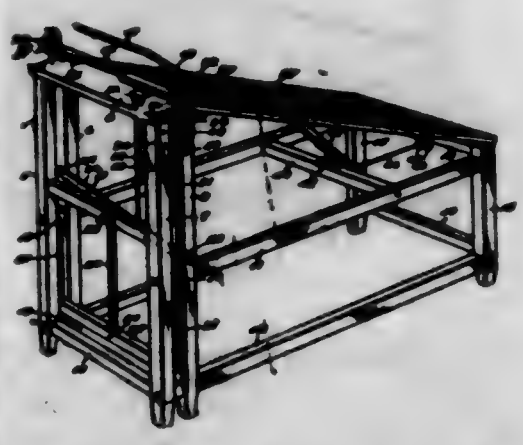
a nut and adapted to engage the recesses, the stop and the nut fitting outside of the block for the purpose specified, each member of each pair of toggle levers having at its outer end a lateral lug or extension, the lugs at each end of the levers extending in opposite directions and being adapted to engage the plate and head when the pivotal connections of the members are at their nearest point.

1,299,782. DIARY. GEORGES HENRI ROBICHON, Three Rivers, Quebec, Canada. Original application filed Nov. 24, 1916, Serial No. 133,237. Divided and this application filed Mar. 22, 1918. Serial No. 224,400½. 1 Claim. (Cl. 283—41.)



A diary comprising a plurality of sheets each having at one vertical edge a tab with means indicating the month, said sheet being ruled horizontally and vertically with the vertical columns numbered consecutively to indicate the days of the month, with a blank vertical column at the right of the numbered columns, an unnumbered vertical column preceding the first vertical numbered column, and a broad blank column at the left of said unnumbered vertical column.

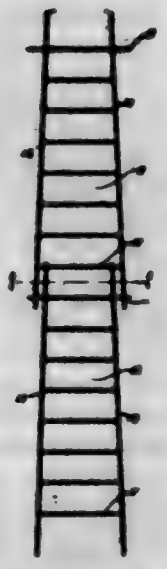
1,299,782. DISPLAY-RACK. CHRIS C. RUSH, Greenville, S. C. Filed Apr. 10, 1917, Serial No. 161,068. Renewed Mar. 3, 1919. Serial No. 280,491. 2 Claims. (Cl. 211—22.)



1. A device of the character described comprising a supporting frame for a pile of rugs, said supporting frame comprising a cap plate, a clamping bar, means for forcing said clamping bar toward said cap plate and a transverse support for the rugs overlying said cap plate, supported from said frame and bodily movable with respect to said frame to thereby restore to its initial position such rugs as may have been thrown thereover during the display of the rugs.

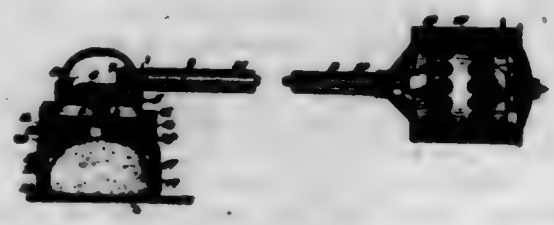
1,299,794. COMBINATION-LADDER. ALEX SADO, Jersey City, N. J. Filed June 8, 1918. Serial No. 238,544. 1 Claim. (Cl. 228—35.)

A combination ladder of the character described comprising, in combination, a plurality of ladders, each having hooks at the upper extremities of its uprights for engaging the rungs of the ladder next above, an upper rung laterally extending through the uprights and engaging the upper edge of the upright of the ladder next above, and having recesses or hooks engaging the uprights of the



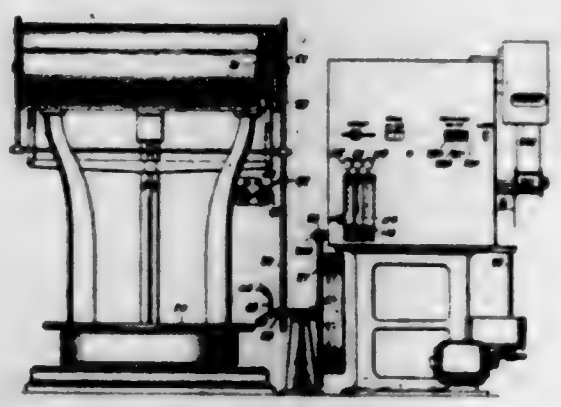
ladder next above for securely holding the parts in their relative position against accidental separation.

1,299,795. DEVICE FOR CLEANING WINDOWS AND OTHER FINISHED SURFACES. GREGORY SARTOR, Perkins township, Erie county, Ohio. Filed Sept. 1, 1917. Serial No. 189,245. 4 Claims. (Cl. 15—97.)



1. A device as described comprising a drum and a body with a flaring skirting about its bottom on which said drum is suspended, and a spring interposed between the interior of the drum at the edge of said skirting to normally depress the drum, in combination with a rotatable power driven surface cleansing medium mounted in said drum.

1,299,796. COMPUTING RECORDING-SCALE. EDWIN M. SCHANTZ, Chicago, Ill., assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 14, 1916. Serial No. 84,019. 42 Claims. (Cl. 235—58.)



1. In a device of the class described, in combination, a scale, devices to be positioned in accordance with the position of the scale, an index positioned by the movement of the scale to varying positions, a motor circuit, a controlling circuit having a pair of contact members therein establishing a normally closed circuit through said index, means operable upon the movement of the index for breaking said controlling circuit, and means for thereby

closing the motor circuit, whereby the motor drives the aforesaid devices in accordance with the displacement of the scale.

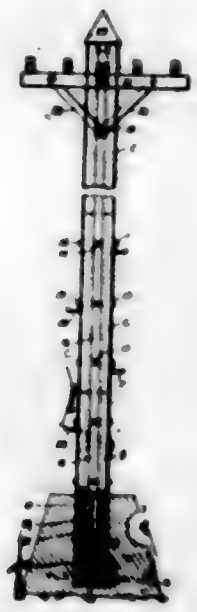
8. In a device of the class described, in combination, an equilibrium machine, a computing device, means for applying an auxiliary source of power to drive the computing device in accordance with the displacement of the equilibrium machine, means for preventing the application of said power when the equilibrium machine is in the no load position of equilibrium, and an auxiliary means for mechanically disconnecting the auxiliary source of power when the equilibrium machine is in load position of equilibrium.

10. In a device of the class described, an equilibrium machine adapted to move to a variable position of equilibrium in accordance with variable load thereon, a computing machine and a recording machine, means for applying an auxiliary source of power to drive the computing machine and position elements of the recording machine in accordance with the variable displacement of the equilibrium machine, and means for preventing the operation of the recording machine except when the equilibrium machine is in position of equilibrium.

15. In a device of the class described, a scale, a computing machine, a recording machine, means for operating the computing machine to carry out a computation therein, means to operate the recording machine to make a record, means for preventing the operation of the computing machine and the recording machine when the scale is in no load equilibrium, and means for preventing the operation of the recording machine when the computing machine is in operation.

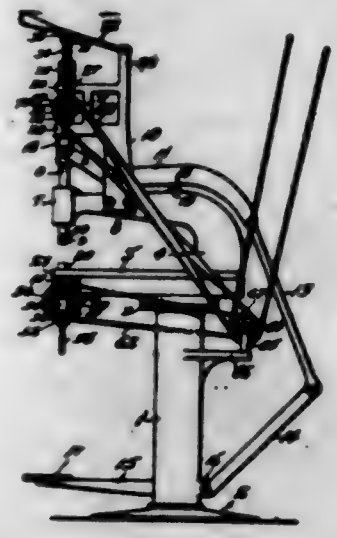
19. In a device of the class described, a scale, a computing machine and a recording machine, means controlled by the scale for operating the computing machine and certain elements of the recording machine, means for operating the recording machine and taking a record therefrom, and means for prevening the operation of said record taking means except when the scale is in position of loaded equilibrium and the computing machine is stationary.

1,299,787. POST OF CONCRETE OR OTHER MATERIAL. HUGO SCHLUTER, Los Angeles, Calif. Filed July 25, 1918. Serial No. 246,735. 4 Claims. (Cl. 72—82.)



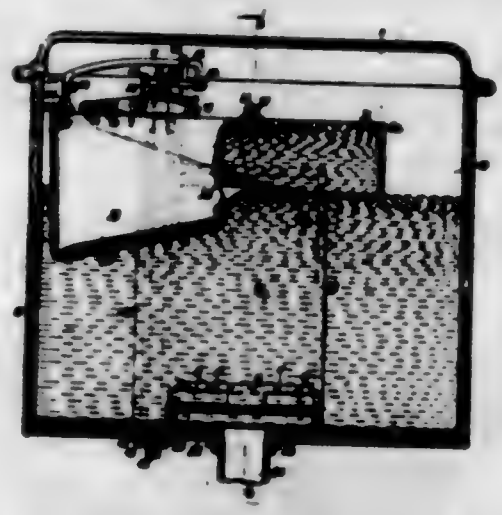
1. In a sectional post, a plurality of post sections adapted to be joined end to end, said sections being substantially semi-cylindrical in formation and being assembled in break joint fashion; tension and connecting members extending longitudinally on the exterior surface of the several sections; and transverse rods tying overlapping sections and said connecting members together.

1,299,788. DRILLING AND RIVETING MACHINE. JACOB FRED SCHOELLKOPF, Dallas, Tex. Filed Nov. 4, 1918. Serial No. 261,152. 9 Claims. (Cl. 29—26.)



1. In a drilling and riveting machine, a work support, movable means located above the support for holding the work on the support, means for drilling a hole through the work, and means operating through the work support for cutting off the end of the rivet depending from the work and heading said rivet.

1,299,789. FLUSHING APPARATUS. FRANK SCHUH, Trenton, N. J. Filed Sept. 26, 1917. Serial No. 193,871. 11 Claims. (Cl. 4—5.)



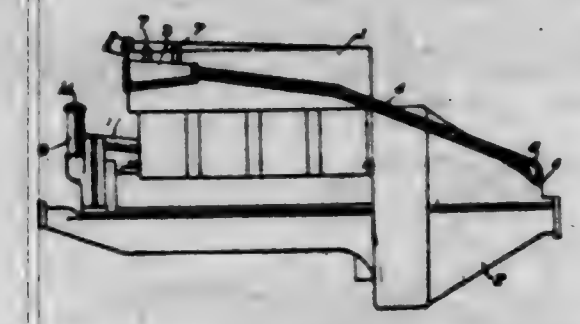
1. A flushing apparatus for water closets and other fixtures, comprising a tank of a vitreous material, and a siphon within the tank and formed integral therewith, the legs of the siphon being approximately rectangular in cross section, the inlet leg having an integral flat foot provided with openings leading into the tank, the outlet leg having an integral foot provided at the bottom with an outlet.

5. A flushing apparatus for water closets and other fixtures, comprising a tank of vitreous material and provided with an integral upright tubular passage extending through the bottom of the tank, a water supply pipe extending through the said passage, a valve casing fitting on the upper ends of the said passage and pipe and provided with an outlet spout, the said valve casing being connected with the said passage, and a siphon in the said tank and having the terminal of its outlet leg connected with the said passage and with a valve seat in register with the pipe and a valve mounted in the said valve casing and controlling the said valve seat.

6. A flushing apparatus for water closets and other fixtures, provided with a combined float and reservoir made of a single piece of vitreous material and mounted to swing in a tank, the reservoir having a bottom, a portion of which

is approximately at a right angle to the side walls and the remaining portion is inclined upwardly and forms the top for the float.

1,299,790. GAS AND OIL SAVING DEVICE. HARRY ROSCO SCOTT, Lordsburg, N. Mex., assignor of one-third to Daniel L. Hill and one-third to Mellage S. Asbell, Lordsburg, N. Mex. Filed Aug. 22, 1918. Serial No. 251,043. 2 Claims. (Cl. 123—118.)



1. In an internal combustion engine, the combination with the crank case, of means for forcing cold air into the crank case at the rear thereof, and means connected with the carbureter for withdrawing the heated air from the crank case at the front thereof, said last named means comprising a pair of casings arranged in spaced approximately parallel relation, one of said casings being connected to the crank case at its lower end, the connection between the casings inclining downwardly from the first named to the last named casing, and a connection between the last named casing and the carbureter, both of said casings having baffle plates, and the last named casing having a drain valve.

1,299,791. DRYING PROCESS. STEWART E. SHAMAN, Brooklyn, N. Y., assignor to Seaman Waste Wood Chemical Company, New York, N. Y., a Corporation of New York. Filed June 4, 1917. Serial No. 172,594. 6 Claims. (Cl. 34—24.)

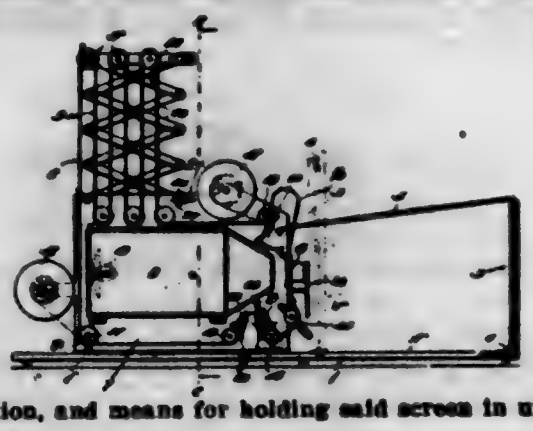


1. The process of drying more or less finely divided materials which consists in delivering such materials to one end of a drier, discharging the hot gases of combustion from a furnace into said drier near the intake of the material to be dried, drawing the mingled gases and material through the drier by suction applied at the discharge end of the latter, separating the waste gases from the dried material, and feeding the dried material direct to a retort.

2. The process of drying more or less finely divided material which consists of feeding the material to be dried to a drying chamber, drawing the hot gases of combustion from a furnace through such chamber whereby the charge and the hot gases become mingled, exhausting the contents of the drying chamber, and separating the steam and waste gases from the dried charge at such a distance from the drying chamber as will preclude the carrying of sparks to the point of separation.

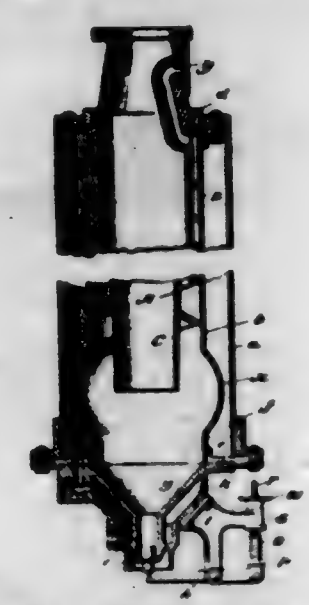
1,299,792. PICTURE-PROJECTING APPARATUS. IWAN SMEDVARM, Altadena, Calif. Filed Oct. 25, 1917. Serial No. 198,449. 3 Claims. (Cl. 88—18.7.)

1. In a portable picture projecting apparatus, the combination of a main base section, and a projecting machine mounted thereon, an auxiliary base section hinged to and forming an extension of said main section, said auxiliary section being foldable upwardly in advance of said projecting machine, a screen hingedly mounted on said auxiliary



base section, and means for holding said screen in upright position.

1,299,793. APPARATUS FOR EVAPORATING OR CONCENTRATING LIQUIDS. EDWARD SHAW, Toronto, Ontario, Canada. Filed May 31, 1917. Serial No. 172,128. 2 Claims. (Cl. 257—232.)



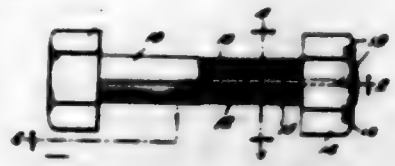
1. An apparatus for evaporating or concentrating liquid by forcing it through a spiral passage of gradually increasing area formed by a downwardly inclined spiral flange interposed between two tubes within a steam jacket, whereby the liquid is caused to travel downward against the outer hot tube, and wherein the inner of said tubes serves as the outlet for the vapor or steam from the lower end of the spiral passage, and the outer tube extends beyond the spiral passage so that the syrup continues to flow along the wall of the outer tube, as set forth.

2. An apparatus for evaporating or concentrating liquid by forcing it through a spiral passage of gradually increasing area formed by a downwardly inclined spiral flange interposed between two tubes within a steam jacket, the spiral flange of a width to leave a slight space between its edge and the outer of its tubes, whereby the liquid is caused to travel against the outer hot tube as it flows downward, the inner of said tubes serving as the outlet for the vapor or steam from the lower end of the spiral passage, and the outer tube extends beyond the spiral passage so that the syrup continues to flow along the wall of the outer tube, as set forth.

1,299,794. NUT-LOCK. FRED H. SHELDON, Springfield, Ohio. Filed Mar. 5, 1918. Serial No. 220,544. 3 Claims. (Cl. 151—5.)

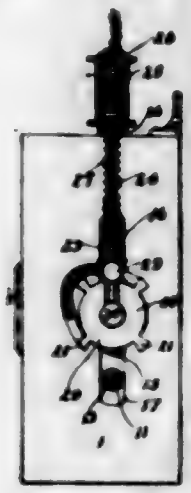
1. A nut lock comprising a bolt having a threaded end portion provided with a longitudinally extending groove, a nut screwed upon the bolt and having its outer end portion provided with an annular groove undercut and provided with radiating grooves leading to the side faces of the nut, and a key for locking the nut against rotation having a shank fitting into the longitudinally extending groove of the bolt and having a collar fitting into the

undercut seat of the nut and terminating in a finger extending through one of the radiating grooves of the nut and having its outer end portion bent to engage the side face of the nut.



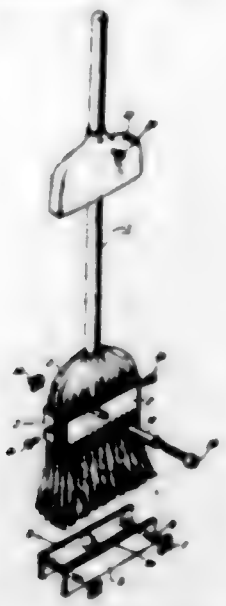
3. A nut lock comprising a bolt having a threaded end portion provided with a longitudinally extending groove, a nut screwed upon the bolt and provided with an annular seat having radiating grooves leading therefrom, and a locking key having a shank fitting into the groove of the bolt and having a collar fitting into the annular seat of the nut and provided with a locking finger extending through one of the radiating grooves of the nut.

1,299,795. CHANGEABLE EXHIBITOR. GUY A. SHIELDS, Spokane, Wash., assignor of one-half to George W. Shields, Spokane, Wash. Filed July 5, 1917. Serial No. 178,725. 1 Claim. (Cl. 40—88.)



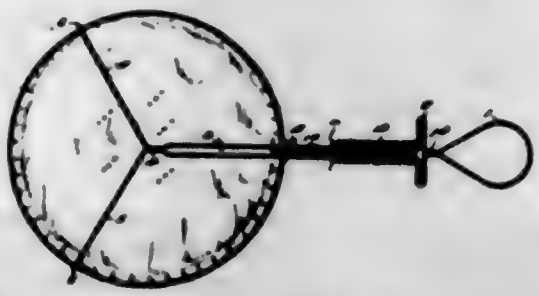
The combination in a reversible, changeable exhibiter of an operating shaft and a ratchet wheel, a spring pressed stem and a slotted, reversible pawl carried by the stem and engaging a plurality of teeth, and means for withdrawing the stem to co-act with the spring for imparting a step by step movement to the operating shaft.

1,299,796. BROOM-HOLDER. HENRY SHOWALTER, Hurley, Okla. Filed Oct. 30, 1918. Serial No. 260,344. 2 Claims. (Cl. 15—19.)



1. A device of the character specified, comprising a handle, a sectional clamping ring for embracing a shaped bundle of broom corn, each section of the ring having angular ends and the said ends being adapted to lap at the side edges of the shaped bundle, said ends having registering openings, and securing pins loosely engaging the openings, the handle having an opening, and the sections having openings registering therewith, a screw bolt passing through the openings, and a hood shaped to fit the inner end of the shaped bundle and to fit over the clamping ring to cover and conceal the same and to prevent disengagement of the pins.

1,299,797. PLATE-LIFTER. STEPHEN G. SINGLETON, Burke, Idaho. Filed Jan. 9, 1919. Serial No. 270,843. 1 Claim. (Cl. 65—22.)

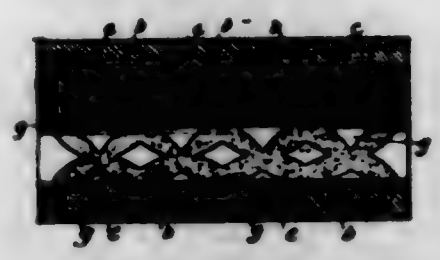


A plate lifter comprising a shank formed from a wire doubled upon itself with the ends lying in parallel spaced relation, said ends being twisted together at each end of the shank, the connection between the two portions at one end of the shank forming a handle and the extremities of the wire being bent to diverge at the other end and having hooks for engaging beneath the edge of a plate, a gripping hook mounted to slide on the shank and normally spring pressed toward the plate for gripping the edge of the same, the portions of the wire being bent outwardly adjacent to the handle end of the shank to form stops for engagement by the end of the spring remote from the sliding hook when the spring is compressed to release the hook.

1,299,798. PLASTIC COMPOSITION AND PROCESS OF MAKING THE SAME. CHARLES E. SKINNER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 8, 1917. Serial No. 173,672. 16 Claims. (Cl. 106—31.)

1. A composition suitable for molding and comprising a cement, a finely divided resinous material and a fibrous material.

1,299,799. SELF-LUBRICATING BEARING. GEORGE O. SMALLEY, Boundbrook, N. J., assignor to Bound Brook Oilless Bearing Company, Boundbrook, N. J., a Corporation of New Jersey. Filed June 8, 1918. Serial No. 238,873. 8 Claims. (Cl. 64—24.)



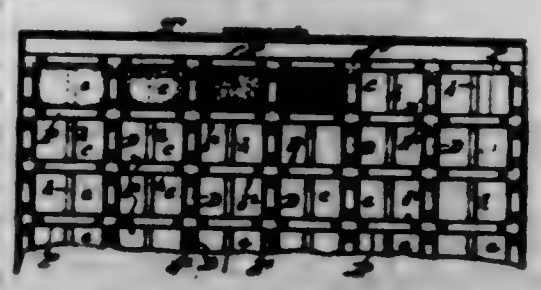
1. A bearing having a shell provided with continuous lubricating grooves arranged in parallel spirals, intersected by similarly formed spirals extending in opposite direction, bearing studs intermediate the intersecting grooves, said grooves being substantially wider between their points of intersection to provide holding faces on opposite sides of the intermediate bearing studs, and a lubricating material pressed into and filling said grooves.

2. A bearing having a shell provided with continuous lubricating grooves arranged in parallel spirals, inter-

sected by similarly formed spirals extending in opposite directions, metallic studs intermediate the intersecting grooves, said grooves varying as to depth and width at their points of intersection and between their intersecting points, whereby the intermediate metallic studs are provided with concaved faces and extended points at each end of the concaved faces, and a lubricating material pressed into and filling said grooves.

5. A bearing having a shell provided with continuous lubricating grooves arranged in parallel spirals, intersected by similarly-formed spirals extending in opposite directions, said spiral grooves having alternate wide and narrow portions, and a lubricating material pressed into and filling said grooves.

1,299,800. APPARATUS FOR MAKING ICE. HARRY J. SMITH, New York, N. Y. Filed Mar. 15, 1918. Serial No. 222,574. 1 Claim. (Cl. 62—104.)



In ice forming apparatus of the character designated, the combination of a tank, a plurality of cell-partitions arranged in parallelism therein, and fixed hollow metallic divisional members interposed between and contacting directly with the opposed metallic sides of adjacent cell-partitions, each of said metallic division members being of inverted wedge shape in cross section, and being formed with an air pressure pipe extending to the bottom thereof and opening through the side thereof, and with a steam injection pipe extending to the lower portion thereof, together with U-shaped stirrup straps positioned in the ice compartments between adjacent divisional members and cell-partitions whereby the wedge shaped blocks of ice formed in said ice compartments may be removed intact, for the purpose described.

1,299,801. COMBINED NECKTIE AND COLLAR FASTENER. J AMORY SMITH, Ellsworth, Kans. Filed Jan. 18, 1917. Serial No. 142,041. 2 Claims. (Cl. 24—62.)

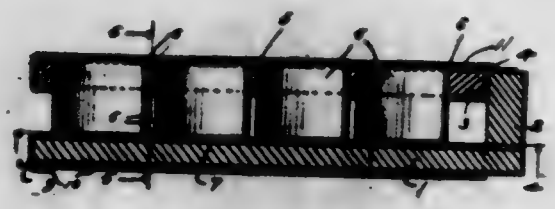


1. A combined necktie and collar fastener comprising two U-shaped portions, one of which is inverted, one of the arms of the inverted portion being bifurcated, one of the arms of the other U-shaped portion having a transverse portion connected to said bifurcated arm between and at the upper ends of said bifurcations.

1,299,802. BISCUIT-CUTTER. JOHN C. SMITH, Sullivan, W. Va. Filed June 14, 1918. Serial No. 239,982. 2 Claims. (Cl. 107—51.)

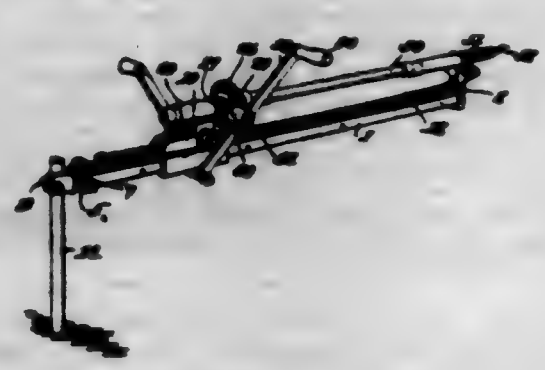
1. A biscuit cutter including a base and a hinged cutter-supporting member having openings, cutters located in said openings, flanges formed on said cutters and overlying the supporting member, and a cover on the cutter-supporting member closing the outer ends of the cutters and coöperating with the flanges in retaining the cutters within the openings.

2. A biscuit cutter including a base and a hinged cutter-supporting member having openings, cutters within said openings, flanges on said cutters and resting upon the supporting member, a cover slidable upon said supporting member and closing the outer ends of the cutters



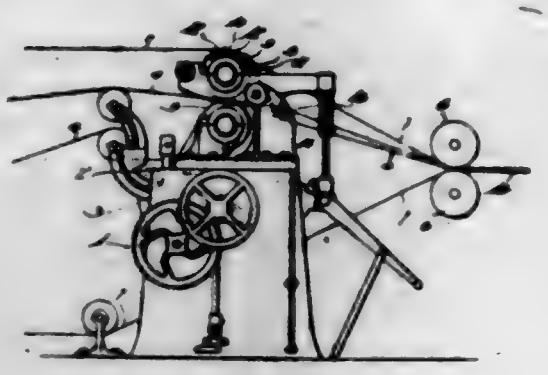
and coöperating with the flanges in retaining the cutters in the openings, and means detachably securing the cover to the supporting member.

1,299,803. MECHANISM FOR OPERATING EARTH-BORING TOOLS. NEWTON H. SMITH, Hamilton, Ill., assignor of one-half to William C. Howell, Keokuk, Iowa. Filed Nov. 11, 1916. Serial No. 130,829. 1 Claim. (Cl. 255—20.)



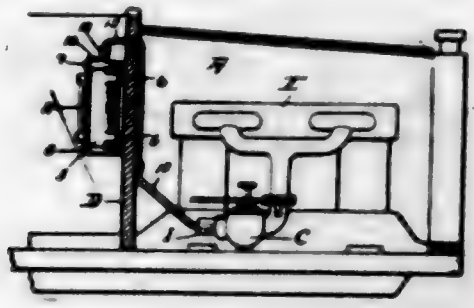
A mechanism for operating earth boring tools, including a support, a carriage on the support, a spindle rotatable in the carriage, a gear wheel rigid on the spindle, a stud extending laterally of the carriage, a driving gear rotatable on the stud and meshing with the gear wheel, there being a clutch member integral with the driving gear, a sleeve rotatable on the stud and having a clutch member engageable with the clutch member of the driving gear, and a crank extending from the sleeve for operating the same.

1,299,804. METHOD OF PASTING AND MACHINE THEREFOR. THOMAS SMITH, Cornell, Wis., assignor of one-half to Henry C. Frisbie, Cornell, Wis. Filed Apr. 25, 1918. Serial No. 230,770. 4 Claims. (Cl. 154—40.)



1. A machine for uniting sheets of material to form a multiple ply board, comprising a pair of rolls between which the sheets pass, means for applying paste to said sheets before passage thereof between said rolls, means for separating said sheets and removing surplus paste therefrom after passage of said sheets between said rolls, and a pair of pressing rolls for again forcing said sheets tightly together after removal of the surplus paste.

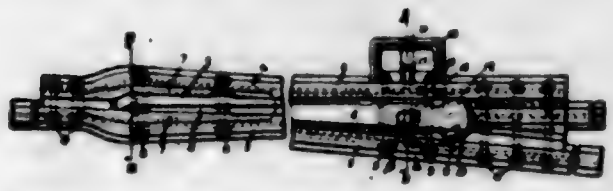
1,299,805. DECARBONIZER FOR ENGINES. FRED C. STEKELBERG, Middleton, Wis., assignor of forty one-hundredths to Lawrence G. Clark, Middleton, Wis. Filed Apr. 2, 1918. Serial No. 226,233. 2 Claims. (Cl. 123—119.)



1. In combination with the air inlet of a carbureter, a receptacle, and a tube extending into the top of said receptacle and having its other end extending into the air inlet of the carbureter whereby the suction at said air inlet will cause kerosene within said receptacle to be drawn in the form of a fog through said tube into the carbureter when said receptacle is agitated.

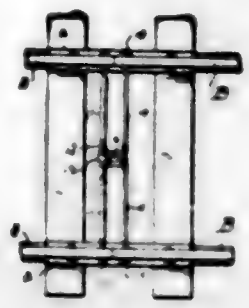
2. An attachment for internal combustion engines, comprising a receptacle, and a tube extending into the top of said receptacle and terminating within the upper portion thereof, the other end of said tube extending into the air inlet of the carbureter of the engine whereby the suction at such air inlet will cause kerosene within said receptacle to be drawn in the form of drops through said tube into the carbureter when said receptacle is agitated.

1,299,806. SWITCH CONSTRUCTION. HENRY C. STIFF, Johnstown, Pa. Filed Jan. 3, 1919. Serial No. 269,453. 4 Claims. (Cl. 246—442.)



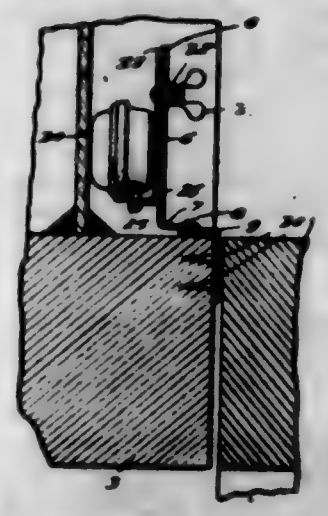
1. In a tongue switch, the combination with the switch body, of a swinging tongue pivotally mounted on said body, said tongue having a lug on the under side thereof, and a pin extending through registering openings in said lug and switch body, said pin being located intermediate the heel and point of the switch tongue, and the ends of the opening in said lug being flared to prevent lifting movement of the tongue relative to the switch body without interference with sidewise swinging movements of the tongue.

1,299,807. ANTISPREADING DEVICE FOR RAILWAY-TRACKS. JOHN T. STOVALL, Shamrock, Tex. Filed Dec. 21, 1918. Serial No. 267,840. 5 Claims. (Cl. 238—5.)



1. A railway track including two pairs of abutted rails, a bolt connecting one pair of rails having its ends disposed adjacent the joint between the abutted rails, and a brace rod engaging one of the rails of the other pair of rails adjacent the joint and engaging with said bolt.

1,299,808. BURGLAR-ALARM AND LOCK. CHARLES J. STROKE, Buffalo, N. Y. Original application filed June 30, 1916, Serial No. 106,916. Divided and this application filed Oct. 20, 1916. Serial No. 126,682. 1 Claim. (Cl. 116—44.)

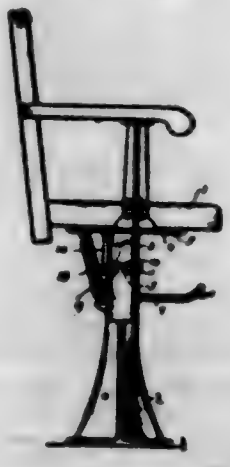


A device of the character described comprising, an L-shaped plate adapted for attachment to the jamb of a door; an elongated supporting plate having one end portion bent at right angles and contacting with one arm of said L-shaped plate; a pivot element extending vertically through the angularly disposed portion of the supporting plate and the contacting arm of the L-shaped plate; and a stop plate adjustably secured to said supporting plate, said stop plate having its inner end portion angularly disposed for contact with the door.

1,299,809. ADHESIVE AND PROCESS FOR MAKING THE SAME. JULIUS B. B. STRIKER, Lansdale, Pa., assignor to Perkins Glue Company, a Corporation of Pennsylvania. Filed July 18, 1917. Serial No. 175,410. 14 Claims. (Cl. 87—17.)

2. The process of making an adhesive which consists in mixing root starch having a viscosity of less than 150 at 20 to 1 and over 18 at 9 to 1, with a degenerated starch having a viscosity of about 80 or less at 9 to 1, and more than 18 at 9 to 1 and water, the amount of such raw starch being greater than the amount of degenerated starch and the amount of water being from 3 to 6 times the weight of the starches, and dissolving the starches in the water with caustic alkali to form a homogeneous colloidal adhesive of starch alkali and water, the amount of water being proportioned relatively to the viscosity of the starches to produce an adhesive which will be spreadable by glue applying machinery and will flow through pipes two inches in diameter.

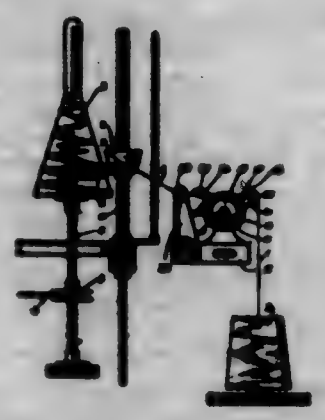
1,299,810. THEATER-CHAIR. LUCIUS C. TOOLE and MARGUERITE R. TOOLE, Jersey City, N. J., assignors to Motion Picture Chair Co., Inc., New York, N. Y., a Corporation of New York. Filed Oct. 21, 1918. Serial No. 258,148. 2 Claims. (Cl. 155—13.)



1. A chair comprising a standard, a seat pivotally connected thereto, one of said parts being provided with an

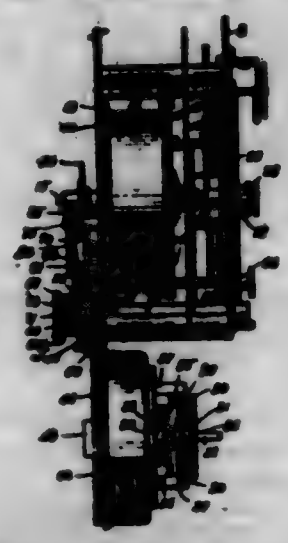
inclined surface extending correspondingly on opposite sides of a low normal point and the other part having a member cooperative with said surface, and a spring cooperative between the standard and seat and free to swing with the seat from side to side whereby the seat will be returned to normal when moved therefrom on either side thereof.

1,290,811. METHOD OF DYEING YARN AND THE LIKE. WILLIAM A. AINSWORTH, Grand Rapids, Mich. Original application filed July 16, 1917, Serial No. 180,905. Divided and this application filed May 10, 1918. Serial No. 233,647. 2 Claims. (Cl. 8—5.)



2. The method of dyeing yarn or similar fibrous material which consists in providing a member saturated with coloring matter, then rapidly passing said material in a continuous length by said member and normally separated a short distance therefrom, and in intermittently pressing said material into wiping engagement with said member as it passes by the same.

1,290,812. TIME CIRCUIT-CONTROLLER. JOHAN M. ANDERSEN, Boston, Mass., assignor to Albert & J. M. Anderson Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Jan. 20, 1917. Serial No. 143,514. 11 Claims. (Cl. 161—27.)



10. In an apparatus of the character described, in combination, a clock mechanism provided with a main shaft and with a main spring having one end connected with said main shaft, a time train geared to said main shaft and governing rotation thereof, a gear fast on said main shaft and connected with said time train, a gear loose on said main shaft and with which the other end of said main spring is connected to be driven by said main spring, a rotatable device, gearing connecting said rotatable device with the gear loose on said main shaft, means for restraining said main spring from rotating said device, means for releasing said restraining means, and a selective mechanism driven by said main shaft and cooperating with said releasing means.

1,290,813. CONNECTION WITH DRY BATTERIES. EDOUARD ARMELIN, South Woodford, England. Filed Sept. 14, 1918. Serial No. 254,114. 1 Claim. (Cl. 204—38.)



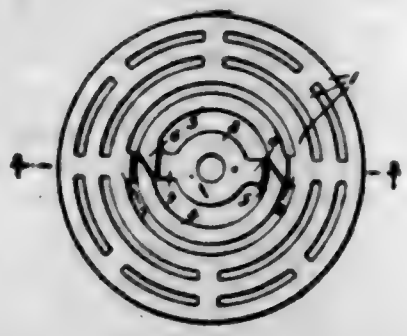
A dry battery comprising a tubular casing having open ends, and a plurality of cells located in said casing, the casing having its tubular extremities bent inwardly to form shoulders which engage opposite ends of two cells and maintain the cells in electrical contact.

1,290,814. FEEDING MEANS FOR DRILLS. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 14, 1917. Serial No. 162,025. 9 Claims. (Cl. 121—10.)



1. In a percussive tool having in combination, air feeding means and an auxiliary feed device comprising a rack attached to said percussive tool, and a pawl adapted upon engaging said rack to permit a slight retrograde movement of said tool relative to said rack.

1,290,815. PLATE-VALVE. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 10, 1917. Serial No. 167,705. 4 Claims. (Cl. 251—119.)

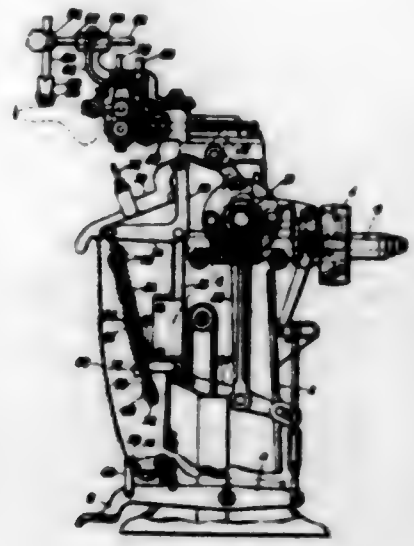


1. A plate valve having annular valve sections and a central supporting portion, integral flexible connecting and guiding arms extending between said valve sections and central supporting portion, said connecting arms being of uniform thickness throughout their length and of less thickness than the annular valve sections to equalise and increase their flexibility.

1,290,816. MACHINE FOR SEPARATING LASTS AND SHOES. JOHN MILTON BENJAMIN, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 17, 1917. Serial No. 149,336. 20 Claims. (Cl. 12—1.)

2. In a machine for separating lasts and shoes, in combination, shoe holding means, last holding means movable

to position the shoe on a supported last in coöperative relation to said shoe holding means, power operated mechanism for effecting relative movement between the shoe holding and last holding means to separate the last and shoe, and starting means for said mechanism responsive to the movement of the last holding means into operative position.



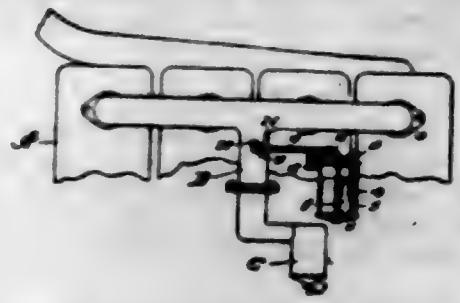
7. In a machine for separating lasts and shoes, in combination, shoe gripping means, a pulling member, a last holder operatively connected therewith and mounted for manually effected movement relatively to the pulling member and shoe gripping means to position the supported shoe in coöperative relation to said gripping means, power operated mechanism effective to move said pulling member and last holder in directions to pull the last from the shoe, starting means for said mechanism including an actuating lever, and operative connections from said lever to said last holder effective to actuate said lever and the starting means by the manually effected movement of the last holder to a position in which the supported shoe is in coöperative relation to the shoe gripping means.

9. In a machine for separating lasts and shoes, in combination, shoe holding means, last holding means movable to position the shoe on a hinged last in coöperative relation to the shoe holding means, means for breaking the hinged last, and mechanism for effecting relative movement between the last holding means and the shoe holding means to separate the last and shoe.

22. In a machine of the class described, the combination with last holding means, shoe holding means and mechanism for effecting relative movement of said holding means to effect relative separating movement of the shoe and last including relative lengthwise movement, of auxiliary means coöperating with said mechanism constructed and arranged to reduce the normal relative lengthwise thrust of the last heel and shoe counter during relative vertical movement of the last heel and shoe counter to clear each other.

27. In a machine of the class described, the combination with shoe gripping means, last holding means and mechanism for moving the last holding means to remove a last from its shoe with a lengthwise component of movement producing lengthwise heelward thrust of the last heel against the shoe counter, of auxiliary spring means coöperating with said last holding means and with said mechanism constructed and arranged to cause the last holding means and last to yield lengthwise responsively to resistance offered by the shoe counter to lengthwise thrust of the last to reduce the normal lengthwise thrust of the last heel against the shoe counter, said spring means acting through compression by said resistance offered by the shoe counter to accelerate lengthwise movement of the last holding means and last after the last heel has been moved vertically to clear the top edge of the shoe counter.

1,299,817. AUXILIARY FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. JEAN B. BERGOUGNOUX, Chicago, Ill. Filed Sept. 15, 1917. Serial No. 191,524. 2 Claims. (Cl. 261—124.)



1. An auxiliary feeding device for internal combustion engines comprising a cylinder, closures for the ends of said cylinder, means extending between said closures adapted to clamp them upon the ends of said cylinder, said upper closure having an outlet passage-way therethrough and an inlet port, a pipe mounted in said inlet port and extending from adjacent the bottom of said reservoir to the outside of said upper cap, a regulating cock on said pipe outside said reservoir, and means for establishing communication between the outlet port in said upper cap and the inlet manifolds of the engine.

1,299,818. RAIN-COAT. ZACHARY T. BLACKMAN, Long Beach, Miss. Filed Feb. 9, 1918. Serial No. 216,265. 1 Claim. (Cl. 2—118.)



A garment embodying a yoke to fit on the shoulders of the wearer, a fabric body suspended from said yoke, bows pivoted on the yoke to swing forwardly and rearwardly, a fabric covering secured on said bows and the rear portion of the yoke, straps connected to the forward bow, and detachable fasteners for connecting the ends of the straps to the forward portion of the yoke.

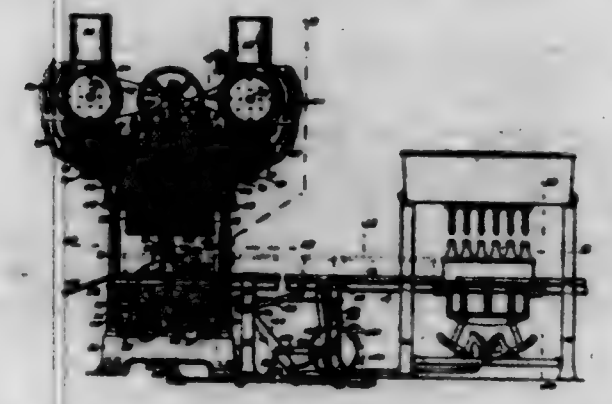
1,299,819. MACARONI AND THE LIKE FOOD PRODUCT. MARIE LOUISE BOUCHET, Roselle, N. J. Filed Aug. 2, 1918. Serial No. 782,712. 1 Claim. (Cl. 99—11.)

The process of preparing a whole-wheat macaroni consisting in mixing water and salt with finely ground whole wheat—the proportions being from one part of salt to fifty parts of water to one part of salt to one hundred parts of water—kneading the aforesaid mixture for not less than three quarters of an hour, forming the dough into tubular bodies, and slowly drying the tubular bodies.

1,299,820. BOTTLE-CAPPING MACHINE. ALBERT A. CARPUS, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed June 14, 1912. Serial No. 703,655. 23 Claims. (Cl. 113—2.)

5. In a machine of the class described, a stationary head, a movable head telescoping therein, a compression spring in said movable head, a cap-affixing throat on said movable head, a plunger arranged to extend into said throat and having an upward extending stem, and means

for elevating and depressing said plunger independently of the movable head.



8. In a machine of the class described, a table, a stationary head, a movable head telescoping therein, a comparatively long powerful compression spring in said movable head, a cap affixing throat on said movable head, a plunger extending through said throat and having an upwardly extending stem, a spring for depressing said plunger, and means actuated by said table for positively elevating the plunger independently of said movable head.

14. In a machine for capping a plurality of receptacles, a feed hopper, a cap affixing throat, and a flexible channel joined to said feed hopper and said cap affixing throat, said channel comprising independent channel sections having a tongue and an overhanging bracket respectively, said bracket and tongue being centrally pivoted together, said channel sections further having said walls separated by gaps at the joints to permit the requisite movement of the channel section, and further having cover plates with V-shaped ends abutting at their apexes.

18. In combination with a capping machine having a plurality of cap-affixing throats, a feed table, a feed channel communicating with said table, a feed rod for propelling cases of receptacles along said channel, and means controlled by the position of a case on said table for relatively moving the table and throats.

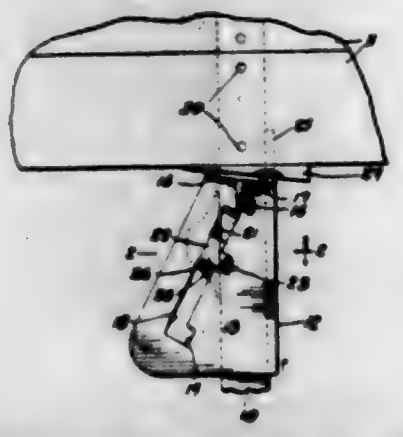
23. In combination with a capping machine having a plurality of cap affixing throats, a table, a feed channel, means for intermittently moving cases of receptacles along said channel and onto said table, means for relatively moving the table and the cap affixing throats, a clutch for actuating said means, a treadle for operating said clutch, said treadle having associated therewith a cam member, a roller, a rock shaft carrying said roller, and a tappet on said rock shaft position to be engaged by a properly positioned case of receptacles on the table.

1,299,821. HOOK. JOHN FRANCIS CARPMILL and HORACE G. HANCOCK, New Britain, Conn., assignors to The North & Judd Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 4, 1918. Serial No. 256,902. 6 Claims. (Cl. 24—242.)



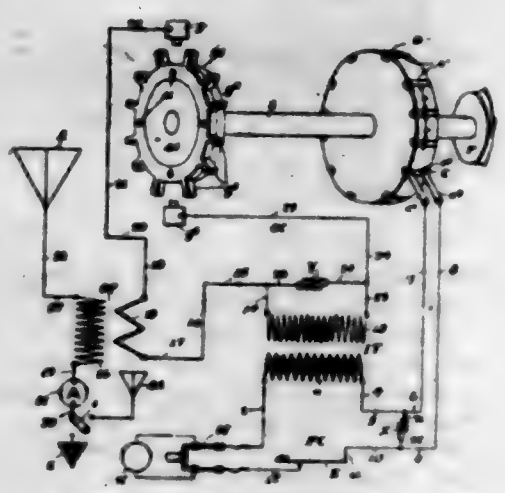
6. A device of the class described comprising a barrel, a shank extending through the barrel and provided with a hook, a hook complemental to the other hook provided with a shank pivoted to the other shank, the second shank having a tail piece in the barrel, the barrel having a cam to operate against the tail piece to separate the hooks on relative movement of the first shank and the barrel, a flanged sleeve in the barrel through which the first shank extends, the barrel having a step to be abutted by the flange of the sleeve, and a coiled spring around the first shank engaging said flange at one end, the first shank having a part to be engaged by the other end of the sleeve.

1,299,822. CLAMP. RICHARD B. CHUTE, Jr., Huntington, N. Y. Filed Aug. 13, 1918. Serial No. 249,651. 7 Claims. (Cl. 254—11.)



1. In a clamp of the class described, an L-shaped body one side of which is provided with an elongated aperture, and a clamp block mounted to move longitudinally of said aperture, the top of the clamp being provided with a face plate arranged in an inclined position.

1,299,823. RADIOTELEGRAPHY. LAURENCE M. COCKADAY, New York, N. Y. Filed Oct. 27, 1917. Serial No. 198,805. 7 Claims. (Cl. 250—37.)

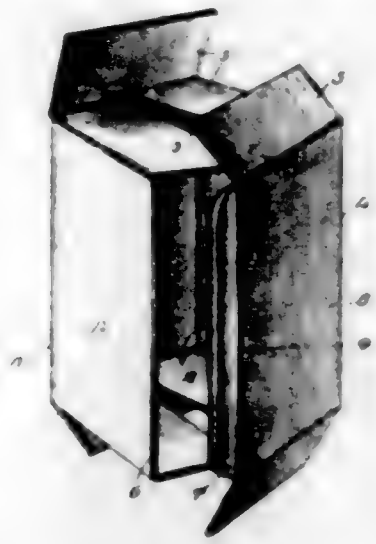


1. In high frequency apparatus having a main supply circuit, the combination of a rotary make and break device controlling said circuit and a rotary spark gap cooperating with said make and break device and rotating in synchronism therewith, said make and break device and spark gap being adjustable relatively to each other to vary the functioning of the spark gap relatively to the make and break device as may be desired.

1,299,824. CONTAINER-BODY. WILLIAM J. CULLEN, Joliet, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 27, 1915. Serial No. 68,696. 1 Claim. (Cl. 229—48.)

A joint for corrugated fiber board boxes, said board comprising two outer flat layers and an intermediate corrugated layer, which consists of the united portions of two sections of said board one arranged within the other, the first section being a side of said box the corrugated layer of which is left intact, and the second section being a bifurcated flap of a contiguous side the corrugated layer of which is removed, the flat layers of which flap em-

brace the first section, and the flat layers of the second section being adhered directly to the faces of the flat



layers of the first section, both within the box and without the box.

1,299,825. BEET-HARVESTING MACHINE. JOHN DUVEY, Lehi, Utah, assignor of two-thirds to Utah Idaho Sugar Co., Salt Lake City, Utah, a Corporation of Utah. Filed Feb. 25, 1918. Serial No. 219,180. 4 Claims. (Cl. 55—106.)



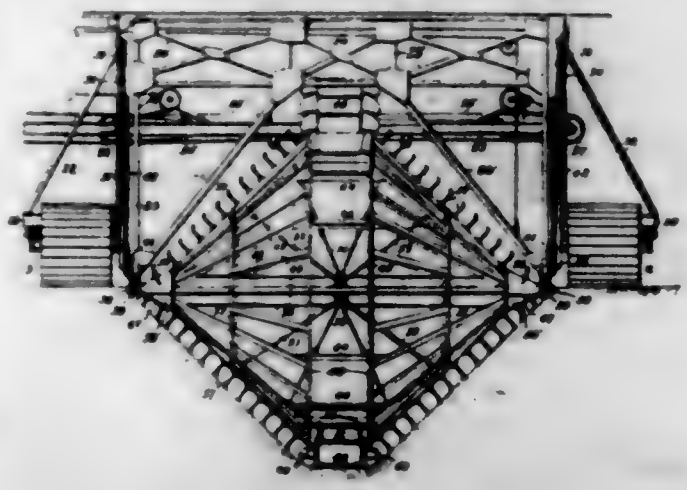
1. In a beet harvesting machine, the combination of a main frame, depending plow point supporting members carried by the frame, plow points mounted on each of said members, a rearwardly extending inclined worm conveyer attached to one of said points, a retaining member attached to the other point and extending substantially parallel to the conveyer on one side of the latter, and rearwardly extending guide members mounted on the plow point supporting members, said guide members being located above the conveyer on opposite sides of the latter.

2. In a beet harvesting machine, the combination of a main frame, plow points carried by the main frame, a worm conveyer secured to one of said plow points and extending rearwardly therefrom at an inclination to the ground, means for rotating said conveyer, and a retaining member secured to one of the plow points and extending along one side of the conveyer.

3. In a beet harvesting machine, the combination of a main frame, traction wheels journaled thereon, plow points carried by the main frame, a shaft attached to one of the plow points and extending rearwardly therefrom at an inclination to the ground, a worm conveyer mounted on said shaft, connections intermediate the traction wheels and shaft for rotating the latter, and a retaining member on one side of the conveyer.

4. In a beet harvesting machine, the combination of a main frame, plow points carried by the main frame, a worm conveyer at the rear of one of said plow points, means for rotating said conveyer, a retaining member secured to one of the plow points and extending alongside of the conveyer, and guides located above and on opposite sides of the conveyer.

1,299,826. EXCAVATING-MACHINE. ELLSWORTH A. DUWEY, Washington, D. C. Filed Dec. 16, 1918. Serial No. 266,869. 16 Claims. (Cl. 37—29.)

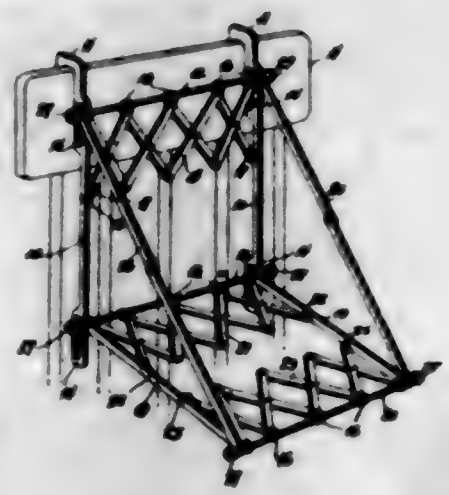


2. An excavating machine including a rotary excavator wheel having a conical side portion provided with cutters to make a side wall of the ditch inclined, the cutters having means to force the loose material to one side of the line of travel thereof downwardly and inwardly toward the bottom of the ditch, said cutters being disposed on the conical side portion of the wheel to extend in spiral rows thereover.

6. An excavating machine including a rotary excavator wheel having a conical side portion provided with cutters arranged to make a side wall of the ditch inclined, said cutters comprising a shank extending outwardly from the conical side portion and an outer cutting portion spaced from the conical side portion and extending laterally and rearwardly at an angle to the shank portion.

15. An excavating machine including a rotary excavator wheel having conical side portions provided with cutters to make the side walls of the ditch inclined and having means to feed the loose material downwardly and inwardly toward the bottom of the ditch, and a conveyer operating centrally of the excavator wheel and having buckets to convey the loose material upwardly from the bottom of the ditch, and plows at the central portion of the wheel disposed in inverted position to operate in advance of the buckets.

1,299,827. FOLDING CHAIR. GEORGE J. EDWARDS, Vancouver, British Columbia, Canada. Filed June 12, 1917. Serial No. 174,602. 9 Claims. (Cl. 155—36.)



1. In a chair, the combination, of a transversely collapsible back portion including a pair of side bars, vertically adjustable rods slidably supported at the upper and lower ends of said side bars, a pair of seat side bars

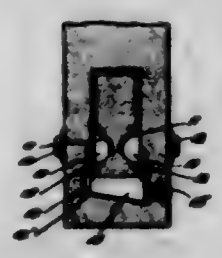
pivotally and slidably mounted upon the lowermost of said rods, collapsible means carried by said lower rod and said seat side bars and forming therewith a seat, and collapsible braces pivotally connected to the outer edge of the seat portion and to the uppermost of said rods.

4. In a chair, the combination, of a transversely collapsible back portion including a pair of side bars having their upper ends shaped to form suspending hooks, vertically adjustable rods slidably supported at the upper and lower ends of said side bars, a pair of seat side bars pivotally and slidably mounted upon the lowermost of said rods, collapsible means carried by said lowermost rod and said seat side bars and forming therewith a seat, and collapsible means carried by the uppermost of said rods and coacting therewith and with the side bars to form a back for the chair.

5. In a chair, the combination, of a transversely collapsible back portion including a pair of side bars having their upper ends shaped to form suspending hooks, vertically adjustable rods slidably supported at the upper and lower ends of said side bars, a pair of seat side bars pivotally and slidably mounted upon the lowermost of said rods, a rod slidably carried by the forward ends of said seat side bars, collapsible means carried by said last named rod and said lowermost rod and said seat side bars to form a chair seat, collapsible braces extending from said last named rod to said uppermost rod, collapsible means carried by the uppermost of said rods and co-acting therewith and with said first named side bars to form a back for the chair, rings carried by said collapsible means and engaging over the rods adjacent to the respective collapsible means, and knobs upon the ends of said rods.

9. In a chair, a pair of suspension bars, a pair of side bars, lazy tongs arranged between the opposite ends of the side bars and forming therewith a seat, all of said lazy tongs having pivot rings arranged along one edge and transverse rods engaging through the lower ends of said suspension bars and through the opposite ends of said side bars to connect the same and engaging through said rings of the lazy tongs to brace the latter, the transverse rods engaging through the ends of said suspension bars being adjustably connected thereto, and supporting means formed upon the upper ends of said suspension bars.

1,290,828. VISE. Edwin W. Fulton, Lowville, N. Y., assignor to Velox Vise Co., Inc., Lowville, N. Y. Filed Dec. 2, 1918. Serial No. 265,120. 15 Claims. (Cl. 81—23.)



1. A vise, comprising a fixed jaw with an opening in the shank portion thereof, a bearing plate in the bottom of the opening, a tail block movable through said opening and resting upon said plate, a fulcrum member mounted upon the shank portion of the fixed jaw, means for supporting said member relatively to the side of the tail block, a movable jaw mounted upon the latter, and means for actuating the movable jaw upon the block.

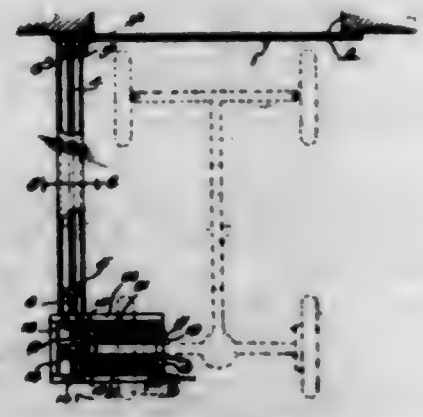
1,290,839. MEANS FOR CONVEYING OR TRANSPORTING GOODS. Charles William Goodyear, Dudley, England. Filed June 18, 1917, Serial No. 175,512. Renewed Mar. 8, 1918. Serial No. 220,420. 2 Claims. (Cl. 214—65.)

1. Means for conveying goods including in combination a barrow provided with a recessed portion adjacent its lower edge and a receptacle formed with a rib along its lower surface, such rib being adapted to seat in the recess



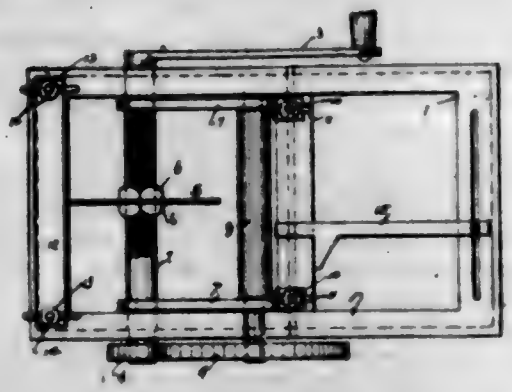
whereby to prevent any movement of the receptacle with respect to the barrow.

1,290,880. DOOR-OPERATING MECHANISM. Ernest A. Gross, Lamoille, Minn. Filed Dec. 4, 1918. Serial No. 265,261. 7 Claims. (Cl. 268—8.)



1. In a closure operating mechanism, the combination with a sliding closure, of a rack along the lower edge of said closure, a pair of parallel rollers, means connecting said rollers and said rack for opening the closure upon rotation of the rollers.

1,290,881. MANUALLY-OPERATED CIRCULAR SAW. John Hakanson and Albert Webber, Seattle, Wash. Filed June 13, 1918. Serial No. 239,729. 1 Claim. (Cl. 143—32.)



In a saw of the class described, the combination of a frame, an arbor mounted in the frame, a saw on the arbor, arms pivotally mounted on the arbor inside the frame and extending away from same and inclining upwardly therefrom and formed near their free ends with alined bearings, each arm having an extension at its free end provided with a substantially vertical opening, a feed roll mounted in the alined bearings, gearing between the arbor and the feed roll, vertically disposed screws pivotally mounted at their lower ends on the inside of the frame, said screws extending through the vertical openings in the extensions, adjusting nuts on the screws to engage the extensions, and springs interposed between the extensions and the frame to normally hold the arms elevated.

1,299,832. COVER-HOLDER. ARTHUR J. HOLDSWORTH, Detroit, Mich., assignor of one-half to Christian Schneider, Detroit, Mich. Filed May 10, 1917. Serial No. 167,831. 2 Claims. (Cl. 215—2.)



2. A cover holder for jars consisting of a single piece of spring wire bent intermediate its ends to form an arcuate slot, the inner side of the slot being formed with two reentrant parts to engage about the edge of a circular cover when inserted in the slot, said wire ends extending in parallel relation from the said reëntrant parts, then being crossed and each bent to form a semi-circular portion for engagement about the neck of the jar.

1,299,833. PLAYING-DISK. GEORGE HUBER, Philadelphia, Pa. Filed Aug. 21, 1918. Serial No. 250,763. 4 Claims. (Cl. 46—65.)



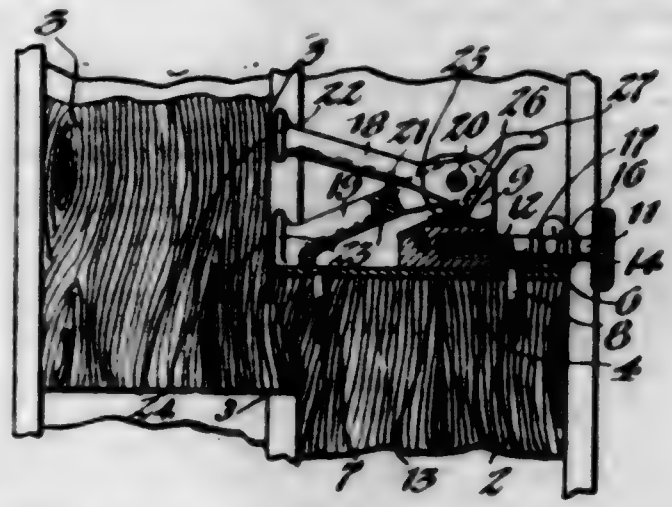
1. In a disk for playing a game, the combination of a round flat disk with a plane top surface and tapered finger grooves cut in the under side to fit the fingers and to act as a protection to the same, substantially as shown and for the purpose specified.

2. In a disk for playing a game, the combination of a round flat disk with a plane top surface and tapered finger grooves cut in the under side, and lying in approximately the same direction as the grain of the wood, substantially as shown and for the purpose described.

4. In a disk for playing a game, the combination of a round flat disk with a plane top surface and tapered finger grooves cut in the under side to fit the fingers, so that when the palm of the hand is open and the fingers extended in a natural and easy manner, the finger ends will fit into the respective finger grooves, thus allowing the disk to lie flat in the hand, and then, with the thumb on top acting as a grip, the disk can be thrown and controlled so that the under side of it will strike flat on the floor or alley and so that the disk will remain flat as it slides along.

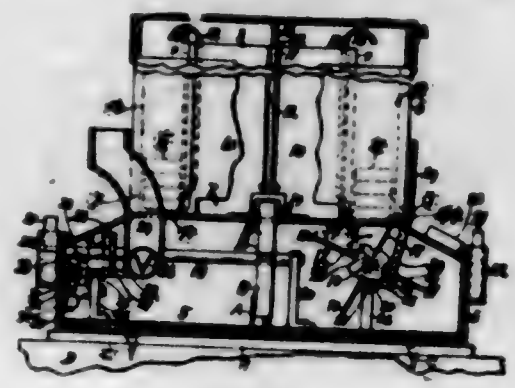
1,299,834. SASH-FASTENER. ALBIN H. HUTCHINGS, Buffalo, N. Y. Filed June 22, 1917. Serial No. 176,440. 3 Claims. (Cl. 16—146.)

1. A sash fastener adapted to be interposed between two relatively movable members of a window, comprising a base plate adapted to be mounted on one of said window members, a carriage slidable on said base plate, a pair of gripping levers or toggles pivoted at one of their corresponding ends on said carriage and adapted to engage their opposite ends with the other window member, one of said levers engaging with said last mentioned window member on one side of the axes of said levers and the other grippings lever engaging with said last mentioned window



member on the opposite side of the axes of said levers and slidable on said base plate.

1,299,835. COIN-OPERATED VENDING-MACHINE. WILFRED J. JANDRON, St. Paul, Minn. Filed Mar. 11, 1918. Serial No. 221,618. 2 Claims. (Cl. 194—27.)



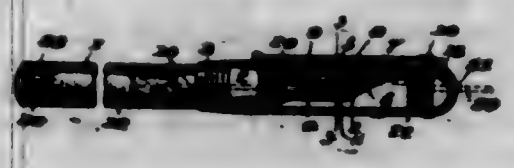
1. In a coin operated vending machine, a hollow base, a plurality of goods magazines fixed upon the base and having each an outlet port for goods and arranged to operate in each port a spider wheel adapted to eject goods by one of its arms at a time, a shaft fixed in said spider and journaled in the hollow base and having one end extended beyond the base, a wheel on the shaft and having its periphery formed with cams corresponding in numbers to the number of arms on the spider, each of said cams having near its base a radial shoulder, a coin chute, a horizontal beam lever fulcrumed in the base and having a light end partly obstructing the lower end of the chute and a heavier and supported end arranged to hold the light end normally in its upper position and engaged with one of the cam shoulders, an auxiliary weight arranged to engage the heavy end of the lever, and thus permit only partial tilting of the lever by a coin in the chute, and means fixed on the outer end of the shaft for taking hold of in turning the shaft so as to overcome the auxiliary weight and cause each cam to complete the tilting of the lever, whereby the coin is allowed to pass it and the spider to eject the goods paid for.

1,299,836. FOUNTAIN-PEN. BENJAMIN R. JOSEY, Raleigh, N. C. Filed Nov. 17, 1916. Serial No. 131,965. 4 Claims. (Cl. 120—42.)

1. A fountain pen with a barrel, a feed plug and pen, a cap fitted with a plunger, and a rod or clip attached to said cap and adapted to be engaged with said plunger for filling the barrel, said barrel having an opening as 23 whereby the plunger may be effective to fill the barrel.

2. A fountain pen comprising a barrel, and a pen, a cap fitting both ends of the barrel, a plunger or piston in the cap, a rod adapted to engage the plunger for pump-

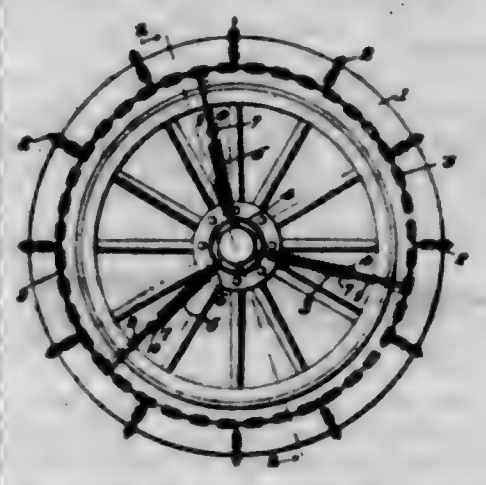
ing ink into the barrel while the cap is in place on the upper end thereof, and means to secure said rod on the outside of the cap in position to form a clip when the cap is on the pen end of the barrel, said barrel having an opening as 23 whereby the plunger may be effective to fill the barrel.



2. A fountain pen comprising a barrel, a pen, a cap, a holding clip and a filler device carried on the cap, and a rod forming part of the clip adapted also to engage the filler device for forcing ink into the barrel.

4. A fountain pen comprising a barrel, a pen, and a combined cap and filler, said cap carrying actuating means for the filler adjustably mounted to act as a clip when the pen is closed and in disuse.

1,299,887. AUTOMOBILE-CHAIN REGULATOR. COULTER JORDAN, Wichita, Kans. Filed July 13, 1918. Serial No. 244,722. 1 Claim. (Cl. 24—73.)

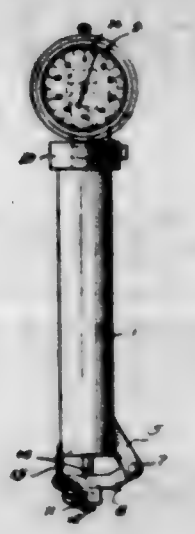


In a device of the class described, the combination with a surrounding ring, of a plurality of springs attached to said ring, each spring comprises a body having looped portions at its ends, and the inner end of each looped portion projecting down between the inner faces of the body of the spring, a pair of hooked members secured to the outer looped portion of the spring, each hooked member comprising a straight body having a loop at its inner end positioned in the outer looped portion of the spring, and having at its outer end a hook, and the hooks of the pair of hooked members facing inwardly, substantially as shown and described.

1,299,936. INDICATOR. CLARENCE J. KELLER, Columbus, Ohio. Filed Mar. 19, 1918. Serial No. 223,418. 6 Claims. (Cl. 33—172.)

2. In an instrument of the type described, the combination with a tubular barrel, a bracket at its lower end, a clamp pivoted at one extremity in said bracket and having a pair of jaws, a jewel holder mounted between said jaws, and yielding means for drawing the clamp and holder toward the barrel; of a plunger loosely mounted in the bore of said barrel and having its lower end rounded and resting on said clamp, means for guiding its upper end within said bore, an indicator mounted in the upper end of the barrel and having a plunger projecting into said bore, and a contact adjustably mounted in the lower end of the indicator-plunger and making contact with the upper end of the main plunger.

3. In an instrument of the class described, the combination with a tubular barrel having the upper end of its bore threaded, a plunger movably mounted in said bore and projecting below the barrel, a movable clamp attached to the barrel and carrying a jewel, yielding means for drawing the clamp and jewel toward the barrel, and yielding means in the barrel for sustaining the weight of the plunger; of a tubular plug screwed into the upper end of said barrel, an indicator mounted on the latter and having a stem projecting through said plug and a plunger movably mounted through said stem, and means for adjusting the contact between the inner ends of the plungers.



4. In an instrument of the class described, the combination with a tubular barrel having the upper end of its bore threaded, a plunger movably mounted in said bore and projecting below the barrel, a movable clamp attached to the barrel and carrying a jewel, yielding means for drawing the clamp and jewel toward the barrel, and yielding means in the barrel for sustaining the weight of the plunger; of a tubular plug movably mounted in the threaded upper end of the barrel, a clamp inclosing this end and having an upstanding arm, an indicator having a casing connected with said arm and a stem projecting down through the plug and a plunger through its stem, and an adjustable contact between the meeting ends of said plungers.

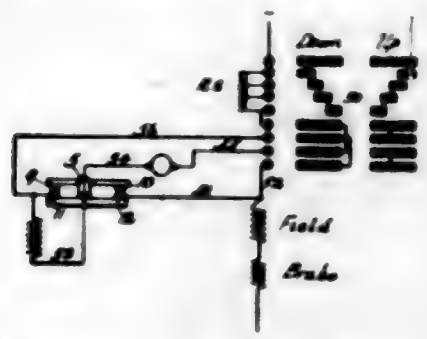
5. In an instrument of the type described, the combination with a plunger whose bore is enlarged at its upper end into a cavity, a washer at the base of said cavity, a plunger mounted loosely in the bore and extending into the cavity, a nut adjustable on the upper end of the plunger, an expansive spring between the nut and washer, a movable jewel holder carried by the lower end of the barrel, and yielding means holding it in contact with the lower extremity of the plunger; of an indicator mounted on the upper end of the barrel with its plunger projecting into said cavity, and an adjustable contact between the meeting ends of said plungers.

6. In an instrument of the type described, the combination with a plunger whose bore is enlarged at its upper end into a cavity, a washer at the base of said cavity, a plunger mounted loosely in the bore and extending into the cavity, a nut adjustable on the upper end of the plunger, an expansive spring between the nut and washer, a movable jewel holder carried by the lower end of the barrel, and yielding means holding it in contact with the lower extremity of the plunger; of a clamp surrounding the upper end of the barrel, an indicator whose casing is carried by said clamp, a guide within said end for the indicator-plunger, and an adjustable contact between the meeting ends of said plungers.

1,299,939. SAFETY LIMIT-SWITCH. DAVID B. KNAPP, Pottsville, Pa. Filed Dec. 28, 1917. Serial No. 209,277. 7 Claims. (Cl. 172—152.)

1. In a device of the character stated, the combination of a hoisting mechanism, a hoisting circuit and a lowering circuit for said mechanism, a controller for said circuits, a normally open dynamic brake circuit, an overhoisting limit switch, means including a suspended weight to automatically operate said switch to close said braking

circuit, means arranged to open a portion of the operating hoist circuit upon operation of said switch, and means to



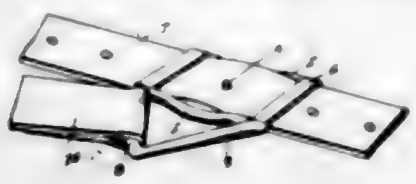
maintain the operating hoist circuit closed to prevent arcing during the operation of said switch.

1,299,840. TURBINE-PUMP FOR IRRIGATION. JAMES T. LACKEY, Dallas, Iowa. Filed Nov. 12, 1917. Serial No. 201,604. 2 Claims. (Cl. 253—201.)



1. In a turbine lifting pump, a frame, a casing mounted on the top of the frame, a revoluble tubular member mounted in bearings of said frame and adapted to have its lower end submerged in water and having its upper end provided with a casing rotatable in the first casing, the second casing having a pair of water chambers and provided with diametrically oppositely radial tubular arms through which the water from the chambers centrifugally pass, pivoted valves for the outer ends of said tubular arms, spring tensioning means for said valves, members slidably mounted on said arms and adapted to move outwardly by centrifugal force, and means connecting said slidable members and the valves to open the same.

1,299,841. BUCKLE. ARTHUR B. LAISURE and CLARENCE E. LAISURE, Fairbury, Nebr. Filed July 13, 1916. Serial No. 109,154. 1 Claim. (Cl. 24—176.)



A buckle comprising a pair of spaced side members extending downwardly intermediate their ends, flat end members connecting the side members at their ends, a cross bar formed on the downwardly extended portions of the side members so as to dispose said cross bar in a plane below the end members, a lug on said cross bar to engage a rein, and a V-shaped member formed on the ends of one of the side members and having one leg portion of a shorter length than the other to dispose said leg portion at a greater angle than the other leg portion to support a rein thereon at an angle in relation to the rein carried by the cross bar.

1,299,842. METHOD OF FORMING REINFORCED-CONCRETE POSTS OR THE LIKE. HENRY A. LANDWEHR, Los Angeles, Calif., assignor to American Cement Products Company, Los Angeles, Calif., a Corporation of California. Filed Sept. 8, 1918. Serial No. 252,843. 2 Claims. (Cl. 25—154.)



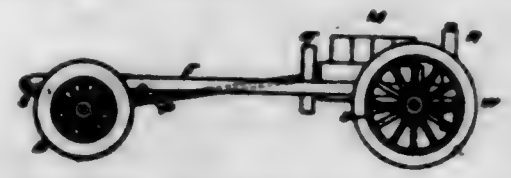
1. The herein described method of forming reinforced concrete posts or the like by the centrifugal process, embodying the longitudinal tensioning of a reinforcing system in a mold substantially concentric with the axis thereof, placing wet plastic concrete in the mold, and rotating the mold about its axis, as and for the purposes specified.

1,299,843. OIL-BURNER. WILLIAM C. LONG, Gordon, Kans. Filed July 18, 1918. Serial No. 245,545. 3 Claims. (Cl. 158—78.)



1. In an oil burner of the class described, the combination of a casing having an internally-threaded forward end, means for injecting a combustible substance into said casing, a comparatively large flared bell having a reduced externally-threaded sleeve formed thereon, said sleeve screwed into said casing at its forward end, and said bell extending beyond the outer face of said casing and having a plurality of air openings formed adjacent to but beyond said sleeve and beyond said casing, whereby the flame passing from said casing will be spread by said bell, while said openings will relieve the vacuum within the bell adjacent said sleeve.

1,299,844. AUTOMOBILE. OTTO G. LUTTERS, Sharon Springs, N. Y. Filed Apr. 15, 1912, Serial No. 691,062. Renewed June 12, 1918. Serial No. 239,661. 2 Claims. (Cl. 180—1.)



1. A four-wheel self-propelled vehicle comprising, in combination, a pair of rear wheels, a pair of front wheels of materially larger external diameter than said rear wheels, an engine mounted on the forward portion of the vehicle to impose the major portion of its weight on said large front wheels, means adapted to drive said rear wheels from said engine, means adapted to steer the vehicle by said front wheels, and a substantially horizontal frame mounted upon said four wheels.

2. A four-wheel self-propelled vehicle comprising, in combination, a pair of rear wheels having a substantially straight driving connection extending from hub to hub,

a pair of front wheels of materially larger external diameter than said rear wheels, a front axle extending materially below the axes of said front wheels, an engine mounted on the forward portion of the vehicle to impose the majority of its weight on said large front wheels, means adapted to drive said rear wheels from said engine, and means adapted to steer the vehicle by said front wheels.

1,299,845. JOURNAL-BOX. ALVIN C. MCCOMB, Chicago, Ill., assignor to McCord and Company, Chicago, Ill., a Corporation of New Jersey. Filed Jan. 27, 1917. Serial No. 144,968. 3 Claims. (Cl. 64—10.)



1. A journal box comprising a cellar and an independently formed top made fast thereon, said cellar having laterally open pedestal channels formed directly in the sides thereof, and said top having laterally open supplemental channels alined with the upper extremities of the channels formed in the sides of said cellar.

2. A journal box comprising a pressed metal cellar and a top cast fast thereto, said cellar having laterally open pedestal channels formed directly in its sides, the said top having laterally open supplemental channels alined with the upper extremities of the channels formed in the sides of said cellar.

3. A journal box comprising a pressed metal cellar and a top cast fast thereto, said cellar having laterally open pedestal channels formed directly in its sides, and extended to the extreme upper edges of the sides of said cellar, the said top having laterally open supplemental channels alined with the upper extremities of the channels formed in the sides of said cellar.

1,299,846. MOLDED ELECTRIC CONDUCTOR AND PROCESS OF MAKING THE SAME. JAMES P. A. MCCOY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 9, 1915. Serial No. 54,991. 5 Claims. (Cl. 204—9.)

3. The method of making electric brushes and other current-carrying elements that comprises molding a pulverulent conducting material with a binder that may be substantially removed by heat without expanding, and heating the molded articles to expel the said binder.

1,299,847. MOLDED COMPOSITION AND METHOD OF MAKING THE SAME. JAMES P. A. MCCOY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1916. Serial No. 76,021. 14 Claims. (Cl. 106—33.)

1. A molded composition comprising a cement base and an impregnating agent containing a polymerized coal-tar derivative.

12. The process of making molded compositions that comprises mixing a cementitious material and a filler, permitting the mixture to set, applying a polymerizable distillation derivative of coal-tar to the resulting objects, and polymerizing the said impregnating agent.

1,299,848. ORE-SEPARATING APPARATUS. GEORGE MCELWAIN, El Paso, Tex. Filed Nov. 12, 1917. Serial No. 201,562. 18 Claims. (Cl. 83—54.)

1. In a machine for separating ore into its constituents in a dry condition, the combination of an elongated casing forming a duct for the ore and having a discharge opening for tailing at one end and a discharge opening in its lower portion intermediate the ends for the relatively heavy ores, a hopper for delivering the ore to said casing, and mechanical means for conveying the



ore through said casing and simultaneously agitating and effecting gravity stratification thereof during such movement, the heavier ore particles settling downwardly through the body of the ore toward the bottom of the casing and finally passing downwardly through said discharge opening, and the lighter particles passing away through the end discharge opening.

1,299,849. CARTON. JOHN D. MACDONALD, Boston, Mass., assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 19, 1916. Serial No. 92,285. 5 Claims. (Cl. 206—45.)



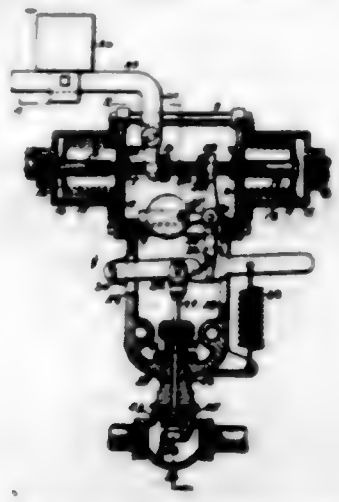
1. A carton comprising a body, a cover therefor; and a stepped display stand hinged to said cover, collapsible against said cover and extensible into said body to support articles to be displayed.

4. A carton comprising a body, a cover therefor; and a collapsible, stepped, display stand therefor comprising an upright, and a strip secured to the latter folded to present risers and tread extensions having reverse bends extending to said upright and flaps died out of said extensions and secured to said upright to form hinges.

1,299,850. AUTOMATIC VALVE CONTROL. JOHN W. F. MACDONALD, Brighton, Mass., assignor to The Merrill Process Company, a Corporation of Massachusetts. Filed Dec. 5, 1918. Serial No. 265,887. 5 Claims. (Cl. 137—139.)

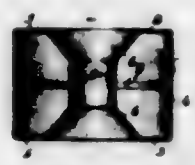
5. Valve controlling means comprising a frame carrying a guide, a valve rod slidable in said guide, a spring actuated lever pivotally mounted in said frame and having a hook, a counterweighted lever pivotally mounted on a member of said frame and having a pin normally in engagement with said hook, a pair of pressure chambers mounted at the upper portion of said frame, a screw threaded rod slidable in openings of the walls of said chambers and having, within said chambers, bellows having heads, nuts adjustable on the screw thread of said

rod, one said nut acting against a member of said counterweighted lever, and a counterweighted lever pivotally



mounted at the upper portion of said frame and acting against the other said nut.

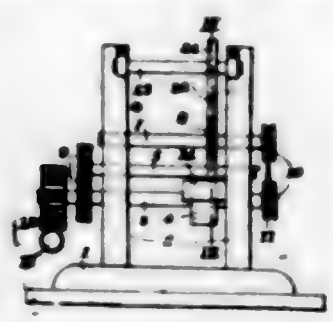
1,299,851. FLOAT AND METHOD OF MAKING THE SAME. PLACIDO MORI, New York, N. Y. Filed Apr. 26, 1916. Serial No. 93,604. 2 Claims. (Cl. 137—104.)



1. The method of making hollow metal floats which comprises providing a fluid tight hollow core of thin nonmetallic material, covering selected parts of said core with shaped metallic pieces and finally depositing electrolytically a coating of metal upon the surface of the float, as and for the purpose described.

2. The method of making hollow metal floats which comprises providing a fluid tight hollow core of thin celluloid, covering selected parts of said core with shaped pieces of copper and finally depositing electrolytically a coating of copper upon the surface of the float, as and for the purpose described.

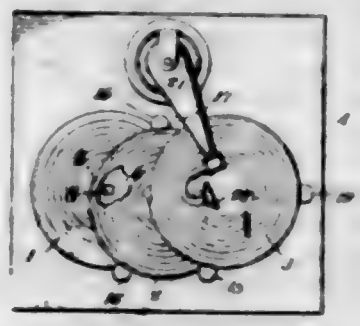
1,299,852. COMB-DECORATING MACHINE. JOHN MOSCINI, New York, N. Y. Filed Nov. 21, 1918. Serial No. 263,610. 2 Claims. (Cl. 41—7.)



1. In a machine of the character described, the combination with a curved table, of a rotary die to operate upon a curved object on said table, means for supporting a roll of colored paper to be led between said die and table above the object to be decorated, and a rotary brush to keep the face of the paper next to the die clean for the purpose specified.

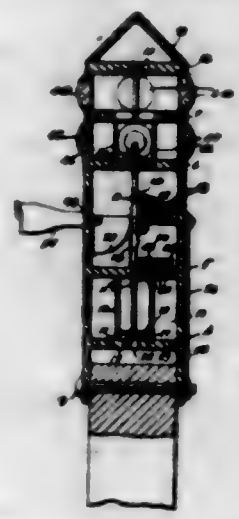
1,299,853. SOUND REPRODUCING AND RECORDING APPARATUS. SAMUEL D. MOTT, Passaic, N. J., assignor of one-half to Arthur B. Sullivan, Allendale, N. J. Filed Feb. 7, 1916. Serial No. 76,641. 32 Claims. (Cl. 274—10.)

1. In an apparatus for reproducing sound, the combination of a plurality of disk records each having record grooves starting at the center and terminating at the outer edge, means for rotating said records and a stylus



traveling in said grooves from the center to the outer edge of the record and dropping off the outer edge by gravity onto the next record.

1,299,854. GRADE-CROSSING SIGNAL. SAMUEL L. NEELY, Longton, Kans. Filed May 17, 1915. Serial No. 28,691. 2 Claims. (Cl. 246—114.)

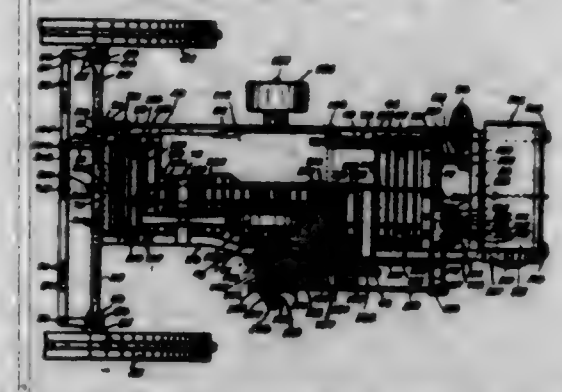


2. In signaling means, a casing of substantial rectangular cross section provided with a plurality of spaced horizontal partition members, the partition members at the upper end of the casing forming two light receiving compartments, each of said compartments being provided with openings through its walls and signaling closure members secured therein, a rack bar mounted coaxially with the casing and slidable through the partition members thereof so as to be braced and guided thereby, a lamp supported directly by said bar so as to be moved from one of the light receiving compartments to the other in accordance with movement of the bar, a lamp housing carried by the bar and having top and bottom plates for closing the openings through the partition between the light receiving compartments, signaling arms rockably mounted on the casing for movement about horizontal axes in planes at right angles to each other, and connections between said arms and the rack bar for simultaneously moving the arms in opposite directions when the rack bar is operated, the operation of the rack bar serving to move the lamp into position to illuminate one of the light receiving compartments so as to produce an illuminating signal corresponding to the signal given by said arms.

1,299,855. TRACTION-ENGINE. DE WITT NELSON, Minneapolis, Minn., assignor to Tom Thumb Tractor Company, Minneapolis, Minn., a Corporation. Filed July 9, 1915, Serial No. 38,880. Renewed June 21, 1918. Serial No. 241,295. 6 Claims. (Cl. 180—9.)

1. A traction engine comprising a main frame, a supplemental frame pivoted to said main frame, means for raising and lowering the forward end of said supplemental frame, a power transmission device for operating said raising and lowering means, and means for automatically rendering said transmission device inoperative at the extreme positions of said supplemental frame.

4. A traction engine comprising a main frame, a supplemental frame pivoted to said main frame, a rack and pinion for raising and lowering the front end of said supplemental frame, means for driving said pinion including a clutch, a lever for operating said clutch, and a pair of stops secured to said rack for engaging said lever to render the driving means inoperable at the extreme positions of said supplemental frame.



5. A traction engine comprising a main frame, depending standards rigidly secured to said main frame, a wheel having its shaft journaled in said standards, a supplemental frame pivotally connected with said shaft, a caterpillar traction belt carried by said supplemental frame and driven from said wheel, and a drawbar connected with said standards in the plane of said shaft and supplemental frame through said shaft.

6. A traction engine comprising a frame, wheels supporting said frame, one of said wheels being a traction wheel, a caterpillar belt running over and being driven by said traction wheel, a shaft on which said traction wheel is loosely mounted, a lug secured to said shaft, an opposed lug secured to said traction wheel and a spring interposed between said lugs.

1,299,858. COUNTERBORE. CHARLES D. NETHERCUTT, Burnetts Creek, Ind. Filed Apr. 12, 1917. Serial No. 161,580. 2 Claims. (Cl. 77—58.)



1. A counterbore comprising a body portion having a transverse recess in its lower edge, a cutting member in said body having its cutting edge adjacent said recess, and a pilot projecting from the body portion having an opening therethrough communicating with the recess in the body portion to carry off the shavings passing through the transverse recess.

2. A counterbore comprising a body portion, a pilot on the lower end of said body portion extending axially thereof and having an opening therethrough, the lower most end of the body portion adjacent said pilot being provided with a transverse recess communicating with the opening through the pilot, and a cutting member passing through said recess and having its cutting edge adjacent said recess so that shavings from the cutting edge will pass through the transverse recess and into the opening to the pilot.

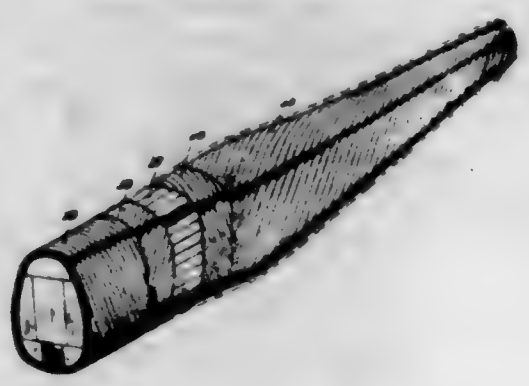
1,299,887. ATTACHING MEANS FOR ELECTRIC FIXTURES. FRANK D. PARMENTER, Toronto, Ontario, Canada. Filed Mar. 13, 1918. Serial No. 222,185. 2 Claims. (Cl. 240—65.)

2. In attaching means for electric fixtures, the combination of a sleeve threaded for connection with an outlet fitting and having a rearwardly facing canopy engaging shoulder formed adjacent its outer end and within its outer end an annular groove forming a cylindrical recess of fixed dimensions; and a sleeve adapted for connection



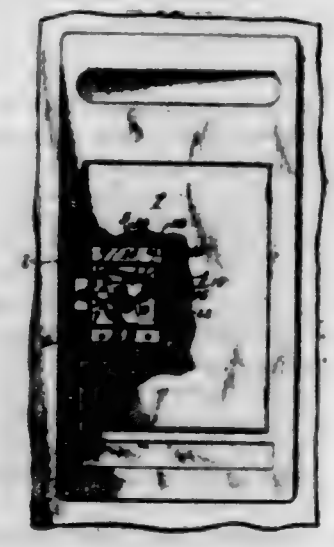
with a fixture fitting having a cylindrical head fitted within the cylindrical recess aforesaid; and a set screw threaded through the first mentioned sleeve adapted to engage the said cylindrical head.

1,299,858. AEROPLANE-FUSELAGE. MELVIN W. PERRY, Algoma, Wis. Filed Sept. 21, 1918. Serial No. 255,062. 3 Claims. (Cl. 244—30.)



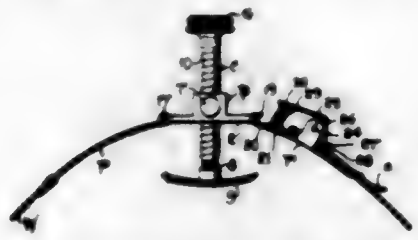
1. A monoblock fuselage comprising a hollow body composed of a plurality of superposed layers glued together, the inner and outer layers being formed from oppositely and spirally wound juxtaposed strips of veneer, and the middle layer being formed of a plurality of juxtaposed longitudinally extending strips of veneer.

1,299,859. SPRING-LOCK. HERMAN L. PETERS, Buffalo, N. Y. Filed Sept. 3, 1918. Serial No. 252,290. 6 Claims. (Cl. 70—75.)



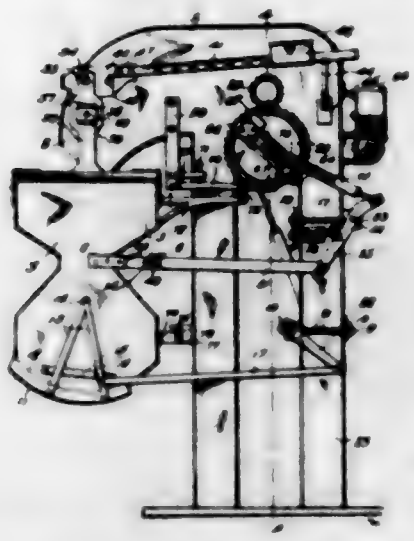
1. In a lock of the character described, the combination of a bolt, a main tumbler, and an auxiliary tumbler shiftable lengthwise of the main tumbler and carrying means for engaging and holding the main tumbler in its inoperative position after it has been manually moved aside and the bolt has been retracted and released.

1,290,860. TOURNIQUET. HENRY W. PLUMMER, Augusta, Me. Filed Mar. 13, 1918. Serial No. 222,142. 11 Claims. (Cl. 128—327.)



1. A tourniquet consisting of a block, a limb embracing compression band coacting with the block, a compression member disposed through the block and having endwise movement, holding means coacting with the compression member and members carried by the block and serving as finger grasps.

1,299,861. GRAIN-MEASURING MACHINE. PATRICK J. POWERS, Red Lodge, Mont. Filed July 23, 1917. Serial No. 182,317. 10 Claims. (Cl. 73—137.)



1. A measuring machine of the class described, comprising a bin, said bin comprising an upper compartment and a lower compartment, an automatic valve plate slidably mounted between said compartments, and adapted to cut off the flow of material from the upper compartment into the lower compartment, and an automatic operating gate carried by said lower compartment and adapted to swing to an open position when a predetermined amount of grain has been deposited within said lower compartment.

4. A measuring device of the class described, comprising a support, a hopper supported upon said support, a scale mechanism coöperating with said hopper, a tripping gear longitudinally mounted upon said support, means for driving said tripping gear, said tripping gear provided with a supporting finger, a pivoted arm supported upon said support and adapted to engage said tripping finger for discontinuing the rotation of said tripping gear at a predetermined time, a valve plate carried by said hopper and adapted to cut off the supply of grain through said hopper, means connecting said valve plate to said tripping gear, and spring means for swinging said valve plate to a closed position when a predetermined amount of grain has been placed within said hopper, thereby releasing said pivoted arm from said tripping finger of said gear.

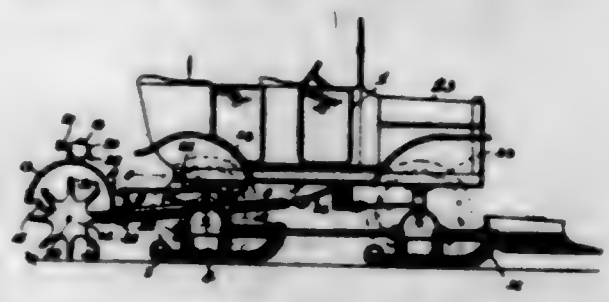
6. A measuring device of the class described, comprising a support, a hopper suspended upon said support, a hanger member, carried by said support, a pivoted arm carried by said hanger member, a strip secured to said hopper and connected to said pivoted arm, said pivoted arm adapted to normally extend in a horizontal plane, a valve plate carried within said hopper, a tripping gear, a supporting finger carried by said tripping gear and adapted to engage said pivoted arm for locking said tripping gear against rotation in one direction at a predetermined point, lever means connecting said valve plate to said tripping gear for holding said valve plate in an open position, spring means engaging said lever means for forcing said valve plate to a closed position when a predetermined weight has been placed in said hopper and said pivoted arm has been drawn out of engagement with said tripping finger, and guiding brackets carried by said hopper and provided with slots formed therein, said valve plate working through said slots, and said guiding brackets being substantially V-shaped.

8. A measuring device of the class described, comprising a support, a hopper suspended upon said support, a scale beam, said hopper connected to said scale beam and adapted to have upward and downward movement, a bracket carried by said support, a pivoted arm carried by said bracket, a bracket arm connected to said hopper and being connected near its outer end by said pivoted arm, a tripping gear carried by said support, means for operating said tripping gear, a tripping finger carried by said tripping gear and adapted to engage said pivoted arm for holding said tripping gear against rotation after the same has reached a predetermined distance, an eccentric finger secured to said gear, a link connected to said eccentric finger, a bell crank lever pivotally mounted upon said support, a valve plate carried by said hopper and slidably mounted thereon, links connected to said valve plate and also connected to said bell crank lever, spring means for pulling said bell crank lever inwardly and through said valve plate to a closed position when said pivoted arm is released from said tripping finger by a suitable amount of weight being placed within said hopper, said tripping wheel provided with an elongated journaled slot, spring means mounted within said slot and adapted to permit said tripping gear to have a vertical sliding movement when undue pressure is brought to bear thereon.

10. A measuring device of the class described, comprising a support, a hopper supported thereon, a measuring compartment formed upon the lower end of said hopper, a gate fitting upon the bottom of said hopper, a spring latch secured to each side of said hopper, hanger brackets connected to said hopper and to said gate, and said spring latch adapted to engage one of said hanger brackets for normally holding said gate in a closed position

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1,299,862. MOTOR-SLEIGH. WILLIAM J. ROECKER, Wittenberg, Wis. Filed Aug. 16, 1917. Serial No. 186,638. 6 Claims. (Cl. 180—6.)

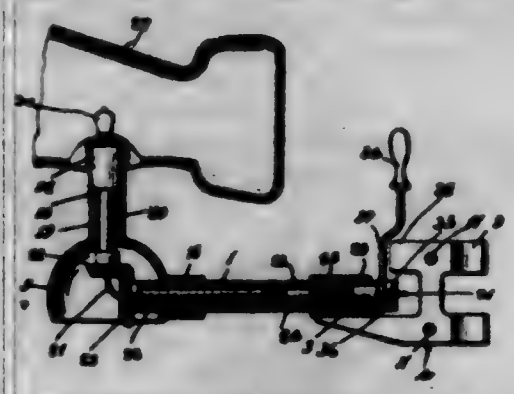


1. A motor vehicle of the class described, comprising a driving shaft, a power shaft, spur wheels carried by said driving shaft, said spur wheels being held in spaced relation, means for driving said spur wheels from said driving shaft, a shield overhanging said spur wheels, a sleeve surrounding said power shaft, a sleeve surrounding said driving shaft, a gear interposed between said power and driving shafts, and means carried by said power shaft and engaging said driving shaft for yieldably holding said driving shaft in an operative position.

1,299,863. DIRECTION-INDICATOR. JOSEPH R. ROMMELFIELD, Plattsmouth, Nebr. Filed Oct. 4, 1916. Serial No. 122,796. 2 Claims. (Cl. 116—31.)

2. A direction indicator comprising a casing, an extension formed on said casing, a hollow arm secured in

said extension, means securing said arm to an automobile, a shaft in said arm, a bearing formed on the casing, a shaft journaled in said bearing, a signaling member secured to the second named shaft, means connecting said



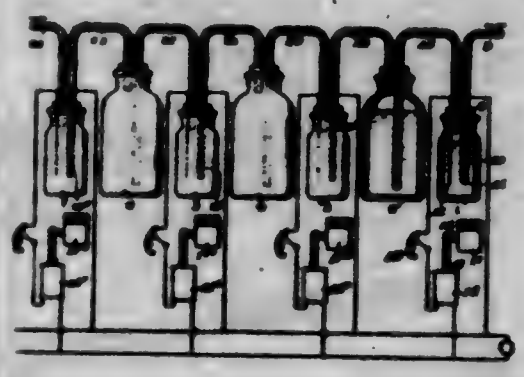
shafts, a controlling means connected to the first named shaft, a washer secured to the first named shaft, and a spring in said arm and bearing against the same and the first named shaft to cause the washer to frictionally engage the arm.

1,299,064. CLASP FOR ANTISKID-CHAINS. GEORGE F. SAVAGE, Centerville, Iowa. Filed July 27, 1918. Serial No. 247,089. 1 Claim. (Cl. 24—232.)



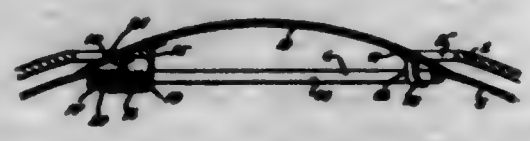
A clasp device for anti-skid chains, comprising a pair of straight side portions terminating at their front ends in integral loops, said loops terminating in an outwardly-extending eye positioned between the sides, said side portions provided at their rear ends with loops, said last-mentioned loops having portions thereof extended outwardly, a rivet passing through said last-mentioned loops, said rivet provided with headed ends, washers positioned upon said loops and in engagement with said headed ends, said last-mentioned loops of the side portions frictionally engaging said washers, and a latch-lever provided with a loop upon its rear end, said loop having a portion thereof extending laterally to frictionally engage the loops on the rear end of said portions, said loop of the latch-lever and last-mentioned loops of the side portions being crowded at all times between said washers, said latch-lever provided near its rear looped end with a comparatively long fulcrum portion, said latch-lever provided with an upwardly-extending, curved reduced forward end, and said forward end of the latch-lever being adapted to be sprung under the eye formed upon the loops at the forward end of the sides, substantially as shown and described.

1,299,865. APPARATUS FOR ANALYZING FLUE-GASES. HERBERT M. SHARP, Buffalo, N. Y. Filed May 6, 1918. Serial No. 232,920. 7 Claims. (Cl. 23—3.)



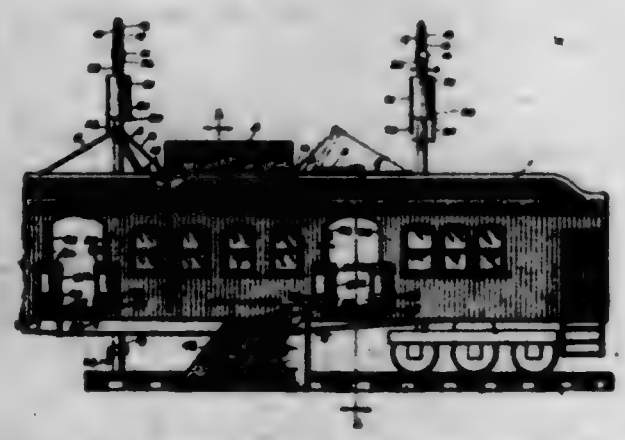
1. In an apparatus for analysing gases, an electric circuit, a receptacle for conductive liquid, electrodes included in said circuit and arranged within said receptacle, and a gas-conduit discharging the gas into said conductive liquid to displace the liquid relatively to an electrode of said circuit and control the latter.

1,299,866. DETACHABLE COVER FOR CENTRIFUGAL EXTRACTORS. ROBERT M. SMITH, San Francisco, Calif. Filed Oct. 16, 1916. Serial No. 125,768. 3 Claims. (Cl. 210—35.)



1. In a machine of the character described, the combination with a stationary curb, of a rotatable basket therein provided with an opening, and having a flange extending around the walls of said opening, a detachable cover for the basket, a housing carried by the under side of said cover, a latch within said housing, an actuating spring for the latch bearing at one end against the same and at the opposite end against the wall of said housing and entirely protected from the splashing contents of said basket during its rotation, said latch having a forwardly projecting part lying in a horizontal plane and engaging the under side of the flange of said basket and additional retaining means carried by the cover for coöperating with the flange.

1,300,367. MAIL-DELIVERER. JAMES STANLEY, Washington, D. C. Filed Sept. 28, 1916. Serial No. 122,656. 6 Claims. (Cl. 258—10.)



1. A mail deliverer, comprising a mail-holding receptacle provided with a swinging bottom, a swinging latch attached to the receptacle and having a portion depending below the bottom of the receptacle and provided with side projections above its lower portion for engaging the swinging bottom to hold the same closed, and a latch releasing device supported in relation to the receptacle to engage the swinging latch to release it from holding engagement with the swinging bottom.

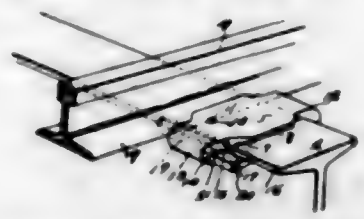
2. A mail deliverer, comprising a mail-holding receptacle provided with a swinging bottom, a latch attached to the receptacle and engaging the swinging bottom to hold the same closed, a latch releasing device supported in relation to the receptacle to engage the latch to release it from holding engagement with the swinging bottom, a crane provided with means for suspending the receptacle from the crane, a bail attached to the receptacle, and a member attached to the bail and disposed in relation to the overhanging arm of the crane to engage with portions of the crane to sustain the receptacle in either of two positions to present the latch in operative relation to the releasing device.

4. A mail deliverer, comprising a mail holding receptacle provided with a swinging bottom, a swinging latch attached to the receptacle and engaging the bottom to hold the same closed, a car formed with an opening in its roof to receive mail discharged from the receptacle, and a device for releasing the latch of the receptacle, said de-

vice comprising a swinging arm attached to the car roof at one end of the opening therein and normally resting in a lowered position on the car top, and means connected with said arm and extending into the car for raising the arm into position to engage the receptacle latch, said arm being suspended in its raised position so as to drop by gravity when released.

5. A mail deliverer comprising a mail holding receptacle provided with a swinging bottom, a latch attached to the receptacle for holding the bottom closed, a releasing device positioned to engage the latch to release the same when the bottom of the receptacle is to be opened, means for supporting the receptacle and moving it into position for delivering mail therefrom, and means for securing the receptacle in different adjusted positions to present its latch in operative relation to said releasing device.

1,299,868. COMBINED I-BEAM AND RAIL-CLAMP. CLARENCE G. A. STEINHEISER, Oil City, Pa. Filed Mar. 8, 1918. Serial No. 221,124. 4 Claims. (Cl. 189—35.)



1. In combination, an I-beam, a rail engaging thereon, a clamping plate, one end of the plate having means extending under the top flange of the I-beam, the other end of the clamping plate having an under protruding hook underlying and spaced from the bottom of the opposite part of the top flange of the I-beam, said hook portion having an adjoining recess V-shaped in cross section, a key engaging said recess and underlying the top flange of the I-beam, means to prevent movement of the key in either direction, said clamping plate having means on each of its opposite edges to overlie the base of the rail to hold the rail in position.

2. In combination, an I-beam, a rail engaging thereon, a clamping plate, one end of the plate having means extending under the top flange of the I-beam, the other end of the clamping plate having an under protruding hook underlying and spaced from the bottom of the opposite part of the top flange of the I-beam, said hook portion having an adjoining recess V-shaped in cross section, a key engaging said recess and underlying the top flange of the I-beam, one end of the key having a shoulder to engage one edge portion of the clamping plate to prevent movement of the key in one direction, a cotter pin engaging the other end of the key in the path of the opposite edge part of the plate to prevent movement of the key in the opposite direction, said clamping plate having means on each of its opposite edges to overlie the base of the rail to hold the rail in position, and means for holding the plate against movement on the I-beam.

3. In combination, an I-beam, a rail engaging thereon, interchangeable and reversible clamping plates on the I-beam, one on each side of the rail to hold the same in place, means carried on either edge of each plate to overlie the base of the rail, means to prevent movement of the plate longitudinally of the I-beam, a hook at one end of the plate to underlie one edge of the flange of the I-beam, and locking means for the other end of the plate.

1,299,869. GUN-DESTROYING MEANS. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed June 14, 1918. Serial No. 240,020. 7 Claims. (Cl. 102—26.)



1. A container adapted to be placed in a gun, a charge of inflammable material in said container adapted to burn with sufficient heat when ignited, to destroy the gun.

1,299,870. PLANT-PROTECTOR. JOHN J. STEVENSON, Muskegon, Mich., assignor of one-half to A. M. Larsen, Muskegon, Mich. Filed Sept. 5, 1918. Serial No. 252,798. 1 Claim. (Cl. 47—22.)



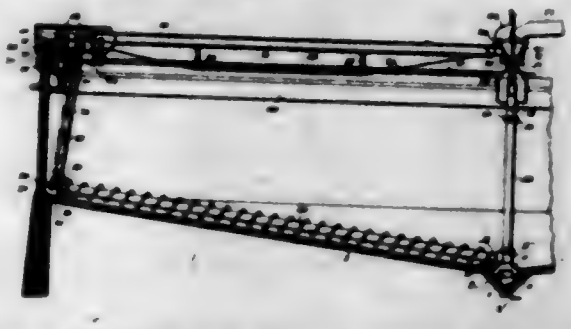
A protecting shield for the stems or stalks of plants consisting of a one piece sheet of flexible material provided with a plurality of longitudinally extending slits at one end thereof, extending parallel to each other a short distance of the length of said sheet of material to thereby form tongues at the end of said sheet of material, said sheet being bent into tubular form to surround the stem or stalk to be protected, and said tongues bent radially outwardly and downwardly from the cylindrical body portion of the tube so formed, substantially as and for the purpose set forth.

1,299,871. UPHOLSTERY SPRING CONSTRUCTION. CLEMENT R. STICKNEY, Detroit, Mich. Filed Feb. 10, 1919. Serial No. 275,991. 9 Claims. (Cl. 155—25.)



1. In an upholstery spring construction, a pair of wires in transverse relation, a main loop formed in one member having a throat into which the other member may be forced laterally into position in the loop, and a guard loop or bend formed in this first member in such relation to the main loop that it permits entrance of the second member by lateral movement into the main loop and locks the second member against withdrawal by lateral movement from the loop, the second member interlocking with the first member to prevent longitudinal movement of the second member.

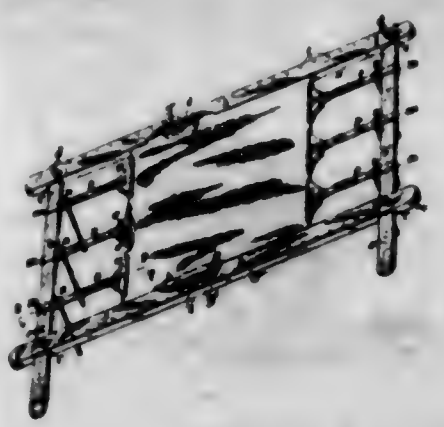
1,299,872. APPARATUS FOR THICKENING AND SEPARATING SOLIDS FROM LIQUIDS. JOHN A. TRAYLOR, Salt Lake City, Utah. Filed Sept. 21, 1917. Serial No. 192,598. 4 Claims. (Cl. 214—17.)



1. The combination with a screw conveyer, of a base and a block rotatably mounted thereon, a bearing removably

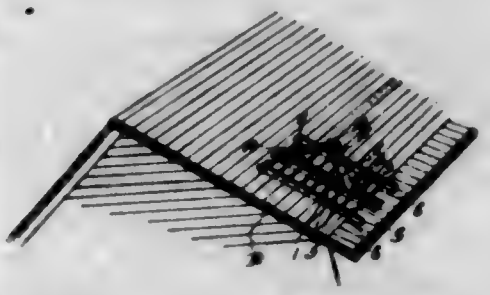
mounted in said block in which the inner end of said conveyer is mounted, depending means for supporting the outer end of the conveyer, mechanism carried by the depending means for revolving said conveyer around the base, and means connected with the outer end of the conveyer and operated by said mechanism for rotating said conveyer on its axis simultaneously with its revolutions around the base.

1,299,873. FRAME FOR THE MANUFACTURE OF EMBROIDERY. RUDOLPH O. TEUBE, Murray Hill Park, N. J. Filed Nov. 29, 1918. Serial No. 264,595. 1 Claim. (Cl. 45—24.)



A frame for stretching fabrics comprising two main bars and two side bars, the main bars being provided each with a row of prongs for securing the fabric thereto, and one of the main bars being adjustably connected to the ends of the two side bars; short sections of bars also provided each with a row of prongs for securing the fabric thereto, hooks fitted to the side bars, buckles connected to the hooks, and straps connecting the short sections of bars with the buckles; substantially as herein shown and described.

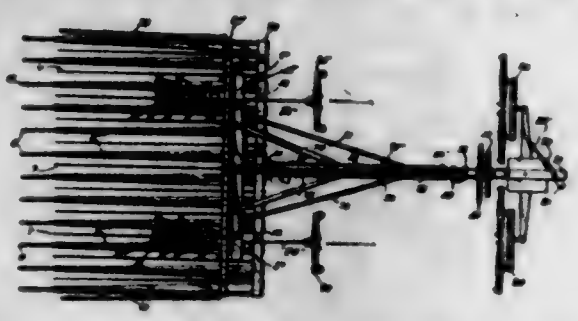
1,299,874. SHINGLING-BRACKET. ALPHA D. TUTTLE, West Barrington, N. H. Filed Mar. 2, 1918. Serial No. 220,066. 1 Claim. (Cl. 20—86.)



The herein described shingling bracket comprising four parallel bars whereof the innermost are disposed more closely together than the others, a series of transverse rungs extending through all bars, spurs depending from the lower faces of the outermost bars, an arm pivoted at its upper end on the uppermost rung, a brace forked at its upper end and passing astride and pivoted to the lower end of the arm, and a reduced extension at the lower end of said brace producing shoulders to bear on the faces of the intermediate bars and a spur at its extremity of a length to project below the lower faces of said bars when the brace stands at a considerable angle thereto, and undercut so as not to project below said faces at other times.

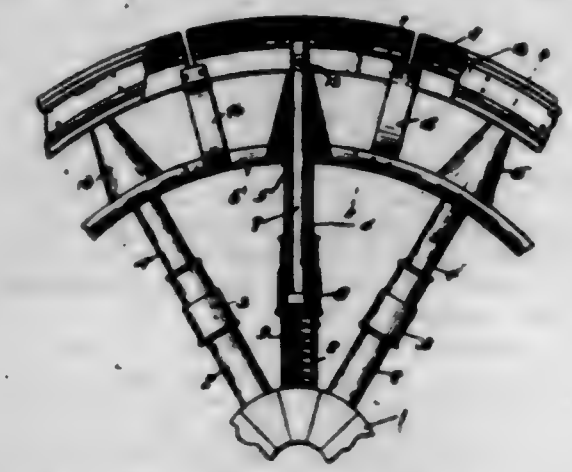
1,299,875. SHOCK AND SHEAF CARRIER. HENRY ARTHUR UNDERWOOD, Grand Forks, N. D. Filed Feb. 4, 1915. Serial No. 6,121. 6 Claims. (Cl. 56—96.)

1. A shock and sheaf carrying machine comprising a draft frame having a rear carrying wheel, a rake pivotally connected with the forward portion of said frame, forward carrying wheels, yokes mounted for oscillation on the hubs of said forward carrying wheels, brackets mounted on said rake and eccentrically mounted on said yokes, and mecha-



nism mounted on said draft frame for raising and lowering said yokes and mechanism for tilting said rake on said draft frame.

1,299,876. RESILIENT WHEEL. CORNELIUS VAN NOORT and FRANK VIGGER, Paterson, N. J. Filed July 10, 1917. Serial No. 179,754. 1 Claim. (Cl. 152—30.)



A resilient wheel comprising a felly having circumferentially spaced openings and equipped with cylindrical spokes, plunger rods extended through the openings in the felly and having their inner ends resiliently supported in the said cylindrical spokes, a rim section attached to the outer end of each plunger rod, each rim section having flanges fixed to opposite sides of the plunger rod, a tapered resilient element embracing each plunger rod at the extended end thereof between the felly and the said flanges, the terminals of the said rim sections being slightly spaced apart, and curved spring elements connecting the ends of the rim sections together and fixed to the said felly to prevent excessive tilting movement of the said rim sections on the ends of the said plunger rods.

1,299,877. UMBRELLA. THOMAS VERDUGO, Monterey, Calif., assignor of one-fourth to William H. Estabrook, Monterey, Calif. Filed July 31, 1918. Serial No. 247,622. 4 Claims. (Cl. 135—26.)

1. In an umbrella, the combination of a staff, a runner slidable on said staff, supporting ribs foldably mounted upon said staff, braces connected to said supporting ribs and to said runner, whereby as the runner is shifted the supporting ribs may be moved to an extended or closed position, a movable tip carried by said staff, and latching means associated with said tip for engaging said runner and holding the same in a set position when the supporting ribs are folded to a collapsed position, thus holding the device inoperative.

2. In an umbrella, the combination of a staff, a runner movable upon said staff, supporting ribs foldably mounted upon said staff, braces connected to the supporting ribs and to said runner, a spring pressed tip carried by said staff, an engaging means carried by said tip for releasably engaging said runner for holding the same in a set position, thus retaining the supporting ribs in a collapsed inoperative position, and said tip being capable

of being shifted to cause said means to disengage the runner and allow the same to be moved when the ribs are to be moved to an operative position.



3. In an umbrella, the combination of a staff, a runner mounted upon said staff, supporting ribs foldably mounted upon said staff, braces connected to said supporting ribs and said runner, a tip carried by said staff, a finger extending from the inner end of said tip and having a head thereon, said head extending from the staff to releasably engage the runner and hold the same in a set position, whereby the ribs will be held in an inoperative folded position, a block carried within the staff and engaging said head, whereby as said tip moves the head upon the block, the head will be shifted to release the runner, thus allowing said rib to be moved to an extended operative position.

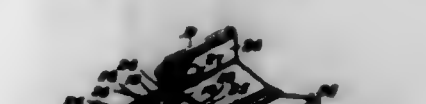
4. In an umbrella, the combination of a staff, a runner movable upon said staff, supporting ribs foldably mounted upon said staff, braces connected to said ribs and said runner, said staff having a pair of spaced apertured septa carried therein, a tip carried by the end of the staff and projecting through said septa, a spring positioned between the septa and bearing upon one septum and connected to said tip for normally urging the same in one direction, a finger extending from the inner end of said tip and having a head thereon, said head having a beveled surface, a block carried within the staff and having a beveled surface engaging the beveled surface of said head, said head extending from said staff to releasably engage said runner to hold the ribs in a folded inoperative position, although said tip may be forced inwardly against the tension of said spring, thus causing the head to ride upon the block and be retracted from engagement with the runner, thus allowing the runner to move and consequently allow the ribs to move to an operative position.

1,299,878. METAL BRIQUET. FELIX A. VOGEL, New York, N. Y., assignor to General Briquetting Company, New York, N. Y., a Corporation of Maine. Filed Oct. 26, 1918. Serial No. 259,805. 3 Claims. (Cl. 148—12.)

3. In the art of preparing metal briquets, that improvement which consists in a treatment of brittle or stiff metal waste, such as turnings or borings, whereby dirt and foreign substances are destroyed and the cutting oil removed therefrom and the metal made available for briqueting, said treatment comprising the subjection of the metal particles in the brittle state to size-reducing crushing and then subjecting the pieces thus produced to an annealing temperature followed by cooling of a non-tempering character preparatory to the introduction of the metal into the briqueting press.

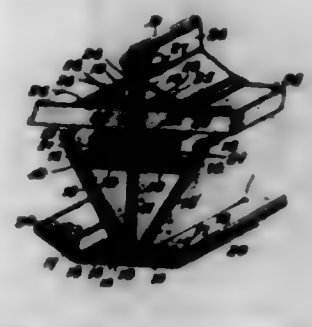
1,299,879. PAD OR POT SLEEPER FOR RAILWAY-TRACKS. JOAH HAIGH WALKER, Old Charlton, England. Filed Jan. 6, 1919. Serial No. 269,844. 1 Claim. (Cl. 238—3.)

A railway sleeper comprising spaced pads having their undersides inclined downwardly toward the center of the track and relatively to the surfaces supporting the rails, an intervening strut located between said pads, the inner



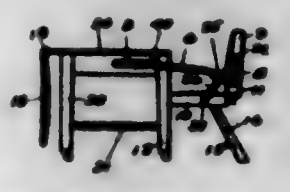
ends of the pads and the outer ends of the strut being provided with T-shaped slots and H-shaped dowels located in said slots and connecting the pads and strut.

1,299,880. SKYLIGHT CONSTRUCTION. MAX WALTER, Washington, D. C. Filed June 4, 1917. Serial No. 172,764. 6 Claims. (Cl. 109—16.)



1. In a skylight or glazed structure, supports, cushions resting on said supports formed of a mass of soft metal fibers of suitable length arranged in intermingled relation, and glass plates resting on said cushions.

1,299,881. CONVERTIBLE CHAIR. RUDOLPH WALTER, Cleveland, Ohio. Filed Dec. 26, 1918. Serial No. 268,274. 4 Claims. (Cl. 155—6.)



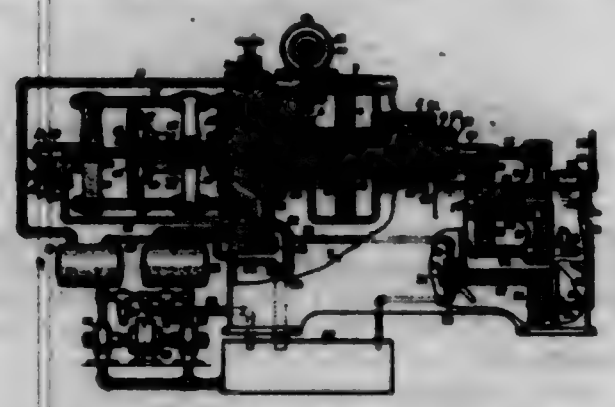
1. A convertible chair comprising a main seat frame and legs, and a back formed in upper and lower sections hinged together, the lower section having a sliding pivot connection with the rear legs, whereby it may be swung down beside said legs to form a lower seat, and supporting connections between the said seat frame and the back sections.

1,299,882. BAND-SECURING DEVICE. ALEXANDER L. WARD, New York, N. Y. Filed June 29, 1918. Serial No. 242,581. 8 Claims. (Cl. 24—16.)



5. In a band securing device, the combination of a frame comprising a rectangular body surrounding a transverse slot, with longitudinal extensions of less width than said body, said extensions having prongs extending upwardly therefrom, a pair of aligned flexible band ends extended through said slot and bent back over said extensions, the bent back portions having openings through which said prongs extend, and fastening means comprising flexible straps bent around said extensions and the overlapped portions of said band ends, the edges of said straps resting against exterior surfaces of said body, and said straps having openings into which said prongs extend.

1,299,893. FLUID-OPERATED LATHE. HENRY E. WARNER, Ashland, Mass., assignor to The Lombard Governor Company, Ashland, Mass., a Corporation of New Jersey. Filed Oct. 29, 1915. Serial No. 58,680. 20 Claims. (Cl. 29—42.)



2. In a machine of the character described, in combination, a hollow spindle axially movable, means for moving said spindle axially, a chuck extended in said hollow spindle and bodily movable therein, and fluid-actuated means movable with said spindle in the axial movement of the latter and connected with said chuck to effect movement of the latter within the hollow spindle in response to fluid under pressure.

1,299,894. SEWER. HERMAN R. WEEKS, Red Wing, Minn. Filed Oct. 16, 1916. Serial No. 125,800. 2 Claims. (Cl. 72—51.)



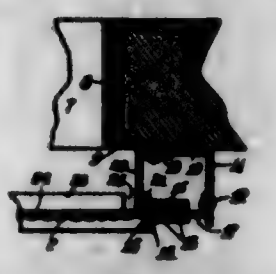
1. A curved hollow block comprising two oppositely disposed concentric segmental walls, an outwardly curved wall connecting said segmental walls at each side of the block and positioned a short distance from the edges of said segmental walls and inwardly extending acute ridges on the projecting portions of said segmental walls adjacent each of said outwardly curved walls to form dovetailed recesses in conjunction with said curved walls.

1,299,895. SOFA-BED. LOUIS C. WESTPHAL, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed July 18, 1914. Serial No. 851,733. 1 Claim. (Cl. 5—51.)



In a structure of the character set forth, the combination with a frame, of a forwardly-turning seat, means tending to turn said seat to the open position, a firmly-mounted rear back-section, a front back-section pivotally supported at its upper portion, a spring interposed between said back-sections and adapted to move the front back-section to the seat-locking position, and flexible connecting-means between the lower portions of the back-sections serving to limit forward movement of the lower portion of the front back-section.

1,299,896. VERTICALLY-SLIDING DOOR FOR ELEVATOR-SHAFTS. BENJAMIN WEELER, Brooklyn, N. Y., assignor to The Peelle Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 9, 1915. Serial No. 66,006. 6 Claims. (Cl. 189—46.)



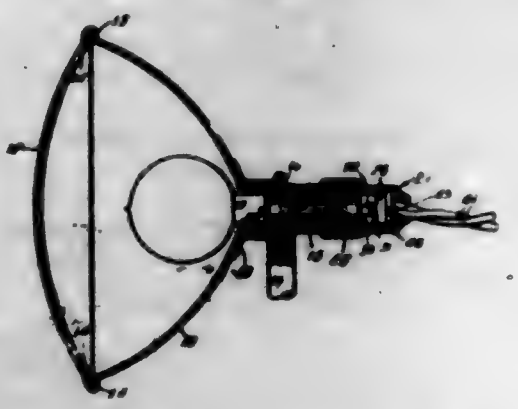
1. The combination with a door comprising an upper and a lower section, both movable vertically in the same direction but in parallel planes at a door opening, of vertical guides at opposite sides of the door opening, guide members carried by said door sections respectively coöperating with said guides, and plates projecting from the wall adjacent each side of said opening, into close proximity to the side frames of said lower section, said plate being of a height to be engaged by the upper section when the door is closed, whereby when the door is closed, the gaps between the lower section and below the upper section, and the wall adjacent the door opening will be substantially closed.

1,299,897. INDEX. GUSTINE S. WHITE, Scranton, Pa. Filed Nov. 16, 1917. Serial No. 202,811. 2 Claims. (Cl. 283—36.)



1. In a closed index, all variations of a single surname arranged in a column in dictionary order, a group of all of said variations arranged in a second column and adjacent to one of the variations in the first column, and a cross reference, adjacent to each of the other variations in the first column, to the variation with which said group is associated.

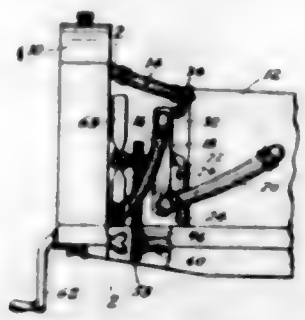
1,299,898. ELECTRIC LAMP. RALPH E. WILLIAMS, Santa Ana, Calif. Filed May 20, 1918. Serial No. 235,481. 9 Claims. (Cl. 240—41.)



1. In combination, an imperforate sleeve, a reflector mounted on one end of the sleeve with a water-proof joint between the reflector and sleeve, switch means con-

tained within the sleeve, and means for operating the switch means embodying a cap fitting completely over the end of the sleeve.

1,299,889. COOLING DEVICE FOR INTERNAL-COMBUSTION ENGINES. GUY L. WILLITS, Minneapolis, Minn. Filed May 31, 1918. Serial No. 237,447. 3 Claims. (Cl. 123—171.)

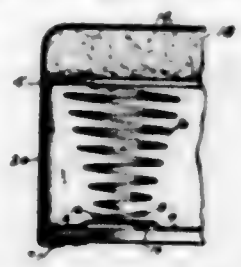


1. In combination with an internal combustion engine and a radiator, a gear pump comprising two intermeshing gears of unequal size, means for driving the larger of said gears from the engine, a fan positioned in proximity to the radiator, and means for driving said fan from the smaller of said gears.

2. In combination with an internal combustion engine and a radiator, a pump casing, a pivotal mounting for said casing, a gear pump in said casing comprising two intermeshing gears, shafts to which said gears are respectively secured, flexible means for driving one of said shafts from the engine, a fan secured to the other of said shafts in proximity to the radiator, said fan shaft being located between said pivotal mounting and the other of said shafts, and means whereby said casing may be adjusted around said pivotal mounting to tighten said flexible driving means without disadvantageously changing the position of said fan.

3. In combination with an internal combustion engine and a radiator, a pump casing pivotally mounted on the front of the engine, a gear pump in said casing comprising two intermeshing gears of unequal size, shafts mounted in said casing to which said gears are respectively secured, driving connections between the shaft of the larger gear and the engine shaft, a fan secured to the shaft of the smaller gear in proximity to the radiator, a pipe leading from the radiator to said casing, a pipe leading from said casing to the engine, and a pipe leading from the engine to the radiator.

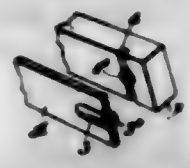
1,299,890. UPHOLSTERY SPRING CONSTRUCTION. LEONARD A. YOUNG, Detroit, Mich. Filed Feb. 10, 1919. Serial No. 276,225. 12 Claims. (Cl. 155—25.)



1. In an upholstery spring construction a base formed of resilient strips, means securing the strips along the end margins thereof to form a closed seat bottom, springs mounted on the base, upholstery on the springs and a cover for the upholstery having a depending apron secured along the margin thereof to the base.

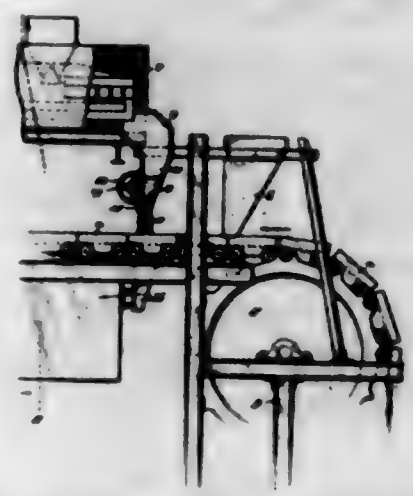
1,299,891. KNIFE-BLADE SWITCH. FREDRICK B. ADAM, St. Louis, Mo., assignor to Frank Adam Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 29, 1918. Serial No. 231,370. 5 Claims. (Cl. 175—282.)

1. A knife blade switch, comprising a blade provided at its handle end with laterally-expanded portions that extend longitudinally of the blade intermediate the edges of the blade, a cross bar or handle, and a screw or similar



device extending through the cross bar or handle and tapped into said laterally-expanded portions.

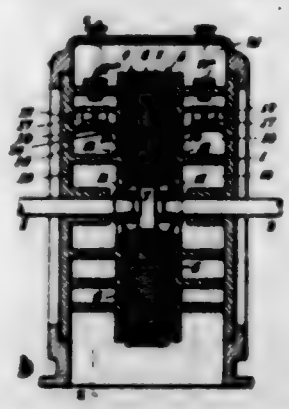
1,299,892. SINTERING IGNITION PROCESS. CHARLES W. ADAMS, Jr., Murray, Utah, assignor to American Smelting & Refining Co., a Corporation of New Jersey. Filed Jan. 19, 1917. Serial No. 143,236. 4 Claims. (Cl. 266—21.)



1. In the art of sintering ores, the process which consists in spreading a uniformly thick layer of red hot ore in direct physical contact with the top of a charge of the ore to be sintered and subjecting the layer and charge to the action of a downwardly directed current of air passed through the same.

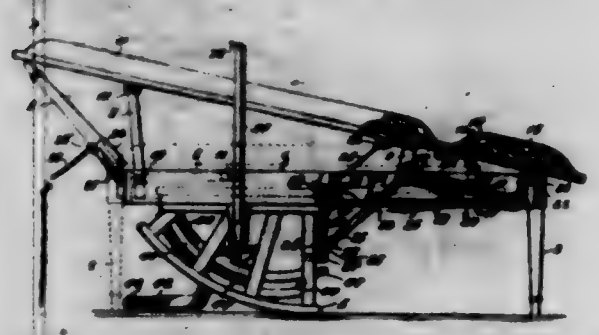
4. In the art of sintering ore containing sulfur, the process which consists in depositing on top of a layer of the ore, a layer of red hot ore having a temperature sufficiently high to quietly ignite the charge and at a temperature sufficiently low so as to distil only a relatively small amount of elemental sulfur from the ore and subjecting the ignited ore to a down draft of air.

1,299,893. RADIAL TURBINE OF THE DOUBLE ROTARY TYPE. THURE ARMÉEN, Finspong, Sweden, assignor, by mesne assignments, to Aktiebolaget Ljungstroms Angturbin, Stockholm, Sweden. Filed Dec. 27, 1918. Serial No. 268,573. 3 Claims. (Cl. 60—97.)



1. A double rotary turbine comprising a radial blade system, a packing device fastened to a turbine disk and dividing said blade system into two divisions, and a chamber provided with a tapping device and connected to said divisions on each side of said packing device, so as to allow the driving fluid to pass from one division to the other through said chamber.

1,299,894. TILTING TABLE. GUSTAV ANDERSON, New York, N. Y., assignor to William West, New York, N. Y. Filed Dec. 12, 1917. Serial No. 206,868. 42 Claims. (Cl. 45—50.)



1. In a device of the character described, a frame, a table movable thereon, means comprising a rocker for supporting the table in a tiltable position, said rocker being laterally adjustable to and from an operative supporting position, latching means independent of the rocker for locking said rocker to its operative position, and means operated upon the movement of the table relative to the frame to shift said latching means to and from its locking position.

11. In a device of the character described, a frame having means for supporting it in both stationary and tiltable positions, a table adapted to rest thereon, and connections between the table and frame for causing the table to assume an inclined position relative to the frame when raised from the latter, and means for holding the table in such position relative to the frame comprising a supplemental table section.

19. In a device of the character described, a table, supporting means therefor comprising two floor members one of which is adjustable relative to the other in a direction to permit downward tilting of the adjacent end of the table under the action of gravity, and a guide member carried by the table co-acting with said adjustable floor member for controlling the tilting movement of the table.

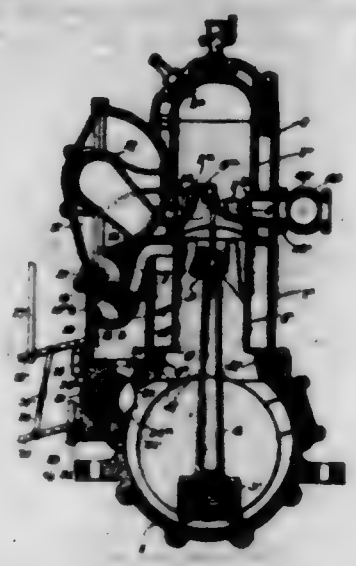
23. In a device of the character described, a table, supporting means therefor comprising a rocker and a guide both connected with the table, and a floor runner bodily adjustable longitudinally of the rocker and co-acting with the guide for controlling the tilting of the table.

33. In a device of the character described, a table, supporting means therefor comprising two members one of which is adjustable relative to the other and adapted to rest on the floor, means for moving said floor member in one direction to effect an upward tilting of the table, means for locking said floor member in adjusted position, means for releasing said locking means to permit of a reverse movement of the floor member and a consequent downward tilting of the table under the action of gravity, and means for rendering said releasing means either operative or inoperative.

1,299,895. INTERNAL-COMBUSTION ENGINE. GUSTAV V. ANDERSON, Philadelphia, Pa., assignor of one-half to William F. Fischer, Philadelphia, Pa. Filed May 1, 1918. Serial No. 231,811. 84 Claims. (Cl. 123—71.)

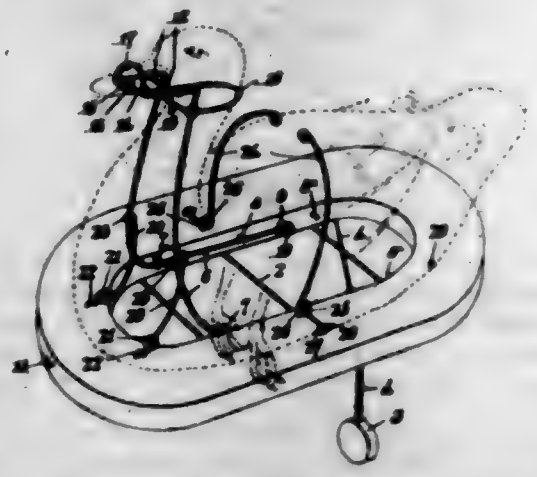
2. In an internal combustion engine, the combination with a cylinder having inlet and exhaust passages and a piston in said cylinder adapted for closing the communications of said passages therewith, of means for forcing air, gas and air through said inlet passage prior to its closure by said piston on its compression stroke.

4. In an internal combustion engine, the combination with a cylinder having inlet and exhaust passages and a piston in said cylinder adapted for cutting off its communication with said passages, of an oscillatory valve adapted for controlling the admission of air to said inlet, an oscillatory valve adapted for controlling the admission of gas to said inlet, and means for operating said valves in synchronous relation.



6. In an internal combustion engine, the combination with an explosion chamber, of an air compressor chamber, and a gas compressor chamber having connections communicating therewith, a piston adapted for pumping air and gas through said compressor chambers to said explosion chamber, valve mechanism comprising an oscillatory valve for controlling the admission of air from said air compressor chamber to said explosion chamber, valve mechanism comprising an oscillatory valve for controlling the admission of gas from said gas compressor chamber to said explosion chamber, and means whereby said piston operates said valve mechanisms in synchronous relation.

1,299,896. DEAD-BIRD-DECOY HOLDER. HJALMAR A. ANDMASON, Garfield township, Sioux county, Iowa. Filed Nov. 22, 1918. Serial No. 263,787. 9 Claims. (Cl. 43—2.)

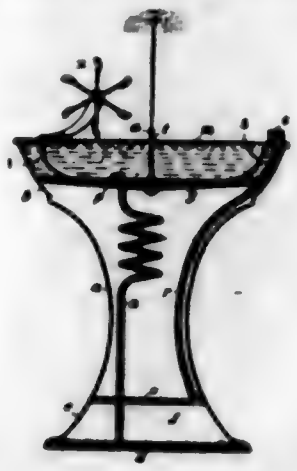


1. In a dead bird decoy holder, the combination with a float, of a neck and head holder which is slidably adjustable as an entirety both lengthwise of the float and upwardly in relation thereto to different positions to accommodate birds of different sizes and species.

1,299,897. HYDRAULIC TOY. ERNST ARNOLD, Reading, Pa. Filed Apr. 4, 1916. Serial No. 88,767. 1 Claim. (Cl. 137—107.)

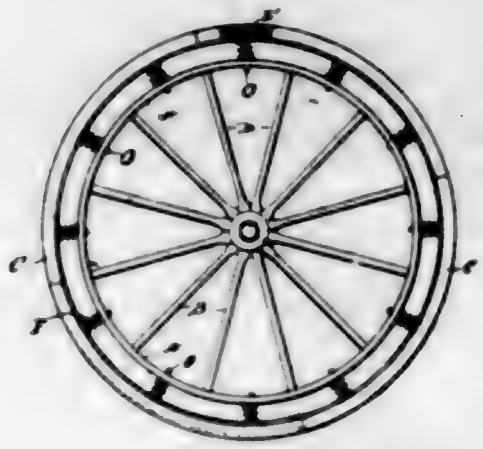
A hydraulic toy comprising a casing, a chamber in the lower portion of the casing, a chamber in the upper portion of the casing, the inner wall of the latter chamber forming a basin and said chamber having in the upper wall a screw-capped filling and emptying opening and also having a central depression in its bottom wall, a discharge nozzle communicating at its lower end with the interior of said depression and extending upwardly through the basin

wall, a conduit leading upwardly from the upper portion of the lower chamber and having its eduction orifice disposed in the screw-capped filling opening of the upper chamber, a pipe leading downwardly from the bottom of the basin to the lower portion of the lower chamber and



having a coiled intermediate portion adapted to retard the passage of water from the basin to the lower chamber, and movable means for closing the induction orifice of said pipe to retain water in the basin until it is desired to bring about an operation of the toy.

1,299,898. RESILIENT WHEEL. BERNARD HARRY BERRY, Helena, Mont. Filed Apr. 1, 1918. Serial No. 225,990. 1 Claim. (Cl. 152—8.)



A resilient wheel having a rim with apertures therein one intermediate each pair of spokes, a tire with apertures therein in alinement with the apertures in said rim, and each aperture in the tire having a recess about the same, a socket member fitted within each recess, and having a central opening the wall of which is threaded, a pin provided with a head the circumference of which is threaded and adapted to engage the threaded wall of the socket member, the inner end of the head engaging the bottom of the recess, said pin passing through registering apertures in the tire and rim, and a coiled spring upon the pin intermediate the rim and said tire.

1,299,899. LAMP-BRACKET. EDWARD F. BRADBY and WILLIAM H. BRUMM, Chicago, Ill., assignors to Howe Manufacturing Company, Chicago, Ill., a Corporation. Filed Mar. 8, 1917. Serial No. 153,282. 16 Claims. (Cl. 240—57.)

14. In a lighting structure the combination of a casing, a supporting arm, a tubular post connecting the same, said post being composed of two duplicate stampings, and having peripheral enlargements acting as cone bearing seats, said casing and arm having similar seats, telescoping ferrules the ends of which bear against said seats, and springs confined within the ferrules, the ends of the post being upset to confine all the parts in operative relation, the ferrules having the triple functions of retaining the halves



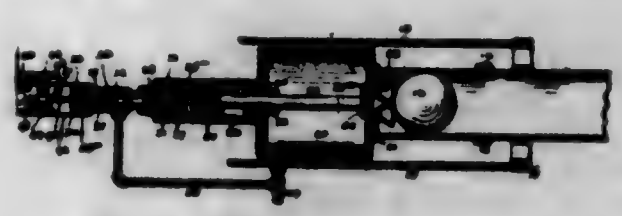
of the post in alinement, acting as friction bearings and as a housing for the springs, substantially as described.

1,299,900. COMBINED FUEL AND AIR VALVE. GROSVER F. BIRD, Troy, N. Y. Filed Dec. 28, 1917. Serial No. 209,213. 5 Claims. (Cl. 158—119.)



1. In a combined fuel and air valve mechanism, a mixer casing having diverging branches with air inlet ports through their top walls, a rotatable air valve on said casing and controlling said ports, a fuel valve discharging into said casing between said branches, and a screw connecting said air valve and fuel valve to cause them to move in unison.

1,299,901. AIR-GUN. BENJAMIN L. BLAIR, Indianapolis, Ind. Filed Apr. 13, 1917. Serial No. 161,790. 6 Claims. (Cl. 89—6.)

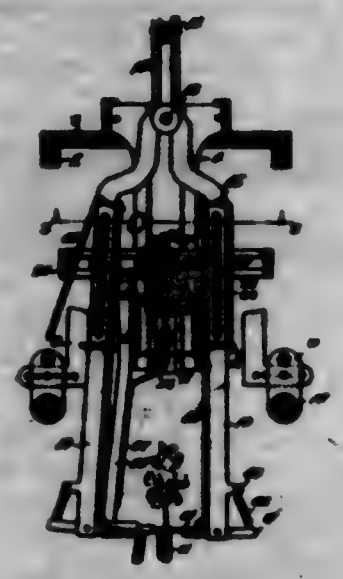


1. In an air gun, the combination of a projectile barrel having a port for the introduction of compressed air, a valve opening and closing the port, a piston operatively connected with the valve, means for supplying compressed air to both sides of the piston to hold its connected valve closed, the means on the side remote from the valve having a port to atmosphere, and means to open and close said last port and simultaneously close and open the compressed air supply against the rear side of the piston comprising a manually rotated cam and a stem projecting into the path of the cam.

1,299,902. HOEING AND CHOPPING APPARATUS. RICHARD J. BLANKENSTEIN, Cleburne, Tex., assignor of one-fourth to William H. Baade, Waco, Tex. Filed July 1, 1918. Serial No. 242,740. 6 Claims. (Cl. 97—45.)

1. In an apparatus of the character described, a supporting frame, operating members movable transversely and vertically of the frame, means for moving the members vertically, means for moving the members trans-

versely operating at the same time as the first named means, a common means of operation for the moving means normally inoperative, and an automatic release for putting the common operating means in motion, and tools on the operating members.



3. In an apparatus of the character described, a supporting frame, vertically and transversely moving operating members mounted in the frame, and means for moving said members, in combination with rockers mounted on the lower ends of the members, hose carried by the rockers normally above the ground, means for holding the rockers elevated, automatically tripped devices carried by the members for releasing the rocker holding means, and springs attached to the rockers for swinging the same when released.

4. In an apparatus of the character described, a supporting frame, swinging operating members mounted in the frame, and hose mounted on the lower ends of the members, in combination with scroll gears connected separately with each member for operating one of the members in advance of the other.

1,299,982. DEMOUNTABLE-RIM-SECURING DEVICE FOR VEHICLE-WHEELS. WILLIAM M. BROWN, Detroit, Mich., assignor to Kelsey Wheel Company, Inc., Detroit, Mich., a Corporation of New York. Filed May 11, 1916. Serial No. 96,772. 2 Claims. (Cl. 152—21.)



1. The combination with a wheel felly, having a fixed metallic rim provided with an inclined bearing on one side thereof and an inwardly-extending flange on the opposite side thereof, of a demountable rim having beads on its edges and adapted to engage the inclined bearing on the fixed rim, and clamping lugs adjustably secured to the wheel felly and embracing the outer and inner edges of the inwardly-extending flange and having bearings adapted to embrace the head at one edge of the rim.

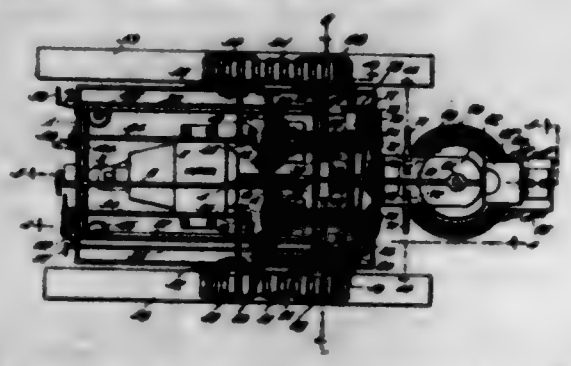
1,299,984. FUEL-SUPPLY VALVE FOR CARBURETERS. WILLIAM J. BOWMAN, Chico, Calif. Filed May 26, 1917. Serial No. 171,102. 8 Claims. (Cl. 277—26.)

1. In combination two fluid supplies, a main valve provided with ports for establishing communication with either and both of the fluid supplies at the will of the operator, and an outlet port leading from the main valve; a secondary valve adapted to regulate said port and adjustable independently of the main valve, and means for locking the secondary valve when adjusted relatively to the main valve, the movement of the main valve varying the relative adjustment of the said secondary valve, substantially as described.



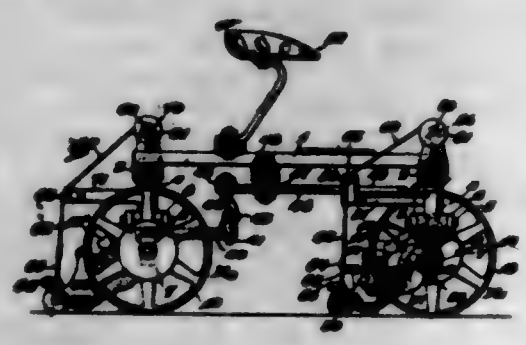
5. In combination, two float chambers, a valve chamber communicating with both float chambers, a main valve in said valve chamber controlling both communications, and a secondary valve within the main valve for controlling the flow of fuel through the main valve, said secondary valve being adjustable independently of the main valve for regulating purposes; the operation of the main valve varying the relative adjustment of the secondary valve.

1,299,995. MINING-MACHINE. JAMES A. BRANTLEY, Sand Springs, Okla. Filed Feb. 2, 1917. Serial No. 146,414. 12 Claims. (Cl. 262—29.)



1. In a mining machine, the combination of a body, a revoluble frame at the front of the body, cutting mechanism carried by said frame, means for actuating said cutting mechanism, means for revolving said frame, means extending to the rear of the body for controlling said revolving means, and means for locking the frame against revolving; the latter means working through the means for controlling the revolving means.

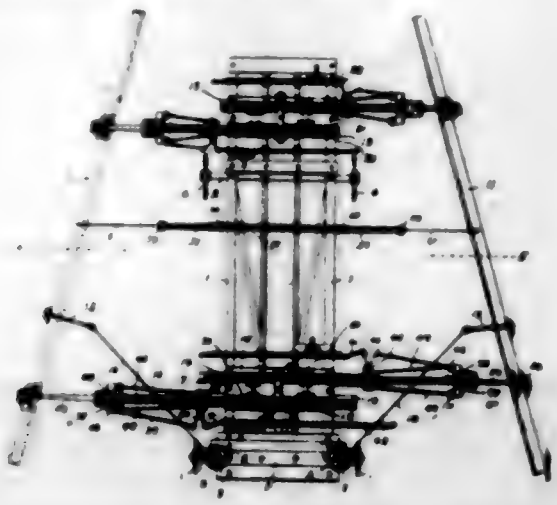
1,299,996. GANG-MOWER. WILLIAM F. H. BRAUN, Philadelphia, Pa., assignor to Pennsylvania Lawn Mower Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1916. Serial No. 94,097. 21 Claims. (Cl. 56—7.)



1. A gang mower comprising a frame, a plurality of individual lawn mowers having lawn engaging wheels and cutters driven thereby, a vertical pivot for each of said individual mowers connecting the same to said frame

for movement about a vertical axis, and horizontal pivots extending in the direction of movement of said frame upon which said individual mowers partake of transverse pivotal movement.

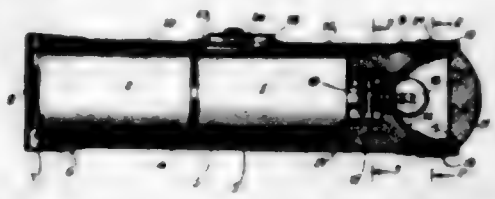
1,299,907. ROAD-GRADING MACHINE. FRANK A. BRUSEWITZ, Duluth, Minn. Filed Oct. 12, 1918. Serial No. 257,828. 7 Claims. (Cl. 37—7.)



1. The combination with a road grader of the character described comprising a chassis and grading blades carried upon either side of the chassis, of a single wheeled support intermediate of each end of each blade and the chassis and independently operative means whereby the blades may be adjusted vertically upon the intermediate supports.

7. The combination with a road grader comprising a chassis having a grading blade upon either side thereof and blade-carrying arms pivotally carried by the chassis, of laterally movable wheeled supports at either end of the chassis, means upon each support for adjustably holding one of the blade-carrying arms, means for raising and lowering the arms upon the support, means for operating the supports laterally in respect to the chassis, and independent means for raising or lowering the blades and their supports simultaneously.

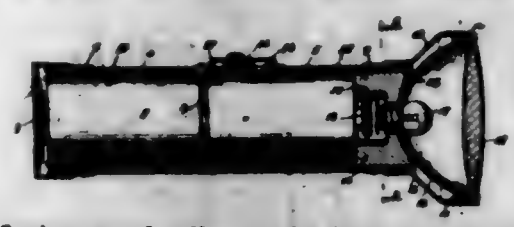
1,299,908. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis., a Corporation of Wisconsin. Filed Mar. 1, 1916. Serial No. 81,301. 18 Claims. (Cl. 240—8.5.)



1. In a tubular hand lamp, the combination of an insulating casing, a battery therein, a spring pressing against the bottom of said battery to establish electrical connection therewith, a lens and a reflector at the other end of said casing, a lamp secured in said reflector, a bumper in said casing between the battery and the reflector to receive the thrust of the battery, a spring connecting one terminal of said battery to said lamp, and means for completing the connection between said bottom spring and said lamp.

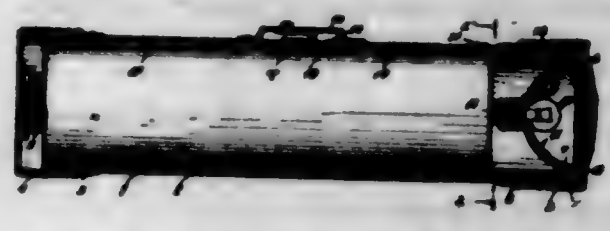
1,299,909. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis., a Corporation of Wisconsin. Original application filed Mar. 1, 1916, Serial No. 81,301. Divided and this application filed Sept. 15, 1917. Serial No. 191,549. 3 Claims. (Cl. 240—8.5.)

1. In a hand lamp, the combination of an insulating tube of fiber, a battery therein, a metal collar reinforcing the rear end of said tube, a cap secured to said collar and closing the rear end of said tube, said cap being removable to permit removal of the battery through said rear end, a spring carried by said cap and engaging the bottom of said battery and establishing electrical connection therewith and with said cap, a lamp connected to the other end of said battery, a reflector into which said lamp is threaded, said reflector receiving support from



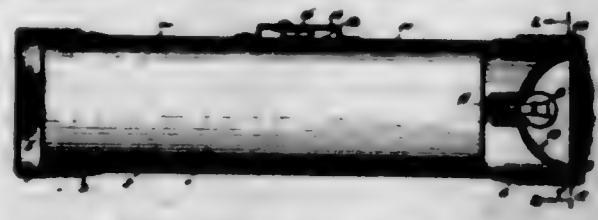
below, a flaring metal collar at the front end of said fiber tube, a lens for said lamp, a holder for said lens threaded to said flaring collar, a conductor connected with said reflector and insulated from said flaring collar and from said lens holder, a housing on said fiber tube beneath which said conductor terminates, and thumb-controlled means for electrically connecting said conductor with said end cap when the lamp is to be lighted.

1,299,910. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis., a Corporation of Wisconsin. Filed Mar. 24, 1917. Serial No. 157,203. 2 Claims. (Cl. 240—8.5.)



1. In a hand lamp, the combination of an insulating tube of fiber, a battery therein, a threaded metal collar reinforcing the rear end of said tube, a cap threaded to said collar and closing the rear end of said tube, said cap being removable to permit removal of the battery through said rear end, a spring carried by said cap and engaging the bottom of said battery and establishing electrical connection therewith and with said cap, a lamp connected to the other end of said battery, a reflector into which said lamp is threaded, a threaded metal collar reinforcing the front end of said tube, an insulating ring on which said reflector seats, a lens for said lamp seated on said reflector, a holder for said lens threaded to said front collar and clamping said reflector and its insulating ring in position, a stationary conductive strip insulated from said front collar and from said lens holder and means controllable from approximately the center of said tube for electrically connecting said end cap to said strip when the lamp is to be lighted.

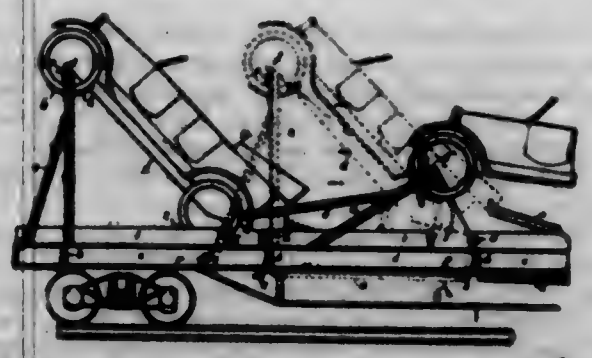
1,299,911. BATTERY HAND-LAMP. CHARLES F. BURGESS, Madison, Wis., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis., a Corporation of Wisconsin. Filed Mar. 24, 1917. Serial No. 157,204. 3 Claims. (Cl. 240—8.5.)



1. In a hand lamp, the combination of a tubular insulating casing, a battery in said casing, a detachable cap closing the rear end of said casing and by the removal of which said battery may be withdrawn through said rear

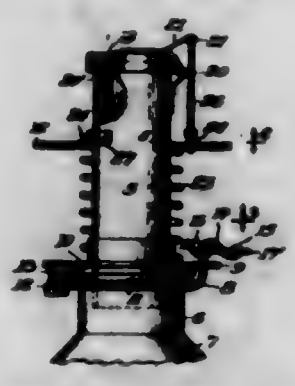
end, a spring carried by said cap and engaging the bottom of said battery and establishing electrical connection therewith, a lamp connected with the other end of said battery, a reflector wherein said lamp is seated, a lens for said lamp, a metal collar reinforcing the front end of said insulating casing and terminating short of the front edge thereof, supporting means for said lens secured to said collar and clamping said reflector in place, a conductive strip having one end hooked over the front edge of said insulating casing and contacting with said reflector, and conductive means for electrically connecting said strip with said spring when the lamp is to be lighted.

1,290,813. APPARATUS AND METHOD FOR LOADING AUTOMOBILES. SAMUEL D. BUTTERWORTH, Lansing, Mich. Filed Apr. 1, 1918. Serial No. 225,862. 8 Claims. (Cl. 214—77.)



8. In apparatus for loading automobiles, a plurality of swinging stanchions spaced apart to hold automobiles in oblique and overlapped relation, a body upon which the stanchions are pivoted, and means on the stanchions whereby when the front of an automobile is rested on said means application of power to the automobile causes the stanchions to raise and lift the front of the automobile.

1,290,912. POURING-SPOUT FOR CANS. JAMES CARMICHAEL, Chicago, Ill. Filed July 8, 1918. Serial No. 243,994. 6 Claims. (Cl. 221—22.)

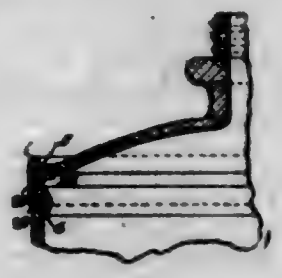


1. A pouring spout provided with a hinged lid covering its delivery end, an arm on said lid extending rearwardly of the hinge thereof, a flange-like disk slidably mounted on said spout, a link connecting said disk and said arm, and a spring urging said disk toward the delivery end of said spout.

5. A detachable pouring spout adapted to engage with the nozzle of a can or like container, and having a radial flange adapted to overlie the outer end of the nozzle, and a releasable clamp adapted to embrace the nozzle inwardly of the outer end of the latter and thereby secure said spout on said nozzle.

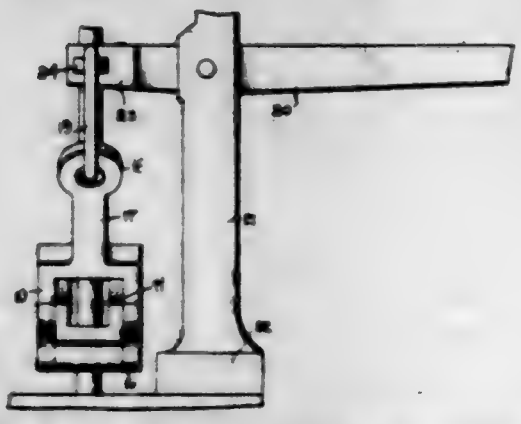
6. A detachable pouring spout adapted for engagement with the headed nozzle of a can or like container, and having a radial flange adapted to overlie the outer end of the nozzle, an annular gasket below said flange adapted to seat on the head of the nozzle, a releasable clamp comprising a pair of curved arms anchored at one end to said flange and adapted to embrace the nozzle below the head thereof, and means for drawing together the free ends of said arms to clamp them on said nozzle.

1,290,914. DISPENSING-RECEPTACLE. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Metal Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 20, 1915. Serial No. 40,845. 1 Claim. (Cl. 215—1.)



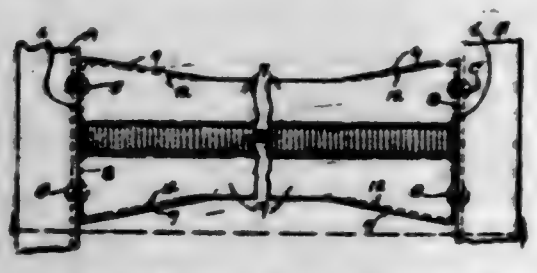
A dispensing receptacle designed to be supported in inverted position by a suitable supporting structure and comprising a body portion having a peripheral head and a neck projecting therebeyond, and a metallic channel member having its open side disposed inwardly and surrounding the body portion and embracing the head, the side of the channel member toward the neck receding inward away from the neck thereby to produce a confined supporting shoulder or ledge.

1,290,915. BOLT-EXTRACTOR. THOMAS A. CHRISTIAN, Merced Falls, Calif., assignor of one-third to Fred A. Stewart and one-third to Lemuel F. Long, Merced Falls, Calif. Filed May 20, 1918. Serial No. 235,541. 1 Claim. (Cl. 254—132.)



A bolt extractor comprising a pair of jaws, each of said jaws having a centrally disposed opening and each jaw having a relatively elongated shank extending therefrom, one of said jaws being disposed through the opening of the other jaw and being pivoted to the last named jaw and both of said jaws being formed at their lower ends with confronting inwardly extending gripping jaws, the shanks of the jaws being in divergent relation, the outer ends of the jaws being formed with eyes, links swingingly connected to said eyes, and a bifurcated lifting lever having eyes with which said links are swingingly connected.

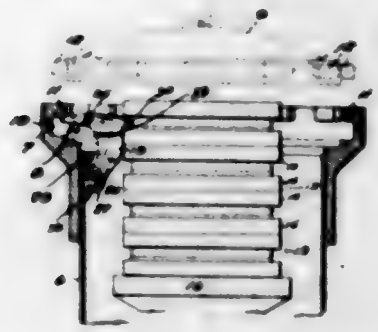
1,290,916. CARLINE. JOSEPH A. COSTELLO, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Sept. 25, 1918. Serial No. 255,545. 8 Claims. (Cl. 105—8.6.)



1. A metal carline having a body which extends longitudinally of the carline and has two laterally and out-

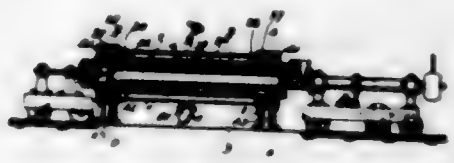
wardly projecting longitudinal flanges arranged at the top of opposite sides respectively and extending from end to end of said body and is provided at each of its ends with a flange extending transversely of the carline, said transverse flange being larger horizontally than vertically and having its central portion connecting with and projecting downwardly from the bottom of said body and having each end portion thereof extending above said central portion and below said bottom and connecting with the adjacent longitudinal flange and with the adjacent side of said body, and two brace-forming members arranged at the inner side of opposite end portions respectively of said transverse flange and facing laterally of the carline, each of said brace-forming members extending up and down the adjacent outer side edge of said transverse flange and endwise of the adjacent longitudinal flange and being integral with said flanges, and each end portion of said transverse flange being provided with a rivet-hole at a point which is above the bottom edge of the flange and below the aforesaid body.

1,299,917. MOLD-BREAKING APPARATUS. RALPH B. DAY, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Aug. 22, 1918. Serial No. 250,954. 10 Claims. (Cl. 18—2.)



1. A device for breaking apart the sections of a grooved mold in a vulcanizer, comprising a support, an arm movably mounted on said support and having a part thereof disposed in the groove of the mold, and a cam bar pivotally mounted on said arm and having one end portion thereof disposed in said groove and having the other end portion thereof bearing against a part of the vulcanizer.

1,299,918. METHOD OF AND APPARATUS FOR WATER-COOLING CENTRIFUGAL PIPE-CASTING MACHINES. DIMITRI SENSAUD DE LAVAUD, New York, N. Y. Filed Oct. 5, 1917, Serial No. 194,976. Renewed Aug. 27, 1918. Serial No. 251,693. 14 Claims. (Cl. 22—212.)



1. In a centrifugal casting machine, the combination comprising an elongated rotary mold having a length several times greater than its maximum width, a shell extending circumferentially around said mold and arranged to form a chamber for the circulation of cooling liquid extending substantially from end to end of the mold, and means for maintaining the chamber full of cooling liquid under pressure.

3. In a centrifugal casting machine, the combination comprising an elongated rotary mold having a length several times greater than its maximum width, a shell extending circumferentially around said mold and arranged to form a chamber for the circulation of cooling liquid under pressure between said mold and shell, means for maintaining the chamber full of cooling liquid under pressure and in circulation, and means for controlling the flow of liquid to maintain the mold at a substantially constant temperature.

7. In a centrifugal pipe casting machine, the combination comprising a rotary mold having a length several times greater than its maximum width, a shell extending circumferentially around said mold and arranged to form a chamber for the circulation of cooling liquid extending substantially from end to end of the mold, and means for maintaining the chamber full of cooling liquid under pressure, said cooling chamber having a thickness at least as great as the wall thickness of the pipe cast by the machine, and said means including an inlet and an outlet of such relative dimensions that the velocity of the liquid issuing from the outlet may be from ten to forty times as great as the velocity of the liquid flowing in at the inlet.

9. In the art of centrifugally casting pipe and other hollow articles, the process of cooling an elongated rotary substantially cylindrical mold during casting, which consists in confining a flow of cooling liquid under pressure in an annular sheet from end to end of the elongated mold and guiding the same in contact with the exterior thereof.

14. In the art of centrifugally casting pipe and other hollow articles, the process of cooling an elongated rotary substantially cylindrical mold during casting, which consists in confining a flow of cooling liquid in an annular sheet from end to end of the elongated mold and guiding the same in contact with the exterior thereof, while controlling the flow of liquid to maintain the mold at a substantially constant temperature.

1,299,919. WASHING-MACHINE LEVER. HERMAN C. DOMAN, Oshkosh, Wis., assignor to Sanderob-Chase Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Aug. 15, 1917. Serial No. 186,407. 2 Claims. (Cl. 74—14.)

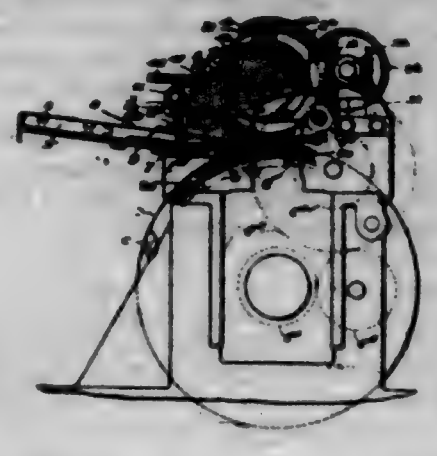


1. In a washing machine having a horizontally extending shaft provided with a rotary member having a wrist pin projecting therefrom, said machine also having a stud shaft below the horizontal shaft and a fly wheel journaled on the stud shaft and driven from the horizontal shaft, of a lever medially journaled on the wrist pin and having an elongated slot in its lower end portion through which the stud shaft extends, the upper end portion of the lever forming the handle of the lever.

1,299,920. MECHANISM FOR REGISTERING SHEETS. MICHAEL ANDREW DROSTCOSH, Dolphos, Ohio. Filed Mar. 21, 1918. Serial No. 223,758. 26 Claims. (Cl. 271—68.)

1. In combination a feed table having side gages; a tiltable frame mounted above the table; a rotatable shaft mounted in said frame; means on said frame for registering sheets against either side gage, and means for actuating said registering means from said shaft; said shaft

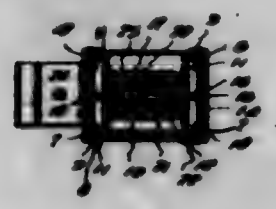
and means being movable with the frame into or out of operative position.



5. In combination a movable frame, a rotatable shaft thereon, a side registering device slidably mounted on said frame, a reciprocatory rod detachably engaged with said registering device, a reciprocatory rack bar, a cam on said shaft actuating said rack bar, and means for reciprocating said rod by said rack bar.

20. In sheet registering mechanism, the combination of a reciprocating bar adapted to underlie the sheet, a movable frame above the sheet, a reciprocating rod carried by said frame, a side registering device operated by said rod, means for oscillating said rod, and a latch finger connected with said bar and adapted to engage the said reciprocatory rod when the frame is lowered, whereby the bar is moved by and with the rod.

1,299,921. ERASER-REEL. JOHN J. DU BOIS, Detroit, Mich. Filed Aug. 16, 1918. Serial No. 250,188. 4 Claims. (Cl. 120—86.)



1. An eraser attachment for typewriting machines comprising a casing having open ends, caps for closing the open ends of the casing, a frame mounted in said casing, means carried by the caps and co-acting with the frame for preventing any loose movement of the latter with respect to said casing, a spindle mounted on said frame, a reel keyed to said spindle, and means for connecting an eraser with said reel.

1,299,922. PLASTIC COMPOSITION AND PROCESS OF MAKING SAME. GEORGE BAKER DUNBAR, Detroit, Mich. Filed July 29, 1918. Serial No. 247,157. 3 Claims. (Cl. 106—8.)

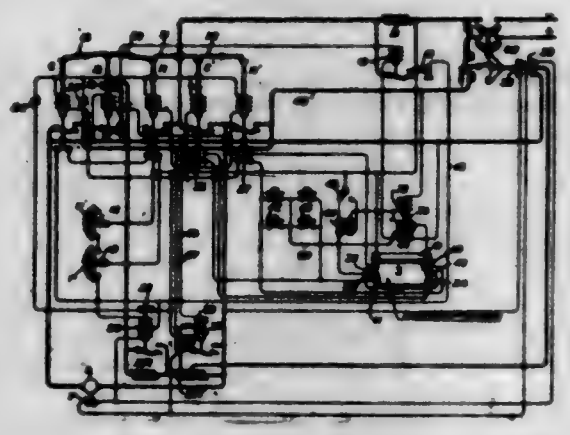
1. A plastic composition, comprising 60% resin, 5% shellac, and 12% carbon combined with 23% fibrous mineral material.

1,299,923. PENCIL-HOLDER. JAMES B. EASTON, Washington, D. C. Filed Mar. 29, 1918. Serial No. 226,587. 1 Claim. (Cl. 120—8.)



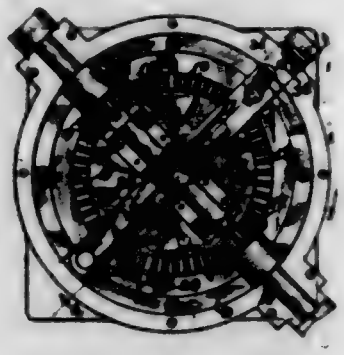
A pencil holder comprising a tubular member having a pair of diametrically arranged slots an appreciable distance from its open end, each slot extending longitudinally with the walls thereof concave to form an opening of oval shape, the parts on each side of the openings being bent inwardly to close the openings so that the part of the holder on each side of the slots will have a spring action to grip the pencil.

1,299,924. MOTOR-CONTROL SYSTEM. JOHN EATON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 23, 1915, Serial No. 23,230. Renewed Jan. 8, 1919. Serial No. 269,417. 9 Claims. (Cl. 172—239.)



1. In combination, a reversible electric motor for operating a planer or the like, a reversing switch for the motor automatically operated at the limits of travel of the planer, manually operated switches for controlling the motor for either direction of rotation and means independent of the reversing switch for changing from manual control to automatic control in either direction of rotation as desired.

1,299,925. CLUTCH-SHIFTING MECHANISM. HAROLD W. EDEN, Chicago, Ill., assignor, by mesne assignments, to Broisw-Eden Manufacturing Co., a Corporation of Delaware. Filed Sept. 13, 1915. Serial No. 50,307. 17 Claims. (Cl. 74—50.)

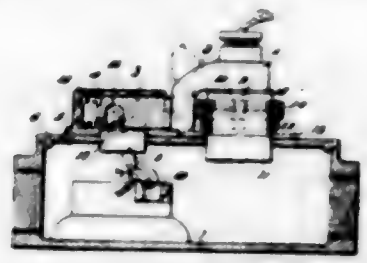


1. In a device of the class described the combination with a main gear, of idler pinions meshing therewith, a drive shaft on which said pinions are journaled, a clutch adapted to engage one of said pinions to said shaft, pivoted means adapted to shift said clutch to engage one of said pinions to said shaft, mechanism for locking the same in neutral position, and spring actuated mechanisms adapted to impel said pivoted means into an extreme position of movement when the same has been moved slightly beyond dead center position.

1,299,926. COMBINED ELECTRIC PLUG AND SWITCH. DAVID MUSGRAVE EDWARDS, London, England. Filed Sept. 27, 1917. Serial No. 193,570. 7 Claims. (Cl. 175—282.)

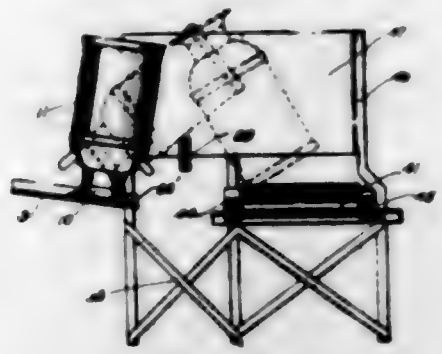
1. In combination, an electric switch, a casing for the switch, a handle operating the switch contacts and projecting through the said casing, a wall socket, a plug

adapted to engage in the said socket, a linearly sliding member engaging said handle, and a wing on said plug



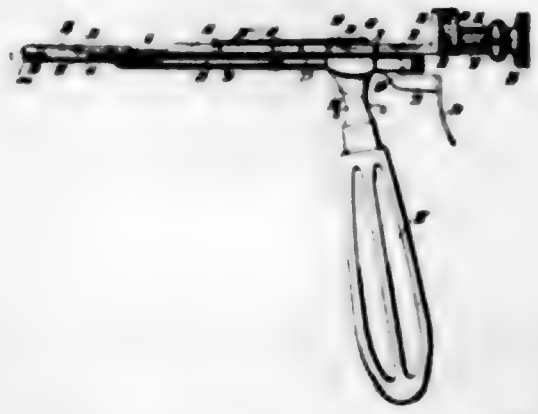
adapted on the insertion of the plug in the socket to move said sliding member to close the switch contacts.

1,299,927. CAN CLEANING AND TURNING DEVICE. FRANK PILLEY, Kansas City, Mo. Filed Jan. 17, 1918. Serial No. 212,322. 2 Claims. (Cl. 198—29.)



1. In a can cleaning device, an inclined way provided with side rails having inwardly projecting flanges to receive the top flanges of an inverted receptacle, an abutment at the end of the way and substantially in line with the floor thereof, a can tilting bar, spaced from and above the abutment, means beyond the abutment to receive the tilted cans as they pass over the can tilting bar and means for adjusting the bar with respect to the abutment.

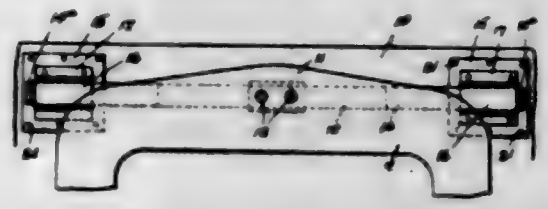
1,299,928. SURGICAL INSTRUMENT. GEORGE ERMOLD, New York, N. Y. Filed Nov. 28, 1917. Serial No. 204,341. 18 Claims. (Cl. 128—309.)



1. A surgical instrument of the character described, comprising a support, a cutting member carried by said support, a secondary coöperating member carried by said support, means for reciprocating said coöperating secondary member, and means independent of said secondary member for reciprocating said cutting member.

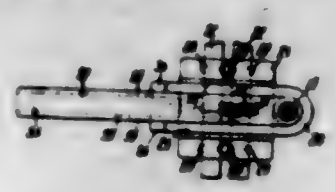
1,299,929. VESTIBULE-DIAPHRAGM BUFFER-SPRING. FRANK G. FOWLER, Altoona, Pa., assignor to Walter P. Murphy, Chicago, Ill. Filed Aug. 30, 1916. Serial No. 117,746. 3 Claims. (Cl. 105—14.)

1. The combination with the end wall and diaphragm face plate of a vestibuled railway car, of a leaf spring anchored to one of the aforesaid elements of the car with an extremity slidably engaged with the other of such elements, and confining means for the free extremity of said spring which permits said sliding movements while subjecting the spring to a strain when the diaphragm face plate is displaced from its normal position, such means comprising a housing member extending around the said extremity of the spring, a wear plate comprising a flat sheet of material, and means, capable of ready detachment, for securing the wear plate and housing member to the last mentioned element of the car.



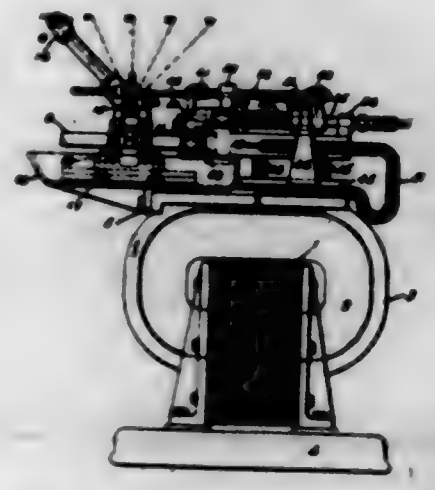
3. A device for attaching the end of a buffer spring of a vestibule diaphragm to a car, comprising a housing member adapted to extend around the extremity of the spring, and a flat wear plate to which said housing member is secured having margins surrounding said housing member, and means engaging said margins for removably securing said plate to the car end.

1,299,930. SCRAPER FOR PAPER-CALENDERING ROLLS OR THE LIKE. JOHN A. FREEMAN, East Pepperell, Mass. Filed Apr. 16, 1918. Serial No. 228,954. 7 Claims. (Cl. 92—74.)



1. In combination, a roll, a scraper extending substantially the length thereof arranged in contact with said roll, a supporting member for said scraper, and disposed substantially parallel with said roll, and means interposed between said scraper and said supporting member at predetermined distances apart throughout the length of said scraper, adapted to support said scraper.

1,299,931. METAL-HEATING DEVICE. HENRY GRIESHÖNER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 13, 1918. Serial No. 249,714. 6 Claims. (Cl. 219—11.)

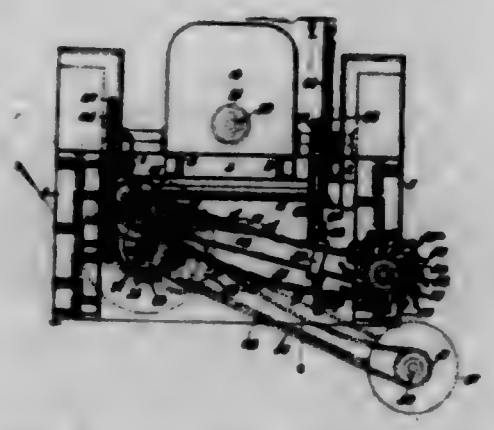


1. The method of heating an elongated metal body which consists in passing a preliminary heating current between a lateral contact near an end of said body and a more remote contact and thereupon continuing the current input at said end from a butt contact.

8. A metal heating device comprising the combination of a pair of work-engaging contact clamps, means for causing said clamps to engage with work to be heated, a third coöperating contact and means for holding said third contact into engagement with the work and simultaneously disengaging from the work one of the paired contacts.

9. A metal heating device comprising the combination of work-engaging contacts adapted to laterally engage work to be heated, a butt contact connected in common with one of said lateral contacts, a lever having a cam surface engaging with one of said contacts to operate the same, links connecting another of said lateral contacts with said lever and movable thereby into engagement with the work, and means for exerting pressure upon the work by said butt contact by said lever while disengaging the work from said second lateral contact.

1,299,932. HILLSIDE AND ROADSIDE DITCHER. VIRGIL T. GRABB, King, N. C. Filed Nov. 23, 1917. Serial No. 204,433. 11 Claims. (Cl. 37—29.)



1. A machine for the purpose described, comprising a tractor vehicle having a main frame, traction wheels on opposite sides of the main frame at the forward end thereof, steering means at the rear end of the main frame, excavating devices beneath the main frame and located behind one of the traction wheels, a power shaft for driving the excavating devices extending lengthwise of the main frame on the side thereof remote from the excavating devices, an arm carrying the excavating devices at one end and at the other end provided with a mounting on the power shaft in eccentric relation thereto, means for rotating the mounting about the axis of the power shaft to move the arm lengthwise in transverse relation to the main frame, and driving connections between the power shaft and the excavating devices.

1,299,933. INVALID-LIFTER. CHARLES A. GREENE, Wilmington, Calif. Filed Oct. 10, 1918. Serial No. 257,883. 1 Claim. (Cl. 5—44.)



An invalid lifting and carrying device comprising a supporting frame mounted on casters, said supporting frame having a horizontal and longitudinally extending overhead supporting bar, a block and tackle slidably attached to said horizontal supporting bar, a cross bar fixed at its middle to the lower block of said block and tackle, a pair of horizontal side bars pivotally supported at the ends of said cross bar and adjustable, longitudinally with relation thereto, and means for securely gripping and holding the edges of bed clothing and the like suspended between said side bars.

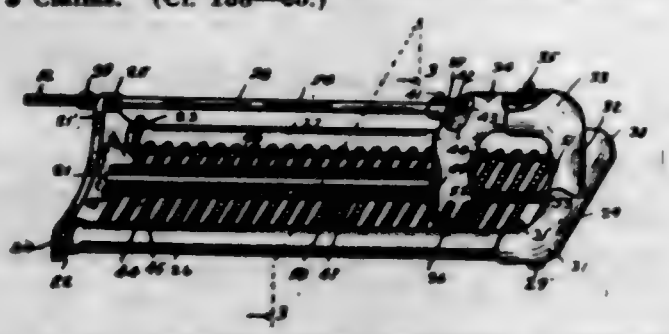
1,299,934. CAST-IRON PIPE AND COUPLING THEREFOR. JOHN T. HARNETT, Philadelphia, Pa. Filed Aug. 12, 1918. Serial No. 249,434. 2 Claims. (Cl. 285—161.)



1. As an article of manufacture, a cast iron pipe section comprising a stem or body, said stem having an inclined outer face at one end and provided with lugs and a bell at the opposite end having an inclined inner face with longitudinal channels leading to an annular groove and a ring having oppositely inclined faces, mounted on the stem.

2. A sectional cast iron pipe and coupling comprising a plurality of identical sections, each section consisting of a stem or body having an inclined outer face at one end, lugs formed with said end, a bell having an inclined inner face carried by the opposite of the stem, said bell further having an annular groove at the inner end of the inclined face and provided with longitudinal channels passing through the inclined face and communicating with the groove, said channels being as deep as the outer circumference of the groove and a ring having oppositely inclined faces, carried by the stem and adapted to register with the space between the outer face of the spigot end and the inner face of the bell when the spigot end of one pipe section has been placed in the bell of another section and the lugs caused to pass through the channels and into the groove as specified.

1,299,935. GAS-GENERATOR. FRED F. HARRIS, Los Angeles, Calif. Filed Oct. 24, 1918. Serial No. 259,524. 3 Claims. (Cl. 158—65.)

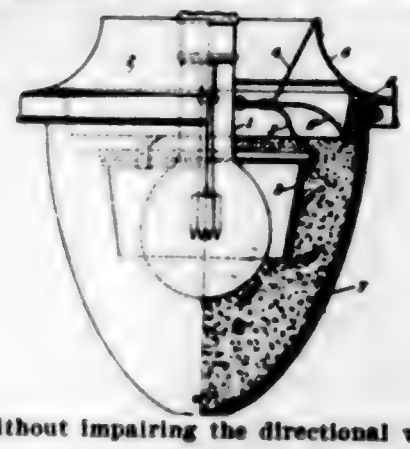


1. A gas generating burner comprising a horizontal generator tube adapted to connect with a supply pipe, a mixing tube connected to said generator tube, parallel side tubes fixed in parallel relation to said generator tube, said side tubes having one end closed, connecting tubes between the ends of said mixing tube and the open ends of said side tubes, a series of cross tubes extending between said side tubes and opening into them, said cross tubes being provided with saw cut openings on their upturned sides and means for initially heating said generator tube.

1,299,936. LIGHTING UNIT. WARD HARRISON, East Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1917. Serial No. 149,928. 2 Claims. (Cl. 240—92.)

1. A lighting fixture for housing a highly intense artificial light source comprising a band refractor closely surrounding the source for modifying the distribution of the light rays and a larger outer protective inclosing glass

globe surrounding said source and refractor and having incorporated therein media for producing diffusion of the



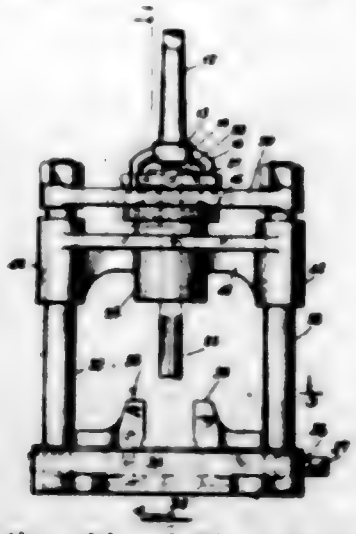
light rays without impairing the directional value of the unit.

1,299,937. MOTOR-DRIVEN VEHICLE HAVING ENDLESS TRACKS. HUBERT AVERY HATFIELD, London, England, assignor to H. A. H. Tractors Limited, Birmingham, England. Filed June 13, 1918. Serial No. 239,836. 4 Claims. (Cl. 180—9.)



1. In motor driven vehicles having endless tracks the frame of each track being pivotally mounted upon a shaft extending transversely and beyond the chassis of the vehicle substantially as specified; the combination of the pivotal shaft fixed to and extending transversely of the chassis, an endless track frame freely and pivotally mounted on each end of said pivotal shaft, two springs one for each track frame one carried on each side of the chassis frame at the rear thereof, an arm extending downward from each spring, a two-armed lever fulcrumed on each downwardly extending arm and extending transversely of the length of the chassis, links to pivotally connect the inner arm of each lever to said chassis, and an arm pivoted at one end to the opposite arm of said two-armed lever and at the opposite end connected to the rear end of the track frame, to permit each track frame to have independent and limited resilient motions controlled by said spring appertaining to each frame.

1,299,938. SQUARE-HOLE DRILL-CHUCK. CHARLES F. HATHAWAY, Fairport, N. Y., assignor to Angular Drill and Machine Corporation, New York, N. Y., a Corporation of New York. Filed Aug. 15, 1916. Serial No. 114,950. 1 Claim. (Cl. 77—61.)



The combination with a drilling spindle, a housing secured thereto, a socket adapted to receive a drill bit and operatively but loosely connected to the housing, and a drill guide, of a work holder comprising a base plate, a pair of clamping jaws adjustably mounted thereon, posts extending upwardly therefrom, a top plate secured to the posts at their upper ends and having an opening through which the housing extends, and a yoke slidably mounted on the posts and embracing the drill guide.

1,299,939. CAR-ROOF. DAVID W. HAWKSWORTH, Detroit, Mich., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 22, 1917. Serial No. 203,217. 6 Claims. (Cl. 105—5.)

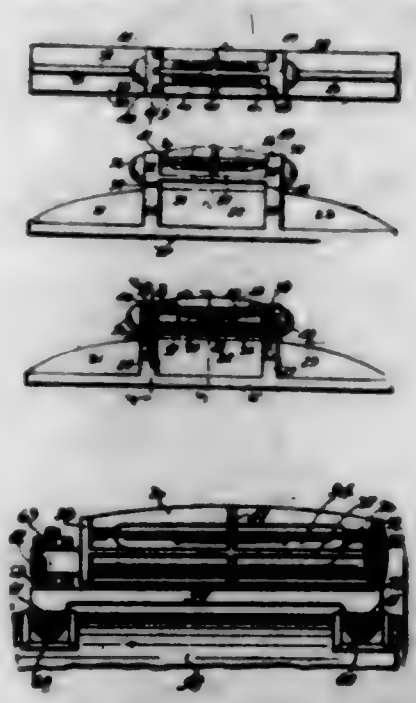


1. In a car roof, the combination with a carline of inverted channel section and having a downturned end portion overlapping the eaves, of a lug secured within the channel of the downturned portion and projecting inward beyond the same, and a member supported on the plate of the car forming a seat for said lug.

2. In a car roof, the combination with a carline of inverted channel cross section having a downturned end portion for overlapping the eaves, of a lug secured within the channel of the downturned portion and projecting inward therefrom, a member resting upon the side plate of the car and projecting downward on the outer face thereof, a second member upon said first-mentioned member and a seat on said second member for engaging and supporting said lug.

3. In a car roof, the combination with a carline of inverted channel section with laterally-extending flanges and having a downturned portion overlapping the eaves, of a member resting upon the side plate of the car having a downturned portion on the outer face of said side plate, a member secured to said downturned portion forming a spacer between the same and the flanges of the downturned portion of said carline, and a lug fitting and secured within the channel of the downturned portion of the carline, projecting inward therefrom and resting upon said spacer.

1,299,940. PRECISION-LEVEL. WILFRID HUDSON, Salt Lake City, Utah. Filed Apr. 20, 1915. Serial No. 22,586. 11 Claims. (Cl. 33—214.)



1. In a precision level, the combination with a base comprising a sole plate, having suitable standards projecting from one face thereof, of a housing adapted to receive a vial, intermediate the said standards; one of

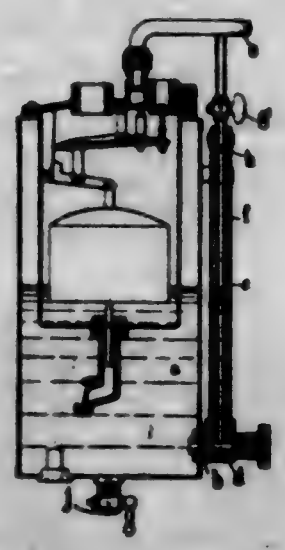
the said standards having a suitably located gap therein, and mutually opposing tension and compression screws, suitably disposed for adjusting the distance between the said sole plate and the said housing, by increasing or decreasing the extent of the said gap.

8. In a level, the combination with a suitable vial, of a housing therefor, comprising hollow heads adapted to hold the said vial, a channeled base portion partly inclosing the said vial and extending longitudinally thereof, the said base portion located intermediate the said hollow heads, a longitudinal guard suitably disposed above the said vial; the said base portion and the said guard being integral with the said heads, and means for securing the said vial in the said housing.

9. In a precision level, the combination with a base portion having an upwardly extending rib longitudinally disposed thereon, and a pair of upwardly extending standards intersecting the said rib, of a vial housing intermediate the said standards, the upper part of one of the standards forming an integral head for one end of the said housing, a second head at the other end of the said housing separate from the second standard, but located immediately thereabove with an intervening gap, longitudinal guards spaced around the central portion of the said housing and integrally connected to the said heads, and opposing thrust and tension screws adapted to allow the varying of the extent of the said gap, at the same time allowing a metal to metal contact connection between the said base portion and the said vial housing.

10. In a level, the combination with a base portion having suitable lugs for attaching to a surveying instrument, of a vial housing located over the said base portion and integrally connected thereto at one end by a strain-bearing neck, the said housing comprising oppositely disposed heads connected by integral longitudinal guards, the said longitudinal guards being connected to each other by intermediate annular guards; the said base and the said housing being separated by a gap extending forward from the said neck and means for adjusting the extent of the said gap at a point opposite the said neck.

1,299,941. LIQUID-FUEL-SUPPLY SYSTEM OF INTERNAL-COMBUSTION ENGINES. Joseph Higginson and Hubert Arundel, Stockport, England. Filed Oct. 16, 1918. Serial No. 258,427. 2 Claims. (Cl. 158—36.)



1. In liquid fuel supply systems for internal combustion engines of the type in which the fuel is drawn into a supply vessel by suction, the combination with the said vessel and its suction conduit, of a reservoir chamber, connections between the chamber and vessel and suction conduit, and a branch or auxiliary reservoir communicating with the said chamber and its suction conduit, as set forth.

1,299,942. EXPLOSIVE MIXTURE. Roy Linder Hill and Archibald J. Strang, Tamaqua, Pa., assignors to Atlas Powder Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 1, 1918. Serial No. 260,697. 4 Claims. (Cl. 52—3.)

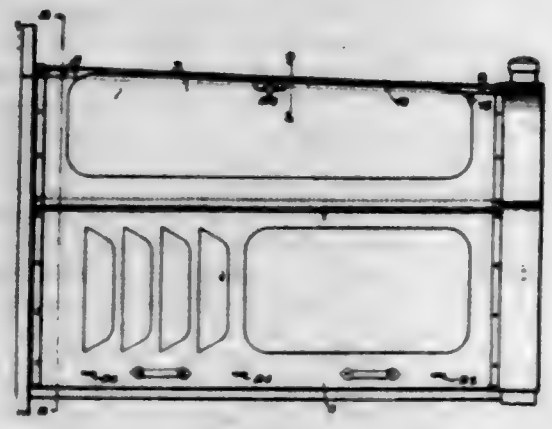
2. The addition of copper sulfate from which the water of crystallization has been wholly or partially removed to an explosive mixture containing ammonium nitrate and an organic nitrate.

1,299,943. DIVISIBLE WHEEL-RIM FOR PNEUMATIC TIRES. Thomas John Hobson, Birmingham, England. Filed July 3, 1918. Serial No. 243,132. 6 Claims. (Cl. 152—21.)



1. A divisible wheel rim for pneumatic tires comprising in combination; two rim parts having a considerably decreased diameter at their adjacent edges; inturned parts forming the outer edges of the rim parts; two channel section rings fixed to and carrying the rim part, inturned flanges on said rings; a bonding band fitting within the inturned flanges; and cross members passing through said rings and detachably securing them and the rim part together; for the hereinbefore specified purpose.

1,299,944. BONNET FOR MOTOR-CARS. George B. Houston and John A. Helman, Bridgeport, Conn., assignors to The Locomobile Company of America, New York, N. Y., a Corporation of West Virginia. Filed Mar. 28, 1914. Serial No. 826,526. 35 Claims. (Cl. 74—56.)

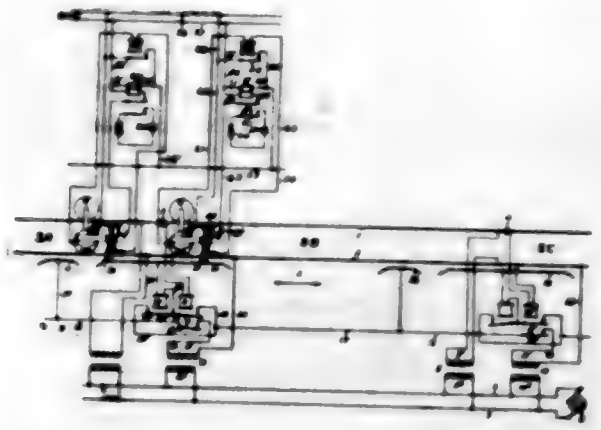


16. An automobile hood comprising a top section hingedly mounted to swing outwardly, and having the hinging means located under the hood.

1,299,945. AUTOMATIC TRAIN CONTROL. Winthrop K. Howe, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Mar. 12, 1915. Serial No. 14,029. 21 Claims. (Cl. 246—35.)

2. In an automatic train control system, in combination: a trackway divided into track circuit sections each including a translating device and a source of current; ramps, one positioned at the entrance to each track circuit section; a partial circuit for each ramp including said ramp, a source of current, a circuit controller governed by the translating device of the track circuit section immediately ahead of the ramp, a circuit controller controlled by the translating device of the section ahead of the last named section, a relay, and a track rail; a train; means on the train to complete the partial cir-

cuit and so energize said relay; a circuit for shunting said first named circuit controller including another circuit controller governed by said relay which is closed by the energization of said relay; and means on the moving vehicle for controlling the movement thereof controlled by the last named means.



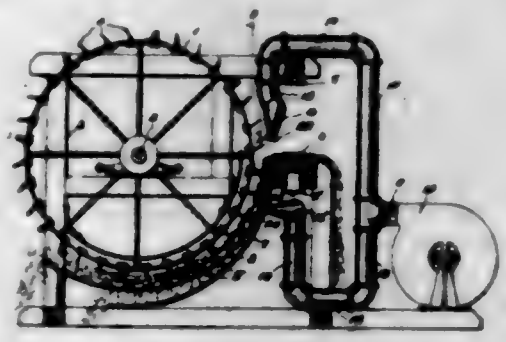
7. In a system for protecting railway traffic, in combination: a track divided into track circuit sections; a traffic controlling device associated with each track circuit section; a controlling circuit for each device governed by the corresponding track circuit section and interrupted when that track circuit section is occupied; normally inoperative means governed by each track circuit section and rendered operative by the presence of a train adjacent to the corresponding device, subject to the control of the corresponding track circuit section, for establishing said controlling circuit independently of the control of said circuit by the corresponding track circuit section.

13. In an automatic train control system, the combination with a track divided into track circuit blocks, of a train including a number of vehicles each similarly equipped, means for transmitting impulses from the track to the train including an element carried by each vehicle and track elements located one adjacent to the entrance end of each block, a controlling circuit for each track element, means for causing a break in said controlling circuit when the corresponding block is occupied, and means initially dependent on the continuity of said controlling circuit for maintaining it closed independent of said means so long as an element on any one of the vehicles coöperates with the corresponding track element.

17. In an automatic train control system, the combination with a track divided into blocks, of a train including a number of vehicles similarly equipped, impulse transmitting means comprising an element on each vehicle adapted to coöperate with elements along the trackway at the entrance to each block, trackway circuits for causing each trackway element to indicate safety when the corresponding block and the next block in advance are not occupied, and means governed by said track circuits and responding to the coöperation of a vehicle carried element with a trackway element for causing said trackway element to maintain its existing controlling condition during the passage of a train and irrespective of the presence of part of such train in the corresponding block.

20. In an automatic train control system, the combination with a track divided into blocks each having a normally closed track circuit, of an impulse device at the entrance to each block adapted to transmit controlling impulses to passing trains, a control circuit for each impulse device governed by the track circuit of the block next in advance of the corresponding block, a normally open break in said controlling circuit, means including a stick relay for closing said break during the passage of a train past the corresponding impulse device, and an energizing circuit for said stick relay governed by the track circuit of the corresponding block.

1,290,946. PNEUMATIC ATTACHMENT FOR SCUTCHING-MACHINES. JOHN HUBLER, Brandon, Wis. Filed Sept. 14, 1917. Serial No. 191,428. 8 Claims. (Cl. 19—19.)

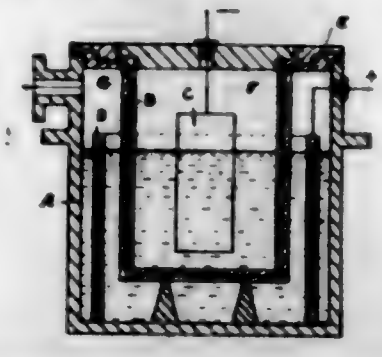


1. A mechanism of the class described comprising in combination, a movable scutching drum, a relatively stationary guard adjacent the drum, the space between said guard and drum forming a restricted throat, a stationary slotted apron between said drum and guard for coöperation with the scutching portions of the former, and means for forcing a draft of air through said throat.

8. A mechanism of the class described comprising in combination, an elongated cylindrical scutching drum, a guard adjacent the drum and extending throughout the length thereof, the space between said guard and drum forming a restricted throat, the same extending from end to end of the drum, an elongated blower head disposed parallel to said throat and having a mouth extending throughout its length and disposed adjacent the opening of said throat, a slide movable over the mouth of the head to regulate the flow of air therefrom, and means for supplying air under pressure to said head.

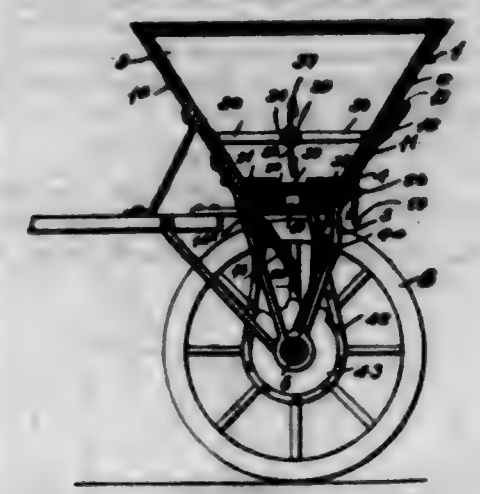
8. A mechanism of the class described comprising a rotatable scutching drum and a transversely arcuate guard adjacent the drum, one edge portion of the guard being spaced a greater distance from the drum than the other side portion whereby to define a throat taperingly increased in width, a transversely slotted arcuate apron between the drum and guard and having a curvature substantially concentric with the curvature of the drum and engaging the guard at the reduced portion of the throat, a longitudinally extending air discharge nozzle extending through the guard adjacent the restricted portion of the throat for discharging air between the slotted apron and guard, and a second longitudinally extending air supply nozzle for discharging air into the restricted portion of the throat between the slotted apron and the drum.

1,290,947. ELECTROLYSIS OF FUSED ELECTROLYTES. HENRY CHARLES MORRIS INGEBRIGT, Sandviken, near Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed Oct. 30, 1917. Serial No. 199,353. 14 Claims. (Cl. 204—19.)



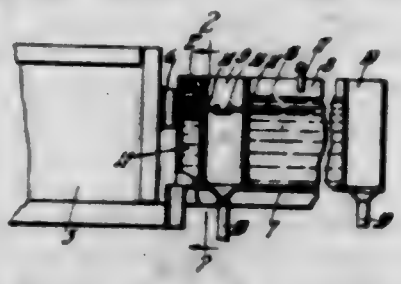
9. A diaphragm for use in the electrolysis of fused electrolytes, which comprises a non-porous material substantially insoluble in the electrolyte, substantially non-conducting at atmospheric temperatures and which becomes conductive at the temperature of fusion of the electrolyte.

1,299,948. LIME-SPREADER. HERBERT W. ISAMAN, Olean, N. Y. Filed Aug. 30, 1918. Serial No. 252,088. 6 Claims. (Cl. 221—122.)



6. In a lime spreader, a container provided with depending hangers, a supporting axle mounted in said hangers, ground wheels mounted on the axle, said container being provided with a plurality of openings through its bottom wall, a valve plate slidably mounted on the upper face of the bottom wall of the container and provided with openings adapted to be moved into and out of alinement with the openings through said bottom wall so as to control the flow of lime therethrough from within the container, a deflector and closure plate hingedly secured at its upper edge to the front wall of said container adjacent the lower edge thereof for movement toward and away from the bottom of the container, means for securing said plate in adjustment about its hinge axis, an agitator mounted within the container and having blades operable closely adjacent the upper face of the valve plate so as to prevent clogging thereof when the agitator is rotated, and driving connections between said agitator and one of the ground wheels for rotating the same when the spreader is in operation.

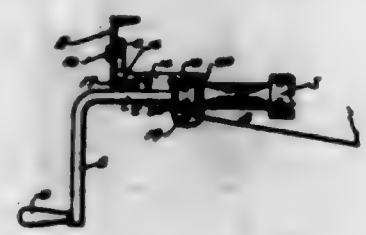
1,299,949. HARDENING-MACHINE. CHESTER C. JACKMAN and RAYMOND S. SQUIER, Springfield, Mass., assignors to Massachusetts Saw Works, Springfield, Mass., a Trust Association of Massachusetts. Filed Oct. 22, 1917. Serial No. 197,856. 4 Claims. (Cl. 266—3.)



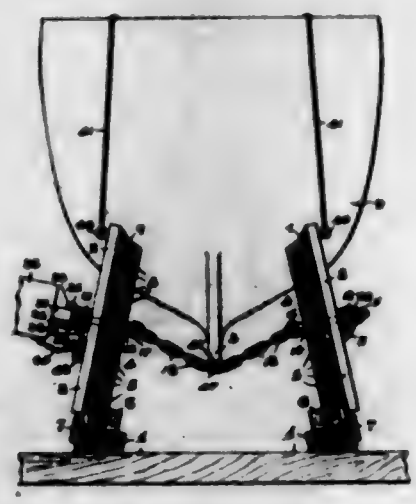
1. In a hardening machine, a heating means and a liquid quenching means through which a chain of articles may be successively passed, a tank associated with the quenching means to receive liquid overflowing from the latter, and a jacketed wall provided for said tank adjacent the exit of the heating means, through which wall a cooling medium may be circulated to cool the quenching liquid in said tank sufficiently to prevent its ignition.

1,299,950. SUPPORT FOR CRANK-SHAFTS. ISIDOR M. JACOBS, Kansas City, and WILLIAM CRAMER, St. Louis, Mo., assignors, by mesne assignments, to Truck, Tractor and Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 26, 1917. Serial No. 198,642. 4 Claims. (Cl. 64—14.)

1. A bracket for supporting a crank for an automobile, comprising a pair of similar abutting sections, said bracket having a front upwardly disposed extension and a rear depending extension, the rear portion of the bracket having a longitudinal counter-sunk opening, the bottom of the bracket between the vertical planes of the front and rear extensions being provided with a longitudinal slot which is in alinement with the longitudinal opening whereby to form a two point support for a shaft, and means for securing the abutting sections together.

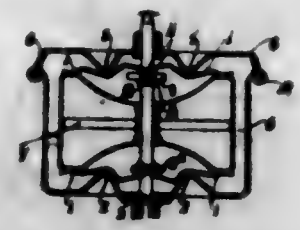


1,299,951. RELEASING AND LOSS-PREVENTING MEANS FOR CRADLE-PACKINGS. HARRY N. JANSEN, Newark, N. J. Filed Feb. 12, 1919. Serial No. 276,636. 10 Claims. (Cl. 61—67.)



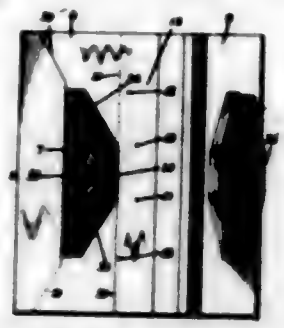
1. In combination with a pair of cradle-packings adapted to be located upon opposite sides of a ship-body, a flexible connection between and detachably connected with said packings, and means connected with said flexible connection for automatically releasing said packings as the ship-body is launched.

1,299,952. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. JOHN THOMAS JENNINGS, Birmingham, England. Filed July 24, 1917. Serial No. 182,561. 5 Claims. (Cl. 137—104.)



5. In a float chamber for a carbureter the combination of a casing having an annular internal projection upon its base; a cover having a similar internal projection upon its underside; a float; a valve passing concentrically through the float and having collars thereon; and levers disposed above and below the float and bent to provide a rocking connection with said annular projections and serving to connect the float to the valve, said levers having extremities bent to interlock with said collars on the valve, for the purpose specified.

1,299,953. STATIONARY INDUCTION APPARATUS. SVEND E. JOHANNESEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 2, 1917. Serial No. 166,024. 9 Claims. (Cl. 175—356.)



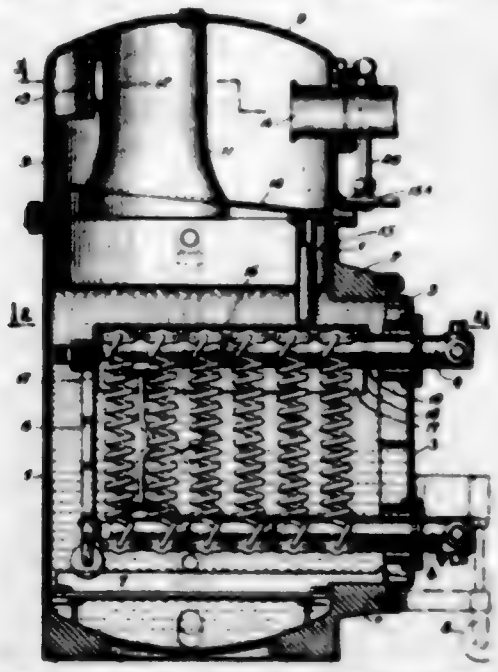
8. Stationary induction apparatus comprising a distributed core and a winding on the central leg thereof, the perimeter of said leg progressively decreasing from both ends toward the center of said leg.

1,299,954. GEAR-SHIFT-LEVER LOCK. COLVIN L. JOHNSON, Chicago, Ill., assignor to Johnson Automobile Lock Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 3, 1917. Serial No. 146,386. 9 Claims. (Cl. 70—126.)



9. In a gear shift lever lock, means mounted on the gear shift rods of an automobile, a gear shift lever, locking means associated therewith, and mechanisms connected with said lever to move said locking means into engagement with said gear shift means to lock said lever from movement.

1,299,955. EVAPORATOR. RUSSELL C. JONES, Garden City, N. Y., assignor to The Griscom-Russell Company, a Corporation of Delaware. Filed Feb. 1, 1916. Serial No. 75,604. 11 Claims. (Cl. 257—199.)



1. In an evaporator, the combination with a shell of heating tubes within the shell, said shell being adapted to contain the liquid to be evaporated with the liquid level maintained so that the tubes are submerged in the liquid and a baffle arranged over the tubes and extending below the liquid level, said baffle having portions arranged to deflect the vapor generated by the tubes beneath the baffle laterally through the liquid to points beyond the space occupied by the tubes before the vapor leaves the surface of the liquid.

1,299,956. SHUTTER FOR MOTION-PICTURE MACHINES. AUGUST F. JUNGENSEN, New York, N. Y. Filed Jan. 19, 1918. Serial No. 212,634. 1 Claim. (Cl. 88—19.3.)



A motion picture shutter including a hub, a rim, and at least two light-deflecting blades arranged between the hub and rim and spaced from each other around the rim; each blade, in that part of the blade coacting with the light-pencil passing through the film during rotation of the shutter, including at least two very thin opaque metallic sheets, each sheet having a multiplicity of small closely spaced openings to act according to the laws of lightway openings in diffraction gratings, the two sheets of the two blades, in that part of each blade coacting with the light-pencil passing through the film during rotation of the shutter, being spaced apart a distance so calculated as to avoid practically any diminution of the light adapted to be transmitted through a blade on a screen, to avoid flicker, and at the same time to permit the two sheets of each blade to act as a compound compensating diffraction-grating device, to avoid ghosting; the two blades of each sheet being fixed and permanently secured in predetermined relative positions.

1,299,957. CORSET-COVER. BARNETT I. KAPLAN, New York, N. Y. Filed Apr. 20, 1917. Serial No. 164,063. 2 Claims. (Cl. 2—98.)

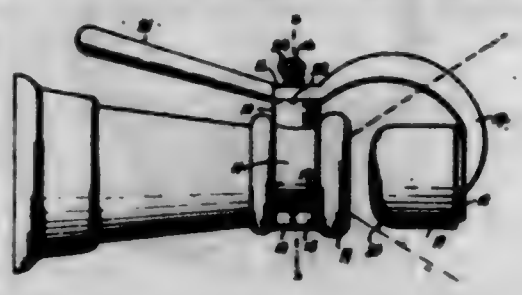


1. In a corset cover and brassière the combination of a front section, a belt connected to the lower end of the section, a pocket at each end of the section extending from the upper portion of the section to the belt, a sustaining member in each pocket and a band connecting the upper end of each pocket and the belt.

1,299,958. SPRAYER ATTACHMENT FOR HOSE-NOZZLES. ROBERT B. KERMACK, Portsmouth, and EDWARD G. O'DONNELL, Newington, N. H. Filed Aug. 19, 1918. Serial No. 250,555. 1 Claim. (Cl. 137—87.)

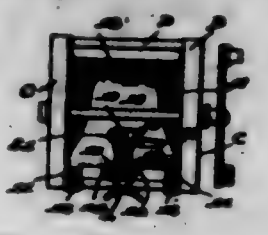
In a stream deflector for hose nozzles, the combination with a nozzle having spaced annular shoulders integral therewith, whereby an annular groove is formed, of a supporting post, a headed screw threaded in the post, a

lever swiveled on the screw for a swinging or oscillatory movement in a plane at right angles to the post, said lever having a pair of arms, one extending toward the rear and overlying the nozzle constituting a handle, the other being curved and overhanging and extending beyond the mouth end of the nozzle, the extremity of the curved end of said lever having a stream deflector provided with a rounded end face in close position to the mouth of the nozzle, the adjacent parts of the lever and post having means for holding the lever in different adjusted positions, whereby the deflector may be positioned to one side or the other of the mouth of the nozzle, said post being provided with opposed resilient curved clamp-



ing members yieldably urging toward and engaging in the groove, a flexible strap detachably connecting the ends of said opposed resilient members, whereby the members may move loosely and swivelly in the groove for supporting the post at right angles to the bottom of the groove, and whereby the deflector may be arranged in a position at right angles to the first position for deflecting the stream at right angles to the first deflection of the stream, and means between the head of the screw and the lever for urging the interengaging parts of the lever and the post together.

1,299,939. FISHING-REEL ATTACHMENT. CHARLES C. KAYSER, Pensacola, Fla. Filed Apr. 18, 1917. Serial No. 161,811. 5 Claims. (Cl. 242—84.5.)



1. The combination with a fishing reel including spaced transverse rods, of a plate pivotally mounted on one of said rods, resilient means for yieldingly pressing the plate against the line on the reel, and a latch pivoted on said plate and engageable with another of said transverse rods whereby said plate may be held out of engagement with the line.

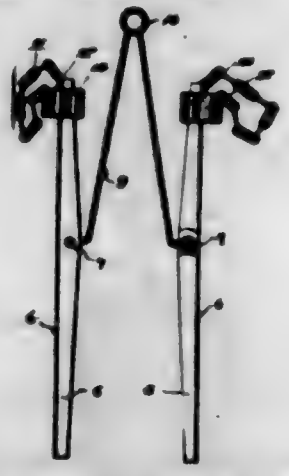
2. In combination with a fishing reel including spaced transverse rods, a plate pivotally mounted on one of the rods, a spring yieldably urging said plate into engagement with the line carried by the reel, and a latch member pivoted upon said plate and revoluble upon the face thereof and having one end offset from the plate and engageable with another of said transverse rods for holding said plate out of engagement with the line.

3. In combination with a fishing reel including spaced transverse rods and a supporting plate, a plate pivotally mounted on one of said rods, a coiled spring carried by said plate and having one end engaging the supporting plate of the reel, a washer provided in its periphery with a groove, the other end of said spring being disposed within said groove whereby said washer will be supported by the spring, and a screw threaded through said washer and bearing against said plate whereby said plate will be held in engagement with the line caried by the reel.

4. In combination with a fishing reel including spaced transverse rods and a supporting plate, a plate pivotally mounted on one of said rods, lugs stamped from said plate and bent to extend in end to end relation to each other, a spring having its intermediate portions formed into two coils disposed respectively on said lugs and having one portion bearing upon said supporting plate, a washer carried by said spring, and a screw threaded through said washer and bearing against said plate for holding said plate in engagement with the line carried by the reel.

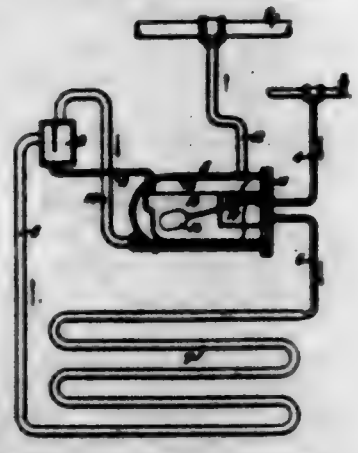
5. In combination with a fishing reel including spaced transverse rods, a plate pivotally mounted on one of said rods, resilient means for yieldably pressing said plate against the line on the reel, a latch member pivoted upon said plate and revoluble upon the face thereof, an offset extension on said latch member movable into engagement with another of said transverse rods whereby said plate may be held out of engagement with the line, and means for holding said latch member in its selected position.

1,299,960. CREASE-PRESERVER. THOMAS J. KISTER, Bethlehem, Pa. Filed Apr. 30, 1918. Serial No. 231,677. 1 Claim. (Cl. 23—19.)



A device of the character described comprising a pair of spaced bars, a spring frame pivotally connected medially of the bars, and a clamp carried by each bar, the bars each being formed from sheet metal folded longitudinally on itself into substantially V shape in cross section, and a chain loosely connecting the clamp with the bar.

1,299,961. REFRIGERATING APPARATUS. WALTER F. KAISER, Milwaukee, Wis. Filed Oct. 29, 1917. Serial No. 198,916. 14 Claims. (Cl. 62—3.)

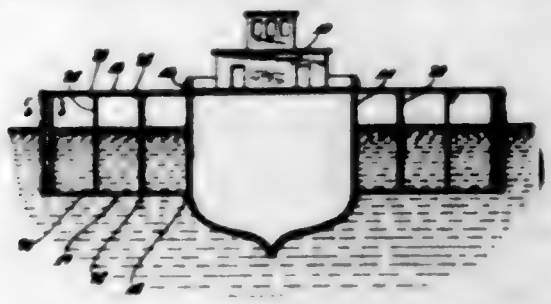


1. In combination, a source of refrigerant supply, a cooling device communicable with said source, and means for effecting delivery or refrigerant from said source to said device in accordance with variations in the humidity of refrigerant in said device.

1,299,962. ANTISUBMARINE DEVICE. TONY KUSNIERCK, Easthampton, Mass. Filed Nov. 12, 1918. Serial No. 262,121. 1 Claim. (Cl. 114—240.)

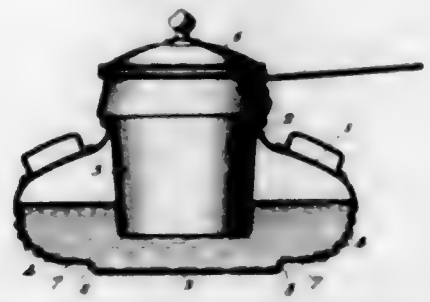
In an antisubmarine device, the combination with the hull of a ship and a plurality of brackets disposed below

and above the water line on each side, of arms rigidly engaged with said brackets, said arms extending laterally outward, vertical floating rollers engaged at the ends of said arms in a row, said rollers having their surfaces juxtaposed and flexibly connected together at said tops and bottoms, rails secured to said arms within said row of



floating rollers, netting on said rails extending from a point above to a distance below the water line, another series of rails attached to said arms, and a plurality of springs secured to the last named row of rails, said springs being arranged closely adjacent and disposed midway between said netting and the hull of said ship.

1,299,963. COOKING APPARATUS WITH WATER-BATH. GEORGE LAQUAL, Zurich, Switzerland. Filed May 20, 1918. Serial No. 235,531. 3 Claims. (Cl. 53—1.)



3. A water-bath cooking utensil comprising a water vessel having an open top, a flat bottom having a shouldered offset from the lower body portion of the vessel, said body portion having a plurality of corrugations sinuous in section below the greatest diameter of said vessel, and a cooking vessel arranged to seat in the open top and a removable cover arranged to fit both the cooking vessel and the water vessel.

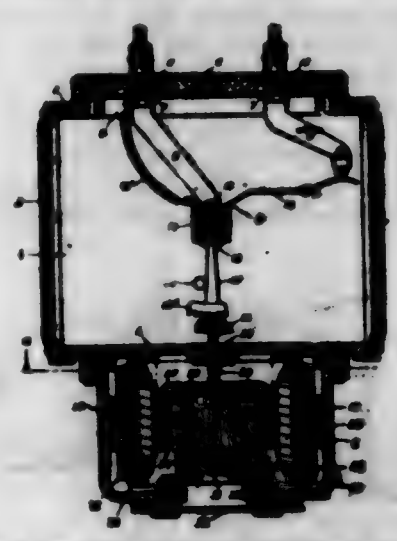
1,299,964. DRAFTING INSTRUMENT. JULIUS LARSON, New Haven, Conn., assignor of one-half to Victor Swanson, New Haven, Conn. Filed Dec. 12, 1918. Serial No. 266,417. 2 Claims. (Cl. 33—177.)



1. A drafting instrument comprising a pair of legs pivoted together, a spring normally tending to expand the outer ends of the legs, means for drawing the legs together, blocks secured to the ends of the legs, a band rigidly secured to one of the blocks and adjustably secured to the other block, and spring fingers bearing against the inner faces of the band at opposite ends.

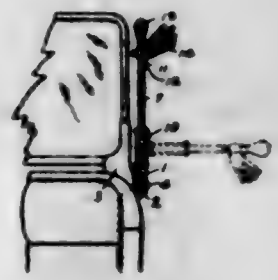
1,299,965. ELECTROMAGNETIC DEVICE. RICHARD C. LEAKE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Mar. 28, 1916. Serial No. 87,102. 9 Claims. (Cl. 175—281.)

1. A relay for use in railway signaling, comprising a circuit controller biased to assume a predetermined position; a motor for operating said circuit controller comprising a stator and a rotor, said rotor being capable of movement endwise and being acted upon by a force tending to cause it to assume a position relative to said stator in which the medial plane of the magnetic field of the cur-



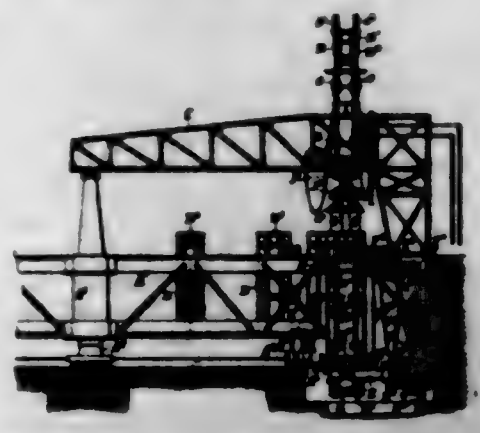
rent induced in said rotor is displaced from the medial plane of the magnetic field of said stator, whereby the rotor is given a predetermined movement endwise when said stator is energized; and means operatively connecting said rotor with said circuit controller when said rotor takes said movement endwise.

1,299,966. DIRECTION-INDICATOR FOR MOTOR-VEHICLES. DATUS S. LEE, Los Angeles, Calif. Filed July 15, 1918. Serial No. 245,038. 2 Claims. (Cl. 116—31.)



1. A direction indicator comprising a socket, means for attaching the socket to an automobile, a jointed arm extending upwardly from the socket, a sleeve mounted upon the jointed arm and adapted to cover the joint and hold the arm stiff in its vertical position and adapted to be elevated above the joint and allow the arm to swing outwardly to a horizontal position, and an indicating means carried by the upper end of the arm.

1,299,967. MOLDING APPARATUS. LOUIS R. LEMOINE, Philadelphia, Pa., assignor to United States Cast Iron Pipe and Foundry Company, Burlington, N. J., a Corporation of New Jersey. Filed Mar. 6, 1917. Serial No. 152,659. 31 Claims. (Cl. 22—17.)



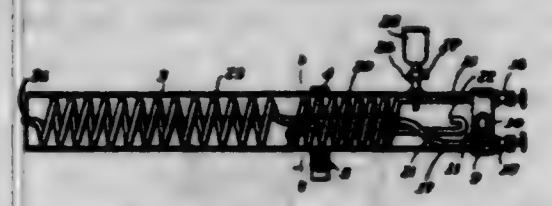
1. The combination with mold supporting means, of a main ramming pattern adapted to be drawn through the

mold, an end pattern adapted to bear against the mold at one end thereof, and means for utilizing each of said patterns as a reaction point from which to apply a force to the other pattern in forcing the end pattern against the mold and drawing the main pattern out of the mold past said end pattern.

6. In a pipe molding machine, a traveling flask support, vertical flasks mounted thereon, an independent support extending over said flasks, and a pattern ramming mechanism mounted thereon and comprising a main ramming pattern puller and an end pattern depresser.

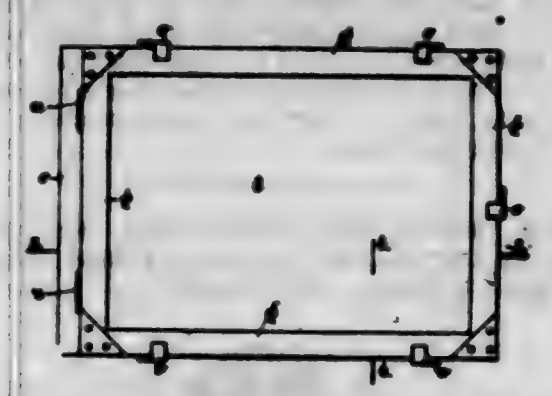
15. In a pipe molding machine the combination with a flask and means for supporting the same in a vertical position, of a vertically adjustable support and a pattern ramming press mounted on said support with freedom for horizontal adjustment.

1,290,868. HYDROCARBON-BURNER. EDWARD DUDLEY LEWIS, Elmira, N. Y. Filed Nov. 3, 1917. Serial No. 200,179. 3 Claims. (Cl. 158—79.)



1. A burner comprising a tube, a coil arranged in said tube, a nozzle connecting with said coil and adapted to distribute a flame on said coil, a second coil arranged in the tube in advance of the first named coil in a position to receive the flame from said nozzle, and a second nozzle connecting with the second named coil and discharging at the forward end of said coil.

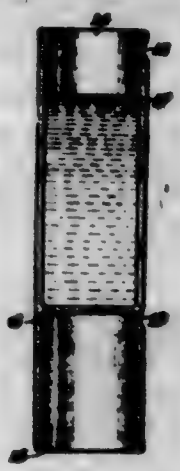
1,290,969. STENCIL PRODUCTION. LOUIS LEWIN, London, England. Filed June 2, 1915. Serial No. 31,978. 1 Claim. (Cl. 164—65.)



In a stencil producing apparatus, a supporting frame provided with a ledge located below the top of the frame, a second supporting frame mounted on the ledge, two transparent plates supported by said first mentioned frame, a translucent original to be copied, held between said plates, a sheet of wire cloth having a rigid marginal rim stretched over the upper transparent plate, a clamping frame consisting of upper and lower clamping members shaped to form a cavity for the rigid marginal rim and clamping means for drawing the upper and lower clamping members together to firmly clamp the rigid marginal rim of the wire fabric therebetween.

1,290,970. RADIATOR ATTACHMENT. ERNST LEUKER, North Arlington, N. J., assignor of one-half to Frederick W. Lepp and one-half to Otto C. Roth, New York, N. Y. Filed Dec. 5, 1918. Serial No. 265,668. 3 Claims. (Cl. 237—78.)

1. A radiator attachment comprising a body member having walls of porous material and a partition dividing the same into compartments, one of which is adapted to receive a liquid with that portion of the walls below the partition forming an apron adapted to absorb the liquid



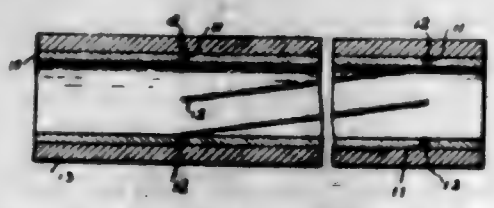
which trickles through from the liquid compartment and from which the liquid is evaporated so that it will not drip therefrom to the floor.

1,290,971. THREAD-CUTTER AND HEM-CREASER. ANNA C. LINCOLN, Savannah, Ga. Filed June 14, 1918. Serial No. 240,031. 1 Claim. (Cl. 223—51.)



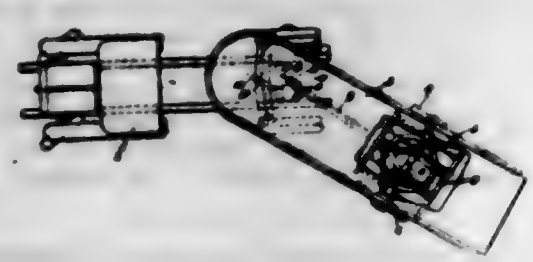
In combination with a thimble, a plate secured transversely on the outer end thereof, said plate having its outer edge formed with a bead and its ends sharpened, and the said sharpened ends terminating inward of the bead.

1,290,972. RIFLE-BARREL. CHARLES W. LINSCOTT, Jackson, Mich. Filed Nov. 9, 1918. Serial No. 261,884. 3 Claims. (Cl. 42—78.)



1. A barrel for fire-arms having formed therein a plurality of parallel, longitudinally extending spiral slots extending entirely through the thickness of the barrel, and strips of metal harder than the material of the barrel inserted through and welded to the walls of said slots and projecting beyond the inner face of the barrel.

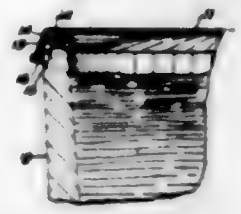
1,290,973. TRAILER-VEHICLE. HERBERT D. LLOYD, Kent, Conn., assignor to Trailer Transportation Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 11, 1918. Serial No. 227,878. 24 Claims. (Cl. 21—137.)



1. In combination, a main vehicle, a trailer therefor, having a part on its body extending to the main vehicle, engaging members respectively on the main vehicle and

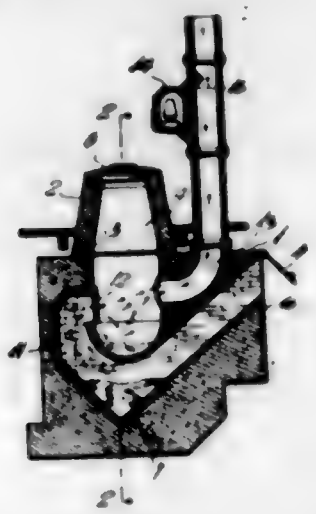
the projecting part of the trailer permitting relative longitudinal sliding between the two and a draw bar comprising a single member located in the line of strain, said member being fixed to a portion of the trailer, and pivotally connected to the main vehicle.

1,299,974. HERMETIC CLOSURE FOR RECEPTACLES. WILLIAM A. LORENZ and STANLEY H. ROOD, Hartford, Conn. Filed May 11, 1918. Serial No. 233,823. 1 Claim. (Cl. 215—84.)



The combination with a receptacle of a hermetic closure comprising a cap formed with an annular gasket channel in its under side near the outer edge, the cap over said channel being pressed downwardly so as to provide an exterior annular recess and an interior annular wedge at the top of the gasket channel, and a plastic gasket molded into and fitting the wall of said channel, said gasket below said wedge and between its edges on the exposed face having a downwardly extending annular rib with an unbroken surface which is designed to rest lightly upon the top of the rim of the receptacle which the cap is designed to close and said rib being spread over the top of the rim of the receptacle by said wedge when the cap is pressed to place for sealing the receptacle.

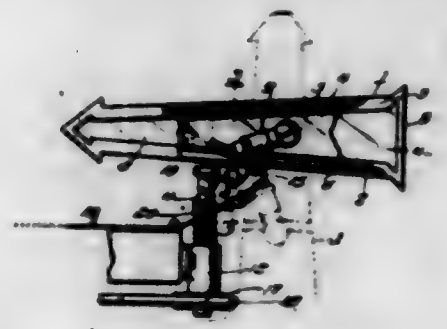
1,299,975. INCINERATOR. JOE ALFORD MCCUTCHEON, Austin, Tex. Filed Oct. 18, 1918. Serial No. 258,784. 2 Claims. (Cl. 110—9.)



1. An incinerator comprising a body of refractory material having a vertical receiving passage provided at its upper end with a removable closure, a receiving pot closing the lower end of said receiving passage, a second passage inclining downwardly in said body from the atmosphere, passing beneath and across the bottom of said pot, and discharging into said receiving passage above the pot, and a smoke outlet passage in said body leading from said receiving passage at a point opposite the discharge end of said second passage, the portion of said second passage beneath said pot forming a fire chamber.

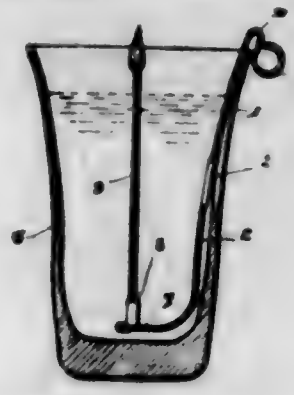
1,299,976. AUTOMOBILE DIRECTION-INDICATOR. RALPH RAYMOND MCDONNELL, Chicago, Ill. Filed Aug. 5, 1918. Serial No. 248,299. 12 Claims. (Cl. 40—77.)

1. In an automobile direction indicator, the combination of a tail light mounted for rotational movement about a vertically disposed axis to indicate the direction of travel, and for tilting movement about a horizontal axis to indicate stoppage of the vehicle, hand-operated



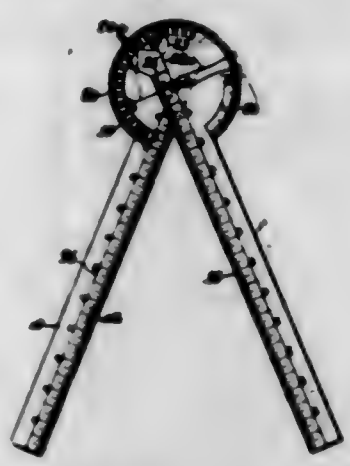
means for controlling said rotational movement, and foot-operated means for controlling said tilting movement.

1,299,977. WICK-HOLDER. FRANK A. MCGUIRE, Iola, Kans. Filed Dec. 14, 1918. Serial No. 266,786. 4 Claims. (Cl. 67—36.)



1. A wick holder of the character specified consisting of a strip bent at its upper end to form a hook for engaging over the edge of a vessel and having a finger piece at the hook, and bent at its lower end to lie at approximately a right angle to the body of the strip, said last named end carrying a socket through which the wick may be passed, the socket having yielding means for engaging the wick to hold the same, said strip consisting of sections slidably connected.

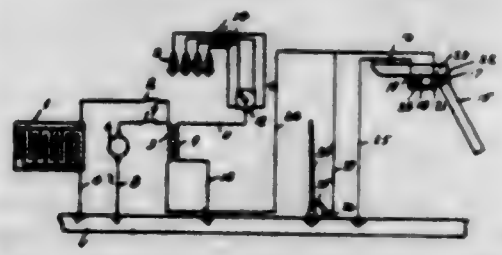
1,299,978. MEASURING INSTRUMENT. SILAS C. MACDOWELL, Chicago, Ill. Filed Feb. 14, 1918. Serial No. 217,186. 2 Claims. (Cl. 33—75.)



1. In an instrument of the character described, the combination of two members only pivoted together near one end and constructed and adapted when crossed and opened one way to form a pair of calipers with a suitable linear scale to indicate the distance between the caliper jaws and when reversely crossed and opened to constitute a protractor with an angle scale with which one jaw of the calipers coacts to indicate the angular relation of the

parts of the protractor, both scales being on the same side of the instrument, the space between said members when adjusted as a protractor up to one hundred and eighty degrees being unobstructed up to the apex of the angle, substantially as described.

1,299,979. DOOR-OPEN SIGNAL FOR ALL VEHICLES. RAYMOND S. MALBURG, Los Angeles, Calif. Filed Aug. 19, 1918. Serial No. 250,549. 2 Claims. (Cl. 180—82.)



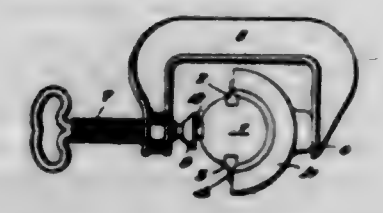
1. A door-open signal for motor vehicles comprising a circuit breaker adapted to be operated by the operation of an emergency brake, and a second circuit breaker adapted to be operated by opening and closing a door, said circuit breakers being in the power line for operating the spark plugs.

1,300,060. ARTIFICIAL LIMB. ANDREW MARCINKO, Joliet, Ill. Filed Jan. 7, 1919. Serial No. 270,072. 4 Claims. (Cl. 3—2.)



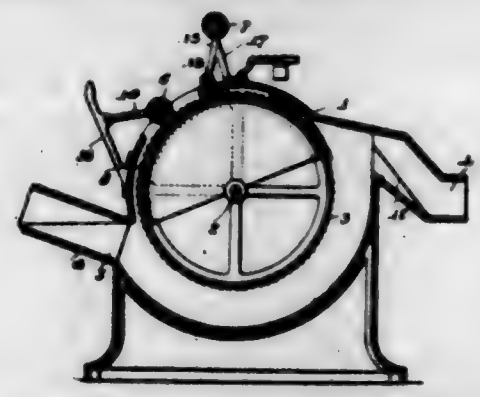
1. In a device of the class described, a flexible socket, attaching means therefor, curved metallic brace members secured to said socket, an artificial limb pivotally connected to said brace, jointed members pivoted to the brace and to the limb, and means for engaging one of the members to hold both of said members in normal longitudinal alinement.

1,300,061. BABBITTING-MANDREL. JAMES M. MARK, Oregon City, Oreg. Filed Aug. 25, 1917. Serial No. 188,126. 1 Claim. (Cl. 22—128.)



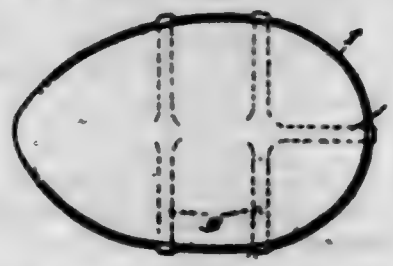
The herein described mandrel for babbitting journal boxes and the like, the same comprising a cylindrical core having diametrically opposed longitudinal slots therein extending the full length thereof and having an additional slot terminating adjacent the ends of the core and disposed intermediate between the first mentioned slots, a rib seated in the last mentioned slot and projecting therebeyond, webs seated in the first mentioned slot and being of a less length than said slots, and an outstanding rib centrally formed on each of the webs and projecting beyond the ends of the webs a distance approximately equaling the length of the core.

1,300,062. CONDENSING APPARATUS. GEORGE W. MARTIN, San Antonio, Tex. Filed July 12, 1918. Serial No. 244,896. 7 Claims. (Cl. 12—17.)



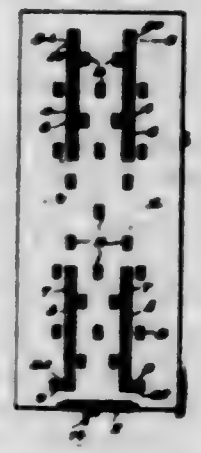
5. In a condensing apparatus the combination of a housing, a condensing cylinder therein, and a throat extending upwardly to the interior of the housing; said throat having on its floor longitudinally spaced spreaders gradually increased in height as they approach the interior of the housing.

1,300,063. HEEL-SUPPORT. DAVID L. MARTIN and JOHN M. HENDERSON, Walla Walla, Wash. Filed Aug. 28, 1917. Serial No. 188,626. 2 Claims. (Cl. 36—33.)



1. A device for use in the restoration and maintenance of the fleshy formation common to the natural shape of a human heel, including a retainer curved to correspond to the natural shape of the heel, and a plurality of pads receivable in superposed relation in said retainer for supporting the heel of a user whereby to facilitate the restoration of the fleshy formation, said pads being adapted to be removed at different periods during the process of restoration of the fleshy formation whereby to accommodate for the enlargement of the heel and the curvature thereof.

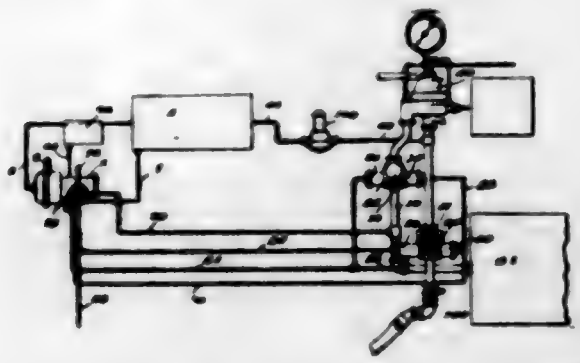
1,300,064. HEARSE-TABLE. CHARLES O. MATHEWS, Milford, Conn. Filed Jan. 24, 1919. Serial No. 272,832. 7 Claims. (Cl. 21—26.)



1. A hearse table having longitudinally spaced pairs of parallel slots extending lengthwise thereof, a shaft journaled on the underside of the table and having spaced right and left screw threaded portions extending between the slots of the respective pairs, cross bars engaged with the threaded portions to advance and retract from each

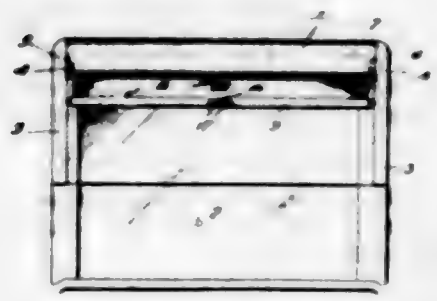
other upon rotation of the shaft, a pair of ears fixed on each end of the bars to extend up into the respective slot of the table, and a clamping jaw secured between each pair of ears and extending above the table, the jaws at one end of the table being adjustable from the path of an incoming casket.

1,299,985. AUTOMATIC TRAIN CONTROL. HENRY I. MATSON, Astoria, Oreg. Filed June 20, 1916. Serial No. 104,784. 104 Claims. (Cl. 246—190.)



5. An automatic train stop system comprising in combination with an air brake system, an air motor controlling a bleed device in the train line and capable of two movements, one causing the device to move to a position to cause a service, the other causing the device to move to a position to accomplish an emergency application of the brakes, an air reservoir, and means held in a normal position by the air pressure in said reservoir, and capable upon a reduction of air pressure to assume two positions, one position allowing a quantity of air to pass to said motor, the other position allowing a second quantity of air to pass to said motor.

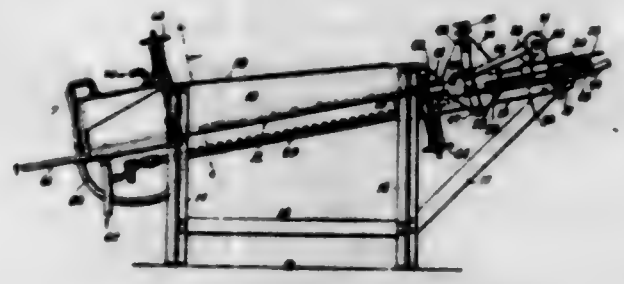
1,299,986. WIND-SHIELD SHADE. EUGENE G. MATTESON, Pasadena, Calif. Filed Dec. 8, 1917. Serial No. 206,297. 2 Claims. (Cl. 21—148.)



2. A shade for automobile wind shields, comprising a hood extending forwardly from the top bar of the wind shield and including a curved top wall and closed end walls, a pair of depending racks secured upon the end walls of said hood and extending along the side bars of the wind shield, a shade carried by a roller mounted within said hood, a rod at the free end of said shade, and means carried by said rod and engageable with said racks for holding said shade in selected positions.

1,299,987. METHOD AND MACHINE FOR MAKING THREADS. CHARLES MESSICK, Hackensack, N. J., assignor, by direct and mesne assignments, to Electrical Conveying Machinery Company, a Corporation of New York. Filed Apr. 6, 1911. Serial No. 619,258. 29 Claims. (Cl. 23—202.)

1. In a tread-manufacturing apparatus, the combination of spring-clamped jaws with wedge-shaped noses for receiving casting-units or two-part molds and removing therefrom temporary clips, feeding-mechanism for receiving said units from said jaws and propelling the same in a continuous series, and a casting-chamber and a cooling-chamber forming a continuous passageway in front of said feeding-mechanism.



3. In a tread-manufacturing apparatus, the combination of an open-ended trough, a second trough located therein and having an opening that communicates with the outer trough, means such as a blank dummy or a casting-unit for spacing the inner trough above the floor of the outer trough to constitute a casting-chamber and to close the outlet therefrom, and means for clamping said troughs upon said spacing-means.

16. The process of heated-mold-casting, which consists in propelling a series of molds bodily into and through and out of a lead-pot.

1,299,988. COATING WITH METALS. FLOYD J. METZGER, New York, N. Y., assignor to Air Reduction Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 30, 1918. Serial No. 260,232. 3 Claims. (Cl. 91—70.2.)

1. The method of coating metal and other objects with metal by supplying to a coating torch a combustible gas consisting essentially of ethylene together with oxygen, supplying the coating metal to the flame thus produced, and projecting the metal upon the object to be coated.

1,299,989. SURFACE-WORKING MACHINE. ROYAL REUBEN MILLER, Chicago, Ill., assignor to Electric Rotary Machine Co., Chicago, Ill., a Corporation of Illinois. Filed June 12, 1916. Serial No. 103,278. 3 Claims. (Cl. 15—14.)



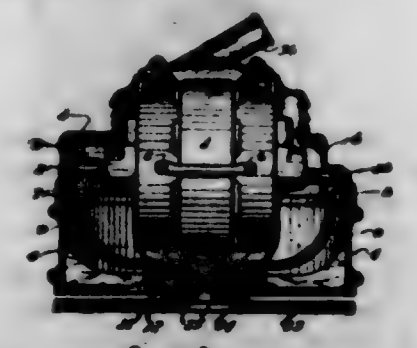
1. A device of the class described comprising driving means, a surface working apparatus supported from and actuated by said driving means, a supporting frame, a yoke having the branches thereof fulcrumed on said frame, said driving means being supported on and between said branches, a guideway mounted on said frame adapted to receive the shank of said yoke, and an adjustable yielding means mounted on said guideway for controlling the position of said yoke shank.

2. A device of the class described comprising driving means, a surface working apparatus supported from and actuated by said driving means, a supporting frame, a yoke having the branches thereof fulcrumed on said frame, said driving means being supported on and between said branches, a guideway mounted on said frame adapted to receive the shank of said yoke, a compression spring slidably mounted on said guideway in position to bear against said shank, and means for adjusting said spring along said guideway.

3. A device of the class described comprising driving means, a surface working apparatus supported from and

actuated by said driving means, a supporting frame, a yoke having the branches thereof fulcrumed on said frame, said driving means being supported on and between said branches, a guideway mounted on said frame adapted to receive the shank of said yoke, a compression spring slidably mounted on said guideway in position to have one end thereof bear against said shank, a stem having threaded engagement with said guideway, a foot on said stem for bearing against the other end of said spring, and a hand-wheel on said stem.

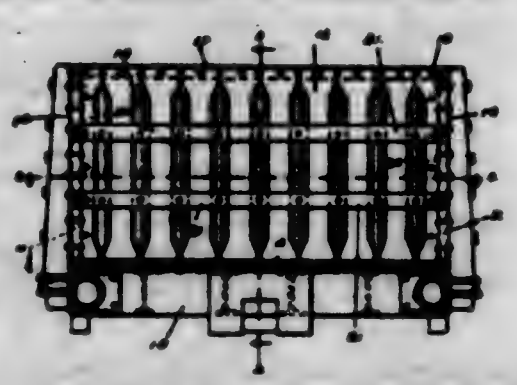
1,299,990. SURFACE-WORKING MACHINE. ROYAL RUDOLF MILLER, Chicago, Ill., assignor to Electric Rotary Machine Co., Chicago, Ill., a Corporation of Illinois. Filed June 12, 1916. Serial No. 103,274. 5 Claims. (Cl. 15—14.)



2. A cleaner of the class described, comprising a motor having a shaft and a driving gear mounted on said shaft, a bowl-shaped gear having teeth around the rim thereof for meshing with said driving gear, a housing surrounding and extending underneath said motor and gears and secured to said motor, a double sided bearing located at the base of said housing, a bearing at the base of said bowl-shaped gear adapted to coöperate with the upper side of said housing bearing, a circular disk connected to the base of said bowl-shaped gear and having a bearing for coöperating with the under side of said housing bearing, and means for attaching a working tool to said disk.

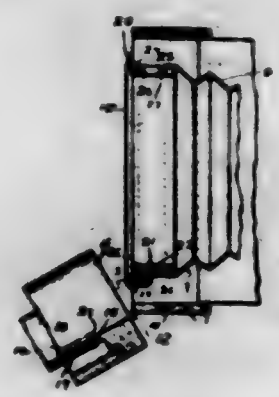
5. In a device of the class described, the combination of a driving motor and a disk driven by said motor, said disk including a rim having notches in the periphery thereof, an upstanding peripherally disposed flange on said rim having a notch therein, an annular ring slidably mounted on said rim and having notches in the periphery thereof located so as to register with the notches in said rim, said ring being shiftable so as to carry the notches therein out of registry with the notches in said rim, means for releasably locking said ring in such shifted position and comprising a locking member mounted on said ring so as to rock in a vertical plane, a lug on said member adapted to fit in the notch in said flange, yielding means for rocking said member so as to urge said lug into said notch, a working tool, and inwardly extending lugs on said tool adapted to be engaged by said ring when shifted so as to carry the notches therein out of registry with the notches in said rim.

1,299,981. END STRUCTURE FOR GONDOLA CARS. WALTER P. MURPHY, Chicago, Ill. Filed Nov. 8, 1918. Serial No. 799,968. 4 Claims. (Cl. 105—410.)



1. The combination with the other elements of a gondola car, of a sheet metal end structure comprising an end sheet provided with pressed strengthening and rigidifying ribs and formed with flanges standing at substantially right angles to the main portion of the sheet for attachment to the side wall structures of the car, angular members secured to the end sheet and to the inner surfaces of said side walls, and an angle bar secured to the upper edge of said sheet and bent inwardly and secured to said side wall structures.

1,299,992. CAMERA. ALFRED E. MYRUP, Racine, Wis. Filed Apr. 23, 1917. Serial No. 163,944. 5 Claims. (Cl. 95—32.)



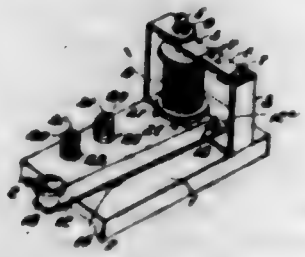
1. A camera having a film carrying section and a lens section connected together and movable relatively to each other to displace the film from exposure position, a focusing curtain, and a roller on which said curtain is normally wound, said roller being bodily movable by the pull upon the curtain when being unwound, to position the curtain in the same position relative to the camera box as is occupied by the film during exposure.

1,299,993. SHADE-HOLDER AND CURTAIN-POLE SUPPORT. MASSOUD NAHAS, Akron, Ohio. Filed Dec. 11, 1917. Serial No. 206,605. 2 Claims. (Cl. 156—22.)



1. In combination, a pair of plates adapted to be retained in parallel alined position against the opposite inner faces of the side walls of a door or window opening, said plates each having similar end portions bent backwardly in spaced parallel relation to the body thereof to form a socket, a vertical transverse rib on each plate adjacent the free end of the backwardly bent portion thereof, a lug on each plate to close the lower end of the socket thereof, and a supporting bracket carrying plate arranged at a right angle to each of said first named plates and having a U-shaped end adapted for removable reception in said socket.

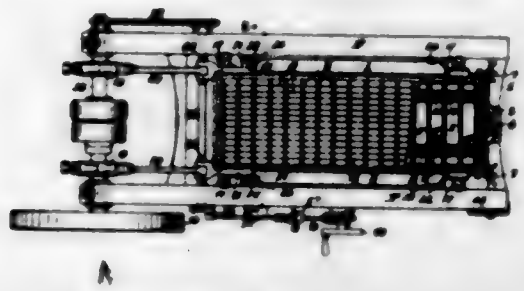
1,299,994. TELEGRAPH INSTRUMENT. JOSEPH S. NEWMAN, Cleveland, Ohio. Filed Sept. 18, 1916. Serial No. 120,212. 4 Claims. (Cl. 178—77.)



3. A telegraph instrument comprising a downwardly opening channel base of insulating material, a frame sup-

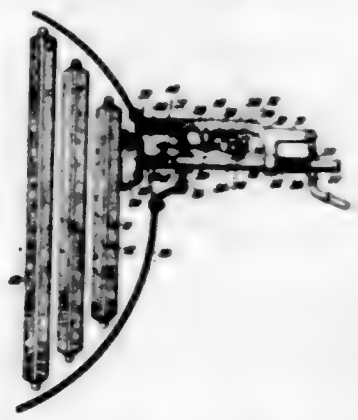
ported by said base, an electromagnet inclosed by the frame, the frame having an open side, one end of which is spaced from and opposed to the core of the magnet, an armature yieldingly supported by the frame and adapted to vibrate between the aforesaid end and the core of the magnet, a key supported by the base, a contact member carried by the base wherewith the key is adapted to cooperate, the winding of the electromagnet, the key, and the contact member having extensions which project downward through the base, and electrical connections between certain of said extensions within the channel of the base.

1,299,905. MACHINE FOR LEVELING AND STACKING MATCH-SPLINTS. ANDREW FRANCIS NET, East Kew, Victoria, Australia. Filed Jan. 28, 1919. Serial No. 273,614. 10 Claims. (Cl. 144—61.)



1. In a machine for leveling and stacking match splints, a reciprocating receptacle, a plurality of boxes in said receptacle, a loose normally raised vertically movable bottom in each box, means to lower said bottoms as the boxes fill with splints, a hopper detachably mounted in the top of the receptacle, a partitioned bottom in the hopper, a slide tray in the bottom of the receptacle to support the boxes and vertically movable uprights to support the loose bottoms of the boxes.

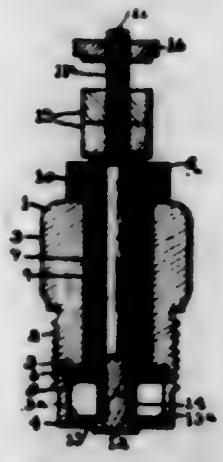
1,299,906. MEANS FOR INDICATING THE THICKNESS OF CAKE FORMATION IN FILTER-PRESSES. DANIEL T. NICHOLSON, Visalia, Calif. Filed Mar. 2, 1918. Serial No. 220,108. 9 Claims. (Cl. 116—81.)



1. A device for indicating the thickness of cake formation in a filter press embodying an audible signal, and means for automatically sounding the signal at a predetermined time.

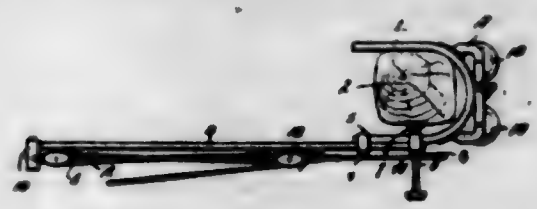
1,299,907. SPARK-PLUG. EDWARD O'CONNELL, West Philadelphia, Pa. Filed May 15, 1918. Serial No. 234,604. 4 Claims. (Cl. 123—169.)

1. A spark plug including a tubular shell provided at the lower end thereof with a depending annular flange, a sleeve extending through the tubular shell, insulation interposed between the sleeve and the shell, the sleeve being held rigidly in position within the shell, a rod extending slidably through the sleeve and having a head at the lower end thereof, a sparking plate provided with an opening loosely receiving the rod and engaging the head at the lower end of the rod, a spacing collar interposed between the sleeve and sparking plate and holding the latter in position with the ends thereof spaced from



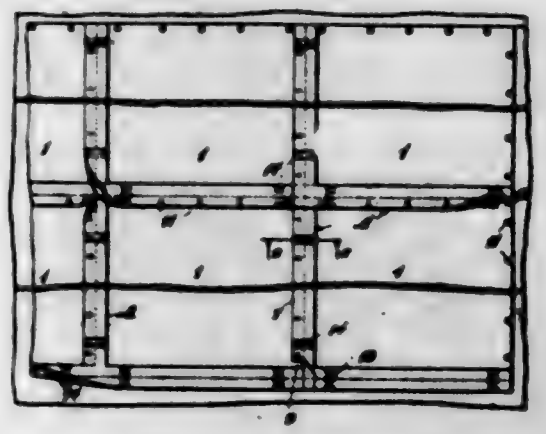
the flange of the shell, and a nut threaded upon the upper end of the rod, and engaging the sleeve to lock the rod and sparking plate in position.

1,299,908. WIRE-STRETCHER. HARRY WILLIAM OELRICH, Ellsworth, Wis. Filed July 16, 1917. Serial No. 180,909. 1 Claim. (Cl. 254—85.)



In a wire stretcher, the combination with a pair of draw bars, a pair of U-shaped yokes, loops embracing one arm of the yokes and one end of the bars, screws through one of the loops and having swiveled heads at their inner ends for binding against a post, and a block-and-tackle connected with the remote end of the bars; of a pair of supports mounted on the bends of the yokes, sheaves journaled between the supports, arms projecting from the supports between the sheaves, a pivot pin connecting the arms at a point beyond a straight line between the outer faces of the sheaves, and a lock-plate mounted at its outer end on said pin and having a V-shaped notch in its inner end at a point to bite a wire running around said sheaves, for the purpose set forth.

1,299,909. WATERPROOF SEAM FOR COMPOSITION-BOARD. ALFRED GERALD PAFFENBARGER, Los Angeles, Calif. Filed July 22, 1918. Serial No. 246,148. 7 Claims. (Cl. 108—7.)



1. A board having a seam joiner attached to an edge thereof, said joiner comprising a flexible strip of T-shaped cross-section, a portion of the top member adhering to

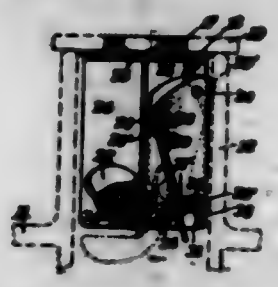
the top surface of the board and the remainder of the top member projecting beyond the edge of the board, and the vertical member of the strip being cemented to the edge of the board.

1,300,000. CEMENT-CATCHING RECEPTACLE. GEORGE H. PALMER, Brooklyn, Md., assignor of one-half to Margaret C. Rank, Baltimore, Md. Filed Nov. 23, 1917. Serial No. 204,208. 2 Claims. (Cl. 72—128.)



1. A wet-cement catching-receptacle having a front wall, a bottom, two end-walls, and a rear wall connected with the bottom and which inclines from said bottom upwardly and rearwardly and is provided at its upper edge with a rearward lateral flange to engage a horizontal groove in a brick-wall structure.

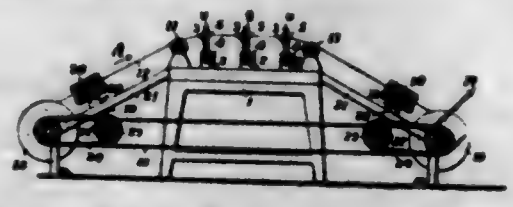
1,300,001. FLUSH-VALVE. ABRAM H. PARMAN, Waterbury, Conn. Filed July 12, 1918. Serial No. 244,737. 8 Claims. (Cl. 4—5.)



1. A flush valve apparatus comprising a tubular body member having a seat thereon, a valve member adapted to bear against said seat, a vane movably connected to said valve member, and a device also movably connected to said valve member and coacting with said vane so that the pressure exerted against the vane and said device by a medium flowing through said tubular body member causes a part of said vane to bear against said tubular body member to maintain the valve in an open position.

2. A flush valve apparatus comprising a tubular body member having a seat at the end thereof, a valve adapted to bear against the said seat, a plurality of angularly placed blades secured to the said valve and fitting movably within the said tubular body member, an angular vane comprising wings set at the same angle as the angle between the said blades, one of the said wings being pivotally connected to one of the said blades adjacent one end thereof, and both of said wings being recessed at their opposite ends in the angular portions thereof, so that said vane lies in the space between two of the said blades, a lever pivotally mounted in the same blade in which the said vane is pivotally connected, the said lever extending into and through the recess in the wings of the said vane and also through a recess in the blade adjacent the one in which the vane is pivotally connected, and a cup member connected to the said lever and lying within the space between the blades adjacent that in which the said vane is placed, the said cup and lever coacting with the said vane so that the pressure exerted by a medium flowing through the said body member causes a part of the said vane to bear against a portion of the said tubular body member to maintain the valve in an open position.

1,300,002. MACHINE FOR MAKING STEEL-WOOL. FRANCIS A. PATON and HENRY L. KOMPUS, Fitchburg, Mass., assignors of nine-tenths to Frederic I. Johnson, Fitchburg, Mass. Filed Mar. 17, 1917. Serial No. 155,033. 5 Claims. (Cl. 29—4.5.)



1. In a machine of the class described, the combination with means for continuously moving a wire circular in cross section, of means for scoring the entire periphery of the wire by a plurality of cuts, and means for shaving the scored portion to produce a wire in circular cross section of less diameter than the diameter of the original wire.

2. In a machine of the class described, a pair of reels for carrying the wire to be operated upon, means for rotating said reels to draw the wire from one reel to the other, two pairs of rotating corrugated rolls engaging the wire between said reels, and a series of annular cutters interposed between said corrugated rolls.

1,300,003. BRAKE. CLIFFORD S. PRATT, Great Neck Station, N. Y., and ORLANDO D. SHONNARD, Montclair, N. J., assignors of two-thirds to said Orlando D. Shonnard and one-third to Harold W. Shonnard, Upper Montclair, N. J. Filed Oct. 19, 1917. Serial No. 197,412. 27 Claims. (Cl. 31—3.)



1. The combination with a tractor and a trailer, of means for pivotally connecting said trailer to said tractor, a brake for said trailer, means on said tractor for operating said brake, and connections, including a rigid member passing through and reciprocable on the axis of said pivotal connection, extending from said brake-operating means to said trailer brake for actuating said brake, whereby said brake may by the movement of said operating means, be directly applied irrespective of the relative positions of said tractor and trailer.

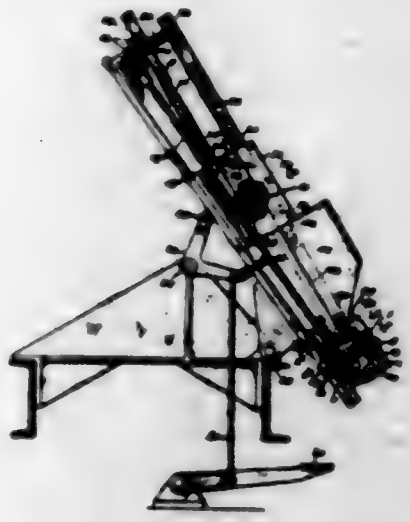
5. The combination of a tractor and trailer connected to each other to have relative movement fore and aft and about a horizontal axis, a brake for the trailer, operating means therefor disposed on the tractor, and means passing through the connection of the two vehicles to each other whereby the brake will always respond instantaneously to actuation of the brake operating means irrespective of the relative positions of the two vehicles.

7. The combination with two vehicle members mounted on wheels respectively, a connection for pivotally and removably connecting the vehicle members to one another, brakes for the wheels on one of said vehicle members, means for controlling said brakes disposed on said other vehicle member, and means for retaining said brakes in braking position when the vehicle members are separated from one another.

8. The combination with two vehicle members mounted on wheels respectively, a connection embracing both a vertical axis of movement and a horizontal axis of movement for connecting the vehicle members with one another to pivot relatively to one another about the axes of said connection, a bar mounted to reciprocate through said horizontal axis, a pin mounted to reciprocate through said vertical axis and operatively connected to said bar, brakes

for the wheels of one of said vehicle members, control means on the other of said vehicle members, means for connecting said brakes with said reciprocable pin, and means for connecting said control means with said reciprocable bar so as to actuate said bar to in turn actuate said pin to actuate said brakes.

1,300,004. BOBBIN-STRIPPER. BURT A. PETERSON, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed May 29, 1916. Serial No. 100,474. 14 Claims. (Cl. 19—18.)



1. A bobbin stripper having, in combination, a bobbin guide; an expansible and contractible annular stripping device at one end of the guide; a yieldable detent located in the path of a bobbin about to enter said device; a plunger for forcing the bobbin past the detent and through said annular device; and a yieldable member located adjacent to the detent and arranged to bear against the side of the bobbin and the plunger to prevent the yarn from clinging to the plunger.

2. A bobbin stripper having, in combination, a pivoted bed, a stripping element mounted on the bed, a plunger guided for reciprocation upon the bed for pushing a bobbin past the stripping element, two opposed racks attached to the plunger, a constantly rotating shaft, a pinion mounted on said shaft between the racks, and means for pivotally moving the bed to place the racks alternately in mesh with the pinion.

3. A bobbin stripper having, in combination, a supporting frame; a stripping element on the frame; means to move the stripping element into engagement with a bobbin; a lever pivoted on the frame; connections from the lever to the stripping element for moving the latter out of position to engage a bobbin; a plunger for forcing a bobbin past the stripping element; two opposed rack bars attached to the plunger; a constantly rotating shaft; a pinion mounted on said shaft between the rack bars; and means to cause the rack bars to mesh alternately with the pinion, said lever bearing against one of said rack bars, the last mentioned rack bar moving out of engagement with said lever when the butt of the bobbin has passed through said annular device.

10. A bobbin stripper having, in combination, an expansible and contractible annular device, a spring tending to contract the device, a lever arranged to enlarge the device, a plunger for pushing a bobbin through the device, and a member moving with the plunger and arranged to operate said lever.

1,300,005. MAIL-CATCHER. CYNTHIA PETTIGREW, Plantersville, Miss. Filed Sept. 30, 1918. Serial No. 256,271. 3 Claims. (Cl. 258—20.)

1. In a device of the class described, the combination of a supporting plate, a retaining bar carried by said plate and having a cross head at its outer end, a mail bag receiving member hingedly mounted upon one end of said plate, a latching hook supported by said receiving member, and resilient means for normally urging said hook in one direction, said hook being adapted to engage said cross head to hold the receiving member in a set position, although when the receiving member is swung slightly in one direction said resilient means will swing said hook from engagement with said cross head, thus allowing the receiving member to swing around into engagement with said supporting plate.



1,300,006. ADJUSTABLE ROPE-TIE. WILLARD G. PHILLIPS, Los Angeles, Calif., assignor to Claude A. Cornell, Los Angeles, Calif. Filed Dec. 16, 1918. Serial No. 266,965. 2 Claims. (Cl. 24—34.)



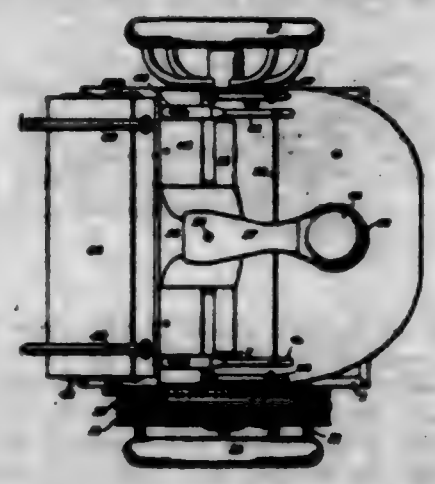
1. An adjustable rope tie comprising a fixed plate provided with tie bars and notched guide bars; a movable plate slidably mounted on said fixed plate; a clamping member pivotally mounted on said movable plate in cooperative relation with one of said tie bars; and a locking member pivotally mounted on said movable plate, said locking member being provided with catch teeth adapted to engage with the notches in said guide bars whereby said movable plate is held in locked relation to said fixed plate.

1,300,007. PRINTING-MACHINE. HENRY J. PLANT, Rochester, N. Y., assignor to Dalance Check Writer Corporation, Rochester, N. Y., a Corporation of New York. Filed Mar. 15, 1916. Serial No. 84,627. 28 Claims. (Cl. 101—19.)

1. In a check printing machine, the combination with two sets of type wheels arranged side by side along a common axis, one of said type wheels bearing figures, another and non-adjacent type wheel bearing words expressing the corresponding figures on the first named wheel, a third wheel bearing figures, a fourth and non-adjacent wheel bearing corresponding figures, of a shaft to which one of said type wheels is secured and on which another turns, a second shaft to which another of said type wheels is secured and on which another turns, and driving connections between each rightly secured type wheel on one shaft and the type wheel which turns on the other shaft.

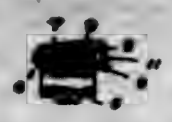
28. In a printing machine, a casing, two printing wheels within the casing rotatable about a common axis,

one of said wheels having a shaft rigidly secured thereto by turn therewith and extending through a side wall of the casing, a dial and a hand wheel secured to said shaft, a second hand wheel mounted at the opposite side of the casing and connected to the other printing wheel



to turn the latter, and a second dial having a sleeve surrounding the shaft of the first named dial so that the two dials lie side by side, said sleeve extending into the casing and being connected to the second hand wheel to be turned by the latter.

1,300,008. SPOON ATTACHMENT. SIDNEY PLASCLASCOVITZ, Denver, Colo. Filed Oct. 22, 1918. Serial No. 260,215. 1 Claim. (Cl. 65—65.)



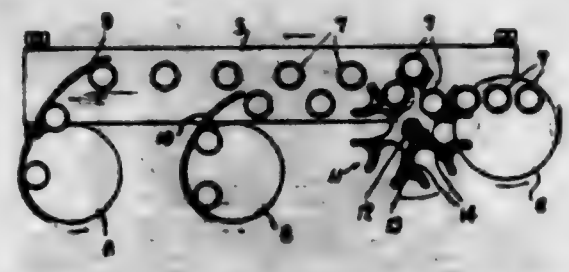
In an attachment for the handles of spoons, a body constructed of spring material bent upon itself to provide oppositely disposed co-acting spring jaws designed to receive and impinge therebetween the handle of a spoon or the like, said jaws being of unequal length and having their edges headed, an angle tongue formed on one end of one of the jaws, a substantially U-shaped binding element having one of its limbs designed to be inserted between the longer jaw and one of the faces of the handle and its second limb arranged over the shorter jaw to force the last mentioned jaw in tighter contact with the handle, and the said U-shaped member, when in such position having one of the outer corners thereof frictionally contacted by the head of the longer jaw to hold the said element against accidental removal from its engagement with the jaws and with the handle.

1,300,009. GREASE-CUP. ALANSON M. POND, Dubuque, Iowa. Filed June 21, 1917. Serial No. 175,997. 7 Claims. (Cl. 184—48.)



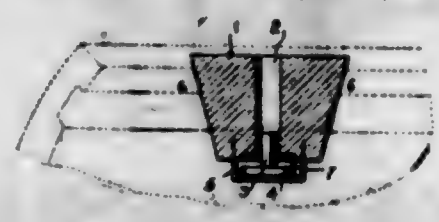
4. In a device of the class described, a base member, a cap member adapted to be telescoped thereover, and coacting means on said members adapted to permit the cap being inserted on the base member without rotation thereof and permitting removal thereof only by rotation.

1,300,010. DIVIDING-STAIRS. CLAUDE G. PORTER, Seaford, Del. Filed Nov. 8, 1917. Serial No. 200,135. 2 Claims. (Cl. 193—4.)



1. A dividing stairs for cans, as set forth, comprising a flat member centrally provided with a hub designed to receive a pivot, said member having an equal number of curved arms radiating from the hub thereof, said arms being gradually increased in width from their inner to their outer ends, the connecting member between the adjacent arms being rounded inwardly and the passage between the arms being off of the center of the hub, one of the sides of the arms in each of the passages between the arms being rounded inwardly with respect to the said passage and thence rounded outwardly, and the widened ends of each of the arms being concaved inwardly providing the outer edges of the said arms with spaced fingers.

1,300,011. VALVE FOR BUNG-VENTS. JOHN B. POWLES, Seattle, Wash. Filed Feb. 21, 1918. Serial No. 218,565. 3 Claims. (Cl. 217—104.)



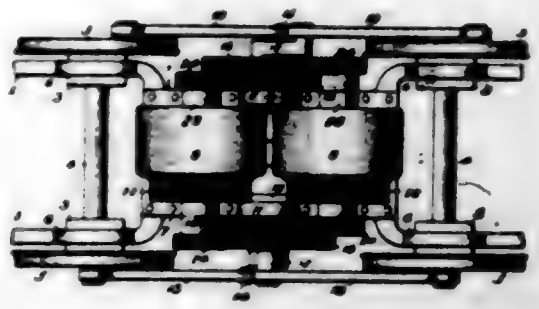
1. The combination, with a keg having a head with a bung hole, of a bung or plug with an aperture for venting the keg, a rivet-like valve having its stem disposed in the aperture, and its head arranged below the inner face of the plug, and a stop limiting the movement of the head of the valve away from the plug face.

1,300,012. BRUSH. SIMEON DESMOND PURDY, Fairville, New Brunswick, Canada, assignor of one-half to T. S. Simms and Company, Ltd., Fairville, New Brunswick, Canada, a Corporation of Canada. Filed May 9, 1918. Serial No. 233,556. 1 Claim. (Cl. 15—88.)



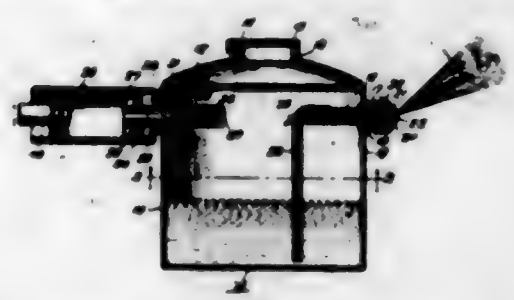
A brush comprising a one-piece handle recessed at one end to form a plain butt receiving socket, a bunch of bristles having a butt-end set in rubber and fitting within said socket, said butt-end being substantially flat and bearing against the bottom of the socket, a central core-piece within said butt, a ring surrounding said butt and between which and said core-piece the butt ends of the bristles are confined, such ring being of less width than the depth of the socket in the handle to permit the bristles to expand into contact with the edge of the socket, together with a means piercing said core-piece and engaging the handle to secure the bristle bunch thereto.

1,300,013. ELECTRIC LOCOMOTIVE. CHARLES H. QUINN, Roanoke, Va. Filed Oct. 29, 1917. Serial No. 199,142. 4 Claims. (Cl. 105—121.)



1. In an electric locomotive, the combination with a pair of motors each provided with a rotatable armature, a pair of pinions mounted on each armature, a jack shaft provided with a plurality of gear wheels each gear wheel being engaged with a single pinion.

1,300,014. SPRAYING DEVICE. JAMES W. RANSOM and OTTO A. GERSTUNG, Chicago, Ill., assignors to The Abbott Laboratories, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1917. Serial No. 171,890. 8 Claims. (Cl. 137—67.)



1. In a spraying device, the combination of a cylindrical tank having its axis vertical, a nozzle projecting outwardly from one side of said tank, a tube projecting inwardly into the tank and constituting a conduit for conducting the air to said nozzle from the interior of the tank, a feed tube open at both ends, having one end extending into said air tube for a substantial percentage of its length and the other end bent down to dip into liquid contained within said tank and adapted to swing about the axis of the air tube, and means for forcing air into said tank.

1,300,015. MIXER. CHARLES L. REED, Rochester, N. Y. Filed June 17, 1918. Serial No. 240,476. 4 Claims. (Cl. 48—180.)



4. A mixing device comprising a plurality of nonmoving twisted blades secured to each other in an axial line, and each gradually decreasing in width toward one end.

1,300,016. METHOD OF AND APPARATUS FOR ENGINE-BRAKING. GEORGE B. REED, Philadelphia, Pa. Filed Aug. 24, 1917. Serial No. 187,999. 15 Claims. (Cl. 121—105.)

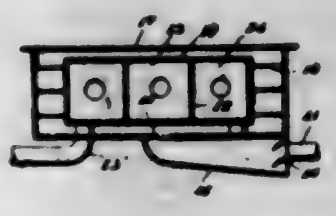
1. The method of braking a reciprocating engine while continuing to run in predetermined direction, which consists in admitting elastic fluid from a source thereof to the cylinder at substantially the end of the forward stroke of the piston, isolating the admitted fluid from said source during return stroke of said piston, converting kinetic energy of the system into pressure of said fluid by compressing the entrapped fluid by the return stroke of said piston, and releasing said compressed fluid.

4. The method of braking a uni-flow engine while continuing to run in predetermined direction, which consists in admitting elastic fluid to the cylinder at substantially



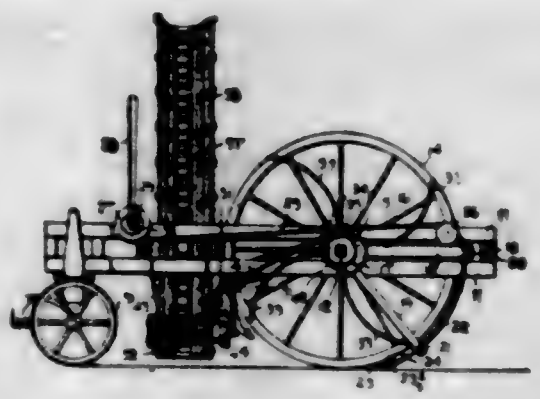
the end of the forward stroke of the piston through the normal exhaust port substantially at the center of the cylinder, absorbing kinetic energy of the system by compressing said fluid while entrapped in the cylinder by the return stroke of the piston, and releasing the compressed fluid through the normal inlet port at substantially the end of the return stroke of the piston.

1,300,017. HEATING DEVICE FOR MOTOR-VEHICLES. FRED A. REICH, Oshkosh, Wis. Filed Apr. 29, 1918. Serial No. 231,468. 1 Claim. (Cl. 237—126.)



A device of the class described comprising an outer casing having a perforated top and an opening in its bottom, a heater casing within said outer casing and spaced therefrom, horizontal plates in said outer casing on both sides of the heater casing and forming a circuitous channel therein, vertical plates in the heater casing forming a circuitous channel therein, pipes for connecting the opposite ends of said heater casing with an exhaust pipe and means for controlling the inlet of air to the outer casing, and the products of combustion to the inner casing.

1,300,018. STONE-GATHERER. OTIS F. RUTTER, Relay, Md. Filed June 2, 1917. Serial No. 172,494. 9 Claims. (Cl. 55—17.)



1. In a stone gatherer, a supporting frame, a truck upon which the frame is mounted, a rotatable axle, a series of downwardly and forwardly curved raker teeth operatively supported rearward of the axle, a series of rotatable lifting teeth mounted upon the axle to rotate

therewith and moving upward and rearward past the raker teeth, and conveyer bars upon which the raker teeth discharge disposed in staggered relation to the raker teeth and said bars having frictional engagement at their rear ends with the axle, the forward ends of the bars being yieldingly held against rotation with the axle.

2. In a stone gatherer, a supporting frame, a rotatable axle, a series of downwardly and forwardly curved raker teeth operatively supported rearward of the axle, a series of rotatable lifting teeth mounted upon the axle to rotate therewith and moving upward and rearward past the raker teeth, conveyer bars upon which the raker teeth discharge disposed in staggered relation to the raker teeth, said conveyer bars having frictional operative engagement with the axle, whereby the conveyer bars may rotate with the axle when free to move, and members upon which the conveyer bars discharge and supporting the forward ends of the conveyer bars, said members being yieldingly held from downward movement.

3. In a stone gatherer of the character described, a supporting frame, a truck upon which the frame is mounted, a rotatable axle, a series of raker teeth disposed rearward of the rear axle and disposed downward and forward and operatively supported upon the rear axle, a series of sets of lifter teeth mounted to rotate with the rear axle, each set comprising a plurality of radially directed raker teeth, said lifter teeth as they move upward and rearward coacting with the raker teeth to lift the stones thereon, a series of fixed conveyer bars having staggered relation to the lifter teeth and having their rear ends extending over the axle, said conveyer bars extending forward and downward, a transversely extending carrier onto which the stones are discharged from the conveyer bars, and means for yieldably supporting the forward ends of the conveyer bars so as to permit said ends to move downward in case a stone locks between the lifter teeth and the conveyer bars.

4. In a stone gathering machine, a supporting frame, an axle rotatably mounted in the frame, traction wheels rotating with the axle, said axle being many-sided in cross section, a downwardly and forwardly extending rake operatively supported rearward of the axle, a plurality of disks mounted upon the axle to rotate therewith, and a plurality of sets of lifting teeth, each set comprising a plurality of radially disposed teeth, the teeth of each set being operatively connected to one of said disks.

5. In a stone gathering machine, a supporting frame, a transversely extending rotatable axle mounted on the frame, traction wheels operatively connected to the axle to rotate therewith, said axle being square in cross section for a portion of its length, a rake comprising downwardly and forwardly extending rake teeth operatively supported upon the axle and disposed rearward thereof, a plurality of disks mounted upon the axle to rotate therewith, each disk formed in two sections and each disk having a plurality of inwardly extending recesses, the dividing line between the two sections extending across two of said recesses, said disks being set upon the axle so as to break joints, bolts passing longitudinally through all of said disks and disposed through said recesses, and a plurality of sets of lifting teeth operatively pivoted to said bolts, springs disposed in the recesses and holding the lifting teeth in a normal position, but yielding against impact of the lifting teeth with stones, each set of lifting teeth being spaced from the adjacent sets, sleeves loosely surrounding the disks and disposed between the lifting teeth, and downwardly and forwardly extending stone conveying bars attached to said sleeves and between which the lifting teeth pass.

1,300,018. OIL-CAN. WILLIAM H. REYNOLDS, De Soto, Mo. Filed Sept. 18, 1918. Serial No. 254,631. 2 Claims. (Cl. 221—46.)

1. In combination with a can having a compressible bottom, of a flat ring seated in the can adjacent to said bottom, means carried by the can and engaged by the ring for holding the ring against movement in an upward direction, and spring fingers formed on the inner



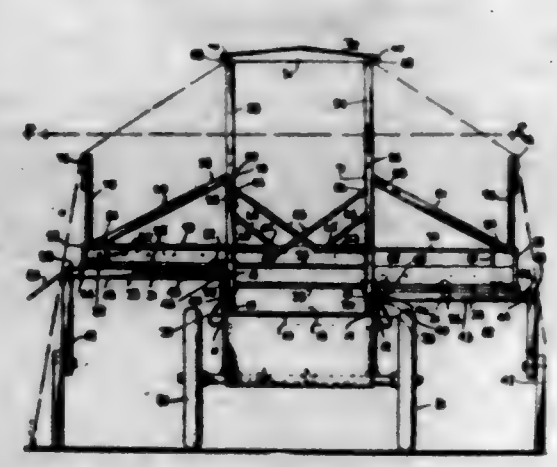
edge of the ring and extending inward at an angle therefrom contacting with the bottom of the can.

1,300,020. STEERING-WHEEL LOCK. LEE RIAL and WILLIAM HUSSEN, San Francisco, Calif.; said Hebern assignor to H. J. McLaughlin and J. F. Sullivan, San Francisco, Calif. Filed Oct. 20, 1917. Serial No. 196,902. 8 Claims. (Cl. 70—54.)



1. A permutation lock comprising a casing and a bolt slidable therein and formed with a plurality of notches in its opposite longitudinal side edges, spaced series of flat and non-rotatable keys having their outer sides slidably engaged with the adjacent sides of the casing for entering the bolt notches to lock the bolt against movement, certain of said keys being ineffective on the bolt but all the keys having catch-engaging recesses, a lock plate slidably mounted above the bolt in the casing, and downwardly divergent catch springs carried by the respective side edges of the plate for engaging in the recesses of the keys to hold the latter depressed.

1,300,021. AUTOMOBILE CAMP-TRAILER. CHARLES A. RICHARDS, Paullina, Iowa. Filed May 24, 1918. Serial No. 236,405. 5 Claims. (Cl. 21—7.)



1. In a device of the class described, a main frame, a plurality of mattress frames movable laterally with reference thereto leaving a free space between the frames

when extended, means comprising a rack member and a rotatable member for moving said frames to extended position, a collapsible structure and a top supported thereby, and means connected with the collapsible structure and the outer portions of the mattress frames for elevating and lowering the collapsible structure.

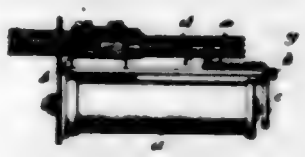
2. In a device of the class described, a main frame, a plurality of overlapping and laterally movable mattress frames supported from the main frame, means carried by each mattress frame and means mounted on the main frame for extending the mattress frames, a canopy supporting device mounted on each mattress frame and adapted to be raised from a horisontal to a vertical position upon the movement of the mattress outwardly, a top for the main frame, collapsible means for supporting the top, and means connected with the outer portion of each mattress frame and with the collapsible structure for elevating the latter.

3. In a device of the class described, a main frame, a plurality of mattress frames movable laterally with reference thereto, a top, a collapsible structure for supporting the top, a canopy supporting device connected with each mattress frame, and means for elevating the collapsible structure, and means for elevating the canopy support upon movement of each mattress frame outwardly from the main frame.

4. In a device of the class described, a main frame, a top, a collapsible structure for supporting the top including a plurality of bars pivotally connected, a plurality of vertical posts supported by the main frame, means for connecting certain of the bars first named with said posts, laterally extending legs carried by others of said bars first named, and means for moving said legs for elevating the collapsible structure and throwing certain of the bars pivotally connected with each other into a substantially vertical position.

5. In a device of the class described, a main frame, a plurality of mattress frames movable laterally with reference thereto, a top, a collapsible structure for supporting the top, a canopy supporting device connected with each mattress frame, and including a rotatable shaft and radial arms thereon, means for elevating the collapsible structure, and means for elevating the canopy support upon movement of each mattress frame outwardly from the main frame.

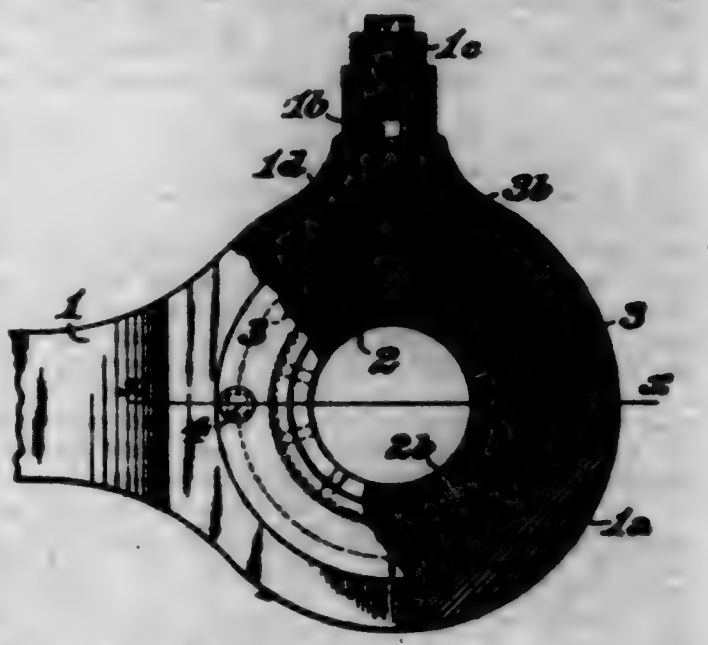
1,300,022. **RELAY FOR TELEPHONE-CENTRALS, &c.** MORTEN BALTHASAR RICHTER, Copenhagen, Denmark. Filed Feb. 6, 1917. Serial No. 146,827. 2 Claims. (Cl. 175—325.)



1. A relay for telephone plants comprising an electro-magnet, an iron yoke fastened on the said electro-magnet, a bent armature, a plurality of contact springs having pins adapted to be influenced by the said armature, pointed screws on the said yoke adapted to coact with notches in the said armature, and forming adjustable means on which the said armature can rock on a line substantially in the level of the places on the said armature engaged by the said pins.

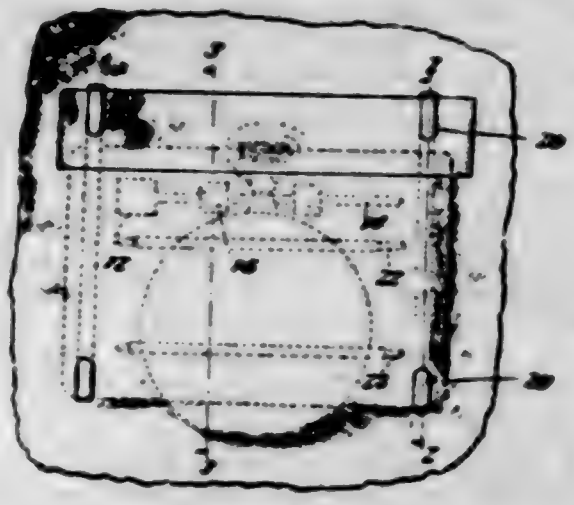
1,300,023. **LOCOMOTIVE SIDE ROD.** SAMUEL S. RIEGEL, Scranton, Pa. Filed Jan. 4, 1918. Serial No. 210,294. 3 Claims. (Cl. 287—93.)

1. The combination of a locomotive side rod stub end; a spherically turned and cylindrically bored crank pin bearing; a longitudinally divided annular bushing, in which said bearing is fitted, and which is itself fixed in a transverse bore in the stub end; and means for supplying



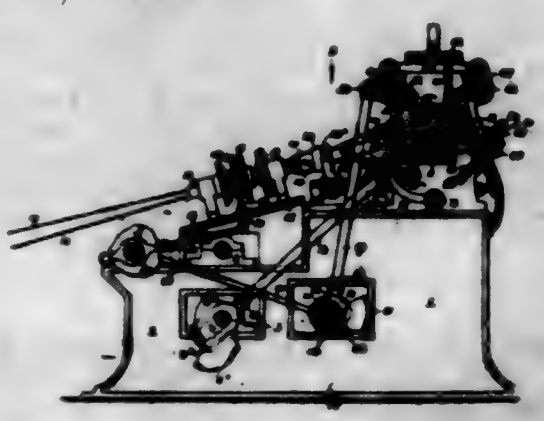
lubricant to both the inner and the outer surfaces of the bearing.

1,300,034. **WATCH-PROTECTING DEVICE.** CHARLES SCHOFIELD ROBERTSHAW, Natchitoches, La. Filed Apr. 2, 1918. Serial No. 226,199. 5 Claims. (Cl. 2—15.)



1. In a device of the class described, a plate member, securing means therefor, and a plurality of watch engaging devices slidably mounted on the plate and having frictional engagement with said plate.

1,300,035. **BARREL-MAKING MACHINE.** EDWARD WILLIAM ROBINSON and CHARLES JEWELL ROBINSON, Savannah, Ga. Filed Jan. 22, 1918. Serial No. 213,232. 12 Claims. (Cl. 140—85.)



1. The combination, in a machine for making wire bound barrels, of upper and lower bilging bridges having

a fixed vertical relation to one another, a pusher head for driving staves longitudinally between said bilging bridges so as to impart the proper bilge to the staves, means for forcing the successive staves forwardly in edgewise direction, and means for forming sheds of pairs of wires for the reception of the successive staves.

6. The combination, in a machine for making wire bound barrels, of upper and lower bilging bridges, means for forming sheds of pairs of binding wires passing between said bilging bridges, a reciprocated pusher head for driving staves longitudinally between the bilging bridges and through successively formed sheds of the pairs of wires; and means for forcing the successive staves forwardly in edgewise direction, said wire shedding device having wire guiding jaws, and means for positively opening the same.

8. The combination, in a machine for making wire bound barrels, of upper and lower bilging bridges, means for forming sheds of pairs of binding wires passing between said bilging bridges, a reciprocated pusher head for driving staves longitudinally between the bilging bridges and through successively formed sheds of the pairs of wires, and means for forcing the successive staves forwardly in edgewise direction, said wire shedding devices comprising a rotatable shaft with pivoted wire guiding jaws thereon, a tension block for said wires, a movable slide cooperating therewith to impart tension to the wires or release them therefrom, means for moving the slide to release the tension, and means connected with said slide for simultaneously opening the jaws.

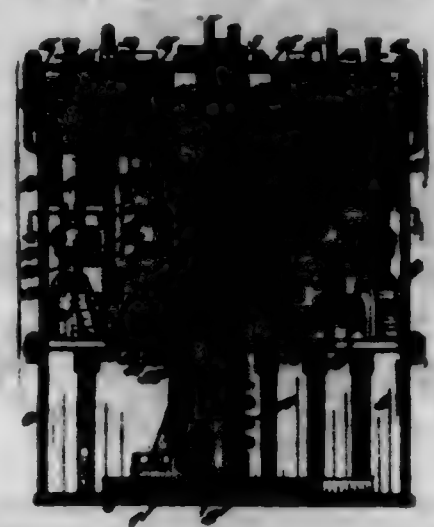
11. The combination, in a machine for making wire bound barrels, of upper and lower bilging bridges, means for forming sheds of pairs of binding wires passing between said bilging bridges, a stave support, a reciprocated pusher head for driving staves longitudinally between the bilging bridges and through successively formed sheds of the pairs of wires, and means for forcing the successive staves forwardly in edgewise direction, said reciprocated pusher head being guided in a path inclined in respect to the stave support that as it pushes a stave forwardly its end in contact with the stave will, at the same time, rise on the end of the stave.

12. The combination, in a machine for making wire bound barrels, of upper and lower bilging bridges, means for forming sheds of pairs of binding wires passing between said bilging bridges, a reciprocated pusher head for driving staves longitudinally between the bilging bridges and through successively formed sheds of the pairs of wires, and means for forcing the successive staves forwardly in edgewise direction, said wire shed forming devices having operative means comprising a shaft mounted so as to be susceptible of back and forth movement, a reciprocated rack whereby such back and forth movement is imparted to said shaft, a rack-operating crank arm, an operating shaft therefor on which said arm is mounted so as to have a limited amount of swing, and springs for normally retaining said crank arm in its proper relation to the shaft, said spring permitting a limited yielding movement of the crank arm when extra strain is exerted thereupon.

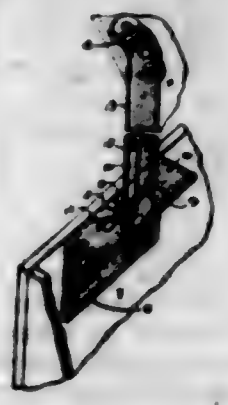
1,300,036. GAS-TURBINE. STAVROS NOMIKOS, Alton, Ill. Filed Dec. 21, 1917. Serial No. 208,614. 9 Claims. (Cl. 60—41.)

1. A gas turbine engine comprising a main shaft, turbine mechanism thereon, a plurality of explosion chambers whose discharge passageways are arranged to constitute jet openings for said turbine mechanism, and means for charging and discharging said explosion chambers respectively, each of said means comprising a cylinder communicating with the explosion chamber, a piston in said cylinder, a toggle for positioning the piston and means for controlling the toggle.

8. A turbine engine in combination with internal combustion engines disposed parallel with the main turbine shaft and adapted to discharge through the jet openings of the turbine and controlling mechanism operatively connected to said main shaft and to the supply and discharge gas having a slit therein, of a card supporting device comprising, a body portion secured to the tympan, a head for valves of the internal combustion engines and to the pistons thereof, each of said supply valves being a reciprocatable spring pressed valve disposed parallel with said shaft and having an adjustable end member, levers disposed transversely of said shaft in operative relation to the respective end members, and a cam mounted on the main shaft and operatively engaging said levers to operate the same and thereby actuate the respective supply valves.

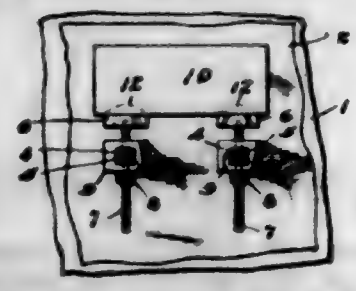


1,300,037. COVER-SUPPORT. HENRY W. BARTLES, Meriden, Conn., assignor to The Hobson & Motner Co., Meriden, Conn., a Firm composed of Harry C. Hobson and Alfred Motner. Filed Jan. 9, 1919. Serial No. 270,297. 2 Claims. (Cl. 217—60.)



1. A cover support comprising a horizontally arranged flange, a longitudinal slot in said flange contracted at its rear end and formed with a transverse bar, a notch opening into the forward end of said slot, a brace extending through said slot and formed in its rear edge with a notch adapted to engage with said bar, said brace also formed with a spring arm terminating in an outwardly projecting finger adapted to ride upon the upper surface of said flange and pass through the notch therein.

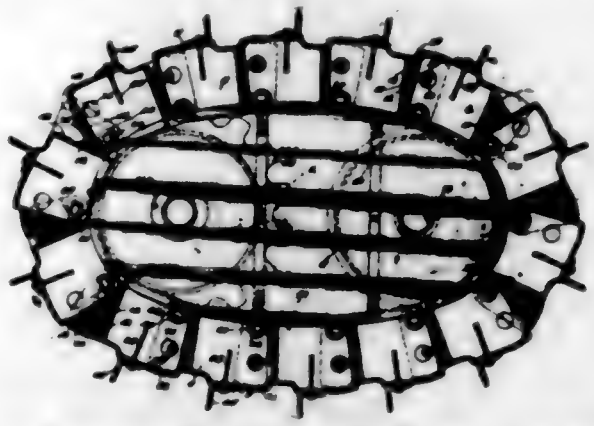
1,300,038. ADJUSTABLE QUADRAT FOR PRINTING-PRESSES. ANTHONY SCAFICCHIO, Arlington, N. J. Filed Mar. 6, 1918. Serial No. 220,712. 2 Claims. (Cl. 101—415.)



2. In a device of the character described, the combination with the tympan of a printing press platen, said tym-

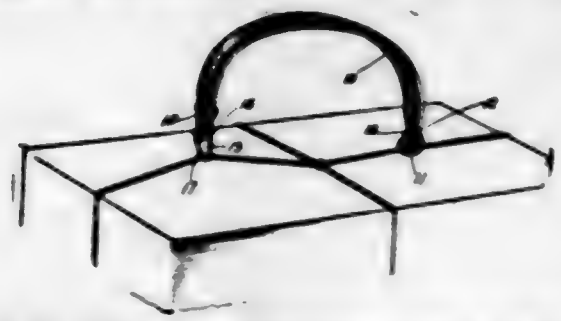
engaging the card, said head having a flange extending its full width and engaging the slit in the tympan so that the outer edge of said flange is covered by said tympan, and means for adjusting the head with respect to the body.

1,300,029. TRACTOR LINKED TRACK. Hugo F. SCHMIDT, Chicago, Ill. Filed Feb. 7, 1917. Serial No. 147,098. 3 Claims. (Cl. 21—150.)



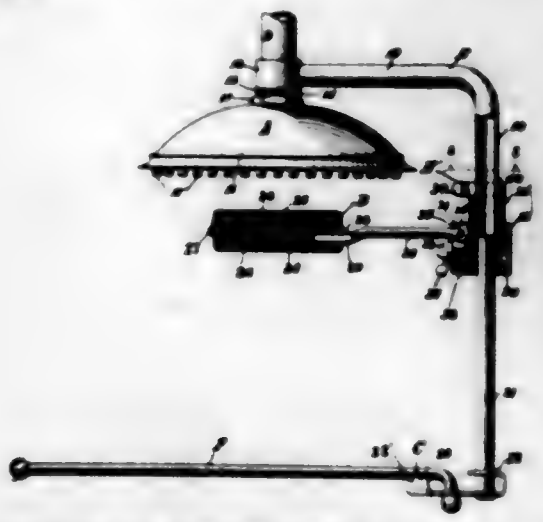
1. In a linked track for tractors, a number of links arranged in the form of an endless chain, each link being secured through a pivot to an adjacent link, and sealed oil chambers in each link; with restricted outlet passages directly to the corresponding pivots affording the sole means of oil escape from the chambers.

1,300,030. PARCEL-HANDLE. CONRAD SCHNEIDER, New York, N. Y. Filed Feb. 26, 1918. Serial No. 219,218. 2 Claims. (Cl. 224—57.)



2. As an article of manufacture, a parcel handle of a relatively rigid bow-shaped piece of wood, the grain of which extends lengthwise throughout the bow, the bow having formed on one end an integral head, and a metallic hook gripped around the opposite end of the bow from the head, substantially as set forth.

1,300,031. APPARATUS FOR WASHING AND CLEANSING. LAURA M. SCHNEIDER, New York, N. Y. Filed July 5, 1917. Serial No. 178,576. 8 Claims. (Cl. 68—27.)



1. A washing and cleansing device comprising a fluid sprinkler, means for supporting the sprinkler, means for supplying fluid to the sprinkler, goods-supporting means located below the sprinkler and in the discharge path thereof, and a perforated cleanser receptacle located intermediate of the sprinkler and the goods-supporting means and movable horizontally and radially in and out of the discharge path of the sprinkler.

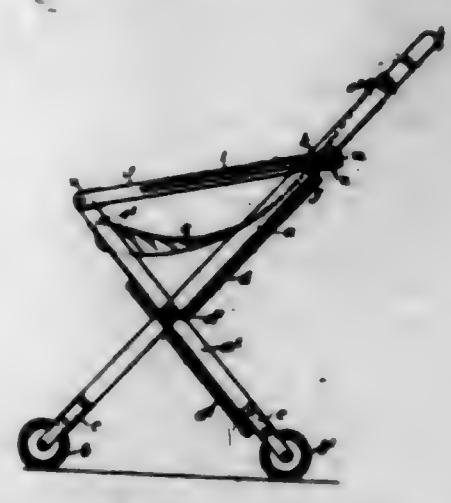
1,300,032. HOOD OR BONNET. ALBERT C. SCHULZ, Bridgeport, Conn., assignor to The Locomobile Company of America, New York, N. Y., a Corporation of West Virginia. Filed June 13, 1916. Serial No. 103,554. 18 Claims. (Cl. 74—56.)



14. An automobile hood, comprising two parts one of which swings outwardly relatively to the other, and a hinge connecting said two parts and located on the inner side of the joint between them.

18. In a hood for automobiles, a pair of hood sections, a tie strip forming part of the hood between said hood sections, hinge means for said hood sections located inside the hood, the edges of said hood sections and the edges of said tie strip being in lapped relationship.

1,300,033. HAND-PROPELLED FOLDING CARRIAGE OR CHAIR. ALFRED THOMAS SCOBEY, London, England. Filed Aug. 2, 1916. Serial No. 112,261. 3 Claims. (Cl. 21—82.)

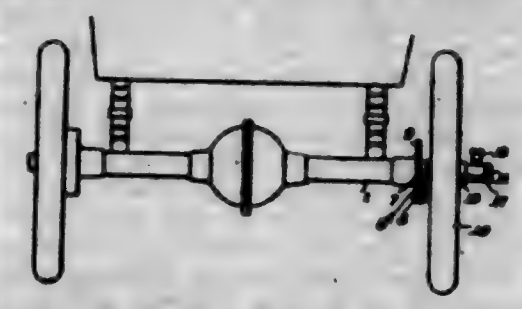


1. A folding carriage or wheeling chair comprising pivotally connected main frames, each consisting of a pair of parallel spaced side members, arm rests limiting the opening movement of the frames about their pivots and arranged to move into line with the side members of one of the frames when the carriage or chair is being folded, and pivoted cross stays connecting the side members of the main frames said stays having a sliding connection with the frame members at one end, the whole arrangement being such that the main frame members are capable of being folded or collapsed into exact parallelism and the opposite parallel sides of the main frames brought close together substantially as described.

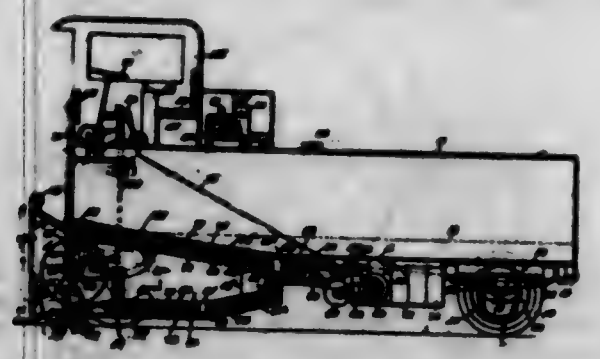
1,300,034. EMERGENCY-HUB. RAYMOND LYNN SHAMBAUGH, La Fayette, Ind. Filed July 8, 1918. Serial No. 243,786. 1 Claim. (Cl. 21—6.)

A device of the class described comprising a sleeve hollow throughout and having a reduced part forming a shoulder at the junction thereof with the main part, a ring shaped member engaging with said shoulder for holding the main part of the sleeve within the axle hous-

ing of an automobile, a stem on said member adapted to be secured to the flange of the housing, a wheel, a bushing connected with the hub thereof and engaging the reduced part of the sleeve and means for holding said bushing on said reduced part.



1,300,033. SNOW-MELTING MACHINE. EDWARD A. SMITH, New York, N. Y. Filed Sept. 26, 1918. Serial No. 121,805. 6 Claims. (Cl. 37—35.)



1. In a snow melting machine, the combination with a truck, of a fuel tank mounted thereon, a fire box, means for scooping up the snow, a snow wheel for throwing the snow into the fire box, a motor, means between the motor and said wheel for driving the latter, atomizers, means for conveying fuel from the tank to the atomizers, and a blower operated by said motor to supply air under pressure to the atomizers, valves respectively controlling the supply of fuel and the supply of air to the atomizers, a lever connected to regulate said valves, a rheostat to control the speed of the motor, and connections from said lever to the rheostat, whereby the speed of the motor and the supply of fuel and compressed air are concomitantly controlled by the actuation of said lever.

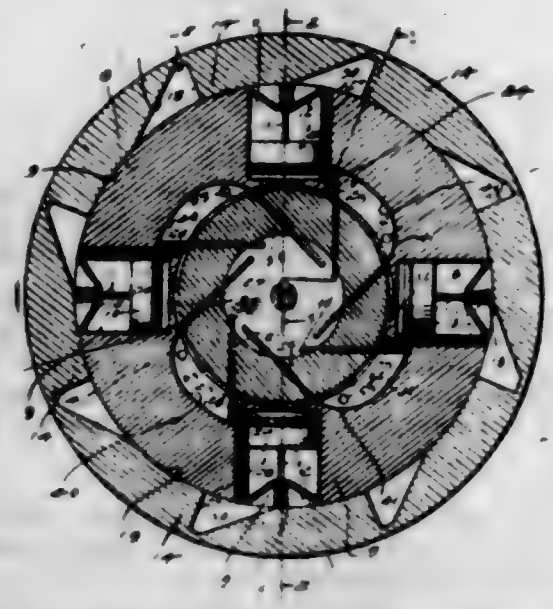
2. In a snow melting machine, the combination with a truck, of propelling means therefor, a receptacle open at its forward end to receive the snow, a hood at said open end of the receptacle, a scoop by which the snow is collected and over which it is conveyed through the hood to said receptacle, a shutter or screen for partially closing the front of said hood and deflecting the heated air, and means for adjusting said screen to regulate the width of the opening through which the snow enters said hood, said hood and scoop shiftable up and down, and wheels carried by said scoop normally out of contact with the ground and adapted to lift the hood when an obstruction or elevation in the road is encountered.

3. In a snow melting machine, the combination of a snow-melting fire box open only at its forward end, means for delivering the snow into said fire box, fuel atomizers at the rear of said fire box positioned so as to direct a flame forwardly through said fire box, a multiplicity of air blast openings in the bottom of said fire box for directing compressed air upwardly through the snow in a direction substantially at right angles to the direction of said flame, and means for supplying compressed air to said openings.

4. In a snow melting machine, the combination of a snow-melting fire box open only at its forward end, a rotatable snow wheel at the open end of said fire box for throwing the incoming snow backward in said fire box, a hood and scoop extending forward from said fire box in advance of said snow wheel, a movable screen carried by said hood in advance of said snow wheel, means for supplying heat to said fire box, and means for conducting the snow water from said fire box.

5. In a snow melting machine, the combination of an elongated snow-melting fire box open at its forward end; a scoop, hood and screen for controlling the collection and supply of snow to said fire box; fuel atomizers at the rear of said fire box for directing a flame forwardly in said fire box; a snow wheel in the forward end of said fire box having blades for engaging the snow supplied by the hood, scoop and screen and throwing it rearwardly in said fire box; and fire-proofing material lining said fire box and covering the shaft of said snow wheel.

1,300,088. ROTARY INTERNAL-COMBUSTION ENGINE. HARRY A. SMITH, Jr., Buffalo, N. Y. Filed Jan. 20, 1918. Serial No. 214,514. 8 Claims. (Cl. 123—18.)



1. In an internal combustion engine, a stator having a plurality of cylinder bores formed therein, gas compressing pistons in said bores, a rotor having inner and outer portions between which the stator is disposed, pistons carried by the inner portion of said rotor and means for causing gases exploded within the cylinder bores to act upon said pistons carried by the inner portion of the rotor so as to cause rotation of said rotor, the outer portion of the rotor serving to operate said pistons.

8. In an internal combustion engine, a stator having a plurality of cylinder bores formed therein, gas compressing pistons in said bores, piston rods connected to said pistons, a rotor, an internal cam structure carried by said rotor and engaging said piston rods to operate said pistons to compress gas in said bores, valve plates to control the exhaust of exploded gas from said cylinders, means normally holding said plates in a closing position, cams carried by said rotor for moving said valve plates into an opening position, and pistons carried by said rotor and arranged whereby exploded gas exhausting from said bores will impinge thereagainst.

1,300,087. PADLOCK. FRANK SOLEY, Philadelphia, Pa., assignor to Miller Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1919. Serial No. 276,758. 4 Claims. (Cl. 70—106.)



2. The combination in a padlock, of a casing; a shackle pivoted thereto and notched at its nose end; a sliding

bolt mounted in the casing and having a portion arranged to enter the notch in the nose end of the shackle; a pivoted lever having a projection at the rear arranged to engage the heel end of the shackle, when the shackle is closed, and having a portion arranged to close the opening for the nose end of the shackle, when the shackle is in the open position, and also having projections of substantially the same height so as to bear against the casing; a short pivot pin for the bolt; and a spring extending from one of the projections of the lever to the heel of the shackle, said spring extending over the pivot pin.

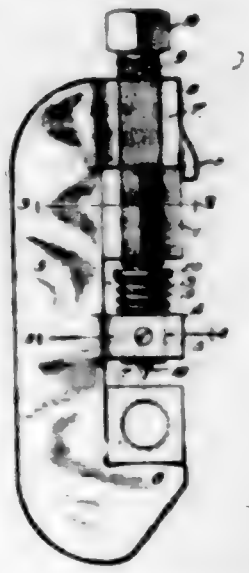
1,300,038. CUFF. EVERETT B. STACKPOLE, Seattle, Wash. Filed Dec. 28, 1916. Serial No. 139,354. 4 Claims. (Cl. 2—79.)



1. A cuff for use with a V-shaped clasp of the type which embraces the meeting-edges of the cuff, having alined notches in its meeting-edges, said notches forming a seat for the angle-portion of the clasp.

4. A cuff for use with a V-shaped clasp of the type which embraces the meeting edges of the cuff and whereof one arm is provided with an inwardly extending fastening-member, said cuff having a single cuff-buttonhole adapted to receive the inwardly extending member of said clasp.

1,300,089. NUT-CUTTING TOOL. ARTHUR L. STANFORD, Chicago, Ill. Filed June 11, 1918. Serial No. 239,363. 7 Claims. (Cl. 164—94.)



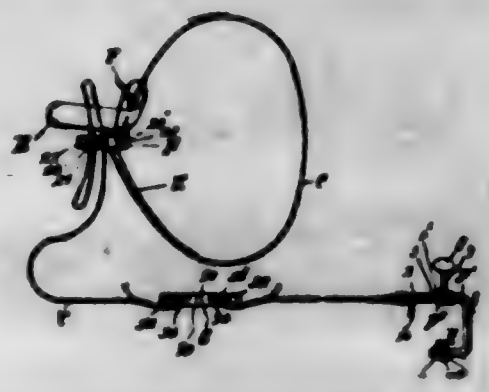
1. In a tool of the character described, the combination of a body provided with means to engage a nut, a threaded guide member mounted for longitudinal movement with respect to the body and held against turning movement, a driving bolt threaded through the guide member, and a cutting member positioned to receive the impact of the driving bolt, substantially as described.

3. In a tool of the character described, the combination of a body provided with means to engage a nut, a threaded guide member mounted for longitudinal movement with respect to the body and held against turning movement, a driving bolt threaded through the guide member, a cutting member positioned to receive the impact of the driving bolt, a guide member on the body for guiding the advance of the cutting member, and a spring for retracting the cutting member, substantially as described.

5. In a tool of the character described, the combination of a body provided with an overhanging bored head at one end and a jaw at the other end, a driving bolt slidable through the head, a guide nut having end contact with the head and side contact with the body and being slidable with respect thereto, a cutting tool adapted to receive the impact of the driving bolt and a guide lug on the body for guiding the cutting tool, substantially as described.

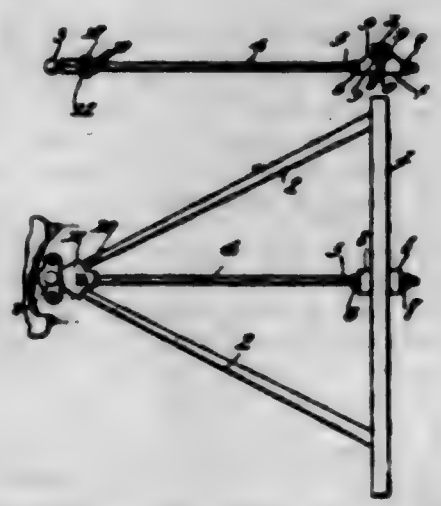
7. In a tool of the character described, the combination of a body, a driving bolt slidably mounted with respect to the body, a threaded member slidable with respect to the body and held against rotation with respect thereto, through which threaded member the driving bolt is entered, an abutment on the body affording a bearing for the rear end of the threaded member, and a cutting tool positioned to receive the impact of the driving bolt, substantially as described.

1,300,040. WINDOW-CLEANER'S SAFETY APPLIANCE. GEORGE S. STUART, Tampa, Fla. Filed Oct. 14, 1918. Serial No. 257,978. 3 Claims. (Cl. 20—72.)



1. A window cleaner's safety appliance comprising a clamp adapted to be securely attached to one of the stiles of a window sash, a strong flexible strap secured at one end to said clamp, a clasp secured to the other end of said strap, an auxiliary strap secured to said strap near said clasp and combining with the end portion of said strap next to said clasp to provide a belt for the window cleaner, an intermediate portion of the first named strap forming a loop passed between the jaws of the clasp and held there by at any desired point, substantially as described.

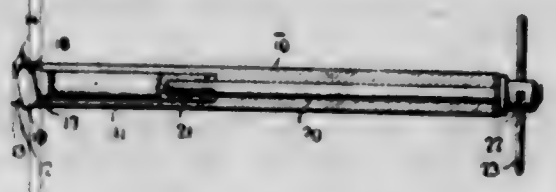
1,300,041. RADIUS-ROD BRACE FOR AUTOS. FRANK K. STURDIVANT, Biscoe, N. C., assignor of one-half to Charles R. Kellam, Biscoe, N. C. Filed Dec. 2, 1914. Serial No. 875,174. 1 Claim. (Cl. 21—182.)



In a motor vehicle, rearwardly converging radius rods, having their rear ends connected with each other and terminating in a ball; an axle wherewith the forward ends of the radius rods are connected; a lower clamp

disposed below the radius rods adjacent their rear ends and in front of the ball; an upper clamp disposed above the radius rods adjacent their rear ends and in front of the ball, both of the clamps being provided upon their inner faces with rearwardly converging grooves which receive the radius rods, both of the clamps being provided on their inner faces and at their forward edges with longitudinal grooves terminating at their rear ends in coöperating enlargements defining a recess; a securing device connecting the clamps together detachably and located between the radius rods; a single auxiliary rod bisecting the angle defined by the radius rods, the rear end of the single auxiliary rod being received in the longitudinal grooves of the clamps and terminating in an enlargement received in the recess; coöperating jaws mounted on the forward end of the auxiliary rod for adjustment longitudinally of said rod, the jaws engaging the axle; and means carried by the auxiliary rod and engaging the jaws to hold the same in adjusted positions.

1,300,042. TOOL-HOLDER. LUDWIG SWANSON, Detroit, Mich. Filed Oct. 18, 1917. Serial No. 196,519. 1 Claim. (Cl. 29—99.)



The herein described tool holder comprising a stock having communicating bores of unequal diameter extending to its opposite end, the outer end of the larger bore being frusto-conical and the corresponding end of the stock having open notches; a cylindrical member arranged for longitudinal movement in the larger bore and having an enlarged frusto-conical outer end arranged to fit in correspondingly shaped portions of said bore, said frusto-conical end having a longitudinal split providing resilient clamping jaws and said jaws being provided with transversely arranged and inclined grooves in their opposing sides, a tool arranged in said grooves, projecting at its ends beyond opposite sides of said member, and engaged in the notches of the stock, and an adjusting and clamping screw extending through the smaller bore of the stock, engaged at its inner end in a threaded bore of said member and having a head at its outer end bearing against the corresponding end of the stock.

1,300,043. OIL-CLOTH. THOMAS B. TALBERT, Huntington Beach, Calif. Filed June 6, 1918. Serial No. 238,573. 5 Claims. (Cl. 91—68.)

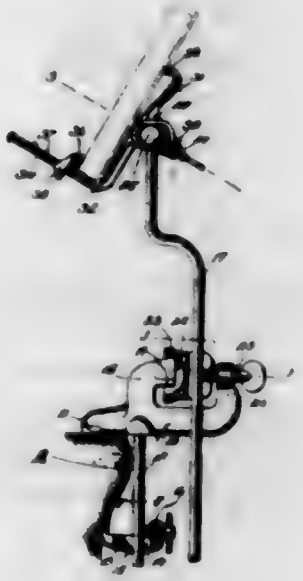
4. In a method of making an oil cloth comprising sizing a sheet of plain untreated paper, applying a coat of a heavy oil paint body thereon, polishing the same, applying successive coats of paint and applying a surface coat of varnish.

1,300,044. FASTENER FOR SHUTTERS, STORM-WINDOWS, AND SCREENS. REUBEN L. TARBOX, Shell Lake, Wis. Filed Feb. 19, 1919. Serial No. 277,908. 3 Claims. (Cl. 16—23.)



1. In a fastener, the combination with anchoring means carried by the base of a window frame, of eyes carried upon the inner and outer faces of a shutter, and short and long hook members loosely united to the anchoring means and adapted to engage the respective eyes, for holding the shutter open or closed.

1,300,045. UNIVERSAL ADJUSTABLE SUPPORT. UNO A. TAVI, Milwaukee, Wis. Filed Nov. 7, 1918. Serial No. 261,476. 7 Claims. (Cl. 45—82.)



1. A universally adjustable support including an attaching member having an abutment portion, an adjustment block having a hemispherical recess receiving said abutment portion, a standard carried by the adjustment block, an article carrying member on the standard, and a screw carried by the attachment member and engageable with the adjustment block to bind it in various positions against the abutment portion.

1,300,046. FUSIBLE LINK. WALTER O. TEAGUE, Brookline, Mass., assignor, by mesne assignments, to Fire Protection Insurance Securities Company, Boston, Mass., a Corporation. Filed June 28, 1917. Serial No. 177,566. 3 Claims. (Cl. 169—26.)

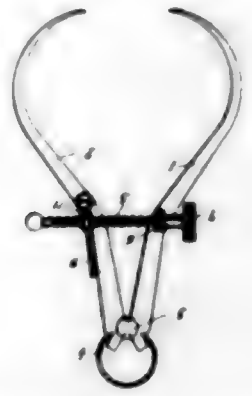


1. A fusible link comprising a pair of similar members adapted to be inversely and oppositely disposed and so held together by a fusible substance, each of said members comprising a substantially flat body portion having means for engaging an arm of a sprinkler head and having a bearing lug formed on said body portion and projecting obliquely therefrom, each of said members being apertured adjacent its lug so that, when the members are assembled, the lug of one member may be inserted through the aperture in the other member and the bearing lugs may contact and a fusible substance forming an intervening film between the members and also a substantially transverse rivet through said apertures.

1,300,047. ADJUSTING MECHANISM. CHARLES W. THOMAS, Madison, Wis. Filed June 12, 1918. Serial No. 239,679. 10 Claims. (Cl. 74—40.)

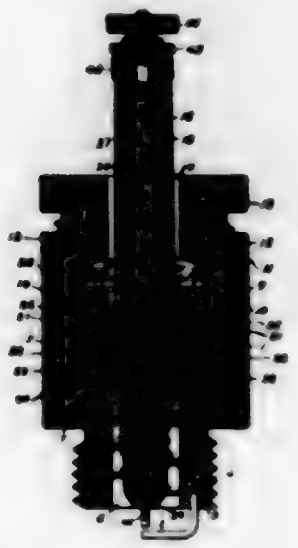
1. The combination, with a pair of coöperating members, at least one of which is movable toward and from

the other; of an adjusting mechanism for controlling such movement, comprising a rotatable adjusting element carried by one of said members, and a pivoted controlling element having a normal frictional engagement



with said adjusting element to prevent coarse adjustment of the movable member, but releasable to permit such adjustment.

1,300,048. SPARK-PLUG. WILLIAM S. THOMAS, Lock Haven, Pa., assignor to Thomas Spark Plug Company, New York, N. Y. Filed Feb. 28, 1918. Serial No. 218,702. 4 Claims. (Cl. 123—169.)

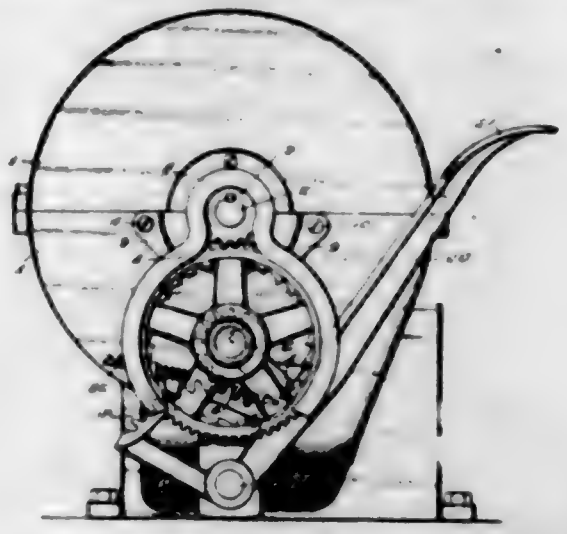


4. The combination of an electrode insulator having a passage extending therethrough; an electrode positioned within said passage and including portions of relatively small and large cross section positioned alternately within its length; a metallic jacket surrounding said insulator, said jacket being located in a zone defined by parallel planes intersecting said electrode between two of said relatively large portions thereof; an insulating band interposed between said jacket and the electrode insulator, said electrode insulator having an enlarged portion in engagement with said band; and washers interposed between flanges of said jacket and band and the electrode insulator, substantially as described.

1,300,049. GAS-ENGINE STARTER. HERBERT L. THOMPSON, Elgin, Ill., assignor to Elgin Gas Motor Company, Elgin, Ill., a Corporation of Illinois. Filed May 10, 1918. Serial No. 233,792. 10 Claims. (Cl. 74—54.)

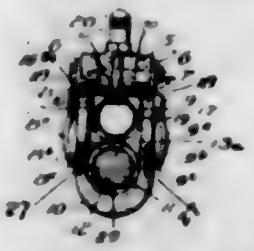
1. In a gas engine starter, a gear, a rotatable ratcheting member connectible with the gear and having teeth which vary successively in their distance from the axis of rotation, and an operating member having teeth which engage the teeth of the ratcheting member for rotating it.

9. In a gas engine starter, a rotatable member, a ratcheting device connectible with the member, and operating means having a convolute geared connection with the device for producing an accelerating movement on



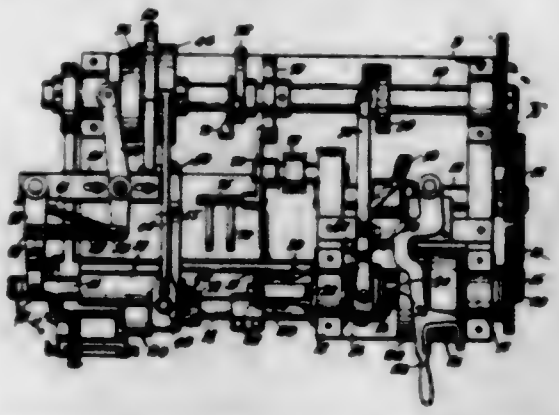
the device for the same continuous movement of the operating means.

1,300,050. PNEUMATIC AUTOMOBILE-TIRE. NATHAN LOUIS TOBIN, Chicago, Ill. Filed May 10, 1918. Serial No. 233,747. 3 Claims. (Cl. 152—10.)



2. The combination with a tire casing, substantially U-shaped in cross section, of a resilient cushion bearing against the inner face of said casing at the tread portion thereof, a liner having an arched outer side bearing against said cushion and an arched inner side, an air tube in said arched inner side and removable from said liner, and a rim against which said tube, liner and casing bear, said rim having annular side flanges embracing the sides of the tire casing, said air tube when inflated acting to press the edge portions of the sides of the casing against the rim.

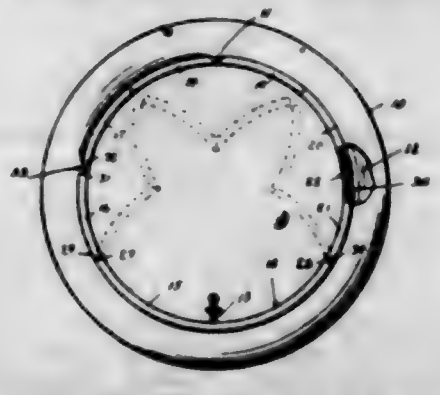
1,300,051. METAL-WORKING MACHINE. HARRY P. TOWNSEND, Hartford, Conn., assignor to The H. P. Townsend Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed May 29, 1915. Serial No. 31,263. 16 Claims. (Cl. 10—101.)



4. A rotatably mounted spindle, a center secured within the end of the spindle to receive a piece blank, a frame including supporting links pivotally secured to the spindle, a cross bar pivotally uniting said links, chuck jaws pivotally secured on the axis of the pivots connecting

said links and cross bars, means for operating the chuck jaws, and means for supporting the opposite end of said piece blank.

1,300,052. DEMOUNTABLE COLLAPSIBLE RIM. CLARENCE A. TRIPP, Mojave, Calif. Filed Oct. 21, 1918. Serial No. 259,082. 1 Claim. (Cl. 152—21.)



A demountable collapsible rim for an automobile tire and the like, comprising a longer rim section forming less than half a circle and which has square cut ends and six shorter rim sections, each of which has a square cut end and a bevel cut end, said shorter sections being hinged end to end in a series in such a way that bevel cut ends are hinged to bevel cut ends and square cut ends are hinged to square cut ends thus providing clearance openings at alternate joints, said series having square cut ends which are hinged to the square cut ends of said longer section, so that of the series of joints thus formed alternate ones are adapted to bend inwardly and alternate ones outwardly thus permitting the collapsing of the rim.

1,300,053. AIR-LIFT PUMP. RALPH H. TUCKER, Los Angeles, Calif. Filed June 20, 1918. Serial No. 240,053. 1 Claim. (Cl. 103—64.)



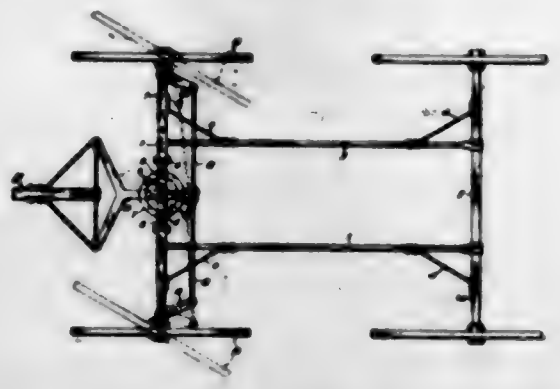
In an air lift pump, a vertical cylindrical barrel having vertical radial slots near its upper end, a base closing the lower end of the barrel, a bushing in the upper end of the barrel, a pipe slidingly mounted through the bushing and having vertical radial slots near its lower end, and means closing the lower end of the pipe and forming a stop to hold the pipe from being drawn through the bushing.

1,300,054. AMALGAMATING-MACHINE. WILLIAM B. TUCKER, Healdsburg, Calif. Filed Nov. 1, 1918. Serial No. 260,702. 2 Claims. (Cl. 53—68.)



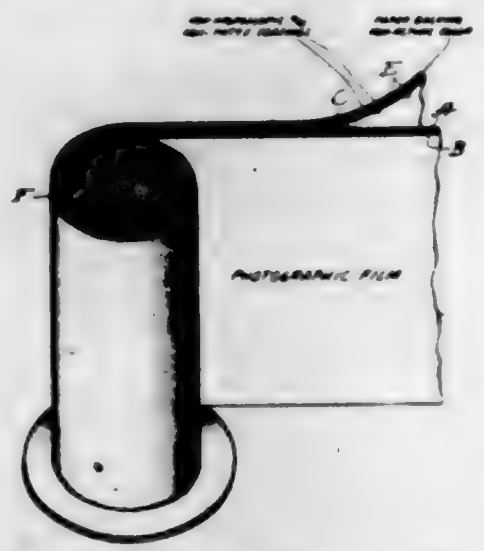
1. An amalgamating machine of the class described, comprising a hollow cylinder mounted for rotation and having air and water inlets and also provided with openings in the sides, doors to close said openings, and amalgamating plates attached to the doors and arranged in the cylinder when the doors are in place and removable from the cylinder with the doors.

1,300,055. VEHICLE CONSTRUCTION. JOHN NIKOLAI TYPPI, Iron Belt, Wis. Filed May 3, 1917. Serial No. 166,164. 1 Claim. (Cl. 21—139.)



The combination with a vehicle axle having bifurcated ends, of stub axles pivotally mounted therein, wheels carried by said stub axles, an arm pivotally connected to said vehicle axle, rods pivotally carried by said arm and extending therefrom in opposite directions, knuckles, posts slidably connecting said rods and knuckles, spaced stop collars arranged upon said rods upon opposite sides of said posts, and expansion springs arranged upon said rods and abutting said stop collars and said posts for yieldingly retaining the latter midway between said stop collars.

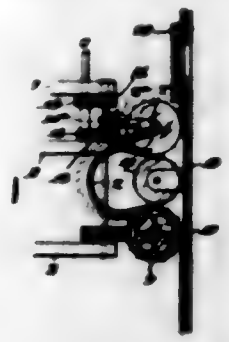
1,300,056. PAPER BACKING FOR FILM-CARTRIDGES. FREDERICK S. TYRRELL, Winnetka, Ill., assignor to Burke & James, Inc., Chicago, Ill., a Corporation of Delaware. Filed Nov. 6, 1915. Serial No. 60,090. 6 Claims. (Cl. 91—68.)



1. A separating sheet to be interposed between two surfaces, one at least of which is photographically sensitized, said sheet being of a non-actinic color and having designation characters impressed upon its surafce which is opposed to the sensitized surface, and said surface, carrying said designation characters, coated with a non-hygroscopic and non-fatty substance.

6. A separating strip of a non-actinic color adapted to be wound with sensitized film in spool form, designation markings on the back of said strip, and said back and markings covered with a transparent non-hygroscopic and non-fatty coating and adapted to be disposed in contact with the sensitized face of the film when wound in such spool form.

1,300,057. FILM-GUIDE CONTROL. CHARLES UEBELMESSER, New York, N. Y., assignor to Cru Patents Corporation, a Corporation of New York. Filed Mar. 17, 1915. Serial No. 15,070. 5 Claims. (Cl. 88—18.)



1. In a motion picture machine, the combination, with movable film guides, means for locking said guides against movement and means controlled by the completion of threading film through said machine for unlocking said guides.

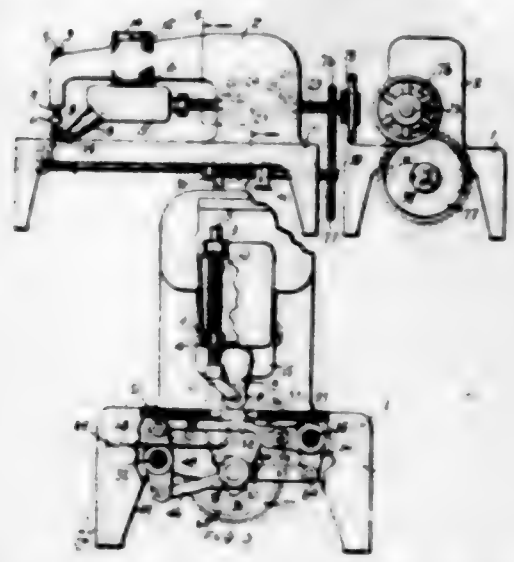
3. In a motion picture machine, a device for automatically varying the space between the aperture and a pressure guide opposite thereto consisting of a movably mounted lever located on said machine and bearing against said pressure guide to move the same upon movement of said lever, and means for operating said lever by the tension of the film passing thereby.

5. In a motion picture machine, a device for automatically varying the space between the aperture and a guide opposite thereto comprising a shiftable lever for normally holding said guide in an inoperative position and means controlled by the tension of the film passing through said guide for actuating said lever to release said guide.

1,300,058. ALLOY. CHARLES VAN AMBURGH, Tacoma, Wash. Filed Oct. 2, 1917. Serial No. 194,310. 8 Claims. (Cl. 75—1.)

1. An alloy consisting of a predominating proportion of aluminum, with substantial but smaller proportions of copper, tin and silicon.

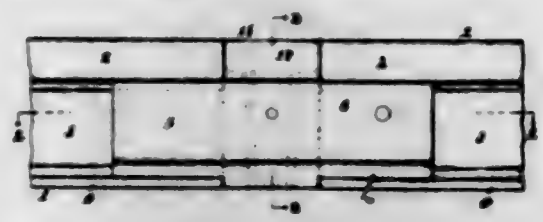
1,300,059. BURNISHING-MACHINE. LOUIS J. VAN GUELPEN, Cincinnati, Ohio. Filed Dec. 6, 1915. Serial No. 65,207. 4 Claims. (Cl. 69—1.)



1. In a burnishing machine, a burnishing tool, means for moving the same forward and backward, a feeding plate, mechanism for operating the same forward and backward, means for dropping said feeding plate at predetermined periods and feeding mechanism above the feeding plate operating in conjunction therewith.

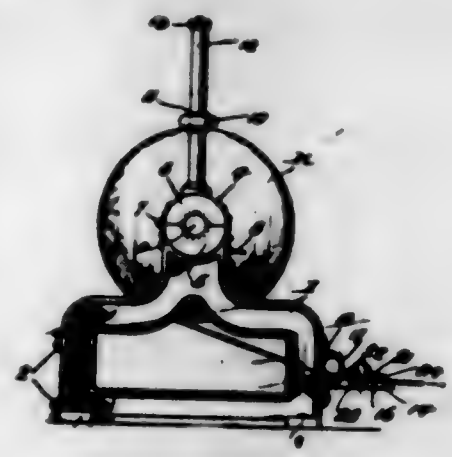
3. In a burnishing machine, a burnishing tool, means for moving the same forward and backward, a feeding plate, mechanism for operating the same forward and backward, means for dropping said feeding plate at predetermined periods, and a feeding roller above said plate operating in conjunction therewith and capable of vertical adjustment.

1,300,060. RAIL-JOINT. ANDREW VRUDNY, Arnold, Pa. Filed Jan. 10, 1918. Serial No. 270,485. 7 Claims. (Cl. 289—3.)



1. In a rail joint the combination with the two rails, of a joint bar on each side of said rails, said bars each being provided with an enlarged portion fitting between the rails and having angular faces to form a wedge seat between the same, a wedge block having angular faces fitting in said seat, and a head on said block for fitting between and conforming to the heads on the rails.

1,300,061. WRAPPING-PAPER SUPPORT. EDWARD WAIGAND, Nampa, Idaho. Filed July 9, 1917. Serial No. 179,516. 1 Claim. (Cl. 211—32.)



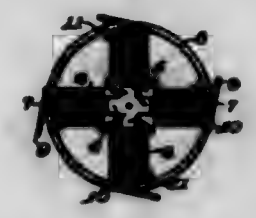
A wrapping paper support comprising a pair of end frames having means for supporting a roll of paer, a transverse shelf secured at its ends to said frames and positioned at the front edges of the latter, said shelf being adapted to receive thereon the paper unwound from said roll and having in its front edge a central notch, a sheet metal cutter plate overlying said shelf and having its rear edge rolled upwardly and forwardly to form a bead which serves to guide the paper between the cutter plate and shelf and also as reinforcing means for said plate, spring hinges secured to the upper side of said bead and to said end frames for forcing said cutter plate downwardly onto the paper to place tension on the latter and for permitting upward swinging of said cutter plate entirely away from said shelf when inserting the paper between the two, the front edge of said cutter plate having a notch positioned above the notch of said shelf, and a pair of spring restored bridge members pivoted to said cutter plate and having straight front edges in alinement and extending across the notch of said plate.

1,300,062. SUBMARINE SIGNALING DEVICE. GEORGE H. WALKER, Willow Grove, Pa. Filed May 2, 1917. Serial No. 165,912. 5 Claims. (Cl. 175—281.)

1. In a submarine signaling device, an electro-magnet, and an electric switch in close proximity to said magnet, said magnet being adapted to contact with and cling to

an iron or steel body, and the said switch adjacent thereto being closed thereby.

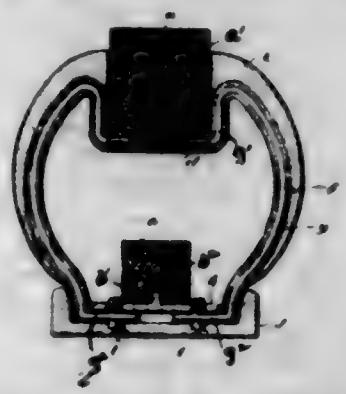
2. In a submarine signaling device, a plurality of radially directed normally energized electro-magnets, a yoke to secure said magnets together, and a switch associated with each magnet adapted to be closed by body in contact with the core of the magnet adjacent thereto, and comprising a pivotably mounted contact member provided



with an aperture through which the adjacent magnet core projects.

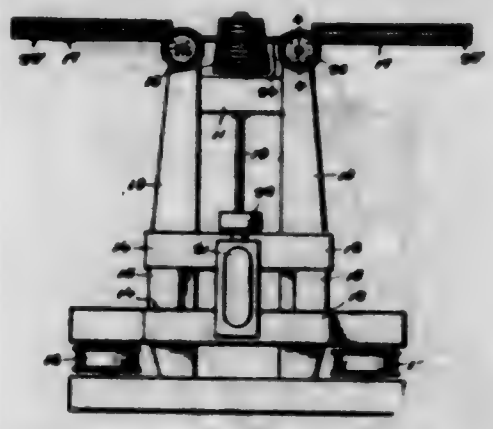
5. In a submarine signaling device, a plurality of radially directed normally energized electro-magnets, means to secure the same together, a circular guard substantially surrounding said magnets, a switch associated with each magnet and each switch being adapted to be closed by a body in contact with the magnet adjacent thereto.

1,300,063. PUNCTURE-PROOF AUTOMOBILE-TIRE. JOSEPH S. WALTON, Burley, Idaho. Filed Jan. 22, 1918. Serial No. 213,266. 2 Claims. (Cl. 152—8.)



2. A resilient tire comprising a series of U-shaped wire springs having channel-shaped portions, a casing inclosing said springs and having a circumferential groove adjacent the channel-shaped portions of the springs, and a tread removably mounted in said groove.

1,300,064. ADZING-MACHINE FOR RAILROAD CROSS-TIES. J WILLIAM WARREN, Kansas City, Mo. Filed June 8, 1918. Serial No. 238,910. 4 Claims. (Cl. 144—133.)



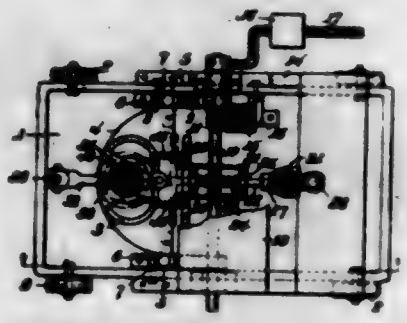
1. A machine of the class described having a supporting frame provided at one end with flanged track rail traversing wheels and at the other end with supporting and guiding rolls, a rotary cross tie adzing tool mounted upon said frame at the end adjacent to said guiding rolls, means for operating said tool, and means for adjusting the supporting frame relative to said guiding rolls to vary the depth of the cut of said tool.

1,300,065. COTTON-PICKING SACK. JOSEPH WILLIAM WATKINS, Ridgely, Tenn., assignor of one-half to Gordon Griffin and Henry W. Bartley, Ridgely, Tenn. Filed May 7, 1918. Serial No. 233,130. 1 Claim. (Cl. 150—2.)



A cotton picking sack and a carrying flap therefor, detachable therefrom, said sack and flap having means whereby the flap can be attached to either side of the sack to form an extension of said side and so that the sack can be reversed and said flap having a strap loop, at its upper end, to enable the same to be suspended from the shoulder of the user.

1,300,066. GLASS-WORKING APPARATUS. PETER WECHT, Bellaire, Ohio. Filed Apr. 6, 1918. Serial No. 227,105. 7 Claims. (Cl. 49—40.)

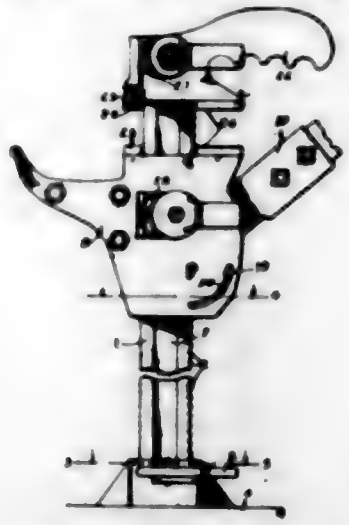


1. The combination with a water-tank, of a mold support, a mold composed of hinged sections which are movable horizontally in opening and closing mounted on said support, said mold and its support being movable vertically into and out of the water in said tank, means normally tending to maintain said mold open, means operable to overcome said tendency and to close said mold when the latter occupies working position, and a rotatable matrix-like bottom-piece for said mold stationarily supported in working position and past which said mold moves axially in its travel into and out of the water.

1,300,067. LIFTING-JACK. OSCAR G. WEE, Tomahawk, Wis. Filed May 29, 1918. Serial No. 237,292. 1 Claim. (Cl. 254—111.)

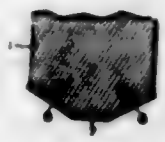
A lifting jack comprising a ratchet bar having ratchet teeth thereon, a movable member embracing said bar, a handle pivoted in said movable member, a pair of dogs carried by said handle and engaging the teeth, a lug on

each dog, a cam member having a substantially U shaped recess in its side engaging one lug and a double curve adjacent its end engaging the other lug, said cam mem-



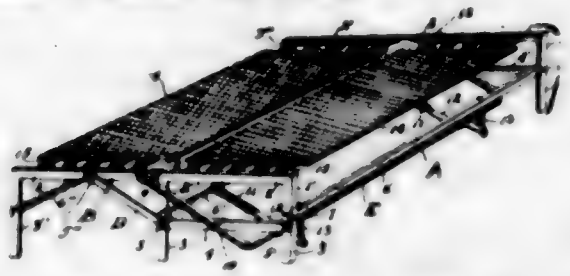
ber having a cam opening provided with curved walls, an operating lever having a concentric part and a pin on said part engaging said opening.

1,300,068. WELDING-ELECTRODE. JAMES M. WEED, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 7, 1918. Serial No. 233,017. 2 Claims. (Cl. 219—4.)



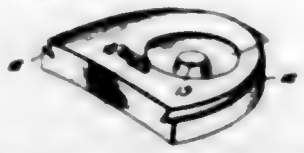
1. An electric spot welding electrode comprising a stem consisting of copper having a welding face on an end, a separable tip and means for removably connecting said tip to said stem at points removed from the welding face of said tip.

1,300,069. FOLDING COUCH-BED. BENJAMIN WEISS, New York, N. Y. Filed Feb. 3, 1917. Serial No. 146,312. 5 Claims. (Cl. 5—46.)



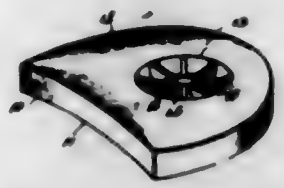
2. In a device of the character described, the combination of a main frame; an auxiliary frame; a rock lever comprising a bottom bar and upturned end pieces fulcrumed to said main frame, and to said auxiliary frame; rock links disposed substantially parallel to said end pieces and pivoted at their upper ends to said auxiliary frame and at the lower part to said main frame; throw-plates loosely secured to said bottom bar; and springs tensioned between the ends of the throw-plate and the main frame.

1,300,070. SHOE-HEEL. FRANK WHARTON, Elyria, Ohio. Filed May 20, 1918. Serial No. 235,661. 2 Claims. (Cl. 36—36.)



1. A shoe heel formed of compressible material and having a cavity or depression in the upper surface thereof, a raised portion forming the outer surface of the lower wall of the cavity or depression and extending below the lower or tread surface of the heel and a solid stop located concentrically within said depression and having its upper surface disposed below the upper surrounding edge of said depression.

1,300,071. SHOE-HEEL. FRANK WHARTON, Elyria, Ohio. Filed May 20, 1918. Serial No. 235,662. 7 Claims. (Cl. 36—35.)



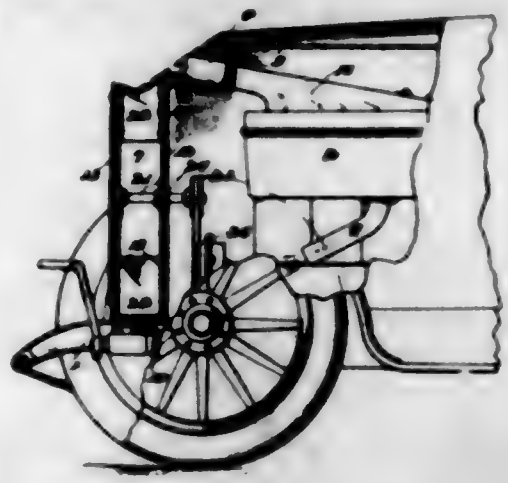
7. A shoe heel formed of compressible material and provided with a cavity or depression in its upper surface, a compressible raised portion forming the outer face of the lower wall of the cavity and extending beyond the lower tread surface of the heel and arranged to be flexed to form a substantially flat tread surface, and a stop within said cavity or depression.

1,300,072. SHOE-HEEL. FRANK WHARTON, Elyria, Ohio. Filed June 13, 1918. Serial No. 239,793. 1 Claim. (Cl. 36—36.)



In a shoe heel, a plate, means whereby said plate may be detachably secured to the heel portion of a shoe, a compressible member, a spring plate embedded in said compressible member, said spring plate being provided with outwardly extending offset portions, which incline toward the heel portion of the shoe when the compressible member is in position, a headed securing element passing through an opening in and contacting with the under surface of the spring plate and flexing the latter to hold the compressible member tightly against the first mentioned plate and means carried by said first mentioned plate for engagement with the spring plate to hold the compressible member against rotary movement.

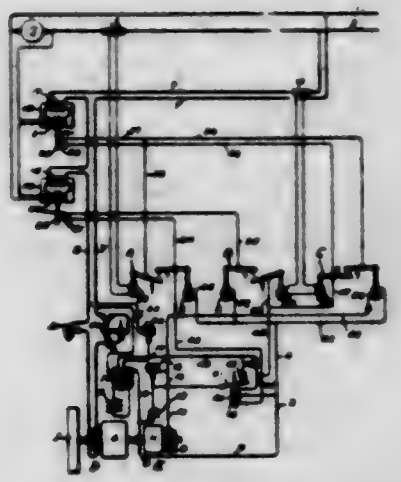
1,300,073. AIR COOLING SYSTEM FOR AUTO-ENGINE CYLINDERS. EDWARD T. WHEELER, Akron, Ohio. Filed Mar. 28, 1918. Serial No. 225,297. 8 Claims. (Cl. 123—171.)



1. An internal combustion motor having a cooling fluid circulating pipe and jacket system, embodying a lower air

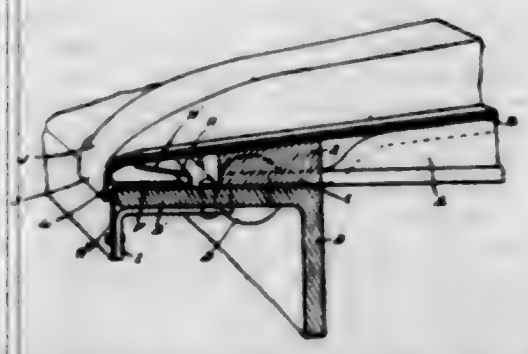
blast outlet and a top air blast inlet, in combination with a fan casing having an air inlet and an upper air blast outlet connected to supply a blast of cooling air to said inlet of the cooling system, a rotary air blast fan in said casing arranged to draw cool air through said casing inlet and force the same under pressure through said top outlet of the casing.

1,300,074. SYSTEM OF ELECTRICAL DISTRIBUTION. MAX A. WHITING, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 6, 1917. Serial No. 173,121. 1 Claim. (Cl. 171—312.)



In combination, a source of electrical energy, a distribution circuit connected thereto, a fly-wheel equaliser set comprising direct connected fly-wheel and direct current dynamo-electric machine, the armature of said machine being connected to said circuit, an exciter electrically connected to the field winding of said machine, automatic means for controlling the voltage of said exciter comprising a regulator, having relatively movable contacts and responsive to the current supplied to said distribution circuit by said source, a second regulator, having relatively movable contacts and responsive to the current traversing said dynamo-electric machine, a third regulator having relatively movable contacts and responsive to the current traversing said dynamo-electric machine, means responsive to the direction and value of the current traversing said dynamo-electric machine for connecting the contacts of the second regulator in series with the contacts of the first regulator, and means responsive to the direction and value of the curent traversing said dynamo-electric machine for connecting the contacts of the third regulator, in shunt to the contacts of the first regulator.

1,300,075. CAR-ROOF. FREDERICK M. WHYTE, Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 1, 1917. Serial No. 199,737. 6 Claims. (Cl. 108—5.)



1. In a car roof, the combination with a side-plate, of roofing sheets extending over said side-plate and having returnbent ends, a flashing strip having an opposite returnbend engaging the returnbends of said sheets and also provided with a depending outer flange, and ventilating apertures in the returnbends of said sheets.

2. In a car roof, the combination with a metalic side-plate having an outwardly-extending top flange, of carlines secured to said side-plate, roofing sheets provided with returnbent outer ends above said flange, a flashing strip having an opposite returnbent portion engaging the returnbends of said sheets and provided with a downturned angle flange, and securing devices for said flashing strip attached to said downturned flange and to the flange of said plate.

3. In a car roof, the combination with a metallic side-plate having an outwardly-extending top flange, of carlines secured to said plate, roofing sheets supported on said carlines and having their outer ends returnbent above said flange, a flashing strip having an opposite returnbend therein engaging the returnbends of said roofing sheets and also provided with a downturned angle flange, and a series of clips or angle brackets secured to said downturned flange and to the flange of said plate to hold said flashing strip in position.

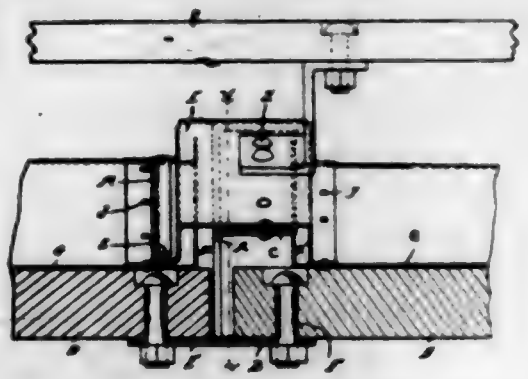
4. In a car roof, the combination with a metallic side-plate having an outwardly-extending top flange, of carlines connected to said plate, roofing sheets supported upon said carlines and having their outer ends returnbent above said flange, filler blocks resting upon said flange inside of said returnbends and forming a support for said sheets, a flashing strip oppositely returnbent and engaging the returnbends of said sheets, said strip being also provided with a downturned flange, and means for securing said flashing strip to said side-plate.

1,300,076. CAR-ROOF. FREDERICK M. WHYTE, Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 1, 1917. Serial No. 199,738. 7 Claims. (Cl. 108—5.6.)



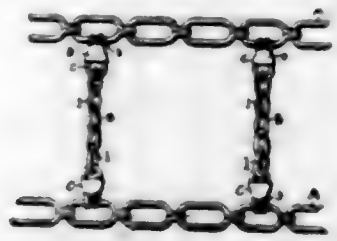
1. In a car roof, the combination with a plurality of car lines, of roofing sheets having one edge thereof rigidly secured to the respective carlines and the opposite edge extending into proximity to another carline, and means for weather-proofing the joint between the free edge and said carline.

1,300,077. CAR-ROOF. FREDERICK M. WHYTE, Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 1, 1917. Serial No. 199,739. 6 Claims. (Cl. 108—5.6.)



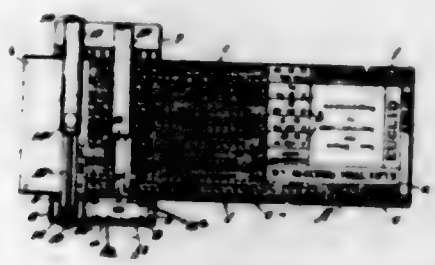
1. In a car roof, a carline comprising a channel beam having a vertically-arranged web portion and laterally-extending flanges, the upper flange conforming to the pitch of the roof, purlins extending between carlines and having one end thereof supported upon the lower flange of said carline, and a flange struck out from the web portion of said carline forming a support for the opposite end of the purlin.

1,300,078. CROSS-LINK FASTENER FOR NON-SKID CHAINS. CARL HERBERT WIDSTRAND, Chicago, Ill. Filed July 11, 1918. Serial No. 244,435. 4 Claims. (Cl. 24—236.)



4. A snap fastener including a U-shaped link having the arms thereof returned to provide lateral hook members and also formed with recessed portions, and a T-shaped plate having the head thereof extending transversely across the link, the middle portion of the head being formed with openings and the lateral wings of the head being bent around the arms of the link while the body portion of the plate is deflected outwardly and forms a spring tongue which normally extends across the mouths of the hook members and engages the noses thereof, the lateral wings of the head engaging the recessed portions of the arms of the link and terminating in tongues which are inserted through the openings of the plate and interlock with the edges thereof.

1,300,079. TRANSFER. WILLIAM WISSE, Cleveland, Ohio. Filed Jan. 24, 1914. Serial No. 814,048. 4 Claims. (Cl. 283—27.)

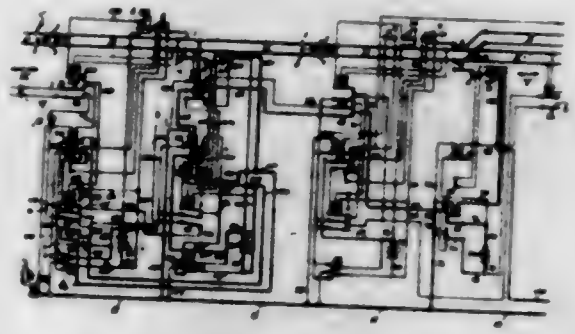


1. A transfer of the character described, having a series of "transfer point" spaces, and a series of "trip" columns intersecting the "transfer point" spaces, the intersection of any one of the "transfer point" spaces and any one of the "trip" columns bearing an indication of the time when the transfer becomes ineffective at the point represented by the respective "transfer point" space upon the trip represented by the respective "trip" column, the transfer being adapted to be severed on a line between any two adjacent "trip" columns, one portion of the transfer, after it has been severed, forming a stub and the other portion thereof an issued transfer, the aforesaid time indications successively decreasing as they progress along the "transfer point" spaces from the stub end of the transfer toward the issued end thereof.

1,300,080. SIGNALING SYSTEM FOR SINGLE-TRACK RAILWAYS. SEDGWICK N. WIGHT, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Dec. 7, 1915. Serial No. 65,458. 28 Claims. (Cl. 246—33.)

1. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay, a signal for governing traffic in one direction over said stretch of trackway; a circuit for controlling said signal; means governed by the track relay of a section succeeding the portion of said trackway protected by said signal for controlling said signal circuit; and means for nullifying the controlling effect produced on said signal circuit by said means, said last-mentioned means being set into operation by the movement of a train in the direction opposite to the direction of traffic governed thereby.

2. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal for governing traffic in one direction over said stretch of trackway; a second signal for governing traffic in the opposite direction; a circuit controller operated by said second signal and closed during a portion of the movement thereof from its normal position; a relay; an energizing circuit for said relay controlled jointly by said circuit controller and the track relay of the section protected by said second signal; a controlling circuit for said first signal; means governed by the track relay of a section succeeding the portion of said trackway protected by said first signal for opening a break in said signal controlling circuit; a shunt for said break; and means controlled by said relay and operated when it is energized for opening said shunt.

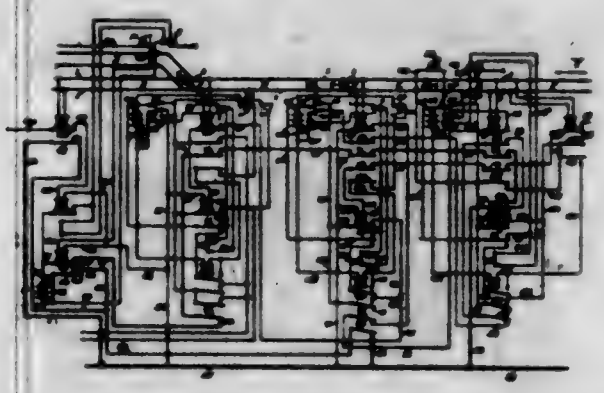


3. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal for governing traffic in one direction over said stretch; a second signal for governing traffic in the same direction over said stretch, each of said signals having a proceed, a caution and a stop aspect; a polarised relay for controlling said first signal; a controlling circuit for said relay; means controlled by said second signal for changing the polarity of said controlling circuit; means controlled by the track relay of a section in advance of the second signal for opening and closing a break in said controlling circuit according to whether said track section is respectively occupied or unoccupied by another train; a normally closed shunt for said break; and means set into operation by the movement of a train over said stretch of trackway in the direction opposite to the direction of traffic governed by said signals for opening said shunt.

4. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal for governing the traffic over said stretch in one direction; a circuit for controlling said signal; means governed by the track relay of a section succeeding the portion of said trackway protected by said signal for opening and closing a break in the controlling circuit for that signal; means associated with said means for nullifying the effect produced thereby; and means set into operation by the movement of a train in the direction opposite to the direction of traffic governed thereby for rendering the corresponding last-mentioned means ineffective.

5. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic over said stretch of trackway in one direction; a circuit for controlling said first signal; a circuit controller included in said circuit; means governed by the track relay of a section protected by said second signal for controlling said circuit controller; a normally closed shunt for said circuit controller; a relay for opening said shunt when energized; a third signal for governing traffic in the opposite direction; a second circuit controller governed by said third signal and closed for a portion of the movement thereof from its normal position; and an energizing circuit for said last-mentioned means controlled jointly by said second circuit controller and by the track relay of the section protected by said third signal.

1,300,081. SIGNALING SYSTEM FOR SINGLE-TRACK RAILWAYS. Sedgwick N. Wight, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Dec. 7, 1915. Serial No. 65,460. 21 Claims. (Cl. 246—33.)



1. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic in one direction over said stretch, a third signal located beyond said second signal for governing traffic in the opposite direction; a circuit for controlling said third signal; a circuit controller included in said circuit; a normally closed shunt for said circuit controller controlled by the track relay of a track section in advance of the third signal and beyond the first signal; a second circuit controller associated with said second signal and closed thereby during a portion of the movement thereof from its normal position; a relay for opening said first circuit controller when energized; and an energizing circuit for said relay controlled jointly by said second circuit controller and the track relay of the section protected by said second signal.

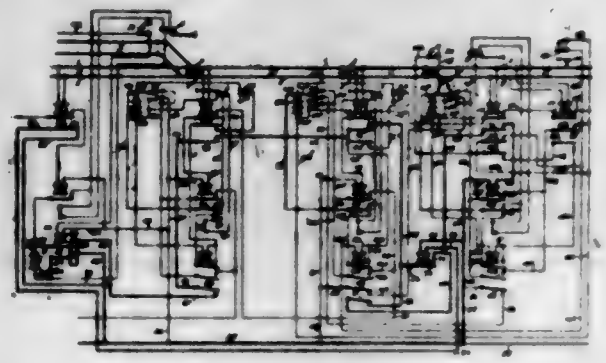
2. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal at one end of said stretch for governing traffic in one direction; two intermediate signals arranged in staggered relation adjacent to said end of said stretch; a circuit for controlling the intermediate signal opposing said first signal; a circuit controller controlled by the track relay of the section preceding the section protected by said first signal and included in said circuit; a normally closed shunt for said circuit controller; and means set into operation by the movement of a train in the direction of traffic governed by said first signal for opening said shunt.

3. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal at one end of said stretch for governing traffic in one direction; a second signal for governing traffic in the same direction; a third signal succeeding said second signal for governing traffic in the opposite direction; a polarized relay for controlling said first signal; a circuit for said relay; a pole changer controlled by said second signal for reversing the polarity of said circuit; means governed by the track relay of a track section in advance of the second signal and beyond the third signal for exerting a controlling influence tending to open said circuit when said advance track section is occupied; a device set into operation by a train traveling in the direction of traffic governed by the first and second signals for rendering said means ineffective; and means controlled by the track relays of the sections between said second and said third signal for opening and closing said circuit accordingly as said sections are occupied or unoccupied by another train.

4. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a signal at one end of said stretch for governing traffic in one direction; a second signal for governing traffic in the same direction; a third signal succeeding said second signal for governing traffic in the opposite direction; a polarized relay for controlling said first signal; a circuit for said relay; means controlled by said second signal for reversing the polarity of said circuit; means controlled by the track relays of the sections between said second and said third signal for opening and closing said circuit accordingly as said sections are occupied or unoccupied by another train; a second circuit for controlling said third signal; a circuit controller governed by the track relay of the section preceding the section protected by said first signal for opening and closing said second circuit; a normally closed shunt for said circuit controller; and means set into operation by the movement of a train in the direction of traffic governed by said second signal for opening said shunt.

5. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic along said stretch in opposite directions; an intermediate signal located between said signals for governing traffic in the same direction as said first signal; a circuit for controlling said first signal; a circuit for controlling said first signal governed by the track relays of all of said sections between said first signal and said second signal; a second circuit for controlling said second signal; a circuit controller included in said second circuit and governed by the track relay of a section preceding the section protected by said first signal; a normally closed shunt for said circuit controller; a second circuit controller operated by said intermediate signal and closed during a portion of the movement thereof from its normal position; a relay; an energizing circuit for said relay controlled jointly by said second circuit controller and the track relay of the section protected by said intermediate signal; and means operated by the energization of said relay for opening said shunt.

1,300,082. SIGNALING SYSTEM FOR SINGLE-TRACK RAILWAYS. Sedgwick N. Wight, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Dec. 7, 1915. Serial No. 65,460. 16 Claims. (Cl. 246—33.)



1. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first signal and a second signal governing traffic in opposite directions over said stretch; a circuit controller governed by said second signal and closed when it is in its stop position; a shunt for said circuit controller which is closed when the track relay of the section adjacent to said second signal and protected thereby is energized; and a controlling device for said first signal having an operating circuit including said circuit controller.

2. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic in opposite directions over said stretch; means controlled by the track relay of the section succeeding the section protected by said first signal for causing said first signal to assume its stop aspect; means set into operation by the movement of a train in the direction of traffic governed by said first signal for rendering said first means ineffective; and a cir-

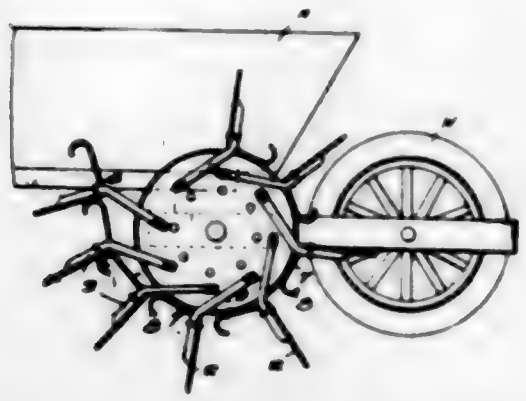
cuit for controlling said second means, said circuit being controlled jointly by said second signal and by the track relay of the section protected thereby, said circuit being broken and said second means being idle when said second signal assumes an aspect other than its stop aspect and said track relay is deënergized.

3. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic in opposite directions over said stretch; means controlled by the track relay of the section succeeding the section protected by said first signal for causing said first signal to assume its stop aspect; means set into operation by the movement of a train in the direction of traffic governed by said first signal for rendering said first means ineffective; a circuit for controlling said second means, said circuit being controlled jointly by said second signal and by the track relay of a section protected thereby, said circuit being broken and said second means being idle when said second signal assumes an aspect other than its stop aspect and said track relay is deënergized; means governed by the track relay of a section in advance of the second signal and beyond the first signal for exerting a controlling influence suitable for causing the second signal to indicate stop; and means operated by said second mentioned means for rendering said last-mentioned means to be effective to control said second signal when a train travels in the direction of traffic protected by said first signal.

4. In a signaling system for railroads, the combination with a stretch of single track having a passing siding and divided into track sections each provided with a track circuit, of a signal located adjacent to one end of the siding and governing traffic away from the siding, a second signal in advance of the first signal and governing traffic in the same direction, a third signal in advance of the second signal and governing traffic in the opposite direction, and controlling circuits and devices for causing the stop control of the first signal to extend up to the second signal when a train travels away from the siding and up to the third signal whenever a train passes the third signal while traveling toward the siding.

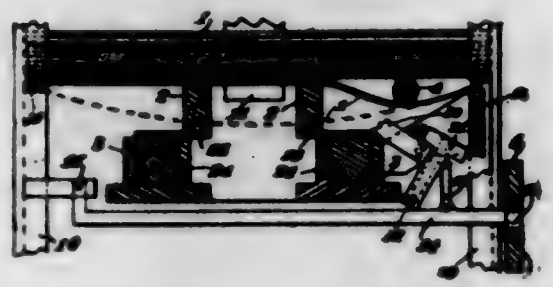
5. In a signaling system for railways, in combination: a stretch of trackway divided into electrically isolated track circuited sections, each having a track relay; a first and a second signal for governing traffic in opposite directions; a device for controlling the first signal; a controlling circuit for said device having two conducting paths arranged in multiple; means for interrupting one of said paths by a movement of the train along said stretch entirely by said second signal in the direction of traffic governed by said first signal; and means for interrupting the other of said conducting paths by the presence of a train on the section adjacent to said second signal and protected thereby.

1,300,083. ROTARY SPADER. TOM WILLIAMS, Marysville, Kans. Filed Nov. 6, 1917. Serial No. 200,558. 5 Claims. (Cl. 97—38.)



1. In a rotary spader, a drum, arms pivotally engaged with the drum, spades carried by the arms, and means carried by said spades and coacting with the adjacent spades and said drum for maintaining said spades in properly spaced relation during the rotation of the drum and the swinging of the arms and for absorbing all shocks incident to the relative adjustment of the spades.

1,300,084. BLANK-FEEDING DEVICE. JOHN T. WILMORE, Seattle, Wash. Filed Apr. 5, 1915. Serial No. 19,369. 16 Claims. (Cl. 271—44.)



1. A means for feeding blanks comprising a movable support for the pile located some distance inward from one end, the blanks at this end being unsupported outwardly of said support, means for separating this unsupported end of the first blank from the remainder, a separating finger movable in conformity with the movable support for the blanks to enter between the separated end of the first blank and the remainder, and means for engaging and removing the separated blank.

5. A mechanism for feeding blanks comprising means for supporting the blanks to leave one end thereof overhanging, said blank-supporting means comprising a member mounted for reciprocation transversely of the pile of blanks, a pair of blank supporting bars carried by said reciprocating member and located at each side of the center thereof, said bars having catches engaging the blanks when removed from the face of the pile, means for engaging the overhanging end of the outermost blank to deflect it away from the others, and a separating finger entering between said deflected blank and the others to throw the body thereof away from the others when said central movable supports are withdrawn.

16. A blank feeding mechanism comprising a suction device, a separating finger and blank removing members and a common reciprocating actuative member for all said parts, and means for confining the action of the suction device and of the blank removing device respectively to opposite movements of said actuative member.

1,300,085. TRACE-CARRIER. THOMAS E. WILSON, Alta, Wyo. Filed July 25, 1916, Serial No. 111,207. Renewed Sept. 28, 1918, Serial No. 256,142. 2 Claims. (Cl. 54—56.)



1. In a trace carrier, a base frame having terminal loops, cross bars defining the same, lugs rising from one of said cross bars, an arched spring secured on the other cross bar and terminally guided between the lugs, and a crown rising from the main frame and including a cap member having down-turned hooks terminally engaging the arched portion of the spring.

1,300,086. FIRE-ESCAPE. VICTOR E. WOLLIN, Minneapolis, Minn. Filed May 12, 1917. Serial No. 168,253. 3 Claims. (Cl. 227—29.)

1. In combination with a life line, a tube through which the line passes freely, formed with a snub loop arranged to receive a leg of the user, said loop being a channel with its open side facing outwardly toward the periphery of laid loop to admit the line in said

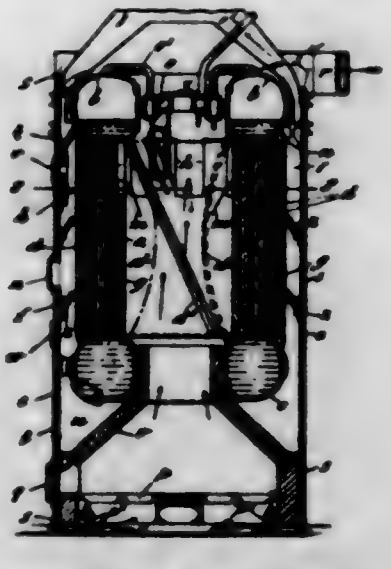
loop and permit the line being lifted out, another loop secured to said tube and arranged to receive the other leg of the user, a brake band lying in the channel of said snub loop having one end anchored to the opposite loop and a part extending upwardly over the portion of said line lying in said snub loop, and means mounted on said tube and attached to the upper end of said brake band for tightening said band upon said line in said snub loop.



2. In combination with a life line, a tube through which the line passes freely, and formed with a snub loop arranged to receive a leg of the user, said loop having an open side facing outwardly to admit the line into said loop and permit the line being lifted out, another loop loop secured to said tube arranged to receive the other leg of the user, a brake band extending over said life line resting in said snub loop, means for tightening said band against said life line to control the speed of descent of a person down said line, and means for releasing said band to allow the line to be lifted out of said snub loop.

3. In combination with a life line, a tube through which the line passes freely, formed with a snub loop channel in which said line rests, said loop being arranged to receive a leg of the user, another loop secured to said tube and arranged to receive the other leg of the user, means for applying braking action against that portion of the line contained in said snub loop channel to control the speed of a person in said loops down said line and means at the lower end of said snub loop channel for releasably holding said line in said channel whereby said line can be removed from said channel to allow said tube to slide freely along said line.

1,300,067. WATER-TUBE BOILER. WILFRED ROTHERY WOOD, London, England. Filed Dec. 26, 1916. Serial No. 268,422. 6 Claims. (Cl. 122—332.)



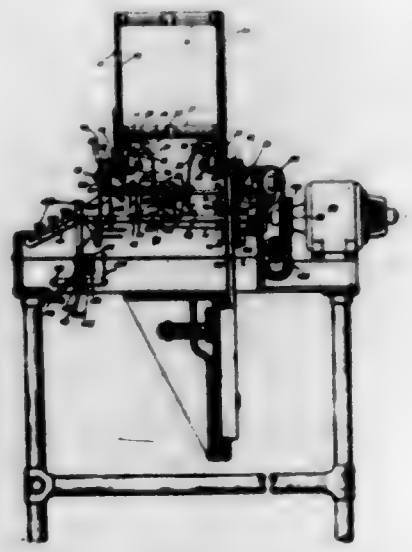
1. A boiler comprising, in combination, upper and lower annular water drums, upright water tubes connecting said drums, a boiler casing inclosing said tubes and having an outlet, a cylindrical baffle constituting a substantially central combustion chamber, and substantially radial and vertical partitions subdividing the space between said baffle and the boiler casing into compartments each containing a portion of said water tubes, said cylindrical baffle having at its upper end peripheral openings communicating with certain of said compartments, the remaining compartments being in communication with said outlet, the combined length of said openings in a horizontal plane being equal to at least one third of the length of the periphery of said baffle in a horizontal plane, and said partitions being arranged to permit passage of gases beneath them between adjacent compartments.

1,300,068. MUFF. JOSEPH FREDRICK WRIGHT, Cincinnati, Ohio. Filed May 23, 1918. Serial No. 236,166. 1 Claim. (Cl. 2—103.)



A muff comprising a body portion whose opposite open ends terminate in triangular extensions, the said extensions forming wristlet portions whose passageways extend substantially vertically, the openings to the said passageways extending substantially horizontally, the meeting edges of the triangular portions and the lower edge of the body portion being abruptly joined, whereby the muff, at such points of connection, tends to buckle or bend inwardly to bind tightly on the wrists of the user, when moving the hands or wrists held within the muff opening.

1,300,069. TYPE-SETTING MACHINE. WALTER WRIGHT, New York, N. Y. Filed Aug. 10, 1912, Serial No. 714,830. Renewed Sept. 13, 1918, Serial No. 253,985. 17 Claims. (Cl. 276—19.)



1. In a type setting machine, a series of upright type supply channels, a type race at the lower ends of said channels comprising a rotary type-pushing member, and

an ejector for each channel adapted to discharge type therefrom to the race, in combination with a set of key levers less in number than the ejectors, operating connections from each lever comprising a part adapted for alternate connection with two ejectors and a shift key for selecting the connection made by said part.

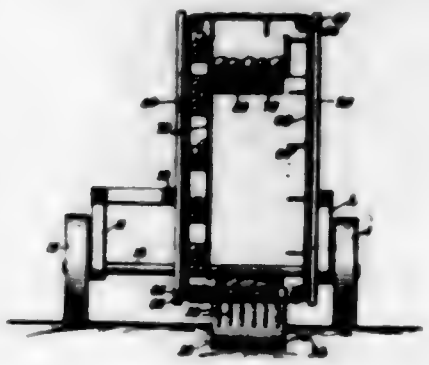
2. In a type setting machine having gravity type-supply channels, a type-race comprising a rotary type-pushing member and ejectors for each channel, the combination of two of said ejectors, a single key for actuating either of them, a shift catch forming part of the line of operating connections between said key and each ejector, and a shift key for swinging said catch from connection with one ejector or the other.

3. In a type setting machine of the kind described, having gravity type-supply channels, a type-race with a rotary type pushing member and a series of key levers less than the supply channels, the combination of ejectors for each channel, a shift catch carried by each key lever and a shift key for shifting said catch into operating connection with either of two of said ejectors.

4. In a type setting machine having a circular set of gravity supply channels and ejectors therefor, the combination of a set of key levers, less in number than the supply channels, with means combined with said levers whereby either of two substantially diametrically disposed ejectors may be operated thereby.

5. In a type setting machine of the kind described, a set of key levers and power means for imparting full throw thereto comprising cam-plates 132 and pins connected to said levers and cam-plates.

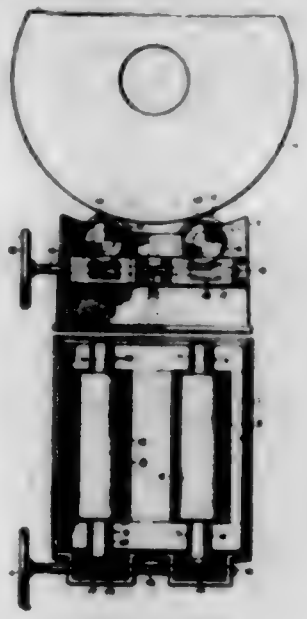
1,300,090. POTATO-DIGGER. PETER A. YATSUK, Waterbury, Conn. Filed Aug. 10, 1918. Serial No. 250,481. 1 Claim. (Cl. 130—32.)



In a separator as described, a frame, uprights mounted in said frame, spindles mounted at the top and bottom of said uprights, sprockets carried by said spindles, an endless screening conveyer moving in a path substantially like a parallelogram, inwardly extending fingers on said conveyer, and a vertical plate forming with said uprights and fingers compartments for the articles separated, and a horisontal screening conveyer to which the potatoes from the vertical conveyer are transferred, and a chute adapted to deliver the potatoes not passing through the screening conveyer to a collector compartment, substantially as described.

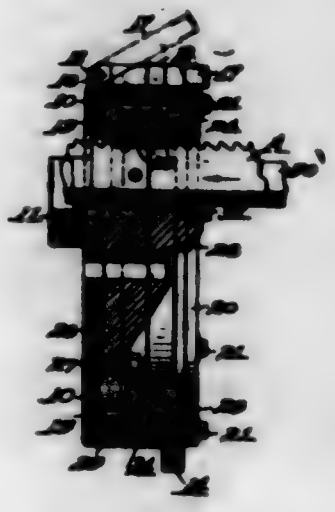
1,300,091. SUPPORT FOR EXPANDING METAL ARTICLES. ENRIQUE ABARCA, San Juan, Porto Rico. Filed Oct. 11, 1917. Serial No. 196,095. 2 Claims. (Cl. 263—5.)

1. An apparatus as characterized comprising a base block having upwardly opening recesses and bearings formed therein; a plurality of supporting rolls adapted to rest within said recesses and provided with bearing members corresponding with the bearings in said base block; a plurality of worm wheels rigidly connected with said rolls for rotating the same; and a worm shaft



adapted to be rotated manually and operatively engaging said worm wheels to rotate the same in unison.

1,300,092. BROACHING-MACHINE ATTACHMENT FOR BROACHING THE TEETH OF LARGE INTERNAL GEARS. MICHAEL J. ACTON, Framingham, Mass., assignor to Lapointe Machine Tool Company, Hudson, Mass., a Corporation of Massachusetts. Filed May 2, 1918. Serial No. 232,130. 5 Claims. (Cl. 90—8.)



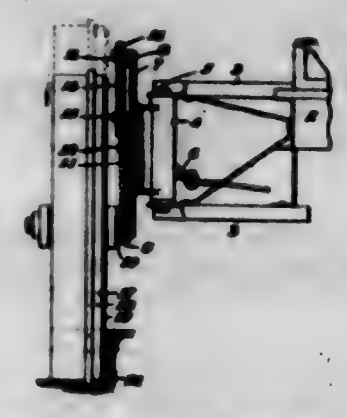
1. A broaching machine attachment comprising a base plate or supporting ring having a substantially cylindrical recess therein, a blank support revolubly fitted therein, means to hold an annular blank in said support, and a fixed support for the cutting tool.

1,300,093. TRACTION-MACHINE. HARRY W. ADAMS, Minneapolis, Minn. Filed Apr. 26, 1915. Serial No. 23,873. 3 Claims. (Cl. 97—61.)

1. A traction machine having forward carrying and guiding wheels, one of them mounted to run in the furrow and a disk mounted in said furrow guiding wheel and having a rounded portion to fit into the angle formed by the bottom of the furrow and the side wall and bear on the furrow wall to prevent the rim of the wheel from cutting into said wall.

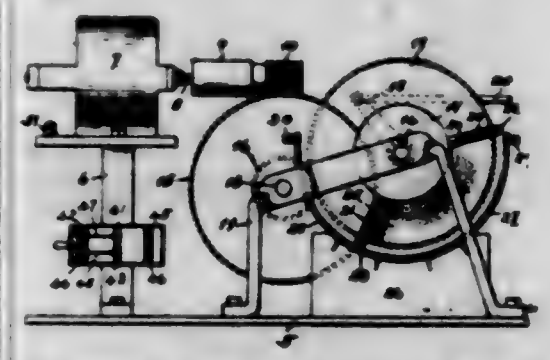
3. A traction machine having a forward guiding wheel mounted to run in the furrow, and means mounted on the

wheel and encircled by the rim thereof and projecting outside said rim and having a rounded annular corner



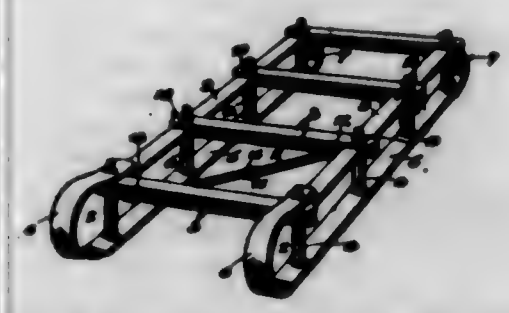
for bearing on the vertical wall of the furrow, for the purpose specified.

1,300,094. ELECTRICALLY-OPERATED VEHICLE-BRAKE. CHARLES ADLER, Jr., Baltimore, Md. Filed June 16, 1917. Serial No. 175,186. 4 Claims. (Cl. 188—56.)



1. In an electric brake device for vehicles, the combination with brake-lever devices, of a reversible electric motor; connections between the motor and brake-levers; a switch having two sets of contacts; a circuit-breaker having two circuit-breaking devices—one for establishing a circuit to drive the motor in one direction and the other for establishing a circuit to drive the motor in a reverse direction and both circuit-breaking devices being independent of the switch; a circuit including the motor, the switch and one circuit-breaking device at a time, and rotating means carrying the circuit-breaking devices.

1,300,096. FOLDING SLED. CHARLES ALDRICH, West Paris, Me. Filed Dec. 16, 1918. Serial No. 266,883. 4 Claims. (Cl. 21—48.)



1. A laterally collapsible sled comprising side frames, a series of parallel pairs of superposed links connecting the frames transversely at their upper portions and upon which they may swing, and means for locking the frames in extended relation.

1,300,098. ADHESIVE AND THE LIKE. JEROME ALEXANDER, New York, N. Y. Filed July 9, 1914. Serial No. 849,864. 10 Claims. (Cl. 87—17.)

1. An adhesive in solid form and soluble in water when added thereto at ordinary temperatures, comprising glue and a metallic chlorid whose action with water is exothermic.

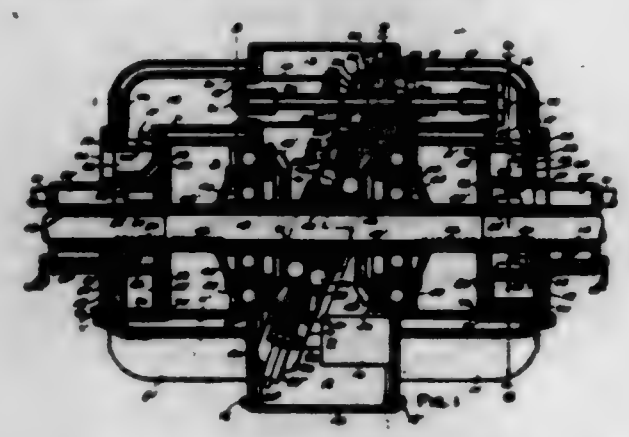
6. A cold water soluble glue comprising a dry mixture of finely divided glue and a metallic chlorid having a marked affinity for water, said chlorid tending to inhibit the formation of gel and causing the glue to dissolve in water at ordinary temperatures.

8. A cold water soluble glue comprising a dry mixture consisting of 50 parts of finely divided glue having a jelly test of approximately 50 incorporated with 17 parts of dry finely divided calcium chlorid.

1,300,097. ADHESIVE AND PROCESS OF MAKING SAME. JEROME ALEXANDER, New York, N. Y. Continuation of application Serial No. 849,864, filed July 9, 1914. This application filed Nov. 30, 1917. Serial No. 204,762. 18 Claims. (Cl. 87—17.)

11. A dry adhesive composed of glue and a substance adapted to control the gelatinization of the glue to a predetermined degree.

1,300,098. INTERNAL-COMBUSTION ENGINE. JOHN O. ALMEN, Seattle, Wash. Filed Mar. 6, 1917. Serial No. 152,494. 10 Claims. (Cl. 123—58.)



1. An internal combustion engine comprising a plurality of circularly arranged cylinders each having a passage, a cylindrical rotary valve having exhaust and inlet compartments respectively provided with passageways that communicate in the travel of the valve with the passages to the cylinders, a normally stationary cylindrical cut off member within said valve having openings that register with the inlet passageways in said valve, and means for adjusting the position of said cut off member to vary the cut off of said valve.

7. An engine having a plurality of cylinders arranged in parallel relations and provided with conical ports, a cylindrical rotary valve having ports therein, a plate interposed between each of said cylinders and the valve and provided with a conical port, and expansion rings constituting wedges positioned in said conical ports, and flexible stops coöperating with said rings to prevent the displacement of said plates.

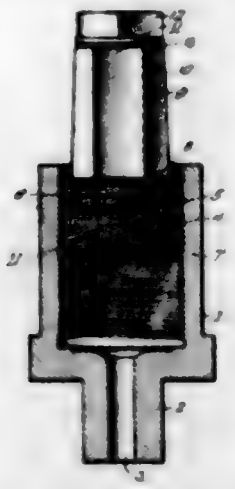
10. An internal combustion engine having a plurality of cylinders, a rotary valve having passages therethrough for the supply of an explosive mixture to the engine cylinders, and a circular member carried in the valve, said member being provided with spaced conduits for the escape of exhaust gases from the various cylinders and having yielding portions intermediate the adjacent conduits to compensate for contraction or expansion of said member due to variations of temperatures when uninfluenced by or subjected to the heat of exhaust gases.

1,300,099. GREASE-CUP. EMIL C. ANDERSON, Denver, Colo. Filed Feb. 16, 1918. Serial No. 217,060. 5 Claims. (Cl. 184—48.)

1. A device of the kind described comprising an internally screw threaded main carrying part, in combination with an externally threaded coöperating part comprising

a plurality of registering members super-imposed one on the other with cam faced approximate faces, and means for rotating one of said members independently of the other or in unison therewith substantially as described.

2. A device of the kind described, comprising an internally screw threaded main carrying part, in combination with an externally threaded coöperating part comprising a plurality of registering members super-imposed one on the other and provided with cam faced approximate faces, one of said parts being provided with a projecting stem rigidly fixed thereto rotatably extending through the other member and formed at its outer end to receive a tool for rotating the same.



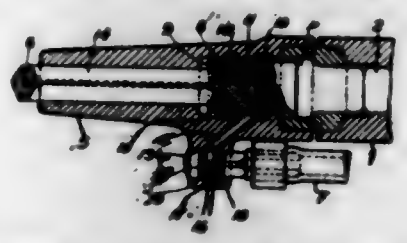
3. A device of the kind described, comprising an internally screw threaded main carrying part, in combination with an externally threaded coöperating part comprising a plurality of registering members super-imposed one on the other and formed with cam faced approximate faces, one of said members being provided with a projecting stem rigidly secured thereto rotatably extending through the other member with its free end formed to receive a tool for rotating the same, the said stem being of a length to permit slight longitudinal play of the same within the outer member.

4. A device of the kind described, comprising an internally screw threaded main carrying part, in combination with an externally threaded coöperating part comprising a plurality of registering members super-imposed one on the other with cam faced approximate faces, the outer member being provided with an extending sleeve formed for the coöperation of a tool to rotate the same and being longitudinally cored, and the other member provided with an extending stem rigidly secured thereto rotatably mounted in the sleeve member with its free end formed for the reception of a tool to operate the same.

5. A device of the kind described, comprising an internally screw threaded main carrying part, in combination with an externally threaded coöperating part comprising a plurality of registering members superimposed one on the other with cam faced approximate faces, provided with shoulders to limit the rotation of one on the other in one direction only, the outer member formed with a marginal extension near its upper part adapted to form a cap for the carrying part, and an extension for the reception of a tool to rotate the same, the same being centrally channeled for the reception of a rotating stem, an inner coöperating part provided with an extending stem rigidly secured thereto, rotatably positioned in the outer member with the free end formed for the reception of a tool, the said stem being allowed a slight longitudinal movement allowing a rotation of one part in relation to the other greater than the distance between the threads of the carrying part.

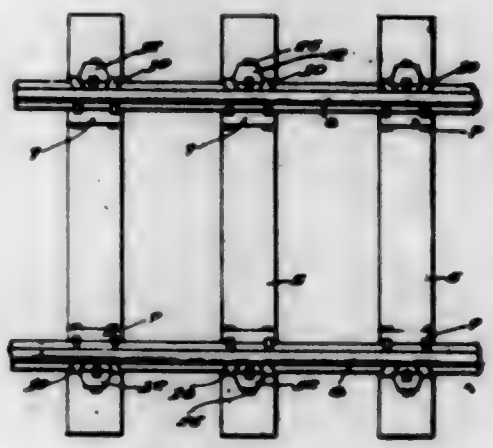
1,300,100. ROCK-DRILLING MACHINE. GUSTAF ANDERSSON, Stockholm, Sweden. Filed Aug. 6, 1918. Serial No. 248,598. 4 Claims. (Cl. 121—10.)

1. In a rock drilling machine, the combination of a hollow bit, a bit holder, means supplying scavenging water to the bore-hole through the bit, a passage formed in the bit holder and communicating with said water supplying means and the cavity of the bit, and a member



connected with said water supplying means and inserted tightly in said passage, the side-face of said outlet member tapering in the direction from the working end of the bit.

1,300,101. RAIL-BRACE. CARL APPEL, South Pasadena, Calif. Filed Oct. 5, 1917. Serial No. 194,908. 2 Claims. (Cl. 238—2.)



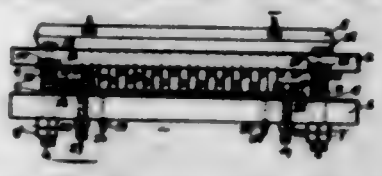
1. In a rail brace, a base plate adapted to receive and support a rail, an upwardly and inwardly extending member carried by said plate and adapted to engage a rail mounted on the plate adjacent the point of juncture between the ball and web of the rail, and a securing tongue projecting from said plate in the plane thereof and positioned centrally of said extension, said tongue and the plate being provided with openings which are disposed in triangular arrangement for receiving securing spikes.

1,300,102. LOOM-SHUTTLE. ANDREW ARCHER, West Rutland, Mass., assignor of one-half to Kearns J. Whalen, West Rutland, Mass. Filed Sept. 22, 1916. Serial No. 121,674. 1 Claim. (Cl. 139—89.)



In a loom shuttle, a detachable bobbin spindle comprising a shaft and a solid metal head fixed to said shaft, said head having a tapered bobbin centering portion and a cylindrical end portion of substantially greater diameter than the bobbin with which it is designed for use and of substantial length whereby the throw of the yarn is increased, and being also of material weight relatively to said bobbin, whereby accidental upward displacement of the spindle and bobbin is prevented.

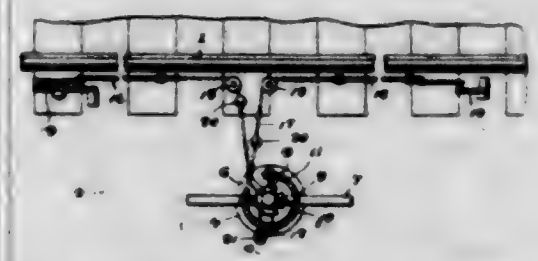
1,300,103. FORMING AND PRICKING SAND MOLDS FOR CASTINGS. ARTHUR EDWARD ARCHER, Pulwith Grange, near Harrogate, England. Filed Dec. 27, 1917. Serial No. 208,039. 8 Claims. (Cl. 22—197.)



5. An apparatus for forming sand molds, comprising a stationary base, pricking members fixed to and upstand-

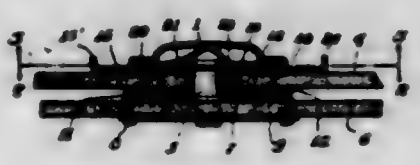
ing from said base, a pattern plate mounted for reciprocating movement above said base and having openings therein to receive the pricking members, and a mold above the pattern plate and movable therewith.

1,300,104. DANGER-SIGNAL. NOAH A. ABEL, Tulsa, Okla. Filed Oct. 29, 1918. Serial No. 260,182. 1 Claim. (Cl. 246—294.)



A device of the class described comprising an upright, a shaft rotatably supported thereby, signal means carried by the shaft, a wheel rotatably carried by the upright, strikers on said wheel, an annular rack on said wheel, a dog on the shaft engaging said rack, a bell on the upright adapted to be engaged by the strikers, a trip device located adjacent the track and adapted to be struck by part of the train and means for connecting said device with the shaft.

1,300,105. FASTENER. LOUIS ARKIN, Boston, Mass. Filed June 12, 1918. Serial No. 239,606. 7 Claims. (Cl. 24—211.)



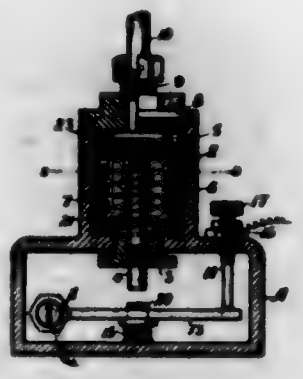
8. A socket member of a fastener comprising a casing having a stud-receiving aperture, a stud-retaining member wholly surrounding the path of the stud, said member being movable outwardly and inwardly respectively into stud-retaining and stud-releasing positions, means yieldingly urging said member outwardly, means for forcing said member inwardly to release the stud and a resilient member adapted to be engaged and stressed by the insertion of the stud into the socket to force the stud from the socket without manipulation of said stud.

1,300,106. AUTOGENOUS CUTTING-TORCH. HARRY H. ARMSTRONG, Chicago, Ill., assignor to Fidelity Brass Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 1, 1915. Serial No. 64,448. 4 Claims. (Cl. 158—27.4.)



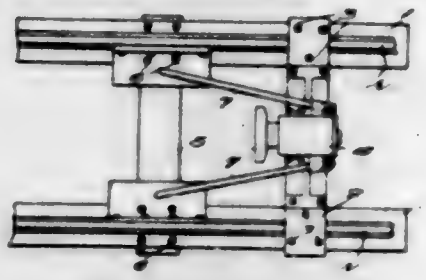
1. An autogenous torch comprising a head having a heating tip, and an oxidizing tip arranged within said heating tip to form therewith a heating gas orifice, said oxidizing tip having a reduced portion snugly fitting said heating tip, the portion of said oxidizing tip above said reduced portion being provided on its outer periphery above said reduced portion with a plurality of deep narrow longitudinal slits forming capillary heating gas passages constructed and arranged to form a radiator, adapted to cool the heating gas and heat the oxidizing gas.

1,300,107. COMBINATION PRESSURE-GAGE AND CIRCUIT-BREAKER. THOMAS P. BACON, Oakland, Calif. Filed May 8, 1917. Serial No. 166,268. 3 Claims. (Cl. 200—27.)



8. A pressure actuated circuit breaker comprising a cylindrical-shaped inclosed casing, means connecting one end of said casing with a source of pressure supply, a corrugated tube open at its lower end secured within the cylindrical-shaped casing, guides formed interiorly of the casing to guide the tube vertically, said guides forming an annular chamber between the casing and the tube, a head forming a closure for the upper end of the tube, a nut passing through the bottom of the casing and centrally positioned with relation to the tube, a rod secured to the head extending through the nut and guided thereby, a spring surrounding the rod interposed between the nut and the head, said spring adapted to be compressed or extended by adjusting the nut and said tube and spring adapted to be compressed when pressure is exerted within the casing and extended when the pressure is reduced, and a circuit breaking arm mounted in alinement with the rod, said arm being engaged by the rod when this moves in unison with the compressible tube, said movement of the arm adapted to make or break a circuit.

1,300,108. ANCHORING DEVICE FOR RAILROAD-ROLLING-STOCK BUMPERS. MARVIN D. BENNETT, Sidney, N. Y. Filed Jan. 7, 1919. Serial No. 270,024. 2 Claims. (Cl. 104—254.)

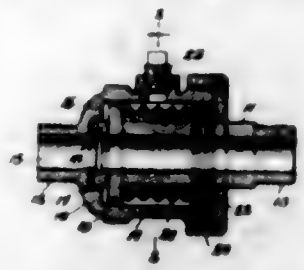


1. A bumper anchoring means including in combination with the rails of a track, a longitudinally disposed base means arranged under portions of said rails, a transverse tie spanning the rails and connected at its opposite end portions of the base means and positioned adjacent the upper sides of the base means, said tie serving to receive the bumper thereon, a second transverse tie spanning the rails and arranged adjacent the lower faces of the base means and connected to said base means, and bracing connections extending from said last mentioned tie upwardly into engagement with the bumper.

1,300,109. SWIVEL-JOINT. WILLIAM N. BENT, Brooklyn, N. Y. Filed Oct. 22, 1: 8. Serial No. 259,265. 4 Claims. (Cl. 285—9.)

1. A swivel joint including a casing member having a shoulder therein encircling the bore, and an annular groove in said shoulder spaced from the bore, an inner member projecting into said casing and having the end

thereof seating in said groove, an annular flange spaced from said end, a gasket at the opposite end of the casing member and encircling said inner member, and a coiled



spring encircling said inner member between said flange and said gasket and pressing said inner member axially and holding it in its seat.

1,300,110. PRODUCTION OF ALUMINA. ANSON G. BETTS, Asheville, N. C. Filed Feb. 9, 1918. Serial No. 216,343. 11 Claims. (Cl. 23—13.)

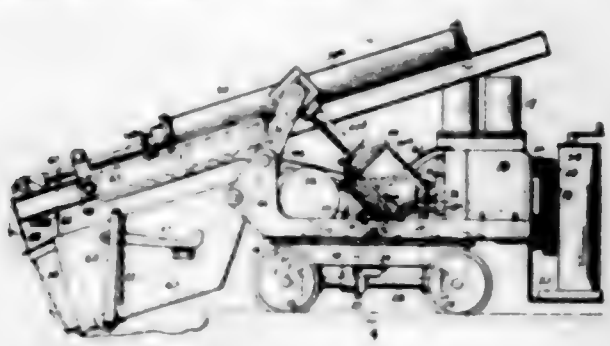
1. The process of decomposing aluminous materials, comprising heating the material with a solution of ammonium fluorid, sufficiently to remove ammonia by evaporation and produce aluminum fluorid in solution.

4. The process of preparing alumina from aluminous materials, comprising decomposing the material with ammonium fluorid in solution, thereby producing ammonia and aluminum fluorid in solution, and bringing said two products together in such proportions as to precipitate aluminum hydrate.

6. The cyclical process of preparing alumina from aluminous material comprising treating the material with a solution of ammonium fluorid and subjecting the same to evaporation to produce ammonia and aluminum fluorid in solution, collecting the ammonia and treating therewith the aforesaid aluminum fluorid in solution to precipitate alumina and produce substantially the original quantity of ammonium fluorid solution, and treating fresh material with the last-mentioned solution.

11. In the process of producing alumina from an insoluble aluminous material, the step of digesting said materials, at an elevated temperature, with a reagent capable of producing by reaction on said aluminous material, a solution of an aluminum compound, and of simultaneously liberating a volatile base which, when added to such solution, is capable of reprecipitating alumina therefrom.

1,300,111. LOADING AND CONVEYING APPARATUS. FRANK BILLINGS, Cleveland, Ohio. Filed June 12, 1913. Serial No. 773,173. 7 Claims. (Cl. 214—1.)



1. In a loading and conveying machine, a wheeled body adapted to travel along a track, a dumping receptacle supported at the forward end of the body and having its forward end adjacent the ground so that material on the ground may be moved rearwardly up into the receptacle, said receptacle being provided with inclosing walls which retain the material moved into the same, means whereby the material may be dumped from the receptacle, and means for filling the receptacle comprising a material moving member, supported by the body for inward and outward reciprocating movement and for swinging movement relative to the receptacle.

2. In a loading and conveying machine, a wheeled body, a dumping receptacle supported at the forward end of the body, said receptacle having a part which during the filling operation is adjacent the ground and inclines upwardly therefrom, said receptacle being provided with inclosing walls which retain the material moved into the same, means whereby the material may be dumped from the receptacle, and means for filling the receptacle comprising a hoe and hoe shank supported by the body for reciprocating movement inward and outward and for swinging movement relative to the receptacle, and motive means for shifting the hoe shank so as to move material up into the receptacle.

4. In a loading and conveying machine, a wheeled body, a dumping receptacle at the forward end of the body, said receptacle being provided with inclosing walls which retain the material moved into the same, means whereby the material may be dumped from the receptacle, means for filling said receptacle comprising a hoe and hoe shank supported by the body for reciprocating and swinging movement relative to the receptacle, and means for operatively connecting a part of the filling mechanism with a part of the receptacle to dump the latter.

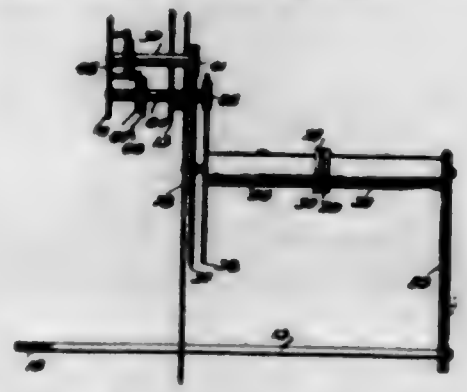
7. In a loading and conveying machine, a wheeled body adapted to travel along the track, a dumping receptacle pivotally supported at the forward end of the body and adapted to have its forward end adjacent the ground so that material on the ground may be moved rearwardly into the receptacle, means for supporting the forward end of the receptacle when the receptacle has been filled with material, and means for filling the receptacle comprising a material moving member supported by the body for inward and outward reciprocating movement and for swinging movement relative to the receptacle.

1,300,112. VIOLIN-STRING. JAMES HENRY BOWN, New York, N. Y. Filed June 28, 1918. Serial No. 242,485. 1 Claim. (Cl. 84—40.)



A musical instrument string comprising a cylindrical steel core, a strand of cat gut wound about said core in close formation, and a silver wire wound about said cat gut in close formation.

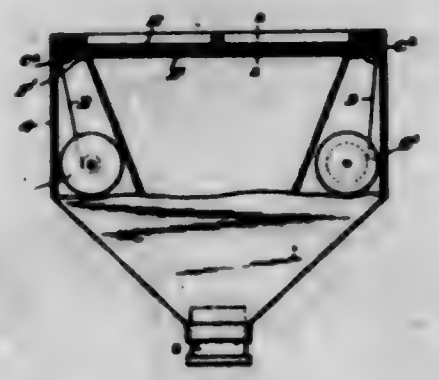
1,300,113. CLOCK WINDING MECHANISM. JOHN H. BOYLE, New Haven, Conn. Filed Nov. 7, 1916. Serial No. 130,001. 1 Claim. (Cl. 58—48.)



In a spring winding mechanism, a main shaft, a main spring receiving drum fixedly mounted on the shaft, a sleeve loosely mounted on the drum, a pivoted pawl carried by the sleeve engageable in a recess in said drum for connecting the sleeve to the drum upon rotation of the latter in a certain direction, a disk fixedly mounted on the main shaft adjacent one end of said drum, spring pawls struck outwardly from said disk, an alarm spring receiving drum loosely mounted on the main shaft adjacent said first drum having one end thereof formed

with recesses to receive the spring pawls on the disk whereby to permit the transmission of rotary motion thereto, at times, and a winding shaft arranged in spaced relation to said main shaft and connected thereto, as and for the purpose set forth.

1,300,114. FILM-CAMERA. ARTHUR ENOCK, Jr., Philadelphia, Pa. Filed June 23, 1917. Serial No. 176,486. 2 Claims. (Cl. 95—31.)



1. In a film camera the combination with the camera housing and lens, of film guiding means supporting the section of the film in position for exposure, and comprising a glass plate through which exposure takes place, and a plate located at the opposite side of the film from the glass plate, and having opposite side edges separated from the glass plate by a distance approximately equal to the thickness of the film and being slightly cut away between said side edges.

2. In a film camera a combination with a camera housing, a lens, and film feeding mechanism of film guiding means supporting the section of the film in position for exposure and comprising a glass plate through which exposure takes place and a metal plate at the opposite side of the film from the glass plate, and having its side edges separated from the glass plate by a distance approximately equal to the thickness of the film and having its body portion separated from the glass plate by a slightly greater distance.

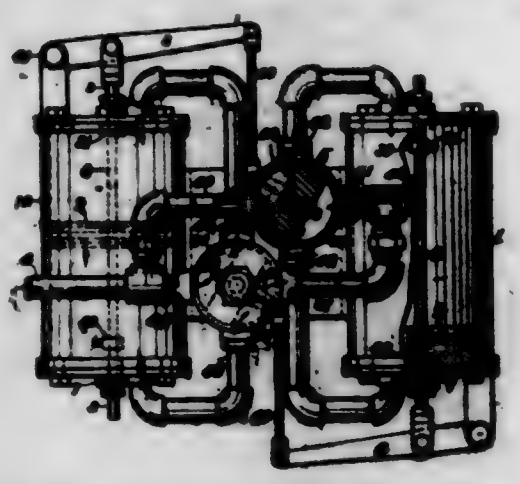
1,300,115. DOUBLE-WALL PIPE. CHARLES M. BULLER, Milwaukee, Wis., assignor to L. J. Mueller Furnace Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 25, 1918. Serial No. 255,715. 6 Claims. (Cl. 137—78.)



1. A double wall pipe, comprising a section of double wall pipe having one of its end portions formed with elongated recesses, and another section of double wall pipe having an outer wall which telescopes over the outer wall of the first mentioned section and having an inner wall which enters the elongated recesses thereof, said outer and inner wall of the second mentioned section adapted to be trimmed at one end to vary the combined length of the sections when assembled together.

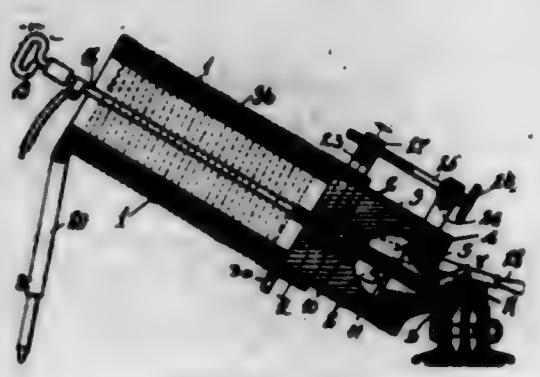
1,300,116. MEASURING DEVICE. ERNEST B. CASE, Seattle, Wash. Filed Apr. 17, 1918. Serial No. 228,997. 3 Claims. (Cl. 73—39.)

2. In a measuring device, in combination, two measuring cylinders, each cylinder having a piston therein and a valve means controlling the supply and discharge of the liquid for each cylinder, means actuated by each piston to actuate the valve means for the other cylinder, said means each comprising a rod passing through the



cylinder head and a collar on said rod within said head, a sleeve surrounding said rod and passing through the head to serve as a stop for said collar, and means for adjusting said sleeve axially of the cylinder.

1,300,117. METHOD OF AND APPARATUS FOR WELDING. CHARLES A. CADWELL, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 19, 1915. Serial No. 35,061. 26 Claims. (Cl. 219—15.)



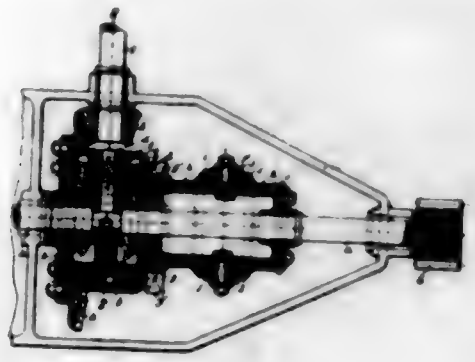
1. In a method of uniting contacting metal bodies, the steps which consist in pressing a heat distributing shield against the exposed face of one of such bodies, and then directing an external heating medium against the face of such shield opposite to that face in contact with such metal body.

9. In a method of homogeneously uniting a copper bond to a rail, the steps which consist in interposing a brass strip therebetween, pressing an infusible shield of greater area than the terminal of such bond against the exposed face of the latter, directing an external heating medium centrally against such shield, and then spreading such flame over a greater area on said shield than the area of such bond terminal.

17. In welding mechanism, the combination of a chamber having an opening in one side and otherwise inclosed by refractory, heat-insulating walls; a heat-distributing plate covering such opening, and adapted to contact with the article to be welded; means within said chamber, including an electrode movable toward and from such plate, for directing an electric arc against the same; and means adapted to spread such arc over the surface of such plate.

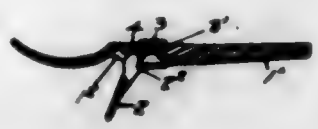
25. In a welding machine, the combination of a hollow core having the bulk of the metal therein disposed at opposite sides and the core being of the same general form as the area of the article to be welded, a coil disposed about said core and constituting therewith an arc in a position to be spread by the lines of force produced by such electro-magnet.

1,300,118. **DIFFERENTIAL STEERING-GEAR FOR MOTOR-VEHICLES.** FRANK CARTER, EVERSHED CARTER, and RICHARD EDWARD WATTS, Stamford, England, assignors of one-fourth to George Mills Blackstone, Stamford, England. Filed Nov. 20, 1918. Serial No. 263,333. 4 Claims. (Cl. 180—17.)



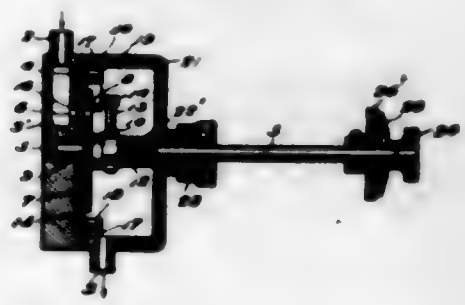
1. In a differential steering gear for motor vehicles of the kind specified, the combination with the planet pinions of the gear of worm wheels fast to the planet pinions, worms engaging said worm wheels for locking same to maintain the vehicle on a straight course, and means for rotating the worms to change the course of the vehicle.

1,300,119. **KNIFE ATTACHMENT FOR TABLE-FORKS.** FRANK CHANDLER, Cowley, Alberta, Canada. Filed Sept. 13, 1918. Serial No. 253,956. 5 Claims. (Cl. 30—5.)



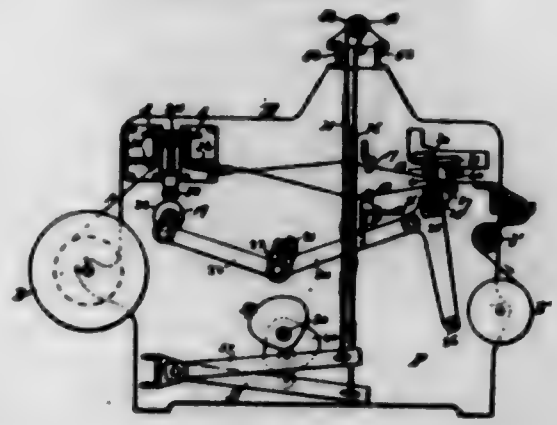
1. The combination with a fork shank, of an arm hingedly connected at one end to the shank and carrying at its opposite end a knife blade set at right angles to the fork and having an arc-shaped cutting edge.

1,300,120. **FUEL-FEED-VALVE LOCK.** CLYDE C. CHARLES, Salina, Kans. Filed Nov. 20, 1918. Serial No. 263,383. 2 Claims. (Cl. 251—6.)



1. The combination with the fuel feed line of a motor vehicle, of a valve controlling the flow of fuel through said pipe, said valve comprising a casing having a fuel receiving chamber and a fuel inlet passage leading thereto, a partition having a fuel opening therein, a rotatable tumbler disk supported in contact with said partition and having an opening therethrough adapted to register with the aforesaid opening in the partition, a post extending from said tumbler disk, a tumbler operating shaft extending through and projecting from said casing, a disk fast on the end portion of said shaft and having an opening therethrough adapted to register with the opening in the tumbler disk, a tumbler actuating finger projecting from said shaft and adapted to cooperate with said post on the tumbler disk, the valve casing having an outlet passage leading off from the space beyond said disk, means for turning said tumbler actuating shaft, and graduated means for indicating the proper degree of turning movement of said tumbler actuating shaft.

1,300,121. **LOOM.** ADEL R. CHURCHACK, Providence, R. I. Filed Mar. 25, 1914. Serial No. 827,151. 5 Claims. (Cl. 139—67.)



2. A loom, having a two-part reed, each part composed of blades with bodies of triangular outline, the points being thinned, the two sets of blades being placed to bring the thinned points in one set adjacent to the thickened edges of the other set.

3. A loom, having a two-part reed, each part composed of blades with thickened bases and thin bodies, having points thinned to a sharp edge, for the purpose described.

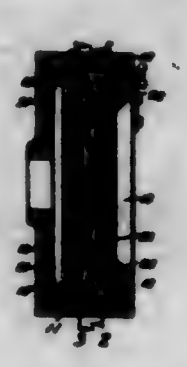
1,300,122. **TRAMMEL.** JOSEPH CRICOO, Minneapolis, Minn. Filed May 25, 1918. Serial No. 236,626. 2 Claims. (Cl. 33—189.)



1. A trammel comprising a frame having an arcuate side portion and a straight side portion, the straight side portion being a chord of the arc of the arcuate side portion, a pivot carried upon the straight side portion at a point exactly midway between the ends of the arcuate portion, three legs movably mounted on the pivot and means for securing the legs at adjusted positions upon the arcuate portion of the frame.

2. A trammel comprising a frame having an arcuate side portion and a straight side portion, the straight side portion being a chord of the arc of the arcuate portion, a pivot mounted upon the straight side portion at a point exactly midway between the ends of the arcuate portion, three legs movably mounted on the pivot, means for securing the legs at adjusted positions upon the arcuate portion, the outer legs being non-extensible and the intermediate leg being longitudinally extensible.

1,300,123. CENTRIFUGAL CASTING-BOX. GEORGE C. CLARK, Detroit, Mich., assignor to George C. Clark Metal Last Co., Mishawaka, Ind., a Corporation of Indiana. Filed July 19, 1918. Serial No. 245,724. 10 Claims. (Cl. 22—85.)



1. A revoluble casting box provided on its inner face with minute integral annular and uninterrupted contacting and retaining means adapted to be engaged by the contacting faces of the ring formed by the molten metal poured into the box.

1,300,124. SPECTACLE-CASE HOLDER. GEORGE E. COLE, Tiffin, Ohio. Filed Jan. 30, 1919. Serial No. 274,062. 2 Claims. (Cl. 24—18.)



1 A device of the character described including an attachment plate, side plates pivoted to the ends thereof, a spring clamping member, and attaching terminals extending angularly from the clamping member and secured to the side plates and to insure of the normal holding of the side plates in slightly spreading relation.

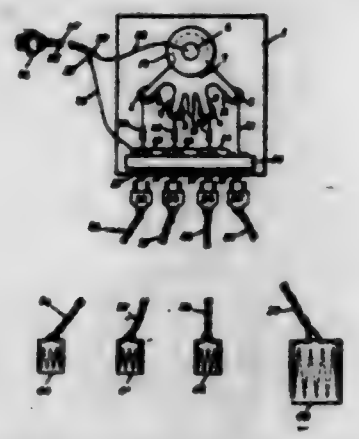
1,300,125. CRANK-LOCK FOR AUTOMOBILES. JOHN COMMEROAD, St. Louis, Mo. Filed Sept. 10, 1917. Serial No. 190,533. 2 Claims. (Cl. 70—180.)



1. A crank lock for automobiles, comprising a clip of substantially U-shape and perforated adjacent to each of its free ends, one of the perforations being threaded, an eye-bolt arranged for extension through the perforations and there being recesses formed in the clip in which the eye-bolt engages, at times, to hold the bolt against undesirable turning, and, a lock bodily separable from the eye-bolt and arranged to secure the crank of the automobile to the eye-bolt in order to prevent unauthorized starting and hence running of the automobile.

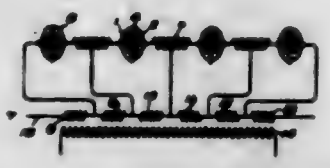
2. A crank lock for automobiles, comprising a U-shaped clip, provided with a perforation adjacent to each of its free ends, one of which perforations is threaded, a bolt having a threaded shank for insertion through the perforations of the clip and provided at one end with an eye, means formed integral with the clip for engagement with the bolt to prevent an undesirable turning thereof, and, a lock arranged to secure the crank of the automobile to the eye-bolt, substantially as shown and for the purposes.

1,300,126. ELECTRIC SWITCH. WILLIAM F. CRAPSICK, Salt Lake City, Utah, assignor to Vit-O-Net Manufacturing Company, a Corporation of California. Filed Jan. 17, 1918. Serial No. 212,260. 1 Claim. (Cl. 175—302.)



An electric switch having separable double connectors, one member of each of which connectors consists of a double plug and the other member of each of which connectors consists of two insulated metal sockets; means for connecting one socket of each of said double connectors with one terminal of a source of electricity; a plurality of equally spaced electric contact members, a different one of which is in connection with the other socket of a different one of said connectors; a plurality of integral electrical contact arms mounted on a rotatively movable spindle, one of which contact arms is adapted to be disposed to rest upon a desired one of said contact members, while the others of said contact arms are disengaged from the others of said contact members, in response to a rotative movement of said spindle; and the others of said contact arms being adapted to be disposed to rest each on a different one of said contact members in response to a rotative movement of said spindle; and means for connecting said integral contact arms with the terminal of said source of electricity.

1,300,127. PROTECTIVE DEVICE. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 21, 1916. Serial No. 110,607. 8 Claims. (Cl. 175—30.)



1. The combination with an oscillatory circuit, of a device in parallel thereto for dissipating the energy of said circuit in excess of a predetermined amount comprising coöperating electrodes terminating in a plurality of discharge points, and a solid insulating barrier between said discharge points to limit the discharge across said electrodes to a brush discharge.

1,300,128. WASHING APPARATUS. PATRICK F. CUMMINGS, Norwood, N. Y. Filed Apr. 5, 1916. Serial No. 89,210. 1 Claim. (Cl. 15—37.)

A device of the character described comprising a shell, a water inlet pipe connected and communicating therewith, a transverse partition plate within said shell provided with a plurality of angularly disposed openings, an axially extending sleeve formed on said partition and extending toward said pipe and having its end closed, a shaft journaled in said sleeve and prevented from longitudinal movement in one direction by the closed end thereof, a water wheel secured on said shaft and provided with blades to be impinged against by water issuing from said openings, a band detachably secured to

said shell and having its outer end curved to provide a constricted opening, a plurality of radially extending arms secured upon said band, a frusto-conical shield carried by the inner ends of said arms and disposed in spaced relation to the open end of said band, a spider disposed within said shield and provided with a bearing for said shaft, a stop collar on said shaft engaging the



bearing on said spider whereby longitudinal movement of the shaft in the other direction will be prevented, and a rubbing element detachably secured upon said shaft, the inwardly curved open end of said band coöperating with the frusto-conical periphery of said shield and serving to direct water issuing from between the band and shield onto the rubbing element.

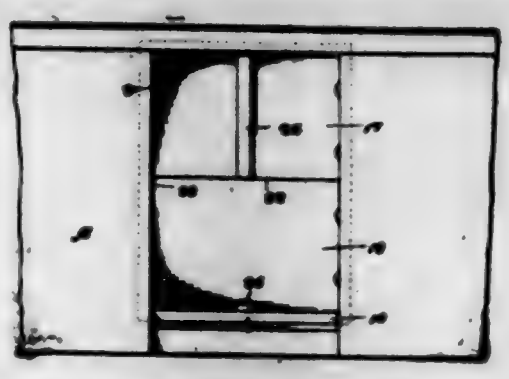
1,300,129. WAGON-JACK. FRED N. DANEY, Lovilia, Iowa. Filed May 8, 1917. Serial No. 167,289. 1 Claim. (Cl. 254—84.)



The herein described lifting jack comprising a lever, a U-shaped member secured upon its lower end and having the ends of the U projecting beyond such blower end, a triangular block secured beneath the lever with its larger end downward and its angle constituting a fulcrum, a rod through said block, and wheels on the extremities of said rod disposed to be above the ground when the fulcrum touches the same, the whole for use as described.

1,300,130. BOX-CAR DOOR. ALFRED E. DERBYSHIRE, Lansing, Kans. Filed Apr. 3, 1917. Serial No. 159,539. 1 Claim. (Cl. 20—32.)

A car door comprising a horizontally sliding frame, a door mounted for vertical sliding movement therein, said door including upper and lower sections, a vertically disposed spring arm having one end secured near the upper edge of the upper section and its lower end formed with an inturned extremity for engagement with the upper edge of the lower section when the latter is closed and a lug carried by the lower section and adapted to engage



the inturned extremity of the spring arm to hold the lower section open.

1,300,131. NUT-LOCK. FREDERICK DREBAUER, Pittsburgh, Pa. Filed Mar. 22, 1918. Serial No. 224,261. 2 Claims. (Cl. 151—68.)



1. A nut lock consisting of an elongated washer plate having a longitudinal rearwardly extending flange along one side and a bolt hole at one end, and a partly severed side portion at the other end provided with an outermost turned up corner and an inner locking edge adapted to be turned up at right angles to the washer plate.

1,300,132. NUT-LOCK. FREDERICK DREBAUER, Pittsburgh, Pa. Filed Mar. 22, 1918. Serial No. 224,262. 3 Claims. (Cl. 151—68.)



1. A nut lock consisting of a washer plate having a bolt hole and a corner portion having a triangular opening providing converging nut-engaging edges adapted to be turned up to engage the corner of a nut.

1,300,133. COTTON-CHOPPER. HARWOOD G. DEWEY, Westminster, Md., assignor to Jackson Brandt, Baltimore, Md. Filed Feb. 5, 1917. Serial No. 146,755. 1 Claim. (Cl. 97—46.)



In a machine of the character described, a frame, traction wheels secured to the frame near its forward end for supporting such forward end of the machine, a longitudinal driving shaft receiving rotation from the traction wheels, a rotatable chopper carried by the rear end of the driving shaft, a transverse bar secured to the frame and arranged near and rearwardly of the rotatable chopper, cultivator blades secured to the bar and disposed rearwardly of the rotatable chopper to act upon the sides of the hill, bevel gage wheels secured to the frame and ar-

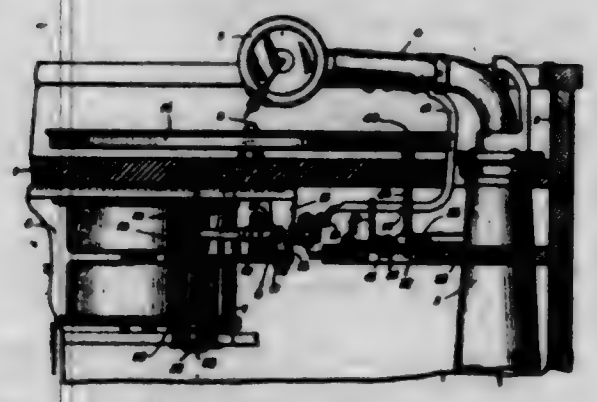
ranged rearwardly of and near the cultivator blades in longitudinal alinement therewith, and means to raise and lower the driving shaft.

1,300,134. ELECTRIC SWITCH FOR FIRE-ALARMS. GEORGE W. DE WITT, Fenton, Mich. Filed Mar. 30, 1918. Serial No. 225,714. 1 Claim. (Cl. 200—33.)



A circuit closing device for alarms, comprising a plate of insulation material, a stationary wire fastened thereto and terminating at one end in an eye and its other end outwardly curved, a second wire fastened at one end to said plate and resilient, bent at its longitudinal center to form an eye, and having a free end held normally by the resiliency of the same in contact with the curved portion of the first referred to wire, pins projecting from the plate, one upon either side of the eye formed at the longitudinal center of said resilient wire, and serving to limit the outer throw of the latter, an inflammable cord connected to the eye of the resilient wire, and a weight fastened to said cord.

1,300,135. RECORD-REPEATING DEVICE FOR PHONOGRAPHS. JOSEPH HOWES DICKINSON, Cranford, N. J., assignor to The Aeolian Company, a Corporation of Connecticut. Filed June 19, 1916. Serial No. 104,424. 13 Claims. (Cl. 274—15.)



1. In a record-repeating device for phonographs, the combination of a motor, a reproducer supported for adjustment to and from playing position and for travel in playing direction across the record and return, and a releasable driving connection between said motor and the reproducer which when made, returns the reproducer across the record, said connection comprising an elongated member connected with the reproducer support and a rotary part adapted to be driven by the motor and to directly contact with and shift said elongated member endwise.

2. In a record-repeating device for phonographs, the combination of a motor, a reproducer supported for adjustment to and from playing position and for travel in playing direction across the record and return, a releasable driving connection between said motor and the reproducer which when made, returns the reproducer across the record, said connection comprising an elongated member connected with said reproducer support and a rotary part adapted to be driven by the motor and to directly contact with and shift said elongated member, and means set into operation by a given travel of the reproducer in playing direction which moves the reproducer off the record and makes said driving connection.

10. In a record-repeating device for a disk-record phonograph, the combination of a horizontal motor-board, a motor supported below the board, a turn-table operatively supported above the board, a vertically adjustable laterally swinging tone-arm and reproducer supported thereby, a horizontally disposed platform supported crosswise from the tone-arm below said board and rigidly connected to move with said tone-arm, and a rotary part driven by the motor and movable against said platform in a direction to raise it and thereby lift the reproducer off and return it across the record.

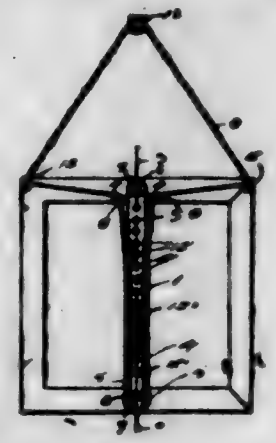
13. In a record repeating device for phonographs, the combination of a motor; a reproducer supported for adjustment to and from playing position and for travel in playing direction across the record and return; a platform rigidly connected with the reproducer support; and a single part located beneath said platform movable upwardly against the latter to raise the same and thereby lift the reproducer out of contact with the record, said part and said platform having a subsequent relative longitudinal movement, so as to shift the platform in a direction to return a reproducer across the record.

1,300,136. FURNITURE-LEG MOUNT. ALBERT B. DISS, Newark, N. J., assignor to The Bamick Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 17, 1918. Serial No. 250,264. 6 Claims. (Cl. 155—38.)



1. In a mount for angular furniture legs, a foot having a bottom and a back, the back having its ends bent rearwardly and curved and bent forwardly to form clamping members for engaging over the angular portions of the leg and to form spaces to receive the free edges of the angular portions, and a spring plate secured at its upper end to the back and having its lower end deflected and formed to have the opposite edges thereof engage the inner side faces of the angular portions of the leg to maintain the latter under constant tension and in engagement with the clamping members.

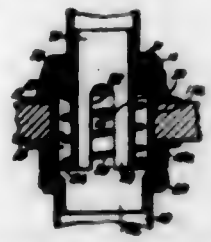
1,300,137. PICTURE-FRAME HOLDER AND HANGER. SAMUEL B. DOUGLASS, Beaufort, N. C. Filed Jan. 31, 1918. Serial No. 214,696. 2 Claims. (Cl. 40—145.3.)



2. In a device of the class described, a picture frame, a bracket including a pair of adjustable bars, means se-

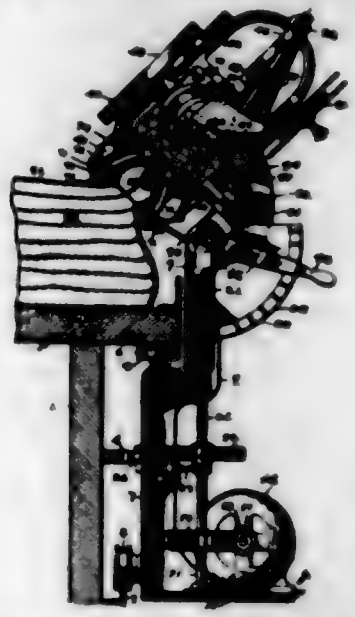
curing the outer terminals of the bars to a picture frame, hooks carried by the upper side edges of the bracket, hooks carried by the upper corners of the picture frame, a hook adjustably associated with the bracket, and a flexible member slidably engaging each of the hooks, as and for the purpose specified.

1,300,133. FLUSH-TANK VALVE. FRANCIS J. DOWLING, New York, N. Y. Filed June 6, 1918. Serial No. 238,572. 6 Claims. (Cl. 4—5.)



1. In a valve structure of the class set forth, the combination of a valve seat having two conical contact surfaces diverging from each other at equal angles from the vertical, the meeting edge thereof being obtuse, means to hold the seat in position, a valve having a groove bounded by two contact surfaces similarly inclined to the respective contact surfaces of the seat with which they cooperate simultaneously, the valve contact surfaces meeting each other in an angle relatively sharper than the apex of the seat aforesaid, and means to support and manipulate the valve with respect to the seat.

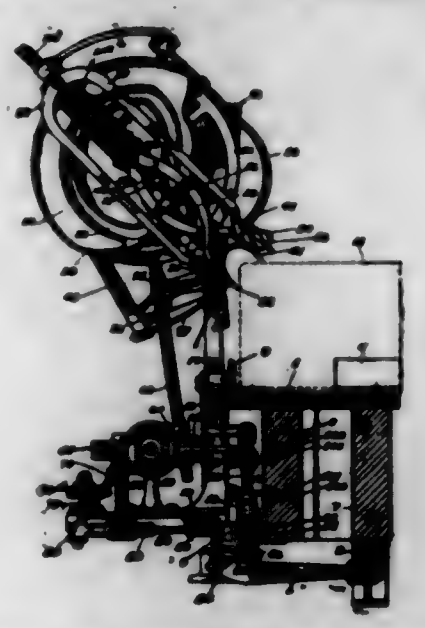
1,300,139. MATTRESS-ROLL-FORMING MACHINE. JOSEPH W. DROLL, Oakland, Calif. Filed Mar. 15, 1917. Serial No. 154,467. 11 Claims. (Cl. 112—24.)



1. A mattress roll forming machine comprising a roll forming means to form a roll on the corners of a mattress or the like; suitable retaining rollers arranged to follow the roll forming means and temporarily retain the formed roll; a suitable stitching needle to penetrate the roll at its junction with the mattress; means for withdrawing the needle and operating the roll forming means simultaneously; and means for moving the needle and retaining the rollers forward the length of one stitch while the roll forming means are engaging the roll.

10. The combination with a mattress roll forming machine of a pair of fingers to enter the said mattress, gather the stuffing therein into a corner of the mattress and thereby form a roll on the said corner; means for sewing the formed roll; means for moving the sewing means forward toward the roll forming means while said roll forming means is in engaging relation with the mattress; and means for retaining the engaging relation of the roll forming means with the mattress while the sewing means is moving toward said roll forming means.

1,300,140. MATTRESS-ROLL-FORMING MACHINE. JOSEPH W. DROLL, Oakland, Calif. Filed Jan. 25, 1918. Serial No. 215,010. 14 Claims. (Cl. 112—24.)



1. A mattress roll forming machine comprising a pair of pivotally mounted packing needles; means for moving the needles into the top and side of a mattress adjacent the corner thereof and at an angle to said side and top; means for rotating the needles on their pivotal points to gather stuffing within the mattress into the corner thereof from both sides to form a roll on said corner; and means for sewing the roll so formed.

1,300,141. SPRING-SCALE. HENRY F. DUNN, Anderson, Ind., assignor to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed May 16, 1916. Serial No. 98,508. 8 Claims. (Cl. 265—69.)



1. In a spring scale, a goods-receiver, a counterbalance spring, connections from one end of said spring to the goods-receiver, a regulating abutment spring comprising tapering laminated leaf springs fixed at the thicker end upon the scale and having its opposite end connected to the upper end of the counterbalance spring, said abutment spring being normally held under tension, and means for automatically varying the tension of said abutment spring in accordance with temperature changes whereby the upper end of the counterbalance spring is moved in conjunction with the free end of the abutment spring to counteract for expansion and contraction in said counterbalance spring.

2. In a spring scale, a goods-receiver, a counterbalance spring, connections from one end of said spring to the goods-receiver, a regulating abutment spring comprising tapering laminated leaf springs fixed at the thicker end

upon the scale and having its opposite end connected to the upper end of the counterbalance spring, said abutment spring being normally held under tension, and means for automatically varying the tension of said abutment spring in accordance with temperature changes whereby the upper end of the counterbalance spring is moved in conjunction with the free end of the abutment spring to counteract for expansion and contraction in said counterbalance spring, said means comprising an equalizing spring of substantially the same mass as the counterbalance spring.

4. In a spring scale and in combination with the indicating mechanism thereof, a pair of counterbalance springs, a crossbar connecting the upper ends thereof, a regulating abutment spring formed of tapered laminated leaves having one end secured to the crossbar and its other end fixed upon the scale, the free end of said abutment spring being held under tension and normally bent downwardly by the weight and pull exerted thereon by the crossbar and counterbalance springs, and means for varying the tension of said abutment spring in accordance with temperature changes whereby the upper ends of the counterbalance springs are moved in conjunction with the free end of the abutment spring to counteract for expansion and contraction in said counterbalance springs.

5. In a spring scale and in combination with the indicating mechanism thereof, a pair of counterbalance springs, a crossbar connecting the upper ends thereof, a regulating abutment spring having one end secured to the crossbar and its other end fixed upon the scale, the free end of said abutment spring being held under tension and normally bent downwardly by the weight and pull exerted thereon by the crossbar and counterbalance springs, and means engaging the crossbar for varying the tension of said abutment spring in accordance with temperature changes whereby the upper ends of the counterbalance springs are moved in conjunction with the free ends of the abutment spring to counteract for expansion and contraction in said counterbalance springs.

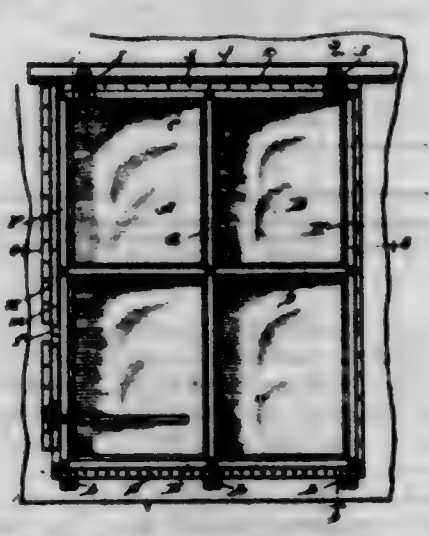
6. In a spring scale and in combination with the indicating mechanism thereof, a pair of counterbalance springs, a crossbar connecting the upper ends thereof, a regulating abutment spring having one end secured to the crossbar and its other end fixed upon the scale, the free end of said abutment spring being held under tension and normally bent downward by the weight and pull exerted thereon by the crossbar and counterbalance springs, and means for varying the tension of said abutment spring in accordance with temperature changes whereby the upper ends of the counterbalance springs are moved in conjunction with the free end of the abutment spring to counteract for expansion and contraction in said counterbalance springs, said means comprising a pair of equalizing springs of substantially the same mass as the counterbalance springs.

1,300,142. DITCHING-MACHINE. HAROLD I. EATON, Atlantic City, N. J., assignor to Eaton, Brown & Simpson, Inc., Elizabeth, N. J., a Corporation of New Jersey. Continuation of application Serial No. 93,729, filed Apr. 28, 1916. This application filed Oct. 25, 1916. Serial No. 127,647. 19 Claims. (Cl. 97—12.)



1. In a ditch or trench cutter, the combination of a frame including longitudinally spaced beams adapted to slide on the surface of the ground, a plow or cutter carried by and depending below said beams, independent cutting blades mounted in advance of said plow, cutting plates at the sides of the plow, and a delivery chute leading rearwardly and upwardly from the plow; said beams being recessed on the inside adjacent the rear of the cutting blades for the passage of uncut root members carried up at the sides of the plow.

1,300,143. SHEET-METAL FREIGHT-CAR DOOR. PERCY M. ELLIOTT, Chicago, Ill. Filed May 8, 1915. Serial No. 26,768. 7 Claims. (Cl. 189—46.)



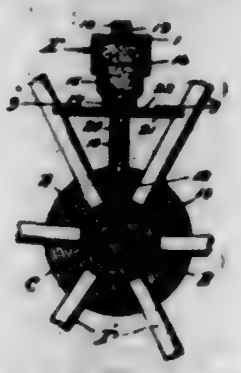
1. A freight car door comprising a sheet metal covering, and a plurality of vertical and horizontal intersecting reinforcing bars formed of pressed sheet metal and comprising central web portions spaced away from the covering and extending across each other at their points of intersection and side flanges overlying and secured to said covering.

1,300,144. ART OF CATALYSIS. CARLETON ELLIS, Montclair, N. J. Original application filed Mar. 29, 1912, Serial No. 686,988. Divided and this application filed Sept. 6, 1916. Serial No. 118,750. 2 Claims. (Cl. 87—12.)

1. In the hydrogenation of fatty oils containing unsaturated components, the step of treating such an oil with hydrogen in the presence of a catalyst comprising an electrically deposited, sponge-like, finely divided catalytic metal, carried upon a charcoal base.

2. In the hydrogenation of fatty oils containing unsaturated components, the step of treating such oil with hydrogen in the presence of a catalyst comprising an electrically deposited sponge-like, finely divided catalytic metal, carried upon a base composed of a non-metallic body containing a high percentage of carbon and capable of occluding hydrogen.

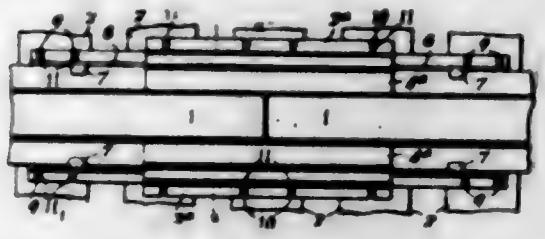
1,300,145. GREASING DEVICE. FREDERICK C. ERDMANN, North Fond du Lac, Wis. Filed Aug. 14, 1918. Serial No. 249,907. 2 Claims. (Cl. 64—36.)



1. In combination with a wagon wheel, a lubricating device comprising a shank threaded into the hub of the wheel and having its outer end formed as a cup and exteriorly threaded, a cover threaded upon said cup, said shank being provided with a bore communicating with a hole through the shell of the hub, a bracing plate spaced from the periphery of the hub and having its opposite

sides curved for engagement with the opposing faces of successive spokes, said plate being provided with a hole for the passage of said shank, and an enlarged portion on said shank bearing on said plate and holding the ends of said plate in engagement with the spokes.

1,300,146. RAIL-JOINT. MERCER ERWIN, Talmo, Ga., assignor of one-half to E. N. Major, Gainesville, Ga. Filed July 25, 1917, Serial No. 182,753. Renewed Jan. 9, 1919. Serial No. 270,445. 1 Claim. (Cl. 239—6.)



A combination with the abutting ends of a pair of rails, of a chair member including a base plate having flat upper and lower faces and provided at an intermediate point in its length with opposed side wings constructed to fit over the flanges of the rails and extend upwardly within the fishing spaces to engagement with the rail heads, the ends of the base plate being formed with longitudinally projecting extensions which have the edges thereof beveled and notched to receive spikes and are also provided with short upwardly projecting inwardly hooked lugs for extending over and locking the flanges of the rail ends to the extensions at a distance from the side wings, the upper and lower surfaces of the longitudinal extensions being flush with the top and bottom of the base plate.

1,300,147. LUG-STICK FOR LOOMS. SAYERS DRAY EUBANKS, Concord, N. C., assignor to William Baxter Bruton and Alexander Robinson Howard, Concord, N. C. Filed Sept. 4, 1918. Serial No. 252,660. 1 Claim. (Cl. 139—48.)



A one-piece wooden lug stick for looms having an elongated longitudinally disposed slot near one end to be traversed by a picker stick, and the other end having an elongated longitudinally disposed slot for the attachment of an actuating link for the lug stick in adjustable relation thereto.

1,300,148. DOUBLE-JOINTED OR UNIVERSAL-JOINTED BOX-SPANNER. EDWIN HORSBURGH EVANS, Laytonstone, England. Filed Sept. 27, 1917. Serial No. 193,577. 2 Claims. (Cl. 81—177.)



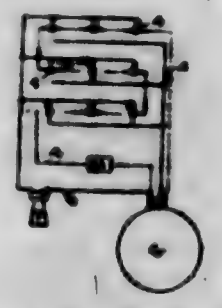
1. A device as set forth including a socket equipped with a shank the free terminal of which is forked, a handle movably mounted between the legs of the fork, and a guide loosely embracing said shank.

1,300,149. FISHING-BAIT. JOHN SPENCER EVANS, Victoria, British Columbia, Canada, assignor to The Canadian Fish Hook Manufacturing Co., Victoria, British Columbia, Canada. Filed Sept. 26, 1918. Serial No. 255,826. 5 Claims. (Cl. 43—30.)



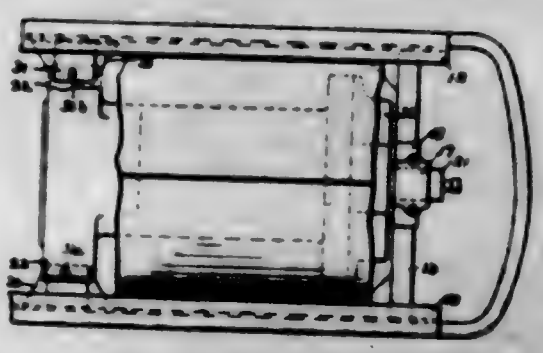
1. A fishing bait formed out of a flat metal plate dished at its rear end and embossed whereby a raised portion substantially triangular in shape is formed on the plate surface within the dished portion.

1,300,150. AUTOMOBILE-THEFT PREVENTER. SR. GEORGE EVANS and EDWARD E. BIRKENHOOD, Portland, Oreg. Filed Mar. 5, 1918. Serial No. 220,612. 4 Claims. (Cl. 177—314.)



1. In an automobile theft preventer, the combination of a number of two-way switches, an ignition circuit wired through said switches in series, an electric generator, an alarm circuit wired through said switches in parallel, and an alarm means, substantially as described.

1,300,151. MOTOR-VEHICLE. FRANK H. FARMER, Cleveland, Ohio, assignor to The White Motor Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 4, 1917. Serial No. 189,471. 3 Claims. (Cl. 180—64.)



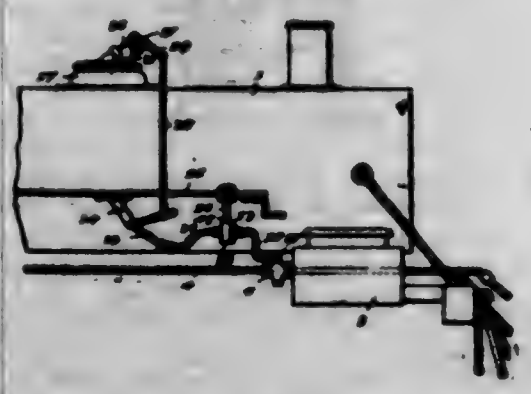
1. In a motor vehicle, the combination with the chassis frame, and inwardly extended brackets secured respec-

tively to the two side members of the chassis frame, an engine frame having a foot at each side and adjacent its rear end, said brackets being disposed respectively beneath the feet of the engine frame, and means which yieldingly draw the feet of the engine frame down upon said brackets, but which permits one foot to move laterally relative to the adjacent side member of the chassis frame and permits the other feet to move longitudinally relative to the adjacent side member of the chassis frame.

2. In a motor vehicle, the combination of the chassis frame, an engine frame having a foot on each side adjacent the rear end, means for suspending the front end of the engine frame from the chassis frame on a longitudinally extended, centrally placed, horizontal pivot, a chair which is fitted and fixed to each foot and is provided with a downwardly extended stud, inwardly extended brackets fixed respectively to the two side members of the chassis frame and project respectively under and into engagement with said chairs, one of said brackets having a transversely elongated slot through which the stud on the associated chair projects and the other bracket having a longitudinally elongated slot through which the stud on the associated chair projects, and means engaging said studs to hold said chair down upon said brackets.

3. In a motor vehicle, the combination of the chassis frame, an engine frame having a foot on each side adjacent the rear end, means for suspending the front end of said engine frame from the chassis frame on a longitudinally extended centrally placed horizontal pivot, a chair fitted and fixed to each foot and provided with a downwardly extended stud, inwardly extended brackets fixed respectively to the two side members of the chassis frame and projecting respectively under and into engagement with said chairs, one of said brackets having a transversely elongated slot through which the stud on associated chair projects, and the other bracket having a longitudinally elongated slot through which the stud on the associated chair projects, a nut which screws onto the lower end of each stud, and a coil spring which surround the projecting lower end of each stud and is compressed between the nut and bracket.

1,300,152. AUTOMATIC TRAIN-STOP. THOMAS A. FLYNN, Jr., Perth Amboy, N. J. Filed May 31, 1916. Serial No. 100,519. 3 Claims. (Cl. 246—190.)



1. In an automatic train stop, the combination with the steam main of a steam engine having a cut off valve therein, a train line pipe carried by the engine and having a discharge port therein and a valve for normally closing the port, of an outwardly projecting operating lever, means for connecting the operating lever to the valve in the air pipe for operating the valve for opening the port when the valve is operated, means for connecting the lever to the valve in the steam main for moving the valve to closed position when the lever is operated, a horizontally swinging block hingedly connected to the free end of the operating lever, and means for holding the block in an extended position, for the purpose specified.

2. In an automatic train stop, the combination with the steam main of a steam engine having a cut off valve therein, a train line pipe carried by the engine and having a discharge port therein, and a valve for normally closing the port, of an outwardly projecting operating lever pivoted intermediate its ends, a link connecting the inner end of the operating lever to the valve in the train line pipe for operating the same for opening the port, a bell crank pivoted at its angle, a link connecting the inner end of the operating lever with the adjacent end of the bell crank, and a rod connecting the opposite end of the bell crank to the valve of the steam main for moving the valve to closed position when the lever is operated.

1,300,153. HOLDER FOR PADS, STAMPS, AND PENS. HARRY S. FOLGER and TOBEY ROSS, Chicago, Ill.; said Ross assignor to said Folger. Filed Aug. 3, 1918. Serial No. 248,109. 3 Claims. (Cl. 101—333.)



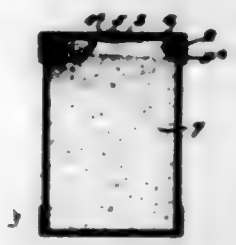
1. A box and a pad therein, said box having a chamber adjacent to and separated from the pad, and a cover hinged to said box, said box and cover when closed being arranged to engage a penholder and protect a stamp secured to such holder.

1,300,154. SUPPORT FOR CONCRETE CONSTRUCTION. HERMAN FOURE, Akron, Ohio. Filed Dec. 29, 1916. Serial No. 139,588. 1 Claim. (Cl. 248—2.)



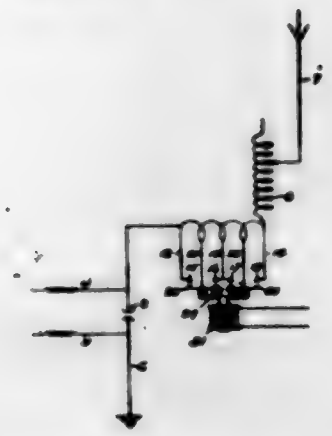
A support for concrete construction, comprising inner and outer telescopic sections and socket base receiving said sections, means for adjustably locking the inner telescopic section within the outer section and within the socket base, a false bottom positioned in the socket of the base, said false bottom having a transverse slot formed with an inclined upper wall, and a wedge adapted to be positioned within said slot and within the oppositely arranged slots formed in the walls of the base and registered with the slot in the false bottom to provide an additional adjustment between the inner and outer telescopic sections.

1,300,155. POWDER-BOX. EVERETT W. FREEMAN, Brooklyn, N. Y. Filed Jan. 17, 1918. Serial No. 212,173. 3 Claims. (Cl. 220—6.)



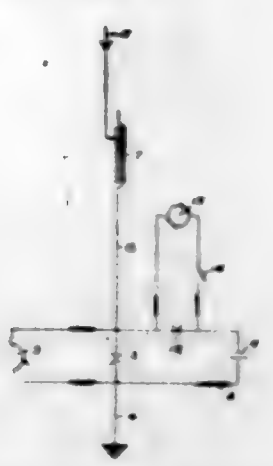
1. A powder box having a readily puncturable sealed opening therein and a cleaning element attached over said opening and composed of a suitable fabric provided with an aperture registering with said opening in the box.

1,300,156. RADIOTELEGRAPHY. LEONARD F. FULLER, San Francisco, Calif., assignor to Federal Telegraph Company, San Francisco, Calif., a Corporation of California. Filed Mar. 27, 1916. Serial No. 88,884. 4 Claims. (Cl. 250—19.)



4. In a radiotelegraph transmission system, an inductance, a key comprising a fixed member having a plurality of contacts connected to the inductance at spaced points and a movable member having a plurality of contacts connected to the inductance at spaced points intermediate the former spaced points and means for opening and closing the circuits between the adjacent contacts whereby each contact carries only a portion of the energy impressed on the key regardless of the sequence of opening and closing of the individual circuits.

1,300,157. RADIOTELEGRAPHY. LEONARD F. FULLER, San Francisco, Calif., assignor to Federal Telegraph Company, San Francisco, Calif., a Corporation of California. Filed Mar. 27, 1916. Serial No. 88,885. 2 Claims. (Cl. 250—19.)



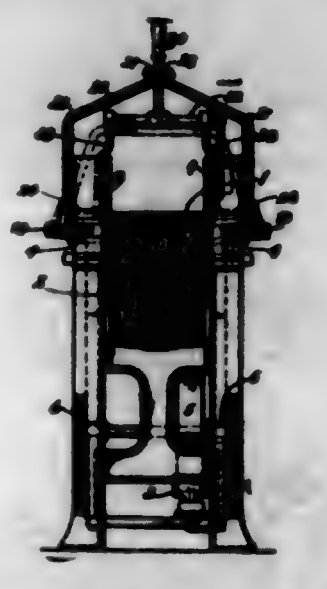
1. In a radiotelegraphy transmission system, an ant, a radiating conductor connected to one side of said arc, a grounded conductor connected to the other side of said arc, a circuit containing capacity, inductance and a gap shunted on said arc, a source of current connected to opposite sides of said gap and a key for controlling the flow of said current.

1,300,158. ADJUSTABLE HOLLOW MILLING-TOOL. ALEXANDER L. GRIFFEN, Rochester, N. Y. Filed Dec. 8, 1917. Serial No. 205,207. 4 Claims. (Cl. 29—105.)



1. A milling tool comprising a head having a seat therein, a cutting tool adapted to rest on said seat, a clamping sleeve engaging said tool on two sides thereof to hold it firmly against movement, a clamping screw passing through said sleeve and threaded into said head, said screw being adapted to force said sleeve against said tool and hold it in its seat.

1,300,159. LAP-MACHINE. JOHN P. GLAZEBROOK, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed June 16, 1917. Serial No. 175,162. 1 Claim. (Cl. 19—8.)



In a lap machine, the combination of two winding drums, of a removable lap spool in frictional contact with the drums, the bushing provided with a keyway fixed in each end of the lap spool, lap guiding disks provided with hollow sleeves having keyways therein, spool holding spindles slidably mounted in the disk sleeves and spool bushings, a key fitted in each spindle, a spring acting on each spindle thereby normally locking them in engagement with the spool, a doffing lever actuating each spindle, a manually operated lever for exerting pressure at the intersection of said doffing levers thereby simultaneously releasing the spindles from the spool, and locking means for the doffing levers comprising a spring operated detent located in one lever and acting in conjunction with a hole in the other lever.

1,300,160. POISONOUS-VAPOR GENERATOR FOR AEROPLANES. GROSES HOSTON GLOVER, Short Hills, N. J., assignor to Harriet Phelps Glover, Short Hills, N. J. Filed June 18, 1918. Serial No. 240,021. 6 Claims. (Cl. 244—1.)

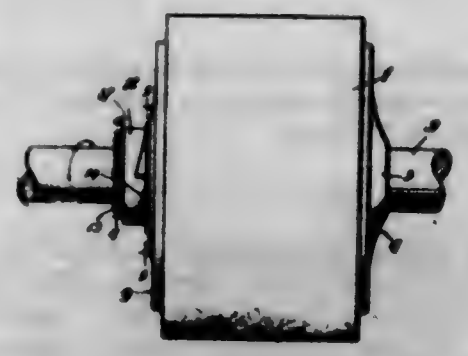
3. In combination with an aeroplane having a passage terminating at the tail end said passage being disposed to

accop air as the aeroplane travels, and means for controlling the inlet of the air into the passage, of means for



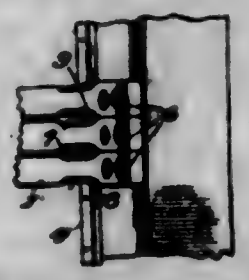
supplying a liquid to the tail end of the passage whereby said liquid may be atomized by the air escaping from the passage.

1,300,161. GRINDING-WHEEL CLAMP. JACOB J. GRAIN, Grand Rapids, Wis. Filed May 16, 1918. Serial No. 234,988. 1 Claim. (Cl. 51—1.)



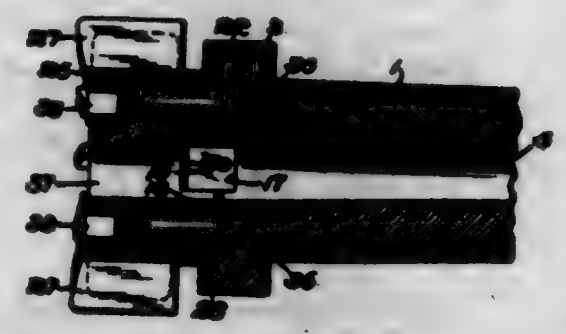
In a pulp mill grinding wheel mounting, an arbor reduced in diameter to form an outstanding shoulder, a wheel clamping disk surrounding the reduced part of said arbor and bearing against said shoulder, a key securing said disk to the arbor for rotation bodily therewith, a grinding wheel mounted on the arbor and bearing against the inner side of said disk, the latter having a hub extending into said wheel, a second clamping disk mounted on the arbor and free to turn thereon, said second disk having a hub extending into the grinding wheel and the latter being provided with a radial key-way adjacent said second disk, a key in said key-way for securing said second disk and the grinding wheel together for movement in unison, wedge shaped cams on the outer side of said second disk, a collar surrounding the arbor and having cams engaging said first named cams, a key securing said collar to said arbor, a washer abutting the outer side of said collar, and a split ring against which said washer bears, said arbor having a peripheral groove in which said ring is secured.

1,300,162. GINNING-RIB. THADDEUS S. CRIMES, Columbus, Ga., assignor to Lummus Cotton Gin Company, Columbus, Ga., a Corporation of Georgia. Original application filed Dec. 2, 1916, Serial No. 134,714. Divided and this application filed June 15, 1917. Serial No. 175,008. 3 Claims. (Cl. 18—18.)



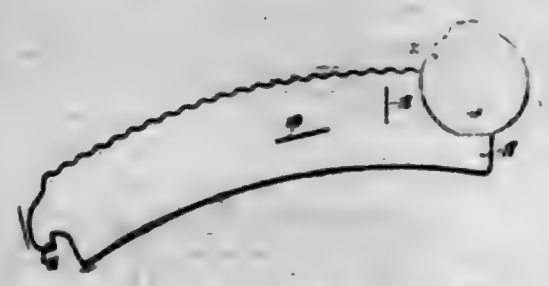
2. The combination with a pair of ginning ribs, of a rail to which said ribs are secured, said rail having a strip at its forward edge, said ribs having recesses formed in their adjacent surfaces at a point above said strip and extending rearward thereof.

1,300,163. MEANS FOR ATTACHING TOOLS TO SPINDLES. WILLIAM F. GROSSE, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 16, 1917. Serial No. 186,626. 4 Claims. (Cl. 90—11.)



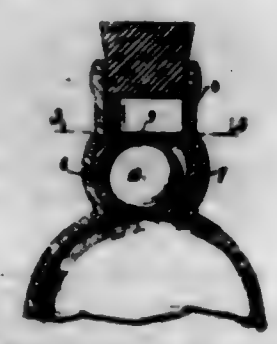
1. The combination of a spindle for machine tools having an arbor receiving bore and a head, a tool having an arbor receiving bore and cutting blades, a tapered portion and a correspondingly tapered recess on the spindle and tool to center the tool and spindle, driving elements on the spindle and tool for positive engagement that the spindle may positively drive the tool, said spindle head having a plural set of holes at different radial distances from the axis of the spindle adapted to receive fastenings for securing different sized cutters to said spindle at points radially within the cutting blades, and fastenings for securing the tool to the head of the spindle.

1,300,164. CONTAINER. DIEGO GUARDINO, Brooklyn, N. Y. Filed Dec. 28, 1918. Serial No. 268,688. 2 Claims. (Cl. 229—31.)



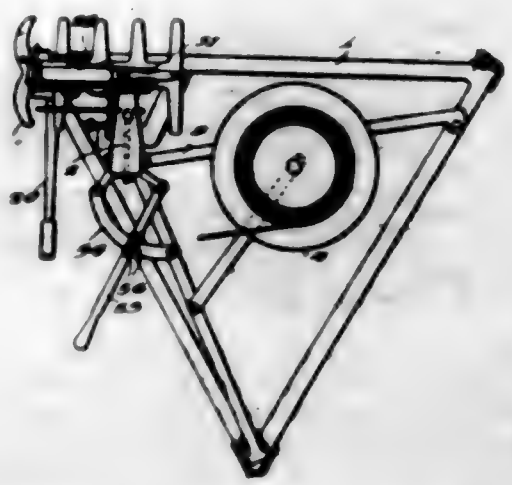
1. A container made of a single piece of sheet material, comprising a conical body and a bottom, the body having a hook and having a slot disposed in a vertical plane and engaged by the said hook to maintain the body in conical shape, the said bottom having a portion of its periphery integral with the side of the body at a point a distance above the bottom edge of the body, the said bottom having an integral lug diametrically opposite the said attached portion and the said body having a horizontal slot through which extends the said lug to support the said bottom horizontally a distance above the bottom edge of the body.

1,300,165. NON-REFILLABLE BOTTLE. FRED GUDGER, Cary, Ky. Filed Sept. 6, 1917. Serial No. 190,067. 3 Claims. (Cl. 215—62.)



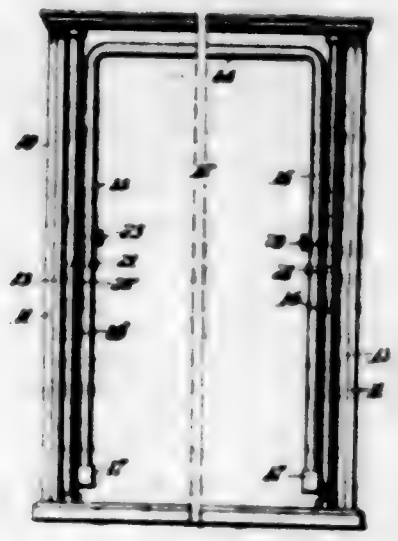
1. In a non-refillable bottle, a liner arranged within the neck of the bottle, the said liner having its upper edge serrated, and a ball arranged within the bottle neck and below the said serrated edge.

1,300,166. BUNDLING-MACHINE. EDWARD HATCH, Portland, Oreg., assignor to Fred A. Douty, Portland, Oreg. Filed June 29, 1917. Serial No. 177,711. 12 Claims. (Cl. 100—31.)



2. In a bundling machine, a frame, article supporting and compressing means, wire receiving and feeding means, a head on the frame, a rotatable wire twisting jaw on the head, wire receiving jaws arranged on the opposite side of said twisting jaw, means for rotating said twisting jaw, other means engageable with said rotating means for causing rotation of said receiving jaws subsequently to rotation of the twisting jaw, and a wire cutter operable subsequently to the twisting of the wire for severing the same from the feeding means.

1,300,167. DISPLAY-RACK. SOLOMON HIMMEL, Baltimore, Md. Filed Apr. 9, 1915. Serial No. 20,267. 7 Claims. (Cl. 211—16.)



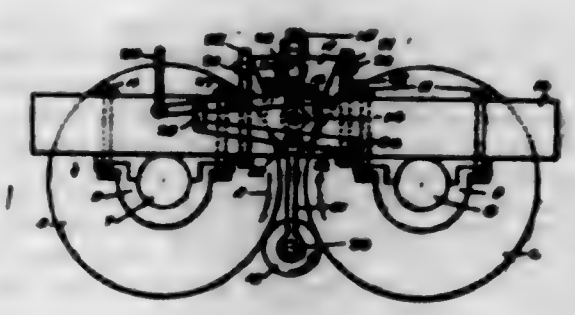
1. A display rack of the character described comprising a garment supporting rod of substantially inverted U-shape, spaced apart standards to which the depending members of said rod are pivotally connected, and counterbalancing means carried by the lower ends of said depending members for automatically returning said rod to a neutral position without shock after being rocked from said position and released.

1,300,168. FRUIT-PICKER. SIDNEY HOLMAN, Seattle, Wash. Filed June 18, 1917. Serial No. 175,258. 1 Claim. (Cl. 56—99.)

In a fruit picking device the combination of a fork supporting staff, a fork hingedly secured to the upper end of said staff, a slotted chute integral with the said fork and extending beyond the hinge point of said fork and oppositely disposed to the fork and means for retaining the fork and chute at selective angles with respect to the said fork supporting staff.



1,300,169. POWER-TRANSMISSION DEVICE. CHARLES N. HUDSON, Seattle, Wash. Filed Sept. 14, 1918. Serial No. 254,877. 1 Claim. (Cl. 74—36.)

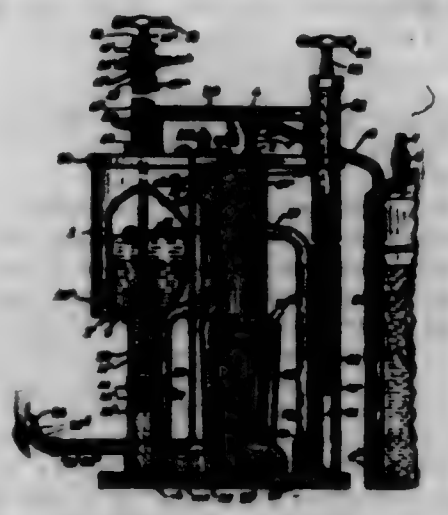


A device of the class described, comprising a frame, two drum rotatably mounted therein in side by side relation the peripheral portions of said drums being spaced apart, a roller adapted to be inserted between said drums on the top sides thereof, a member extending crosswise of said frame above said roller, means adjustably secured to said member for supporting said roller for rotation, devices supporting said member for vertical movement with respect to said frame, links pivotally connected with the outer ends of said member, lever arms fulcrumed on said frame and articulated with the lower ends of said links, means for raising and lowering the outer ends of said lever arms, another roller adapted to be inserted between said drums on the bottom side thereof, other lever arms pivotally secured at the inner end of said frame, links connecting the outer ends of said other lever arms to said first named lever arms, and links connecting said last named roller with the medial portions of said last named lever arms whereby said first named roller and said last named roller may be moved into and out of engagement with said drums simultaneously.

1,300,170. GASIFYING APPARATUS. DANIEL H. JEFFERSON, Los Angeles, Calif., assignor of one-half to Frank E. Andres, Alhambra, Calif. Filed June 12, 1915. Serial No. 229,517. 9 Claims. (Cl. 48—6.)

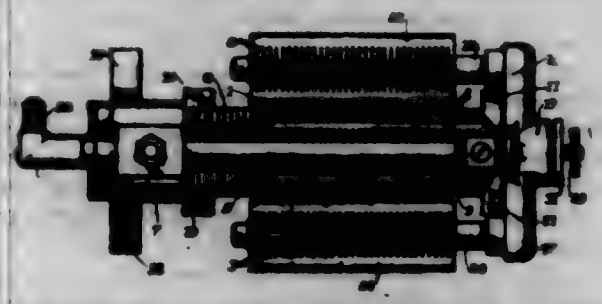
1. In apparatus of the character disclosed, a receiving receptacle adapted to contain liquefied gas, means for

discharging a predetermined charge of such liquefied gas therefrom, a receiver adapted to receive said charge, and



pressure means for ejecting said charge from said receiver to gasify the same.

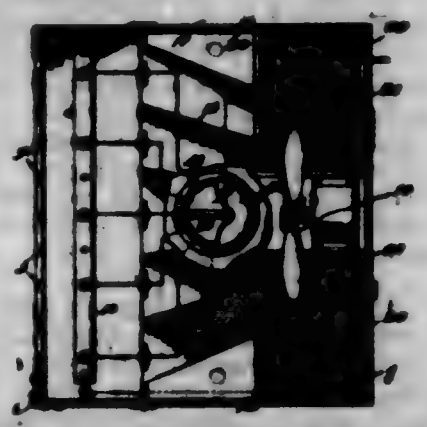
1,300,171. BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed Dec. 18, 1916. Serial No. 137,492. 10 Claims. (Cl. 158—85.)



1. In combination a main burner, a pair of supplementary burners one on each side of said main burner, a mixing tube for said main burner, a bracket for supporting the rear end of said main burner and the rear ends of said supplemental burners, said supporting means having passages therein for connecting said mixing tube with said supplemental burners, and a valve controlling said passages.

6. In an oil burner, a burner comprising a mixing chamber, a mixing tube in said chamber, said tube having perforations in the walls thereof, said perforations being in the upper part of the side walls of said tube, the lower side walls of said mixing tube being imperforate, said mixing tube having an opening in the end thereof whereby accumulations of oil therein will be discharged outside of said burner, and a tube surrounding said mixing tube, said second tube having perforations in the lower side walls thereof.

1,300,172. RADIATOR. WILLIAM RUFUS JONES, Summitville, Ind. Filed June 21, 1918. Serial No. 241,201. 2 Claims. (Cl. 210—30.)



2. A radiator comprising a suitable casing having a tank, a series of electrically controlled heating units supported on one side of the tank, a series of wicks depending at their lower ends into the water in the tank and arranged in spaced relation, an electrically controlled fan behind the wicks for driving air over the wicks and over the units, said casing having a cylindrical portion at its bottom, and a base or pedestal having a cylindrical portion at its top in which the cylindrical portion of the casing engages to rotatably support the casing.

1,300,173. CRYPT FOR MAUSOLEUMS. GEORGE COLVIN KENNEDY, Waterloo, Iowa. Filed Aug. 17, 1912, Serial No. 715,617. Renewed July 8, 1918. Serial No. 243,944. 3 Claims. (Cl. 189—1.)

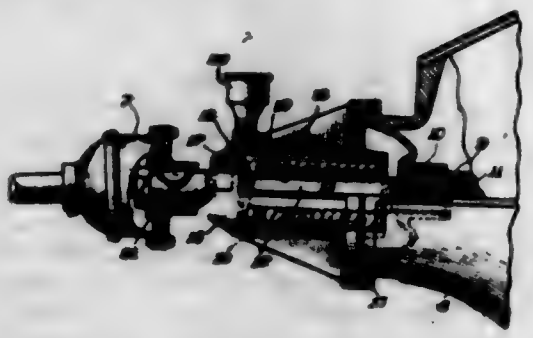


1. The combination of a plurality of crypts, separated by single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, heads fitted in the ends of said crypts and secured thereto detachably by detachable securing devices, additional securing devices mounted detachably at or near the meeting edges of the outer top, bottom and side plates of the said connected crypts adapted for use in detachably securing like plates thereto to build thereon additional like crypts, and face-plates mounted over heads of said crypts.

2. The combination of a plurality of crypts, separated by single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, heads fitted in the ends of said crypts and secured thereto by detachable securing devices, and additional securing devices mounted detachably at or near the meeting edges of the outer top, bottom and side plates of the said connected crypts adapted for use in detachably securing other like plates thereto to build thereon additional like crypts.

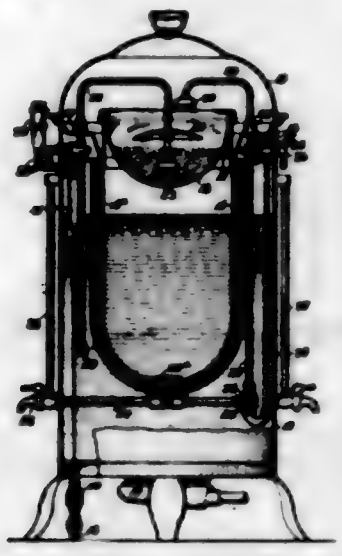
3. The combination of single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, and additional securing devices mounted detachably at or near the meeting edges of the said plates adapted for use in securing other plates thereon to build thereon other hollow structures.

1,300,174. SHAFT EXTENSION FOR AUTOMOBILE TRANSMISSION-GEARING. HARRY ORLAND KING, Chicago, Ill. Filed Nov. 7, 1917. Serial No. 200,707. 2 Claims. (Cl. 64—89.)



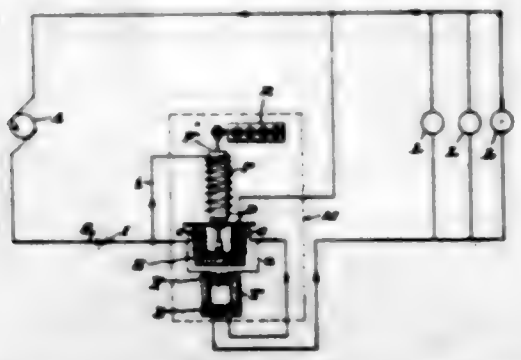
1. A gear casing containing a main shaft and bearing therefor in combination with a journal bearing attached to the gear casing, an extension shaft journaled in the said journal bearing and connected with the main shaft, and a thrust bearing associated with said journal bearing cooperating with a thrust element in said extension shaft.

1,300,175. BEVERAGE-URN. OTIS A. KITTINGER, San Francisco, Calif., assignor to San Francisco Coffee Urn Company, San Francisco, Calif., a Corporation of California. Filed Oct. 29, 1917. Serial No. 198,946. 4 Claims. (Cl. 53—3.)



1. A beverage urn comprising a boiler provided at its upper end with an upwardly extending rim, a beverage container within the boiler and carrying a percolator at its top, a vertically disposed pipe having a lower open end immersed in the water in said boiler and passing upwardly through the end of the boiler and terminating in a cone-shaped open end, a nozzle detachably fitted on said cone-shaped end and extending into the percolator whereupon water in said boiler under the pressure of steam will be passed into the container, a valve-controlled circulating pipe for the liquid in said container communicating with the container at the bottom thereof and having a vertically extending portion projecting upwardly through the end of the boiler and terminating in a cone-shaped open end on the opposite side of the beverage container from the first cone-shaped pipe end, a nozzle detachably fitted on said cone-shaped end for discharging into the percolator, means for conveying steam from said boiler into the return pipe for circulating the liquid therein, and a stepped ring supported at its inner edge by the container and at its outer edge by the rim, said pipes passing upwardly through the ring with their cone-shaped ends engaging over the latter to hold it seated on the container and rim.

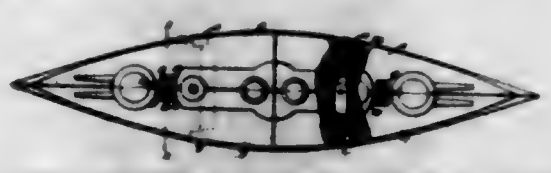
1,300,176. ELECTRIC WATT-HOUR METER. OTTO A. KNOPP, Oakland, Calif. Filed Nov. 20, 1916. Serial No. 132,247. 2 Claims. (Cl. 171—264.)



1. In combination with an induction watt hour meter having a potential coil and a current coil, a transformer having a primary winding connected in series with said current coil, and means comprising the secondary winding of said transformer for superposing a magneto-motive force on the magneto-motive force of said series coil.

2. In combination with an induction watt hour meter having a current coil, a transforming device having a primary winding connected in series with the said current coil and a secondary winding connected in parallel with said current coil.

1,300,177. TOY BOAT. JULIUS KOHN, New York, N. Y. Filed July 6, 1918. Serial No. 243,693. 2 Claims. (Cl. 46—42.)



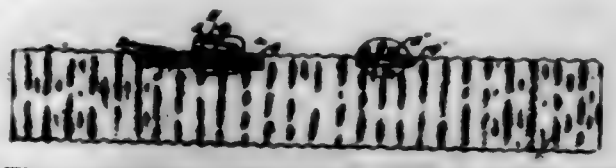
1. A toy comprising a wagon structure, a base arranged on said wagon structure, a super-structure arranged on said base, said super-structure being divided into a plurality of sections, said sections being arranged in pairs, means for pivotally connecting each section to said base, a spring member acting on each section for moving the same to a given position, an upstanding lug on each section, said lugs being positioned so as to be arranged close together when the sections are in a folded or assembled position, and a catch acting as a target formed with extensions straddling each pair of stops so that each catch and target will lock a pair of sections together.

2. A toy of the character described comprising a vehicle structure, a base mounted on the vehicle structure, said base being shaped to conform to the usual shape of a well known article, a super-structure mounted on the base conforming to the same well known article above mentioned, said superstructure being divided into a plurality of pairs of sections, means for pivotally mounting each section on said base, an upstanding lug arranged on each of said sections, said lugs being positioned so as to be near each other when the sections are in a folded or assembled position, a catch for each pair of sections formed with an upright body having a notch in one end for accommodating the upstanding lugs on the sections, and a target connected with the end of said body opposite said notch.

1,300,178. PROCESS FOR PRODUCING LEGENDS IN BLACK ON MOTION-PICTURE NEGATIVES. GEORGE LANB, Fort Lee, N. J. Filed Nov. 12, 1918. Serial No. 262,374. 3 Claims. (Cl. 88—16.)

1. In motion picture photography, the herein described process of producing legends in black on a negative film comprising the following steps: (1) forming the legend in positive characters in dark on a thin white sheet; (2) making a photo print of the legend so produced in close contact with the photo print sheet and developing the same producing the legend with negative colors, and (3) photographing said negative photo sheet on a motion picture film and developing the same producing thereon black characters on a white background, and constituting thereby a permanent negative film.

1,300,179. NECKWEAR. JULIUS H. M. LIPP, Buffalo, N. Y. Filed Oct. 15, 1917. Serial No. 196,682. 2 Claims. (Cl. 2—59.)



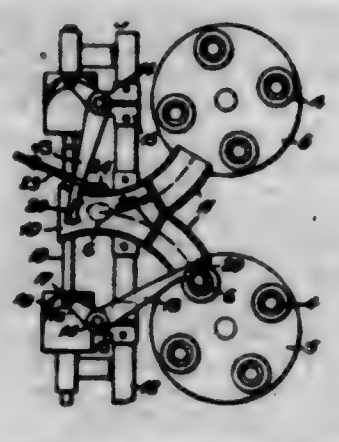
2. The combination, with a neck scarf or similar article of wear having one of its edges provided with fastening means, of spaced holding members engageable over the usual collar upon the wearer's shirt so as to hold the scarf at points at opposite sides of the neck, and means for adjustably connecting one of said members to the scarf fastening means aforesaid.

1,300,180. APPARATUS FOR FEEDING MOLTEN GLASS. WILLIAM A. LORENZ, Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y., a Corporation of New York. Filed Aug. 7, 1917. Serial No. 184,874. 10 Claims. (Cl. 49—55.)

1. An apparatus for transferring gathers of molten glass from a source of supply to the molds of a shaping

machine, including a conduit having a substantially horizontal surface for supporting gathers of molten glass received from the source of supply, reciprocating means movable substantially horizontally along the conduit and advancing the gathers thereon, and mechanism for moving said means back and forth.

3. An apparatus for transferring gathers of molten glass from a source of supply to the molds of a shaping machine, including a substantially horizontal conduit for receiving and delivering gathers of molten glass from the source of supply, oscillatory means movable substantially horizontally along and close to the upper surface of said conduit from its receiving portion to its delivery portion, and mechanism for oscillating said means.



5. An apparatus for transferring gathers of molten glass from a source of supply to molds of shaping machines, comprising a substantially horizontal conduit for receiving and delivering gathers of molten glass from the source of supply, a plurality of oscillatory means movable substantially horizontally along and close to the upper surface of said conduit from its receiving portion to different delivery portions, and mechanism for oscillating said means alternately with each other.

8. An apparatus for transferring gathers of molten glass from a source of supply to the molds of a plurality of shaping machines, comprising a substantially horizontal conduit for receiving and delivering gathers of molten glass from the source of supply, a plurality of pushers movable substantially horizontally along and near the upper surface of said conduit from the receiving locality toward the delivery ends thereof, and mechanism for moving said pushers alternately back and forth.

10. In an apparatus for handling gathers of molten glass, the combination with a source of supply, and with molds for receiving the gathers, of a horizontally arranged conduit, transferring means movable back and forth over the conduit, and mechanism for actuating said transferring means.

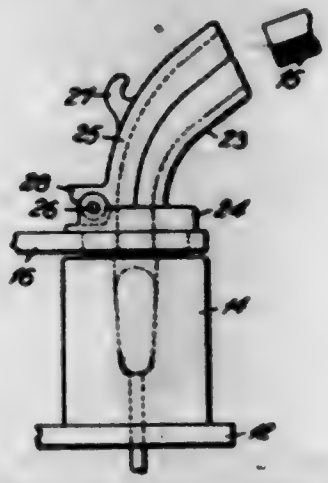
1,300,181. APPARATUS FOR FEEDING MOLTEN GLASS. WILLIAM A. LORENZ, Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y., a Corporation of New York. Filed Aug. 7, 1917. Serial No. 184,875. 7 Claims. (Cl. 49—14.)

1. In an apparatus for handling gathers of molten glass the combination with a conducting trough and a shaping mold, of a curved inclosing funnel located between the delivery end of the trough and the mouth of the mold for conducting the gathers from the trough to the mold and shaping them while being so conducted.

2. In an apparatus for handling gathers of molten glass the combination with a conducting trough and a shaping mold, of a funnel arranged between the delivery end of the trough and the mouth of the mold, said funnel having a curved passage that is oval in cross section at its discharge end for conducting gathers of glass from the trough to the mold and shaping them while being conducted therethrough.

4. In an apparatus for handling gathers of molten glass the combination with a conducting trough and a shaping mold, of a funnel having a curved passage from the delivery end of the trough to the mouth of the mold, said funnel having its walls formed in sections so that it may be opened to gain access to the passage therethrough.

6. In an apparatus for handling gathers of molten glass the combination with a conducting trough and a shaping mold, of an inclosing funnel located between the delivery end of the trough and the mouth of the mold, said funnel having a section that is rigidly fixed in position and a section that is hinged thereto and which may be swung open so as to permit access to the opening through the funnel.



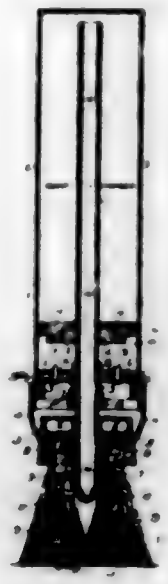
7. In an apparatus for handling gathers of molten glass the combination with an inclined conducting trough and a vertical shaping mold, of an inclosing funnel having a curved passage with an enlarged receiving opening substantially in line with the inclined trough and a smaller discharge opening substantially in line with the vertical mold.

1,300,182. EXPANSION-VALVE. BENJAMIN S. MCCLELLAN, Chicago, Ill. Filed Jan. 4, 1915. Serial No. 351. 2 Claims. (Cl. 50—23.)



1. An expansion valve adapted for use in a refrigerating system, comprising a valve casing having high and low pressure passages, a fixed valve member interposed between said passages and separating one from the other, a movable valve member provided with a stem having sliding engagement with said fixed valve member, said stem being provided with an axial passage closed at both ends and having an outlet port establishing communication between said low pressure passage and said axial passage, said stem having an inlet port adapted to establish communication between said high pressure passage and said axial passage, said inlet port coacting with a margin of said fixed valve member in the endwise movement of said movable valve member, so that endwise movement of the latter will effect the opening and closing of said inlet port, said movable valve member being subject to the pressure in said low pressure passage in a direction to shift said movable valve member into its closed position, and means acting on said movable valve member in opposition to the pressure exerted thereon.

1,300,183. LIQUID-DISPENSING DEVICE. FRANK MCLAUGHLIN, Philadelphia, Pa., assignor to De Luxe Brush Company, Philadelphia, Pa., a Corporation of Delaware. Filed Apr. 22, 1918. Serial No. 230,090. 8 Claims. (Cl. 221—79.)



1. The combination of the reservoir and head, one rotatable in respect to the other, a valve seat, a valve thereon, means for closing said valve against said seat, and means for normally arresting the rotation of the rotatable part until said valve has been opened by longitudinal movement.

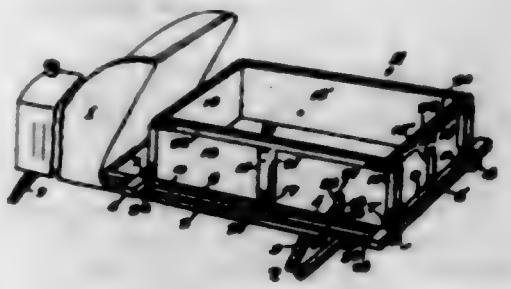
8. In a device for dispensing plastic or liquid material, the combination of the reservoir and head members, one rotatable with respect to the other, a tube carried by one of said members and having a valve seat and an opening at its forward end, a valve rotatable with said member and coöperating with said valve seat, said valve being movable longitudinally with respect to said member, said valve having connection with a part which extends into said reservoir, and a plunger in engagement with said part, said plunger and part being relatively rotatable.

1,300,184. SEWING-MACHINE ATTACHMENT. HARRIS MITTLEMAN, New York, N. Y., assignor to American Invisible Stitching Machine Co., Inc., a Corporation of New York. Filed Feb. 20, 1917. Serial No. 149,917. 2 Claims. (Cl. 112—18.)



1. A sewing machine attachment of the class described comprising in combination a presser foot-bar, a presser foot detachably carried by said presser foot-bar, a head having a transverse passage formed therein, a bar rotatably and longitudinally movable in said passage, locking means carried by said head for engaging this bar, a supplemental presser foot and guide carried by said bar having vertical and lateral adjustment with respect to said presser foot, and said supplemental presser foot having a vertical groove in the face thereof contiguous to said presser foot to receive portions of a folded section of fabric and the nap thereon through which a vertically movable needle passes.

1,300,185. VEHICLE. HIRAM W. MONTGOMERY, Topanga, Calif. Filed Aug. 13, 1917. Serial No. 186,078. 1 Claim. (Cl. 21—7.)



A utility vehicle comprising spring supported side rails; a seat fixed to the front ends of said side rails; supplemental side rails fixed to said spring supported side rails and spaced apart to receive a berry box; a front cross bar fixed to the supplemental side rails behind the seat; a rear cross bar fixed to the supplemental rails rearwardly beyond the ends of the spring supported side rails; a berry box movable up and down in the space formed between the side rails and the front and rear cross bars and provided on the outside with sockets for spring guides; helical springs in said sockets, said springs resting upon the side rails and cross bars respectively to support the berry box; and lost motion means retaining the supplemental side rails and cross bars in position with the springs resting on said rails.

1,300,186. WHEELBARROW. HIRAM W. MONTGOMERY, Topanga, Calif. Filed Sept. 26, 1917. Serial No. 193,616. 4 Claims. (Cl. 21—68.)



1. In a wheelbarrow the combination with a frame, of a front wall at the front of the frame, a head bar at the top of the front wall, a foot bar under the frame, brackets connected above their lower edges to the frame and engaged by the head bar and the front wall and clamping means adapted to clamp the head bar upon the front wall and brackets and the foot bar against the frame.

1,300,187. DISAPPEARING BOW-REST AND SHACKLE. HIROTSUNE TSUCHU NAKAMISO, Los Angeles, Calif. Filed Sept. 18, 1917. Serial No. 193,013. 11 Claims. (Cl. 21—61.)



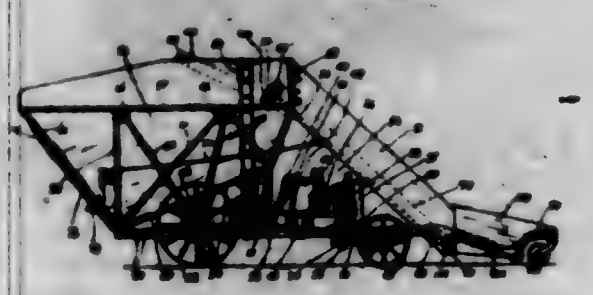
1. A disappearing bow rest and shackle for automobile tops comprising a holder secured within the body of the car, and a combination bow rest and shackle adapted to be telescoped in or extended with relation to the holder to project exterior of the body.

5. The combination with the bows of a foldable vehicle top and the body of the vehicle, of a tube extending

crosswise of the body between the walls thereof, a combination bow rest and clamping shackle adapted to be received in each end of the tube and to telescope therein, means for securing said members within the tube when telescoped, and means for automatically projecting the same when required.

7. The combination with the bows of a foldable vehicle top and the body of the vehicle, of a tube extending crosswise of the body between the walls thereof, a plunger slidably mounted in each end of the tube, a clamping shackle pivotally attached to the outer end of each plunger, each plunger and attached shackle being adapted to telescope within the tube, means for securing each plunger and shackle against projection when telescoped, a spring within the tube interposed between the plungers, said spring adapted to automatically project the plungers, means for releasing the plungers to permit the spring to project the same, and means for limiting the outward movement when they are projected.

1,300,188. SHOCK-GATHERER. BENJAMIN H. NELSON, St. Thomas, N. D., and JOHN M. LAUDERDALE, Virginia, and LAWRENCE G. ERICKSON, Minneapolis, Minn., assignors to Traveling Shock Gatherer Company, Minneapolis, Minn., a Corporation. Filed Nov. 17, 1917. Serial No. 202,632. 4 Claims. (Cl. 56—61.)

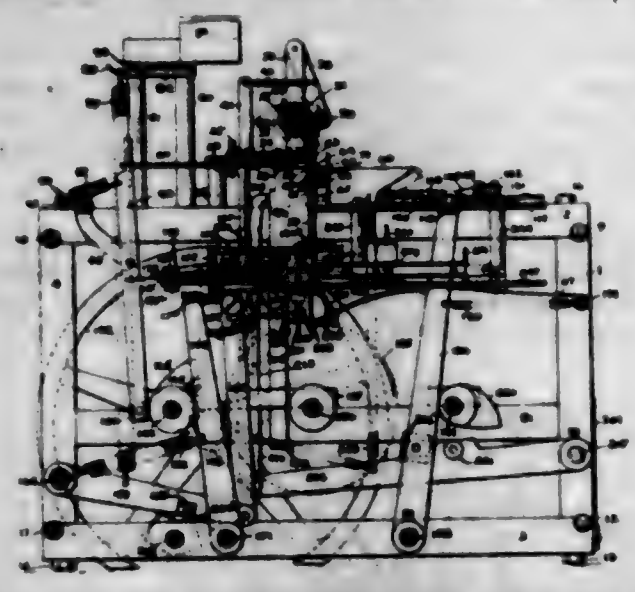


1. In combination with a traction engine and the mechanism for controlling and operating the same, means for converting said traction engine into a shock loading conveyer comprising a tank removably connected to the frame of the traction engine, a carrier frame removably connected to the frame of the traction engine, means for supporting the carrier frame and tank so as to bridge and extend above the controlling and operating mechanism of the traction engine, a platform removably connected to the side of the traction engine frame, and means for assembling the various control levers in proximity to said platform and in operative connection with the part controlled thereby.

4. In combination with a traction engine and the mechanism for controlling and operating the same, a pair of plates connected with the front end of the traction frame and extending beyond the same, a pair of arms connected to the rear end of the traction frame and extending outwardly from the same, a tank removably connected to said traction frame having a part thereof connected to and supported by said outwardly-extended arms, and a carrier frame removably connected to the front end of said traction frame by said forwardly-extended plates, and means for supporting said carrier frame and tank so as to bridge and extend above the controlling and operating mechanism of the traction engine.

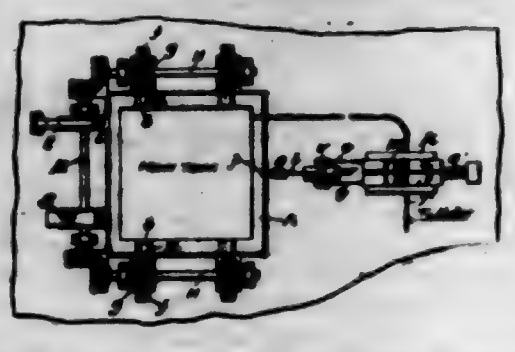
1,300,328. WRAPPING-MACHINE. CLARENCE A. PERSONS, San Francisco, Calif., assignor to Nathan Schiller, San Francisco, Calif. Filed Mar. 30, 1915, Serial No. 18,190. Renewed Feb. 6, 1918, Serial No. 215,919. 16 Claims. (Cl. 93—8.)

4. A parcel wrapping machine comprising the combination with a paper supply roll, of a paper feed roll, means operated by the parcel being wrapped to set the mechanism feed a fresh strip of paper for the parcel next to be wrapped, means to sever a length of paper from the



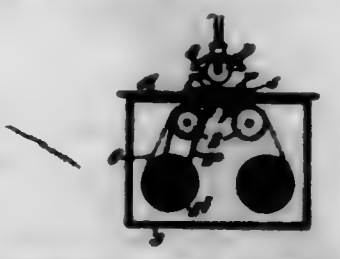
paper strip, and means to move the paper feed roll backwardly a small amount each time a length of paper is severed from the paper strip.

1,300,190. MEANS FOR PREVENTING THE DISASTROUS CONSEQUENCES OF THE ACCIDENTAL IGNITION OF THE GASOLENE OF AIRCRAFTS' TANKS. NICOLAS POGOLSKI, Washington, D. C. Filed June 13, 1918. Serial No. 239,562. 6 Claims. (Cl. 244—1.)



3. Means for preventing the disastrous consequences of the ignition of the gasolene of aircraft tanks, comprising in combination, a releasable main fuel tank, an auxiliary reserve fuel tank, and means for automatically connecting the auxiliary tank with the motor when the main tank is released.

1,300,191. RECORDING APPARATUS. GEORGE D. POOLE, St. Louis, Mo. Filed Nov. 7, 1917. Serial No. 200,719. 14 Claims. (Cl. 234—5.5.)

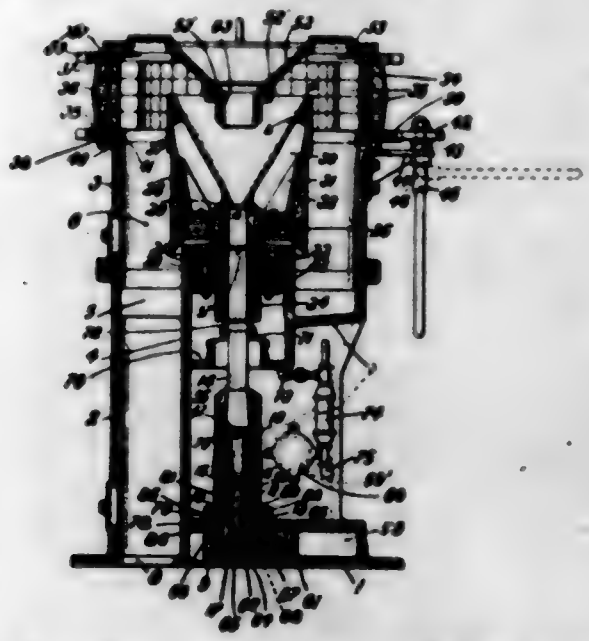


8. A recording apparatus adapted to be used with a watt-hour meter or other mechanism, comprising a record that is sensitive to light, means for causing said record to move at a fixed speed or rate per hour, a source of light, means for causing a ray of light from said source to act on said record intermittently so as to produce a record of the movements of said mechanism, and means for forming time marks on said record at fixed intervals.

12. A recording apparatus, comprising a source of light, a record strip that is sensitive to light, a light-proof housing for said record strip provided with an opening, a watt-

hour meter and a governing member operated by said meter that normally prevents the rays of light from said source from entering the opening in said housing, said governing member having a definite path of travel and being provided with a hole or perforation arranged in such a manner that it will come into alinement with the opening in said housing and thus permit a ray of light to act on said record strip intermittently, thereby producing a record of the movements of said meter.

1,300,192. METHOD OF AND APPARATUS FOR PULVERIZING FRANGIBLE SUBSTANCES. GUSTAVE A. OVERSTROM, Pasadena, Calif. Filed Aug. 21, 1916. Serial No. 115,947. 5 Claims. (Cl. 83—46.)



2. An apparatus for pulverizing frangible substances comprising a rotatable centrifugal surface upon which the substances are fed, means upon said centrifugal surface for accumulating a layer of said substances, means for causing said surface to centrifugally discharge the substances to be pulverized over said layer of substances, and an annular fixed impact surface against which the substances are thrown over said layer of substances.

1,300,193. FINGER-POSITIONING CHART FOR STRINGED INSTRUMENTS. CHARLES DUNCAN RAFF, Portland, Oreg. Filed June 3, 1916. Serial No. 101,681. 2 Claims. (Cl. 84—86.)



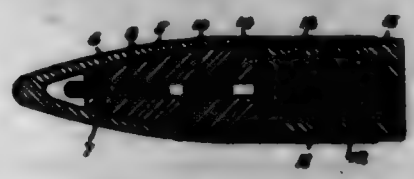
1. An adjustable finger positioning chart for string instruments consisting of an elongate case bearing aimed characters spaced to correspond with the notes of a diatonic scale playable on each string, and a slide in such case bearing supplemental characters exposed by the spaces between the characters on the case, thereby modifying the scale shown on the latter.

1,300,194. WAVE AND CURRENT MOTOR. CHARLES H. ROSMUS, Salt Lake City, Utah. Filed June 10, 1918. Serial No. 239,321. 2 Claims. (Cl. 170—60.)



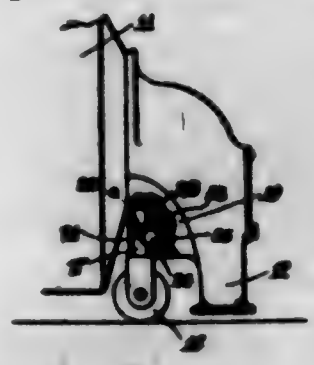
1. In a wave motor the combination of a rigidly mounted frame; of vertical angle iron supports thereon; other frames vertically adjustable as to said supports; a chain belt operable over sprocket wheels which are mounted in said last mentioned frames and other sprocket wheels pivoted to said angle iron supports, and means to raise and lower the first mentioned sprocket wheels to adjust the distance between the lands of said chain belt.

1,300,195. INCENDIARY BULLET. LEE W. ROCKWELL, Washington, D. C., assignor to The Government of the United States. Filed Mar. 27, 1918. Serial No. 225,112. 10 Claims. (Cl. 102—90.)



1. A projectile comprising a jacket and a body member, of relatively hard metallic composition and substantially solid in cross section, adapted to impart penetrating power to the projectile, inserted in said jacket, said body member having its forward end cut away to provide a hollow portion adjacent the nose of the projectile adapted to be collapsed on impact.

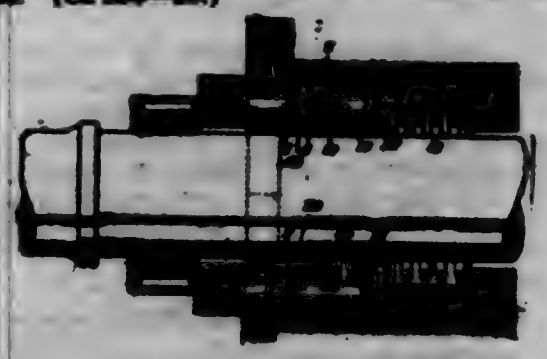
1,300,196. SUCTION-CLEANER. WILLIAM W. ROSENFIELD, New York, N. Y. Filed Dec. 17, 1918. Serial No. 267,158. 5 Claims. (Cl. 15—60.)



1. A roller support for suction cleaners, comprising a roller, and means for adjustably mounting said roller, including a stem by which the roller is carried and which is formed with a plurality of position determining depressions and a diagonally extending guide groove connecting said depressions, a part having a socket for receiving said stem, and a yielding member for engaging in said groove and for entering said depressions to hold the stem in adjusted position.

2. A roller support for suction cleaners, comprising a roller, and means for adjustably mounting said roller, including a stem by which the roller is carried and which is formed with a plurality of position determining depressions, a part having a socket for receiving said stem, means for causing an endwise movement of the stem in said socket when the stem is turned, and a member for entering said depressions to hold the stem in adjusted position.

1,300,197. PISTON-PACKING. HORACE S. BOOTH, Norfolk, Va. Filed Oct. 20, 1917. Serial No. 197,055. 2 Claims. (Cl. 286—20.)



1. A packing of the class described comprising a body composed of an alloy and a pair of cast iron rings in said body spaced apart, said body and rings made up of segments having overlapping ends, the end of one ring projecting into the lap at one end of the body and the other ring into the lap at the other end.

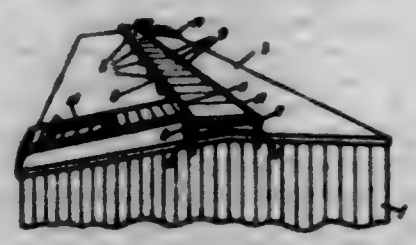
2. A packing of the class described comprising a ring made up of segments having overlapping ends, one end of each segment having a recess therein adapted to receive a lug on one side of a cover plate, the other end of said cover plate having sliding engagement with the other segment and each of said segments having a slot in its rear face for engagement with a lug on a push ring.

1,300,198. CLASP FOR ARMBANDS AND THE LIKE. THEODORE A. SCHAFFER, Brooklyn, N. Y., assignor to Interstate Elastic Braid Company, Brooklyn, N. Y., a Corporation of New York. Filed May 2, 1918. Serial No. 232,008. 1 Claim. (Cl. 24—242.)



As an article of manufacture, an arm band formed of a strip of elastic material, with means for joining the ends together to form a permanently closed band, a clip covering and protecting said means, said clip comprising a core of metal and a seamless tubular fabric covering braided thereon whereby either face of said clip may be applied to and bent around said means for permanently connecting the ends of the elastic strip, the ends of said clip being located at the inner side of said arm band.

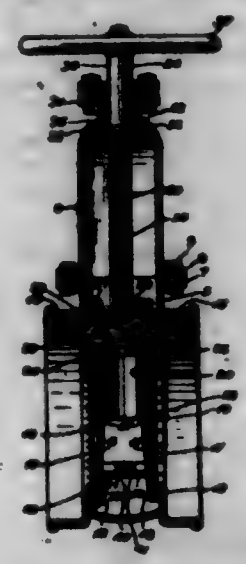
1,300,199. RUNNING-BOARD FOR BOX-CARS. JOHN R. SCHRAMM, New York, N. Y. Filed Aug. 19, 1915, Serial No. 46,262. Renewed Oct. 25, 1917. Serial No. 198,542. 25 Claims. (Cl. 105—467.)



1. In combination with the roof of a box car and saddles fitting and mounted upon the same, a support disposed longitudinally of the car, composed of strips of iron mounted upon said saddles on the roof adapted to receive short lengths of boards and lateral tie straps securing said strips in parallel position secured to said saddles.

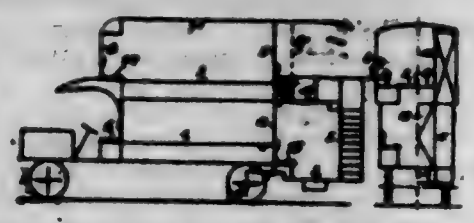
1,300,200. CUT-OFF GATE-VALVE. FRANK P. SNOW, Los Angeles, Calif. Filed Oct. 18, 1916. Serial No. 126,262. 4 Claims. (Cl. 251—62.)

1. A gate valve mechanism comprising a casing having opposite ports for the passage of an element therethrough, a pair of disk valves housed in said casing for closing said ports, a rotatable valve stem held against longitudinal movement in said casing, means threaded on said valve



stem for raising and spacing said valves, a spreading element loosely carried by said valve stem for engagement with and seating said valves, and telescoping studs on the lower portions of and spacing said valves.

1,300,201. DOUBLE-DECKED VEHICLE. LUDWIG SPINDLER, Vienna, Austria. Filed Sept. 4, 1914. Serial No. 860,282. 6 Claims. (Cl. 105—340.)



1. In a double decked car the combination of longitudinal benches at the sides of the lower deck, longitudinal benches having their backs adjacent to each other on the upper deck, whereby a longitudinal passage way is obtained on each side of the pair of benches of the upper deck the floor below such benches on the upper deck being cut away, side walls, transverse walls and a roof for such upper deck, the rear transverse wall being arranged at the end of the two benches of the upper deck and being provided with a separate entrance door for each of the said longitudinal passage ways of the upper deck and a transverse bench outside the said rear wall and between the said doors.

2. In a double decked car the combination of longitudinal benches at the sides of the lower deck, longitudinal benches having their backs adjacent to each other on the upper deck whereby a longitudinal passage way is obtained on each side of the pair of benches of the upper deck the floor below such benches on the upper deck being cut away, side walls, transverse walls and a roof for such upper deck the rear transverse wall being arranged at the end of the two benches of the upper deck and being provided with a separate entrance door for each of the said longitudinal passage ways of the upper deck, a transverse bench at the front end of the pair of benches in the upper deck extending over the width of the latter and another transverse bench opposite the first named transverse bench and extending over the whole width of the upper deck of the vehicle a transverse passage way being left between the two transverse benches.

3. In a double decked car the combination of longitudinal benches at the sides of the lower deck, longitudinal benches having their backs adjacent to each other on the upper deck whereby a longitudinal passage way is obtained on each side of the pair of benches of the upper deck the floor below such benches on the upper deck being cut away, side walls, transverse walls and a roof for such upper deck the rear transverse wall being arranged at the

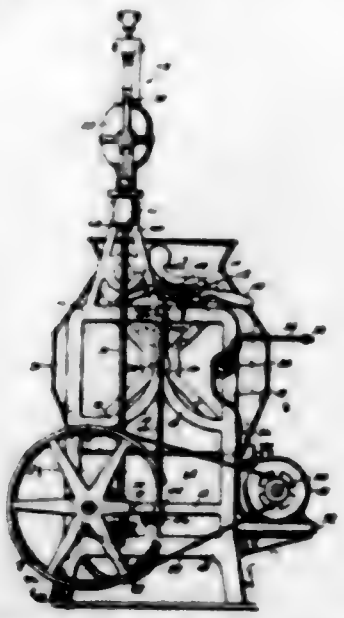
end of the two benches of the upper deck and being provided with a separate entrance door for each of the said longitudinal passage ways of the upper deck, a transverse bench at the front end of the pair of benches in the upper deck extending over the width of the latter and another transverse bench opposite the first named transverse bench and extending over the whole width of the upper deck of the vehicle a transverse passage way being left between the two transverse benches and a transverse bench connecting the longitudinal benches of the lower deck and located below the said transverse passage way of the upper deck.

1,300,202. INDIRECT-LIGHTING APPARATUS. GARFIELD STUBBLEFIELD, Portland, Oreg. Filed Feb. 12, 1917. Serial No. 148,036. 5 Claims. (Cl. 240—41.)



1. In an indirect lighting apparatus, in combination with a source of light, a reflector adapted to concentrate the rays of light therefrom through a focal point at a distance from said source of light, said reflector inclosing said source of light and having a restricted opening through which the major portion of the rays of light are directed to said focal point, an inwardly facing annular reflector around said restricted opening adapted to intercept the remaining portion of such rays and to redirect them back into said reflector, and means beyond said focal point for redirecting the rays of light passing therethrough.

1,300,203. POWER-DRIVEN WASHING-MACHINE. CARL W. SWANSON, Chicago, Ill. Original application filed July 27, 1917, Serial No. 183,027. Divided and this application filed Mar. 8, 1918. Serial No. 221,214. 6 Claims. (Cl. 74—46.)



1. The combination with a washing machine frame, of an oscillatable tub; a source of power for oscillating the tub; a clutch between the source of power and the tub; a latch for engagement with the tub to lock it in selected position, and a lever having a compound movement and connected to the clutch for operation thereof when moved in one part of its compound movement in one direction and to the latch to cause operation thereof, when moved in another part of its compound movement in another direction.

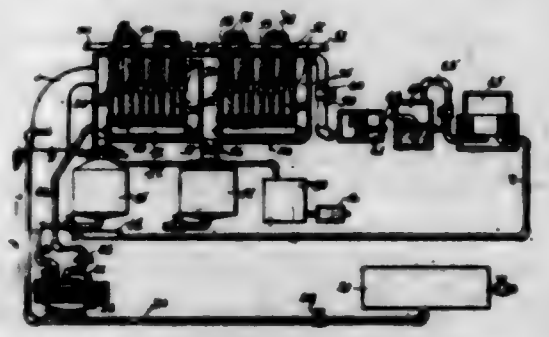
6. The combination with a washing machine frame of an oscillatable tub; driving means for oscillating the tub; a latch automatically operable for engagement to lock the tube to the frame, and a lever connected to a clutch member and movable in one direction to connect the clutch members and displace the latch, and movable in the opposite direction to disconnect the clutch members and permit the latch to move into position to hold the tub locked to the frame.

1,300,204. COMBINATION LATHE-TOOL. JOHN WACZULA, New York, N. Y. Filed Apr. 20, 1918. Serial No. 229,780. 5 Claims. (Cl. 29—97.)



1. A tool holder comprising a member having a head formed with a slot extending from one side to the other and having a passage extending from the top to the bottom and intersecting the slot, a cutter disposed in the slot and adjustable to different angles, and a bolt extending through the passage and having an opening through which the cutter passes, whereby the bolt clamps the cutter in different positions of adjustment.

1,300,205. PROCESS OF PRODUCING AND SEPARATING CERTAIN SUBSTANCES. VICTOR M. WEAVER, Harrisburg, Pa., assignor to Weaver Company, a Corporation of Wisconsin. Original application filed Aug. 22, 1914, Serial No. 858,001. Divided and this application filed Jan. 7, 1915. Serial No. 919. 18 Claims. (Cl. 23—13.)



1. The process of separating aluminum chlorid and silicon tetrachlorid which comprises submitting the mixture to a moisture free atmosphere which will condense the former but not the latter.

8. The process which comprises treating clay with chlorin in the presence of carbon in a moisture free atmosphere to form aluminum chlorid, silicon tetrachlorid and carbon monoxid, and then separating the two chlorids by a difference in temperature.

9. The process which comprises treating a substance containing silicon with a halogen to form a compound between the halogen and the silicon, and then condensing the gaseous compound thus formed in a moisture free atmosphere.

11. The process which comprises treating a continuously fed charge with a continuously fed gas to form continuously a mixture of gaseous compounds, and then separating said gaseous compounds by fractional condensation at the same rate at which they are formed.

12. The process which comprises treating a continuously fed charge of material containing aluminum and silicon and oxygen with a continuous feed of chlorin and

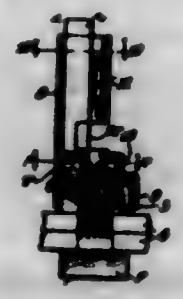
a reducing agent to form aluminum chlorid, silicon tetrachlorid and a compound between said reducing agent and the oxygen, and continuously submitting the gaseous mixture thus formed to an atmosphere which will condense the aluminum chlorid but not the silicon tetrachlorid of said compound.

1,300,206. LOOSE-LEAF BOOK. RALPH G. WHITLOCK, Los Angeles, Calif. Filed Aug. 21, 1918. Serial No. 250,885. 4 Claims. (Cl. 129—24.)



1. In a loose leaf book, a back plate comprising a strip of metal having loops struck up therefrom; in combination with a ring member comprising side members carrying half ring members; means to connect said side members, said connecting means permitting said side members to rock and move back and forth laterally and having lugs adapted to engage the loops of the back plate; and means to rock said side members and move them laterally.

1,300,207. TOOL FOR LOCKING NUTS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Jan. 21, 1916. Serial No. 73,316. 5 Claims. (Cl. 81—10.)



1. The combination with a guide member having an extension for laterally engaging the nut and bolt structure to be operated upon and maintaining the distance of the member from the axis of the bolt, and further having a way at one side of the bolt's axis and approximately parallel thereto when the member is in operative position, of a cutter movable in said way toward the end of the bolt and beveled to a cutting edge at the side nearest said axis and lying between the latter and the surface elements of the bolt; whereby the forcible advance of the cutter may force outward a narrow nut-locking segment of the peripheral portion of the bolt.

4. The combination with a structure adapted to be passed over the end portion of a bolt bearing a nut and provided with a way for guiding a sliding chisel, of a frictionally held chisel lying in said way, of a width equal to a small portion of the bolt's diameter and having its cutting edge between the axis and periphery of the bolt, whereby forcible advance of the chisel may cut and bend outward from the end portion of the bolt a narrow and shallow segment.

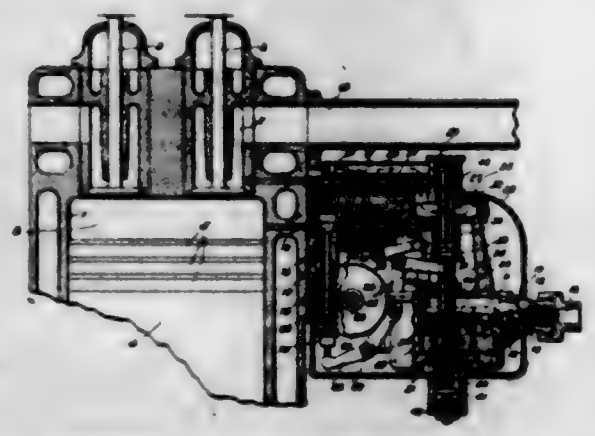
5. In devices of the class described, the combination with a guide member, to be encircled by the hand of the operator, for positioning a chisel by lateral contact of its lower end with the nut and bolt structure to be operated upon, of a reciprocating chisel mounted in said member and by it guided against the peripheral portion of the bolt's end when advanced by hammer blows, and a guard fixed to said member above the place of the grasping hand, substantially as set forth.

1,300,208. CARBURETER. ERASTUS E. WINKLEY, Lynn, Mass. Filed May 8, 1916. Serial No. 96,077. 17 Claims. (Cl. 123—181.)

1. A carbureter for internal combustion motors, comprising a fuel reservoir, and means for measuring a definite volume of fuel controlled by the pressure in the combustion chamber at a predetermined point in the compression stroke of the piston.

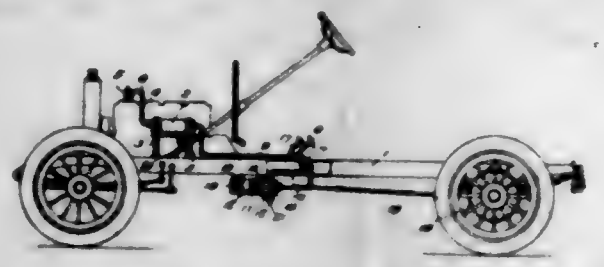
2. A carbureter, comprising a liquid reservoir, a measuring device located in the reservoir for separating a column of liquid of predetermined height from the latter, and mechanism for actuating the measuring device during each cycle of operations of the internal combustion motor.

5. A carbureter, comprising a fuel reservoir, means for measuring a definite volume of fuel from the reservoir during each cycle of operations of the motor, and means controlled by the pressure in the combustion chamber for varying the volume of fuel measured.



7. A carbureter, comprising mechanism for measuring a predetermined volume of liquid fuel, means for operating the measuring device during one cycle of operations of the internal combustion motor, and means controlled by the pressure in the combustion chamber for varying the volume of liquid measured.

1,300,209. BRAKE FOR MOTOR-VEHICLES. JAMES AZLE, Nashville, Tenn. Filed Mar. 11, 1918. Serial No. 221,739. 1 Claim. (Cl. 188—2.)



In a motor vehicle, the combination with the engine and the brake mechanism, of a tank or reservoir, a pipe connecting the said tank to one of the cylinders of the engine, said pipe carrying a check valve, a priming valve for connecting the said pipe to the cylinder, a brake cylinder, a piston in the cylinder connected with the brake operating mechanism for operating the same, and a valved connection between the storage tank or reservoir and one end of the brake cylinder for moving the piston in a direction to operate the brake, a spring being arranged between the piston and the other end of the cylinder for releasing the brake.

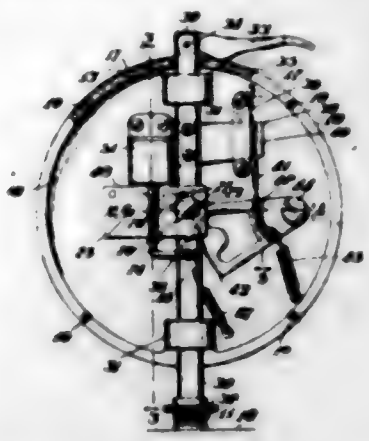
1,300,210. MICROMETER-CALIPER. ELISHA JAMES CADY, Oak Park, Ill. Filed May 31, 1918. Serial No. 237,457. 4 Claims. (Cl. 33—147.)

1. In a calipering device, an anvil, a reciprocating plunger, a gear-segment carrying a drum, fixed connections between the drum and plunger in the tangential line of the drum, a scale and revoluble pointer, a shaft carrying the pointer and a fixed pinion in mesh with the gear-segment, a handle to raise the plunger, a return spring for the plunger.

2. In a calipering device, an anvil, a reciprocating plunger carrying a projecting shoulder, a gear-segment carrying a drum-segment in line with the shoulder, a flexible band connecting the drum-segment and shoulder, a scale

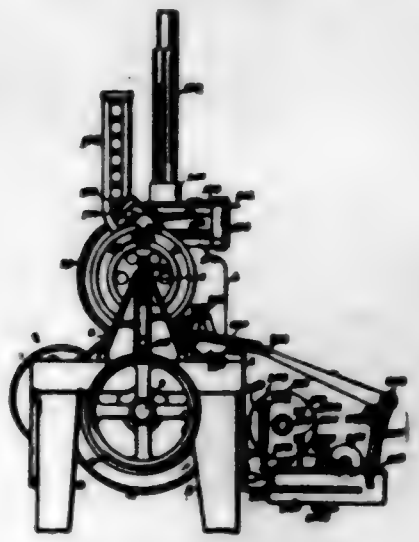
and revoluble pointer, a shaft carrying the pointer and a fixed pinion in mesh with the gear-segment, a handle to raise the plunger, and a return spring for the plunger.

3. In a calipering device, an anvil, a reciprocating plunger, a gear-segment, connections between the segment and plunger, a scale and revoluble pointer, a shaft carrying the pointer and a fixed pinion in mesh with a gear-segment, a handle to raise the plunger, a return spring for the plunger, and means to cushion the return-stroke of the plunger.



4. In a calipering device, an anvil, a reciprocating plunger, a gear-segment, fixed connections between the segment and plunger, a scale and revoluble pointer, a shaft carrying the pointer and a fixed pinion in mesh with the gear-segment, a handle to raise the plunger, a return spring for the plunger, a piston carried by the plunger, and a pneumatic cylinder to cushion the piston on the return-stroke of the plunger.

1,300,211. MACHINE FOR MAKING ROUND BOXES. THOMAS JAMES CLARKE and ARMAND ILLY, Jamestown, N. Y., assignors to The William Koehl Company, Jamestown, N. Y., a Corporation of New York. Original application filed June 26, 1911, Serial No. 635,517. Divided and this application filed May 16, 1914. Serial No. 838,990. 7 Claims. (Cl. 154—37.)

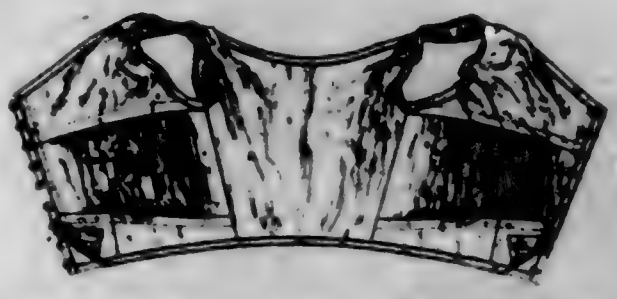


1. In a box machine, the combination of a plate, a pair of guides thereon arranged in series for feeding separate overlapping strips of paper thereon, means for adjusting one of said guides laterally with respect to the other guide, the second guide being placed so as to feed the strip controlled thereby onto the other strip while passing over the first guide.

2. In a box machine, the combination of a feed plate, a pair of guides thereon for feeding separate strips of paper thereon, means for shifting said feed plate forward and back to intermittently cause the feed of the paper carried thereon, a supply roll from which said paper strip is drawn, an idle roller over which said strip passes between said feeding plate and said supply roll, a swinging arm on which said idle roller is mounted, said arm swinging forward and back with said feed plate to take up the slack in said paper strip.

6. In a box machine, the combination of a feed plate for supporting a paper strip thereon, a supply roll from which said paper strip is drawn, a swinging arm interposed between said feed plate and said supply roll, a roller yieldingly mounted on said swinging arm, over which said paper strip passes, means for moving said feed plate forward, means for moving said swinging arm forward to adjust it to the position of said paper strip, yielding connections between said swinging arm and said last named means.

1,300,212. BRASSIÈRE FOR NURSING MOTHERS. IDA C. ERY, San Francisco, Calif. Filed June 14, 1918. Serial No. 239,941. 1 Claim. (Cl. 2—68.)



A brassière for nursing mothers having the parts immediately over the breasts formed of material impervious to moisture, said material forming pockets at its lower edge.

1,300,213. JUNCTION-BOX FOR CABLE-SPLICES. HARRY G. FREEMAN, Atlantic City, N. J., assignor of one-half to William H. Bartlett, Atlantic City, N. J. Filed Nov. 10, 1916. Serial No. 130,594. 3 Claims. (Cl. 247—14.)



3. The combination in a junction-box for cable splices, of a suitable shell having permanent sides and ends; the latter having threaded openings, detachable plates for closing said shell, screws for securing the plates to the shell; the latter having internally disposed bosses for the reception of said screws; said plates having apertures for the inlet and discharge of an internal coating material, detachable plugs for closing the apertures in the plates, and a waterproof coating of asphaltic or bituminous material wholly covering the junction-box and the members attached thereto.

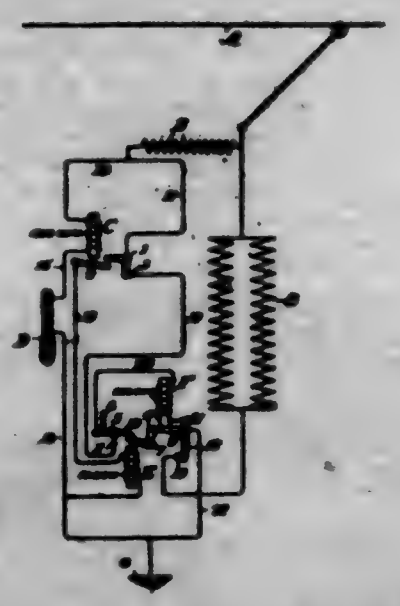
1,300,214. STAIR-CARPET FASTENER. CORNELIUS GRAY, Walsall, England. Filed Feb. 12, 1917. Serial No. 147,904. 1 Claim. (Cl. 16—146.)



A stair carpet fastener comprising in combination a stair rod having a notch at each extremity, said notch opening on the axis of said rod, a pillar adapted to engage each notch and prevent movement of the rod transversely thereof, a rotatable arm pivoted axially upon said pillar and adapted to prevent movement of said rod axially along it, a base on and at right angles to the axis of the

pillar and means for securing the base to the surface of a body and at right angles to the axis of the pillar, substantially as described.

1,300,216. THERMO-ELECTRIC REGULATOR. WILLIAM G. HARTWIG, Chicago, Ill., assignor to Arthur Frantzen, Chicago, Ill. Filed July 16, 1917. Serial No. 180,780. 13 Claims. (Cl. 219—20.)



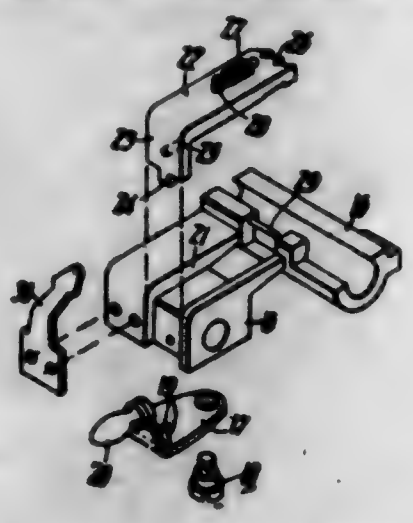
1. A thermo-electric regulator comprising a thermostat, a circuit including said thermostat and controlled thereby, means to supply electric current to said circuit, automatic devices to reduce the current in said thermostat after closure and before the opening of said circuit, so that the current is high when the thermostat closes and low when it opens, a heater, a circuit for said heater, a switch having mechanism operated by the energizing of said coil to open the heater-circuit, said devices including a coil for operating said switch.

2. A thermo-electric regulator, comprising a thermostat, a circuit including said thermostat and controlled thereby, means to supply electric current to said circuit, automatic devices to reduce the current in said thermostat after closure and before the opening of said circuit, so that the current is high when the thermostat closes and low when it opens, a heater, a circuit for said heater, a switch for controlling said heater-circuit having mechanism to lock the heater-circuit closed, and a second coil to actuate said switch into closed position, said devices including a coil for operating said switch.

9. A thermostatically controlled heating system comprising a heater, means for thermostatically controlling the production of heat thereby comprising a main coil, an armature therefor controlling the heater, a catch for maintaining the armature in attracted position independently of said main coil, an auxiliary coil operating when energized to withdraw the catch to permit the arm to drop, a pair of contacts in circuit with the main coil and closed by the auxiliary coil when the latter is energized, a relay operating when energized to open the main coil circuit and close the auxiliary coil circuit, and a thermostat in circuit with the coil of the relay.

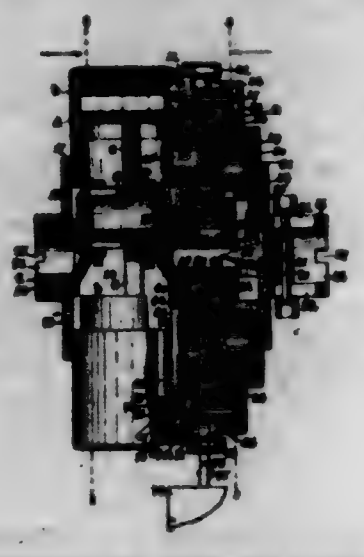
1,300,216. TYPE-WRITING MACHINE. ARTHUR B. HOWELL, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 22, 1918. Serial No. 241,266. 10 Claims. (Cl. 197—70.)

1. Adjustable marginal stop mechanism for typewriters and similar machines comprising a supporting rod; a block or support supported by and slidable along said rod; a swinging cam carried by and pivotally connected with said block; a slidable member carried by said block and movable relatively thereto in a direction transverse to said supporting rod, and which member is operated by



said cam; and a pawl with which said slidable member is operatively associated, and which pawl is adapted to engage a rack to thereby lock said block in place.

1,300,217. SELF-STARTING APPARATUS. FREDERICK O. KILGORE, Somerville, Mass. Filed Mar. 6, 1914. Serial No. 822,909. 1 Claim. (Cl. 230—37.)

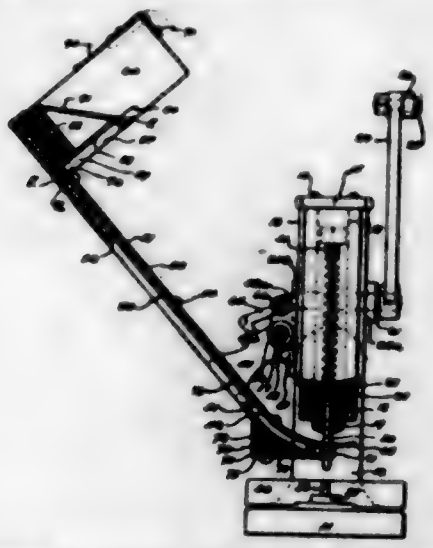


In an apparatus of the character described, in combination, a fluid-operated motor provided with a casing having a cylinder attached thereto, a piston reciprocating in said cylinder, a crank shaft supported by said casing and to which said piston is connected, a valve in said casing controlling the passage of air into said cylinder, a device mounted on said crank shaft to rotate therewith and operate said valve, a shaft to be driven by said crank shaft, mechanism for indirectly connecting said crank shaft with said driven shaft, and means for directly connecting said crank shaft with the shaft to be driven, and means for connecting the shaft to be driven directly or indirectly at the will of the operator.

1,300,218. MOLDING COMPOSITION. JAMES P. A. McCOY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 12, 1915. Serial No. 20,752. 6 Claims. (Cl. 106—22.)

1. A molding composition comprising a filler, a polymerizable vegetable oil which expands upon polymerization, and a resinous binder that contains at least one of a group of substances including indene, cumaron and their isomers, and the partial polymerization products of the said substances, said binder shrinking upon polymerization, said oil and said binder being combined in such proportion that said shrinking effect is substantially neutralized by said expanding effect in the polymerization of said composition.

1,300,219. **EYELETING-MACHINE.** CARL MACK, New York, N. Y., assignor to Henry C. Karlson, Hasbrouck Heights, N. J. Filed June 19, 1916. Serial No. 104,510. 21 Claims. (Cl. 218—15.1.)



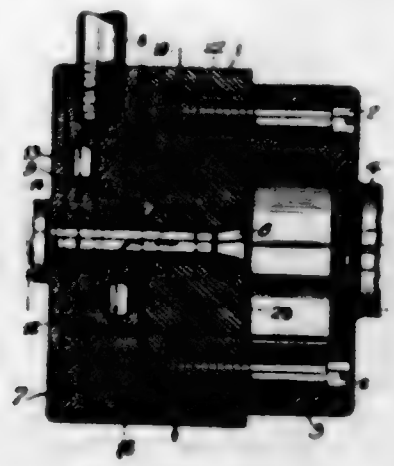
1. An eyeleting machine including, in combination, an affixing device, means for feeding eyelets thereto, and a suspension for said feeding means enabling it to receive an oscillatory wabbling motion.

13. An eyeleting machine including, in combination, an eyelet setting plunger, an impaling element associated therewith, an eyelet chute adapted for engagement at its delivery end by said plunger together with said element, and a means of suspension for said chute causing it to receive a vibratory wabbling movement through contact with either the element or the plunger.

16. An eyeleting machine including, in combination, an affixing device, a magazine for the eyelets, a chute arranged to deliver the eyelets to said device from said magazine, a barrier within the latter having alternate openings and solid portions controlling the flow of eyelets into said chute, and means operating to impart a vibratory wabbling movement to the chute and magazine.

21. An eyeleting machine including, in combination, an affixing device provided with an impaler, an eyelet chute suspended so as to have a wabbling motion relatively to said device, the lower end of said chute having an oblique slot in engagement with said impaler at the beginning of the working stroke thereof, and means for actuating the device to cause disengagement of the impaler from said slot when extracting an eyelet from the chute while the latter is simultaneously oscillated to effect the descent of other eyelets therein, the retraction of the device permitting the slotted end of the eyelet chute to swing back to its first position.

1,300,220. **FOUR-WAY VALVE.** ERNEST E. MINARD, Detroit, Mich. Filed Mar. 14, 1918. Serial No. 222,290. 10 Claims. (Cl. 188—2.)



1. A valve of the type described, comprising a stationary body adapted to receive air under pressure, a reservoir carried by said body, and a rotary valve member carried by said stationary body, said rotary valve member having ports therein constructed and arranged in one position of said valve member to provide two air passages therethrough, in another position to permit air to simultaneously pass through said valve member, and also to enter said reservoir, and in another position to permit of air simultaneously leaving said reservoir and also passing through said rotary valve member.

4. The combination of a work cylinder, a piston therein dividing said cylinder into chambers, a valve body adapted to communicate with the chambers of said cylinder, and with a supply of air under pressure, a reservoir having an open side connected to said valve body and communicating therewith, and a ported valve member carried by said valve body and constructed and arranged so that by adjustment it controls the movement of said piston in said work cylinder by either admitting air to said cylinder direct from the supply or from said reservoir.

1,300,221. **CALCULATING-DIVIDERS.** JOSEPH W. MOONEY, St. Louis, Mo. Filed June 5, 1918. Serial No. 238,388. 3 Claims. (Cl. 33—143.)



1. Calculating dividers comprising a pair of legs, a pivot connecting said legs, the free end of each leg having a measuring point in a radial line drawn from the center of the pivot, a rule-pivot adjustably mounted on one of said legs and guided in a radial line drawn from the point of the leg to the first mentioned pivot, the other leg having a longitudinal measuring line formed in alinement with its pointed end and the first mentioned pivot, a rule spanning said legs and pivotally secured at one end to said rule-pivot so that the rule can be readily adjusted longitudinally of the legs and readily turned on said rule-pivot to properly measure distances between the radial lines, and said legs being provided with corresponding oppositely disposed arbitrary graduations indicating various arbitrary points on the radial lines of the legs so that the rule can be readily positioned at a right angle to a radial line bisecting the angle between the aforesaid radial lines.

1,300,222. **BOTTLE OR JAR CLOSURE DEVICE.** HARLAN MOORE, New York, N. Y. Filed May 22, 1917. Serial No. 170,180. 5 Claims. (Cl. 215—14.)



1. As an article of manufacture, a receptacle closure comprising an imperforate readily yielding disk substantially circular in form having a smooth periphery and a continuous slit from its center to the circumference and adapted to have its sections adjacent to the slit overlap each other when said disk is forced into and its periphery uninterruptedly seated against the inner side of the mouth of a receptacle, whereby after the closure has

been placed in the mouth of a receptacle the top or outer slitted edge of the overlapping sections is capable of being easily bent up or lifted to permit the air to enter into the receeptacle and at the same time form a projecting tab with which to remove said closure from the receptacle.

1,300,223. DEMOUNTABLE RIM FOR WHEELS OF VEHICLES. CHRISTOPHER W. PAINE, Canton, Cardiff, England, assignor to himself and John Jenkins David, Cardiff, England. Filed June 6, 1914. Serial No. 843,573. 2 Claims. (Cl. 152—21.)



1. A wheel with a detachable rim for motor cars and like vehicles, comprising an internal rim member carried by the spokes of the wheel, and an outer rim member adapted to carry a tire, there being a circular ledge upon the edge of the circumference of said internal rim member, also projections upon said circumference, and a circular ledge upon the opposite edge of the circumference of said outer rim member, the internal diameters of said outer rim member and ledge of same being equal to the diameters respectively, of said circular ledge on the internal rim member and said member, together with the slotted plates secured upon said outer rim member flush as regards radial distance from the center with the upstanding circular ledge upon same, said plates being let into recesses in the side of said ledge and being so positioned as to enable the projections aforesaid to slide circumferentially into the slots of said plates, and a key-operated lock in the outer rim member flush with the inner circumference of same, the bolt of which is adapted to be projected behind one of the projections aforesaid and prevent the withdrawal of the latter by circumferential force after such projection has been slid inside a slotted plate as described.

1,300,224. HERMETIC CLOSURE. STANLEY H. ROOD, Hartford, Conn. Filed Mar. 29, 1918. Serial No. 225,440. 2 Claims. (Cl. 215—31.)

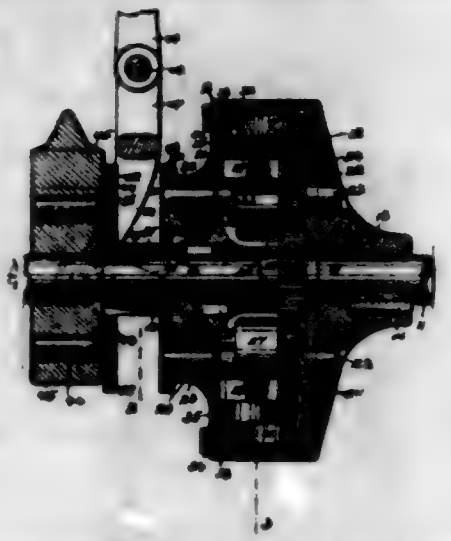


2. A gasket for hermetically sealing a receptacle closure, having an adhesive and plastic body of partially cured gum and a vulcanized exposed surface.

1,300,225. TRANSMISSION. EDMUND SCHMITT, Bridgeport, Conn. Filed Apr. 8, 1917. Serial No. 159,409. 10 Claims. (Cl. 74—34.)

2. In a transmission, a driving member, a driven member, said members being adapted to be rotated relatively to one another, a plurality of air compressing means between the members and operable when the members are relatively rotated, a passage for compressed air common to all the members, and a single valve for controlling and preventing the passage of air from the compressing means, whereby the members are held against rotation relatively to each other.

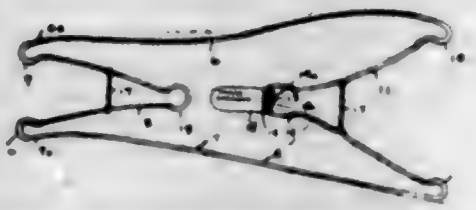
3. A transmission comprising a driving member, a driven member, air compressing means mounted on the driven member, means for operating the air compressing means from the driving member when the members are rotated relatively to each other, means for controlling and preventing the passage of compressed air from the compressing means whereby said prevention acts to lock the compressing means and cause the members to rotate in unison, and means connected with said controlling means for holding the driven member against rotation



when the controlling means is moved to a position where the compressed air can freely pass from the air compressing means.

1,300,226. TROUSERS CREASER AND STRETCHER. JOHN J. SULLIVAN, Springfield, Mass. Filed July 21, 1917. Serial No. 181,954. 2 Claims. (Cl. 223—19.)

1. A garment creaser and stretcher consisting of a one-



piece wire frame shaped to provide opposing creaser members having sharp integral edges presented outwardly to engage the trousers leg and V-shaped tension elements integrally connected by open spring loops to said creaser members, the terminals of said frame being brought into confronting relation at the narrower end of one of said tension elements and formed with outwardly directed stops, and a tube having a slot to receive said stops embracing said confronting terminals to lock said terminals to each other and having a portion extended laterally of the tube.

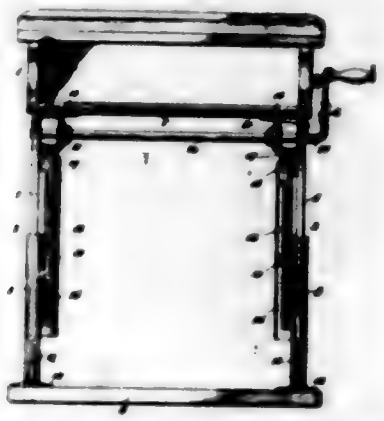
1,300,227. PROCESS FOR THE MANUFACTURE OF AROMATIC SULFONIC ACIDS. JOSEPH A. AMBLER, Norwich, Conn., and HARRY D. GIBBS, San Francisco, Calif. Filed Jan. 16, 1918. Serial No. 212,101. 7 Claims. (Cl. 23—24.) (Dedicated to the public.)

1. A continuous process for the manufacture of sulfonic acids of aromatic hydrocarbons by causing the vapors of the hydrocarbon to mix with the vapors of sulfuric acid, and continuously removing in the vapor phase the unacted on aromatic hydrocarbons and the water formed, and also continuously removing in the liquid phase the excess of sulfuric acid and the aromatic sulfonic acids.

1,300,228. PROCESS FOR THE MANUFACTURE OF BENZENE SULFONIC ACIDS. JOSEPH A. AMBLER, Norwich, Conn., and HARRY D. GIBBS, San Francisco, Calif. Filed Jan. 26, 1918. Serial No. 213,977. 6 Claims. (Cl. 23—24.) (Dedicated to the public.)

1. A continuous process for the manufacture of sulfonic acids of benzene by causing the vapors of benzene to come into contact with a descending current of sulfuric acid, and continuously removing in the vapor phase the unacted on benzene and the water formed, and also continuously removing in the liquid phase the excess of sulfuric acid and the benzene sulfonic acids.

1,300,229. **ADJUSTABLE SUPPORT FOR DESKS, TABLES, SEATS, OR THE LIKE.** FRANK L. WELT and WILLIAM A. WHITEHOUSE, Somerville, Mass.; Jennie E. Whitehouse, executrix of said William A. Whitehouse, deceased, assignor of one-half of the whole right to Harry W. Hatch, Somerville, Mass. Filed Feb. 12, 1915. Serial No. 7,870. 1 Claim. (Cl. 45—6.)



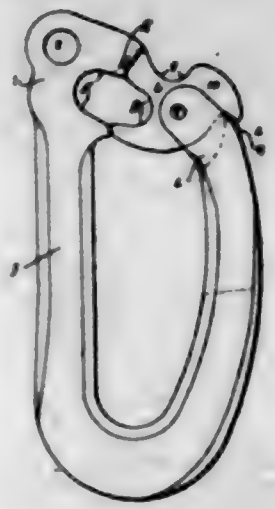
An adjustable support of the type specified, comprising separate spaced uprights, each having a stationary portion attachable to a base, and an adjustable portion attachable to the part to be supported, the adjustable portion of each of the uprights being slidably mounted upon the stationary portion and adjustable thereon in extension thereof and snugly retained by said stationary portions against else than endwise adjustment, both said stationary and adjustable portions of each of the uprights having upon the interior side thereof parts for receiving and retaining an adjusting screw, that part of the stationary portion of the upright for receiving the screw being internally threaded, adjusting screws arranged to extend through the parts of said portions of the uprights made to receive them and held thereby against else than endwise adjustment, said screws being each provided with a head by which it may be turned, a rod mounted upon the adjustable portions of said uprights above the heads of said screws, and members carried by said shaft to engage the heads of the respective screws for turning the screws as the shaft is turned, said members upon the rod engaging the heads of the screws in a manner whereby the rod may be held against endwise displacement by the heads of the screws.

1,300,230. **GAS MAKER AND COMBUSTION APPARATUS.** BERT E. HADLEY, Los Angeles, Calif. Filed Nov. 27, 1918. Serial No. 264,438. 6 Claims. (Cl. 158—66.)



1. In a gas maker and combustion apparatus, a retort, a conduit connected at one end to the upper portion of said retort and at its other end to the lower portion of the retort with the intermediate portion of said conduit extending over the retort and spaced therefrom, said intermediate portion of said conduit being formed with a downwardly opening discharge orifice, and means for delivering liquid fuel to the interior of said retort.

1,300,231. **SAFETY RIGGING-HOOK.** HERBERT A. SINCLAIR, Renton, Wash. Filed July 28, 1917, Serial No. 182,140. Renewed Oct. 28, 1918. Serial No. 260,061. 1 Claim. (Cl. 24—241.)



A rigging hook comprising an elongated hook member open at one end, the end of one of the legs of the hook member having an inwardly extended projection formed in its edge with a groove, said leg having a shorter inwardly extended projection spaced from the first mentioned projection, said leg having a cable attaching opening disposed to one side of the projections and in substantial alinement with the center of the leg, the end of the other leg of the elongated member being bifurcated and bent inwardly toward and disposed between and spaced from the two projections and formed with alined openings, a latch fitted in the bifurcated portion curved end of the leg, a pivot pin extending through the openings in the bifurcated portion and the latch, said latch being formed with two spaced inwardly extended projections between which is formed a depression and on the upper edge of said latch beyond the outer projection thereon is formed a second projection, the outermost projection on the latch when in normal position fitting in the groove and the innermost projection registering with the short projection on the leg, the latch having an extension which abuts against the outer edge of the curved leg to limit the movement and hold said latch in normal position.

1,300,232. **STOP MEANS.** JAKOB SKANDORA, Racine, Wis. Filed Sept. 2, 1916, Serial No. 118,265. 1 Claim. (Cl. 74—13.)

A stop means comprising a support having a vertical wall, a horizontal revoluble shaft carried by said support, a toothed stop wheel secured on said shaft, a pair of spaced superposed brackets rigid with said vertical wall of the support beneath said shaft and having alined apertures therethrough, said support having an angular slot in said vertical wall thereof, a latch bolt of a diameter smaller than that of the bracket apertures loosely slidably arranged in the latter, and a spring to project said bolt upwardly into engagement with the teeth of said stop wheel, said bolt having an angular end extending through said angular slot adapted to be moved laterally in the latter whereby the bolt is maintained out of engagement with said stop wheel, substantially as described.

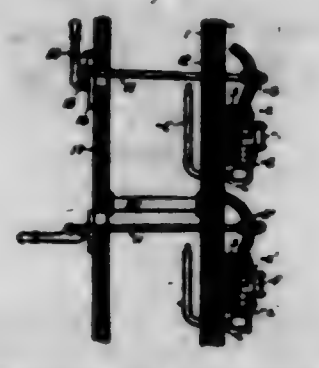
REISSUES.

14,630. BOTTLE-STOPPER. LEONARD G. ABBOTT, Boston, Mass., assignor to Standard Bottle Stopper Co., Boston, Mass., an Association of Massachusetts. Filed Oct. 21, 1918. Serial No. 258,126. Original No. 1,212,871, dated Jan. 16, 1917, Serial No. 124,942, filed Oct. 11, 1916. 7 Claims. (Cl. 215—18.)



1. A bottle stopper comprising a shouldered thimble having an axially disposed hole through it, an elongated internally threaded sleeve member having one end closed movable in said hole, a screw member engaging said internally threaded sleeve member, one of said members having a head at one end, an elastically compressible plug mounted on one of said members between said head and thimble, and means for relatively turning said members and pulling said head toward said thimble for longitudinally compressing and radially expanding said plug.

14,631. SWITCHBOARD. HUBERT F. KRANTZ, Brooklyn, N. Y., assignor, by mesne assignments, to Krantz Manufacturing Company, Inc., a Corporation of New York. Filed Jan. 19, 1918. Serial No. 212,818. Original No. 1,172,371, dated Feb. 22, 1916, Serial No. 651,565, filed Sept. 27, 1911. 18 Claims. (Cl. 175—293.)



18. In a switchboard, the combination with a panel, a bus-bar mounted thereon and a terminal laterally displaced from the bus-bar and extending in the same direction as the bus-bar on the same side of the panel, of a switch member that is adapted to be flexed to electrically connect the bus-bar and the terminal.

DESIGNS.

53,173. SURFACE ORNAMENTATION OF FABRIC. ELISABETH AMBLER-LAFFOON, New City, N. Y. Filed Dec. 23, 1918. Serial No. 268,168. Term of patent 3½ years



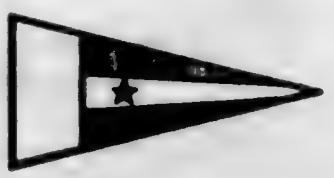
The ornamental design for surface ornamentation of fabric, as shown.

53,174. EMBLEM, PIN, OR BADGE. FLORENCE L. GAILEY, Detroit, Mich. Filed Oct. 2, 1918. Serial No. 256,605. Term of patent 3½ years.



The ornamental design for an emblem, pin, or badge as shown.

53,175. BADGE. THOMAS HEATH, Attleboro, Mass., assignor to C. H. Eden Company, Attleboro, Mass., a Corporation of Rhode Island. Filed July 1, 1918. Serial



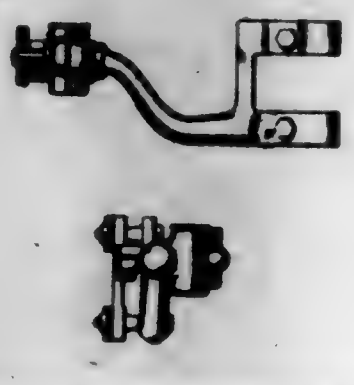
No. 242,969. Term of patent 3½ years.
The ornamental design for a badge, as shown.

53,176. FLAG, PENNANT, EMBLEM, SIGN, OR ARTICLE OF A SIMILAR NATURE. ERIK HEYL, Buffalo, N. Y. Filed Feb. 7, 1919. Serial No. 275,669. Term of patent 3½ years.



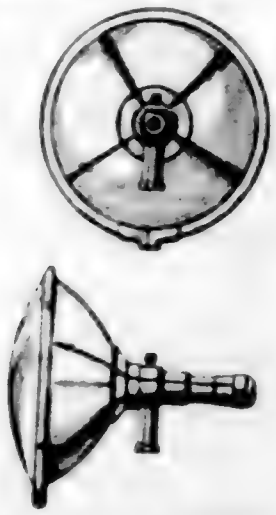
The ornamental design for a flag, pennant, emblem, sign, or article of a similar nature, as shown.

53,177. VEHICLE-LAMP BRACKET. CHARLES F. L. KAUFMANN, CARL H. KAUFMANN, and WALLER L. KAUFMANN, Santa Ana, Calif. Filed Jan. 22, 1918. Serial No. 218,253. Term of patent 7 years.



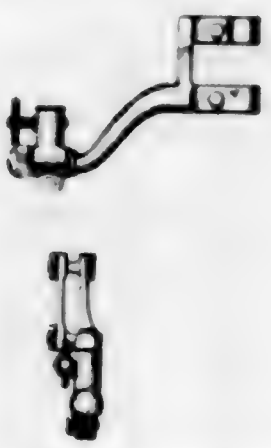
The ornamental design for a vehicle lamp bracket, as shown.

53,178. VEHICLE-LAMP CASING AND HANDLE-STEM. CHARLES F. L. KAUFMANN and WALLER L. KAUFMANN, Santa Ana, Calif. Filed Jan. 22, 1918. Serial No. 213,254. Term of patent 7 years.



The ornamental design for a vehicle lamp casing and handle stem, as shown.

53,179. VEHICLE-LAMP BRACKET. WALLER L. KAUFMANN, Santa Ana, Calif. Filed Jan. 22, 1918. Serial No. 213,252. Term of patent 7 years.



The ornamental design for a vehicle lamp bracket, as shown.

53,180. SWITCHBOARD. PHILIP KURTZ, Philadelphia, Pa. Filed Oct. 19, 1916. Serial No. 126,615. Term of patent 7 years.



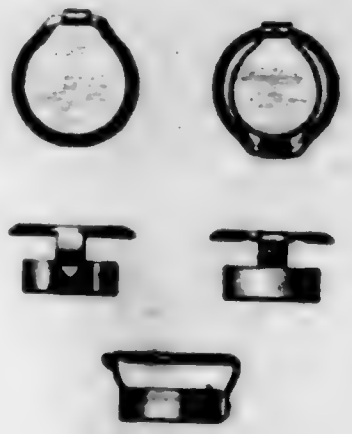
The ornamental design for a switchboard as shown.

53,181. BADGE. MOINA MICHAEL, New York, N. Y., assignor of one-half to Lee Keedick, New York, N. Y., and one-half to Otho L. Ferris, Portland, Oreg. Filed Dec. 26, 1918. Serial No. 268,395. Term of patent 14 years.



The ornamental design for a badge, as shown.

53,182. MILK-BOTTLE PROTECTOR. GUY ROBERTS, Whitefield, N. H. Filed Nov. 29, 1918. Serial No 264,738. Term of patent 14 years.



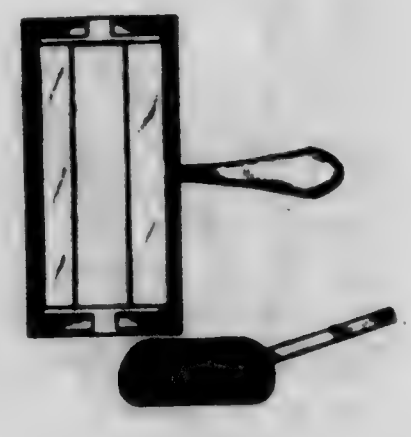
The ornamental design for a milk bottle protector, as shown.

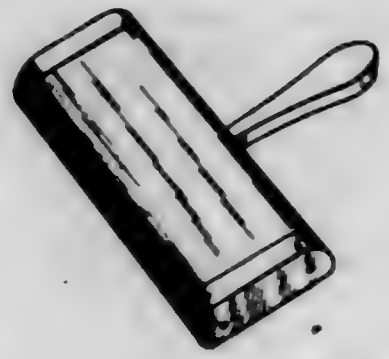
53,183. PAPER-WEIGHT OR OTHER ORNAMENT OF SIMILAR NATURE. BENJAMIN S. SAMUELS, New York, N. Y. Filed June 3, 1918. Serial No. 238,060. Term of patent 3½ years.



The ornamental design for a paper weight, or other ornament of similar nature, as shown.

53,184. CASING OF A TABLE-CRUMB SWEEPER. LUCILLE K. SUTTER, Cleveland, Ohio. Filed Mar. 20, 1918. Serial No. 226,940. Term of patent 14 years.





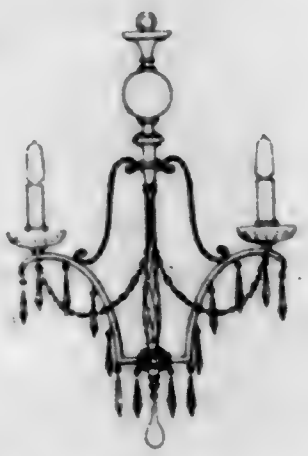
The ornamental design for the casing of a table crumb sweeper as shown.

53,185. ARTICLE OF MANUFACTURE. CHARLES J. TOBEY, New York, N. Y., assignor to J. H. Peckham & Sons, North Attleboro, Mass. Filed Aug. 12, 1918. Serial No. 249,584. Term of patent 3½ years.



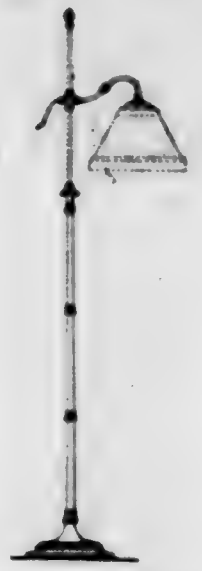
The ornamental design for an article of manufacture as shown.

53,186. CHANDELIER. VICTOR FRANK VON LOSBERG, New York, N. Y. Filed Jan. 4, 1919. Serial No. 269,697. Term of patent 3½ years.



The ornamental design for a chandelier substantially as shown and described.

53,187. STANDARD. VICTOR FRANK VON LOSBERG, New York, N. Y. Filed Jan. 4, 1919. Serial No. 269,698. Term of patent 3½ years.



The ornamental design for a standard substantially as shown and described.

53,188. STANDARD. VICTOR FRANK VON LOSBERG, New York, N. Y. Filed Jan. 4, 1919. Serial No. 269,699. Term of patent 3½ years.



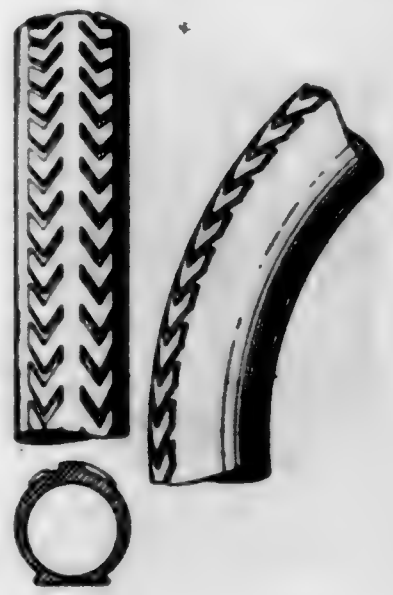
The ornamental design for a standard substantially as shown and described.

53,189. STANDARD. VICTOR FRANZ VON LOSBERG, New York, N. Y. Filed Jan. 4, 1919. Serial No. 269,700. Term of patent 3½ years.



The ornamental design for a standard substantially as shown and described.

53,190. AUTOMOBILE-TIRE. RAIDEN S. WICKS, Seattle, Wash., assignor to Wicks' Tire & Rubber Products Co., Seattle, Wash., a Corporation of Washington. Filed Sept. 18, 1918. Serial No. 254,013. Term of patent 7 years.



The ornamental design for an automobile tire, as shown.

TRADE-MARKS

OFFICIAL GAZETTE, APRIL 8, 1919.

[PUBLISHED APRIL 29, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 106,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARIE DUTCH, Calais, Me. Filed Sept. 29, 1917.



Particular description of goods.—Candy.
Claims use since Mar. 15, 1914.

Ser. No. 106,858. (CLASS 37. PAPER AND STATIONERY.) WAHL ADDING MACHINE COMPANY, Chicago, Ill. Filed Oct. 1, 1917.

EVERSHARP

Particular description of goods.—Lead-Pencils.
Claims use since the 1st day of October, 1915.

Ser. No. 108,342. (CLASS 37. PAPER AND STATIONERY.) OSWEGO RIVER PAPER MILLS, Phoenix, N. Y. Filed Feb. 5, 1918.



The vertical lining appearing on the drawings indicates red and the diagonal lining indicates green.
Particular description of goods.—Toilet-Paper.
Claims use since Aug. 1, 1911.

Ser. No. 108,585. (CLASS 46. MALT BEVERAGES, EXTRACTS, AND LIQUORS.) CREAM CITY BREWING Co., Milwaukee, Wis. Filed Mar. 16, 1918.

CREAMCO

Particular description of goods.—Beer and Near Beer Made of Malt and Corn Combined with Not More Than One and One-half Per Cent. Alcohol.
Claims use since Jan. 15, 1918.

Ser. No. 108,586. (CLASS 46. MALT BEVERAGES, EXTRACTS, AND LIQUORS.) CREAM CITY BREWING Co., Milwaukee, Wis. Filed Mar. 16, 1918.

BESTO

Particular description of goods.—Beer and Near Beer Made of Malt and Corn Combined with Not More Than One and One-half Per Cent. Alcohol.
Claims use since Jan. 15, 1918.

Ser. No. 110,220. (CLASS 39. CLOTHING.) RED DIAMOND CLOTHING COMPANY, St. Louis, Mo. Filed Apr. 15, 1918.

IRON CLAD

Particular description of goods.—Overalls, Jumpers, Pants, and Work-Shirts.
Claims use since about Apr. 1, 1914.

Ser. No. 110,376. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALYPTOL CHEMICAL COMPANY, Newark, N. J. Filed Apr. 22, 1918.

Kalyptol

Particular description of goods.—A Preparation for the Treatment of Mucous-Membrane Disorders and Diseases.

Claims use since 1905.

Ser. No. 111,573. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PUBLIC BOTTLING WORKS, New York, N. Y. Filed June 14, 1918.



Particular description of goods.—Non-Alcoholic Maltless Beverages Not of a Cereal Nature Sold as Soft Drinks.

Claims use since May 1, 1918.

Ser. No. 112,010. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) AURELIUS S. HIRDS, Portland, Me. Filed July 9, 1918.

Cre-mis

Particular description of goods.—Toilet Soap.

Claims use since May, 1918.

Ser. No. 112,426. (CLASS 39. CLOTHING.) FRANK KATZ HAT CO., INC., New York, N. Y. Filed July 30, 1918.



No claim is made to the exclusive use of the word "Felt" apart from the mark shown in the drawing.

Particular description of goods.—Men's, Women's, and Children's Hats Made of Cloth, Felt, or Straw.

Claims use since the 1st day of July, 1917.

Ser. No. 112,540. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHANE BROS. & WILSON CO. INC., Minneapolis, Minn. Filed Aug. 5, 1918.

SEMOLEON

Particular description of goods.—Wheat-Flour.

Claims use since January, 1918.

Ser. No. 112,804. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES WILLIAM KIDD, Fort Wayne, Ind. Filed Aug. 20, 1918.

TONE-UPPO

Particular description of goods.—Tonic to Build Up the Human System.

Claims use since June 3, 1918.

Ser. No. 112,880. (CLASS 7. CORDAGE.) THE HOOVEN & ALLISON COMPANY, Xenia, Ohio. Filed Aug. 26, 1918.



Particular description of goods.—Rope of Manila, Sisal, Istle, and Hemp.

Claims use since May 26, 1918.

Ser. No. 113,163. (CLASS 39. CLOTHING.) MARY'S INC., New York, N. Y. Filed Sept. 13, 1918.



Particular description of goods.—Women's Clothing—Namely, Hats, Shirt-Waists, Dress-Waists, Blouses, and Underwaists.

Claims use since Oct. 15, 1917.

Ser. No. 113,210. (CLASS 37. PAPER AND STATIONERY.) CHAS. H. GERBERT, Bridgeport, Conn. Filed Sept. 17, 1918.



No claim is made herein to the border with the representation of flashes of lightning thereon.

Particular description of goods.—Sales-Cards for Use on Groceries and other Salable Commodities to Denote the Name and Price of the Particular Articles Displayed.

Claims use since Aug. 10, 1918.

Ser. No. 113,372. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE S. McCORD, Seattle, Wash. Filed Sept. 25, 1918.

Eat a Bite

Particular description of goods.—Bread, Cakes, Sandwiches, and Pies.

Claims use since Sept. 9, 1918.

Ser. No. 113,753. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WILLIAM RALPH HUGHES, New York, N. Y. Filed Oct. 16, 1918.

ENAMO

Consisting of the word "Enamo."

Particular description of goods.—Bath-Room Accessories—viz., Towel-Bars, Glass Shelves with Brackets, Soap-Holders, Tooth-Brush Holders, Roll-Toilet-Paper Holders, Sponge-Holders, Towel-Pins, Glass Shelves in Combination with Towel-Bars Provided with Brackets; Combination Soap and Tumbler Holders, Bath-Seats Suspended by Metal Supporting-Arms from the Sides of the Bath-Tub, and Combined Shelf and Towel Bars.

Claims use since Feb. 1, 1918.

Ser. No. 113,885. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HYMAN & ACKERMAN, Lima, Ohio. Filed Oct. 25, 1918.

GROWMORE

Particular description of goods.—Poultry Food.

Claims use since about Jan. 16, 1912.

Ser. No. 114,019. (CLASS 39. CLOTHING.) A. V. VICTORIUS & CO., INC., New York, N. Y. Filed Nov. 1, 1918.

PATRIOT

Particular description of goods.—Hosiery for Men and Women.

Claims use since Sept. 9, 1918.

Ser. No. 114,051. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LOUIS A. BLOCK, New Orleans, La. Filed Nov. 5, 1918.

GLAS
GLOS

Particular description of goods.—A Polishing and Cleaning Liquid for Use on All Metal Surfaces, for Automobile-Tops, for Leather Upholstering, Shoes, and other Leather Surfaces.

Claims use since Sept. 1, 1918.

Ser. No. 114,304. (CLASS 39. CLOTHING.) CHARLES R. DE BEVOISE COMPANY, Newark, N. J. Filed Nov. 23, 1918.

De Bevoise

The trade-mark is a facsimile of the signature of Charles R. De Bevoise, the founder and former president of the applicant corporation.

Particular description of goods.—Women's Brassières and Corsets.

Claims use since Jan. 15, 1904.

Ser. No. 114,514. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NATIONAL GAUGE & EQUIPMENT COMPANY, La Crosse, Wis. Filed Dec. 7, 1918.

"NATWELD"

Particular description of goods.—Gasolene-Tank Gages, Oil-Tank Gages, Oil-Gages, Hoseline-Gages, Safety-Gages, Tire-Gages, Dashboard-Gages, Air-Tank Gages, Gasolene-Lighting Gages, Pressure-Gages, Vacuum-Gages, Compound Gages, Altitude-Gages, Steam-Gages, Oxyacetylene-Welding Gages.

Claims use since the 1st day of December, 1917.

Ser. No. 114,546. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK L. SELB, Philadelphia, Pa. Filed Dec. 7, 1918.

NU-RUB

Particular description of goods.—Ointment for Rheumatism, Chest-Colds, Stiff Neck, Neuralgia, Headache, Bronchitis, Sore Throat, Lumbago, Tonsillitis, Sore Muscles, Congestion, Croup, Sprains, and Head-Colds.
Claims use since Oct. 1, 1918.

Ser. No. 114,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADDIE E. SOBERS, Washington, D. C. Filed Dec. 16, 1918.



The portrait shown in the trade-mark is that of applicant.
Particular description of goods.—Hair-Dressing to Promote the Growth of Hair and Remove Dandruff.
Claims use since the fall of the year 1913.

Ser. No. 114,764. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FEDERAL SNAP FASTENER CORPORATION, New York, N. Y. Filed Dec. 21, 1918.



The trade-mark consisting of the pictures of Rita O'Gara and Herbert Gillette.
Particular description of goods.—Snap-Fasteners and Placket-Fasteners.
Claims use since Oct. 4, 1918.

Ser. No. 114,888. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAN ANTONIO DRUG CO., San Antonio, Tex., and New York, N. Y. Filed Dec. 30, 1918.

Olympian

Particular description of goods.—Cold-Cream; Massage-Cream; Pomade; Freckle-Cream; Peroxid Cream; Hair-Dressing; Sachet-Powders; Bay-Rum; Hair-Oil; Face-Powder; Florida Water; Shampoo; Dandruff Remedy; Hair-Tonic, and Brilliantine.
Claims use since 1914.

Ser. No. 114,924. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARSON'S CHEMICAL WORKS, Grand Ledge, Mich. Filed Dec. 31, 1918.

Tix Ton

Particular description of goods.—An Antiseptic, Insecticide, and Disinfectant for Live Stock, Used for the Prevention of Worms, Ticks, and Diseases.
Claims use since July, 1917.

Ser. No. 115,203. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARENCE M. GAINES, Bowling Green, Ky. Filed Jan. 15, 1919.

TRUTONA

Particular description of goods.—A General Tonic and System-Purifier.
Claims use since Feb. 1, 1918.

Ser. No. 115,219. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Jan. 16, 1919.

HOOD

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Sole Canvas Shoes.
Claims use since Dec. 19, 1896.

Ser. No. 115,298. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) TAPLEX CORPORATION, New York, N. Y. Filed Jan. 18, 1919.

TAPLEX

Consisting of the coined word "Taplex."
Particular description of goods.—Dry Fuel Containing Charcoal as a Base.
Claims use since Nov. 1, 1917.

Ser. No. 115,424. (CLASS 12. CONSTRUCTION MATERIALS.) THE HYDRAULIC PRESSED STEEL COMPANY, Cleveland, Ohio. Filed Jan. 25, 1919.

STEELCRAFT

Particular description of goods.—Concrete-Forms.
Claims use since about Jan. 11, 1919.

Ser. No. 115,433. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

1834
J. RUSSELL & CO.

Particular description of goods.—Table and Fruit Knives Made Wholly or Partly of Precious Metals or Plated with Precious Metals.
Claims use since the year 1884.

Ser. No. 115,435. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.



Particular description of goods.—Table, Carving, Butcher, Cotton, and Hunting Knives.
Claims use since the year 1884.

Ser. No. 115,436. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

RUSSELL

Particular description of goods.—Pen and Pocket Knives.
Claims use since the year 1884.

Ser. No. 115,437. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

◇R◇
J. RUSSELL & CO.
GREEN RIVER
WORKS

Particular description of goods.—Pen and Pocket Knives.
Claims use since the year 1884.

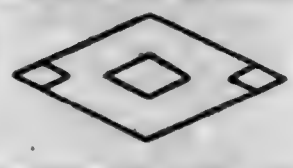
Ser. No. 115,440. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919.

◇R◇

Particular description of goods.—Pen and Pocket Knives.
Claims use since Apr. 1, 1878.

Ser. No. 115,441. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

J. RUSSELL & CO.
GREEN RIVER WORKS



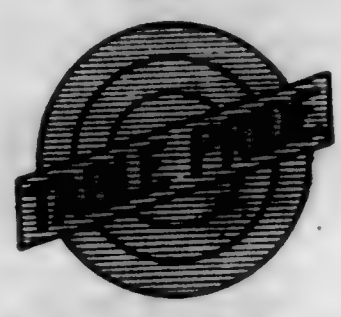
Particular description of goods.—Butcher-Knives.
Claims use since the year 1884.

Ser. No. 115,443. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

1834 J. RUSSELL & CO.

Particular description of goods.—Tableware Made Wholly or Partly of or Plated with Precious Metals, as Follows: Knives, Forks, and Spoons.
Claims use since the year 1884.

Ser. No. 115,455. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRUBSMILL GITTEN COMPANY, Detroit, Mich. Filed Jan. 27, 1919.



The medallion and superimposed panel being printed in blue.
Particular description of goods.—Bread.
Claims use since Feb. 1, 1916.

Ser. No. 115,468. (CLASS 2. RECEPTACLES.) STANDARD PAPER COMPANY, Indianapolis, Ind. Filed Jan. 27, 1919.



Particular description of goods.—Paper Bags.
Claims use since July 1, 1918.

Ser. No. 115,498. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BATES MANUFACTURING COMPANY, Lewiston, Me. Filed Jan. 29, 1919. Under ten-year proviso.

Bates

Particular description of goods.—Cotton Piece Goods.
Claims use since about Jan. 1, 1878.

Ser. No. 115,512. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Jan. 29, 1919.

THE SOLDIERS SERVICE BUREAU

The pictures shown in the drawing being fanciful.
Particular description of goods.—A Newspaper-Section.
Claims use since Jan. 16, 1919.

Ser. No. 115,531. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GENEVIEVE JACKSON, Los Angeles, Calif. Filed Jan. 30, 1919.

DIA-BISKIT

No claim is made to the exclusive use of the word "Biskit" apart from the mark as shown.
Particular description of goods.—Bread.
Claims use since Jan. 1, 1919.

Ser. No. 115,578. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE TALLERDAY MEDICINE CO., Belvedere, Ill. Filed Feb. 1, 1919.

Chum

Particular description of goods.—A Non-Alcoholic Maltless Non-Intoxicating Beverage Not of a Cereal Nature Sold as a Soft Drink.
Claims use since Dec. 29, 1918.

Ser. No. 115,609. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CONTINENTAL FILE CORPORATION, Anderson, Ind. Filed Feb. 4, 1919.

CONTINENTAL

Particular description of goods.—New Files and Recut Files.
Claims use since June 11, 1918.

Ser. No. 115,691. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KING CHEMICAL COMPANY, INC., New York, N. Y. Filed Feb. 8, 1919.

DIOSUL.

Particular description of goods.—Medicinal Gases for the Treatment of Diseases of the Throat, Nose, and Lungs.
Claims use since about Jan. 28, 1919.

Ser. No. 115,698. (CLASS 15. OILS AND GREASES.) SINCLAIR REFINING COMPANY, Chicago, Ill. Filed Feb. 8, 1919.

SINCO

Particular description of goods.—Refined, Semirefined, and Unrefined Oils, Waxes, and Greases, All Made from Petroleum, Both with and without Admixture of Animal, Vegetable, or Mineral Oil or Oils, for Illuminating, Burning, Power, Fuel, and Lubricating Purposes.
Claims use since about Nov. 1, 1916.

Ser. No. 115,735. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MANNING ABRASIVE COMPANY, INC., Troy, N. Y. Filed Feb. 10, 1919.



Particular description of goods.—Abrasive Paper and Abrasive Cloth.
Claims use since Jan. 22, 1919.

Ser. No. 115,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SALSINA CANNING & PACKING CO., San Jose, Calif. Filed Feb. 11, 1919.

PUMMAROLA

Consisting of the word "Pummarola."
Particular description of goods.—Tomato Pulp.
Claims use since September, 1918.

Ser. No. 115,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 12, 1919.

Domino

Particular description of goods.—Icing for Use as a Food.
Claims use since Feb. 10, 1919.

Ser. No. 115,900. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BUCKLEY MACARONI COMPANY, INC., Kensington, Conn. Filed Feb. 17, 1919.

INTERNATIONAL BRAND

No claim being made for the word "Brand" apart from the other features of the mark as shown.

Particular description of goods.—Macaroni.

Claims use since Dec. 14, 1918.

Ser. No. 115,926. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OKADA & COMPANY, LTD., San Francisco, Calif. Filed Feb. 17, 1919.

Uroko

Particular description of goods.—Canned Crab.

Claims use since on or about Mar. 1, 1917.

Ser. No. 115,938. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VAN SANT & Co., San Francisco, Calif. Filed Feb. 17, 1919.

PESCADERO

Particular description of goods.—Canned Sardines.

Claims use since Oct. 5, 1918.

Ser. No. 115,978. (CLASS 17. TOBACCO PRODUCTS.) GENERAL CIGAR CO. INC., New York, N. Y. Filed Feb. 19, 1919.

Laddies

Particular description of goods.—Cigars, Little Cigars, Cheroots, and Cigarettes.

Claims use since January, 1917.

Ser. No. 115,991. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PETER MAGGINI, Lyndhurst, N. J. Filed Feb. 19, 1919.



Particular description of goods.—Fruit Extracts for Non-Alcoholic Beverages.

Claims use since Jan. 18, 1919.

Ser. No. 116,063. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GEO. RAHMANN & Co., New York, N. Y. Filed Feb. 21, 1919.

BAK-BONE

"Bak-Bone."

Particular description of goods.—Leather Belting.

Claims use since the 1st day of February, 1919.

Ser. No. 116,453. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) OTTO HEINEMAN PHONOGRAPH SUPPLY CO. INC., New York, N. Y. Filed Mar. 11, 1919.

OKEH

Particular description of goods.—Sound-Records, Talking-Machines, Phonographs, and Phonograph Parts and Accessories, as Follows: Sound-Boxes, Reproducers, Tone-Arms, Horns, Sound-Amplifiers, Talking-Machine Needles, and Mechanical Motors for Talking-Machines and Phonographs.

Claims use since the month of February, 1919.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 8, 1919.

125,012. INDIGESTION-TABLETS. ABBOTT CHEMICAL Co., Boston, Mass.
Filed November 8, 1918. Serial No. 114,069. PUBLISHED DECEMBER 31, 1918.

125,013. PRINTED BOOKS, BOOKLETS, PAMPHLETS, AND MANUALS. ÆTNA LIFE INSURANCE COMPANY, Hartford, Conn.
Filed June 18, 1918. Serial No. 111,662. PUBLISHED DECEMBER 10, 1918.

125,014. PREPARATION FOR THE TREATMENT OF ASTHMA AND BRONCHIAL AND CATARRHAL AFFECTIONS. JOSHUA S. ALPHONSUS, New York, N. Y.
Filed June 27, 1918. Serial No. 111,842. PUBLISHED DECEMBER 31, 1918.

125,015. SNAP-FASTENERS. AMERICAN SNAP FASTENER Co., Inc., New York, N. Y.
Filed July 17, 1918. Serial No. 112,177. PUBLISHED DECEMBER 17, 1918.

125,016. INSULATED WIRE. ATLANTIC INSULATED WIRE & CABLE COMPANY, Jersey City, N. J., and New York, N. Y.
Filed September 8, 1917. Serial No. 106,127. PUBLISHED DECEMBER 3, 1918.

125,017. RADIATORS FOR AUTOMOBILES. THE A-E Co., New York, N. Y.
Filed January 24, 1918. Serial No. 106,624. PUBLISHED JANUARY 7, 1919.

125,018. DRESS AND SHIRT WAISTS. ALFRED BEER Co., New York, N. Y.
Filed August 28, 1917. Serial No. 105,910. PUBLISHED NOVEMBER 20, 1917.

125,019. RETREADED RUBBER AND FABRIC TIRES, THE RETREAD BEING OF RUBBER AND FABRIC. BELL 2 IN 1 TYRE Co., INC., Richmond, Va.
Filed July 20, 1917. Serial No. 105,141. PUBLISHED JANUARY 7, 1919.

125,020. PILL FOR PULMONARY TUBERCULOSIS. ALBERT BRUCH, Harvey, Ill.
Filed October 25, 1918. Serial No. 113,883. PUBLISHED DECEMBER 31, 1918.

125,021. CANNED PEAS AND CANNED SAUER-KRAUT. BIG FOUR CANNING COMPANY, Stanley and Eau Claire, Wis.
Filed April 4, 1918. Serial No. 109,963. PUBLISHED DECEMBER 24, 1918.

125,022. DRIED OR DESICCATED MILK. BORDEN'S CONDENSED MILK COMPANY, New York, N. Y.
Filed October 17, 1918. Serial No. 113,762. PUBLISHED DECEMBER 24, 1918.

125,023. CERTAIN NAMED TUBES AND METAL POSTS AND POLES. THE BRITISH MANNESMANN TUBE COMPANY LTD., London, England.
Filed June 1, 1918. Serial No. 111,304. PUBLISHED JANUARY 7, 1919.

125,024. MEDICINAL SALVE FOR BURNS, WOUNDS, PILES, ECZEMA, VARICOSE VEINS, &c. CHARLES W. BROWN, Cleveland, Ohio.
Filed November 2, 1918. Serial No. 114,020. PUBLISHED DECEMBER 31, 1918.

125,025. RUBBER OR RUBBER AND FABRIC TIRES AND TUBES FOR VEHICLES. THE BRUNSWICK-BALKE-COLLENDER COMPANY, Wilmington, Del., and Chicago, Ill.
Filed July 26, 1918. Serial No. 112,333. PUBLISHED JANUARY 7, 1919.

125,026. PRINTED ADHESIVE SEALS USED FOR SEALING LETTERS. WILLIAM JOHN BURDINGER, New York, N. Y.
Filed October 10, 1918. Serial No. 113,641. PUBLISHED JANUARY 7, 1919.

125,027. ELECTRIC SEARCH-LIGHT, SPOT-LIGHT, AND TROUBLE LAMPS. CELLBRAM MANUFACTURING COMPANY, Brooklyn, N. Y.
Filed May 22, 1918. Serial No. 111,100. PUBLISHED DECEMBER 17, 1918.

125,028. CERTAIN NAMED ARTICLES MADE OF COMPOUNDS OF PYROXYLIN. THE CELLULOID COMPANY, Newark, N. J., and New York, N. Y.
Filed May 23, 1918. Serial No. 111,131. PUBLISHED DECEMBER 10, 1918.

125,029. CERTAIN NAMED ARTICLES MADE OF COMPOUNDS OF PYROXYLIN. THE CELLULOID COMPANY, Newark, N. J., and New York, N. Y.
Filed May 23, 1918. Serial No. 111,137. PUBLISHED JANUARY 7, 1919.

125,030. KNIT GLOVES AND LEATHER GLOVES FOR MEN AND WOMEN. P. CENTEMERI & COMPANY, New York, N. Y.
Filed November 1, 1918. Serial No. 113,994. PUBLISHED DECEMBER 24, 1918.

125,031. THREAD. THE CLARK THREAD Co., Newark, N. J.
Filed October 28, 1918. Serial No. 113,910. PUBLISHED DECEMBER 31, 1918.

125,032. AUTOMOBILES, PLEASURE AND COMMERCIAL. CLASSIC MOTOR CAR CORPORATION, Chicago, Ill.
Filed August 29, 1916. Serial No. 97,680. PUBLISHED JANUARY 7, 1919.

125,033. CERTAIN NAMED ENAMELED WARE FOR HOUSEHOLD USE. COLUMBIAN ENAMELING & STAMPING COMPANY, Terre Haute, Ind.
Filed June 11, 1918. Serial No. 111,486. PUBLISHED NOVEMBER 26, 1918.

125,034. CERTAIN NAMED ENAMELED WARE FOR HOUSEHOLD USE. COLUMBIAN ENAMELING & STAMPING COMPANY, Terre Haute, Ind.
Filed June 11, 1918. Serial No. 111,485. PUBLISHED NOVEMBER 26, 1918.

125,035. OIL-CLOTH. THE COLUMBUS-UNION OIL CLOTH Co., Columbus, Ohio.
Filed October 24, 1918. Serial No. 113,871. PUBLISHED DECEMBER 3, 1918.

125,036. FERTILIZERS. FRANK CRUTCHFIELD, Richmond, Va.
Filed August 28, 1918. Serial No. 112,907. PUBLISHED DECEMBER 3, 1918.

125,037. CORN-PLASTERS. THE DRAKE PLASTER Co., Yonkers, N. Y.
Filed November 8, 1918. Serial No. 114,093. PUBLISHED DECEMBER 31, 1918.

125,038. SCALP-CLEANSER. ENOS D. DE LONG, Bay City, Mich.
Filed October 28, 1918. Serial No. 113,912. PUBLISHED DECEMBER 31, 1918.

125,039. TIMOTHY-SEED. THE C. H. DE PUY COMPANY, Pontiac, Mich.
Filed October 3, 1918. Serial No. 113,561. PUBLISHED JANUARY 7, 1919.

125,040. KNITTED HOSIERY, KNITTED GLOVES, AND KNITTED MITTENS. DETROIT ALASKA KNITTING MILLS, Detroit, Mich.
Filed May 26, 1917. Serial No. 104,096. PUBLISHED DECEMBER 17, 1918.

125,041. DRILLS, DRILL-HANDLES, AND DRILL-POINTS. DIAMOND EXPANSION BOLT CO., New York, N. Y.
Filed September 4, 1918. Serial No. 113,012. PUBLISHED DECEMBER 17, 1918.

125,042. CANE AND CORN SYRUP COMBINED. DOTHAN SYRUP CO., Dothan, Ala.
Filed August 26, 1918. Serial No. 112,869. PUBLISHED DECEMBER 24, 1918.

125,043. MEN'S, WOMEN'S, AND CHILDREN'S HOSIERY. FALLS CITY MILLS CO., Louisville, Ky.
Filed February 28, 1918. Serial No. 109,268. PUBLISHED JUNE 18, 1918.

125,044. PASTE AND POWDER USED IN ICE-CREAM. HARRY D. FARQUHAR, New York, N. Y.
Filed June 29, 1917. Serial No. 104,746. PUBLISHED DECEMBER 18, 1917.

125,045. BLOOMERS, DRAWERS, UNDERSKIRTS, AND PETTICOATS. DAVID L. FINE, Boston, Mass.
Filed January 19, 1918. Serial No. 108,541. PUBLISHED DECEMBER 17, 1918.

125,046. HAIR-RESTORER. FITZ-WATER AND MOORE, Texarkana, Ark.
Filed September 7, 1918. Serial No. 113,057. PUBLISHED DECEMBER 31, 1918.

125,047. CHEWING-GUM AND A PRODUCT THEREOF COMPRISING A CHEWING-GUM BODY COVERED WITH CANDY. FRANK H. FLEER CORPORATION, Philadelphia, Pa.
Filed November 2, 1916. Serial No. 99,035. PUBLISHED DECEMBER 24, 1918.

125,048. METAL COMB USED FOR STRAIGHTENING HUMAN HAIR. SILAS M. FLEISCHER, Baltimore, Md.
Filed November 14, 1918. Serial No. 114,158. PUBLISHED DECEMBER 24, 1918.

125,049. STOCK FEED. GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill.
Filed November 1, 1918. Serial No. 113,998. PUBLISHED DECEMBER 31, 1918.

125,050. LEMONS. GOLDENWEST CITRUS ASS'N., Tustin, Calif.
Filed October 31, 1918. Serial No. 113,961. PUBLISHED DECEMBER 24, 1918.

125,051. FRESH CITRUS FRUIT—NAMELY, LEMONS. GOLDENWEST CITRUS ASSN., Tustin, Calif.
Filed October 31, 1918. Serial No. 113,963. PUBLISHED DECEMBER 24, 1918.

125,052. LADIES' OUTER STREET-SUITS. JOSEPH A. GOLDSTEIN, New York, N. Y.
Filed August 28, 1917. Serial No. 105,916. PUBLISHED NOVEMBER 20, 1917.

125,053. PIANOS, PLAYER-PIANOS, AND PLAYER-ACTIONS. GULBRANSEN-DICKINSON CO., Chicago, Ill.
Filed July 14, 1917. Serial No. 105,040. PUBLISHED DECEMBER 17, 1918.

125,054. DESSERT IN FORM OF A POWDER MADE FROM STARCH PRODUCTS. HOLLAND RUSK CO., Holland, Mich.
Filed September 19, 1918. Serial No. 113,250. PUBLISHED DECEMBER 24, 1918.

125,055. WHEAT-FLOUR. HOLT & COMPANY, New York, N. Y.
Filed November 23, 1918. Serial No. 114,318. PUBLISHED DECEMBER 31, 1918.

125,056. LEATHER BELTING. HUDSON BELTING COMPANY, Worcester, Mass.
Filed October 17, 1918. Serial No. 113,765. PUBLISHED JANUARY 7, 1919.

125,057. WHEAT-FLOUR, BARLEY-FLOUR, RYE-FLOUR, CORNMEAL, CORN-FLOUR, AND ROLLED OATS. INTERNATIONAL MILLING COMPANY, New Prague, Minn.
Filed September 21, 1918. Serial No. 113,293. PUBLISHED DECEMBER 31, 1918.

125,058. CONCENTRATED TOMATO PASTE, CONSISTING OF ENTIRE TOMATO PUT INTO A PASTE FOR FOOD USES. ITALIAN FOOD PRODUCTS CO., Los Angeles, Calif.
Filed September 3, 1918. Serial No. 112,982. PUBLISHED DECEMBER 31, 1918.

125,059. MALTLESS NON-ALCOHOLIC BEVERAGE NOT OF A CEREAL NATURE TO BE SOLD AS A SOFT DRINK. KERN DRINK MFG. CO., Altus, Okla.
Filed November 14, 1918. Serial No. 114,166. PUBLISHED DECEMBER 17, 1918.

125,060. CANNED HERRING, CANNED SARDINES, AND DRIED FIGS. ERNEST KIRSTEN, Oakland, Calif.
Filed October 31, 1918. Serial No. 113,971. PUBLISHED DECEMBER 24, 1918.

125,061. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. LUMAN V. KIVETT, Meeker, Colo.
Filed August 20, 1918. Serial No. 112,948. PUBLISHED DECEMBER 31, 1918.

125,062. SHIRTS, SHIRT-WAISTS, OVER AND UNDER COATS, JUMPERS, AND OVERALLS. B. KRONTHAL & COMPANY, Michigan City, Ind.
Filed August 28, 1918. Serial No. 112,916. PUBLISHED DECEMBER 10, 1918.

125,063. WOOD-PULPS. LAGERLOEF TRADING COMPANY, INC., New York, N. Y.
Filed October 7, 1918. Serial No. 113,611. PUBLISHED JANUARY 7, 1919.

125,064. WATERPROOF COTTON FABRICS. THE LANDERS BROTHERS COMPANY, Toledo, Ohio.
Filed July 26, 1918. Serial No. 112,329. PUBLISHED JANUARY 7, 1919.

125,065. FRESH CITRUS FRUITS — NAMELY, ORANGES, GRAPE-FRUIT, AND TANGERINES. LEE & EDWARDS, Thonotosassa, Fla.
Filed October 31, 1918. Serial No. 113,974. PUBLISHED DECEMBER 31, 1918.

125,066. MEDICINAL COMPOUND FOR THE TREATMENT OF CERTAIN NAMED AILMENTS. MORRIS LEFKOVITS, Chicago, Ill.
Filed November 29, 1918. Serial No. 114,420. PUBLISHED DECEMBER 31, 1918.

125,067. HATS AND CAPS. A. LESSER & CO., New York, N. Y.
Filed June 14, 1918. Serial No. 111,570. PUBLISHED AUGUST 6, 1918.

125,068. LINIMENT FOR SORE JOINTS, MUSCLES, SPRAINS, BRUISES, CUTS, AND SIMILAR AILMENTS. HOLMES W. LEVI, Washington, D. C.
Filed November 6, 1918. Serial No. 114,064. PUBLISHED DECEMBER 31, 1918.

125,069. MEN'S SUITS AND OVERCOATS AND PANTS. LIEBERMAN MFG. CO., Philadelphia, Pa.
Filed September 30, 1918. Serial No. 113,488. PUBLISHED DECEMBER 17, 1918.

125,070. PREPARATION FOR USE IN THE TREATMENT OF BLOAT IN CATTLE. ANDREW J. LOUTON, Glendale, Ariz.
Filed May 18, 1918. Serial No. 111,047. PUBLISHED DECEMBER 31, 1918.

125,071. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. JOSEPH-LOUIS & CO., New York, N. Y.
Filed April 16, 1918. Serial No. 110,249. PUBLISHED DECEMBER 17, 1918.

125,072. DOLLS. MARY A. MCAROY, Denver, Colo.
Filed April 19, 1917. Serial No. 103,121. PUBLISHED MARCH 26, 1918.

125,073. CERTAIN NAMED CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. DAVID MCMENRAN Mfg. Co., Brooklyn, N. Y.
Filed March 9, 1918. Serial No. 109,474. PUBLISHED DECEMBER 31, 1918.

125,074. PREPARATION FOR TREATMENT OF STOMACH TROUBLES. MAG-RHU COMPANY, Dover, Del., and Pittsburgh, Pa.
Filed June 21, 1918. Serial No. 111,782. PUBLISHED DECEMBER 31, 1918.

125,075. ELECTRIC OSCILLATING FANS. ERCOLE MARELLI & Co., Milan, Italy.
Filed August 2, 1917. Serial No. 105,431. PUBLISHED DECEMBER 17, 1918.

125,076. ELECTRIC OSCILLATING FANS. ERCOLE MARELLI & Co., Milan, Italy.
Filed August 2, 1917. Serial No. 105,434. PUBLISHED DECEMBER 17, 1918.

125,077. CANNED CORN-KERNELS. MARSHALL CANNING Co., Marshalltown, Iowa.
Filed September 19, 1918. Serial No. 113,259. PUBLISHED NOVEMBER 19, 1918.

125,078. CERTAIN NAMED LADIES' AND MISSES' OUTER GARMENTS. J. A. MIGEL, INC., New York, N. Y.
Filed November 1, 1918. Serial No. 114,008. PUBLISHED DECEMBER 24, 1918.

125,079. BRATTICE-CLOTH. MIKESELL BROTHERS COMPANY, Chicago, Ill.
Filed October 2, 1918. Serial No. 113,522. PUBLISHED JANUARY 7, 1919.

125,080. CERTAIN NAMED CONSTRUCTION MATERIALS. THE NATIONAL PAINT & VARNISH COMPANY, Cleveland, Ohio.
Filed August 6, 1917. Serial No. 105,502. PUBLISHED NOVEMBER 5, 1918.

125,081. POWDER FOR DISSOLVING SOOT FROM THE WALLS OF FURNACES, BOILERS, AND THE LIKE. NORTHERN CHEMICAL WORKS, Chicago, Ill.
Filed July 6, 1918. Serial No. 111,969. PUBLISHED DECEMBER 31, 1918.

125,082. CERTAIN NAMED HEAT-REFRACTORY PRODUCTS. NORTON COMPANY, Worcester, Mass.
Filed October 3, 1918. Serial No. 113,569. PUBLISHED DECEMBER 3, 1918.

125,083. CERTAIN NAMED HEAT-REFRACTORY PRODUCTS. NORTON COMPANY, Worcester, Mass.
Filed September 16, 1918. Serial No. 113,200. PUBLISHED OCTOBER 29, 1918.

125,084. STITCHED CANVAS BELTING. W. S. NOTT COMPANY, Minneapolis, Minn.
Filed August 21, 1916. Serial No. 97,518. PUBLISHED JANUARY 7, 1919.

125,085. CERTAIN NAMED BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES. THE NORWALK TIRE AND RUBBER COMPANY, Norwalk, Conn.
Filed November 1, 1917. Serial No. 107,094. PUBLISHED JANUARY 7, 1919.

125,086. CANDY. THE NUNNALLY Co., Atlanta, Ga.
Filed July 31, 1918. Serial No. 112,441. PUBLISHED DECEMBER 24, 1918.

125,087. FIELD-SEEDS. THE O'BANNON COMPANY, Claremore, Okla.
Filed October 2, 1918. Serial No. 113,526. PUBLISHED JANUARY 7, 1919.

125,088. SHOES MADE OF LEATHER. THE O. K. DORR SHOE COMPANY, Cleveland, Ohio.
Filed June 13, 1918. Serial No. 111,545. PUBLISHED DECEMBER 17, 1918.

125,089. NON-ALCOHOLIC LIQUID INVIGORANT. ALEXANDER PASEKIEWICS, Shenandoah, Pa.
Filed July 11, 1918. Serial No. 112,072. PUBLISHED DECEMBER 31, 1918.

125,090. KNIT SWEATERS, MACKINAWS, AND KNIT UNDERWEAR. RED RIVER WOOLEN MILLS Co., Fergus Falls, Minn.
Filed September 12, 1918. Serial No. 113,147. PUBLISHED DECEMBER 17, 1918.

125,091. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. ROBERT REIS & Co., New York, N. Y.
Filed June 20, 1918. Serial No. 111,710. PUBLISHED DECEMBER 10, 1918.

125,092. WORK-SHIRTS. RELIANCE MANUFACTURING COMPANY, Chicago, Ill.
Filed November 18, 1918. Serial No. 114,155. PUBLISHED DECEMBER 24, 1918.

125,093. SPRING-WATER. HIRAM RICKER & SONS, South Poland, Me.
Filed December 6, 1918. Serial No. 114,513. PUBLISHED DECEMBER 31, 1918.

125,094. COFFEE, RICE, WHEAT-FLOUR, AND FLAVORING EXTRACTS FOR FOODS. J. J. ROGERS & SON, Tupelo, Miss.
Filed October 1, 1918. Serial No. 113,514. PUBLISHED DECEMBER 31, 1918.

125,095. RUBBER FRUIT-JAR RINGS. J. J. ROGERS & SON, Tupelo, Miss.
Filed October 1, 1918. Serial No. 113,513. PUBLISHED JANUARY 7, 1919.

125,096. MEDICINAL SULFONIC ACIDS AND THEIR SALTS DERIVED FROM MINERAL SHALE. SAMSON ROSENBLATT, New York, N. Y.
Filed January 19, 1917. Serial No. 100,754. PUBLISHED MAY 1, 1917.

125,097. MAILING-LISTS, FACSIMILE LETTERS, MAIL-ORDER ADVERTISING LITERATURE, AND ADVERTISING-COPY. ROSS-GOULD LIST & LETTER COMPANY, St. Louis, Mo.
Filed July 1, 1918. Serial No. 111,906. PUBLISHED DECEMBER 10, 1918.

125,098. MEDICINAL COMPOUND FOR THE TREATMENT OF CERTAIN NAMED AILMENTS. GEORGE N. ROSSIA, New York, N. Y.
Filed November 25, 1918. Serial No. 114,349. PUBLISHED DECEMBER 31, 1918.

125,099. MEN'S READY-TO-WEAR CLOTHES—NAMELY, MEN'S COATS, VESTS, AND TROUSERS. SEARS, ROEBUCK AND Co., Chicago, Ill.
Filed October 10, 1918. Serial No. 113,674. PUBLISHED DECEMBER 17, 1918.

125,100. CERTAIN NAMED CLOTHING FOR LADIES AND MEN. THE SPOT INC., Norfolk, Va.
Filed June 8, 1918. Serial No. 111,449. PUBLISHED DECEMBER 10, 1918.

125,101. LIQUID PREPARATION FOR CLOSING HOLES IN PNEUMATIC TIRES. LE ROY M. SUTTON, Dubois, Pa.
Filed April 27, 1917. Serial No. 103,371. PUBLISHED DECEMBER 11, 1917.

125,102. PREPARATIONS FOR OFFENSIVE FEET. SWAT SWEAT REMEDY Co., Kansas City, Mo.
Filed August 16, 1918. Serial No. 112,761. PUBLISHED DECEMBER 31, 1918.

125,103. SEMIMONTHLY PUBLICATION. TECHNICAL PUBLISHING COMPANY, Chicago, Ill.
Filed September 7, 1917. Serial No. 106,122. PUBLISHED DECEMBER 17, 1918.

125,104. HAND SCREW-DRIVERS. M-B TOOL COMPANY, Danielson, Conn.
Filed March 26, 1918. Serial No. 109,858. PUBLISHED DECEMBER 17, 1918.

125,105. WAGONS AND TRAILERS. THE TROY WAGON WORKS COMPANY, Troy, Ohio.
Filed July 19, 1918. Serial No. 112,225. PUBLISHED JANUARY 7, 1919.

125,106. LEATHER BELTING. J. S. TURNER MANUFACTURING CO., Lowell, Mass.
Filed September 25, 1918. Serial No. 113,420. PUBLISHED JANUARY 7, 1919.

125,107. BUTTER, EGGS, AND POULTRY. JOHN Z. TURNER, Philadelphia, Pa.
Filed October 6, 1917. Serial No. 106,644. PUBLISHED DECEMBER 24, 1918.

125,108. STORAGE BATTERIES. U-NEED-IT DRY STORAGE BATTERY CO. INC., New York, N. Y.
Filed October 15, 1918. Serial No. 113,748. PUBLISHED DECEMBER 10, 1918.

125,109. SHOE-SOLES OF RUBBER OR RUBBER AND FIBER COMPOSITION. WM. C. WALSH, Philadelphia, Pa.
Filed February 8, 1918. Serial No. 108,905. PUBLISHED DECEMBER 17, 1918.

125,110. CAKES. WARD BAKING COMPANY, New York, N. Y.
Filed October 12, 1918. Serial No. 113,708. PUBLISHED DECEMBER 31, 1918.

125,111. CORSETS AND BRASSIÈRES. WEINGARTEN BROS., INC., New York, N. Y.
Filed August 28, 1917. Serial No. 105,925. PUBLISHED DECEMBER 4, 1917.

125,112. GRAPE-JUICE. THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y.
Filed November 15, 1918. Serial No. 114,196. PUBLISHED DECEMBER 31, 1918.

125,113. CORKS. WILLIS JASON KENDRICK INC., Saratoga Springs, N. Y.
Filed February 14, 1918. Serial No. 108,994. PUBLISHED JANUARY 7, 1919.

125,114. CANNED TOMATOES, CANNED PEAS, AND CANNED CORN. WITWER TATE GROCERY CO., Centralia, Ill.
Filed February 3, 1917. Serial No. 101,163. PUBLISHED MARCH 5, 1918.

125,115. MEN'S AND BOYS' BALBRIGGAN UNDERWEAR. THE WYCKOFF KNITTING COMPANY, Perry, N. Y.
Filed May 3, 1918. Serial No. 110,637. PUBLISHED DECEMBER 10, 1918.

125,116. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET USES. YOUTH CRAFT COMPANY, Chicago, Ill.
Filed October 31, 1918. Serial No. 113,998. PUBLISHED DECEMBER 31, 1918.

125,117. WOMEN'S AND MISSES' CLOAKS, SUITS, DRESSES, AND SKIRTS. ZELENKO & MOSKOWITZ, New York, N. Y.
Filed June 26, 1918. Serial No. 111,841. PUBLISHED AUGUST 13, 1918.

LABELS

REGISTERED APRIL 8, 1919.

21,179.—*Title:* "WAUKESHA." (For Oleomargarin.) AMERICAN STANDARD FOOD ASSOCIATION, Milwaukee, Wis. Filed March 13, 1919.

21,180.—*Title:* "VALU GAGE FIELD FENCING, NUMBER 11 SERIES." (For Woven-Wire Field-Fencing.) JULIAN ARMSTRONG, Chicago, Ill. Filed December 7, 1918.

21,181.—*Title:* "RED STAR TIMER FOR FORDS." (For Timers.) AUTO COMPONENTS Inc., Chicago, Ill. Filed February 24, 1919.

21,182.—*Title:* "EASTON'S MAYONNAISE." (For Mayonnaise.) GILBERT J. EASTON, Newark, N. J. Filed February 20, 1919.

21,183.—*Title:* "CECHO SLOVAK FAMILY SOAP." (For Soap.) FITZPATRICK BROS., Chicago, Ill. Filed February 17, 1919.

21,184.—*Title:* "FRANKLIN FASHIONS." (For Men's and Boys' Outer Garments.) FRANKLIN CLOTHING M'F'G CO., St. Louis, Mo. Filed February 28, 1919.

21,185.—*Title:* "IROQUOIS INDIAN HEAD." (For Non-Intoxicating Beverage.) IROQUOIS BREWING COMPANY, Buffalo, N. Y. Filed March 10, 1919.

21,186.—*Title:* "DE PREVEN." (For Medicinal Preparation for Treatment of Malaria.) JOSÉ DE JESÚS, New York, N. Y. Filed March 1, 1919.

21,187.—*Title:* "LEFAS PRIVATE STOCK GINGER ALE." (For Ginger-Ale.) STEPHEN D. LEFAS, Washington, D. C. Filed February 7, 1919.

21,188.—*Title:* "MAJIC." (For Dye Soap Flakes.) MAGIC M'F'G CO., Chicago, Ill. Filed February 27, 1919.

21,189.—*Title:* "LEAGUE OF NATIONS PUZZLE." (For Mechanical Puzzles.) FRANK ALBERT MCCABE, Blackfoot, Mont. Filed March 12, 1919.

21,190.—*Title:* "THE MILLER SOCK." (For Men's Socks.) SOLOMON S. MILLER, Reading, Pa. Filed February 19, 1919.

21,191.—*Title:* "BUTTER CREAMS." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed February 17, 1919.

21,192.—*Title:* "EXTRA CHOCOLATES." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed February 20, 1919.

21,193.—*Title:* "CHOCOLATE SUPREME." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed February 27, 1919.

21,194.—*Title:* "TRI-EATS." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed March 10, 1919.

21,195.—*Title:* "ASSORTED CHOCOLATES." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed March 12, 1919.

21,196.—*Title:* "BELMONT PACKAGE." (For Candy.) MILWAUKEE PAPER BOX COMPANY, Milwaukee, Wis. Filed March 12, 1919.

21,197.—*Title:* "BAR OF BARS." (For Chocolate Candy.) THE NUT HOUSE INCORPORATED, Seattle, Wash. Filed March 10, 1919.

21,198.—*Title:* "PENICK & FORD'S BROWN LABEL BRER RABBIT BRAND." (For Sugar-Cane Products and Corn-Syrup.) PENICK & FORD, LT'D, New Orleans, La. Filed March 13, 1919.

21,199.—*Title:* "PENICK & FORD'S GOLD LABEL BRER RABBIT BRAND." (For Pure New Orleans Molasses.) PENICK & FORD, LT'D, New Orleans, La. Filed March 13, 1919.

21,200.—*Title:* "PENICK & FORD'S RED LABEL BRER RABBIT BRAND." (For Pure Country Sorghum.) PENICK & FORD, LT'D, New Orleans, La. Filed March 13, 1919.

21,201.—*Title:* "PENICK & FORD'S GREEN LABEL BRER RABBIT BRAND." (For Pure New Orleans Molasses.) PENICK & FORD, LT'D, New Orleans, La. Filed March 13, 1919.

21,202.—*Title:* "HAPPY THOUGHT." (For Pure Blended Coffee.) ALEX. SHEPPARD & SONS, INC., Philadelphia, Pa. Filed February 19, 1919.

21,203.—*Title:* "PINE-OIL-RUB." (For Natural Oil of Pine for Coughs and Colds.) SMITH-FAUS DRUG CO., Salt Lake City, Utah. Filed March 13, 1919.

21,204.—*Title:* "OLENE." (For Spraying Compounds for Citrus-Trees.) STANDARD CHEMICAL CO., Emeryville, Calif. Filed February 17, 1919.

21,205.—*Title:* "OPITMA," (For Fresh Citrus Fruits.) VALLEY VIEW RANCH, Ontario, Calif. Filed March 13, 1919.

21,206.—*Title:* "SOME." (For Bread.) HENRY V. WALTUS, Oceanport, N. J. Filed February 27, 1919.

21,207.—*Title:* "JACK SPRAT BRAND." (For Coffee.) WESTERN GROCER COMPANY, Marshalltown and Oskaloosa, Iowa. Filed March 13, 1919.

21,208.—*Title:* "JACK SPRAT BRAND." (For Canned Corn.) WESTERN GROCER COMPANY, Oskaloosa, Iowa. Filed March 13, 1919.

PRINTS

REGISTERED APRIL 8, 1919.

5,080.—*Title:* "HISTORY." (For Furniture.) JOHN STOCKTON BLANKENSHIP, Lynchburg, Va. Filed February 21, 1919.

5,081.—*Title:* "ALL CHAMPIONS." (For Tires and Tubes.) BRANDER RUBBER & TIRE CO., Rutherford, N. J. Filed March 3, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE DUTCHER.

Decided July 19, 1918.

PATENTABILITY—SUBSTITUTION OF EQUIVALENTS.

In a counterbalanced-window-sash construction the substitution of the flexible connection shown in one patent for the lever connection of another, without producing any material difference in operation or obtaining any materially different result, involves no invention.

APPEAL from Examiners-in-Chief.

WINDOW CONSTRUCTION.

Mr. Watson E. Coleman for the applicant.

NEWTON, *Commissioner.*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of the following claims:

1. The combination with a window frame, of hingedly connected sashes slidably mounted at one of their ends in said frame for vertical movement, and a flexible counterbalancing connection between the latter ends of the sashes to sustain the same in various angularly adjusted positions with respect to each other.

2. The combination with a window frame, of a pair of sashes hingedly connected together at one of their ends, means for slidably mounting the sashes at their other ends in the window frame for relative vertical movement, and flexible counterbalancing connections between the latter ends of the sashes to sustain the same in various angularly adjusted positions with respect to the window frame.

The references are: Dettra, No. 386,003, July 10, 1888; Erwood, No. 788,761, May 2, 1905; Knox, No. 821,510, May 22, 1906; Poulson, No. 910,857, January 26, 1909; Lunken *et al.*, No. 957,668, May 10, 1910; Kahn, No. 1,079,497, November 25, 1913.

The rejected claims cover balancing means for a window-sash, avoiding the necessity of weights.

The ground of rejection has been that Dettra meets the claims except for the—

flexible counterbalancing connections between the latter ends of the sashes,

and that Lunken *et al.* show this feature.

The Dettra patent differs from applicant's construction in that the two sashes may not only be placed at any angle to each other, but they can be moved bodily up and down, thus making the opening at the bottom larger than the opening at the top, etc. In applicant's device the top sash, Fig. 4, must necessarily come down just as much as the bottom sash goes up, and vice versa. Sometimes this is undesirable. There are no such capabilities of operation as are in the Dettra construction; but Dettra requires two weights instead of causing the sashes to balance each other, and applicant has simplified the Dettra construction by adopting the well-known expedient of causing one sash to balance the other, which is shown in Lunken *et al.*, and there is no difficulty whatever in substituting the Lunken *et al.* flexible connection 13 for the weights of Dettra. The net result of what applicant has really done therefore is to simplify construction at the expense of convenience.

The Kahn balance-sashes are also quite similar in operation to applicant's, possibly more so than the Dettra device. Applicant has only substituted the flexible connection of Lunken *et al.* for the lever connection of Kahn without producing any material difference in operation or obtaining any materially different result. Nor would there be any difficulty in supplying the chain 13 of Lunken *et al.* for the levers 5 and 7 of Kahn.

It must be held, therefore, that the decision of the lower tribunals was correct, and it is affirmed.

EX PARTE ODEN.

Decided March 12, 1919.

TRADE-MARKS—SIMILARITY.

A mark consisting of the representation of a swimming duck *Held* not registrable in view of the prior registrations for the same class of goods of two marks, one consisting of the representation of a swimming duck and the other showing a standing duck holding in its beak a banner with the word "Tasco" thereon, since the differences between applicant's mark and the registered marks are not such as would probably be noted by purchasers.

ON APPEAL.

TRADE-MARK FOR PAINTS.

Mr. Francis M. Wright for the applicant.

NEWTON, *Commissioner:*

This in an appeal from a decision of the Examiner of Trade-Marks refusing to register the representation of a swimming duck for ready-mixed paints, the ground of rejection being the prior registrations of The Water Paint Company of America, No. 42,554, May 3, 1904, and Albert E. Kirk, No. 67,888, February 25, 1908, the latter showing a swimming duck, used on "paint," the former showing a standing duck holding in its beak a banner with the word "Tasco," used on "water-paints in paste form."

Applicant has pointed out the difference between the appearance of his mark and that of the regis-

trants; but purchasers would scarcely note these differences. The paints would probably be known as "duck" paints, if identified at all by their respective marks (See *Great Bear Spring Co.* v. *Fulton Water Works, etc.*, 229 O. G., 613; 45 App. D. C., to the effect that where the prominent feature of two marks was a bear there was interference nothwithstanding one mark showed a polar bear, while the other showed a black bear, there being other minor differences. See also *The Kaut-Reith Shoe Company* v. *International Shoe Company*, 239 O. G., 939.)

Applicant also contends that his paint—"The Waterproof Paint"—is a different class of goods from the paint of the registrants; but in view of *Phoenix Paint & Varnish Co.* v. *John T. Lewis & Bros. Co.* (139 O. G., 990) applicant's and registrants' goods must be held to belong to the same class.

The decision of the Examiner of Trade-Marks is clearly right, and it is affirmed.

SNELLING v. RITTMAN v. BROOKS, BACON, AND CLARK.

Decided April 2, 1919.

1. INTERFERENCE—CONTINUING APPLICATION—PRIOR APPLICATION UNDER ACT OF 1883.

Where R. filed an application under the provisions of the act of March 3, 1883, without a fee and subsequently filed a duplicate application with a fee and abandoned the first, *Held* that for the purpose of determining the burden of proof he is entitled to the benefit of his earlier application.

2. SAME—SAME—SAME—ABANDONMENT OF APPLICATION.

A dedication by filing an application without fee under the provisions of the act of 1883 is not completed unless the patent issues.

3. SAME—SAME—SAME—QUESTION OF DEDICATION REVIEWABLE BY THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

3. SAME—SAME—SAME—QUESTION REVIEWABLE BY THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

Where in an interference it is contended that the filing of an application without fee under the provisions of the act of 1883 is a dedication of the invention to the public and that a subsequent application filed with fee has no standing, *Held* that this is a matter which presumably the court of appeals would review in connection with an appeal upon the question of priority.

ON PETITION.

MANUFACTURE OF LOW-BOILING HYDROCARBONS.

Messrs. Howson & Howson for Snelling.

Mr. C. B. Dutton, Mr. Darwin S. Walcott, and *Messrs. Byrnes, Townsend & Brickenstein* for Rittman.

Mr. Eugene C. Brown for Brooks, Bacon and Clark.

NEWTON, *Commissioner:*

This is a petition by Brooks, Bacon and Clark asking, first, the reversal of the decision of the Examiner of Interferences of September 26, 1918, sustaining Rittman's motion to shift the burden of proof, Rittman having filed a prior application under the act of March 3, 1883, (c. 122; 22 Stat. L., 625,) without payment of fee, which he abandoned after filing a second application and fee.

In its last paragraph the petition states that—

Rittman has no standing in this interference and his application should be eliminated therefrom.

These are different matters and should not be confused. The Examiner of Interferences has clearly stated why Rittman is entitled to the filing date of his first application as the date of constructive reduction to practice and why, therefore, the order of the parties should be reversed. His decision as to this point is held correct.

As to the second prayer of the petition that the Rittman application has no standing in this interference, the petitioners contend, in effect, that Rittman dedicated his invention to the public by his first application and has no power to revoke or recall that dedication. In filing his first application Rittman stated:

This application is made under the act of March 3, 1883, (c. 122; 22 Stat. L., 625,) and the invention described therein may be used by the Government or any of its officers or employees in prosecution of work for the Government or by any other person in the United States, without payment of any royalty thereon.

In order to make a dedication under this statute to the public the act of dedication must be complete—that is, Rittman must offer to dedicate and the Government must accept the offer by granting him a patent; but the Government has not accepted Rittman's offer of dedication; indeed, through its Patent Office it denied the patentability of some of Rittman's claims in his first application, and unless Rittman had continued the prosecution of his case it would have become abandoned and neither the Government nor the people would have received any dedication. In other words, the act of dedication—that is, the proffer on the part of Rittman and the acceptance on the part of the Government—had never been completed. Under these circumstances no reason is seen why Rittman could not withdraw his offer of dedication or modify its terms. He did modify its terms when he filed his second application by paying the usual first fee. The dedication to the public has not yet been completed and will not be until accepted by grant of a patent to Rittman.

Petitioners have verbally requested that this case be referred to the Attorney-General for an opinion; but I see no reason for granting this request. If petitioners are dissatisfied with the Office decision, they may get the matter before the Court of Appeals of the District of Columbia in the regular course of appeals on priority. This view is expressed after a careful review of that court's decisions on similar points. In *Wintroath* v. *Chapman and Chapman* (248 O. G., 1004; 47 App. D. C., 428) the court took jurisdiction of the question of laches, and in determining the question of priority referred to the cases it had considered in deciding priority contests as follows:

In determining the question of priority we have considered which party procured from the other the idea of the invention, (*Milton* v. *Kingsley*, 7 App. D. C., 531; 75 O. G., 2193,) whether there had been a reduction to practice, (*Stevens* v. *Seiler*, 11 App. D. C., 245; 81 O. G., 1532,) lack of reasonable diligence, (*Peel* v. *Johnson*, 22 App. D. C., 187; 109 O. G., 807; *Wichers* v. *McKee*, 29 App. D. C. 4; 120 O. G., 809,) concealment, (*Matthes* v. *Burt*, 24 App. D. C., 265; 111 O. G., 1262,) existence of reasonable diligence, (*Yates* v. *Huson*, 8 App. D. C., 93; 74 O. G., 1732,) the effect of constructive reduction to practice, (*Sherwood* v. *Dresser*, 29 App. D. C., 161; 120 O. G., 657,) that one party was the agent of another, (*Milton* v. *Kingsley*, 7 App. D. C., 531; 75 O. G., 2193; *Hoebel* v. *Bernard*, 15 App. D. C., 510; 90 O. G., 781,) and the right

of a party to make the claims of the issue. (*Podlesak* v. *McInnerney*, 26 App. D. C., 399; 120 O. G., 2127; *Wickers* v. *McKee*, 29 App. D. C., 4; 129 O. G., 560.) Priority in an interference proceeding is the ultimate question for determination, but before it can be reached it may be, and usually is, necessary to decide one or more incidental or ancillary questions, as is shown by the decisions just referred to and others which might be cited.

The court might have added to what is stated above that prior to the decision in *Podlesak* v. *McInnerney* (120 O. G., 2127; 26 App. D. C., 399) it had refused to consider any questions except the straight question of priority, in which, however, it included not only the mere question of the dates when the inventions were made by the respective parties, but the question of originality and its allied question under the employer and employee doctrine. (See *Milton* v. *Kingsley*, 75 O. G., 2193; 7 App. D. C., 531.) That rule was early laid down in *Westinghouse* v. *Duncan*, (66 O. G., 1009; 2 App. D. C., 131.)

The court has uniformly refused to consider the question of the patentability of the issue, meaning by that a decision holding that the issue is not patentable to any of the parties or to allow that question to be raised on an appeal from an award of priority. (*Johns* v. *Mucsser*, 145 O. G., 764; 29 App. D. C., 61.) It has considered the question whether the device of one of the parties was operative. (See *Carlin* v. *Crumpton*, 228 O. G., 1093; 45 App. D. C., 166.) It has considered the question of the right of one of the parties to make the claims, although it had specifically refused to consider that question in the case of *Schupphaus* v. *Stevens*, (95 O. G., 1452; 17 App. D. C., 548.) This question of lack of disclosure by one of the parties has been considered by it in a number of cases; for example, in *Manly* v. *Williams*, (168 O. G., 1084; 37 App. D. C., 194.) It has considered the question of new matter, (*McKnight* v. *Pohl*, 130 O. G., 2069; 30 App. D. C., 92,) the question of the validity of the application, taking under this head the question of joint inventors, (*Lemp* v. *Randall*, 146 O. G., 255; 33 App. D. C., 430,) the question whether the application had been altered after execution, (*Lindstrom* v. *Ames*, 168 O. G., 250; 37 App. D. C., 365,) the question of the invalidity of an oath where the original oath was executed before a notary who was the attorney in the case, (*Dalton and Magnus* v. *Wilson*, 224 O. G., 741; 44 App. D. C., 249,) and the question of abandonment of the application during prosecution, (*Kinsman* v. *Strohm*, 136 O. G., 1769; 31 App. D. C., 581.)

From the general trend of these decisions it would appear that what the court of appeals will consider as being ancillary to priority are those cases wherein the point raised, if decided against one of the applicants only, would bar him from getting a patent, whence it would follow as a matter of course that the other party should be awarded priority, but if the bar, as want of patentability of the issue, would debar both parties from securing a patent no question of priority whatever is involved and the court will not consider this last class of cases under the interference statute, or, rather, under the statute allowing an appeal to the court of appeals from a decision of the Office under the interference statute.

The petition is denied as to both points.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

HATHAWAY v. FIELD, LANNING, AND COLMAN. FIELD AND LANNING v. HATHAWAY AND COLMAN. HATHAWAY v. COLMAN.

Decided February 3, 1919.

1. INTERFERENCE—PRIORITY—CONCEALMENT OR ABANDONMENT—BURDEN OF PROOF.

Where it is alleged that the party who first reduced the invention to practice concealed or abandoned the invention, *Held* that the party alleging such concealment or abandonment has the burden of strictly proving it.

2. SAME—SAME—SAME.

Where H. conceived an invention, made a machine embodying it, but did not file his application until five years thereafter, during which time C. conceived the invention, built a machine, and filed his application, and it appeared that this machine was closely related to another machine which was being manufactured by H.'s assignee and that the development of both machines depended upon the refinement of a part known as the "warp-worm" and it appeared that work was constantly done upon this and that the owners of the invention were advised by mill men that the machine of the issue would not be successful until it was capable of handling fine yarns, which depended upon the development of the "warp-worm," *Held* that there was no suppression of the invention and priority should be awarded to H.

3. SAME—SAME—REDUCTION TO PRACTICE BY AGENT.

Where F. and L. made an invention in warp-uniting machines and disclosed it to H., who embodied their generic ideas in a warp-tying machine, which was successfully tested, *Held* that what H. did in reducing the invention to practice inured to the benefit of F. and L.

Mr. F. L. Emery, *Mr. W. G. Johnson*, and *Mr. Melville Church* for Hathaway and for Field and Lanning.

Mr. W. O. Underwood, *Mr. L. B. Smith*, and *Mr. Luther L. Miller* for Colman.

SMYTH, *C. J.*:

We have here two related interferences which were argued and submitted together. The applications of Hathaway and of Field and Lanning are owned by one party—the American Warp Drawing Machine Company, and the application of Colman by another party—Barber-Colman Company. We shall consider first the interference between Hathaway and Colman, which involves a warp-tying machine.

Hathaway conceived the invention in 1900 and completed a machine embodying it in 1901, but did not file his application for a patent until 1906. Colman conceived his invention in 1903, built a machine in 1904, and filed his application for a patent in the latter part of the same year. He is therefore the senior party. Both inventions are striking productions of inventive genius.

The Board of Examiners and the Commissioner united in holding that Hathaway was the first to

conceive and the first to actually reduce to practice, and for the purposes of this case the correctness of the holding was conceded at the bar by Colman; but he asserted that after the reduction to practice Hathaway and his assignee concealed the machine and treated it as an abandoned invention. His contention was sustained by the Examiner of Interferences, rejected by the Board of Examiners but upheld by the Commissioner. It presents the only question for our consideration.

In *re appeal of Mower* (15 App. D. C., 144, 153) this court held as a general proposition that—

> there can be no abandonment of the right to a patent, unless such abandonment *be affirmatively proved*.

Proof, however, of long delay, unexplained, may satisfy the rule, for "affirmative facts may be proved by negative evidence." (Id.)

In *Oliver* v. *Felbel* (20 App. D. C., 255, 262) we said:

> But when reduction to practice has been satisfactorily shown, and there is no unreasonable or unexplained delay, there is no law that would bar the first or original inventor of his right. In order to give to delay the effect of destroying such a right, there must be some circumstance of concealment, suppression or abandonment of the invention.

It was ruled in *Lederer* v. *Walker* (39 App. D. C., 122, 126) that—

> the right of the first inventor who has actually reduced to practice has always been respected where there is no doubt of actual reduction to practice, and consideration has always been given to the circumstances excusing the delay.

Hubbard v. *Berg* (40 App. D. C., 577, 581) is authority for the proposition that—

> abandonment must be strictly proved, and will never be presumed.

It was also said in the same case that—

> it is a fundamental principle of patent law that the first to reduce to practice is *prima facie* the first inventor and entitled to a patent.

From this it would seem that the appellee in the case at bar has the burden of strictly proving concealment or abandonment on the part of Hathaway or his assignee.

Mars, superintendent of installation of the Warp Drawing Machine Company, said that between the years 1901 and 1906 he saw the machine so many times that he could not count them; that it was in the factory all the time

> where I couldn't help seeing it and I couldn't say how many times;

that during that period all the employees of the establishment saw it and that—

> from time to time there would be strangers brought in by Mr. Hathaway, Mr. Lanning and Mr. Field. On such occasions they would be shown the machine.

The machine was cleaned from time to time, was carefully guarded against abuse and when not being shown

> was covered with a cloth to keep out the dirt and prevent the oil dripping upon it.

Sullivan, an attorney-at-law, who at one time worked for the machine company but who at the time he testified was not in any way connected with it, said that about 1903 Mr. Hathaway showed him a knotting (tying) machine and told him he must learn to operate it as they intended to put it out in conjunction with another machine. He further said that after he left the factory in which the machine was located he was accustomed to return four or five times a year, between 1902 and the time he left the employ of the company in 1907; that the machine at these times was always in the factory and looked to him

> to be in condition so that it could be run at a moment's notice.

Senay, an overseer in the warp preparation department of the granite mill, an establishment engaged in the manufacture of cotton yarn and cotton cloth, testified that Mr. Hathaway showed him the knotting-machine in the plant of the Warp Drawing Machine Company in 1902; and Coldwell, superintendent of the Booth Manufacturing Company, and Collins, superintendent of the Berkeley Mills, all disinterested witnesses, testified to the same effect.

The warp-tying machine in 1901 was capable of handling only a coarse class of yarn. This was not enough to secure for it a wide commercial field. It was the first machine of its kind that had ever been invented and those who owned it were puzzled as to just how it could be utilized. They sought advice from experts in the textile mills of New England. In doing this they revealed the machine to many persons. Blanchard, who was superintendent of the machine company up to 1902, but not connected with it after that, testified that he had consulted with a number of men engaged in the mill business in Massachusetts and neighboring territory concerning the machine and that he learned from them—

> that the work suitable for tying-in commercially, as opposed to the process of drawing-in, would be found in by far the largest volume in fine yarns and complicated weaves;

that various mill men,

> particularly Mr. Hardy of the Manchester Mills, and more especially Mr. Lacey, whose judgment I (he) respected more than the other men, told me (him) that a successful tying-in machine, that is a tying machine to be commercially successful, must be able to handle those fine yarns, and further than that they did not have any tying-in work at that time except that was running on fine yarns.

In this he is supported by the testimony of the witnesses just named. How to improve the tying machine so as to make it capable of handling the finer yarns was the question which confronted the machine company. It could be done only by a further development of one of its parts known as the warp-separating worm. Until this was accomplished the market for the machine would be very much restricted.

At the time about which we have been speaking the machine company also owned a drawing-in machine. This machine utilized a warp-separating worm the same as the tying-in machine. Coldwell testified that he advised Mr. Hathaway

> to do his experimenting on those worms on the drawing-in machine as the same mechanism applied to both machines, the tying-in machine and the drawing-in machine,

and that if he succeeded in developing the worm on the drawing-in machine to the point desired he "certainly could do it on the tying-in machine." This course was adopted by the machine company.

From that time, about 1901, until 1906, when the difficulty was overcome, the company gave almost

constant attention to the problem before it. Hathaway testified—

> we were working constantly not only from October 1, 1901, to the beginning of 1903, but clear through and well into the year 1906, and I do not think that there was a working day when we were not engaged in either making a new warp worm embodying some minute, if not great, change in forming or finishing or were not trying out or having tried out in some of the mills worms for the handling of the finer kinds of yarn.

Collins, who had never been in the employ of the machine company or in any way connected with it, and who from 1899 to 1914 was superintendent of the Berkeley Mills, said that between 1901 and 1906 he kept in touch with all the machine company was doing with respect to—

> refining the warp worms in order to enable their machines to handle the finer kinds of yarn,

and that

> they were constantly at work to improve the warp worms so that they could accomplish this very thing for the finer work.

Mars, Field, Senay, Lanning, and Sullivan gave testimony to the same effect. These witnesses are not directly contradicted.

The party Colman relies upon many circumstances from which he draws a conclusion favorable to his theory of concealment and abandonment. While we recognise the force of what he shows we cannot yield to it. In our judgment it falls far short of satisfying the rule which requires strict proof from him. Much reliance is placed by him upon *Mason* v. *Hepburn* (13 App. D. C., 86) and *In re Mower*, (15 App. D. C., 144, 151,) but we do not think they aid him. It was held in the first case that Mason, against whom abandonment was asserted,

> attached no importance to the invention, for there is (was) not a fact in evidence to account otherwise for his long inaction.

The Mower case decided that it was—

> not pretended (in that case) that the delay occurred by reason of any oversight or inadvertence, or from poverty, or any obstacle that could not easily be overcome.

These decisions do not fit the case before us, for there are here abundant facts "in evidence to account" for the machine company's delay. The obstacle which that company had to deal with "could not easily be overcome," as was the fact in the Mower case.

We think it cannot be correctly held that the machine company either concealed or abandoned its invention.

The other interference is between Hathaway, Field and Lanning and Colman. It involves a warp-uniting machine as distinguished from the warp-tying machine of the first interference. Field and Lanning filed in 1905, while, as we have said at the outset of this opinion, Hathaway filed in 1906 and Colman in 1904. It is clearly established that Field and Lanning were the first to conceive. Colman asserts that they never reduced to practice, but, if they did, that their invention was afterward concealed or abandoned.

In 1900 they disclosed their invention to Hathaway and he embodied their generic ideas in his machine. We have heretofore pointed out that both applications are owned by the same assignee. What Hathaway did in reducing his invention to practice was done under Field and Lanning's instructions and in behalf of the common assignee. We think his work must be treated as inuring to their benefit—that their invention was reduced to practice the same time that his was.

This leaves for disposition only the question as to whether or not the invention was concealed or suppressed. It was submitted on the same evidence as that upon which we determined a like contention in the first interference; consequently the result must be the same.

The decisions of the Commissioner of Patents are reversed, and priority of invention is awarded to Edgar F. Hathaway in interference 33,920 and to Field and Lanning in interference 33,918.

Reversed.

ADJUDICATED PATENTS.

(U. S. C. C. A. Pa.) The Edmands and Hoyt patent, No. 755,105, for an electrical surgical baker, *Held* valid and infringed. *Edmands* v. *Perlman*, 255 Fed. Rep., 564.

(U. S. C. C. A. N. J.) The Hornsby and Anger patent, No. 882,498, for protective appliance for electric circuits and apparatus, which is a device for mechanically indicating on the outside of the casing when a fuse has blown, *Held* not infringed. *Economy Fuse & Mfg. Co.* v. *Beaver Engineering Co.*, 255 Fed. Rep., 569.

(U. S. C. C. A. N. J.) The Horton patent, No. 901,448, for fuse-holder, *Held* not infringed. *Economy Fuse & Mfg. Co.* v. *Beaver Engineering Co.*, 255 Fed. Rep., 569.

(U. S. D. C. N. Y.) The Jones patent, No. 688,739, for method of producing sound-records, *Held* valid, but not infringed. *American Graphophone Co.* v. *Emerson Phonograph Co.*, 255 Fed. Rep., 574.

(U. S. C. C. A. Mass.) The Roper patent, No. 821,123, for an improvement in filling-exhaustion-indicating mechanism for detecting and indicating substantial exhaustion of the filling in the running shuttle, claims 1 and 9 *Held* valid, but not infringed. *Stafford Co.* v. *Draper Corporation*, 255 Fed. Rep., 548.

(U. S. C. C. A. N. J.) The Seward patent, No. 1,135,404, for a wardrobe-trunk, *Held* valid and infringed. *Rauchbach-Goldsmith Co.* v. *Seward Trunk & Bag Co.*, 255 Fed. Rep., 567.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 19, 1919.

The heirs, assigns, or legal representatives of John Baker, Jr., deceased, take notice:

An interference existing between the applications for patent of Michael A. Popkess and James E. Black, care of Bituminized Road Company, 405 Reliance Building, Kansas City, Mo., and John Baker, Jr., of 17 Battery Place, New York, N. Y., was on February 6, 1919, suspended for a period of thirty days in order that the legal representatives of Baker might intervene, the Office having been notified of the death of said Baker. The time referred to has expired, but no response has been made on behalf of the heirs, assigns, or legal representatives of Baker. Notice is therefore hereby given that unless said heirs, assigns, or legal representatives of Baker shall enter an

appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 1, 1919.

C. Schmitz & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Anacortes Fisheries Co., of 1912 L. C. Smith Building, Seattle, Wash., for registration of a trade-mark and trade-mark registered October 22, 1907, No. 65,811, to C. Schmitz & Co., of 82–88 Wall street, New York, N. Y., and a notice of such declaration sent by registered mail to said C. Schmitz & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said C. Schmitz & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 4, 1919.

Colonial Leather Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Dural Rubber Corporation, Flemington, N. J., for registration of a trade-mark and trade-mark registered December 26, 1911, No. 84,598, to the Colonial Leather Company, 811–817 Reese street, Chicago, Ill., and a notice of such declaration sent by registered mail to the said Colonial Leather Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Colonial Leather Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1919.

William J. Lickel, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Richard H. Heinrichs, of 2140 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered March 7, 1905, No. 44,281, to William J. Lickel, of 410 Cumberland street, Brooklyn, N. Y., and a notice of such declaration sent by registered mail to said William J. Lickel at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William J. Lickel, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Patents Nos. 1,300,233 to 1,301,065.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 261—No. 3. TUESDAY, APRIL 15, 1919. Price—$5 per year.

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Issue of April 15, 1919.

Patents	333	No. 1,300,233 to No. 1,301,065,	inclusive.
Designs	28	No. 48,191 to No. 48,218,	inclusive.
Trade-Marks	67	No. 125,118 to No. 125,184,	inclusive.
Labels	13	No. 21,209 to No. 21,221,	inclusive.
Prints	6	No. 5,632 to No. 5,637,	inclusive.
Reissues	6	No. 14,632 to No. 14,637,	inclusive.
Total	905		

You agree with the man on the W. S. S. whenever you buy one. He said:

"Look before or you'll find yourself behind."

—Ben Franklin.

Adverse Decisions in Interference.

PATENT No. 1,199,872.

On February 18, 1919, a decision was rendered that Frank J. Bannemann was not the first inventor of the subject-matter covered by claims 1, 2, and 3 of his Patent No. 1,199,872, subject, "Bottle-seals," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 1, 1919.

C. Schmitz & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Anacortes Fisheries Co., of 1913 L. C. Smith Building, Seattle, Wash., for registration of a trade-mark and trade-mark registered October 22, 1907, No. 66,811, to C. Schmitz & Co., of 82–86 Wall street, New York, N. Y., and a notice of such declaration sent by registered mail to said C. Schmitz & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said C. Schmitz & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 4, 1919.

Colonial Leather Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Dural Rubber Corporation, Flemington, N. J., for registration of a trade-mark and trade-mark registered December 26, 1911, No. 84,598, to the Colonial Leather Company, 511–517 Reese street, Chicago, Ill., and a notice of such declaration sent by registered mail to the said Colonial Leather Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Colonial Leather Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1919.

William J. Lickel, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Richard H. Heinricks, of 2140 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered March 7, 1905, No. 44,281, to William J. Lickel, of 410 Cumberland street, Brooklyn, N. Y., and a notice of such declaration sent by registered mail to said William J. Lickel at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William J. Lickel, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 9, 1919.

Francis J. Underwood, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alfred Wright, Inc., 689 North Broad street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered September 6, 1898, No. 51,940, to Francis J. Underwood, 726 Main street, Hartford, Conn., and a notice of such declaration sent by registered mail to said Francis J. Underwood at said address having been returned by the post-office undeliverable, notice is hereby given that unless said Francis J. Underwood, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 11, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Mar. 3	Feb. 19	197
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Dec. 5	Jan. 1	441
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Feb. 15	Dec. 17	196
254	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Oct. 26	Mar. 4	343
167	5. Book-Making; Books, Strips, and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter.	Jan. 5	Nov. 6	167
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Dec. 10	Jan. 21	318
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Feb. 10	Feb. 18	267
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 15	Mar. 13	103
221	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps; Marine Propulsion.	Sept. 26	Nov. 26	286
295	10. Carriages and Wagons; Motor Vehicles	Feb. 6	Mar. 17	460
154	11. Boot and shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 27	Mar. 20	169
322	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements.	Oct. 24	Oct. 26	978
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 11	Mar. 10	606
323	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 17	Mar. 7	182
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 2	451
112	16. Electric Signaling-A; Radiant Energy; Telegraphy; Telephony	Dec. 2	Dec. 9	576
307	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Mar. 1	Feb. 3	99
229	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 22	Jan. 27	414
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Feb. 7	Feb. 1	214
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 11	Feb. 19	207
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 3	Jan. 6	356
249	22. Aeronautics; Firearms; Ordnance	Jan. 25	Mar. 4	280
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Jan. 15	Feb. 20	201
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines.	Sept. 21	Jan. 4	262
318	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Feb. 24	Feb. 17	171
106	26. Electricity, Generation; Motive Power	Oct. 17	Dec. 16	581
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 20	Jan. 21	435
225	28. Internal-Combustion Engines	Dec. 10	Dec. 13	519
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Dec. 10	Jan. 9	530
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 18	Mar. 18	224
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 25	Jan. 20	268
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration	Sept. 16	Feb. 7	585
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roofs.	Dec. 5	Nov. 21	240
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners; Track-Sanders; Vehicle-Fenders.	Jan. 28	Feb. 3	369
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Mar. 13	Mar. 1	269
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Mar. 14	Mar. 4	425
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Nov. 4	Nov. 9	669
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 15	Mar. 14	137
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Water Distribution.	Nov. 20	Dec. 6	429
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 7	Feb. 17	345
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 28	Dec. 28	234
114	42. Electricity, Conductors; Electricity, Transmission to Vehicles; Electric signaling	Nov. 7	Dec. 13	434
382	43. Baths and Closets, Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 15	Mar. 13	96
253	44. Air Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Nov. 7	Feb. 12	180
379	45. Clutches; Lubrication; Motors; Railway Brakes	Dec. 14	Jan. 7	388

Oldest new case, Sept. 16; oldest amended, Oct. 26.
Total number of applications awaiting action..... 15,668

183	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Mar. 10	Mar. 29	825
	Designs	Feb. 17	Mar. 14	89
	Labels and Prints	Mar. 15	Mar. 26	90

PATENTS

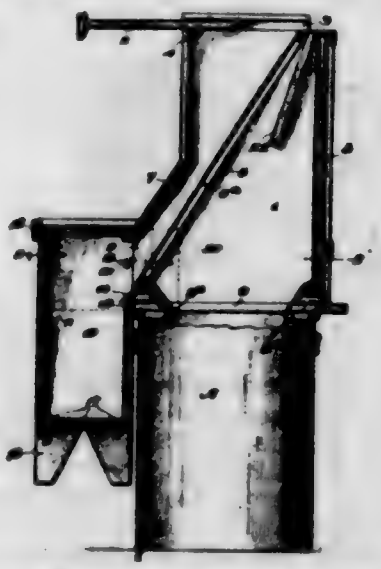
GRANTED APRIL 15, 1919.

1,300,232. DYEING-MACHINE. THOMAS ALLSOP and WALTER W. SIBSON, Philadelphia, Pa., assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 22, 1917. Serial No. 197,941. 4 Claims. (Cl. 8—18.)



1. A dyeing machine comprising a vat; means for passing the goods into and out of the dye liquor in the vat; in combination with means for completely enveloping the goods in a spray of liquid when withdrawn from the dye liquor to protect the same from injurious effects of atmospheric exposure.

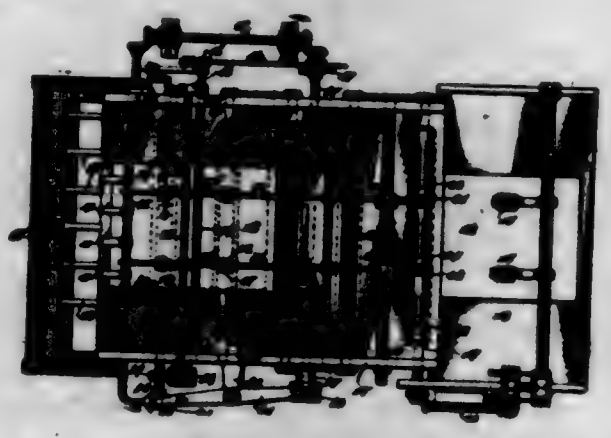
1,300,234. ASH-SIFTER. JOHN B. ADDUCI, Boston, Mass. Filed Apr. 25, 1918. Serial No. 230,710. 2 Claims. (Cl. 83—60.)



1. The combination with an ash receptacle and a sifter casing adapted to rest thereon, of a cinder box having supporting legs and a perforated bottom and cut away adjacent the top on one side, side members carried by the box and cut out to form shoulders, a base for the sifter casing adapted to interlock with said shoulders, a beveled projecting block carried by the casing and projecting into the cinderbox opening, a slidable top for the cinder box, and means for locking the cinder box to the lower portion of the sifter casing.

1,300,235. SHEET-REGISTER. NILS A. ANDERSON, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Dec. 7, 1915. Serial No. 65,450. 62 Claims. (Cl. 271—82.)

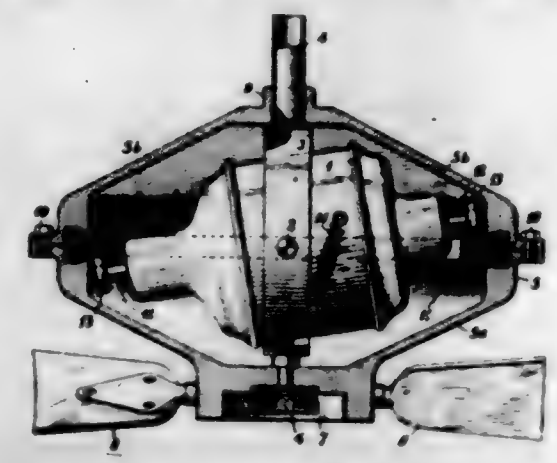
1. A sheet-registering device comprising a normally stationary, transversely movable side-guide against which sheets are to be registered, means for advancing the sheet in one direction, means for moving said advancing means transversely of the path of the sheet, and means for thereafter withdrawing the side-guide from the lateral edge of the sheet.



20. In a sheet-registering device, the combination with a side guide, of means for advancing the sheet in one direction comprising a plurality of revolving feed rollers, of a plurality of balls coöperating with each of the feed rollers to advance the sheet, means for transversely reciprocating one of said feed rollers across the path of the sheet once in each cycle of operation, and means for withdrawing the side-guide from the lateral edge of the sheet.

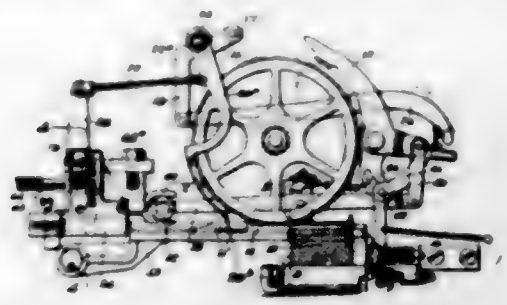
37. A sheet-registering device comprising a side-guide to contact with the sheets to be registered, rotary means for advancing the sheet in one direction, means comprising a plurality of balls bearing on the sheet off the vertical axis of said rotary means for temporarily crimping or corrugating the sheet transversely as it travels over said rotary means, means for holding the front edge of the advancing sheet, means for moving simultaneously said rotary means and said sheet-holding means transversely of the path of the sheet, and means for withdrawing said side-guide and removing said sheet-holding means simultaneously from contact with the sheet.

1,300,236. REDUCTION-GEARING FOR ELECTRIC MOTORS. CARLYLE A. ATHERTON, Bowdon, England, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 15, 1917. Serial No. 168,703. 9 Claims. (Cl. 74—26.)



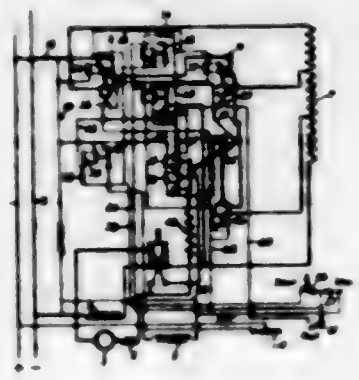
1. The combination with a fixed support and a motor pivotally mounted thereon, of a frame inclosing said motor and rotatably mounted on said support, and gearing located therein for rotating said frame.

1,300,237. MEASURING MECHANISM FOR COMPOSING-MACHINES. JOHN SELLERS BANCROFT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 16, 1918. Serial No. 250,203. 5 Claims. (Cl. 164—112.)



1. A typographic composing machine embodying the following instrumentalities, to-wit: a units wheel, a units rack support provided with a horizontal bearing surface, a units rack supported on said surface, a spring and lever device for returning the units rack to initial position and forward and rear stops for arresting the rack, said wheel, rack, spring, and lever lying in approximately the vertical plane extending through the line of motion of the center of gravity of the rack and said stops lying in said line of motion, whereby the forces for moving the rack and the means for arresting its motion in each direction are applied directly in said line of motion.

1,300,238. MOTOR-CONTROL SYSTEM. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1915. Serial No. 5,896. 13 Claims. (Cl. 172—288.)



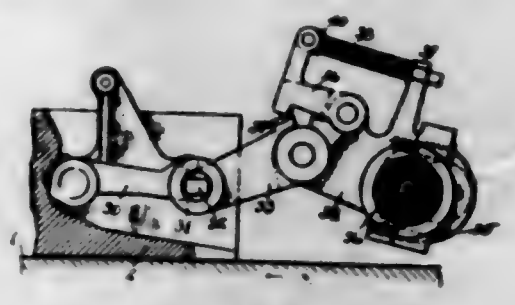
4. In a motor-control system, the combination with a double-throw switch, and two coils for actuating said switch in opposite directions, of means for successively connecting said coils in series relation and energizing them to different degrees, shunting one of said coils, opening the circuit of the one coil, opening the circuit of the other coil and again connecting them in series relation.

1,300,239. COMMUTATOR-BRUSH. CHARLES B. BEBBT, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 25, 1916. Serial No. 86,655. 8 Claims. (Cl. 200—23.)



1. The combination with a commutator cylinder, of a pair of brushes adapted to engage substantially diametrical points on the commutator cylinder, and a single resilient means adapted for lateral movement only with respect to the commutator cylinder for supporting corresponding ends of said brushes.

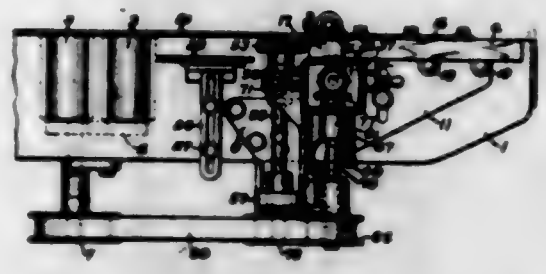
1,300,240. SAFETY DEVICE FOR FORGING-MACHINES AND THE LIKE. JOHN E. BLAKESLEE, Cleveland, Ohio, assignor to The Ajax Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 16, 1914. Serial No. 832,241. 5 Claims. (Cl. 74—48.)



1. In a safety device, the combination with two pivotally connected arms forming, when in one relative position, a single rigid member, of a resiliently mounted, movable safety latch engaging over one of said arms and permitting the same to swing relatively to each other under abnormal strain.

5. In a safety device, the combination with two pivotally connected arms, forming, when in one position, a single rigid lever, one of said arms having an engaging face, and a latch pivotally mounted on the other of said arms and adapted to engage against such engaging face on said first-named arm, a projection on said latch, a second projection on said second named arm, and a compression spring interposed between said projections and adapted to maintain said latch in such engaging position against a predetermined pressure tending to dislodge the same.

1,300,241. FEED MECHANISM. CHARLES W. H. BLOOD, Winthrop, Mass. Filed Jan. 16, 1917. Serial No. 142,750. 10 Claims. (Cl. 144—245.)

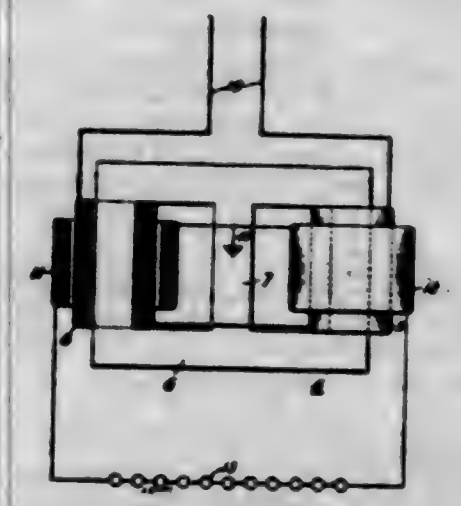


1. The feed mechanism comprising, in combination, a magazine to receive a supply of articles and having a discharge opening, and means for feeding forward articles from the supply in uninterrupted succession through said opening including a driven member having a portion arranged for yielding, rapidly recurrent projection laterally into said magazine adjacent said opening under an intrinsic rule and independently of the feeding of the articles and having feeding movement therein.

7. The preliminary feed mechanism comprising, in combination, a magazine to receive a pile of articles and a member mounted adjacent the side of the magazine and having a main body portion located beyond the boundary of the magazine and a distal portion extending therefrom at a side thereof and means to operate said member recurrently to project said portion into the magazine, the interior of the magazine being unobstructed by said member at recurrent intervals alternating with the entrances therein of said distal portions.

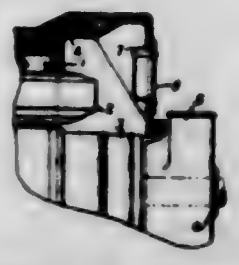
10. The preliminary feed mechanism comprising, in combination, a magazine to receive a pile of articles, a shaft yieldably mounted beside the same, a circular head on said shaft cut away along a chord, the distance between the normal location of said shaft and the boundary of the magazine being less than the radius of said head and not less than the distance of said chord from the center.

1,300,243. SERIES-TYPE DISTRIBUTING SYSTEM. HOWARD D. BRALEY, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 26, 1917. Serial No. 182,261. 6 Claims. (Cl. 171—97.)



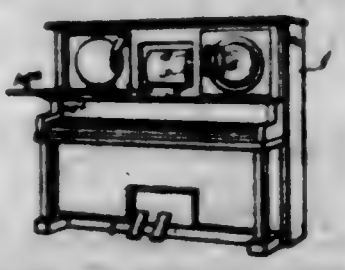
1. A distributing system comprising a substantially constant-current circuit, a current transformer provided with split primary and secondary windings and having said primary windings inserted in said circuit, a lead circuit connected to said secondary windings, a ground connection between the two halves of said secondary winding, and means in said transformer providing a flux path for a portion of the excess magnetizing flux of one half of the primary winding over that of the other half thereof.

1,300,243. DYNAMO-ELECTRIC MACHINE. AUBREY L. BROOMALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 8, 1916. Serial No. 75,952. 5 Claims. (Cl. 172—36.)



1. The combination with a dynamo-electric machine comprising magnetizable members provided with current-carrying conductors and an inclosing casing for said members provided with a ventilating opening, of a cover for said opening comprising a plate provided with an aperture and means carried by said plate for deflecting the air passing through said aperture around the edges thereof.

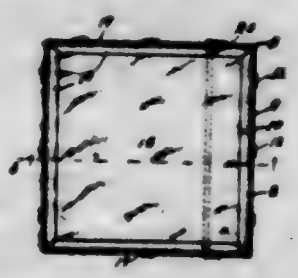
1,300,244. COMBINED PIANO AND PHONOGRAPH. CHARLES S. BURTON, Oak Park, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Original application filed Jan. 29, 1917, Serial No. 145,087. Divided and this application filed Aug. 3, 1917. Serial No. 184,208. 8 Claims. (Cl. 84—193.)



1. In combination with an upright piano comprising a record carrier tablet mounted for rotation in playing within the piano case about a fore-and-aft extending axis, said carrier having its entire extent and path of rotation in the space forward of the vertical plane of the hammer action; said phonograph comprising an amplifier located behind the plane in which the carrier is rotated about said axis and behind the upper part of said carrier.

5. In combination with an upright piano, a phonograph having its record carrier in the form of a tablet for carrying a flat or disk type of record, the same being mounted and contained within the piano case with said carrier at playing position occupying a space forward of the vertical plane of the hammer action, the amplifier having its smaller end for connection with the sound arm located laterally adjacent to the upper part of the record carrier, the tone arm pivotally suspended from said smaller end of the amplifier, and swinging in front of the record carrier for coöperation with the record carried thereon, to an arc whose chord is steeply inclined, and a counterbalance for said pendant tone arm and the sound box thereon comprising a weighted lever arm fulcrumed and positioned for oscillating in the space behind the upper part of the record carrier, and operating connections from said counterbalance to the tone arm.

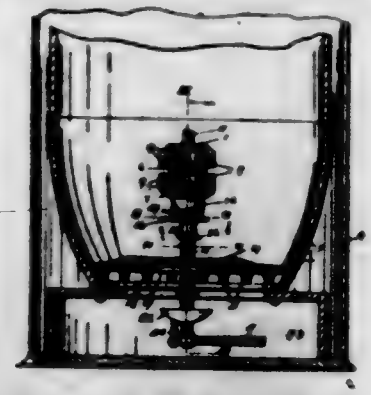
1,300,245. PLANTING-BOX. WILLIAM H. BUSSEY, Minneapolis, Minn. Filed Apr. 29, 1918. Serial No. 231,221. 5 Claims. (Cl. 47—37.)



1. A planting box comprising a body member provided with inturned edges to support a protecting cover that will pass light to the interior of the box, and a rim telescopically slidable onto the upper end of said body member to hold said cover in position.

2. A planting box comprising an angular body member having inturned upper edge flanges, and an angular member telescoped over said body member but projecting above the same, and a glass plate rested on said flanges and held in position by said rim.

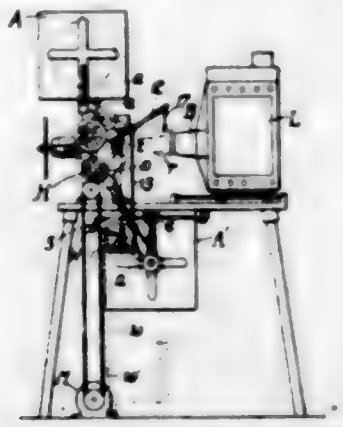
1,300,246. GAS-GENERATING OIL-BURNER. LAWRENCE S. CAMPBELL, Kansas City, Mo. Filed Aug. 14, 1918. Serial No. 249,922. 2 Claims. (Cl. 158—53.)



1. In a gas generating oil burner, the combination, of a cup-shaped section provided exteriorly with radial projecting ribs and with an extension having an opening communicating with the section, an inverted cup-shaped section demountably mounted on said first mentioned section and provided exteriorly with radial projecting ribs and forming with the latter a retort, a pipe penetrating said retort and having a washer slidably mounted thereon and adapted to supportingly engage the retort, diaphragms mounted on said pipe within the retort, said diaphragms comprising perforated saucer-shaped members provided with central openings and with vertical annular flanges

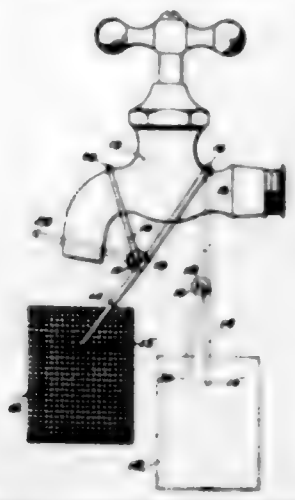
at the borders of the openings and convexed disks supportingly engaged by said saucer-shaped members and provided with central openings and with vertical annular flanges at the borders of the openings and adapted to receive and support the saucer-shaped members, and means carried by said pipe for supporting the burner in vertical position.

1,300,247. MOTION-PICTURE-PROJECTING MACHINE. JAMES C. CHAMBERS, St. Louis, Mo. Filed Aug. 29, 1918. Serial No. 251,919. 3 Claims. (Cl. 88—17.)



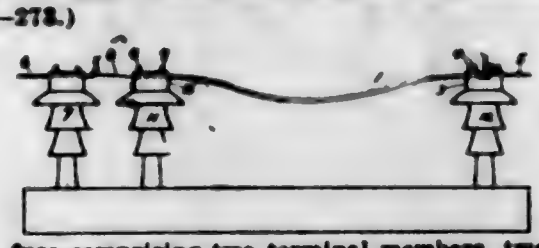
1. In a motion picture projecting machine, a traveling film maintained under tension, a light source, means for conducting the rays to the film, a fixed support, a vertically oscillating weighted lever fulcrumed about a fixed spindle on said support, a guide spool on said fulcrum spindle, a spindle secured to the free end of the short arm of the weighted lever in proximity to the fulcrum spindle, a sprocket spool on the last named spindle, an arm on the weighted lever positioned opposite the spindle carrying the sprocket spool, a link block pivotally coupled to the free end of the arm aforesaid, a post, a vertically oscillating lever fulcrumed to said post and provided with a short and long arm, a push rod pivotally connected to the short arm of said lever and connected to the link block aforesaid, a rod projecting laterally from the long arm of the lever, and a shield suspended from the rod aforesaid, and adapted to be dropped across the light rays upon a release of the weighted lever by the film due to a removal or reduction in the normal tension imposed on the film, the parts operating substantially as, and for the purpose set forth.

1,300,248. SOAP-HOLDING ATTACHMENT FOR FAUCETS. MAURICE B. COLEMAN, Newton, Mass., assignor of one-half to Michael John Vail, Newton, Mass. Filed Aug. 7, 1918. Serial No. 248,692. 3 Claims. (Cl. 45—28.)



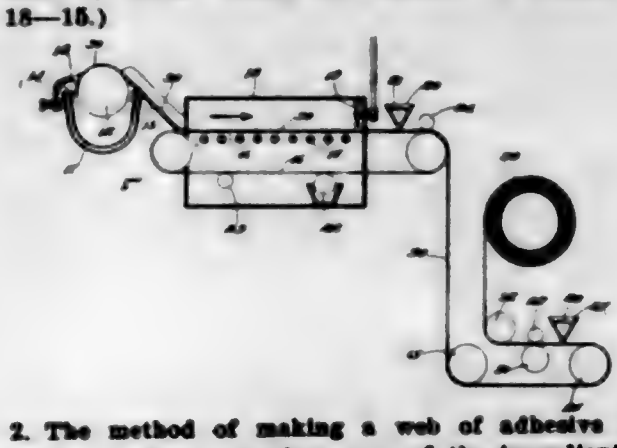
3. A soap-holding attachment comprising a foraminous receptacle, and supporting means connected therewith and separably engageable with a faucet to operatively support the receptacle under the latter, said means including an inner bail composed of a length of wire including two arms having receptacle-engaging trunnions, a neck adapted to bear on an inner portion of a faucet, and eyes between said trunnions and neck, and an outer bail composed of a shorter length of wire including two arms having trunnions engaging said eyes, and a neck adapted to bear on an outer portion of the faucet, the outer bail being displaceable to permit the attachment to be inoperatively supported by the inner bail.

1,300,249. FUSE FOR HIGH-TENSION ELECTRICAL CIRCUITS. LESLIE N. CRICHTON, Salt Lake City, Utah, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 25, 1918. Serial No. 744,179. 16 Claims. (Cl. 175—278.)



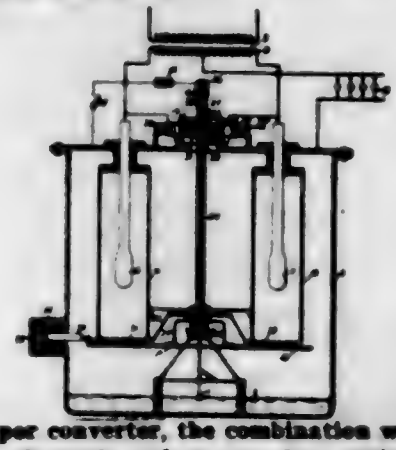
3. A fuse comprising two terminal members, two expulsion tubes open at both ends to the air, and a fusible conductor extending through the said tubes.

1,300,250. PROCESS OF MAKING ADHESIVE MATERIAL. CHARLES H. CROWELL, Brooklyn, N. Y. Filed Nov. 4, 1918. Serial No. 59,673. 2 Claims. (Cl. 18—18.)



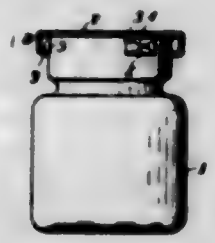
2. The method of making a web of adhesive which consists in mixing together some of the ingredients and allowing them to soak for a period of time to form a glue jelly, cooking a mixture of other ingredients until the said mixture congeals quickly when dropped in cold water and mixing the said glue jelly with said cooked mixture and then heating the combined mixture, then forming a web of said combined mixtures after they have been heated, and then chilling the web to harden the same.

1,300,251. VAPOR-CONVERTER. DAVID C. DAVIS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 16, 1916. Serial No. 104,072. 12 Claims. (Cl. 175—354.)



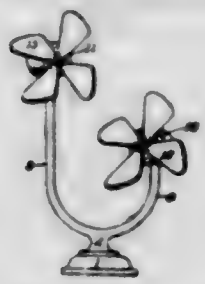
1. In a vapor converter, the combination with a periodically active electrode, of means for, entirely shielding said electrode from the interior of the container during its periods of inactivity.

1,300,252. CLOSURE FOR CONTAINING VESSELS. JOHN E. DOLE, Portland, Me., assignor to National Metal Seal Corporation, Portland, Me., a Corporation of Maine. Filed June 26, 1916. Serial No. 105,844. 6 Claims. (Cl. 215—12.)



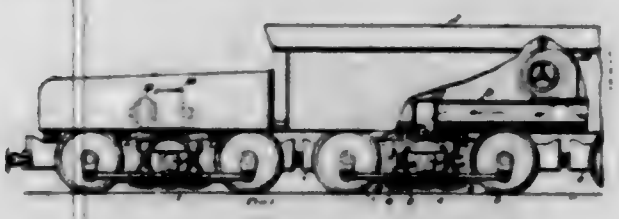
6. In combination with a container having a series of lugs about its mouth uniformly disposed in the same horizontal plane, each lug of general pyramidal form and consisting of an upwardly sloped under face, opposite lateral faces sloped upwardly toward each other from the ends of the lug, and a downwardly sloped upper face, and all of said faces terminating at substantially the center of the lug, a closure consisting of a rotatable cap having a depending skirt terminating in a series of spaced inturned horizontal lug-engaging portions and said portions arcually curved from their centers outwardly toward their ends and meeting said cap skirt at their ends and there extending as short trusses adapted to brace the skirt against permanent distortion in the seating of the cap.

1,300,253. FAN DEVICE. JOHN A. DOUGHERTY, Zanesville, Ohio. Filed Feb. 5, 1915. Serial No. 6,304. 3 Claims. (Cl. 230—1.)



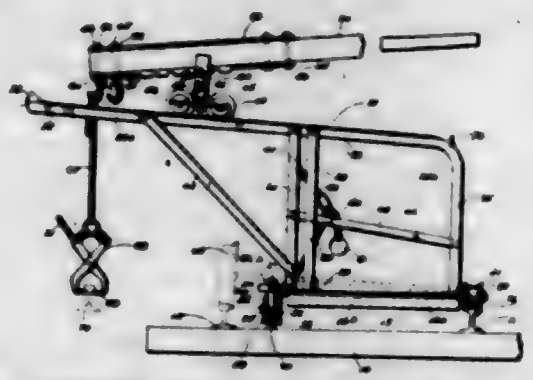
1. The combination with a fan device of a single stand combined with two arms in combination with two fans, one fan being combined with one of said arms and the other fan being combined with the other of said arms, said fans being so directed and trained that their currents combine, substantially as described.

1,300,254. LOCOMOTIVE CONSTRUCTION. GEORGE M. EATON, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 10, 1917. Serial No. 141,619. 22 Claims. (Cl. 105—47.)



5. In a locomotive, the combination with a cab, and a plurality of trucks, a portion of said trucks being pivotally connected to said cab, of a plurality of motors, a motor frame comprising a part of each of said pivotal trucks and forming a portion of the pivotal connection between the truck associated therewith and the cab, and a jack shaft mounted in each motor frame and connected to the associated motors.

1,300,255. TRACK-LAYING MACHINE. CHARLES J. ECCHET, La Crosse, Wis., assignor to Three Men Rail Laying Machine Company, La Crosse, Wis. Filed May 11, 1914. Serial No. 837,903. 27 Claims. (Cl. 212—11.)



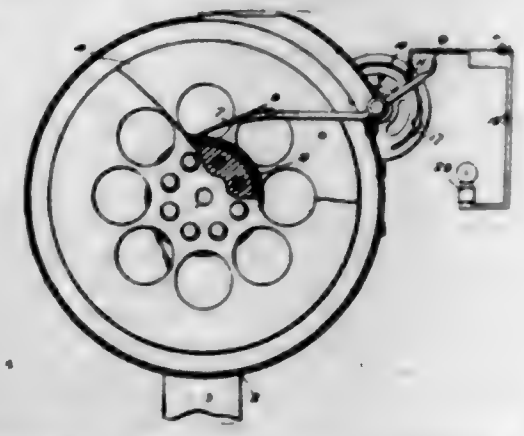
1. In a rail-laying apparatus, a truck having wheels for travel on alined rails, and a supplemental rail hung from the truck under other wheels of the same.

1,300,256. TORCH. ARTHUR J. FAUSEK and IRWING F. FAUSEK, St. Louis, Mo. Filed Aug. 2, 1915. Serial No. 43,187. 4 Claims. (Cl. 158—27.4.)



1. In a torch, a head having two gas conducting channels therein leading to the forward end of the head, a mixing chamber shell secured to the forward end of said head, an inner member located centrally within said shell, said inner member containing a duct in communication with one of the channels in said head and extending laterally through the inlet member at a point near its rear end, a ring within said shell surrounding said inner member and having a duct therein communicating with the second channel in said head, said ring being spaced from said inner member to provide an inner annular gas conducting channel leading from the duct in said inner member and being spaced from said mixing chamber shell to provide an outer annular channel through which the gas passing through said ring may pass to mingle with the gas passing from the inner annular gas conducting channel to the mixing chamber in front of said ring.

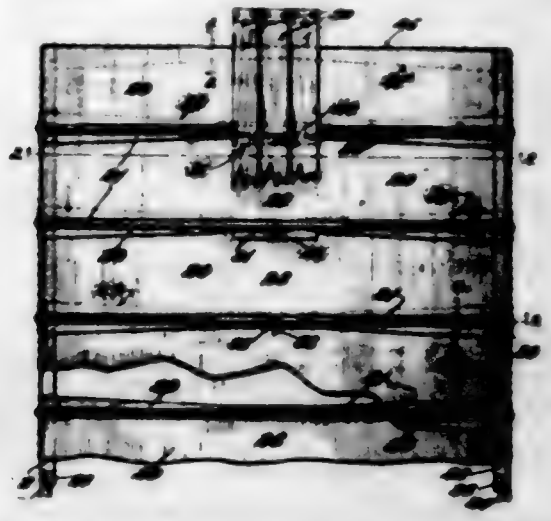
1,300,257. ELECTRIC SIGNAL FOR MOTION-PICTURE-PROJECTOR REELS. MELVIN JOSEPH FELLAND, Great Falls, Mont. Filed Mar. 13, 1917. Serial No. 154,502. 3 Claims. (Cl. 23—169.)



1. An alarm for motion picture projector reels, including a pivotal arm, an electric circuit including a signal therein, an adjustable circuit closing element engageable by the arm arranged in proximity to the reel, and means arranged in proximity to said circuit closing element for receiving and holding the pivotal arm in neutral position at times.

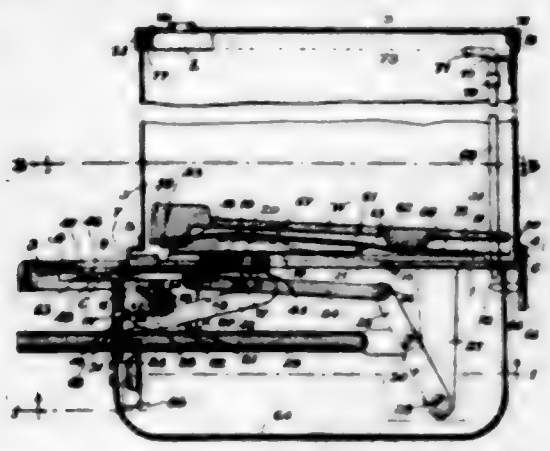
3. In combination with a motion picture reel casing, a bracket secured to the peripheral portion thereof having a segmental slot formed therein, an arm pivoted to the bracket engageable with the film strip arranged in the casing, an electrical circuit including a signal, a circuit closing element adjustably arranged in the segmental slot connected to the opposite sides of the electrical circuit, and a clasp adjustably arranged in the segmental slot adapted to engage and hold the adjacent end of the pivotal arm in neutral position at times.

1,300,258. CAR-ROOF. GARTH GRIFFITH GILPIN, Riverside, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Oct. 17, 1918. Serial No. 258,528. 12 Claims. (Cl. 105—5.)



1. A car roof comprising a plurality of metal roof sheets extending from eaves to eaves, the side margins of the respective sheets being lapped to form seams, the extent of the sheet lap being greater at the eaves than at the ridge.

1,300,259. VENDING-MACHINE. ALBERT D. GROVER, Malden, and EARL E. BARBER, Boston, Mass., assignors, by mesne assignments, to Autosales Corporation, a Corporation of New York. Filed Dec. 15, 1911. Serial No. 666,006. 16 Claims. (Cl. 211—8.)

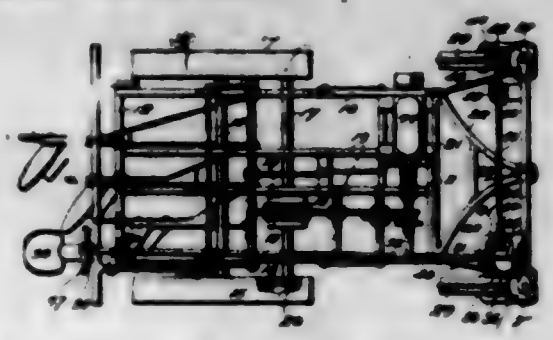


1. In a vending machine having a magazine for containing a vertical stack of flat, flexible articles in which the upper side extends beyond the free edge of the underside to form a mouth or opening at the said underside, the combination with a slidable ejector adapted to engage the lowermost article at said free edge to eject the same from the magazine, said ejector normally engaging said upper extension on the article and pressing upwardly against the same, of a weight adapted to rest on the stack of articles and provided on its underside with a rib or projection arranged to bear down upon the articles at a point near the mouth, whereby the mouth of the article is automatically caused to gap under the downward pressure of said rib and the upward pressure of said ejector.

4. In a vending machine, a magazine for containing the vendable articles in a vertical stack, said magazine being at its lower end provided with a delivery-opening, adjustable means at the bottom of said magazine for normally supporting the forward end of the lowermost article above said delivery-opening, ejector mechanism operable to eject the articles through said delivery-opening, means whereby the operation of said ejector mechanism causes automatic lowering of said supporting means to bring the forward end of the lowermost article into alinement with said delivery-opening, a weight adapted to rest loosely on the stack of vendable articles, and a downwardly-extending projection at the forward end of said weight to exert a downward pressure on the forward end of the articles and thus insure the alinement of the lowermost article at its forward end with said delivery-opening, when said adjustable supporting means is in lowered position.

16. In a vending machine provided with a magazine for containing the vendable articles, in combination a flat ejector adapted to slide over the bottom of said magazine, said bottom having a slot, formed therein, a slide movable beneath the bottom of the magazine, said ejector and said slide being substantially parallel to each other, means for securing the said ejector to said slide, said means including a block arranged to move in said slot, and means for operating said slide.

1,300,260. AGRICULTURAL TRACTOR. JACOB GUTH, Salem, Ill. Filed Oct. 10, 1917. Serial No. 195,696. 8 Claims. (Cl. 21—196.)

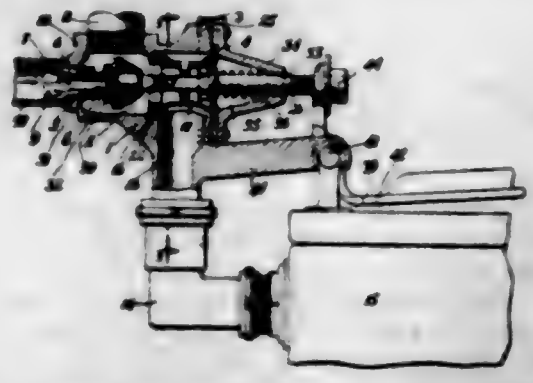


1. In a machine of the class described, a frame, a transversely disposed member pivotally mounted on the front of the frame, steering wheels pivotally carried by the ends of said member, and means for shifting either one of the steering wheels laterally independently of the other.

7. In a tractor, a main frame, vertically disposed shafts journaled in supports adjacent to the forward end of said main frame, steering wheels carried by the lower ends of said shafts, a steering rod, connections between said rod and one of the vertically disposed shafts, a sleeve on said rod, operating connections between said sleeve and the other one of the vertically disposed shafts, and steering wheels on said steering rod and sleeve.

8. In a tractor, a main frame, traction wheels for said main frame, caster wheels arranged at the forward end of said main frame for steering the tractor, said caster wheels capable of independent lateral swinging movement, and means for positively and simultaneously swinging said caster wheels laterally.

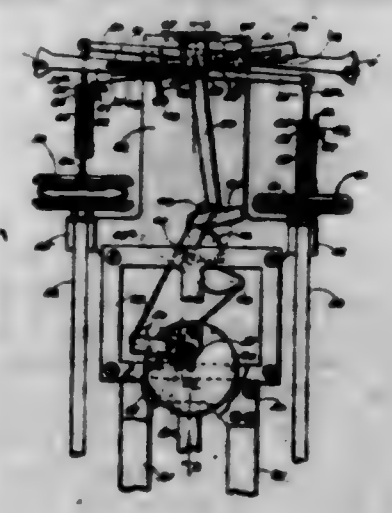
1,300,261. VALVE MECHANISM. PHILIP HAAS, Dayton, Ohio. Filed Dec. 2, 1918. Serial No. 264,906. 12 Claims. (Cl. 4—28.)



1. In a valve mechanism, the combination with a valve body provided with a water inlet, a tank connection and

a water outlet, a normally closed inlet valve, and a normally open outlet valve, interposed between the tank connection and the outlet passage and means for operating said valves, of a rotatably adjustable sleeve within said valve-body having a lateral discharge passage adjacent to the discharge passage of the main body, whereby said sleeve may be adjusted rotatably to throttle the discharge of water through the valve casing, and means operable from the exterior of the valve body by which said sleeve may be rotated without disassembling the parts of the valve mechanism.

1,300,262. TRANSMISSION MECHANISM FOR CLOCKS. AUGUSTUS L. HAHL, Chicago, Ill. Filed May 21, 1915. Serial No. 29,526. 18 Claims. (Cl. 58—42.)



1. In a pneumatic clock system, an air-displacing element, a driving member, and means comprising non-resilient flexible elements permanently connecting said driving member and said air-displacing element to actuate said element with gradually increasing power as the resistance to said air-displacing element increases.

2. A pneumatic clock system, an air-displacing element, a driving member, a cam arm intermittently actuated by said driving member, and means comprising non-resilient flexible elements for operatively connecting said cam arm with said air-displacing element to actuate said element with gradually increasing power as the resistance to said air-displacing element increases.

3. In a pneumatic clock system, an air-displacing element, a driving member, an intermediate member operatively connected to said air-displacing element to actuate the same, a cam adapted to actuate said intermediate member, and a second cam arranged to be actuated intermittently by said driving member and operatively connected to said first-named cam to actuate said intermediate member with increasing power as the resistance to said air-displacing element increases.

4. In a pneumatic clock system, a plurality of air-displacing elements, a driving element, a single oscillatory lever having right-angularly disposed arms each operatively connected to one of said air-displacing elements, said connections comprising resilient power transmitting means adapted to produce positive forward strokes of said air-displacing elements and to permit full return strokes thereof, means to adjust the movements of said air-displacing elements independently of each other, and means to connect said driving element with said oscillatory lever to actuate the latter with increasing mechanical advantage as the resistance to said air-displacing elements increases.

5. In a device of the class described, an air-displacing element, an oscillatory member connected to actuate said displacing element, an intermediate member connected to said oscillatory member having a relatively large movement as compared with the movement of said oscillatory member, and means for actuating said intermediate member with increasing mechanical advantage as the resistance to said air-displacing element increases.

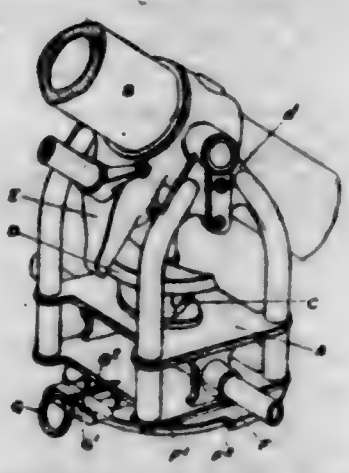
1,300,282. VULCANIZABLE COMPOSITION. WILLIAM T. HALE, Dodge City, Kans. Filed May 25, 1918. Serial No. 236,444. 6 Claims. (Cl. 106—22.)

4. A vulcanizable composition comprising unvulcanized rubber or caoutchouc, a solvent therefor, plumbic oxid, plumbic acetate, sulfid of mercury, and sulfur.

5. A vulcanizable composition comprising rubber or caoutchouc, a solvent therefor, plumbic oxid, a compound having the formula $CH_3.CO_2$—X, in which X is either $\frac{1}{2}Pb.1\frac{1}{2}aq.$ or hydrogen, a filler, asphalt, and sulfur.

6. A vulcanizable composition comprising unvulcanized rubber or caoutchouc, a solvent therefor, plumbic oxid, plumbic acetate, sulfid of mercury, asphalt, and sulfur.

1,300,284. GUN-MOUNTING. BELTON TATTNALL HAMILTON, London, England. Filed Feb. 27, 1919. Serial No. 279,587. 5 Claims. (Cl. 89—37.)



1. In a mounting for a gun of the non-recoil type the combination of a fixed vertical pivot, a crosshead rotatably mounted thereon, a gun mounted in said crosshead so as to be capable of elevation and depression, a cam member secured to the pivot and a lever mounted on the gun and coöperating with the cam member to limit the elevation and depression of the gun.

1,300,305. TUBULAR ELECTRICAL CONDUCTOR. WILLIAM HANDLEY, Providence, R. I., assignor to Tubular Woven Fabric Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Aug. 1, 1916. Serial No. 112,597. 4 Claims. (Cl. 173—264.)

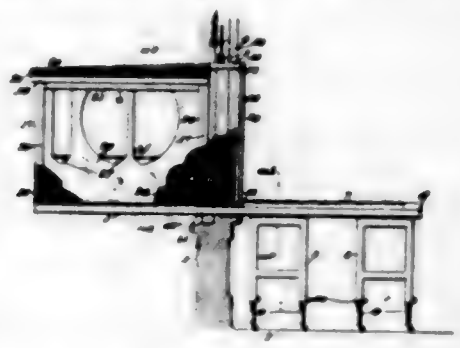


1. A seamless woven tube having as its weft strands a plurality of conductors and a plurality of non-conductors arranged in alternation, the non-conducting strands being between the conducting strands, and longitudinally extending warp threads interwoven with both the conducting and the non-conducting weft strands.

1,300,306. WINDOW-BED. EMMET J. HENRY, Cedar Rapids, Iowa. Filed June 25, 1917. Serial No. 176,888. 11 Claims. (Cl. 5—4.)

2. In a window-bed, the combination of a bed-frame, a canopy attached thereto, rigid, upstanding wings hinged

to the sides of the canopy at the inner end, braces to hold said wings at right angles to the canopy, and a rigid, horizontal flap hinged to the top of the canopy near the



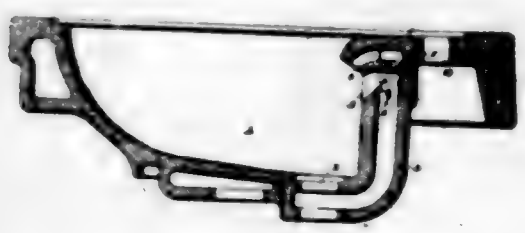
inner end, the side wings serving as closures and abutments at the sides of the canopy, by overlapping the window casing, and the top flap abutting the lower rail of the raised sash.

1,300,267. AUTOMATIC DOOR-ACTUATING HINGE. LYMAN O. HIGLEY, Williston, N. D. Filed Feb. 1, 1918. Serial No. 214,822. 3 Claims. (Cl. 268—9.)



1. The combination with a swinging door, of an actuating hinge therefor, comprising a fulcrum shifter pivotally mounted at the lower hinge corner of the door, a hinge head on the door detachably fulcrumed against said fulcrum shifter at points on opposite sides of the door, means for oscillating said fulcrum shifter to cause the door to swing from closed to open positions, and conversely, a latch for securing said fulcrum shifter in its extreme positions while the door is in intermediate positions, and latch trips carried by the door and operative to release the latch in the extreme open and closed positions of the door.

1,300,268. LAVATORY. WINFIELD E. HINSDALE, Trenton, N. J. Filed Nov. 9, 1917. Serial No. 201,152. 8 Claims. (Cl. 4—1.)



1. In a one-piece lavatory, the combination of a basin; a slab; an overflow; independent inlets for hot and cold water arranged on opposite sides of the upper portion of the overflow; and a mixing chamber above the overflow into which the inlets discharge, said chamber in turn discharging into the basin, the side walls of the overflow forming the inner walls of the inlets, the upper wall of the overflow forming the bottom wall of the mixing chamber, and the slab, adjacent the mixing chamber forming the upper wall of said chamber, all of the walls being of substantially uniform thickness.

1,300,269. MANUFACTURE OF QUICK-SETTING KEENE'S CEMENT. WILLIAM HOSKINS, Chicago, Ill., assignor to The Best Brothers Keene's Cement Company, Medicine Lodge, Kans., a Corporation of Kansas. Filed May 13, 1918. Serial No. 234,257. 4 Claims. (Cl. 106—34.)

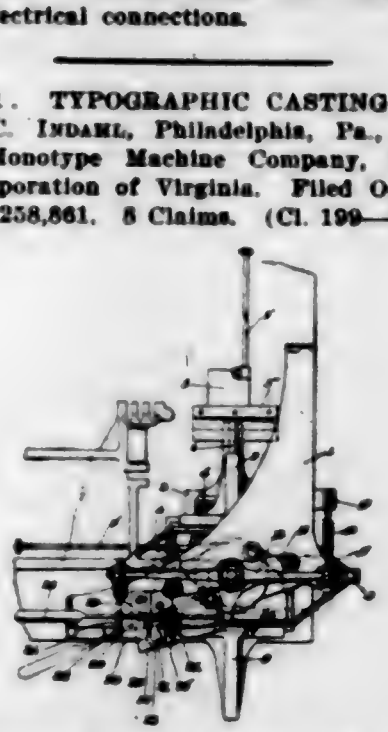
1. A quick-setting grade of Keene's cement comprising an admixture of finely-divided calcined gypsum, and a catalyst comprising a salt containing an amount of acid in excess of that necessary for the formation of a normal salt and not exceeding one-half of that necessary for the formation of an acid salt.

1,300,270. ELECTRIC PLUG-RECEPTACLE. WILLIAM ILE, Toronto, Ontario, Canada. Filed Feb. 19, 1917. Serial No. 149,458. 3 Claims. (Cl. 173—335.)



3. A plug receptacle, comprising, a plug of insulating material threaded externally and having a recess in the inner end, a threaded metal casing encircling said plug, a bolt extending through said insulated center, a metal member secured to said bolt and fitting into the recess in said plug, threaded metal socket shells having inturned flanges at the upper ends, metal strips rigidly secured at one end to said plug casing and at the other end to the flange ends of said socket shells, central contacts for each of said sockets secured to the central metal member and insulated from said casings, and a unitary mass of insulating material molded around and embedding said shells and electrical connections.

1,300,271. TYPOGRAPHIC CASTING-MACHINE. MAURITZ C. INDAHL, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Oct. 19, 1918. Serial No. 258,861. 8 Claims. (Cl. 199—76.)

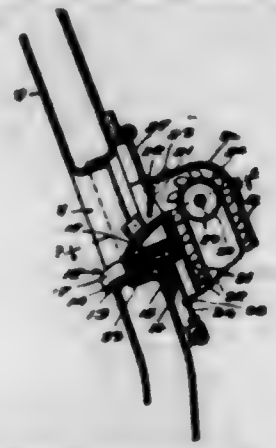


1. A type casting machine provided with a matrix case and means for moving it, and in combination therewith, a buffer for preventing abnormal movement of the case and means for removing the buffer to inoperative position and moving the case to abnormal position.

1,300,272. FUEL-DISTRIBUTING APPARATUS. ROBERT E. JACKSON and BYRD O. YEARWOOD, Princeton, W. Va. Filed Jan. 9, 1918. Serial No. 211,058. 7 Claims. (Cl. 110—104.)

1. In fuel distributing apparatus of the character described, a substantially transversely flat lower plate provided with forwardly diverging upstanding flanges which

cover the entire area of the forward portion of said lower plate and adapted for insertion within the door opening of a fire box, a fluid pressure supply nozzle arranged rearwardly of and near the flanges, means to supply fluid pressure to the nozzle, and an inclined guide plate arranged near and above the rear portions of the flanges with the forward portions of the flanges projecting forwardly beyond the same for a substantial distance, said inclined guide plate having its surface spherically curved.



2. Fuel distributing apparatus of the character described, comprising a plate adapted to be arranged in the door opening of a fire-box and having forwardly diverging upstanding flanges, a swinging fluid pressure supply nozzle arranged rearwardly of and near the flanges, an inclined guide-plate disposed near and above the nozzle and terminating at the rear ends of the flanges to supply fuel thereto, means to supply fuel upon the inclined guide-plate, and means to move the swinging nozzle.

3. Fuel distributing apparatus of the character described, comprising a plate adapted to be arranged in the door opening of a fire-box and having forwardly diverging upstanding flanges, a swinging fluid pressure supply nozzle arranged rearwardly of and near the flanges, an inclined guide-plate arranged near and above the nozzle and having a depending approximately V-shaped flange which diverges forwardly and is adapted to be arranged in close relation to the first named plate, means to move the nozzle, and means to supply fuel to the inclined plate.

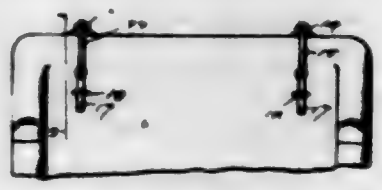
4. Fuel distributing apparatus of the character described, comprising a plate having forwardly diverging upstanding flanges, a swinging fluid pressure supply nozzle arranged rearwardly of and near the flanges, a guide plate arranged near and above the nozzle and adapted to discharge fuel upon and between said flanges, a depending flange carried by the guide-plate and adapted to be arranged in close relation to the first named plate, means to supply fuel to the guide-plate, and an angularly arranged deflector plate disposed near and above the guide-plate.

5. In fuel distributing apparatus of the character described, a lower plate provided with forwardly diverging upstanding flanges and adapted for insertion within the door opening of a fire box, a fluid pressure supply nozzle arranged rearwardly of and near the flanges, means to supply fluid pressure to the nozzle, an inclined guide plate arranged near and above the rear portions of the flanges with the forward portions of the flanges projecting forwardly beyond the same for a substantial distance, said inclined guide plate having its surface spherically curved, and a horizontally swinging deflector arranged approximately centrally of the spherically curved surface of the guide plate and disposed near and above the same.

1,300,272. ROBE-HOLDER CLAMP. BERT JACOBS, Waterloo, Iowa. Filed Apr. 4, 1918. Serial No. 226,761. 3 Claims. (Cl. 21—61.)

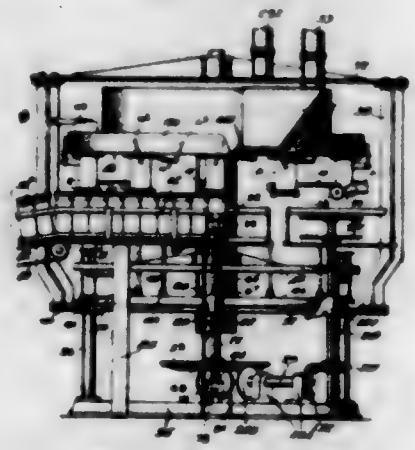
1. A robe holder comprising an attaching member, supporting members carried by said attaching member and bent to form hooks for engagement with the upper edge of the seat, straps connected to said supporting members and clamps carried by said straps.

2. A robe holder comprising an attaching member consisting of a pair of adjustable sections, means slidably connecting said sections together, teeth formed on one of said sections, an eccentric lever having teeth pivoted to the other section and adapted to coöperate with the teeth and locking the sections against movement, means securing the attaching member to a seat, straps connected to said means, and clamps carried by said straps.



3. A robe holder comprising an attaching member, supporting members connected to the attaching member and engaging the upper edge of the seat, a bracket hinged to the attaching member, a set screw carried by said bracket and adapted to be turned into engagement with the lower edge of the seat, straps secured to the supporting members and clamps connected to the straps.

1,300,274. FILLING APPARATUS. FREDRICK L. JEFFRIES and WILLIAM SPAIN, Riverside, Ill., assignors to Corn Products Refining Company, a Corporation of New Jersey. Filed Sept. 10, 1917. Serial No. 190,545. 86 Claims. (Cl. 73—153.)



1. In a machine for filling receptacles, the combination of a revoluble structure on which the receptacles are carried during the filling operation, a guideway for the empty receptacles, a forwarding wheel provided with projections adapted to move the receptacles upon said revoluble structure, and means actuated with said forwarding wheels for moving said receptacles in succession from the guideway into position to be engaged by the forwarding wheel.

2. In a machine for filling receptacles, the combination of a revoluble structure on which the receptacles are carried during the filling operation, a guideway for the empty receptacles, a forwarding wheel provided with projections adapted to move the receptacles upon said revoluble structure, and a reciprocating follower actuated with said forwarding wheel for moving said receptacles in succession from the guideway into position to be engaged by said forwarding wheel.

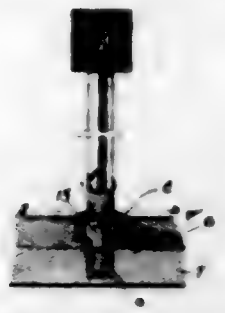
3. In a machine for filling receptacles, the combination of a revoluble structure on which the receptacles are carried during the filling operation, a guideway for the empty receptacles, a forwarding wheel provided with projections adapted to move the receptacles upon said revoluble structure, a reciprocating follower to move the receptacles in succession from the guideway into position to be engaged by said forwarding wheel, a shaft to which the forwarding wheel is secured, a cam on said shaft, a slide actuated by said cam, and a spring returned lever connecting the slide with said follower.

4. In a machine for filling receptacles, the combination of a scale, a scale plate adapted to receive an empty receptacle, means for depositing a charge of material into the receptacle while the receptacle is on said plate, and

means for holding said scale plate out of operative relation with the scale while the charge is being deposited in the receptacle.

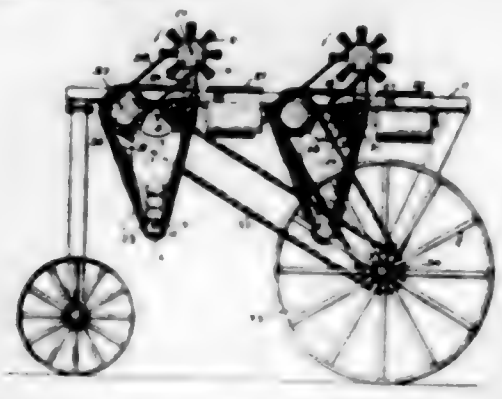
5. In a machine for filling receptacles, the combination of a revoluble structure on which the receptacles are carried during the filling operation, a scale, a scale plate adapted to receive an empty receptacle, means for depositing a charge of material into the receptacle while the receptacle is on said plate, and means actuatd by the movement of the revoluble structure for holding said scale plate out of operative relation with the scale while the charge is being deposited in the receptacle.

1,300,275. SCREW-THREADED FASTENING. CARL F. JOHNSON, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 8, 1914. Serial No. 860,047. 4 Claims. (Cl. 145—50.)



1. As a new article of manufacture, a screw having a threaded body and a driving end portion of substantially circular contour, said driving portion provided with one and only one longitudinal hole located eccentrically with reference to the axis of the screw.

1,300,276. COTTON-PICKER. FRANK EDWARD JOHNSON, Dallas, Tex. Filed Feb. 9, 1918. Serial No. 216,218. 13 Claims. (Cl. 56—6.)



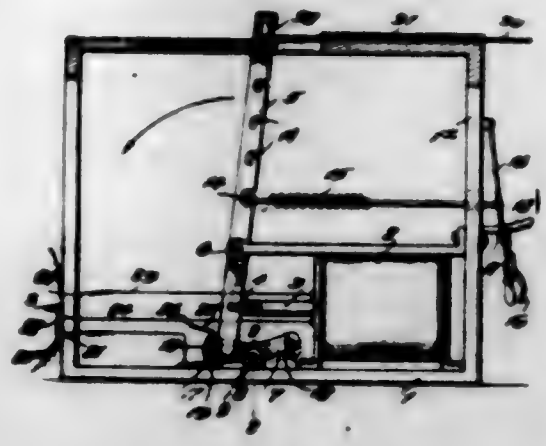
1. A cotton picker including a pendulum suspended from its upper end, a traveling picker element arranged over and carried by the pendulum, and means for propelling the picker element.

10. A cotton picking machine including a plurality of separate endless picker elements having cotton picking means thereon and mounted to form pendent loops of graduated length.

13. A cotton picking machine including a wheeled frame, a plurality of cotton picking units carried by said frame, each unit including a plurality of separate independently operating tensioned looped belts having cotton picking means thereon, and a conveyer arranged transversely of the frame adjacent the upper end of the said belts, and means for removing the cotton from the cotton picking means of said belts and depositing the same on said transverse conveyer belts.

1,300,277. ELECTRIC RECIPROCATING DEVICE. CHARLTON JOHNSTON, Richmond, Va. Filed Apr. 16, 1917. Serial No. 162,458. 3 Claims. (Cl. 172—126.)

1. A reciprocating device comprising an arm pivotally mounted on a fixed bracket, an electro-magnetic device for moving the arm in one direction, a constantly acting tension device moving the arm in the opposite direction, when the energizing force of the electro-magnetic device has terminated, means for permitting the adjustment of the leverage of said tension device, means for adjusting the tension of said tension device in any of its shifted positions, means controlled by the movement of the arm for cutting off the current through the electro-magnetic device at the end of the movement of the arm in one direction and for turning on the current at the end of the movement in the other direction, said means comprising a rock arm having a lug at each end arranged to be engaged by the first mentioned arm, a stationary contact, and a contact carried by one end of said arm and arranged to engage said stationary contact during the movement of the arm.



2. A reciprocating device comprising a pivoted arm, an electro-magnetic device for moving the arm in one direction and a constantly acting tension device moving the arm in the opposite direction when the energizing force of the electro-magnetic device has terminated, said tension device comprising a spring, means carried by the pivoted arm for permitting the adjustment of the leverage of the spring on the arm, a lever connected to the opposite end of the spring, means for shifting said last named lever and for locking it in its shifted position, a rocker arm having lugs arranged to be engaged by said pivoted arm at its end to shift the rocker arm and a pair of contacts adapted to be opened and closed by the shifting of the rocker arm.

1,300,278. ALARM-CLOCK. GEORGE KERN, Peru, Ill., assignor to Western Clock Co., La Salle, Ill., a Corporation of Illinois. Filed Feb. 12, 1918. Serial No. 216,779. 6 Claims. (Cl. 58—90.)

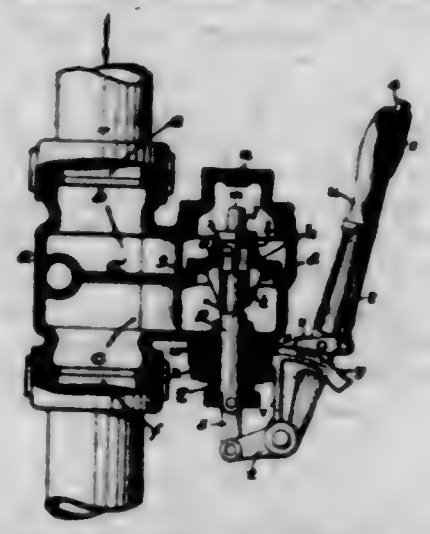


1. In an alarm clock, a clock movement, a protective case having apertures and means for retaining said movement, arbors from said movement projecting into said apertures, members each having an aperture through which said arbors project and means for holding said members against the edges of the said apertures in said protective case.

1,300,279. PROCESS OF MAKING ALLOY STEEL. ALAN KISSOCK, Tucson, Ariz. Filed Aug. 23, 1918. Serial No. 251,780. 12 Claims. (Cl. 75—1.)

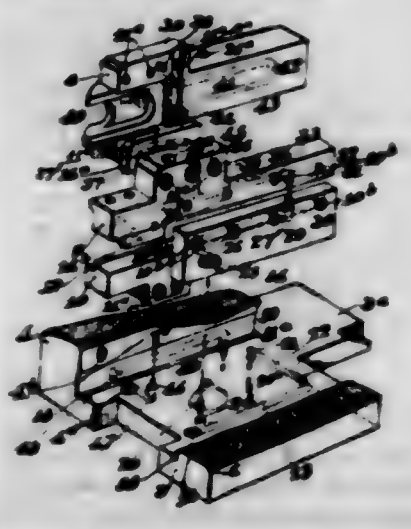
1. The process of making alloy steel which comprises reducing a suitable salt of an alloying metal by subjecting the salt to furnace temperatures for a protracted period in the presence of fused steel by the carbon or silicon contained in the steel acting directly upon the salt whereby the alloying metal is reduced directly from the salt and immediately enters the steel without the preliminary conversion into a ferro alloy of the alloying metal of the salt preparatory to its introduction into the steel.

1,300,280. STARTING-VALVE MECHANISM. STRICKLAND L. KNIGHT, Philadelphia, Pa., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 22, 1917. Serial No. 170,182. 5 Claims. (Cl. 277—36.)



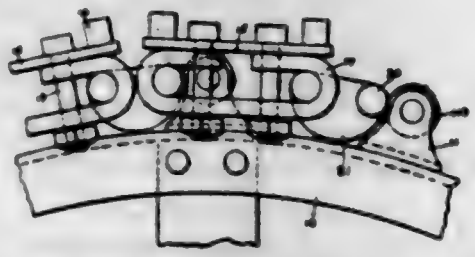
2. Starting valve mechanism comprising a valve casing having inlet and outlet passages, a septum separating said passages and provided with a port, a main valve seated on the septum, a secondary valve of lesser area seated upon the main valve, each valve adapted to be returned to its seat after being opened and to be held thereon by fluid pressure, the main valve having a central bore and the secondary valve having a body loosely fitting the bore and a head of larger diameter the lower face of which is adapted when the secondary valve is closed to seat upon the upper face of the main valve surrounding its bore, the body of the secondary valve being solid for a relatively short distance from its head and thence cut away and the central bore of the main valve being counterbored from its upper end for a distance somewhat less than the length of the solid part of the body of the secondary valve.

1,300,281. FLUID-PRESSURE APPARATUS, AMOS L. KNIGHT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 29, 1917. Serial No. 188,780. 5 Claims. (Cl. 199—56.)



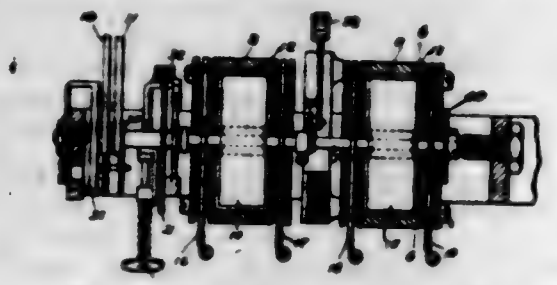
4. A fluid-cooled typographic mold comprising base and type blocks, means for securing said blocks together to form a mold cavity adapted to receive molten type metal, said securing means being located at one side of said mold cavity, said blocks being provided with a cooling fluid duct intersecting the joint between said blocks, and a groove in the said joint intermediate the said duct and the said mold cavity to direct away from said mold cavity cooling fluid escaping through said joint from said duct.

1,300,282. CHAIN TREAD FOR TRACTORS. JOHN W. LAMBERT, Anderson, Ind. Filed Oct. 4, 1918. Serial No. 256,855. 5 Claims. (Cl. 21—150.)



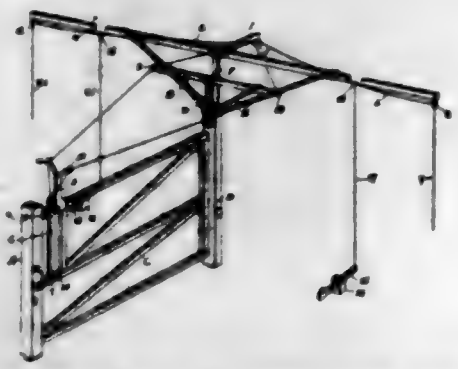
1. A chain tread for tractors, including tread plates, a pair of parallel main links secured on each tread plate so as to project therefrom and leave a space between them adapted to receive the tooth of the drive wheel of the tractor, and connecting links for uniting the main links on adjacent tread plates, each connecting link projecting inwardly so that it will constitute a tooth for coöperating with the teeth on the drive wheel of the tractor.

1,300,283. MEASURING INSTRUMENT. PAUL M. LINCOLN, Pittsburgh, and BENJAMIN H. SMITH, Turtle Creek, Pa.; said Smith assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 5, 1917. Serial No. 159,925. 10 Claims. (Cl. 171—306.)



9. An electrical instrument comprising an indicating member, two thermal-responsive spring members attached to the indicating member, and adapted to exert opposing actions thereon, and means for equalizing the heat dissipation from the two thermal-responsive members.

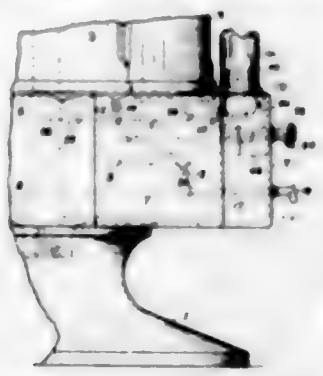
1,300,284. FARM-GATE. EMANUEL BAKER LONG and DEWEY FRANKLIN LONG, Crane Valley, Saskatchewan, Canada. Filed Apr. 12, 1918. Serial No. 228,231. 1 Claim. (Cl. 89—34.)



In combination, a pair of vertical gate posts, a gate positioned therebetween and hinged to one of the same for horizontal swinging movement, a keeper carried by one of said posts opposite the free end of said gate, a latch pivoted to said gate and coöperating with said keeper, a pair of vertical bars carried by the post to which said gate

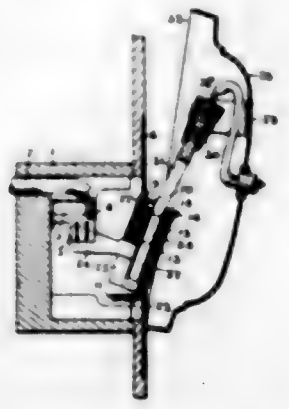
is hinged, one of said bars being longer than the other, a horizontal bar provided with eyes at the ends thereof and rigidly carried by the shorter of said vertical bars to project an equal distance beyond each side thereof, a second longer horizontal bar provided with eyes at the ends thereof and rigidly carried by the upper end of said longer vertical bar, a third relatively short horizontal bar having a pair of eyes at the free end thereof, and having its other end rigidly secured to said second horizontal bar to extend at right angles to the latter in a direction away from said gate, a plate attached to the free end of the gate provided with a pair of eyes spaced apart and positioned above the top of said gate, a vertical slidable draw-bar mounted on said gate and connected at its lower end to said latch, and a pair of cords threaded through the eyes carried by said bars and said plate and attached to said draw-bar whereby each cord may be independently pulled to operate said draw-bar and thereby release said latch from said keeper substantially as described.

1,300,285. LIQUID-VENDING DEVICE. ALEXANDER MCDONALD, Duluth, Minn. Filed Feb. 11, 1918. Serial No. 216,583. 3 Claims. (Cl. 225—21.)



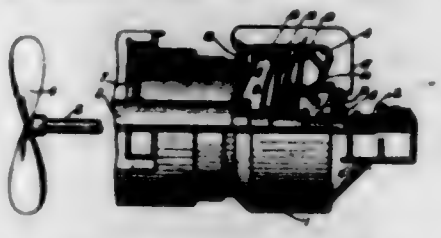
1. The combination with a liquid vending device of the character described having a valve controlled measuring cup in coöperative relation therewith, of a container carrying a plurality of nested drinking cups in upright position, two parallel horizontally disposed manually reciprocable rods adjacent the measuring cup, cup supporting means coöperatively associating one of the rods with the cup container valve controlling means coöperatively associating the other rod with the measuring cup and means intermediate of said rods whereby the operation of the former controls the operation of the latter.

1,300,286. ELECTRICAL-FITTING CONNECTION. JOHN ANDREW MCKAY, Toronto, Ontario, Canada. Filed July 1, 1918. Serial No. 242,916. 6 Claims. (Cl. 173—330.)



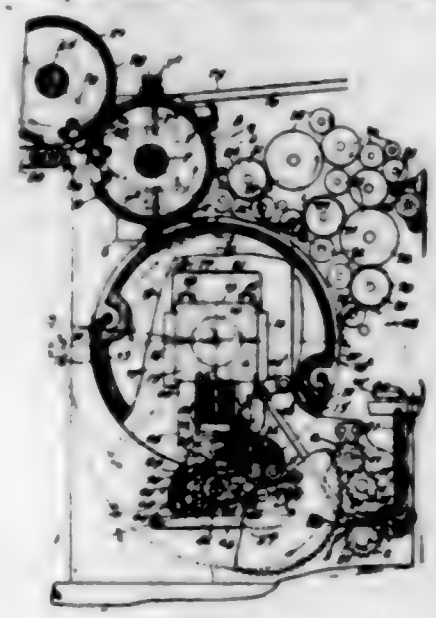
1. An electrical fitting connection comprising a fixed member having electrical contacts, a member pivotally supported from said fixed member and having a pair of electrical contacts adapted to engage said fixed contacts, a pair of contacts pivotally mounted in the fitting and electrically connected and adapted to engage the contacts in said pivotal member.

1,300,287. MARINE STEAM-TURBINE. JOHN F. METTEN, Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company, a Corporation of Pennsylvania. Filed Sept. 9, 1915. Serial No. 49,661. 8 Claims. (Cl. 253—69.)



1. In a steam turbine drive for a ship, the combination with a propeller shaft having a driving thrust in one direction of a series of steam turbine stages for driving said shaft and mounted on a drum having an axial thrust opposite to the driving thrust of said propeller shaft, a plurality of turbine wheel stages driving said shaft, said drum stages being substantially greater in number than said wheel stages so as to increase the efficiency of the drive, and means for exerting a counter thrust to counterbalance the excess of said drum thrust and permit the relatively large number of drum stages, comprising means for reducing the rearward pressure on one of said wheels.

1,300,288. TRIPPING MECHANISM FOR PRINTING-PRESSES. ROBERT MIEHLE, Chicago, Ill. Filed Mar. 28, 1917. Serial No. 157,979. 59 Claims. (Cl. 101—247.)

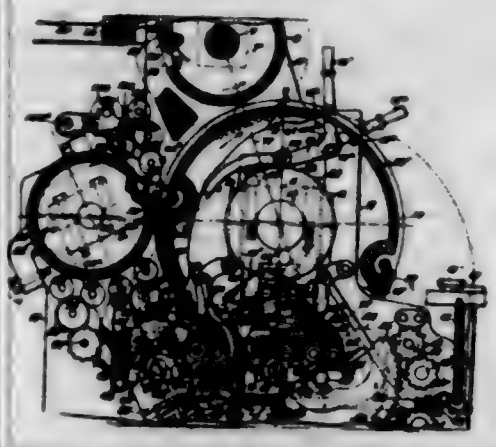


5. A rotary printing press including a printing couple one of whose members is a rotary form cylinder that is mounted for tripping movement along a diametrical line of the cylinder; inking mechanism substantially included in a quadrant of a circle having its center included in the normal axis of the cylinder and margined by said diametrical line, said printing couple including an impression cylinder in the other quadrant of the same half circle with the inking mechanism; tripping mechanism for tripping the form cylinder out of printing relation with the impression cylinder and substantially out of inking relation with the inking mechanism, the diametrical line along which the form cylinder moves dividing said half circuit into said quadrants; and automatic mechanism for restoring said form cylinder to printing position during the same revolution in which it is tripped.

21. In a printing press, the combination with a movably mounted cylinder, of press actuated mechanism in operative relation therewith adapted to trip and restore the same, and controlling mechanism for said press actuated mechanism and adapted to be positioned to allow said press actuated mechanism to function to trip and while in this position to be engaged by said press actuated mechanism to render the same inoperative to restore at a later

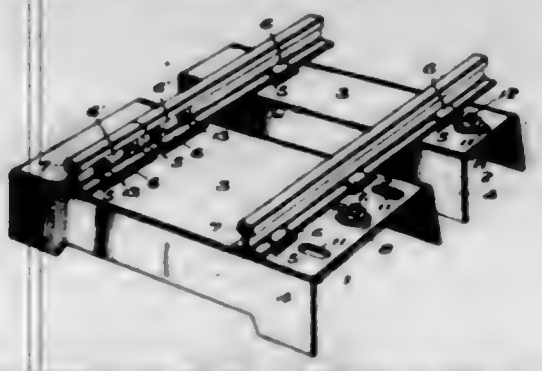
period in the cycle of operation than that in which said press actuated mechanism was allowed to function to trip.

1,300,286. TRIPPING MECHANISM FOR ROTARY PRINTING-PRESSES. ROBERT MIEHLE, Chicago, Ill. Filed Apr. 13, 1917. Serial No. 161,699. 40 Claims. (Cl. 101—144.)



1. A printing press including a cylinder; means for moving the cylinder into and out of operative position; a second cylinder; means for effecting tripping movement of the second cylinder; a coupler for connecting the second cylinder with its tripping mechanism; and mechanism for operating the coupler to disconnect the second cylinder from its tripping mechanism and operable by the first cylinder when in operating position.

1,300,290. COMBINED TIE AND JOINT. PHILIP R. MOORE, McHenry, Miss. Filed Jan. 10, 1918. Serial No. 211,155. 3 Claims. (Cl. 238—5.)



1. A combined railway tie and joint comprising coacting locking members each provided with an opening and with a lug at one edge of the opening; one of said members being adapted to be associated with the other member, the lug on one member passing through the opening in the other member and juxtaposed to the lug on the other member to receive and to retain a rail flange; and automatic means for locking the members when so assembled.

1,300,291. INDICATOR FOR OIL-PUMPS. GEORGE W. MORRIS, Racine, Wis. Continuation of application Serial No. 866,030, filed Oct. 10, 1914. This application filed Jan. 15, 1918. Serial No. 72,229. 4 Claims. (Cl. 116—81.)



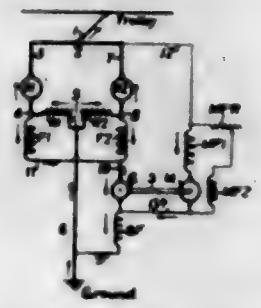
1. An indicator for oil pumps and the like, comprising a casing forming a cylinder with an enlargement at its ends and a valve seat between said enlargement and the bore of the cylinder, a plunger fitting in the bore of the cylinder and having an enlargement on one end forming a valve adapted to be seated on the valve seat, an oil pump connection communicating with the interior of the enlargement of the casing, a front plate on the end of the casing, there being a recess in the other end of the plunger, a flanged plunger stem within the recess and bearing at one end against the plunger with its other end passing through the front plate, and a spring surrounding the plunger stem and bearing against the flange thereof and against the front plate respectively.

1,300,292. BABY-WALKING DEVICE. AGHASIR OSHANA, Mason City, Iowa. Filed Mar. 1, 1918. Serial No. 219,836. 1 Claim. (Cl. 155—45.)



A baby walking device comprising a pair of spaced parallel horizontal superimposed members, vertical members connecting the horizontal members adjacent to the ends thereof, a forwardly projecting bar secured to the central portion of and extending at right angles to the lower member, an inclined brace connecting the forward end of the bar to the central portion of the upper member, and rollers mounted on the lower surface of the lower member adjacent to the terminals thereof and on the free end of the bar, as and for the purpose specified.

1,300,293. SYSTEM OF CONTROL. LAURENCE M. PERKINS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1916. Serial No. 88,788. 10 Claims. (Cl. 172—179.)



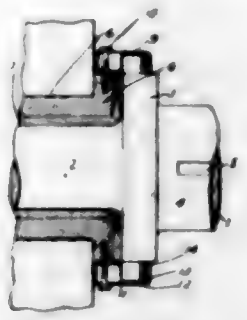
1. In a system of control, the combination with a momentum-driven main dynamo-electric machine having an armature and a field-magnet winding, of an auxiliary self-excited, substantially constant-speed dynamo-electric machine for exciting said field winding and inherently adapted to vary the field-winding current in substantially inverse proportion to the main machine-speed while maintaining the resistance of the field-winding circuit unchanged.

2. In a system of control, the combination with a momentum-driven main dynamo-electric machine having an armature and a field-magnet winding, of a self-excited auxiliary generating substantially constant-speed machine having series characteristics for exciting the main field winding while maintaining the resistance of the field-winding circuit unchanged.

3. In a system of control, the combination with a momentum-driven main dynamo-electric machine having an armature and a field-magnet winding, of a normally-non-variable translating device, and an auxiliary generating machine having an armature and a series-related field winding connected to excite the main field winding through said non-variable translating device until a predetermined

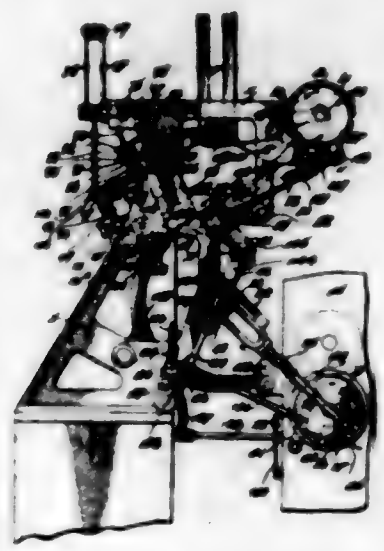
degree of saturation obtains in the auxiliary machine, to inherently maintain a substantially constant regenerated voltage.

1,300,294. GUARD FOR ROTATABLY-MOUNTED MEMBERS. ALEXIS R. PRIBIL, Cleveland, Ohio, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 19, 1917. Serial No. 181,525. 15 Claims. (Cl. 64—22.)



1. A guard for a rotatably mounted member comprising nesting trough-shaped members having their side walls spaced apart and a layer of absorbent material located between adjacent walls of said members.

1,300,295. COLLATING-FEEDER. CARL G. PRITCHARD, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Mar. 21, 1916. Serial No. 85,653. 108 Claims. (Cl. 270—18.)

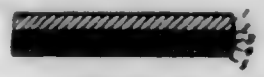


1. In a collating feeder, the combination with means for segregating a predetermined plurality of sheets of impression-receiving material from each of a plurality of separate piles and associating same in a common pile, of means for feeding the sheets from the common pile in proper succession.

8. In a collating feeder, the combination with means for segregating a predetermined plurality of sheets of impression-receiving material from each of a plurality of separate piles and associating same in a common pile in predetermined order, of means for varying the respective numbers of separate sheets so fed from the different piles in each cycle of operation.

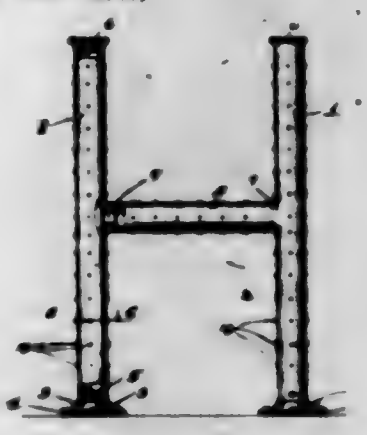
40. In a collating feeder, the combination with means for segregating sheets of impression-receiving material from a plurality of separate piles in predetermined order, of means for moving certain segregated piles in one direction to a common pile, means for moving other segregated piles in another direction to the common pile, both said pile-moving means operating in predetermined order, and means for feeding the sheets from the common pile to a printing or like machine.

1,300,296. METHOD OF PRODUCING IRON SHEETS BY ELECTRICAL DEPOSITION. JOSEPH H. PROCTER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 7, 1917. Serial No. 190,113. 4 Claims. (Cl. 204—8.)



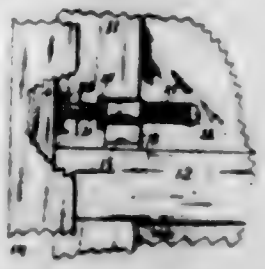
3. A coherent composite structure consisting of alternate layers of electro-deposited metal, an oxid and non-metallic material.

1,300,297. STOCK-OILER. GLEN RANDALL, Mitchell, Nebr. Filed Aug. 5, 1918. Serial No. 248,382. 1 Claim. (Cl. 119—157.)



A stock oiler comprising a pair of parallel columns of hollow construction, a brace pipe disposed horizontally and having its ends connected to the said columns approximately intermediate the ends thereof, the said columns and said pipe having a plurality of openings formed therein, and inwardly movable valve means mounted in the said openings and resiliently held to extend beyond the said pipe and columns when in operative position.

1,300,298. SASH-LOCK. FRANK T. ROBINSON, Louisville, Ky. Filed Aug. 6, 1917. Serial No. 184,642. 3 Claims. (Cl. 16—122.)



1. In a device as characterized, a standard carrying a bearing a screw-threaded bolt mounted in said bearing and adapted to have longitudinal and lateral movement therein, a nut positioned on the bolt on one side of the bearing, and a coiled spring disposed about the bolt on the other side of the bearing.

2. In a device for locking the sashes of windows, a standard adapted to be secured to the upper rail of the lower sash, said standard being formed of a sheet of metal bent into tubular form at its center forming an interiorly smooth bearing then extending in two parallel juxtaposed side members, said side members then bent outward so as to rest on the sash to which they are secured, a threaded bolt slidably mounted in said bearing and adapted to have a slight lateral movement therein, a coil spring disposed about said bolt between the head thereof and said bearing, a nut disposed on the bolt on the opposite side of the bearing from said spring and a fixed contact foot on the bolt.

3. In a device as characterized, a standard, a bearing disposed thereon in a plane parallel with the base thereof, a screw threaded locking bolt slidably mounted in and pro-

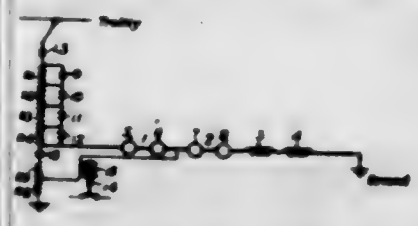
jecting beyond the ends of said bearing, a head on one end of said bolt and adapted for the application directly thereto of manual pressure, a fixed contact foot on the other end of the bolt, the bolt having a slight lateral movement in the bearing which allows the foot to cant slightly permitting the edge thereof to bite into the surface with which it contacts, and a nut disposed on the bolt.

1,300,299. DITCHER AND GRADER. FRIDRICH OTTO SCHLUETER, Scribner, Nebr., assignor of one-half to Henry Schlueter, Scribner, Nebr. Filed Jan. 24, 1918. Serial No. 213,510. 3 Claims. (Cl. 37—29.)



3. In a machine of the class described, a wheel, a series of shovels separately rockable thereon, a series of toggle levers connected with the respective shovels, pinions, the turning of which actuates said toggle levers, a second series of levers, toothed segments on the second series of levers and meshing with said pinions, and a relatively fixed cam with which the levers of the second series engage for actuating said levers by the turning of the wheel relatively to said cam.

1,300,300. SYSTEM OF CONTROL. KARL A. SIMMON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 4, 1916. Serial No. 82,100. 12 Claims. (Cl. 172—179.)



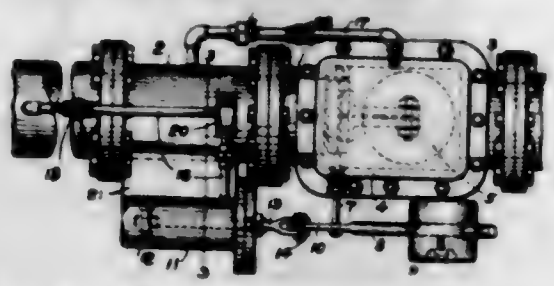
1. In a system of control, the combination with a plurality of electric motors in series-circuit relation and a plurality of resistors connected in shunt to the motors, of means connected between the resistors and the motor terminals for breaking the circuit of said motors in case the relative potentials across the motor terminals vary.

2. In a system of control, the combination with a supply circuit, a plurality of motors connected across said supply circuit, and a plurality of accelerating resistors associated with the motors, of means for disconnecting the motors from said supply circuit in case the relative potentials across the motor terminals vary substantially and for preventing the operation thereof till the accelerating resistors are inserted in circuit therewith.

5. In a system of control, the combination with a supply circuit, a plurality of motors connected in series to said supply circuit and a controller for governing the operation of said motors, of means connected to said controller for automatically disconnecting said motors from the supply circuit in case the relative potentials across the different motor terminals vary and for preventing the operation of the motors till the controller is moved to the off position.

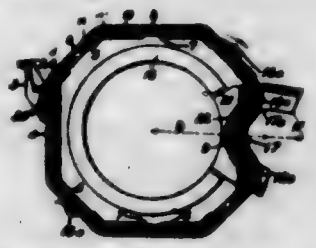
11. In a system of control, the combination with a line circuit, a plurality of motors, a plurality of resistors adjacently disposed and connected in series with said motors across the line circuit, and a plurality of auxiliary resistors connected in series with the first named resistors and in shunt to said motors, of relays for bridging the circuits of said auxiliary resistors and of said motors, and means controlled by said relays for breaking the motor circuit in case the relative potentials across the motor terminals vary substantially.

1,300,301. EMERGENCY SHUT-OFF VALVE. ROSCOE L. SMITH, Berwick, Pa. Filed June 30, 1917. Serial No. 178,008. 3 Claims. (Cl. 67—115.)



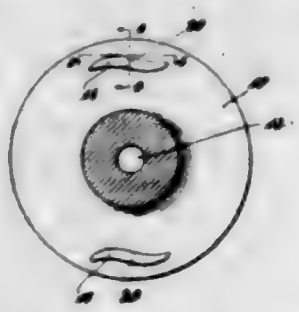
1. In an emergency shut-off apparatus, the combination of a valve casing; a switch valve closing in the direction of the flow; a shaft for the valve extending outside of the casing and having a crank arm; a cylinder; a piston therein subject to the fluid pressure from the outlet side of the valve and having a rod connection to the crank for holding the valve open; a weighted lever arm tending to close the valve; and a hand controlled by-pass for admitting fluid from the inlet side around the valve to the outlet side.

1,300,302. DYNAMO-ELECTRIC MACHINE. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Sept. 10, 1914. Serial No. 860,974. Divided and this application filed Sept. 27, 1916, Serial No. 122,386. Renewed Oct. 17, 1918. Serial No. 258,619. 24 Claims. (Cl. 105—134.)



1. The combination with a dynamo-electric machine frame having a peripheral recess, of a separable axle-bracket having surfaces conforming to said recess and located therewithin, and means for securing the axle-bracket to the frame.

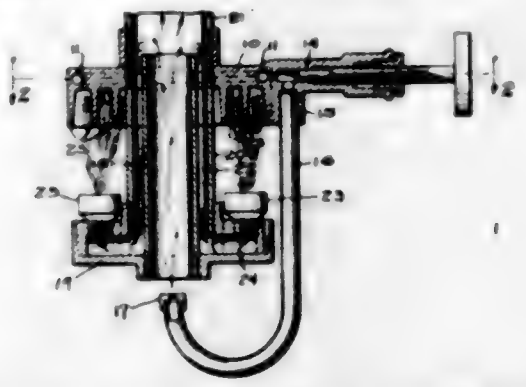
1,300,303. TROLLEY-WHEEL. ANTONI TOMASZAK, Cohoes, N. Y., assignor of forty one-hundredths to Jozef Skowyra, Cohoes, N. Y. Filed Oct. 20, 1917. Serial No. 197,556. 2 Claims. (Cl. 191—63.)



1. A trolley harp wheel, having an integral body and containing an annular recess receptive of a trolley wire, of

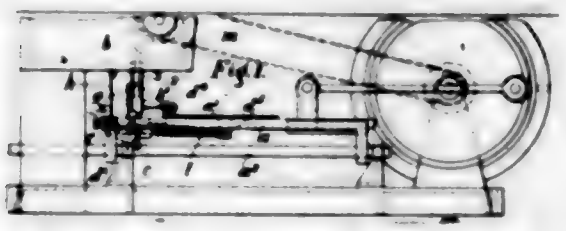
a plurality of spaced arcuate spring elements secured in said body, said elements extending outwardly from the mentioned recess, a stem formed with said elements passing through the sides of the pulley and means for clamping said stems in an adjusted position thereto.

1,300,304. GASOLENE-GENERATOR. CHARLES A. TRIPP, Indianapolis, Ind., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind., a Corporation. Filed July 24, 1916. Serial No. 110,933. 5 Claims. (Cl. 158—58.)



2. A gasolene generator including a heated member for receiving and converting gasolene into gas, a conduit extending upwardly through said heated member and through which the gas passes after it has been mixed with air, a flash pan secured to said conduit burners carried by said flash pan and located under the heated member which are in communication with the lower end of said gas conduit, a mixer tube carried by the flash pan and extending through the lower part of said gas conduit to said heated member and smaller than said conduit so as to leave a chamber around said tube for the gas to descend and supply said burners, and a conduit for conveying the gas from said heated member and discharging it upwardly into the lower end of said mixing tube.

1,300,305. CORK-CUTTING MACHINE. JAMES TYRIE and ARTHUR GREGG, Belfast, Ireland. Filed Aug. 1, 1918. Serial No. 247,726. 10 Claims. (Cl. 144—2.)

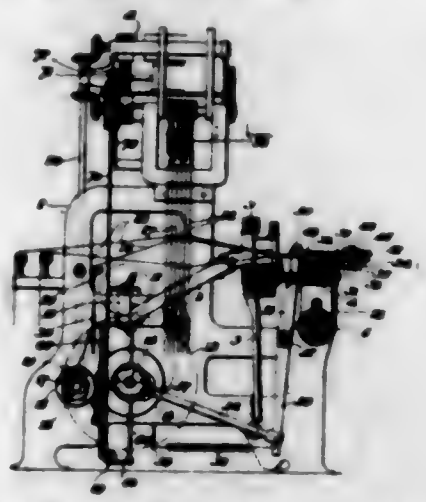


1. A cork docking machine comprising a framework, a receptacle for the corks being operated on, reciprocable cutting means in the framework, means for conducting the corks from the receptacle and for controlling their delivery to the cutting means, an adjustable support for the corks when same are delivered to the cutting means, and means for holding the cork during the cutting operation.

1,300,306. LOOM FOR WEAVING AND CUTTING PILE FABRICS. ANDRE VELUARD, Philadelphia, Pa. Filed Oct. 6, 1917. Serial No. 195,011. 16 Claims. (Cl. 139—62.)

1. In a loom for weaving pile fabrics, the combination of the loom frame, a pile wire extending in the direction of the warp threads, mechanism for weaving pile fabric having pile floats of weft threads extending over said wire, a knife adjacent to said wire and movable independently thereof for cutting the pile floats, a pattern mechanism, and means comprising a cam mechanism controlled by the pattern mechanism for actuating said knife.

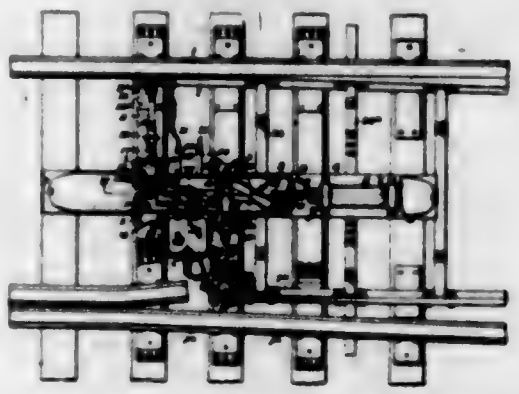
6. In a loom for weaving pile fabrics, the combination of the loom frame, pile wires extending in the direction of the warp threads, mechanism for weaving pile fabric having pile floats extending over said wires, said mechanism including a lay and its reciprocating means, knives adjacent to said wires and movable longitudinally and independently thereof for cutting the pile floats, and means adapted to reciprocate said knives during certain reciprocations of the lay only, said knives remaining idle during other reciprocations of the lay.



7. In a loom for weaving pile fabrics, the combination of the loom frame, pile wires extending in the direction of the warp threads, mechanism for weaving pile fabric having pile floats extending over said wires, knives adjacent to said wires for cutting the pile floats, a knife actuating bar to which said knives are connected, a rotatable shaft, means to rotate said shaft, a cam carried by said shaft and movable into and from an operative position, means to move said cam into its operative position at certain intervals, and means operated by said cam when it is in its operative position to actuate said bar.

10. A pile wire terminating in an end member having a channel formed therein provided with an overhanging side wall, and a pile cutting knife slidable in the channel and having a rib projecting laterally beneath said wall and retaining the knife within the channel.

1,300,307. RAILWAY-SWITCH-OPERATING APPARATUS. JAMES M. WALDRON, Englewood, N. J., and JOHN P. COLEMAN, Edgewood borough, Pa. Filed Dec. 12, 1917. Serial No. 206,725. 5 Claims. (Cl. 246—158.)



1. In combination, a railway switch having switch rails the points of which are staggered longitudinally with relation to the track; and a switch operating mechanism comprising a motion plate movable in a direction substantially parallel to the track and having two longitudinally spaced cam slots, and two operating members one for each switch rail and coöperating with said said two cam slots respectively.

2. In combination, a railway switch having switch rails the points of which are staggered longitudinally with relation to the track; and a switch operating mechanism comprising two members connected with said switch rails respectively adjacent the points thereof and disposed substantially at right angles to the rails, a me-

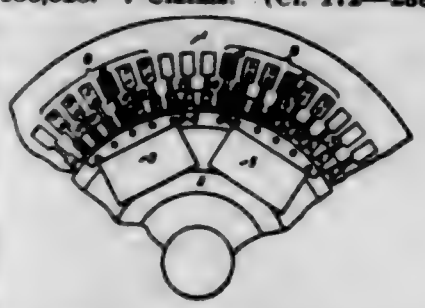
tion plate movable longitudinally with respect to said rails and having two longitudinally disposed cam slots coöperating with said two members respectively, and means for reciprocating said motion plate.

3. In combination, a railway switch comprising movable switch rails rigidly connected by tying members for simultaneous movement; and means for moving said switch rails in reverse directions comprising two operating members one for each switch rail for moving the switch rail toward the corresponding stock rail but not for movement of the switch rail in the other direction.

4. In combination, a railway switch comprising movable switch rails rigidly connected by tying members for simultaneous movement; and an operating mechanism comprising operating members one for each switch rail, a socket attached to each switch rail and having a recess opening toward the middle of the track, and a head on each operating member coöperating with the bottom of said socket recess to positively drive the switch rail toward and hold it against the adjacent stock rail.

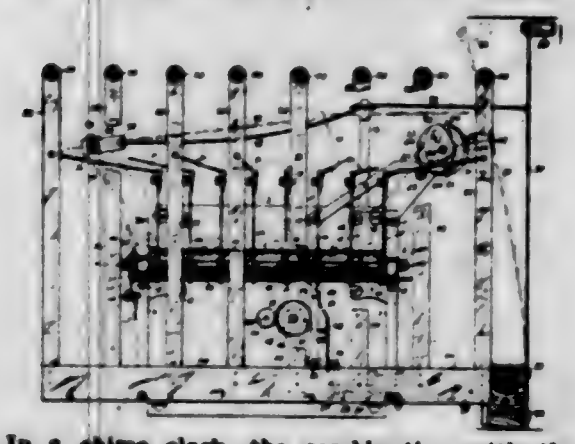
5. Railway switch operating apparatus comprising a rod connected with a rail of the switch, a rod connected with the switch operating mechanism, and a stirrup-shaped weak member the arms of which are connected with one of said rods and the cross-piece of which is attached to the other rod.

1,300,306. ELECTRICAL CONVERTER. MILES WALKER, Manchester, England. Filed Dec. 23, 1916. Serial No. 138,528. 7 Claims. (Cl. 172—238.)



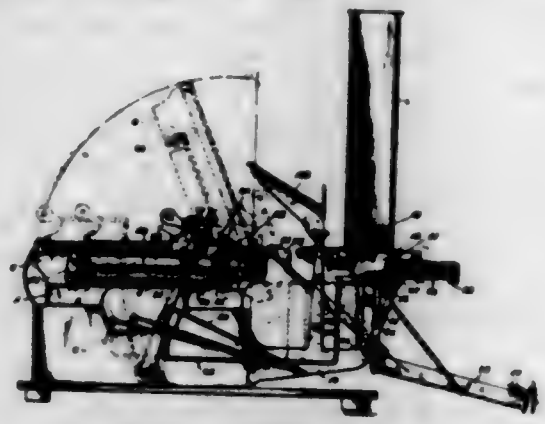
1. The combination with a dynamo-electric machine provided with two armature windings, of means for supplying alternating current to one of said windings, means for deriving alternating current of different nature from the other of said windings, and means for neutralising the magnetic reaction of said derived current upon said supplied current, said neutralising means being energised in accordance with the supply current, whereby the effect thereof is substantially proportional to said supply current.

1,300,309. CHIME-CLOCK. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Jan. 12, 1918. Serial No. 211,505. 16 Claims. (Cl. 58—18.)



1. In a chime clock, the combination with the time-train thereof, of a chime-barrel having two sets of chime-pins, chime-hammers, and barrel-shifting means connecting the said time-train with the said barrel at a point between the pins thereof for shifting the barrel to cause one or the other set of chime-pins to operate the said chime-hammers.

1,300,310. DUPLICATING-MACHINE. JOHN B. WEST, Syracuse, N. Y. Filed May 20, 1911. Serial No. 628,390. 60 Claims. (Cl. 101—56.)

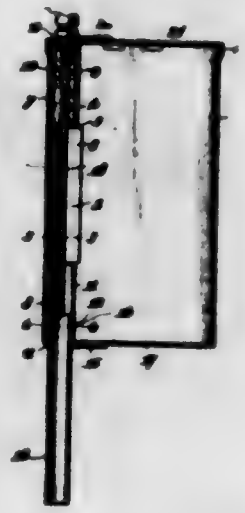


1. In a duplicating machine, a stationary type bed, a magazine for holding printing plates to be fed one by one to the type bed, a chute between the magazine and the type bed, the printing plates being slidable along the chute in one direction to the type bed, and being slidable in the opposite direction along a portion of the chute, the chute having an exit for the printing plates when the same are passing from the type bed and also means for covering the exit during the movement of the printing plates to the type bed, substantially as and for the purpose described.

54. In a printing machine, the combination of a platen and a bed for a form, the one mounted to travel reciprocatively to the other, an inking ribbon over said bed, means for placing successive address forms on the bed, and means controlled by the mentioned traveling element for lifting the ribbon to permit entrance of a form.

60. Two coöperating printing elements, one a type form and the other a movable platen, a plurality of filling in type holders adapted to be placed successively in printing position in said form, means for feeding said holders successively longitudinally with the movement of said platen into said form, means for conducting said holders successively from said form, an inking ribbon between said platen and the type in the form, said ribbon being movable transversely to the line of movement of said platen between said platen and form and means for raising said ribbon automatically above the type in the form after each stroke of the platen to allow said holders to be freely adjusted longitudinally in the form and below the ribbon.

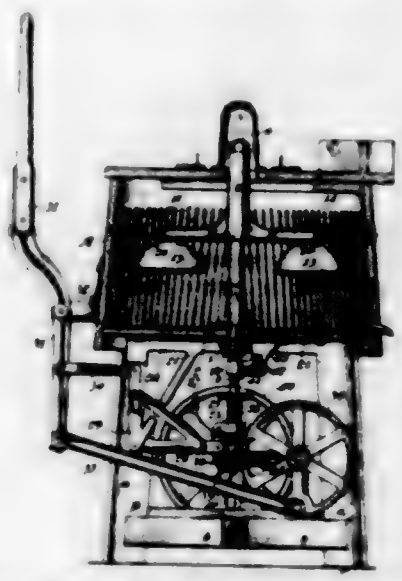
1,300,311. CIGARETTE-MAKER AND TOBACCO-CONTAINER. FRANK E. WHITE, New Haven, Conn. Filed Mar. 15, 1918. Serial No. 222,691. 4 Claims. (Cl. 131—5.)



1. In a device for the purpose set forth, the combination with a container, of a cigarette former including a packing tube secured adjacent one side wall of said container and having a central longitudinal opening communicating with the container, a former tube removable

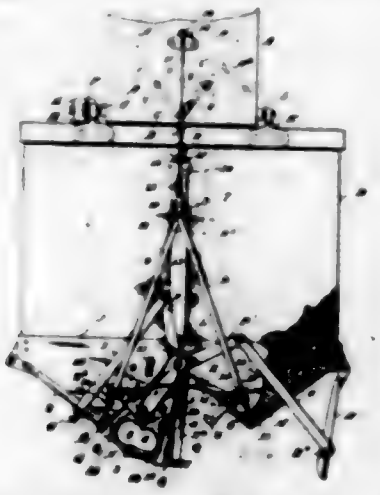
from but slidable in the packing tube, means for locking said former tube to the packing tube when the former tube is partly withdrawn from the packing tube, and a plunger for the packing tube operable exteriorly of the container and removable from the container, and designed when in inoperative position to be received in the former tube, when the latter is wholly received in the packing tube.

1,300,312. MECHANICAL MOVEMENT. SAMUEL T. WHITE, Davenport, Iowa. Filed Sept. 30, 1916. Serial No. 122,972. 10 Claims. (Cl. 74—14.)



1. Mechanism of the kind described comprising a suitable support, a vertically reciprocable shaft extending up through the bottom of said support, vertically vibrating devices carried by the upper end of said shaft, mechanism below said receptacle for simultaneously revolving said balance-wheel and reciprocating said shaft, and means including a crown-ratchet secured to said shaft, and a pendent pivoted pawl adapted to engage said ratchet when said shaft is moving upward and imparts an intermittent rotating movement thereto.

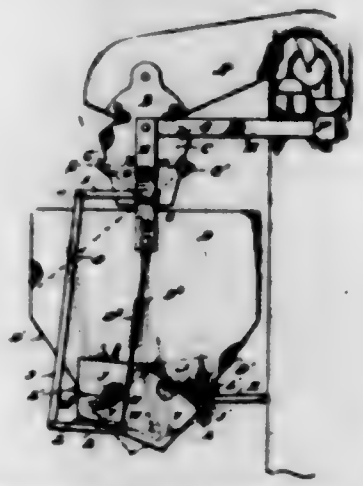
1,300,313. WEIGHER. EDWARD WIEDINGER, Peoria, Ill. Filed Apr. 14, 1917. Serial No. 162,016. 25 Claims. (Cl. 73—168.)



2. A weighing hopper including in its construction, a partition dividing it into two compartments each open at its bottom, closures hinged parallel to one another, one at each of two outer walls, the axis of movement of each being parallel to the partition, and a closure pivoted beneath the partition parallel to it adapted to close either compartment in conjunction with one of the first named closures.

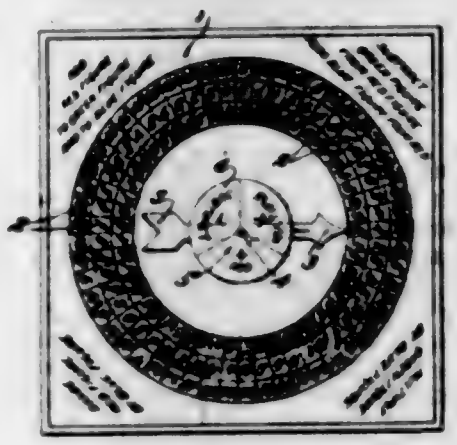
1,300,314. GRAIN-WEIGHER. EDWARD WIEDINGER, Peoria, Ill. Filed Feb. 9, 1914. Serial No. 817,630. Renewed Sept. 19, 1918. Serial No. 254,802. 17 Claims. (Cl. 73—168.)

3. A grain weigher including in its construction a hopper having two compartments, a valve or gate pivoted on the hopper adapted for closing one or the other of the compartments, a grain delivering part overhanging the hopper, a valve pivoted therein adapted to divert grain to one or the other of the hopper compartments including an arm to operate it, a lever pivoted on the hopper having an



upper short arm and a lower longer arm, the pivot of the lever being spaced widely from a line drawn between the pivots of the valves, and a link connected to each end of the lever, whereby each can have operative engagement with one of the valves.

1,300,315. GAME-BOARD AND SPINNER DEVICE. ALLEN B. WILDER, St. Louis, Mo., assignor to Wilder Patents Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 4, 1917. Serial No. 205,276. 10 Claims. (Cl. 46—63.)



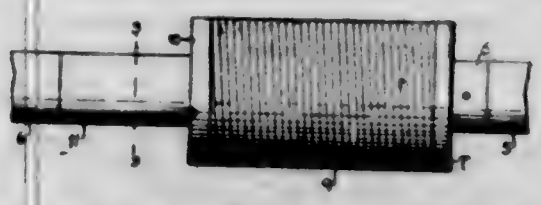
1. A spinner device comprising a dial bearing series of numbers arranged in concentric bands, a pointer pivotally mounted at the center of said bands, and a disk concentric with said pointer and having frictional engagement therewith, said disk being divided into differentiated sectors.

9. The combination with a playing board comprising zones and a continuous path traversing said zones, of a spinner device comprising a plurality of bands bearing numbers and a plurality of indicator elements pivotally mounted at the center of said bands, and having frictional engagement with each other, whereby the spinning of one of said elements causes the other to spin part of the distance with it, said spinner device determining the distance the player moves along said path.

1,300,316. POWER-TRANSMISSION MEANS. GEORGE W. WILKIN and JOHN P. KEE, Grangeville, Idaho. Filed Jan. 19, 1918. Serial No. 212,652. 1 Claim. (Cl. 64—66.)

The combination with the shaft sections, of a flexible joint connecting said sections including joint members each consisting of a disk, one of said members being rigidly fixed to one shaft section, the other of said disks being provided with a sleeve extending from one side thereof having spaced longitudinally extending keys, the other of the shaft sections being provided with complementary

grooves to receive said keys whereby the joint member is connected for rotation with the shaft section and for longitudinal movement with respect thereto, and a flat metal spring having its coils normally in contacting engagement with each other and the ends of said spring being fixed



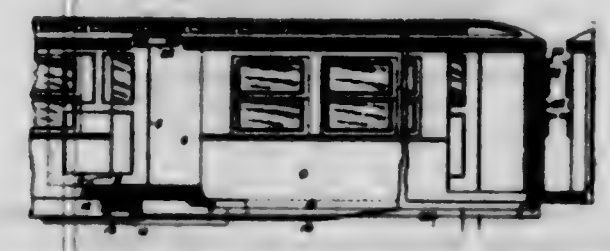
to the disks of the respective joint members, said spring being of the same external diameter as the diameter of said disks and strongly resistant to torsional stresses but permitting of a yielding axial displacement of the shaft sections.

1,300,317. HAND-BRAKE. KEITH WILLIAMS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 27, 1918. Serial No. 231,026. 2 Claims. (Cl. 188—54.)



1. In a winding mechanism of the character described, the combination with a rotatable winding drum, of pawl and ratchet mechanism including an operating handle movable in a plane parallel to the axis of the drum, gearing operatively interposed between said ratchet mechanism and one end of the drum for rotating the latter upon actuation of said ratchet mechanism; and means for operating said drum directly from its opposite end.

1,300,318. CAR-DOOR SAFETY DEVICE. ANNA K. WINTER, Brooklyn, N. Y. Filed Oct. 1, 1917. Serial No. 194,218. 5 Claims. (Cl. 180—82.)



1. In a car, the combination with the side having a doorway and a door slidable to close the doorway, of a sill plate pivoted at the doorway beneath the door so as to be held operatively disposed thereby in its closed position and arranged to be depressed by a passenger when the door is open, and means for arresting the closing movement of the door that is caused to operate by the said depression of the sill plate.

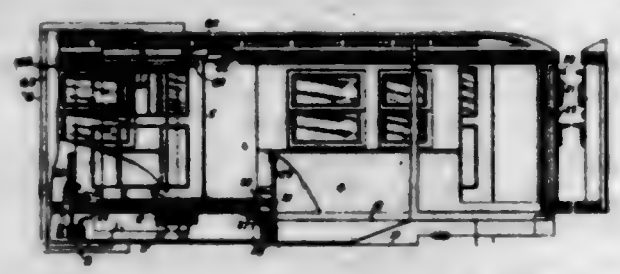
2. In a car, the combination with the side having a doorway and a door slidable to close the doorway, of a sill plate pivoted at its inner end in the doorway and beneath the door in its closed position and arranged to be depressed by a passenger when the door is open, means for arresting the closing movement of the door that is caused to operate by the said depression of the sill plate, said means including a contact carried by the opposite end of the sill plate for closing an electric circuit, and a signal device included in the circuit and located at a part of the car remote from the doorway, that is operated by the sill plate of the door during the closing movement of the door.

3. In a car, the combination with the side having a doorway, and a door slidable to close the doorway, of a sill plate located at the doorway beneath the door in closed position and arranged to be depressed by a passenger when the door is open, a toothed rack on one edge of the door, a pawl on the car arranged to engage the teeth of the rack when swung from normal position, a bell crank for sliding the pawl to engage the rack and arrest the closing movement of the door, and a magnet included in a circuit closable upon the depression of the sill plate for rocking the bell crank.

4. In a car, the combination with the side having a doorway, and a door slidable to close the doorway, of a sill plate located at the doorway beneath the door in closed position and arranged to be depressed by a passenger when the door is open, a toothed rack on the lower edge of the door, a vertically movable, spring actuated pawl on the car arranged to engage the teeth of the rack when moved from normal position, an electro-magnet arranged to shift the pawl to engage the rack, an electric circuit including said magnet, and a switch in said circuit normally open but arranged to be closed on depression of the sill plate by the passenger whereby the electro-magnet will swing the pawl into the rack and arrest the closing movement of the door.

5. In a car, the combination with the side having a doorway, and a door slidable to close the doorway, of a sill plate located at the doorway beneath the door in closed position and arranged to be depressed by a passenger when the door is open, a toothed rack on the lower edge of the door, a vertically slidable pawl on the car arranged to engage the teeth of the rack when moved from normal position, a bell crank lever having the pawl seated on one arm, an electro-magnet arranged to attract the other arm of the bell crank lever to shift the pawl to engage the rack, an electric circuit including said magnet, a switch in said circuit normally open but arranged to be closed on depression of the sill plate by the passenger whereby the electro-magnet will swing the pawl into the rack and arrest the closing movement of the door, and a signal light at a remote part of the car connected with said circuit to be lighted when it is closed by the sill plate.

1,300,319. CAR-DOOR SAFETY DEVICE. ANNA K. WINTER, New York, N. Y. Filed Oct. 28, 1918. Serial No. 259,917. 4 Claims. (Cl. 70—50.)

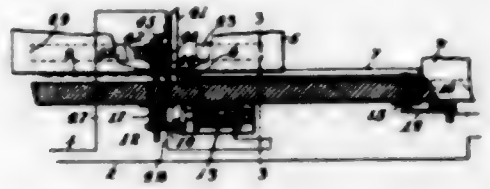


1. In a car, the combination with the side having a doorway and a door slidable to close the doorway, and a sill plate pivoted at the doorway beneath the door in its closed position and arranged to be depressed by a passenger when the door is open, and means for arresting the closing movement of the door that is effected by the said depression of the sill plate, of means for disabling said arresting means by the door when brought to the fully open and to the fully closed positions.

1,300,320. CAR-DOOR SWITCH CONTROL. ANNA K. WINTER, New York, N. Y. Filed Nov. 15, 1918. Serial No. 262,657. 10 Claims. (Cl. 70—50.)

1. In a car, the combination with the side having a doorway and a door slidable to close the doorway, and a sill plate pivoted at the doorway beneath the door so as to

be held operatively disposed thereby in its closed position and arranged to be depressed by a passenger when the door is open, and means for arresting the closing move-



ment of the door that is caused by the said depression of the sill plate, of means for disabling said arresting means by the opening movement of the door from any position.

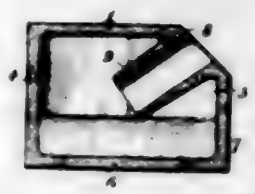
1,300,321. NECKTIE-TYING FORM. BUSHROD W. J. WOFFORD, Italy, Tex. Filed Apr. 26, 1918. Serial No. 230,972. 2 Claims. (Cl. 2—84.)



1. A necktie tying form comprising a split flexible sleeve having a reinforcing stay and an opening in one of its walls for receiving one end of the necktie.

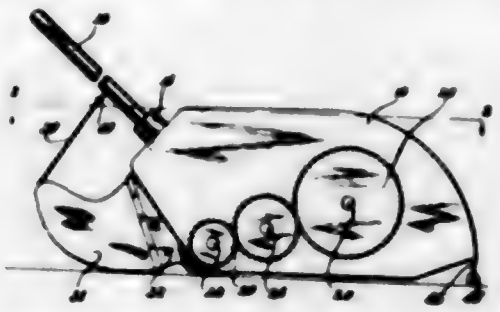
2. A necktie tying form comprising an elongated split sleeve curved laterally and having openings at one side through which the necktie is threaded, the free side of the sleeve overlapping the side receiving the tie.

1,300,322. INK-WELL. MARTIN WYKA, Buffalo, N. Y. Filed Sept. 8, 1916. Serial No. 119,019. 1 Claim. (Cl. 120—57.)



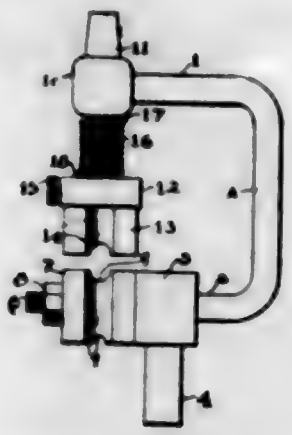
An ink well of cubical shape adapted to have any of three sides serve as its bottom and having an internal open-ended tube opening at its outer end at a corner formed by three sides of the well and being directed toward the diagonally-opposite corner formed by the remaining three sides of the well.

1,300,323. CARPET-CLEANER. ALEXANDER ZDANCEWICZ, Lansford, Pa. Filed June 8, 1918. Serial No. 238,840. 1 Claim. (Cl. 15—60.)



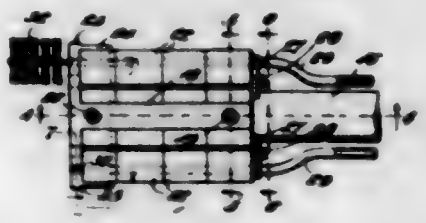
In a carpet sweeper of the character described, having a curved front edge, enlargements to both sides of said front edge containing curved cylindrical openings or channels, slotted extensions at the lower ends of said enlargements, rods frictionally engaging the inner walls of said channels, a roller at the lower end of said rods, and limit pins set in the inner sides of said rods adapted to be operated within the slot of said extensions, substantially as described, and for the purpose set forth.

1,300,324. SWAGE ATTACHMENT FOR ANVILS. ABRAHAM L. AMON, South Bend, Ind. Filed July 11, 1918. Serial No. 244,423. 2 Claims. (Cl. 78—7.)



1. A swage attachment for anvils including an upright frame formed with upper and lower superposed lateral arms, a base block at the end of the lower arm, a positioning tang projecting downwardly from the base block and adapted to enter the opening of the anvil, a horizontal stem projecting from the end of the base block, a polygonal swage block rotatably mounted upon the stem and formed with a series of grooved faces any selected one of which can be rotated upwardly into operative position, the lowermost face of the swage block resting upon and engaging the anvil to hold the swage block in an adjusted position while the device is in use, a vertical guide sleeve carried by the upper arm, a spring retracted plunger slidable through the guide sleeve, and an upper swage block carried by the plunger for coöperation with the first mentioned swage block.

1,300,325. FINISHING-TOOL. FREDERICK BAUMANN, Philadelphia, Pa., assignor, by direct and mesne assignments, of seven thirty-seconds to himself, seven thirty-seconds to Norman T. Whitaker, Washington, D. C., seven thirty-seconds to Leopold Baumann, Sr., Philadelphia, Pa., and eleven thirty-seconds to Herbert J. Browne, Washington, D. C. Filed Apr. 8, 1918. Serial No. 227,263. 4 Claims. (Cl. 77—58.)

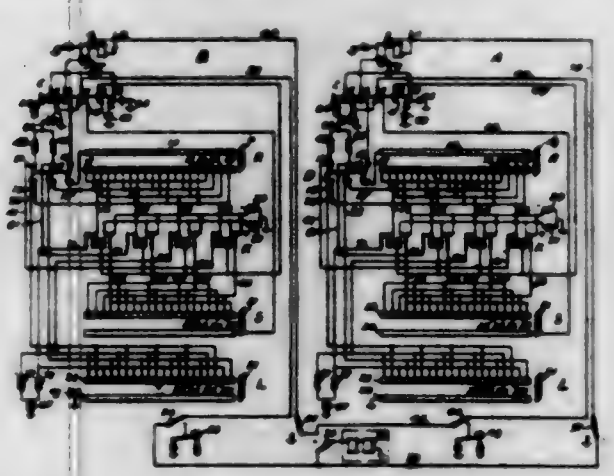


1. A finishing reamer comprising a head, a plurality of wood segments having the grain thereof disposed radially with respect to said head, the wood segments being spaced from each other, and a cutting elements carried by said head.

2. A finishing reamer comprising a head, a plurality of wood segments having the grain thereof disposed radially with respect to said head, the wood segments being arranged in rows, the rows being spaced from each other, and a cutting element carried by said head.

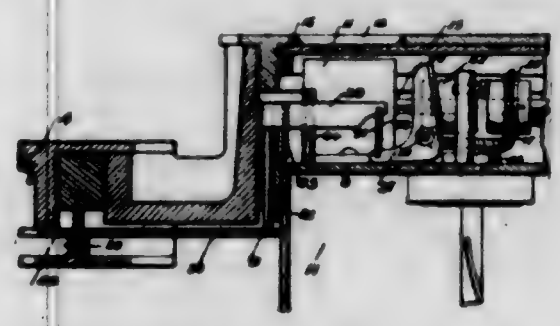
4. A finishing reamer comprising a head provided with a plurality of grooves, a plurality of wood segments arranged in rows within said grooves, the wood segments having the grain thereof disposed radially with respect to said head and spaced from each other and a cutting element carried by said head.

1,300,326. TELEGRAPH SYSTEM. JOHN H. BELL, East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 29, 1917. Serial No. 199,040. 15 Claims. (Cl. 178—71.)



2. In a telegraph system, the combination with a plurality of line sections; sources of current; distributer equipment comprising three segmented divisions respectively corresponding with receiving, sending and clearing out operations, and a plurality of relays each interconnected to be effective from a plurality of segments in each of said distributer divisions; and means effective through said distributer equipment for repeating telegraphic impulses between said line sections.

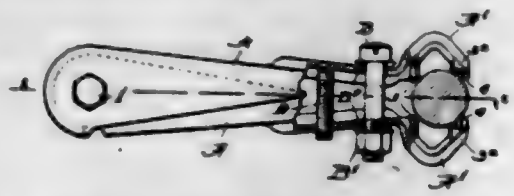
1,300,327. TANK-REGISTERING DEVICE. HENRY J. BENJAMIN, New York, N. Y. Filed Apr. 21, 1916. Serial No. 92,628. 2 Claims. (Cl. 235—94.)



2. In a device of the class described, in combination, a container, said container having an inlet opening, a rotatable shaft, a float associated with said shaft to control the rotation thereof as liquid is inserted or withdrawn from said container, a pair of shafts mounted to rotate in axial alinement, a driving connection between said first mentioned shaft and one shaft of said pair of shafts, a registering device adapted to be operated by the other one of said pair of shafts, clutch mechanism adapted to operatively connect said pair of shafts, a closure member for said container adapted when positioned to close the latter to operate said clutch mechanism to operatively disconnect the shafts comprising said pair, and means when said closure member is removed from said container for automatically connecting the shafts comprising said pair.

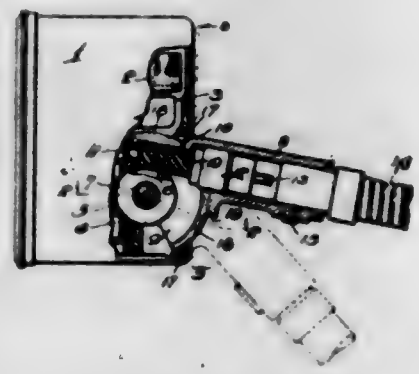
1,300,328. VEHICLE-LAMP-SUPPORTING CLAMP. JOSEPH BERG, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Dec. 8, 1917. Serial No. 206,109. 5 Claims. (Cl. 24—248.)

3. A clamp comprising two jaw members pivotally connected for swinging apart and toward each other; jaws rigid with said members respectively, means for forcing the jaws toward each other, consisting of a clamping bolt set through the clamp members between the jaws and their pivotal connections, and a fulcrum bolt mounted between said clamping bolt and the clamp pivot, suitably engaged



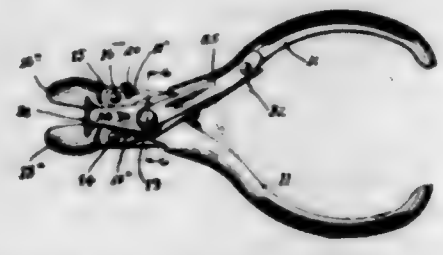
with said clamp members for crowding them apart at the point at which said fulcrum bolt is situated.

1,300,329. ADJUSTABLE DRIVE FOR SPEEDOMETERS. JOSEPH BERG, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Dec. 22, 1917. Serial No. 208,421. 5 Claims. (Cl. 235—96.)



3. In a speedometer comprising a casing and a rotary shaft journaled therein, a drive shaft and a support in which it is journaled hinged to said casing for angular adjustment relatively thereto, and means operatively connecting said drive shaft and rotary shaft throughout the range of such angular adjustment.

1,300,330. HAND-TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollborn Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 31, 1916. Serial No. 128,720. 12 Claims. (Cl. 30—24.)

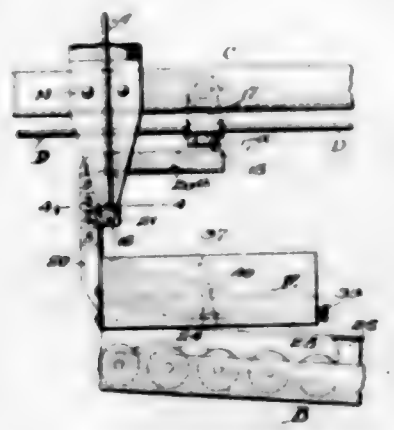


1. In a fruit clipper, the combination of cup-shaped jaws, means for operating said jaws, and a stop separate from the jaws extending into the cup shaped space presented by said jaws and arranged transversely thereof for determining the point in the length of the cutting edges at which the cutting action shall take place; substantially as described.

1,300,331. CONVEYER. MORRIS U. BERNHEIM, Cincinnati, Ohio, assignor to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 7, 1918. Serial No. 257,264. 20 Claims. (Cl. 198—16.)

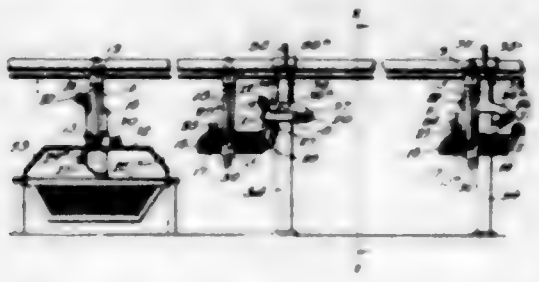
1. A conveyer comprising a plurality of traveling carriers, a plurality of containers, means for suspending the

containers from the carriers, respectively, each including coöperating elements on the container and carrier constructed to be freely released from each other when the container is stopped and the carrier allowed to proceed, to thereby detach the container from the carrier, and means for stopping the containers selectively at predetermined stations, including stops arranged variously at the stations respectively and elements coöperating with



the stops and movable with the containers and adjustable with relation to the stops, to be engaged by the latter or to pass the same according to the positions to which they have been adjusted, respectively.

1,300,332. CONVEYER. MORRIS U. BERNHEIM, Cincinnati, Ohio, assignor to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 7, 1918. Serial No. 257,265. 11 Claims. (Cl. 186—16.)

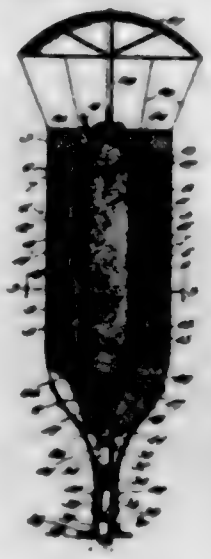


1. A conveyer, comprising a traveling pivotally suspended support for the matter being conveyed, a tiltable sending station, means controlled by the support for permitting the sending station to dump its contents upon the support and for restoring the sending station to its initial position, respectively, and means for automatically tilting the support to discharge its contents, including an element carried by the support and an element to engage the same and retard the movement of the support with relation to the movement of the carrier.

1,300,333. EXPLOSIVE SHELL. LEROY A. BERRY, Allston, Mass. Filed Apr. 8, 1918. Serial No. 227,329. 13 Claims. (Cl. 102—2.)

1. An explosive shell comprising a front and a rear section, said rear section being movable toward and rotatable on said front section when the latter strikes an object, said front section having anchoring means effective when said section strikes, missiles carried by said rear section, explosive means for projecting said missiles, and means operable by the movement of said rear sections toward said front sections for firing said explosive means.

13. An explosive shell comprising a front and a rear section rotatably connected, said rear section being adapted for rotation upon said front section when the latter strikes an object, and said front section having anchoring means effective when said section strikes, missiles carried by and projectible from said rear section, and



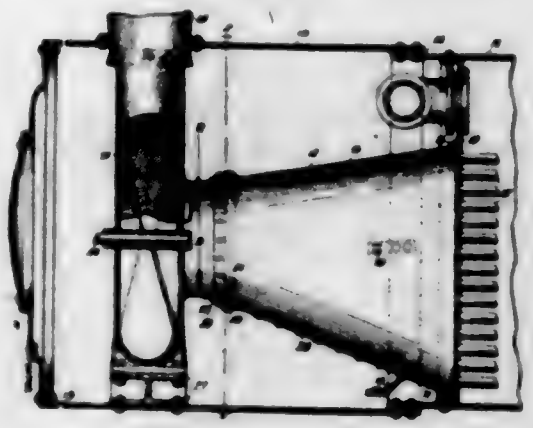
substantially helical vanes on said rear section acted upon by the air during the travel of the shell to rotate said rear section.

1,300,334. VISIBLE AND EXPANSIBLE CARD-INDEX. JOHN AUSTIN BEST, Augusta, Ga. Filed Feb. 16, 1918. Serial No. 217,720. 3 Claims. (Cl. 129—16.7.)



1. A card index consisting of a plurality of cards, each of which has means along one edge thereof to form a space adjacent and along said edge arranged to receive a portion of the next adjacent card at one side thereof, for the purpose described.

1,300,335. DRAFT DEVICE FOR LOCOMOTIVES. WILLIAM J. BOHAN, St. Paul, Minn. Filed Apr. 7, 1917. Serial No. 160,380. 1 Claim. (Cl. 110—162.)



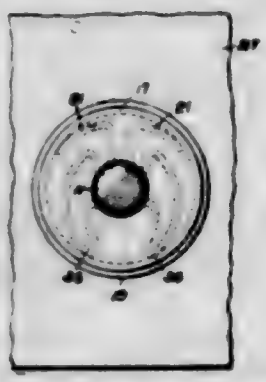
In a draft device of the character described, the combination with a flue sheet of a boiler and the flues associated therewith, of a hollow cone-like conduit having its larger end fitted over said flue sheet, and an exhaust fan having an intake orifice in communication with said conduit at the smaller end of the latter, said intake orifice of the fan being of circular cross section and having an outwardly curved surface, the minimum diameter of said orifice equaling the radius of curvature of said surface.

1,300,326. DOOR. WILLIAM J. BOHAN, St. Paul, Minn. Original application filed July 12, 1915, Serial No. 39,288. Divided and this application filed Apr. 7, 1917. Serial No. 160,282. 2 Claims. (Cl. 189—46.)



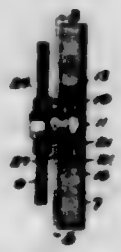
1. As an article of manufacture, a door for freight cars and the like, said door comprising a rectangular framework formed by a single, commercial-shaped beam, said beam having side members, top member, bottom member and a diagonal brace all formed integrally; and metal sheathing secured to said framework.

1,300,337. STUD-AND-SOCKET FASTENER. DAVID BOURQUE, Amesbury, Mass., assignor to G. W. J. Murphy Company, Amesbury, Mass., a Corporation of Massachusetts. Filed Apr. 11, 1918. Serial No. 227,959. 6 Claims. (Cl. 24—218.)



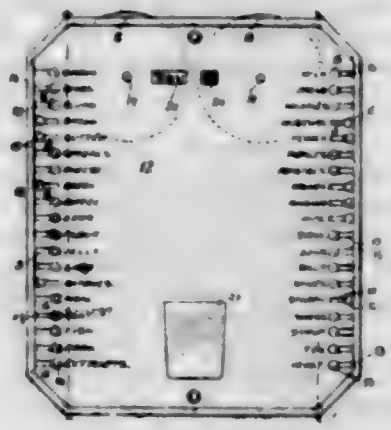
1. In a stud and socket fastener, a stud having a long shank and an abruptly shouldered head, a socket including a casing, jaws in the casing yieldable outwardly from the center thereof and means to prevent inward movement of the jaws.

1,300,338. SOCKET FOR FASTENERS. DAVID BOURQUE, Amesbury, Mass., assignor to G. W. J. Murphy Company, Amesbury, Mass., a Corporation of Massachusetts. Filed May 25, 1918. Serial No. 236,502. 7 Claims. (Cl. 24—218.)



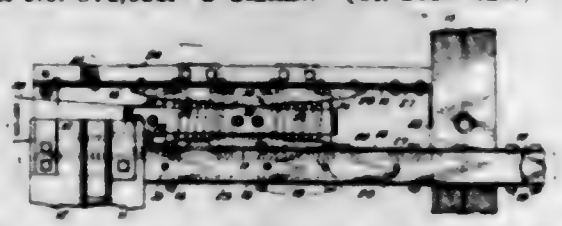
1. A socket for a stud and socket fastener comprising a cup-like element having a base apertured to receive a stud and an exteriorly threaded cylindrical wall, and stud-engaging means housed inwardly of said wall and presented adjacent the aperture of the base, said socket adapted to be directly screwed into a supporting member.

1,300,339. INDICATOR. GEORGE F. BRIGDEN, Waltham, Mass. Filed Jan. 11, 1918. Serial No. 270,624. 8 Claims. (Cl. 116—30.)



1. An indicator of the character stated, comprising a body of sheet material having open-ended slots extending through and inwardly from one or more of its edges, slides including neck portions movable in said slots and enlarged end portions bearing on opposite sides of the body, said neck portions being insertible in the open ends of the slots, and a channeled marginal reinforcing strip clamped upon and covering the edges of the strip to prevent displacement of the strip edges between the slots, and close the outer ends of the slots.

1,300,340. CAR-UNDERFRAME. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Nov. 30, 1914. Serial No. 874,681. 8 Claims. (Cl. 105—420.)



1. In an underframing for cars, the combination with wooden center sills, end sill, and body bolster, of plates secured to the inner sides of said center sills and having offset depending portions disposed beneath said sills, the offset depending portions being connected to the upper portions by integral horizontal webs, separate plates secured to the outer faces of said sills, angle irons secured to the outer upper portions of said offset portions of the first named plates, said angle irons engaging the under sides of said sills, horizontal bolts extending through said plates on the sides of said sills, and vertical bolts extending through said angle irons and said sills, whereby the center sills are provided with a substantially boxlike casing.

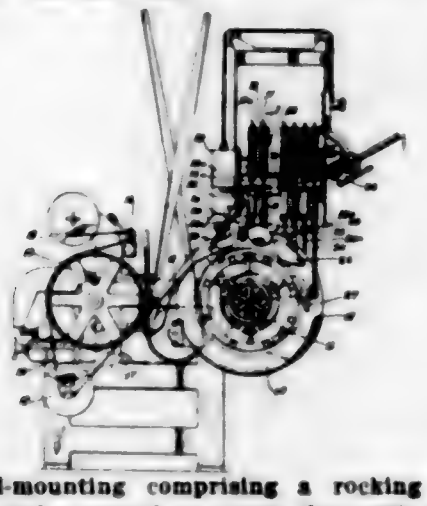
3. In an underframe construction for cars, the combination with a wooden center sill, of a plate secured to one side of said sill, said plate having a depending portion below the sill to which is adapted to be attached a stop casting, a reinforcing member secured to the depending portion of said plate and abutting the bottom face of said sill, another plate secured to the opposite face of said sill, horizontal bolts extending through said plates on the sides of said sill and vertical bolts extending through the reinforcing member and said sill, whereby the center sill is provided with a substantially boxlike casing adapted to prevent splitting of the sill.

5. A reinforced wooden underframe for cars having wooden center sills, draft plates secured to the inner faces of the center sills, a portion of the draft plates extending below the sills and offset outwardly, horizontal angle irons secured to the upper and lower edges of the depending portions of the draft plates, each upper angle iron having one flange secured to the bottom face of one sill and a vertical flange secured to the depending portion of the corresponding draft plate just below the sill, the other angle iron having a horizontal flange at the bottom

of the draft plate and a vertical flange secured to the lower portion of the draft plate, and check plates secured to the depending portions of the draft plates, and means passing through the vertical webs of the angle irons, the depending portion of the draft plate and the check plates for holding the parts together.

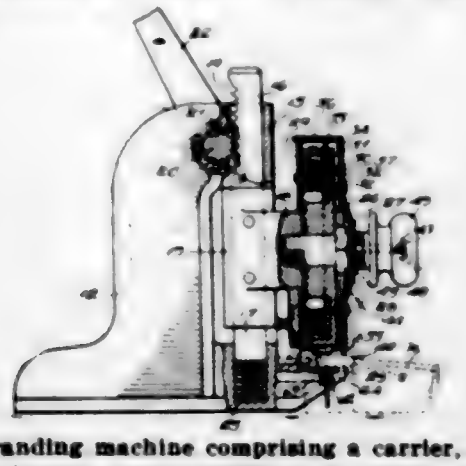
8. In an underframe construction for cars, the combination with a wooden center sill, of a rolled plate secured to one side of said sill and provided with a depending portion beneath the bottom of said sill, said depending portion being offset from the upper portion and the plate extending continuously from the end sill of the car to a point at the rear of the body bolster, said depending portion of the plate being provided along the lower edge thereof on the outer side with a reinforcing flange, said depending portion of the plate being also provided with outwardly extending offsets adapted to receive the usual lugs formed on the outer sides of the draft rigging stop castings employed with wooden draft sills.

1,300,341. TOOL-MOUNTING FOR TIRE-MACHINES. JAMES L. BUTLER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1918. Serial No. 260,895. 5 Claims. (Cl. 154—10.)



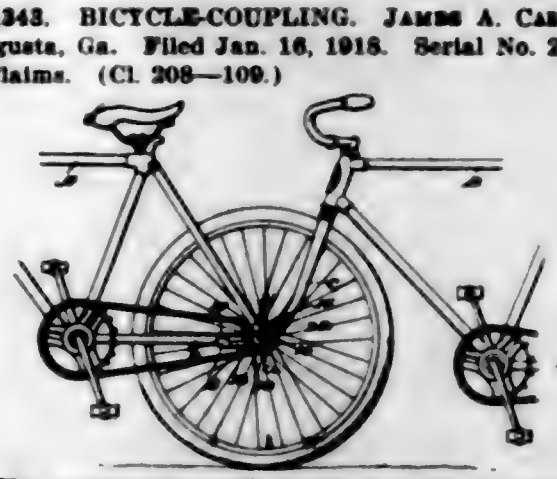
1. A tool-mounting comprising a rocking tool-holder carrying a tool mounted to swing therewith toward and from its working position, a flexible tractive element attached at two radii on said tool-holder, a guide for said flexible element dividing the latter into portions which make a greater angle with each other in an intermediate position than in the two extreme positions of the tool holder, and means yieldingly pressing said guide against said flexible element.

1,300,342. BRANDING-MACHINE. DUNCAN R. CAMPBELL, Boston, Mass., assignor, by mesne assignments, to Robert A. Linden, Flushing, N. Y. Filed June 23, 1916. Serial No. 105,517. 5 Claims. (Cl. 101—21.)



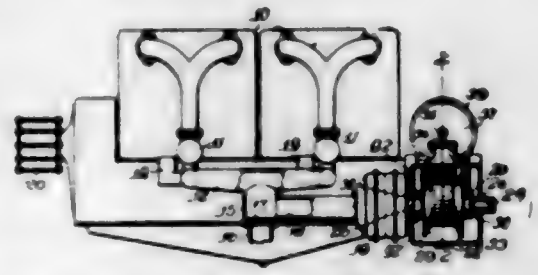
1. A branding machine comprising a carrier, a supporting frame having carrier-guiding and carrier-reciprocating means, said carrier including a bearing stud and a flange surrounding said stud, a disk rotatable on said stud and provided with branding dies on its periphery and with an annular recess opening toward said flange and separated from the periphery of the disk by a relatively thin heat-conducting rim, and heating means supported by said flange and projecting into said recess in close proximity to the inner surface of said heat-conducting rim.

1,300,343. BICYCLE-COUPLING. JAMES A. CARSWELL, Augusta, Ga. Filed Jan. 16, 1918. Serial No. 212,114. 5 Claims. (Cl. 208—109.)



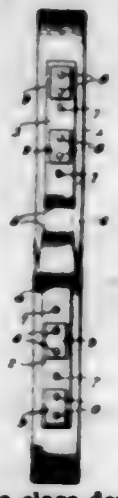
1. The combination with a bicycle having a rear wheel and spindle and a bicycle having a forward wheel receiving fork, of means for coupling the fork of the second bicycle to the spindle of the first bicycle, said means including coupling links applicable to the spindle of the first bicycle, and having arms adapted to receive and support the ends of the fork of the second bicycle, the arms being formed to provide hubs, spindles journaled at their end portions in such hubs, and means carried by the spindles for securing the ends of the fork thereon.

1,300,344. FUEL-REGULATING MEANS FOR EXPLOSION-ENGINES. EDWARD NEWELL CASE, San Diego, Calif. Filed Feb. 26, 1918. Serial No. 219,333. 14 Claims. (Cl. 123—119.)



1. Means for supplying an explosive mixture to a hydrocarbon explosion engine, comprising mechanism responsive to variations of altitudinal atmospheric conditions to maintain constant the pressure of air delivered to the engine.

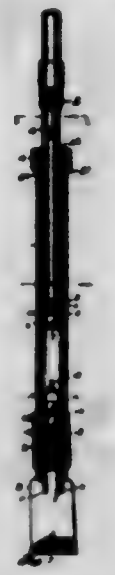
1,300,345. POWER-BELT. JOHN L. CASE, Sunnyside, Wash. Filed Apr. 24, 1918. Serial No. 230,526. 8 Claims. (Cl. 24—31.)



2. A power belt of the class described, having narrowed end extensions and provided near the inner end of one end extension with a transverse slot to receive the other

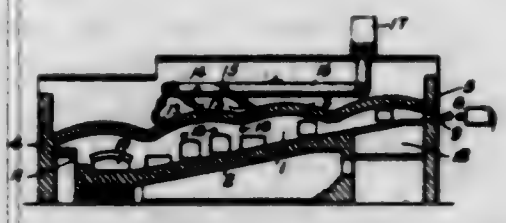
end extension and also provided near the last named extension with a pair of transverse slots to receive the first named end extension so that the end extensions are arranged in overlapping relation on or at the outer side of the belt, and fastening means to secure the end extensions on the belt, said end extensions and the corresponding portions of the belt being provided with a series of adjusting openings, and said fastening means extending through certain of said openings.

1,300,246. SAMPLE-TAKING DEVICE. WALTER LEE CHURCH, Humble, Tex. Filed Sept. 9, 1918. Serial No. 253,203. 2 Claims. (Cl. 255—61.)



2. A device of the character described, including a drill stem, a tubular member into which the lower end of the drill stem extends, interlocking means, through which said member is suspended from the stem when lowering the device into, or withdrawing it from a well, said stem and member being provided with fluid passageways, which aline when said member is so suspended, interlocking means through which rotation from said stem may be imparted to said member, a drill bit carried by the lower end of the member, and means within said member controlling the passage of fluid from the stem to said bit, said means being operable to withdraw the cuttings from the bit into and trapping said cuttings within said member.

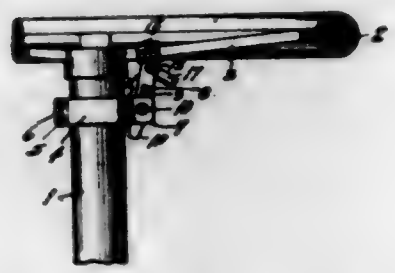
1,300,347. METHOD OF AND MEANS FOR HEATING METAL ARTICLES. JAMES B. CLARKE, Woodlawn, Pa. Filed Feb. 2, 1918. Serial No. 215,168. 3 Claims. (Cl. 263—6.)



1. A step in the fabrication of metal articles—as, for example, the rolling of pipe-shells—the method herein described of heating a body of metal preparatory to shaping, such method consisting in causing the body to advance through a flame moving in opposite direction and nourished intermediate its length by fresh supplies of oxygen.

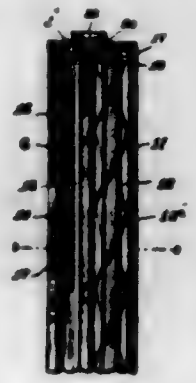
1,300,348. LOCKING DEVICE. JAMES L. CRAWFORD and JACK R. DUNLAP, Dallas, Tex. Filed Aug. 18, 1918. Serial No. 249,751. 1 Claim. (Cl. 70—129.)

In a locking device for steering wheels, a split collar adapted to be fastened on the steering-wheel column of a motor vehicle, a housing formed integral with the collar and having its outer end closed, a latch bar slidable in the housing and having a limited swinging movement therein, said bar having an elongated slot, a transverse pin in the housing passing through the slot of the latch bar, a flat spring mounted on the bar and engaging the collar within the housing and forcing the bar against the closed end



of the housing to retain the bar in vertically adjusted positions, a keeper adapted to be mounted on a steering-wheel, the upper end of the bar engaging the keeper, and a lock having a hasp passed the keeper and the bar.

1,300,349. WIND-SHIELD CLEANER. DEWEY M. CATRON, Adelphia, Ohio. Filed Dec. 20, 1917. Serial No. 208,002. 6 Claims. (Cl. 15—59.)



1. A wind shield cleaner including detachable clamps adapted to be mounted on the ends of the wind shield, each clamp including complemental jaws connected by a pivot pin and the pivot ends of the jaws being bifurcated, pulleys arranged within the bifurcated ends of the jaws and mounted upon the pivot pins, a flexible wire adapted to be extended around the front and back of the wind shield and engaging the pulleys, and a cleaning bar carried by the wire and engaging the front of the wind shield, said cleaning bar being movable across the wind shield by manipulating the wire.

6. A wind shield cleaner including detachable clamps adapted to be mounted on the ends of the wind shield, pulleys journaled on the clamps, a flexible wire adapted to be extended around the wind shield and engaging the pulleys, a cleaning bar carried by the wire and adapted to be moved across the wind shield by manipulating the wire, a rotary scraping element carried by the cleaning bar, operating wheels frictionally engaging the wind shield and geared to the rotary scraping element, and a strip projecting from the cleaning bar in a parallel relation to the rotary scraping element, the rotary scraping element and strip both engaging the wind shield.

1,300,350. HAND-BRAKE FOR RAILWAY-CARS. CHARLES E. DATH, Chicago, Ill., assignor to William H. Minor, Chazy, N. Y. Filed Aug. 20, 1917. Serial No. 187,203. 2 Claims. (Cl. 254—186.)

1. In a brake, the combination with a casing having an opening in the top and provided with inner and outer integrally formed end walls and side walls, said end walls

being provided on the inner faces with vertically extended slots having journal bearings at their lower ends, the case being adapted to be secured to a car by means of its said inner wall, of a chain winding drum having journals at its ends, said drum being insertible vertically through said opening in the top of said casing and adapted to have its journal ends supported by said bearings, and pawl and ratchet mechanism for rotating said drum, the bottom of



said casing being slotted to accommodate the chain and parts of said pawl and ratchet mechanism.

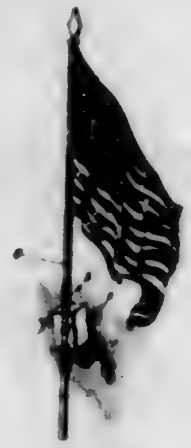
1,300,351. HAND-BRAKE. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 8, 1918. Serial No. 210,878. 3 Claims. (Cl. 188—420.)



1. In a brake, the combination with a vertical brake staff having a ratchet wheel thereon, of a sleeve loosely rotatably mounted with respect to said ratchet wheel, an operating handle pivotally attached to said sleeve by means of a pivot pin, and a spring controlled pawl carried by said handle, said pivot pin acting as a retainer for said pawl to prevent accidental removal thereof from the handle, said pawl being coöperable with the ratchet wheel when the handle is in horizontal position.

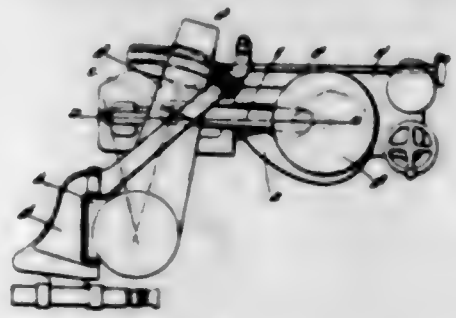
3. In a hand brake for railway cars and the like, the combination with a bracket adapted to be secured to a vertical car wall, said bracket including a vertical wall, a horizontal flange and two vertical flanges extending outwardly from the vertical wall and above said horizontal flange, said horizontal flange being provided also with an upwardly extending annular flange adapted to form part of a housing, said horizontal flange being also perforated to accommodate a vertical brake staff; of a vertical brake staff extending through said horizontal flange of the bracket; a ratchet wheel mounted on said brake staff above said horizontal flange and disposed partly within said annular flange; a member oscillatably mounted on said brake staff and coöperating with said annular flange to complete the housing for said ratchet wheel; a pawl operating handle pivotally attached to said member; a pivoted locking dog coöperable with said ratchet wheel to prevent accidental reverse rotation of the staff; a top plate extending over said member to retain the latter in operative position, said top plate being detachably connected with said bracket; and means for securing said bracket to a car wall, all of said securing means being arranged to pass through said vertical wall of the bracket.

1,300,352. FLAG-SUPPORT. BENJAMIN W. DAVIS, Evanston, Wyo.; James J. Davis administrator of said Benjamin W. Davis, deceased. Filed Aug. 17, 1918. Serial No. 250,350. 3 Claims. (Cl. 248—37.)



1. A flag-staff support comprising a bracket; a staple extended from one side thereof; a groove cut upon another side thereof; holes piercing the bracket transversely to the groove; and a flexible binder extended through the holes.

1,300,353. ORDNANCE SIGHTING APPARATUS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed June 21, 1917. Serial No. 176,111. 4 Claims. (Cl. 33—48.)



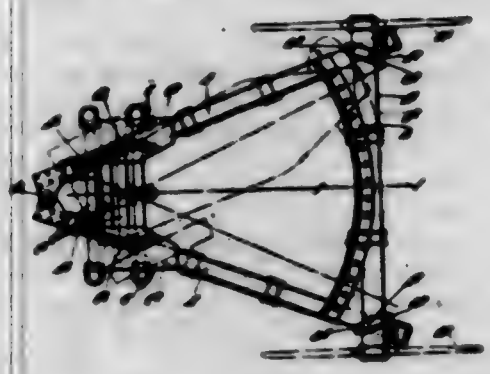
1. In ordnance sighting apparatus, the combination with the sight bracket, of a cam, a longitudinally movable member interposed between the cam and the sight bracket, means for guiding said member, and a common support for said elements.

1,300,354. ORDNANCE SIGHTING APPARATUS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed June 21, 1917. Serial No. 176,112. 8 Claims. (Cl. 33—48.)



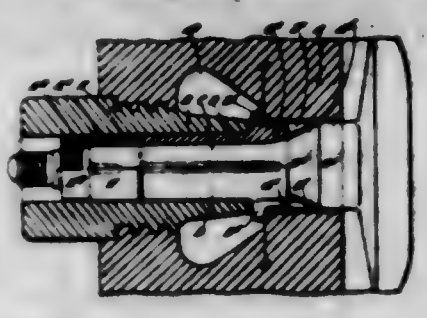
1. In ordnance sighting apparatus, the combination with the gun cradle of a sight bracket pivotally mounted on the gun cradle for range adjustments, a sight carrier pivoted to the sight bracket for lateral adjustments, range adjusting gear, including a range indicator carried by the gun cradle and deflection adjusting gear, including a deflection indicator also carried by the gun cradle.

1,300,255. GUN-CARRIAGE. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Dec. 21, 1917. Serial No. 208,317. 4 Claims. (Cl. 89—40.)



1. A bed plate serving as a firing platform for a gun carriage and composed of a rigid structure of triangular form serving to support the carriage wheels at or near its apex and to support the trail at or near its base in such a manner as to permit of the carriage being traversed on the structure.

1,300,256. ORDNANCE BREECH MECHANISM. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Jan. 18, 1918. Serial No. 212,500. 7 Claims. (Cl. 89—20.)



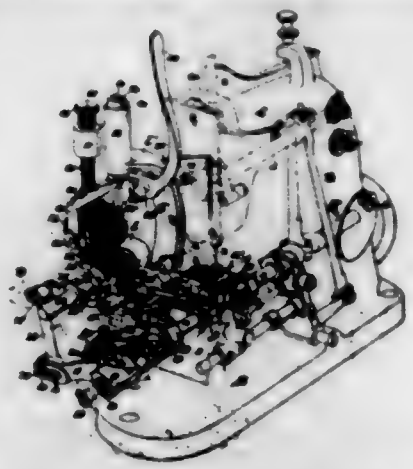
1. In ordnance breech mechanism of the breech-screw carrier type, the combination with the breech screw, the axial vent bolt of said screw, the carrier stem, the spring of the axial vent bolt and a sleeve which is interposed between the axial vent bolt and the carrier stem which sleeve bears against the breech screw and also serves as an abutment for the spring of the axial vent bolt, of a forward prolongation of said carrier stem fitting in an axial hole in the forward part of the breech screw, and a projection on said sleeve passing through said stem and bearing against part of the breech screw behind said prolongation.

1,300,257. PROCESS OF TREATING PAPER-PULP. JUDSON A. DE CEW, Montreal, Quebec, Canada. Filed Sept. 25, 1917. Serial No. 193,162. 8 Claims. (Cl. 92—21.)

7. A process of sizing which comprises treating paper stock in a beating engine with sodium aluminate and separately with rosin soap solution containing free rosin acids in the colloidal state.

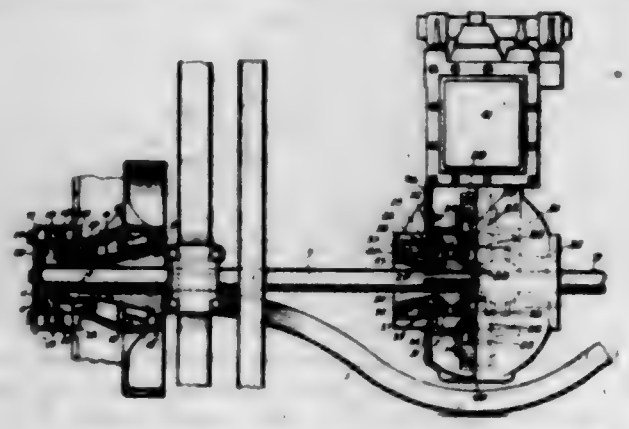
1,300,258. FEEDING MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 3, 1914. Serial No. 842,595. 9 Claims. (Cl. 112—2.)

1. In a puller feeding mechanism for sewing machines having a needle, the combination with a main feed-dog adjacent the needle and an auxiliary feed-dog located remote from and in rear of the needle, of an actuating rocker common to both dogs and adapted to impart simultaneous feeding movements thereto, means for changing the length of feed of both dogs simultaneously, and



means for changing the length of feed of the auxiliary dog independently of the main dog.

1,300,259. POWER-APPLICATION MECHANISM FOR MOTOR-VEHICLES. CHARLES W. DUER, Chicago, Ill. Filed Mar. 13, 1918. Serial No. 222,134. 13 Claims. (Cl. 74—99.)

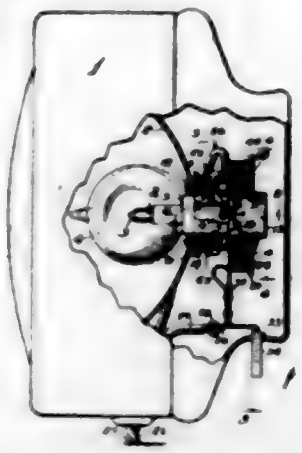


1. Mechanism of the kind specified comprising an axle having its opposite ends provided with substantially hollow conical extensions, wheels journaled on said extensions, drive-shafts having their outer ends extended through the hollow portions of said conical extensions and pivotally connected to said wheels, a differential mechanism, universal joints carried thereby and longitudinally sliding connections between said universal joints and the inner ends of said drive-shafts whereby the inner ends of said drive-shafts are capable of vertical movement with said differential mechanism and such movement is accommodated in the hollow portions of said axle extensions.

2. Mechanism of the kind specified comprising an axle having its opposite ends provided with hollow substantially conical extensions, wheels journaled on said extensions, drive-shafts having their outer ends extended through the hollow portions of said conical extensions and pivotally connected to said wheels, a differential mechanism, and universal joints connecting the inner ends of said drive-shafts and said differential mechanism whereby the inner ends of said drive-shafts are capable of vertical movement with said differential mechanism and such movement is accommodated in the hollow portions of said axle extensions.

3. Mechanism of the kind specified comprising an axle having its opposite ends provided with hollow substantially conical extensions, wheels journaled on said extensions, drive-shafts having their outer ends extended through the hollow portions of said conical extensions, a differential mechanism, and universal joints connecting the ends of said shafts with their respective wheels and said differential mechanism whereby the inner ends of said drive-shafts are capable of vertical movement with said differential mechanism and such movement is accommodated in the hollow portions of said axle extensions.

1,300,360. LAMP-MOUNT FOR PROJECTORS. THOMAS I. DUFFY, Oak Park, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed June 19, 1917. Serial No. 175,624. 11 Claims. (Cl. 240—44.)

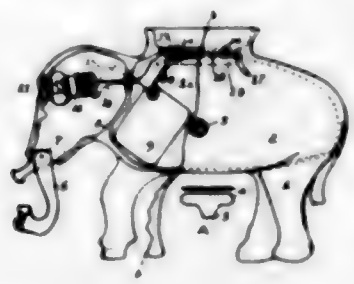


6. The combination of a focusing member, a socket member mounted for adjustment along the axis of said focusing member, a cam plate mounted to rotate in a plane perpendicular to the axis of the focusing member having a bearing face inclined to said plane, a follower on the socket member engaging said bearing face, and yielding means for maintaining such engagement.

10. In a light projector in combination with a reflector a mounting block of cylindrical form with a plurality of radially projecting and circumferentially spaced bosses at one end for attachment to the reflector, and a flange at the other end, a switch lever having a flat collar with a circular aperture and a plurality of radial notches in the outline of said aperture spaced to register with the bosses of the mounting block for assembly thereon, said block having a groove between each boss and the aforesaid flange dimensioned to accommodate the thickness of the flat collar of the switch lever to permit rotation of the lever on the block and a casing having a segmental slot to receive the handle of the lever and so limiting its rotation as to prevent the notches from registering with the bosses of the block when the parts are thus assembled.

11. In a light projector a reflector with a central aperture to receive a lamp base, a mounting block for such lamp base, and means for attaching said block to the reflector comprising a collar with parts secured to the block and a sleeve portion extending through the aperture of the reflector with flanges pressed against the opposite faces thereof, the material of the reflector at the periphery of its aperture being crimped to form teeth for securely engaging the flanges of the collar to effect a non-rotative connection therewith.

1,300,361. ELECTRICAL TOY AND DEVICE. PHILIP E. EDELMAN, St. Paul, Minn. Filed Aug. 7, 1915. Serial No. 44,232. 14 Claims. (Cl. 46—40.)



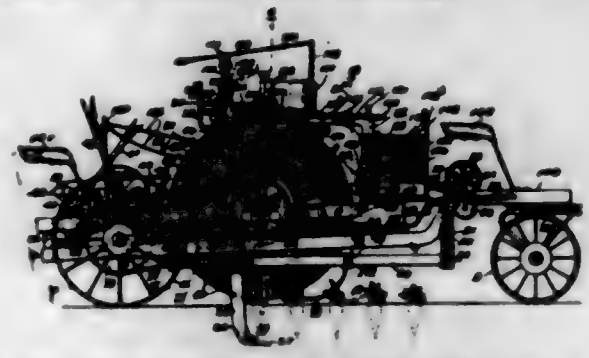
1. In a device of the class specified, a toy figure, an electrical device included thereby, an electrical circuit therefor, a coin compartment within said figure, a coin slot connecting therewith, and electrical contacts in relation to said slot and included in said circuit, said contacts comprising means which permit passage of coins in one direction only.

2. A toy bank including an electrical current consuming indicator, a current source and circuit controlling contacts therefor, said contacts comprising a pair of metal pieces insulated from each other, one of which has its edge facing the flat side of the other, at an angle to permit passage of a coin therebetween in one direction only.

3. A toy bank comprising an ornamental figure including an electrical device, means for protecting said device from injury and from coins entering said bank, an electrical circuit and circuit closer for said device, said circuit closer being operated by a coin in passing into said bank and comprising means to prevent the return passage of said coin.

4. In a device of the class set forth, a toy figure, an electrical lamp forming a portion thereof, a money compartment therein, a coin slot connecting therewith, a pair of contacts arranged about said slot, a battery connecting with said lamp and contacts, one of said contacts extending over the other whereby a coin can pass therethrough into said compartment but not reversely.

1,300,362. BEET-HARVESTER. GEORGE E. FAUCHER, Beeville, Tex. Filed Sept. 30, 1918. Serial No. 792,588. 24 Claims. (Cl. 55—108.)



1. In a beet harvester, the combination with a wheel supported frame, of means for grasping the beets and pulling them out of the soil, and means for loosening the soil around the beets which is constructed and arranged to begin the loosening of the soil around each beet after the said pulling means has grasped the beet and by the time it has begun to pull the beet.

5. In a beet harvester, the combination with a wheel supported frame, of means for grasping the beet tops and pulling the beets out of the soil, means for guiding the beet tops to said grasping and pulling means, and a plow for loosening the soil around the beets which is constructed and arranged to begin the loosening of the soil around each beet after the said pulling means has grasped the tops thereof and by the time it has begun to pull the beet.

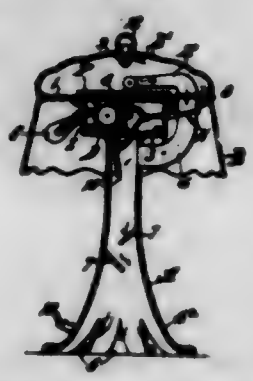
7. In a beet harvester, the combination with a wheel supported frame, of a rotary puller wheel having two opposed series of gripper arms, relatively stationary endless cams for closing and opening the outer ends of opposite arms of the puller wheel to successively grasp and release the tops of the beets, and means for angularly adjusting the cams to vary the times of the closing and opening of the gripper arms.

9. In a beet harvester, the combination with a wheel supported frame, of a rotary puller wheel having two opposed series of gripper arms, relatively stationary endless cams for closing and opening the outer ends of opposite arms of the puller wheel to successively grasp and release the tops of the beets, a plow beneath the puller wheel for loosening the soil around each beet while it is being pulled, means for adjusting said plow forward and backward relative to the puller wheel, and means for angularly adjusting the cams to vary the times of the closing and opening of the gripper arms.

21. In a beet harvester, the combination with a wheel supported frame, of means for grasping the beets and pulling them out of the soil, means for loosening the soil around the beets which is constructed and arranged to begin the loosening of the soil around each beet after the

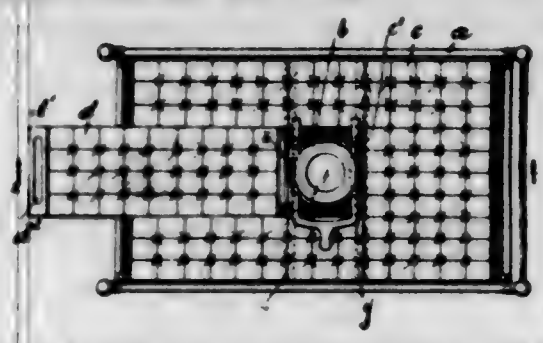
said pulling means has grasped the tops thereof and by the time it has begun to pull the beet, means for severing the bodies from the tops of the beets while they are still held as initially grasped by the pulling means, and means for automatically adjusting the severing means relative to the bodies of the beets as the latter are presented to the severing means.

1,300,362. PHONOGRAPH-LAMP. FRANK H. FERAUD, Granite City, Ill. Filed Aug. 2, 1917. Serial No. 184,068. 7 Claims. (Cl. 240—2.)



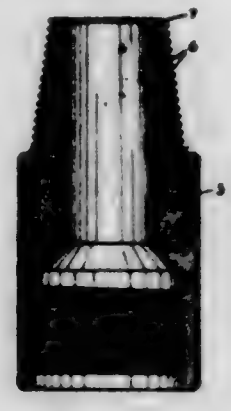
1. A device of the character referred to, consisting of a lamp provided with a shade, and a sound reproducing machine provided with a turntable or record support that is arranged inside of said shade, said shade having a movable top portion that can be shifted into an inoperative position when a record is being applied to or removed from said turntable.

1,300,364. INVALID-BED. WALTER H. FITZ GERALD, Brooklyn, N. Y. Filed Sept. 20, 1917. Serial No. 192,841. 3 Claims. (Cl. 5—12.)



1. In an invalid bed, a mattress having a cut out portion, a section slidably fitting in said cut out portion, the latter forming an opening extending all the way through the thickness of the mattress, a bed pan having a flange, and a fork-shaped member to be placed across said opening and adapted to engage said flange to hold said pan in position while in use.

1,300,365. TOOL-JOINT. HAROLD W. FLETCHER, Houston, Tex. Filed Oct. 29, 1918. Serial No. 260,118. 4 Claims. (Cl. 285—146.)



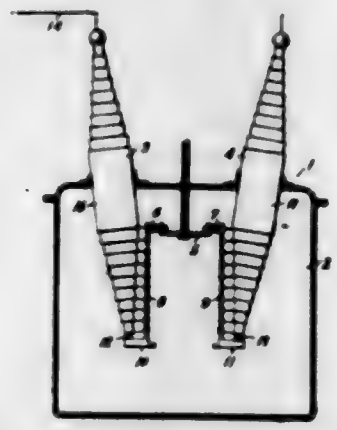
1. A tool joint comprising a female member threaded with an outward taper at one end, a male member tapered to fit therein, the threads being cut on said tapered surfaces with broad flat crests.

1,300,366. ADJUSTABLE SHADE-ROLLER HANGER. THOMAS W. FLOWERS, Goldsboro, N. C., assignor to E. A. Humphrey, trustee, Goldsboro, N. C. Filed Jan. 11, 1919. Serial No. 270,681. 2 Claims. (Cl. 156—27.)



1. A shade-roller hanger, comprising a pair of extensible bars with angularly positioned grooves in the extreme ends, bands encircling the bars to hold them together, said bands being secured to the respective bars, a combined clamp and hanger cord attachment, consisting of a clamp portion encompassing the bars, with a movable clamp ring operating above said portion; shade roller hangers including prongs occupying the aforesaid grooves, with inwardly turned ends resting on top of the bars to prevent the hangers from pulling out, and means including end caps arranged to be secured over said prongs.

1,300,367. CIRCUIT-BREAKER. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 31, 1914. Serial No. 869,506. 8 Claims. (Cl. 175—283.)

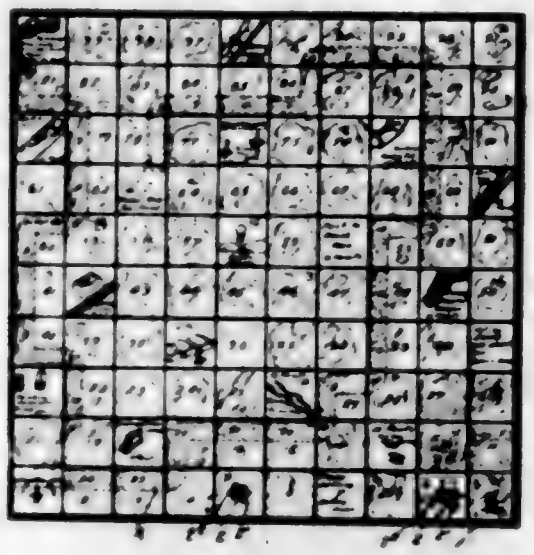


1. In a circuit interrupter, the combination with a condenser terminal bushing and a movable contact member, of a plurality of stationary contact members connected to points of different potential on the said condenser terminal bushing.

1,300,368. PARLOR GAME. HAROLD FOWLER, Port Hope, Ontario, Canada. Filed May 15, 1918. Serial No. 234,767. 1 Claim. (Cl. 46—64.)

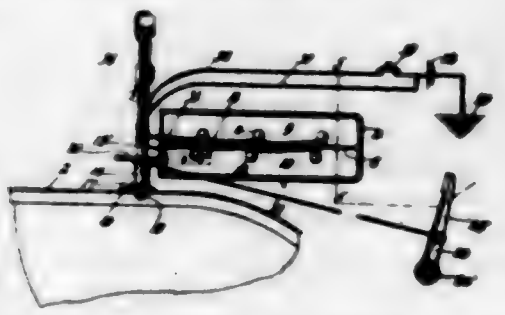
An aviation parlor game comprising a board divided into squares, having peculiar characteristics common to aviation, the board having two main paths on its surface,

the lost in the mist path and the home path and movable parts designed to represent aeroplanes, these being moved



from one square to another according to the rules of the game as set forth, the moves being governed by throw of dice.

1,300,369. TRAFFIC-SIGNALING DEVICE. PATRICK J. FOY, Chicago, Ill. Filed Sept. 22, 1916. Serial No. 121,533. 5 Claims. (Cl. 116—31.)



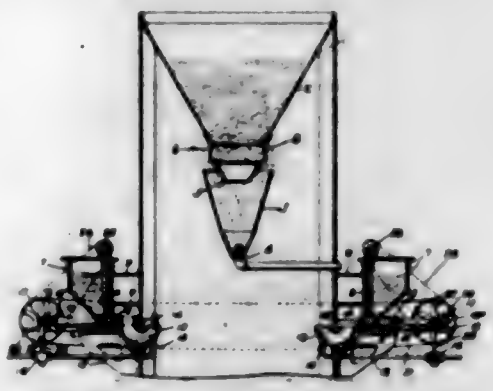
5. In a traffic signal device for vehicles, the combination of a pair of illuminated casings, posts on the vehicle to which said casings are pivotally attached, a transparent wall forming part of each casing, a partition wall coextensive with each casing and dividing the latter into an upper and lower chamber, sets of lamps within the chamber of said casings, one set of lamps illuminating a legend on the upper portion of the transparent wall, and means within reach of the driver of the vehicle and common to both of said illuminating casings for arbitrarily moving either one of said casings into display position, a brake element and means connecting the brake element with the moving means, for simultaneously moving both of said casings to display position.

1,300,370. MICA-BUILDING APPARATUS. LOUIS T. FREDERICK, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 30, 1915. Serial No. 37,396. 8 Claims. (Cl. 154—1.)

1. A tower for making built-up composite masses of subdivided solid material and a binder, comprising pneumatically operating bond-ejecting devices discharging into the tower at various points, means for intermittently operating said devices, and means for supplying predetermined quantities of bond to said devices.

3. A tower for making built-up composite masses of subdivided solid material and a binder, comprising means for intermittently projecting showers of solid material therein and means for pneumatically projecting finely divided binding material into the said tower in the intervals between the successive deposits of solid material.

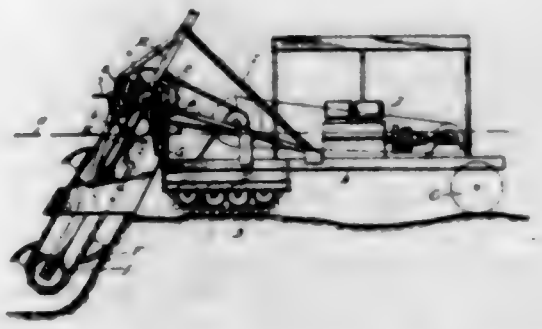
5. A bond-distributing device for mica-building towers and the like comprising a bond-receiving hopper, a pneumatic ejector for forcing the bond from the said hopper and means for depositing predetermined amounts of bond in the said hopper at regular intervals.



7. A bond-distributing device for mica-building towers and the like comprising a supply hopper for containing a supply of bond, a bond-receiving hopper, a pneumatic ejector for forcing the bond from the said hopper and a reciprocating conveyer adapted to transfer predetermined amounts of bond from the said supply hopper at regular intervals.

8. A bond-distributing device for mica-building towers and the like comprising a supply hopper for containing a supply of pulverulent bond, the said hopper being provided with stirring means, a U-shaped receiving hopper, one arm of which communicates with the interior of the tower, a pneumatic ejector for forcing the band from the said receiving hopper through the said arm and into the tower, a reciprocating conveyer adapted to receive a predetermined amount of bond from the said supply hopper and to deposit such bond in the other arm of the said U-shaped hopper, and means for reciprocating the said conveyer and for actuating the said ejector in timed relation to the movements of the said conveyer.

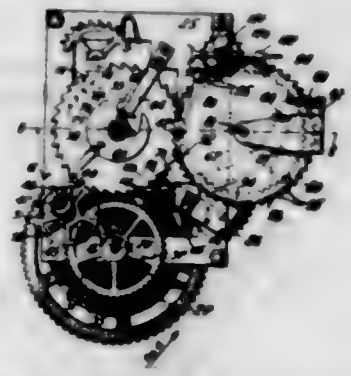
1,300,371. GRADE-LINE INDICATOR. JAMES C. FRENCH, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Sept. 24, 1917. Serial No. 192,895. 8 Claims. (Cl. 33—185.)



1. In a trenching machine provided with a digging device mounted to swing about a horizontal axis extending transversely of the trench, means above the ground to form a grade line, an indicator on the machine to cooperate with said grade line to indicate the rise and fall of said axis when the machine travels over uneven ground, and means operated by pendulum action about a horizontal axis to determine the adjustment necessary for said digging device about said axis to maintain the lower end thereof the desired distance below said grade line.

8. In an adjustable trenching machine, the combination of graduated means to indicate the exact degree of rise and fall of the machine, and devices arranged to swing in a vertical longitudinal plane about a transverse axis and coöperating with said means, and operative by pendulum action about a horizontal axis to determine from time to time the exact degree of adjustment necessary to maintain the desired depth of the trench.

1,300,372. CALENDAR-CLOCK. GAETANO FRICANO, Buffalo, N. Y. Filed July 12, 1917. Serial No. 180,209. 16 Claims. (Cl. 58—5.)

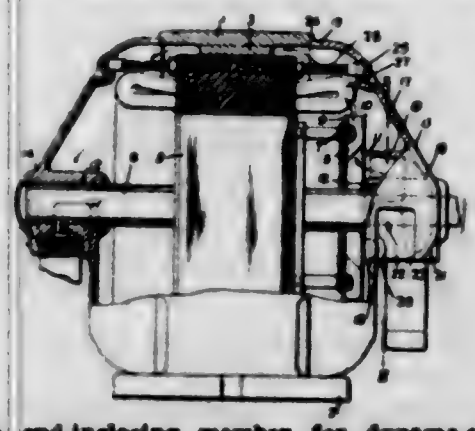


1. The combination of a clock mechanism, of mechanism for indicating the day and month of the year, including a day wheel, means actuated by said clock mechanism for advancing said day wheel once a day, a pawl for holding said day wheel in the advanced positions, a month wheel actuated by said day wheel once a month, said month wheel actuating said pawl to move the same out of operative relation to said day wheel, and means adapted to engage said pawl when the same has been moved out of operative relation to said day wheel for holding said pawl in inoperative position until said day wheel returns to its initial position.

11. The combination with a clock having a winding shaft, of mechanism for indicating the day and month of the year including a day wheel and a ratchet device rotated by said winding shaft to actuate said day wheel once a day when said shaft is turned to actuate the clock, said ratchet means being movable relatively to said day wheel without actuating the same when said shaft is turned for winding the clock.

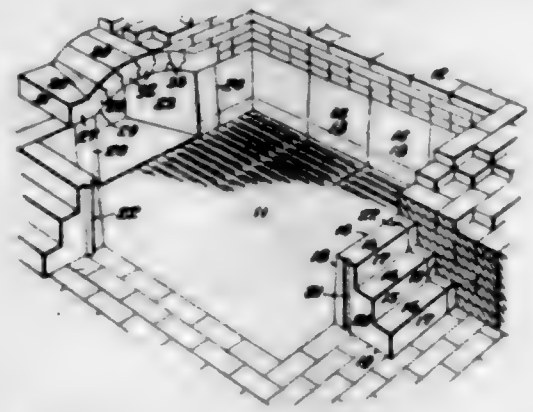
15. The combination with a clock mechanism, of mechanism for indicating the day and month of a year including a day wheel, of means actuated by said clock mechanism for advancing said day wheel once a day, a month wheel which is positively engaged by said day wheel once a month for advancing said month wheel, a pawl engaging said day wheel to hold the same in advanced positions, said pawl having a part engaging said month wheel for causing the advance movement of the month wheel to move said pawl out of engagement with said day wheel to permit the day wheel to return to its initial position, and means on said day wheel for engaging said month wheel to advance the same.

1,300,373. DYNAMO-ELECTRIC MACHINE. GEORGE H. GARCELON, Swissvale, MEIGS W. BARTHESS, Wilkinsburg, and JOSEPH L. CHANTEMERLE, Turtle Creek, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 21, 1916. Serial No. 73,319. 3 Claims. (Cl. 172—36.)



1. An end-inclosing member for dynamo-electric machines comprising an upwardly extending wall, a flared-out portion projecting beyond said wall, a bearing supported at its ends by said wall and said flared-out portion, and openings located adjacent to said bearing and beneath said flared-out portion.

1,300,374. FURNACE. JOHN W. GATES, Montreal, Quebec, Canada. Filed Oct. 30, 1916. Serial No. 128,498. 6 Claims. (Cl. 110—36.)



1. In a furnace, a casing having a recess therearound from the level of the grate upward, the casing above said recess being supported by a stepped cornice, and lining blocks in said recess having the rear faces thereof formed to mesh with the cornice.

3. In a furnace, a casing having a doorway, a recess entirely around the casing from one side of the doorway to the other, the casing above the recess being supported by a stepped cornice, an arch supporting the casing above the doorway and resting at its ends on the casing at each side of the doorway, and a series of lining blocks in said recess having stepped rear faces engaging the cronice of the casing, said stepped rear faces forming ledges excluding from the base of the blocks grit fallen from the casing, and projections engaging the casing and holding the blocks against tipping into the furnace, and lining blocks at the sides of the doorway having stepped faces engaging the casing, said blocks being removable without disturbance of the arch.

4. In combination with a furnace having a recess therearound from the level of the grate upward, a lining block having the base thereof extending farther to the rear than the top and having the rear face formed in a plurality of ledges, each lower ledge extending farther to the rear than the ledge next above.

1,300,375. OPERATING MECHANISM FOR HAND-BRAKES. WILLIAM A. GEIGER, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,523. 4 Claims. (Cl. 74—54.)



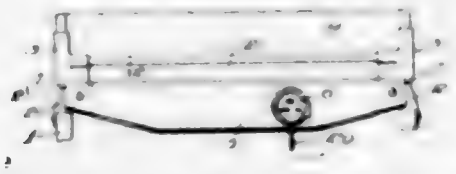
1. In a winding mechanism of the character specified, the combination with a winding drum rotatable about a horizontal axis, of a ratchet wheel movable in unison with the drum, an operating handle oscillatably supported about the same axis as that of the drum, a gravity-controlled pawl pivotally carried by said handle intermediate its ends, said pawl being held out of engagement with the ratchet when the handle is in normal position.

1,300,376. HAND-BRAKE FOR RAILWAY-CARS. WILLIAM A. GRIGGS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Aug. 23, 1918. Serial No. 251,058. 2 Claims. (Cl. 188—67.)



1. In a brake, the combination with a rotatable drum, of a ratchet wheel associated therewith, a hanger of substantially annular form telescoped over the ratchet wheel, said hanger having an opening formed therein, the opening being located intermediate the side planes of the hanger, a pawl-operating lever pivotally mounted within said opening of the hanger and adapted to have the pawl thereof coöperate with the ratchet wheel, and a locking pawl adapted to be also extended through said opening to coöperate with said ratchet wheel.

1,300,377. INSTRUMENT-BOARD. JOHN E. GANN, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Apr. 6, 1918. Serial No. 226,995. 4 Claims. (Cl. 180—90.)



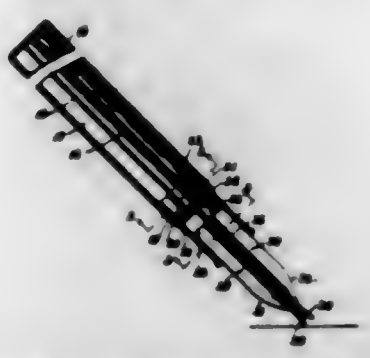
1. In combination with a vehicle body having a cowl with a depending edge extending transversely of the body and side sills in a plane below said edge, an instrument board lodged upon said sills with its upper edge engaging the depending cowl edge, and means positively stopping said board against slipping along said sills.

1,300,378. WASHSTAND-TOP. MIGUEL GONZALEZ, New York, N. Y. Filed June 8, 1918. Serial No. 239,000. 2 Claims. (Cl. 4—1.)



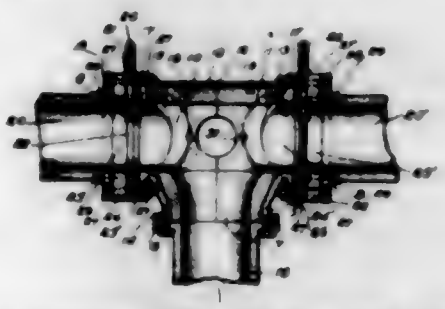
1. In a device of the class described, the combination of a one piece molded slab for a wash stand including a substantially flat top provided with a relatively deep depression designed to constitute a wash basin, said slab provided with an outlet therefrom extending through the depression to drain the liquid therefrom, a hollow protuberance positioned between the basin and the flat top, the portion of the top above said protuberance being recessed to form a relatively deep dish shaped depression provided with a drain opening for discharging into said protuberance, a relatively deep dish designed to fit snugly within said dish shaped depression and provided with vents for draining therefrom through said drain opening, the portion of the slab outlining the upper edge of said dish shaped depression being recessed slightly below the top of the slab to provide a cover seat above the upper edge of the seated dish and a cover for the dish fitted to said seat.

1,300,379. FOUNTAIN-PEN. SIMON GREENFIELD, New York, N. Y. Filed Mar. 29, 1918. Serial No. 225,603. 5 Claims. (Cl. 120—42.)



1. In a fountain pen capable of employing two colors of ink, concentric barrels spaced apart to provide an inner and an outer longitudinal reservoir, a holding head formed with concentric flanges removably connected respectively with said concentric barrels and having individual ink ducts for said reservoirs, feeding plugs arranged in said head longitudinally thereof to individually receive and convey the ink from said ink ducts, and means combined with said holding head and said feeding plugs to receive and write with either color of ink without one color intermingling with the other.

1,300,380. FITTING FOR PIPE CONVEYER SYSTEMS. LORNE A. GRIFFIN, Evanston, Ill., assignor to American Steam Conveyor Corporation, Chicago, Ill., a Corporation of New York. Filed Apr. 8, 1918. Serial No. 227,230. 16 Claims. (Cl. 137—75.)



1. The combination with a hollow body member having alined end openings and a plurality of lateral openings, of a pair of complementary wear linings having openings registering with the openings in said body member, and an impact plate closing one of said end openings, and detachable means for holding said impact plate in position.

2. The combination with a hollow body member having alined end openings and a plurality of lateral openings, of a wear lining having openings registering with the openings in said body member, and an impact plate for closing one end opening, the said wear lining being withdrawable through the end opening closed by said impact plate.

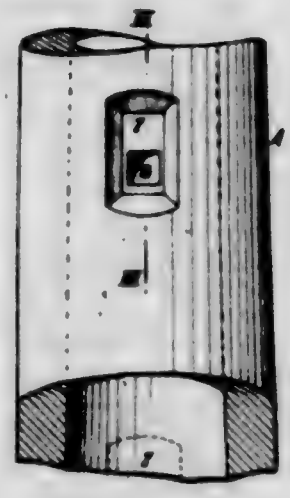
3. The combination with a hollow body member having alined end openings and a plurality of lateral openings, of a wear lining having openings registering with the openings in said body member, and an impact plate for closing one end opening.

12. The combination with a hollow body member having inlet and discharge openings, of means for controlling the flow through one of said openings, comprising a gate, and means adjustably secured to said body member for holding said gate in coacting relation with said opening, said means permitting the gate to be adjusted about the axis of said opening.

13. The combination with a hollow body member having inlet and discharge openings, of means for controlling

the flow through one of said openings, comprising two members, one of said members being provided with a recess closed by the other of said members to form a gate seat extending inwardly from one edge thereof and decreasing in depth toward the inner end, the said members being provided with registering openings opening into said recess, means for securing said members to said gate member to permit their adjustment about the axis of said opening, and a gate tapered longitudinally for coacting with said gate seat.

1,300,881. MOLD-FORM. JULIUS J. GRUENFELD, Jr., and PAUL KIRCHER, Chicago, Ill., assignors to Massey Concrete Products Corporation, Chicago, Ill., a Corporation of Virginia. Filed May 28, 1918. Serial No. 235,803. 4 Claims. (Cl. 25—121.)



4. A mold for making concrete poles comprising in combination a shell having a plurality of apertures alternately arranged on opposite sides, said shell being provided with projections adjacent said apertures, a plurality of plugs adapted to be removably inserted in said apertures, the ends whereof project inwardly within the shell, and means for securing said plugs to said projections.

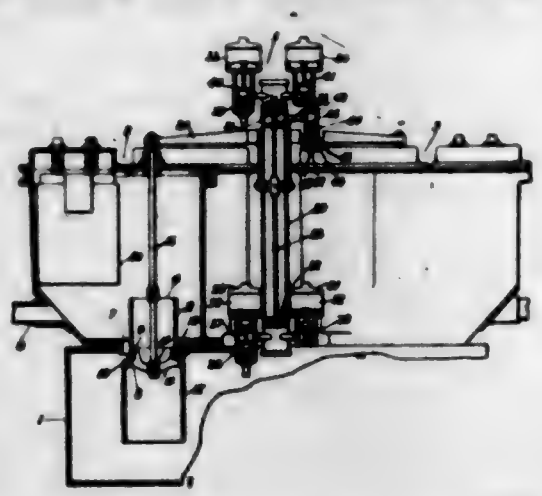
1,300,882. WIND-MUSICAL-INSTRUMENT VALVE. EDWARD J. GULICK, Elkhart, Ind., assignor to C. G. Conn, Ltd., a Corporation of Indiana. Filed July 8, 1918. Serial No. 243,750. 7 Claims. (Cl. 84—7.)



8. In a valve for winding musical instruments, a pad carrier; a pad carried by said pad carrier; and a flexible pad cover overlying the pad and removably fastened to the pad carrier.

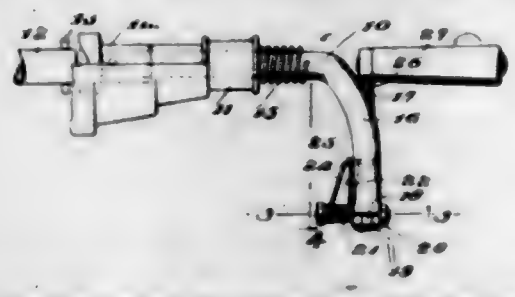
1,300,383. CONTROL APPARATUS. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, A Corporation of Pennsylvania. Filed Nov. 25, 1914. Serial No. 873,919. 10 Claims. (Cl. 137—81.)

8. The combination with a liquid-containing tank having a bottom opening therein, of a movable valve comprising two hollow cylindrical portions open at the ends, the upper portion normally projecting through said opening and providing an annular opening of material size between the edge of said bottom opening and said upper portion, and the bottom portion normally located below said open-



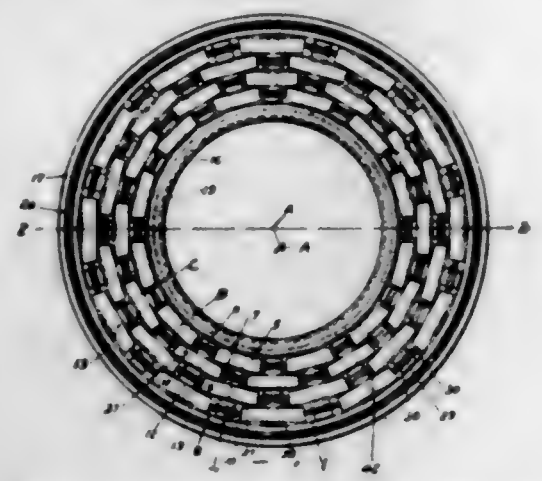
ing and being of substantially the same diameter and adapted to fill said opening when said movable valve is raised in position.

1,300,384. STARTING-CRANK FOR MOTOR-VEHICLES. JAMES L. HANAHAN, Columbia, S. C. Filed Apr. 13, 1918. Serial No. 228,415. 8 Claims. (Cl. 74—33.)



1. A starting crank for internal combustion engines including a crank formed of pivotally connected inner and outer sections, a handle carried by the outer section, the outer section being movable to active position rigidly coacting with the inner section apd to inactive position folded upon the inner section, and yieldable means constantly tending to fold the outer section.

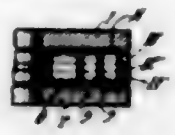
1,300,385. ROLLER-BEARING. ORLANDO W. HART, Fall River, Mass. Filed Feb. 2, 1918. Serial No. 215,068. 24 Claims. (Cl. 64—50.)



9. A thrust bearing comprising a plurality of conical bearing rollers each having its axis disposed radially with respect to the axis of the bearing, and a plurality of cylindrical alining shafts, each of the bearing rollers of the bearing being loosely mounted on an alining shaft, and each of the alining shafts coacting with other rollers of the bearing to maintain the roller or rollers mounted thereon in proper position.

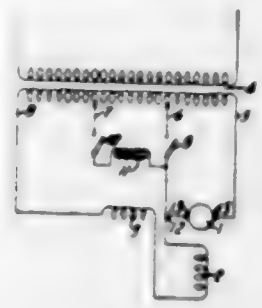
17. A sheet metal idler roller for roller bearings, consisting of a pair of separable sections, each section comprising a sleeve or hub and a flange having a conical bearing surface.

1,300,386. ROLLER-BEARING. ORLANDO W. HART, Fall River, Mass. Filed June 15, 1918. Serial No. 240,140. 14 Claims. (Cl. 64—50.)



14. In a roller bearing, one or more bearing rollers, and a cage having one or more sockets in which said rollers are disposed, said cage comprising a comparatively soft plate and a hard plate each having one or more openings respectively forming a portion of said sockets, the walls of each opening in the hard plate entirely surrounding the rollers disposed therein and being formed on the plate.

1,300,387. SYSTEM OF CONTROL. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 8, 1914. Serial No. 860,611. 2 Claims. (Cl. 172—276.)

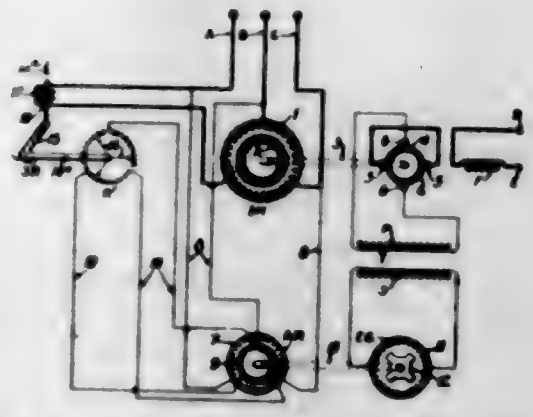


1. The combination with an alternating-current motor of the commutating type provided with an armature winding and a cross-field winding, of a source of alternating current, means for connecting said armature and cross-field windings in series-circuit relation across said source, a connection from a point in said series circuit between said armature and cross-field windings to a point in said source, a second connection including a reactance device that may be established between said point in the series circuit and a point of different potential than the first-named point in said source, and single switching means for interrupting said first-named connection and for simultaneously rendering said last named connection, including said reactive device, effective upon the motor circuit.

1,300,388. ELECTRICAL SYSTEM. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 4, 1915. Serial No. 12,068. 18 Claims. (Cl. 172—281.)

1. In an electrical system, the combination with a driving dynamo-electric machine and an alternating-current machine driven thereby, of automatic means for varying the delivered frequency of the driven machine in accordance with the current supplied to the dynamo-electric machine while maintaining the speed thereof substantially constant.

6. In an electrical system, the combination with a main electric motor, and an alternating-current generator driven thereby, of an auxiliary alternating-current motor, speed-controlling means therefor actuated in accordance with load conditions of said electric motor and independent of the speed of said main motor, and an auxiliary-current generator driven by said auxiliary motor to deliver an exciting current to said first generator for automatically varying the delivered frequency thereof in accordance with said load conditions, while maintaining the speed of said electric motor and its driven generator substantially constant.



7. In an electrical system, the combination with a driving dynamo-electric machine and an alternating-current machine driven thereby, of automatic means for obtaining a variation in the current frequency of the output of said driven machine while maintaining the current frequency of the input to said driving machine substantially constant and while also maintaining a substantially constant speed of said machines.

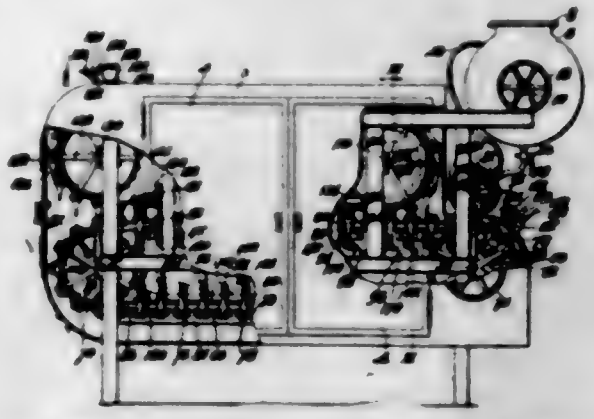
18. In an electrical system, the combination with a set comprising a driving dynamo-electric machine and an alternating-current machine driven thereby, of means independent of the speed of said set for automatically varying the delivered frequency of the driven machine in accordance with the load conditions of said set.

1,300,389. LOCOMOTIVE. RUDOLF E. HELLMUND, Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 30, 1916. Serial No. 128,425. 10 Claims. (Cl. 105—120.)



1. In a locomotive, the combination with a plurality of pairs of driving wheels, a jack shaft disposed adjacent to said driving wheels, and means, comprising side rods, for connecting the jack shaft to the driving wheels, of a plurality of motors mounted adjacent to said driving wheels, and a rigid member for joining said motors to the jack shaft.

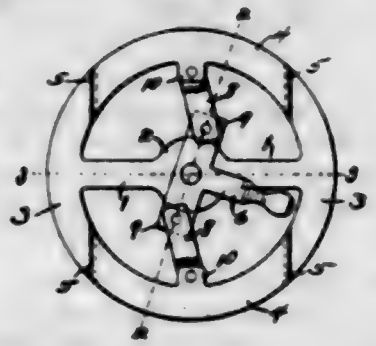
1,300,390. CONE-WAFFLE MACHINE. HENRY HEMPEL, Gage, Okla., assignor of two-thirds to Abraham S. Batrick, Kansas City, Mo. Substitute for application Serial No. 809,385, filed Dec. 29, 1913. This application filed Nov. 13, 1916. Serial No. 131,338. 8 Claims. (Cl. 107—58.)



2. In a cone waffle machine, a bake oven, an endless conveyer traveling through said oven and carrying a plurality

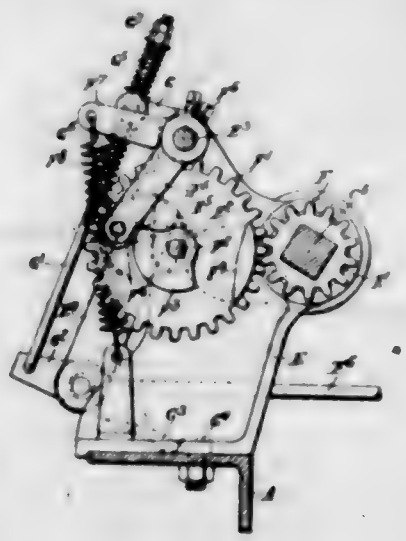
of rows of molding devices, means for feeding dough to said molding devices, means coöperating successively with the molding devices of the several rows to shape the dough into cone waffle form, a grease distributing pipe, and wicks depending from said pipe for simultaneously greasing said rows of devices.

1,300,291. CORE FOR TIRE-CASINGS. CASSELL D. HINNS, Fort Worth, Tex. Filed Nov. 5, 1918. Serial No. 261,186. 2 Claims. (Cl. 18—45.)



1. A collapsible tire core comprising a circular form consisting of two stationary segments and two movable segments loosely connected together, said movable segments having inwardly projecting lugs, a double armed lever fulcrumed on said stationary members, and link bars pivotally connected to the arms of said lever and to said lugs.

1,300,392. PLOW-LIFT. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Aug. 23, 1913. Serial No. 786,211. 28 Claims. (Cl. 97—70.)



1. A plow lift comprising a lifting lever, means for oscillating it, a latch lever pivoted thereon, a stop in opposition to said latch lever, a controlling rod carried by said lifting lever and in pivotal engagement with said latch lever, operating means for said controlling rod and yielding connections between it and said operating means.

2. A plow lift comprising a lifting lever, means for rotating it, a latch lever pivoted thereon, a stop in opposition to said latch lever, a controlling rod carried by said lifting lever and in pivotal engagement with said latch lever, operating means for said controlling rod comprising a rocker arm and yielding connections between it and said operating means.

10. A gang plow comprising a frame, plows pivotally mounted thereon and a plow controlling means comprising a shaft, a series of cams angularly spaced thereon, means for raising the plows operated by one face of said cams during a complete revolution of the shaft in one direction and means for lowering the plows operated from the other faces of the cams during the next succeeding complete revolution of the shaft.

19. In a plow lift, a plow lifting lever, a latch pivotally mounted thereon, a stop against which said latch is adapted to rest, a control rod carried by said lever pivoted at one end on said latch, a rocker arm and yielding connections between said rocker arm and said rod, said connections comprising a plurality of springs.

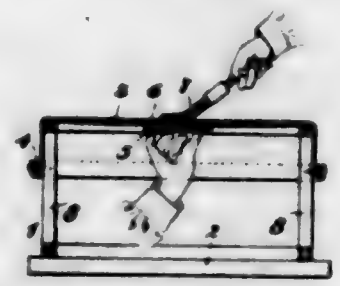
21. A plow lift comprising a cam shaft, cams thereon and driving means therefor, plow lifting levers in opposition to said cams, locking means and operating springs therefor mounted on said levers, and means for actuating said springs.

1,300,393. COLUMN-FORM. JESSE E. HODGES, Covington, Ky. Filed Dec. 31, 1915. Serial No. 69,613. 2 Claims. (Cl. 25—131.)



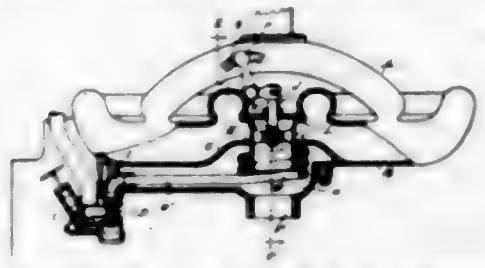
2. A column form comprising a series of sheets having a series of alined perforations in their edges, means engaging registering perforations of adjacent sheets for securing the sheets together to form a concrete receiving mold, a series of reinforcing bands embracing the mold, and clamps engaging the ends of the bands and adapted to retain the bands in adjusted positions upon the mold, said clamps consisting of a coupling having transverse intersecting ways adapted to receive the ends of the bands in superimposed relation with one another, and clamp dogs having eccentric surfaces pivotally mounted on the coupling adapted to be driven into clamping engagement with the ends of the bands to retain the bands against displacement from their adjusted positions.

1,300,394. PROCESS OF GUMMING THE EDGES OF RIBBONS. JOHN HENRY HOFFMAN, New York, N. Y., assignor to Theo. Tiedemann & Sons, Inc., New York, N. Y., a Corporation of New York. Filed July 26, 1918. Serial No. 246,862. 2 Claims. (Cl. 91—68.)



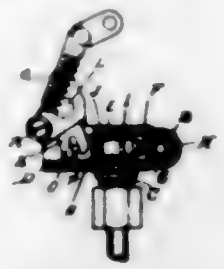
1. The process of applying gum to the edge of ribbon rolls consisting in supporting a ribbon roll beneath a sheet of flexible, permeable textile material which conforms to the surface on the roll to which the adhesive is to be applied, and applying an adhesive by brushing the same through said sheet of material.

1,300,395. MANIFOLD CONSTRUCTION FOR EXPLOSION-ENGINES. GEORGE M. HOLLEY, Detroit, Mich., assignor to Holley Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 4, 1917. Serial No. 189,667. 11 Claims. (Cl. 257—241.)



1. The combination with an exhaust manifold, of a fuel heating coil arranged therein, a tubular shield for protecting said coil from the exhaust gases, and means for adjusting said shield to expose the coil to said gases.

1,300,396. PRIMER. GEORGE M. HOLLEY and DONALD T. HASTINGS, Detroit, Mich.; said Hastings assignor to said Holley. Filed Mar. 7, 1918. Serial No. 220,912. 4 Claims. (Cl. 137—139.)



1. A primer, comprising a casing having inlet and discharge nipples, an open-ended barrel intermediate said nipples, a plunger slidable in said barrel forming a valve for closing the connection between said nipples, a vented passage in said plunger intermediate said nipples in the closed position of the valve, and a lever for actuating said plunger to open the valve.

1,300,397. METHOD FOR PRODUCING PRINTS WITH COLORS ON PAPERS, LEATHER, OR SIMILAR MATERIAL. GUSTAF EMIL HOLMSTRÖM, Gefle, Sweden. Filed Jan. 19, 1914. Serial No. 813,059. 2 Claims. (Cl. 91—67.9.)

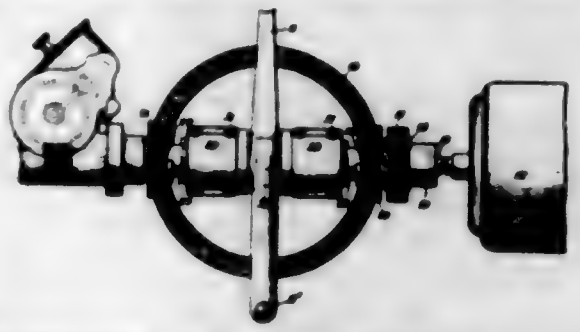


1. The method of producing prints in relief from color on such materials as paper, leather, etc., with a printing form, which comprises applying a removable thin metal leaf to the face of said printing form, pressing the cooperating surfaces of said material and printing form together, a layer of color being previously applied to one of said surfaces, and producing a thin layer of said color on said material at the places subjected to pressure by the raised parts of the printing form and a thicker layer at other places.

2. The method of producing prints in relief from color on such materials as paper, leather, etc., with a printing form which comprises applying a removable thin metal leaf to the face of said printing form, applying color to said coated face, pressing said coated printing form against said material and distributing the color and producing a thin layer thereof on said material at the places subjected to pressure by the raised parts of the printing form and a thicker layer at other places.

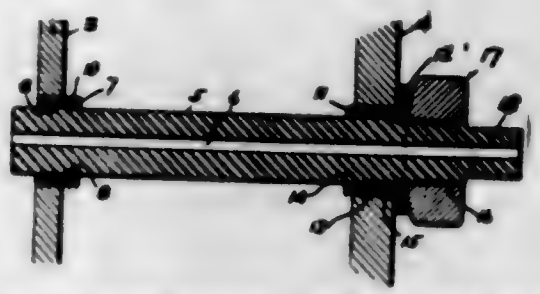
1,300,398. CLUTCH. FRIEDSMAN R. JAEGER, Oak Park, Ill. Filed June 14, 1918. Serial No. 239,915. 6 Claims. (Cl. 192—1.)

2. In a mechanism of the character described, the combination of two sets of coöperating clutch-elements, means to shift said elements to render the one or the other set operative, a rotary driving-means, and a torsional-spring-connection between said driving-means and one of the



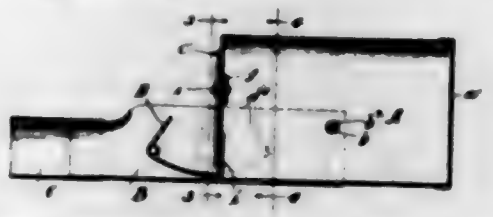
clutch-elements of each set, comprising a spring having reversely-coiled end-portions connected to the clutch-elements and an intermediate part operatively associated with said driving means, substantially as described.

1,300,399. STAY-BOLT. WESTON JENKINS, Rome, N. Y., assignor to Rome Iron Mills, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 24, 1917. Serial No. 187,932. 7 Claims. (Cl. 85—1.5.)



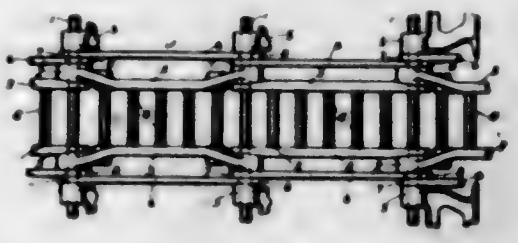
6. A stay-bolt having a core of hard metal of a length greater than the distance between the boiler sheets, a shouldered soft metal ferrule on the core adapted for engagement with a sheet, and a nut having threaded engagement with the core and adapted to take against the shouldered portion of the ferrule.

1,300,400. SEEDER. GEORGE SCUDDER JARVIS, Copiague, N. Y. Filed Feb. 14, 1918. Serial No. 217,023. 9 Claims. (Cl. 221—119.)



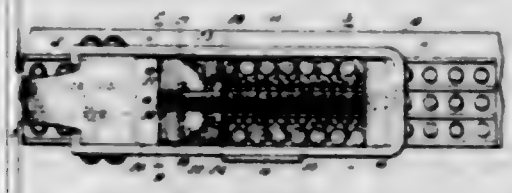
1. A seeder embodying a seed container, a seed outlet therefrom, means for adjusting the size of said outlet, and a spring with a bent end for manually controlling the flow of seed from said outlet.

1,300,401. SAFETY DEVICE FOR CONVEYERS. GRIFFITH JOHN, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 5, 1917. Serial No. 205,493. 7 Claims. (Cl. 74—32.)



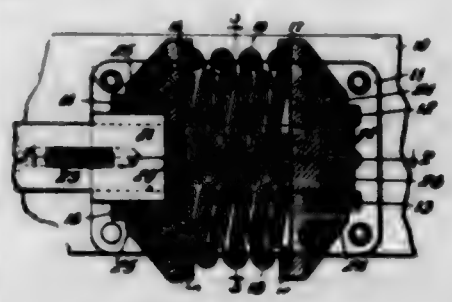
1. In a conveyer apparatus, a series of axles, a drive linkage connecting the latter, and an auxiliary linkage connecting the same.

1,300,402. FRICTION-GEAR FOR DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Dec. 20, 1916. Serial No. 137,982. 2 Claims. (Cl. 213—64.)



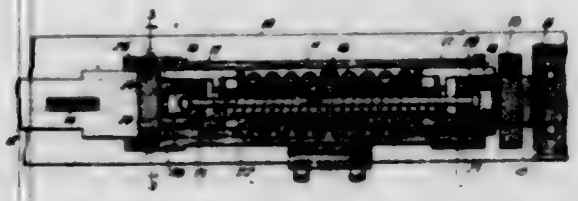
1. In a friction shock absorbing mechanism, the combination with a friction post, of a plurality of friction shoes disposed around and frictionally engaging said post, said shoes having exterior wedge faces, a spring directly engaging the inner ends of said shoes to assist in resisting movement thereof, wedging means for holding said shoes in operative relation with said post, and a spring engaging said wedging means, said inner ends of said shoes being extended lengthwise of said post and within said wedging means.

1,300,403. DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 8, 1918. Serial No. 210,865. 2 Claims. (Cl. 213—42.)



2. In a draft rigging, the combination with draft sills, of a front set of vertically spaced transversely extending keys mounted in said sills, a draw bar having the butt thereof supported by and guided between said keys, a rear set of vertically spaced transversely extending keys mounted in said sills, a horizontal yoke connected to said draw bar having the rear end thereof supported and guided by said keys, followers interposed between said keys, and cushioning means between the followers, each of said followers having horizontally extending flanges slidably engaging the upper and lower surfaces of the upper and lower keys respectively of the corresponding set of keys.

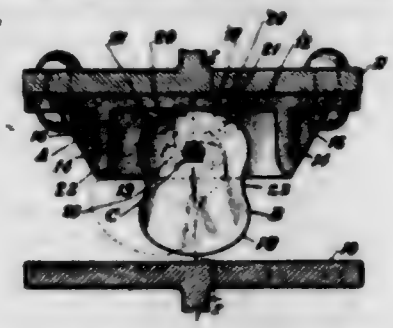
1,300,404. FRICTION-GEAR FOR RAILWAY DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,510. 2 Claims. (Cl. 213—64.)



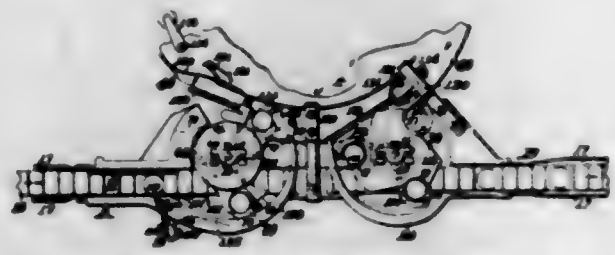
1. In a draft rigging, the combination with draft sills, draw bar, and yoke-acting means, of a friction gear shell, means for holding said shell stationary under draft but permitting said shell to move under buff, a set of friction elements coöperable with said shell at its rear end under both buff and draft, and additional shock absorbing means at the front end of the gear and operable under buff only.

1,300,405. ROCKER SIDE BEARING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 25, 1918. Serial No. 246,624. 2 Claims. (Cl. 64—65.)

2. In a side bearing for railway cars and the like, the combination with a hollow box-like casting adapted to be secured to the body bolster of a car, said casting having a bearing surface and provided with a plurality of depending projections, of an anti-friction rocker, means for suspending said rocker freely from said casting, said rocker having recesses in its upper face for coöperation with said projections, and means for limiting the movement of said rocker.

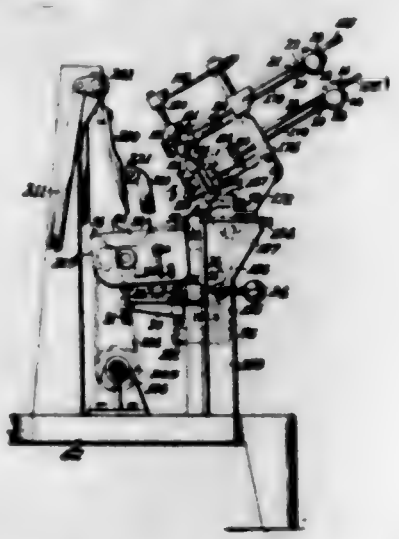


1,300,406. CONVEYING DEVICE. JOHN EMANUEL JOHNSON and CHARLES H. OSLUND, Worcester, Mass., assignors to The O. and J. Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 2, 1916. Serial No. 112,705. 14 Claims. (Cl. 198—1.)



1. In a machine of the character described, the combination of a carrier, a turret having a rigid arm thereon for engaging an article fed forward by the carrier, and a relatively movable arm mounted on the turret for holding the article against said rigid arm on the turret with yielding pressure, said movable arm having a yielding end thereon.

1,300,407. LABEL-ADVANCING MECHANISM. JOHN EMANUEL JOHNSON and CHARLES H. OSLUND, Worcester, Mass., assignors to The O. and J. Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 2, 1916. Serial No. 112,706. 8 Claims. (Cl. 271—61.)

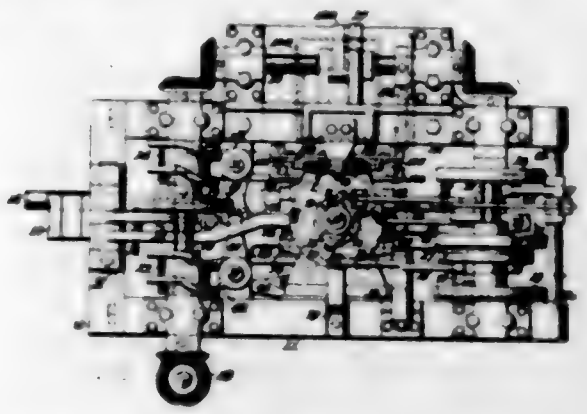


1. In a labeling machine, the combination with a label holding and label feeding device of an inclined fixed rod, a roller supported on said rod and mounted to roll down the same, a weight supported by the roller below the rod, a movable rod yieldingly connected with said weight but movable therewith, and a plate on the movable rod for applying pressure to a pile of labels below.

5. In a labeling machine, the combination with a label holding and label feeding device of an inclined rod, a roll adapted to move along said rod, a weight supported by the roll on the opposite side of the rod, means connected with the weight for applying pressure to a pile of labels, and a pivoted latch having a projection for engaging the rod and holding the weight at the upper end thereof when the latch is in one position and having means whereby when the latch is moved to the opposite position the weight can be moved toward said end.

7. In a labeling machine, the combination with a label holding and a label feeding device with an inclined fixed rod having teeth therealong, a roller adapted to roll down the rod, a pawl movable with the roller and adapted to engage the teeth to prevent the movement of the roller up the rod, and means connected with said roller for applying pressure to a pile of labels below.

1,300,408. BOTTLE-SEAL-LABELING MACHINE. JOHN EMANUEL JOHNSON and CHARLES H. OSLUND, Worcester, Mass., assignors to The O. & J. Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed March 30, 1917. Serial No. 158,707. 47 Claims. (Cl. 216—54.)



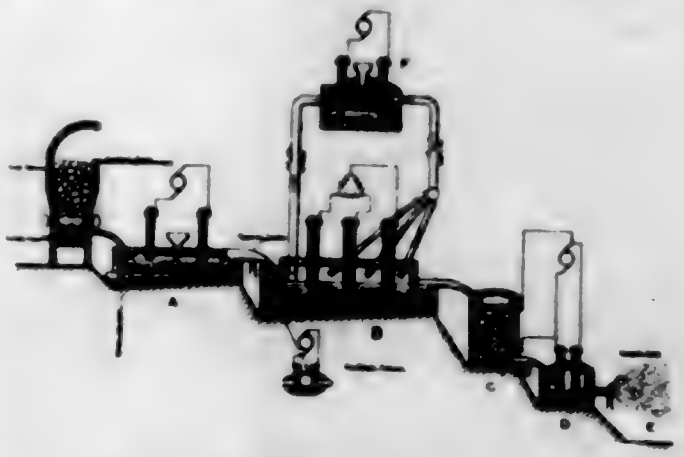
1. In a labeling machine, the combination of a conveyer for supporting and carrying articles to be labeled, means for gripping an article while on said conveyer, and holding it in the stationary position to which the conveyer has carried it without stopping the conveyer, and means for applying a label to the article while held in that position.

1,300,409. ADVANCING MEANS FOR LABEL-HOLDERS. JOHN EMANUEL JOHNSON and CHARLES H. OSLUND, Worcester, Mass., assignors, by mesne assignments, to The O. & J. Machine Company, Worcester, Mass., a Corporation of Massachusetts. Original application filed June 11, 1914, Serial No. 844,553. Divided and this application filed Oct. 22, 1915, Serial No. 57,340. Renewed Jan. 6, 1919. Serial No. 269,892. 9 Claims. (Cl. 271—61.)



1. In a label holding and feeding device, the combination of a movable support, means for reciprocating said support, a bracket carried by the support, label holding devices mounted on the bracket, a rod extending at an incline from said bracket, a weight supported by the rod and slidable therealong, a movable rod connected with the weight having a plate on it for transmitting the pressure of the weight to a pile of labels, and means for connecting the last named rod with the weight.

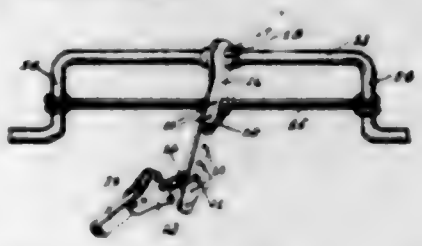
1,300,410. STEEL-MAKING PROCESS. WOOLSEY McA. JOHNSON, Hartford, Conn. Filed May 3, 1915. Serial No. 25,378. 16 Claims. (Cl. 204—64.)



1. A process for settling lead or copper blast furnace slag which comprehends creating strongly reduced conditions in the absence of slag-forming conditions and maintaining the slag at a sufficient fluidity to enable the iron bearing products to settle, and then tapping said products for subsequent use.

3. A process for recovering iron values from slag which comprehends subjecting the molten slag to high temperatures under reduced conditions to precipitate matte; then blowing air through the molten slag to oxidize sulfur; and then actively subjecting the slag to reducing conditions to precipitate iron.

1,300,411. AGRICULTURAL MACHINE. OLIVE J. JOHNSON, Paris, Tex., assignor of one-half to G. W. WORTHAM, Paris, Tex. Filed July 16, 1917. Serial No. 180,816. 2 Claims. (Cl. 97—36.)



1. The combination with a cultivating machine including a frame and an arched axle; of a mounting for farming implements including a supporting rod detachably secured to the arched portion of said axle, a connecting arm having a bearing for receiving said axle, said arm being arranged in a downwardly and rearwardly inclined position, a link connecting the intermediate portion of said arm with said supporting rod, and means adjustable longitudinally of said connecting arm for detaching the beam of a farming implement thereto.

1,300,412. TRIPOD. HOWARD B. JONES, Chicago, Ill., assignor to Klix Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 9, 1918. Serial No. 233,500. 4 Claims. (Cl. 248—43.)

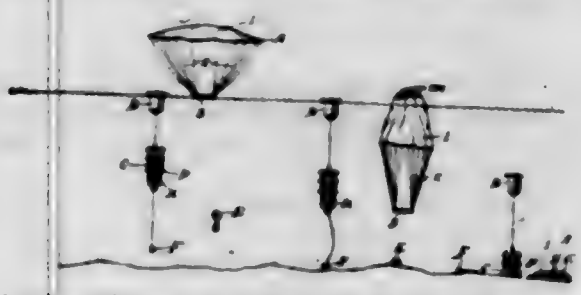
1. A tripod having a plurality of legs each comprising a pair of telescoping members, the end of the outer member being provided with a plurality of slits forming tongues, a sleeve having a tapered screwthreaded bore coacting with said tongues to clamp them against said inner

member, a bail having side members, the free ends thereof being pivotally mounted on said sleeve and the bight thereof being turned at an angle to the said members to form a loop for receiving the outer member, the said side members being sprung inwardly intermediate their ends to form spring clamps for engaging the sides of the outer member.



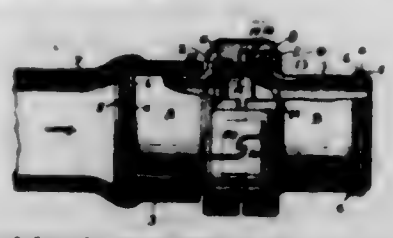
4. A tripod having a plurality of legs comprising inner and outer telescoping members, means for locking said members together, comprising a rotary element, a lever pivotally mounted on said rotary member, and means for holding said lever in inoperative position.

1,300,413. AIRCRAFT-PLANTED MINE AND ANCHOR. CHARLES L. KEE, Portsmouth, Va. Filed June 1, 1917. Serial No. 172,173. 40 Claims. (Cl. 102—3.)



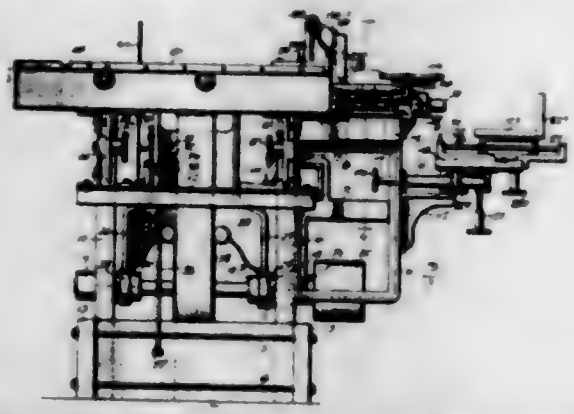
1. A mine adapted to be planted by aircraft, comprising a parachute; means for floating the parachute on striking the water and subsequently sinking it; a submarine mine; a mine anchor; mechanical means releasably engaging the anchor with the mine and both of those elements to the parachute; said means also engaging the firing member of the mine to prevent its accidental discharge; independent dissolvable fastening means releasably engaging the firing member of the mine with the cover of the mine to prevent its operation prior to submergence in the water; a resistance chamber carried by the anchor and adapted to first retard the sinking of the anchor to release the means fastening the mine, the anchor and the parachute in immediate engagement; means carried by the anchor for automatically controlling the depth at which the mine is to be anchored beneath the surface of the water; and buoyant means arranged to be operated on striking the water to set in operation the means for automatically controlling the depth at which the mine is to be anchored.

1,300,414. HOSE-COUPLING. ALBERT KLELL, West Park, Ohio. Filed Mar. 15, 1915. Serial No. 14,360. 1 Claim. (Cl. 285—163.)



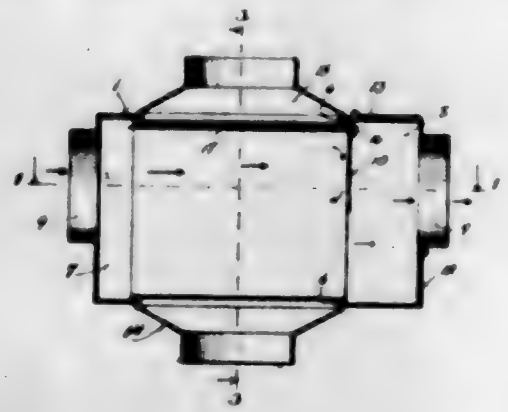
As a new article of manufacture, a hose coupling consisting of two units operatively related one within the other, one of said units having an annular extension to engage hose thereon and a head with a front extension to engage over the other unit and an annular channel within said head having an inwardly projecting rib about its side provided with a transversely rounded and flaring edge, and the other unit having a head sleeved within the first named unit and provided with an annular channel with a rim about its side having the edge thereof transversely rounded and flaring and forming part of an arc with the corresponding rib on the other unit, and a rubber gasket in each of said annular channels having an annular extension with a relatively thin neck portion to allow the same to flex and rounded transversely on its back outside said neck and adapted to bear against the corresponding rounded and flaring edges of the ribs on the heads of the said units, and means on said heads adapted to lock said units separably together.

1,300,415. WOODWORKING-MACHINE. WILLIAM B. KNICKERBOCKER, Jackson, Mich. Filed June 19, 1918. Serial No. 240,735. 3 Claims. (Cl. 144—1.)



1. In combination with a saw table comprising two spaced-apart side frame members; a table top mounted thereon; cross beams carried by the frame members; a saw driving shaft mounted on said cross beams; a saw frame rotatably movable about said driving shaft and located between said cross frame members; a saw mandrel carried by said frame; pulleys on said shaft and mandrel; a belt connecting said pulleys to drive the mandrel; a secondary frame attachable to the main frame; a mandrel carried by the secondary frame; a clutch member on each said mandrel to connect said mandrels together in coaxial relation and means to hold the saw mandrel in position to be clutched to the secondary mandrel.

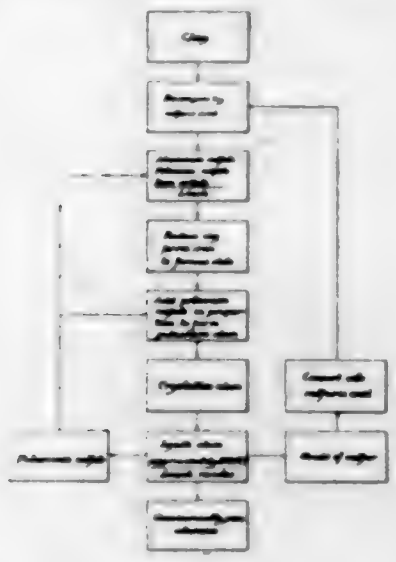
1,300,416. HEATING APPARATUS. JOSEPH KOENIG, Two Rivers, Wis. Filed Feb. 5, 1918. Serial No. 215,498. 3 Claims. (Cl. 257—166.)



2. In a device of the class described, a casing having a series of hot gas passage-ways extending in one direction and a second series of fluid passage-ways extending in a cross direction, the ends of said passage-ways opening through the adjacent walls of the casing, an inlet hood disposed over one end of the casing, an outlet hood disposed over the opposite end of the casing, said hoods being in communication with said hot gas passage-ways, a

pipe connection on each of said hoods, a baffle plate in the outlet hood to retard the flow of fluid through said hot gas passage-ways, a check damper in the outlet hood between the outer end thereof and the baffle plate, an inlet into the casing, and an outlet from the casing, said inlet and outlet communicating with the second series of fluid passage-ways.

1,300,417. PROCESS OF PREPARING ALUMINA. FREDERICK LAIST, FREDERICK F. FRICK, and ROBERT S. OLIVER, Anaconda, Mont., assignors to Anaconda Copper Mining Company, Anaconda, Mont., a Corporation of Montana. Filed Apr. 10, 1918. Serial No. 227,722. 5 Claims. (Cl. 23—13.)



1. A cyclical process of producing commercially pure alumina from aluminous raw materials, comprising treating the aluminous material with sulfuric acid in proportion sufficient to convert the bases into sulfates, and dissolving the same; reducing any ferric iron to the ferrous state; adding to the solution potassium sulfate in proportion to convert the aluminum sulfate into potassium alum; crystallizing the alum and igniting the same at a sufficient temperature to produce alumina, potassium sulfate, and oxids of sulfur; recovering the alumina; and returning the potassium sulfate to the process at the appropriate stage for producing with aluminum sulfate additional quantities of potassium alum.

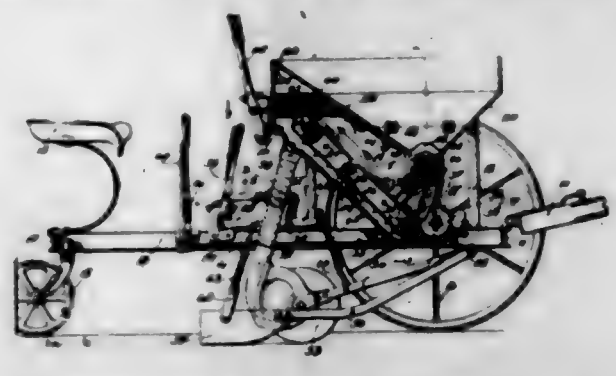
3. In a process of preparing commercially pure alumina from aluminous raw materials, the steps which consist in converting the alumina component of the raw material into aluminum sulfate; reacting thereon with potassium sulfate to produce potassium alum; and recovering potassium sulfate and commercially pure alumina from the alum thus produced.

5. In a cyclical process of preparing commercially pure alumina from aluminum sulfate contaminated by ferric iron, the steps which consist in reducing the ferric iron to the ferrous state; treating the resulting aluminum sulfate in aqueous solution with potassium sulfate in proportion to produce potassium alum; crystallizing and recovering the alum and decomposing the same by heat to produce commercially pure alumina and potassium sulfate; and utilizing the recovered potassium sulfate in a repetition of the process.

1,300,418. PROCESS OF PREPARING IRON-FREE ALUM. FREDERICK LAIST, FREDERICK F. FRICK, and ROBERT S. OLIVER, Anaconda, Mont., assignors to Anaconda Copper Mining Company, Anaconda, Mont., a Corporation of Montana. Filed Apr. 24, 1918. Serial No. 230,496. 3 Claims. (Cl. 23—13.)

1. A process of preparing substantially pure aluminum salts from iron-bearing aluminous materials, comprising converting the aluminum component of the raw material into aluminum sulfate contaminated by ferric iron; reducing the ferric iron to the ferrous state; and crystallising and recovering aluminum from the resulting solution in the form of a sulfate compound containing an alkali metal sulfate but substantially free from ferric or ferrous iron.

1,300,419. CONVERTIBLE PLANTER. BERNHART M. LANGNES, Kenosha, Wis. Filed Dec. 5, 1918. Serial No. 265,384. 5 Claims. (Cl. 221—128.)

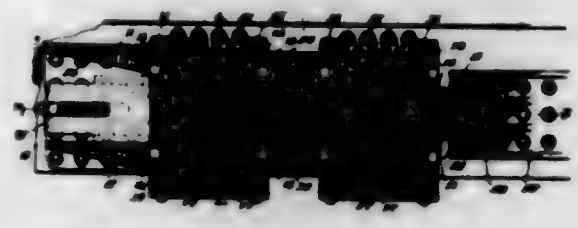


1. A planting machine including a main frame, ground wheels supporting the main frame, a pivoted belt frame mounted on the main frame, a shaft carried by said belt frame, a belt carried by the belt frame and trained about the shaft, selective speed gears on the shaft, a gear-means for driving said gear, means for holding the belt frame in differing pivotal positions to procure differing drive speeds of the belt, a hopper on the main frame, and batch determining members on the belt fed from the hopper.

1,300,420. PROCESS OF CONDUCTING ELECTROLYSIS. ERNEST A. LE SUEUR, Ottawa, Ontario, Canada. Filed July 19, 1918. Serial No. 245,785. 2 Claims. (Cl. 204—60.)

2. In cells used for preparing chlorates by the electrolysis of chlorid solutions, in combination a lime coating on the cathode and a salt of chromic acid in solution in the electrolyte.

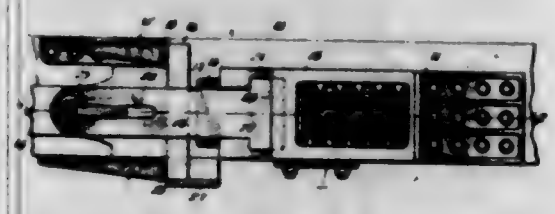
1,300,421. RAILWAY-CAR DRAFT-RIGGING. GOODRICH Q. LEWIS, Wheaton, Ill., assignor to William H. Miner, Chazy, N. Y. Filed May 24, 1916. Serial No. 99,486. 6 Claims. (Cl. 213—42.)



1. In a draft rigging, the combination with draft members, of upper and lower, horizontal front and intermediate stops, a rear stop, a horizontal tandem yoke between said upper and lower stops, the yoke remaining stationary under buff, tandem arranged shock absorbing units, insertible and removable from below, within the yoke, said yoke actuating both units in draft, and means for actuating both units in buff.

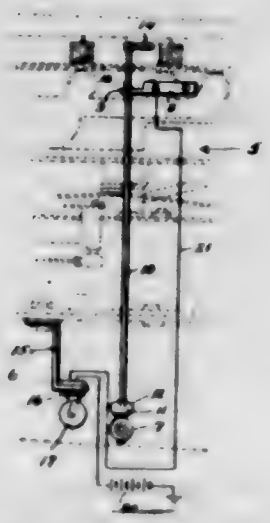
3. In a draft rigging, the combination with draft members and tandem arranged stops, of a front follower, front intermediate follower, rear intermediate follower, rear follower, cushioning means between the sets of followers, a yoke having operative engagement with the front intermediate follower to actuate the latter under draft, said yoke remaining stationary under buff, a column extending from the front follower rearwardly, and a block interposed between the intermediate followers, said block being actuated by said column under buff to thereby move the rear intermediate follower rearwardly.

1,300,422. FRICTION DRAFT-GEAR. GOODRICH Q. LEWIS, Wheaton, and JOHN R. MITCHELL, Evanston, Ill., assignors to William H. Miner, Chazy, N. Y. Filed Sept. 23, 1916. Serial No. 121,716. 1 Claim. (Cl. 213—64.)



In a draft rigging, the combination with a friction shell of a friction gear, of a pair of relatively short links for connecting said shell with a draw bar, and integral means on said links and shell for detachably connecting the links with the shell, said means comprising recesses on the shell providing rearwardly facing shoulders, coöperating forwardly facing shoulders at the rear ends of said links, and flanges on the shell located rearwardly of the said shoulders and extended partly over the extreme inner ends of the links when the latter are assembled with the shell to thereby prevent lateral separation of the links from the shell, said links being attached by applying the same first at an angle to the axis of the shell and then bringing them into parallelism with said axis.

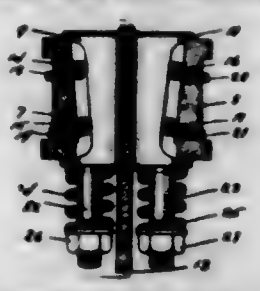
1,300,423. OIL-COCK CONTROL AND ILLUMINATOR. RUFUS H. LIMPP, King City, Mo. Filed May 23, 1918. Serial No. 236,143. 1 Claim. (Cl. 137—139.)



An attachment for internal combustion engines comprising a horizontally disposed bracket secured upon the engine, a vertically extending rod journaled in said bracket and having its lower end laterally offset and connected with the handle of the oil pet cock, a laterally extending operating handle on the upper end of said rod, a stationary contact plate secured upon and insulated from said bracket, a rigid arm extending horizontally from said rod in alinement with and engageable with said stationary contact, and an electric light bulb disposed adjacent said oil pet cock and arranged in a circuit including a source of current and said contact, rotation of said rod to open said cock moving said arm into divergent engagement with said contact whereby said lamp will be energized.

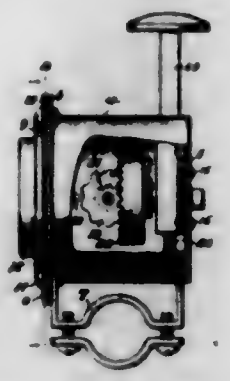
1,300,424. SAFETY DEVICE. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 16, 1916. Serial No. 84,589. 11 Claims. (Cl. 187—91.)

2. In a car brake or catch, the combination of a rail engaging member, a member for actuating said first named member, and so positioned relatively thereto that relative movement of the two members above a predetermined amount tends to release the frictional engagement of the rail engaging member with the rail, and a spring between



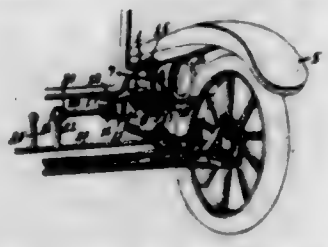
the two members, tending to return the rail-engaging member into frictional engagement with the rail.

1,300,425. AUTOMOBILE-HORN. GEORGE F. LONG, New York, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed July 21, 1916. Serial No. 110,497. 1 Claim. (Cl. 116—1.)



In an automobile horn of the diaphragm type, the combination with a mechanism inclosing casing, including a vibratory diaphragm provided with a wear-piece, of a driving mechanism for actuating said diaphragm, said mechanism including a driven shaft mounted for rotary movement about an axis substantially parallel to the diaphragm and relatively close thereto, a wear-piece engaging member fixed to the shaft to rotate therewith and designed to engage the wear-piece to vibrate the diaphragm, a relatively small spur gear fixed to the shaft and spaced from said member, a crown gear mounted for rotary movement about an axis extending at right angles to the shaft and offset from the axis of the wear-piece, said spur gear meshing with said pinion, said member extending into said crown gear beyond the plane of the teeth thereof, one-way driving means mounted in rear of said crown gear for rotating the same in one direction and a fly-wheel of relatively large diameter fixed to said shaft, offset from the crown gear on the side thereof opposite said member and lapping both the wear-piece, the crown gear and said one-way driving means.

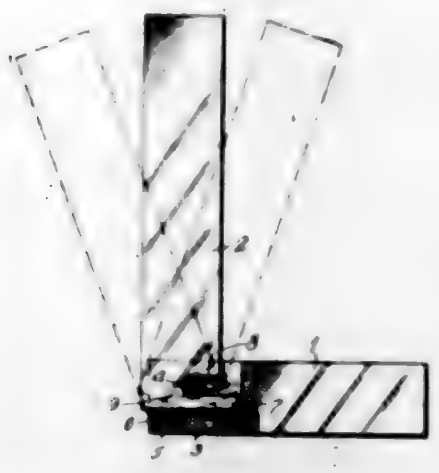
1,300,426. DIRIGIBLE HEADLIGHT. WALTER L. LORANGER, Highland Park, Mich. Filed Nov. 10, 1916. Serial No. 130,511. 2 Claims. (Cl. 240—62.)



1. A lamp and bracket for automobiles having a steering arm, consisting of a substantially C shaped bracket adapted to be secured to the forward end of the vehicle frame, the upper horizontal member of the bracket having an upwardly and outwardly extending portion providing a fender arm, a spindle rotatably mounted in the bracket between the horizontal portions thereof, said spindle having a forwardly projecting arm, a lamp member fixedly secured to the forward end of the arm, said arm position-

ing the lamp forward of and below the point of connection of the bracket and fender, and means pivotally connecting the spindle and the said steering arm.

1,300,427. ADJUSTABLE SQUARE. LOUIS LOWENSTEIN, Detroit, Mich. Filed May 16, 1918. Serial No. 234,863. 3 Claims. (Cl. 33—114.)



1. A square comprising a base arm having the inner end thereof bifurcated and provided with a fixed transverse pin, an upright arm having the inner end thereof provided with an open slot so that said upright arm may be positioned in the bifurcation to rock on the pin thereof, and means in the bifurcation of the base arm bearing against the inner end of the upright arm and adapted for adjusting the upright arm relative to the base arm.

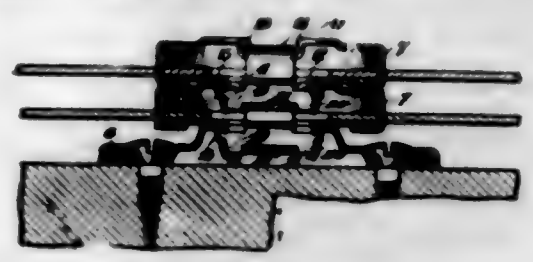
1,300,428. WIGGLER. LOUIS LOWENSTEIN, Detroit, Mich. Filed May 16, 1918. Serial No. 234,866. 5 Claims. (Cl. 33—169.)



1. A wiggler comprising a tubular spindle, a tubular bearing slidable in the outer end thereof, an adjustable plug in the inner end of said spindle, a coiled spring interposed between said plug and the inner end of said tubular bearing, a needle having a spherical end bearing against the outer end of said tubular bearing, and a retaining sleeve on the outer end of said spindle retaining the spherical end of said needle in engagement with said tubular bearing.

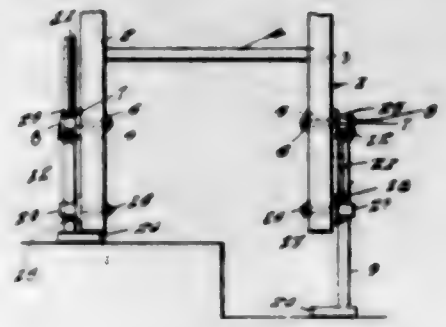
5. The combination of a spindle, a needle adjustably and removably connected thereto, a bearing in said spindle engaging the inner end of said needle, a spring in the spindle yieldingly holding said bearing in engagement with said needle, and means in connection with said bearing adapted to retain it against engagement from the spindle when the needle is disengaged from the spindle.

1,300,429. FASTENING DEVICE. EMIL LUDEKE, Rochester, N. Y. Filed May 20, 1918. Serial No. 235,482. 7 Claims. (Cl. 24—211.)



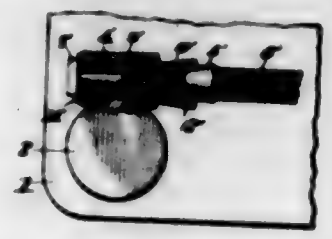
1. A fastening device comprising a keeper and a cooperating member having a plurality of members adapted to engage said keeper, a lever for actuating said engaging members and separate means for locking the lever.

1,300,430. LADDER-FOOT. ALEXANDER J. LUNDIN, Long Prairie, Minn. Filed Feb. 25, 1916. Serial No. 80,444. 1 Claim. (Cl. 228—63.)



An adjustable foot for ladders comprising in combination with a ladder housings secured to one side rail of the ladder, a rack bar adjustably mounted in the housings and provided with a foot, and a cam lever pivoted to the under side of one of the housings and arranged at right angles with relation to the rack bar, said cam lever being adapted to be swung transversely across the rack teeth to secure the rack bar in adjusted position against upward or downward movements with relation to the ladder, and said cam lever being adapted when in rack bar securing position to engage the under side of the housing.

1,300,431. BATTERY-TERMINAL. JOSEPH O. LUTHY, San Antonio, Tex. Filed July 1, 1918. Serial No. 242,790. 3 Claims. (Cl. 204—29.)

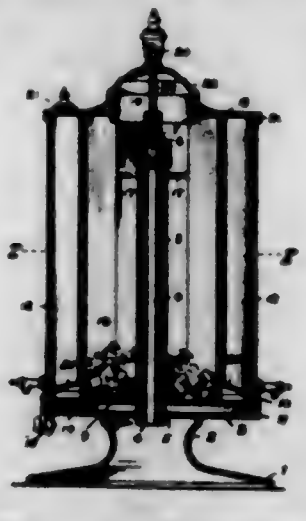


1. The combination with a battery terminal having a tapered socket and a tapered conductor terminal, of a bushing removably interposed between the battery and conductor terminals, and means for drawing the conductor terminal tightly into engagement with the bushing and the bushing tightly into engagement with the battery terminal.

1,300,432. LIQUID-RECEPTACLE. ALEXANDER McDONALD, Duluth, Minn. Filed Feb. 11, 1918. Serial No. 216,582. 4 Claims. (Cl. 62—59.)

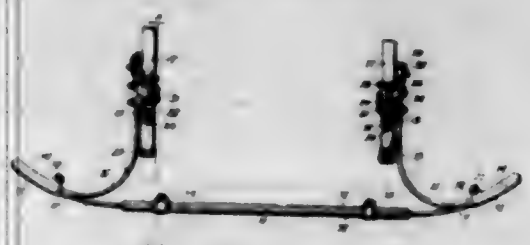
1. The combination with a stand having a rotatable axial cooling chamber star shaped in horizontal cross sec-

tion, of a plurality of independent removable circumferential liquid containers having their sides abutting each



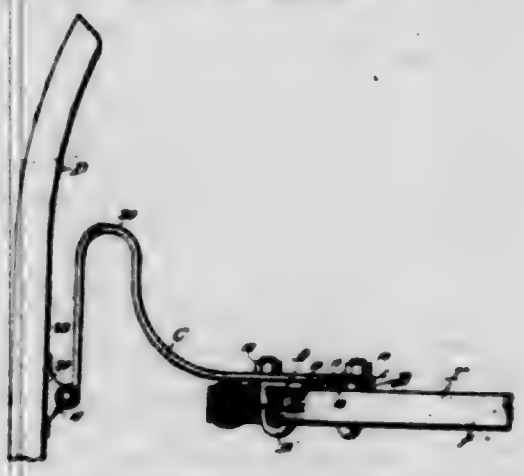
other and their innermost walls each surrounding a point of the star shaped chamber.

1,300,433. AUTOMOBILE-BUMPER. ALLAN L. McGREGOR, Chicago, Ill. Filed Jan. 19, 1917. Serial No. 143,229. 3 Claims. (Cl. 293—55.)



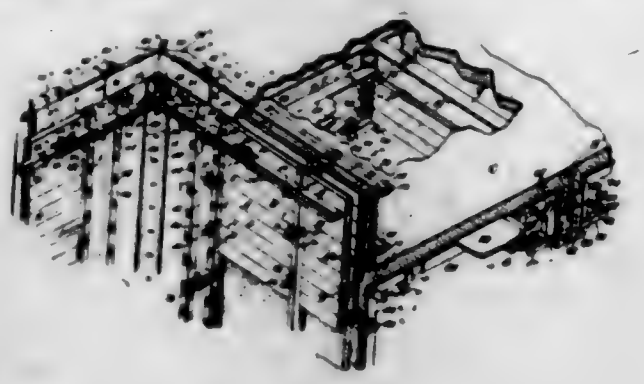
2. In a bumper structure, the combination of a bumper bar, supporting bow structures having their inner ends extending rearwardly and adapted to be secured to a vehicle frame, the front ends of said bow structures extending laterally outwardly into parallelism with and alongside of the ends of the bumper bar, caps receiving the respective ends of the bumper bar and bow structures, said ends being relatively shiftable and movable in said caps whereby the distance between the inner ends of said bow structures may be readily adjusted, and means on said caps for securing them and the received ends rigidly together.

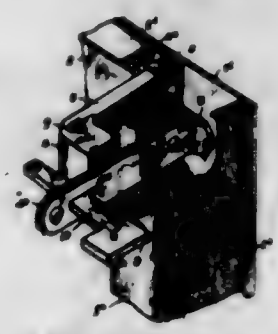
1,300,434. AUTOMOBILE-BUMPER. ALLAN L. McGREGOR, Chicago, Ill. Filed Oct. 18, 1917. Serial No. 196,589. 2 Claims. (Cl. 293—55.)



1. A clamp for securing arms of a bumper structure to the side beams of a vehicle comprising a U-shaped plate for engaging with its legs against the outside of a beam and having a lug extending laterally from its base for engaging with the outer side of a flange of the beam, a bolt passing through said lug and having its inner end curved to extend around the beam flange, and a nut for the outer end of said bolt, the space between the plate legs serving to receive rivet heads or other projections which might be on the outer side of the beam.

1,300,435. CONCRETE-FORM. STEWART R. MCKAY, Cleveland, Ohio, assignor to McKay Concrete Form Company, Sewaren, N. J., a Corporation of New Jersey. Filed Nov. 17, 1914. Serial No. 872,648. 33 Claims. (Cl. 25—131.)



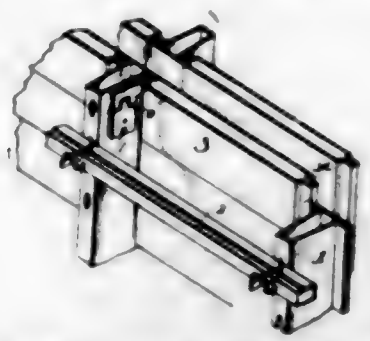


4. In a form of the character described, the combination of a pair of units each comprising a pair of posts and an interposed plate removably and adjustably connectible therebetween, a corner section interposed between said units, a plate member interposed between a post of each unit and the adjacent lateral edge of the corner section, said plate member being adapted to overlap the corner section, posts on the corner section, a corner ranger corresponding to the corner section, means for connecting the corner section to said posts, ranger sections adjustably connected to the ends of the corner ranger and means for connecting the ranger sections to the posts of the units.

27. In a form of the character described, the combination of a pair of posts, a ranger section connected to one of said posts and comprising a channeled member having a wooden filling block therein, and a coöperating ranger section telescopically connected to the adjacent end of the first mentioned ranger section, the second ranger section comprising a metallic channel shaped member, means extending through the filler block of the first mentioned section and connecting the same to one of said posts, a bolt connected with the other post and extending through the second ranger section between the flanges thereof, a saddle covering the open space between the flanges of the second section and having an aperture for the bolt, and a wedge key driven through the outer end of said bolt and bearing against the saddle.

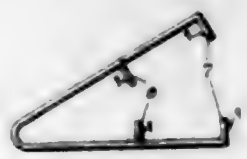
30. A mold plate for forms of the character set forth having its opposed lateral edges provided each with a tenon or shoulder, a lining plate applied to the inner face of the said mold plate, a plate insertible between each lateral edge of the lining plate and the mold plate body and having an extension adapted to overlap one of the faces of the tenon, a pair of metallic plates covering respectively the top and the bottom of the mold plate and each having a flange insertible between the top and bottom edges of the lining plate and the corresponding portions of the mold plate and each having extensions covering respectively the tops and bottoms of the shoulders or tenons, and a metallic channel which is adapted to be applied to each shoulder or tenon and to receive therewithin the lateral extensions of the third mentioned plates.

1,300,436. CONCRETE-FORM. STEWART R. MCKAY, East Cleveland, Ohio, assignor to McKay Concrete Form Company, Sewaren, N. J., a Corporation of New Jersey. Filed June 12, 1915. Serial No. 33,798. 2 Claims. (Cl. 25—131.)



2. In a form of the character described, the combination with a plurality of spaced posts, panels extending between the posts and engaging the posts, a pair of retaining members, one upon each opposite side of a post, each of said members having a slanting surface to engage with the end of the panel and hold it against the post, each member being movable upon its pivot toward the post to release the panels.

1,300,437. BELT-FASTENER. ROY MCNICOL, Lanark, Ontario, Canada. Filed June 15, 1918. Serial No. 240,161. 6 Claims. (Cl. 24—33.)



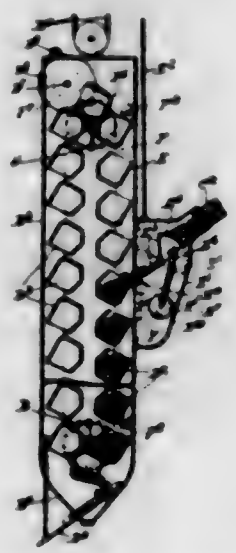
5. A belt fastener including a pair of U-shaped spring clips formed of resilient sheet material and adapted to be sprung upon the ends of a belt, the folded ends of the webs being cut away to provide complemental knuckles, while the sides of the clips are provided at the free ends thereof with longitudinally projecting arms, one set of complemental belt engaging prongs being provided at the extremities of the arms and another set of complemental belt engaging prongs being provided between the bases of the arms, each of the prongs being provided with an opening and also with a locking lug adapted to enter the opening of the complemental prong when the device is in operative position, and a pintle insertible through the knuckles of the clips.

1,300,438. CONVEYER. JOSEPH A. MACLENNAN, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1917. Serial No. 165,058. 3 Claims. (Cl. 193—24.)

1. A conveyer comprising a group of descending buckets, and inclosing case in which said buckets travel provided with a longitudinal aperture along the line of travel of such buckets, a supply device adjacent the line of travel of such buckets, means whereby the whole group of buckets and the supply device may have relative bodily movement one with reference to the other and means whereby the supply device at each position of such relative movement will deliver through the aperture a definite quantity of material to each bucket as it passes.

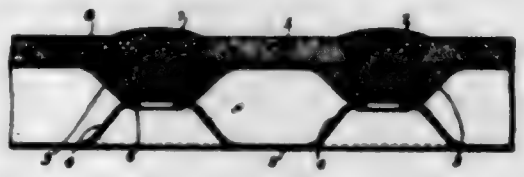
2. A conveyer comprising a group of descending buckets and inclosing case in which said buckets travel provided with a longitudinal aperture along the line of travel of such buckets, a supply device containing an intermittently acting deliver gate adjacent the line of travel of such buckets, means whereby the whole group of buckets and the supply device may have relative bodily movement one with reference to the other and means whereby the supply device at each position of such relative movement will deliver through the aperture a definite quantity of material to each bucket as it passes.

3. In a conveyer the combination of a longitudinally apertured casing and a chain of buckets therein with a carriage slidably mounted on the casing adjacent the aperture, and feeding means mounted to shift with the carriage means for delivering material from said feeding means through the carriage to the bucket chain and means



on the carriage whereby at any position of the carriage it will deliver through the aperture a definite quantity to each bucket as it passes said means comprising a controlling gate a driven link and timing wheel to operate said gate and a driving connection between the timing wheel and the bucket carrying belt.

1,300,439. TRUSSED SHEET STRUCTURE. JOHN O. MADISON, Brooklyn, N. Y. Filed July 10, 1918. Serial No. 244,144. 4 Claims. (Cl. 72—116.)



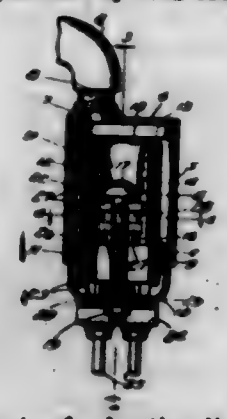
1. In a trussed sheet structure, adapted to withstand heavy loads or stresses, the combination of two sheets constituting the opposite chord members of the truss, and each formed with permanent integral depressions of a depth many times the thickness of the sheet, said depressions forming web members spaced apart laterally and longitudinally and secured together at the inner end portions of said depressions, some of said alined inner end portions having openings therethrough with the members rigidly secured together about the edges of the openings.

3. In a trussed sheet structure, adapted to withstand heavy loads or stresses, the combination of a sheet constituting a chord member of the truss and formed with permanent integral depressions of a depth many times the thickness of the sheet, said depressions forming spaced apart web members, and having openings through their apex portions, and another sheet constituting an opposite chord member of the trussed structure, having openings therethrough corresponding to the openings through said first sheet, said sheets being positioned and secured together with said openings alined, the material at the edges of the openings in one sheet being bent and pressed about the material at the edges of the openings in the other sheet.

1,300,440. RADIATOR-HEATER. CHAUNCEY L. C. MAGEE, Chicago, Ill. Filed Apr. 25, 1918. Serial No. 230,718. 10 Claims. (Cl. 219—38.)

1. The combination of an automobile radiator, an electric heater disposed outside of said radiator, and a single connection whereby the cold water enters the heater from the radiator and through which the hot water is discharged

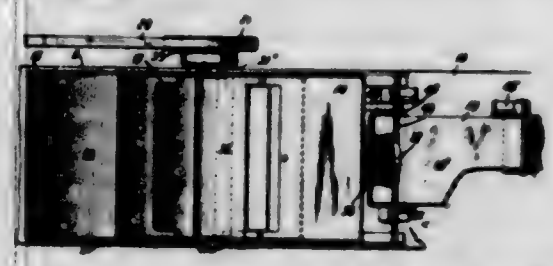
from the heater into the radiator, said connection including a T-coupling, and an elbow whereby the heater is supported in depending position by said coupling.



2. In an electric heater for heating liquids, the combination of a casing, a heating element, a holder for said heating element, said holder being of sheet metal and of cylindric form with one end thereof reduced and turned inward to form a recess in the end of the holder, said casing having an internal shoulder, a bolt inserted through the holder, with the head of the bolt in said recess, and means to tighten said bolt to draw the holder against said shoulder.

6. In an electric water heater, a heating element, a holder inclosing said element and adapted to be immersed in the water, a bolt extending longitudinally and axially of the holder, means to engage the outer end portion of said holder, a nut on the outer end of said bolt, and a member to receive the pressure of said nut, whereby tightening of said nut draws the holder tightly into engagement with said means to prevent leakage of the water.

1,300,441. CORK-FEEDING MECHANISM. MELCHOR MARSA, New York, N. Y., assignor to International Cork Company, Brooklyn, N. Y., a Corporation of New York. Filed May 10, 1918. Serial No. 233,773. 17 Claims. (Cl. 221—118.)



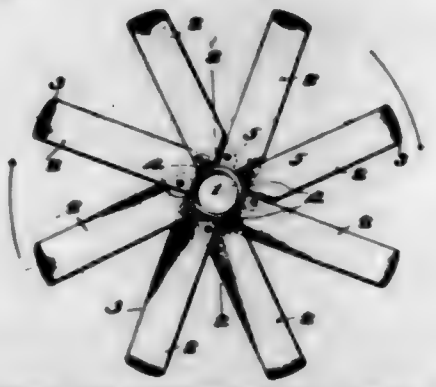
1. A feeding device for corks or the like, including a hopper having a discharge opening, one of the walls of said hopper including a stationary section and a movable section disposed in proximity of said opening, and means for imparting a vibrating motion to said movable section in a plane parallel to its respective stationary section and in the direction of the travel of the mass of material through said opening.

5. A feeding device for corks or the like, including a hopper having a discharge opening, one of the walls of said hopper including a stationary section and a movable section disposed in proximity of said opening and extending substantially throughout the width thereof, means for imparting a vibrating motion to said movable section in a plane parallel to its respective stationary section, a baffle plate within said hopper projecting over said opening, and means for adjusting the size of said opening.

14. A feeding device for corks or the like, including a hopper having a discharge opening, one of the walls of said hopper including a stationary section and a movable section disposed in proximity of said opening and extending substantially throughout the width thereof, means for imparting a vibrating motion to said movable section in a plane parallel to its respective stationary section, a roller opposite said movable section and projecting into said opening, and a baffle plate within said hopper projecting over said roller and said opening.

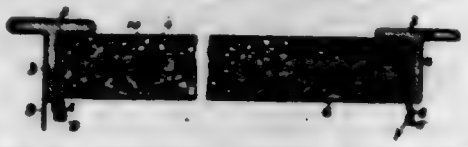
17. A feeding device for corks or the like, including a hopper having a discharge opening, part of the hopper adjacent said opening being movable in relation to the body portion thereof and in the direction of the travel of the mass of material through said opening, means for imparting a vibrating motion to said movable part, and rotary means opposite said movable part and projecting into said opening for preventing a clogging of the latter.

1,300,442. CULTIVATOR. FRANK MATOUSHEK, Colome, S. D. Filed May 17, 1918. Serial No. 235,158. 1 Claim. (Cl. 97—62.)



In a cultivator, the combination of a shaft, and a plurality of blades disposed about the shaft, the inner ends of the blades being provided with laterally projecting tongues extending in opposite directions on alternate blades and fitting against and secured to the shaft, the said tongues being of less width than the blades and the forward inner corner of each blade overlapping and being secured to the blade preceding it.

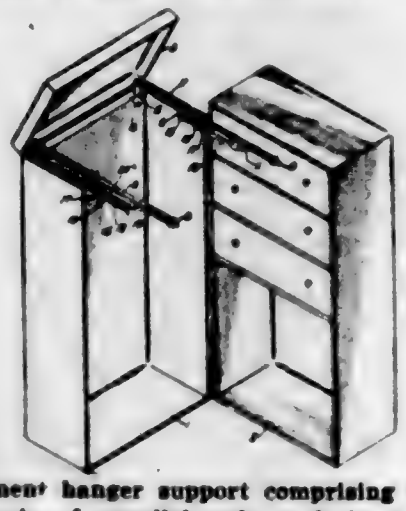
1,300,443. INSULATED-BUILDING CONSTRUCTION. CARLE J. MERRILL, Portland, Me. Filed May 7, 1918. Serial No. 233,097. 2 Claims. (Cl. 189—1.)



1. A panel for insulating building construction consisting of a pair of metal plates having their edges turned at right angles to form closely contiguous flanges, insulating material interposed between said plates, said flanges being secured together by corresponding crimping recesses.

2. A panel for insulating building construction consisting of a pair of metal plates having their edges turned at right angles to form closely contiguous flanges, insulating material interposed between said plates, said flanges being secured together by corresponding crimping recesses, the outer edges of one of said flanges being turned over the other flanges to form a finishing bead.

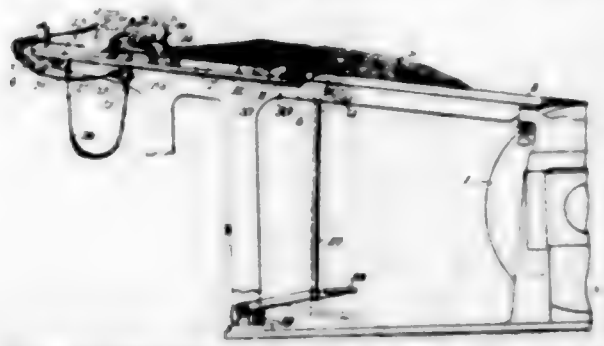
1,300,444. GARMENT-HANGER SUPPORT. LOUIS MEYERS, Brooklyn, N. Y. Filed Dec. 16, 1918. Serial No. 266,915. 7 Claims. (Cl. 211—16.)



7. A garment hanger support comprising the combination of a pair of parallel rods each having a pivoted extension and each extension being provided with a depending bracket provided with a shoulder, a locking bar for each rod provided with an offset downturned end having a beveled face and arranged to contact with the shoulder, and an unlocking bar slidably maintained on

each extension and each provided with a beveled face arranged to contact when forced in one direction with the corresponding beveled face on the locking bars.

1,300,445. MECHANISM FOR ADJUSTING LIFTS OF PAPER UPON FEED-BOARDS. ROBERT MIEHLE, Chicago, Ill. Filed Feb. 13, 1917. Serial No. 148,443. 31 Claims. (Cl. 271—8.)



1. The combination with a feed board for supporting a lift of sheets; of a tray for disposition beneath a lift and movable longitudinally of the feed board; and step by step driving mechanism for moving said tray longitudinally of the feed board step by step.

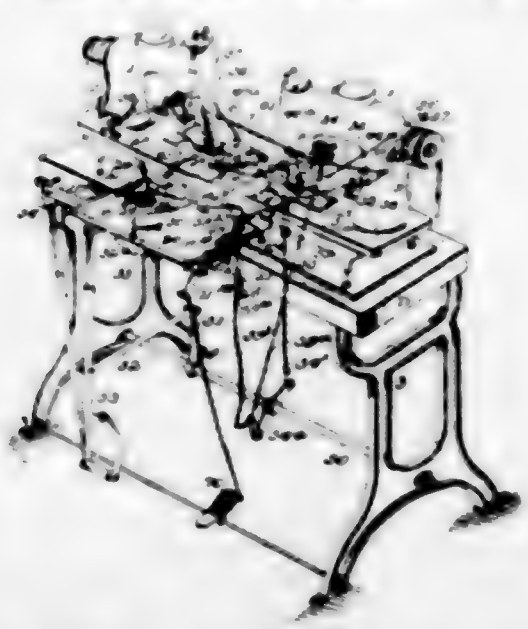
7. The combination with a feed board for supporting a lift of sheets; of a tray for disposition beneath a lift and movable longitudinally of the feed board; step by step driving mechanism for moving said tray longitudinally of the feed board step by step and located beside the tray; and clamping mechanism for holding sheets of a lift and the tray together.

22. The combination with a feed board for supporting a lift of sheets; of a tray for disposition beneath a lift and movable longitudinally of the feed board, there being an open space over which the tray is movable and of a size enabling an attendant to enter the same.

27. The combination with a feed board for supporting a lift of sheets; of a tray for disposition beneath a lift and movable longitudinally of the feed board, another lift being insertible beneath the tray; means for obstructing forward movement of the tray while such other lift is being inserted thereunder; and means for securing sheets of a lift and the tray together.

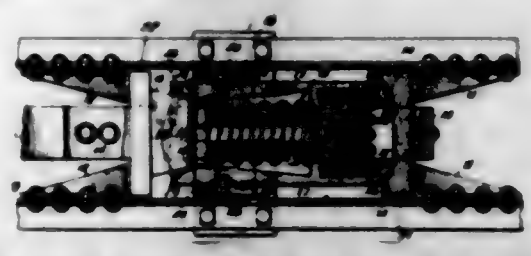
29. The combination with a feed board for supporting a lift of sheets; of a tray for disposition beneath a lift and movable longitudinally of the feed board, another lift being insertible beneath the tray; and roller mechanism connected with the tray and located to turn upon a lift being inserted beneath the tray.

1,300,446. LOADER FOR BUTTONHOLE MACHINES. HENRY C. MILLER, Waterford, N. Y. Filed Jan. 31, 1918. Serial No. 214,654. 36 Claims. (Cl. 112—4.)



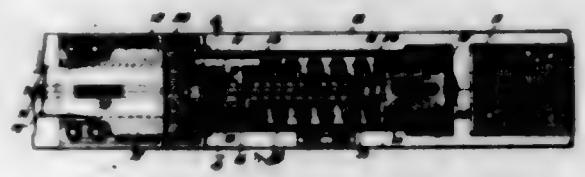
1. In combination a buttonhole machine, a platform, gages on the platform to gage a collar preparatory to forming a buttonhole therein, means for pivotally mounting the platform, and means permitting reciprocal movement of the platform toward and from the buttonhole machine.

1,300,447. DRAFT-RIGGING. WILLIAM H. MINER, Chazy, N. Y. Filed Jan. 2, 1917. Serial No. 140,085. 7 Claims. (Cl. 213—64.)



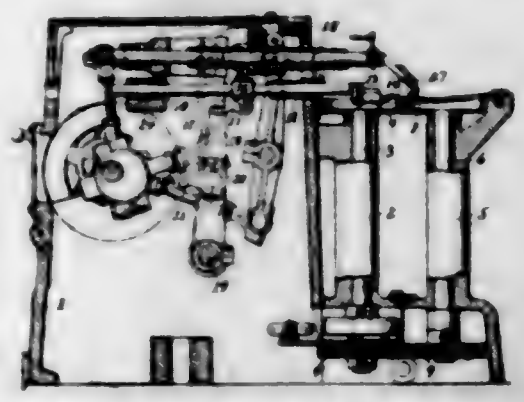
1. In a draft rigging for railway cars, the combination with draft sills having front and rear stops secured to their inner faces, of front and rear followers coöperable with said stops, an expansible friction shell including pivoted levers and mounted between said followers, wedging means for expanding said shell upon relative approach of the followers, a pair of springs, one for resisting expansion of said shell and the other for resisting movement of the wedging means, said springs, shell and wedging means being disposed between the sills.

1,300,448. SPRING-FRICTION DRAFT-GEAR. JOHN R. MITCHELL, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,480. 3 Claims. (Cl. 213—64.)



1. In a draft rigging, the combination with a friction shell having friction elements coöperable therewith, and a spring within said shell, a follower within said shell, the spring being interposed between said follower and said friction elements, and a key extending through said shell and follower, said shell being slidable with respect to the said key when the gear is actuated in one direction, while the key remains stationary.

1,300,449. OVERSEAMING-MACHINE. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 28, 1913, Serial No. 797,778. Divided and this application filed Mar. 30, 1916. Serial No. 87,802. 1 Claim. (Cl. 112—36.)



A sewing machine including in combination, a casing, devices for supporting and feeding a fabric in substantially a vertical plane, a needle, a horizontally reciprocating needle bar, a needle head carried by said needle bar and supporting the needle, a bearing in said casing adjacent the needle head, a laterally projecting lug carried

by one of the side walls of said casing, said lug having a bearing sleeve for the inner end of said needle bar, and means connected to said needle bar between its supporting bearings for reciprocating the same, said bearing sleeve carried by the casing being extended inwardly some distance from the inner wall of said casing so that the distance between the supporting bearings for the needle bar is only substantially the stroke of the needle bar.

1,300,480. BALL-BEARING. FRED S. MORTON, Worcester, Mass. Filed July 1, 1918. Serial No. 242,726. 6 Claims. (Cl. 64—26.)



4. A ball bearing race-way member comprising two cup rings formed of sheet metal, and a casing surrounding the outer sides of said rings and holding them together at their outer edges, the rings each comprising a cone and an integral flat bracing member at the small end of said cone projecting into contact with the inner surface of the casing all around and constituting the outer surface of the bearing and also a strut to take the strain.

1,300,481. METHOD OF PREPARING PARACETALDEHYDE. HAROLD A. MORTON and BEN H. NICOLET, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y., a Corporation of Virginia. Filed July 1, 1918. Serial No. 242,807. 7 Claims. (Cl. 23—24.)

1. The method of preparing paraldehyde substantially free from acetaldehyde, comprising treating acetaldehyde with sulfuric acid, neutralizing the acid, separating the bulk of the unchanged acetaldehyde by distillation, and purifying the paraldehyde fraction by treatment with caustic alkali and distillation.

2. The method of preparing paraldehyde substantially free from acetaldehyde, comprising effecting a partial conversion of acetaldehyde into paraldehyde by an acid treatment, neutralizing the acid, separating the bulk of the unchanged acetaldehyde by distillation, resinifying the residual acetaldehyde, in presence of paraldehyde, by an alkali treatment, separating the resinous product, and purifying the paraldehyde by distillation.

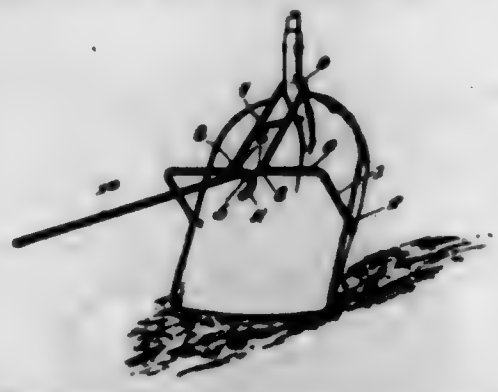
4. The method of preparing paraldehyde substantially free from acetaldehyde, comprising effecting a partial conversion of acetaldehyde into paraldehyde by an acid treatment, neutralizing the acid, separating the bulk of the unchanged acetaldehyde by distillation, resinifying the residual acetaldehyde, in presence of paraldehyde, by an alkali treatment, separating the resinous product, and purifying the paraldehyde by distillation in presence of a small proportion of additional alkali.

6. In a method of preparing paraldehyde substantially free from acetaldehyde, the steps which consist in treating paraldehyde, contaminated by acetaldehyde, with an alkali under conditions to resinify the acetaldehyde, separating the resinous product, and purifying the paraldehyde by distillation.

7. In a method of preparing paraldehyde substantially free of acetaldehyde, the steps which consist in treating paraldehyde, contaminated by acetaldehyde, with an alkali under conditions to resinify the acetaldehyde, separating the resinous product, and purifying the paraldehyde by distillation in presence of a small proportion of additional alkali.

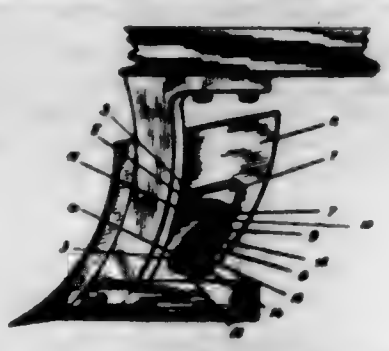
1,300,452. ATTACHMENT FOR SHOVELS. HARRY G. MOSCHENROSCH and PETER G. SCHWARTZ, Appleton, Wis. Filed Mar. 5, 1918. Serial No. 220,631. 2 Claims. (Cl. 55—115.)

1. An attachment for a shovel having a rigid handle rising from its rear end comprising a bail adapted at its ends to be secured to the edges of the shovel and provided at its center with alternate reversely arranged reëntrant angles, a draft rod to engage one of said reëntrant angles, and a link to pass around the shovel handle and engage others of said reëntrant angles.



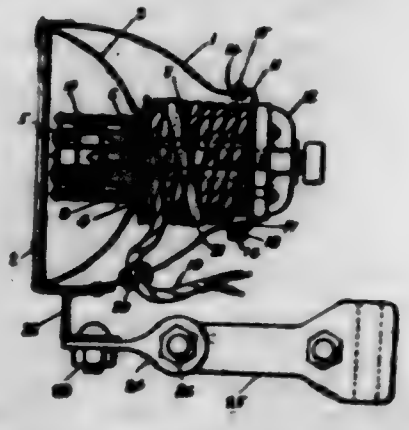
2. An attachment for a shovel having a rigid handle permanently secured to and rising from its rear end comprising a bail adapted to be secured to the side edges of the shovel and provided at the center of its top with reversely disposed bends forming alternate reëntrant angles, a draft hook to engage the central reëntrant angle, and a U-shaped link passing around the shovel handle and provided at its front ends with hooks to engage the outer reëntrant angles of the bail.

1,300,458. RETAINING MEANS FOR PLOWSHARES. GUY E. NEEDHAM, Tracy, Calif. Filed Nov. 5, 1917. Serial No. 200,424. 2 Claims. (Cl. 97—18.)



1. In a plow, the combination with the frog and mold board thereof, of a pair of pins on the mold board arranged to removably project through the frog, each pin being provided with a transverse slot, and means independent of the frog to frictionally lock the mold board stationary on the frog comprising a pair of arms, each having a tapered end adapted to project into the slot in each pin to frictionally engage one end of the slot and the frog, a lever pivoted to the outer end of one arm, and a link pivotally connected to the lever and to the outer end of the other arm.

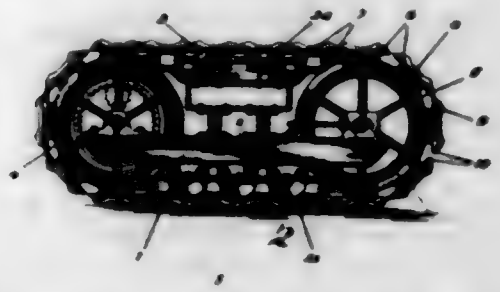
1,300,484. ELECTRIC SPOT-LIGHT. JOHN P. NIKONOW, New York, N. Y. Filed July 23, 1918. Serial No. 246,290. 4 Claims. (Cl. 240—7.)



3. In an electric spotlight, the combination with a housing, a reflector inside of said housing, an opening in

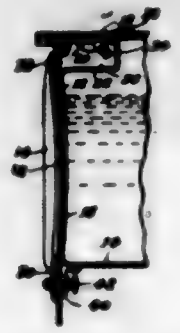
said reflector, a lamp adapted to be moved in and out of said reflector through said opening, a supporting member for said lamp, detachably connected with said housing, flexible electric conductors in coöperation with said lamp and said housing, adapted to be supported by said supporting means, when said lamp is placed inside of said reflector.

1,300,455. ENDLESS TRACK FOR TRACTORS. HENRY A. NORDWICK and WILLIAM A. BARTH, Stockton, Calif. Filed Dec. 10, 1917. Serial No. 206,426. 1 Claim. (Cl. 21—150.)



The combination with a driving wheel, idler wheel and supporting rollers there-between, of a flexible track-chain passing around the wheels and under the rollers, and track shoes fixed rigidly on the alternate links of the chain, the track shoes having projecting flanges on the inner face of each shoe at the sides thereof and bearing against the rollers, the adjacent ends of the flanges on adjacent shoes overlapping to form a continuous track for the rollers.

1,300,456. RESERVOIR FOR RANGES. CHARLES W. NYE, Minneapolis, Minn., assignor to The Minnesota Stove Company, a Corporation of Minnesota. Filed Apr. 19, 1918. Serial No. 229,515. 6 Claims. (Cl. 126—31.)



1. A reservoir attachment for ranges comprising a bar adapted to be secured to the inside of a wall of the range, and means associated with said bar whereby the reservoir contacting portion of said wall will be bulged outwardly.

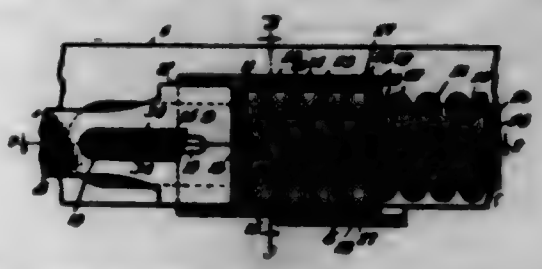
2. A reservoir attachment for ranges comprising means for attaching a reservoir to a range with a wall of the reservoir in contact with a wall of the range, and means engaging a restricted area of the reservoir contacting portion of the wall of the range to cause outward bulging of the same.

3. A reservoir attachment for ranges comprising means adapted to be secured to the inside of a wall of the range for bulging a portion thereof outwardly, and means for securing a reservoir to the range with one of its walls in contact with said bulged portion.

4. A reservoir attachment for ranges comprising means for forcing one of the walls of the range outwardly into a shallow cup-like form, and means for securing a reservoir to the range with one of its walls tensioned over said cup-like wall.

5. A reservoir attachment for ranges comprising a member adapted to be secured to the inside of a wall of the range, said member having a horizontal bar portion and a vertical bar portion extending upwardly from said horizontal portion, the latter portion being secured to the wall of the range at about the bottom line of the reservoir and the vertical portion being secured to the wall of the range near the top thereof, and means on said vertical portion to cause outward bulging of the reservoir contacting portion of the wall of the range.

1,300,457. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 26, 1916. Serial No. 111,364. 9 Claims. (Cl. 213—42.)



5. In a draft rigging for railway cars, draft members, a draw bar, a compound key, a plurality of yokes connected by said key to the draw bar, the draw bar being slidingly mounted on said key, the key having a movable portion adapted to move forwardly with the draw bar to draw the yokes forwardly and a stationary portion to hold said yokes against rear movement.

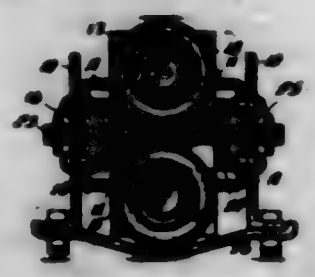
1,300,458. BRAKE FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 28, 1916. Serial No. 128,195. 6 Claims. (Cl. 188—67.)



1. In a brake, a drum, a ratchet associated therewith, an operating handle, a pawl associated with said handle to engage the ratchet, and a hanger riding upon said ratchet and connected to the handle.

6. In a winding mechanism, the combination with a casing, of a member rotatably mounted within said casing, said member having a ratchet wheel rotatable in unison therewith, an arcuate hanger loosely mounted on said ratchet wheel and free to oscillate with respect to the latter, an operating lever pivotally attached to said hanger, said lever having a pawl adapted to coöperate with said ratchet wheel.

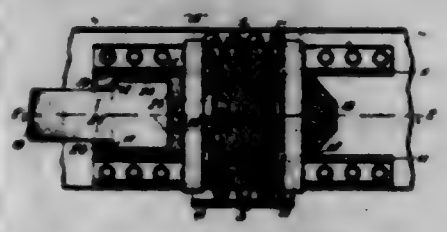
1,300,459. DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 27, 1916. Serial No. 133,994. 2 Claims. (Cl. 213—42.)



1. In a draft rigging, the combination with draft sills, a draw bar, a yoke, and cushioning means, of stop mem-

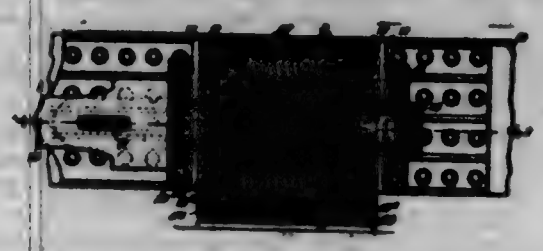
bars secured to said ribs, each stop member comprising a plate bent to U-shape in vertical cross section with the arms extending horizontally, said arms having inwardly projecting shoulders.

1,300,660. DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Dec. 6, 1916. Serial No. 135,902. 6 Claims. (Cl. 213—42.)



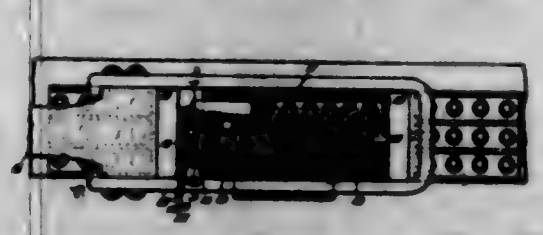
1. In a draft rigging, the combination with a draw bar having a shouldered butt, of a yoke having upper and lower shoulders on the forward ends of the arms thereof, devices for detachably connecting the draw bar and yoke including shouldered blocks fitting over the top and bottom shoulders of the butt and said shoulders of the yoke arms, and means for retaining said parts in assembled position.

1,300,661. DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 2, 1917. Serial No. 140,686. 5 Claims. (Cl. 213—42.)



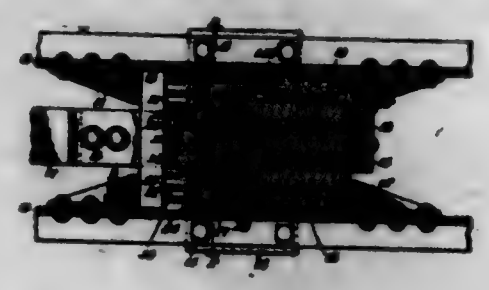
1. In a draft rigging, the combination with stop members, of main followers coöperable with said stop members, auxiliary followers slidable with respect to the main followers and extending forwardly and rearwardly thereof, respectively, and a plurality of shock absorbing units interposed between the main and auxiliary followers, certain of said units being actuated directly by the auxiliary followers and the others by the main followers and integral coöperating means on each set of main and auxiliary followers to limit relative separation thereof.

1,300,662. HIGH-CAPACITY FRICTION-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 28, 1917. Serial No. 156,915. 4 Claims. (Cl. 213—44.)



1. In a friction shock absorbing mechanism, the combination with a friction shell, friction shoes coöperable therewith, and a spring, of a pressure-transmitting member, wedge members interposed between the pressure, transmitting member and each of the friction shoes, and elements interposed between the pressure-transmitting member and each of the wedge members, said elements being of roller form and having volute cam surfaces.

1,300,663. FRICTION-PLATE DRAFT-GEAR WITH ANTIFRICTION WEDGING MEMBERS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed May 31, 1917. Serial No. 170,022. 1 Claim. (Cl. 213—44.)



In a friction shock absorbing mechanism, the combination with a shell; of a plurality of friction plates mounted within said shell and immovable longitudinally thereof; of a plurality of friction plates alternated with respect to said immovable friction plates and adapted to slide between said immovable plates; spring means within said shell and adapted to resist relative movement between said movable friction plates and the shell; and wedging means associated with said friction plates, said wedging means comprising two opposed members having outer substantially parallel faces and provided on their inner opposed faces with duplicate sets of wedge surfaces, and a pair of anti-friction rollers interposed between said wedge surfaces, said wedging means being located centrally of the friction plates with substantially one-half of the latter on each side thereof.

1,300,664. HAND-BRAKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed June 9, 1917. Serial No. 173,852. 6 Claims. (Cl. 188—57.)



1. In a hand brake for cars and the like, the combination with two members which together form a chamber adapted to receive chain tightening means therewithin, said members being each provided with flanges by which the same are adapted to be secured to the wall of a car, said flanges being disposed entirely within the outlines of said chamber, of chain tightening means disposed within said chamber.

5. In a hand brake for railway cars, the combination with a plate adapted to be secured to a car wall and having a post extending outwardly therefrom, of a hollow casing member fitting over said plate and forming a support for the outer end of said post, said casing member having means at its inner end disposed entirely within the casing member and by which it is adapted to be secured to the wall, a rotatable chain tightening element carried by said post within the casing member, and pawl and ratchet mechanism for rotating said element, said mechanism including an operating handle normally in inoperative position under the influence of gravity.

1,300,465. HAND-BRAKE FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed June 9, 1917. Serial No. 173,853. 3 Claims. (Cl. 188—59.)



1. In a brake for railway cars and the like, the combination with a sprocket wheel rotatably mounted about a substantially horizontally extending axis, of a brake chain coöperable with said sprocket wheel, means for rotating said sprocket wheel step by step, said means including an operating handle oscillatably mounted about said axis, devices interposed between said handle and the wheel, said handle normally depending under the influence of gravity and said devices being in inoperative position.

3. In a brake of the character described, the combination with a housing adapted to be secured to a car wall, of a sprocket wheel rotatably mounted within said housing and having two ratchet wheels associated therewith, an operating lever having a gravity controlled pawl coöperable with one of said ratchet wheels, a gravity controlled locking dog coöperating with the other of said ratchet wheels, and a brake chain extending over said sprocket wheel.

1,300,466. BRAKE-OPERATING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 1, 1917. Serial No. 199,730. 2 Claims. (Cl. 74—54.)



1. In a hand brake for railway cars and the like, the combination with hand operated, chain tightening mechanism including a chain winding drum and a ratchet wheel, a pivotally mounted locking dog adapted to coöperate with said ratchet wheel to thereby maintain the chain in its tightened condition, said dog being pivotally mounted and normally held in operative position under the influence of gravity, and an operating handle pivotally attached to said dog, said operating handle being normally disposed in a depending position under the influence of gravity but adapted to be manually elevated and, when in elevated position, arranged to move the pivoted dog to release the chain tightening mechanism.

1,300,467. HAND-BRAKE FOR CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 8, 1918. Serial No. 210,884. 2 Claims. (Cl. 188—54.)



1. In a hand brake adapted for railway cars and the like, the combination with a housing of substantially cylindrical form having an outer end wall and an intermediate partition, of a chain winding drum rotatably mounted within said casing and adapted to receive the chain thereon in the space between said intermediate partition and the inner end of the casing, a gear wheel movable in unison with said drum, an oscillatable pawl lever, a ratchet pinion with which said pawl lever is adapted to coöperate, a pinion interposed between said ratchet pinion and said gear, and means for locking said drum against accidental reverse rotation, said gear wheel, pawl lever, ratchet pinion and pinion being all disposed within the casing in the space provided between said outer end wall and intermediate partition.

2. In a brake adapted for attachment to railway cars and the like, the combination with a casing adapted to be secured to a car wall, said casing being divided into one relatively small chamber and another relatively large chamber, of a chain winding drum rotatably mounted within said casing and adapted to have the chain wound thereon within the larger chamber, an operating handle pivotally supported so as to swing within said smaller chamber, and leverage ratio multiplying gearing operatively interposed between said handle and said drum and all located within said smaller chamber.

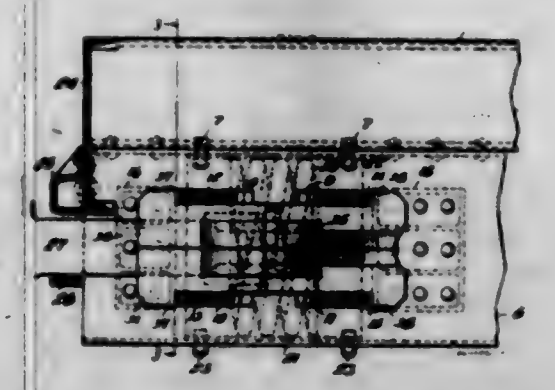
1,300,468. HAND-BRAKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 8, 1918. Serial No. 210,885. 3 Claims. (Cl. 188—53.)



1. In a brake for railway cars and the like, the combination with a rotatable element, and means for rotating said element in a direction to tighten a brake chain, of

means, including a friction clutch member having a wedge-shaped friction face rotatable with said elements and a collapsible friction member having a wedge-shaped friction face for holding said element when the chain is tightened, and means for effecting a variable release of said holding means to thereby permit slackening of the chain under control.

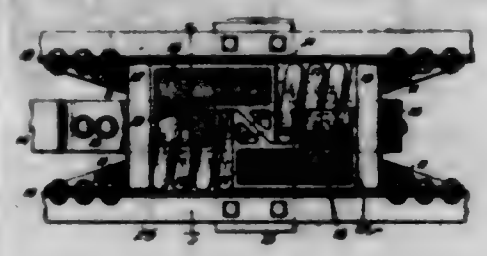
1,300,469. DRAFT-GEAR FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,507. 7 Claims. (Cl. 213—42.)



1. In a draft rigging for railway cars, in combination: a draw-bar, draft members, a connector member mounted between the draft members and secured to the draw-bar, front spaced-apart keys and rear spaced-apart keys extending through the draft members, springs between the front keys and the rear keys, the connector member being mounted between the upper and lower keys, the said connector member having front and rear shoulders, the front shoulders engaging the front keys on rearward movement of the draw-bar, and the rear shoulders engaging the rear key on forward movement of the draw-bar.

7. As an article of manufacture, a connector member adapted to be operatively associated with a draw bar and parts of a draft rigging, said connector member comprising two parts, an upper and a lower, said parts having each laterally extended flanges near their center, fastening means extending through said flanges to secure said parts together, said flanges being provided with rounded edges, said connector member having also upper and lower transversely extending shoulders adapted to cooperate with keys or the like.

1,300,470. SPRING-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,508. 1 Claim. (Cl. 213—42.)



In a tandem spring gear, the combination with draft sills having front and rear pairs of stop lugs and front and rear followers; of a pair of oppositely arranged blocks interposed between said followers, each block having an outer end arranged to be engaged by the adjacent follower, a longitudinally extending spring seat, an intermediate transversely extending shoulder portion, and an inner transversely elongated and reinforced by a diagonal bracing wall; and tandem arranged springs laterally offset from each other, each spring being seated in the spring seat of one block and its inner end engaging the inner end of the other block, a portion of the transversely elongated inner end of each block being in line with the intermediate transverse shouldered portion of the other block and normally spaced therefrom, said blocks being arranged to come into contact upon actuation of the gear to thereby limit the compression of the springs.

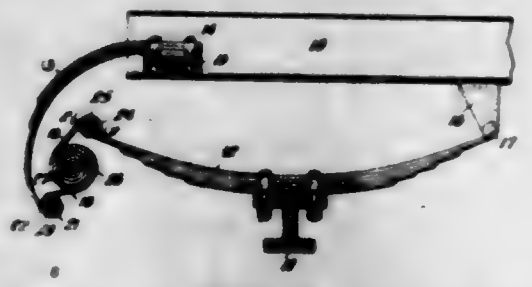
1,300,471. HAND-BRAKE FOR FLAT-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,511. 6 Claims. (Cl. 188—41.)



1. In a brake mechanism for a flat car, the combination with a chain-winding element rotatable about a horizontal axis extending transversely of the car; of a ratchet wheel; a pawl actuating lever oscillatable about a horizontal axis extending longitudinally of the car, said lever being operable from the side of the car; and means interposed between said ratchet wheel and said element for communicating movement of the former to the latter to thereby effect winding of the chain.

6. In a brake mechanism for a flat car having an end sill, the combination with a supporting bracket extending in a generally horizontal direction and secured to said end sill, of a chain winding drum rotatably mounted on said bracket about a horizontal axis extending substantially parallel to the end sill, of a ratchet wheel rotatably mounted on said bracket about a horizontal axis extending perpendicular to the end sill, a pawl operating lever oscillatable in a vertical plane parallel to said end sill, said lever in normal condition extending toward one end of said end sill and arranged to be disposed entirely below the top plane of said end sill, and means interposed between said ratchet wheel and said drum for communicating movement of the ratchet wheel to the drum.

1,300,472. COMBINED COMPENSATING LINK AND SHOCK-ABSORBER. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 16, 1918. Serial No. 217,513. 2 Claims. (Cl. 267—16.)

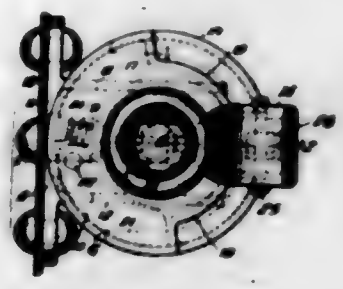


1. In a vehicle, the combination with two main shock absorbing springs, of a compensating link pivotally connected to the ends of said springs, said link including a spring plate having an integral portion therein coiled about an axis parallel to the axes of pivotal connection between the link and said main springs, said coiled portion being adapted to frictionally slide upon an associated part to provide auxiliary friction shock absorbing capacity.

1,300,473. WINDING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 1, 1918. Serial No. 225,883. 8 Claims. (Cl. 188—67.)

1. In a mechanism of the character described, the combination with an element adapted to be rotated; of means for rotating said element step-by-step in one direction and including an operating handle and a pawl normally

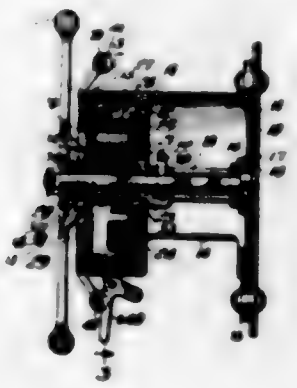
disposed in an inoperative position under the influence of gravity but adapted to be moved in one manner to operative position; separate means for locking said element against reverse rotation; and means, including a slidable member interposed between said locking means and said handle adapted to be actuated by said handle when moved in a different manner to release the locking means and thereby said element.



2. In a mechanism of the character described, the combination with an element adapted to be rotated; of means for rotating said element step-by-step in one direction and including a pawl and a pivotally mounted operating handle normally hanging in a vertical inoperative position under the influence of gravity but adapted to be elevated to horizontal operative position; separate means for locking said element against reverse rotation; and movable means interposed between said locking means and said handle adapted to be actuated by the latter to release said locking means, said releasing means being operable only by said handle and when the latter and said pawl are in inoperative position relatively to the rotating means.

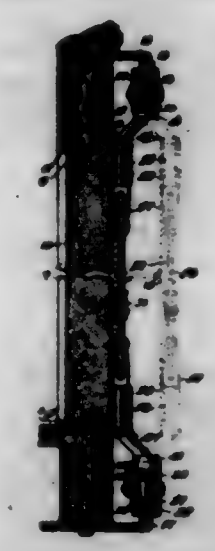
6. In a mechanism of the character described, the combination with a rotatable element and an operating handle coöperable therewith, said operating handle normally depending vertically in an inoperative position under the influence of gravity and adapted to be elevated to horizontal operative position; and automatically acting means for holding said handle in its elevated position, said means including a pivoted latch coöperable with a recess in said handle and a cam on the latter for elevating the latch so as to drop it into said recess while the handle is being lifted to operative position.

1,300,474. HAND-BRAKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 1, 1918. Serial No. 225,889. 6 Claims. (Cl. 74—34.)



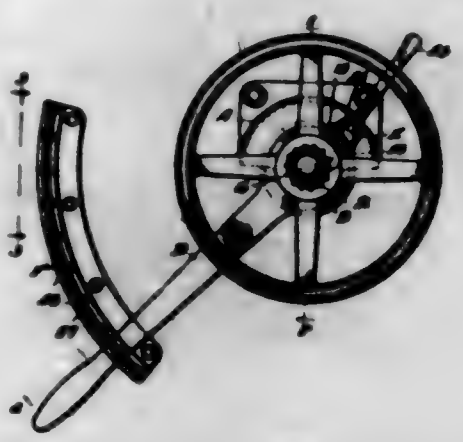
1. In a mechanism of the character described, the combination with an element adapted to be rotated to effect tightening of a chain; of a manually operable member; means providing a friction clutch between said member and element to effect rotation of the latter in unison with said member; and means interposed between said member and said element for multiplying the leverage ratio and adapted to be brought into action when the friction clutch means become ineffective, the friction clutch means becoming automatically ineffective when a predetermined degree of resistance is offered to the rotation of said element.

1,300,475. REFRIGERATOR-DOOR MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 27, 1918. Serial No. 231,102. 1 Claim. (Cl. 20—23.)



In a refrigerator car having a door opening and a single element door adapted to be positioned within the door opening flush with the side wall of the car, the combination of upper and lower tracks secured to the car, of a carriage slidably mounted on each of said tracks, a pair of shafts journaled on said door, each shaft having crank arms at its ends, the upper crank arms of both shafts being journaled in the carriage slidable on the upper track and the lower crank arms of the two shafts being journaled in the carriage slidable on the lower track, two of said crank arms being provided with gears disposed within the corresponding carriage, a rack bar longitudinally slidably mounted within said carriage and coöperable with said gears, and means for directly rotating one of said shafts whereby, rotative movement of said shaft directly actuated will be positively communicated to the other shaft through said rack bar and gears.

1,300,476. HAND-BRAKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 27, 1918. Serial No. 231,108. 3 Claims. (Cl. 188—54.)



1. In a winding mechanism, the combination with a rotatable element, of a manually operable member for rotating said element to effect the first part of the winding movement, a ratchet wheel rotatable in unison with said element, a locking dog coöperable with said ratchet wheel to prevent reverse rotation of said element, and a second manually operable member for rotating said element, said second named member affording a greater leverage ratio than the first named member, said ratchet wheel being carried by the first named member and the locking dog by the second named member.

1,300,477. WINDING MECHANISM. John F. O'Connor, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 27, 1918. Serial No. 281,100. 9 Claims. (Cl. 74—64.)



2. In a mechanism of the character described, the combination with a rotatable element, of an operating lever adapted for oscillation as an entirety about the same axis as said element rotates, pinion pawl and ratchet means interposed between said lever and element for effecting step by step rotation of the latter upon oscillation of the lever about said axis, and means for effecting oscillation of a portion of said lever about a different axis, said first named means, rotating said element step by step, when said lever is oscillated about said different axis but with an increased leverage ratio.

1,300,478. HAND-BRAKE. John F. O'Connor, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 1, 1918. Serial No. 242,827. 5 Claims. (Cl. 188—84.)



1. In a winding mechanism of the character described, the combination with a winding drum, of means for rotating said drum directly at a relatively high speed, and means for rotating said drum at a relatively low speed but with a higher leverage ratio, said last named means including a sleeve bearing on which said drum is rotatably mounted and a hand wheel rotatably mounted about an axis eccentric to the axis of the drum.

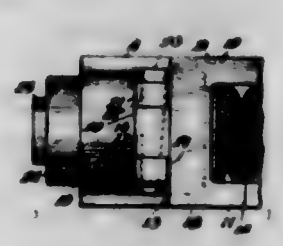
1,300,479. SIDE BEARING FOR RAILWAY-CARS. John F. O'Connor, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 18, 1918. Serial No. 254,573. 4 Claims. (Cl. 64—35.)



1. In a side bearing for railway cars a bearing member adapted for attachment to a bolster, an opposed bolster,

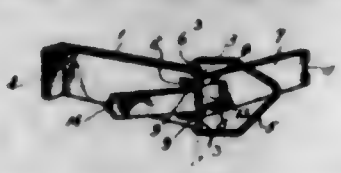
a rocker mounted in the bearing member and a pinion associated with the rocker, the said pinion being geared to the rocker and to the bearing member.

1,300,480. FRICTION-GEAR HAVING REMOVABLE FRICTION-SHELLS. Calvin B. Patch, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 25, 1916. Serial No. 127,514. 3 Claims. (Cl. 213—64.)



1. A friction gear housing comprising, a spring container member and a separate friction shell member, said members being provided with a male and female joint, and means for holding said members against separation, said means comprising over-lapping and interfitting recessed lugs on said members and keys extending through said recesses and thereby placed under shear.

1,300,481. DOOR-FASTENER. Charles C. Peterson, Tompkins, Saskatchewan, Canada. Filed May 23, 1916. Serial No. 99,425. 1 Claim. (Cl. 16—8.)



A door fastener comprising a plate formed from a single strip of material bent upon itself to provide eyes which are spaced by recessing one end of the plate, the extremities of said strip being bent to provide a hook adapted for engagement with the lock plate of a door, a looped frame having a portion engaging in said eyes, a bar having one end bifurcated to form extensions having eyes at their extremities for receiving said portion of the frame, and a second bar having an eye at one end to close between said extensions and receiving said portion of the frame, said bars having pivotal movement about said portion and being adapted for engagement with a door and casing therefor.

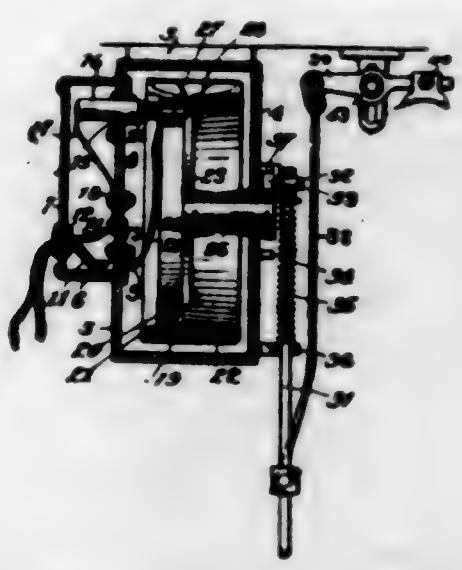
1,300,482. CLAMP. Frank Petranich, St. Louis, Mo. Filed Dec. 26, 1917. Serial No. 208,948. 1 Claim. (Cl. 24—243.)



In a clamp for awnings and the like, a main member integrally comprising a central portion transversely provided with a screw-seat, a hook-portion depending from the central portion, and perforated ears oppositely projecting laterally from the central portion and adapted to accommodate fastening-screws for the main member, the main member being adapted to be independently positioned flatwise at its rear face upon, and to be secured by said fastening-screws to, a window-frame or the like, the outer face of said central portion being flat and said central portion having such thickness relatively to the thickness of said ears that, when the main member is in said position upon a window-frame or the like, the said outer face of the central portion is presented and extends throughout in a straight plane disposed forwardly of the

plane of the outer face of the ears, a second member integrally comprising an upper portion provided with a transverse aperture, and a depending hook-portion, said second member being adapted for coöperation with the main member, and a headed screw-member fitting loosely through the aperture of the second member and threadedly into said seat of the main member for securing the second and main members in clamping engagement with the awning, the second member moving out of such clamping engagement and permitting removal of the awning on only loosening the threaded engagement of said screw-member with said main member.

1,300,483. RHEOSTAT. EDWARD PODSZNICK, Brooklyn, N. Y. Filed Mar. 28, 1916. Serial No. 87,151. 8 Claims. (Cl. 219—55.)

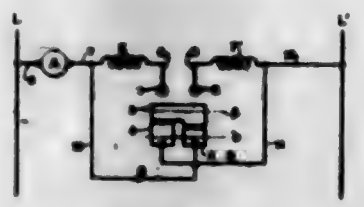


2. In a rheostat, the combination of a fixed contact connected to a terminal of an electric circuit; a resistance coil connected to the other terminal of said circuit; a pivotally supported carrier around which said coil is wound; a plurality of contacts carried by the carrier and insulated from the coil and electrically connected in series and with different sections of the coil, said contacts being normally out of contact with the fixed contact and adapted to be placed in contact with the fixed contact; a spring to maintain the carrier in position with the coil out of circuit with the fixed contact; and a lever to impart rotative movement to said carrier against the action of the spring to place the coil contacts successively in contact with the fixed contact, substantially as and for the purpose specified.

4. In a rheostat, the combination of a resistance coil connected to a terminal of an electric circuit; an oscillatory annular carrier of insulating material for said coil; a plurality of contacts carried by said carrier electrically connected in series and to different sections of the coil; a fixed contact connected to the other terminal of the electric circuit; a crank connected to the coil carrier; a rod connected to the crank to operate the coil carrier and successively place the contacts carried thereby in contact with the fixed contact; and a spring to return the carrier, substantially as and for the purpose specified.

7. In a rheostat, the combination of a casing having an opening in one end; a removable cover for said opening having an opening with a panel of insulating material therein; terminal posts for an electric circuit carried by said panel; a contact carried by said panel to have yielding sliding movement in an opening in said panel into and out of the casing and electrically connected to one terminal post; a resistance coil pivotally supported within the casing connected to the other terminal post carried by the panel; a plurality of contacts movable with the coil certain of which contacts are electrically connected in series and with different sections of the coil and at least one of which contacts is not connected with the coil and which contact is adapted to normally be in contact with the contact carried by the panel; and means to move said coil to place the contacts connected in circuit therewith successively in circuit with the contact carried by the cover, substantially as and for the purpose specified.

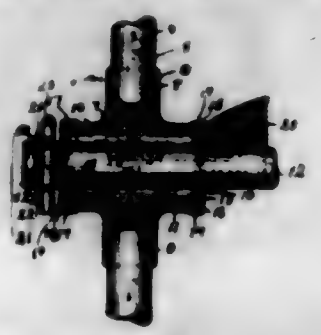
1,300,484. CIRCUIT-CONTROLLER. GUY R. RADLEY, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 30, 1914. Serial No. 828,253. 3 Claims. (Cl. 172—179.)



1. A circuit controller having two contacts and three segments adapted to coöperate therewith, said contacts being provided with electrical connections and being arranged to provide series circuit connections in one coöperative position and parallel circuit connections in another position and to maintain continuity of circuit during movement from one position to the other.

2. A series parallel controller provided with two contacts, three coöperating segments, one to bridge the same and connections whereby the remaining two segments cooperate with said contacts to establish parallel connections therethrough, one of said last two mentioned segments engaging its respective contact prior to interruption of circuit between said contacts and said first mentioned segment.

1,300,485. PIN-BEARING. WILLIAM RIBTA, Sheboygan Falls, Wis., assignor to White Wagon Works, Sheboygan Falls, Wis., a Corporation of Wisconsin. Filed Oct. 30, 1915. Serial No. 58,742. 1 Claim. (Cl. 64—33.)

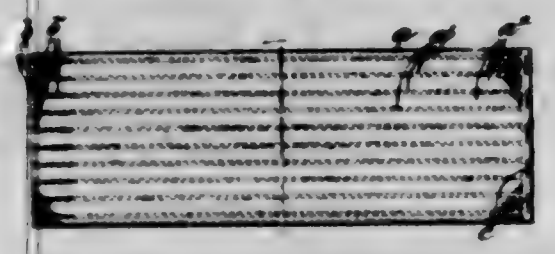


A pin bearing, comprising a hub member provided with a bore and having annular end recesses and radially extending spoke recesses, an axle extending through the bore and having a transverse opening at its outer end, a plurality of bearing pins positioned within the bore between the axle and the hub member and having annular grooves medially of their length, an annular member surrounding the axle and entering the annular grooves of the bearing pins, washers surrounding the axle and entering the annular end recesses, said washers being of less thickness than the depth of the washers and the projecting end portions of the hub forming the recesses being bent over the washers to maintain them in position, cap members surrounding the axle and bearing against the opposite end portions of the hub member, said cap members having annular flanges which extend over and tightly engage the ends of the hub member, and a pin extending through the axle for holding the hub on the axle.

1,300,486. SCREEN FOR CENTRIFUGAL BASKETS. EUGENE ROBERTS, Salt Lake City, Utah, assignor to Sugar Centrifugal Discharger Co., Salt Lake City, Utah, a Corporation of Utah. Filed Aug. 18, 1917. Serial No. 187,011. 4 Claims. (Cl. 210—25.)

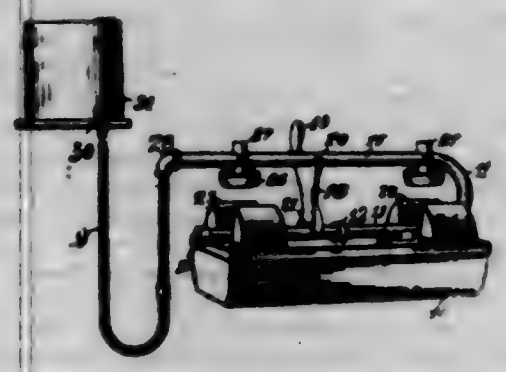
1. A screen for a centrifugal basket comprising a perforated sheet of metal adapted to be bent into annular

form, one end being provided near its edge with a series of transverse slots, the other end edge being slitted longitudinally of the screen to form tongues arranged to interlock with said slots, the perforated area of the sheet metal being subdivided into longitudinal parallel strips between which are located longitudinal relatively narrow imperforate strips or portions forming a stiffening or protective selvage, substantially as described.



4. A screen for a centrifugal basket embracing in its construction a sheet of perforated material whose end edges are respectively slitted longitudinally to form tongues and slotted transversely to form receiving slots for some of said tongues, the interior portions of said tongues being perforated while the narrow edge portions of said tongues are left imperforate to form a smooth selvage edge, substantially as described.

1,300,487. OIL-BURNER. EDWIN L. ROBERTSON, New York, N. Y. Filed May 31, 1918. Serial No. 237,498. 4 Claims. (Cl. 158—84.)



2. An oil burner comprising a base having spaced air openings through the top of the same, a U-shaped tubular pipe burner attached between said spaced air openings on said base with one leg above another, burner openings in the lower leg of said U-shaped pipe between said air openings, cup-shaped flat bottom deflectors slidably mounted on said upper leg of said U-shaped burner to start vaporization of the oil, and a movable support for the upper leg of said U-shaped burner to support the same, said support having an asbestos faced portion to close said burner opening and shut off the gas when desired.

1,300,488. ARTIFICIAL MINNOW. HERSCHEL ROBINSON, Pocahontas, Miss. Filed July 22, 1918. Serial No. 245,248. 5 Claims. (Cl. 43—39.)



3. An artificial bait including a body comprising a plurality of sections, means pivotally connecting the sections and hooks detachably connected with the connecting means.

5. An artificial bait or minnow of the character described, comprising a pair of flat sections jointly simulating a minnow, split rings connecting the sections together, and hooks detachably mounted on the rings at opposite sides of the sections.

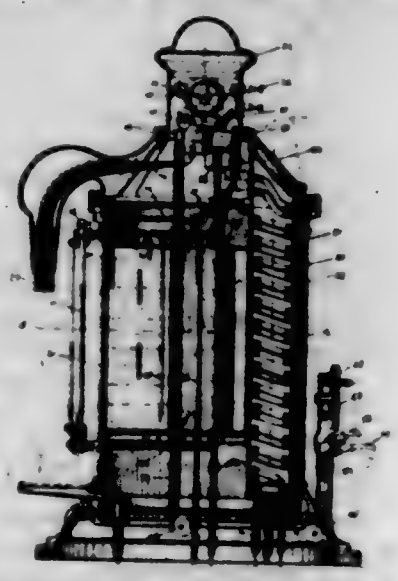
5. In an artificial bait the combination with a sectional body and a plurality of hooks, of a common means pivotally connecting the body sections together and connecting the hooks therewith.

1,300,489. KEY-FASTENER. WILLIAM SABIN, San Francisco, Calif. Filed Feb. 23, 1916, Serial No. 80,868. Renewed Aug. 28, 1918. Serial No. 251,540. 1 Claim. (Cl. 70—65.)



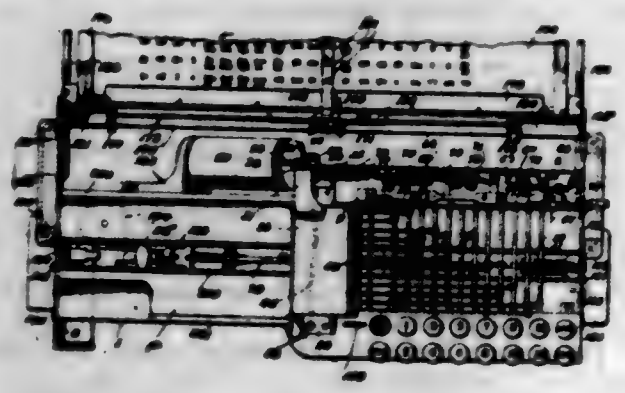
The combination in a key fastener of a clamp, having two hook-shaped lugs and a threaded spindle burred or flattened at the extreme end, with a thumb nut having a concaved side and working on said threaded spindle, all substantially as set forth.

1,300,490. APPARATUS FOR THE DELIVERY OF SEVERAL LIQUIDS SIMULTANEOUSLY OR SUCCESSIVELY. DINO SAMAIA, Milan, Italy. Filed Aug. 23, 1917. Serial No. 187,912. 5 Claims. (Cl. 226—21.)



1. A liquid dispensing apparatus including a receptacle subdivided into a number of compartments, pipes connected to each compartment, valves provided with valve stems in said pipes, and bell cranks having one of their arms above said valve stems and adapted to contact therewith, and a drum above the bell crank for operating, such drum being adapted to operate the valves by contacting with the bell cranks.

1,300,491. PAPER-PERFORATING MACHINE. JOHN T. SCHAAFF, Washington, D. C. Filed Nov. 17, 1916. Serial No. 131,934. 11 Claims. (Cl. 164—118.)



1. In a perforating machine the combination of a base, a finger key suitably supported and means for restoring said key, when displaced, to its normal position of rest, a

spring supported punch, a punch guide and a stationary die registering with the punch, a normally inactive electromagnetic motor device arranged in a normally open circuit, a source of electric supply in said circuit and a pair of contacts normally spaced apart also in said circuit, means including an interposing member movable from its normal position of rest upon the depression of the finger key for closing the said circuit at the said contacts whereupon the said motor device becomes energized; means including said interposing member movable by the said motor device for actuating the punch and for effecting the deënergization of the said motor device immediately thereafter and in advance of any return movement of the finger key toward its normal position of rest, whereupon the said motor device becomes inactive and remains inactive till another key depression whether the then pressure of the finger upon the key be maintained or not.

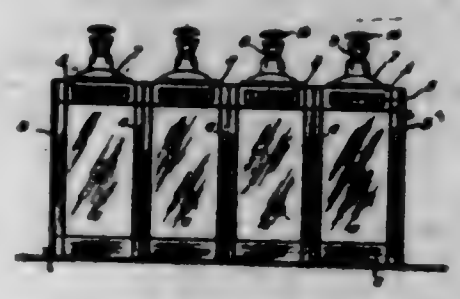
3. In a perforating machine the combination of a base having guideways, a card carrier movable along the guideways, a punch support rigidly secured to the base and having a series of sockets extending across it transversely to the path of movement of the card carrier, spring supported punches in the sockets one in each socket, means for operating the punches each as required, suitable feeding and escapement mechanism controlled by the punch-operating means for advancing the card carrier by a step-by-step movement along the guideways in one direction, backstepping mechanism and means for operating the same whereby the card carrier may be given a step-by-step movement along the guideways in the opposite direction; said backstepping mechanism including a stepping dog and a holding dog both pivotally mounted in a support pivotally carried by the base of the machine and both said dogs being operable independently of the feeding and escapement mechanism.

6. In a perforating machine the combination of a base having guideways, a card carrier movable along the guideways, a punch support rigidly secured to the base and having a series of sockets extending across it transversely to the path of movement of the card carrier, spring-supported punches in the sockets one in each socket, a plate having dies registering with the punches, means for operating the punches each as required, suitable feeding and escapement mechanism means for advancing the card carrier by a step-by-step movement along the guideways whereby the card to be perforated is brought within the range of action of the punches; an index card having a horizontal row of characters for each punch carried by a support rigidly secured to the frame of the machine, a movable indicator suitably supported by the frame of the machine and means for effecting a step-by-step movement of the indicator coincident with the step-by-step movement of the card carrier; the indicator being so associated with the index card as that the then position of the card being perforated in its relation to all the punches will be indicated upon the index card.

8. In a perforating machine the combination of a base having guideways, a card carrier movable along the guideways, a punch support rigidly secured to the base and having a series of sockets extending across it transversely to the path of movement of the card carrier, spring-supported punches in the sockets one in each socket, a plate having dies registering with the punches, means for operating the punches each as required, suitable feeding and escapement mechanism controlled by the punch-operating means for advancing the card carrier by a step-by-step movement along the guideways whereby the card to be perforated is brought within the range of action of the punches; an index card having a horizontal row of characters for each punch carried by a support rigidly secured to the frame of the machine, a movable indicator suitably supported by the frame of the machine and means for effecting a step-by-step movement of the indicator coincident with, but by steps greater in length than, the coinciding steps of the card carrier.

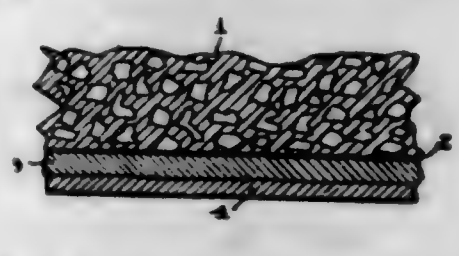
11. In a machine for perforating record cards, the combination of a base having guideways, a card carrier movable along the guideways, a punch support rigidly secured to the base and having a series of sockets extending across it transversely to the path of movement of the card carrier, spring supported punches in the sockets one in each socket, dies registering with the punches; means, including a series of spring supported finger keys one for each punch, for effecting the operation of the punches; suitable feeding and escapement mechanism for advancing the card carrier by a step-by-step movement along the guideways whereby the card to be perforated is brought within the range of action of the punches; a stationary index card having a horizontal row of characters for each punch supported by the frame of the machine and a movable indicator co-acting with the card carrier; said indicator bearing upon its surface characters which indicate the particular key or keys to be depressed to effect the perforation of the record card at the place or places desired at each operation.

1,300,492. DISPLAY-FRAME. EDWARD L. SCHUSTER, Jr., Cleveland, Ohio. Filed Jan. 2, 1917. Serial No. 139,990. 1 Claim. (Cl. 211—14.)



A display frame for glass jars or otherwise transparent repositories from which beverages or the like may be drawn without separation of the jars from the frame, comprising an angular frame formed of comparatively narrow upper and lower bands, a plurality of comparatively narrow upright members firmly holding said bands in superposed relation and constituting the sole connecting medium therebetween, said frame being open in all directions, said frame being designed and proportioned uniformly to embrace a plurality of fluid repositories closely brought together in a group, said bands being at the top and bottom of said frame and conforming to the aggregate top and bottom edges of said repositories respectively, some of said upright members being located opposite and of sufficient width to cover the division line between adjacent pairs of such repositories.

1,300,493. PLASTERED CONCRETE CEILING AND METHOD OF MAKING SAME. MAX Y. SHATOS and JOHN S. HARRIS, Cleveland, Ohio, assignors to The Arco Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 23, 1917. Serial No. 156,396. 4 Claims. (Cl. 72—123.)

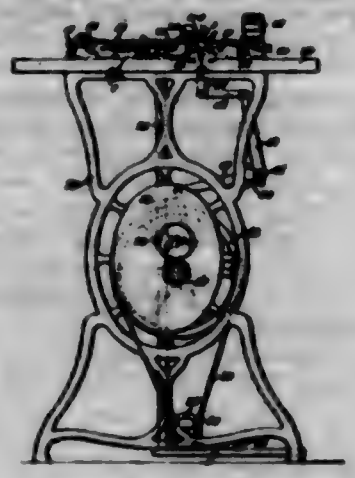


3. A composite wall structure consisting of a set concrete layer, a plaster layer, and an intermediate layer cementing together such concrete and plaster layers, said intermediate layer consisting of a viscous drying oil containing fibrous material.

1,300,494. COHESION-MACHINE. WARREN P. SMITH, Altoona, Pa. Filed Jan. 2, 1918. Serial No. 210,102. 8 Claims. (Cl. 73—81.)

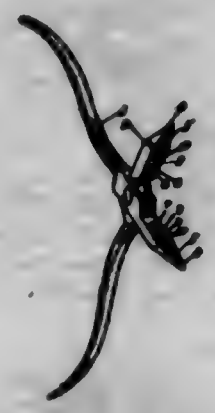
1. A machine for determining the cohesion of silk threads, comprising a thread carrier; a pressure member adapted to roll in contact with the thread on the carrier

and pressing the thread against the carrier; means for mounting the pressure member for rotation; and means



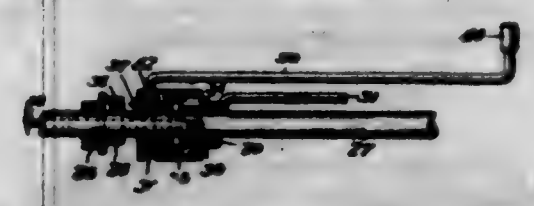
for producing relative translatory movement between the pressure member and the carrier.

1,300,406. DENTAL TOOL. JOSEPH H. SHANK, Manchester, Ohio. Filed June 14, 1918. Serial No. 239,850. 2 Claims. (Cl. 32—10.)



1. A dental tool comprising in combination with plier jaws, a pair of registering depressions in said jaws, one of said depressions being adapted to receive a member to be used as a handle for a dental broach, and a blade in the other depression, arranged to produce a depression in said member, the depression in said member being adapted to receive the shank of said broach.

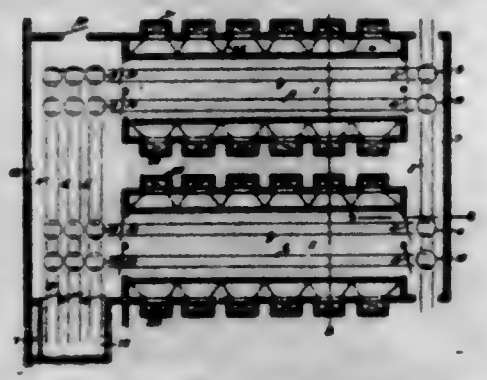
1,300,496. SEWING-MACHINE. JUAN DIEGO SHAW, Buenos Aires, Argentina. Filed Oct. 11, 1915. Serial No. 55,264. 3 Claims. (Cl. 112—2.)



1. In a sewing machine, the combination with a rock shaft, feeder teeth, means actuable to impart a double reciprocal movement to the feeder teeth, and rotary means for actuating the means last mentioned, of means for clutching and unclutching the rotary means to and from the rock shaft; substantially as described.

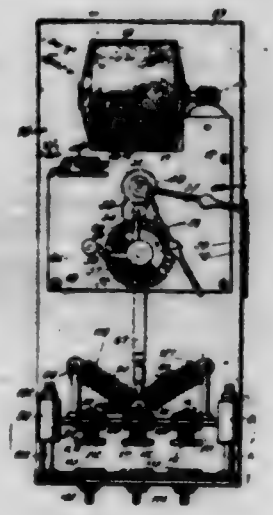
1,300,497. DRIER FOR EVAPORATING FRUITS, VEGETABLES, AND THE LIKE. HENRY L. SHEPARD, Portland, Oreg., assignor to Pacific Evaporator Company, Portland, Oreg., a Corporation of Oregon. Filed June 28, 1917. Serial No. 177,722. 9 Claims. (Cl. 34—30.)

1. In a drier, the combination of a drying chamber; two sets of means for supporting material to be dried in said chamber; means for directing a current of air through said chamber and at an angle to the material on said supports, the angles of one set of supports being opposite to those of the other; and means for reversing the direction of flow of air through the chamber.



2. In a drier, the combination of a drying chamber; two sets of trays arranged in the chamber; means for directing a current of air through said chamber and at an angle to the tray bottoms and past both sets, the angles of the bottoms of one set being opposite to those of the other; and means for reversing the direction of flow of air through the chamber.

1,300,498. TIME-SWITCH. HAROLD S. SIMMS, Chicago, Ill., assignor to Mineralac Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1915. Serial No. 31,120. 22 Claims. (Cl. 161—27.)



1. In a clock, the combination of a main spring, time-indicating devices driven thereby, means for winding the spring, and differential gearing interposed between said spring, time-indicating devices and winding means.

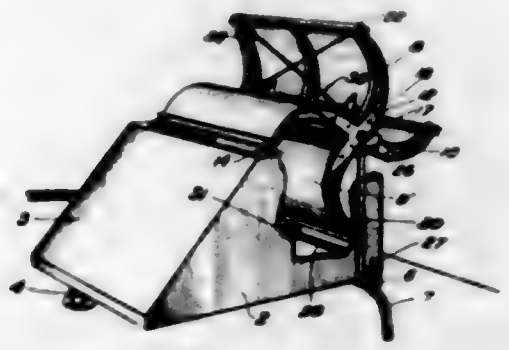
2. In a clock, the combination of a main spring, time-indicating devices driven thereby, means for winding the spring comprising an electric motor, electric switching mechanism whose operation depends on the condition of the main spring for controlling the operation of the motor, and differential gearing interposed between said spring, time-indicating devices and motor.

15. A clock comprising a main spring, time-indicating devices connected to one end of the spring, a member connected to the other end thereof and driven thereby, and means for winding the end of the spring connected with the time-indicating devices, and for placing tension on the time-indicating devices while the main spring is being wound.

16. A clock comprising a main spring, a driven member connected to one end of the spring, a second driven member connected to the other end thereof, and means for winding one end of the spring, and for placing tension on the driven member normally connected with the winding end of the spring while the same is being wound.

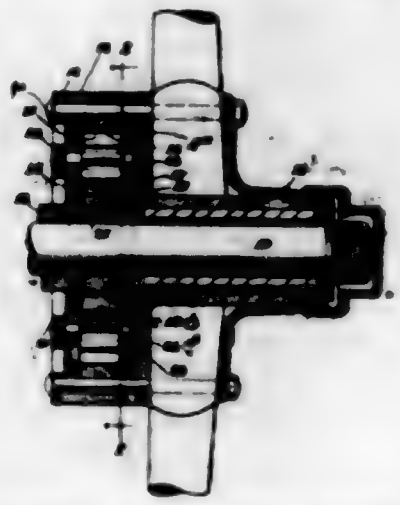
21. A clock comprising in combination a coil spring, differential gearing, a driven member connected with one end of the spring through the differential gearing, and means for operating the differential gearing to wind the spring without relieving tension on the driven member.

1,300,499. WIND-WHEEL OR WIND-DRIVEN PRIME MOVER. HARRY E. SLAGEL, Scott City, Kans. Filed May 4, 1917. Serial No. 166,350. 6 Claims. (Cl. 170—14.)



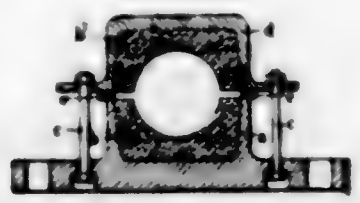
1. A wind wheel comprising a frame having radially disposed arms arranged about a common center, braces connecting said arms, stub shafts carried by the arms and braces, longitudinally arranged U-beams connecting said arms near the center, braces connecting the tips of said arms and vanes carried by said arms.

1,300,500. GEARLESS DIFFERENTIAL. WILLIAM TAIT SNEDDON, Kansas City, Mo. Filed Mar. 13, 1917. Serial No. 154,491. 1 Claim. (Cl. 192—20.)



In a mechanism of the character described, a driving sleeve, a head fixed on said sleeve, a wheel, a brake drum fixed to said wheel and surrounding said sleeve, but spaced therefrom and having internal pawl engaging recesses, disks rotatably mounted on said sleeve, having friction rings on their periphery engaging said drum, and pawls mounted on said disks between the head and the drum and actuated by said head to engage said drum recesses.

1,300,501. BUSH OR BEARING. EMILE EUGÈNE ALBERT SOREL, Paris, France. Filed Oct. 12, 1917. Serial No. 196,825. 6 Claims. (Cl. 64—19.)



1. A bush or bearing consisting of a frame of any material and a lining consisting of an agglomerate composed of a lubricating substance and magnesia mounted inside the said framing.

2. A bush or bearing consisting of a frame of any material and a lubricating lining consisting of an agglomerate composed of graphite, magnesia and a binding medium.

3. A bush or bearing consisting of a frame of any material and a lining consisting of a lubricating agglomerate composed of ground graphite and powdered magnesia, mixed together and with a solution of chlorid of magnesium.

4. A bush or bearing consisting of a frame of any material and a lining consisting of an agglomerate composed of a lubricating substance, magnesia, both, in a pulverized state, and a solid fatty body.

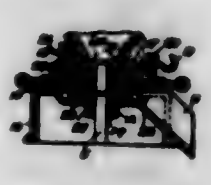
5. A bush or bearing consisting of a frame of any material and a lining consisting of a lubricating agglomerate composed of ground graphite and powdered magnesia, mixed together and with a solution of chlorid of magnesium and of a solid fatty body.

1,300,502. PACKAGE-TIE. OTTO KRISTIAN SÖRENSEN and ALFRED JENS PETER ÖSTERGAARD, Copenhagen, Denmark. Filed Dec. 29, 1916. Serial No. 139,607. 5 Claims. (Cl. 24—18.)



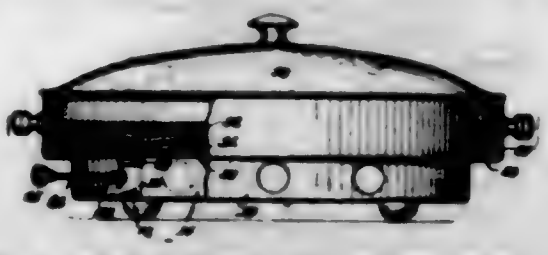
3. A package tie as claimed in claim 1, wherein the second member of the tie is provided with side extensions lying in a plane substantially parallel with that of said member and spaced therefrom, and the first member of the tie lies in a plane between those of the second member and its extensions.

1,300,503. GRINDING-MILL. GEORGE E. SOVEREIGN, Plainfield, N. J. Filed Apr. 20, 1918. Serial No. 229,309. 3 Claims. (Cl. 83—7.)



1. In a device of the class described, a top member having a neck; a cup including a flange mounted to slide on the outside of the neck; a hand wheel threaded externally on the flange co-acting with the top; a fixed grinding disk carried by the cup; and a rotatable grinding disk co-acting with the fixed grinding disk.

1,300,504. COMBINED COOKER AND SERVICE DEVICE. PERRY E. SPEARS, Harrisburg, Pa. Filed Apr. 25, 1918. Serial No. 230,778. 6 Claims. (Cl. 53—6.)



1. In a cooking, heating and service device, a base having a shoulder intermediate its length and an inclosing flange, a cleat on the bottom of the base having a flange constituting a pocket, a stove body having a flange fitting under the flange of the cleat, a latch pivoted to the base and adapted to engage the flange of the stove, and a damper for controlling the flame of the stove.

2. In a cooking, heating and service device, a base having a shoulder intermediate its length, and an inclosing flange, a cleat on the bottom of the base having a flange constituting a pocket, a stove body having a flange fitting under the flange of the cleat, a latch pivoted to the base and adapted to engage the flange of the stove, a damper for controlling the flame of the stove, a plate adapted to

rest on the flange of the base, and a plank resting on said plate.

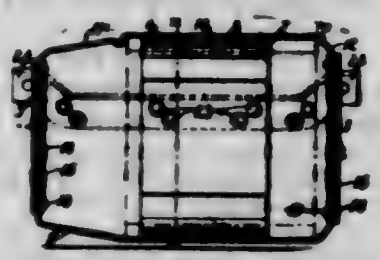
8. In a cooking, heating and service device, a base having a shoulder intermediate its length and an inclosing flange, a plate on the bottom of the base having a flange constituting a pocket, a stove body having a flange fitting under the flange of the plate, a latch pivoted to the base and adapted to engage the flange of the stove, a damper for controlling the flame of the stove, a refractory pad on the plate, a plank resting on the pad and partially embraced by the flange of the base.

1,300,506. STEERING-WHEEL LOCK. THEODORE D. STANLEY, Detroit, Mich., assignor to Leland Lock Company, Detroit, Mich., a Corporation of Michigan. Filed July 11, 1918. Serial No. 244,245. 8 Claims. (Cl. 70—120.)



1. In a device of the character described, the combination of a steering post, a housing concentric to the post, a cover screwed to the housing, a steering wheel supported by a stub shaft adapted for lengthwise movement, planetary gearing inclosed in the housing for operatively connecting the steering wheel with the steering post, said stub shaft being movable upwardly and downwardly whereby the planetary gearing may be either operative or inoperative for connecting the steering wheel with the steering post, means for maintaining the stub shaft in an operative or inoperative relation to the steering post, and means carried by the cover of the gear housing, and automatically operated by the said means and arranged to engage with the gearing for preventing the removal of the cover while the steering wheel is in an operative disconnected relation to the steering post.

1,300,506. DYNAMO-ELECTRIC MACHINE. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1914. Serial No. 860,974. 4 Claims. (Cl. 172—36.)



1. A dynamo-electric-machine frame comprising an incasing member of relatively thin material, and a magnetizable band of relatively thick material fitted within said incasing member and adapted to receive and support magnetizable pole pieces, the incasing member being adapted to receive and support any one of a plurality of bands of different lengths.

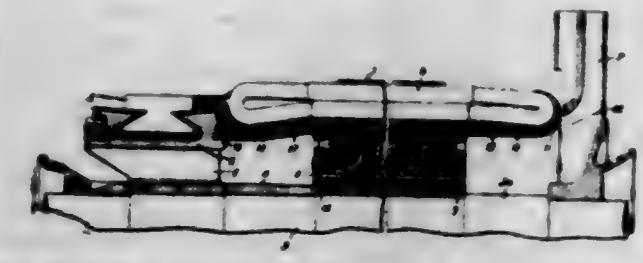
1,300,507. AXLE-BEARING. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1915. Serial No. 50,884. 11 Claims. (Cl. 64—32.)

1. In an axle bearing, the combination with a housing member having a cylindrical seat, a bearing member positioned therein and comprising a shell having an external flanged portion, a layer of bearing metal within said shell and an axle rotatably mounted in the said bearing and



having an enlarged portion adjacent to the said flanged portion, of a guard member encircling the enlarged portion of the said axle and secured to the flanged portion of the said shell.

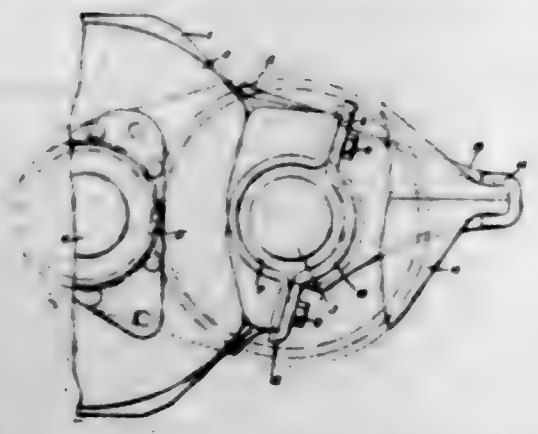
1,300,508. ARMATURE FOR DYNAMO-ELECTRIC MACHINES. CHARLES W. STARKER, Pittsburgh, and GUSTAV L. S. KRONFELD, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 30, 1916. Serial No. 128,415. 9 Claims. (Cl. 171—206.)



2. In an armature for dynamo-electric machines, the combination with a magnetizable body member provided with a plurality of slots and a plurality of coils located in said slots and having overhanging end portions, of a plurality of magnetizable plates secured to the respective ends of said body portion and within said end portions, one of said plates being provided with an extended portion to support the end portions of said coils.

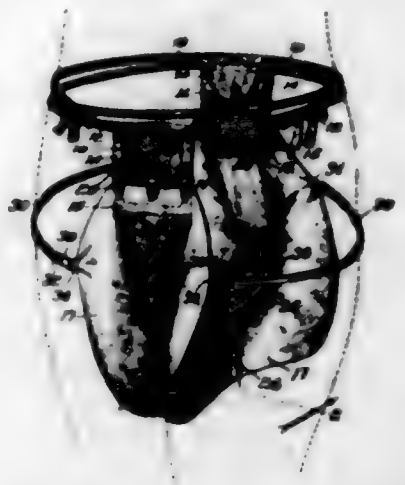
9. In an armature for dynamo-electric machines, the combination with a shaft, a slotted core member and a commutator cylinder provided with longitudinal ducts and a fan mounted thereon in spaced relation, and a plurality of coils located in the slots of said core member and having projecting end portions, of means for supporting the end portions of said coils and for increasing the magnetizability of said core without obstructing the spaces between the ducts of said core member and of said commutator cylinder and between the ducts of said core member and said fan.

1,300,509. AXLE-CAP FOR DYNAMO-ELECTRIC MACHINES. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1917. Serial No. 146,450. 6 Claims. (Cl. 105—136.)



1. An axle cap comprising a curved axle-engaging portion, the said curved portion having one end bent perpendicularly and laterally to the axle to form a gear-case supporting arm.

1,300,510. CATAMENIAL APPLIANCE. EVA STEELE, Chicago, Ill. Filed Apr. 17, 1918. Serial No. 228,991. 1 Claim. (Cl. 128—287.)



A catamenial appliance comprising a protective shield formed of front and rear sections, the inner edges of said sections being secured together and the inner portion of each section being correspondingly cut away so that when the sections are brought together an oblong space is formed about the center of the shield, said space terminating at a distance from the ends thereof; an oblong strip inserted in said cutaway space and secured at its sides and ends to said shield section to form a pouch to receive a napkin; the outer side portions of each of said shield sections being given such fullness as to cause the shield sections when in use to snugly fit the wearer's legs and assume a substantially vertical position; both said front and rear shield sections having broad outer truncated ends tapering from the central portions of the shield and adapted to snugly engage the wearer's body and provided with a plurality of means arranged across the upper edges thereof for attachment to front and back supporters; and straps connected to the outer edges of said shield sections at a distance below the upper ends thereof for holding said shield sections snugly in place.

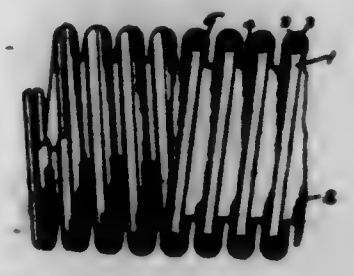
1,300,511. HAMMER. HAROLD M. STURGEON, Erie, Pa. Filed July 26, 1917. Serial No. 182,927. 4 Claims. (Cl. 78—27.)



1. In a device of the class described, a frame, a hollow spring-pressed reciprocating hammer, a helical cam within said hammer, means co-engaging said hammer and said cam, a longitudinally movable tool-stock in said frame to receive the blows of said hammer, means operated by the longitudinal movement of said tool-stock to control the length of the stroke of said hammer, and means to rotate said cam, substantially as set forth.

4. In a device of the class described, a frame, a hollow, spring-pressed reciprocating hammer having an opening in its front end slidably and non-rotatably mounted in said frame, said hammer having a helical slot in the wall thereof, a thimble rotatably mounted in said hammer, a stud-roller pivoted on the exterior of said thimble and projecting into said helical slot, a stud-roller pivoted on the interior wall of said thimble, a driven shaft axially mounted in said frame, a helical cam in said thimble adapted to engage the stud roller on the interior of said thimble, a hollow shaft for said cam and telescoping over said driven shaft, a spring in said hollow-shaft to normally maintain said cam in its outermost position, a short shaft slidably mounted in said frame in axial alinement with said hammer, a bar axially secured on said short shaft extending inwardly through the opening in the front end of said hammer and slidably and non-rotatably passing through the bottom of said thimble and contacting against the end of said helical cam, means to cause said short shaft to rotate during its longitudinal movement, and a tool-stock slidably mounted in the frame in axial alinement with said short shaft and hammer, and contacting against said short shaft, whereby, as the tool-stock is caused to move inwardly by pressure against the work, said helical cam is moved longitudinally and said thimble caused to rotate within said hammer to move said stud-rollers forward in the helical slot in said hammer to increase the length of the stroke of said hammer, substantially as set forth.

1,300,512. FLEXIBLE TUBING. ANDREW SUNDH, Hastings-upon-Hudson, N. Y., assignor to National Clutch Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 26, 1918. Serial No. 213,974. 9 Claims. (Cl. 137—75.)



1. In a flexible metallic tubing, the combination of a spirally wound metal tape, and a resilient spirally wound wire to which said tape is rigidly secured to maintain the tubing fluid tight.

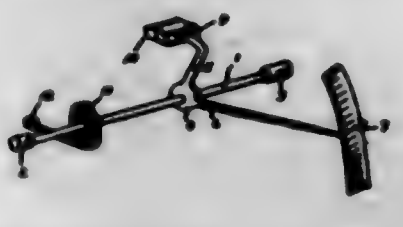
2. In a flexible metallic tubing the combination of a spirally wound metal tape and a resilient spirally wound wire to which said tape is rigidly secured, the tubing as a whole being characterized by the tape being more flexible than the wire for the purposes set forth.

3. A flexible metallic tubing, the combination of a metal tape wound spirally to form a corrugated tube and a resilient spirally wound wire rigidly secured to the convolutions of said corrugated tube and having its periphery shaped to conform to the corrugations of said tube.

5. A flexibly metallic tubing comprising a spirally wound corrugated strip and a spirally wound resilient member less flexible than the strip for binding and holding together the adjacent edges of said strip, and to cause the corrugations of the strip to be distorted uniformly and proportionately when the tubing is flexed.

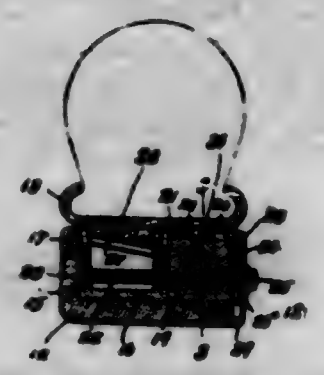
6. A flexible tubing, comprising a spirally wound strip having abutting edges to form a hollow member, and a holder within said member to which the strip is rigidly secured.

1,300,513. MEASURING INSTRUMENT. HORACE V. S. TAYLOR, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 3, 1917. Serial No. 184,232. 8 Claims. (Cl. 33—216.)



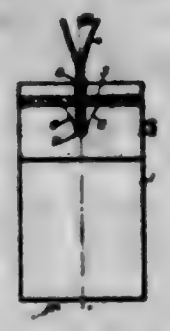
1. An accelerometer comprising a rotatable member, a pointer mounted thereon, a weight member operatively connected to the rotatable member, and a spring for restraining the movement of the rotatable member, the center of gravity of the weight member, the pointer, and the rotatable member being normally in a vertical plane above the rotatable member.

1,300,514. DEMOUNTABLE-RIM LOCK. EDWARD TRIMM, St. Louis, Mo. Filed Apr. 5, 1916. Serial No. 89,067. 6 Claims. (Cl. 152—21.)



1. The combination with a wheel felly and demountable rim, which felly is provided with a plurality of pockets, of rim locking means arranged in each pocket, each locking means comprising a block adapted for movement lengthwise in said pocket, means for adjusting the position of said block, and a second block interposed between the first mentioned block and the rim, said blocks having inclined contacting surfaces.

1,300,515. SELF-REINFORCING FABRIC. CHARLES B. TEWKESBURY, West Roxbury, Mass., assignor to Safeguard Tag Company, Boston, Mass., a Corporation of Maine. Filed Oct. 27, 1917. Serial No. 198,768. 10 Claims. (Cl. 40—87.)



1. A self-reinforcing article comprising in combination, an attaching member, sheet material having an aperture for the reception of said attaching member, and an extended reinforcement for said material embedded therein in the path which that part of the attaching member which is disposed in said aperture tends to follow when the attaching member is under operative tension, said part being spaced from said reinforcement at such time by a strain distributing pad formed from parts of said sheet material.

2. A self-reinforcing article comprising in combination, an attaching member, sheet material having an aperture for the reception of said attaching member, an extended reinforcement for said material embedded therein in the path which that part of the attaching member which is disposed in said aperture tends to follow when the attaching member is under operative tension, said article having provisions to automatically form in a portion thereof, lying in said path, a cushion between said part of said member and said reinforcement, when said member is placed under said tension.

10. A self-reinforcing article comprising in combination, an attaching member, sheet material having an aperture for the reception of said attaching member, and deformation arresting means attached to said sheet material in the path which that part of the attaching member which is disposed in said aperture tends to follow when the attaching member is under operative tension, said part being spaced from said reinforcement at such time by a strain distributing pad formed from parts of said sheet material.

1,300,516. SEPARATION OF MIXED SULFID ORES. ROWLAND THOMAS DEELL WILLIAMS, Broken Hill, New South Wales, Australia, assignor, by mesne assignments, to Minerals Separation North American Corporation. Filed July 20, 1915. Serial No. 40,847. 10 Claims. (Cl. 23—85.)

1. A process for the separation of mixed metalliferous minerals which consists in mixing an ore containing mixed metalliferous minerals in a finely ground condition with water containing bleaching powder in solution and submitting it to froth flotation separation, whereby products are obtained relatively high in certain values and other products are obtained relatively high in other values.

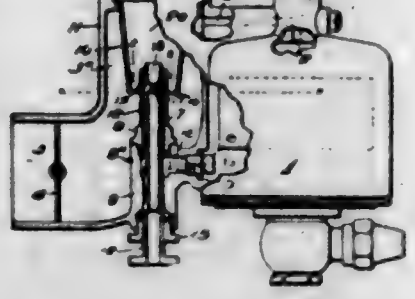
2. A process for the separation of mixed metalliferous minerals which consists in mixing an ore containing mixed metalliferous minerals in finely ground condition with water containing bleaching powder in solution, agitating the mixture to form a froth, and separating the froth, whereby a product relatively high in certain values is obtained in the froth and a product relatively high in other values is obtained in the residues.

3. A process for the separation of mixed metalliferous minerals which consists in mixing an ore containing mixed metalliferous minerals in a finely ground condition with water containing in solution bleaching powder and a small proportion of a frothing agent, agitating the mixture to form a froth, and separating the froth, whereby a product relatively high in certain values is obtained in the froth and a product relatively high in other values is obtained in the residues.

4. A process for the separation of mixed metalliferous minerals which consists in mixing an ore containing mixed metalliferous minerals in a finely ground condition with water containing in solution bleaching powder and a persulfate, and submitting it to flotation separation, whereby products are obtained relatively high in certain values and other products are obtained relatively high in other values.

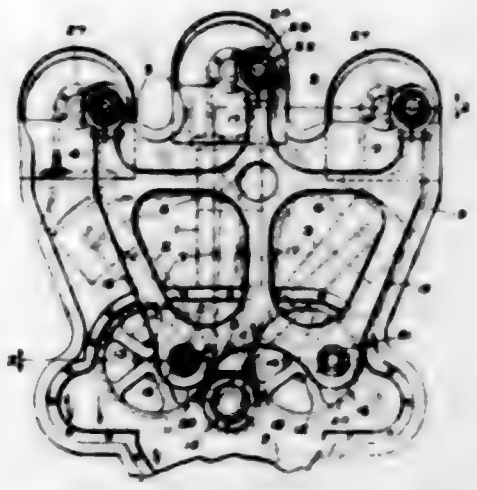
5. A process for the separation of mixed metalliferous minerals which consists in mixing an ore containing mixed metalliferous minerals in a finely ground condition with water containing in solution bleaching powder and a persulfate, agitating the mixture to form a froth, and separating the froth, whereby a product relatively high in certain values is obtained in the froth and a product relatively high in other values is obtained in the residues.

1,300,517. CARBURETER. PERCIVAL S. TICE, Detroit Mich. Filed June 27, 1917. Serial No. 177,176. 6 Claims. (Cl. 261—62.)



1. In a carbureter, in combination with a main air inlet passage, an air jet discharging in the main air inlet passage, a fuel inlet passage extending adjacent to the air jet passage, the air jet passage being constricted at a short distance back of its discharge in the main air inlet passage, and laterally apertured immediately beyond the restriction for communication with the fuel inlet passage, said fuel inlet passage being extended a short distance beyond said apertures and open at the end there-beyond for communication with the main air inlet passage.

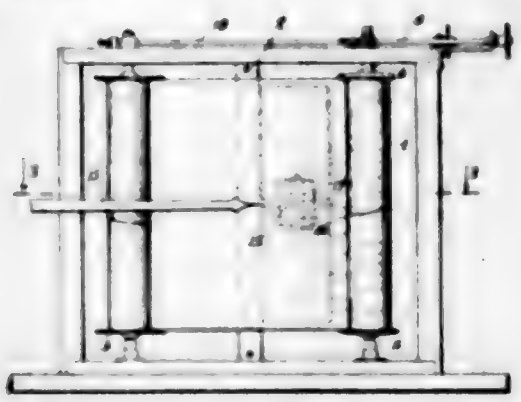
1,300,518. CAM-SHAFT-OPERATING MEANS FOR INTERNAL-COMBUSTION ENGINES. PEMO I. TOWE, Indianapolis, Ind. Filed Sept. 16, 1916. Serial No. 120,498. 8 Claims. (Cl. 123—55.)



1. In an internal combustion engine, in combination with an explosion cylinder, the main shaft, a valve for said cylinder, a crank driven by the main shaft, a cam shaft for operating said valve, a crank on said cam shaft, a connecting arm between said cranks and a means for eccentrically adjusting the end of said arm at its connection with the second crank to adapt the centers of said arm connection and said cranks to variations in the assembled parts of the engine.

8. In an internal combustion engine in combination with a series of explosion cylinders arranged in three rows side by side, the cylinders of the central row extending vertically and the cylinders of the two side rows extending to a V-angle to those of the central row and to one another, all of said cylinders having vertical extending heads, the heads of the cylinders of the side rows being to an angle of the axes of said cylinders, valves inclosed within said heads, cam shafts for operating the valves of the respective rows, a main shaft, cranks driven by said main shaft, cranks on the cam shafts, a connecting member between the cranks driven by the main shaft and the cam shaft cranks, consisting of a three armed frame, mounted to be circularly driven by the two cranks which are driven by the main shaft.

1,300,519. AUTOMATIC MUSICAL INSTRUMENT. HENRY BARNES TREMAINE, Westfield, N. J., assignor to The Aeolian Company, a Corporation of Connecticut. Filed July 8, 1916. Serial No. 108,178. 3 Claims. (Cl. 84—161.)



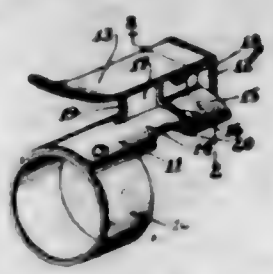
1. In an automatic musical instrument, an upright tracker-bar having the treble ducts in its upper half and the bass ducts in its lower half, an upright take-up spool located at the left of the tracker, and means located at the right of the tracker for operatively supporting an upright music roll in position for the music-sheet to travel across the tracker from right to left to the take-up spool, so that its treble perforations will be at the top thereof and its bass perforations at the bottom, while the playing indicating marks will be on the back of the sheet; in combination with lighting means arranged to illuminate the sheet from the back, so as to show said indicating marks through said sheet to the player.

1,300,520. SPECTACLE-RIM-STRETCHING DEVICE. MIKE TRITSCH, Plattsmouth, Nebr. Filed Oct. 26, 1918. Serial No. 259,830. 4 Claims. (Cl. 81—4.)



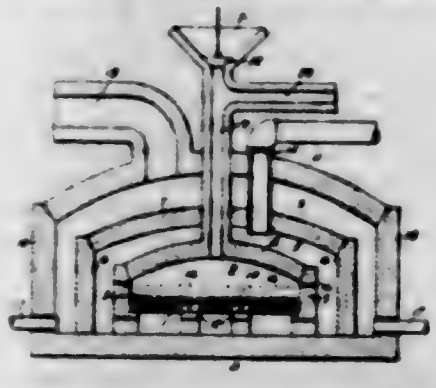
4. A device for expanding spectacle rims, comprising a pair of rim-expanding jaws, each having an arcuate outer edge, and a jaw-expanding member having a freely rotatable engagement with one of said jaws and a threaded engagement with the other jaw, said jaw-expanding member extending beyond both jaws and having a suitable operating handle by means of which said jaw-expanding member may be rotated, and stop means for limiting the expanding movement of the jaws.

1,300,521. TWINE-CUTTER. ALOIS VILLIGER, San Francisco, Calif. Filed Dec. 18, 1918. Serial No. 267,215. 1 Claim. (Cl. 30—14.)



A twine cutter including a finger engaging ring, a plate secured on the outer face of the ring and having a member extending laterally from the edge of the ring, said extension being rebent at the intermediate portion thereof to form a tongue which is disposed in parallel relation to the said extension, inwardly and upwardly bent tabs formed on the sides of the extension, a knife disposed between the tabs and between the tongue and extension, and a clamping bolt disposed through the tabs and knife.

1,300,522. MAKING METALLIC OXIDS. THEODORE J. VOLLKOMMER, Pittsburgh, Pa. Filed Dec. 26, 1916. Serial No. 138,953. 3 Claims. (Cl. 75—19.)



1. An apparatus for producing oxids of metal comprising a furnace having a porous or perforate bottom and perforate side walls, a chamber surrounding said furnace and bottom, and means for introducing an oxidizing gas under pressure in said surrounding chamber.

2. An apparatus for producing oxids of metal comprising a furnace having a porous or perforate bottom and perforate side walls, a chamber surrounding said furnace and bottom, means for introducing an oxidizing gas under

pressure in said surrounding chamber, and a heating chamber surrounding said furnace and provided with means for heating the entire furnace.

2. An apparatus for producing oxids of metal comprising a furnace having a porous or perforate bottom and perforate side walls, a chamber surrounding said furnace and bottom, means for introducing an oxidizing gas under pressure in said surrounding chamber, a charging hopper connected to the furnace, and an outlet flue for the oxids connected to said inner chamber.

1,300,523. LOW-PRESSURE ALARM. WILLIAM E. VOSS, Oklahoma, Okla. Filed Apr. 10, 1916. Serial No. 90,184. 4 Claims. (Cl. 188—1.)



1. The combination with a fluid pressure container, of a cylinder having one end thereof in communication with the container, a sleeve adjustably threaded in the head at the opposite end of the cylinder, a piston rod slidable through the sleeve, a piston rigid with the piston rod and slidable within the cylinder, the interior of the cylinder being formed at one side thereof with a by-pass of which the end portions communicate with the cylinder at points spaced apart a greater amount than the thickness of the piston, and a spring surrounding the piston rod and interposed between the sleeve and the piston, said spring tending to move the piston against the air pressure and the tension of the spring being adjustable by manipulating the before-mentioned sleeve, a lateral discharge opening being formed in that end of the cylinder remote from the connection with the fluid pressure container, and alarm means actuated by the escape of air through the discharge opening.

1,300,524. SUBMARINE VESSEL. JAMES FRANKLIN WADDINGTON, of Beverly, N. J. Filed June 21, 1916. Serial No. 104,901. 11 claims. (Cl. 114—16.)



1. A submarine boat having a hull comprising a water-tight midships section transversely circular and longitudinally curved or bowed throughout.

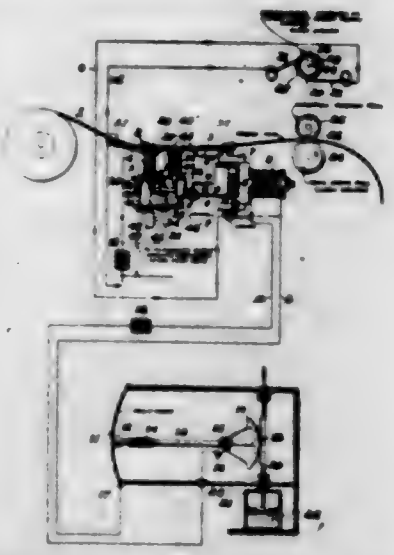
2. A submarine having the hull thereof comprising a plurality of hull sections united together and having common bow and stern compartments, each of said hull sections comprising a water-tight midships section longitudinally curved or bowed throughout.

3. A submarine having a tubular hull and a non-water-tight cutwater mounted below the bow thereof to form stream lines for the hull.

7. A submarine comprising a plurality of tubular hull sections, each having a water-tight midships section transversely circular and longitudinally curved or bowed throughout, and means for uniting said hull sections, the hull sections and the uniting members being exposed to the sea.

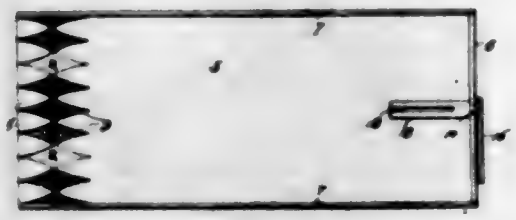
9. A submarine comprising a plurality of tubular hull sections, each including a water-tight midships section substantially transversely circular and longitudinally curved or bowed throughout, members connecting all of the hull sections, the ends of said hull sections terminating in common bow and stern compartments, and a superstructure mounted on the hull sections and extending between the bow and stern compartments.

1,300,525. RECORDING MECHANISM. JAMES C. WARREN, Fredericksburg, Va. Filed Oct. 15, 1917. Serial No. 196,736. 4 claims. (Cl. 234—1.5.)



3. In combination a tape, feed rolls for said tape, a marking device, an electro-magnetic means for operating the marking device, a commutator for energizing the said electro-magnetic means periodically, clock-work mechanism for operating said commutator, and said feed rolls, a carrier for the marking device, electro-magnetic means for shifting the carrier and a controller affected by changes in the condition to be recorded for regulating the supply of current to said electro-magnetic carrier operating means, substantially as described.

1,300,526. GAME APPARATUS. ORRIN W. WATSON, Newman Lake, Wash. Filed July 15, 1918. Serial No. 244,965. 3 Claims. (Cl. 46—32.)

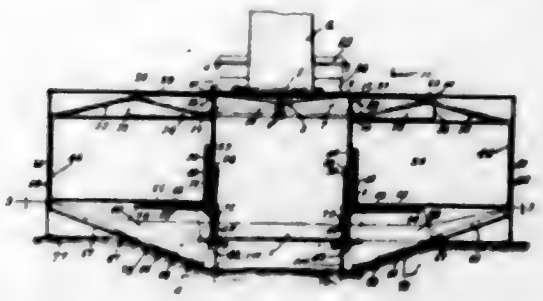


1. In a game apparatus, a base board having a transverse row of pockets at one end, and a disk projector positioned at the other end of the board and having a longitudinal groove to seat the disk, said projector being pivotally mounted for a tilting movement sidewise.

1,300,527. FIELD-STOVE. JAMES WATSON, Marinette, Wis. Filed Dec. 24, 1918. Serial No. 268,146. 6 Claims. (Cl. 126—9.)

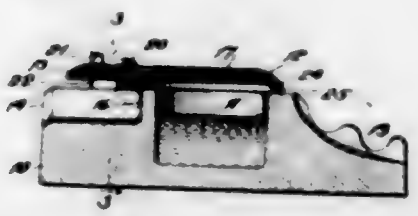
4. In a device of the class described, a central section having an outlet for the products of combustion; side sections detachably connected to the central section; ovens in the side sections; fixed deflectors carried by the side sections and located below the ovens, the

fixed deflectors slanting downwardly and inwardly; movable deflectors hinged to the inner edges of the fixed



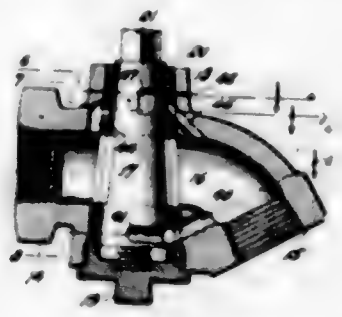
deflectors; and upright wings hinged to the ends of the movable deflectors.

1,300,528. INKSTAND. FRANK A. WEEKS, Plainfield, N. J. Filed Dec. 24, 1917. Serial No. 208,673. 5 Claims. (Cl. 120—57.)



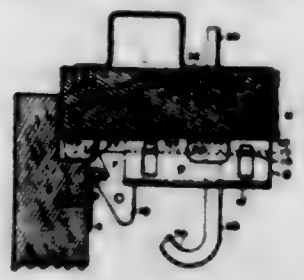
1. An inkstand of the character described comprising an integral base containing in its interior portion an inkwell and at the rear thereof a vertical recess open at its top, and a cover adapted to close said well and being wholly exterior thereto and bodily removable from said base and having a rearwardly extending tongue adapted to be turned downwardly into said recess and engage the front wall thereof, said tongue having laterally extending trunnions at its opposite side edges and said base having open-top bearings adapted to detachably receive said trunnions and a flat top adapted to receive the body portion of said cover.

1,300,529. FLUID-PRESSURE SYSTEM. JAMES N. WEIKLY, Jersey City, N. J. Filed Mar. 18, 1918. Serial No. 223,082. 13 Claims. (Cl. 188—8.)



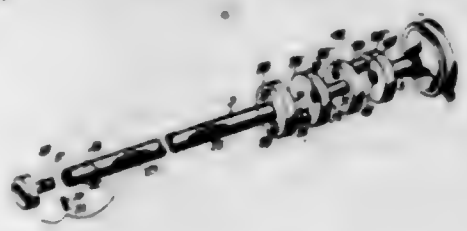
1. A valve of the character described comprising a casing to be interposed in a fluid pressure pipe-line and having a main valve member for opening and closing the main passage therethrough, auxiliary chambers having outlet ports, auxiliary valves within said chambers for controlling said ports, a duct leading from one side of said main valve when it is in closed position to one of said chambers and a duct leading from the other side of said main valve, when closed, to the other of said chambers, the whole being so arranged that the pressure at one side of the main valve may exhaust into one of said chambers and move the valve therein to open the exhaust port therefrom and effect the movement of the other auxiliary valve to its open position, whereby on the reduction of pressure at one side of said main valve, the pressure at the other side of said valve may act to seat both of said auxiliary valves and close the ports from said chambers.

1,300,530. DOOR LATCH AND BUMPER. EDWARD W. WEILAND, Fresno, Calif. Filed Dec. 5, 1917. Serial No. 205,499. 3 Claims. (Cl. 70—42.)



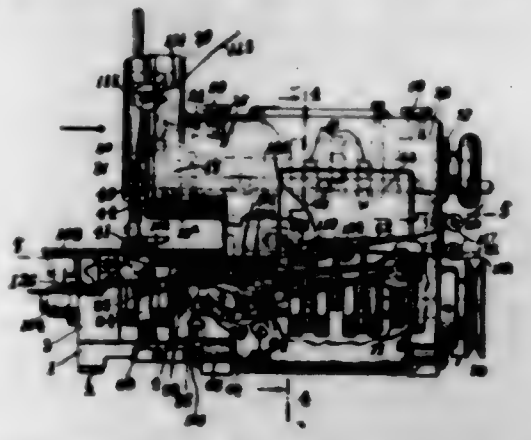
1. In combination with a door and a jamb therefor, a bumper attached to one of said elements so as to be movable into positions in which it is respectively operative and inoperative to resiliently resist the closing motion of the door, a striking plate on the jamb, and an automatic latch on the door for engaging said striking plate, one of said co-engaging elements being provided with means for engaging the other in either of two latching positions corresponding to the operative and inoperative positions of the bumper.

1,300,531. SEWING-MACHINE DRIVING-SHAFT. JOHN P. WEIS, Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Corporation, Dover, Del., a Corporation of Delaware. Filed June 15, 1916. Serial No. 103,729. 2 Claims. (Cl. 74—38.)



1. A crank shaft comprising two spaced and aligned shafts, an end crank disk secured on the adjacent end of each shaft, each of said disks having a wrist pin aperture, a plurality of intermediate crank disks having two wrist pin apertures, and wrist pins secured and held in said apertures by a tight fit.

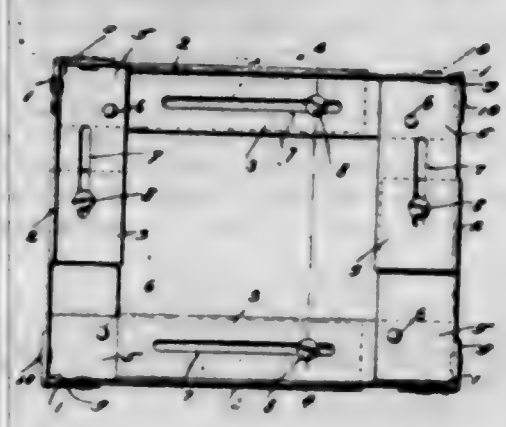
1,300,532. OVERSTITCH SEWING-MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Corporation, Dover, Del., a Corporation of Delaware. Filed Aug. 10, 1917. Serial No. 185,407. 51 Claims. (Cl. 112—24.)



1. In an overstitch sewing machine, the combination of a top and bottom rotary shaft, means including a recip-

rotatory connection between said shafts, feeding mechanism, looper mechanism, needle mechanism including a needle bar, and an upwardly extending connection from said top shaft to said needle bar and connected with said needle bar above the rotary top shaft, thereby forming an underslung needle drive.

1,300,532. ADJUSTABLE TRUNK-RACK. LON WOODRAM WHEELHOUSE, San Antonio, Tex. Filed Nov. 27, 1918. Serial No. 264,418. 1 Claim. (Cl. 211—14.)



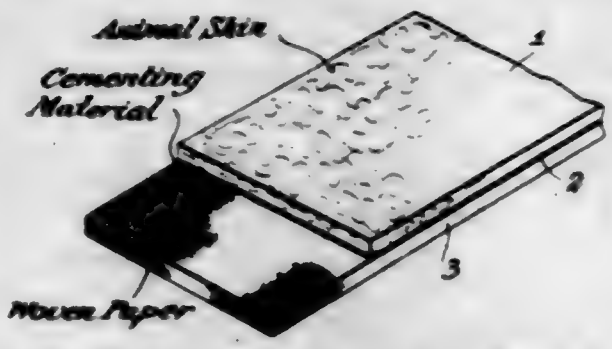
An extensible trunk rack comprising four L-shaped angle members each including a vertical flange and horizontal flanges, the vertical flanges being bent to define the arms of each L-shaped member, and to cause the inner ends of the horizontal flanges to overlie each other, the vertical flanges of adjoining angle members being overlapped longitudinally, and the horizontal flanges of adjoining angle members being superposed, one of the superposed flanges in each arm having a longitudinal slot, and the coacting superposed flange having a clamp adjustable in the slot; corner legs in the form of angle members including flanges; means for securing the flanges of the legs to the vertical flanges of the L-shaped members; blocks seated in the legs and abutting at their upper ends against the overlying portions of the horizontal flanges; and securing devices connecting the overlying portions of the horizontal flanges.

1,300,534. PRESSURE-GAGE FOR VEHICLE-TIRES. HARLEY L. WEST, Crested Butte, Colo., assignor of one-third to Ben L. Cress, Redcliff, Colo. Filed Aug. 5, 1918. Serial No. 248,378. 8 Claims. (Cl. 152—12.)



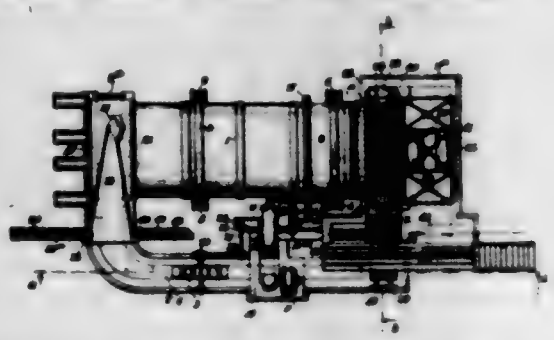
2. A device of the character described including a barrel, a gage sleeve slidable thereon, tire valve engaging means carried by the barrel, yieldable means operatively connected at one end with the sleeve and at its opposite end with the said means for resisting outward sliding movement of the sleeve upon the barrel, and means for adjustably connecting the barrel with a tire valve casing.

1,300,535. MATERIAL COMPOSED OF SKIN AND PAPER. AXEL WHIST, Haggedal, Norway. Filed Dec. 5, 1917. Serial No. 205,702. 3 Claims. (Cl. 154—46.)



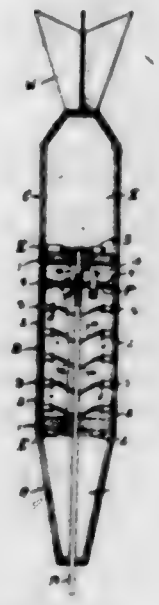
1. A laminated material consisting of a sheet of animal skin and a woven material formed of threads of paper, the two constituents being glued and rolled together into an integral product having the softness and strength of skin and the non-stretching properties of paper.

1,300,536. BARKING-DRUM. AMBROSE H. WHITE, Brooklyn, N. Y., assignor to International Paper Company, a Corporation of New York. Filed Mar. 26, 1915. Serial No. 17,084. 1 Claim. (Cl. 144—208.)



In combination with a horizontal, rotary barking drum open at opposite ends for the supply and discharge respectively of the wood to be barked, means for continuously feeding the wood to be barked into the receiving end of the drum, and means for maintaining in the drum a substantial level of water and flowing the same continuously through the drum from its receiving end to its discharge end to cause the wood to be continuously discharged from the discharge end of the drum.

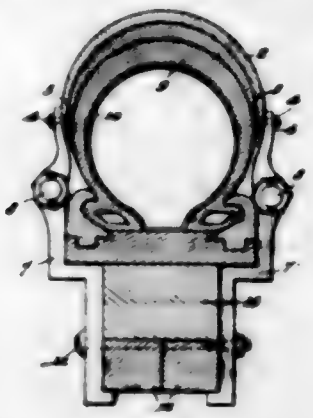
1,300,537. BOMB. GRIFFITH H. WILLIAMS, Cambria, Wis. Filed Oct. 14, 1918. Serial No. 257,988. 4 Claims. (Cl. 102—2.)



1. An aerial bomb comprising a body provided with series of substantially radially disposed cartridge cham-

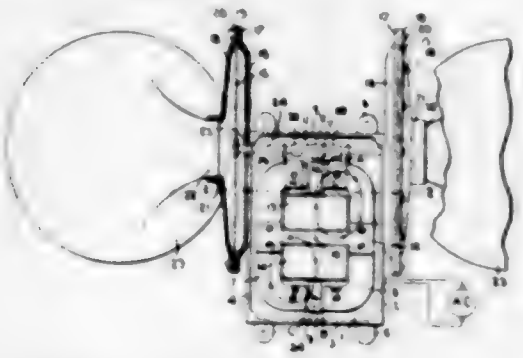
bers, a tube in communication with each of the chambers, a firing pin mounted for movement in said tube, an impact actuated member carried by the body and means coacting with each of the firing pins and operated by the impact actuated member for imparting movement to the firing pin toward the cartridge chamber when the impact actuated member is moved under impact.

1,300,538. TIRE-CLAMP. JAMES A. WILLIAMS, Bisbee, Ariz. Filed Jan. 26, 1916. Serial No. 74,508. 1 Claim. (Cl. 152—17.)



In a device of the class described the combination of an overshoe for a pneumatic tire, anchor plates secured to the overshoe and located at the opposite edges thereof, brackets pivoted to the anchor plates and arranged to swing transversely of the wheel, filler blocks of a length to extend across the space between two of the spokes of the wheel and fit against the said spokes, and fastening devices piercing the filler blocks and the brackets and securing the same together and to the wheel.

1,300,539. POLARIZED SIGNALING MECHANISM. DANIEL S. WILSON, West Somerville, Mass., assignor to Samson Electric Company, Canton, Mass., a Corporation of Massachusetts. Filed May 11, 1917. Serial No. 167,895. 14 Claims. (Cl. 177—7.)

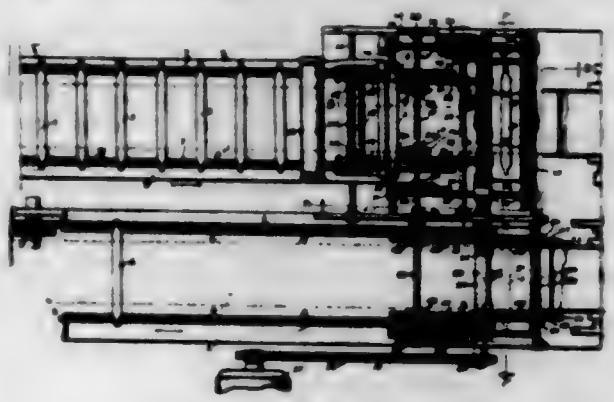


2. A polarized synchronous vibrating signaling mechanism comprising a pair of complementary magnets having their opposite poles facing one another, an armature reciprocably mounted intermediate of said poles, means for producing a magnetic flux in said armature alternately in opposite directions whereby the same will pass alternately through the respective magnets in the normal direction of the magnetic flux of said magnets to cause a reciprocation of said armature and means operable by the reciprocation of said armature to produce a recognizable signal.

5. A polarized synchronous vibrating signaling mechanism comprising a pair of complementary magnets having their opposite poles juxtaposed, an armature pivotally mounted centrally of said magnets for bilateral movement, coils surrounding said armature upon either side of the pivot of said armature and wound to cause the current passed through said coils to produce the same polarity in both ends of said armature, means for passing an alternating current through said coils whereby balanced forces for turning said armature about said pivot will be produced and said turning forces reversed at each alternation of the current, and means operable by the vibration of said armature to produce a recognizable signal.

9. A polarized synchronous vibrating horn mechanism comprising a horn having a diaphragm, a pair of complementary magnets having their opposite poles juxtaposed, an armature mounted for bi-lateral movement between the juxtaposed poles of said complementary magnets, stationary coils surrounding said armature wound to cause a current passed through the same to produce the same polarity in both ends of said armature, yoke pieces magnetically connecting the neutral portions of said magnets with the central portion of the armature, means for passing the alternating current through said coils whereby two multiple half-length magnetic circuits will be produced in diametrically opposite quadrants of said magnets and the air gaps between the operating magnet poles and the armature shortened with the movement of the armature and means for causing the vibration of the armature to transmit blows to said diaphragm to produce an audible signal.

1,300,540. AUTOMATIC STICK-FEEDING MACHINE. OSCAR S. WINEBURG and IRVIN G. PALMER, Elkhart, Ind. Filed Aug. 6, 1917. Serial No. 184,785. 17 Claims. (Cl. 34—20.)



1. In combination with paper drying machinery and the loop forming mechanism thereof, the following elements in combination: a lath machine, including means for receiving and lowering the lath into said magazine; conveyer members for extracting the lath from said magazine and supplying a lath transfer unit; a lath transfer unit, including curved lath actuation members; a lath receiver unit; and a lath supply unit adapted to supply lath to the loop forming devices of the drying machinery.

2. In combination with paper drying machinery and the loop forming mechanism thereof, the following elements in combination; a lath magazine, including means for tilting the lath and means for lowering the lath into the magazine; conveyer members for extracting the lath from said magazine and supplying a lath transfer unit; a lath transfer unit; a lath receiver unit; and a lath supply unit adapted to supply lath to the loop forming mechanism of the drying machinery.

3. In combination with paper drying machinery and the loop forming mechanism thereof, the following elements in combination: an upright lath magazine; conveyer members for extracting the lath from said magazine and supplying a lath transfer unit; a lath transfer unit arranged transversely of said conveyer members; a lath receiver unit coöperating with said transfer unit and provided with means for guiding the lath as it enters therein; and a lath supply unit adapted to supply lath to the loop forming mechanism of the drying machinery.

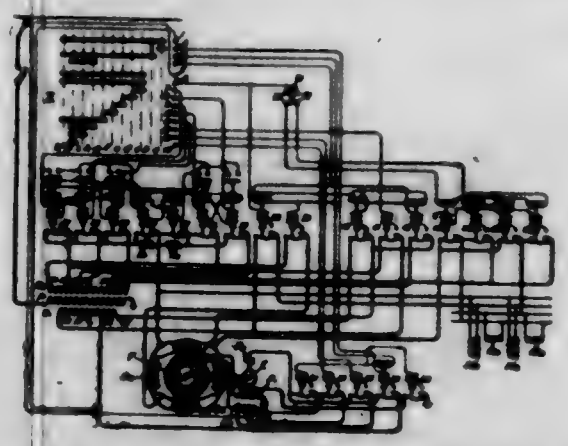
17. In combination with paper drying machinery and the loop forming mechanism thereof, the following cooperative elements in combination: a lath magazine; conveyer members for extracting the lath from said magazine and supplying a lath transfer unit; a lath transfer unit; a lath receiver unit; and a lath supply unit in coöperation with said lath receiver unit and adapted to supply lath to the loop forming devices of the drying machinery.

1,300,541. COUPLING. LUDWIG WOLFSTHAL, Erie, Pa. Filed Dec. 12, 1918. Serial No. 136,409. 2 Claims. (Cl. 64—21.)



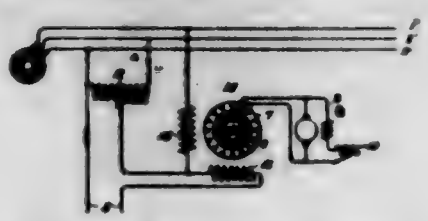
1. A flexible shaft coupling comprising a plurality of similar complementary members each having two enlarged oppositely disposed rigid wedge-shaped jaws spaced apart at their apexes, one radial face of each jaw having a socket of spherical curvature and the other radial face being flat, and segmental bearing blocks severally provided with spherical surfaces and plane surfaces, each block engaging a socket of one jaw of one wedge-shaped member and a plane radial surface of the adjacent jaw of another wedge-shaped member.

1,300,542. SERIES-MULTIPLE CONTROL. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1914. Serial No. 815,280. 32 Claims. (Cl. 172—274.)



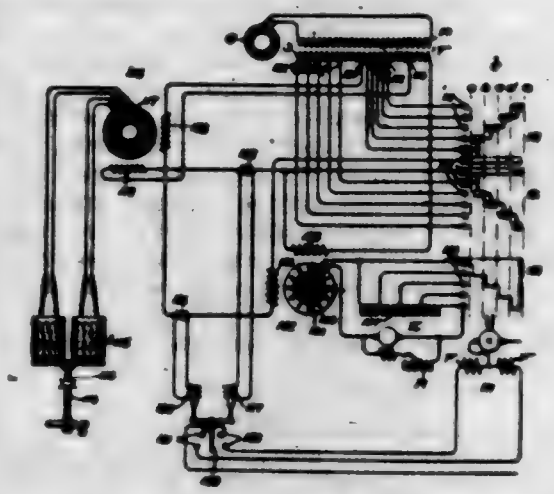
3. The method of starting a polyphase motor from a single phase source by means of a phase converter which consists in connecting one motor phase and one converter phase in series with each other to said single phase source and maintaining such connection while the motor torque is changing and then connecting said motor phase and said converter phase independently of each other to said single phase source.

1,300,543. SYSTEM OF PHASE MODIFICATION. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 23, 1917. Serial No. 150,412. 3 Claims. (Cl. 172—238.)



2. The method of supplying energy to a single phase circuit from a polyphase circuit by means of a phase converter of the polyphase induction motor type comprising relatively rotatable members, one of which is provided with a distributed short circuited winding and another of which is provided with windings constituting a plurality of phases, which consists in passing the current consumed by the single phase circuit through one of said phases, thereby inducing currents in the other converter phases, synchronously exciting said converter independently of said phases and adjusting said excitation to such a value that the currents in the phases will have a predetermined ratio and the theoretically correct phase relating at all loads.

1,300,544. SYSTEM OF PHASE MODIFICATION. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 23, 1917. Serial No. 150,413. 10 Claims. (Cl. 172—238.)



1. In combination, a single phase source of electrical energy, a polyphase induction motor, adapted to be operated therefrom, a phase converter comprising relatively rotatable members, one of said members being provided with windings constituting a plurality of phases, one of said phases being connected to be traversed by current supplied to a motor phase, means for interpolating a portion of the voltage of said source in series with said converter phase, for impressing a portion of the voltage of said source upon another converter phase and for impressing a portion of the voltage of said source upon another motor phase, means for synchronously exciting the converter independently of said windings, and means for simultaneously varying the voltage interpolated in series with the first named converter winding and the converter excitation.

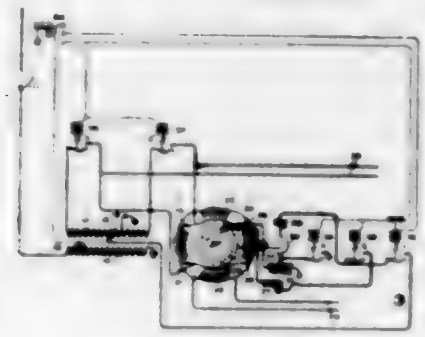
2. In combination, a single phase source of electrical energy, a polyphase induction motor adapted to be operated therefrom, a phase converter of the polyphase induction motor type comprising relatively rotatable members, one of said members being provided with a short circuited winding and another of said members being provided with windings constituting a plurality of phases, one of said phases being connected to be traversed by current supplied to a motor phase, means for interpolating a portion of the voltage of said source in series with said converter phase, for impressing a portion of the voltage of said source upon another converter phase and for impressing a portion of the voltage of said source upon another motor phase, means for synchronously exciting the converter independently of said windings, and means for simultaneously varying the voltage interpolated in series with the first named converter phase, the voltage impressed upon the second named converter phase, and the converter excitation.

5. In combination, a single phase source of electrical energy, a polyphase induction motor adapted to be operated therefrom, a phase converter comprising relatively rotatable members, one of said members being provided with windings constituting a plurality of phases, one of said phases being connected to be traversed by current supplied to a motor phase, means for interpolating a portion of the voltage of said source in series with said converter phase, for impressing a portion of the voltage of said source upon another converter phase and for impressing a portion of the voltage of said source upon another motor phase, means for synchronously exciting the converter independently of said windings, means for varying the load on the induction motor, and means for simultaneously varying the voltage interpolated in series

with the first named converter phase, the voltage impressed upon the second named converter phase, and the converter excitation as the load upon the motor varies.

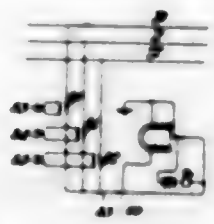
10. In combination, a single phase source of electrical energy, a polyphase induction motor adapted to be operated therefrom, a phase converter of the polyphase induction motor type comprising relatively rotatable members, one of said members having a plurality of windings, one of said windings being connected to be traversed by current supplied to a motor phase, means for interpolating a portion of the voltage of said source in series with said converter winding, for impressing a portion of the voltage of said source upon another converter winding and for impressing a portion of the voltage of said source upon another motor phase, means, comprising a winding carried by another of said members and a source of direct current, for synchronously exciting the converter, means to control the operation of the induction motor, and automatic means controlled by the currents traversing the motor phases for simultaneously varying the voltage interpolated in series with the first named converter winding, the voltage impressed upon the second named converter winding, the voltage impressed upon the second named motor phase, and the converter excitation.

1,300,545. STARTING PHASE-CONVERTERS. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Jan. 29, 1914, Serial No. 815,280. Divided and this application filed Aug. 7, 1916, Serial No. 113,483. Renewed Jan. 29, 1919. Serial No. 273,929. 2 Claims. (Cl. 172—238.)



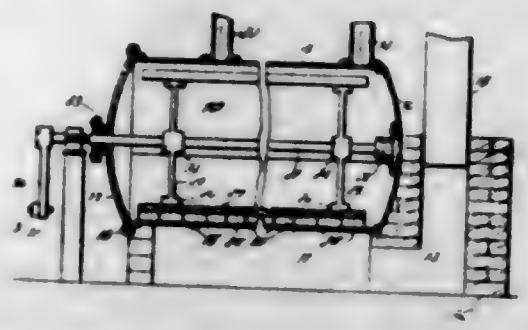
1. The combination with a dynamo-electric machine adapted to operate either as a motor or as a generator and comprising an armature and a plurality of field windings, of means for connecting said armature in series with one of said field windings during the motor operation and for connecting said armature in series with another of said field windings and for short circuiting the first mentioned field winding during the generator operation.

1,300,546. GROUND-DETECTOR. GEORGE E. ARMSTRONG, Los Angeles, Calif. Filed Dec. 27, 1915. Serial No. 68,925. 5 Claims. (Cl. 177—311.)



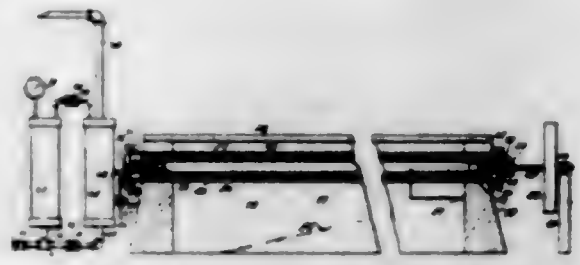
3. A ground detector for an electrical circuit comprising impedances of identical electrical characteristics, each impedance having one end connected to one of the wires of the circuit and the other end connected to a common neutral point, a relay having one end of its winding connected to said point and the other end of its winding connected to ground, means by which said relay actuates a signal, and means by which said relay short circuits its own winding.

1,300,547. SCRAPING APPARATUS FOR STILLS. ARTHUR ALAN ASHWORTH, Coffeyville, Kans. Filed Feb. 18, 1918. Serial No. 217,961. 8 Claims. (Cl. 196—4.)



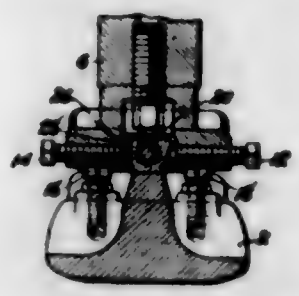
2. In apparatus of the character described, the combination with the stationary shell of a still having a fire-plate with seams at the edges thereof, of scraping elements arranged to contact with the inner surface of the fire-plate, and means to oscillate the scraping elements and retain the same within the transverse area of the fire-plate.

1,300,548. STILL. ARTHUR ALAN ASHWORTH, of Coffeyville, Kans. Filed Mar. 2, 1918. Serial No. 220,624. 9 Claims. (Cl. 196—3.)



9. In apparatus of the character described, a heating tube, means to feed oil or the like into the tube, means to heat the tube, a rotary agitating device arranged in the tube, means to rotate the device so that it revolves the oil at a suitable speed to form an annular coating of the same in the tube, and outlet means for the oil serving to define the thickness of the annular coating.

1,300,549. FORM-HOLDING MEANS FOR SOLE-PRESSING MACHINES. JOHN W. BASS, Danvers, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 12, 1914. Serial No. 818,242. 9 Claims. (Cl. 12—38.)



1. Form holding means for sole pressing machines having, in combination, a form carrier, a form, a longitudinal rib on one of said parts, and two sets of opposed securing bolts on the other part engaging opposite sides of the rib and spaced longitudinally a sufficient distance to secure an angular adjustment of the form relative to the carrier when the securing bolts are relatively adjusted.

6. Form holding means for sole pressing machines, having, in combination, a form carrier, a form, adjustable positioning devices accessible when the form is on the carrier arranged to vary the longitudinal or lateral tilt

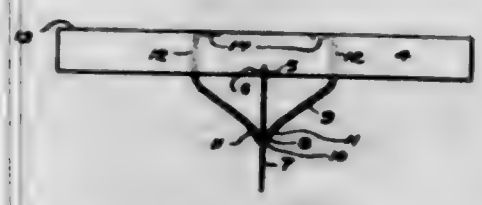
of the form, a rib on the form and clamping devices on the carrier engaging the rib.

8. Form holding means for sole pressing machines, having, in combination, a form carrier, a longitudinal groove in the under side of the carrier, securing bolts projecting into the groove from opposite sides, a form provided with a rib to enter the groove, one side of which is inclined inward, a stop bolt in the end of the rib arranged to engage the end of the groove in the carrier, and positioning stop bolts on opposite sides of the rib arranged to engage the under side of the carrier.

1,300,550. PROCESS FOR COVERING AND INCASING ARTICLES. BERTRAM DOUGLAS BAKER, Wylde Green, England. Filed Dec. 2, 1914. Serial No. 875,133. 1 Claim. (Cl. 91—68.)

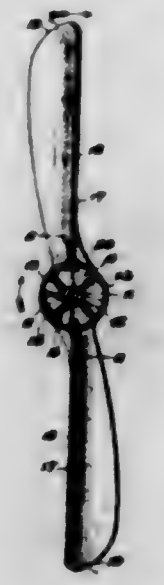
A process for covering or incasing articles with celluloid or like compound consisting in preliminary coating the article to be treated with a lacquer-like material, immersing the article in a lacquer-like solution, and causing the article to emerge somewhat quickly initially and then as the lower portion of the surface of the article is reached, causing the action to take place more slowly, for the purpose described.

1,300,551. SCRAPER. THOMAS F. BALL, Kansas City, Mo. Filed July 16, 1917. Serial No. 180,778. 2 Claims. (Cl. 145—47.)



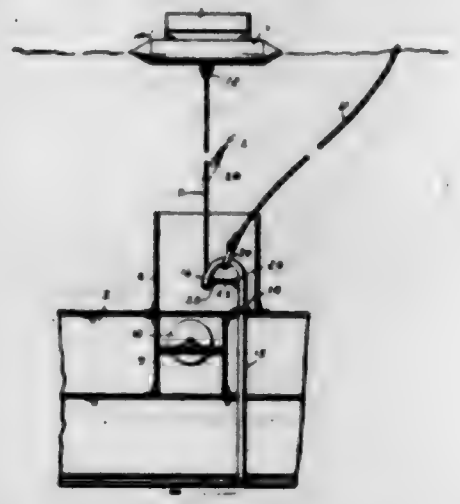
2. A scraper comprising a hand-block having a transverse groove therein, a blade inserted in said groove and provided with a hole approximately in the center thereof, a wire through said hole in said blade having the center of the length thereof resting in said hole, said wire bent next to said blade at sharp angles toward said hand-block and thence outward at an approximate angle of 45 degrees to said blade and hand-block, and the ends of said wire secured to said hand-block.

1,300,552. AIRPLANE-PROPELLER. LESTER S. BARR, Washington, D. C. Filed May 18, 1918. Serial No. 235,287. 1 Claim. (Cl. 170—172.)



A tractor type airplane propeller comprising a central hub, a concentric ring spaced from the hub, a wall joining the rear ends of the hub and ring thereby forming an annular chamber open at the front of the propeller, blades secured to said ring each blade having an air passage formed therein extending from said chamber to the end of the blade and having its outer opening at the trailing edge of the blade, and blades connecting the front ends of the hub and ring constructed and arranged to effect a circular motion of the air entering the chamber to direct the same to the inner ends of said passages, said blades also acting as reinforcing members.

1,300,553. VESSEL-RAISING APPARATUS. BENJAMIN N. BARTLETT, Tacoma, and MYCOGON DU VALL, Bellingham, Wash. Filed Aug. 5, 1918. Serial No. 248,424. 2 Claims. (Cl. 114—50.)



2. In an apparatus of the class described; the combination with a vessel of a hook member secured thereto and having a bill portion provided with a longitudinal extending opening the lower end of which is enlarged, a drum carried by the vessel, a cable normally wound upon said drum and passing through said opening in the bill of the hook member, a stop secured to the end of the cable wound upon the drum and adapted to engage in the enlarged portion of said opening when the cable is entirely unwound from the drum whereby to permanently maintain the cable in connection with the hook member, a buoy adapted to remain afloat when the vessel sinks and connected to the cable to unwind the same, a hoisting element adapted to be lowered along said cable and guided thereby into engagement with the bill of said hook member to permit of the raising of the vessel, and a pivoted locking bar carried by said hook member movable to permit of the engagement of said hoisting element with the bill of the hook member and then movable to a locking position to prevent detachment of said hoisting element.

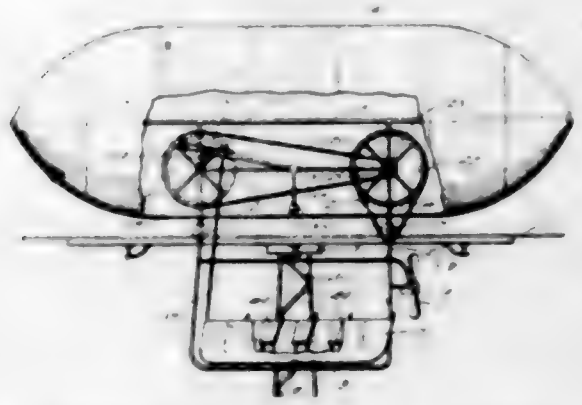
1,300,554. HARROW. NELS LARSEN BECK, Exira, Iowa. Filed Nov. 1, 1917. Serial No. 199,626. 3 Claims. (Cl. 97—44.)



1. In a device as described, in combination, a main vehicle frame, a support secured thereto, a pair of tubular bars rotatably mounted relatively to said support, side parallel bars connected to said tubular bars, a series of harrow teeth secured upon said tubular bars, a longitudinal bar arranged centrally of and parallel to the side bars over said tubular bars, an outer tubular bar rotatably mounted in said longitudinal bar and side bars, links car-

ried by the last-named bar connected to said pair of tubular bars, a raised lock bar having downwardly-extending divergent portions secured to said longitudinal bar, a hand lever pivoted to the longitudinal central bar short of the outer end and having a link element connected to the outer tubular bar and being in line with the other links, said raised lock bar being formed with a series of longitudinally-spaced apart openings, said hand lever adapted to actuate all of said links in order to rotate the tubular bars, and raise the harrow teeth, and a pin passing through said hand lever and into any of said openings in the raised lock bar whereby to hold said lever in locked position.

1,300,555. AMUSEMENT AERIAL RAILWAY. RUDOLF BEHRENS, New York, N. Y. Filed Nov. 28, 1917. Serial No. 204,377. 5 Claims. (Cl. 104—22.)



1. In a pleasure aerial railway, the combination with a cable forming a track, of a car structure including a supporting frame work, a tonneau pivotally carried by said frame work and positioned beneath said cable, a balloon carried by said frame work and positioned above said cable, means for rocking said tonneau during the travel of the car structure, and rollers carried by said frame work and engaging said cable.

3. In a pleasure aerial railway, the combination with a cable forming a track, of a car structure for travel over said track including a frame work, a tonneau pivotally carried by the lower portion of said frame work, a balloon carried by the upper portion of said frame work and positioned above said cable, rollers carried by said frame work and engaging said cable for guiding the travel of said car structure, a pivoted arm positioned within said balloon, means operated by the operation of one of said guiding rollers for rocking said pivoted arm, and means connecting said arm and said tonneau for rocking the tonneau during the rocking movement of said arm.

5. In a pleasure aerial railway, the combination with a cable forming a track, of a car structure for travel over said track including a frame work, a tonneau pivotally carried by the lower portion of said frame work, a balloon carried by the upper portion of said frame work and positioned above said cable, rollers carried by said frame work and engaging said cable for guiding the travel of said car structure, a pivoted arm positioned within said balloon, means operated by the operation of one of said guiding rollers for rocking said pivoted arm, and means connecting said arm and said tonneau for rocking the tonneau during the rocking movement of said arm, and a counter-balancing pendulum connected to said arm, and a propeller rotatably supported rearwardly of the rear end of said car structure for idle rotation during the travel of the car structure.

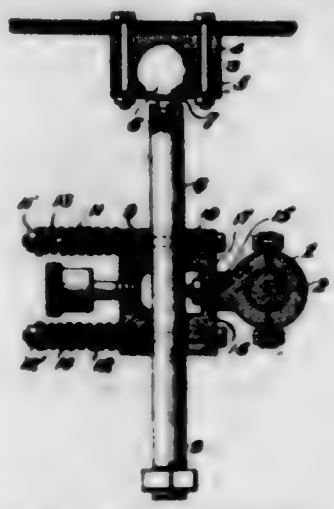
1,300,556. FLOATING BEARING. GEORGE M. BICKNELL, Detroit, Mich., and HUGH H. C. WEBB, St. Louis, Mo., assignors to The Carter Carbureter Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1918. Serial No. 245,005. 5 Claims. (Cl. 64—14.)

1. A device of the character described comprising, in combination with a rotatable shaft, a floatable bearing engaging said shaft, a resilient element fixed to assume a position with its free portion adjacent the bearing, and



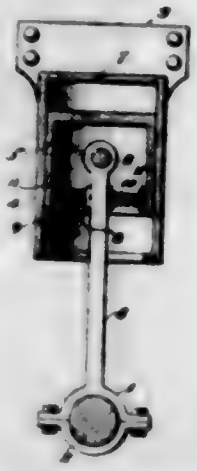
means for connecting said element to said bearing, substantially as described.

1,300,557. FLOATING BEARING. GEORGE M. BICKNELL, Detroit, Mich., and HUGH H. C. WEBB, St. Louis, Mo., assignors to The Carter Carbureter Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1918. Serial No. 245,006. 4 Claims. (Cl. 64—14.)



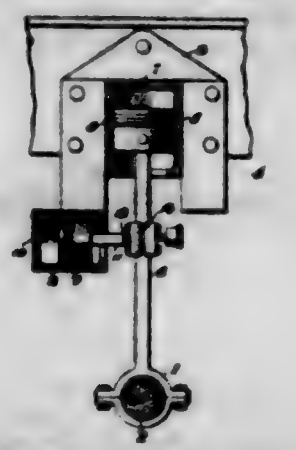
1. A device of the character described, comprising, in combination with a rotatable shaft, a floatable bearing engaging the shaft, an element mounted for universal lateral movement and connected to said bearing, and means carried by said element for resisting bodily movement of the bearing.

1,300,558. FLOATING BEARING. GEORGE M. BICKNELL, Detroit, Mich., and HUGH H. C. WEBB, St. Louis, Mo., assignors to The Carter Carbureter Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1918. Serial No. 245,012. 4 Claims. (Cl. 64—14.)



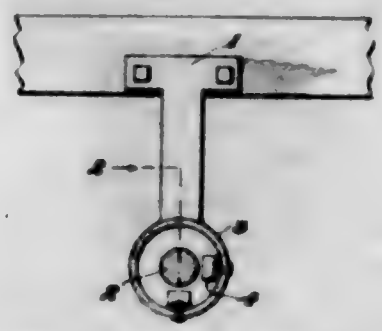
1. A device of the character described comprising, in combination with a rotatable shaft, a floatable bearing engaging the shaft, and means interposing a pneumatically-cushioned resistance to flotation of said bearing.

1,300,559. FLOATING BEARING. GEORGE M. BICKNELL, Detroit, Mich., and HUGH H. C. WEBB, St. Louis, Mo., assignors to The Carter Carburetor Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1918. Serial No. 245,013. 2 Claims. (Cl. 64—14.)



1. A device of the character described comprising, in combination with a rotatable shaft, a floatable bearing engaging the shaft, a dash-pot connected to the bearing and adapted to interpose a pneumatically-cushioned resistance to vertical movement thereof, and a supplemental dash-pot adapted to resist lateral movement of the bearing in either direction.

1,300,560. FLOATING BEARING. GEORGE M. BICKNELL, Detroit, Mich., and HUGH H. C. WEBB, St. Louis, Mo., assignors to The Carter Carburetor Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1918. Serial No. 245,014. 1 Claim. (Cl. 64—14.)

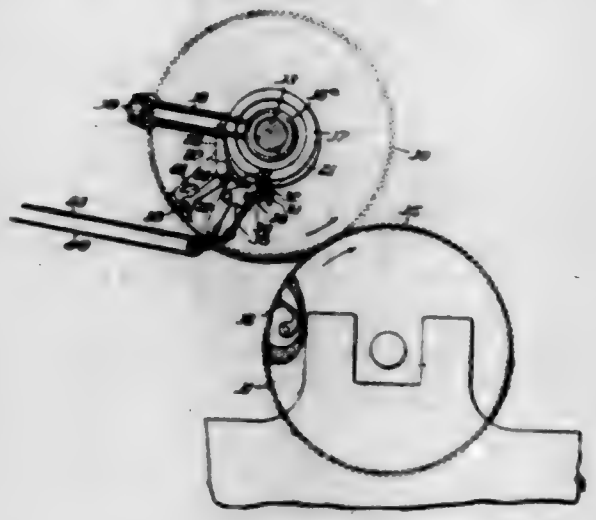


A device of the character described comprising, in combination with a rotatable shaft, a member extending adjacent and surrounding the shaft and carrying resilient fingers adapted to contact the shaft in its lateral whipping movements, thereby presenting an unequal resistance to movement in a direction at an angle to the central line of the shaft, in opposite directions.

1,300,561. SHEET-REGISTERING MECHANISM. JOSEPH R. BLAIVAS, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 22, 1916. Serial No. 105,321. 9 Claims. (Cl. 271—53.)

1. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a front gage mounted to revolve at the speed of the grippers in a curved path into and out of the sheet path, a revoluble sheet clamping device traveling normally with the gage, means to actuate the clamping device to seize the sheet, and means to temporarily accelerate the speed of the clamping device to advance the sheet to the gage, the sheet clamping device comprising a shoe and mechanical means to frictionally press the sheet against the shoe.

2. The combination of the means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a front gage mounted to revolve at the speed of the grippers in a curved path into and out of the sheet path, a revoluble sheet clamping device traveling normally with the gage, means to actuate the clamping device to seize the sheet, means to temporarily accelerate the speed of the clamping device to advance the sheet to the gage, the sheet clamping device comprising a shoe and mechanical means to frictionally press the sheet against the shoe, and the accelerating means comprising a cam, and a lever connected to the shoe and actuated by the cam to advance the shoe relative to the gage.



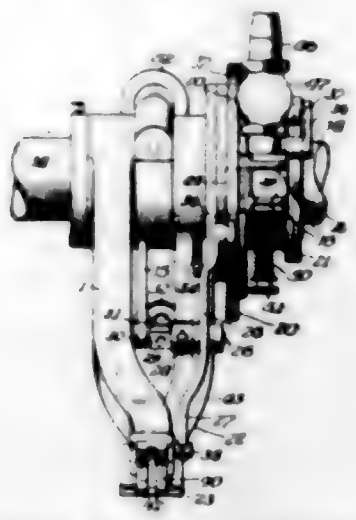
3. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a front gage mounted to revolve at the speed of the grippers in a curved path into and out of the sheet path, a revoluble sheet clamping device traveling normally with the gage, means to actuate the clamping device to seize the sheet, and means to temporarily accelerate the speed of the clamping device to advance the sheet to the gage, the clamping device comprising a shoe movable toward and from the gage and a flipper hinged to the forward end of the shoe and the actuating and accelerating means comprising a pair of cams one arranged to operate the flipper to frictionally hold the sheet against the shoe and the other to advance the shoe relative to the gage.

4. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a shaft arranged parallel to the impression cylinder, a gage arm mounted upon said shaft, a front gage on the arm and revolving at the speed of the grippers, a lever suitably fulcrumed and revolving with the arm, a shoe carried by the lever and having a curved lower face corresponding substantially to the curvature of the path of the gage and to its own path to which the path of the sheet is tangent, a flipper hinged to the forward end of the shoe, a second lever suitably fulcrumed and revolving with the gage arm, and connected with the flipper, a cam arranged to be engaged by the second lever for operating the flipper to hold the sheet frictionally against the shoe, and a cam arranged in the path of the first lever to move the shoe to advance the sheet to the gage.

5. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a shaft arranged in spaced parallelism to the impression cylinder and geared therewith to insure a corresponding speed, a revolving arm fixed on the shaft, a gage arm adjustable relative to the fixed arm, a front gage carried by the gage arm, a lever fulcrumed on the gage arm, a shoe extending angularly from one arm of the lever forwardly in a direction corresponding to the arc of travel of the gage, a flipper hinged to the forward end of the shoe, a second lever fulcrumed on the gage arm and connected with the flipper, a cam arranged to be en-

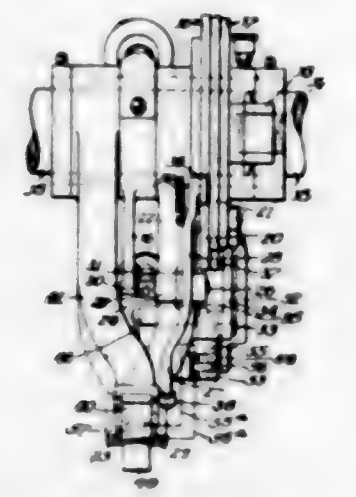
gaged by the second lever for operating the flipper to hold the sheet frictionally against the under side of the shoe, and a cam arranged in the path of the first lever to move the shoe to advance the sheet to the gage.

1,300,562. SHEET-REGISTERING MECHANISM. JOSEPH R. BLAINE, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1916. Serial No. 105,822. 13 Claims. (Cl. 271—53.)



1. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a front gage mounted to revolve at the speed of the grippers in a curved path into and out of the sheet path, a revoluble sheet clamping device traveling normally with the gage, means to actuate the clamping device to seize the sheet, and means to temporarily accelerate the speed of the clamping device to advance the sheet to the gage.

1,300,563. SHEET-REGISTERING MECHANISM. JOSEPH R. BLAINE, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1916. Serial No. 105,824. 9 Claims. (Cl. 271—53.)



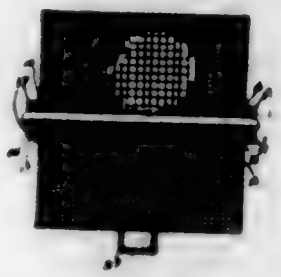
1. The combination of means for imparting front register to a sheet fed to a printing couple having grippers without interrupting the forward movement of the sheet, comprising a front gage mounted to revolve at the speed of the grippers in a curved path into and out of the sheet path, a revoluble sheet clamping device traveling normally with the gage, means to actuate the clamping device to seize the sheet, and means to temporarily accelerate the speed of the clamping device to advance the sheet to the gage, the clamping device comprising a shoe movable toward and from the gage and a flipper hinged to the forward end of the shoe, and electro-magnetic means to press the flipper upon the sheet to hold the latter against the shoe.

1,300,564. TOY AEROPLANE. ERNEST BLIESATH, Portland, Oreg., assignor of one-half to George W. De Witt, Portland, Oreg. Filed Dec. 23, 1918. Serial No. 268,020. 5 Claims. (Cl. 244—12.)



4. In a toy aeroplane, the combination of a fuselage, a main supporting plane, a tail plane, an elevation plane, vertical fins on top of tail and elevation plane, stops attached to the tail plane to hold the elevation plane at an angle to the fuselage, a tension member between tail and elevation plane, a tongue extending downward from the elevation plane through the fuselage, a bell crank adapted to engage said tongue, means to release said elevation plane in mid air, and means to project the aeroplane into space.

1,300,565. TOASTING DEVICE. JOHN W. BOWERS and ANNA E. BOWERS, Quakertown, Pa. Filed Aug. 8, 1917. Serial No. 185,149. 2 Claims. (Cl. 53—5.)



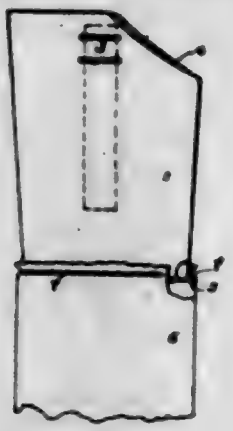
1. A toasting device including a base, a pair of superimposed reticulated article supporting members removably supported on the base and having notches in diametrically opposite sides, eye members carried by the opposite sides of the base for disposition in said notches, to hold the reticulated members against horizontal movement on the top of the base, and a handle member straddling the upper side of the device and having leg portions on its opposite ends and resiliently and detachably engaged in said eye members.

2. A toasting device including a base member, a coarse meshed screen secured on the base member, a fine meshed screen secured to the base member and disposed above the first screen, said screens having oppositely arranged notches, angle members carried by diametrically opposite sides of the base and provided with eyes in their outer ends, and a handle member including a hand grip portion having legs formed on the ends thereof, said legs being disposed through the notches of the screens and formed with lugs for engagement in said eyes, one leg at each end of the handle member being provided with a spring pressed portion whereby the said lugs are capable of detachment from the eyes.

1,300,566. BERRY-PICKER. EDWARD C. BARWIS, Seattle, Wash. Filed July 18, 1918. Serial No. 245,552. 4 Claims. (Cl. 56—99.)

3. A berry picker comprising a cup-like metal body having a handle secured thereto a short distance below its

upper edge and adapted to receive a finger of the hand, the top edge of said cup being cut down substantially to the



level of the top of said handle in a segment located at little to one side of said handle.

1,300,567. TRUCK. JACOB I. EBORNY, Shenandoah, Iowa. Filed Dec. 20, 1918. Serial No. 267,067. 7 Claims. (Cl. 214—65.4.)



1. The combination with a load embracing structure and a truck adapted to be supported on end in an inclined position relative to the load by said structure, said truck and structure being slidably connected, of means mounted on the structure for engaging the load to tilt said load and draw the end flange of the truck under the load.

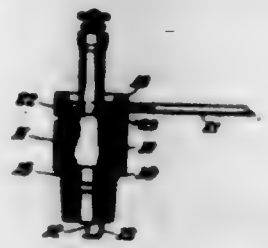
1,300,568. BRAKE FOR TALKING-MACHINES. HUBERT C. BRYANT, Hartford, Conn. Filed Dec. 28, 1917. Serial No. 209,328. 6 Claims. (Cl. 74—13.)



1. A brake for sound reproducing machines, including a lever pivoted at a point beneath the turntable of the machine, a pair of sleeves carried by the lever, and a friction element having its ends seated in said sleeves and its center presented toward said edge.

1,300,569. SPARK-PLUG. CYRUS L. BUNDY, East Orange, N. J., assignor of one-half to William Bohleber, New York, N. Y.; William Bohleber executor of said Cyrus L. Bundy, deceased. Filed Nov. 2, 1915. Serial No. 59,170. 27 Claims. (Cl. 123—169.)

1. In a spark plug, a bushing provided with a screw thread at its upper end and an annular shoulder at an intermediate point, a removable core for said bushing provided with a shoulder normally resting upon the shoulder of the bushing, and means for removably securing said core to the bushing, comprising a hollow lock nut through which the core may be inserted and withdrawn and pro-



vided with a plurality of lateral perforations therein, in combination with means provided with a portion adapted to pass laterally through said perforations and engage with said core for moving the lock nut downward to effect a fluid tight union between the core and bushing.

1,300,570. CATCH. FRANK BURNS, Westfield, N. Y. Filed May 18, 1918. Serial No. 235,312. 7 Claims. (Cl. 70—82.)



1. A catch comprising a body portion, a spring-actuated angled member and an operating member mounted on a common pivot, and a relatively-movable member provided with a bolt portion movable at right angles to the pivot of said lever and interlockable with and adapted for cooperation with and endwise movement by the cross portion of the angular member, said body portion having an opening through which the said lever is accessible for operation, and the lever being disposed entirely behind said body portion.

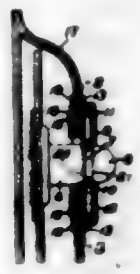
5. A catch comprising a body portion having an opening and a lateral member, a lever pivotally mounted on the body portion and movable through said member and accessible through said opening, a yoke mounted on the pivot of and movable with the lever and a spring acting on the yoke to normally hold it in engagement with a coöperating bolt, combined with a member having a bolt portion with lateral lug adapted to interlock with the cross member of the yoke, and conical end serving as a centering means.

6. A catch comprising a body portion having an opening and a lateral member, a lever pivotally mounted on the body portion and movable through said member and accessible through said opening, a yoke movable with the lever and a spring acting on the yoke to normally hold it in engagement with a coöperating bolt, combined with a member having a bolt portion with lateral lug adapted to interlock with the cross member of the yoke and conical end serving as a centering means, the upper face of said lug being inclined for coöperation with the cross portion of the yoke.

1,300,571. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Sept. 14, 1917. Serial No. 191,337. 11 Claims. (Cl. 24—218.)

1. A separable fastener comprising, in combination, a stud having a head, a socket providing a resilient jaw for engagement with one side of said stud, and a cam on said

socket for engagement with said jaw to promote disengagement of said jaw from said stud when said jaw is



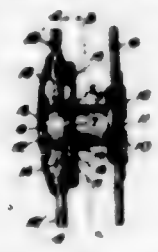
pressed toward said cam by relative movement of said stud and socket.

1,300,572. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Nov. 27, 1917. Serial No. 204,254. 9 Claims. (Cl. 24—218.)



1. A stud and socket fastener comprising, in combination, a stud having a head and a neck, a socket providing a jaw element yieldable when said stud is entered in the socket but substantially unyielding when said stud is withdrawn from said socket.

1,300,573. SEPARABLE FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed July 1, 1918. Serial No. 242,696. 5 Claims. (Cl. 24—218.)



1. A separable fastener comprising, in combination, a stud having a head and a neck, a socket for engagement with said stud and providing a yielding jaw having a sloping surface for engagement with the shoulder on said stud behind the head thereof, said jaw and said shoulder being relatively proportioned so that the sloping portion only of the jaw engages said shoulder.

1,300,574. SEPARABLE FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed July 1, 1918. Serial No. 242,697. 3 Claims. (Cl. 24—218.)



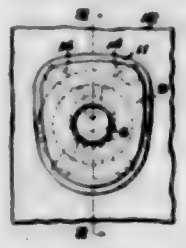
1. A stud and socket fastener comprising, in combination, a stud having a head and a neck with an abrupt shoulder between them, a socket having a resilient jaw rounded in cross section for engagement with said neck behind said shoulder, said neck being relatively shallow, whereby the edge of the head adjacent the shoulder will engage an inwardly sloping rounded portion of the resilient jaw.

1,300,575. SEPARABLE FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed July 1, 1918. Serial No. 242,698. 4 Claims. (Cl. 24—218.)



1. A stud and socket fastener comprising, in combination, a stud having a head and a neck, a socket providing a casing providing below the stud an inclined lip for engagement behind the head of said stud, and above said stud a yielding jaw for engagement behind the head of said stud.

1,300,576. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Aug. 23, 1917. Serial No. 187,866. 2 Claims. (Cl. 24—218.)



1. A separable fastener including a casing comprising a front plate having prongs projecting rearwardly therefrom, a second plate secured to said front plate by offsets in said prongs, and a third plate on the opposite side of the carrying fabric from said second plate and held in position by bent over portions of said prongs rearwardly of the first-named offsets therein.

1,300,577. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Sept. 14, 1917. Serial No. 191,338. 7 Claims. (Cl. 24—218.)



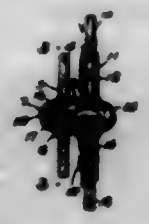
1. A socket for stud and socket fasteners having a jaw-containing casing, a projection from one side of said casing to receive and support the head of the stud, said projection being adapted to pass through the fabric, and a plate on the opposite side of said fabric having an aperture therethrough, said projection passing through said aperture and being expanded to firmly engage said plate.

1,300,578. FASTENING MECHANISM. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed July 1, 1918. Serial No. 242,080. 4 Claims. (Cl. 24—266.)



1. Securing means for securing a plurality of objects together including a pair of coöperating stud and socket members, a second pair of stud and socket members, one member of one pair being permanently secured to one member of the other pair at a point out of line therewith.

1,300,579. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Nov. 2, 1917. Serial No. 199,835. 4 Claims. (Cl. 24—218.)



1. In a stud and socket fastener, a stud having means for attachment to a curtain, a socket-engaging expansible and contractible head at one end thereof, a locking element opposing contraction of said head in one position while permitting contraction of said head in another position, resilient means tending to maintain said locking means in locking position, and manually operable means located on the opposite side of the curtain from said head for moving said locking means into unlocked position against the pressure of said resilient means.

1,300,580. FASTENER. FRED S. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Nov. 2, 1917. Serial No. 199,836. 1 Claim. (Cl. 24—218.)



A fastener comprising, in combination, a socket formed by an aperture in a plate, a stud for expansive engagement with said socket, cam means for positively locking said stud in expanded position, and turn-button means extending axially of the stud for locking said stud in expanded position.

1,300,581. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Aug. 23, 1917. Serial No. 187,802. 10 Claims. (Cl. 24—218.)

1. A stud and socket fastener comprising, in combination, a stud having a head and providing a reduced portion rearwardly of said head, said reduced portion presenting an abrupt shoulder at one side and a less abrupt shoulder on the opposite side; a socket providing stud-engaging means extending transversely thereof and



means permitting separation of said stud and socket by initial tipping movement in a direction transverse to said stud engaging means.

1,300,582. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Sept. 14, 1917. Serial No. 191,355. 10 Claims. (Cl. 24—218.)



1. A snap fastener comprising, in combination, a stud, a socket, and a resilient jaw element for engagement with said stud and said socket, said resilient jaw element presenting a rounded surface to a portion of said stud and an angular portion to another portion of said stud.

1,300,583. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Aug. 23, 1917. Serial No. 187,804. 8 Claims. (Cl. 24—218.)



1. A fastener comprising, in combination, a stud, a socket, jaw means carried by said socket for engagement with said stud, and means coöperating with said jaw means providing for opening thereof on diagonal movement of said socket in a direction transverse to, away from, and in the direction of the longitudinal axis of said stud.

1,300,584. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Aug. 23, 1917. Serial No. 187,803. 9 Claims. (Cl. 24—218.)



1. A socket for separable fasteners comprising a single plate having portions projecting in a plurality of planes

to receive and support on opposite sides jaw means, said portions permitting insertion or removal of said jaw means subsequent to completing the formation of said plate.

1,300,585. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Sept. 14, 1917. Serial No. 191,484. 7 Claims. (Cl. 24—218.)



1. A socket for stud and socket fasteners having a spring jaw, and a casing therefor formed of a single sheet of metal to support opposite sides of said jaw and to provide an extended support for the stud both forwardly and rearwardly of said jaw.

1,300,586. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Nov. 27, 1917. Serial No. 204,255. 3 Claims. (Cl. 24—218.)



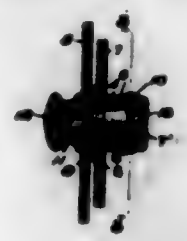
1. A stud and socket fastener comprising, in combination, a stud, and a socket therefor providing yielding jaw means and a portion unyieldingly holding said stud in engaged position when out of axial alinement with said socket, thereby permitting separation of stud and socket only when force is exerted in a direction substantially axial of said stud and socket.

1,300,587. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Dec. 8, 1917. Serial No. 206,330. 3 Claims. (Cl. 24—218.)



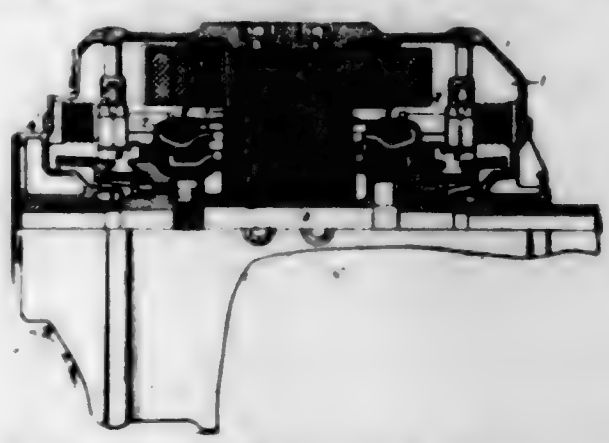
1. A separable fastener comprising, in combination, a stud providing a plurality of grooves, and a socket adapted to receive said stud providing a resilient jaw element adjacent the entrance portion thereof for engagement with one of said grooves, and unyielding projection means further removed from the entrance of said socket and said resilient jaw, said unyielding projecting means being adapted to enter the second groove in said stud when the stud is tipped relative to the socket, while permitting withdrawal of said stud from said socket without engagement of said second groove by said unyielding projecting means.

1,300,588. FASTENER. MOSES F. CARR, Newton, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Dec. 8, 1917. Serial No. 206,331. 2 Claims. (Cl. 24—218.)



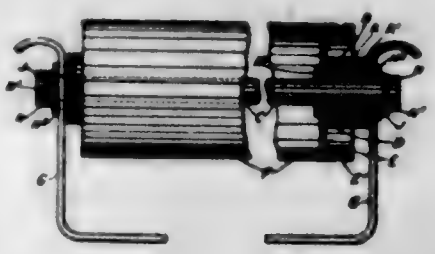
1. A separable fastener comprising, in combination, a stud providing two grooves spaced longitudinally thereof, and a tubular socket adapted to receive said stud and having interiorly thereof two grooves spaced to correspond to the grooves of the stud, two of said grooves retaining annular spring portions for engagement with oppositely disposed grooves.

1,300,589. DYNAMO-ELECTRIC MACHINE. JOSEPH LE CONTE DAVIS, deceased, Pittsburgh, Pa., by Myra Shields Davis, administratrix, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 29, 1913. Serial No. 781,746. 3 Claims. (Cl. 171—123.)



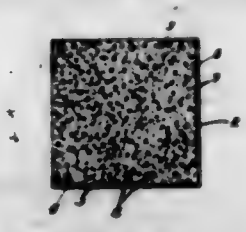
1. The combination with a source of electrical energy, a dynamotor connected thereto adapted to intermittently drive a mechanical load and comprising a double commutator armature having a plurality of armature windings composed of conductors of different size, and field magnet windings composed of conductors of different size connected in series circuit between said armature windings, of translating devices connected at one end to said dynamotor at a point between said field windings, whereby one pair of said armature and field-magnet windings is caused to carry a greater amount of electrical energy than the other pair of said windings.

1,300,590. ROLLER-BEARING APPLICABLE TO GRAVITY-RUNWAYS OR OTHER PURPOSES. PERCY GEIKIE DONALD, London, England. Filed May 28, 1918. Serial No. 237,158. 2 Claims. (Cl. 64—30.)



2. In a roller bearing, a tubular member constituting an outer race, an inner race flanged outwardly at each end to retain antifriction members, an outward flare of the inner race extending across an end of the outer race to prevent longitudinal movement of the inner race.

1,300,201. ARTIFICIAL STONE. MICHAEL EHINGER, Oakland, Calif. Filed Nov. 15, 1916. Serial No. 131,578. 2 Claims. (Cl. 106—24.)



1. An artificial stone comprising crushed crystals of two contrasting shades in substantially equal parts, a light colored cementitious compound, and stearate of lime.

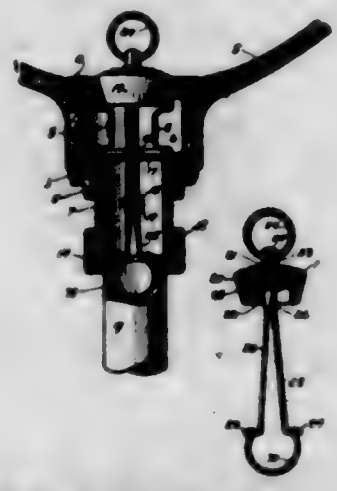
2. An artificial stone comprising finely crushed crystals of two contrasting colors in substantially equal parts, a light colored Portland cement, a coloring compound, and stearate of lime.

1,300,582. BEAUTY-MARK. LESTER C. ESSIG, Kansas City, Mo. Filed Feb. 13, 1917. Serial No. 148,889. 5 Claims. (Cl. 41—10.)



4. A beauty mark comprising a patch of material cut in ornamental design and having one of its faces treated with an adhesive substance for adhering to the body of the wearer, the opposite face of said patch being provided with flock material adhering thereto and surface ornamenting material adhering to said flock material, said patch and flock and surface ornamenting material being held together by glue containing perfume adapted to be released when said patch is subjected to the heat and moisture of the body.

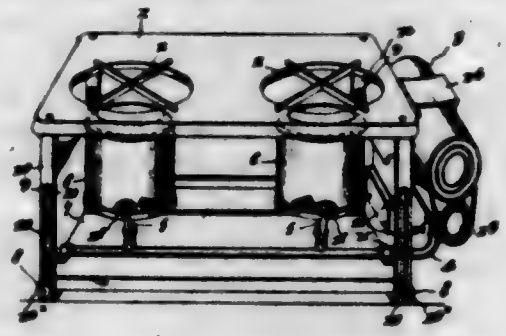
1,300,593. COMBINED PLUG AND STOPPER. FRED J. FAIRCHILD, Denver, Colo. Filed May 23, 1918. Serial No. 236,185. 4 Claims. (Cl. 4—35.)



1. The combination of a hollow plug; a vertically apertured guide support therein; an elongated actuating element, providing longitudinally spaced arms extending through said apertured guide support, said arms being maintained under resilient tension to spring outwardly into sliding frictional engagement with the encompassing body portion of said guide support; and a stopper carried at the upper end of said actuating element, substantially as described.

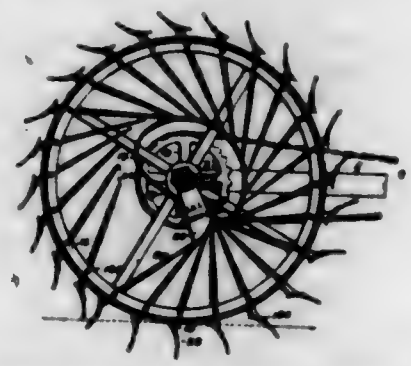
1,300,594. COLLAPSIBLE FOLDING STOVE. GUY W. FENNOY, Crestfill, N. J. Filed Jan. 28, 1918. Serial No. 214,150. 8 Claims. (Cl. 126—44.)

6. In a stove for burning fuel, in combination, a top plate, a burner support, a kerosene burner having a kindler or wicks and chimney, on said support, said burner being provided with means whereby by the removal of or adjustment of certain parts it may be converted into a burner for using kerosene, into a burner for using liquid



alcohol, into a burner for using solidified alcohol in cans, into a burner for using cubed or lumped alcohol, into a burner for gas, and means whereby the burner support may be set at varying heights to meet the requirements for burning the different fuels.

1,300,595. ROTARY PLOW. LEON FONNESBECK, Logan, Utah. Filed May 7, 1918. Serial No. 233,145. 4 Claims. (Cl. 97—38.)



1. In a rotary plow, the combination of a drum, a plurality of radiating plow-arm levers projecting in circumferential rows through the drum and fulcrumed on transverse shafts, and intermediate annular rings secured to the inside of the drum on either side of said plow-arm levers and supporting said shafts.

4. In a rolling drum plow, the combination of a frame, a drum, a plurality of radiating plow-arm levers fulcrumed on the inside of the drum and projecting through the drum wall in circular groups, plow shares or blades mounted on the exterior ground ends of said levers, stops or turning-irons depending from stationary drum axle and rigidly secured thereto, one for each circular group of plow-arm levers, with which the interior ends of the said levers engage and are pushed forward, when the plow is in motion, and means attached to the turning-irons to hold or retain the plow-arm levers in this tripped position with reference to the drum until they are about to engage the ground again, and then gradually to allow the said levers to come to a radiating position and compel proper successive engagement with said turning irons.

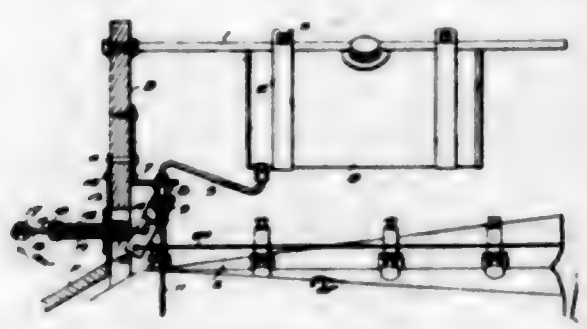
1,300,596. CULTIVATOR. WILLIAM HENRY FRASHIER, Athelstan, Ark. Filed June 19, 1918. Serial No. 240,750. 1 Claim. (Cl. 97—10.)



A cultivator of the class described comprising side beams adjustable toward and away from each other to vary the distance therebetween, means for maintaining

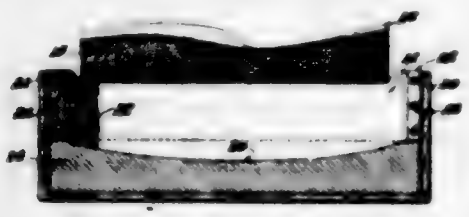
said beams in adjusted positions, supporting arms depending from said beams adjacent the forward ends, covering blades secured to the lower ends of said arms and of arcuate formation, said blades diverging rearwardly and outwardly from the side beams, other supporting arms depending from the side beams adjacent the rear ends thereof, and covering blades secured to the lower ends of the last-named arms, said blades being of arcuate formation and disposed between said side beams and arranged in rearwardly converging relation with relation to each other and diverging relation with respect to the side beams.

1,300,597. PRIMING-DEVICE ATTACHMENT. LAURENCE E. FRENCH, Sebastopol, Calif. Filed Oct. 12, 1917. Serial No. 196,141. 1 Claim. (Cl. 180—77.)



A priming device attachment, including, in combination with a vehicle dashboard, a fuel tank, a rotary valve arranged below and having connection with said fuel tank, a lever secured to the rotary valve, a spring pressed plunger rod pivotally connected to the lever and extending through the dashboard, said rod being provided with means for maintaining the same in depressed position at times, and hand operated means pivotally engaged with said lever.

1,300,598. PRESSING MEMBER. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 18, 1918. Serial No. 245,472. 9 Claims. (Cl. 12—38.)



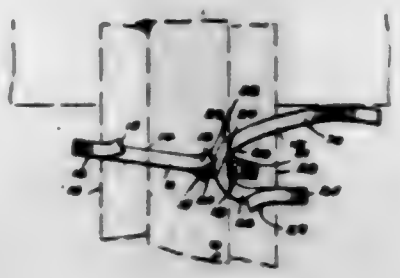
1. A pad for sole laying machines having, in combination, a flexible pressing pad, a supporting member containing granular material, and a base for the supporting member constructed and arranged to provide an unstable support for the granular material when pressure is applied to the pad.

5. A sole pressing member having, in combination, an inclosing box, a rigid base supported within the box, a bag containing granular material removably received within the box and supported upon the base, and a rubber pressing pad having a face conforming approximately to the contour of the shoe bottom and supported upon the bag.

7. A sole pressing member having, in combination, a pad box, a bag containing granular material received within the box, a filler block of rectangular shape secured in each end of the bag, a block detachably inserted in one of the blocks, and a flexible pressing pad supported upon the bag.

9. A sole pressing member having, in combination, a pad box, a rigid base block received within the box and having a curved supporting face, a bag containing granular material resting upon the curved face of the block and received within the box, and a flexible pressing pad resting upon the upper surface of the bag.

1,300,599. ANTICREEPER FOR RAILS. CHARLES J. GADD, deceased, Lebanon, Pa., by Anna Eyre Gadd, executrix, Atlantic City, N. J. Filed Oct. 16, 1917. Serial No. 196,789. 4 Claims. (Cl. 238—4.)



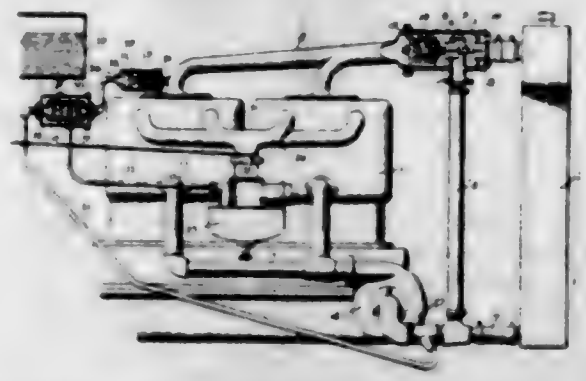
1. In an anti-creeper, a member having a vertical slot, a clamp at one end, a body portion passing beneath the rail, an abutment upon one side of the slot, a dog upon the opposite side of the slot, a second member adapted to enter the slot and there curved and engaging the abutment and adapted in rolling about the abutment to engage the dog, limiting angular movement, in combination with a flange engaging clamp upon one end of the second member and a tie engaging arm on the opposite end thereof.

2. In an anti-creeping device for rails a member having a rail-flange-engaging clamp at one end and an abutment at the other, an eccentrically placed dog spaced from the abutment and a second member having a rail-flange-engaging lamp at one end and a tie engaging arm at the other, bent between these ends there passing through the passage to roll about the abutment and engage with the dog.

3. In an anti-creeper for rails, a member provided with a rail-flange-engaging clamp at one end and an abutment at the other end in combination with a plurality of dogs upon the member spaced from the abutment and having engaging edges on opposite sides of the center line joining the clamp and abutment, and a second member passing between the abutment and dogs and curved about the abutment to carry a flange engaging clamp on one end and a tie engaging arm on the other.

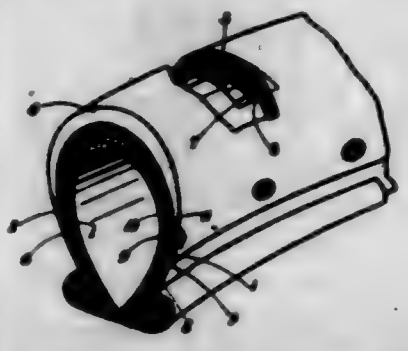
4. An anti-creeping device comprising a member having a rail engaging clamp at one end and providing a restricted passage at the other in combination with a second member passing through the restricted passage and having a rail engaging clamp at one end and a tie engaging arm at the other.

1,300,600. FUEL-HEATING SYSTEM. JEAN V. GIBELIN, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Oct. 16, 1916. Serial No. 125,894. 26 Claims. (Cl. 123—174.)



1. In combination with an internal-combustion engine, means for supplying said engine with liquid fuel, means for circulating a cooling medium in heat-interchanging relation to said engine, means for circulating said medium in its heated condition in heat-interchanging relation to said fuel-supplying means, and thermosensitively controlled means for regulating the temperature of said cooling medium.

1,300,602. MOTOR-TIRE COVER. JOHN HARLEY GILL, JAMES DOUGLAS REA, and LEONARD SAUNDERSON, Dunedin, New Zealand. Filed July 15, 1918. Serial No. 244,996. 1 Claim. (Cl. 152—17.)



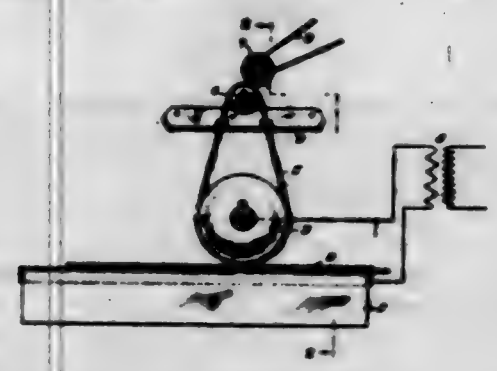
The combination with a casing provided upon its tread surface with lateral spaced recesses and upon its opposite sides and near its beads with annular grooves; of an attaching wearing surface member provided at its tread portion with inwardly projecting spaced projections which snugly fit in the recesses, the edges of the attaching wearing surface member being provided with inwardly extending locking beads which fit in said grooves; and attaching means for securing the wearing surface member to the casing, said attaching elements being arranged inwardly of and near said locking beads.

1,300,603. AERO-GRADOMETER. ROSCOE G. GODDARD, Outlook, Mont. Filed Nov. 22, 1917. Serial No. 203,428. 11 Claims. (Cl. 33—215.)



2. An aero grademeter comprising a support, a globe, an indicator carried thereby, said support provided with vertically extending slots, supporting arms engaging said globe, means carried by said supporting arms and working in said slots, and yieldable means for normally holding said arms intermediate the ends of said slots.

1,300,608. ELECTRIC WELDING APPARATUS. JAMES H. GRAVELL, Brooklyn, N. Y., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1918. Serial No. 253,018. 7 Claims. (Cl. 219—4.)



1. In an electric seam welding apparatus, the combination of a current supplying roller and a metallic strip engaging a large portion of the periphery of the roller and forming the work-contacting surface thereof.

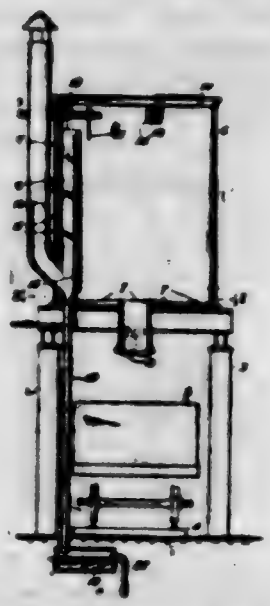
3. In an electric welding apparatus, the combination of a current supplying roller and a continuous metallic band engaging the periphery of the roller and forming a detachable work-contacting surface for said roller.

7. In an electric welding apparatus, the combination of a current supplying roller, a guide roll spaced from said roller, a continuous band of conducting material connecting said rolls and forming a detachable work-contacting surface for said roller, means acting on said band to remove imperfections in the previously used surface and means adapted to collect the removed particles.

1,300,604. TREATING FLOUR. HENRY GRANVILLE, Birkenhead, England. Filed July 9, 1918. Serial No. 244,109. 2 Claims. (Cl. 99—10.)

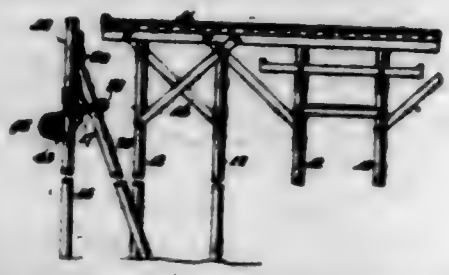
2. A composition of matter for making bread, consisting of flour having incorperated therewith an alkali metal sulfate in the approximate proportions of one to two ounces per two hundred and eighty pounds of flour.

1,300,605. TANK FOR ASH-CONVEYER SYSTEMS. LORNE A. GRIFFIN, Evanston, Ill., assignor to American Steam Conveyor Corporation, Chicago, Ill., a Corporation of New York. Filed July 18, 1917. Serial No. 181,438. 5 Claims. (Cl. 183—2.)



2. In combination with a closed ash tank of the class described, and a pressure ash conveyer conduit discharging therein, means for venting steam and entrained air from the tank consisting of a U-shaped pipe passing through the tank near the lower end thereof with its legs extending vertically one inside and one outside of the tank, together with a water supply pipe and spray nozzle for washing the steam and entrained air as the same pass through said U-shaped pipe.

1,300,606. WHARF. WALTER HAGENBUCH, Martinez, Calif., assignor to Shell Company of California, a Corporation of California. Filed June 10, 1918. Serial No. 239,218. 6 Claims. (Cl. 61—46.)



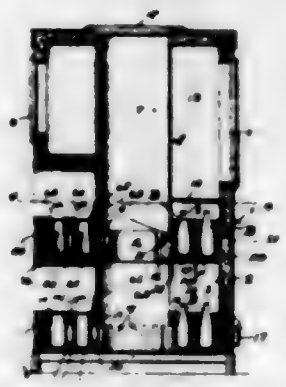
1. In a wharf structure, a vertically arranged pile, a diagonally arranged brace pile for said vertical pile, said brace pile having its upper end in sliding relation to the vertical pile, and elastic means for holding the vertical pile in such relation to the brace pile.

1,300,607. CREAM-BOTTLE. MATILDA HAHN, Waterloo, Ontario, Canada. Filed Nov. 27, 1918. Serial No. 264,380. 10 Claims. (Cl. 81—65.)



1. The combination with a cylindrical container having an open mouth, and a disk-like closure therefor having oppositely disposed notches; of a partition movably mounted within said container, a loop whose lower end loosely engages said partition and whose side stretches pass upward through the notches in said closure, and projections on said stretches for the purpose set forth.

1,300,608. DISPENSING-REFRIGERATOR. HENRY H. HARRIS, Peru, Ind. Filed Aug. 27, 1917. Serial No. 188,411. 3 Claims. (Cl. 211—8.)



1. In an apparatus of the class described, a cabinet having an ice chamber, a cooling chamber surrounding said ice chamber, a bottle carrier mounted to travel in said cooling chamber, said cabinet having an opening in one side wall through which said carrier passes in its travel, actuating means for said carrier, means for locking said actuating means against movement, coin-controlled means for releasing said locking means, and spring-pressed means for automatically closing the opening through which the bottles are ejected after the ejected bottle is removed.

3. In a refrigerator, a cabinet, a cylindrical ice chamber therein extending from the top to the bottom thereof and spaced from the inner walls of said cabinet to form a cooling compartment, said cylindrical chamber having a plurality of longitudinally spaced series of peripheral longitudinally extending slots, a horizontal partition in said cooling compartment, an annular partition in said ice chamber at the bottom of one of the series of slots, a flange rising from the inner edge of said annular partition to control the height of the water collecting in said compartment and permit it to overflow to the chamber below, traveling means for supporting articles to be cooled in the water of said cooling compartment, and means for actuating said traveling means.

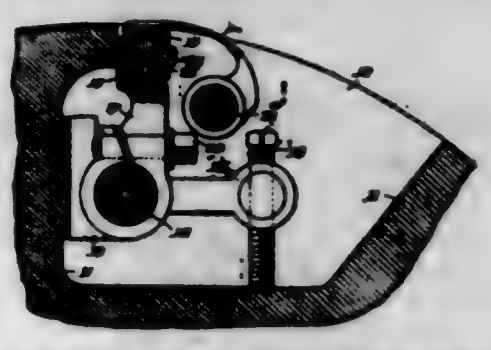
1,300,609. COTTER-PIN. CHRISTIAN F. HEINKEL, Cleveland, Ohio. Filed June 24, 1916. Serial No. 105,599. 3 Claims. (Cl. 74—3.)

1. A cotter pin having a pair of legs, a head formed as a triangle, one side of this triangle being substantially in alinement with and a continuation of one of the legs, another side of this triangle being substantially at a right angle to the first said leg and formed on the other leg to form an abutment for the head, the third side of this triangle connecting the other two sides and forming a strut



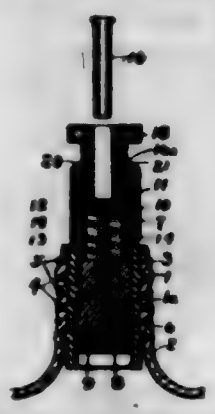
to force the first said side outward when it is forced down sufficiently far to lock the pin and also to prevent the head from flattening out too much, and the end of the last said leg being bent over the end of the first said leg.

1,300,610. GRIPPER DEVICE. CARL HEDENSTROM, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 8, 1917. Serial No. 185,694. 3 Claims. (Cl. 101—412.)



1. The combination with a printing press cylinder, of a gripper pad having an unyielding rough face, and a gripper finger having a smooth face coöperating therewith.

1,300,611. PILLOW-VALVE. ROBERT H. HEINRICH, New York, N. Y., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 4, 1915. Serial No. 491. 4 Claims. (Cl. 152—12.)



1. In a device of the character described, a stem, a yielding valve therein, a rotatable member positioned on the stem and operative to force the valve from its seat to permit deflation, a separable mouthpiece for inflating and said rotatable member being formed with a passage therethrough for said mouthpiece to permit of independent manual release of the valve by the latter during inflation, substantially as described.

1,300,612. ANTICREEPER. LEWIS O. HERRON, Oakmont, Pa. Filed Nov. 21, 1918. Serial No. 263,626. 5 Claims. (Cl. 238—4.)

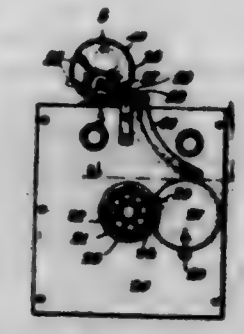
4. An anti-creeper for rails comprising a plate having a pair of terminal jaws disposed so as to rigidly engage the

top of the rail base when said body is moved transversely of said rail base, and a flared-out portion for exerting a



gripping spring action upon the bottom of the rail base when said anti-creeper is in position.

1,300,013. PHOTOGRAPHIC-CAMERA EXPOSING MECHANISM. HENRY HESS, Philadelphia, Pa., assignor to Hess-Ives Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed Feb. 4, 1916. Serial No. 76,127. 8 Claims. (Cl. 95—10.)



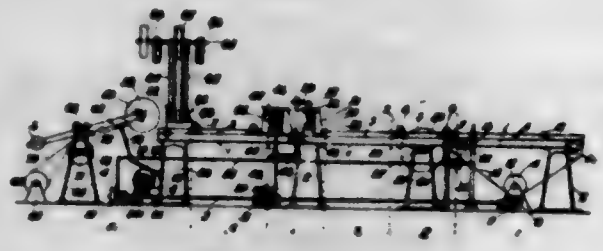
1. Photographic camera exposing mechanism, including, in combination with the camera exposure means, including an adjustable diaphragm device and an adjustable timing device, and an exposure meter, a driving motor adapted to run at a predetermined rate, control means for rendering the motor operative at will, connections between the motor and exposure means actuated from the motor when operative for simultaneously progressively adjusting the exposure diaphragm device and the exposure timing device, and connections between said motor control means and the exposure meter for also setting in operation the exposure meter simultaneously with rendering the motor operative.

3. Photographic camera exposing mechanism, including, in combination with the camera exposure means, including an adjustable diaphragm device and an adjustable timing device, and an exposure meter, a driving motor adapted to run at a predetermined rate, control means for rendering the motor operative or inoperative at will, connections between the motor and exposure means actuated from the motor when operative for progressively adjusting the exposure diaphragm device, and connections between said motor control means and the exposure meter for also setting in operation the exposure meter simultaneously with rendering the motor operative.

8. Photographic camera exposing mechanism, including, in combination with the camera exposure means, including an adjustable diaphragm device and an adjustable timing device, and an exposure meter, a driving motor adapted to run at a predetermined rate, control means for rendering the motor operative or inoperative at will, and connections between the motor and exposure means actuated from the motor when operative for adjusting the exposure-means.

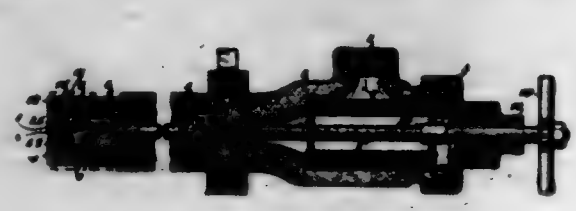
1,300,014. APPARATUS FOR MAKING CLOTHES-PEGS. ALBERT ARTHUR HOWES, Christchurch, New Zealand. Filed Oct. 19, 1917. Serial No. 197,457. 4 Claims. (Cl. 144—2.)

1. In a machine of the class described for making clothes pegs, the combination of mechanical movements comprising a loading table having an automatically actuated intermittent feed gear, means for dividing the wood from which the pegs are manufactured into strips, means for so disposing of the strips as will conveniently arrange them for a drilling and paring operation, means for drilling a hole in the wood to determine the top of the slot in the peg, means for fashioning the outer profile of the peg, and mechanism for cutting and shaping the slots and cutting off of the pegs.



2. In a machine of the class described for making clothes pegs, the combination and arrangement of parts comprising a feed table, a gang of saws for longitudinally dividing the material fed from said table into strips, wedge means for automatically separating the cut strips, drills for boring the separated strips, cutters for slotting the strips, the drills and cutters partly forming the outer profile of the pegs, and a final series of saws and cutters to longitudinally slot and shape the entrances of the said slots, and a traveling cross cut circular saw for severing the strips in predetermined lengths to complete the pegs.

1,300,615. LIQUID-ATOMIZER. DAVID J. IRISH, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Nov. 22, 1915. Serial No. 62,683. 3 Claims. (Cl. 137—26.)



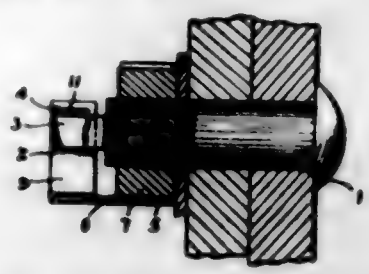
1. A liquid atomizer comprising a nozzle having a central opening and passages for the liquid to be atomized, an outer tip fitted over the end of said nozzle and having a central chamber and an open discharge orifice, an inner tip having a central chamber and an open discharge orifice, ducts in the wall of said inner tip to admit the liquid from the nozzle passages, a spindle to which the inner tip is directly connected, and means for operating said spindle to seat the tip carried thereby in the central chamber to the outer tip to thereby cause the liquid to enter the inner tip and to be discharged therefrom, or to unseat said inner tip to permit the liquid to enter the chamber of the outer tip and to be discharged therefrom.

3. A liquid atomizer comprising a nozzle having a central opening and passages for the liquid to be atomized, said passages terminating in an annular channel in the face of the nozzle, an outer tip fitted over the end of said nozzle and having a central chamber and an open discharge orifice, a disk having a central opening and adapted to be clamped between the outer tip and the face of the nozzle, said disk having openings tangential to the wall of the central opening therein, an inner tip having a central chamber and an open discharge orifice, ducts in the wall of said inner tip to admit the liquid from the nozzle passages, a spindle to which the inner tip is connected, and means for operating said spindle to seat the tip carried thereby in the central chamber of the outer tip to thereby cause the liquid to enter the inner tip and to be discharged therefrom, or to unseat said inner tip to permit the liquid to enter the chamber of the outer tip and to be discharged therefrom.

1,300,616. COLORED PHOTOGRAPHIC IMAGE AND METHOD OF PRODUCING SAME. FREDERIC E. IVES, Philadelphia, Pa. Continuation in part of application Serial No. 149,743, filed Feb. 20, 1917. This application filed Oct. 9, 1917. Serial No. 195,508. 5 Claims. (Cl. 95—66.)
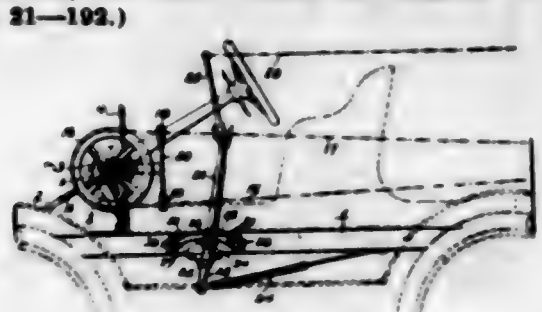
1. For multi-color photography a red image comprising a colloid layer containing a copper-toned image of a reddish color, the same reinforced by a red dye image selectively mordanted by the copper-toned image.

1,300,617. NUT-LOCK. FRANCESCO IZZO, Toronto, Ontario, Canada. Filed Sept. 4, 1917. Serial No. 189,475. 3 Claims. (Cl. 151—29.)



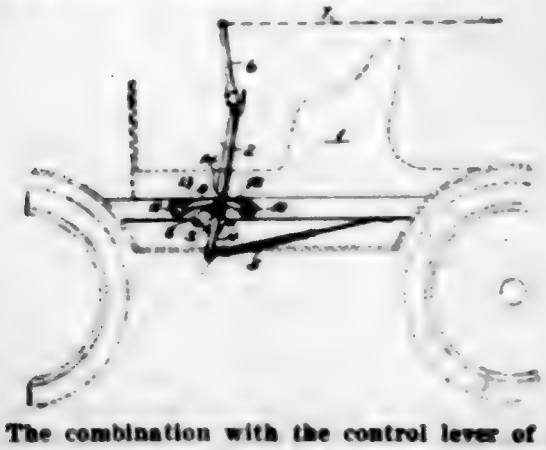
1. A nut lock comprising a member adapted to non-rotatably engage the perimeter of the nut and having an extension formed with a pair of members non-rotatably engaging the end of the bolt, and means engaging the pair of members and said bolt in locking contact.

1,300,618. REIN-OPERATIVE CONTROL MEANS FOR MOTOR-CARS. HOMER B. JOHNSON, Sheridan, Ind. Filed July 27, 1917. Serial No. 183,162. 3 Claims. (Cl. 21—192.)



1. Steering means for an automobile, comprising a bracket adapted to be secured in place forwardly of the dash-board of the automobile and adapted for the free passage of the steering shaft of the machine, a gear adapted to be secured to the steering shaft adjacent to said bracket, a short shaft mounted in said bracket, a pinion on said short shaft to mesh with said gear, an operating member secured to said short shaft and reins secured to said operating member and adapted to extend rearwardly of the automobile.

1,300,619. REIN-OPERATED MEANS FOR MOTOR-CARS. HOMER B. JOHNSON, Sheridan, Ind. Original application filed July 27, 1917, Serial No. 183,162. Divided and this application filed Apr. 5, 1918. Serial No. 226,889. 2 Claims. (Cl. 74—39.)



1. The combination with the control lever of an automobile, and a spring tending to move said lever in one direction, of a toothed segment, a pawl carried by the lever to engage said segment, a trip lever mounted on the control lever and having a part to engage the pawl to release the same from the segment, and stop devices at respective ends of said segment to control the operation of said trip lever.

1,300,620. GATHERING MECHANISM FOR COAL-LOADING MACHINES. JOSEPH F. JOY, Belle Vernon, Pa. Filed Aug. 23, 1917. Serial No. 187,805. 16 Claims. (Cl. 37—27.)

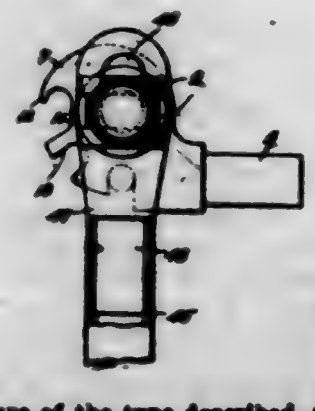


1. In a coal loading machine, the combination with a conveyer shoe portion, of a plurality of sets of substantially horizontal pointed tapering spiral augers arranged longitudinally of and projecting beyond the free end of said shoe portion, the augers of one set being of a pitch opposite to the pitch of another set, means to communicate rotation to said augers whereby the augers of one set are rotated in a direction opposite to the direction of rotation of those of another set, and means to raise the rear end portions of the augers to simultaneously lower the forward end portions of the same.

3. In combination, a conveyer shoe portion having a transverse gear casing and an apron extending forwardly from the said gear casing, said gear casing having a vertical front wall provided with vertically elongated slots, a plurality of substantially horizontal augers arranged longitudinally of said apron and having shafts extended rearwardly through said vertically elongated slots into said gear casing, an upwardly movable transverse driven shaft in said gear casing connected and geared to said auger shafts, and manually operable means to move said driven shaft upwardly whereby the rear end portions of said augers are raised and the forward end portions thereof are simultaneously lowered.

16. In combination, a conveyer shoe portion, a substantially horizontal auger arranged longitudinally of said shoe portion and having an upwardly movable shaft, a gear on said shaft, an upwardly movable driven shaft connected to said auger shaft, a gear on said driven shaft meshing with said gear on the auger shaft, and means to move said driven shaft upwardly whereby the rear end portion of said auger is raised and the forward end portion of the same is simultaneously lowered.

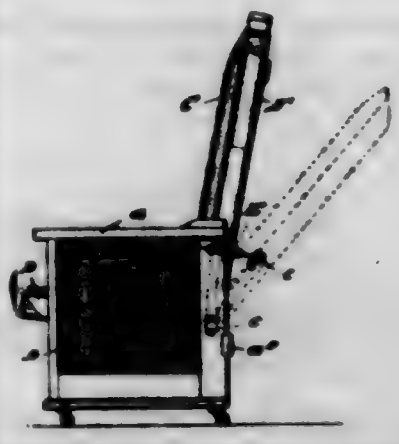
1,300,621. COLLAPSIBLE COT. EMMETT M. KAY, Tulsa, Okla., assignor of five thirty-seconds to I. W. Patterson, one thirty-second to C. H. Veale, one thirty-second to C. Z. Wiley, and one-thirty-second to E. B. Velton, Tulsa, Okla. Filed June 12, 1918. Serial No. 239,599. 3 Claims. (Cl. 5—5.)



1. In a structure of the type described, the combination with a frame whereof each corner includes an upright

flattened head on the side bar provided with a transverse hole and a plurality of notches in its periphery whereof one is beneath said hole, another is at right angles to the first and formed with an overhanging tongue, and a third notch is between the other two, and an end bar having a trunnion fixed in said hole and a flange spaced from the contiguous face of said head; combined with another element having a flattened head standing between the first-named head and the flange and provided with a longitudinal slot slidably mounted on said trunnion, and a stud in this head for selective engagement with said notches, for the purposes set forth.

1,300,622. CHAIR. GEORGE M. KIM, Pittsburgh, Pa. Filed Nov. 4, 1918. Serial No. 261,066. 8 Claims. (Cl. 155—6.)



1. A convertible chair comprising a frame having substantially upright side pieces, a back pivotally supported in a substantially upright position between said side pieces and adapted to swing back into a substantially horizontal position, a seat pivotally supported between said side pieces and adapted to be slid back and forth so as to occupy either a substantially horizontal position, in the upright position of the back, or a slightly inclined position, in the horizontal position of the back, with its rear edge abutting against the lower end of the back in the latter position, adapting the chair to serve as a bed or lounge in the last mentioned positions of the seat and back.

1,300,623. PACKING-RING. HERMAN KIESTER, Elizabeth, N. J. Filed May 26, 1918. Serial No. 237,048. 4 Claims. (Cl. 121—108.)



1. A packing ring consisting of a split ring, the inner peripheral edges of which are formed with a beveled surface said beveled surface having a series of dents or indentations.

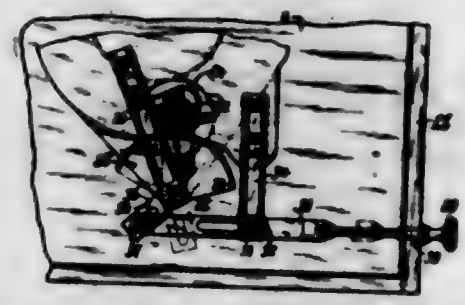
2. A packing ring consisting of a split ring, the peripheral edges of which are formed with a beveled surface, said beveled surface having a series of dents or indentations.

3. A packing ring consisting of a split ring, the inner peripheral edges of which are beveled, said edges provided with dents or indentations, and having a groove formed in each beveled edge.

4. A packing ring consisting of a split ring, the inner peripheral edges of which are beveled, said edges provided with dents or indentations, and having a groove formed in each beveled edge, and the inner curved surface near its meeting edge with the beveled surface provided with a single line of dents or indentations.

1,300,634. SPEED-STARTING DEVICE FOR MOTORS. EMILE LABOULY, Paris, France, assignor to Pathe Freres Phonograph Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 1, 1918. Serial No. 219,846. 7 Claims. (Cl. 74—26.)

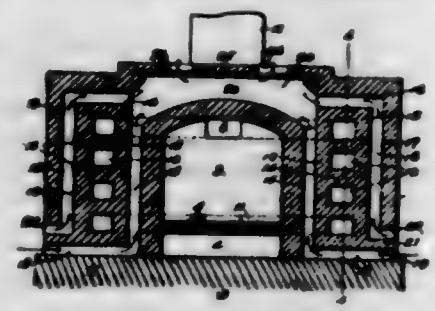
1. The combination with a motor comprising a shaft and driving means therefor, of means for accelerating the movement of said shaft comprising a fixed clutch member and a sliding clutch member, and a pair of spiral gears, the driven gear of said pair serving both to rotate the sliding clutch member and to slide same on said shaft into coaction with the other clutch member, the clutches being adapted to be automatically disconnected when the speed of the fixed clutch member exceeds that of the other clutch member.



5. In a motor starting device, a shaft, a driven clutch member fixed to said shaft, a driving clutch member rotatable and slidable on said shaft, a spiral gear on said driving clutch member, a second spiral gear meshing with the first-named spiral gear, the teeth of said gears being inclined to thrust said driving clutch member toward said driven clutch member, means for rotating the last-named spiral gear, and spring means for retarding rotation of said driving clutch member.

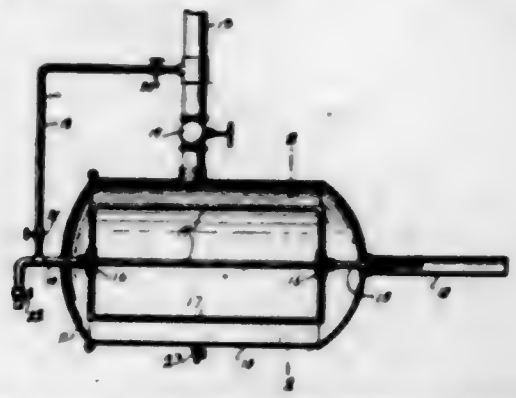
7. In a motor starting device, a shaft, a driven clutch member fixed thereon, a driving clutch member free to turn and slide on said shaft, a spiral gear on said driving clutch member, a spring bearing against said spiral gear, a sector having spiral gear teeth adapted to coact with the first-named spiral gear, an arm projecting from said sector into the path of a movable element of the motor and adapted, when the sector is turned to rotate said driving clutch member, to be withdrawn from the path of movement of such element, and means including a slide and a handle for imparting rotary movement to said sector.

1,300,625. DOMESTIC AIR-HEATER. PETER S. LANCHICK, Victoria, British Columbia, Canada. Filed May 12, 1917. Serial No. 168,202. 2 Claims. (Cl. 126—99.)



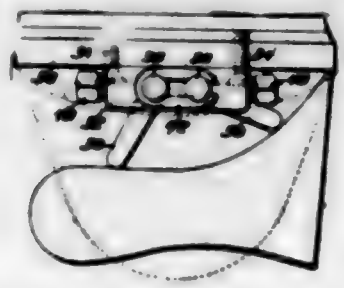
1. A domestic air heater which comprises a furnace of non-heat conducting material having a main combustion chamber, and a hot air chamber, a chimney, a series of reversely directed longitudinally extending horizontal flues located at each side of the combustion chamber that communicate at the top with the combustion chamber and at the bottom with the chimney, said horizontal flues at the respective sides of the furnace lying one above the other and communicating one with another *serialim*, and a series of vertically extended air spaces between the combustion chamber and the adjacent horizontal flues, air-inlet passages beneath the lowermost horizontal flue to convey the air to said air spaces, said air spaces at their upper ends being in communication with the hot air chamber, said hot air chamber lying above the furnace chamber, other vertically extended air spaces toward the outside of the furnace beyond the horizontal flues, ducts for leading air into said other air spaces adjacent to the bottom of the furnace, and other ducts from said other air spaces to the hot air chamber which lie above the uppermost horizontal flues, and air duct outlets from the hot air chamber, all being arranged substantially as shown and for the purposes described.

1,300,626. OIL-BURNER. JOSEPH V. LANDRY, Killona, La. Filed Dec. 26, 1918. Serial No. 268,262. 3 Claims. (Cl. 158—75.)



1. An oil burner of the character described including a steam chamber adapted to be connected to a source of steam under pressure and having a discharge nozzle, and an oil pipe entering the steam chamber and connecting with a plurality of relatively small pipes extending longitudinally through the steam chamber, and a single nozzle passing into the steam chamber nozzle and with which said plurality of pipes are connected.

1,300,627. MACHINE FOR OPERATING ON IRREGULARLY-SHAPED BLANKS. ELMER E. LANE, South Berwick, Me., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 18, 1917. Serial No. 181,444. 8 Claims. (Cl. 12—68.)



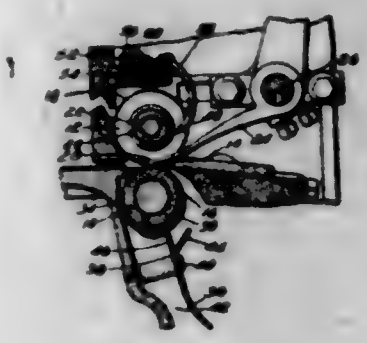
1. A machine for operating on irregularly shaped blanks having, in combination, mechanism for operating on a blank, means for supporting blanks in stacked formation, blank feeding mechanism including a feed slide for engaging the rear edge of a blank, and a pair of blank positioning and separating abutments arranged to engage the front concavely curved edges of the blanks at separated points intermediate their ends.

3. A machine for operating on irregularly shaped blanks having, in combination, mechanism for operating on a blank, means for supporting blanks in stacked formation, blank feeding mechanism including a feed slide for separately advancing blanks to said operating mechanism, a yieldingly mounted gate at the rear of said operating mechanism, and a pair of separating abutments mounted upon and projecting rearwardly from said gate to separate the bottom blank from the stack.

6. A machine for operating on irregularly shaped blanks having, in combination, mechanism for operating on a blank, means for supporting blanks in stacked formation, a feed slide to engage the rear edge of a blank, and a plurality of separating abutments to engage the concavely curved front edge of the blanks, one of which is adjustably mounted on a vertical pivot.

1,300,628. SKIVING-MACHINE. ELMER E. LANE, South Berwick, Me., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 18, 1917. Serial No. 181,446. 6 Claims. (Cl. 12—68.)

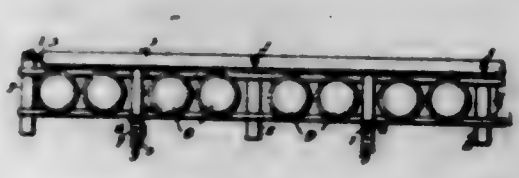
1. A skiving machine, having, in combination, a skiving knife, a die roll, a pressure roll, and a scraper clamped on the die roll to scrape material from the surface of the roll.



3. A skiving machine, having, in combination, a skiving knife, a die roll provided with a die cavity, a pressure roll, and a scraper fixed to the machine frame having a thin, flexible edge in contact with the die roll, and means to press said edge against the face of the roll in such manner that the edge will conform to the contour of the roll as it is moved past said edge.

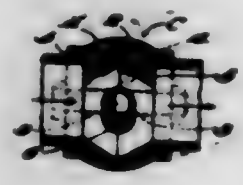
5. A skiving machine, having, in combination, a skiving knife, a die roll provided with a die cavity, a pressure roll, a scraper arranged to engage the surface of the die roll, and a plate for supporting said scraper having a slot to separate waste materials scraped from the die roll from the path of the skived blanks.

1,300,629. FLOWER-POT SUPPORT OR HANGER. DUNCAN MACAW, Norwood, Pa. Filed Feb. 9, 1916, Serial No. 77,889. Renewed Dec. 21, 1918, Serial No. 267,873. 2 Claims. (Cl. 211—14.)



1. In combination with a plurality of upright supports, laterally projecting brackets vertically adjustable thereon, a pair of spaced horizontally extending object suspending rails positioned on said brackets, and transverse strips each having one end engaging the outer side of one rail and the other end adjustably connected with the outer side of the opposite rail for maintaining the rails in adjusted position and to prevent their spreading.

1,300,630. VAPORIZER. WILLIAM R. MATHIS, Visalia, Calif., assignor of one-half to Raymond Bisconer, Visalia, Calif. Filed Apr. 30, 1917. Serial No. 165,515. 1 Claim. (Cl. 237—241.)



A vaporizer of the class described comprising a casting formed of opposed members each of which has a conical bore, which when the members are joined form a chamber, the walls of which converge from the center toward the outer ends of the casting, and a heating tube disposed transversely through the casting at the largest diameter of the chamber therein and threaded externally for engagement with and removal from the casting and to form an increased radiating surface.

1,300,631. PROCESS OF MAKING FURNACE-LINING MATERIALS. ALBERT P. MEYER, Pittsburgh, Pa., assignor to Allen S. Davison Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 50,632, filed Sept. 14, 1915. This application filed Mar. 20, 1917. Serial No. 156,232. 9 Claims. (Cl. 106—6.)

1. The process of making granular refractory material which comprises passing a mixture of granules of highly refractory material and a proportion of less refractory material together through substantially the entire length of an internally fired rotating kiln under such conditions that the less refractory material is taken up by the granules of the more refractory material without substantial sintering together or clinkering of the granules.

1,300,632. BELT-HINGE FASTENER AND PIN. JOHN MILLAR, Cincinnati, Ohio. Filed June 8, 1918. Serial No. 238,899. 8 Claims. (Cl. 24—33.)



8. A hinge fastener for belts, comprising independent arms, a pair of hinge eyes formed on the side edges of the arms and depending therefrom, a pair of flexible clenching prongs projecting from said edges in horizontal planes with the eyes and bendable lengthwise the arms in a clenching operation, and a hinge pin having a fabric bearing surface for the eyes and forming a flexible hinge connection.

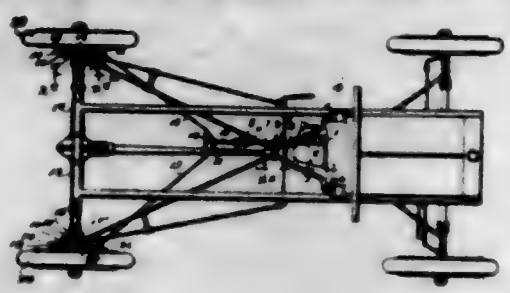
1,300,633. FASTENER FOR RETORT-DOORS. FRANK LOUIS MILLER, Parkersburg, W. Va., assignor to Perfection Wood Steaming Retort Co., Parkersburg, W. Va., a Corporation of West Virginia. Filed July 6, 1917. Serial No. 178,921. 5 Claims. (Cl. 70—3.)



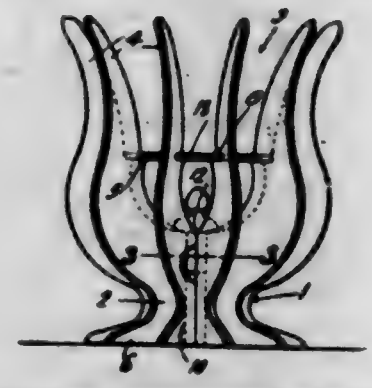
2. Fastening means comprising a plurality of levers, means for simultaneously rocking said levers and advancing them substantially in the direction of their length, said levers having a sliding pivotal mounting upon said door, said means comprising a threaded shaft extending through the door to the inner side, a threaded part in said door with which said shaft engages, and a part on the inner side of the door axially movable by said shaft, said levers being pivoted to said axially movable part, said simultaneous movement of said levers acting to bring them successively into their engaging and binding positions, and vice versa, acting to bring them successively out of their binding and engaging positions.

1,300,634. BRAKE. HENRY N. MOORE, Los Angeles, Calif., assignor of one-third to ETHAN C. LE MUNYON and one-third to FRANK H. EICKHART, Los Angeles, Calif. Filed Aug. 18, 1917. Serial No. 186,918. 1 Claim. (Cl. 21—8.)

In combination, a chassis having axle housing flanges, annular brake housings having ears, radius rods, bolts fastening the radius rods to two of the ears of the respective housings and fastening said ears to the flanges, wheels for the chassis, brake drums on the wheels respectively inside of the housing flanges, brake bands between the housing flanges and brake drums, and means to contract the brake bands on the drums.

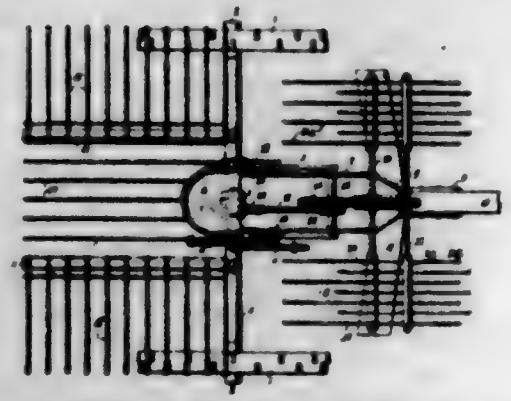


1,300,635. JARDINIÈRE-STAND. PHILLIP J. MUTCH, Hoboken, Pa. Filed Feb. 18, 1918. Serial No. 217,941. 1 Claim. (Cl. 248—41.)



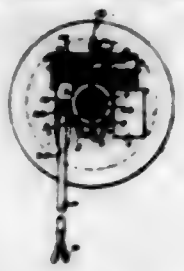
A jardinière stand comprising a pedestal made up of a plurality of radial members each including a body and an arm upstanding from the body, the arms coöperating to form a central space and being provided on their inner edges with shoulders, the inner edges of the bodies cooperating to form a second central space; a shelf supported on the shoulders and disposed within the central space defined by the arms; a former in the central space defined by the inner edges of the bodies, the former being provided with a shoulder coacting with the upper edges of the bodies to limit the downward movement of the follower; means for hingedly connecting the inner edges of the bodies, the bodies of two adjacent members being free to permit the radial members to be folded together; and a latch forming a releasable connection between said adjacent free members to hold all of the radial members above the former.

1,300,636. PEANUT-DIGGER. JOSEPH O. NOAH, Lingleville, Tex. Filed June 19, 1918. Serial No. 240,790. 5 Claims. (Cl. 55—109.)



1. In a machine of the type described, the combination with a framework mounted on wheels, and a series of rake teeth carried by said framework, of a picker reel having fingers moving between said rake teeth in one direction, a tosser reel having fingers moving between the fingers of the picker reel in the opposite direction, and driving connections between the reels and said wheels.

1,300,687. MAGNETO FOR INTERNAL-COMBUSTION ENGINES. RICHARD A. GILBERT, South Bend, Ind., assignor to Quick Action Ignition Company, South Bend, Ind., a Corporation of Indiana. Filed Mar. 19, 1917. Serial No. 155,917. 11 Claims. (Cl. 123—149.)



1. In magnetos, a stationary armature plate, a central opening therethrough, an external support, a hub projecting therefrom, means connected to the plate adapted to secure the same on the hub, a shaft extending through the hub, an annular central support attached thereto, a magnet casing secured to the support, the casing and support adapted to rotate with the shaft, a magnet having an air gap secured to the casing, detachable pole ends for the magnet separately secured to the casing in close contact with the magnet, a plurality of armature heads magnetically connected, windings between the heads, means for securing the heads to the armature plate adjacent the path of travel of the field magnet, a combined circuit breaker and condenser unit held on the plate, a breaker cam rotated by the shaft, a detachable connector plug and cable passing into the armature plate from the rear side thereof, and suitable circuit connections between the windings breaker condenser and terminal plug.

1,300,688. ELECTRIC-FAN CONTROL. GUSTAF OLSON, Chicago, Ill., assignor of one-half to Willard M. McEwen, Chicago, Ill. Filed July 29, 1916. Serial No. 112,069. 4 Claims. (Cl. 230—1.)

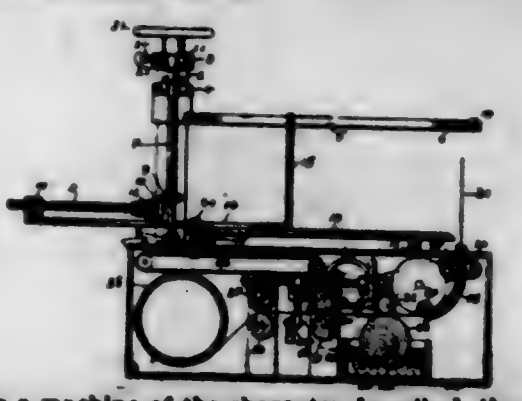


1. In an air circulating device, the combination of a support, a pair of members rotatably mounted on said support independently of each other, motor driven blower mechanism tiltably mounted on one of said members, coacting means on said blower mechanism and the other said member, adapted to cause said blower mechanism to tilt in a plane transverse to the pivotal connection to said one member during a relative rotation of said members, means for causing a relative rotation of said members, and a finger shiftably mounted on said support and adapted to be shifted to engage one or the other of said members for locking it against rotation relative to said support.

2. In an air circulating device, the combination of a support, a pair of members rotatably mounted on said support independently of each other, motor driven blower mechanism tiltably mounted on one of said members, coacting means on said blower mechanism and the other said member, adapted to cause said blower mechanism to tilt in a plane transverse to the pivotal connection to said one member during a relative rotation of said members, means for causing a relative rotation of said members each of said members having a notch formed in an exposed part thereof, and a finger shiftably mounted on said support so as to be shifted to engage one or the other of said notches for holding the corresponding member against rotation relative to said support.

4. In an air circulating device, the combination of a support, a shaft journaled on said support, a sleeve rotatably mounted on said support concentrically of said shaft and having an annular track of wavelike form carried thereon, arms on said shaft extending outwardly overhanging said track, motor driven blower mechanism, lugs on said mechanism pivotally supporting said blower mechanism on said arms, means on said blower mechanism adapted to coact with said track for causing a tilting of said blower mechanism during the relative rotation of said sleeve and shaft, other means for causing a relative rotation of said sleeve and shaft, said sleeve and one of said arms having notches formed therein, and a finger pivotally mounted on said support adapted to be set to engage one or the other of said notches for holding said shaft or sleeve against rotation relative to said support.

1,300,689. LABEL-APPLYING MACHINE. JOHN R. O'NEILL, Ridgewood, N. J. Filed Oct. 31, 1912, Serial No. 728,765. Renewed Aug. 16, 1918. Serial No. 250,234. 4 Claims. (Cl. 216—30.)



1. In a machine of the character described, the combination of means for applying a label to boxes or packages of various sizes, adjustable means for severing such label from the end of a web and feeding the same into juxtaposition to said applying means, and means for simultaneously adjusting said applying means and said feeding means.

2. In a machine of the character described, a label applying pocket having three sides, two of said sides being adjustable, means for simultaneously adjusting said last mentioned sides, and means for separately adjusting said sides.

3. In a machine of the class described, a label applying device comprising two substantially parallel members, one of said members being yieldingly mounted, a transverse member, means for simultaneously adjusting one of said parallel members and said transverse member, and means for separately adjusting said members.

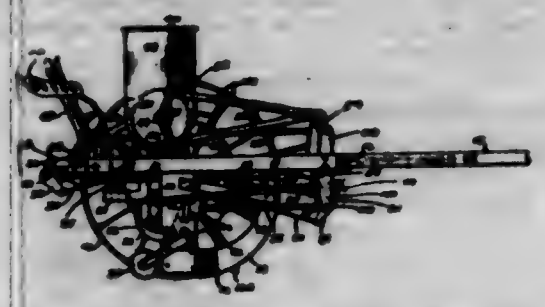
4. In a machine of the character described, the combination of means for supplying, in the path of a box or package to be sealed, adhesive labels or strips of various lengths, means adapted to press against and affix the labels or strips of tape to a box or package, and means operatively connected with the said label supplying means and pressing means whereby the two latter may be adjusted simultaneously to accommodate boxes or packages of various sizes.

1,300,640. TOY BALLOON. JOHN PASTERNAK, New York, N. Y. Filed Nov. 22, 1918. Serial No. 263,659. 4 Claims. (Cl. 46—37.)



1. The combination of a plurality of expansible bags or sacks one within the other, the inner bag or sack being adapted for greater expansion than the outer sack, the outer bag or sack being frangible.

1,300,611. CORN-PLANTER. BANNER W. PAULSEN, Otho, Iowa. Filed Sept. 20, 1916. Serial No. 121,024. 10 Claims. (Cl. 111—34.)



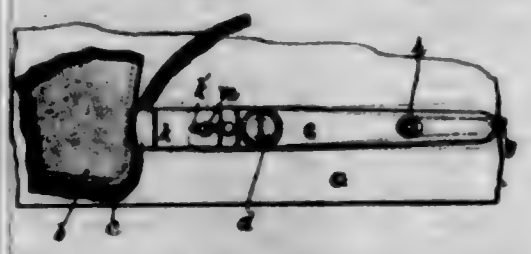
1. In a corn-planter, a traveling frame, two rotatable members actuated by travel of the frame, a seed hopper, a valved chute to receive seeds from the hopper and drop them to the ground, mechanism actuated by one of said members for feeding seeds from the hopper to the chute, and means actuated by the other of said members for opening and closing the valved chute to permit dropping the seeds.

4. In a corn-planter a frame, two independently rotating travel wheels, a plurality of planting mechanisms arranged transversely of the frame and each including a seed hopper, a valved chute to receive seeds from the hopper and drop the same to the ground, means actuated by one of the wheels for feeding seeds from the hoppers to the chutes, and means actuated by the other wheel for opening the valved chutes to permit dropping of the seeds.

6. In a corn-planter, a frame, two independently rotating travel wheels, a seed planting mechanism including a seed hopper; a valved chute to receive seeds from the hopper and drop the same to the ground, means actuated by one of said wheels for feeding seeds from the hopper to the chute, and means actuated by the other of said wheels for controlling the valved chute.

9. A corn-planter including a main-frame, a traveling-wheel, a plurality of seed-dropping members each including an upright chute, a furrow-opening means carried thereby, a seed-hopper, and a wheel rotatable in a vertical plane and operable to feed the seeds from the hopper into the chute, and means for actuating the feeding-wheels including ratchet-wheels fixed coaxially with the feeding-wheels, dogs to drive the ratchet-wheels, a crank-armed rock-shaft, driving connections between the dogs and the crank-arms, studs carried by the traveling wheel, a reciprocating part adapted to be placed in and out of the path of the studs, and actuated by engagement with the studs, a driving connection between said part and the rock-shaft, and means for placing said part in and out of the path of the studs.

1,300,642. EDGE-TRIMMING MACHINE. LOTTIN M. PECK, Braintree, Mass. Filed Aug. 15, 1918. Serial No. 250,046. 2 Claims. (Cl. 12—51.)



1. The improvement in edge-trimming machines which consists, in combination with a reciprocating arm, of a right-angled knife blade carried by said arm, and a gage mounted upon said blade.

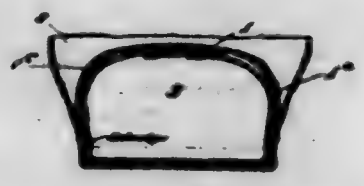
1,300,643. OIL-BURNER. WILLIAM L. PERRY, San Francisco, Calif. Filed Oct. 24, 1918. Serial No. 259,595. 9 Claims. (Cl. 158—76.)

1. In a burner, the combination with a body having a cavity in its outlet end, a nozzle having a cavity in its inlet end, abutting flanges around the cavities of these members, bolts connecting the flanges, and means for admitting oil and air through the body and into its cavity;



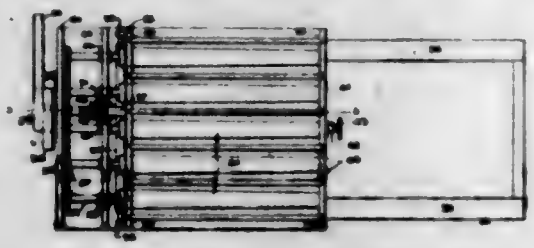
of a spreader removably mounted within said two-part cavity and pierced with perforations out of registry with each other.

1,300,644. HAT. MARIE ARMINA PHILLIPS, New York, N. Y. Filed Oct. 3, 1918. Serial No. 256,695. 8 Claims. (Cl. 2—108.)



1. A collapsible adjustable hat for ladies' wear comprising a crown portion and a brim portion having its inner edge connected to the lower edge of the crown and conforming in diameter therewith, and having its outer edge slightly larger in diameter than its inner edge so that the rim will normally stand up when the hat is worn; the brim and crown being made of soft material so that the upper part of the brim may be readily adjustable to different positions and retain the same when the hat is worn; and the hat can be folded flat when not in use.

1,300,645. MACHINE FOR MOLDING COMPOSITION BLOCKS. EDWARD H. PIPE, St. Louis, Mo. Filed July 31, 1916. Serial No. 112,272. 2 Claims. (Cl. 25—41.)



1. In a machine for making composition blocks, a mold comprising an apertured head, a bottom, a hinged front and vertical partitions; cores mounted independently of said mold and extending through the apertures in said head; means for imparting constant rotary motion to said cores; mechanism for moving the mold with relation to said cores; and a timing mechanism arranged to effect said movement periodically.

2. In a machine for making composition blocks, a mold comprising an apertured head, a bottom, a hinged front and vertical partitions; cores mounted independently of said mold and extending through the apertures in said head; means for imparting constant rotary motion to said cores; mechanism for moving the mold with relation to said cores; a timing mechanism arranged to effect said movement periodically, and brushes so secured to said head as to contact with the cores during the movement of said head.

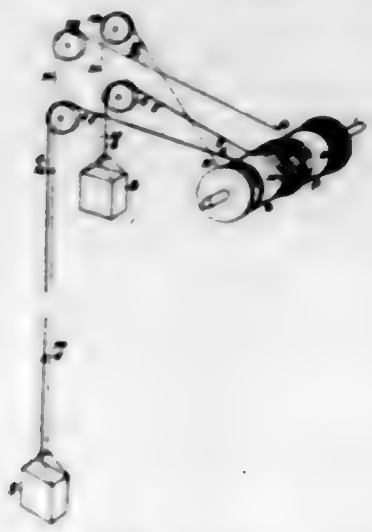
1,300,646. TUBE FOR INCLOSING LIQUIDS OR VISCOUS SUBSTANCES. JULES PREVET, Paris, France. Filed Jan. 20, 1915. Serial No. 3,290. 2 Claims. (Cl. 113—116.)

1. The method of closing the end of a collapsible tube consisting in compressing a resilient stopper to reduce

its diameter to that of the end of said tube, inserting said stopper within the end of said tube while restraining the end walls of the tube from radial expansion, upsetting the rim of the tube over said stopper, and applying over said end a rigid capsule adapted to receive and hold the radially expanding wall against the full expansion of said stopper to form a tight joint.

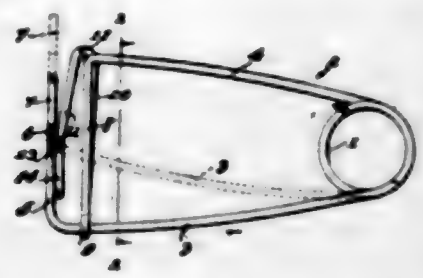


1,300,647. MINE-CAGE HOIST. THOMAS PRICE, Nanaimo, British Columbia, Canada. Filed Jan. 15, 1919. Serial No. 271,266. 5 Claims. (Cl. 187—71.)



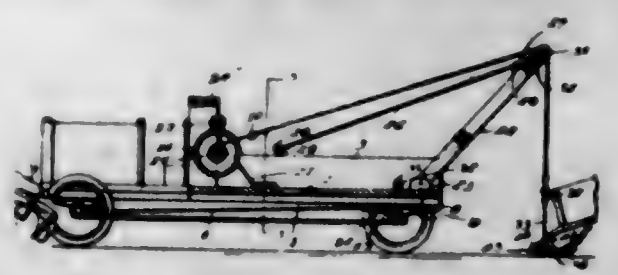
1. The combination with two cages operable in separate compartments of a mine shaft, a winding drum, a rope separately connecting each cage to diametrically opposite sides of said winding drum so that one cage may ascend as the other descends, and a supplemental rope from each cage to that half of the winding drum to which the other cage is connected.

1,300,648. JAR-LIFTER. JED W. PRIOR, Burlington, Vt. Filed Mar. 4, 1918. Serial No. 220,823. 2 Claims. (Cl. 65—26.)



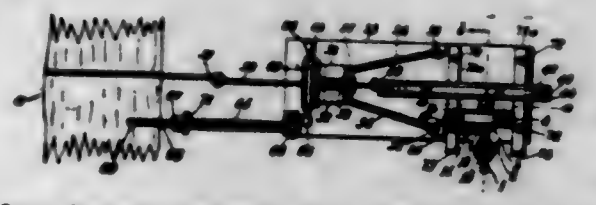
1. A jar lifter comprising a single piece of wire having a coiled central portion and a pair of arms extending in normally diverging relation therefrom, the wire at the end of one arm being bent to extend toward its co-acting arms then bent again to form a jaw portion extending at right angles to the plane of the coiled portion, the wire at the end of the other arm being bent toward the coacting arm and around said arm and then back to its respective arm to form a loop guide to surround its coacting arm, and the extremity of said end of the wire being bent to and across the inner side of the jaw portion then bent again to form a second jaw portion arranged at right angles to the plane of said coiled portion of the lifter.

1,300,649. AUTOMOBILE WRECKING-TRUCK. FREDDIE A. RAYMOND, Spokane, Wash. Filed Aug. 15, 1918. Serial No. 115,108. 1 Claim. (Cl. 214—38.)



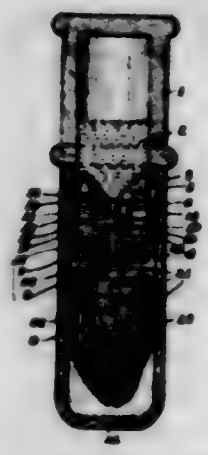
An automobile wrecking truck of the class described including a body, a transverse bar provided with means for securing it to the front portion of an automobile, means for connecting the transverse bar with the truck, a windlass mounted on the truck and provided with a rope or cable, means for connecting the rope or cable with the transverse bar at opposite sides of the center thereof, and a foldable crane member provided with a pulley to receive the said rope or cable whereby the latter may be arranged for lifting an automobile, said rope or cable being also adapted to draw the automobile forwardly when the crane member is folded.

1,300,650. DRAG-SAW MACHINE. REINHART REITHBOUR, Portland, Oreg. Filed Mar. 22, 1918. Serial No. 225,218. 3 Claims. (Cl. 143—68.)



1. In a drag-saw machine, the combination of a rotary shaft, a sprocket wheel attached to the end of the shaft, said sprocket wheel guiding and propelling a rack frame having one single row of rack pins at the longitudinal center line, said rack pins, at both ends of the row, disposed in the figure of an endless loop, adapted to impart a rocking motion to the saw at the end of every stroke; an extension bar secured to one end of the rack frame and a saw removably connected to the end of the extension bar.

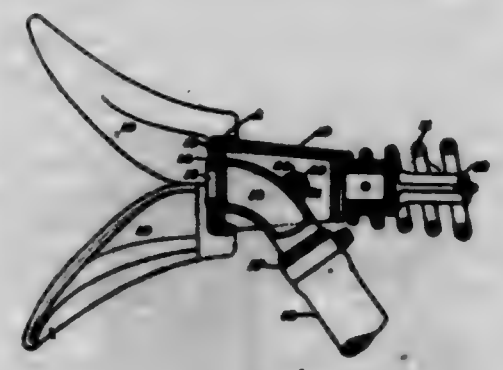
1,300,651. FOUNTAIN SHAVING-BRUSH. RAY N. ROBBINS, East Orange, N. J. Filed Nov. 18, 1918. Serial No. 263,122. 3 Claims. (Cl. 15—30.)



2. In a fountain brush, the combination with a reservoir for liquid soap, and a brush head having a passage

for feeding soap to the bristles of the brush, there being a transverse bore intersecting said passage and having enlarged recesses at both ends, a valve member fitted to slide in said bore, a finger piece housed in one recess and carried by said valve member, a disk detachably connected to the other end of said valve member and housed in the other recess, a spring also housed in the recess with the disk and bearing against the same for normally retaining the valve member in closed position with the finger piece flush with the outside of the brush head, and a cap removably arranged in the outer end of the spring carrying recess and constituting a bearing for said spring.

1,300,852. AUTOMATIC TRAIN-PIPE CONNECTOR. JOSEPH V. ROBINSON, Chevy Chase, Md. Filed Apr. 7, 1914. Serial No. 830,234. Renewed Aug. 3, 1917. Serial No. 184,358. 5 Claims. (Cl. 285—58.)



1. In an automatic train pipe connector, the combination of a connector head having an aperture and being provided also with a shank having an opening therein, a conduit extending through said opening in the shank into said aperture for directing a fluid to said head, and adapted to have its end outside of the shank connected to a train pipe, and means for holding said conduit in position in said head and opening and for permitting removal therefrom while the head is coupled up in service.

2. In an automatic train pipe connector, the combination of a coupling head provided with a face and having an aperture therein, a suitable support for said head, a hollow shank extending rearwardly from the head, a tube in said shank and aperture for directing a fluid to the head, said tube being curved laterally of the head, a flexible pipe connected to said tube, and means for maintaining the tube in said shank and aperture and for permitting removal therefrom while said head is coupled up in service.

3. In an automatic train pipe connector, the combination of a coupling head having a face and an aperture therein, a hollow shank extending rearwardly from the head, a fluid conduit having one end provided with means for engagement with a train pipe and its other end positioned in said shank and aperture and adapted to be removed therefrom while the connector head is coupled up in service, a gasket in said conduit, and manually operated means for compressing said gasket upon replacement of said conduit in said aperture after extraction therefrom.

4. In an automatic train pipe connector, the combination of a connector head having an aperture through its face and an opening through a side wall, a conduit extending through said opening and into said aperture, and a pin extending through a boss on the conduit and opposite sides of the portion of the head into which the conduit extends.

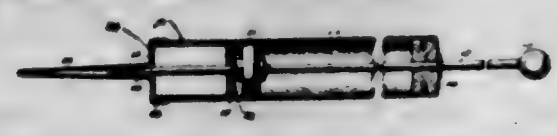
5. In an automatic train pipe connector, the combination of a connector head having an aperture through its face, a conduit having one end extending into said aperture, and a pin extending through alined apertures formed in the connector head and said conduit, to hold the conduit in position, the pin being adapted to exert a wedging action on the conduit to hold the end thereof in said aperture in the head.

1,300,852. CHECK-VALVE. WALTER F. ROPER, Hopedale, Mass., assignor to Hopedale Manufacturing Company, Milford, Mass. Filed Jan. 13, 1917. Serial No. 142,284. 3 Claims. (Cl. 103—64.)



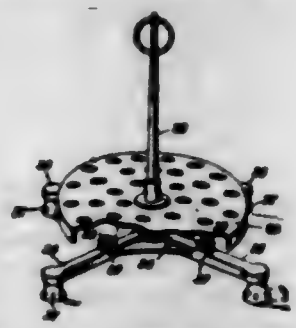
1. A check valve comprising in combination, upper and lower plates, the former having a chamber depending therefrom and presenting an opening in the bottom thereof closely adjacent the upper surface of the lower plate with a small space between them, a valve seat surrounding said opening, a ball valve freely movable in said chamber to and from said seat, a pin extending transversely across said chamber above said ball valve to limit movement of the latter from its seat, a strainer wall surrounding said chamber and confined between said plates, and members independent of said chamber detachably connecting said plates and located intermediate said strainer wall and said chamber.

1,300,654. DRY-SPRAYING MACHINE. WILLIAM H. ROSS, Jersey City, N. J. Filed Jan. 30, 1919. Serial No. 274,039. 5 Claims. (Cl. 43—14.)



1. In an apparatus for spraying powdered material, the combination with a closed package of such material, of means for holding the package, other means for opening the package at two points, and means for blowing air through said openings and through the package.

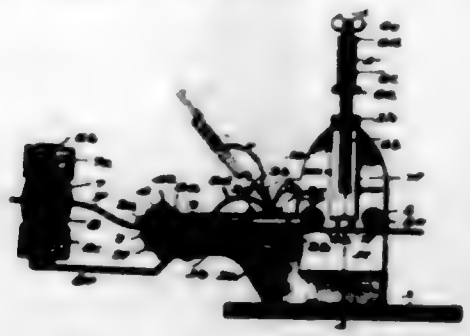
1,300,655. MACHINE FOR FACILITATING THE UNROLLING OF CLOTH FROM CLOTH BOLTS. NATHAN RUBENSTEIN, New York, N. Y. Filed May 3, 1918. Serial No. 232,253. 6 Claims. (Cl. 242—61.)



1. In a device of the class described, a suitable supporting member or base; a vertically extending rotatable shaft carried by said supporting member; a horizontally arranged table carried by said shaft; a vertically extending spindle adapted to enter a cloth bolt and having a passage formed in its lower portion adapted to receive the upper end of said shaft, and a flange at its lower end adapted to rest upon said table, and a steadying member carried by and located adjacent the upper end of said spindle.

6. In a device of the class described, a suitable supporting member or base; a horizontally arranged rotatable table supported from said supporting member; a vertically extending shaft carried by said supporting member and extending through said table; a vertically extending bolt supporting member adapted to enter a cloth bolt and having a passage formed in its lower portion and adapted to receive the upper end of said shaft, and the lower end of which bolt supporting member rests upon said table; and a plurality of rollers carried by said supporting member or base, and the peripheries of which are adapted to engage the under side of said table.

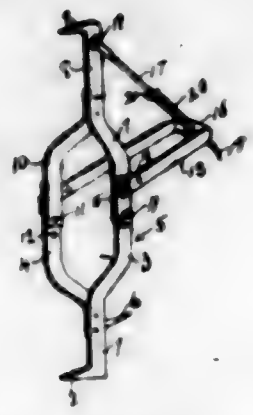
1,300,656. MACHINE FOR CLEANING AND WAXING PHOTOGRAPHIC FILMS. RUPERT S. SCHEIBLEIN, Merchantville, N. J. Filed Apr. 27, 1918. Serial No. 231,864. 5 Claims. (Cl. 91—36.)



1. In a machine for waxing photographic films, the combination of a frame, having opposite side members provided with brackets adapted to support the margins of a film, rollers mounted in said sides adapted to coöperate with said brackets and hold the margins of the film, wax holders on said side members above the brackets, rods entering said holders to expel wax therefrom, a plate connecting said rods, a spring for depressing said plate and rods, and a screw for regulating the tension of said spring.

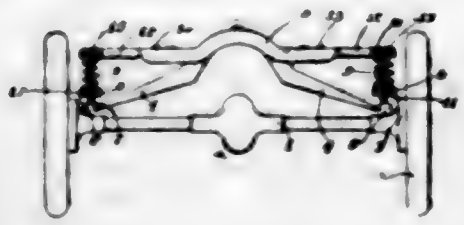
2. In a machine for cleaning and waxing photographic films, the combination of brushes adapted to brush the film, means for wiping the film, means for guiding the film, and means for applying wax to the margins of the film.

1,300,657. ANIMAL-POKE. FRANCIS A. SCHROEDER, Seibert, Colo. Filed Dec. 27, 1918. Serial No. 268,561. 3 Claims. (Cl. 119—139.)



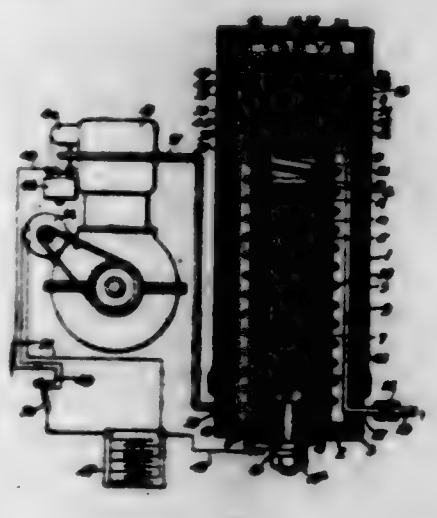
1. An animal poke comprising a yoke composed of upper and lower sections pivotally connected at their inner ends and carrying forwardly extending fingers at their terminals, a prong carried by the lower section, a U-shaped member pivotally connected at the free ends of its legs with the inner ends of the lower yoke section, and a spring retracted prong carried by the upper section and engaged with said U-shaped member.

1,300,658. AUXILIARY SPRING FOR MOTOR-VEHICLES. ALPHONSE A. SEBASTIAN, Chicago, Ill. Filed June 18, 1917. Serial No. 175,283. 1 Claim. (Cl. 267—19.)



The combination with an automobile having an axle, a brake housing at each end of the axle, a centrally arched main spring above and extending lengthwise of the axle, and a frame member channeled on the underside and centrally embracing and connected with the central arched portion of the main spring, of a bracket on each brake housing pivotally connected with the adjoining end of the main spring and having an upwardly facing annularly flanged spring seat, an extension bracket at each end of the channeled frame member having a downwardly facing annularly flanged spring seat spaced above the seat on the housing bracket, a coil spring interposed between and engaging in said seats so as to be compressed by downward movement of the frame member, and a removable transverse pin extending through apertures in opposite sides of the annular flange of each seat and engaging and retaining the end coils of the coiled spring so that said spring will be extended when the frame member is moved upwardly and resiliently will resist said upward movement.

1,300,659. ENGINE-PRIMING DEVICE. FREDERICK L. SHELOR and FREDERICK C. SCHOFIELD, Salem, Va. Filed Feb. 27, 1918. Serial No. 219,252. 18 Claims. (Cl. 123—180.)



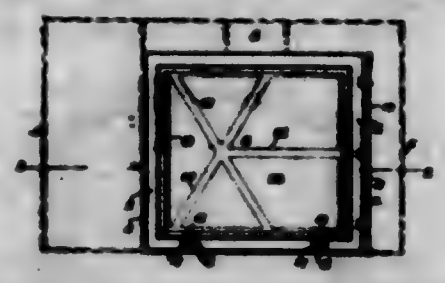
1. The combination with an internal combustion engine, of a fuel vaporizing chamber to confine a quantity of fuel and its vapor, having a fuel inlet and vapor outlet, a valve for admitting a quantity of fuel through the inlet only when the chamber is not heated and to confine the fuel and vapor, and a conduit for conducting vapor under pressure from the vapor outlet to the engine intake.

4. The combination with an internal combustion engine and a source of fuel, of a fuel vaporizing chamber to confine a quantity of fuel and its vapor, having a fuel inlet connected to said source of fuel, and a vapor outlet connected to the engine intake, a check valve for the fuel inlet to prevent reverse flow and to confine the fuel and its vapor in the chamber, and a check valve for the vapor outlet held seated with sufficient pressure to prevent the opening thereof by the intake suction unless assisted by the vapor when under pressure by the heating of the chamber.

12. The combination with an engine, a carbureter therefor, and a starter for transmitting mechanical impulse to the engine for starting it, of priming means constructed and arranged for supplying confined vapor under pressure to the engine independent of said carbureter, means for bringing the priming means into operation for supplying confined vapor under pressure irrespective of the operation of the carbureter, and means whereby the last named means is operated when the starter is operated.

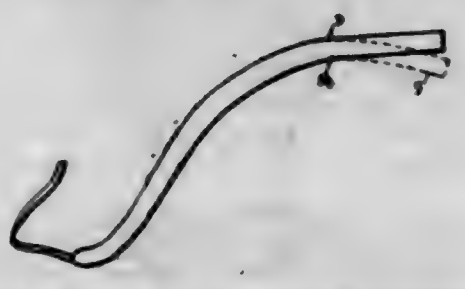
18. The combination with an engine intake and means for supplying fuel; of a vaporizing chamber; and means whereby when the chamber is cool, and vapor therein condensed, fuel is sucked therefrom into said means and the intake suction shut off from the chamber, and when the chamber is heated, vapor is delivered therefrom to the engine intake only when the vapor pressure rises to a predetermined amount.

1,300,690. RANGE. FRANKLIN L. STEVENS, Philadelphia, Pa., assignor to Walter L. Sheppard, Philadelphia, Pa. Filed Oct. 12, 1918. Serial No. 127,498. 1 Claim. (Cl. 126—32.)



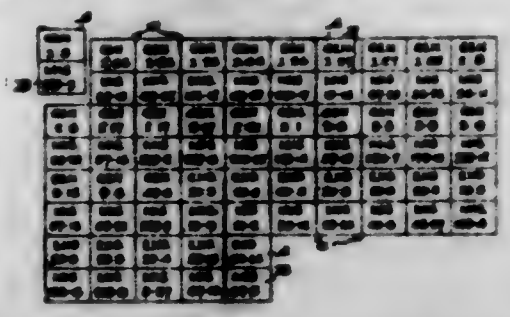
The combination of a cast metal range having an oven, said oven having a main bottom frame of cast metal open at the center and flanged; an open supporting frame resting on the flanges of the main frame, the upper edge of the said supporting frame being flush with the upper service of the main frame, said supporting frame being detachable and having legs on one side extending under the main frame and resessed on the opposite side to receive fastening devices on the main frame; braces extending across the supporting frame; a sheet metal plate supported by said braces and secured to the supporting frame, the upper surface of the sheet metal plate being also flush with the upper surface of the other frames; a flue strip located in the bottom flue of the range, one of the braces having a depending flange and legs engaging the flue strip and tending to hold the flue strip in position.

1,300,951. METHOD OF MAKING PUTTEES. GEORGE HENRY SHIELEY, Washington, D. C., assignor to Dr. Alice Patterson Shibley, Washington, D. C. Filed July 26, 1918. Serial No. 246,857. 1 Claim. (Cl. 36—2.)



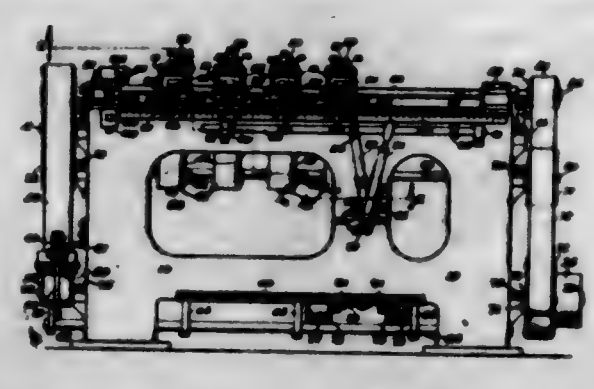
A method of forming a woven non-constricting puttee, consisting in cutting from woven material a puttee having a major portion of that part of its length which is to cover the calf of the leg curved to lie smoothly when wound around the calf, and the remaining lower portion of the puttee having its edges tangent to such curved part, and thereafter stretching the upper edge of the straight part to form a curved continuation of the curved portion.

1,300,982. CROSS-REFERENCING TAB USED IN SYSTEMS OF INDEXING. JAY BENJAMIN FRANKLIN SNOWALTER, Pekin, Ill. Filed Oct. 17, 1917. Serial No. 197,105. 5 Claims. (Cl. 283—36.)



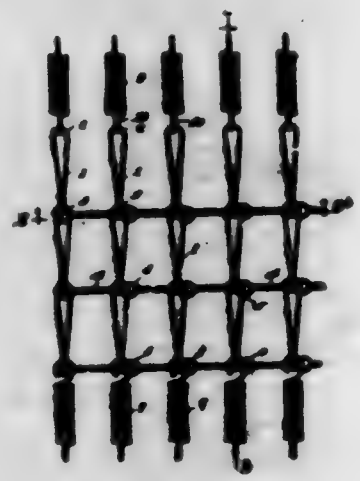
1. In indexing twin tabs each composed of a reference section and a guide section, the reference section containing reference information and the guide section containing directions as to where said reference information section is to be put for reference purposes.

1,300,988. BORING-MACHINE. FRED SILBERSACK, Oak Park, Ill., assignor of one-third to Edwin T. Erickson, Oak Park, Ill., and one-third to William A. Hansen, Chicago, Ill. Filed Apr. 15, 1918. Serial No. 228,644. 18 Claims. (Cl. 144—112.)



8. In a boring machine, the combination with a frame, of a series of laterally adjustable supports thereon, boring spindles on said supports, clutch controlled, power-operated mechanism for simultaneously adjusting said supports to variably space said spindles, and means for rotating said spindles in the different adjusted positions of said supports.

1,300,994. BED-SPRING FABRIC. GARY B. SMITH, Chicago, Ill. Filed Aug. 8, 1917. Serial No. 184,800. 6 Claims. (Cl. 5—39.)



1. A fabric embodying two sets of chains crossing one another and each comprising doubled wire links each having a loop at one end and hooks at the other end, the hooks of the links of one set engaging the loops of their companion links to connect them, the hooks and loops of the links of the other set embracing and crossing, respectively, the doubled portions of the links of the first-named set, with said loops surrounding and slidably contacting with said hooks to hold them closed on the links of the first-named set when the links are under strain and to connect the links of the second-named set.

2. A fabric according to claim 2, with those portions that are disposed side by side provided with separated portions between which the second-named hooks and loops are disposed.

5. A fabric including longitudinal and transverse sets of wire link chains crossing one another and connected together, the longitudinal chains each having at one end a link with a hook embracing a link of one endmost transverse chain, and individual independent members separable from the chains and to take up the strain therefrom, disposed beyond the ends of the longitudinal chains and having hooks extending across said transverse chain and around the aforesaid hooks to hold them closed on the links of said transverse chain and to connect the ends of the longitudinal chains and said members.

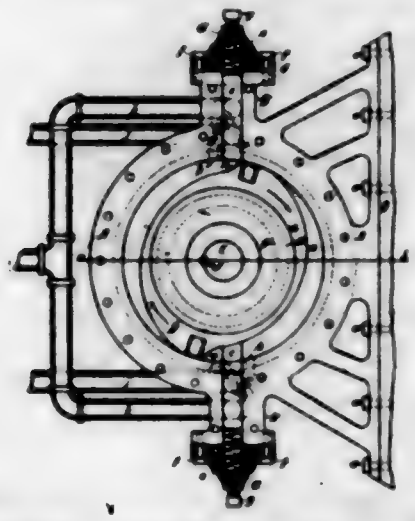
6. A fabric according to claim 5, with the links of the transverse chain that are embraced by the hooks of the longitudinal chains provided with portions holding the hooks in position thereon.

1,300,665. SWITCH. THOMAS E. SMITH, Los Angeles, Calif., assignor to Endert Traffic Signal Company, Bakersfield, Calif., a Corporation of California. Filed June 18, 1917. Serial No. 175,345. 5 Claims. (Cl. 200—27.)



2. A switch mechanism embodying a base, a switch rod mounted thereon to be independently longitudinally slidable and rotatable, spring means to oppose the longitudinal and rotational movements of the switch rod, a switch arm mounted transversely across the end of the switch rod extending normally both above and below the switch rod, a stationary contact below the switch rod in a position to be engaged by the lower end of the switch arm when the switch rod and arm are moved longitudinally, and a pair of stationary contacts arranged at opposite sides of the switch rod and with which the upper end of the switch arm is adapted to engage when the switch rod and arm are rotated.

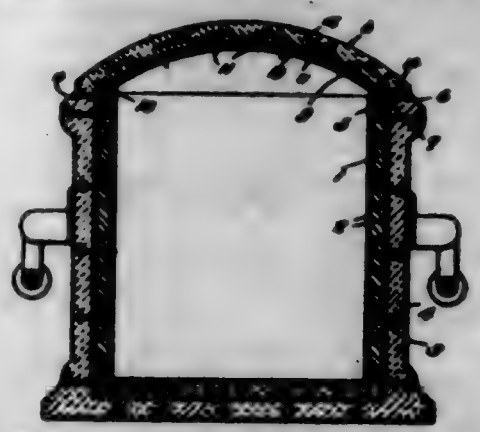
1,300,666. ROTARY ENGINE. JOHN N. SPENCER, Truro, Nova Scotia, Canada. Filed June 20, 1918. Serial No. 241,064. 4 Claims. (Cl. 121—71.)



1. In a rotary engine, the combination of a base plate, a cylinder mounted on the base plate and having an inwardly projecting circumferential flange adapted to receive a plurality of packing rings in its outer surface, a cylinder head secured to the cylinder and having an inwardly projecting circumferential flange adapted also for the reception of a plurality of packing rings on its outer surface, a piston revoluble between the cylinder and the cylinder head and having oppositely formed circumferential projections arranged in overlapping relation with the said flanges and adapted to fit against the said packing rings, said circumferential projections being provided with outer peripheral cam faces and valves operated by the peripheral cam faces for controlling the admission and cut off of fluid pressure.

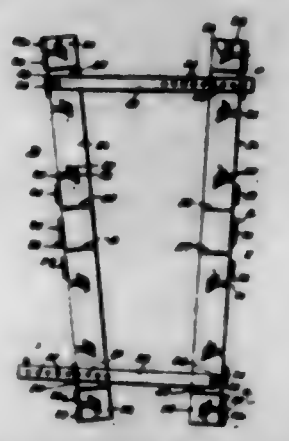
1,300,667. BURIAL-CASKET. CHARLES HOWARD STAMM, Indianapolis, Ind., assignor to Pitch-Lined Cement Casket Co., Indianapolis, Ind. Filed Sept. 17, 1918. Serial No. 254,447. 1 Claim. (Cl. 27—3.)

A combined burial vault and casket including a wooden structure consisting of tongue and grooved members forming the lining of the bottom and walls of the device, a pitch covering upon the outer and inner surfaces of said lining, a plurality of headed anchoring devices extending beyond the outer surfaces of the lining, a concrete covering molded onto the outer pitch covered surface of the lining and having the heads of the anchoring devices embedded therein, the upper edges of the wall portions of the lining and concrete covering converging downwardly to form a con-



tinuous channel, adapted to be seated at its edges in the channel and including a lining plate, wings thereon, and a concrete covering upon the plate and anchored thereto by the wings, said covering bearing downwardly upon the inclined upper edge of the concrete covering of the walls of the device.

1,300,668. GARMENT PRESSER AND CREASER. SHIRLEY Q. STANLEY, Chicago, Ill. Filed Sept. 28, 1918. Serial No. 256,268. 6 Claims. (Cl. 100—57.)



6. In a trouser presser and creaser, a clamp, said clamp comprising two members, said members being hingedly connected at one of their longitudinal edges, slots reaching from these edges inwardly, a clamping bolt in each of said slots, said clamping bolt having a right-angled bend, said bent portion being embedded in the lower surface of one of said members, and means for retaining said bent portion in position.

1,300,669. PORTABLE VALVE-GRINDER. BENN F. STRINMAN, Worcester, Mass., assignor of one-half to Albert W. Larson, Worcester, Mass. Filed Sept. 16, 1917. Serial No. 190,494. 2 Claims. (Cl. 51—4.)

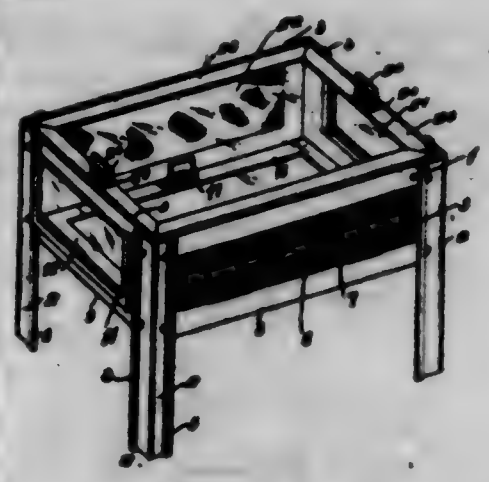


1. A portable valve grinder having, in combination, a reciprocating operating shaft provided with devices for

engaging a valve head, an arm on said shaft, a bell crank, a link connecting said arm to said bell crank, a crank pin, a second link connecting said bell crank to said crank pin, a rotatable support for said crank pin axially alined with said operating shaft, and means to continuously rotate said support, thereby reciprocating said shaft angularly.

2. A portable valve grinder having, in combination, a casing, a reciprocating operating shaft mounted therein, devices on said shaft for engaging a valve head, a motor in said casing, upper and lower bearings for said motor, an eccentric device movable in a circular path by said motor, operative connections from said eccentric to said shaft effective to reciprocate said shaft angularly, and a cup inclosing the upper end of said casing and independent of the upper motor bearing, said cup being detachably mounted on the upper end of said casing and comprising a handle for convenient manipulation of said valve grinder.

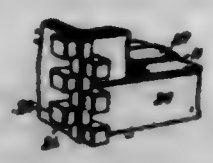
1,300,670. EVAPORATOR. Hannah Stevens, La Harpe, Ill. Filed Aug. 1, 1917. Serial No. 182,884. 4 Claims. (Cl. 34—20.)



1. In an evaporator, a substantially rectangular body having a solid bottom, a transparent tray resting upon said solid bottom, and a transparent tray removably supported at the upper edge of the body for forming a cover therefor.

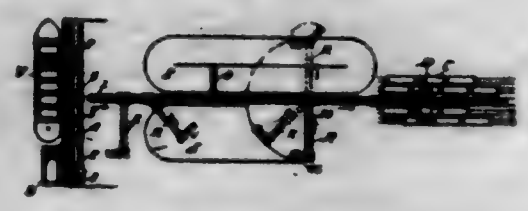
4. In an evaporator, a rectangular body having openings formed in its sides and ends, screen wire of fine mesh extending over the openings formed in the sides of said body, guides carried by the outer surfaces of the ends of said body, glass plates removably supported by said guides, a glass tray positioned within said body and resting upon the bottom of the same, horizontal inwardly extending flanges carried by the sides of the body adjacent their upper edges, a glass cover plate removably mounted upon said flanges and forming a closure for the open top of the body, said glass tray and cover plate having their edges bound with metallic binding strips.

1,300,671. BOX. Howard W. Still, Fargo, N. D. Filed Aug. 24, 1918. Serial No. 251,345. 2 Claims. (Cl. 217—42.)



1. A collapsible box or crate comprising side and end sections having portions to intersect each other at the corners of the box when said sections are assembled, said portions being provided with rectangular notches, a top and a bottom wall, bars to retain said top and bottom walls in place having tenons at their ends provided with grooves to register with certain of said notches, and removable key bars adapted to be vertically engaged through the notches in the ends and sides of the box and through said grooves to retain the several parts in their assembled positions.

1,300,672. SYSTEM AND APPARATUS FOR RECLAIMING MATERIALS. Francis Lee Stuart, Washington, D. C., assignor to International Conveyer Corporation, New York, N. Y. Filed Nov. 18, 1917. Serial No. 202,796. 8 Claims. (Cl. 198—8.)



1. In a system of the class hereinbefore described a main conveyer, a truck-supported secondary conveyer longitudinally adjustable over said main conveyer for supplying it, pivotal connections between said truck and the inner end of the secondary conveyer, a truck on the outer end of said secondary conveyer, a turn-table thereon, a hopper carried by and turning with the turn-table, and a digger mounted on said truck discharging into said hopper and turning therewith about a vertical axis.

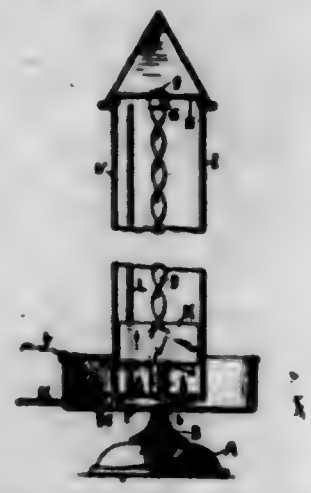
1,300,673. SAFETY DEVICE FOR RAILWAY-CARS. William V. Turner, San Jose, Calif. Filed June 12, 1918. Serial No. 239,543. 2 Claims. (Cl. 105—6.)



1. A safety device for railway cars comprising triangular shaped members, lips formed upon said triangular shaped members, and braces secured to said lips and to the platforms of cars.

2. A safety device for railway cars comprising a pair of triangular shaped plates having triangular shaped openings, lips formed on said plates and surrounding said openings, braces connecting said lips, end members having annular flanges secured to the plates, and braces secured to the lips and to the platforms of the cars.

1,300,674. MERRY-GO-ROUND. John C. Turner, Dayton, Ohio, assignor to The John C. Turner Novelty Co., Dayton, Ohio, a Corporation of Ohio. Filed Mar. 20, 1917. Serial No. 156,183. 2 Claims. (Cl. 46—37.)

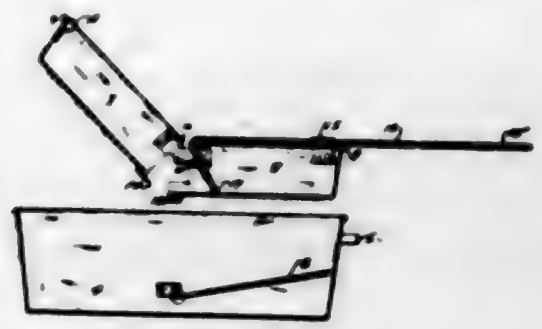


1. A gravity toy combining a base; an upright spiral having a ratchet connection with said base; a turn-table freely pivoted to said base; a weight vertically slidable on said spiral; and means for enabling said weight to rotate said turn table during its descent.

2. A gravity toy combining a vertical spiral; a weight threaded thereto and vertically slidable thereon so as to

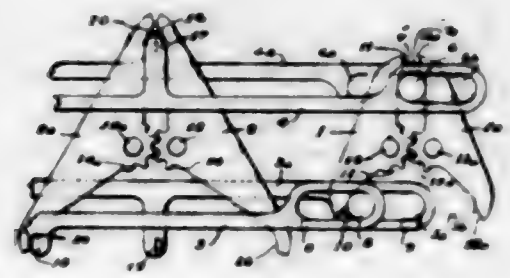
be retained thereby; a turn table; a tongue-and-slot connection between said weight and turn-table enabling said weight to impart its rotations to said turn table during its descent; and a ratchet for permitting a free turning of said spiral when said weight is uplifted and for restraining its turning during its descent.

1,300,675. ASH-SIFTER. JOSEPH VOLPERT, Milwaukee, Wis. Filed July 27, 1918. Serial No. 247,005. 5 Claims. (Cl. 93—60.)



1. A sifter comprising hingedly connected screen-bottom sections open at their meeting ends, and a reciprocative scraper for which one of the sifter sections is provided with guides.

1,300,676. GEAR-SHIFTING DEVICE. GEORGE LESLIE WALKER, Pueblo, Colo. Filed Mar. 11, 1916. Serial No. 83,455. 16 Claims. (Cl. 74—33.)

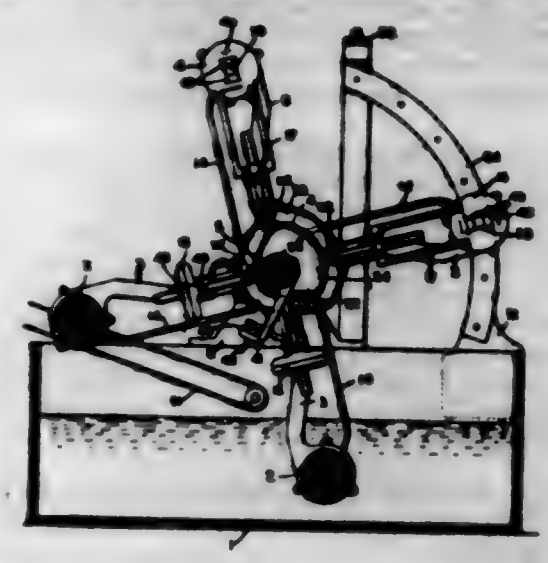


1. In combination with the two gear shifting rods of an automobile transmission, a pin rigidly attached to each rod, a pair of slotted links engaging each pin by their slots, and connections from each pair of links to the pin associated with the other pair of links for returning either pin to neutral position whenever the links associated with the other pin are operated.

9. In combination with the two gear shifting rods of an automobile transmission, a pin rigidly attached to each rod, a pair of slotted links engaging each pin with their slots, a pair of intermeshing link shifting members pivoted between the said pairs of links and having their ends crossing the links, and a lug on each link in position to engage an end of one of said link shifting members.

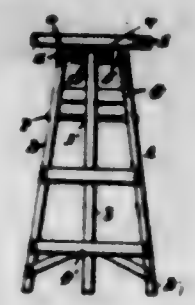
1,300,677. MACHINE FOR MOLDING ARTICLES FROM PULP. FRANK W. WATERMAN, Baltimore, Md., assignor to Keyes Fibre Company, Waterville, Me., a Corporation of Maine. Filed Mar. 2, 1917. Serial No. 151,880. 12 Claims. (Cl. 92—56.)

1. In a machine for molding pulp articles comprising a traveling mold having a plurality of separable members provided with coöperating mold faces, and means for introducing a layer of pulp between said mold faces: a stationary compressor secured against movement with the traveling mold extending in substantial parallelism with the path of the mold through a considerable portion of said path and yieldable means for causing the same to apply a gradually increasing pressure to said mold



members whereby the liquid content of the pulp will be gradually expelled.

1,300,678. FOLDING STOOL. DAVID WEINER, Pittsburgh, Pa. Filed Nov. 25, 1916. Serial No. 133,334. 1 Claim. (Cl. 155—32.)

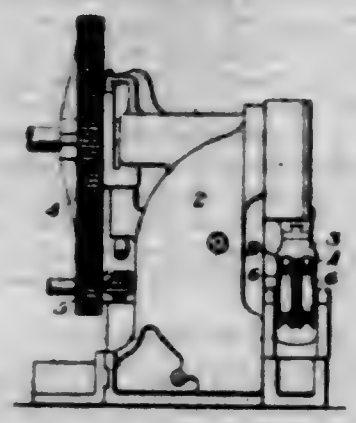


A folding stool, comprising a seat member, a pair of spaced lugs on the under side of the seat, a pair of spaced legs having their upper ends slotted to receive said lugs, and pins passing through said legs and said lugs to form a pivotal connection, a bar extending between said legs, a third leg rockably mounted on said bar and spaced from the ends thereof, a pair of guide members on the bottom of said seat extending at right angles to the hinged axis of said pair of legs and adapted to receive the upper end of the third leg between the same, to thereby support said third leg laterally, said guide members having longitudinally slots in their opposed faces, a guide pin carried by said third leg and retained in said slots, stops at the end of said slots to limit the movement of said third leg in the open position of said stool, a brace secured to the face of one side of said pair of legs above said bar, and other braces secured to the opposite side of said pair of legs below said member, said braces being adapted to limit the movement of the third leg in the closed position of said stool.

1,300,679. STRAIGHTENING-PRESS AND METHOD OF OPERATING SAME. CHARLES O. WEISSENBURGER, Youngstown, Ohio. Filed June 2, 1916. Serial No. 101,284. 2 Claims. (Cl. 153—48.)

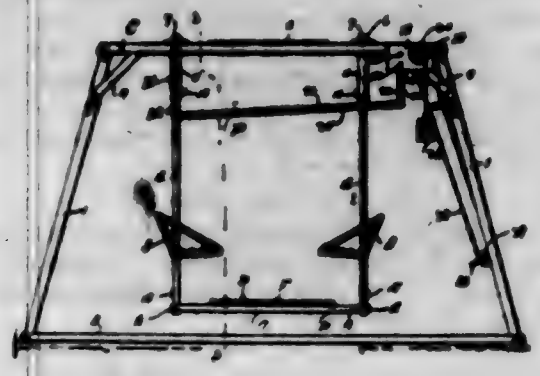
1. The herein described method which consists in entering a piece to be straightened in one pass of a straightening press and feeding through and straightening a portion thereof from one side of the press and thereafter feeding through and straightening the remaining portion of the piece from the opposite side of the press, and while the first piece is being fed and straightened from the opposite side of the press, entering another piece to be straightened from the first side of the press in another and parallel pass, feeding and straightening the

second piece from the first side of the press until the first piece is withdrawn at the opposite side and then feeding and straightening the second piece from the opposite side of the press, and repeating the above described operations with subsequent pieces to be straightened; substantially as described.



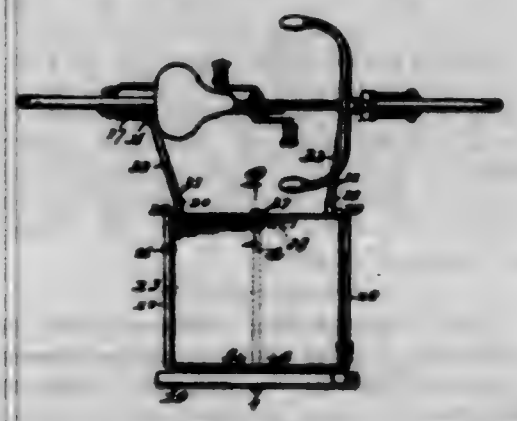
2. A straightening press having two sets of anvil wheels arranged in tandem and forming two parallel passes through which two separate pieces to be straightened are adapted to be fed by operators working at opposite sides of the press, and a reciprocating bending die arranged to act simultaneously upon the pieces in both passes; substantially as described.

1,300,680. SWING. JAMES C. WILSON, Dalton, Ga. Filed Feb. 8, 1919. Serial No. 275,792. 4 Claims. (Cl. 155—35.)



1. A device of the character described comprising a shaft supported for rocking movement, an oscillating member carried by the shaft, an arm extending from the shaft, a motor including a rocking driving arm, and a pitman operatively connected with both of said arms, the connection of the pitman with the first named arm being adjustable longitudinally of said first named arm.

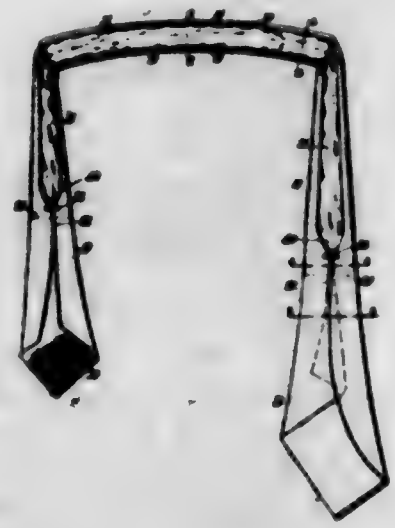
1,300,681. SIDE CAR FOR BICYCLES. ARTHUR X. WISSMAN, West Haven, Conn. Filed Mar. 11, 1918. Serial No. 221,772. 3 Claims. (Cl. 206—45.)



1. A side car comprising a frame, supporting wheels at the sides of the frame, plates secured to and extending outwardly from the side of the frame, bars adapted for securement to a cycle frame, plates on said bars, and bolts loosely passed through said plates and the frame carried plates.

2. A side car comprising side frame sills, end frame sills having their extremities disposed over and secured to the side sills, a receptacle adapted to detachably seat on the side sills and fit between the end sills, means for securing the receptacle in such seating position, an axle extended transversely under and secured to the side sills, a wheel on said axle and means for connecting the frame sills with a cycle frame.

1,300,682. NECKTIE. ISADORE DAVID WOLFSON, New York, N. Y., assignor to I. D. Wolfson, Inc., a Corporation of New York. Filed May 22, 1914. Serial No. 840,181. 1 Claim. (Cl. 2—11.)



A necktie consisting of a neckband and two tying ends and comprising a face-strip having its opposite edges overturned along the neckband forming marginal folds, and a lining-strip of antifriction material of a width substantially less than the width of the neckband portion having its opposite edges under-turned forming marginal folds narrower than the folds of the face-strip, said strips being secured together by concealed stitchings passing through the turned flaps thereof.

1,300,683. NECKTIE AND METHOD OF MAKING SAME. ISADORE D. WOLFSON, New York, N. Y. Filed Oct. 7, 1918. Serial No. 257,116. 4 Claims. (Cl. 2—11.)



1. A necktie having a main portion and an inserted strip, said strip being shorter than the full length of the main portion of the tie and having its ends secured within the main portion of the tie.

1,300,684. METHOD OF MAKING NECKTIES. ISADORE DAVID WOLFSON, New York, N. Y. Original application filed Oct. 7, 1918, Serial No. 257,116. Divided and this application filed Mar. 1, 1919. Serial No. 280,042. 4 Claims. (Cl. 2—11.)

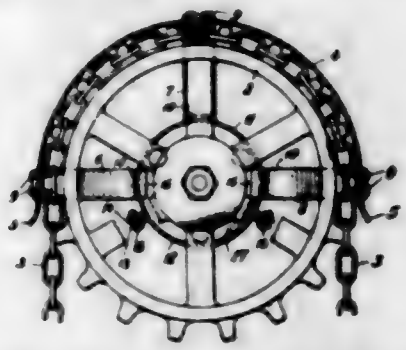
4. The method of making a necktie formed of a main portion and an inserted strip, said strip being shorter than the full length of the main portion of the tie; which consists in forming a blank out of the goods of which the tie

is to be made; sewing together, on the wrong side, the edges of the strip and main portion of the tie; securing



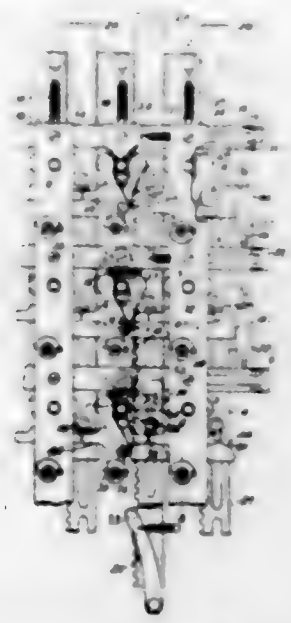
the ends of the strip to the main portion of the tie; and turning the tie thus formed.

1,300,685. VALVE-OPERATING DEVICE. JOHN WOODCOCK, Hartford, Conn., assignor to Pratt & Cady Company, Incorporated, Hartford, Conn., a Corporation of New York. Filed July 31, 1918. Serial No. 247,490. 6 Claims. (Cl. 137—139.)



4. In valve operating devices adapted to operate steam valves or the like, an operating wheel for the valve stem to be engaged by a flexible operating member, a guide adjacent said operating wheel throughout part of its circumference engaged by said operating member and supporting means connected to said guide to hold the same in position and adapted to fit around and be securely clamped to a flange on the valve.

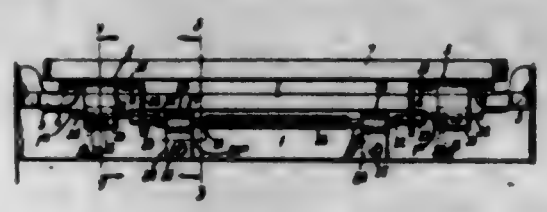
1,300,686. VOTING MECHANISM. WILLIAM H. BABCOCK, West Somerville, Mass., assignor to American Voting Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 10, 1915. Serial No. 20,553. 14 Claims. (Cl. 235—54.)



1. A voting mechanism, comprising a bar mounted to slide endwise with rack teeth along an edge thereof, a row of key spindles mounted in spaced apart relation adjacent said rack and each equipped with teeth to engage the rack teeth, and a separate slide for each key spindle mounted for limited endwise movement in parallelism with said bar to coöperate with said bar adjacent each of said key spindles, said slide being formed to permit one tooth only of a key spindle to engage a tooth of said rack and to lock the key spindle against further turning.

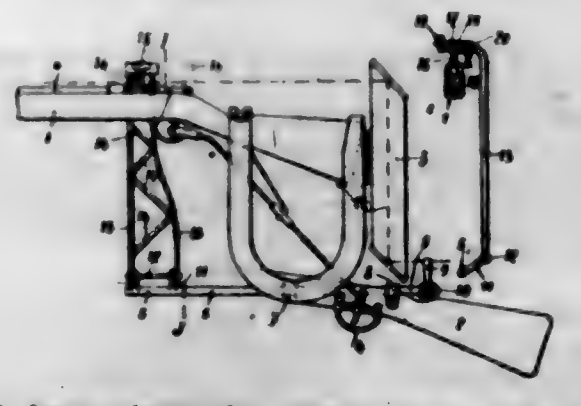
10. A voting mechanism, comprising series of key spindles arranged in vertical columns and horizontal rows, a bar mounted in operative relation to the key spindles of each vertical column, said spindles and bar having coöperative means whereby the spindle moves the bar endwise, a slide member for each spindle mounted to coöperate with its bar for limiting the operative engagement of the spindle with the bar and arranged to be moved with the bar by the spindle to a limited extent, a horizontally slidable bar having projections engaging the tops of said slide members to lock the same when said bar is held in one position, said slide members having beveled corners adapted to engage said projections, and a spring for normally holding said horizontal bar with its projections engaging said slide members.

1,300,687. TYPE-WRITING MACHINE. JOHN H. BABB, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 12, 1916. Serial No. 136,492. 9 Claims. (Cl. 197—82.)



1. In a typewriting machine, the combination of a pair of parallel levers pivotally supported on the main frame of the machine, a cross bar connecting said levers, and an equalizing device supported on the main frame and comprising a rock shaft having bearings in the base frame of the machine and provided with angularly extending portions, said portions having loose connections with parts extending from said cross bar.

1,300,688. APPARATUS FOR ACTUATING THE BOLTS OF RIFLES OR OTHER WEAPONS. ALFRED BELLARD, Paris, France. Filed June 3, 1916. Serial No. 101,496. 10 Claims. (Cl. 42—72.)

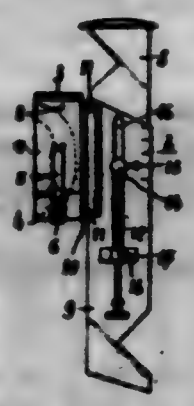


6. A frame adapted for attachment to a gun of the breech bolt type, adapted to hold such gun fixedly in an elevated position during firing, combined with an operating handle mounted on said frame beneath the gun, said handle being capable of two movements, the one for rotating the bolt, and the other for sliding it longitudinally, and intermediate connecting means mounted on said frame and engaging the breech bolt, and adapted to communicate said respective movements from the handle to the bolt for reloading the gun after firing.

1,300,689. PERISCOPIC ATTACHMENT FOR MACHINE-GUNS. ALFRED BELLARD, Paris, France. Filed Aug. 27, 1917. Serial No. 188,539. 8 Claims. (Cl. 88—1.)

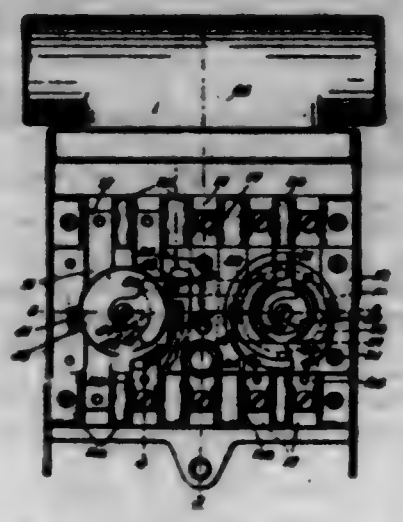
1. Periscopic apparatus for fixing to machine guns, comprising a box in two parts hinged together, in which the

handle, butt or other part of the machine gun is inserted; means for holding or clamping the two parts of the



box together; the box having an attachment at the rear; a periscope adapted to be fixed at the rear of the box, and means for adjusting the periscope.

1,300,690. METER-TESTING CONNECTION. CARL H. BIRDSALL and HAROLD P. HASTINGS, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 15, 1918. Serial No. 261,200. 17 Claims. (Cl. 175—182.)



1. A meter testing system comprising a plurality of conductors, some being connected between the meter and the feed circuit and others between the meter and the load circuit, one of the conductors being permanently connected to a leg of one of said circuits and to the meter, and the connections between the meter and a second one of the conductors, the later conductor being connected to a leg of the other circuit, including a movable conductor connected in circuit with the meter and normally in circuit with said second conductor, means for short circuiting said two of the plurality of conductors, at a point between the movable conductor and the circuits connected to said two conductors, and for breaking the circuit between the movable conductor and said second conductor, and a meter testing circuit having one leg designed to be connected in series with the first-mentioned meter, at a point between said movable conductor and the feed circuit, and having its other leg provided with means for electrical connection with another of said plurality of conductors the latter conductor being connected to the feed circuit, substantially as and for the purpose described.

2. A meter testing system comprising a pair of conductors designed to be connected in circuit respectively with one leg of a feed circuit and one leg of a load circuit, a terminal normally in circuit with the meter, a movable switch member, a conductor carried by the switch member and connected in circuit with the terminal and normally in circuit with one of the pair of conductors, means for short-circuiting the pair of conductors, at a point between the conductor carried by the switch member and the circuit legs connected to said pair of conductors, and for operating the switch member to break the circuit between the conductor carried thereby and said one of the pair of conductors, said means being provided with a conductor for making electrical connection with the conductor carried by the switch member, and a meter testing circuit having one leg designed to be connected to the conductor of said means and its other leg designed to be connected to the feed circuit, substantially as and for the purpose described.

11. A meter testing system comprising a base having a recess and a socket, a plurality of conductors carried by the base, some of the conductors being connected between the meter and the feed circuit, and others between the meter and the load circuit, the connections between one of the conductors and the meter including a movable conductor in the recess, the movable conductor being connected in circuit with the meter and normally in circuit with said one of the conductors, means for short-circuiting said one of the conductors and another of said conductors, at a point between the movable conductor and the circuit legs connected to the conductors to be short-circuited, and for breaking the circuit between the movable conductor and said one of the conductors, said means being movable in the socket and being provided with a conductor for making electrical connection with the movable conductor in the recess, and a meter testing circuit having one leg designed to be connected to the conductor of said means and its other leg designed to be connected to the feed circuit, substantially as and for the purpose specified.

13. A meter testing system comprising a base having a recess and a socket, a plurality of conductors carried by the base, some of the conductors being connected between the meter and the feed circuit, and others between the meter and the load circuit, the connections between one of the conductors and the meter including a movable conductor in the recess, the movable conductor being connected in circuit with the meter and normally in circuit with said one of the conductors, means for short-circuiting said one of the conductors and another of said conductors, at a point between the movable conductor and the circuit legs connected to the conductors to be short-circuited, and for breaking the circuit between the movable conductor and said one of the conductors, said means including separate terminals in the socket connected respectively to the conductors to be short-circuited, a movable conductor for connecting the terminals, and means associated with the last mentioned movable conductor for entering the recess and actuating the first-mentioned movable conductor, and a meter testing circuit designed to be connected between the movable conductor in the recess and the feed circuit, substantially as and for the purpose set forth.

16. A meter testing system comprising a base having a pair of recesses and a pair of sockets communicating with the recesses, a plurality of conductors carried by the base, some of the conductors being connected between the meter and the feed circuit, and others between the meter and the load circuit, the connections between one of the conductors and the meter including a movable conductor in one of the recesses, the movable conductor being connected in circuit with the meter and normally in circuit with said one of the conductors, and the connections between two of the other conductors and the meter including a pair of separate, movable conductors in the other recess, the last-mentioned movable conductors being connected in circuit with the meter and normally in circuit with said two conductors, and short-circuiting means comprising members movable into the sockets to complete the short circuiting, members coacting with the movable conductors for breaking the circuits between said movable conductors and the first-mentioned conductors in circuit therewith, and another movable conductor for making connection with one of the separate, movable conductors, and a meter testing circuit having one leg designed to be connected to the last-mentioned conductor and its other leg designed to be connected to the feed circuit, substantialy as and for the purpose set forth.

1,300,691. DEVICE FOR FILLING END-OPENING CONTAINERS. ALBERT BLEILE, Dayton, Ohio. Filed June 27, 1918. Serial No. 242,330. 17 Claims. (Cl. 107—45.)



2. A device of the character described comprising a structure to support a plurality of cakes on edge and face to face, said structure having an opening along one edge thereof to permit the cakes to be manipulated thereon and being adapted to extend lengthwise into a container for substantially the full length of said container, said structure also having means to retain said cakes in stationary upright positions while said container is being placed about the same, and having its forward end unobstructed to enable the cakes to be withdrawn therefrom along with said container when the latter is removed from said structure.

1,300,692. SCEW-THREAD MICROMETER. LOWELL C. BLOMSTROM, Detroit, Mich. Filed Jan. 7, 1918. Serial No. 210,627. 6 Claims. (Cl. 33—166.)



3. A micrometer caliper comprising a yoke, an anvil an barrel respectively carried by said yoke, said barrel having a scale extending longitudinally thereon, a spindle adjustable in said barrel to or from the anvil, a sleeve embracing said barrel and carrying a helical scale reading in screw pitches, said sleeve and spindle having engaged screw-threaded portions, the pitch of which is also that of said helical scale, and a thimble rigidly engaged with said spindle and embracing said sleeve and formed with a sight window with which the indicia of the helical scale may be respectively registered through relative rotation of the sleeve and spindle, the sleeve being adapted to be set with reference to the scale on the barrel by adjustment of the sleeve in unison with the spindle.

4. A micrometer caliper comprising a yoke, an anvil and barrel respectively carried by said yoke, said barrel having a scale extending longitudinally thereon, a spindle screw-threaded in said barrel for adjustment by rotation to or from the anvil, a sleeve embracing said barrel and carrying a scale reading in screw-pitches, and a thimble rigidly engaged with said spindle and embracing said sleeve, the sleeve and thimble being relatively longitudinally adjustable to set the latter with reference to the scale on the former and being adjustable in unison with the spindle and with reference to the scale on the barrel to set the spindle with relation to the anvil.

1,300,693. DISCOUNT-SAVINGS CHECK. CHARLES W. BOLL, Harrisburg, Pa. Filed Mar. 20, 1915. Serial No. 18,134. 2 Claims. (Cl. 283—60.)



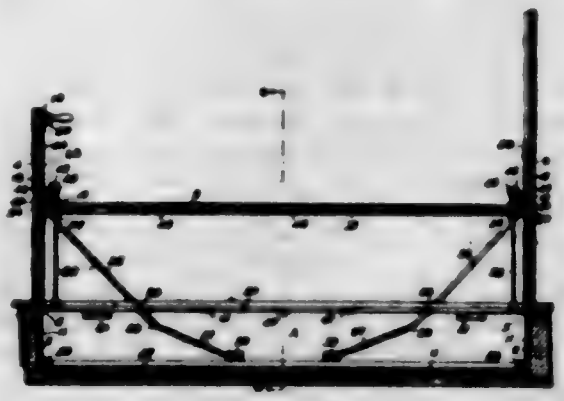
1. A check of the character referred to showing the amount of a purchase and also the definite money value thereof as a savings deposit.

1,300,694. DISAPPEARING BED. ROBERT W. BOSTWICK and GRANT W. BOSTWICK, Detroit, Mich. Filed June 20, 1918. Serial No. 240,951. 8 Claims. (Cl. 5—18.)



1. In combination with a floor recess having a hinged cover provided with supporting abutments, a bed comprising a hinged bottom adapted to be folded upon itself, means for locking said bottom in erected operative position, with one end resting on said abutments, and leg members on said bottom adapted to be folded up against said bottom.

1,300,695. DISAPPEARING BED. ROBERT W. BOSTWICK and GRANT W. BOSTWICK, Detroit, Mich. Filed Aug. 17, 1918. Serial No. 250,376. 14 Claims. (Cl. 5—18.)



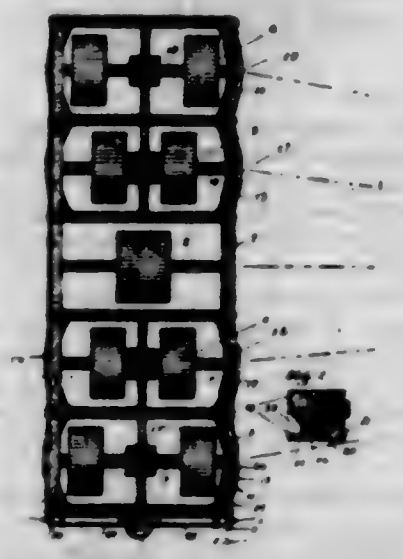
1. In a collapsible bedstead in combination with a recessed floor, a head and foot board adapted to be lowered to the floor level and to be erected at right angles thereto, a bedstead, raising and lowering mechanism therefor carried by the head and foot boards and provided with actuating mechanism mounted on one of said boards, and spring controlled locking and bracing mechanism for fixedly engaging and holding the bedstead and head and foot boards respectively in erected position.

1,300,696. REINFORCING FABRIC STRIP FOR TIRES. THOMAS BRANSON, Philadelphia, Pa., assignor to Silvers & Stern, Inc., Germantown, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1918. Serial No. 221,714. 4 Claims. (Cl. 66—4.)



1. A reinforcing fabric strip for tires comprising a series of straight parallel cords extending lengthwise of the strip, a series of rows of enchained thread loops extending lengthwise of the strip and binding threads extending lengthwise of the strip and connecting said enchained thread loops, said enchained thread loops and binding threads being disposed so as to connect and hold said cords, whereby said strip may be cut in a lengthwise direction between alternate binding threads.

1,300,697. COMPENSATING STEARING-GEAR FOR ROAD-PLANERS. GEORGE W. CARTWRIGHT, Sacramento, Calif. Filed Feb. 7, 1917. Serial No. 147,268. 8 Claims. (Cl. 21—184.)

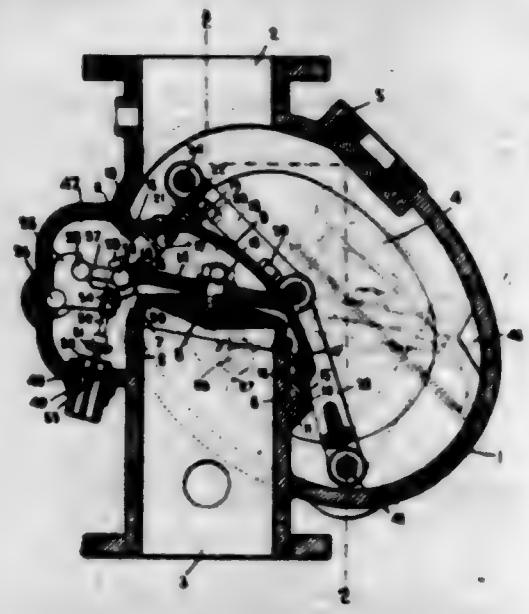


1. The combination with a perpendicularly rigid frame, of a plurality of axles arranged in consecutive order on the frame, a single steering rod common to all the axles, worms on the rod connected in driving relation with the axles, the pitch of the threads of the successive worms being varied whereby with the operation of the rod all the axles will be steered horizontally in arcs having a constant common center irrespective of the radii of the arcs.

2. A device of the character described comprising the combination with a road planer consisting of a frame and a series of shafts carrying rollers arranged in consecutive order within the frame, of a means for steering said rollers comprising a common steering wheel, means interposed between the steering wheel and the shafts for turning all of the shafts horizontally and in unison with each other on a curvature having a common center, such means comprising curved bearing members supporting the shafts, curved guides, the bearing members being movable in the guides, a pinion rack on each bearing member, a worm gear intermeshing with each pinion rack, and means for turning all of the worm gears with the common steering member.

3. A device of the character described comprising the combination with a road planer consisting of a frame and a series of shafts carrying rollers arranged in consecutive order within the frame, of a means for steering said rollers comprising a common steering wheel, means interposed between the steering wheel and the shafts for turning all of the shafts horizontally and in unison with each other, such means comprising curved bearing members supporting the shafts, curved guides, the bearing members being movable in the guides, a pinion rack on each bearing member, a worm gear intermeshing with each pinion rack, and means for turning all of the worm gears with the common steering member, the pitch of said gears being varied so that the said shafts will be turned at a proper relative speed to cause them to move on a curvature having a common center.

1,300,698. DRY-PIPE VALVE. EZRA E. CLARK, Newtonville, Mass. Filed Dec. 31, 1917. Serial No. 209,765. 8 Claims. (Cl. 169—22.)



1. A dry pipe valve comprising a casing, a water valve and an air valve connected to form a single valve structure, the water valve being of less area than the air valve, the planes of the differential valves being oblique to each other, seats for said valves, and link members of equal length pivoted to provide a parallel link motion to carry the differential valve structure and to guide the valve structure from seated to unseated position.

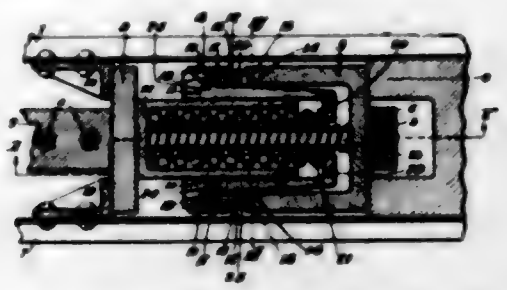
1,300,699. GREASE-CUP. LLOYD GROVE COPEMAN, Flint, Mich., assignor to Copeman Development Co., Flint, Mich., a Corporation of Michigan. Filed June 5, 1918. Serial No. 238,321. 5 Claims. (Cl. 184—48.)



1. In a grease cup adapted to contain a grease capsule, a plunger constructed of two or more washers, a screw-threaded stem, the washer immediately abutting the screw-

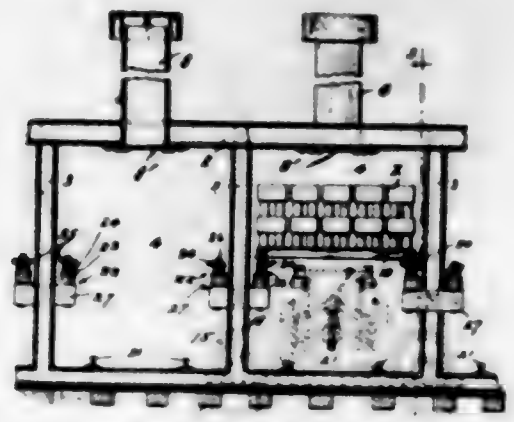
threads being fixed upon the stem so as to rotate with the stem while the washer on the immediate end is mounted loosely upon the stem.

1,300,700. DRAFT-GEAR. JOHN F. COURSON, Pitcairn, Pa. Filed Apr. 4, 1918. Serial No. 226,586. 5 Claims. (Cl. 213—64.)



1. In a friction draft gear, a central friction member and a pair of lateral embracing co-acting friction wedges adapted to move thereon, a spring adapted to exert pressure on each of said members, a wedge faced casing, a wedge faced retaining frame engaging said friction wedges, compound angle friction wedges engaging the casing, retaining frame and said co-acting friction wedges respectively, and means connecting said mechanism with a drawbar.

1,300,701. DRIER. DELL S. CROSBY, Chicago, Ill., and SILAS E. CULLUM, Tower, Minn. Filed Aug. 3, 1916. Serial No. 112,939. 5 Claims. (Cl. 34—47.)

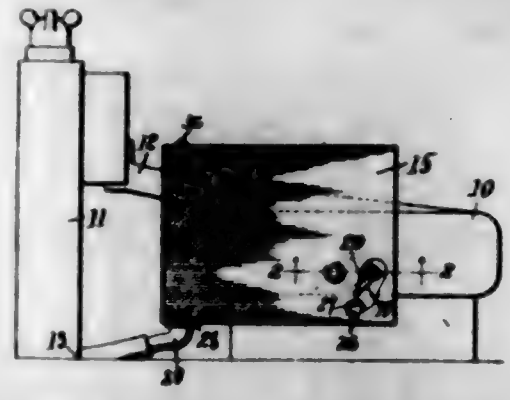


1. In a drier of the kind described, the combination with a tunnel, of a roller equipped track in the tunnel, a ware conveying pallet having metal angle shoes, the horizontal flanges of said shoes arranged to rest on the rollers of the track, and the vertical flanges of the shoes arranged back to back and turned downward to hold the pallet against lateral movement on the roller of the track.

2. In a drier of the kind described, the combination with a tunnel, of a roller equipped track in the tunnel, a ware conveying pallet having metal angle shoes, the horizontal flanges of said shoes arranged to rest on the rollers of the track, and the vertical flanges of the shoes arranged back to back and turned downward to hold the pallet against lateral movement on the roller of the track, said shoes being split at their end and the horizontal and vertical flanges thereof bent, the former upward and the latter inward with respect to the pallet.

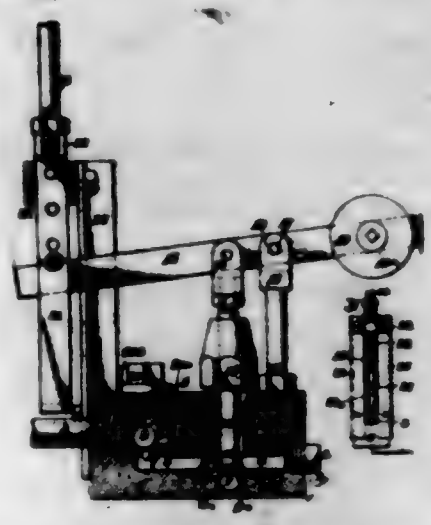
1,300,702. AUXILIARY WATER-TANK. CHARLES J. DALLEY, Newark, N. J. Filed July 17, 1918. Serial No. 245,430. 7 Claims. (Cl. 123—174.)

1. The combination with a water cooled motor and radiator, of an auxiliary water tank directly connected to and supported by the motor casting and adapted to be interposed in the water circulation system between the motor and the radiator with the water circulation outlet



of the radiator leading into said tank and the water circulation inlet of the motor leading out of said tank.

1,300,703. AUTOMATIC VALVE FOR HYDRAULIC MACHINERY. JOSEPH DAVIDSON, Greenville, S. C., assignor of one-half to American Machine & Manufacturing Company, a Corporation of North Carolina. Filed Aug. 8, 1918. Serial No. 113,701. 1 Claim. (Cl. 103—89.)

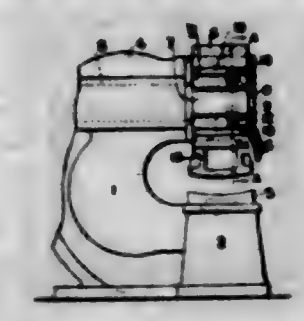


A pressure regulating valve, comprising a body having a thoroughfare provided with inlet and outlet ports, a check valve between them, a by-pass opening from the thoroughfare between the check valve and the inlet port, a by-pass valve controlling the by-pass opening having a stem extending to the outside of the body, operating means for the by-pass valve consisting of a counterweighted lever operatively connected with the stem of the by-pass valve and with the body, and operating means for the lever permitting of free oscillation in a vertical direction under the action of the counterweight, said means characterized by having a vertically reciprocating rod provided with a slotted lower portion through which the end of the lever extends and in which it has a large free play in a vertical direction and a guiding means on the body close to the reciprocating slotted portion of the vertical reciprocating rod whereby the lever is guided in a vertical direction and held against lateral displacement, said guiding means also having at its upper part an overhanging guide through which the slotted lower portion of the reciprocating rod is guided to maintain its slotted opening in alinement with the guiding means and with the lever end.

1,300,704. POWER-PRESS FOR BENDING PLATES OR METAL SHEETS. JOHANNES DIEWES, Gideon, near Groningen, Netherlands. Filed Apr. 14, 1917. Serial No. 162,140. 3 Claims. (Cl. 153—32.)

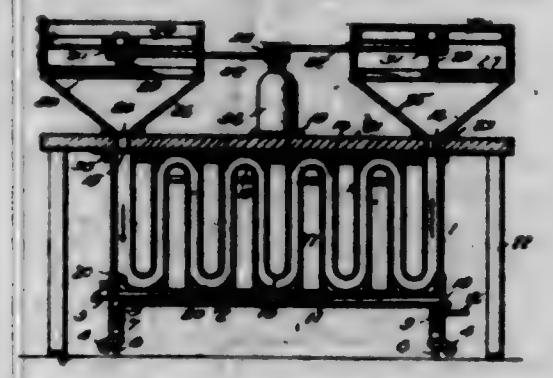
2. In a machine for bending metal plates or sheets, the combination of a concave stationary matrix, a die-carrier reciprocating with respect to said stationary matrix, a convex die secured to said die-carrier, an eccentric for

imparting reciprocating movement to said die-carrier, a block mounted between raceways in a recess of the die-carrier and adapted to reciprocate therein in a plane at right angles to the axis of said eccentric and in a direction substantially at right angles to the direction of



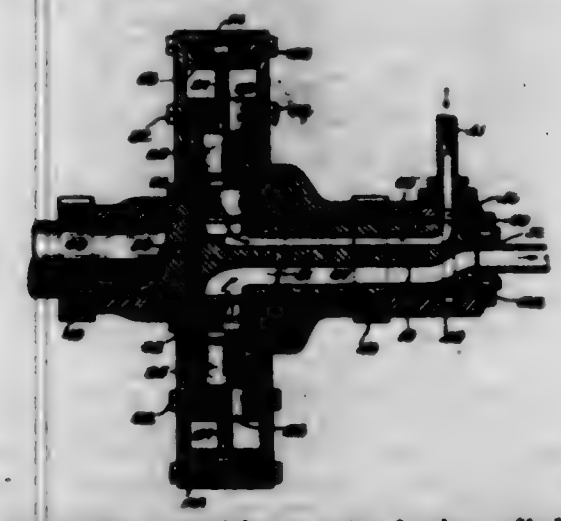
motion of the die-carrier, a second eccentric rotatably mounted in said block and embracing the first named eccentric, and means for imparting a rotary movement to the second eccentric to adjust the terminal points of the stroke of the movable die.

1,300,705. DEVICE FOR CHILLING AND DRYING AIR. BENJAMIN JOSHUA DU BOSE, Lisbon, Ga. Filed Oct. 26, 1917. Serial No. 198,655. 3 Claims. (Cl. 62—121.)



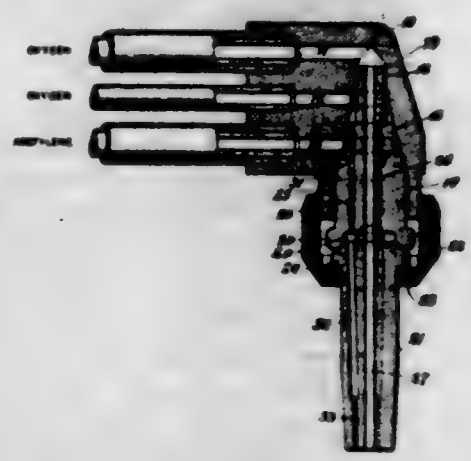
2. A device of the character specified, comprising a casing having an opening at each end, series of ice containers within the casing, the members of one series alternating with those of the other and the members of one series being spaced from the top of the casing, the members of the other series being spaced from the bottom for the purpose specified, and deflectors between the adjacent pairs of the same series, said deflectors being concaved and the adjacent members of the other series having rounded ends to form curved passages at the said deflectors.

1,300,706. ROTARY ENGINE. JOHN F. DUBY, Boston, Mass. Filed May 6, 1918. Serial No. 232,964. 7 Claims. (Cl. 121—64.)



1. An engine comprising a rotor having cylinders and passages connecting said cylinders with the rotor hub, pistons in said cylinders, a non-rotating valve shaft coaxial with the rotor and provided with means for admitting an expansive fluid to said passages to successively project the pistons, and for exhausting said fluid from said passages when the pistons are retracted, a driven shaft whose axis is out of alinement with the axis of the rotor, torque-transmitting connections between the pistons and the driven shaft, including a driving head fixed to, and concentric with, the driven shaft, and piston-rods connecting said head with the pistons, sprocket wheels fixed respectively to the rotor and driving shaft, an intermediate shaft having corresponding sprocket wheels, and sprocket chains connecting said wheels in pairs.

1,300,707. CUTTING-TORCH. MELBOURNE KEITH DURHAM, Chicago, Ill. Filed Jan. 18, 1919. Serial No. 271,814. 12 Claims. (Cl. 158—27.4)



8. In a torch, a head having a comparatively deep narrow angled conical socket, an interchangeable seat member adapted to fit within said socket and having a comparatively shallow wide angled conical socket in its outer end co-axial with said first-mentioned socket, and a tip having a conical head for seating in said last mentioned socket.

1,300,708. PROJECTILE. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed Feb. 12, 1916. Serial No. 77,882. 9 Claims. (Cl. 102—26.)



1. A projectile having a plurality of wings mounted thereon, and a plurality of longitudinally extending open-ended grooves extending forwardly from said wings and respectively terminating at their rear ends beneath the forward end portions of such wings, substantially as described.

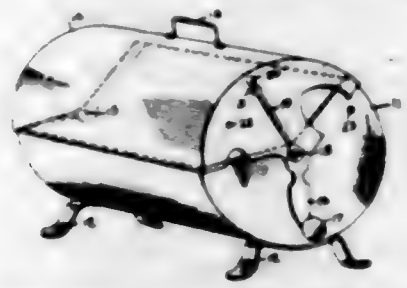
1,300,709. PROJECTILE. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed Feb. 12, 1916, Serial No. 77,882. Renewed Dec. 14, 1918, Serial No. 266,909. 12 Claims. (Cl. 102—26.)



1. A projectile comprising a body portion and a reduced end portion, said body portion having a cylindrical extension projecting therefrom and over said reduced end portion thereby providing an annular space between such extension and reduced end portion, the projectile

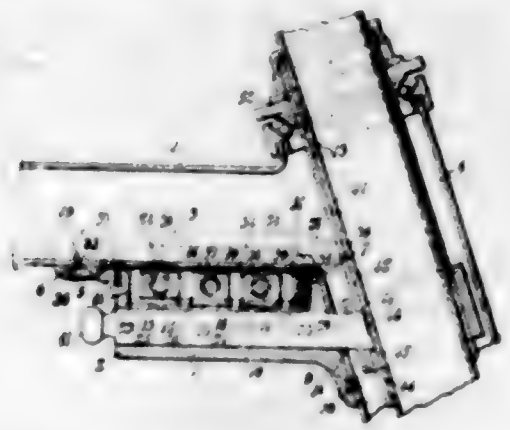
being provided with a plurality of straight longitudinally extending opened grooves communicating at one end with said space, substantially as described.

1,300,710. SELF-CLOSING RECEPTACLE. ALBERT EDWARDS, Brooklyn, N. Y., assignor to Solar Metal Products Co., Inc., a Corporation of New York. Filed Feb. 8, 1917, Serial No. 147,408. Renewed Jan. 31, 1919. Serial No. 274,328. 8 Claims. (Cl. 220—115.)



1. In a self-closing receptacle, the combination with a body portion, a portion of said body portion being curved in cross-section, said last named portion being provided with an opening; of a closure, a portion of said closure being curved in cross-section, said closure being pivotally connected to said body portion at a point coinciding with the center of one of said curves and slightly off the center of the other of said curves.

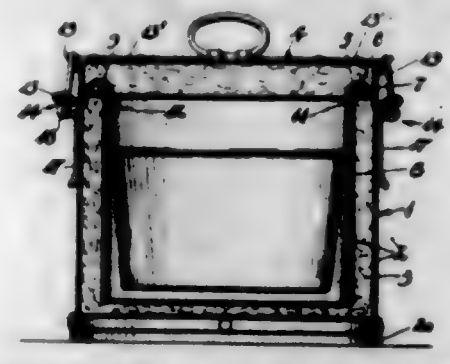
1,300,711. LOCK. HERBERT G. FANNING and JOHN B. MCADAMS, Middletown, Ohio. Filed Sept. 19, 1917. Serial No. 192,097. 1 Claim. (Cl. 70—60.)



In a lock comprising a bolt having a projection, a plurality of tumbler blocks each having a slot through which said projection must pass to bring the bolt into locking position, and a plurality of screws threaded through respective ones of said tumbler blocks for severally sliding the blocks across the path of travel of said projection, a casing having a relatively thick bottom, and relatively thin sides and rear extending up from said bottom to bear against the lower side of the upper frame bar of a bicycle, and a front end to bear against the rear side of the head of said bicycle, said bottom having a longitudinal bore in which said bolt is slidable to project or retract its end at the front of said casing, and having means projecting from said casing to be grasped for manipulation, and said bottom having a slot longitudinally of the upper side of its bore through which said projection of said bolt extends, and said screws being journaled in said sides of said casing, and having projections outside of the casing for turning them to slide said tumblers across said slot, substantially as and for the purpose set forth.

1,300,712. MARMITE. GUY W. FERDON, Creskill, N. J. Filed Sept. 16, 1918. Serial No. 254,356. 12 Claims. (Cl. 220—138.)

1. In a food container, in combination, a heat insulated vessel, a receptacle adapted to be contained in said vessel, a flange on said receptacle, a bead on said flange, a cover for said vessel and receptacle, said cover provided with a groove to engage said bead and flange, the groove



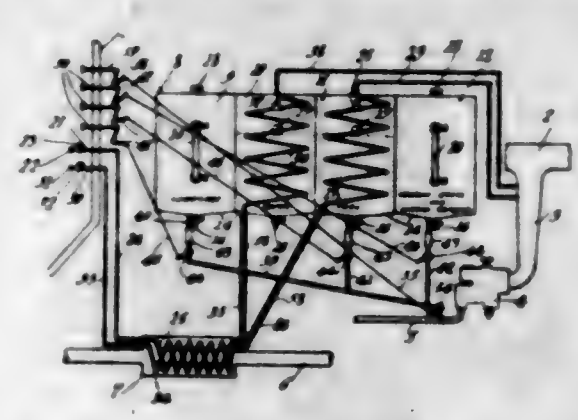
being so made that its inner wall engages the inner part of the receptacle, and clamping means for holding the lid in place.

1,300,713. NON-REFILLABLE BOTTLE. DAVID FERRACCA, Logan, W. Va. Filed Mar. 25, 1918. Serial No. 224,601. 1 Claim. (Cl. 215—70.)



A non-refillable bottle whose neck has means to prevent the admission of air during the pouring out of the contents, the base of the bottle being raised to produce a recess and the top of the recess depending in conical form, the tip of the cone being closed by a solid knob having a groove around its neck, whereby the knob may be manually broken to vent the bottle when inverted.

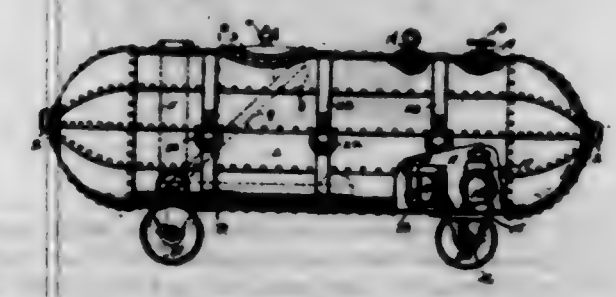
1,300,714. GASOLENE-ENGINE SYSTEM. ROBERT F. FORKNER, Princeton, W. Va., assignor of one-third to John B. Thomas, Princeton, W. Va. Filed Aug. 30, 1918. Serial No. 253,110. 6 Claims. (Cl. 123—25.)



1. In a device of the class described, a motor vehicle frame; a carbureter having a fuel outlet; an exhaust; a compartment; a conduit leading from the top of the compartment to the outlet; an air pipe having one of its ends located on the frame and having the other of its ends open within the compartment adjacent the top thereof, the pipe coöperating with the exhaust to be heated thereby, and passing through the compartment; a valve controlling the

first specified end of the air pipe and accessible to an operator of the vehicle; a fuel supply for the carbureter; a connection between the lower portion of the compartment and the fuel supply; and means for controlling the passage of the contents of the compartment through the connection.

1,300,715. AUTOMATIC DEVICE FOR RAISING SUBMERGED VESSELS AND OTHER STRUCTURES. ALFRED FOSGATE, Detroit, Mich. Filed July 7, 1917. Serial No. 179,178. 4 Claims. (Cl. 114—53.)



2. A device of the character described comprising a hollow air tight body having a valve controlled inlet whereby the body may be filled with water by submerging the same, a discharge channel opening to the exterior of the body at the top and in communication with the interior thereof, a float operated valve for controlling the channel opening the valve as the float is raised by introduction of fluid and closing the same as the body becomes emptied, a fluid tight carbid receptacle positioned within the body, and means for rupturing the receptacle exposing the contents to action of the water to produce pressure within the receptacle and force the fluid from the body.

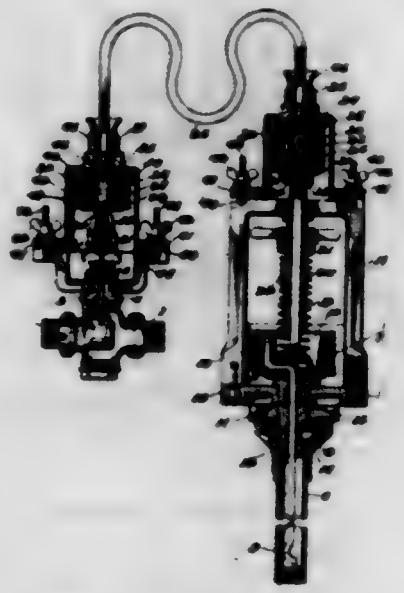
3. A device of the character described consisting of a hollow, wheel supported body, a valve controlled inlet whereby the body may become filled with water on lowering the same into a body thereof, a discharge conduit opening exteriorly of the body at the top, a float operated valve controlling the conduit, opening the same on introduction of fluid into the body and closing the same on removal thereof, means connected to the body above the horizontal center line whereby the same may be lowered right side up into the water, and means for attaching the body to a submerged vessel or the like.

1,300,716. OBSERVATION-CAMERA MOUNT. JOHN FROLICK, Trapp Lake, British Columbia, Canada. Filed Aug. 22, 1918. Serial No. 251,006. 5 Claims. (Cl. 95—12.5.)



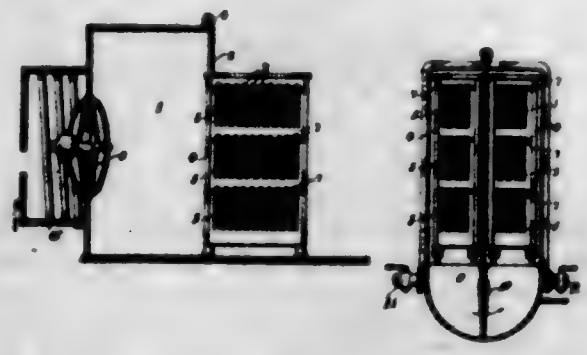
1. A device of the class described comprising an elevating means, a holder swivelly suspended therefrom, a wind-operating vane carried by the holder, and an adjustable platform upon the holder.

1,300,717. TANK-REGULATOR. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Sept. 23, 1918. Serial No. 255,374. 19 Claims. (Cl. 236—6.)



1. A device for operating a valve from a thermostat comprising a fluid power-transmission unit having a fluid sealed therein and including a flexible connection, and means whereby said unit may be readily attached to and detached from the valve and the thermostat.

1,300,718. PROCESS OF DRYING MACARONI. KARL GAMMEL, Cleveland, Ohio, assignor to The Cleveland Macaroni Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 25, 1911, Serial No. 616,937. Renewed Sept. 14, 1917. Serial No. 191,498. 6 Claims. (Cl. 34—24.)



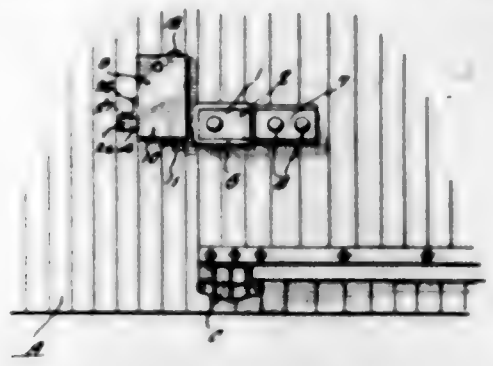
1. The process of drying macaroni and similar edible pastes which consists in subjecting the goods to the action of a current of air having considerable velocity and relatively low humidity and then to a current of air having less velocity and higher humidity until the excess moisture contained in the goods is removed, and then subjecting the goods to a current of air alternately moving in opposite directions and having a relatively high humidity until the drying process is completed, all of said currents having a humidity below their saturation point.

6. The process of drying macaroni which consists in subjecting the goods to a relatively rapid preliminary drying in the presence of air having relatively low humidity and then to a relatively slow drying in the presence of air currents having relatively high humidity but below the saturation point of the air.

1,300,719. LOCK. ERNEST PAUL GANGEWERE, Chattanooga, Tenn. Filed Sept. 3, 1918. Serial No. 252,414. 3 Claims. (Cl. 70—64.)

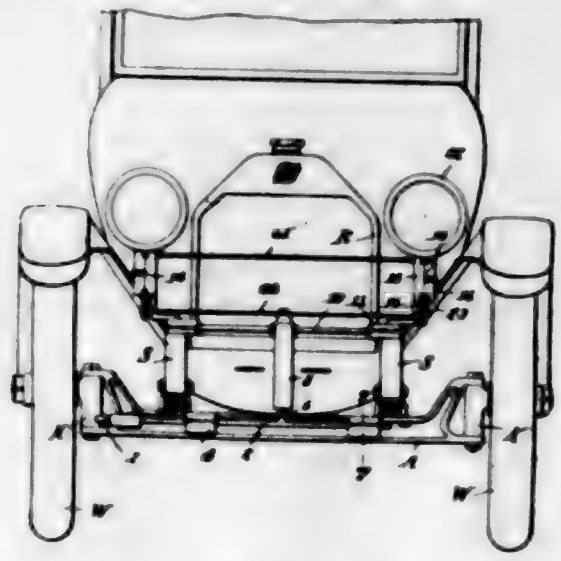
1. In a lock, the combination, of a door carried attaching plate, a locking bolt pivotally carried by said attaching plate and provided with a bolt receiving opening near its free end, a frame carried casing adapted to receive

said pivoted bolt therethrough, a gravity actuated locking bolt carried by said casing and adapted for projection through said opening, means for normally holding said gravity actuated locking bolt in a raised position, and



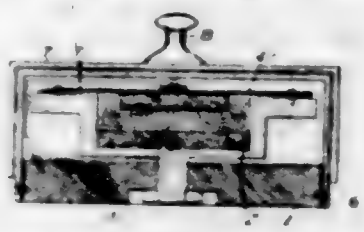
means carried by said pivoted locking bolt for operating said bolt holding means to release the gravity actuated bolt upon insertion of the pivoted locking bolt into said casing.

1,300,720. DIRIGIBLE HEADLIGHT. JAMES GLENNON, Rochester, Minn. Filed July 5, 1918. Serial No. 243,421. 2 Claims. (Cl. 240—62.)



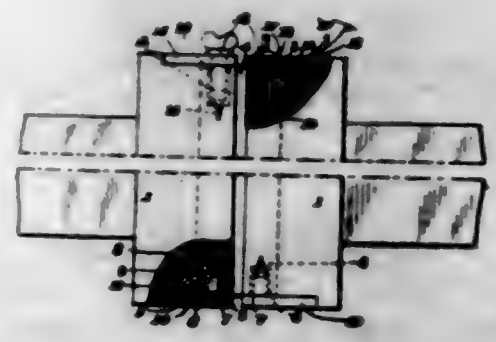
1. The combination with a motor vehicle, of a dirigible headlight attachment including a slidable rod, bearings therefor on the front axle of the vehicle, means for sliding the rod when the front wheels of the vehicle are turned, an upstanding arm on the rod, a housing slidable on the arm and shiftable laterally therewith, a ball bearing in said housing and carried by the arm, bearings on the springs of the vehicle, a supporting rod extending into said bearings and from the housing, revoluble lamp posts, bearings therefor, and a rod connecting the housing with the posts to rotate the posts during the lateral movement of the housing.

1,300,721. INTERCHANGEABLE TRANSMITTER-CASING. FELIX GOTTSCHALK, Hilton, N. J. Filed Mar. 31, 1916. Serial No. 87,968. 1 Claim. (Cl. 179—179.)



In an apparatus of the character described, an electric transmitter having a casing, a supplemental casing therefor, and fingers of different shapes, and means whereby any one of them may be detachably secured to said supplemental casing.

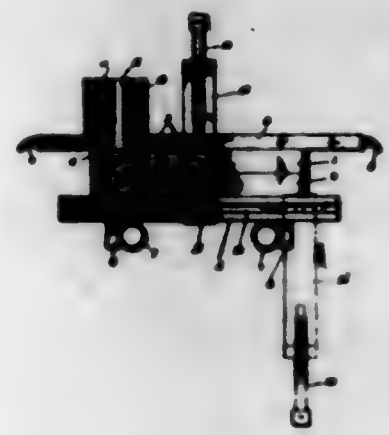
1,300,722. HOSPITAL-SCREEN. BROWN T. GRAY, New York, N. Y., assignor of one-half to Ashowets Brothers, New York, N. Y. Filed Aug. 6, 1918. Serial No. 248,590. 3 Claims. (Cl. 45—106.)



1. In a hospital screen, the combination with leaves having grooves along their meeting edges, of hinge members having cylindrical edge portions to fit said grooves, the ends of said hinge members having bores arranged axially of their cylindrical edge portions, bushings secured in said bores, the bushings at the lower end of the hinge members being smooth bored and the bushings at the upper end of the hinge members being internally screw threaded, straps secured to the bottom ends of the leaves and having integral pivot studs engaging the smooth bored bushings, straps secured to the upper ends of the leaves and having holes registering with the screw threaded bushings, and thumb screws passed through said holes and engaging said screw threaded bushings.

3. In a hospital screen, the combination with leaves having grooves along their edges, of hinge members having cylindrical edge portions to fit said grooves, the ends of said cylindrical edge portions having axial bores, thimble-shaped bushings secured in said bores by screws passed through their inner ends into the inner ends of the bores, and straps secured to the ends of the leaves and carrying pivotal means to engage said bushings.

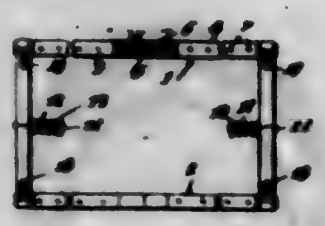
1,300,723. CASTING APPARATUS. AUGUST G. GUTMUELLER, Richmond Hill, N. Y., assignor to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Nov. 14, 1918. Serial No. 262,449. 2 Claims. (Cl. 22—90.)



1. A casting apparatus comprising a mold formed of a plastic composition, having therein a mold cavity, a run communicating therewith, and an ingate communicating with said run, a base member on which said mold is placed, having grooves formed on opposite edges thereof, a supplemental member adapted to be positioned on said mold, said member having an ingate adapted to register with the ingate of the mold, a yoke having side portions and a top cross portion, adapted to extend around said mold and supplemental member, said side portions having

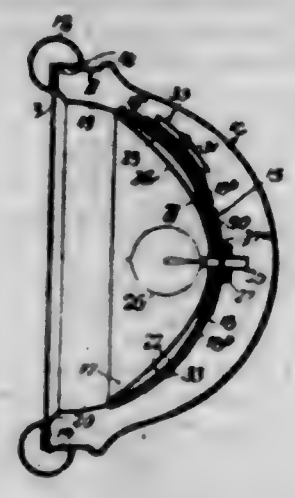
legs slidably mounted in said grooves, and a screw extending through the cross portion of said yoke, adapted to press against the upper surface of said supplemental member.

1,300,724. QUILTING-FRAME. Lewis B. Haines and Mary B. Haines, Tar River, Okla. Filed Sept. 13, 1918. Serial No. 254,025. 3 Claims. (Cl. 45—84.)



2. A quilting frame comprising side bars having material attaching elements, pairs of crossed legs for supporting the ends of the bars, said legs being mortised on their meeting faces at their points of intersection for interlocking engagement, pivot bolts extending through said mortised portions of the legs to pivotally connect them and having coiled springs mounted thereon whereby the legs are yieldably held in interlocked position.

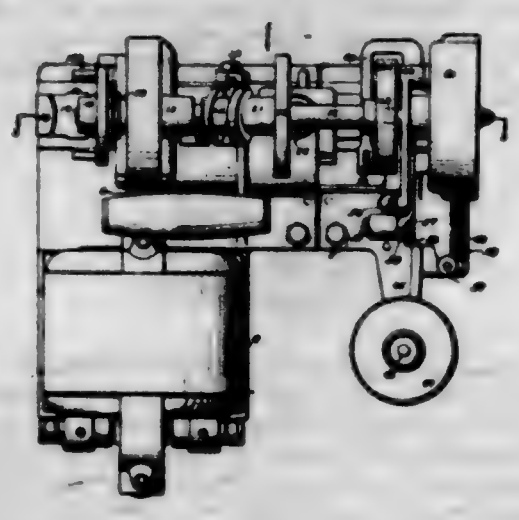
1,300,725. REFLECTOR FOR HEADLIGHTS OR SEARCH-LIGHTS. Alfred W. Harris, Peoria, Ill., assignor to Hill-Harris Company, Galesburg, Ill., a Corporation of Illinois. Filed Sept. 20, 1916, Serial No. 122,784. Renewed Jan. 15, 1919. Serial No. 271,338. 5 Claims. (Cl. 240—41.)



1. A reflector comprising a fixed spheric shell member, a parabolic reflector having bearing upon said fixed spheric shell member, and capable of universal movement thereon, a lamp fixed in the focal center of said reflector movable with said reflector, and means for moving said reflector in any direction upon said fixed spheric shell member.

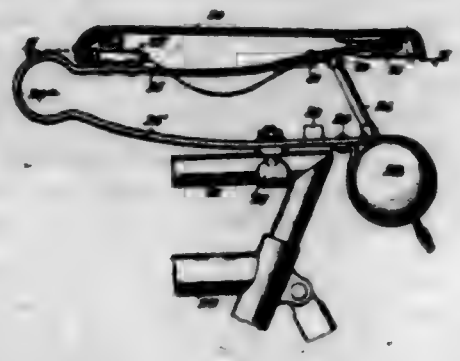
1,300,726. PIN-TICKETING MACHINE. George W. Hurat, Jr., Philadelphia, Pa., assignor to H. G. Davis Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1916. Serial No. 121,789. 3 Claims. (Cl. 93—33.)

1. The combination in a machine for attaching tickets to goods, of a bed plate over which the strip of tickets travels; a type form; means for operating the form; means for inking the type; means for cutting the strip after a ticket has been projected from one end of the machine; a staple forming means at the end of the machine; a reel for the wire; means for feeding the wire from the reel to the staple forming means; a guide block located between the feeding mechanism and the staple forming means and through which the wire passes, the parts, with the exception of the guide block, being arranged so as to expose the wire to the view of the operator; and means



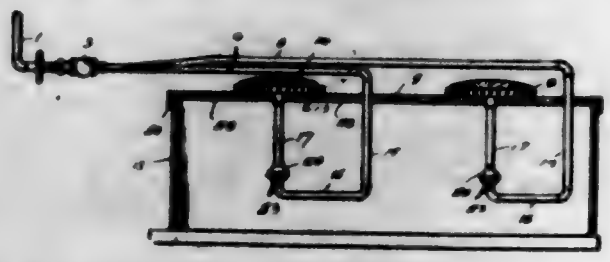
for driving the formed staple through the ticket and the material to which the ticket is to be secured.

1,300,727. PNEUMATIC SPRING. Jonny Hofmann, Baumaroche, Switzerland. Filed Oct. 11, 1918. Serial No. 257,768. 12 Claims. (Cl. 267—22.)



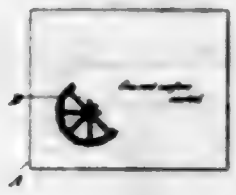
6. A pneumatic suspension for vehicles and the like, comprising an elongated air cushion arranged crosswise to the longitudinal axis of the element of the vehicle to be spring supported, means resting on the air cushion, a member supported by said means, a resilient lever arm carrying the element to be spring supported and said member, a resilient arm carrying the air cushion and secured to the frame of the vehicle and a resilient portion connecting said resilient arms, which act together with said portion as a spring.

1,300,728. GAS-GENERATING OIL-BURNER. James P. Horgan, Littleton, N. H. Filed Nov. 17, 1917. Serial No. 202,551. 2 Claims. (Cl. 158—65.)



1. An oil burner of the class described including a box or casing open at the bottom and designed to be arranged upon the grate and provided with a cover or top, burner heads arranged upon the cover or top, mixing tubes depending from and communicating with the burner heads, and generating tubes extending over the burner heads and connected with the mixing tubes.

1,300,729. PROCESS OF PREPARING GRAINED-TONE PHOTOGRAPHIC NEGATIVES AND POSITIVES AND PRODUCING PRINTING-PLATES THEREFROM. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Co., Buffalo, N. Y. Filed Mar. 17, 1916. Serial No. 84,880. 5 Claims. (Cl. 95—5.4.)

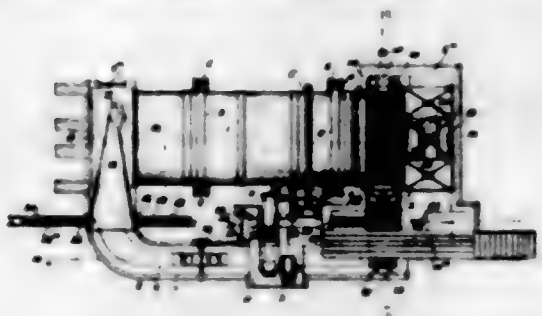


1. A process of preparing, without the use of screens, grained tone negatives and positives, consisting in providing a transparent or semi-transparent plate or film with a light sensitive grain producing coating, exposing the same to light under a suitable image and developing the same, thereby producing a surface having grains which will receive and grains which will repel a coating material and then applying opaque material to said surface to provide opaque and transparent or semi-transparent grains which make up the image and are adapted respectively to block and permit the passage of light for acting upon a sensitised printing surface.

4. A process of preparing, without the use of screens, grained tone negatives and positives, consisting in providing a transparent or semi-transparent plate for film with a light sensitive grain-producing gelatin coating, exposing the same to light under a suitable image and developing the same thereby producing a surface having light hardened grains and moisture swelled grains which will repel a coating material, and then applying opaque material to said surface to provide opaque and transparent or semi-transparent grains which make up the image and are adapted respectively to block and permit the passage of light for acting upon a sensitised printing surface.

5. A process of producing press printing surfaces, consisting in preparing, without the use of screens, a grained tone negative or positive, by providing a transparent or semi-transparent plate or film with a light sensitive grain producing coating, exposing the same to light under a suitable image and developing the same, thereby producing a surface having grains which will receive and grains which will repel a coating material, then applying opaque material to said surface to provide opaque and transparent or semi-transparent grains which make up the image and are adapted respectively to block and permit the passage of, and then exposing a sensitised printing surface to light through said grained tone negative or positive.

1,300,730. BARKING-DRUM. EDWARD HUTCHINS, Montclair, N. J., assignor to International Paper Company, a Corporation of New York. Filed Mar. 26, 1915. Serial No. 17,102. 20 Claims. (Cl. 144—208.)



1. In a mechanism for barking wood, the combination of a horizontal or substantially horizontal rotary barking drum, means for continuously feeding the wood to be barked into the receiving end thereof, and means for effecting a flow of water axially through the drum from its receiving end toward its discharge end, said latter means operating to return the water discharged by the drum, to its receiving end and to circulate it through the drum as a continuous body inside and outside the drum, said drum operating in its rotation to remove the bark from the wood and deliver the barked wood continuously.

1,300,731. TIRE. HYMAN KAPLAN, New York, N. Y. Filed Nov. 15, 1918. Serial No. 262,712. 2 Claims. (Cl. 152—18.)



1. A pneumatic tire shoe, comprising two metallic ring sections provided with clencher beads, each of said sections having an interior annular shoulder, a plurality of armor sections attached to said ring sections, each of said armor sections being composed of a plurality of pivoted links, a rubber tread section secured to said ring sections and inclosing said armor sections, and a ring-shaped shield of U-shaped cross-section abutting against the inner face of said armor sections and resting upon said shoulders.

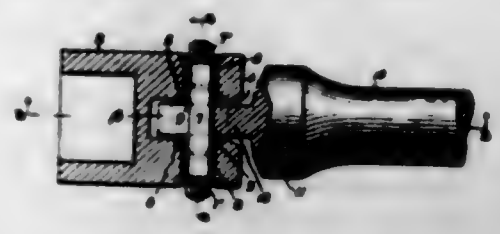
1,300,732. VEHICLE-TIRE. GEORGE L. KAVANAGH, Montreal, Quebec, Canada. Filed June 9, 1917. Serial No. 173,773. 4 Claims. (Cl. 152—1.)



1. In a tire, a casing, a series of ribs formed integral therewith, and projecting from the inner surface thereof, one of said ribs being located mid-way between the edges of the casing and formed longer than the remaining ribs and having grooves formed therein for the reception of the remaining ribs.

4. In a tire, a casing, a main rib, radially disposed ribs extending inwardly from the casing and having their inner edges supported by said main rib, an integral means on said main rib for maintaining said radial ribs in proper supporting position.

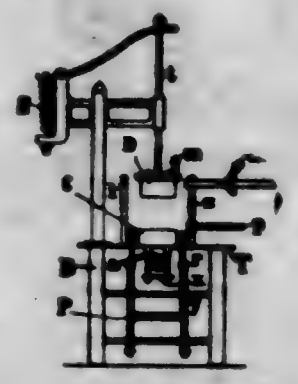
1,300,733. UNIVERSAL COUPLING. ALBERT T. KELLER, Baltimore, Md. Filed Apr. 3, 1917. Serial No. 159,417. 3 Claims. (Cl. 64—91.)



3. In a universal coupling, an end piece formed with a transverse bearing cavity and an opening thereto through one end of said piece, a journal fitting said cavity and having a through slot, a pin extending through said end piece

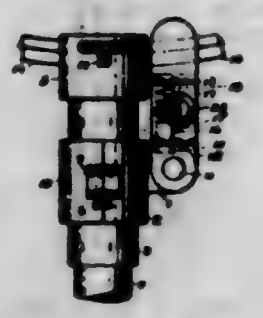
and said journal at right angles to said slot and a spindle having an end portion entered in said opening extending through said slot and straddling said pin.

1,300,734. MACHINE FOR MOLDING PERFORATED BRICKS OR BUILDING-BLOCKS. JEAN E. KIENER, Lausanne, Switzerland. Filed Nov. 19, 1917. Serial No. 202,690. 1 Claim. (Cl. 25—41.)



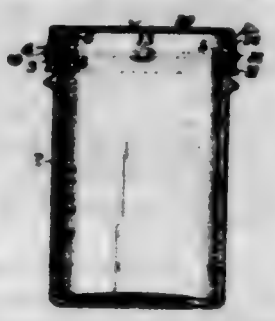
In a machine for molding perforated bricks or building blocks, the combination with the machine frame of a molding frame fitted in the machine frame and corresponding in shape to that of the brick or block to be molded, said molding frame consisting of an outer mold box, matrices for forming the cavities in the brick or block, a molding plate having the same section as the brick or block and to correspond with that of the mold, rods fixed to said molding plate and slidable in sheaths fixed at the bottom part of said molding frame, a gripping bar attached to the lower ends of said rods, a lever system pivotally connected to said molding and machine frames, a foot pedal to operate said lever system to raise the said molding frame to allow the latter to be tilted over and inverted upon a supporting plate by the gripping bar, a pressure applying bolt movably connected in the frame of said machine to press the gripping bar and thereby the molding plate upon the brick or block, substantially as described.

1,300,735. LOCKING DEVICE FOR AUTOMOBILES. FRANK KIEBLE, Fort Wayne, Ind., assignor of one-half to Newell H. Ransom, Fort Wayne, Ind. Filed June 28, 1918. Serial No. 242,837. 1 Claim. (Cl. 70—129.)



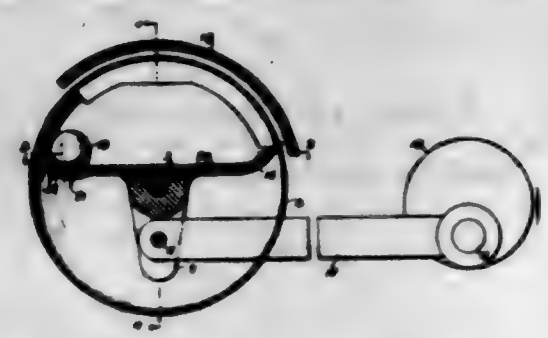
In a locking device for automobiles, the combination with a steering wheel, steering shaft and steering column, of a support rigidly secured to the steering column and having a rounded free end with a recess in its upper surface, a yoke pivotally mounted on the support and adapted to be swung upwardly on its pivot to cause it to embrace one of the spokes of the steering wheel, a spring pressed bolt reciprocably mounted in the yoke in frictional engagement with and adapted to slide on the rounded face of the support as the yoke is swung upwardly or downwardly and to seat within the said recess when the yoke is in its uppermost position embracing the spoke with the bolt positioned endwise between the support and spoke to prevent tampering, and a lock and key in the yoke adapted to withdraw the bolt from the recess to permit the yoke to be swung downwardly on its pivot.

1,300,736. JAR-CLOSURE. ALBERT H. KIPPENBERG, Pittsburgh, Pa. Filed Nov. 8, 1916. Serial No. 130,152. 8 Claims. (Cl. 215—30.)



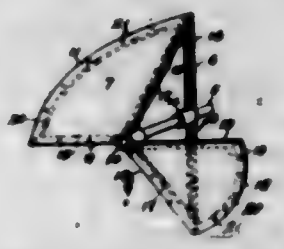
1. The combination of a jar having a circumferential groove at its mouth, a cap having a groove registering with the groove in the jar, and a resilient wire expansion ring received in both grooves for locking the cap on the jar, and having projecting handles external to the jar for contracting the ring to permit the removal of the cap, and also having an inwardly projecting bend engaging a recess in the jar so as to be kept from sidewise movement therein to assist in centering the ring, substantially as described.

1,300,737. BELL-ACTUATING MEANS. BENJAMIN K. KIRK, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 28, 1918. Serial No. 268,005. 3 Claims. (Cl. 116—38.)



1. The combination of a standard; a bell mounted on the standard; a rocker also mounted on the standard and having a flange located within the bell and another flange on the outside of the bell and inclosing a space; and a ball adapted to move freely in said space and to be thrown against the bell when the rocker is actuated.

1,300,738. PROPELLER. JOSEPH KOPCSAY, South Bend, Ind. Filed Feb. 25, 1918. Serial No. 219,055. 3 Claims. (Cl. 170—168.)

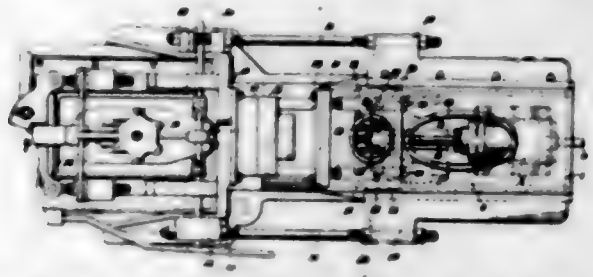


2. A propeller comprising an open triangular frame having spaced hubs alined perpendicular with respect to the base and coincident with the apex thereof, and blades carried by and extending transverse the frame in opposing relation and inclined at substantially right angles with relation to each other.

1,300,739. CASTING APPARATUS. JOHN KRALUND and CLARENCE DUCKWORTH, Brooklyn, N. Y., and MARCUS SIMON, Toledo, Ohio, assignors to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Nov. 11, 1918. Serial No. 261,972. 8 Claims. (Cl. 22—78.)

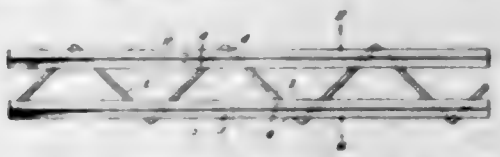
1. In a casting machine, the combination of a reciprocable actuating member, a member to which a portion

of a die may be secured, movable into positions to close and open the die, a frame, and toggle connections be-



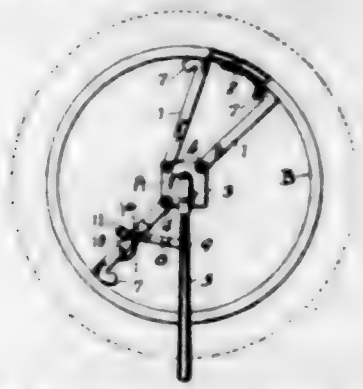
tween said frame and members adapted to move said second member and to straighten the toggle, to form a lock, when said member has been moved to close the die.

1,300,740. METALLIC STRUCTURE. LAURENCE S. LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed May 8, 1916. Serial No. 96,021. 2 Claims. (Cl. 189—34.)



1. A metallic structure comprising a zigzag middle member and a pair of flanged longitudinal members spaced apart by said middle member with the flanges thereof engaging and intersecting the edges of the middle member and welded thereto.

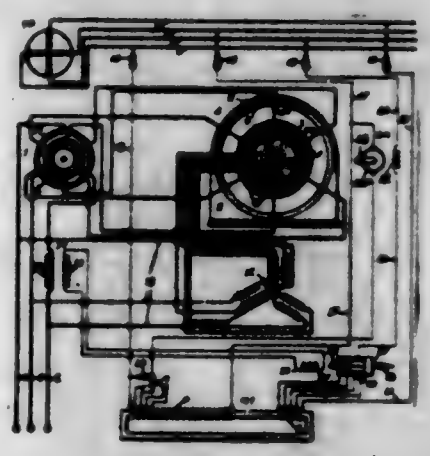
1,300,741. DEMOUNTABLE-RIM-EXPANDING TOOL. CLAUDE T. LAMB, Terre Haute, Ind. Filed Oct. 20, 1917. Serial No. 197,614. 3 Claims. (Cl. 157—1.)



1. A tool for expanding demountable rims, including a central body, a handle rigid with the body and projecting laterally therefrom for rotating the body in the plane of the rim, a series of expanding arms projecting from the body in an angular relation and pivotally connected to the body at their inner ends, and cam feet projecting laterally from the outer ends of the arms in the plane of the body, said cam feet having outer curved faces which are eccentrically arranged with respect to the body and have a rolling contact and cam action upon the rim to assist in expanding the rim when the central body is rotated to move the arms toward radial positions with respect thereto.

1,300,742. SYSTEM OF CONTROL. BENJAMIN G. LAMME, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 583. 7 Claims. (Cl. 172—274.)

1. In a system of control, the combination with a dynamo-electric machine having a primary and a secondary winding, of an auxiliary regulating machine connected to said secondary winding, a polyphase alternating-current supply circuit, a driving motor for said auxiliary machine having an armature and a field winding adapted for connection to different phases of the supply circuit, means for varying the armature voltage of said driving motor at will, and means for automatically varying the field voltage thereof, in accordance with the load on said dynamo-electric machine.



2. In a system of control, the combination with a dynamo-electric machine having a primary and a secondary winding, of an auxiliary regulating machine connected to said secondary winding, a polyphase alternating-current supply circuit, a driving motor for said auxiliary machine having coöperating stator and rotor elements adapted for connection to different phases of the supply-circuit, means for, at will, varying the voltage of one of said elements, and means actuated in accordance with the load on said first machine for automatically varying the voltage of said other element.

7. The method of operating an induction motor from a source of alternating-current with an auxiliary source of alternating-current for determining the secondary frequency of said motor which comprises increasing said secondary supplied frequency with an increase in the load of said motor so as to cause the resultant speed-torque curve of said motor to approximate the speed-torque curve when undergoing the same load changes with the secondary winding closed through a resistor.

1,300,743. NUMBER-HOLDER FOR AUTOMOBILES. JAMES A. LAWLER, Rushville, Ill. Filed June 28, 1918. Serial No. 242,433. 1 Claim. (Cl. 40—125.)

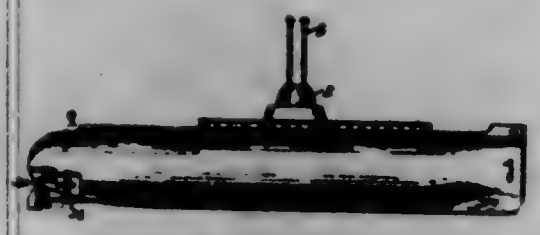


The combination with a license plate having pairs of openings therethrough, of a pair of brackets each including an arm disposed across the plate and having a terminal hook at one end engaged in an opening of a corresponding pair and an arm extending from the other end of the first named arm through the other opening of the same pair and beyond the plate, where it is adapted for engagement with a support.

1,300,744. SUBMARINE. FRANK J. LIBSER, Detroit, Mich., assignor, by direct and mesne assignments, of one-sixteenth to Chas. F. Kuhn and one-sixteenth to H. J. Koepp, Marquette, Mich., and three-eighths to American Engineering Associates, a Trust Estate of Michigan. Filed June 23, 1917. Serial No. 176,665. 8 Claims. (Cl. 114—16.)

1. In a device of the character described, a main submarine, a receiving slip formed in the body thereof, an

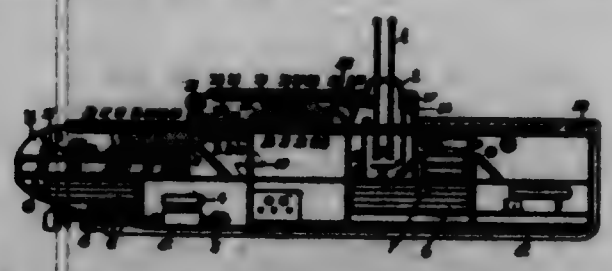
auxiliary submarine adapted to be moved by its own power longitudinally into the said slip, the said slip having ways and the auxiliary having complementary ways whereby on longitudinal movement of the auxiliary in the slip, the auxiliary is held from vertical movement relative to the main submarine, and a locking device for securing the auxiliary submarine from longitudinal movement.



8. In a device of the character described, a main submarine, a receiving slip formed in the rear end of the submarine and extending below the upper surface thereof, an auxiliary submarine adapted for operation by its own power and being provided with ways engageable with ways provided in the slip whereby on final longitudinal movement of the auxiliary into the slip the auxiliary is secured from vertical movement relative to the main submarine, the body of the submarine at the forward end of the slip being provided with a closable aperture, a protruding tubular member at the forward end of the auxiliary providing a passageway therefrom, the said protruding member being adapted to engage in water tight relation in the aperture of the main submarine by final longitudinal movement of the auxiliary into the slip, a locking device on the auxiliary, a complemental locking device on the main submarine with which the part on the auxiliary is brought to coöperative relation by movement of the auxiliary into the slip, means for operating the locking device within the auxiliary adapted to draw the auxiliary longitudinally of the slip to final locked position preventing both longitudinal and vertical movement relative to the main submarine.

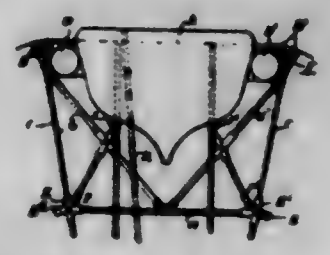
4. In a device of the character described, in combination with a sea going vessel, a receiving slip formed in the body of the vessel and opening through the surface thereof, the body of the vessel having a closable opening at the forward end of the slip, a submarine operable by its own power having means at the forward end providing a passageway therefrom and adapted to close said opening, locking means on the vessel and submarine respectively brought to coöperative relationship by movement of the submarine longitudinally into the slip, the said locking means being adapted upon locking operation to draw the submarine into the slip to final locked relationship therewith.

1,300,745. SUBMARINE. FRANK J. LISSER, Detroit, Mich., assignor, by mesne assignments, of one-half to American Engineering Associates, a Trust Estate of Michigan. Filed Oct. 2, 1918. Serial No. 256,499. 10 Claims. (Cl. 114—16.)



1. In a device of the character described, a main submarine provided with a conning tower projecting above the upper surface thereof, a pair of auxiliary submarines individually operable by their own power, a receiving slip formed in the rear end of the main submarine below the upper surface thereof, a second receiving slip provided on the upper surface of the main submarine at the rear of the conning tower, said conning tower having an extension forming the forward end of the said slip, the forward end of both slips being provided with an aperture and the auxiliary submarine when in position in the slip having an opening registering with the said aperture.

1,300,746. DIRIGIBLE AIRSHIP. ALFRED JOHN LIVESEY, London, England. Filed May 7, 1917, Serial No. 168,963. Renewed Mar. 3, 1919. Serial No. 280,490. 3 Claims. (Cl. 244—31.)

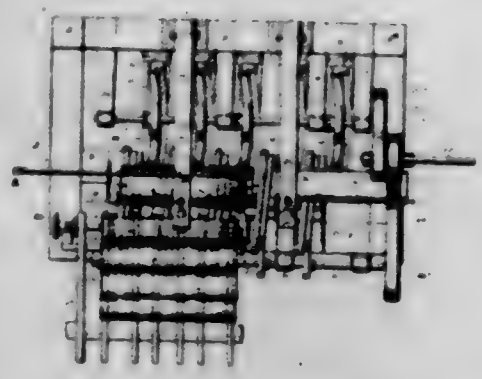


1. In dirigible airships, an upper structure rigid with the airship structure, a floatable structure adapted to be housed within the rigid structure, longitudinal girders on the rigid structure for supporting said floatable structure, and temporary lashings for detachably securing said floatable structure to said rigid structure.

1,300,747. PROCESS OF EXTRACTING, PURIFYING, OR EXCLUDING ALKALOIDS AND ALKALOIDAL SALTS. JOHN URI LLOYD, Cincinnati, Ohio. Filed July 6, 1915. Serial No. 38,316. 4 Claims. (Cl. 167—4.)

4. A process of precipitating an alkaloidal substance from a neutral or slightly acid solution by the addition thereto of magnesium clay in pulverulent condition.

1,300,748. MACHINE FOR BARKING WOOD. NATHANIEL LOMBARD, Worcester, Mass., assignor to International Paper Company, a Corporation of New York. Filed May 6, 1915. Serial No. 26,205. 7 Claims. (Cl. 144—208.)

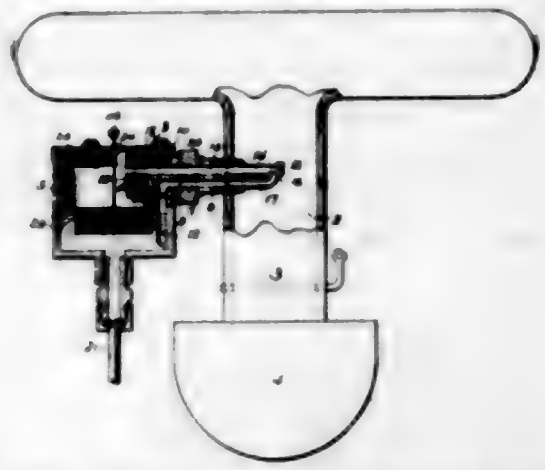


1. In a machine for barking wood, the combination of two coöperating series of feeding wheels to advance the log endwise, the wheels of one series being mounted for rotation on axes inclined from the horizontal, and the wheels of the other series being mounted on horizontal axes inclined relatively to the direction of feed.

1,300,749. PRIMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM B. LONERGAN, Louisville, Ky. Filed May 21, 1918. Serial No. 235,825. 6 Claims. (Cl. 123—180.)

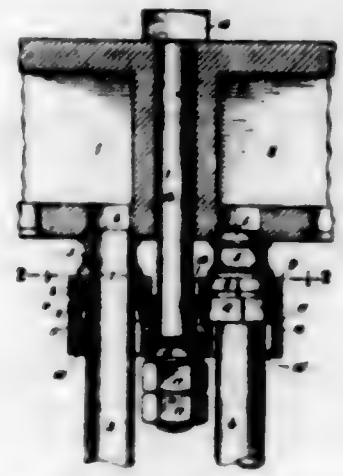
1. In a priming device, the combination with a tank, a nipple to communicate therewith and adapted to enter the intake of an engine, and an atomizer at the end of the nipple which enters the intake, and means adjustably con-

necting the nipple and tank whereby said nipple may be turned to cause the atomiser to discharge longitudinally



of the intake whether the latter be disposed vertically, horizontally or in an inclined position.

1,300,750. CONNECTING MEANS FOR SUPERHEATER ELEMENTS. NEAL TRIMBLE MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 6, 1916. Serial No. 82,886. 3 Claims. (Cl. 285—25.)

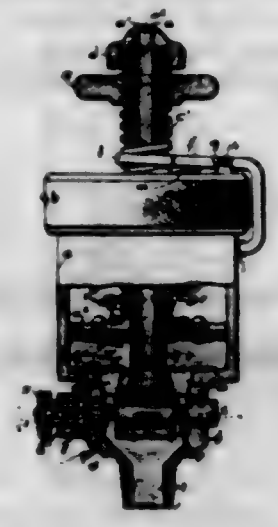


1. In combination with a pair of superheater pipes having ends formed as expanded heads, a connecting bar having end openings which inclose said pipes, a holder ring adapted to slip over each head and to rest movably upon the connecting bar, and a split ring removably held within each holder ring and closely embracing the pipe, the split rings being adapted to be pressed against the heads by the connecting bar.

2. In combination with a pair of super-heater pipes having ends formed as expanded heads, a yoke having a flat upper surface and end openings which closely surrounds said pipes at said surface, said openings being enlargeable to permit them to pass over the expanded heads, a holder ring adapted to slip over each head and to rest upon the yoke, and a split ring removably held within each holder ring and closely embracing the pipe, the split rings being adapted to be pressed against the heads by the yoke.

3. In combination with collector chambers having a pair of openings, a pair of super-heater pipes having expanded heads fitted to said openings, a connecting bar having end openings inclosing said pipes and adapted to pass over said heads, a split ring removably held in each opening the top of said ring being flush with the top of the bar and closely surrounding the pipe, holder rings adapted to pass over said heads, a split ring removably held in each holder ring and closely embracing the pipe, the bottom surfaces of holder ring and split ring being flush with one another, and means for pressing said bar toward the collector chambers so as to force the split rings held by the holder rings against the under sides of the heads and the heads into the opening of the collector chambers.

1,300,751. LUBRICATOR. JOHN FRANKLIN MACLENNON, Philadelphia, Pa. Filed May 10, 1918. Serial No. 233,617. 3 Claims. (Cl. 184—45.)



1. In combination, a lubricating cup having an outlet, a spring actuated plunger in said cup for forcibly discharging the lubricant through said outlet, a valve controlling the outlet and movable independently of said plunger, means for moving said valve simultaneously with the plunger and means for adjusting and limiting the lead of said valve comprising a valve stem, an extension provided on the outlet structure through which said valve stem extends and being interiorly threaded to engage the exterior threads of an adjusting screw and an adjusting screw, substantially as shown and described.

1,300,752. FIRE-ESCAPE. JACOB A. MATTERN, Des Moines, Iowa. Filed July 16, 1918. Serial No. 245,179. 2 Claims. (Cl. 227—25.)

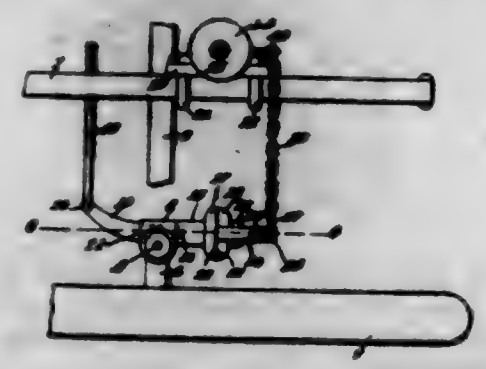


1. In a device of the class described, a rope having fastening devices at its ends, a pair of clamp members hinged together along one edge and designed to grip said rope, said clamp members having at their opposite edges spaced flanges, bolts extended through said flanges, cam-faced members on said bolts, a lever on one of said bolts having a coacting cam face, an arm on the other of said bolts having a coacting cam face, a link pivoted to said arm and said lever for causing them to act in unison, a spring secured to one of said clamp members and to said lever for normally holding the parts in position with the rope gripped between the clamp members.

1,300,753. DIRIGIBLE HEADLIGHT. CHARLES E. MATTSON and CHARLES W. BAILEY, Maud, Okla. Filed Feb. 16, 1918. Serial No. 217,724. 2 Claims. (Cl. 240—62.)

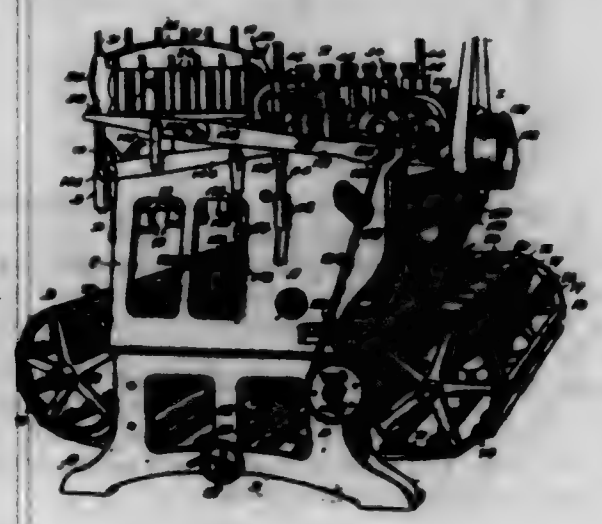
1. The combination with a vehicle frame and a movable axle end, of a stem passing through the axle end and provided with a shoulder engaging one side of the axle

end; a head having teeth, a spindle, and a neck mounted on the stem and engaging the opposite side of the axle end; an arm inclosing a head rotatably adjustable on the spindle and having teeth coöperating with the teeth of the



first specified head; means on the spindle and coöperating with the head of the arm to hold the teeth of the heads interengaged; a lamp shaft journaled in the frame; an operative connection between the shaft and the arm; and operating means connected with the stem.

1,300,754. BOTTLE-CAPPING APPARATUS. JOHN C. MILLER, Covington, Ky., assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of Ohio. Original application filed Aug. 24, 1908, Serial No. 179,645. Divided and this application filed Apr. 16, 1917. Serial No. 162,526. 31 Claims. (Cl. 226—5.)

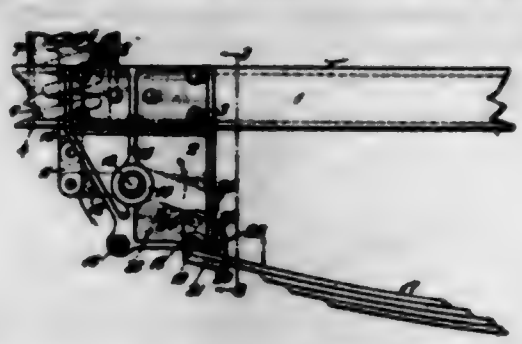


1. In apparatus of the character described, the combination of a support for bottles, a holder for holding in stacked relationship a plurality of caps, means for successively moving the caps in said holder to a position above the tops of the bottles, and a plunger having a yieldable cap engaging member for forcing each cap into the top of a bottle when the cap is moved to the inserting position thereabove.

1,300,755. LOAD-COMPENSATOR. WILLIAM S. MILLER, Providence, R. I., assignor to Arthur W. Penny, Fernwood, Pa. Filed May 17, 1916. Serial No. 98,004. Renewed Feb. 25, 1919. Serial No. 279,222. 5 Claims. (Cl. 267—19.)

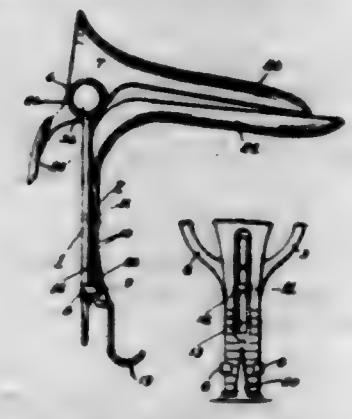
1. In a load compensator, a vehicle frame, a bracket carried thereby, a shock absorbing element, a lever fulcrumed in said bracket and having one end operatively connected with said shock absorbing element, a supporting spring, and a bearing member carried by the supporting springs, guided by said bracket, and in sliding engagement with the other end of said lever.

2. In a load compensator, a vehicle frame, a shock absorbing element carried by it, a supporting spring, a lever carried by said frame and having one end operatively connected with said shock absorbing element, a bearing box having a bottom in bearing engagement with the spring



and having sides, and a bearing member carried by said sides and in sliding engagement with the other end of said lever.

1,300,756. SPECULUM. JESSE J. MOYER, Oakland, Calif. Filed May 8, 1918. Serial No. 237,150. 6 Claims. (Cl. 128—17.)



1. A speculum of the character described comprising two flat, longitudinally movable members, ratchet teeth formed on the back of one of said members, coöperating engaging members formed on the other of said members and embracing the member with said ratchet teeth, a flat spring between said members to hold said ratchet means in engagement, and curved blades extending substantially at right angles to said members.

2. A speculum of the character described comprising two flat members longitudinally movable on each other, guides for holding said members in parallel relation, means for holding said members in opposition to movement in one direction, a flat spring between said members and curved blades extending substantially at right angles to said members.

3. A speculum of the character described comprising two members longitudinally movable one on the other, ratchet means for holding said members in adjusted relation, a curved blade extending at substantially right angles from one of said members, arms extending from the other of said members, bosses on said arms, a curved blade pivotally mounted in said bosses, coöperating ratchet teeth formed on the adjacent face of said pivoted blade and on one of said bosses, an adjusting screw extending through said boss and engaging said blade, an enlarged head on said screw, spring means interposed between said boss and said screw head for holding said coöperating ratchets in engagement; and means for releasing said coöperating ratchets.

1,300,757. FRAMING CONSTRUCTION. DANIEL J. MURMANN, Chicago Heights, Ill., assignor to Zouri Drawn Metals Company, Chicago Heights, Ill., a Corporation of Illinois. Filed Oct. 29, 1917. Serial No. 199,695. 1 Claim. (Cl. 20—12.)

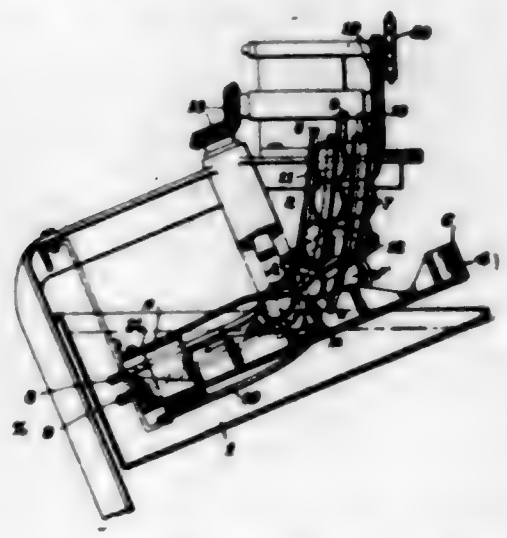
A framing construction forming a door-opening, one of the members thereof being formed of a section connected with the adjacent framing members and having a recessed portion with front and rear seats facing in substantially the same direction and arranged at opposite

sides of said recess, and a second, size-regulating strip section of substantially Z-shape in cross-section bearing at its lateral portions against said seats and extending at its intermediate portion in said recess, and adapted to cause



the door-opening to conform to the size of the door and means securing said second section to said first-named section in said position at both of said seats, said second section being adapted to be secured in said position after said first-named section has been secured in place.

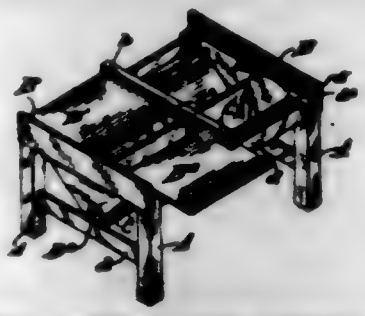
1,300,758. FILLING-MACHINE. ALTON VICTOR NEAL, Hurlock, Md. Filed Sept. 25, 1918. Serial No. 255,699. 11 Claims. (Cl. 226—9.)



1. In a receptacle filling machine the combination of a tank, a track or chute extending into the tank and having a bend therein intermediate of its length for turning the receptacles, from a horizontal to an inclined position to be submerged and filled, said chute having its discharge end elevated above the tank to deliver the can bodies in upright position and a wheel, for propelling the can bodies along the chute, having means to engage and initiate the propulsion of the can bodies in advance of the point where they are turned by the chute and having also means for cutting off the stack of cans from the one being propelled, substantially as described.

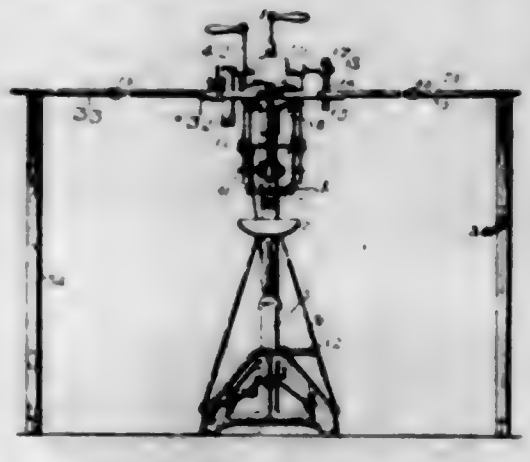
1,300,759. TABLE. ELIN NIELSEN, Chicago, Ill. Filed June 3, 1918. Serial No. 237,908. 2 Claims. (Cl. 45—31.)

2. In a table of the class described, the combination with uprights and bracing members, of an upper surface consisting of a plurality of laterally slidable table tops forming individual work tables when extended, said tables having a plurality of compartments arranged therein, the larger of said compartments being located nearest to the center of the table and having its outside partition arranged at an oblique angle to the inside partition; the smaller compartment being nearest to the outside of the



table, said oblique partition being extended to contact with the under side at its upper extremity, said compartments being closed by sliding the aforesaid table tops into overlapped position.

1,300,760. SICKLE-GRINDER. JOHN C. NOSE, Bellevue, Idaho. Filed Aug. 8, 1918. Serial No. 248,800. 3 Claims. (Cl. 51—8.)



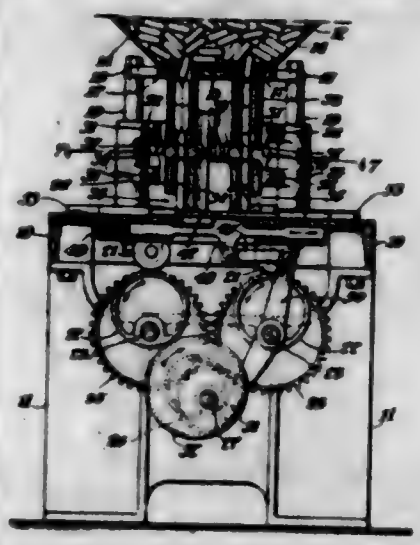
1. A device of the character specified comprising a suitable supporting frame, a driving shaft journaled on the frame, pedal operated, mechanism for rotating said shaft, clamping means for holding the sickle, a pair of arms journaled on the driving shaft, a grinder shaft carried by the free ends of the arms, a driving connection between the said shaft and the driving shaft, a grinding wheel on the said shaft, spring controlled means normally moving the free ends of the arms upward, means for moving the said arms downward, and means for tilting the clamping means for the sickle.

1,300,761. APPARATUS FOR ASSEMBLING BOXES IN ROWS. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 20, 1917. Serial No. 192,380. 15 Claims. (Cl. 193—62.)

1. In a box assembling apparatus, the combination with a box support, of a structure above the same having a vertical guide passage for a plurality of boxes in end to end relation to each other, a movable box supporting and carrying member arranged to afford a temporary support for the lower end of the lowermost box in the passage and so constructed that in one movement of said member the box resting endwise thereon is carried outwardly beyond the passage and tipped so as to fall flatwise upon said member, and that in the next succeeding movement of said member the box thus disposed thereon contacts with the next lowermost box within the passage and is thereby delivered to the box support and in advance of the said member, and means for actuating said member.

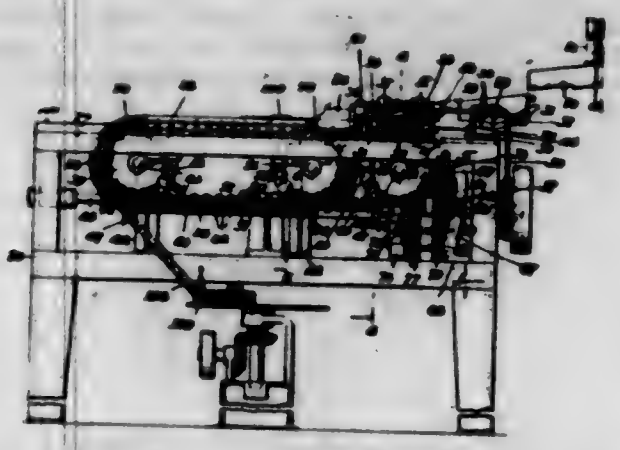
4. In a box-assembling apparatus, the combination with a box-support, of a pair of spaced box-receiving structures above the same, each structure having a series of vertical box-guiding passages, means for feeding boxes in endwise position to the upper portions of the passages of the respective structures, a member movable in a path beneath

the two structures and constructed to afford a temporary support for the lower ends of the lowermost boxes in the respective passages, and means for actuating said member whereby the respective boxes resting thereon are



alternately withdrawn from the said structures in opposite directions to each other and deposited flatwise upon the support adjacent to the respective outer ends of said member.

1,300,762. MACHINE FOR FILLING BOXES. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed June 22, 1915, Serial No. 35,541. Renewed Sept. 11, 1918. Serial No. 253,647. 8 Claims. (Cl. 93—6.)

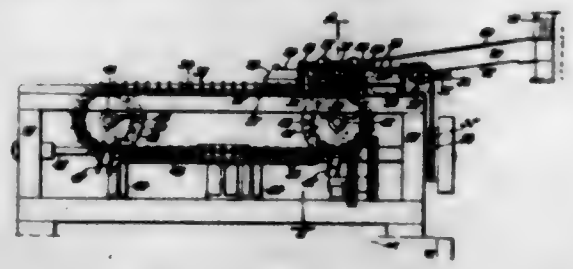


1. In a box-filling machine, the combination of a conveyer having spaced shuck-holding members thereon, means for moving said conveyer, a guide-way for box shucks, said guide-way having a delivery throat adjacent the path of the conveyer, and means reciprocative in said throat for moving the shucks therefrom into the spaces between the successive members of the conveyer.

4. In a box-filling machine, the combination with an endless chain conveyer having spaced shuck-holding blades thereon, and sprocket wheels whereby said conveyer is guided in upper and lower horizontal paths, of means whereby shuck trays are supported laterally adjacent the conveyer as it travels from the lower to the upper path, and means whereby the shucks thus supported are progressively fed to the conveyer.

8. In a box-filling machine, the combination of a conveyer comprising an endless chain of links having two rows of spaced blades extending longitudinally of the conveyer, the inner ends of the blades of one row having beveled guide and stop portions, means for inserting box shucks between the successive blades having such portions, means for inserting box trays between the successive blades of the other row, means for supplying matches to the trays on the conveyer, and means for pushing the filled trays into their complementary shucks on the conveyer.

1,300,763. MACHINE FOR FILLING BOXES. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 22, 1915, Serial No. 35,541. Divided and this application filed Aug. 30, 1916, Serial No. 117,589. Renewed Sept. 11, 1918. Serial No. 253,659. 9 Claims. (Cl. 144—61.)

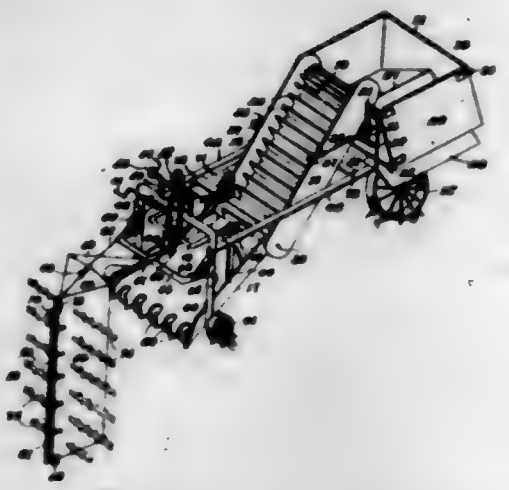


1. In a box-filling machine, the combination with a match-feeding hopper, of a tray-conveyer mounted to travel under the delivery portion of the hopper and having spaced tray-holding members provided with upstanding portions adapted to enter the interior of the hopper and transfer matches therefrom to the trays on the conveyer.

3. In a box filling machine, the combination with a match feeding hopper, of a tray-conveyer mounted to travel under the delivery portion of the hopper, said conveyer having spaced members which project above the tops of the successive trays on the conveyer during their travel adjacent the hopper and provide measuring chambers for the matches before their delivery to the trays, and a yielding element at such delivery portion of the hopper overhanging the path of said members and affording a top or cover for the traveling chambers.

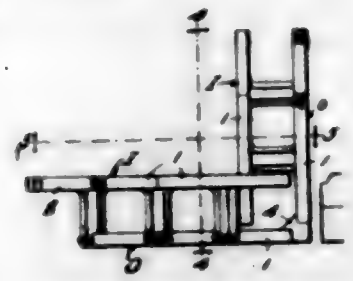
6. In a box-filling machine, the combination with an elongated match feeding hopper, of a tray-conveyer mounted to travel under the delivery portion of the hopper, said conveyer having spaced members which project above the tops of the successive trays on the conveyer during their travel adjacent the hopper, a yielding throat piece at the delivery portion of the hopper arranged to overhang the conveyer in proximity to the path of said members, and a rod extending longitudinally of the hopper and overhanging the throat member, the end of said rod adjacent the throat member being pivotally supported.

1,300,764. SNOW-GATHERER. FRANK PATAYA, Gardenville, N. Y. Filed Oct. 30, 1917. Serial No. 199,275. 8 Claims. (Cl. 37—62.)



1. A device of the class described comprising a vehicle having a forward extension, an approach and an elevator arranged within said extension associated with the vehicle, a body V-shaped in cross section and normally arranged upright forwardly of the approach, hinged connections between said body and approach and elevating and lowering means for said body.

1,300,765. BUILDING-BLOCK FOR HOLLOW-WALL CONSTRUCTION. JOHN B. PAULSON, Edgefield Park, N. J. Filed June 30, 1917. Serial No. 177,921. 3 Claims. (Cl. 72—39.)

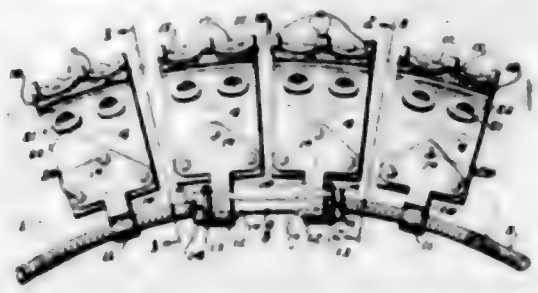


1. A hollow wall corner construction for a building comprising an outer wall section composed of a right-angular corner block having recesses in two of its outer corners, blocks for endwise engagement with said corner block and having recesses to register with the recesses in said corner block, blocks disposed edgewise on those of the course below and in break joint relation, corner filler blocks having right angle grooves for interlocking engagement with the ends of the blocks on the adjacent angularly disposed walls, and an inner wall section comprised of blocks having shanks for engagement with the recesses in the blocks of said outer wall section.

2. A hollow wall corner construction for a building comprising a right angular outer corner block, adjacent angularly disposed wall blocks engaged with said corner block, the last mentioned blocks and the corner block being provided with registering recesses to form semi-hexagonal pockets, blocks disposed edgewise on those of the course below and in break joint relation, inner wall blocks having shanks to be received in said pockets of the outer wall blocks, and a corner filler block construction for certain courses, in order to obtain the break joint arrangement of the blocks of the different courses.

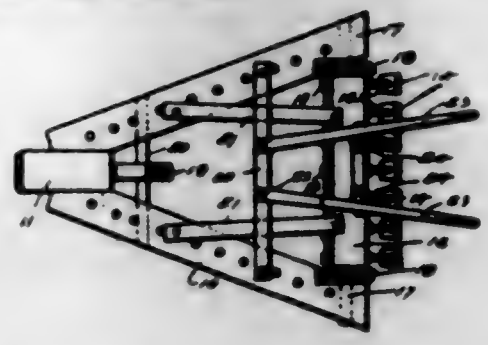
3. A hollow wall corner construction for a building comprising an outer wall section including a right angular corner block, side wall blocks engaged with said corner block, a corner filler block resting upon the first mentioned corner block, said corner filler block having vertical grooves in its opposite sides for interlocking engagement with the ends of the blocks on the adjacent angularly disposed walls, shanks carried by the outer wall block, an inner wall section formed of inner wall blocks, shanks carried by the last mentioned blocks, the shanks of the blocks included in the outer wall section being received in pockets in the corners and edges of said blocks of the inner wall section, the shanks of the blocks of the inner wall section being received in the pockets formed in the corners and edges of the blocks of the outer wall section, and means for locking said shanks in their pockets and preventing separation of said wall sections or movement of the same toward one another.

1,300,766. TIRE-ARMOR. ADOLPH X. PFEIFFER, St. Louis, Mo. Filed Dec. 12, 1918. Serial No. 266,430. 6 Claims. (Cl. 152—16.)



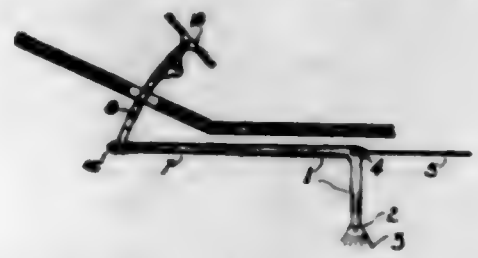
5. Tire armor, comprising a pair of rods, one threaded, turnbuckles for uniting the rods and a plurality of armor units attached to the said rods; the said means of attachment for the unit or units opposite the turnbuckles being such as to permit turning of the turnbuckles in either direction, said connecting of a hook attached to each unit, the said hook impinging against a flange upon one of the turnbuckles.

1,300,767. CULTIVATOR. WILLIAM H. PHILLIPS, Albany, Ala. Filed July 5, 1918. Serial No. 243,400. 1 Claim. (Cl. 55—128.)



As an article of manufacture, a cultivator having a frame consisting of forwardly convergent side beams and a transverse rear beam connecting the extremities of the side beams, harrow teeth carried by the side beams, cotton chopper blades carried by the rear beam and having their stems extending rearwardly therefrom, supporting and depth controlling rollers mounted upon the frame fore and aft thereof, longitudinal braces connecting intermediate portions of the side beams with the intermediate portions of the transverse beam, a transverse brace connecting the intermediate portions of the side beams, and handles supported at their forward ends by said transverse brace and connected at intermediate points with the rear beam.

1,300,768. BRAKE-PEDAL. JOHN H. PIPER, Larimore, N. D. Original application filed Jan. 28, 1918, Serial No. 214,224. Divided and this application filed July 18, 1918. Serial No. 245,574. 2 Claims. (Cl. 74—81.)



2. A brake operating mechanism comprising a pivoted lever, an operating member, having teeth, pivoted thereto, said operating member comprising a foot engaging piece eccentrically arranged in relation to said operating member and a stationary detent, the eccentricity of said foot engaging piece tending to keep the operating member removed from said detent during the operation thereof.

1,300,769. PATCH FOR TIRE-CASINGS. HOMER P. PIATTS, Walters, Okla. Filed May 6, 1918. Serial No. 232,787. 3 Claims. (Cl. 152—26.)



1. A patch for a tire casing comprising hingedly connected plates adapted to overlie the inner face of a tire casing, one of said plates being provided with means engageable with the bead of the casing.

1,300,770. BROOM. CHARLES DAN POSSENTE, Sonoma, Calif. Filed June 13, 1918. Serial No. 239,666. 1 Claim. (Cl. 15—20.)



A broom comprising a handle having a pointed lower end, and a broom straw sweeping portion bound into shape and being divided into a plurality of separate units or bunches above the said binding, the short straws in the sweeping portion being centrally located to form the central bunch and being bound around and secured to the pointed end of the handle, and the longer straws in the sweeping portion forming the outer bunches, each bunch being bound within itself substantially on a line with the binding of the central bunch, and having their upper extremities merged together and bound around and secured to the handle above the central bunch.

1,300,771. CHIME-CLOCK. WILSON E. POTTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Oct. 17, 1917. Serial No. 197,150. 5 Claims. (Cl. 58—18.)



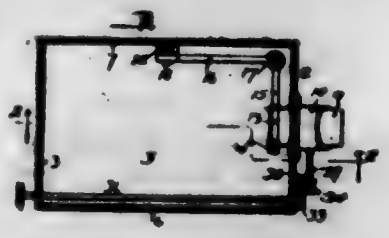
1. In a self-contained time, strike and chime clock-movement, the combination with the time and chime mechanism thereof, of a spring-actuated releasing-lever periodically moved by the time-train into its blow-delivering position, and a lifting-dog operated by a blow delivered by the said releasing-lever for releasing the chime-train without "warning" the same.

1,300,772. MOTOR-CYCLE. ANDREW J. PURDY, San Francisco, Calif. Filed Jan. 22, 1918. Serial No. 213,227. 2 Claims. (Cl. 280—75.)



1. In a motor cycle, side supporting wheels pivotally connected with the frame of the motor cycle, a governor responsive to the speed of the motor cycle, means controlled by said governor for raising and lowering said supporting wheels.

1,300,773. FOCUSING DEVICE FOR MOTION-PICTURE CAMERAS. HOWARD L. QUICK, Brooklyn, N. Y. Filed Jan. 23, 1916. Serial No. 74,020. 4 Claims. (Cl. 95—44.)



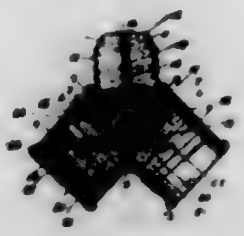
1. In a device of the class described, the combination of a camera for taking pictures including a lens, of means for moving the lens to focus the same, means movable automatically with the lens for indicating the positions thereof on an enlarged scale and a dial associated with said indicating means and having markings thereon representing different distances at which objects will be in focus.

2. In a device of the class described the combination of a camera for taking pictures including a lens, means for focusing the lens during the taking of the pictures, automatically moved means for indicating the different focal positions of the lens and a dial coöperating with said indicating means and having markings representing different distances at which objects will be in sharp focus and having markings indicating maximum and minimum distances at which objects will be in approximate focus.

3. In a device of the class described the combination of a camera for taking pictures including a lens, means for focusing the lens during the taking of the pictures, automatically moved means for indicating the different focal positions of the lens and a dial coöperating with said indicating means and having markings representing different distances at which objects will be in sharp focus, and having markings indicating maximum and minimum distances at which objects will be in approximate focus when the lens is operated with a given diaphragm opening and having other markings indicating maximum and minimum distances at which objects will be in approximate focus when the lens is operated with a different diaphragm opening.

4. In a device of the class described the combination of a camera for taking pictures including a movable lens, means movable automatically for indicating the different focal positions of the lens, and a dial coöperating with said indicating means and having a row of markings indicating different distances at which objects will be in sharp focus at different lens positions, and having rows of markings arranged above and below and in line with said first markings for indicating minimum and maximum distances at which objects will be in approximate focus, and markings indicating different diaphragm values associated with said latter rows of markings.

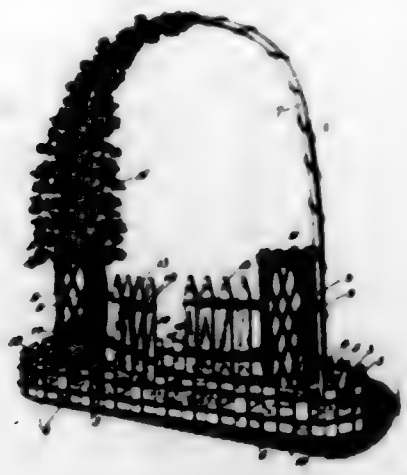
1,300,774. WEATHERPROOF PLURAL LAMP-SOCKET. ADOLPH C. [illegible], Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed June 16, 1917. Serial No. 175,146. 1 Claim. (Cl. 173—335.)



In a weather-proof lamp-socket, the combination with a screw plug-shell and two lamp-receptacle screw-shells, of means for electrically connecting the said shells, slotted closure disks located within the inner ends of the screw-shells, a contact pin passing through the said plug, contact-strips connected with the said pin and entering the

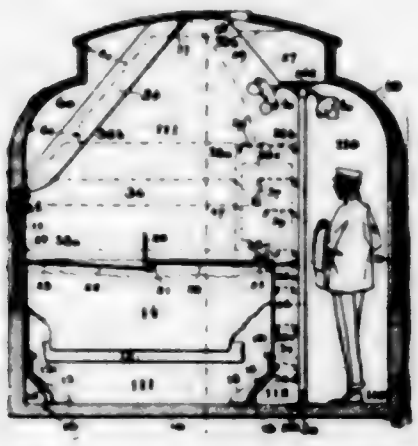
slots in the said disks, and a one-piece molded body inclosing the said screw-shells and filling the space between the said shells, plug and disks, the said parts being assembled in spaced relation into a substantially unitary structure preparatory to the application of the molded body by which their spaced relations are permanently fixed and they are protected.

1,300,775. FLORAL STAND. WILLIAM N. REED, Hackensack, N. J. Filed Oct. 12, 1917. Serial No. 196,120. 2 Claims. (Cl. 47—18.)



1. In a device of the character described the combination of a base board, a handle secured thereto and having the general form of an arch, a pair of flower retaining wicker cylinders mounted upon said base board and secured to said handle, and a pair of water tanks removably mounted within said wicker cylinders, for the purpose of supporting flowers and supplying the stems thereof with water.

1,300,776. RAILWAY-CAR. SIDNEY A. REEVE, Tompkinsville, N. Y. Filed Mar. 2, 1916. Serial No. 81,670. 15 Claims. (Cl. 105—315.)



1. In a railway-car, the combination of a night-aisle along one side thereof, transverse berths as long as the human form convertible into reversible seats along the other side thereof, and a space intermediate between said aisle and said berths substantially as described.

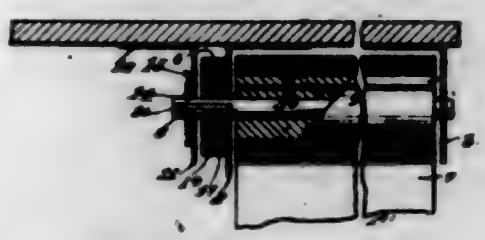
1,300,777. AIRCRAFT-FUSELAGE. WILFRID THOMAS REID, Bristol, England, assignor of one-half to The British & Colonial Aeroplane Company Limited, Bristol, England. Filed Mar. 19, 1918. Serial No. 223,279. 4 Claims. (Cl. 244—30.)

1. In an aeroplane-fuselage, the combination of a plurality of trough-shaped separable sections each section comprising a pair of plates fixed together, one plate constituting the trough and the other a lining for it and one being corrugated, flanged ends on each section to abut against corresponding flanged ends on the adjacent sec-



tions, and means for connecting the abutted flanged ends to one another.

1,300,778. WINDOW-SHADE ROLLER. ROBERT H. REVIER, Dallas, Tex. Filed Feb. 5, 1918. Serial No. 215,481. 1 Claim. (Cl. 156—36.)



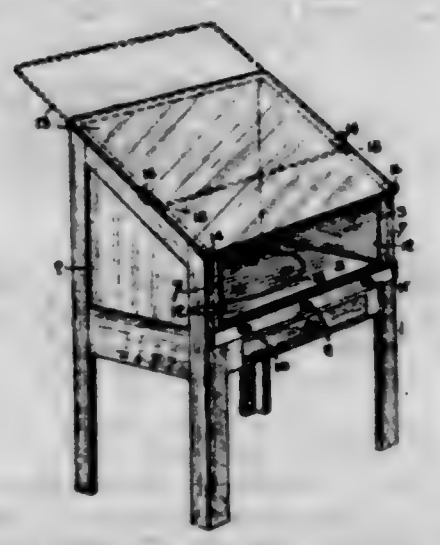
In a device of the character described, spaced main brackets, an auxiliary bracket arranged in closely spaced relation to one of the main brackets, a shaft journaled through the brackets, a shade roller carried by the shaft and positioned between the main brackets, a casing arranged loosely about the shaft between the auxiliary bracket and one of the main brackets and secured to the outer face of the adjacent main bracket, a spring arranged about the shaft within the casing and having one end secured to the shaft and the remaining end secured to the casing, the end of the shaft projecting beyond the auxiliary bracket being provided with recesses, a disk carried by the outer face of the auxiliary bracket, and a plurality of pawls pivoted to the disk and terminating in lugs for coactive engagement with the recess in the shaft.

1,300,779. TIMER-BRUSH. JOHN H. RICHARDS, AUGUST J. SIMON, and JOHN H. HAAS, Overbrook, Kans. Filed July 10, 1918. Serial No. 244,275. 4 Claims. (Cl. 123—167.)



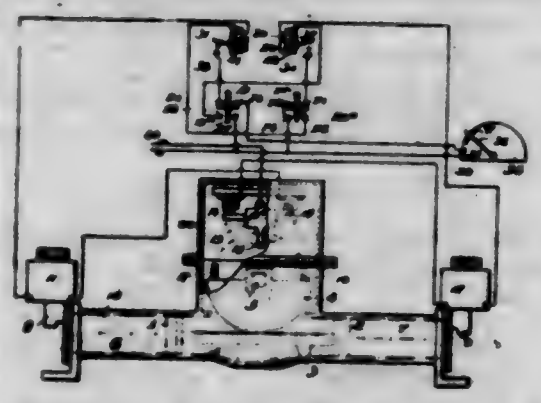
1. The combination with a rotatable shaft and a concentric contact ring, of a supporting frame secured on said shaft for rotation therewith and provided with oppositely directed arcuate arms, one of said arms being provided at its outer end with a transversely extending outwardly directed eye, an arcuate spring secured at one end to the other arm of the frame and having its free end loosely inserted through said eye so as to be readily movable therethrough, and a contact member mounted on the outer face of the spring and normally held thereby in engagement with the inner face of said ring, the eye serving to permit movement therethrough of the spring to accommodate distortion thereof while preventing contact of the free end of the spring with said ring.

1,300,788. TYPE-WRITER CABINET. WALTER R. C. ROWAN, Pittsburgh, Pa. Filed Apr. 26, 1916. Serial No. 93,747. 1 Claim. (Cl. 45—52.)



A stand or support for typewriter or other machine having a normally open-front compartment with its bottom and walls provided with sound absorbing material, and a slanting top-plate of translucent material adapted to deflect the sound of the keys against the sound-absorbing walls and bottom.

1,300,781. ELECTRIC CONTROL OF FLUID-PRESSURE-ACTUATED MOTORS. HAROLD ROWNTREE, Kenilworth, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Dec. 30, 1916. Serial No. 139,794. 6 Claims. (Cl. 123—2.)



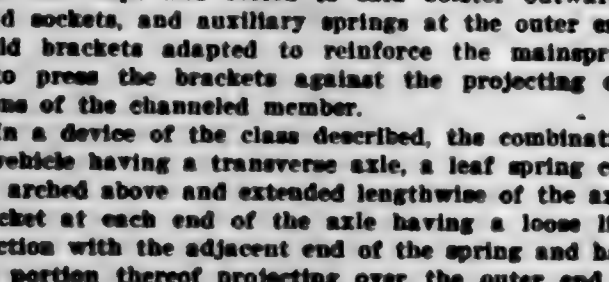
1. The combination with a fluid pressure actuated motor, magnet valves for controlling the supply of pressure to said motor, normally open circuits for said magnet valves, means for closing said circuits, and electrically operated means, actuated by the momentary closing of one of said circuits, for maintaining said circuit closed until the operation of said motor is completed, and means actuated by the momentary closing of the other of said circuits for breaking said first mentioned circuit.

1,300,782. DOOR OPERATING AND LOCKING DEVICE. WALTER S. RYAN, New York, N. Y., assignor of one-half to Robert C. Lafferty, New York, N. Y. Filed May 11, 1918. Serial No. 27,487. 32 Claims. (Cl. 189—7.)

1. In a door-operating mechanism, the combination of driving mechanism for the door, a source of power for said mechanism, means for cutting off said source, a controller and means dependent upon the position of said door and upon said controller for operating said first-named means to cut off said source of power.

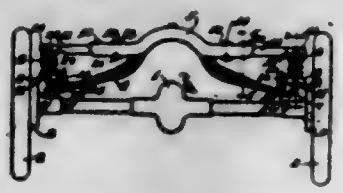
2. In a door-operating mechanism, the combination of mechanism having a plurality of operative settings for moving the door respectively in a plurality of directions and means dependent upon the position of the door for shifting said mechanism from one setting to another.

3. In a door-operating mechanism, the combination of mechanism having a plurality of operative settings for moving the door respectively in a plurality of directions, a controller and means dependent upon the position of the door and of the controller for shifting said mechanism from one setting to another.



4. In a door-operating mechanism, the combination of mechanism having a plurality of operative settings for moving the door respectively in a plurality of directions and means rendered operative upon movement of said mechanism from a limiting position for shifting said mechanism from one setting to another.

1,300,783. AUXILIARY SPRING ATTACHMENT FOR MOTOR-VEHICLES. ALPHONSE A. SEBASTIAN, Chicago, Ill. Filed June 21, 1918. Serial No. 241,198. 3 Claims. (Cl. 267—19.)



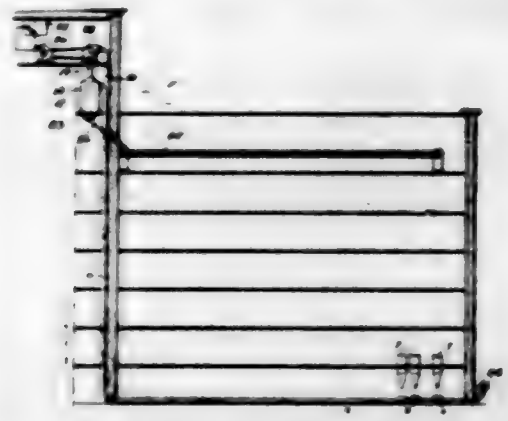
1. In an automobile, the combination with a transversely extending bolster channeled on its under side for connection with the arched central portion of the automobile main spring, and yoke-shaped clips fixed in the channel of said bolster to provide, in connection with said bolster, attaching means for the side sills of the automobile, said bolster and clips forming sockets, of brackets at the ends of said bolster having their inner ends inserted into the sockets formed by said bolster and clips and bolted to said bolster outwardly of said sockets, and auxiliary springs at the outer ends of said brackets adapted to reinforce the mainspring and to press the brackets against the projecting end portions of the channeled member.

3. In a device of the class described, the combination of a vehicle having a transverse axle, a leaf spring centrally arched above and extended lengthwise of the axle, a bracket at each end of the axle having a loose link connection with the adjacent end of the spring and having a portion thereof projecting over the outer end of the spring to engage the main spring and thereby utilize the resilience thereof to minimize the rebound thereof, a frame supported on the centrally arched portion of the main spring and having portions projecting over the brackets at the ends of the axle, and a spring compressed between the outer end of each projecting portion and the adjacent bracket on the end of the axle for reinforcing the main spring.

1,300,784. TRANSLATING AND COOLING MATERIAL. MIRABEAU SIMS, Llanerch, Pa., assignor to Sims Automatic Conveyer Company Incorporated, a Corporation of Delaware. Filed Sept. 4, 1915. Serial No. 49,102. 1 Claim. (Cl. 193—10.)

Apparatus for operating upon bone black after its use in the refining of sugar, which comprises a drying kiln adapted to discharge its contents intermittently, a pneumatic conveyer pipe of sufficient extent to secure a substantial cooling of the material discharged from the kiln, said conveyer pipe provided with a plurality of apertures through which the material is introduced

thereto, means for converting the intermittent discharge from the kiln to a substantially constant flow into the pipe, regulatable means for inducing a current of air through the pipe, a conveyer belt and means for dis-



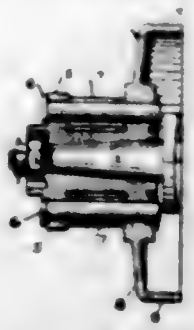
charging the material from the pipe to the belt, whereby the material is reduced in temperature from that of the kiln to the temperature required for reuse at the discharge end of the conveyer belt.

1,300,785. VALVE-OPERATING MECHANISM. RICHARD SPRINGBORN, Cleveland, Ohio. Filed July 31, 1918. Serial No. 247,529. 3 Claims. (Cl. 251—48.)



2. An attachment for valves embodying the usual hollow body, bonnet, valve member, valve stem and valve operating hand wheel, said attachment comprising a hollow casing constructed at one end for attachment to the bonnet and being provided internally with valve stem operating means, said operating means at the other end of the casing having an exposed portion constructed and arranged to receive said hand wheel, a seat within said casing, a coöperating seat on said operating means, and yielding means for holding said seats in engagement.

1,300,786. DRIVING-PINION. EDWIN G. STAUDE, Minneapolis, Minn. Filed Nov. 25, 1916. Serial No. 133,452. 2 Claims. (Cl. 74—41.)



1. The combination, with an axle spindle, of a pinion sub fitting thereon and having flanged ends and pins mounted in said flanges to form a lantern pinion, the inner flange of said hub having an annular web radiating therefrom terminating in a flanged portion which extends in a direction parallel substantially with the axis of said hub and having an external friction surface.

1,300,787. SINGLE-TRUCK CAR. EDWIN M. SWIFT, Seattle, Wash. Filed June 21, 1918. Serial No. 241,191. 5 Claims. (Cl. 105—194.)

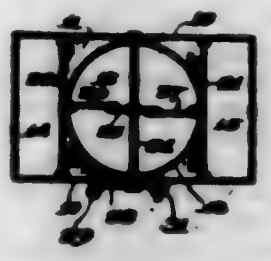


1. The combination in a single truck car, of a car body; a four-wheeled truck mounted under the car body; beams pivoted to the truck directly above the boxes for the axles, one arm of each beam being pivoted to the car body beyond the wheels, the other end of each beam being independently connected through a spring to the frame of the truck so that each beam will operate independently of the others.

2. The combination in a single truck car, of a car body; a four wheeled truck frame mounted under the car body and having boxes for the axles; beams pivoted to the boxes, one arm of each beam extending beyond the wheels and pivoted to the car body, the other arm of the beam being connected to a rod having a piston; a cylinder in which the piston is mounted; and springs between the piston and the upper end of the cylinder, said cylinder being secured to the truck frame.

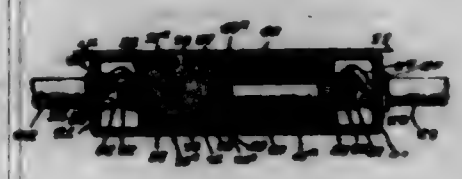
3. The combination of a car body; a four wheeled truck mounted on the car body; four beams pivoted to the truck; means connected to the inner ends of each beam for yieldingly supporting the car body; a bearing on the car body to which the outer end of each lever is pivotally connected; and a spring between each side of the lever and the bearing, which allows for the side easement of the car body.

1,300,788. REGULATOR FOR FURNACES. GEORGE M. TAGGART, Philadelphia, Pa., assignor of one-half to Silas H. Yerkes, Philadelphia, Pa. Filed July 16, 1918. Serial No. 245,171. 2 Claims. (Cl. 126—293.)



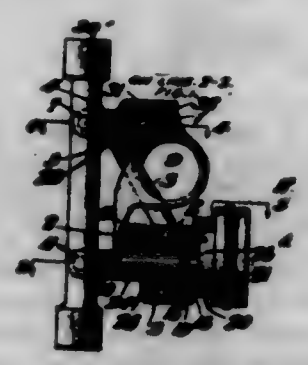
1. A device of the character described including a box having a bottom plate with a hole therein; a coupling collar adapted to fit within said hole; a coupling collar in communication with the top of said box and above said first coupling collar whereby products of combustion can pass through said first coupling collar, thence through said box, and finally out through the top coupling collar, said plate having openings oppositely disposed at both sides of said first coupling collar and open to the atmosphere, said box including sides tapering upwardly from said plate at the outside of said openings and other plane parallel sides extending between said first two sides; and plates having their bottom portions pivotally mounted within said box and adapted to be moved toward each other between the planes of said parallel sides to vary the amount of products of combustion passing through said box and to permit air to pass through said box through said openings, substantially as described.

1,300,789. CAR AND ELECTRIC COUPLING DEVICE. CHARLES H. TOMLINSON, Mansfield, Ohio. Filed June 10, 1916. Serial No. 103,180. 28 Claims. (Cl. 173—332.)



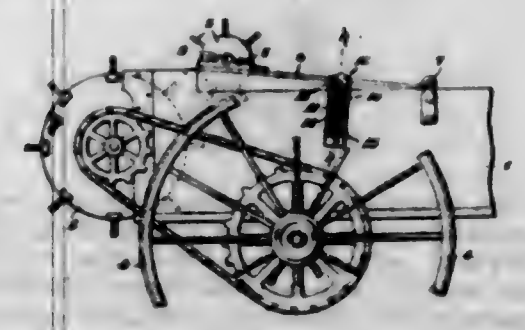
2. In an electric coupler, a pair of casings, projecting yielding butt end contacts in each casing, means adapted to automatically register the contacts in direct longitudinal alinement before they abut, and means to prevent relative vertical, lateral and longitudinal movement of the casing when coupled.

1,300,790. EXTENSOMETER. WILLIAM J. TABTCH, Philadelphia, Pa., assignor to Riehle Bros. Testing Machine Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 13, 1917. Serial No. 196,362. 15 Claims. (Cl. 33—147.)



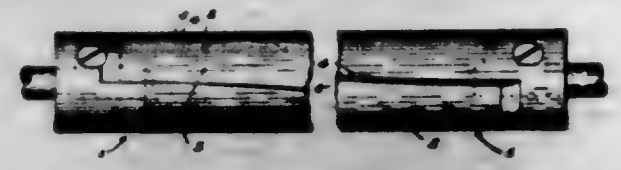
1. In an extensometer, in combination, a strut, a fixed frame carried by said strut, an indicator carried by said strut and provided with an actuating plunger, and a bell crank lever fulcrumed in said strut and having one arm provided with opposed specimen clamping members adapted to be connected to the specimen to be stressed and its other arm to engage said plunger.

1,300,791. FERTILIZER-DISTRIBUTER. FARLEY D. VANDEMARK, Seneca Falls, N. Y., assignor to Marseilles Company, Moline, Ill. Filed July 26, 1915. Serial No. 41,835. 8 Claims. (Cl. 275—3.)



1. In a fertilizer distributer, the combination of a body, a beater revolvable in one direction for discharging the load, a conveyer for carrying the load toward the beater, an idler rake located near the beater for engaging the upper portion of the load in advance of the contiguous part of the beater, said rake being revolvable in the opposite direction by the traveling load, movable means supporting the rake in position to yield in a substantially vertical direction toward and from the beater, and spring means interposed between the body and the supporting means to resist movement of the supporting means and the rake away from the beater, substantially as and for the purpose described.

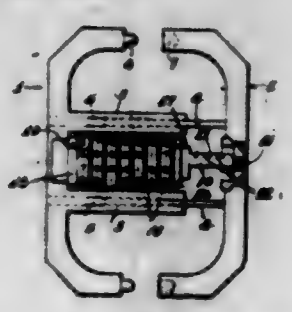
1,300,792. ROTARY CUTTER FOR ENVELOP-OPENERS. JAMES V. WASHBURNE, Fulton, N. Y. Filed July 19, 1917. Serial No. 181,587. 7 Claims. (Cl. 164—16.)



1. A cutter for envelop openers comprising a rotary cylinder having a spiral groove in the periphery thereof, the groove having its bottom convex and depressed slightly below the periphery of the cylinder, one side of the groove forming a cutting edge, the cylinder being formed with a channel in the bottom of the groove at the base of the cutting side of the groove, substantially as and for the purpose described.

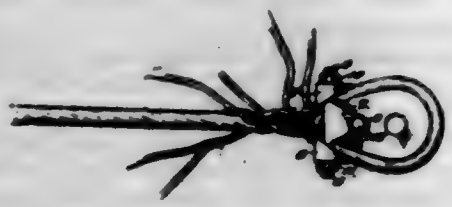
7. A cutter for envelop openers comprising a rotary cylinder having a lengthwise peripheral spiral groove forming a knife edge at one side of the groove, the bottom of the groove being convex and the portion of the bottom of the groove contiguous to the cutting side thereof being removed to form a clearance for receiving a sharpening tool for the cutting edge, substantially as and for the purpose specified.

1,300,793. COMBINATION-LOCK. GEORGE WATERFIELD, Syracuse, N. Y. Filed Feb. 23, 1918. Serial No. 218,761. 1 Claim. (Cl. 70—19.)



The combination of a lock comprising a post having a lengthwise keyway therein, and external lugs spaced apart, rings mounted on the post and having internal keyways for receiving the lugs, and internal keyways for alinement with the keyway of the post, indicator rings rotatably mounted on the peripheries of the former rings, disks mounted upon the sides of the latter rings and having their inner margins movable between said lugs and formed with keyways arranged to come into and out of alinement with the keyway of the first mentioned rings, the second mentioned rings having projections on their lateral sides and their disks having a series of holes for receiving the projections and the disk being adjustable to bring any hole in position to receive the projection, and a second post movable endwise into the keyway of the former post and one of the keyways of each of the first mentioned rings, the second post having notches for receiving the inner margins of said disks, substantially as and for the purpose described.

1,300,794. SPLICING AND SEIZING CLAMP. ADOLF J. T. WENDT-WRIEDT, Alexandria, Va. Filed Jan. 28, 1918. Serial No. 213,674. 6 Claims. (Cl. 24—115.)



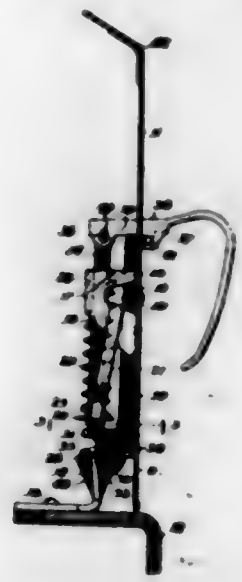
4. A splicing and seizing clamp adapted to retain the bight of a rope around a heart being secured therein including a pair of side members each having a bearing ear

and each provided with threaded extensions, wedge-shaped clamp blocks having openings to receive said threaded extensions, clamp nuts to be turned onto the



threaded extensions to draw in said clamp blocks, a pin to be fitted through the openings of the bearing ears and in engagement with the heart, and a filler sleeve received around said pin to fit the same to said heart.

1,300,795. BARKING-DRUM. AMBROSE H. WHITE, New York, N. Y., assignor to International Paper Company, a Corporation of New York. Filed Jan. 26, 1915. Serial No. 4,575. 1 Claim. (Cl. 144—208.)

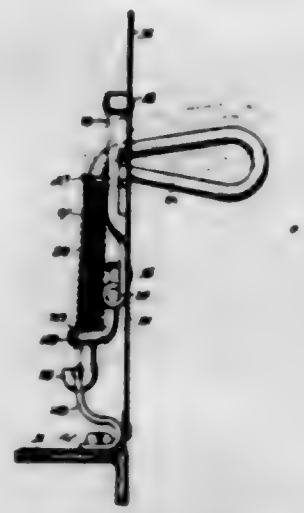


In an apparatus for barking wood, the combination of a tank to contain a quantity of water, a drum to receive the wood to be barked and rotatable in the tank, said drum being provided with openings through which the bark may escape into the tank, a plurality of series of blades projecting from the exterior of the drum at intervals in its length with the blades of one series staggered with relation to the blades of another series, and said blades adapted in the rotation of the drum to sweep through the tank and remove the bark therefrom, whereby the strain on the blades will be evenly distributed throughout the length and circumference of the drum, and a trough at the side of the drum in position to receive the bark delivered by the blades.

1,300,796. HOOD-FASTENER. JOHN F. WHITE, Chicago, Ill., assignor, by mesne assignments, to White Products Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,005. 10 Claims. (Cl. 70—62.)

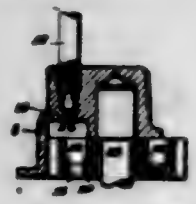
5. In a device of the class described, the combination with a hinged member of an engine hood, of a keeper and latch hook mounted within the hood one on the hinged member and the other fixed, and relatively movable toward each other, a spring pressing the hook away from the keeper, an operating member movably associated with the hook and having a portion extending across the throat and below the beak of the hook, the operating member operable from without the hood to expel the hook from the keeper in the act of opening the hood and to engage the hook with the keeper in the act of closing the hood.

1,300,797. HOOD-LATCH. JOHN F. WHITE, Chicago, Ill., assignor, by mesne assignments, to White Products Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 12, 1917. Serial No. 191,079. 6 Claims. (Cl. 70—3.)



1. In a device of the class described, the combination with the door of an engine hood, of a latch comprising a handle, a shank and a hook, means for confining the upper portion of the shank against lateral movement relative to the door but permitting of longitudinal movement, means for confining the lower portion of the shank against lateral movement parallel to the door and allowing lateral play for the hook toward and from the door, a stationary keeper for coöperation with the hook, a spring urging the latch shank in the direction of its length away from the keeper, the handle of the latch extending from the door and forming with the shank an angle lever fulcrumed in its upper portion whereby the latch hook may be swung toward and away from the door out of and into engagement with the keeper.

1,300,798. FORCE-FEED LUBRICATOR. JOHN WILKINSON, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed June 22, 1916. Serial No. 105,188. 8 Claims. (Cl. 184—35.)



1. A force feed lubricator having a circular series of outlet ports and a pump including a rotary distributer arranged concentric with the axis of the series of the ports and formed with a transverse delivery passage extending in the direction of the axis of the distributer and opening through opposite side faces of the distributer, the delivery passage being arranged to register successively with said outlet ports, substantially as and for the purpose described.

2. A force feed lubricator comprising a body formed with a series of circular outlet ports, and a pump including a casing and intermeshing gears located in the casing one of said gears being arranged with its axis coincident with the axis of the series of outlet ports and having a delivery passage therethrough eccentric to said axis and movable successively into registration with the outlet ports, substantially as and for the purpose set forth.

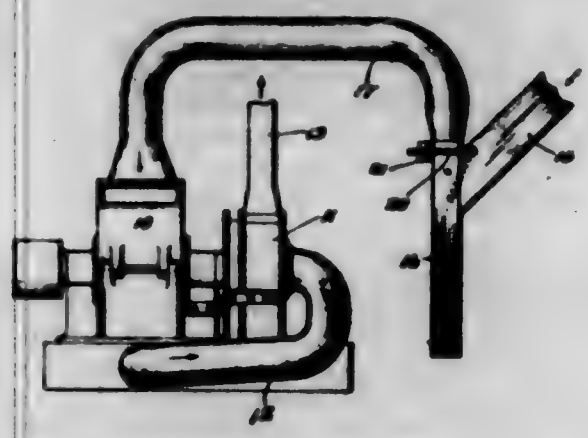
3. A force feed lubricator comprising a body formed with a circular series of outlet ports, and a pump including a casing, and movable elements in the casing, said ele-

ments including intermeshing gears, one of the gears serving as a distributer and being arranged with its axis coincident with the axis of said series of outlet ports and formed with a delivery passage arranged to come successively into alinement with the outlet ports, the pump also including an annular compression chamber arranged concentric with the axis of said distributer and into which the delivery passage opens, substantially as and for the purpose described.

4. A force feed lubricator comprising a body having a circular series of outlet ports, and a pump including a rotary distributer arranged concentric with the axis of said series and formed with a delivery passage arranged to register successively with said outlet ports, and means for adjusting the pressure through the delivery passage, substantially as and for the purpose specified.

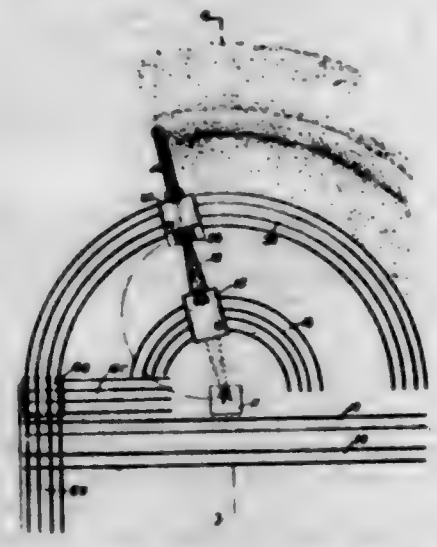
5. A force feed lubricator comprising a body formed with a circular series of outlet ports, and a pump including a casing, movable elements in the casing, said elements including intermeshing gears, one of the gears serving as a distributer and being arranged with its axis coincident with the axis of said series of outlet ports and formed with a delivery passage arranged to come successively into alinement with the outlet ports, the pump also including an annular compression chamber arranged concentric with said distributer and into which the delivery passage opens, and means for adjusting the pressure in said annular passage, substantially as and for the purpose set forth.

1,300,790. METAL-CATCHER FOR REDUCING-MILLS. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 13, 1917. Serial No. 201,830. 1 Claim. (Cl. 83—54.)



In a metal catcher for reducing mills, the combination of a material supply pipe having in its length a substantially V-shaped portion or bend, from the junction of the legs of which depends a pipe, the lower end of which is open to atmosphere for conducting away particles and objects heavier than the material being acted upon, a valve pivotally arranged in the supply pipe adjacent to the junction of the legs of the V-shaped portion thereof, the lower edge of said valve being designed to coöperate with the lower wall of one of the legs of the V-shaped portion, and means for causing a current of air to pass upwardly through the open-ended pipe and one of the legs of the V-shaped portion of the supply pipe whereby the material being acted upon is drawn downwardly past one side of the valve, thence forced beneath said valve, and thence upwardly through the other leg of the V-shaped portion of the supply pipe to a reducing machine, whereby any foreign objects heavier than the material being acted upon and not susceptible to the upward movement of the air current will drop through the open-ended pipe and a reducing machine for acting upon all of the lighter material, including dust and finer particles, passing through the V-shaped portion of said supply pipe.

1,300,800. SYSTEM FOR STORING BULKY MATERIALS. ALEXANDER H. WOOD, Kildav, Ky., assignor to Wood Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 2, 1917. Serial No. 178,248. 2 Claims. (Cl. 214—10.)



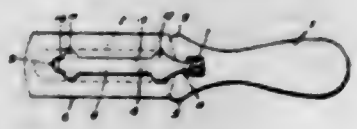
1. In a system for storing material, the combination with a locomotive crane operating on a track and adapted to pick up material deposited on one side of the track, of a parallel track on the opposite side from the material and a portable conveyer operating on the second track and adapted to receive material from the locomotive crane and deposit it beyond the second track, the conveyer having a boom adapted to revolve in a horizontal plane, whereby material may be stored beyond and between the tracks and upon the track beds, and may be removed therefrom.

1,300,801. SELF-LOCKING SCREW-THREAD. IRVING C. WOODWARD, Chicago, Ill. Filed July 12, 1918. Serial No. 244,590. 3 Claims. (Cl. 151—22.)



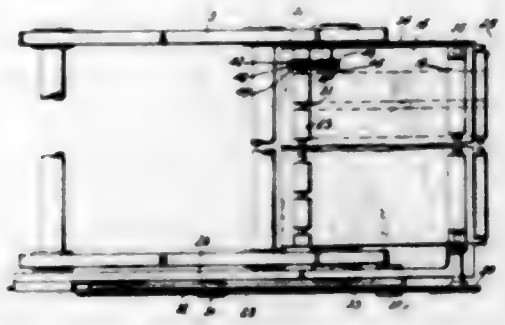
2. A pair of complementary threaded members, one having a standard thread of equilateral triangular cross-section, and the other having a thread of equal cross sectional area and of like triangular form, except that at the base of the thread the sides slope inwardly on one side, and outwardly on the opposite side from the normal angle.

1,300,802. RAZOR-BLADE KNIFE. THOMAS S. ABERNATHY, Birmingham, Ala. Filed Jan. 21, 1919. Serial No. 272,897. 3 Claims. (Cl. 30—25.)



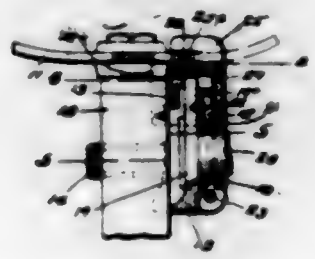
2. In a razor blade knife handle, a stamped metal plate having a keeper struck up from its handle end and having a stud struck up from its blade supporting end, there being a slot in the outer portion of said latter end, said stud and slot being in position to register with openings in a safety razor blade, and a blade clamping member having an offset depressed tongue adapted to pass through the handle slot and having a curved body portion adapted to overlie said stud and at its rear end to be sprung into engagement with said keeper, substantially as described.

1,300,803. AUTOMATIC FEEDING ATTACHMENT FOR PRINTING-PRESSES. LEOPOLD ABELMOPER, New York, N. Y. Filed Jan. 17, 1919. Serial No. 271,678. 5 Claims. (Cl. 101—291.)



1. A paper feeding attachment for printing presses of the type including a stationary platen, a reciprocating bed holding the form and a continuously rotating gear, the combination with said bed, of feeding rollers mounted thereon, and a train of gears for actuating said feeding rollers, one member of said train being brought into mesh with said continuously rotating gear when said bed approaches the end of the stroke away from said platen and unmeshed when said bed moves in the opposite direction.

1,300,804. AUTOMOBILE-STEERING-WHEEL LOCK. ROBERT E. ADAMSON, St. Louis, Mo. Filed Sept. 21, 1918. Serial No. 255,125. 4 Claims. (Cl. 70—129.)



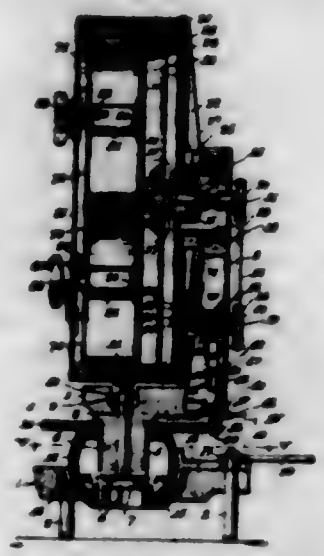
1. In a locking device of the class described, a member adapted to be secured to the steering column of a motor vehicle adjacent to the steering wheel, an arm hinged to said member, the free end of which arm is notched so as to receive one of the spokes of the steering wheel when swung upward into locking position, there being laterally disposed notches formed in said arm to the sides of the spoke engaging notch, which laterally disposed notches are adapted to receive the side portions of the engaged spoke to retain the same against upward movement, and means on said member for locking said arm in wheel engaging position.

1,300,805. SUPPORT FOR MOTION-PICTURE CAMERAS AND THE LIKE. CARL E AKELEY, New York, N. Y., assignor to Akeley Camera Inc., New York, N. Y., a Corporation of New York. Filed May 8, 1916. Serial No. 96,197. 7 Claims. (Cl. 248—47.)

1. The combination with a motion picture camera casing, and a casting in which said casing is mounted adjustably on a horizontal axis, of a base, a universal connection between said casting and said base, and a separate connection between said casting and said base for permitting said casting to be adjusted on a vertical axis.

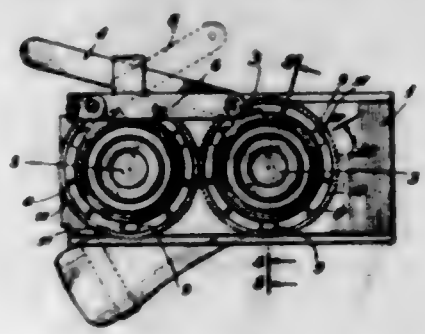
4. In a motion picture camera, a base, a camera casing, a casting in which said camera casing is mounted, a vertical extension at the bottom of said casting projecting into said base, a sleeve fixed to said vertical extension and forming a pivotal bearing between said extension and said base, said sleeve being split at its lower end in engagement with said base, and a cam plate for expanding said split end to clamp it to said base.

7. In a camera, a base, a camera casing, a spherical member mounted at the lower portion of said casing, fixed jaws in said base shaped to conform to said spherical member and receiving the same, a similar but adjustable



jaw also engaging said spherical member, and a cam for clamping said adjusting jaw against said spherical member to lock it in any adjusted position.

1,300,806. CAMERA LENS-HOLDER. CARL E. AKELEY, New York, N. Y. Filed Apr. 12, 1918. Serial No. 228,094. 6 Claims. (Cl. 95—45.)



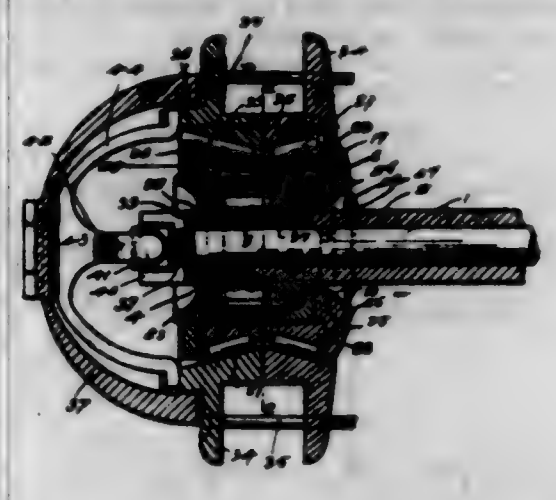
1. In an adjustable lens holder, in combination, a slotted cylinder adapted to be mounted on a camera, an internally threaded cylinder surrounding and interengaging with the same, and a lens holding tube fitting the slotted cylinder and having raised longitudinal threaded portions fitting in the slots and engaging with the threads on the interior of the outer cylinder, whereby rotation of the latter will adjust the lens.

3. In a lens holder for cameras, in combination, a slotted brass cylinder adapted to be attached to a camera, the ends of the sections of which are formed with outwardly extending flanges, an outer cylinder with internal screw threads surrounding the slotted cylinder, which is expanded so that the flanges engage with the end of the threaded cylinder, and a lens tube with mutilated exterior screw threads adapted to fit the slotted cylinder when the threads thereon enter the slots and engage the threads in the inner surface of the outer cylinder.

4. In a lens holder, in combination, an inner and an outer cylinder, the former containing longitudinal slots and the latter interiorly screw threaded, a lens holding tube having exterior rows of mutilated gears adapted to enter the slots and engage with the threads on the interior of the outer cylinder, a pointer pivoted in fixed relation to said lens tube and adapted to engage with an inclined slot in the lens tube, whereby the adjustment of the said tube will move the pointer to indicate the adjustment of the lens.

6. Any form of adjustable lens holder, which comprises in combination, an inner cylinder 7, a surrounding internally threaded cylinder 10, and a lens holding tube with exterior mutilated gears engaging through openings in the cylinder 7 with the threads in the cylinder 10.

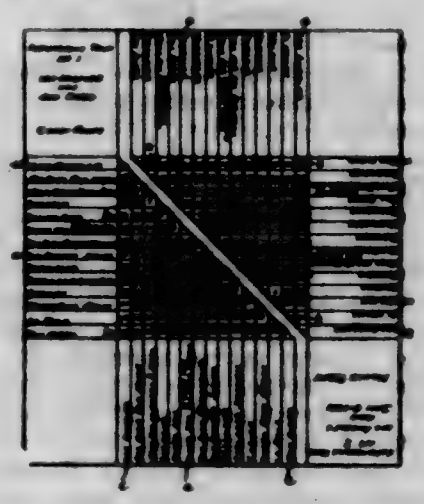
1,300,807. AUTOMOBILE-WHEEL HUB. Benson H. Anderson, Chicago, Ill. Filed Jan. 28, 1918. Serial No. 213,046. 2 Claims. (Cl. 21—142.)



1. An automobile hub comprising a cylindrical bearing member having oppositely disposed openings, a cylindrical member in said openings and having a tapered opening, an axle housing in said tapered opening of said cylindrical member, an axle in said axle housing, means securing the axle housing to the cylindrical member, sectional bushings located in the openings of the bearing member and receiving the upper and lower ends of the cylindrical member, and a hub structure rotatably mounted upon the bearing member.

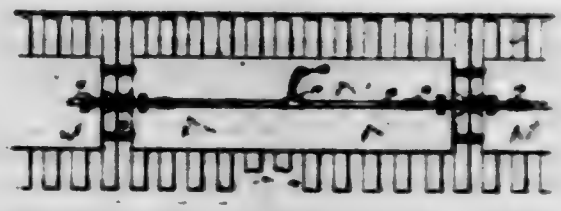
2. An automobile hub comprising a cylindrical bearing member having opposite disposed openings, a concaved wall partially closing one end of said bearing member, a cylindrical member positioned within the oppositely disposed openings and having a tapered opening, an axle housing having a tapered portion disposed within the tapered opening of the cylindrical member and screw threaded, a lock nut threaded to said axle housing, means securing the cylindrical member to the axle housing, an axle in said axle housing, sectional bushings in the openings of the bearing member and receiving the upper and lower ends of the cylindrical member, and a hub structure rotatably mounted upon the bearing member.

1,300,808. DISTANCE-CHART. Frank W. Bacon, Los Angeles, Calif. Filed Apr. 29, 1918. Serial No. 231,490. 5 Claims. (Cl. 283—32.)



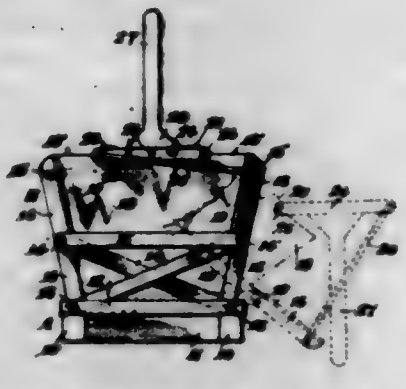
1. A distance chart having names of stations arranged in a column, and distance indicating characters located opposite said names of stations, in successive columns, the number of distance indicating characters in each column decreasing by one and the value of the last distance indicating character appearing opposite any given name of a station being as much less than the value of the character appearing in the same column opposite the next succeeding name of a station as is the distance from said first named station to the said succeeding station.

1,300,809. POWER PIPE-LINE. George D. Baldwin, Hoboken, N. J. Filed Sept. 26, 1918. Serial No. 255,711. 6 Claims. (Cl. 104—2.)



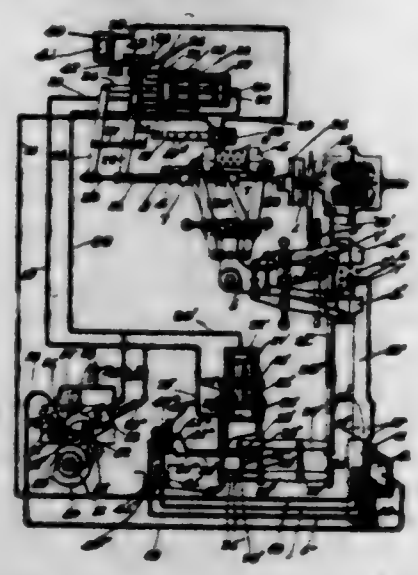
1. An apparatus of the kind described comprising portable supports adapted to be extended along a roadbed or the like, and a power pipe line carried by the supports, said pipe line having means whereby the power can be taken from it at various points for performing work adjacent to but not on the supports.

1,300,810. DUMPING-BODY. Alonzo C. Ballou, Lynchburg, Va. Filed Apr. 29, 1918. Serial No. 231,401. 19 Claims. (Cl. 21—20.)



8. A dumping body comprising a frame, a carrier body having swingable sides tiltable thereon, and an actuating mechanism, said mechanism including a hand-operated lever connected with said sides, said lever having two fixed arms from which the two sides are manipulated and between which it is shiftable.

1,300,811. TYPE CASTING AND COMPOSING MACHINE. John Sellers Bancroft and Maurits C. Indahl, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 9, 1918. Serial No. 249,196. 37 Claims. (Cl. 199—77.)



1. A pattern controlled composing machine embodying a matrix, means for positioning the same in accordance with the signals of the pattern, and means, controlled in accordance with the position of the matrix, for varying the said positioning means to cause it

to position the matrix otherwise than in accordance with the signals of the pattern.

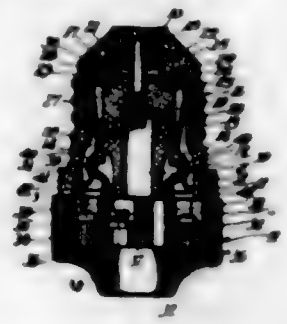
12. A pattern controlled composing machine embodying a mold, a matrix, means for dimensioning the mold and positioning the matrix in two directions at an angle to each other, said dimensioning and positioning being in accordance with the signals of the pattern, and said means comprising for each direction a stop, a jaw movable into engagement with said stop and a connection between said jaw and the matrix; and in combination therewith means for varying both connections to position the matrix in both directions otherwise than in accordance with the signals of the pattern.

15. A pattern controlled composing machine embodying a controller adapted to be positioned in accordance with the signals of the pattern, a matrix and means responsive to signals in said controller, for positioning said matrix.

26. A pattern controlled composing machine embodying the following instrumentalities, to-wit: a mold, mold dimensioning mechanism, means for setting the same in a plurality of dimensioning positions, a matrix case, matrices therein arranged in a plurality of rows less in number than the number of said dimensioning positions, a connection between said setting means and said matrix case for normally positioning the latter with a matrix of a definite row over the mold cavity, said row corresponding with a definite one of said dimensioning positions, and means for varying said connection to cause a positioning over the mold cavity of a matrix of a row other than said definite row and corresponding with a dimensioning position other than said definite dimensioning position.

37. A typographic composing machine embodying a plurality of pattern controller mechanisms, one responsive to signals in the other, a mold, and a matrix with means whereby the position of the matrix with respect to the mold is made responsive to signals in both controller mechanisms.

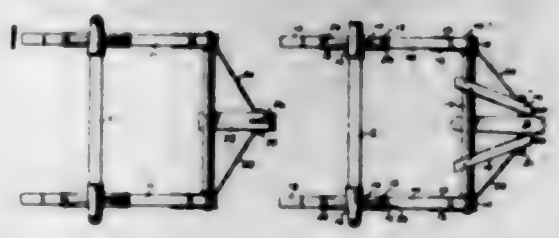
1,300,812. ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1915. Serial No. 14,577. 8 Claims. (Cl. 173—343.)



2. A quick detachable electrical connector comprising an insulating base having a recess therein, and a spring contact within said recess having a straight portion for engagement with a straight contact blade and having a curved portion for engagement with the curved contact of a separable portion which may be separated by movement other than in a straight line, in combination with a separable insulating member having a straight contact blade engaging the straight portion of said spring contact.

7. A separable attachment plug comprising an insulating base, a shell contact supported thereby, said base having a pair of passages therethrough substantially parallel to the axis of said base on opposite sides of said axis, said base having a pair of shoulders extending from said passages toward said axis, spring contacts extending within said passages and having base portions extending toward said axis and engaging said shoulders, an insulating member, a center contact supported by said member, said contact base portion being clamped between said shoulders and said member, said shell contact having an integral flange portion also clamped between one of said shoulders and said members for engagement with one of said contact bases, an insulating support, contact blades supported thereby for engagement with said spring contacts, said blades when in engaging position being nearer said axis than said spring contacts are.

1,300,813. SLEIGH-RUNNER ATTACHMENT FOR VEHICLES. SAMUEL M. BUCK, Cedar Lake, Mich. Filed May 4, 1917. Serial No. 166,471. 1 Claim. Cl. 21—48.



In a sleigh runner attachment for vehicles the combination, with a pair of runners, of a shaft detachably mounted through the forward ends of the runners, a spacing sleeve rotatably mounted upon said shaft, spaced apart hounds having their rear ends attached to said sleeve, a bolt extending through the forward ends of said hounds, braces having their rear ends connected to said sleeve and their forward ends to said bolt, and a draft member pivotally mounted upon said bolt and extending rearwardly thereof having its rear end projecting beyond and beneath said sleeve.

1,300,814. TRACTION DEVICE. CHARLES E. S. BUNCH, San Jose, Calif., assignor of one-half to Hart S. De Puy, San Diego, Calif. Filed July 16, 1918. Serial No. 245,204. 29 Claims. (Cl. 21—150.)



1. A traction belt comprising alternately arranged tread members and individual flexible connectors between said tread members.

4. A traction belt comprising tread members, and a separate resilient flexible connecter between each pair of said tread members.

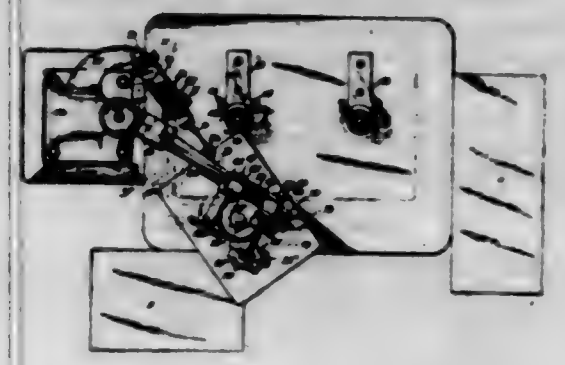
12. A traction device comprising a track having curved portions, and a belt composed of tread members, wheeled carriages pivotally supporting the tread members and running upon said track, individual resilient flexible connections between the carriages adapted for curvilinear flexion in a plane perpendicular to the plane of travel of the tread members, and curved shields upon the carriages arranged to form curved abutments for maintaining a prescribed curvature of said connections in their travel around the curved portions of the trackway.

14. A traction device comprising an endless trackway, and a traction belt composed of tread elements, wheeled carriages pivotally supporting the tread elements and having bearing contact with said trackway, and independent flexible connectors between the carriages.

1,300,815. WOODWORKING-MACHINE. DUGALD CAMMON, St. Johns, Quebec, Canada, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 19, 1916. Serial No. 137,753. 10 Claims. (Cl. 144—145.)

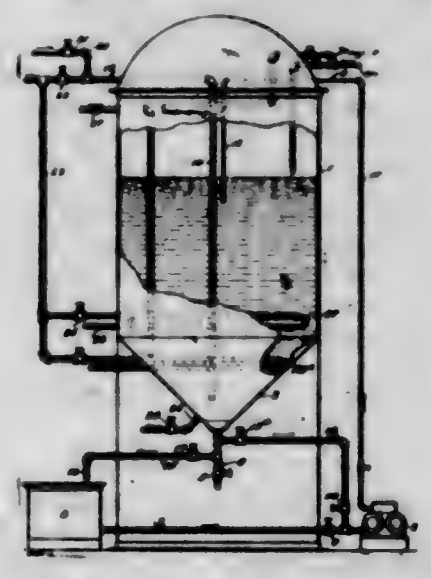
1. In a wood-shaping machine having a table for supporting the work, in combination, a rotary cutter having

its cutting edges arranged above the table, an arm movable over and parallel with the table, a templet between which and the table work is adapted to be clamped and confined for movement in a predetermined plane, means carried by the arm and connected to the templet for rotating said templet about an axis fixed relative to the



arm and for holding the templet down upon the work and thereby holding the work flat upon the table, an edge-guide spaced above the table, means for moving said arm in parallelism with the table toward and from the axis of the rotary cutter, whereby work held flat upon the table may be shaped in conformity with the templet.

1,300,816. PROCESS OF DESULFURIZING PETROLEUM-OILS. ERNEST B. COMB, Jersey City, N. J., assignor to Standard Oil Company, a Corporation of New Jersey. Filed Sept. 11, 1915. Serial No. 50,177. 19 Claims. (Cl. 196—26.)

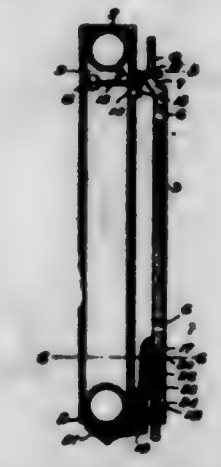


1. The process of removing elementary sulfur from petroleum oil, which consists in subjecting said oil to an alkaline sulfid.

16. The process of removing elementary sulfur from petroleum oil, which consists in heating said oil for approximately one hour, subjecting the same to a solution of an alkaline sulfid for from approximately one hour to approximately three hours, while maintaining the same at a temperature of from about 160° F. to 190° F., separating the sulfid from the oil and after-treating the oil to remove residual sulfid suspended in the oil.

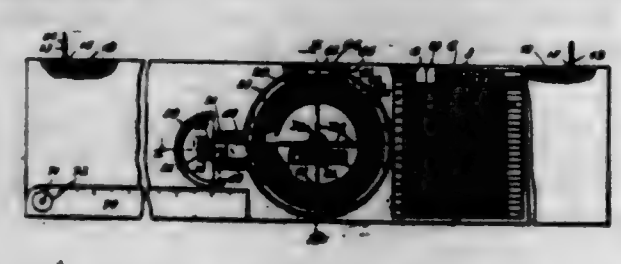
1,300,817. WALL-RADIATOR BRACKET. ALFRED W. COCHRANE, Kewanee, Ill., assignor to James P. Adamson, St. Paul, Minn. Filed Mar. 14, 1918. Serial No. 222,476. 9 Claims. (Cl. 248—30.)

1. A wall radiator bracket having means for securing it to a wall, a stirrup having a bearing in the lower portion of said bracket and provided with a seat for the lower portion of the radiator and free to oscillate in a vertical plane, means connecting the upper portion of the radiator with the corresponding portion of said bracket, said means having freedom of movement horizontally in its bearing on said bracket, the horizontal movement of



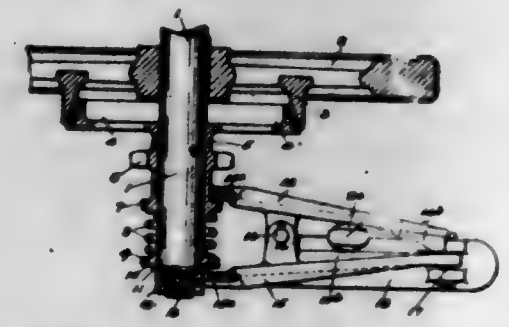
said means and said stirrup compensating for expansion or contraction of the radiator.

1,300,818. COMBINATION LEVEL AND GRADE-FINDER. BENJAMIN J. COLLINS, Supply, Okla. Filed Apr. 15, 1918. Serial No. 228,707. 8 Claims. (Cl. 33—215.)



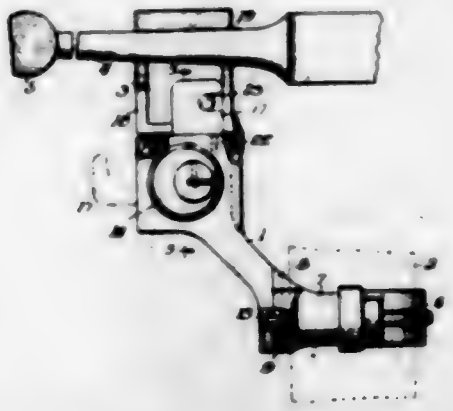
1. In a device of the character described, a stock having an opening extending transversely therethrough, a rotatable dial arranged in said opening, an indicator to coact with said dial, consisting of four wires arranged at angles of ninety degrees to each other, inner and outer concentric rings to which said wires are fixed, the outer ring being fixed to the stock, and glass plates disposed at opposite sides of the dial to close the transverse opening in the stock.

1,300,819. CLUTCH. PERLEY A. COMBS, Portland, Oreg., assignor to Beaver State Motor Co., Gresham, Oreg., a Corporation of Oregon. Filed May 3, 1917. Serial No. 166,182. 4 Claims. (Cl. 192—1.)



4. In a clutch, in combination, a shaft, a clutch element driven thereby, a second clutch element movable on said shaft into and out of driving engagement with said driven clutch element, a bearing member on said shaft, a pair of operating levers pivotally mounted intermediate their ends with their corresponding ends operatively connected, respectively, with said second clutch element and said bearing member, one of said levers being anchored at its opposite end and means operating between the opposite ends of said levers for moving them relative to each other, whereby to move their opposite ends and said second clutch member and said bearing member relative to each other.

1,300,820. STEERING-WHEEL LOCK FOR AUTOMOBILES. THOMAS C. COOPER, Chicago, Ill. Filed Oct. 30, 1916. Serial No. 128,432. 3 Claims. (Cl. 70—129.)



1. A device of the class described comprising a steering wheel clamp, a steering post clamp, and an intermediate member arranged directly beneath said steering wheel clamp whereby upward movement thereof is obstructed by said steering wheel clamp, said intermediate member being provided with locking means adapted to engage said steering wheel clamp and having a dove-tail connection with said steering post clamp, the walls of said dove-tail connection converging, thereby forming means whereby said intermediate member is limited in its movement in one direction beyond a predetermined position.

1,300,821. VACUUM CASTING-MACHINE. LOUIS R. CURTIS, Chicago, Ill., assignor to Frank S. Bets Company, Hammond, Ind., a Corporation of Indiana. Filed May 2, 1917. Serial No. 165,842. 3 Claims. (Cl. 230—27.)



2. A quick acting suction pump, comprising in combination a piston chamber and piston therefor having a rod connected operatively thereto, said chamber at one end being provided with a suction conduit and at its other end being provided with a guide for the piston rod, yielding means adapted to urge said piston from said conduit, said rod having a lateral aperture and said guide having a detent mounted operatively thereon for engagement with said aperture, resilient means for urging said detent into such engagement, and said detent being releasable manually whenever suction is desired in said conduit, said aperture and detent being disposed relatively to each other for mutual engagement when the piston is near said conduit.

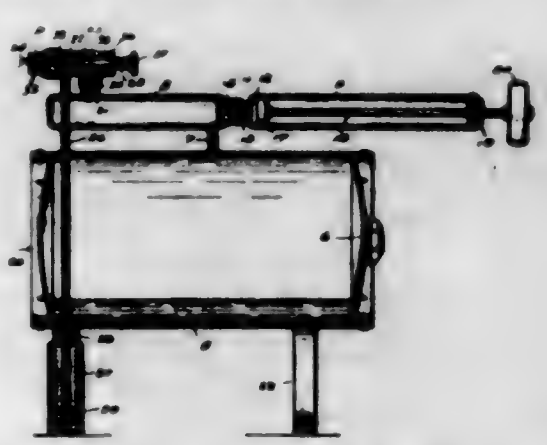
1,300,822. TROLLEY-WHEEL. JOHN C. DARNALL, Cincinnati, Ohio. Filed Sept. 5, 1916. Serial No. 118,462. 2 Claims. (Cl. 64—66.)



1. In a trolley-wheel device, a peripherally-grooved rim, a segmental-bush having radial pins projecting toward the wheel axis, a spherical-bearing having transverse or lateral shaft-extensions disposed in outlet orifices of larger area in said segmental-bush, play and stop sockets in said spherical-bearing for said radial pins, and a harp having bearing-ends with oppositely-sloped inner faces for the pivotal or rocking contact of the wheel mounted therein.

2. In a trolley-wheel device, a peripherally-grooved rim, a central bearing-bush or hub, a spherical-bearing in said bush having oppositely-extended transverse bearing-shafts of lesser diameter than the outlet orifices of said bush, a harp having oppositely-sloping rocker-faces on the inner faces of bearing blocks or inserts carried by its arms, and removable bearings in the harp-arms adapted to support the said transverse bearing-shafts of the wheel.

1,300,823. SPRAYING APPARATUS. ARTHUR V. DICKEY, Seattle, Wash. Filed July 17, 1917. Serial No. 180,967. 1 Claim. (Cl. 137—67.)



In spraying apparatus, a closed liquid receptacle, an air reservoir communicatively connected therewith and serving as a handle whereby the operator carries and directs the apparatus, a pump communicating with said reservoir, a non-return valve provided in the connection between said pump and the reservoir, an atomizer having a discharge orifice at one end thereof, an air duct connecting the atomizer with the reservoir, a valve for controlling the effective opening of said duct, a liquid discharge pipe extending from the receptacle into said atomizer between the outlet of said air duct and said discharge orifice, and a valve adapted to seat in the outer end of said orifice for regulating the delivery of fluid from the atomizer.

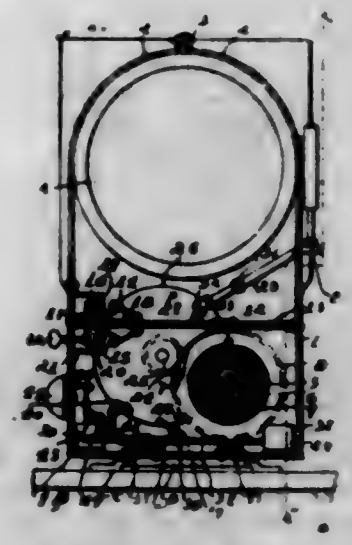
1,300,824. WHEELED PLOW. HARRY S. DICKINSON, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Original application filed Dec. 17, 1915, Serial No. 67,338. Divided and this application filed Jan. 2, 1918. Serial No. 209,826. 1 Claim. (Cl. 97—40.)



In a disk plow, the combination of a frame member having upper and lower horizontal supporting ribs, an upright disk-supporting bracket having upper and lower

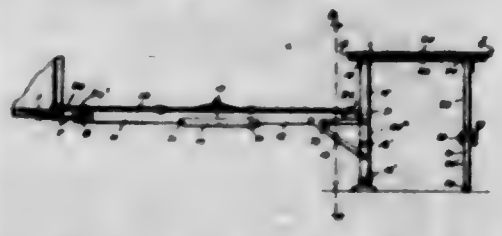
grooves, said bracket being applied to the frame member with the ribs and grooves in registry with each other, a releasing fastening bolt extending through the bracket and frame member between the ribs and grooves and acting to clamp the supporting bracket fixedly to the frame member, and a removable elongated adjusting liner of concave-convex form in cross section, said liner seated in one of the grooves in the supporting bracket and embracing the opposing rib on the frame member, and being disposed free of and beyond the fastening bolt and serving to maintain the bracket at a given inclination, said liner being adapted to be removed and seated in the other groove of the bracket without removing the fastening bolt, to maintain the bracket at a different inclination.

1,300,825. TIME-CONTROLLED CAMERA ATTACHMENT. DEMETER DONCHEFF, East St. Louis, Ill. Filed Oct. 24, 1918. Serial No. 259,518. 7 Claims. (Cl. 161—26.)



1. The combination with a camera and its shutter mechanism, of a shutter releasing lever having an operative connection with the shutter mechanism of the camera, a movable trip member, and a contact arm adjustably mounted upon the lever and projecting into the path of the trip member.

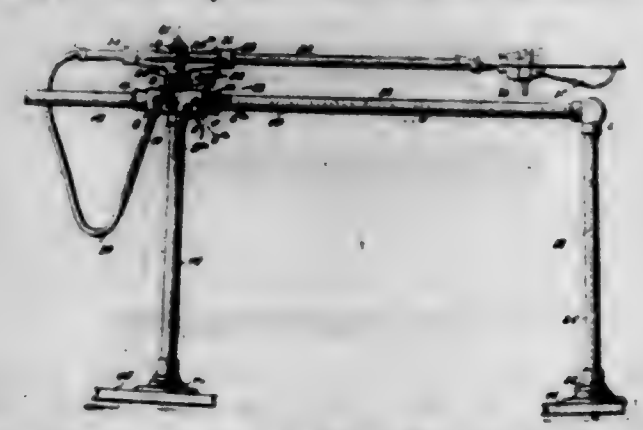
1,300,826. CONVERTIBLE BED AND TABLE ATTACHMENT FOR AUTOMOBILES. SAMUEL F. DONNELL, Seattle, Wash. Filed June 12, 1918. Serial No. 239,848. 8 Claims. (Cl. 5—17.)



1. The combination with a folding bed having a main frame comprising two hingedly connected members and a foot frame foldably connected to one of said members, of a board hingedly connected to said foot frame for use as a table top when the main frame is in either its extended position at one end of the bed or above the foot frame and said main frame members when the same are folded in superposed relations.

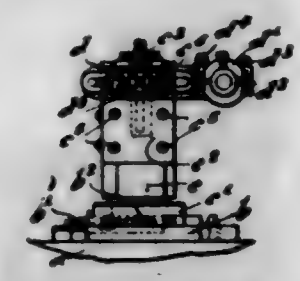
1,300,827. ELECTRIC-LIGHTING FIXTURE. GARRY J. DORMANDY, Troy, N. Y., assignor of one-half to United Shirt and Collar Company, Troy, N. Y., a Corporation of New York. Filed June 28, 1917. Serial No. 177,468. 2 Claims. (Cl. 240—61.)

2. In combination, a distributing box, an opening therein through which electric conductors may be brought into the box, an attachment secured to the box, an electric light fixture removably mounted on said attachment and having universal movement with respect thereto, and a



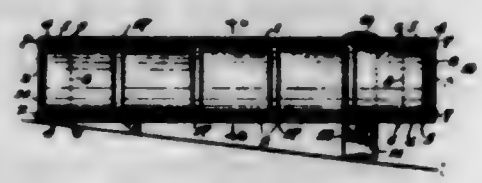
removable cover on said box provided with an opening through which electric conductors may be taken from said box.

1,300,828. JIG DEVICE FOR BORING OR DRILLING PURPOSES. HARRY ALLSOP DUDGEON, Coventry, England. Filed Nov. 21, 1918. Serial No. 263,584. 4 Claims. (Cl. 77—62.)



1. A jig device comprising a base, a standard, means interposed between such base and standard for rendering the latter movable in a horizontal plane with respect to the former, means incorporated within the standard for rendering the base adjustable in a vertical plane, a bracket secured to the standard and horizontally adjustable with respect thereto, each bracket being provided with a socket, which is universally adjustable, such socket being adapted to receive a removable setting bar for setting up the work, and to afterward locate the position for, and receive the machine boring bar or drill during the boring or drilling process.

1,300,829. BOILER-COMPOUND HOLDER. ROBERT E. DURNING, Avalon, Pa. Filed Aug. 12, 1918. Serial No. 249,589. 6 Claims. (Cl. 210—23.)

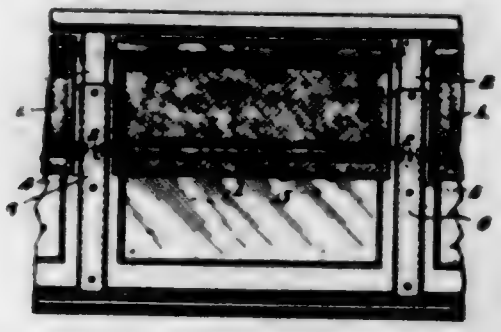


5. In a boiler compound holder having an open ended barrel, perforated plugs of lighter weight material having inwardly turned flanges engaging against the inner end walls of the barrel, a number of closed inner chemical containing receptacles provided with flow control means, a number of metal strips riveted to the walls of the barrel, said rivets forming a stop for the inner edges of the plug flanges, and the metal strips folded over the ends of the plugs to hold same in position.

1,300,830. SHADE-HOLDING DEVICE. PLATO G. EMERY, Chicago, Ill. Filed Sept. 23, 1916. Serial No. 121,722. 2 Claims. (Cl. 156—26.)

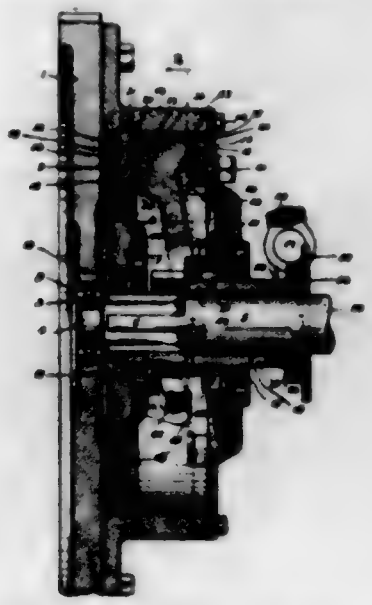
1. A curtain stick, a sleeve adjustably and detachably secured in the end of said stick, a shoe slidable in and

projecting beyond the outer end of said sleeve, a part extending from said shoe through the sleeve and out of the inner end of the latter, a spring surrounding



said part beyond said sleeve and engaging with the inner end of the latter, and a nut on said part engaging with the inner end of the spring.

1,300,831. CLUTCH. FERGUS R. FERGUSON, Cleveland, Ohio, assignor to The Columbia Clutch Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 4, 1916. Serial No. 129,607. 17 Claims. (Cl. 192—7.)



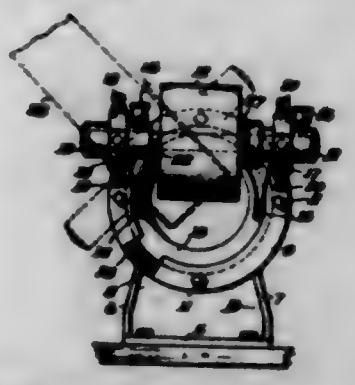
1. A clutch comprising a rotatable driving cover flange, a shaft to be driven, friction pads carried by said flange, a plate carried by said shaft and having a surface extending between said pads, a plurality of pairs of members having wearing surfaces also carried by said flange adjacent to one of said pads, pressure arms attached for movement along said shaft, said arms having curved surfaces projecting between and engaging said members respectively whereby to press one of said members toward said plate and means for adjusting correspondingly located of said members whereby to vary the confinement of said arm surfaces.

1,300,832. FLEXIBLE STAY-BOLT CONNECTION. PETER F. GALLAGHER, New Dorp, N. Y. Filed Oct. 27, 1917. Serial No. 198,863. 11 Claims. (Cl. 85—1.5.)



1. A flexible sleeve for stay bolts having a tubular inner end portion to fit within an opening in a boiler sheet, a tubular, internally threaded outer end portion projecting into and terminating within the body of said sleeve, a body portion curved on the arc of a circle to form a spring member, said body portion being of greater diameter than the tubular inner end portion, and a neck portion extending outwardly at an angle from the tubular inner end portion and connecting the same with the body portion, said body portion and neck portion being continuously spaced from the inwardly projecting outer end portion to provide an annular channel around said tubular outer end portion and a passage connecting said channel with the bore of the inner end portion, the said portions of the sleeve being substantially of like thickness throughout.

1,300,833. IDLER-PULLEY STRUCTURE. JULIUS A. GRAWEN, Moline, Ill., assignor to Moline Mill Manufacturing Company, Moline, Ill., a Corporation of Delaware. Filed Dec. 12, 1918. Serial No. 266,461. 6 Claims. (Cl. 64—21.)



1. In an idler pulley structure, the combination of an annular supporting frame, a flat annular supporting plate, a clamping ring detachably secured to said frame and receiving said plate to hold said plate and frame in axial alinement, bearing arms extending from said plate, a shaft journaled at the ends of said arms, and a pulley wheel on said shaft, said shaft being at right angles to the axial line of said plate and frame.

1,300,834. TOOL FOR MINERS' AND BLASTERS' USE. EDWARD GOUDREY, Montreal, Quebec, Canada, assignor to Canadian Explosives Limited, Montreal, Canada, a Corporation. Filed June 26, 1918. Serial No. 241,942. 3 Claims. (Cl. 86—22.)

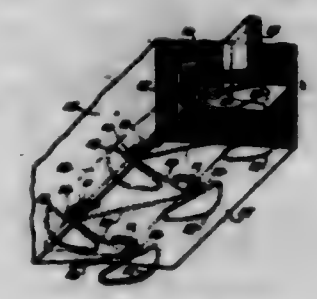


1. A tool for miners' and blasters' use consisting of two pivoted members each of which presents a handle portion and a jaw portion, one jaw portion having a cylindrical bore formed axially thereof extending inward from its outer end and the other jaw portion carrying a cutting blade adapted to be passed through said bore sidewise thereof, the first named jaw portion being slotted to accommodate movement of the blade.

1,300,835. REINFORCEMENT FOR THE COMPOSITION COVERING OF STRUCTURAL SHAPES. DAVID HOMER HAYDEN, New York, N. Y. Filed Mar. 14, 1912. Serial No. 683,819. 15 Claims. (Cl. 72—160.)

1. A reinforcement for the composition covering of structural members comprising a series of cross stays adapted to extend back and forth over the face of the member and having attaching elements offset on one side of the plane of said cross stays and reinforcing elements offset upon the other side of the plane thereof, said cross

stays being securely connected together at points removed from the outer ends of said attaching and reinforcing elements to thereby hold said stays against displacement and in predetermined spaced relation on the member.



7. The combination with a structural member, of an expansible series of connected cross-stays extending back and forth over and in contact with the face of the member, upwardly offset attaching hooks extending from the points of connection of said cross-stays and engaging the edges of the member, laterally and downwardly offset reinforcing elements extending from said cross-stays, and a composition covering wherein said reinforcing elements are embedded.

10. A reinforcement for the composition covering of structural members comprising a length of wire bent back and forth and having adjacent portions twisted together to form an expansible series of cross-stays with loops extending from said twisted portions, said loops being offset from the plane of said cross-stays and having parts bent to form attaching hooks and spacing elements.

12. A reinforcement for the composition covering of structural members comprising an expansible series of cross-stays, each of said cross-stays having a hook and reinforcing loop at one end arranged in a plane transverse to the plane of the cross-stays, the opposite end of each stay having an eye pivotally engaging the hook portion of the next adjacent stay.

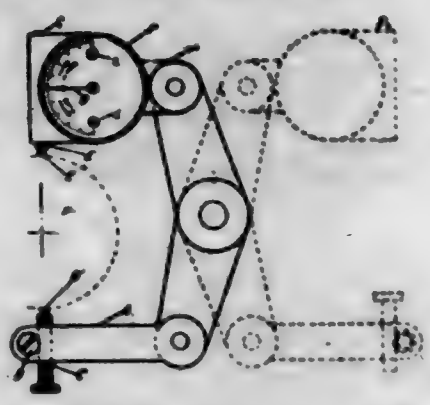
15. A reinforcement for the composition covering of structural members comprising an expansible series of connected cross-stays, each of said cross-stays having a closed loop at or adjacent one end, and each of said loops having a U-shaped jaw portion arranged to extend about the edges of the flanges of the structural member, said U-shaped jaw portions being tied at points adjacent their loops.

1,300,886. DETACHABLE HANDLE. HOWARD H. HILL, Montclair, N. J. Filed Aug. 24, 1917. Serial No. 187,998. 1 Claim. (Cl. 220—24.)



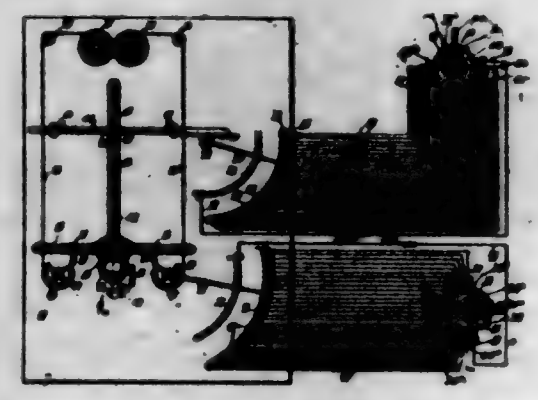
A detachable handle comprising a pair of members having upper apertured flat sections, oppositely extending bulged sections below the flat sections, and flexible jaws merging into the bulged sections, said jaws converging from top to bottom, an eyed bail engaging said flat sections, a bolt likewise engaging said flat sections, and a nut on the bolt that is adapted to draw said sections toward each other and to flex the jaws.

1,300,887. INDICATING-CALIPER. FREDERICK WILLIAM HORSTMANN, Kearney, N. J. Filed June 12, 1917. Serial No. 174,248. 8 Claims. (Cl. 33—148.)



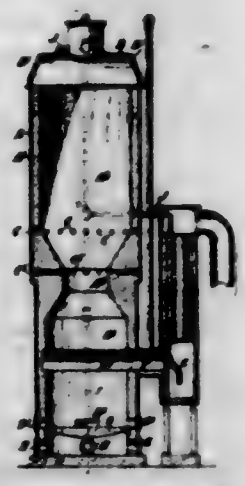
1. As an article of manufacture an indicating caliper composed of a beam with an adjustably fixed contact point at one end and at the other a means to operate from a movable contact point to move an indicating finger upon a dial, said means consisting of a toothed rack, a double segment gear and pinion all in engagement in the same plane of motion.

1,300,888. EMBROIDERY-MACHINE. WALTER HUBELLE, Weehawken, and MAX KRAPF, Union Hill, N. J. Filed Mar. 22, 1915. Serial No. 16,262. 7 Claims. (Cl. 112—7.)



1. In a device of the character described, the combination of a pantograph frame, means operated by the pantograph frame, electrical means controlled by said last-named means, and means operated by said electrical means adapted to have a relative movement with said pantograph frame.

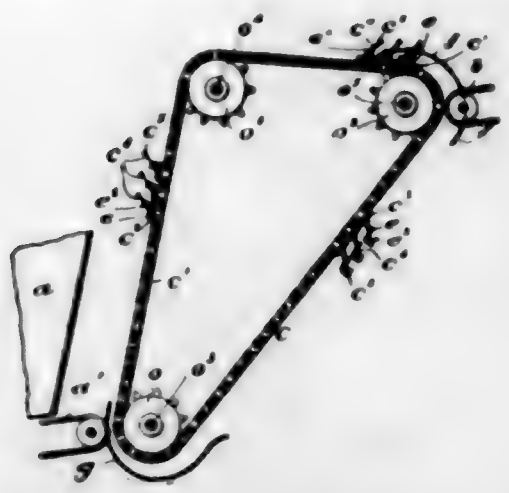
1,300,889. GAS-PRODUCER. ERLE STAFFORD HUNTLEY, Friesland, Queensland, Australia, assignor to The Hampden Cloncurry Copper Mines Limited, Melbourne, Australia. Filed Feb. 23, 1916. Serial No. 79,911. 1 Claim. (Cl. 48—52.)



A gas producer, comprising in combination, a vertical chamber having a constriction dividing the same into

upper and lower compartments, a cover for said chamber provided with feed openings, a series of twyers introducing air into the upper compartment, a second series of twyers introducing air at said constriction, a gas outlet, an inverted U-shaped bridge within the lower chamber opposite to and communicating with said outlet, a grate at the lower part of said lower chamber, means for admitting air beneath said grate, a vaporizer, and a steam pipe leading from said vaporizer and supplying steam into said chamber at the top and bottom thereof.

1,300,840. DEVICE FOR FEEDING RAGS AND THE LIKE. JULIAN S. JACOBS, Springfield, Vt., assignor to John T. Slack Corporation, Springfield, Vt., a Corporation of Vermont. Filed Feb. 26, 1917. Serial No. 151,077. 1 Claim. (Cl. 19—7.)



A feed device of the class described embracing an endless carrier provided with successively arranged series of transverse rag-engaging spikes, a series of movable doffing members normally resting upon the carrier adjacent to the base portions of said spikes, and means for positively moving said doffing members outwardly to the points of said spikes in order to completely disengage from said spikes the rags impaled thereon, substantially as described.

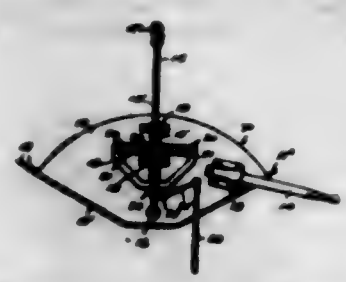
1,300,841. INTERNAL GAGE. CARL EDVARD JOHANSSON, Eskilstuna, Sweden, assignor to Aktiebolaget C. E. Johansson, Eskilstuna, Sweden. Filed June 17, 1916. Serial No. 104,338. 1 Claim. (Cl. 33—163.)



In an internal gage the combination of a frame, a screw in said frame provided with a conical point, two measuring studs arranged in alinement in said frame at substantially right angles to said screw on either side of the conical point thereof and provided with edges contacting with said conical point at two opposite points only, and means for preventing the studs from turning in the frame.

1,300,842. EXCAVATING AND HOISTING APPARATUS. JOHN JOHNSON, Tukwila, Wash., assignor of one-half to Theodore Carlson, Stillwater, Wash. Filed Aug. 22, 1918. Serial No. 250,949. 1 Claim. (Cl. 37—54.)

A scraper pan consisting of side walls and a bottom, a ball pivotally connected to said side walls adjacent to the pan bottom, a frame connected for vertical reciprocatory movement to one of said walls, latches provided in spaced relations on said frame, means provided on said ball and engagable within the space between said latches, and a lever fulcrumed to the pan whereby said



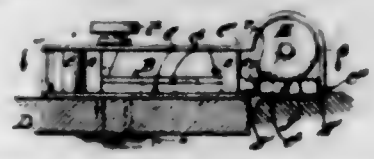
frame may be elevated to render said latches inoperable to retain the pan in upright position.

1,300,843. SEWING-MACHINE. EDWARD A. KAUMEYER and DAVID M. BLOOM, Chicago, Ill.; said Kaumeyer assignor to said Bloom. Filed Jan. 2, 1918. Serial No. 209,863. 2 Claims. (Cl. 112—260.)



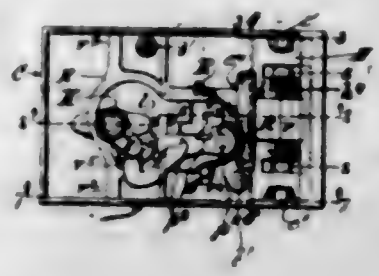
1. A sewing machine for sewing the lower end of sleeve linings to coat sleeves, comprising a sig sag, lock stitch sewing machine head, having a narrow work support for supporting the feed dog and hook actuating mechanism, a cover hingedly secured to the under side of said work support, and a base for supporting said work support above a sewing machine table, whereby a coat sleeve and its lining may be slipped around said work support and its cover to sew a seam around said lining and sleeve.

1,300,844. LOCK. CHARLES KEMP, New York, N. Y. Filed Oct. 18, 1918. Serial No. 258,701. 8 Claims. (Cl. 70—46.)



1. In closure means of the character designated, in combination with a jamb staple or equivalent stationary securing means, a lock comprising a rotatable hasp cylinder adapted to engage with said staple and formed with peripheral teeth, a rack bolt formed with teeth engaging said cylinder teeth, and with two other series of rack teeth, one set engaging and actuated by teeth on a key arbor, and the other set engaging and actuated by teeth on a latch spindle, together with said toothed key arbor and said toothed latch spindle, for the purpose set forth.

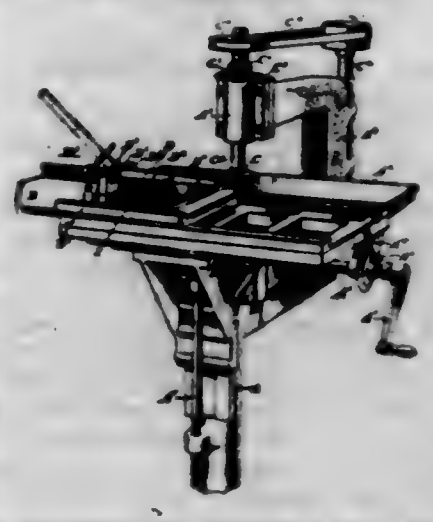
1,300,845. LOCK. CHARLES KEMP, New York, N. Y. Filed Dec. 9, 1918. Serial No. 265,857. 5 Claims. (Cl. 70—46.)



5. The combination with a jamb staple or equivalent stationary securing means, of a lock comprising a rotatable

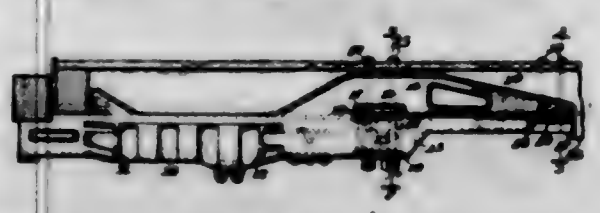
hasp cylinder adapted to embrace and engage with said staple, said cylinder being formed with peripheral teeth, a rack bolt formed with teeth engaging said cylinder teeth and with a recess, a key arbor having a cam arm engageable with said recess, a latch spindle having an arm also engageable in said recess, a spring pawl having a shoulder, means for engagement therewith for withdrawing the cam arm of the key arbor, means for depressing said pawl to disengage it from said means to free the rack bolt, and means whereby when the rack bolt is shot to locking position a double locking is effected.

1,300,843. APPARATUS FOR PREPARING TYPE-BARS OR SLUGS FOR USE IN PRINTING-FORMS. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Original application filed July 2, 1915, Serial No. 37,664. Divided and this application filed Nov. 21, 1916. Serial No. 132,541. 15 Claims. (Cl. 90—19.)



1. In an apparatus for trimming slugs for the reception of cuts or printing plates, the combination of means for holding a series of slugs side by side, means independent of the cut or printing plate whereby the ends of their type lines may be simultaneously brought into transverse alinement, and means for reducing or recessing the plain edge portions of the slugs beyond the type lines.

1,300,847. DRAFT-ARM FOR RAILWAY-CARS. CHARLES C. KIRKMAN, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1914. Serial No. 862,295. 1 Claim. (Cl. 105—420.)



A draft arm for railway cars comprising a body portion having draft shoulders, and an extension for projecting beyond a body bolster, such extension having a section arching over the bolster and a section passing through the bolster, the lower section being laterally offset at its inner end to extend under the car sill and form a pocket for a tie plate.

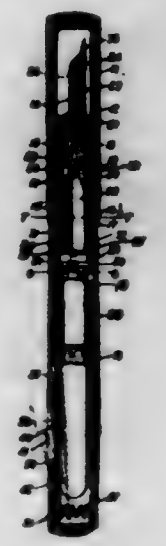
1,300,848. WORK-SUPPORT FOR SEWING-MACHINES. FREDERICK R. KNOWLOCK, Worcester, Mass., assignor to The Graton & Knight Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed June 6, 1918. Serial No. 238,421. 6 Claims. (Cl. 112—39.)

1. The combination with a sewing machine having a work rest and adapted to sew a corner seam, of a block fitting within the work and adapted to rest on the work rest, a shaft projecting from the block, a block on the other end of said shaft having the same shape as the first named block and similarly located, and a support



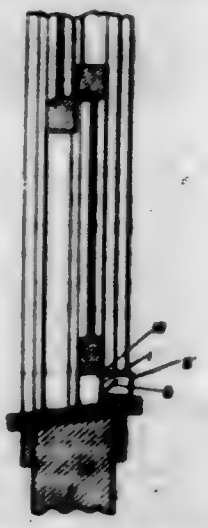
having a surface which the second block freely engages for supporting and guiding the second block and controlling the position of the work.

1,300,849. FOUNTAIN-PEN. DAVID J. LA FRANCE and WILLIAM P. DE WITT, Somerville, Mass., assignors to De Witt La France Co., Cambridge, Mass., a Partnership composed of David J. La France and William P. De Witt. Filed May 10, 1918. Serial No. 233,692. 12 Claims. (Cl. 120—42.)



9. A fountain pen having, in combination, a casing, a member slidable within one end of said casing and embodying a pen section and a feed section, a valve plunger having slidable engagement with said slidable member and a flexible sleeve connecting the lower end of said slidable member with said valve plunger.

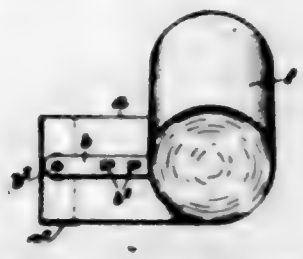
1,300,850. WINDOW-VENTILATOR. CHARLES R. A. LOWE, Indianapolis, Ind. Filed Dec. 17, 1917. Serial No. 207,498. 7 Claims. (Cl. 98—31.)



7. A window ventilator having a hollow member projecting inwardly beyond the window and constituting an

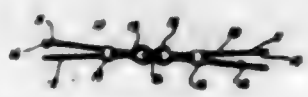
air receiving and deflecting chamber having with a series of air exit openings in its upper horizontal wall, a slidable closed bar constituting a regulating member for said apertures mounted in the chamber below said horizontal wall, supports in said member at the ends thereof on which said member is mounted for slidable movement, said member being of less width than said horizontal wall and capable of movement from front to rear of the casing to open or close said apertures, said bar having its ends extending freely beyond the ends of said chamber whereby it may be manipulated to effect said forward and rearward adjustment.

1,300,851. PUTTEE. HARRY T. LOOMIS and DOROTHY Z. HUNT, Brooklyn, N. Y. Filed May 6, 1918. Serial No. 232,699. 6 Claims. (Cl. 36—2.)



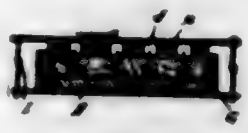
1. A puttee comprising a strip of flexible material provided at one end with a pivoted flexible strip having projecting teeth.

1,300,852. GARMENT-HOLDER. ARTHUR M. LYCKLAND and HARRY WACHENHEIMER, Providence, R. I., assignors to the Firm of Wachenheimer Bros., Providence, R. I., composed of Jacob Wachenheimer and Samuel Wachenheimer, New York, N. Y., and Henry Wachenheimer, Providence, R. I., Copartners. Filed Mar. 23, 1918. Serial No. 224,193. 1 Claim. (Cl. 24—81.)



A garment holder comprising a connector member having a pair of compressible grippers at each end, and a slidable clamp member for each pair to close and bind the jaws of said grippers upon the garment, means for flexibly connecting said grippers together, and means for limiting the movement of said grippers to swing slightly out of alinement one with the other.

1,300,853. CUSHION AND METHOD OF FORMING THE SAME. CHARLES P. MCDONALD, Detroit, Mich. Filed July 23, 1915. Serial No. 41,460. 8 Claims. (Cl. 155—43.)



8. In a cushion, the combination with a top piece, a bottom piece, padding between said top piece and bottom piece, and a flexible strip secured to the edge of said top piece and arranged to lap past the adjacent edge of said bottom piece, of fastening devices to connect said bottom piece to said top piece and to connect said strip to said bottom piece.

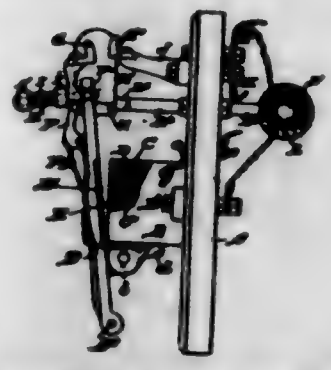
1,300,854. PRESSER-FOOT FOR SEWING-MACHINES. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 20, 1915. Serial No. 40,890. 7 Claims. (Cl. 112—13.)

1. A presser foot for sewing machines including in combination, a supporting shank, a main section rigidly connected to said supporting shank, said main section having a needle opening therein, an auxiliary section extending along one side of the main section, means for yieldingly supporting said auxiliary section, whereby the same may move vertically, a second auxiliary section extending along the other side of said main section, means for yieldingly supporting said second auxiliary section whereby the same may move vertically, said first named yielding section at its front end being laterally spaced from a portion of the main section to provide a guiding channel for the edges of the fabric sections being stitched, and said guiding channel having one of its walls substantially in line with the center of said needle opening.



6. A presser foot for sewing machines including in combination, a supporting shank, a main section rigidly connected to said supporting shank, said main section having a needle opening therein, an auxiliary section extending along one side of the main section, means for yieldingly supporting said auxiliary section, whereby the same may move vertically, a second auxiliary section extending along the other side of said main section, and means for yieldingly supporting said second auxiliary section whereby the same may move vertically, the front portions of said auxiliary sections projecting inwardly in advance of the main section and spaced from each other to form a guiding channel, said main section having a portion extending over one of said auxiliary sections but spaced therefrom and supporting the stationary member of a trimming mechanism.

1,300,855. ELECTRIC SWITCH. DON A. MUNOZ, Detroit, Mich. Filed May 23, 1917. Serial No. 171,263. 3 Claims. (Cl. 175—282.)

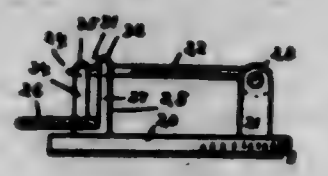


1. An electric switch including circuit closing contacts, a fixed bracket having one of the contacts mounted on it, a pivoted armature, a yieldably mounted arm carried by the armature and having the other of said contacts mounted on it, means for closing the switch, rods supported intermediate of their ends and provided at one end with blades located at opposite sides of the said contacts, said rod and blades being of magnetic material and a blow-out coil magnetically connected with and supported by the rods at the other end thereof.

1,300,856. SAFETY-CATCH FOR JEWELRY. THOMAS F. MURPHY, Utica, N. Y. Filed Feb. 28, 1917. Serial No. 151,576. 4 Claims. (Cl. 24—157.)

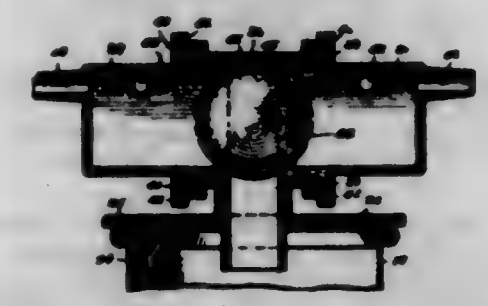
3. In a safety catch for pin tongs of articles of jewelry comprising a keeper having a main recess to receive a pin tong, and having pintle recesses near the base of its sides, combined with a U-shaped spring loop having its ends inturned to form oppositely disposed pintles fitting said pintle recesses of the keeper and adapted to retain the pin

tong in the said main recess and to be turned back to uncover the said main recess to allow the pin tong to be removed therefrom, said keeper having guiding grooves extending to said pintle recesses to direct said pintles into



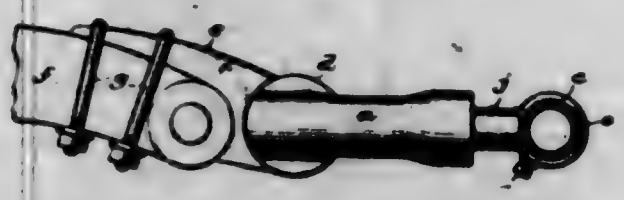
said recesses, said keeper being provided with means for retaining said spring loop in closed position, and said loop being adapted to be affixed to the keeper by temporarily springing the loop apart and entering the pintles into the said pintle recesses of the keeper.

1,300,857. MILKING-MACHINE. WILLIAM R. NICOLL, Owatonna, Minn. Filed Oct. 2, 1917. Serial No. 194,451. 6 Claims. (Cl. 31—86.)



2. In combination, a milker head having a pair of milk chambers therein, each provided with a milk inlet, an air passage and a milk discharge outlet, and a single ball valve for controlling the milk outlets of the two chambers.

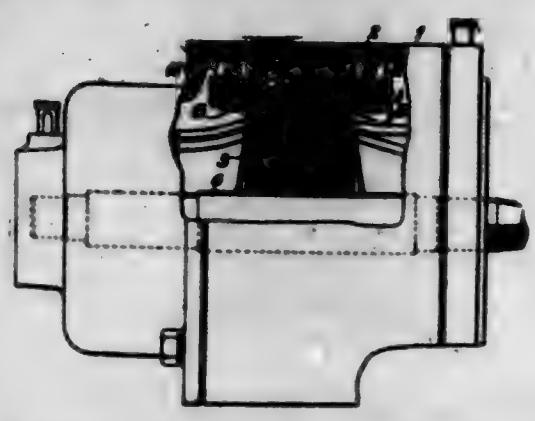
1,300,858. BUMPER-BRACKET FOR AUTOMOBILES. ARTHUR A. OLLENBURG, Milwaukee, Wis., assignor to Gemco Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 8, 1918. Serial No. 60,776. 2 Claims. (Cl. 293—55.)



1. A bumper bracket comprising a spring housing having an inturned notched flange at one end and a spring seat at a distance from said flange, a stem guided and movable axially in the flange and spring seat of the housing and provided with a spring seat and with a lug arranged to register with the notch in said flange when one of the parts is turned on its axis into abnormal position relative to the other, and a spring bearing at one end against the seat in the housing and at the other end against the seat on the stem and adjacent to the point of engagement of the lug on the stem with the flange at the outer end of the housing.

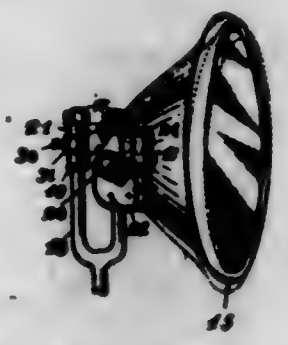
1,300,859. COIL-RETAINING DEVICE AND METHOD OF ASSEMBLING THE SAME. JOHN P. NIKONOW, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 26, 1918. Serial No. 868,710. 4 Claims. (Cl. 171—252.)

1. The method of assembling a coil-support upon a polar projection which consists in first loosely interlocking said support with said projection, then placing a field magnet coil over said projection and said support to maintain said support in locking engagement with said projection and



finally in bending a portion of said support over said field coil to hold said coil in position.

1,300,860. HEADLIGHT-ADJUSTER. OTHO M. OTTE, Jamestown, N. Y. Filed June 20, 1918. Serial No. 241,049. 26 Claims. (Cl. 240—57.)



1. In a lamp mounting, a two-point support, connections between the respective points of the support and points on opposite sides of the lamp and means whereby to enable the connections to be independently adjusted and fixed after adjustment so as to increase or decrease the distance between the respective points of the support and said points on opposite sides of the lamp.

12. In a lamp adjuster, a support, and extensible and contractile means between the lamp and support for supporting the lamp so as to allow sidewise adjustments of the latter and to also allow the lamp to have pivotal movement so as to incline same to the vertical.

16. A lamp support comprising a forked standard, two pairs of struck up clips hinged to one another in their central portions to form two brackets which are adjustable vertically, said brackets pivotally attached to said forked standard one to each tine at one end and the other ends pivotally attached to the opposite sides of the lamp to move sidewise in unison with each other.

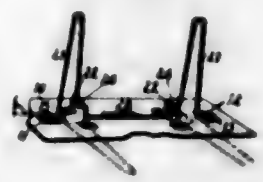
1,300,861. FOLDING TABLE. OTHO M. OTTE, Jamestown, N. Y. Filed Aug. 17, 1918. Serial No. 250,302. 8 Claims. (Cl. 45—11.)



1. In a folding table, a top, legs for the top having outturned inner ends, and sheet metal clips for each leg having attaching portions and having the part between its ends extended inwardly on one side at an incline, then approximately parallel to the attaching portions and connected at its opposite side to the adjacent attaching portions, the last named side being cut-away to leave the ad-

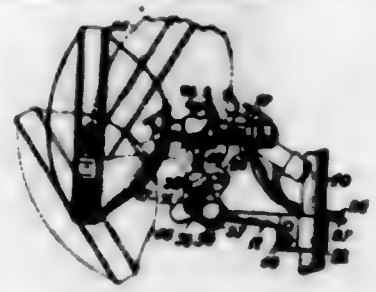
jacent edge of the parallel part exposed, said edge being cut-away to form a socket for receiving the side of the leg, the inclined side being also cut-away to receive the out-turned end of the leg.

1,300,862. **FOLDING TABLE.** OTHO M. OTTE, Jamestown, N. Y. Filed Aug. 17, 1918. Serial No. 250,308. 5 Claims. (Cl. 45—11.)



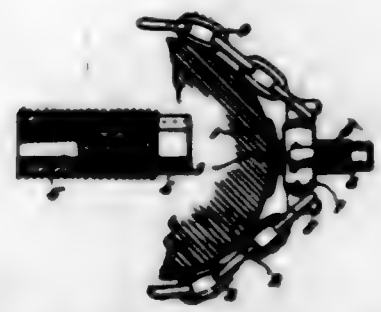
1. In a folding table, a top, substantially U-shaped legs pivoted to the top, one side of each of the legs being bent outwardly at approximately right angles to form a shoulder spaced from the adjacent end of said side of the leg, and a brace composed of a rod bent into approximately rectangular form, and pivoted in a plane at right angles to the plane of the pivot of the leg and in said space between the shoulder and the adjacent end of said side of the leg to engage said shoulder.

1,300,863. **SPOT-LIGHT MOUNTING.** OTHO M. OTTE, Jamestown, N. Y. Filed Sept. 20, 1918. Serial No. 254,898. 5 Claims. (Cl. 240—57.)



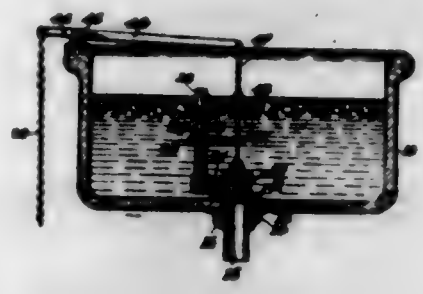
5. A lamp mounting comprising a lamp having a tubular rear extension with a second tube slidably mounted therein to support the electric light, a standard engaging around said tubular rear extension to support said lamp, two set screws in said standard to adjustably hold both said tubular extension and the tube therewithin, one tube to each set screw, a ball-shaped lower end on said standard, a bracket arm having a ball-shaped outer end, plates having sockets to clampingly engage said ball-shaped ends to adjustably connect the same, a fulcrum point on said plates to give a three-point bearing therefor, and a manually operable screw inserted through said plates between said fulcrum point and said ball-shaped ends to adjustably clamp said plates thereon.

1,300,864. **DEVICE FOR CONNECTING TOGETHER MEMBERS SUCH AS SCAFFOLD-POLES AND THE LIKE.** DANIEL PALMER-JONES, Stockwell, London, England, assignor of one-half to The Patent Rapid Scaffold Tie Company Limited, Stockwell, England. Filed Aug. 13, 1918. Serial No. 249,620. 1 Claim. (Cl. 20—88.)



In devices for connecting together members such as scaffold poles and the like; the combination of a pressure plate having a surface to bear against one of the members to be secured, a plain cylindrical stem extending from the opposite face of said pressure plate and rigid therewith, a sleeve having a plain cylindrical bore to be slid on to said stem and supported thereon throughout its length said sleeve having a screw-thread formed externally thereon a centrally bored and internally screw-threaded block adapted to be screwed on to said sleeve, means on said block for securing thereto the ends of flexible connections passing around the members to be connected together, and means by which said sleeve can be turned about its axis upon said stem to traverse said block in the endwise direction of said sleeve to tension said flexible connections.

1,300,865. **FLUSH-VALVE.** ABRAM N. PASMAN, Waterbury, Conn. Filed July 18, 1918. Serial No. 244,728. 7 Claims. (Cl. 4—5.)



1. A flush valve apparatus comprising a tubular body member having a seat, a valve member adapted to bear against said seat, a plurality of vanes movably connected to said valve member so that pressure exerted against said vanes by a medium flowing through said body member causes a part of said vanes to bear against the tubular body member to maintain the valve in an open position, and means for connecting said vanes to cause them to act as a unit.

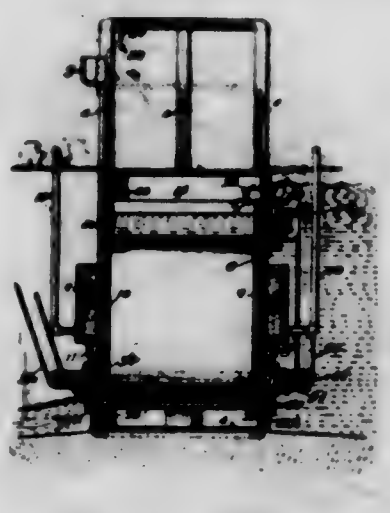
6. A flush valve comprising a tubular body member having a seat, a plurality of radially placed blades connected to said valve and movable within said tubular body member, a pair of vanes pivotally connected to one of said blades each having an outturned rib along its outer edges so that pressure exerted against said vanes by a medium flowing through said body member causes part of said vanes to bear against a portion of the body member to maintain the valve in an open position, and a link connecting said vanes and moving in a slot provided therefor in the blade to which the said vanes are pivotally connected so as to cause the said vanes to act as a unit.

7. A flush valve apparatus comprising a tubular body member having a seat and an offset portion, an overflow pipe secured in the opposite portion of the tubular body member, a valve, a plurality of radially placed blades connected to the valve, a pair of vanes pivotally connected to one of said blades so that pressure exerted against said vanes by a medium flowing through said body member causes part of said vanes to bear against a portion of the body member to maintain the valve in an open position, means for connecting the said vanes to cause them to act as a unit, and means attached to the said overflow pipe for determining the extent of movement of the valve and parts associated therewith in opening the same.

1,300,866. **IRRIGATING APPARATUS.** JOSEPH LAFFERTON PENNINGTON, Tonopah, Nev. Filed May 28, 1918. Serial No. 237,181. 6 Claims. (Cl. 253—18.)

1. A water elevating device comprising a guide frame, a floatable casing slidably disposed in said guide frame, weights carried by said casing for normally retaining the casing at the bottom of the frame, a slidably buoyant box disposed within the casing, said box having a water receptacle at its top, a power operated gate carried by the casing for admitting the water of the stream into said receptacle, a power controlled inlet at the bottom of the

casing for admitting water underneath the buoyant box to float the same, a power controlled outlet carried by the casing at the bottom for discharging water from underneath the buoyant box and thereby permitting the return of the box to its lower position, an automatically operated



gate valve carried by the receptacle for permitting the discharge of water from the receptacle when the box is in its upper position, and a trough carried by said guide frame for receiving the water discharged form said receptacle.

1,300,857. BEVERAGE-SHAKER. Hugo Pick, Chicago, Ill., assignor to Albert Pick & Company, Chicago, Ill., a Corporation of Illinois. Filed June 7, 1915. Serial No. 32,557. 2 Claims. (Cl. 65—12.)



1. A beverage shaker comprising a body formed of metal of substantially uniform thickness, having a substantially semi-spherical bottom and an upwardly flared side integral with said bottom, and a base comprising a bottom wall and an upwardly extending flange, said bottom wall and flange being integral and formed of sheet metal, the base flange extending around the semi-spherical bottom portion and being permanently united to the side of the body, the bottom wall of the base forming a closure below the semi-spherical portion of the bottom.

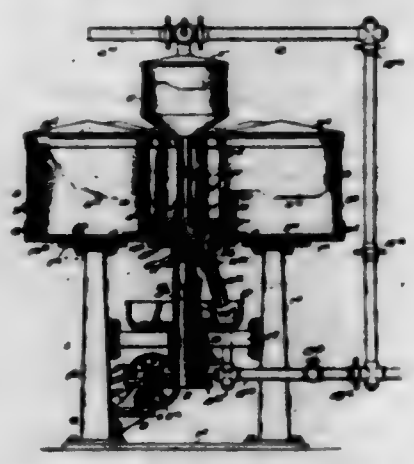
1,300,868. DENTAL CUSPIDOR-FIXTURE. Oscar H. Pierce and Alphonse F. Pierce, Rochester, N. Y. Filed Sept. 8, 1917. Serial No. 190,225. 13 Claims. (Cl. 4—60.)

1. In a cuspidor fixture, the combination with a support, a tubular head rotatably adjustable thereon forming a fluid waste, means for locking it in adjusted position, and a cuspidor mounted on the head and discharging therethrough, of a fluid supply pipe having a portion disposed in the axis of the head, an extension rotatable on said portion of the supply pipe, said extension projecting outwardly and upwardly and discharging into the cuspi-



dor, and an arm attached to the head and supporting said extension.

1,300,869. PASTEURIZING APPARATUS. George B. Pitts, Cleveland, Ohio, assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 20, 1917. Serial No. 188,749. 10 Claims. (Cl. 137—21.)



1. In apparatus of the class described, the combination of a plurality of holders each formed with an opening in one wall, a valve member having a delivery duct and a discharge duct, the outlet and inlet ports of which register with the openings in the walls of the holders, means for supplying liquid to the inlet port of said delivery duct, means for conveying away the liquid from the outlet port of the discharge duct, and means for causing relative movement between said series of holders and said valve member.

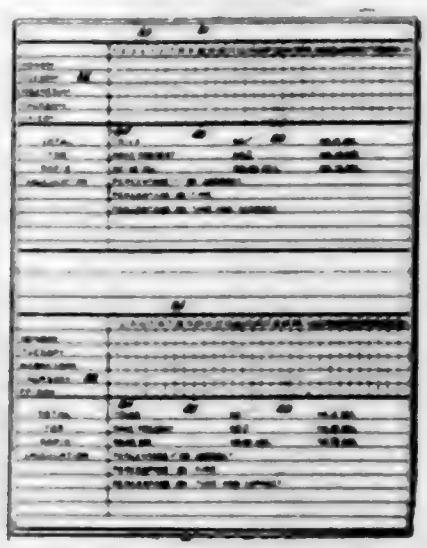
1,300,870. RECEPTACLE FOR FIRE-ESCAPES. Abram L. Plush, Philadelphia, Pa. Filed Jan. 17, 1919. Serial No. 271,656. 5 Claims. (Cl. 227—11.)



1. A fire-escape apparatus comprising in combination, a hook arranged to be rigidly secured to a fixed support to suspend a fire-escape of the rope type, and a receptacle for said fire-escape comprising two interfitting sections, one of said sections having an opening to receive said

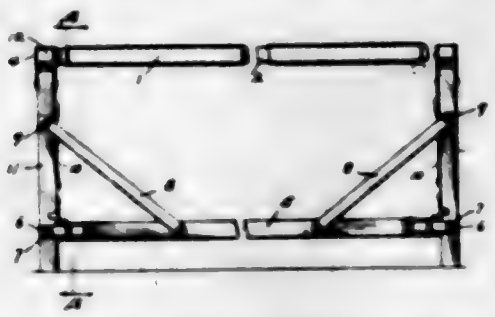
hook, and means to support the other section in interfitting position but leaving the receptacle free to swing laterally, whereby said sections can be disconnected to release said fire-escape.

1,300,871. CHART FOR TEACHING. CLARENCE H. PRAGER, Muskogee, Okla. Filed Feb. 25, 1918. Serial No. 219,028. 2 Claims. (Cl. 283—1.)



1. Means for showing the standing of a pupil in a class of pupils with respect to problems to be solved, comprising a chart containing a series of columns of boxes lined off on a sheet with the columns headed by a series of consecutive numbers representing the problems in order and flanked by another orderly series of numbers, one of the flanking series of numbers representing the number of pupils in the class and the other flanking series of numbers representing seconds of time allotted to the solution of the problems, whereby the numbers heading the columns and one set of the numbers flanking the columns may be utilized in the production of a graphic delineation showing the standing of the pupil with respect to the other pupils in solving the problems, and the other series of numbers flanking the columns may be utilized for the designation in the boxes opposite them of the character of the problems with respect to the time allotted to their solution, the efficiency of the pupil being thereby indicated by the chart as a whole.

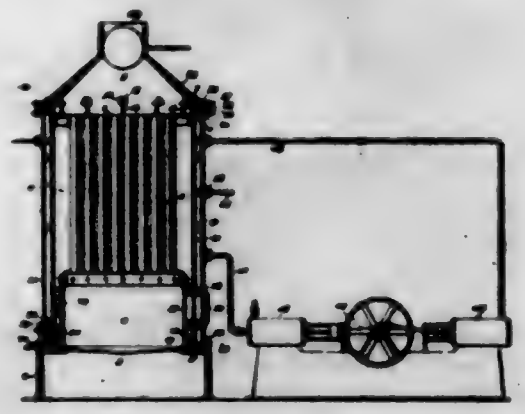
1,300,872. COLLAPSIBLE COT. ISAAC S. PURCELL, Chicago, Ill., assignor to Tentobed Company, Chicago, Ill., a Corporation of Illinois. Filed June 4, 1917. Serial No. 172,597. 8 Claims. (Cl. 5—5.)



1. In a cot, a side member including a pair of normally horizontal bars pivoted to each other intermediate of their ends, and stops associated with said bars for limiting the relative movement thereof to positions in each of which the bars aline horizontally with each other; each of the said stops consisting of a metal member having a portion engaging one of the side member bars to prevent rotation upon the latter, and having another portion affording a ledge substantially in the plane of the lower edge of the said bar.

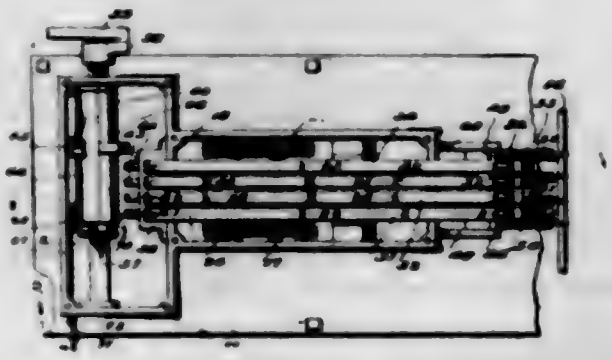
3. In a cot frame, the combination with a pair of laterally opposed legs and a spreader detachably secured to both legs, of a latch on each leg for maintaining the spreader in its said position, said latch comprising a metal member pivoted to the leg and equipped with a pair of ledges positioned respectively for engaging the spreader and an edge of the said leg.

1,300,873. INSULATED BOILER. ERNEST JAMES QUINN, Richmond, Va., assignor of one-half to B. B. Blanton, Charlotte, N. C. Filed May 8, 1917. Serial No. 167,215. 1 Claim. (Cl. 220—126.)



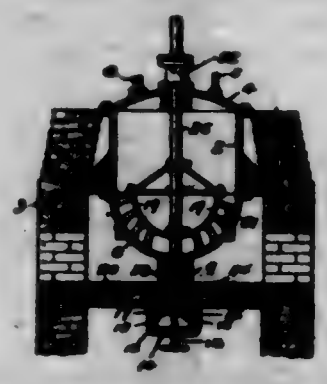
In a device of the class described, an inner shell, a base plate for mounting said shell, an outer casing spaced from the latter, an upper casing member carried by the outer casing, a cone shaped member carried by the upper portion of the shell and spaced from a portion of the side wall of the upper casing member, said shell, casing, upper casing member, and cone-shaped member constituting the walls of an air-tight chamber within which reduced pressure may be maintained, and means for connecting said upper casing member with the outer casing and comprising an annular member including flanges extending at an obtuse angle with reference to each other, means for securing the annular member to the upper casing member, a flanged ring secured to the upper portion of the outer casing, packing material between said upper portion of the outer casing and the casing member, said packing material being retained in position by the flanged ring, and means for retaining said flanged ring in position.

1,300,874. MECHANICAL GEAR-SHIFT. GLENN T. RANDOL, Marmaduke, Ark. Filed Feb. 16, 1918. Serial No. 217,668. 27 Claims. (Cl. 74—56.)



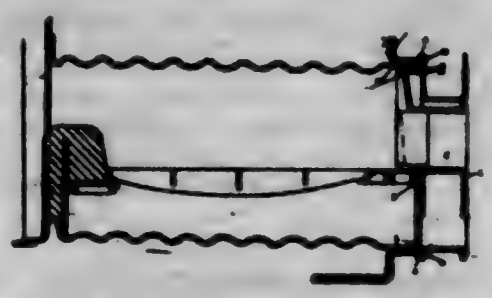
1. A speed gear shifting mechanism including companion actuating means normally tending to shift the different speed gears, tripping means adapted to be set to release the said first mentioned means selectively for shifting a selected gear and movable upon the actuation thereof for shifting any previously selected gear to neutral position, and means for actuating the said second mentioned means.

1,300,875. DIGESTING APPARATUS. HARRY D. RANKIN, San Francisco, Calif., assignor to Corrosion Extraction Company, a Corporation. Filed Apr. 24, 1916. Serial No. 92,122. 4 Claims. (Cl. 23—3.)



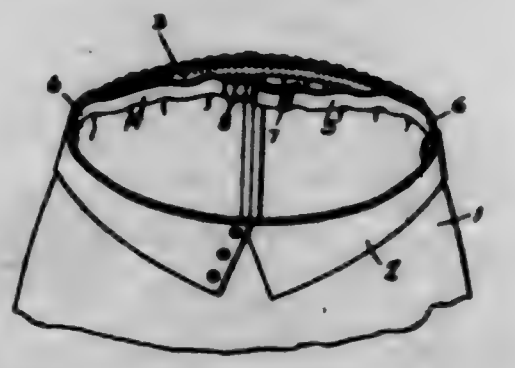
1. In a digesting apparatus, a vessel, a vertically disposed discharge passage arranged at the bottom of the vessel, rotatable means in said passage for returning material from the passage into the vessel and mechanism for rotating said means.

1,300,876. FURNACE-FRONT AND ADAPTER-RING THEREFOR. JOHN RAUH, New York, N. Y. Filed Jan. 10, 1918. Serial No. 211,142. 2 Claims. (Cl. 110—172.)



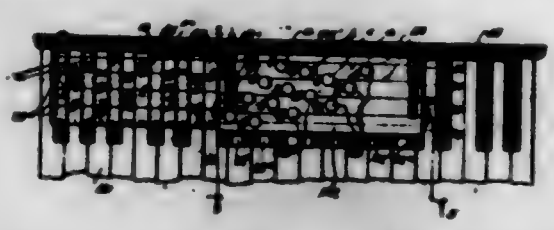
1. In a furnace front comprising a front plate and a back plate, an annular plate of metal having an annular flange projecting from the rear face thereof and fitting to the plate wall of the furnace mouth and said back plate being secured to the front face of said annular plate.

1,300,877. WAISTBAND. SOLOMON REPLANSKY, New York, N. Y. Filed Aug. 10, 1917. Serial No. 185,596. 1 Claim. (Cl. 2—142.)



A garment having an elastic flat tape stitched thereto on the inside of its waist engaging portion, the back of the waist engaging portion being gathered with respect to said tape, said tape normally contracting said waist engaging portion, an inelastic flat tape overlying said elastic tape and secured thereto throughout its length, a second inelastic tape overlying said first named inelastic tape and divided to provide overlapping ends, and means for adjustably connecting said overlapping ends to prevent the waist engaging portion from distending beyond a desired predetermined degree.

1,300,878. CHORD-PLAYING ATTACHMENT FOR KEYBOARD INSTRUMENTS. GEORGE L. REYNOLDS, East Boston, Mass. Filed Dec. 8, 1916. Serial No. 135,864. 16 Claims. (Cl. 84—12.)

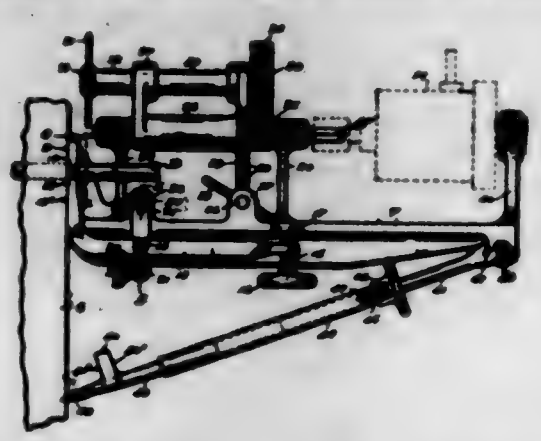


1. The combination with a musical instrument including keys, of an attachment therefor for playing chords comprising a support adapted for disposition over the keys aforesaid, chord bars mounted on said support and arranged to operate certain of said keys, keys disposed over said bars each adapted for operating a certain chord bar, and a pressure member disposed over each chord bar and beneath the key for operating said bar, said pressure member having a contact point at one edge contacting with the chord bar and a contact point at its opposite edge contacting with the support.

6. The combination with a keyboard musical instrument, of an attachment for playing chords comprising a support adapted for disposition over the instrument keyboard, and means for holding the attachment against displacement at a predetermined position on the keyboard, comprising a blade member adjustable vertically with respect to the attachment and insertible into an interstice between the instrument keys into contact with the instrument frame therebeneath whereby the weight of said attachment is sustained by said frame.

12. The combination with a keyboard musical instrument, of an attachment therefor for playing chords comprising a support, a series of chord playing-keys mounted thereon and operable by one hand, and means carried on said support for indicating the bass key of the instrument keyboard to be played by the other hand with a predetermined chord key of the attachment.

1,300,879. METAL-CUTTING MACHINE. GEORGE P. RISSUM and ALBERT P. WILLIAMS, Seattle, Wash. Filed Oct. 18, 1917. Serial No. 196,838. 4 Claims. (Cl. 29—69.)

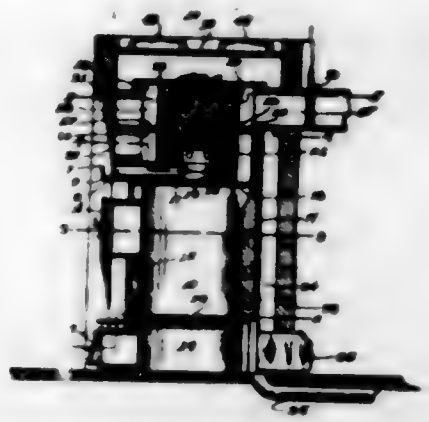


1. A machine for cutting off bolts, comprising a machine frame, a saw mounted for reciprocatory movements thereon, means to effect such movements of the saw, means to rotate the saw, a clamping jaw provided on the frame, a lever pivotally connected to the frame and having a jaw element thereon, and means for actuating said lever to cause the jaw element thereof to coöperate with the first-named jaw to clamp the frame to a bolt which is to be cut off.

1,300,880. HOT-AIR FURNACE. VICTOR RUBIN, Winnipeg, Manitoba, Canada. Filed Jan. 11, 1918. Serial No. 211,436. 6 Claims. (Cl. 126—99.)

1. A hot air furnace including a fire box, a compartment located above the fire box and adapted to be packed with heat retaining means and having a perforated air chamber

with externally actuated valve, means for passing air through the compartment and means for circulating the products of combustion from the furnace around the compartment.



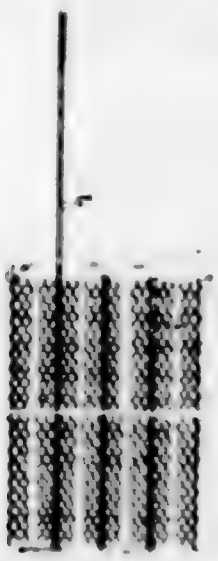
2. A hot air furnace including a fire box, a compartment located above the fire box and designed to be filled with heat retaining means and having a perforated air chamber with externally actuated valve, means for passing the products of combustion around the compartment, and a smoke pipe and valve means designed to control the passage of the products of combustion and deliver the same directly to the smoke pipe when it is desired to check the heat.

3. A hot air furnace including a fire box, a compartment located above the fire box and designed to be filled with heat retaining means and having a perforated air chamber, a valve in the compartment through which air is designed to pass and means for actuating the valve.

4. A hot air furnace including a fire box, a compartment located above the fire box and designed to be filled with heat retaining means and having a perforated air chamber, a flue around the compartment, means for delivering the products of combustion to the flue, a valve in the flue controlling the direction of flow of the products of combustion and an air passageway, as and for the purpose specified.

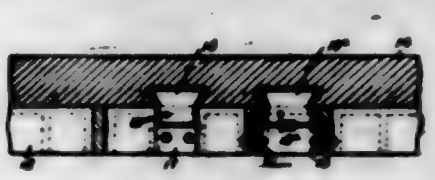
5. A hot air furnace including a fire box, a compartment located above the fire box and designed to be filled with heat retaining means and having a perforated air chamber, a pair of flues surrounding the said compartment, means for circulating the products of combustion successively through each flue and means for passing air through the said compartment.

1,300,881. METHOD OF MAKING LACE HAIR-NETS. RUDOLF SARNOER, New York, N. Y. Filed Nov. 14, 1918. Serial No. 262,482. 5 Claims. (Cl. 132—23.)



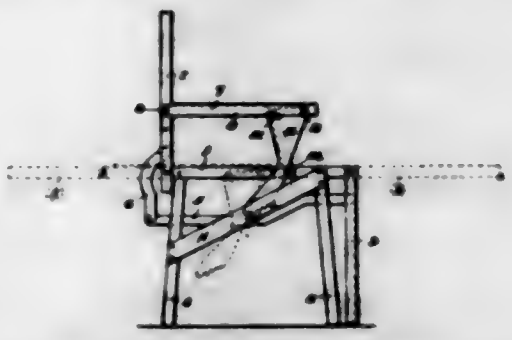
2. The herein described method of making lace hair nets comprising: (1) the manufacture of a piece of lace of any desired length and including a plurality of net strips arranged edge to edge and separably connected, there being introduced along the selvages of each strip during the making of the lace elastic cords; (2) fastening all of the ends of the cords at one end of the piece and withdrawing the opposite ends of the cords from the opposite end of the piece thereby putting the remaining portions of the cords in the lace under suitable tension; (3) fastening the portions of the cords at the opposite ends of the lace and removing the exposed portions of the cords therefrom; (4) separating the net strips from one another and treating the several strips so formed each with elastic cords along its edges as strings or ropes of fabric; (5) applying pairs of fasteners at uniform distances between pairs around the string or rope of fabric in stretched condition thereby binding the cords and other portions of the lace between them firmly and permanently together, and (6) severing the fabric throughout its length between the fasteners of each pair.

1,300,882. WATER-COOLED WALL-SUPPORT FOR FURNACES. LAWRENCE S. SCHMIDT, Pittsburgh, Pa., assignor to Schmidt-McCormick Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 9, 1915. Serial No. 60,534. 2 Claims. (Cl. 122—6.)



2. In a regenerative furnace, the combination with a furnace wall, a breast plate structure, a skew-back structure, and buck-stays, of cooling means interlocking with the wall and adapted to form a support for the wall against inward collapsing and having a length equal to the distance between the breast plate and skew-back structures, said means being positioned between and secured to adjacent buckstays.

1,300,883. ARM-REST-HOLDING MEANS. FRANK F. SCHWALLER, St. Louis, and THOMAS M. QUINN, Overland, Mo. Filed May 28, 1917. Serial No. 171,407. 2 Claims. (Cl. 155—16.)



1. In combination with the movable back-section of a leg supporting chair having a seat-section, of an arm-rest having a depending outer flange pivotally connected to the movable back-section, a rib depending from said arm-rest having a slotted opening, an arm-rest supporting member pivotally connected at its upper front corner to said arm-rest, a pin fixed to the upper rear corner of said arm-rest supporting member and adapted to pass through the slotted opening in the aforesaid rib, a link pivotally mounted upon said pin at its upper end and pivotally connected at its lower end to the seat-section of said chair, teeth formed in the lower edge of said arm-rest supporting member, and means carried by the chair for supporting said arm-rest supporting member in various selected elevations.

1,300,884. COLLAPSIBLE SHAVING-BRUSH. EDMUND R. J. SCHWARTZ, New Orleans, La. Filed June 22, 1917. Serial No. 176,415. 1 Claim. (Cl. 15—22.)

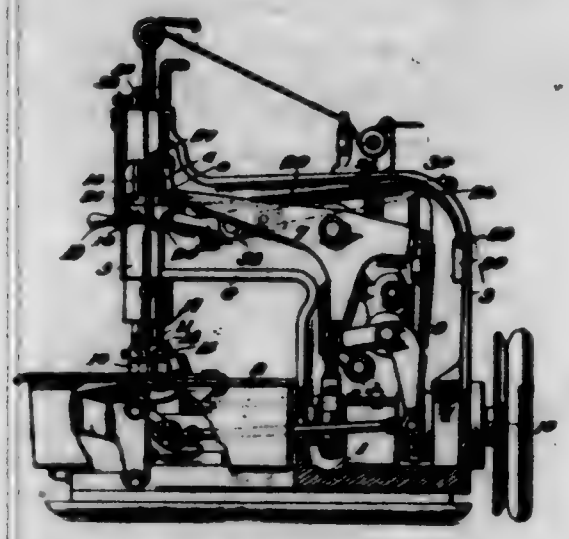
A shaving brush provided with a collapsible handle, said handle comprising a base of greater diameter than the han-

die and having a circumferential groove in the upper surface thereof, a tapered flexible sleeve formed integral with the base at right angles thereto, and a plurality of tapered



flexible sleeves telescoping over the first mentioned sleeve, the outer sleeve housing the remaining sleeves and the lower end being adapted to be received and frictionally held within the circumferential groove.

1,300,885. PRESSER-FOOT MECHANISM FOR SEWING-MACHINES. DUDLEY S. BURNHAM, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Original application filed Dec. 27, 1915, Serial No. 68,787. Divided and this application filed Apr. 6, 1916. Serial No. 89,814. 3 Claims. (Cl. 112—18.)

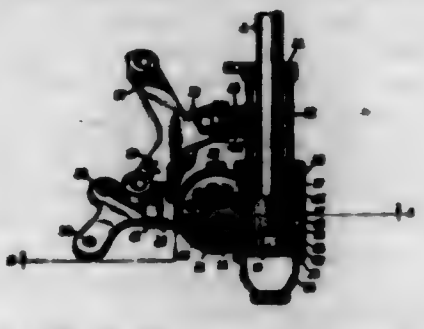


1. The combination of a hollow standard, a hollow overhanging arm, a presser foot, a presser bar carrying said foot, a leaf spring, a bearing carried by said presser bar on which one end of said spring rests, a supporting abutment attached to the inner face of the outer wall of the standard and supporting the other end of said leaf spring, and means engaging the spring between its ends for placing the same under tension.

2. The combination of a standard, an overhanging arm, a presser foot, a presser bar carrying said foot, a leaf spring, said spring having a horizontal portion, a curved portion and a vertical portion, a bearing on said presser bar on which the free end of the horizontal portion of said spring rests, an abutment carried by the standard for supporting the other end of the spring, means engaging the spring between its ends for placing the same under tension for causing said spring to force the presser foot downwardly.

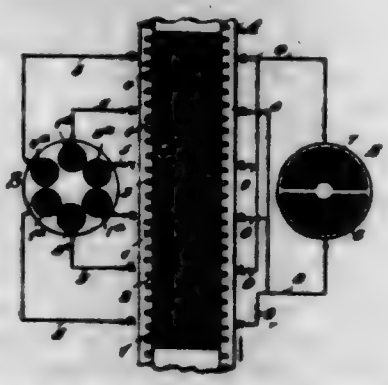
1,300,886. MOTOR-VEHICLE STEERING MECHANISM. LEE C. SHARP, Plattsmouth, Nebr. Filed Oct. 27, 1917. Serial No. 198,892. 6 Claims. (Cl. 74—79.)

1. In a steering mechanism for motor-vehicles, the combination with a steering-post and a worm disposed coaxially therewith, of a fixed housing for said worm, bearing means revolubly supporting said worm in said housing, and means forming an axially slidable connec-



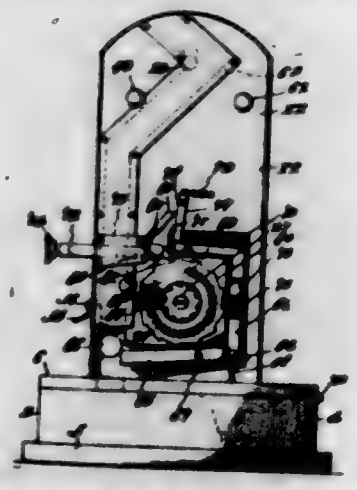
tion between the steering-post and worm and adapted to transmit rotary movement from the one to the other.

1,300,887. METHOD OF PRODUCING MOVING PICTURES IN COLORS. JOSEPH SHAW, New York, N. Y., assignor to Rainbow Pictures Corporation, a Corporation of New York. Filed July 31, 1917. Serial No. 183,083. 5 Claims. (Cl. 88—16.4.)



1. A method of producing moving pictures in colors, which consists in taking on a panchromatic or orthochromatic negative film successive groups of six picture image sections, each section showing a color selection, three of which are of red color selection and alternately disposed in their relation to the other three picture image sections of the group of which one is of green, one of yellow and one of blue color selection; the making of a positive film therefrom and projecting it with the aid of recurring red and green color filters, the picture image sections of red color selection being colored by the red filter and each of the picture image sections of green, yellow and blue color selection being colored by the green filter.

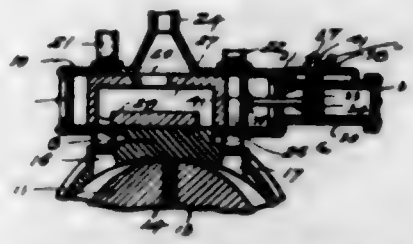
1,300,888. PENCIL-VENDING MACHINE. EMERSON W. SINGLETARY, Morganza, La. Filed Jan. 2, 1918. Serial No. 209,988. 5 Claims. (Cl. 194—38.)



1. In a vending machine, the combination of article delivery means, and coin controlled mechanism for said article delivery means including a device attached to said article delivery means, a thrust bar for engaging and

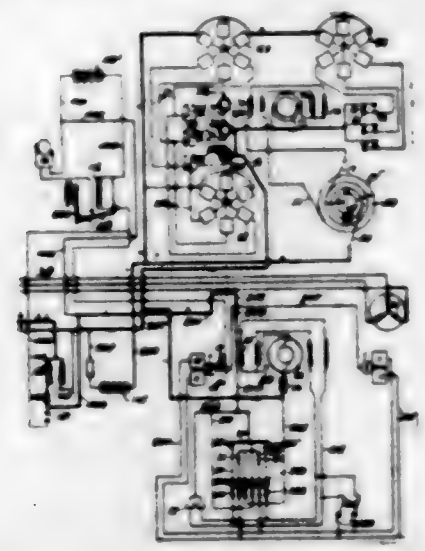
driving said device, a latch normally preventing operation of said thrust bar, a coin chute, means in said coin chute connected to said latch for shifting the latter out of locking position, a movable stop adapted to be engaged by said latch when moved to the unlocking position whereby to limit the movement of said last named means and prevent the immediate release of the coin, yieldable means for normally holding said stop in the operative position, means carried by said thrust bar for engaging and shifting said stop to an inoperative position out of the path of said latch, and means also carried by said thrust bar for engaging and causing a further shifting of said latch and connected means whereby to release the coin, substantially as described.

1,300,889. REVERSIBLE TURBINE. ALFRED J. SPARROW, Woodstock, New Brunswick, Canada, assignor of one-half to Albert Ernest Babkirk, Woodstock, New Brunswick, Canada. Filed May 2, 1918. Serial No. 232,094. 2 Claims. (Cl. 121—74.)



1. A device of the character described including a stator, a rotor therein, nipples mounted through the upper edge of the stator near opposite sides thereof and serving as inlet and exhaust passages, a valve casing having connection with the nipples, a steam supply pipe having its branches communicating with the top of the casing at points opposite the nipples, an exhaust pipe leading from the top of the casing, a valve body slidable in the casing and having vertical passages therethrough near the ends thereof either of which alines with either of the opposed nipples and supply pipe branches, the body also having another passage therein which establishes communication between the other nipple and the exhaust pipe, and a manually controlled steam operable piston connected with the valve body for shifting the body for the reversing of the rotor.

1,300,890. NAVIGATIONAL INSTRUMENT. ELMER A. SPERRY, Brooklyn, N. Y., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 8, 1915. Serial No. 5,819. 47 Claims. (Cl. 177—351.)



1. The combination with a gyro-wheel and casing, of means for supporting the same for free movements in azimuth comprising a supporting element mounted for movement in azimuth and means for causing said element to follow the apparent arc-in-azimuth movements of said wheel, and means associated with said other means for causing a hunting action of said element.

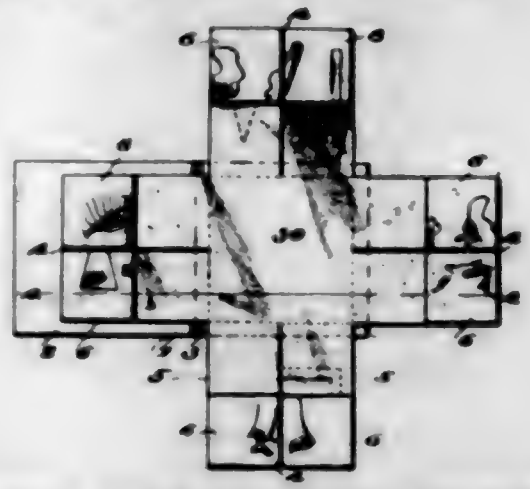
2. In a gyro-compass, the combination with the sensitive element, of a mechanical suspension for said sensitive element, a rotary support for said suspension and means for vibrating said support through a predetermined angle with respect to the position of said sensitive element.

3. In a gyro-compass, the combination with the sensitive element, of a rotary supporting element for said sensitive element, a motor connected to said supporting element for rotating it, controlling contacts for said motor adapted to cause normally both a vibratory and rotary motion thereof about its vertical axis, and a friction-inertia device connected with said motor adapted to limit the extent of the vibrations thereof but not to oppose a continuous rotation.

4. In a gyro-navigational instrument, a sensitive element, and a follow up device for relieving the sensitive element of the work necessary to cause apparent arc-in-azimuth movements of said element device, including a motor for driving said device, controlling contacts between said device and element, and a relay in the electrical connections between said contacts and motor adapted to prevent the motor from becoming locked.

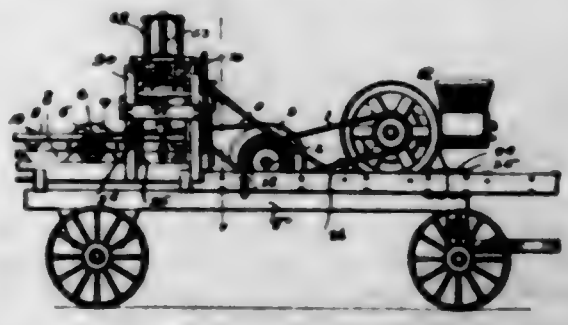
5. In a gyro-navigational instrument, a sensitive element, a follow-up device for relieving the sensitive element of the work necessary to cause apparent arc-in-azimuth movements of the sensitive element, including a motor for driving said device, and a friction-inertia mass connected to said motor.

1,300,891. PICTURE-PUZZLE. WESLEY B. STATON, Gray, Saskatchewan, Canada. Filed May 17, 1918. Serial No. 235,152. 2 Claims. (Cl. 46—41.)



1. A puzzle consisting of a cruciform body of flexible material having its wings divided longitudinally and having sections of pictures displayed upon the branches of its wings.

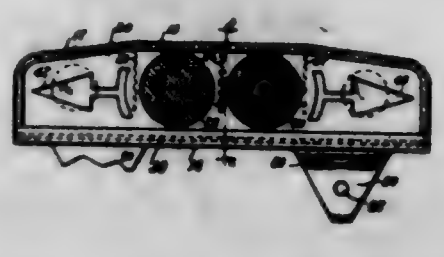
1,300,892. WOODWORKING-MACHINE. ROBERT O. STEFFEN, Elroy, Wis. Filed Oct. 4, 1918. Serial No. 256,851. 4 Claims. (Cl. 144—1.)



1. In a boring machine, the combination with a work table, a skeleton framework rising therefrom, and head-

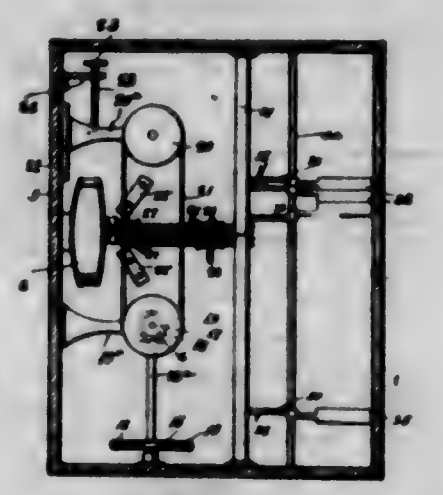
sontal tracks within said framework; of a carriage mounted on said tracks, a shaft journaled in the carriage and having a miter gear, a driving pulley splined on the shaft and connected with a source of power, means on the framework for holding the driving pulley when the shaft is adjusted through it, means for adjusting the carriage on the tracks, an upright auger shaft having a miter gear meshing with that mentioned, a tool at its lower end, and means for supporting said shaft in the carriage.

1,300,893. AUTOMOBILE-SIGNAL. PAUL A. STOVER, Cleveland, Ohio. Filed Oct. 7, 1918. Serial No. 124,270. 1 Claim. (Cl. 240—11.)



In a signaling device for indicating the progress of an automobile, the combination of a housing divided into compartments by upright partitions which terminate short of the bottom, a translucent bottom for said housing, means for carrying a license plate beneath the housing, lamps in the different compartments adapted to illuminate the license plate through the translucent bottom, the housing having a rear wall with individual translucent openings opposite the respective lamps.

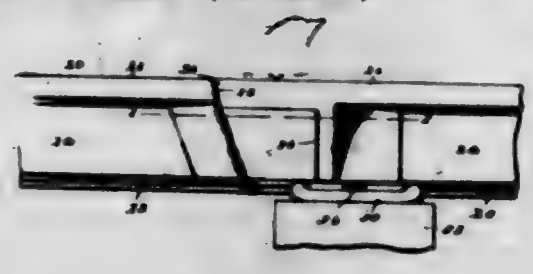
1,300,894. VIOLIN-PIANO. JESSE C. STRAWN, Buffalo Springs, Tex., assignor of one-half to George W. Jones, Buffalo Springs, Tex. Filed Jan. 17, 1917. Serial No. 142,854. 3 Claims. (Cl. 84—48.)



1. In a violin piano, a plurality of strings disposed in parallel spaced relation, a bow belt mounted for operation transversely of the strings and positioned adjacent thereto, means for driving said belt, and means for optionally moving a portion of one run of the belt into frictional contact with any one of said strings selectively, said means serving to hold the belt out of contact with the other strings and to normally maintain the belt in spaced relation to all of said strings.

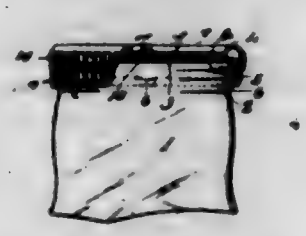
2. A violin piano including a violin having a finger board, fingers movable against the portions of the violin strings arranged over the finger board, a bow belt arranged transversely of the strings, means for operating the bow belt, a plurality of bow belt shifting rods arranged at right angles to the belt and operatively connected thereto, a plurality of shafts extending at right angles to the belt shifting rods, downwardly extending fingers carried by the shafts and operatively connected to the belt shifting rods, a plurality of actuating keys pivotally secured in position, means for rocking said shafts by depressing said keys, upstanding ears carried by the keys and means operatively connecting the upstanding ears with the fingers, as and for the purpose specified.

1,300,895. RAIL-JOINT. FRANK SZYMALAWSKI, Cobalt, Ontario, Canada. Filed Dec. 18, 1918. Serial No. 267,318. 2 Claims. (Cl. 238—8.)



1. The combination with two alining rails each having its web widened at the end thereof, one of said rails having its head portion cut away in a line with the juncture of the head and web, providing the widened web with a straight upper portion and the end of the head with an inclined shoulder, the base flange of the rail projecting beyond the web thereof, the upper portion of the web from the shoulder having a central longitudinal groove and being further provided with a round socket at the terminal of the groove, the said socket terminating approximately in a line with the juncture of the web and base flange of the rail, and the base flange having an opening communicating with the socket, said rail end having a recess communicating with the socket and of a depth equaling that of the socket, the second rail having its head extending beyond its web and the end of the said head inclined to coengage with the angle shoulder of the end of the first mentioned rail, said second mentioned rail having a longitudinal rib extending below its head designed to be received in the groove of the first mentioned rail, the web of the second mentioned rail, at the end thereof being centrally formed with a tongue terminating in a round head, the tongue and head being of a height equaling the depth of the socket and recess and designed to be received in said socket and recess when the rails are assembled, and the base flange of the second mentioned rail terminating inward of the end of the web thereof whereby the lower wall of the web extension will rest upon the base flange extension of the first mentioned rail when the rail ends are associated.

1,300,896. JAR-CLOSURE. THOMAS LUCIEN TALIAFERRO, La Grange, Ill. Filed Nov. 6, 1917. Serial No. 200,532. 1 Claim. (Cl. 215—13.)



A jar closure including in combination, inner and outer sections, said inner section having a connection with the jar, the side wall of said inner section having a knurled section and an annular groove above the knurled section, said outer section having a depending side wall with the lower edge thereof turned into said groove for holding the sections together, but permitting one to rotate on the other, the side wall of said outer section being knurled, said sections of the cover having openings formed therein which may be brought into register by the turning of one

section of the cover relative to the other, said inner section having an indented projection centrally thereof adapted to engage an indented projection centrally of the outer section of the cover, said indented projection on the lower section being proportioned so as to positively hold the outer section of the cover from contact with the inner section thereof about the openings in said cover.

1,300,897. BRUSH-PULLER. WALTER D. VAUGHAN, Clarendon, Vt. Filed Jan. 31, 1919. Serial No. 274,240. 2 Claims. (Cl. 57—9.)

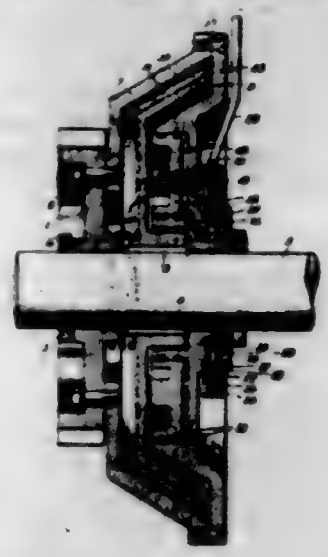


1. A device of the character described including a pair of complemental sections pivoted together near adjacent ends and arranged in cross-like form and having their long portions curved arcuately in opposite directions and arranged in opposed relation with respect to each other, coacting guides at the outer portions of the sections and arranged in divergent relation with respect to each other, serrated engaging jaws carried by the inner surfaces of the curved portions of the sections and arranged in opposed relation with each other and positioned so as to move into clamping relation when a pull is exerted on the short portions of the sections, flexible elements operably connected with the short portions of the sections, and a draft device connected to the flexible elements.

2. A device of the character described comprising a pair of complemental sections pivoted together near adjacent ends and arranged in cross-like form and having their long main portions curved arcuately in opposite directions and arranged in opposed relation with respect to each other, coacting guides continuing from the outer portions of the main lowering portions and arranged in divergent relation with respect to each other, gripping jaws each of which is formed from a single straight piece of material, angularly disposed attaching flanges at the terminals thereof, means for securing said flanges to the inner surfaces of the main long portions and near the ends thereof, the outer and adjacent faces of the straight portions of the jaws being serrated and positioned so as to move in clamping relation when a pull is exerted on the short portions of the sections, flexible elements operably connected with the short portions of the sections, and a draft device connected to the flexible elements.

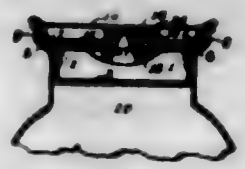
1,300,898. FLUID-PRESSURE CLUTCH. BEE ELMER VINCENT, Swifts, Ohio, assignor of one-half to Patrick Henry Hays, Swifts, Ohio. Filed June 8, 1918. Serial No. 238,895. 5 Claims. (Cl. 192—18.)

1. In a fluid pressure clutch, the combination of a rotary driving clutch member, a rotary driven clutch member, a rotary abutment member arranged in opposition to said driving clutch member and embodying an annular fluid pressure chamber, a non-rotary fluid chest in constant communication with said fluid pressure chamber, and a fluid pressure piston mounted for reciprocatory movement in said fluid pressure chamber and adapted to



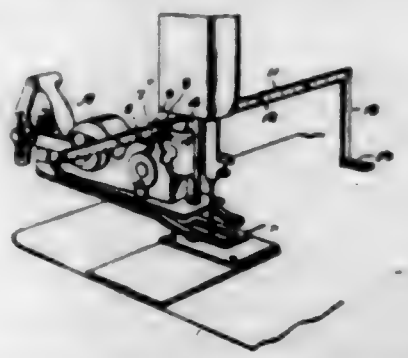
shift said driving clutch member into engagement with said driven clutch member.

1,300,899. LOCK-LID CONTAINER. EDWIN WAGNER, Cove Orchard, Oreg. Filed Sept. 9, 1918. Serial No. 253,187. 3 Claims. (Cl. 31—78.)



1. A lock lid for containers, comprising the lid proper; two ports cut in opposite sides thereof; two flat springs mounted interiorly adjacent said ports and set to normally thrust outwardly; a lock dog attached to the free end of each spring and adapted to protrude through the ports aforesaid; a lock lever attached to each lock dog and extending inwardly and overlapping; slots formed through the overlapping ends of said lock bars, said slots being offset as to one another so that the inner ends of the slots approach one another; a lock spring mounted below said lock bars; a triangular lock lip mounted upwardly from said lock spring and adapted to engage the slots in the ends of the lock bars; a lock lever pivoted above said lock bars and slots, said lever having a slot adapted to receive the said lock lip when same is pressed upwardly; and a supporting handle for said elements.

1,300,900. BUTTONHOLE-GAGE. MAUD E. WALTER, Hayward, Wis. Filed Nov. 3, 1917. Serial No. 200,103. 1 Claim. (Cl. 112—4.)



The combination with a button hole attachment for machines, of a U-shaped clamp therefor provided with projecting lugs, one of which carries a set screw, and a gage formed of flat stock having graduations thereon, said gage being adapted to lie between the lugs and be securely held in adjusted position by the set screw acting thereon.

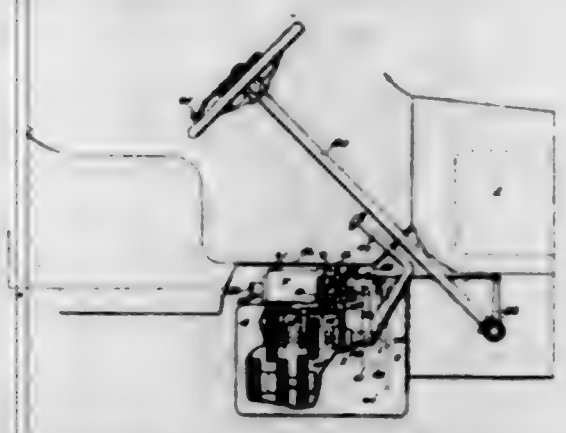
the gage having an angular end adapted to register with a finished button hole, and resilient legs formed integral with the clamp and extending at right angles with respect to said lugs.

1,300,901. PERISCOPE. THOMAS DUANE WARNER, Jonesboro, Ark. Filed June 10, 1918. Serial No. 239,204. 6 Claims. (Cl. 88—1.)



1. A periscope having a tubular body and a mirror arranged therein, said body being provided with a sight opening, and complementary closure members for said sight opening adapted to be arranged in laterally extending relation to the body to provide a projecting hood extending outwardly from the sight opening.

1,300,902. GEAR-SHIFTING DEVICE. ANTON WEBER and WILLIAM E. LEIDING, Oakland, Calif., and JAMES PETER HUGO JACOBSEN, Chicago, Ill., assignors to United States Auto Gear Shift Company, Oakland, Calif., a Corporation of California. Filed Apr. 6, 1918. Serial No. 226,984. 10 Claims. (Cl. 74—58.)



1. A mechanical shifting device for variable speed power transmitting mechanism comprising a plurality of movable shifting members connected with the shiftable elements of said mechanism, selective operating means for actuating any one of said shifting members, devices for resetting said shifting members to normal position prior to the actuating of any one thereof, means for locking said shifting devices in either shifted or normal position, and means carried by the resetting means for releasing said locking means on the movement thereof.

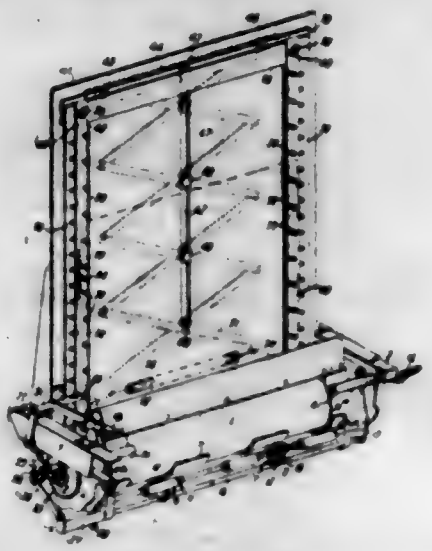
1,300,903. INTERNAL-COMBUSTION-ENGINE TURBINE. THOMAS H. WHELDEN, Newark, N. J. Filed Nov. 9, 1916. Serial No. 130,413. 15 Claims. (Cl. 60—41.)

1. In a rotary gas engine, the combination of a rotor provided with a series of radially arranged vanes on the opposite sides thereof and a stator provided with explosive chambers mounted on the opposite sides of the rotor and arranged for directing single explosive charges



against a plurality of the vanes on said rotor, and means mounted on the rotor and arranged between the series of vanes for centripetally exhausting the gases, substantially as described.

1,300,904. TYPE-WRITING MACHINE. JOHN A. WHERRY, New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 14, 1917. Serial No. 180,530. 38 Claims. (Cl. 197—127.)



1. The combination with a platen, of a collating belt curved around the platen, studs on the belt facing the platen, and means extending behind the platen for supporting the belt with the studs to enable work-sheets to be adjusted thereon, so that when the belt is drawn forward with work-sheets on the studs, the work-sheets will be engaged by the studs and be bound against the platen by the belt.

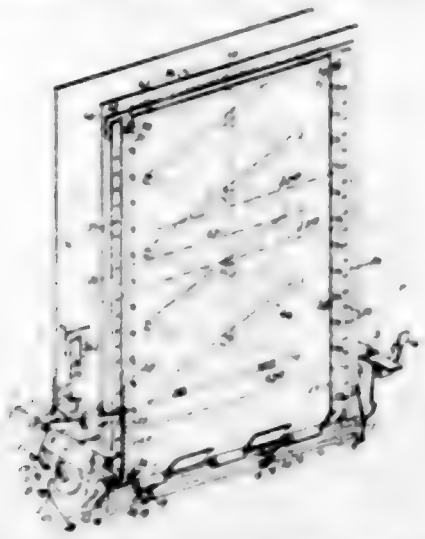
1,300,905. TYPE-WRITING MACHINE. JOHN A. WHERRY, New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 7, 1917. Serial No. 184,820. 28 Claims. (Cl. 197—126.)

1. The combination with a platen, of a flexible collating frame wrapped around said platen, and oppositely-acting springs connected to the ends of said frame for maintaining said collating frame taut and smooth on said platen.

2. The combination with a platen, of a collating frame wrapped around said platen, an expanding device connected to the leading edge of said collating frame, a spring for operating said expanding device, and means for opposing the action of said spring so as to maintain said frame taut on said platen.

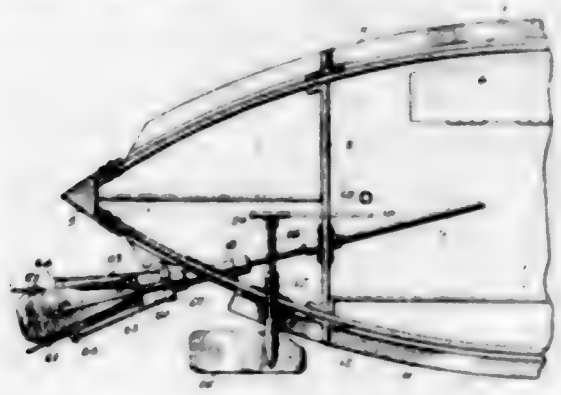
28. The combination with a platen, of a belt adapted to be curved around the platen, collating studs on the belt, a support in front of the platen, along which the belt may extend, and which is adapted to support work-sheets while being adjusted on the studs, a support behind the platen, along which the belt is adapted to be drawn, and which is

adapted to support the free margin of work-sheets, a finger-piece operable to cause the belt to carry the work-



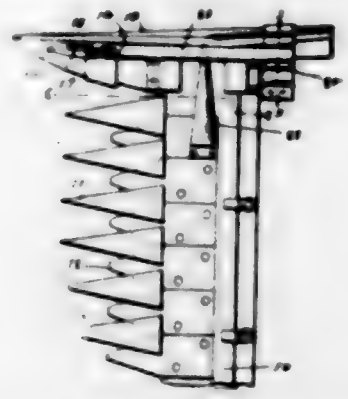
sheets to the latter support, and an adjustable stop adapted to arrest the belt when a work-sheet thereon arrives at the proper printing line.

1,300,906. LIFE-BOAT. JAMES S. WHITAKER, San Francisco, Calif. Filed June 26, 1916. Serial No. 105,901. 2 Claims. (Cl. 9—4.)



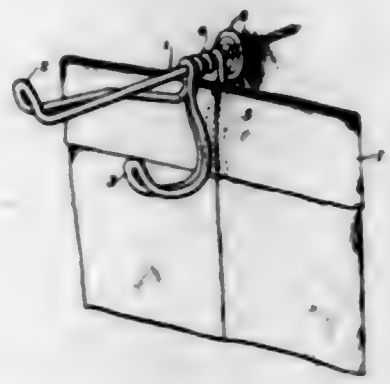
1. A life boat comprising a hollow casing, reciprocating propelling means operable from within the casing, and a steering means operable from within the casing, said propelling means including a shaft, a plurality of blades, pivotally mounted at the ends thereof on said shaft, and resilient devices each connected at one end with the shaft, and pivotally connected at the opposite end with the blade intermediate of the ends thereof.

1,300,907. MOWER. DELVIN D. WILLIAMS, Greenwood, Wis. Filed May 15, 1918. Serial No. 234,698. 3 Claims. (Cl. 56—30.)



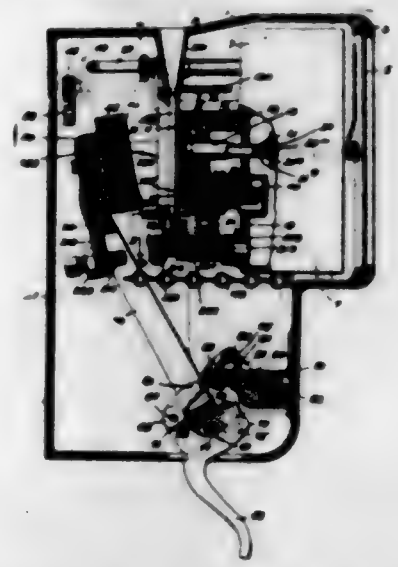
1. In a machine of the class described, the combination with a main cutter bar and terminal shoe, of an upright supplemental cutter bar, a bracket carried by said shoe, a rocker bar fulcrumed upon the said bracket and having connection with the supplemental cutter bar, a spring for moving the rocker bar in one direction, and a cam bar carried by the main cutter bar for engagement with the rocker to move the latter in opposition to the tendency of said spring.

1,300,908. GARMENT-HANGER. HERBERT ELY WILLIAMS, Red Bank, N. J. Filed Aug. 23, 1918. Serial No. 251,139. 1 Claim. (Cl. 45—13.)



A clothes hanger formed from a single piece of wire, comprising a shank provided with a threaded end for securing the same to the wall, a horizontal hook formed by looping the wire and bending the end of the loop upward, a drop hook formed by looping the wire around the shank and dropping a loop below the shank and turning up the end of such loop, a spacing element formed by spirally winding the wire around the shank, a trouser clamp formed by dropping a loop from such spacing element and bending the same toward the drop hook, said loop being adapted to operate in conjunction with the drop hook, a shoulder formed by winding the wire spirally around the shank, and means on the shank for securing the same to the wall.

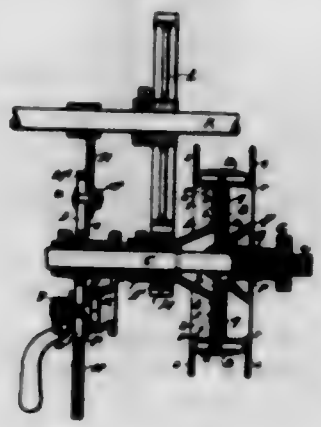
1,300,909. TIME-STAMP. JOHN C. WILSON, Boston, Mass.; Grace E. Wilson executrix of said John C. Wilson, deceased. Filed Apr. 27, 1910. Serial No. 557,918. 28 Claims. (Cl. 234—55.)



5. A machine of the class described comprising, in combination, a die including a computing scale; an advance index; a second index lagging a predetermined distance behind said advance index; provision for making an initial imprint of said scale and said indexes and provision for making an imprint of said indexes exclusively of said scale.

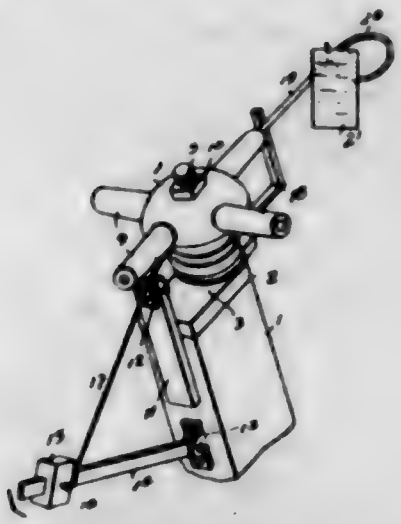
22. A machine of the class described comprising, in combination, die means; provision for moving the same to positions of different time phase; a platen; a handle for moving the latter to make successive imprints of said die on an imprint receiving sheet; and means independent of said handle for varying the effective imprinting surface of said platen.

1,300,910. POWER TRANSMISSION. EDWARD WITT, Newport, N. H. Filed Aug. 24, 1916, Serial No. 116,724. Renewed Mar. 10, 1919. Serial No. 281,815. 6 Claims. (Cl. 64—6.)



1. A shaft and a pulley body mounted thereon, said body comprising a flat annular section having concentric outer and inner flanges provided with guide recesses in radial lines, and a second flat annular section spaced from the first section by said flanges, and means for detachably uniting the two sections, rim-forming segments having shank members slidably guided in the said recesses in the aforementioned flanges, springs exerting inward forces on the segment shanks, a conical member slidable axially on the shaft and having an expanding coaction with the inner ends of the segment shanks, and a nut screwing on the shaft and adapted to exert an endwise forcing action to the cone.

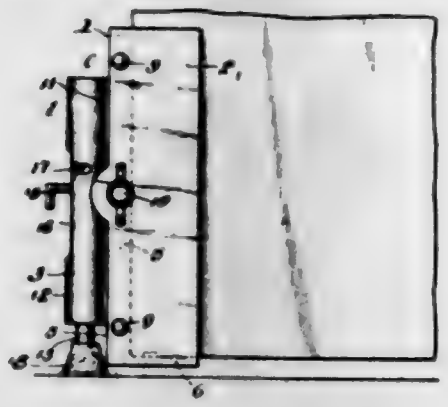
1,300,911. TRAIN-ORDER DELIVERER. ANDREW J. WOOD, Bakersfield, Calif. Filed Feb. 21, 1917. Serial No. 150,102. 1 Claim. (Cl. 258—2.)



A train order holder and delivering device including a base, a bearing table on said base, a horizontally arranged rotatable order holding and delivering member mounted on said table comprising a body portion having radially disposed tubular extensions and a vertical winding drum, said body, extensions and drum being formed in a single piece, a flexible connection engaged at one end with said winding drum, a weighted arm pivoted to the base and engaged with the remaining end of said flexible connection, order holding and delivering rods receivable in the tubular extension, and an upright stop arranged in proximity to the rotatable order holding and delivering means adapted to be engaged with one of said rods for maintaining the same in a predetermined position to be engaged.

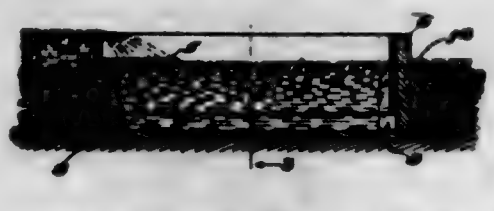
1,300,912. DOOR-BOLT. ROLAND L. YARBERRY, San Antonio, Tex. Filed July 20, 1918. Serial No. 245,917. 1 Claim. (Cl. 16—83.)

A device for clamping a bolt to a door comprising a casing consisting of two sides extending at right angles to each other and an end plate for engaging one side, the edge and bottom of the door, one side having a central screw threaded hole in its edge and a pair of plain holes, a cover plate for engaging the other side of the door,



guide pins on said plate engaging with the plain holes, a thumb bolt on said plate engaging the screw threaded holes for adjustably clamping the plate to the side and a spring operated bolt carried by said casing.

1,300,913. WATER-GRASS-SEED TRAP. JOHN AMITY BAILEY, Willows, Calif. Filed Dec. 18, 1918. Serial No. 267,383. 4 Claims. (Cl. 130—17.)



1. In a device of the class described the combination with a primary container, of an auxiliary container within the primary container, said auxiliary container comprising sides and ends, means holding the sides and ends spaced above the bottom of the primary container, and a receiving means in said auxiliary container and at one end thereof.

1,300,914. SAFETY-HARNESS. FRANK H. BARNHART, Bloomdale, Ohio. Filed Sept. 7, 1918. Serial No. 253,026. 2 Claims. (Cl. 155—12.)



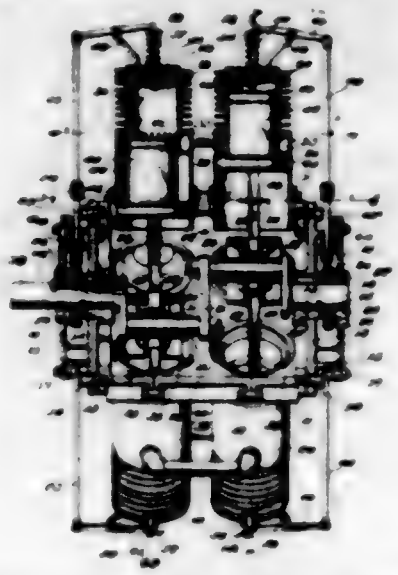
1. A safety harness for growing children comprising side straps having lengthwise adjustable lower loops, shoulder straps or loops into which the upper portions of the side straps merge, a transverse connection interposed between portions of the shoulder straps or loops, a transverse detachable connection interposed between opposite portions of the shoulder straps or loops, loops carried by the side straps at points below the shoulder straps or loops, and a body strap extending loosely through the loops on the side straps and having an adjustable loop at one end and a fastener member in said loop.

1,300,915. DOLL'S DRESS. JULIA BAUM, Brooklyn, N. Y. Filed Nov. 26, 1918. Serial No. 264,157. 5 Claims. (Cl. 46—40.)



1. A dress for dolls, comprising a body having sleeves and legs and formed of braid of a textile material, the braid being arranged in layers around the body, arms and legs, the adjacent edges of the braid being arranged in abutting relation, and fastening means fastening the braid in position to hold the body, arms and legs of the dress together.

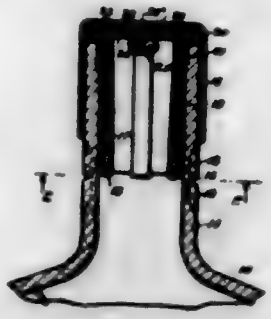
1,300,916. INTERNAL-COMBUSTION ENGINE. BERNARD M. BEACH, Lima, Ohio. Filed Nov. 7, 1917. Serial No. 200,901. 12 Claims. (Cl. 123—44.)



1. An internal combustion engine including a fixed crank shaft, a crank case mounted to revolve upon the crank shaft, a pair of cylinders connected with the crank case and provided with compression and explosion chambers, exhaust ports for the said cylinders, transfer and receiving chambers upon each cylinder, the transfer chambers communicating with the compression chambers of the cylinders and the receiving chambers communicating with the explosion chambers, means connecting the transfer chamber of each cylinder with the receiving chamber of the other cylinder, intake ports for the said compression chambers, and pistons mounted to reciprocate within said cylinders and connected to the crank shaft, the said pistons being movable to open and close said intake ports and deliver a charge of fuel mixture from the compression chamber of each cylinder into the transfer chamber thereof to be delivered into the receiving chamber of the other cylinder and thence introduced into the explosion chamber of the latter cylinder at each revolution of the crank case.

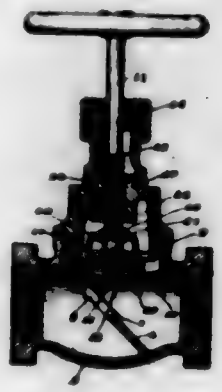
1,300,917. NON-REFILLABLE CONTAINER. PAUL BERGER, Richwood, Wis. Filed May 20, 1918. Serial No. 235,679. 3 Claims. (Cl. 215—78.)

1. Closure means for the neck of a container, said means including a bushing adapted to fit in the interior of the said neck, a cap for the neck, and spring fingers secured to the cap at the interior and depending from the top



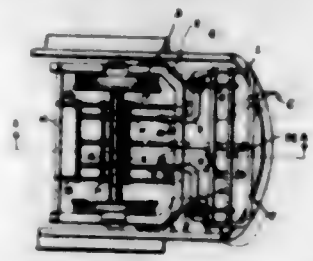
thereof, said spring fingers having a length to extend through the bushing and having hooked ends adapted to engage the lower edge of said bushing.

1,300,918. VALVE. LEON BLOCH, New York, N. Y. Filed May 24, 1918. Serial No. 236,367. 1 Claim. (Cl. 251—46.)



A valve structure comprising a chamber member having a valve seat, a stem movable relatively to the seat, and a flexibly connected valve disk supported from said stem, the seat being arranged to intercept the path of movement of the disk and adapted to effect a canting action of the disk against the seat when the stem is moved toward the seat.

1,300,919. CAR-FENDER-OPERATING MEANS. HERMENIA A. BOCKER, Buffalo, N. Y. Filed Sept. 9, 1918. Serial No. 253,268. 2 Claims. (Cl. 293—24.)

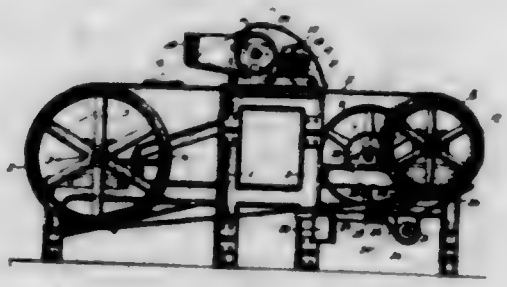


1. A car fender operating means, consisting of a slidably mounted carriage, adapted to work on bar members attached to a car truck, a controller, being provided with a cog wheel and dog, said controller being connected with said slidably mounted carriage, said carriage being connected with a fender, runways attached to said car truck, pairs of small wheels attached to said fender and adapted to operate in said runways.

1,300,920. MACHINE FOR TREATING HIDES AND THE LIKE. CHARLES P. BOSSERT, Milwaukee, Wis. Filed Apr. 30, 1918. Serial No. 231,572. 16 Claims. (Cl. 91—44.)

1. An apparatus for applying substances to hides and the like, having means for delivering the substance to a

position adjacent the hide, a flexible strip for receiving a portion of the substance therefrom, and means for moving



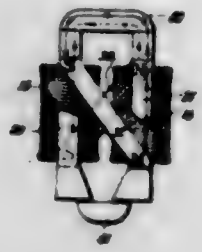
said strip at a comparatively high velocity to throw the substance received thereby onto said hide.

1,300,921. REMOVABLE TRAY FOR TRAVELING-BAGS. KATHARINE C. BRIGGS, Washington, D. C. Filed Jan. 23, 1918. Serial No. 213,377. 6 Claims. (Cl. 190—41.)



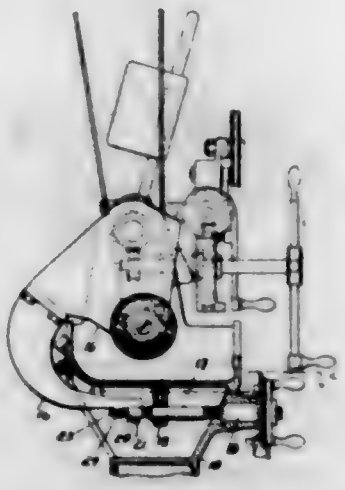
1. A removable tray for satchels or traveling bags, comprising a flexible clothing container having a length substantially equal to the width of the bag and the combined height of the sides thereof, and a width substantially equal to the length of the bag, said container having flaps extending from its edges and adapted to overlap thereacross to thereby envelop articles of clothing, a cover member having a central rigid portion serving as a bottom therefor and provided with end fastening devices, adapted to engage coöperating devices on said container adjacent its ends and spaced apart a greater distance than the length of said cover, whereby the central part of the cover will be supported above and spaced from the container when the tray is inserted in the bag.

1,300,922. IGNITER. PHELPS BROWN, Springfield, Mass. Filed Apr. 9, 1917. Serial No. 160,092. 12 Claims. (Cl. 171—252.)



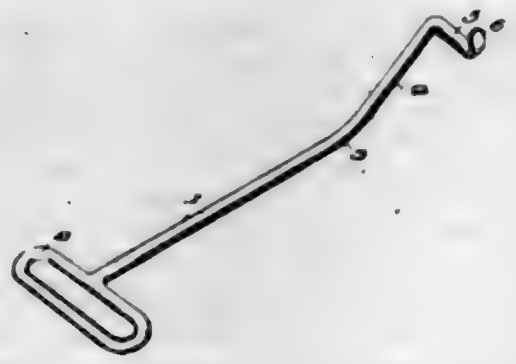
1. A machine for generating electrical currents comprising two coils having each a core of magnetic material therein, a permanent magnet connected at one end with one core end and at the other end with an end of the other core, and reciprocable means operable alternately to first magnetically connect said end of the one core with the opposite end of the other core and then magnetically connect the first mentioned end of the last-named core with that end of the other core not connected to said magnet.

1,300,923. GRINDING-MACHINE. WILLIAM LE ROY BRYANT, Springfield, Vt. Filed Dec. 30, 1916. Serial No. 139,871. 3 Claims. (Cl. 51—4.)



1. A grinding machine, comprising a rotary work holder, a rotary grinding wheel arranged to move bodily transversely of the work axis about an axis parallel to the axis of the grinding wheel, means for effecting a relative longitudinal feed of the work holder and grinding wheel, a removable "irregular" templet arranged longitudinally of said axes and having an elongated operative surface of which a portion is out of parallelism with the axis of the work, and an abutment engaged with said operative surface of the templet, one of the last two mentioned elements being stationary and the other being movable along the same together with the said longitudinally movable element of the first two mentioned elements, to swing said grinding wheel bodily on its axis of movement.

1,300,924. TIRE-TOOL. ROY W. BUSH, Satus, Wash. Filed July 25, 1917. Serial No. 182,680. 1 Claim. (Cl. 157—6.)

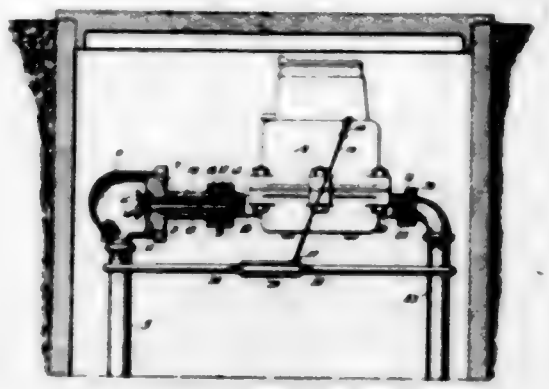


A tire tool including a shank having one portion of the same bent, the free end of the bent portion having a substantially right angularly disposed finger lying in the same plane therewith, the outer end of which is turned up laterally to said plane to form a hook.

1,300,925. WATER-METER CONNECTION AND VALVE. JOHN W. CALHOUN, Pittsburgh, Pa. Filed Sept. 22, 1917. Serial No. 192,763. 1 Claim. (Cl. 284—18.)

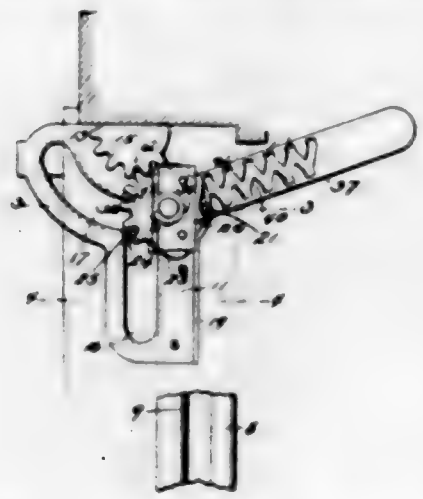
A device of the class described comprising an inlet pipe having a portion provided with an enlarged outer end forming a packing chamber and a valve seat at its front end, a one piece valve, in said portion consisting of a tubular stem passing through said portion and having an enlarged head at one end engaging the valve seat and its other end being screw threaded and extending into the chamber, packing means secured to the screw threaded end of said stem and movable within the packing cham-

ber and a water meter having a spud thereon engaging with said packing means and holding the valve off its



seat, said stem being held to the seat by the water pressure when the spud is removed.

1,300,926. CASEMENT-WINDOW ATTACHMENT. ALBERT H. CARRIER, Asheville, N. C., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Sept. 9, 1918. Serial No. 253,259. 7 Claims. (Cl. 268—4.)



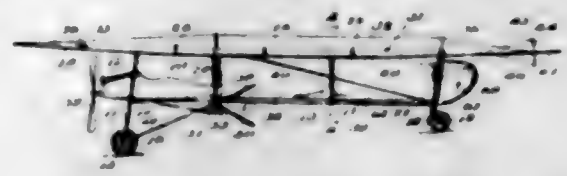
1. A casement window comprising a frame and a sash, and an attachment for adjusting the sash comprising devices at the upper and lower parts of the frame and sash to move the latter outwardly with a turning movement and also permitting parts of the devices to be engaged for manually shifting the sash to turn the same at various angles to reach the outer side thereof.

2. A casement window comprising a frame and a sash fitted therein, combined with an operating attachment embodying upper and lower slotted guide plates fixed to the frame and having switch devices therein, and means at the upper and lower portions of the sash engaging the guide plates and movable inwardly and outwardly and longitudinally of the latter.

3. A casement window comprising a frame and a sash fitted therein, combined with operating attachments embodying upper and lower guide plates secured to the frame and having slots at different angles therein, switch means controlling the communication of the slots in the guide plates, upper and lower pivot devices connected to the sash and engaging the slots of the guide plates, the latter and the upper and lower portions of the sash also having toothed segments adapted to intermesh, and a lever for operating the sash to move the same inwardly and outwardly.

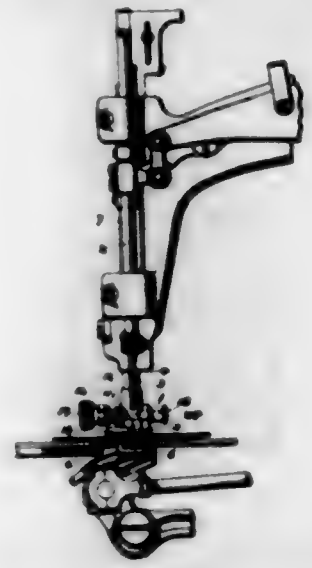
1,300,927. AEROPLANE. VICTOR V. CARSON, Tacoma, Wash. Filed Jan. 16, 1918. Serial No. 212,119. 4 Claims. (Cl. 244—14.)

1. An aeroplane comprising a chassis, a fuselage mounted on the forward end of the chassis, a vertically disposed longitudinally extending stabilizing plane supported on the chassis and extending from the rear end of the fuselage to the rear end of the chassis, and a longitudinally extending sustaining plane supported from the



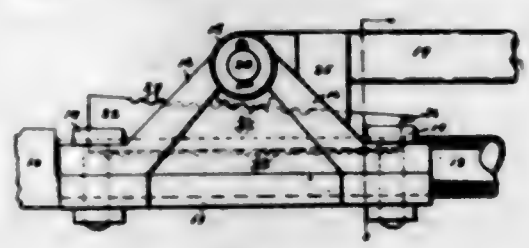
chassis directly over the fuselage and the stabilizing plane and extending forwardly beyond the front end of the fuselage.

1,300,928. PRESSER-FOOT FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1916. Serial No. 95,093. 5 Claims. (Cl. 112—13.)



1. A presser foot for sewing machines, comprising a foot section having a needle opening, an edge guide extending underneath the presser foot, means for supporting said edge guide whereby the same may be shifted to different set positions and means for adjusting said set positions of the guide relative to the needle opening in the presser foot.

1,300,929. TROLLEY-POLE CLAMP. ALFRED J. CLEMENTS and WENZEL FISCHER, Des Moines, Iowa. Filed Apr. 16, 1917. Serial No. 162,579. 3 Claims. (Cl. 24—263.)

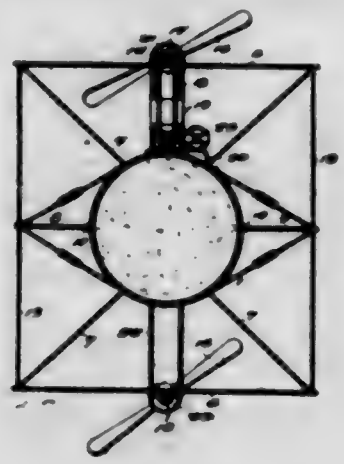


1. In a clamp for trolley poles and the like, a base formed with a seat, spaced brackets connected to the base and extending upwardly therefrom on opposite sides of the seat, a lever pivoted to the brackets and mounted between the latter, a toothed cam carried by the lever, a wedge having a seat complementary to the seat of the base and having teeth engageable with the teeth of the cam, and a stop carried by the lever and extending outwardly from a side thereof and engageable with one of the brackets to restrict movement of the lever to clamping position.

3. In a clamp for trolley poles and the like, a lower clamping member, an upper slidable clamping member having a series of teeth on its upper face arranged in an

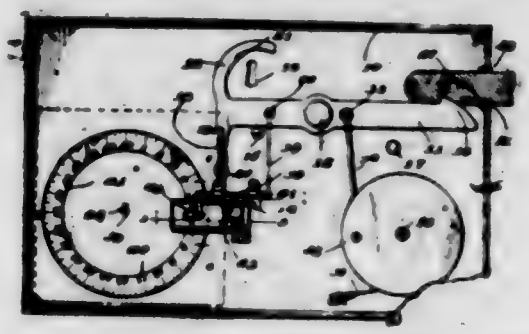
inclined plane, a pivoted lever, and a cam borne by the lever and having teeth to engage the teeth of the upper member whereby to slide the latter rearwardly upon downward movement of the lever, the cam being formed to force the upper member toward the lower member to clamp the pole upon said downward movement of the lever.

1,300,930. AERIAL TORPEDO. JOSEPH D. COVEL, Orin, Wash. Filed Oct. 25, 1917. Serial No. 198,423. 3 Claims. (Cl. 244—1.)



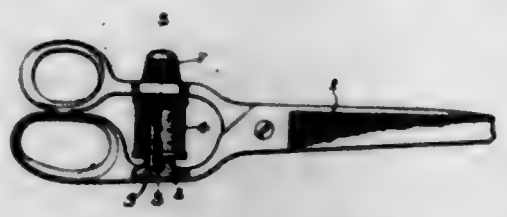
1. An aerial torpedo, including an explosive containing body, planes arranged above and below said body in spaced relation thereto, laterally extending longitudinal supplemental planes hingedly engaged with the body on the opposite sides thereof intermediate the top and bottom portions of the body, means for adjusting said lateral planes, and propelling means arranged on the torpedo.

1,300,931. LOCK. GEORGE DANIEL and EDWARD G. LEWIS, Mabscott, W. Va. Filed Nov. 15, 1915, Serial No. 61,634. Renewed Sept. 20, 1918. Serial No. 254,988. 1 Claim. (Cl. 234—2.)



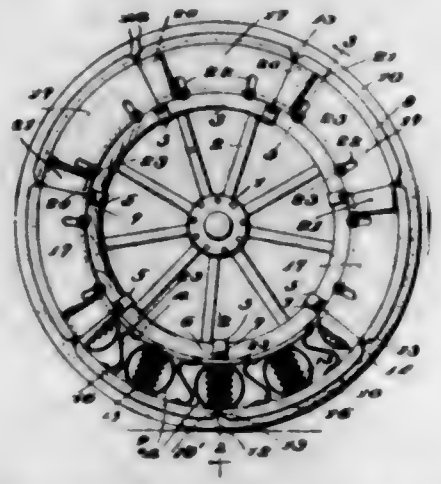
A lock of the character described comprising a casing, a key operated locking bolt pivotally mounted within the casing, a chart support interiorly of the casing, means for automatically rotating the chart support, a flat disk-like chart removably fitted upon the holder and having indicia thereon indicative of hours and fractions thereof, a frame mounted interiorly of the casing, a feed roller journaled in the frame, guide rollers journaled in the frame, an inking ribbon trained over the guide rollers to have a portion overlie the chart and connected with the feed roller for movement thereby, a rock shaft journaled adjacent the frame and having a crank, a connection between the crank and the bolt for the simultaneous movement of the shaft and bolt, an extension on the shaft, a rigid marking tip carried by the extension and movable into contact with the portion of the ribbon extending over the chart to act thereon for the making of an impression upon the chart on the rocking of the shaft in one direction, a ratchet wheel connected with the feed roller, a ratchet member actuated by the shaft and engageable with the ratchet wheel for imparting movement thereto, and a resiliently supported marking tip carried by the extension and adapted for contact with the ribbon, said resiliently supported marking tip being normally extended beyond the first named marking tip.

1,300,932. SCISSORS. HERBERT DINGLE, Minas Geraes, Brazil. Filed Nov. 20, 1918. Serial No. 263,401. 2 Claims. (Cl. 7—6.)



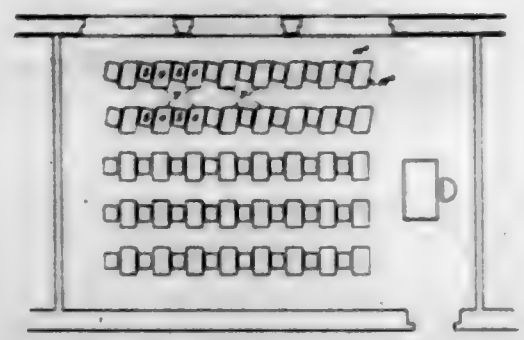
1. The combination with the handles of a pair of shears or scissors, of a tubular member connected with one handle and projecting toward the other handle for receiving needles and forming a support for a spool of thread, and a cap engaging the end of said member and adapted to receive a thimble.

1,300,933. RESILIENT TIRE. WILLIAM H. DIVERS, Crane, Oreg. Filed Aug. 5, 1918. Serial No. 248,367. 1 Claim. (Cl. 152—8.)



In a resilient tire, the combination of an annular base adapted to be secured around the felly of a wheel, hingedly connected tread members spaced from the base member, coil springs disposed between the base member and the tread members, arcuate spring braces disposed between the base member and the tread members at the sides of the coil springs, and S-shaped resilient braces having their opposite ends secured, respectively, to the base member and the tread members, said braces being arranged alternately with said springs.

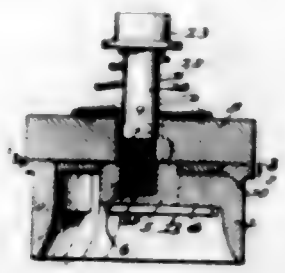
1,300,934. DESK ARRANGEMENT. JOHN J. DONOVAN, Oakland, Calif. Filed Dec. 12, 1918. Serial No. 266,403. 3 Claims. (Cl. 155—34.)



1. The combination of a plurality of rows of desks with intermediate aisles, each desk with its individual seat, the locus of the ends of any row of desks lying in a substantially right line parallel with the aisle, a seat

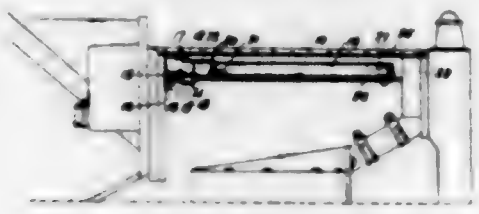
arrangement for each desk with the longitudinal axis of the seat substantially at right angles to the back of its particular desk.

1,300,935. AUTOMATIC VALVE AND RIM. HARRY B. EADS, Vicksburg, Miss. Filed Mar. 8, 1918. Serial No. 221,185. 3 Claims. (Cl. 251—145.)



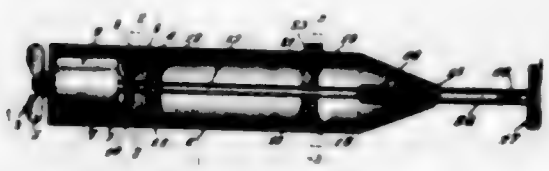
1. A device of the character described including a casing formed with a valve seat and a rim seat, a valve body for coöperating with the valve seat, a rim for cooperating with the rim seat and for protecting the valve body, and resilient means for yieldingly and normally holding the valve body and rim on their seats.

1,300,936. AUXILIARY HOOD FOR AUTOMOBILE-ENGINES. SAMUEL T. EAST, Norwood, La. Filed July 10, 1918. Serial No. 244,309. 3 Claims. (Cl. 74—56.)



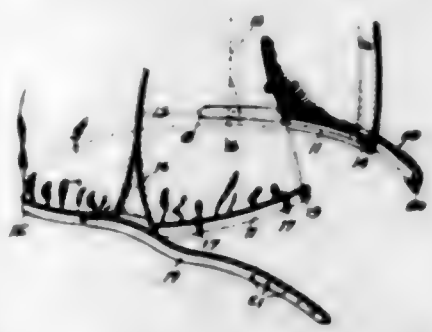
1. A hood as characterized comprising a cover constructed of water-proof fabric; a skeleton frame for holding said fabric in position to shed water which may be deposited on the upper surface thereof; means for installing said cover temporarily in position above an automobile engine and below the usual protective-hood therefor, said means embodying hinge members connecting the dashboard of the automobile and rear end of said cover; and a temporary fastening support for the front end of said cover, said support embodying a clip adapted for engaging the structure of the automobile engine equipment.

1,300,937. TOOTH-BRUSH. WILLIAM S. EDWARDS, Long Beach, Calif. Filed Jan. 17, 1919. Serial No. 271,704. 3 Claims. (Cl. 185—37.)



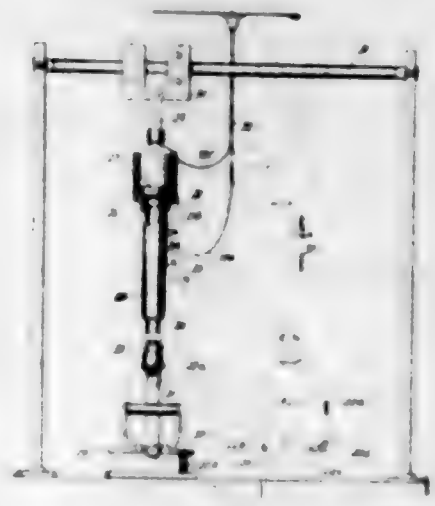
2. The combination with a combined casing and handle, a motor therein, a shaft and means for transmitting motion from the motor to the shaft, of a revoluble tool connected to the shaft and supported beyond the casing, a friction disk revoluble with the shaft and within the casing, a friction ring pivotally connected to the casing, and extending against the disk, a spring for holding the ring in contact with the disk, and slidable means on the casing for shifting the ring out of engagement with the disk to release the shaft and motor.

1,300,938. OVERALL JACKET OR WAIST. JOSEPH SAMUEL ELLIOTT, Eddy, Tex. Filed Feb. 26, 1918. Serial No. 219,246. 2 Claims. (Cl. 2—98.)



1. A body garment in the form of a waist or jacket, the lower edge of which terminates substantially at the waist line, and is divided into front and rear sections having connecting gussets, a waist band in front and rear sections, respectively, at the lower edges of the front and rear portions of the garment, and belt sections attached at one end to the opposite ends of the rear section of the waist band and engageable with and disengageable from the front section of the waist band whereby the front section may be arranged to depend loosely over the belt for better ventilation, for the purpose specified.

1,300,939. SUPPORT FOR PRESSER-IRONS. MOSHER EPSTEIN, New York, N. Y. Filed Jan. 18, 1918. Serial No. 212,456. 3 Claims. (Cl. 68—9.)



1. The herein described supporting means for presser irons comprising an overhead member, a rigid member connected to the iron and movable upward and downward with respect to the overhead member, electromagnetic means to lift the rigid member and iron, and means to positively hold the rigid member and iron in elevated position independently of the lifting means aforesaid.

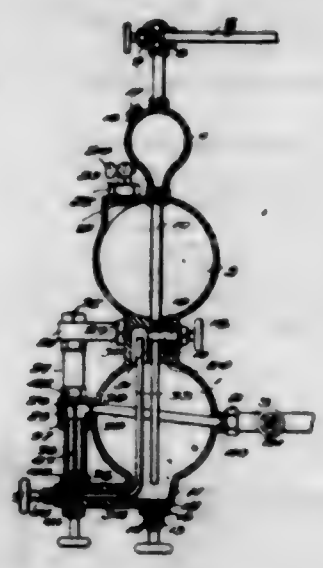
1,300,940. WIRE-CUTTING ATTACHMENT FOR RIFLES. JOHN A. ERIKSON, Polytechnic, Mont. Filed Mar. 1, 1918. Serial No. 219,909. 2 Claims. (Cl. 42—90.)



1. In a device of the class described, the combination with a rifle including a barrel, of a wire cutter including an attaching bar, means for securing the attaching bar to a rifle, the attaching bar having its forward edge sharpened, a blade pivoted to the attaching bar adjacent to the sharpened surface thereof, an angular arm

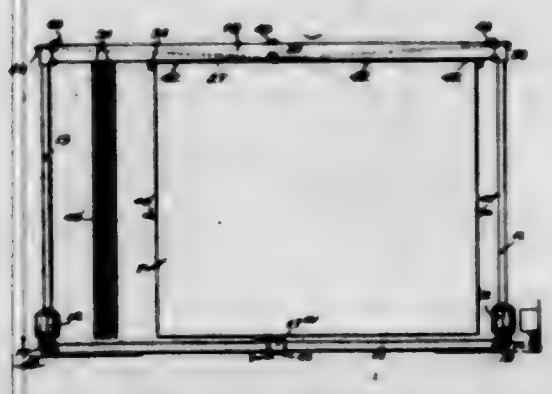
formed on the pivoted blade, an operating lever pivoted to the rear end of the attaching bar, a connecting link pivotally connecting the operating lever and the angular arm formed on the pivoted blade, and spring means engaging the link to normally hold the cutting blade in engagement with the sharpened surface of the attaching bar.

1,300,941. LUBRICATOR. MARTIN A. BENTSON, College Place, Wash. Filed Jan. 25, 1919. Serial No. 278,068. 5 Claims. (Cl. 184—49.)



5. A lubricator of the character described including a main oil chamber, a connecting block integral with the top thereof, a secondary oil chamber carried with the block, the block being provided with a vertical passage way establishing communication between the chambers, valve means for controlling the flow of oil through said passage way, a condensation chamber above the secondary chamber, a conducting pipe leading from the condensation chamber and passing through the secondary chamber and communicating with the main chamber, manually operable valve means for controlling the passage of condensation through the pipes, an outlet pipe arranged in the main chamber and having its upper end positioned near the top of the main chamber, valve controlled feeding means regulating the passage of oil from the chamber and a gage glass having its lower end arranged in communication with the main chamber medially of the height thereof and having its upper end arranged in communication with the top of the main chamber.

1,300,942. DISPLAY-RACK. FREDERICK M. ETHRIDGE, Boston, Mass., assignor of one-half to B. E. Stewart, Somerville, Mass. Filed July 10, 1918. Serial No. 244,298. 6 Claims. (Cl. 211—14.)

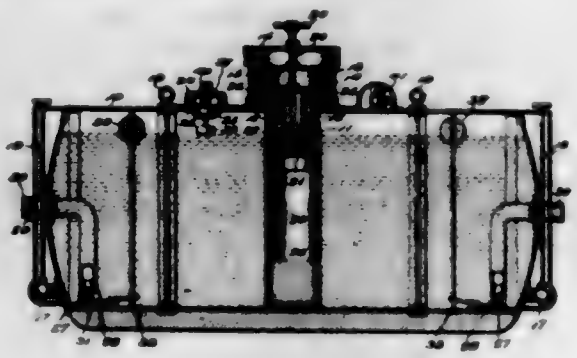


1. A display rack comprising spaced apart horizontal channeled track bars having weight-supporting track members within their channels, supports engaged with the end portions of said bars, longitudinal truss rods within said channels, having raised end portions seated at opposite ends of the bars, and a depressed central portion seated between the ends of the bars, and merchandise carriers having trolleys adapted to run on said track members.

2. A display rack comprising spaced apart horizontal bars having weight-supporting track members, supports engaged with the end portions of said bars, and merchandise carriers having trolleys adapted to run on said track members, each carrier including a hanger bar carrying said trolleys, and an elongated merchandise-engaging rod pivoted to said hanger bar and adapted to swing relatively thereto in a horizontal plane.

3. A display rack comprising spaced apart horizontal bars having weight-supporting track members, supports engaged with the end portions of said bars, and merchandise carriers having trolleys adapted to run on said track members, each carrier including a hanger bar carrying said trolleys, and an elongated merchandise engaging rod pivoted to said hanger bar and adapted to swing relatively thereto in a horizontal plane, means being provided for releasably locking the rod to the hanger bar to prevent a swinging movement of the rod.

1,300,943. SHIP-RAISING DEVICE. LEONARD FARNHAM, New York, N. Y. Filed Aug. 10, 1918. Serial No. 249,304. 4 Claims. (Cl. 114—53.)



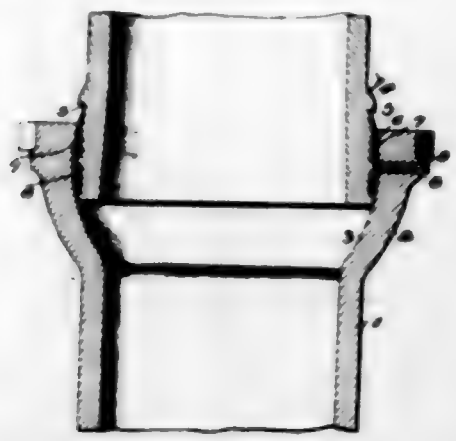
1. A float comprising a hollow body, means whereby the said body may be filled with water to submerge the same, a gas generator within said body, a water tight closure for the generator, having a water contained chamber and an alkali contained chamber, a threaded rod operable from without the body for establishing communication between the chambers to mix the water and alkali for the formation of gas, means whereby the formation of gas within the generator will raise the closure to permit the gas to enter the hollow body and displace the water, a water outlet valve and means for automatically closing the valve after the escape of the water.

1,300,944. HORSESHOE. CASH C. FERGUSON, Champaign, Ill. Filed Sept. 20, 1918. Serial No. 254,955. 1 Claim. (Cl. 168—24.)



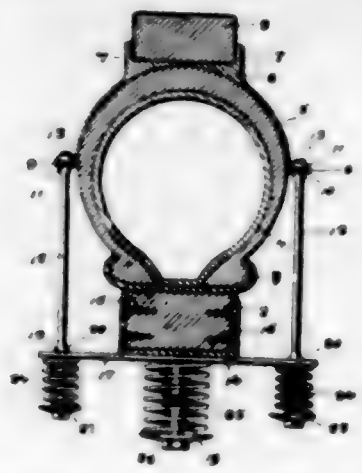
An article of the class described comprising a plate provided with nail-holes for attaching the plate to the toe of a horse's hoof, ridges extending between said nail-holes and projecting above the body of the shoe, and integral toe calks on either side of the center of the shoe projecting beyond the body of the shoe and beyond the afore-mentioned ridges and being reinforced thereby.

1,300,945. FLEXIBLE PIPE-JOINT. HERBERT E. FIELD, Wheeling, W. Va. Filed Apr. 24, 1914. Serial No. 834,208. 2 Claims. (Cl. 285—91.)



1. A flexible pipe joint adapted to be supported upon shifting muddy and sandy bottoms, as of rivers, comprising two pipes, one of said pipes having a bell flange, the inner side of the said bell flange highly ground and polished, the other pipe having a spigot end inserted within the flange, a soft metal carried by the spigot end, the said soft metal having a smooth circular outer surface corresponding with and coöperating with the polished inner surface of the said bell flange, whereby the joint is rigidly held against endwise movement, and the mud, sand or dirt of river bottoms is prevented from working into said joint, substantially as described.

1,300,946. TIRE-ARMOR. WALTER C. FRANCIS, Clarksburg, W. Va. Filed Mar. 30, 1918. Serial No. 225,736. 1 Claim. (Cl. 152—33.)



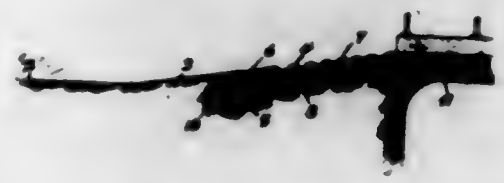
In a protector for pneumatic tires, the combination with a wheel carrying such a tire, of spaced yokes surrounding the felly of the wheel and secured thereto, each of said yokes having a centrally threaded stem, plates each provided with a central opening and with openings adjacent the ends thereof and the central opening receiving the stems of the respective yokes, nuts on the stems, springs surrounding the stems and contacted by the nuts for adjusting the tension of the springs and for forcing the latter against the plate to cause the same to hug the inner periphery of the felly, a band semi-circular in cross section arranged on the thread surface of the tire, said band having its central portion thickened and provided with spaced outstanding flanges, a compressible tread between the flanges, the edges of the band having outstanding flanges which are apertured, rod members having reduced threaded ends extending through the openings in the plates and through the openings in the flanges, bolts on the nuts, springs on the ends of the rods passing through the plate and contacted by the nuts thereon for adjusting the tension of the said springs and for yieldably sustaining the rods on the plates.

1,300,947. SEPARATION AND RECOVERY OF POTASSIUM SALTS FROM COMMERCIAL NITRATE OF SODA CONTAINING SUCH SALTS. FRANCIS A. FREETH, Great Crosby, and HERBERT E. COCKBURN, London, England. Filed Feb. 12, 1917. Serial No. 148,292. 10 Claims. (Cl. 23—12.)

1. The process of separating potassium nitrate from commercial nitrate of soda which comprises extracting the potassium nitrate at an elevated temperature in the form of an aqueous solution, separating the solution from the undissolved sodium nitrate, adjusting the composition of said solution by dilution so that on cooling to a given lower temperature it will deposit a considerable amount of potassium nitrate without depositing sodium nitrate, cooling the solution to said lower temperature, and separating the potassium nitrate crystallizing therefrom.

1,300,948. [WITHDRAWN.]

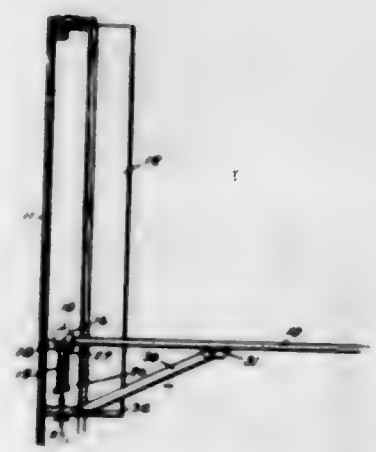
1,300,949. BRIDGE-APPROACH. SAMUEL H. FURRY, Lancaster, Ohio. Filed Oct. 8, 1917. Serial No. 195,472. 5 Claims. (Cl. 94—1.)



1. In combination with vertically disalined communicating ways, an approach arranged between the same and adjoining flush therewith, and reinforcing means engaged with said approach and connected to one of said ways.

4. In combination with vertically disalined communicating ways, an approach arranged therebetween and adjoining flush therewith, a corrugated reinforce engaged with the approach, the lower end of said approach being formed with a transversely disposed drain, and means for effecting connection between one end of said reinforce and one of the ways.

1,300,950. COUNTERBALANCING DEVICE FOR WALL-CABINET BOARDS. EDWARD L. GILLESPIE, Seattle, Wash. Filed Jan. 17, 1917. Serial No. 143,193. 2 Claims. (Cl. 68—10.)

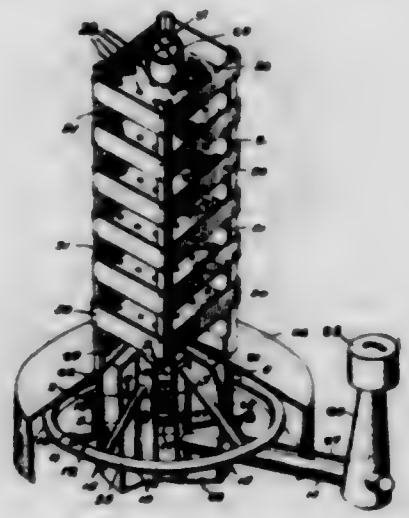


1. A device of the class described comprising a board, grooved wheels secured to opposite sides of said board adjacent one end thereof, bearing plates mounted on a fixed support, eccentric pivot, studs projecting outwardly from said grooved wheels and engaging within said bearing plates, springs, bands encircling said grooved wheels thence extending downwardly through said springs and

secured to the bottom thereof said bands being formed of two detachable parts, and devices connected to a fixed support and extending upwardly and secured to the tops of said springs whereby a tension will be exerted on said bands by the force of compression of said springs.

2. The combination with a cabinet formed in a wall of a board adapted to be moved from a horizontal position at right angles to said cabinet to a vertical position within said cabinet, brackets adapted to be secured to the inner end of said board, grooved wheels rigid with said brackets, pivot studs eccentric to said wheels, said pivot studs being below the centers of said wheels when said board is horizontal, bearing plates secured to the sides of said cabinet for the reception of said studs, compression springs, devices secured to the bottom of said cabinet, thence extending upwardly therethrough and engaging the top end of said springs and bands encircling said wheels, thence passing downwardly through said springs and engaging the bottom ends of said springs whereby a tension will be exerted on said bands.

1,300,951. BROODER. JOSHUA GILSON, Nebraska City, Nebr. Filed July 25, 1918. Serial No. 246,751. 1 Claim. (Cl. 237—3.)



In a brooder, the combination of a stove casing, a burner in said casing, a source of fuel supply exterior to the brooder compartment and connected with a burner, a brooder compartment surrounding the stove casing and inclosing the heat supply pipes, a second casing spaced from the stove casing and forming a cold air jacket for the protection of the chicks, a cold air supply pipe opening into the lower portion of the stove casing and also into the cold air jacket to cause a continuous draft of fresh cold air into said jacket, a dividing plate spaced above the burner and having an opening therethrough, a damper to open and close said opening, a thermostat positioned in the brooder chamber and operatively connected with the damper to automatically control the opening and closing of the damper at predetermined temperatures, heat supply pipes opening out of the stove casing below the dividing plate, a circulating pipe into which said heating pipes open, return pipes connecting the circulating pipe with the stove casing at a point above the dividing plate for the return of circulated products of combustion, and a pipe for the discharge of said products of combustion.

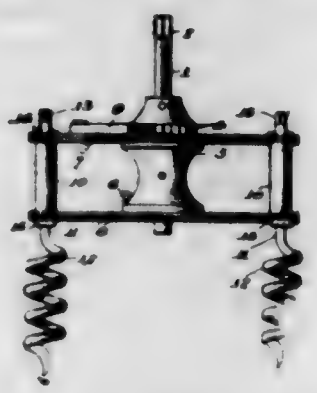
1,300,952. SPIKE-PULLER. EDWARD FISHER GOSEN, Muskogee, Okla. Filed Aug. 20, 1918. Serial No. 250,735. 9 Claims. (Cl. 254—21.)

1. In a spike puller, a head having a fulcrum projection, and a bit disk mounted on the head and having a plurality of openings extending therethrough and intersecting the periphery of the disk to form slots which converge outwardly, the disk being adjustable to dispose any



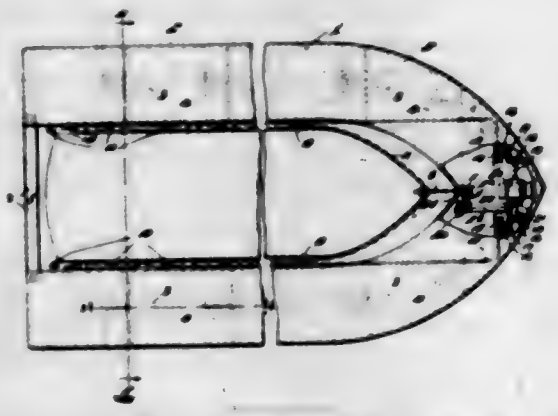
one of the openings and corresponding slot at the extreme lower portion of the disk.

1,300,953. PULLING DEVICE. DAVID H. GOLDING, Virden, Manitoba, Canada. Filed Oct. 29, 1918. Serial No. 260,207. 2 Claims. (Cl. 254—150.)



1. A pulling device comprising a shaft adapted for the connection and winding of a cable, upper and lower frame bars pivoted on the shaft and arranged in spaced relation; means connecting one lower bar with one upper bar whereby one pair of bars is adapted to be swung to and from a position at right angles to the other pair of bars, and augers adapted to be turned into the ground and having shanks journaled in the outer portions of the pairs of bars.

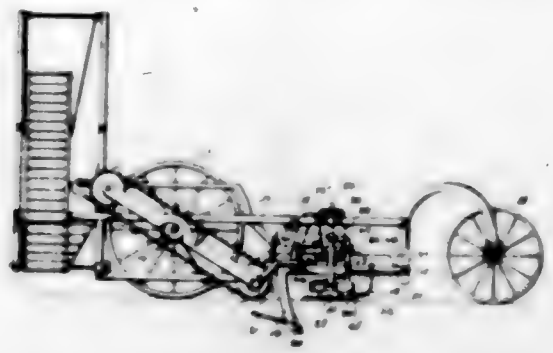
1,300,954. PONTOON DRY-DOCK. HOWARD A. GRAY, Godfrey, Ill. Filed July 18, 1918. Serial No. 245,546. 3 Claims. (Cl. 114—45.)



3. A submersible dry dock having gates at one end thereof, a cable, drums about which the same wind, a

motor geared to said drums, pulleys about which the cable passes, said cable adapted to be disposed in the path of the boat as it enters the dock.

1,300,955. BEET-HARVESTER. MORGAN A. GREEN, Rupert, Idaho. Filed Oct. 29, 1917. Serial No. 199,047. 9 Claims. (Cl. 55—107.)



1. In a beet harvester, a wheeled carrying frame and a topping device comprising a vertically movable sleeve of non-circular cross section, a knife carrying shaft mounted for rotation in said sleeve, said shaft having a portion of non-circular cross section, and a driving gear for the knife carrying shaft through which the non-circular portion of said shaft is guided.

5. In a beet harvester, a wheeled supported carrying frame, plow beams pivotally connected therewith, a non-rotatable sleeve supported for vertical movement between the plow beams, a driven knife carrying shaft journaled in said sleeve, horizontally disposed rollers mounted on the sleeve and extending laterally therefrom in the path of the plow beams, and means for effecting vertical adjustment of the plow beams.

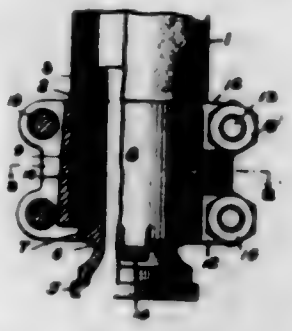
6. In a beet harvester, a topping device including a non-rotatable sleeve supported for vertical movement, a driven shaft supported for rotation in the sleeve and having a cup-shaped disk at its lower end, a cup-shaped washer coöperating with the disk, an annular knife positioned between the disk and the washer, said disk and knife having interengaging lugs and slots to prevent rotation of the knife, and assembling means for the disk, the washer and the knife.

7. In a beet harvester, a topping device including a non-rotatable sleeve supported for vertical movement, a driven shaft supported for rotation in the sleeve and having a cup-shaped disk at its lower end, a cup-shaped washer coöperating with the disk, an annular knife positioned between the disk and the washer, said disk and knife having interengaging lugs and slots to prevent rotation of the knife, and assembling means for the disk, the washer and the knife, said assembling means consisting of a nut for the reception of which the lower end of the rotary driven shaft is threaded, said nut being accommodated in the cavity of the washer when the parts are assembled.

8. In a beet harvester, a topping device comprising a vertically movable non-rotatable sleeve, a driven shaft supported for rotation in said sleeve and adjustable therewith, a circular knife connected with and carried by the shaft, a fender extending obliquely across the knife, a beam with which said fender is connected, a link connecting said beam with the vertically movable sleeve and a gage member adjustably connected with the beam.

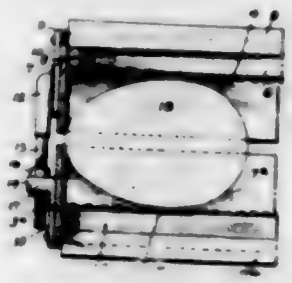
1,300,956. HOSE-COUPLING NOZZLE AND CLAMP. EDGAR K. GREVE, Bellevue, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 30, 1918. Serial No. 231,630. 6 Claims. (Cl. 285—84.)

1. In a hose nozzle and clamp construction, the combination with a nozzle member, of a divided encircling clamp member spaced from the nozzle and formed with interiorly tapered faces, movable tapered slips disposed in the space between the nozzle and clamp, and means for securing the clamping members together, said nozzle having a smooth hose contacting surface entered in the



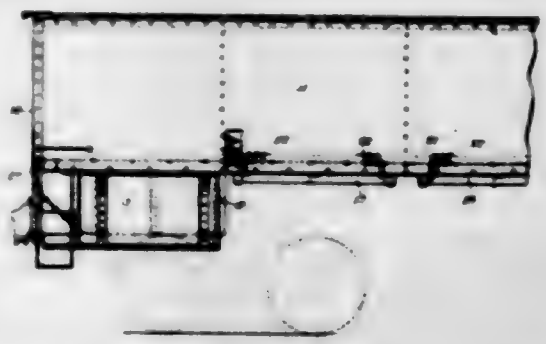
portion of the hose within the clamp whereby a slight movement of the hose and its slips within the clamp is permitted.

1,300,957. INCUBATOR-TRAY. JOHN F. HARRISON, Jr., Laddonia, Mo.; Crockett J. Harrison administrator of said John F. Harrison, Jr., deceased. Filed Apr. 15, 1918. Serial No. 228,651. 2 Claims. (Cl. 119—43.)



1. In an incubator tray, an upper section of box-like construction provided in its upper end with a frame having a fabric closure member secured thereto and acting to close the frame, a lower section mounted beneath the upper section and provided adjacent its lower end with a frame to which is secured a fabric closure member, the fabric closure members of the two said sections acting to grip eggs placed within the tray formed by the sections so as to prevent movement thereof, and means for holding the frames in place; combined with plates secured to the exterior of said sections, the upper plates having fingers passing over the upper edges of the sections and the lower plates having fingers passing under the lower edges of their sections, arms projecting outward from the lower plates, heads projecting from the upper plates and having depending threaded shanks passing through said arms, and an adjusting nut on the shanks above and below said arms, for the purpose set forth.

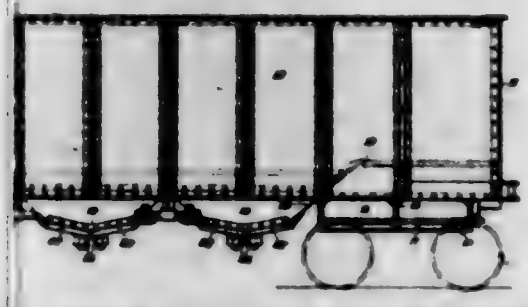
1,300,958. GENERAL-SERVICE RAILWAY-CAR. HARRY S. HART, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Oct. 14, 1918. Serial No. 257,928. 5 Claims. (Cl. 105—244.)



3. A car of the class described, having a single floor which comprises stationary downwardly and outwardly

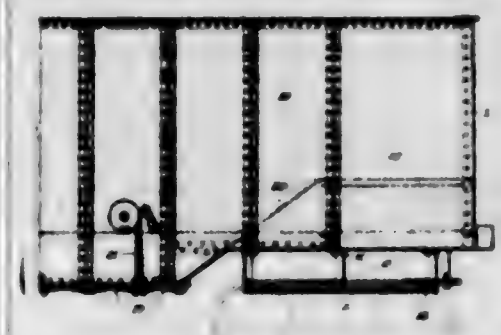
sloping end portions extending inwardly from the end sills and being connected to the underframe members to stiffen the car, the remainder of the floor being substantially horizontal and substantially in the plane of the top of the center sill.

1,300,959. HOPPER-DUMP-CAR CONSTRUCTION. HARRY S. HART, Chicago, Ill. Filed Oct. 21, 1918. Serial No. 258,991. 7 Claims. (Cl. 105—248.)



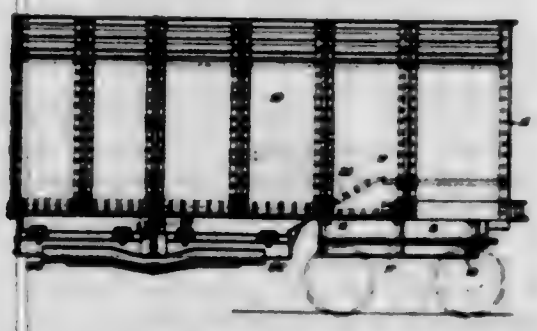
1. A car of the class described having sides, ends and a floor, the floor over the trucks comprising portions sloping downwardly and outwardly toward the sides of the car, the floor between the trucks comprising a plurality of doors hinged transversely of the car and swinging toward and from each other to closed and opened positions, respectively.

1,300,960. DUMP-CAR CONSTRUCTION. HARRY S. HART, Chicago, Ill. Filed Nov. 4, 1918. Serial No. 260,925. 4 Claims. (Cl. 105—253.)



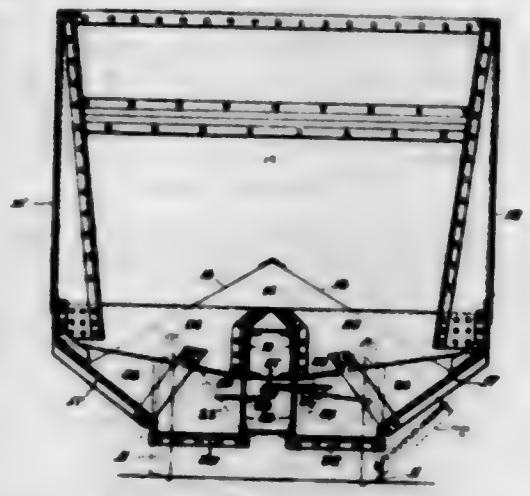
1. In a car of the class described having sides, ends, and a floor, the floor over the trucks comprising portions sloping downwardly and outwardly toward the sides of the car, the floor intermediate the trucks being flat and at a lower level than the floor portions over trucks and including a plurality of transversely hinged doors.

1,300,961. HOPPER DUMP-CAR. HARRY S. HART, Chicago, Ill. Filed Nov. 4, 1918. Serial No. 260,926. 3 Claims. (Cl. 105—248.)



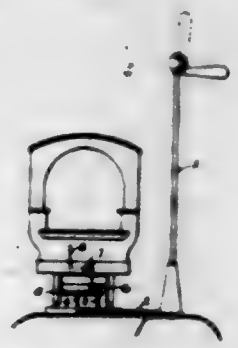
1. A car of the class described comprising sides, ends, and a floor, the floor over the trucks comprising portions sloping downwardly and outwardly toward the sides of the car, the floor between the trucks being at a lower level than the floor over the trucks and comprising a plurality of longitudinally extending hoppers on each side of the longitudinal center line of the car and each having a plurality of oppositely arranged swinging doors.

1,300,962. DUMP-CAR. HARRY S. HART, Chicago, Ill. Filed Nov. 4, 1918. Serial No. 260,927. 11 Claims. (Cl. 105—251.)



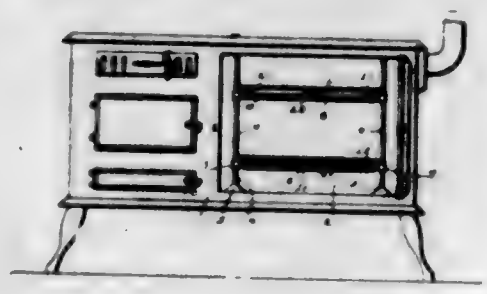
1. A car of the class described, having sides, ends and a floor, the floor over the trucks comprising portions extending downwardly and outwardly toward the sides of the car, the floor between the trucks being horizontally flat and below the center sill.

1,300,963. AUTOMATIC TRAIN-STOP. ALFRED EDWARD HASELTINE, Greene county, Mo. Filed Feb. 16, 1916. Serial No. 78,766. 1 Claim. (Cl. 246—203.)



An automatic train stop comprising a head, levers pivotally supporting the head and connected to the latter on opposite side of a trip contact portion of the head, said levers being pivotally connected intermediate their ends on a track fixture, the ends of the levers remote from the head being connected to an independent element, whereby in the operation of such element there is occasioned a simultaneous movement of the head.

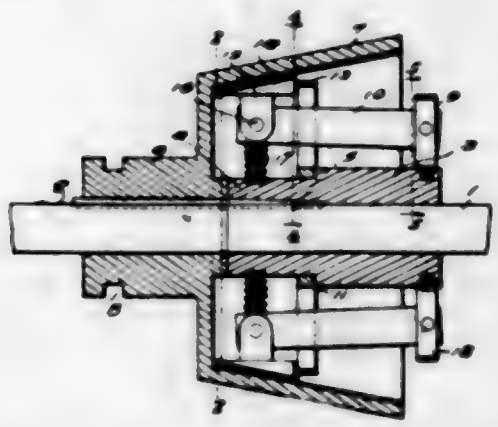
1,300,964. GRATE FOR OVENS. WALTER H. HEWES, Saco, Me., assignor of one-half to Charles H. Innes, Saco, Me. Filed Aug. 26, 1916. Serial No. 117,076. 1 Claim. (Cl. 126—338.)



An oven attachment comprising a plurality of rectangular sliding frames, a plurality of vertical standards having enlarged ends forming supporting bases, sleeves formed

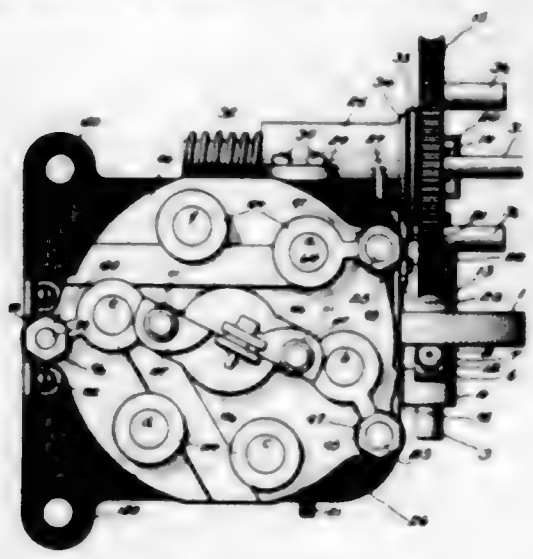
on the corners of the frames and slidably engaging the standards, locking means carried by the sleeves for engaging said standards, said frames each having an annular depression formed in the upper surface thereof, a circular supporting plate arranged on each frame, and a depending lug formed on the central portion of each plate, each of the frames having a central opening rotatably receiving the lug, and a plurality of rollers carried by the lower surfaces of the circular plates adjacent the outer edges thereof and engaging in the annular depressions, as and for the purpose specified.

1,300,965. CLUTCH. ROBERT D. HIGGINBOTHAM, San Francisco, Calif. Filed Oct. 3, 1917. Serial No. 194,499. 2 Claims. (Cl. 192—4.)



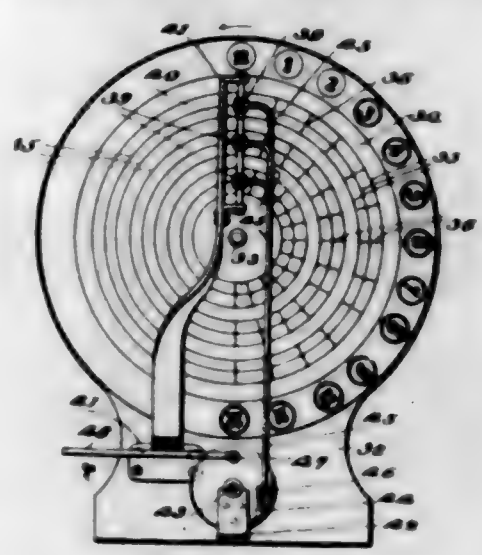
1. In combination with driving and driven shafts, interengageable clutch members carried on said shafts, longitudinally disposed arms pivoted to one of said clutch members and arranged therenbout, friction shoes pivoted to the free ends of said arms having their outer faces inclined, means carried by the last mentioned clutch member engaged with the free ends of the arms for normally moving the same outwardly to predetermined points, and a frusto-conical drum carried by the remaining clutch member and adapted to be engaged by said friction shoes immediately previous to engagement between the interengageable clutch members whereby to effect even transmission of rotary motion to the driven shaft.

1,300,966. MACHINE FOR PRODUCING EITHER SOLID OR HOLLOW FIBROUS PULP ARTICLES OF VARIOUS FORMS. ARTHUR J. HODGE and HENRY B. RUGGLES, Pasadena, Calif., assignors to American Products Company, St. Louis, Mo. Filed Apr. 28, 1915. Serial No. 24,501. 15 Claims. (Cl. 92—62.)



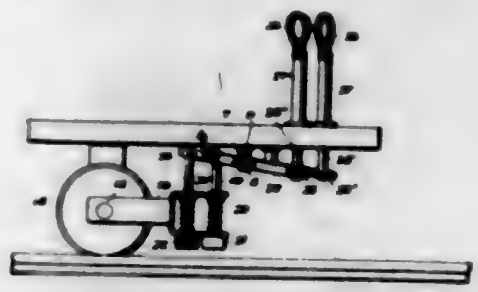
1. A machine of the class described including a base, compressor jaws positioned upon said base, oscillating means for moving said compressor jaws upon said base in constant contact with adjacent jaws to compress a material between said compressor jaws, and means for limiting movement of said compressor jaws.

1,300,967. COMBINED WATER GAGE AND RECORDER. JAMES M. HOLLAND, Temple, Tex. Filed May 7, 1918. Serial No. 233,060. 3 Claims. (Cl. 234—10.)



3. The combination with a casing including a float, of a recording device, a bracket arranged near the recording device, a substantially vertical shaft carried by the bracket, a substantially horizontal shaft arranged near the recording device, a block slidably mounted on the vertical shaft, a scribing device extending laterally from the block and movable over the face of the recording device, a rod having one end thereof connected with the block, a second rod having one end thereof operatively connected with the float, and means mounted on the horizontal shaft and operatively connected with the adjacent ends of said rods whereby the scribing device will be actuated as the float rises and falls within the casing.

1,300,968. SWITCH-OPERATING MECHANISM. WILLIAM M. HOLMBERG, Millbury, Mass., Filed Oct. 29, 1918. Serial No. 260,125. 3 Claims. (Cl. 246—370.)

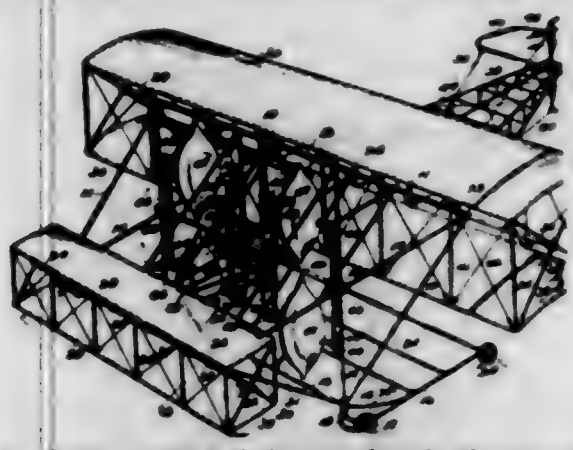


1. In a device of the class described, a car including a truck and a plurality of wheels mounted thereon, a frame carried by said truck and including a plurality of horizontally extending elements, vertically movable rods passing through said horizontal elements, springs mounted between said elements and connected with the rods for normally throwing the latter upwardly, a shoe carried by the lower end of each rod, a pivotally mounted lever connected with each rod, a laterally slidable element for effecting the pivotal mounting of each lever, and a vertically movable rod connected with the opposite end of each lever and controlled by the operator of the car.

1,300,969. AEROPLANE. JAMES A. HORNE, Denver, Colo. Filed Apr. 26, 1917. Serial No. 164,697. 5 Claims. (Cl. 244—25.)

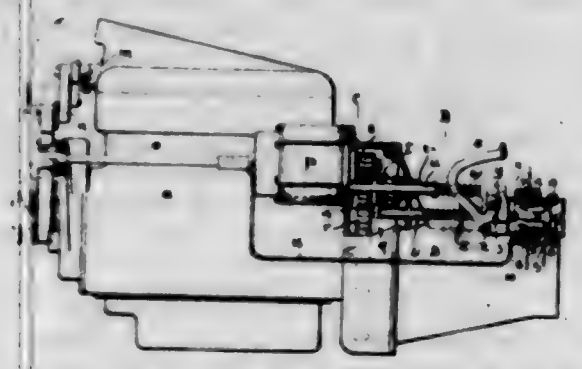
1. In an aeroplane, a frame, planes carried by the frame, a pair of propeller buckets supported by the frame, one

pair at either side of the longitudinal center of the frame, each pair of buckets being supported for simultaneous rotary movement about a propeller shaft located between them and to which they are connected and also for simultaneous turning movement about an axis parallel to such



shaft to always present their open face in the same direction, means for transmitting power to the propeller shafts to drive the buckets, and a single controlling means for selectively cutting off the supply of power to either pair of buckets or to both pairs.

1,300,970. ENGINE-STARTER. EDWARD S. HUFF, Detroit, Mich., assignor, by mesne assignments, to The Simms Magneto Company, a Corporation of New Jersey. Filed Nov. 16, 1914. Serial No. 872,296. 3 Claims. (Cl. 290—31.)

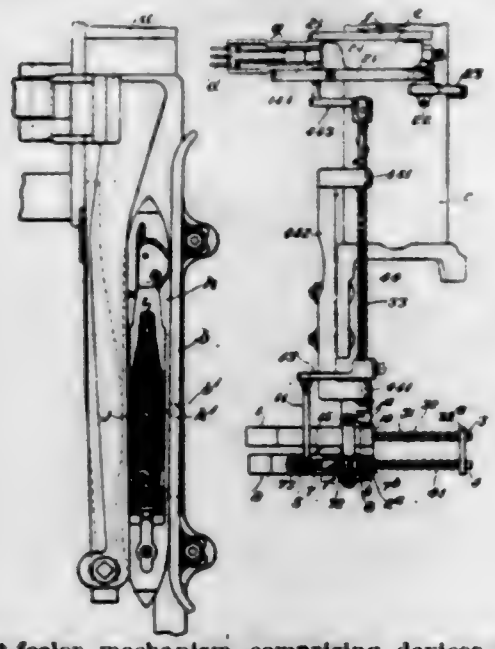


1. In an engine starter, an electric starting and charging dynamo, a permanent yielding engagement between said dynamo and engine at one relative speed, and means for temporarily connecting said dynamo to said engine at a different relative speed to drive the same, said yielding connection being adapted to resist relative motion of the connected parts with an approximately constant force that shall not prevent the action of the dynamo to start the engine.

1,300,971. WEFT FEELER MECHANISM FOR LOOMS. SIMEON S. JACKSON, Boston, Mass., assignor to The Stafford Company, Readville, Mass., a Corporation of New Jersey. Filed May 12, 1916. Serial No. 97,189. Renewed Aug. 15, 1918. Serial No. 250,077. 7 Claims. (Cl. 139—85.)

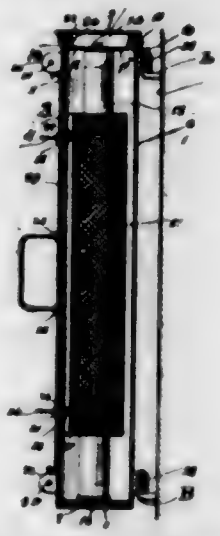
1. Weft-feeler mechanism comprising devices for calling a change, a controller for such devices, a primary feeler-member, a controller-rest actuated by the said feeler-member, a secondary feeler member controlling said controller-rest, a finger normally projecting from said controller-rest below the secondary feeler-member, and a controller-rest-governing finger occupying a position lower than the secondary feeler-member in which it intersects the forward portion of the path of movement of said controller-rest finger.

2. Weft-feeler mechanism comprising devices for calling a change, a controller for such devices, a primary feeler-member, a controller-rest actuated by the said feeler-member, a secondary feeler-member controlling said controller-rest, a finger normally projecting from said controller-rest downward below the secondary feeler-member, and a fixed controller-rest-governing finger occupying a position in which its acting rear end is lower than the secondary feeler-member and intersects the forward portion of the path of movement of said controller-rest finger.



3. Weft-feeler mechanism comprising devices for calling a change, a controller for such devices, weft-feeler-means, a controller-rest controlled by the said feeler-means, and a controller-rest-governor which renders said devices inoperative to call a change while the diameter of the filling-mass exceeds a predetermined amount, the said controller-rest governor having means for adjusting its time of action.

1,300,972. TENNIS-NET REEL. OTTO C. JANSSEN, Delmar, Iowa. Filed July 10, 1917. Serial No. 179,690. 3 Claims. (Cl. 46—24.)

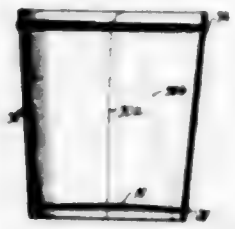


1. In a tennis net reel the combination with a slotted casing, a spring acting roller within said casing, and a net mounted on said spring acting roller, and posts outside said casing and engageable therewith and with said net, of a closing plate at the outside of and covering the slotted part of the casing and all around the edges of said slot, means to secure said net to said covering plate, and fastening means outside said plate and engageable with any of said posts.

1,300,973. METHOD OF MAKING PAPER RECEPTACLES. DAVID J. JENNINGS, Cleveland, Ohio. Filed May 5, 1917. Serial No. 166,590. 1 Claim. (Cl. 93—36.)

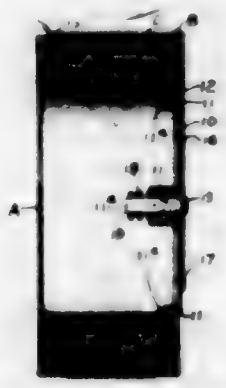
The method of forming paper receptacles, comprising wrapping sheet material to become a side wall of the receptacle face-wise against the edge of a disk in such a manner as to extend the paper each way from the disk at an abrupt angle to its face and during this wrapping

operation pressing the disk and sheet material together, thus forming a shoulder in the material of the side wall at each side of the disk, and during such pressing operation



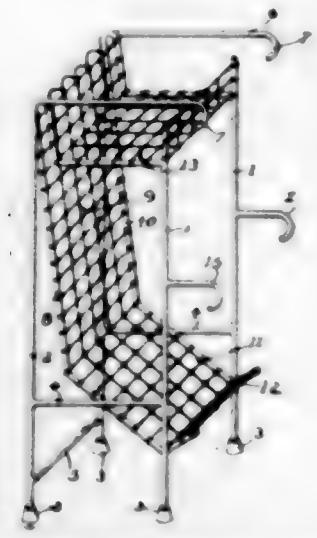
supporting the disk in a manner to distort the central portion thereof from its normal plane, leaving its periphery in the normal plane, whereby the disk may become a wall of the receptacle, and upon the finishing of the rolling operation releasing the disk allowing it to press outwardly to the wall of the receptacle by reason of its tendency to assume its normal plane.

1,300,974. ATTACHMENT FOR RIBBON-ROLLS. WILLIAM A. JOHANNSEN, Paullina, Iowa. Filed Dec. 10, 1918. Serial No. 266,104. 3 Claims. (Cl. 206—54.)



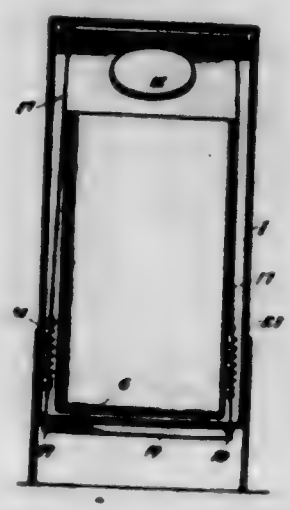
2. A ribbon holder including an attaching member adapted to be applied to the drum of a ribbon roll at a face of said drum and having means to secure said member in position, a holding member comprising a shank having a lateral clamping arm adapted to overlie the roll at the periphery, a keeper through which said shank extends, and resilient means acting on said keeper to yieldingly press the latter against the shank, said shank being slidable in the keeper to adjust the lateral arm radially on the roll, and said keeper being yieldable to a turning movement of the shank about its own axis to swing the lateral arm through an angle to dispose it either over a roll at the periphery or away from the roll.

1,300,975. TOASTER. JENNIE JONES, Winchester, Ky. Filed Dec. 18, 1918. Serial No. 267,327. 5 Claims. (Cl. 53—5.)



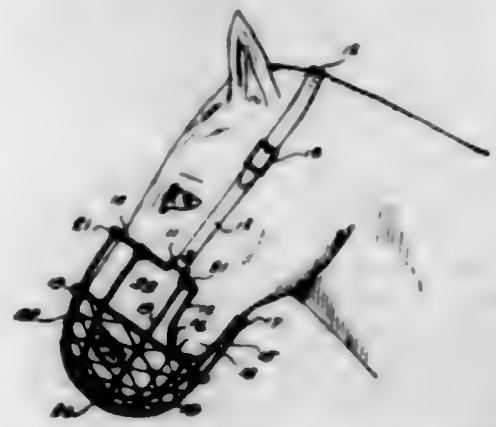
2. A toaster comprising uprights, means for connecting them with a stove, a frame carried by the uprights and having an intermediate angularly disposed portion, a lower angularly disposed portion and a ledge provided at the lower edge of the last mentioned portion, there being provided at the upper portion of the frame a horizontally disposed basket like portion.

1,300,976. GARBAGE-CAN. JOHN ARTHUR JONES, Dallas, Tex. Filed Nov. 15, 1918. Serial No. 262,676. 2 Claims. (Cl. 220—115.)



1. A receptacle comprising a casing having supporting legs and a top curved from front to rear of the casing, the rear wall of the casing being cut away from the curved top to near the bottom, a tray seating within the casing, said tray having at its rear edge a depending rib resting upon the bottom of the casing and the casing having an upstanding flange engaging outside of the rib and having means for supporting the front end of the tray spaced above the bottom of the casing, said casing having an opening in the curved top extending transversely of the casing, a housing arranged above the opening and having a passage in its front wall, said casing having an inlet opening at the front of the curved top, a door fitting the curved top for closing the inlet opening and having a reduced portion extending through the passage into the housing, shoulders being formed between the reduced portion and the body of the door for engaging the ends of the passage to limit the inward movement of the door, said door having a rib for engaging the front wall of the housing to limit the outward movement of the door, and foot operated means for opening the door, the door closing by gravity.

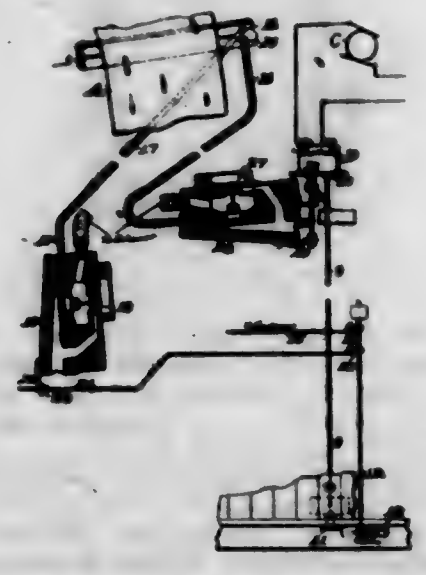
1,300,977. ANIMAL-MUZZLE. JESSE S. KERR, Wakarusa, Ind. Filed May 16, 1918. Serial No. 234,951. 1 Claim. (Cl. 119—133.)



The herein described muzzle comprising a main band having offsets at opposite sides thereof and dropped portions in rear of the offsets, a second band paralleling the body of the first and contacting with its dropped portions, a series of loops connected at their extremities with the main band at opposite points, extending thence down-

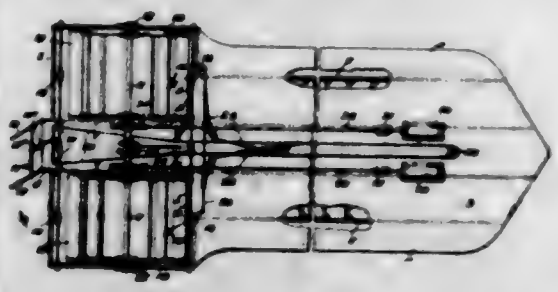
ward and wrapped around the second band, and crossing each other at the bottom of the muzzle, one of these loops connecting the dropped portions, wire netting carried by the lower band and the lower portions of said loops, and straps rising from the offsets of the main band and adapted to be connected by a buckle.

1,300,978. REROLL-CONTROLLING MECHANISM FOR MUSICAL INSTRUMENTS. HERBERT J. LA JOIE, Orange, N. J., assignor to Autopiano Company, a Corporation of New York. Filed Nov. 10, 1914. Serial No. 871,395. 1 Claim. (Cl. 84—186.)



In a musical instrument, the combination of a tracker bar having a row of control apertures and two openings at one end of said control apertures, said two openings being substantially in alinement with each other transversely to the direction of the row of control apertures and adapted to be controlled by a note sheet having a notch therein near the edge thereof adapted to uncover one of said openings and having its end also shaped to uncover one of said openings during the travel of the sheet, means controlled by one of said openings for stopping the sheet, and means controlled by the other of said openings for re-rolling the sheet.

1,300,979. MARINE VESSEL. WILLIAM P. LAY, Gadsden, Ala. Filed July 28, 1917. Serial No. 183,253. 4 Claims. (Cl. 114—58.)



1. The combination, in a marine vessel, of a shallow draft hull having its stern reduced in width to form lateral recesses; wheels in the recesses, and a pair of rudders one at the lateral extremity of each recess and junction of the side of the hull, and at the longitudinal center, vertical plane of the adjacent wheel so as to take backwash therefrom when the wheel is reversing.

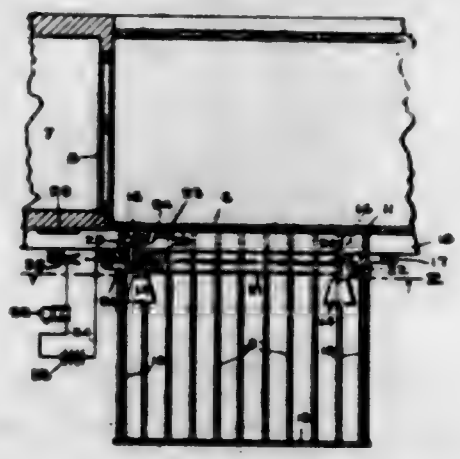
1,300,980. AUTOMOBILE INSIDE TIRE. GEORGE A. LA DOUX, San Francisco, Calif. Filed Aug. 13, 1918. Serial No. 249,605. 1 Claim. (Cl. 152—18.)

In combination with the outer casing and the inner tube of a pneumatic tire; an elastic inside tire lying between and throughout the entire circumference of the casing and the tube, said inside-tire having when uncompressed an outside diameter greater than the inside diameter of the casing; and cementitious material uniting



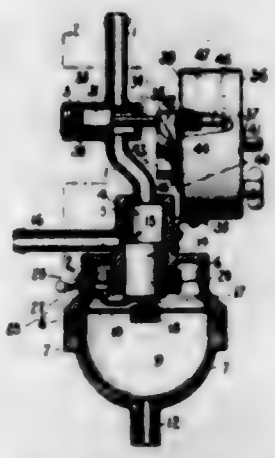
the adjacent surfaces of the inside-tire and the outer casing.

1,300,981. BURGLAR-TRAP. WILLIAM LEON, Seattle, Wash. Filed Mar. 21, 1918. Serial No. 223,866. 1 Claim. (Cl. 43—19.)



1. A device of the class described comprising a cage disposed below a floor and adapted to move upwardly through openings in the floor, means for quickly lifting said cage through said floor, trip mechanism for normally retaining said cage below said floor and a concealed panel in said floor and connected to said trip mechanism to actuate said trip mechanism in response to pressure thereon.

1,300,982. GAS-REGULATOR. EDMUND GILBERT LODGE, Philadelphia, Pa. Filed July 19, 1917. Serial No. 181,476. 6 Claims. (Cl. 161—9.)

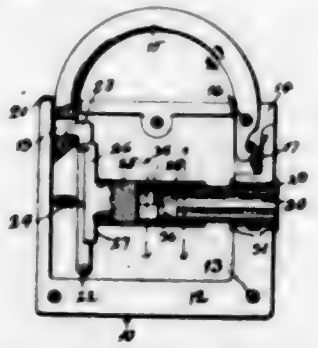


1. In a device of the character described, a casing, a diaphragm in the casing forming a pressure chamber, a cylinder forming a gas chamber, said cylinder concentrically mounted upon the casing in relation to the diaphragm, a valve piston slidably mounted in said cylinder adapted to control the flow of gas through the cylinder, and means for adjustably connecting the piston with the diaphragm so that the position of the piston may be changed in relation to the said diaphragm.

2. In a device of the character described, a casing, a diaphragm in the casing forming a pressure chamber, a cylinder forming a gas chamber, said cylinder concentrically mounted upon the casing in relation to the diaphragm, a valve piston slidably mounted in said cylinder adapted to control the flow of gas through the cylinder, a rod having a screw thread thereon secured to the piston, a nut secured to the diaphragm, said nut having a screw threaded aperture formed therein to receive said rod, and means for turning the piston to adjust the same in relation to the diaphragm.

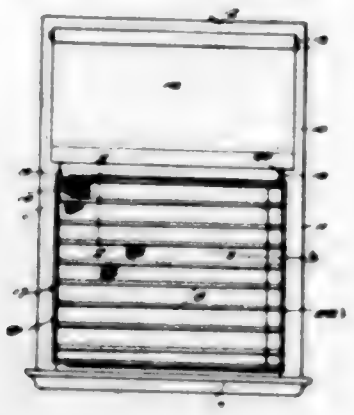
3. In a device of the character described, a casing, a diaphragm in the casing forming a pressure chamber, a cylinder upon said casing forming a gas chamber, a valve piston slidably mounted in said cylinder adapted to control the flow of gas through the cylinder, a screw threaded member connecting the piston with the diaphragm, and a handle for rotating the screw threaded member to adjust the piston in relation to the diaphragm.

1,300,983. PADLOCK. FORREST D. LUCKEY, Logan, Utah. Filed Aug. 9, 1918. Serial No. 249,074. 2 Claims. (Cl. 70—111.)



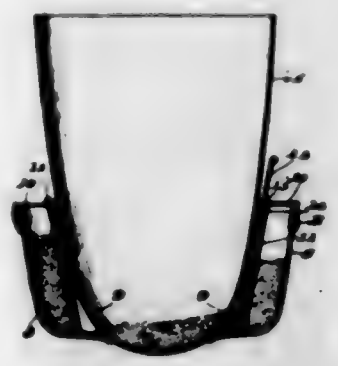
2. In a padlock, a casing, a shackle pivoted at one corner of the casing and having an opening in its free end also engageable in the casing, a pivoted catch engageable with the opening of the shackle to secure the latter in locked position, means to normally hold said catch in said position, a block slidable in the casing and connected to the catch, a barrel turnable in the casing and provided with a slot therethrough, means to limit the turning of the barrel, means to prevent displacement thereof longitudinally, said block being provided with a socket having a key receiving slot corresponding to the slot in the barrel, and opposite undercut recesses providing flanges adapted to receive a key having opposite extensions therebeneath when said key is inserted in the slot and turned whereby outward pull may be exerted upon the block for releasing the catch, said slots being of segmental formation whereby said flanges are engaged by turning the key in one direction only, the opposed sides of the slots being solid to prevent engagement of the key beneath the flanges in the opposite direction.

1,300,984. CURTAIN-PROTECTING ATTACHMENT FOR SCREENS. VIRGINIA MCKIBBAHAN, New Rochelle, N. Y. Filed June 13, 1918. Serial No. 239,768. 1 Claim. (Cl. 156—33.)



A curtain protecting device comprising a frame including a section having top and bottom guide ways, another section slidable in said guide ways, both of said sections having spaced slats, and means for attaching and suspending the device carried by said sections.

1,300,985. FEED-BAG. HENRY MANDELBAUM, Brooklyn, N. Y. Filed Aug. 30, 1918. Serial No. 252,064. 1 Claim. (Cl. 119—65.)



A feed bag of the character described comprising a main receptacle provided adjacent its lower end with openings, a pair of pockets secured upon opposite sides of said main receptacle and communicating with the interior thereof through said openings, a pair of guide members disposed on opposite sides within each pocket adjacent said main receptacle, each guide member being provided adjacent its upper end with a recess, plates slidable between said pairs of guide members and adapted to cut off communication between the interior of the associated pockets, and the interior of the main receptacle, springs disposed within said recesses, and bearing against said plates, and a flap covering the top of each pocket and provided with a slot for the passage of said plates.

1,300,986. ROBE-LOCK. HARRY E. MANSFIELD, Racine, Wis., assignor to Racine Handy Manufacturing Company, a Corporation of Wisconsin. Filed July 15, 1918. Serial No. 109,448. 8 Claims. (Cl. 70—17.)

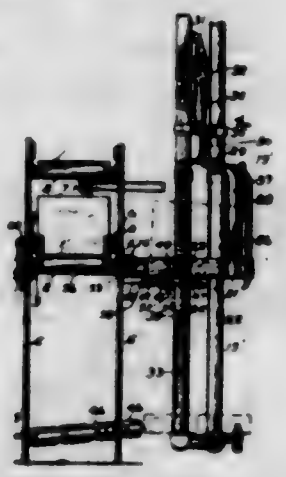


1. In a robe lock of the class described pivotally connected clamping members, a slotted handle pivotally connected to one of said members and adapted to engage the other of said members to force the same together into locking position, a member on one of said clamping members adapted to project through the slotted handle and a locking member in the handle adapted to engage said member.

2. In a device of the class described, clamping jaws, pivotally connected members connected therewith adapted to be folded around said jaws to force the same together, a latch bolt secured to one jaw and a spring pressed locking bar in one of said members adapted to engage said latch bolt.

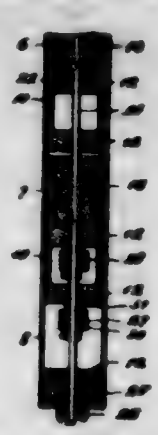
3. In a device of the class described, pivoted clamping members, a lever arm, links pivotally connecting the same to one of said members, a projection integrally formed on said lever arm, teeth formed on the other of said members each adapted to be engaged by the projection, said lever arm adapted to be moved toward said last mentioned member to permit said projection to engage one of said teeth to force said members together into locking position.

1,300,987. TRAY-CONVEYING APPARATUS. WILLARD ADNA MARCY, Newton Upper Falls, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Sept. 23, 1915. Serial No. 52,196. 28 Claims. (Cl. 186—14.)



25. In a conveyer system, the combination of a moving endless belt for carrying articles upon both of its runs, respectively in one direction or the other, with means common to both of said runs for despatching a tray upon either of them, and means for selectively removing the articles from either of said runs.

1,300,988. DRILLING-GEAR. SAMUEL J. MATHEWS, Kansas City, Mo., assignor to B & B Manufacturing and Drilling Company, a Corporation of Delaware. Filed Oct. 10, 1917. Serial No. 195,737. 10 Claims. (Cl. 255—4.)



1. In a drilling gear of the character described, a housing containing a lubricant, and means secured to the drilling gear to retain said lubricant in said housing.

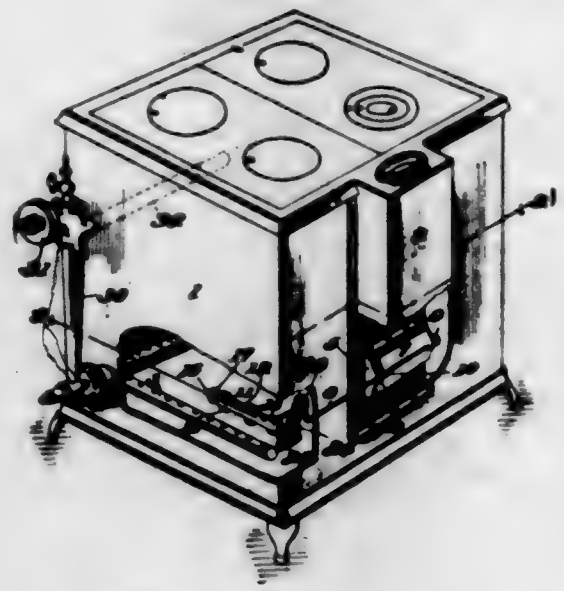
1,300,989. WELL-DRILLING APPARATUS. SAMUEL J. MATHEWS, Kansas City, Mo., assignor to B & B Manufacturing and Drilling Company, a Corporation of Delaware. Filed May 23, 1918. Serial No. 236,210. 4 Claims. (Cl. 255—4.)



1. In well drilling apparatus, the combination with a drilling tool, of driving means therefor comprising a bearing in proximity to the tool, and means forming an air chamber to exclude tool cuttings and other debris from the bearing.

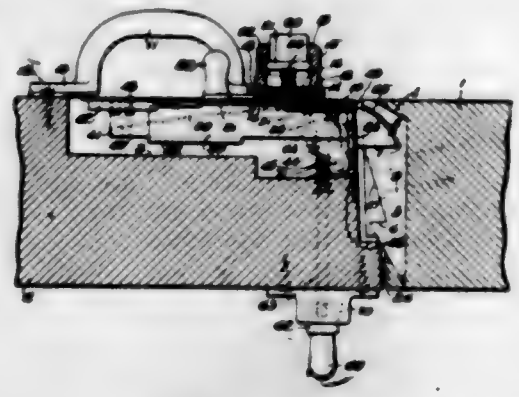
4. In well drilling apparatus, the combination with a drilling tool, of driving means therefor comprising a shaft and a bearing for said shaft, and means coöperating with the contents of the well to form an air chamber to exclude tool cuttings and other debris from the bearing.

1,300,990. HEAT AND DAMPER REGULATOR FOR GAS-OVENS. BENJAMIN E. MEACHAM, Lorain, Ohio, assignor to The American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 16, 1918. Serial No. 217,506. 14 Claims. (Cl. 236—5.)



1. The combination with a gas oven, having a vent opening therefor, a burner for the oven, controlling means for the vent opening, a thermostat device located in the burner flame zone, and an operative means between the thermostat and the said vent controlling means, whereby the thermostat operates the vent controlling means according to the variations of the heat from the burner.

1,300,991. AUTOMOBILE-DOOR LOCK. JOHN MILLER, Amesbury, Mass., assignor to John Miller, Jr., Washington, D. C. Filed Mar. 29, 1918. Serial No. 225,436. 2 Claims. (Cl. 70—42.)



1. In a door lock of the kind described, a sliding carrier, a coiled spring arranged to hold said carrier in forward position, a bolt pivoted to the forward part of said carrier and having a shoulder on its rearward portion, a leaf spring secured to the carrier and engaging said shoulder, to hold the bolt in outward locking position, said bolt having a beveled face adjacent the shoulder, a latch adapted to be moved into and out of engagement with said beveled corner, to hold the bolt in locked position and a lock to coöperate therewith and prevent the bolt moving, and thereby holding the bolt in locked position.

1,300,992. CEREAL-SPROUTING OVEN. SIMON M. MILLER, Bridgewater, Va. Filed Apr. 12, 1916. Serial No. 90,719. 2 Claims. (Cl. 126—17.)



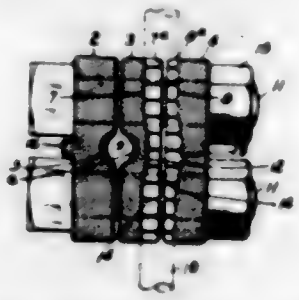
1. In combination, an upright oven comprising inner and outer shells having a dead-air space between them, an upright heating pipe in the form of a frame disposed transversely of the oven within the dead-air space, said pipe completely circumscribing the inner shell and having its inner walls immediately adjoining said inner shell and its remaining wall spaced from said outer shell, an upright by-pass pipe disposed exteriorly of the oven, a heat supply pipe below said oven, branches leading to the lower ends of said by-pass pipe and said circumscribing pipe from said supply pipe, means for regulating the passage of the heat through said branches, and a branch leading from the top of said circumscribing pipe to the upper portion of said by-pass pipe.

1,300,993. FOLDING IRONING-BOARD. WILLIAM N. MILLER, Oakland, Calif. Filed Mar. 27, 1918. Serial No. 225,031. 8 Claims. (Cl. 69—10.)



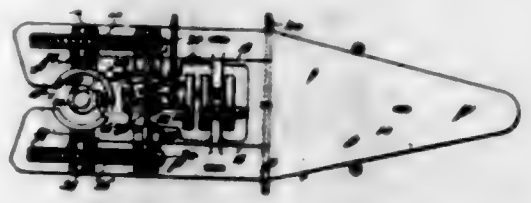
1. An ironing board structure, comprising a compartment, a horizontally swinging supporting beam pivoted within said compartment and adapted to swing therefrom, an ironing board carried by said beam, and means whereby the beam may be temporarily and automatically locked in its outstanding position.

1,300,994. WIRE-ROPE CLAMP. BOLTON C. MOISE, Pittsburgh, Pa. Filed July 31, 1917. Serial No. 183,716. 5 Claims. (Cl. 24—125.)



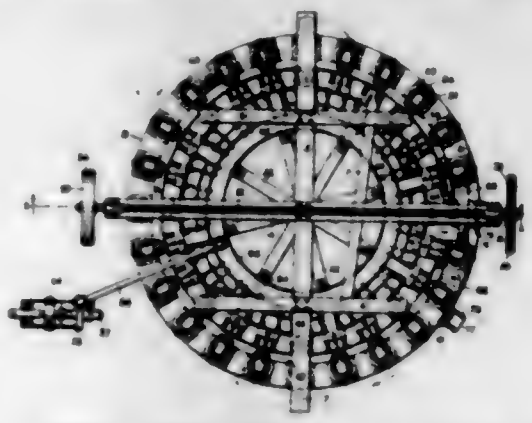
3. A rope clamp comprising outer members and an intermediate member, said members having registering, rope receiving grooves in the adjoining faces thereof, with the registering grooves in opposite sides of said intermediate member extending lengthwise at an angle with each other, said grooves being reversely curved lengthwise and having projections on the surfaces thereof to form a sinuous, serrated seat for the ropes, transversely extending, registering holes in said members and means in said holes for connecting the members in rope clamping position.

1,300,995. WELL-DRILLING APPLIANCE. JOSEPH F. MOODY, St. Francisville, Ill. Filed Aug. 10, 1918. Serial No. 249,284. 12 Claims. (Cl. 255—35.)



1. A well drilling appliance comprising a base, a rotatable ring carried by the base and having a side opening, a gripping device carried by the ring, means for rotating the ring, a suspension means for the base, and means for anchoring the base stationary relative to the ring.

1,300,996. TARGET-MAKING MACHINE. DANA MORRILL, deceased, late of South Omaha, Nebr., by EMMA J. MORRILL, administratrix, Omaha, Nebr., assignor to Morrill Target Company, Omaha, Nebr., a Corporation of Nebraska. Filed Dec. 14, 1915. Serial No. 66,872. 3 Claims. (Cl. 25—66.)



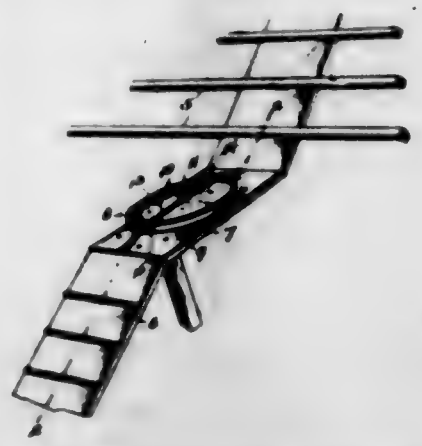
1. In a target making machine, a rotating table, a plurality of mold-units mounted peripherally thereon, each of the same including relatively-movable mold-members having water-spaces therein, a pan carried on the table above the highest level of the mold-members, means for supplying water to said pan, means connecting said pan with the water-spaces of the several mold-members, a stationary pan disposed beneath the table, and means forming discharge passages from the water-spaces of the mold-members and adapted to empty into the latter pan.

3. In a target making machine, molding devices including a female mold member having a cavity therein and a male mold member, means for moving the same into said cavity to partially fill the same, said male member being arranged in spaced relation with the upper edges of the walls of the cavity to form an outlet whereby the male member is adapted to mold material in the cavity and express excess material therefrom and leave the expressed material connected by a thin marginal portion with the molded material within the cavity, means for moving the male member from the cavity and for simultaneously detaching the material from the said male member.

1,300,997. VERMIN-EXTERMINATING DEVICE. GEORGE F. MOYERS, Osceola, Iowa. Filed July 11, 1918. Serial No. 244,404. 4 Claims. (Cl. 119—22.)

1. In a exterminating device of the class specified, a receptacle and a thin sheet metal plate forming a tread

device and sole top closure for the receptacle and having springs interposed between the lower side thereof and the bottom of the receptacle and simultaneously removable and replaceable with the tread device when the latter is withdrawn from or inserted in the receptacle, the springs holding the plate up adjacent to the top edge of the receptacle, the receptacle being fully open at the top at all times, and means extending over a portion of the top surface of and holding the thin sheet



metal plate against displacement from the receptacle and resisting the upward pressure of the springs engaging the plate and whereby the greater portion of the upper surface of the plate is continually exposed for engagement by the feet of fowls, the receptacle having a charge of exterminating material therein between the bottom thereof and the said plate and fed to the top surface of the plate by the depression of the latter.

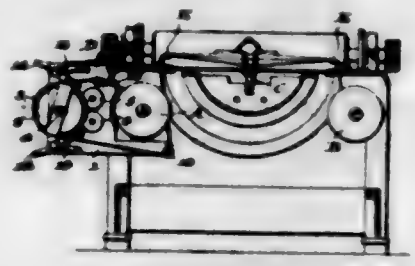
1,300,905. FASTENER ATTACHMENT FOR RUBBERS. FRANK JULIUS NELSON, Hallock, Minn. Filed Feb. 2, 1917, Serial No. 146,133. Renewed Feb. 5, 1919. Serial No. 275,250. 2 Claims. (Cl. 36—5.)



1. A pair of foot coverings having a flexible strip permanently secured to each article of the pair at a corresponding point at the interior thereof, at a side of each, near the upper edge of said side, and at the upper end of the strip, the said strips being of a length to lie in a depending position at the interior of the articles when the strips are unconnected, the free ends of the strips having co-engaging fastening means and being flexible to dispose the free ends above the tops of the articles for engagement of the fastening means.

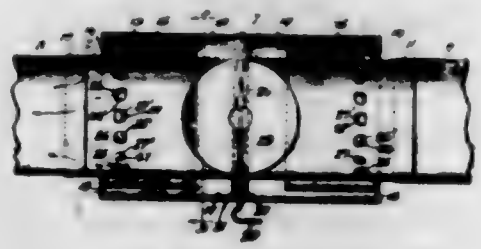
1,300,968. INKING ATTACHMENT FOR TYPE-WRITERS. HYDESABURO OHASHI, New York, N. Y., assignor to Hydesaburo Ohashi & Co., Inc., New York, N. Y., a Corporation of Delaware. Filed Dec. 6, 1916. Serial No. 135,968. 12 Claims. (Cl. 91—60.)

3. An inking attachment for typewriter ribbons comprising a revolubly mounted ink distributer, a perforated ink container arranged in rolling contact with said distributer, and means for supporting the ribbon in frictional contact with said distributer to cause the latter to



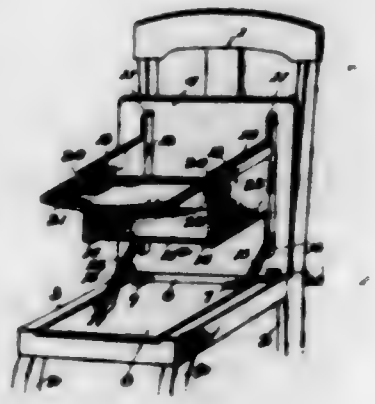
revolve against the container upon movement of the ribbon through the machine.

1,301,000. FUEL-ECONOMIZER. ELLSWORTH B. OVERSHINER, Chicago, Ill., assignor of one-half to James B. Blackman, Chicago, Ill. Filed Oct. 11, 1918. Serial No. 257,679. 6 Claims. (Cl. 110—58.)



1. An organized structure of the character described comprising a relatively long cylinder or pipe adapted to replace a section in a smoke flue or conduit, and having a series of circumferentially extending perforations near each end; a relatively larger cylinder, spaced apart therefrom, to provide an annular air-receiving chamber and inclosing said perforations; a ring for supporting each end of the outer cylinder, each ring having a circumferentially extending series of perforations near its periphery; a shorter and intermediate cylinder at each end of the device each intermediate cylinder having its outer end closed, their open ends extending toward each other so that air entering the perforations in the rings will first pass around the ends of the shorter and intermediate cylinders, respectively whereby its velocity is checked and it becomes heated and mixed with gases before entering the smoke pipe through the perforations in the inner cylinder.

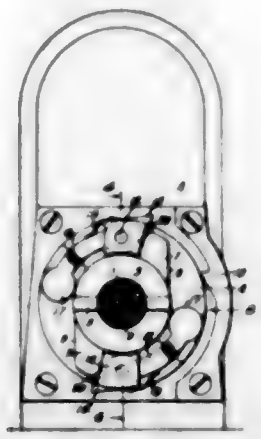
1,301,001. CHAIR. JOHN V. PALMER, Pittsburgh, Pa. Filed Nov. 18, 1918. Serial No. 262,360. 4 Claims. (Cl. 155—26.)



1. A chair comprising a seat frame, a seat hinged upon the side members of the seat frame, a rail rigid with the

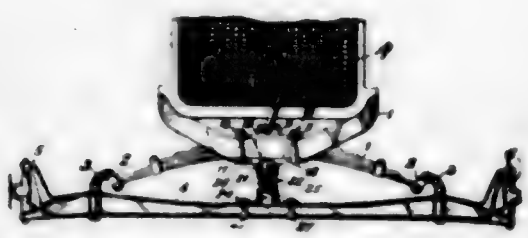
rear edge of the seat and disposed at a right angle thereto whereby to fit within the side members of the seat frame, a plate hinged to said rail, a rest on the seat frame for said plate, and a collapsible seat carried by the under side of said chair seat.

1,301,002. MAGNETO-COUPLING. RALPH H. PIERCE, Eugene, Oreg. Filed Aug. 29, 1918. Serial No. 251,937. 2 Claims. (Cl. 123—149.)



1. A coupling of the class described, comprising two relatively rotatable sections, one of the sections being provided with lugs having cam surfaces on one face and the other section with projections, a spring connecting the sections, pivoted and spring pressed dogs mounted on the section having the projections, said dogs having curved and weighted arms adapted to be engaged by the cam surfaces of said lugs, and a fixed projection with which the dogs engage, a projection being adapted to engage the face of a lug opposite that having a cam surface when the dog is disengaged from the fixed projection.

1,301,008. SHOCK-ABSORBER. WILLIAM H. PLUNKETT, Richmond Hill, N. Y. Filed Oct. 31, 1918. Serial No. 260,591. 1 Claim. (Cl. 267—19.)



In combination with an elliptic spring having a floating middle point, and its support, a boss rigidly secured to said spring at its middle point, a boss rigidly secured to the support, said bosses being in axial alinement and threaded and a helical spring having its end convolutions engaging the threads upon said bosses for a major part of the length of the spring, the number of free convolutions between the bosses being comparatively few and the cross section of the spring being proportionally large to absorb or snub the relative longitudinal and transverse movement of the bosses.

1,301,004. MULTIPLE-FEED LUBRICATING SYSTEM. GEORGE D. POORE, St. Louis, Mo. Filed June 26, 1917. Serial No. 176,968. 7 Claims. (Cl. 184—6.)

1. A lubricating system for engines and machines, comprising a sight feed lubricator to which oil is supplied, an oil conducting pipe leading from said lubricator to a part that requires lubrication, said pipe comprising two sections that are connected by ball and socket joints to said lubricator and part, a tubular member connected to one of said pipe sections and provided with a stuffing box in which one end of the other pipe section is telescoped, and a spring in said tubular member that tends to force the sections of the pipe apart.



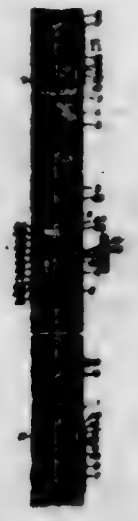
2. In an engine or machine provided with a plurality of spaced A frames, a plurality of multiple feed sight lubricators, one of which is arranged intermediate a pair of said frames, oil conducting pipes leading from said lubricators to the crank shaft bearings of the machine, spring-pressed ball and socket connecting joints for securing said pipes to said lubricators and to said bearings, the conducting pipes leading from the end lubricators being arranged in parallel relation to each other, and distributing pipes on the end crank shaft bearings of the machine that communicate with the conducting pipes which lead from the end lubricators.

3. In an engine or machine provided with a plurality of spaced A frames, a plurality of multiple feed sight lubricators, one of which is arranged intermediate a pair of said frames, oil conducting pipes leading from said lubricators to the crank shaft bearings of the machine, spring-pressed ball and socket connecting joints for securing said pipes to said lubricators and to said bearings, the conducting pipes leading from the end lubricators being arranged in parallel relation to each other, distributing pipes on the end crank shaft bearings of the machine that communicate with the connecting pipes which lead from the end lubricators, and cover plates on the caps of the end bearings that hide said distributing pipes from view.

4. In an engine or machine provided with a plurality of spaced A frames, a horizontally-disposed supporting member arranged intermediate a pair of said frames at the point where the side legs of same start to diverge, a multiple feed lubricator carried by said supporting member, removable housing members arranged between said A frames and having their upper ends contacting with said supporting member, and oil-conducting pipes leading from said lubricator to one of the crank shaft bearings of the machine.

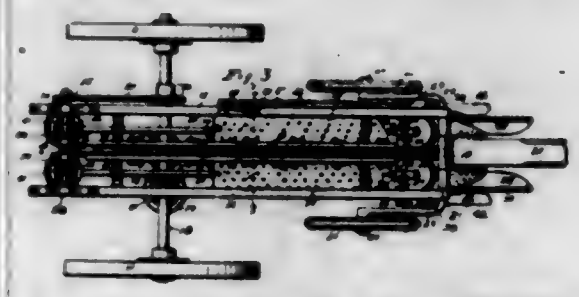
5. An engine or machine provided with a plurality of spaced A frames, a plurality of multiple feed sight lubricators arranged between said frames and at points outside of the end frames, horizontally-disposed supporting members secured to the A frames that carry said lubricators, housing members arranged between the A frames with their upper edges resting on the intermediate supporting members, spring-pressed, telescoped conducting pipes leading from said lubricators to the crank shaft bearings of the machine, and ball and socket connecting joints between said conducting pipes and said lubricators and bearings.

1,301,005. VEHICLE-BODY. PERCY W. POMEROY, Toledo, Ohio, assignor to The Willys-Overland Company, Toledo, Ohio. Filed May 22, 1917. Serial No. 170,445. 16 Claims. (Cl. 21—62.)



14. In a vehicle, the combination of a body, a top, a removable multiple-part pillar detachably connected to said top and said body respectively, and means for connecting the parts of said pillar.

1,301,006. BEET-HARVESTER. FRED PRICE, Des Moines, Iowa. Filed June 7, 1915. Serial No. 32,786. 12 Claims. (Cl. 55—108.)



1. In a beet harvesting machine, the combination of a frame mounted on wheels, a pair of parallel rollers mounted on said frame, means for imparting rotation to said rollers for moving their adjacent faces upwardly, a plurality of brushes arranged spirally on each roller for carrying material upwardly and rearwardly in the machine, with a pair of endless carriers arranged adjacent to said rollers, means for imparting rotation to said carriers for moving their adjacent stretches upwardly and rearwardly in the machine.

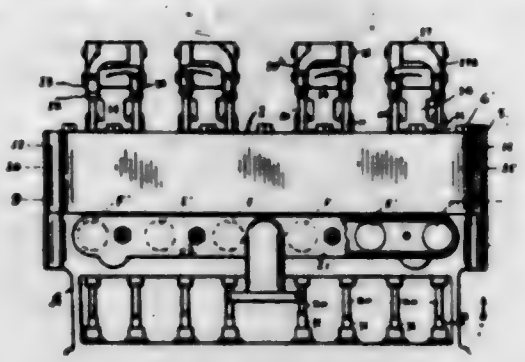
3. In a beet harvester the combination of a frame mounted on wheels, a pair of parallel rollers mounted for rotation on said frame, means for imparting rotation to said rollers for moving their adjacent faces upwardly, a pair of endless carriers adjacent to said rollers, means for imparting motion to said carriers for moving their adjacent faces upwardly and rearwardly in the machine, guides for the adjacent stretches of said rollers, said guides being adapted to limit the upward movement of the bodies of vegetables or the like, the tops of which are engaged by said carriers and said rollers.

6. In a beet harvester, a frame mounted on wheels, a pair of endless carriers, means for imparting motion to said endless carriers for moving their adjacent stretches upwardly and rearwardly in the machine, a pair of rollers adjacent to said endless carriers, means for imparting rotation to said rollers for moving their adjacent faces upwardly, means for mounting the forward ends of said endless carriers for permitting them to move toward and from each other in the machine, and means for mounting the forward ends of said rollers for permitting them to move toward and from each other in the machine.

9. In a beet harvester, a frame mounted on wheels, a digging device on said frame, means for engaging vegetables or the like and carrying them rearwardly and upwardly in said frame, a movable cutting member, means for actuating said cutting member, and guide devices arranged in the path of travel of said vegetables for actuating said last named means.

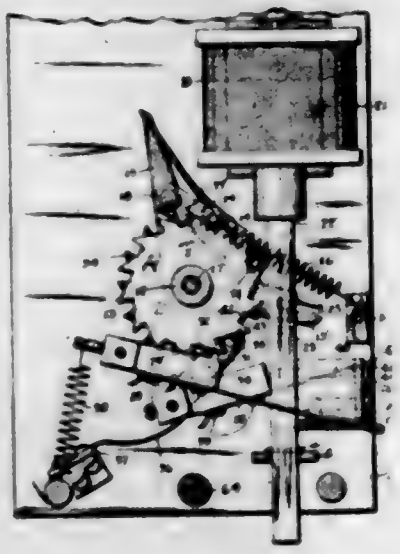
10. In a beet harvester, a frame mounted on wheels, a digging device on said frame, means for engaging vegetables or the like and carrying them rearwardly and upwardly in said frame, a movable cutting member, means for moving the same to cutting position, holding means for rendering said last means inoperative, engaging devices arranged in the path of travel of said vegetables, adapted when engaged by said vegetables to move said holding means to inoperative position.

1,300,007. CONTROL MEANS FOR INTAKES AND EXHAUSTS OF INTERNAL-COMBUSTION ENGINES. ROBERT M. ROOF, Anderson, Ind., assignor to Laurel Motors Corporation, Phoenix, Ariz., a Corporation of Arizona. Filed Feb. 20, 1917. Serial No. 149,786. 1 Claim. (Cl. 123—59.



A control means for the intake and exhaust of internal combustion engines, comprising a head member having firing chambers therein for the cylinders, inlet ports leading from the engine ports into the firing chambers, exhaust ports leading from said firing chambers, a spark plug for each firing chamber and located centrally and between the sets of said ports, valves for the inlet ports, valves for the exhaust ports, a spring for each of said valves to retain said valve at normally closed position, a push rod for the inlet valves, a push rod for the exhaust valves, a standard on said head member and located above each firing chamber, a trip lever journaled on said standard having its power arm to register with a push rod and its weight arm to register with the inlet valves, and trip lever journaled on said standard having its power arm to register with a push rod and its weight arm to register with the exhaust valves, there being an opening in said last named lever to afford access to the spark plug.

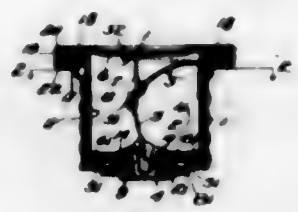
1,301,008. ELECTRICALLY-OPERATED TIME MECHANISM. WALTER S. RYAN, New York, N. Y. Filed Aug. 18, 1917. Serial No. 186,498. 6 Claims. (Cl. 161—27.)



4. A time switch comprising in combination a clock or timing mechanism, a solenoid having a movable core,

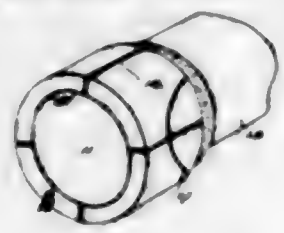
means for periodically closing the solenoid circuit to rewind the clock at regular intervals, a main switch for controlling the opening and closing of a circuit other than that in which the solenoid is included, a rotatable member for actuating said main switch, and means between said rotatable member and said solenoid whereby each time the solenoid core is moved by the energizing of the solenoid said rotatable member will be partially moved by said core.

1,301,009. FUSE-PLUG. RALPH ABRAHAM SCHOENBERG, (now by judicial change of name Ralph A. Belmont,) New York, N. Y., assignor to the Connecticut Electric Mfg. Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 11, 1914. Serial No. 871,609. 18 Claims. (Cl. 175—277.)



10. A fuse plug comprising a fuse; a spring held under tension by the fuse; a pin carried by the spring; a fuse chamber for said fuse; and a mica sheet closing said chamber, said spring acting upon the blowing of the fuse to force said pin to penetrate said sheet.

1,301,010. PIPE-SEAL. JOHN C. SCHRADE, Rockaway Beach, N. Y. Filed Mar. 6, 1917. Serial No. 152,732. 3 Claims. (Cl. 72—53.)



1. In a device of the class described, the combination with a pipe and a bell portion provided on one end thereof, of a cap member adapted to embrace the said bell portion and a portion of the pipe and having a plurality of longitudinally extending grooves therein.

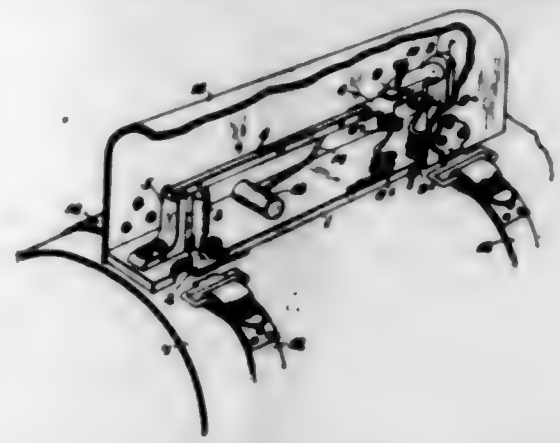
2. In a pipe seal, a cap member having a plurality of semi-circular indentures therein providing means for facilitating the removal of the semi-circular portion within the semi-circular indentures to adapt the cap member for use with various designed pipes.

3. In a pipe seal, a cap member having a plurality of longitudinal and semi-circular grooves formed in the sides thereof and an annular groove formed in the end thereof, said longitudinal groove terminating at points adjacent the annular groove, as and for the purpose set forth.

1,301,011. THERMOSTATIC ALARM. FLOYD L. SCOUTTEN, East Cleveland, Ohio. Filed Mar. 19, 1915. Serial No. 15,424. 5 Claims. (Cl. 200—31.)

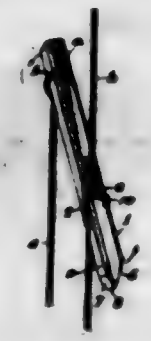
2. In an alarm device comprising a substantially non-conducting base, a conducting plate arranged beneath the same, an expansion member connected to the plate and projecting through the base, a lever pivotally connected with the base, resting upon the expansion member and carrying a contact, a second contact spaced from the first contact, said contacts constituting parts of an alarm circuit, and means for connecting the device to a flue or pipe.

3. In an alarm device, the combination of a bracket, an expansion device adjacent to said bracket, a lever pivoted to said bracket and adapted to be engaged and supported by said expansion device at a point intermediate of its ends, said lever having a contact adjacent to its free end, a contact coöperating with the first mentioned



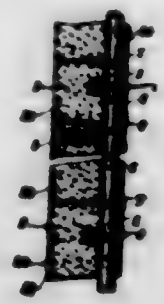
contact, an arm projecting from said lever, beneath said lever, and a weight on said arm adapted to maintain the latter in engagement with the expansion device in varying angular positions of said alarm device.

1,301,012. ONE-PIECE LIVE-WIRE SELF-HOLDER. FENWICK W. SIMONSON, Sherman, Calif., assignor of one-half to Wallace W. Snell, Sherman, Calif. Filed May 29, 1918. Serial No. 237,677. 4 Claims. (Cl. 175—265.)



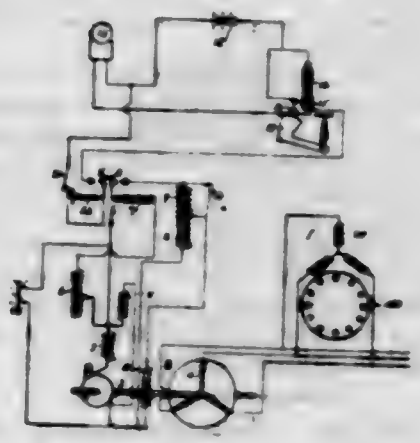
1. An insulating bar provided with an oblique slot and an internal mortise of greater width than the slot; said mortise extending obliquely to the axis of the bar and said slot communicating with the mortise to admit a wire thereto.

1,301,013. CONSTRUCTION OF REINFORCED-CONCRETE SHIPS. JOHN CHARLES SCHILLING, Chiswick, London, England. Filed Nov. 21, 1918. Serial No. 263,620. 4 Claims. (Cl. 114—65.)



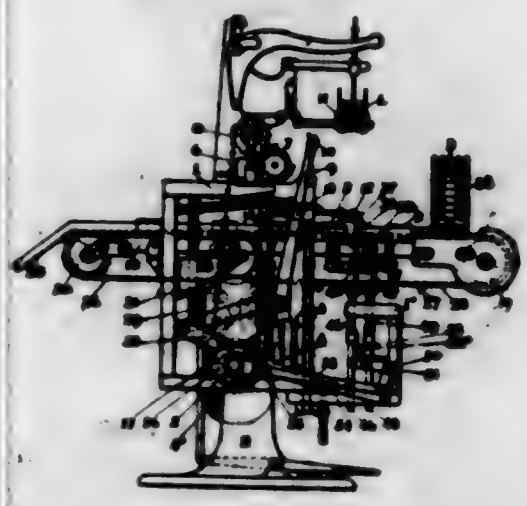
1. A reinforced concrete wall, comprising a frame or skeleton formed of adjacent longitudinal and transverse joined rods, sheets of perforated or expanded metal lodged between the longitudinal and transverse rods, other sheets of perforated or expanded metal spaced from the first-named sheets, means connecting the second-named sheets to the rods, a filling of concrete between the first and second named sheets, and a surfacing of concrete embedding the sheets and the rods.

1,301,014. ELECTRIC DRIVE FOR GYROSCOPES. ELMER A. SPERRY, Brooklyn, N. Y., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 9, 1915. Serial No. 7,827. 17 Claims. (Cl. 172—237.)



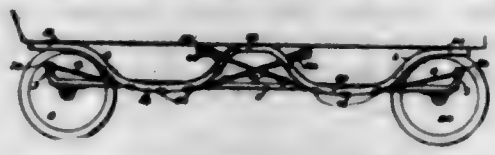
17. In an electrical driving system for the rotors of gyroscopes, the combination with a gyroscope, of a motor for driving the rotor thereof having a high inductance winding and a motor generator set having a low regulative factor for supplying said motor whereby the gyromotor may be started or reversed without current limiting devices during the normal operation of the motor generator set.

1,301,015. LABELING-MACHINE. HERMAN STAKE and ARVID P. EKVALL, Worcester, Mass., assignors to Economic Machinery Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 28, 1918. Serial No. 259,954. 11 Claims. (Cl. 216—38.)



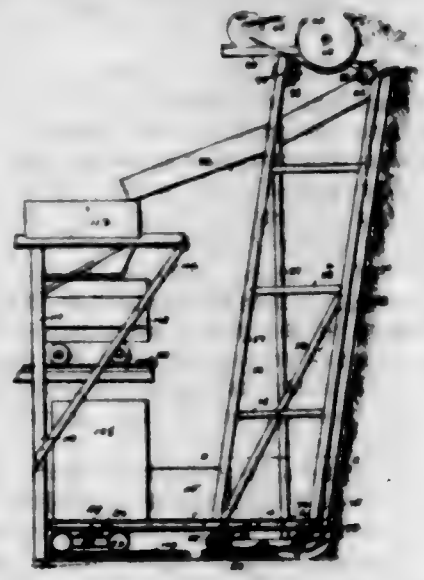
1. A machine for labeling flat or paneled-face boxes or the like, including a bottom delivery label-supply holder, vertically moving pickers, means for gumming said pickers, a grip-device acting between said pickers, a box-supporting run-way extending beneath the pickers, a traveling delivery chain provided with detents for propelling the boxes along said run-way, means for intermittently actuating said chain, a pair of tiltable pressure-levers having free members disposed for pressing the label upon the package in a direction approximately perpendicular to its surface, right and left oppositely swinging fulcrum-carrying members having the fulcrum of said pressure-levers respectively carried thereon, supports at the sides of the run-way for the fulcrums of said carrying members, means for actuating said carrying members and pressure-levers independently, and means for operating the label-delivering mechanism, box-delivery mechanism, and pressor devices with a relative synchronous action.

1,301,016. SPRING-MOUNTING FOR VEHICLES. HARRY STUBBS, Seattle, Wash. Filed Sept. 12, 1918. Serial No. 253,896. 4 Claims. (Cl. 267—42.)



1. A spring mounting for vehicle bodies comprising rocker bars secured to the body, flexible supporting elements for said rocker bars having one end attached to the chassis and extending lengthwise of the body beneath the rocker bars, said supporting elements being connected at one end with the body and at the other with the chassis, and springs inserted as a tension element to sustain said bars.

1,301,017. CLAY CUTTING AND MIXING MACHINE. HALVER RUFUS STRAWSER, Adel, Iowa. Filed Apr. 14, 1915. Serial No. 21,485. 10 Claims. (Cl. 37—24.)



1. In a device of the class described, a frame, a supporting means for the forward end of said frame, an upwardly extending frame at the forward end of said first frame, excavating devices on said second frame, a truck for supporting the rear end of said first frame, and means for pivotally mounting said first frame on said truck and for permitting vertical and horizontal adjustment of the first frame with relation to the truck.

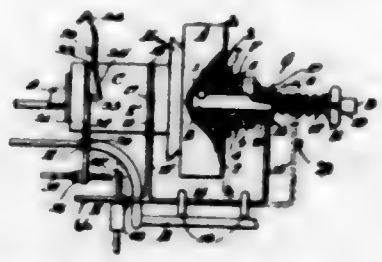
2. In a device of the class described, a main frame, a truck for supporting one end of said frame for permitting said frame to be swung pivotally on said truck, rotary supporting members under the other end of said frame, a source of power, and means for operatively connecting said source of power with said rotary supporting members and with said truck, whereby the rotary supporting members may be actuated for swinging the frame pivotally on the supporting truck and for simultaneously advancing the frame with relation to the supporting truck.

10. In a device of the class described, a frame pivotally supported at one end to swing horizontally, a curved track on the other end of said frame, a rotating supporting member interposed between said curved track and said other end of said frame, and means operatively connected with said main frame for engaging and advancing said curved track when said frame is swung on its pivot.

1,301,018. COMBINED BRAKING, DRIVE-CLUTCH, AND MOTOR-STARTING MECHANISM. JAMES A. TAYLOR, New York, N. Y. Original application filed July 14, 1914, Serial No. 850,572. Divided and this application filed Dec. 16, 1914. Serial No. 877,336. 5 Claims. (Cl. 180—1.)

1. In a wheeled vehicle, a motor-starter mechanism; a constantly rotating motor-shaft; a drive-shaft; a clutch

for connecting the motor and drive-shafts; braking-mechanism for braking the vehicle; and power actuated mechanism operating the brake, motor-starter and clutch-mechanisms, whereby the initial movement thereof toward the braking position automatically throws out the clutch connecting the motor and drive-shafts.



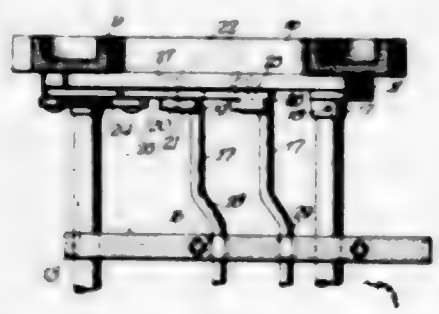
2. In a vehicle, a constantly rotating motor-shaft; a drive-shaft; a clutch for connecting the motor and drive-shafts; braking mechanism power-mechanism for actuating the braking-mechanism; and mechanism operated by the power means for throwing the clutch out upon the initial movement of the power means to actuate the braking mechanism.

3. In a device of the class described, a reciprocating shaft; braking mechanism normally in the non-braking position thrown to set upon the movement of the shaft in one direction; a motor-starter actuated upon the movement of the reciprocating shaft in the direction opposite to its brake-setting movement; and power means for actuating the shaft in either direction.

4. In a device of the class described, a combined motor-starting and braking mechanism adapted to give an initial starting movement to the motor when moved in one direction, and to set the vehicle brakes when moved in another direction; and means for normally maintaining both starter and brake mechanisms in the neutral and non-working positions.

5. In a device of the class described; a braking mechanism comprising a main-axle; a knuckle-joint steering-axle vibratorily secured to the main-axle at either end; a steering-bar extending longitudinally of the main-axle; connecting the knuckle-joint steering-axles adapted to simultaneously vibrate the same so as to steer the vehicle; a brake for each wheel; a brake-rod extending longitudinally of the steering-bar in actuating connection at either end with the brakes; a motor-starter; and power means for setting the brakes by movement of the same in one direction; and for actuating the motor-starter by movement in another direction.

1,301,019. CAR-SEAT CONSTRUCTION. SHERIDAN A. WALKER, New York, N. Y., assignor to The Carson Company, Chicago, Ill., a Corporation of Illinois. Filed July 9, 1918. Serial No. 244,066. 5 Claims. (Cl. 155—2.)



1. In a car seat, the combination of a movable back, a pivoted link connected to said back, said link being formed with a slot to provide a jaw member thereon, a rod in the form of a crank, said jaw member engaging said rod to turn the same as the link is moved, a cushion, rocker mechanism for changing the angular position of the cushion as the back is moved, and a connection between said rod and rocker mechanism, substantially as described.

8. In a car seat, the combination of a movable back, a pivoted link connected to said back to permit movement thereof, a crank rod, an offset flattened portion on said rod, a slotted jaw-like portion on said link engaging the offset portion on the rod, whereby the rod is rotated as the link is moved, a cushion, rocker mechanism for changing the angle of the cushion as the back is moved, and a connection between the rocker mechanism and rod, substantially as described.

5. In a car seat, the combination of a movable back, pivoted links connected to said back to permit movement thereof, a portion of said links being positioned on each side of the seat, a crank rod, each link being formed with a recess for receiving an end of a crank rod, a wall on said recess being of flat-faced formation, a complementary flat face on the rod end, and said flat faces coöperating to turn the rod as the link is moved, a cushion, rocker mechanism for changing the angle of the cushion as the back is moved, and an operative connection between said rod and rocker mechanism, substantially as described.

1,301,020. ROCKER MECHANISM FOR CAR-SEATS. SHERIDAN A. WALKER, New York, N. Y., assignor, by mesne assignments, to The Carson Company, Chicago, Ill., a Corporation of Illinois. Filed July 9, 1918. Serial No. 244,067. 5 Claims. (Cl. 155—2.)



1. In a mechanism of the class described, the combination of a seat embodying a movable back and a cushion, a rocker plate upon which the cushion rests, a connection between the back and rocker plate, whereby when the back is moved the rocker plate is actuated to change the angle of the cushion, and means embodied in the rocker plate for retarding the movement of the back just prior to the back reaching its limit of movement, substantially as described.

3. In a mechanism of the class described, the combination of a seat embodying a movable back and a cushion, a rocker plate supporting the cushion, a connection between the back and rocker plate, whereby when the back is moved the rocker plate is actuated to change the angle of the cushion, supporting rods for said plate, said plate being formed with slots through which said rods pass, each of said slots comprising an elongated portion, an angular portion and a terminal portion, and said angular portion and rods coöperating to retard the movement of the plate and back just prior to the back reaching its limit of movement, substantially as described.

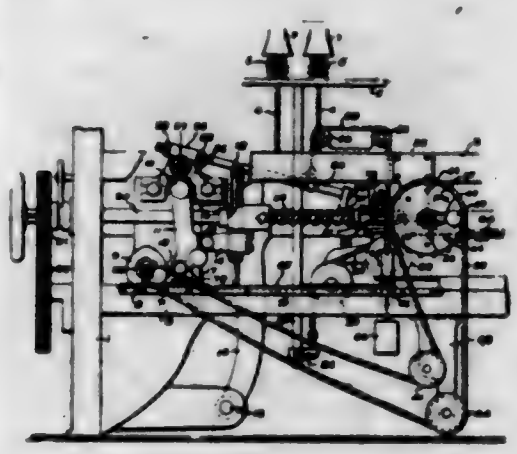
5. In a mechanism of the class described, the combination of a seat embodying a movable back and a cushion, a rocker plate supporting the cushion, a connection between the back and rocker plate whereby when the back is moved the rocker plate is actuated to change the angle of the cushion, fixed supporting rods engaging a surface on said plate, and said surface being formed with an offset portion with which said rods engage as the plate is moved, said engagement acting to retard the movement of the plate and back just prior to the back reaching its limit of movement, substantially as described.

1,301,021. CAR-SEAT BACK. SHERIDAN A. WALKER, New York, N. Y., assignor, by mesne assignments, to The Carson Company, Chicago, Ill., a Corporation of Illinois. Filed July 9, 1918. Serial No. 244,068. 6 Claims. (Cl. 155—35.)



1. In a car seat back, the combination of a body, covering material for said body, means for securing said covering to said back to provide an elongated slit-like aperture having the walls thereof formed of said covering material, and said aperture extending along the top edge of said back and serving as a receptacle for tickets, substantially as described.

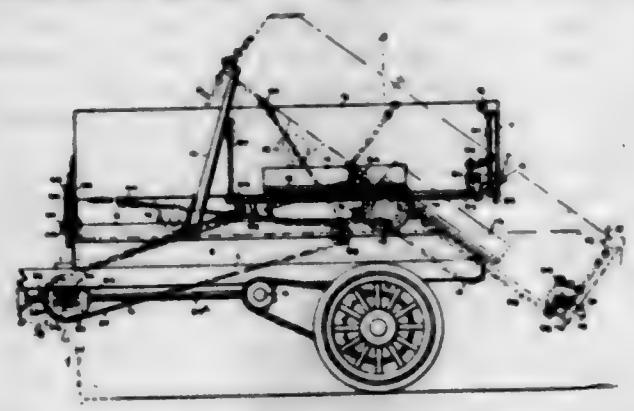
1,301,022. SPINNING OR WINDING MACHINE. WILLIAM E. WALSH, Lowell, Mass., assignor to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed July 22, 1918. Serial No. 245,978. 20 Claims. (Cl. 242—43.7.)



13. In a machine of the character described, the combination of spindles and yarn guiding means for directing yarn to bobbins on said spindles, a cam actuated swing arm and connections for imparting relative service traverse between the bobbins and yarn guiding means, said connections including a traverse rod, a movable plunger on the rod, and means for locking the plunger to the rod.

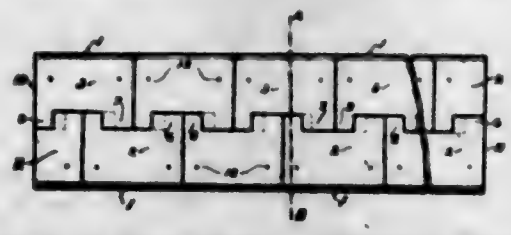
1,301,023. AUTOMATIC DUMP-BODY FOR VEHICLES. JAMES B. WELLS, Tacoma, Wash. Filed Dec. 28, 1917. Serial No. 209,292. 1 Claim. (Cl. 21—20.)

In combination with a vehicle chassis, a main frame mounted on the chassis, a roller shaft having trunnions journaled on the main frame and projecting beyond the sides thereof, said roller shaft being of length equal to the distance between said main frame, a dump body, elongated loops carried by the bottom of the body and depending within said main frame adjacent its opposite sides, said loops receiving and arranged to have their upper stretches continuously bear on said roller shaft, rack bars fixed to the opposite sides of the body, flanged pinions fixed on the outer ends of said roller shaft trunnions and meshing with said rack bars, the flanges of said pinions bearing against the sides of said rack bar to main-



tain said pinions in proper position, and mechanism for moving the body back and forth.

1,301,024. INTERLOCKING CULVERT-BLOCK. FREDERICK S. WENDELKEN, Denver, Colo. Filed Jan. 30, 1918. Serial No. 214,437. 5 Claims. (Cl. 72—52.)



1. A block of substantially a U-shaped cross section having the edges of the two sides mortised oppositely diagonal to the block ends and sides and with mortise floors parallel to the base of the block, substantially as described.

2. A block of substantially a U-shaped cross section provided with interlocking devices at the edges of the two sides consisting of diagonal mortises intermediate of the block ends and resulting complementary tenons, the diagonal walls of said mortises in the opposite sides being perpendicular to the base of the block and at opposite diagonals to the ends and sides of the blocks, substantially as described.

3. A culvert block of substantially U-shaped cross section having the edges of the two sides oppositely diagonally grooved parallel to the plane of the base of the block forming diagonal mortises intermediate of the ends of the sides and resulting tenons at each side of said mortises, the combined longitudinal width of the tenons being equal to the longitudinal width of the intermediate mortise.

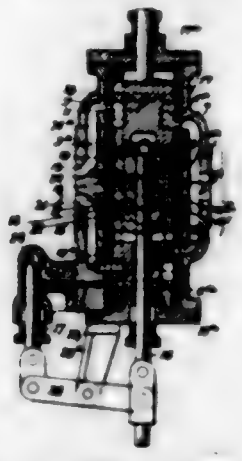
4. A block having mortises and tenons adapted to interlock with a series of similar blocks reversed and longitudinally alined, the interlocking faces of said tenons being disposed perpendicular to the base of the block and diagonal to the ends and sides of the block to prevent lateral or longitudinal displacement of a block in the series, substantially as described.

5. Culvert blocks of substantially U-shaped cross section adapted to be assembled in two longitudinally alined series, one series with sides extending upward and the other series with sides extending downward and resting upon said first series forming a conduit, the edges of the sides of said blocks being mortised and tenoned to interlock in dove-tail joints, the interlocking faces of said tenons being disposed perpendicular to the base of the blocks and at opposite diagonals to the sides and ends of the blocks to prevent lateral or longitudinal displacement of any block in the series, substantially as described.

1,301,025. MEANS FOR DISTRIBUTING ACTUATING FLUID IN ENGINES. WILLIAM ARMSTRONG WOODESON, Gateshead, England. Filed Oct. 11, 1917. Serial No. 196,019. 4 Claims. (Cl. 136—2.)

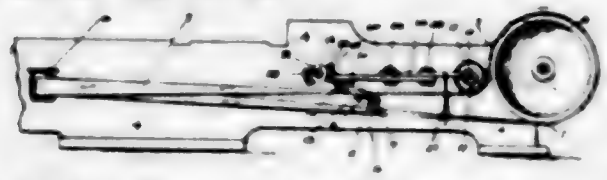
1. Means for distributing actuating fluid in engines of the kind referred to comprising a chest having a steam inlet passage, steam admission passages to the engine

and steam exhaust passages, a main piston valve endwise movable within said chest and controlling said steam admission and exhaust passage, a liner fitted in said chest and having two pairs of ports (17^b, 17^c and 18^b, 18^c) which respectively communicate with spaces at opposite ends of the main valve, a pair of ports (20, 21) in communication with the steam supply and, nearer the ends of the liner than said pair of ports (20, 21), two ports (19 and 22) communicating respectively through separate passages with the exhaust, the longitudinal distance between the ports (20 and 21) of the single pair being greater than the distance between the adjacent ports



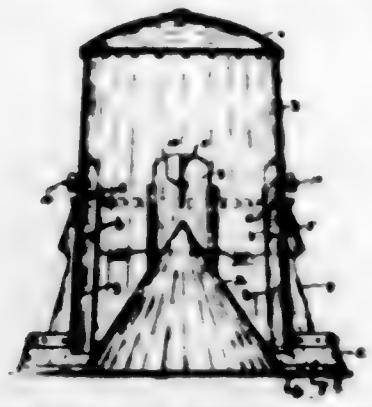
(17^b, 18^b) of the two pairs of ports (17^b, 17^c and 18^b, 18^c) an auxiliary valve endwise movable in said liner and formed with ports (13 and 14), and means, directly connected with the auxiliary valve and through a lost motion connection with the main valve, for imparting movement thereto from the engine piston, the arrangement being such that one of each pair of the ports (17^b, 17^c and 18^b, 18^c) will be in communication with the respective ports (13 and 14) in the auxiliary valve, when the latter is in either extreme position, the ports in the said valve in that position respectively communicating with the steam supply and exhaust, substantially as described.

1,301,026. BELT-TIGHTENER. GEORGE A. YEATON, Portland, Oreg. Filed Jan. 2, 1918. Serial No. 210,099. 4 Claims. (Cl. 64—5.)



1. In a belt tightener, a pair of longitudinally adjustable arms; a pulley rotatably mounted upon each of said arms; means to rigidly secure said arms in any desired angular relationship; and means to rigidly secure the facial alinement of said pulleys.

1,301,027. SWINE-FEEDING RECEPTACLE. JAMES R. BARNES, Beaver Crossing, Nebr. Filed Feb. 13, 1919. Serial No. 276,732. 3 Claims. (Cl. 119—53.)



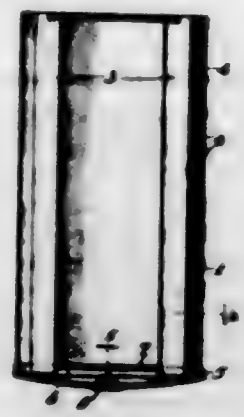
1. In a feeding device, a circular receptacle having an upwardly convergent wall and having its bottom provided centrally thereof with a cone-shaped member, said receptacle wall being provided intermediate its top and bottom with a plurality of feed-openings, an approximately cylindrical casing within and secured to the receptacle with its lower end disposed adjacent to the base of the cone-shaped member, near the bottom of the receptacle, and a plurality of doors mounted upon the wall of the casing, each door being disposed between a feed-opening and said cone-shaped member and arranged to be adjusted longitudinally of the casing to project a selected distance below the lower end of said casing.

1,301,028. WHEEL-BRACKET. RUSSELL A. BATES, Grand Rapids, Mich., assignor to L. D. Taylor, Grand Rapids, Mich. Filed Jan. 12, 1917. Serial No. 141,950. 3 Claims. (Cl. 224—29.)



2. In a bracket for securing extra wheels to the body of an automobile, supporting arms secured to the automobile body near the top and bottom thereof, a bracket secured to the said arms near their longitudinal centers, a supporting lug extending from the surface of the bracket, a screw threaded end projecting from the end of the lug and having a laterally disposed hole through it, an extension made to engage the screw threaded end of the lug, and having a laterally disposed hole corresponding with the hole in the screw threaded end of the supporting lug, a pin engaging said holes, a screw threaded end on the extension having a laterally disposed hole through it, a nut made to engage the screw threaded end on the extension, and a pin passed through the hole in the end of the extension.

1,301,029. BATH-CABINET. IRVING MCC. BEAN, Milwaukee, Wis.; Mabel Webster Bean, executrix, and First Trust Company, executor, of said Irving McC. Bean, deceased. Filed May 22, 1918. Serial No. 29,725. 13 Claims. (Cl. 4—26.)



1. A shower bath cabinet comprising, a single sheet of metal bent to form the side walls and having its

vertical edges spaced apart to provide an entrance, and a one piece metal bottom in the form of a basin in which the side walls set.

1,301,030. IRRIGATING-VALVE. EDWARD BENNER, Los Angeles, Calif. Filed Sept. 30, 1918. Serial No. 256,192. 7 Claims. (Cl. 251—57.)



1. In a valve of the class described, a frame made of channel bars with the flanges of the two opposite bars toward each other, a valve seat also made of channel bar with one flange engaging over one flange of the frame within the frame and secured at the points of engagement to the frame, and a cover plate slidingly disposed between the flanges of the two opposite bars of the frame so as to normally engage with the valve seat.

1,301,031. FISH-TRAY. RAYMOND B. BENTLEY, East San Pedro, Calif. Filed Apr. 4, 1918. Serial No. 226,789. 4 Claims. (Cl. 220—136.)



1. An apparatus for treating fish comprising, a foraminous basket rectangular in plan with a flat bottom and straight sides, and a plurality of flat foraminous trays removably stacked one upon the other in the basket and having means for spacing the trays apart.

4. A tray member comprising, a flat wire screen having rolled side edges, wires in each of said rolled side edges, U-shaped binding plates secured to the ends of the tray between the ends of the wires, and handles secured to the U-shaped plates and extending upwardly, so that the handles of one tray member will support the next tray member and hold the tray members spaced apart.

1,301,032. FASTENING-INSERTING MACHINE. GEORGE H. BLACK, Rochester, N. Y., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 10, 1917. Serial No. 201,371. 14 Claims. (Cl. 12—17.)

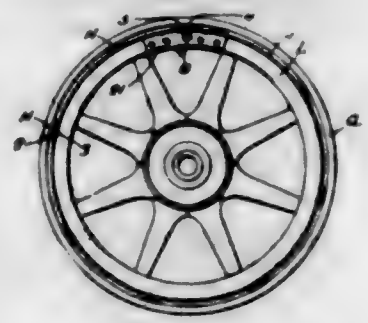
1. In a machine of the class described, the combination of a work supporting table and a rib bending device relatively arranged to permit an insole to be thrust sidewise across the table and under the bending device for bending the rib inwardly from the edge of the insole, and means for fastening the rib in its inwardly bent position.

9. A machine of the class described comprising, in combination, a fastening inserting mechanism, and insole supporting means constructed and arranged to cause the sewing rib of a welt insole to be bent inwardly from the edge of the insole and presented in said bent position for the operation of the fastening inserting mechanism.

13. In a machine of the class described, the combination of a fastening inserting mechanism, a relatively movable insole support constructed and arranged to present an insole having a sewing rib to the fastening inserting mechanism, and sewing rib engaging means operating to force the outer wall of the sewing rib into the plane of operation of the inserting mechanism.

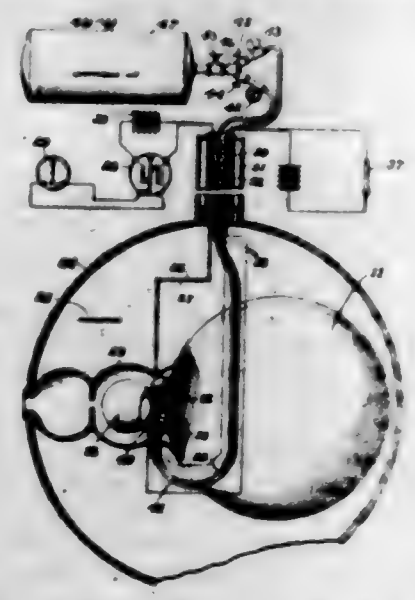


1,301,033. DEMOUNTABLE RIM. WADE W. BOWMAN, New York, N. Y. Filed June 9, 1917. Serial No. 173,727. 10 Claims. (Cl. 152—21.)



3. A wheel comprising a fixed rim and a movable rim, means whereby to connect said rims together by a rotary movement of one rim relatively to the other, a cam movably carried by one rim having its cam surface disposed to engage a part connected with the other rim whereby movement of said cam will move said rims relatively to each other, the part with which the cam engages comprising a crank arm, and the cam being arranged to swing said crank arm.

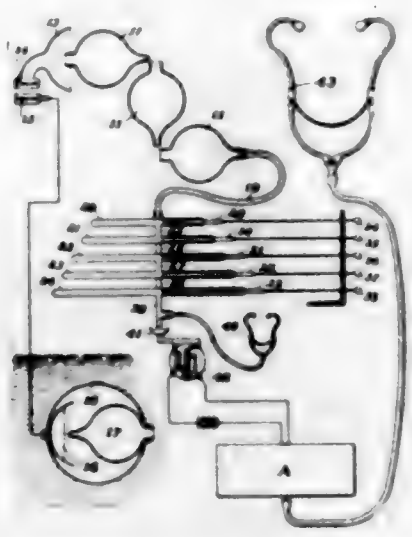
1,301,034. SOUND-DETECTOR. JOHN A. BURGESS, Toronto, Ontario, Canada, assignor of one-half to George B. Hutchings, Richmond, Va. Filed June 8, 1917. Serial No. 173,584. 22 Claims. (Cl. 181—0.5.)



1. A method of sound detection consisting in varying molecular movement within a body by exposing the body

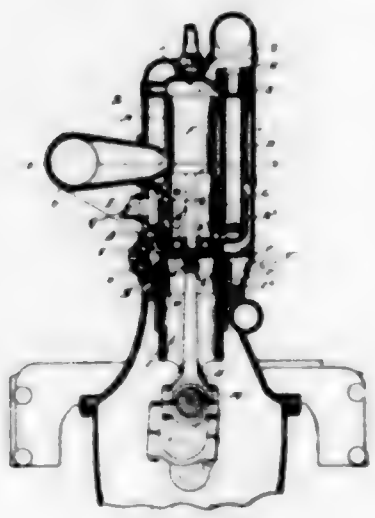
to succeeding areas of condensation and rarefaction of a sound wave, and then using the sum of the variations of movement of the molecules within the body to indicate the presence of the sound.

1,301,035. SOUND-INTERFERENCE DEVICE. JOHN A. BURGESS, Toronto, Canada, and GEORGE B. HUTCHINGS, Richmond, Va. Filed Aug. 10, 1917. Serial No. 185,578. 10 Claims. (Cl. 181—5.)



1. A method of purifying composite sound consisting in eliminating or counterbalancing each undesired sound by causing it to interfere with itself.

1,301,036. INTERNAL-COMBUSTION ENGINE AND METHOD OF OPERATING THE SAME. JOHN M. CAGE, Detroit, Mich. Filed Mar. 15, 1916. Serial No. 84,420. 8 Claims. (Cl. 60—32.)



1. In an explosion engine, the combination with a cylinder having explosion and gas-compression chambers in the opposite ends thereof, of a piston in said cylinder, a sleeve-valve concentric with said cylinder for controlling ports of one of said chambers, and a tube eccentric to and external of said cylinder carried by said sleeve-valve, forming a transfer conduit and valve controlling the other of said chambers.

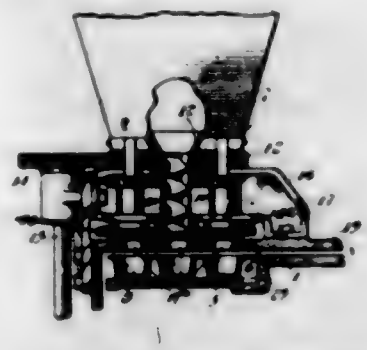
5. The herein described method of evacuating an explosion chamber, comprising discharging the exhaust into a chamber of constant capacity, forming a partial vacuum in the chamber in advance of the discharge of exhaust thereinto to accelerate the velocity of the exhaust wave into the chamber, and stopping the exhaust discharge before the return wave of exhaust reaches the point where the exhaust is discharged into the chamber.

1,301,037. SPACING DEVICE FOR WRAPPING-PAPER ROLLS. BERT CARLISLE, Santa Ana, Calif. Filed Feb. 6, 1918. Serial No. 215,664. 1 Claim. (Cl. 211—32.)



A spacing device for roll paper cutters, comprising the combination with a paper cutter construction having spring-pressed arms, of a piece of flat metal bent longitudinally to form a flat straight blade and an attaching bar, means for connecting the attaching bar to the ends of the spring-pressed arms, and a spacing bar mounted behind the blade and bar to bear against a paper roll and guide the paper between the blade and spacing bar; said spacing bar construction comprising a piece of sheet metal cut and bent to form a guide plate, a spacing bar, and flanges extending upwardly and forwardly from the ends of the guide plate and the ends of the spacing bar and fitting against the lower faces of the ends of the blade and the back faces of the ends of the attaching bar; the parts being rigidly secured together.

1,301,038. APPARATUS FOR DEPOSITING DOUGH. JAMES S. CLINTON, Chicago, Ill. Original application filed June 13, 1912, Serial No. 703,442. Divided and this application filed Nov. 5, 1915. Serial No. 59,814. 5 Claims. (Cl. 107—29.)

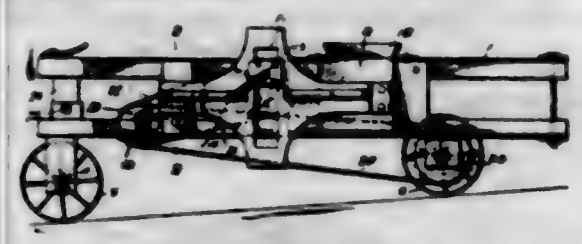


1. In a cup cake machine in combination, a movable support, baking tins carried by said support, a fixed plate beneath which said support moves, said plate being provided with apertures, a bridge piece mounted above said apertures, a hopper for dough carried above said bridge piece, and feeding worms carried by said bridge piece for delivering dough from said hopper into said tins, the axes of said feed worms being arranged in alinement with said tins.

3. In a cup cake machine in combination, a revoluble table, a fixed plate covering a portion of said table, a bridge piece mounted above said plate, a hopper supported by said bridge piece, a plurality of feeding worms passing through tubes suspended in said bridge piece for delivering dough from said hopper, and a reciprocating cut-off plate operating in front of the lower ends of said tubes, said plate being provided with a plurality of elongated apertures, and having guide strips attached to its upper face, said bridge piece having guides depending from its lower portion for coöperating with said guide strips to suspend said plate.

5. Apparatus of the class specified comprising a hopper, openings in the bottom thereof, feed devices for said openings, means for operating said feed devices, and cut-off mechanism comprising a sliding member provided with adjustable cut-off members.

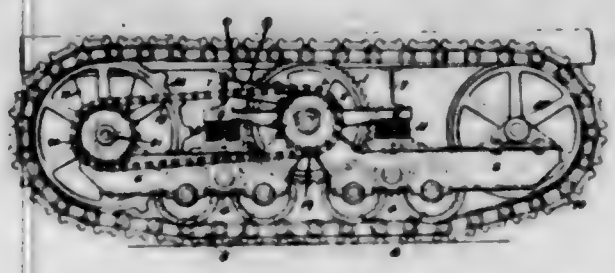
1,301,039. BALING-PRESS. STEPHEN JAMES COAFFEY, Fallon, Nev. Filed Apr. 30, 1918. Serial No. 231,651. 2 Claims. (Cl. 100—2.)



1. In a baling press, a plunger comprising a plate, a second plate secured to the first named plate intermediate the ends of the said plate, said last named plate forming a stem and having the greatest width intermediate its ends and reduced at each end, said stem having a vertical slot at the widest portion and having laterally extending ribs at each side of each of the reduced portions, and having flanges at the ends of the first named plate, said ribs and flanges serving as guides.

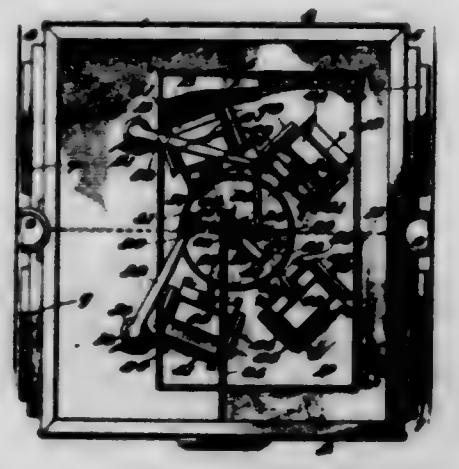
2. In a baling press, a plunger comprising a head and a stem, the head and the stem being plates, the head plate being secured to one end of the stem plate intermediate the ends of the head plate, said stem plate having longitudinally extending central ribs forming guides for the stem, the head plate having flanges at its ends extending substantially parallel with the stem.

1,301,040. TRACTION-ENGINE. CHARLES COLAHAN, Stockton, Calif. Filed Feb. 14, 1918. Serial No. 217,146. 5 Claims. (Cl. 180—9.)



1. In a traction engine, in combination, a traction belt, sprocket and idler wheels over which said belt is carried, flexible truck frames provided with supporting wheels within said belt, an extension arm on each of said frames, a centrally transverse connecting shaft to which said truck frames are pivoted, and a gear mounted on said shaft to actuate the supporting wheels through gear wheels independently of the traction belt.

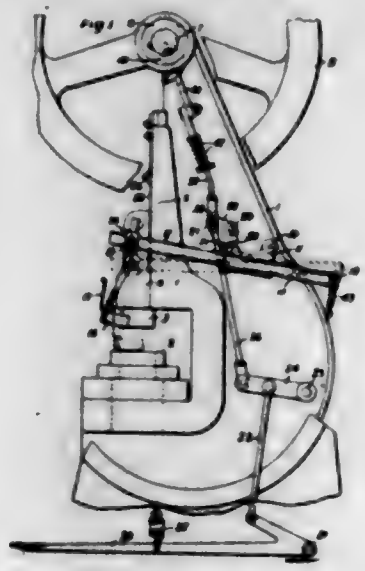
1,301,041. GAS-METER. EDMUND S. DICKEY, Baltimore county, Md., assignor to American Meter Company, Inc., New York, N. Y., a Corporation of Delaware. Filed Mar. 20, 1918. Serial No. 223,575. 11 Claims. (Cl. 73—1.)



1. In a gas meter, in combination, a suitable casing having separate gas-tight compartments and intake and outlet openings, two sets of diaphragms each set located in a separate compartment, a plurality of valves controlling the flow of gas into and out of one set of diaphragms and its compartment, and a plurality of valves controlling the flow of gas into and out of the other set of diaphragms and its compartment.

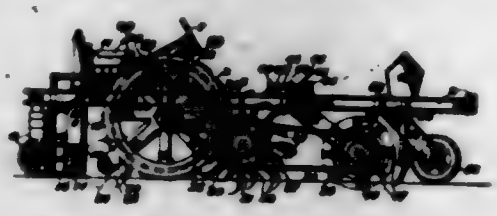
2. In a gas meter, in combination, a suitable casing having separate compartments therein, and intake and outlet openings, two pairs of diaphragms, each pair located in separate compartments, valves for controlling the flow of gas to and from each pair of diaphragms and its compartment, a valve operating shaft having three cranks, two of the valves being connected with one crank and the other two valves connected with the other two cranks respectively, connections between a diaphragm in each compartment and the valve operating shaft, whereby the valves are operated upon the expansion and collapse of the diaphragms.

1,301,042. GUARD FOR MACHINE-TOOLS. THOMAS R. DICKS, Wilkinsburg, Pa. Filed June 6, 1916. Serial No. 101,912. 2 Claims. (Cl. 74—105.)



1. A safety attachment for punch presses and similar machine tools comprising a pivoted supporting arm, a guard carried thereby, a lever mechanism for bringing the guard into operative position and for thereafter operating the press, a latch normally tending to swing into the path of movement of the said arm, and means associated with a moving part of the machine for deflecting the said latch from the path of the said arm.

1,301,043. AGRICULTURAL IMPLEMENT. EDWARD J. DOUGHERTY, St. Louis, Mo. Filed Nov. 6, 1916. Serial No. 129,721. 10 Claims. (Cl. 97—72.)



1. An agricultural implement, comprising a frame, mechanism supported by the frame for pressing the vegetation to the ground, a power device for propelling the frame and operating said mechanism, mechanism operated by travel of the frame for cutting the vegetation into short lengths, and for cutting the soil into strips parallel with the travel of the implement, and plow mechanism operating in the ground whereby said strips are broken and the soil is raised to cover the vegetation cut as aforesaid.

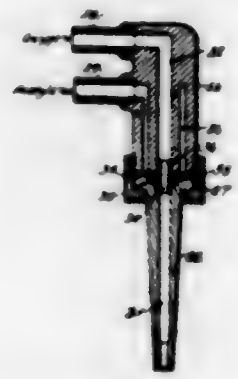
2. An agricultural implement, comprising a power driven frame, mechanism operated by travel of the frame for pressing the vegetation to the surface of the ground, cutters for cutting the vegetation into short lengths and for cutting the soil into elongated strips parallel with the direction of travel of the implement, plow mechanism for raising the soil and breaking said strips to cover the

vegetation with the soil, and gearing for operating said plow mechanism in a forward direction in the soil whereby the soil is raised by the plow mechanism to cover the vegetation as aforesaid.

5. An agricultural implement, comprising a frame, mechanism operated by travel of the frame for pressing the vegetation to the surface of the ground, tractor wheels supporting the frame, a shaft, plows supported by said shaft and arranged to work in the ground, gearing for driving said shaft by the tractor wheels whereby the plows are caused to raise the soil and to cover the vegetation pressed to the ground as aforesaid, and mechanism for breaking the soil after the soil has settled after having been raised by the plow mechanism.

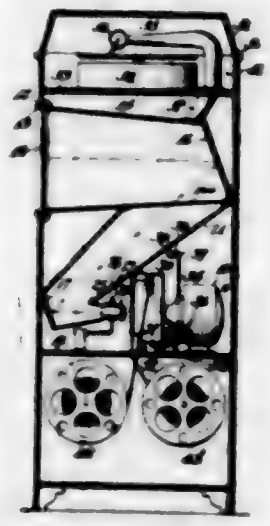
7. An agricultural implement, comprising a power driven frame, cutters for cutting the soil into elongated strips parallel with the direction of travel of the implement, plowing mechanism for raising the soil and breaking said strips, gearing for operating said plow mechanism in a forward direction in the soil, whereby the soil is raised by the plow mechanism, and mechanism driven by the plow mechanism for cutting the soil transversely of said strips after the soil has been raised by the plow mechanism.

1,301,044. APPARATUS AND METHOD OF BURNING COMBUSTIBLE GASES. MELBOURNE KEITH DUNHAM, Jersey City, N. J. Filed Apr. 10, 1918. Serial No. 227,646. 14 Claims. (Cl. 158—27.4.)



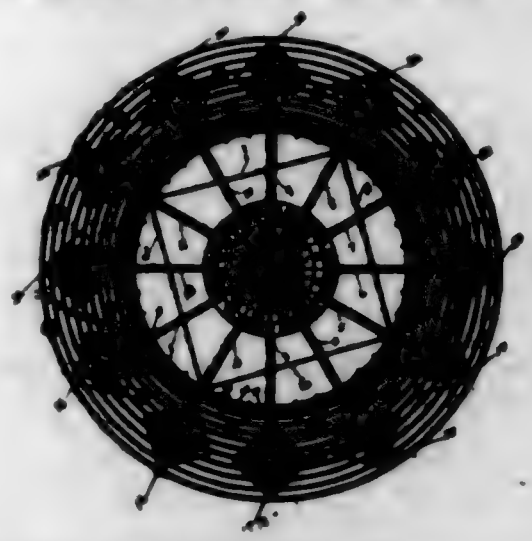
11. A cutting or welding torch mixing chamber, having an oxygen inlet of the same size as the mixing chamber, and an acetylene inlet of slightly less than one half the cross sectional area of the mixing chamber.

1,301,045. COMBINED MOTION-PICTURE AND SOUND-REPRODUCING DEVICE. ALBERT L. EDMISON and JOHN RIKKELMAN, Los Angeles, Calif. Filed Nov. 24, 1917. Serial No. 204,128. 2 Claims. (Cl. 88—16.2.)



1. In an entertainer; a horn; a phonograph located above said horn; means for connecting the interior of said horn with the tone arm of said phonograph; a translucent flexible diaphragm closing the front of said horn; a motion picture projector located below said horn; a lower mirror on which the light from said projector impinges; and an upper mirror located in the back of said horn and so placed as to receive the light reflected from said lower mirror and project same on said diaphragm.

1,301,046. MEANS FOR DEMONSTRATING STELLAR POSITIONS AND INFLUENCES. GENEVIEVE PRICE EVANSON, Cincinnati, Ohio. Filed June 12, 1916. Serial No. 103,071. 15 Claims. (Cl. 35—8.)

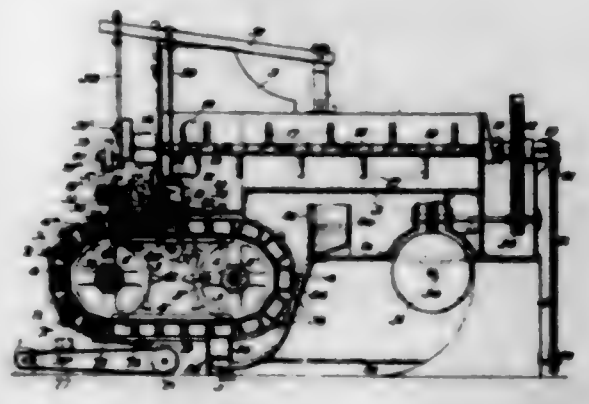


9. In means for demonstrating stellar positions, influences and in combination; a tripod stand having detachably attached thereto a chart-pole and a spindle; a chart having placed thereon a figure called the mundane sphere, said chart being securely attached to said pole and detachably mounted on said spindle; a wheel called the celestial sphere rotatably mounted on said spindle, said wheel being adapted to make all desirable alinements with said mundane sphere; arms having attached thereto disks representing various heavenly bodies rotatably mounted on said spindle; and a nut run onto the threaded end of said spindle.

1,301,047. MANUFACTURE OF AMMONIUM NITRATE. FRANCIS ARTHUR FREETH, Sandiway, and HERBERT EDWIN COCKBURN, London, England. Filed Sept. 16, 1918. Serial No. 254,339. 2 Claims. (Cl. 23—21.)

2. The process of obtaining pure ammonium nitrate which consists in producing a solution saturated with respect to ammonium nitrate, sodium nitrate and sodium sulfate at a temperature not less than that sufficient to prevent the formation of the double salt $NaNO_3.Na_2SO_4.1H_2O$, diluting this solution with sufficient water to enable the sodium salts to remain in solution at a given lower temperature, cooling to that temperature and separating the ammonium nitrate which crystallises out when the solution is thus cooled.

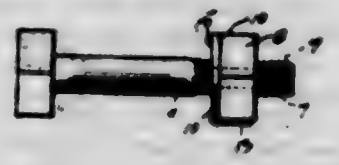
1,301,048. BRICKMAKING-MACHINE. IVAN C. FREY, York, Pa. Filed Dec. 1, 1915. Serial No. 64,418. 7 Claims. (Cl. 25—100.)



2. In a brick machine, a housing having a guideway, a plurality of independent molds disposed within the hous-

ing, sprocket wheels arranged to engage the molds successively for moving them in the guideway and means for bumping said molds during their engagement by the sprocket wheels.

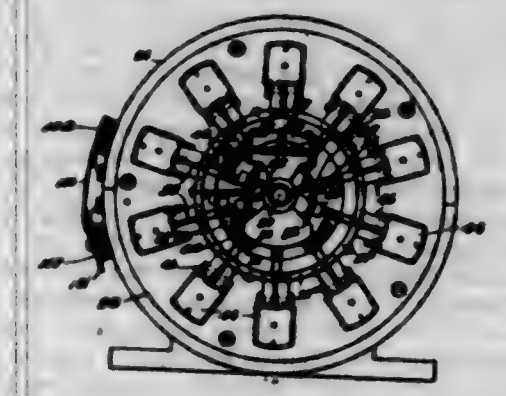
1,301,049. LOCK-NUT WASHER. CHARLES E. GREENE, Hastings, Fla. Filed May 9, 1917. Serial No. 167,470. 2 Claims. (Cl. 151—20.)



1. A lock washer comprising a circular body of varying thickness, a plurality of inwardly extending projections engageable with a bolt to prevent rotation of the washer, and an outwardly radially extending tongue of thickness less than that of the adjacent side of the washer whereby a shoulder is formed permitting easy insertion of a tool between the tongue and work to bend the tongue into engagement with the nut.

2. A lock washer comprising a circular body having one of its faces inclined toward the other, means for preventing the rotation of the washer on a bolt, and a tongue of lesser thickness than the adjacent section of the washer, one face of the tongue and washer being flushed whereby a shoulder is formed between the opposed face of the tongue and the washer.

1,301,050. ELECTRIC MOTOR. EDWIN V. HAGMAN, Boston, Mass., assignor to Alfred A. Ziegler, trustee, Boston, Mass. Filed May 12, 1914. Serial No. 838,253. 23 Claims. (Cl. 173—36.)



4. In an electric-motor, the combination of a shaft rotatable in either direction through different predetermined arcs, a plurality of separately energizable electromagnets arranged in a circle concentric to said shaft, each magnet having a pole-piece, a crescent-shaped armature carried by said shaft and arranged in the fields of all of said magnets, and a crescent-shaped piece of non-magnetic material arranged between the two horns of said armature, which serves as a counterbalance therefor, substantially as described.

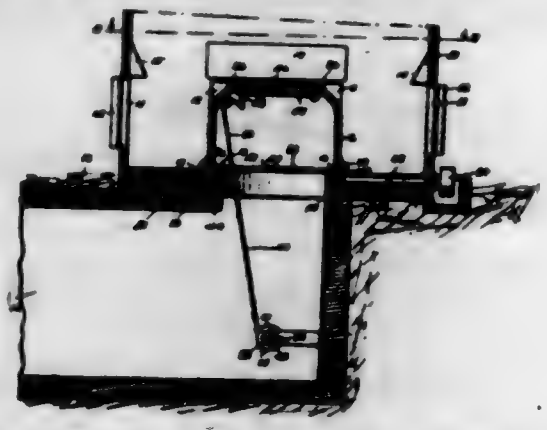
6. In an electric-motor, the combination of a shaft rotatable in either direction through different predetermined arcs, a plurality of electro-magnets arranged in a circle concentric to said shaft and separately energizable, an armature carried by said shaft and arranged in the fields of all of said magnets, and adapted upon energization of any magnet to move in either direction through the shortest arc to a predetermined position relative to the energized magnet and to correspondingly rotate the shaft, arresting-means controlled by any energized magnet to check rotation of the shaft suddenly upon its arrival at such predetermined position, and hold it while said magnet remains energized, and release it upon deenergization of the magnet, and means arranged to lock said shaft in said predetermined positions with respect to said magnets upon deenergization thereof, substantially as described.

16. In an electric-motor, the combination of a shaft, a series of electro-magnets arranged in a circle concentric to said shaft, a main-armature fast on said shaft and rotatable therewith, means arranged to lock the shaft normally against rotation, an auxiliary-armature for each magnet having a tail-piece, means coöperating with the tail-piece of any auxiliary-armature to unlock said shaft when the corresponding magnet is energized, and means coöperating with the tail-piece of said auxiliary-armature and arranged to arrest said shaft when the main-armature arrives at the predetermined position, substantially as described.

17. An electric-motor comprising a shaft, a series of electro-magnets arranged in two sets circumferentially about the shaft, circuit-connections for said magnets arranged for separate energization of the magnets and of each set of magnets, a main-armature common to all said magnets fast on said shaft and rotatable therewith, means arranged to lock said shaft against rotation when said magnets are deënergized, an auxiliary-armature for each magnet, means operable by the auxiliary-armature of any magnet upon attractive movement thereof and arranged to unlock said shaft when said magnet is energized and to break the circuits through the other set of magnets, and means coöperating with said auxiliary-armature and arranged to arrest said shaft when said main-armature arrives at the predetermined position, substantially as described.

18. An electric-motor comprising a shaft, a series of electro-magnets arranged circumferentially about the shaft, circuit-connections to said magnets, a main-armature common to all said magnets secured to said shaft and rotatable therewith, a notched-member secured to said shaft, a pawl adapted to engage said member to lock said shaft against rotation, an auxiliary-armature for each magnet, means arranged for operation by the auxiliary-armature of any magnet when said magnet is energized to actuate said pawl to unlock said shaft, and means rotatable with said shaft adapted to be operated by said auxiliary armature to again lock said shaft when the main-armature assumes any predetermined position, substantially as described.

1,301,051. SILO. LOREN D. HART, Dickens, Iowa. Filed Sept. 4, 1917. Serial No. 189,503. 10 Claims. (Cl. 214—17.)



1. A silo having at its lower portion a plurality of openings through which animals may feed, and a central upwardly extending cylindrical member at the bottom of said silo.

2. A silo having at its lower portion a plurality of openings through which animals may feed, a device on the interior of the silo above the level of said openings, for engaging downwardly moving ensilage, and a central upwardly extending cylindrical member at the bottom of said silo.

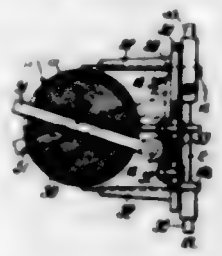
3. A silo having at its lower portion a plurality of openings through which animals may feed, and a central upwardly extending cylindrical member at the bottom of said silo, having an opening through it.

4. A silo having at its lower portion a plurality of openings through which animals may feed, a device on the interior of the silo above the level of said openings, for engaging downwardly moving ensilage, and a central up-

wardly extending cylindrical member at the bottom of said silo, having an opening through it to permit ensilage to pass downwardly from the central portion of the silo, said silo being designed to be used in connection with a passageway leading to a point below the central port of the silo.

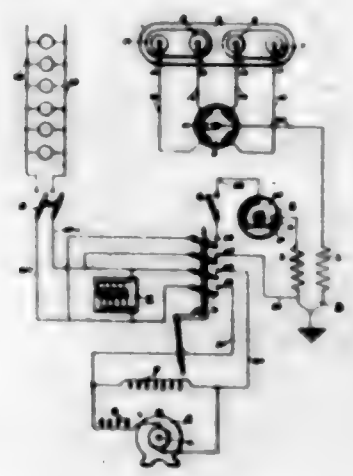
5. A silo having at its lower portion a plurality of openings through which animals may feed, a central upwardly extending cylindrical member at the bottom of said silo, having openings at its upper and lower ends, a closure device for one of said openings, and means for controlling said closure device.

1,301,052. ADJUSTABLE PROPELLER. SETH HART and ROBERT I. EUSTIS, Los Angeles, Calif. Filed Sept. 10, 1917, Serial No. 190,527. Renewed Mar. 4, 1919. Serial No. 280,661. 7 Claims. (Cl. 170—163.)



1. In combination, a propeller shaft, a propeller blade mounted on the shaft to be adjustably revoluble about an axis longitudinal of the blade, a sliding member rotating with and slidable longitudinally of the shaft, and a tilting rod for the blade slidingly engaging the blade and pivotally connected with the sliding member, said pivotal connection being adjustable on the sliding member so as to adjust the normal position of the tilting rod and of the blade.

1,301,053. IGNITION DEVICE FOR MOTOR-VEHICLES. JOHN ALLEN HIMANY, Jersey City, N. J., assignor to Lindsay Auto Parts Company, Indianapolis, Ind., a Corporation of Indiana. Original application filed July 27, 1910, Serial No. 574,030. Divided and this application filed Nov. 21, 1917. Serial No. 203,171. 6 Claims. (Cl. 123—148.)



1. In an ignition system for internal combustion engines, the combination with a spark producing device including a winding, of a source of electrical energy comprising a storage battery and dynamo adapted to charge the same through an automatically controlled circuit, an ignition circuit adapted to connect said source of energy with said winding, a switch for interrupting the flow of current in said ignition circuit independently of current flow in the other circuits of the system, a circuit interrupting member periodically actuated by the engine for controlling and timing the current flow in said ignition circuit, and means intercalated in said ignition circuit for automatically preventing excessive current flow therein when the rate of periodic actuation of said circuit interrupting member falls below a certain value.

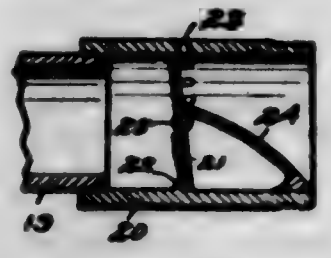
2. In an ignition system for internal combustion engines, the combination with a current transforming device comprising high and low tension windings, of a source of electrical energy comprising a storage battery and charging means therefor connected thereto through an automatically controlled circuit, a primary circuit adapted to connect said source of energy with said low tension winding, a switch for interrupting the flow of current in said primary circuit independently of current flow in the other circuits of the system, a circuit interrupting member periodically actuated by the engine for controlling and timing the current flow in said primary circuit, and current actuated means intercalated in said primary circuit for automatically preventing excessive current flow therein when the rate of periodic actuation of said circuit interrupting member falls below a certain value.

3. In an ignition system for variable speed internal combustion engines, the combination with a spark producing device including a winding, of a source of electrical energy comprising a storage battery and charging means therefor connected thereto through an automatically controlled circuit, an ignition circuit adapted to connect said source of energy with said winding, a normally closed circuit interrupting member periodically actuated by the variable speed engine for controlling and timing the current flow in said ignition circuit, and current actuated means intercalated in said ignition circuit for automatically preventing excessive current flow therein when the rate of periodic actuation of said circuit interrupting member falls below a certain value.

4. In an ignition system for internal combustion engines, the combination with a spark producing device including a winding, of a source of electrical energy comprising a storage battery and charging means therefor connected thereto through an automatically controlled circuit, an ignition circuit adapted to connect said source of energy with said winding, a circuit interrupting member periodically actuated by the engine for controlling and timing the current flow in said ignition circuit, and electromechanical means intercalated in said primary circuit for automatically preventing excessive current flow therein when the rate of periodic actuation of said circuit interrupting member falls below a certain value.

5. In an ignition system for variable speed internal combustion engines, the combination with a spark producing device including a winding, of a source of electrical energy comprising a storage battery and charging means therefor connected thereto through a manually closed circuit, an ignition circuit adapted to connect said source of energy with said winding, a normally closed circuit interrupting member periodically actuated by the variable speed engine for controlling and timing the current flow in said ignition circuit, and current actuated means intercalated in said primary circuit for automatically preventing excessive current flow therein when the rate of periodic actuation of said circuit interrupting member falls below a certain value.

1,301,054. AUTOMATIC AUXILIARY AIR-SUPPLY DEVICE FOR INTERNAL-COMBUSTION ENGINES. EDWARD G. HOUSER, Marshalltown, Iowa. Filed Apr. 6, 1918. Serial No. 227,155. 3 Claims. (Cl. 251—11.)

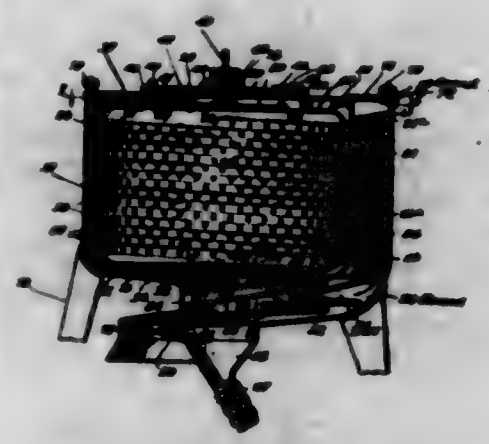


1. An auxiliary air attachment for motor vehicle engines comprising means for conducting air to the fuel supply of such engines, said means including a tube having

a flaring end, a valve casing, a butterfly valve therein, a shield for protecting a portion of said butterfly valve from contact with blasts of air passing through said air supply tube to said first described tubes, means for yieldingly holding said valve in its seated or closed position, said casing being provided with openings in its wall adjacent to said valve on the side of said casing opposite said shield, and on the side of the valve adjacent to the intake end of the valve casing.

3. In a device of the class described, a fuel mixture conducting tube, an auxiliary air supply tube arranged in communication with said first tube, a valve casing arranged in the path of air passing through said air supply tube, a butterfly valve in said casing, an inclined shield for protecting substantially one-half of said butterfly valve from the passing air, and for directing the passing air against the other half of said butterfly valve.

1,301,015. WASHING-MACHINE. ALONZO HUMPHREYS, Chicago, Ill. Filed Oct. 8, 1917. Serial No. 195,490. 22 Claims. (Cl. 68—18.)



12. In a washing machine of the character described, the combination of a casing, a foraminous drum mounted to rotate therein, said drum having on its side wall a plurality of corrugations arranged spirally, for the purposes described.

21. The combination with the relatively fixed casing of a centrifugal washing machine having a rotatable drum therein, of walls forming a channel adjacent to the body of said casing, one of said walls being hingedly mounted to form a door to open said channel into the interior of said casing, said casing having an opening to the outer air adjacent to said door, said door being mounted to close said casing opening.

1,301,055. WATER-MOTOR FAN. FRANK L. HURFF and ALBERT S. WRIGHT, Cleveland, Ohio. Filed Dec. 4, 1914. Serial No. 875,529. 2 Claims. (Cl. 230—1.)



1. A device of the character described comprising, in combination, a casing having an aperture in a side wall and adjacent one edge thereof, a shaft journaled within one of the side walls of the casing, a fan secured to the outer end of said shaft, a water wheel secured to the inner end of the shaft, a fitting having an inwardly converging portion which reposes within the aforesaid aperture, and a cap applied to the end of said fitting within the casing whereby the fitting is firmly drawn into contact with the edge of the aperture, the cap having a port in one side thereof through which a stream of water is directed against the vanes of the water wheel, said port being positioned to direct the stream in the plane of the wheel and tangential thereto.

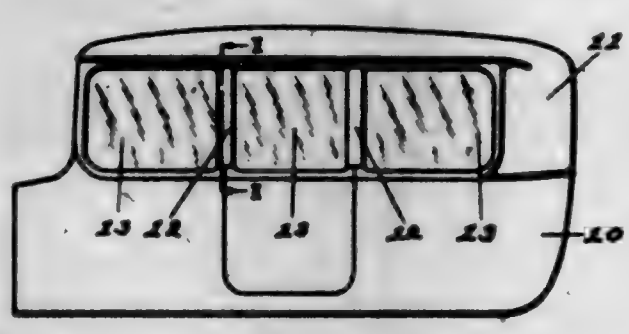
1,301,057. FOUNTAIN-PEN. CHARLES R. KEERAN, Chicago, Ill., assignor to Keeran Products Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1918. Serial No. 232,052. 6 Claims. (Cl. 120—42.)



1. In a fountain pen, the combination of a barrel having its open end threaded interiorly, a bushing formed to engage with the barrel threads with relatively great friction to form an ink-tight joint therewith, and a pen section formed to engage with the bushing with relatively small friction and forming an ink-tight joint therewith, whereby the pen section may be rotated to disengage from the bushing without unscrewing the bushing from the barrel, substantially as described.

6. In a fountain pen, the combination of a metallic barrel, a rubber bushing having a threaded connection with the barrel and engaging therewith in a manner to form a permanent and ink-tight joint with the barrel, and a rubber pen section removably threaded into the bushing, substantially as described.

1,301,058. VEHICLE-BODY. THOMAS J. KEHOE, Toledo, Ohio, assignor to The Willys-Overland Company, Toledo, Ohio. Filed Aug. 2, 1917. Serial No. 184,087. 16 Claims. (Cl. 21—62.)

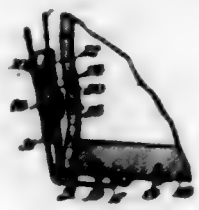


8. In a vehicle, the combination of a body, a top, a removable pillar, rotatable means extending longitudinally of the pillar and having its ends terminating between said body and top, and means connecting said rotatable means with said body and top adapted to effect the clamping of the same upon the pillar.

1,301,060. MANDOLIN-TAILPIECE. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1916. Serial No. 98,527. 4 Claims. (Cl. 84—146.)

1. A stringed instrument having a tail piece comprising a plate provided with hooked members for engaging

the ends of the strings, said plate being provided with heads over which the strings pass, a supplemental plate



having a loose connection with said tail piece, and a clamping device arranged to actuate said supplemental plate and clamp the same against the strings.

1,301,060. SUPPORT FOR MUSICAL INSTRUMENTS. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Aug. 4, 1916. Serial No. 113,077. 6 Claims. (Cl. 84—115.)



6. A harp support comprising a piece of stiff material, one end of which is of a size to accommodate the base of the harp, and the other end of which is of a size to accommodate the feet of the player, said harp support being provided at the last mentioned end with means for engaging a player's chair and holding same in position.

1,301,061. HARP. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1917. Serial No. 161,784. 10 Claims. (Cl. 84—14.)



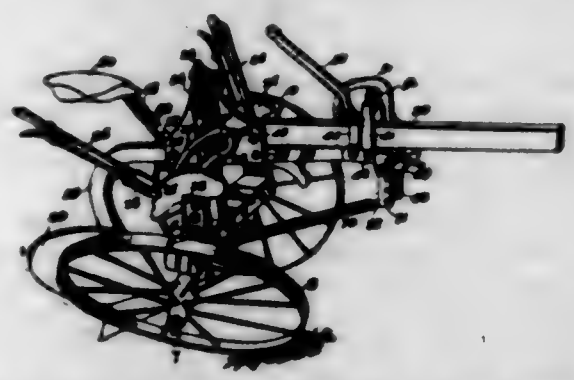
10. A harp having the upper end portion of its pillar provided with a recess, a reinforcing member 4 arranged in said recess, said reinforcing member having a flat lower portion 4^a and an upper box-like portion 4^b forming a socket open at the top and at one side and closed at the bottom by a cross piece 10, the end portion of the harp neck being fitted into said box-like portion and resting upon said cross piece 10, screws passed through the flat portion 4^a to hold said reinforcing member in position and other screws passing through the walls of said box-like portion 4^b and holding the end portion of said harp neck in position therein.

1,301,062. MUSICAL INSTRUMENT. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Mar. 18, 1918. Serial No. 223,116. 6 Claims. (Cl. 84—14.)



1. A harp having a hollow body provided with an aperture and a tuning fork device located within the hollow body and having a striker arranged adjacent to said aperture.

1,301,063. PLOW. OTTO H. KOEPLIN, Marion, Tex. Filed May 23, 1918, Serial No. 236,197. Renewed Mar. 6, 1919. Serial No. 281,061. 3 Claims. (Cl. 97—36.)



1. In a plow, the combination with a plow beam, of a tongue pivotally supported upon said beam, a bracket on said plow beam through which said tongue extends, a bracket provided with overhanging lips carried by said tongue, and lever means pivotally connected to said first-mentioned bracket and adapted to slide under said lips for adjusting the tongue with respect to said plow beam.

2. In a plow, the combination with a plow beam, of a tongue pivotally supported upon said beam, a bracket surrounding said tongue and attached to said plow beam, a lever provided with a curved lower end, said curved lower end attached to said bracket, said lower end of the lever being provided with flanges, means carried by the tongue and engaging said flanges and permitting the curved lower end to slide therein when said lever is swung upon the tongue for raising or lowering said tongue with respect to said plow beam.

1,301,064. ROAD-BED. HERBERT J. KRATZER, St. Louis, Mo. Filed Dec. 11, 1916. Serial No. 136,169. 7 Claims. (Cl. 104—14.)

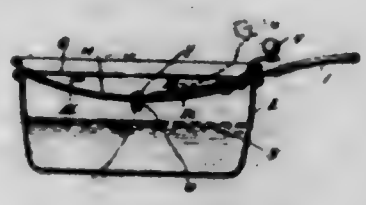
1. In roadbed construction, a longitudinally arranged groove formed in the roadbed being wider at the bottom than adjacent the top, a rail mounted in said groove, removable sectional rail supporting members mounted in said groove each having a rail base recess formed therein, said recesses of said members being for the reception of the base of said rail.

8. A road bed constructed of a body of concrete material, longitudinally arranged grooves formed in said concrete body each being enlarged at the bottom, resilient members mounted in said grooves, and rails secured to said resilient members, said resilient members and said rails adapted to be removed from said grooves without destroying said concrete body.



7. In roadbed construction, a rail bed comprised of self-hardening plastic material having a longitudinal groove formed therein, which is wider at the bottom than adjacent the top, a rail mounted in said groove, and a plurality of removably mounted fibrous supports for supporting said rail.

1,201,025. NOODLE-MAKING DEVICE. JOHN KUNST, New York, N. Y. Filed Aug. 7, 1916. Serial No. 113,533. 5 Claims. (Cl. 107—7.)



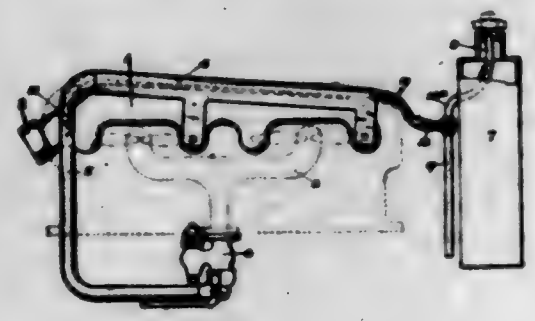
1. A noodle making device comprising a pan-like structure adapted to contain a quantity of dough, the bottom wall of said structure being perforated to permit portions of the dough to extend therethrough, and a cutter for cutting off the portions of dough extending through said perforations, said cutter comprising a member adapted to be moved transversely across the perforations and being flexible to permit its being bent to move portions thereof closer to or farther from the perforated bottom wall, for the purpose set forth.

2. A noodle making device comprising a pan-like structure adapted to contain a quantity of dough, the bottom wall of said structure being perforated to permit portions of the dough to extend therethrough, and a cutter for cutting off the portions of dough extending through said perforations, said cutter comprising a strip of material pivotally connected with said structure to be swung back and forth across said perforations, said cutter having an angularly disposed part operative as a wedge to force the dough through the perforations when the cutter is swung in one direction and as a knife to cut off the dough which extends through the perforations when the cutter is swung in the opposite direction, and the cutter being flexible to permit of its being bent to move its angularly disposed portion closer to or farther from the perforated bottom wall, for the purpose set forth.

4. A noodle making device comprising a pan-like structure adapted to contain a quantity of dough, the bottom wall of said structure being perforated to permit portions of the dough to extend therethrough, a cutter for cutting off the portions of dough extending through said perforations, the cutter comprising a member pivotally mounted to swing transversely across the perforations, said member at one side of the pivot thereof being disposed to rest substantially flat against the bottom wall to cut off the dough as said member is swung, and said member at the opposite side of the pivot being disposed at an angle to the surface of the bottom wall to serve as a wedge for forcing the dough through the perforations as said member swings, and the last mentioned portion of said member being flexible to permit of its being bent to move the angularly disposed portion closer to or farther from the bottom wall at will.

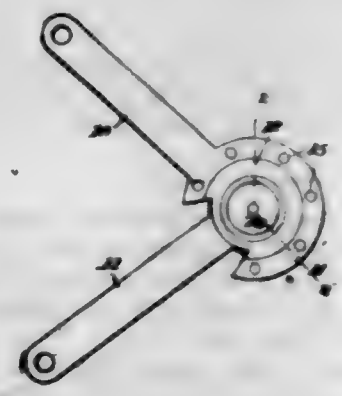
5. A noodle making device comprising a pan-like structure adapted to contain a quantity of dough, the bottom wall of said structure being perforated to permit portions of the dough to extend therethrough, and a cutter for cutting off the portions of dough extending through said perforations, said cutter comprising a strip of material extending transversely across the bottom wall of said structure and being pivotally connected at approximately the center of said bottom wall by its intermediate portion so as to provide two parts one at each side of said pivot for operating upon the dough when the cutter is rotated about the pivot, one of said parts being disposed flat upon the surface of the bottom wall to serve only as a cutter while the other of said parts is disposed at an angle to the surface of the bottom wall to serve as a wedge for forcing the dough through the perforations.

1,201,068. GASIFIER FOR GAS-ENGINES. JACOB H. LANER, Portland, Oreg. Filed May 11, 1916. Serial No. 96,864. 1 Claim. (Cl. 123—25.)



In combination with the exhaust member, carbureter and the radiator of a gas engine, an air heating hood mounted over said exhaust member and terminating in a pipe leading to the carbureter of said engine, and a pipe from the radiator extended under said hood along said exhaust member and discharging in to the air pipe leading to said carbureter, whereby water, or vapor, from said radiator is heated and converted into steam as it passes along adjacent said exhaust member and under said hood, substantially as shown and described.

1,201,067. SHOCK-ABSORBER. JASPER A. MCCASKELL, Salt Lake City, Utah. Filed Sept. 14, 1917. Serial No. 191,432. 7 Claims. (Cl. 21—105.)



1. A shock absorber comprising a pair of arms; a casing on the inner end of one of said arms and having

oppositely projecting tapering portions; oppositely projecting tapering blocks or heads on the inner end of the other arm and embraced by said casing; means between the adjacent tapering surfaces of the blocks and casing for causing relative transverse movement between the casing and blocks, and an elastic cushion interposed between the inner opposed faces of the blocks and engaged by the transverse movement of the blocks toward each other to retard the movement of the arms beyond a neutral position with a gradually increasing resistance.

2. A shock absorber comprising a pair of arms; a casing on the inner end of one of said arms, and having an oppositely-projecting tapering interior; oppositely-projecting tapering blocks on the other arm adapted to register with and to be inclosed by said casing; right-and-left threaded connections between the blocks and the interior of the oppositely-extending portions of the casing whereby the blocks transversely approach and recede in unison relatively to the casing; and an elastic cushion interposed between the inner opposed faces of the blocks adapted to retard the movement of the arms beyond a neutral position with a gradually increasing resistance.

3. A shock absorber comprising a pair of arms; a casing on the inner end of one of said arms and having oppositely projecting tapering portions; oppositely projecting tapering blocks or heads on the inner end of the other arm and embraced by said casing; means between the adjacent tapering surfaces of the blocks and casing for causing relative transverse movement between the casing and blocks, an elastic cushion interposed between the inner opposed faces of the blocks and engaged by the transverse movement of the blocks toward each other to retard the movement of the arms beyond a neutral position with a gradually increasing resistance; and means for inflating said cushion.

4. A shock absorber comprising a pair of arms; a casing on the inner end of one of said arms, and having an oppositely-projecting tapering interior; oppositely-projecting tapering blocks on the other arm adapted to register with and to be inclosed by said casing; right-and-left threaded connections between the blocks and the interior of the oppositely-extending portions of the casing whereby the blocks transversely approach and recede in unison relatively to the casing; an elastic cushion interposed between the inner opposed faces of the blocks adapted to retard the movement of the arms beyond a neutral position with a gradually increasing resistance, and means for inflating said cushion.

5. A shock-absorber comprising a pair of arms; a casing on the inner end of one of said arms and having oppositely projecting tapering portions; oppositely projecting tapering blocks or heads on the inner end of the other arm and embraced by said casing; means between the adjacent tapering surfaces of the blocks and casing for causing relative transverse movement between the casing and blocks; and an elastic cushion interposed between the inner opposed faces of the blocks and engaged by the transverse movement of the blocks toward each other to retard the movement of the arms beyond a neutral position with a gradually increasing resistance; and an open-ended sleeve within which the cushion is contained, said blocks having annular grooves for receiving the ends of the sleeve and thereby permitting the blocks to move transversely toward and from each other.

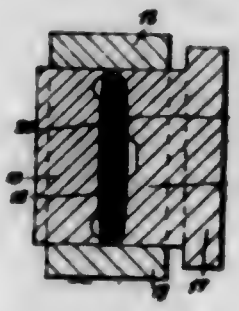
1,301,068. WORKING BARREL FOR OIL-WELL PUMPS. WILLIAM A. MCGREGOR, Bradford, Pa., assignor to McGregor Working Barrel Company, Inc., Bradford, Pa. Filed June 17, 1918. Serial No. 240,444. 4 Claims. (Cl. 103—80.)

1. In a well-pump, the combination with a tubing having a section forming an internal seat, of a working-barrel having a packing at its lower end fitting said seat, a bushing at the upper end of the working-barrel having outlet openings and a central extension, a cup-shaped check-valve working on said extension to cover the openings in the bushing, and a ring packing at the upper end of the working-barrel fitting tightly in the well



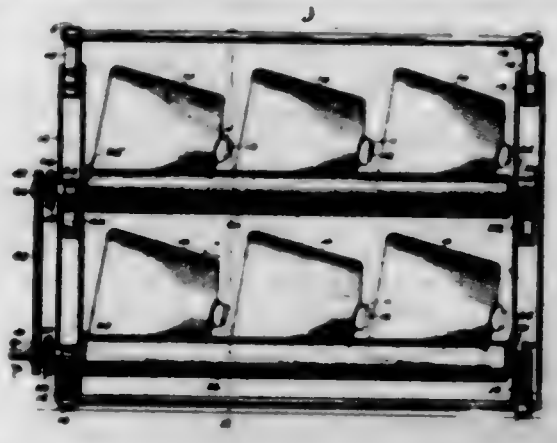
tubing, substantially as shown and for the purpose set forth.

1,301,069. METHOD OF MOLDING AND ORNAMENTING PLASTIC SUBSTANCES. JAMES M. MACDONALD, East Orange, N. J. Filed Feb. 14, 1917. Serial No. 148,527. 3 Claims. (Cl. 24—92.)



1. As a new article of manufacture, a button comprising a body portion and a fabric covering impregnated with a solution of the substance of which said body portion consists for securing the said fabric covering to the said body portion.

1,301,070. MIXING AND GRINDING APPARATUS. ROBERT D. MADDOX, U. S. Army. Filed Nov. 26, 1918. Serial No. 264,228. 4 Claims. (Cl. 259—61.)



1. In an apparatus of the class described, a container elliptical at its opposite ends and with the major axes of the elliptical portion at angles to each other and the side walls continuous from end to end, rollers supporting the containers and in constant contact with the elliptical surfaces thereof, and means for rotating the rollers.

1,301,071. CHIROPRACTIC TABLE. LILLARD T. MARSHALL, Winchester, Ky. Filed Apr. 24, 1918. Serial No. 230,464. 4 Claims. (Cl. 128—72.)

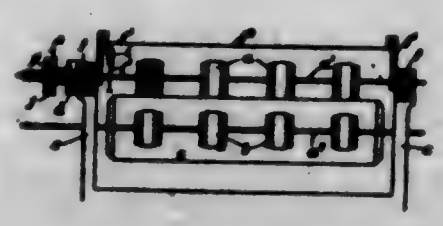


1. A chiropractic table including a base, a supporting frame pivotally mounted upon the base, means on the base for shifting the frame into a plurality of angular positions around its pivot, a shoulder support slidably mounted upon the frame and mounted for rotation in a vertical plane, a hip support slidably mounted on the frame and mounted for rotation in a vertical plane, and an intermediate abdominal support, the abdominal support being resiliently mounted upon the hip support for longitudinal adjustment nearer to or farther from the hip support.

2. A chiropractic table including a base, a frame mounted upon the base and including longitudinally extending angle irons having inwardly extending flanges, a body supporting member having downwardly extending legs, the legs being formed to embrace the inwardly extending flanges of the angle irons, and a reversely threaded screw engaging the downwardly extended portions of the legs, whereby these legs may be forced into binding engagement with the angle irons or released from said binding engagement.

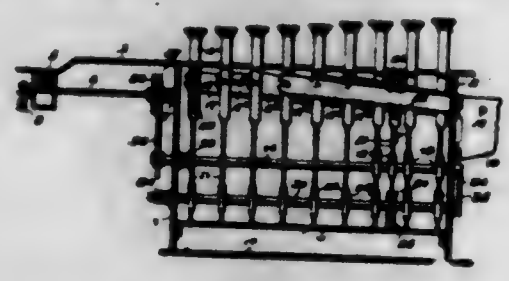
4. A chiropractic table including a base, a fluid actuated piston mounted in the base, the base having arms extending up to one side of the piston, a body supporting frame pivotally mounted adjacent one end to said arms and pivotally connected to the piston, that end of the frame adjacent the arms being formed with an angularly disposed foot rest and that end of the frame remote from the arms being provided with legs, and body supporting members individually, longitudinally adjustable on the frame and mounted for angular adjustment in a vertical plane, one of said members carrying a longitudinally adjustable spring extending toward the other member and supporting an abdominal cushion.

1,301,072. FUDGE OR LATE-NEWS DEVICE FOR NEWSPAPER-PRINTING PRESSES. GEORGE W. MASCORD, Barnes, London, England. Filed July 20, 1915. Serial No. 40,920. 3 Claims. (Cl. 101—247.)



3. In a printing press comprising the usual printing couple, a "fudge"-box cylinder, a spindle upon which said "fudge"-box cylinder is mounted, connected eccentric bearings within which the said spindle is carried, a continuously rotating impression cylinder manually operated means for the partial rotation of the said eccentric bearings for lifting the "fudge"-box cylinder from contact with the impression cylinder, gear for causing the rotation of the said spindle, a clutch by which the spindle of the "fudge"-box cylinder may be disconnected from the gear of the press, and a brake by which the rotation of the "fudge"-carrying cylinder may be arrested, substantially as described.

1,301,073. CALCULATING-MACHINE. JAMES F. MAYS, Birmingham, Ala., assignor to Mays Accounting Machine Company, Lexington, N. C., a Corporation of North Carolina. Filed Aug. 7, 1917. Serial No. 184,921. 7 Claims. (Cl. 235—62.)



1. A calculating machine comprising a column of keys, a dial, key actuated dial operating mechanism comprising an actuator directly driven by keys of higher denomination in said column, and differential leverage means forming a driving connection between said actuator and other keys of lower denomination in said column.

2. A calculating machine comprising a column of keys, a dial, key actuated dial operating mechanism comprising an actuator, a direct operating connection between said actuator and the keys of higher denomination in said column, differential leverage means directly actuated by the keys of lower denomination in said column, and a common transmission element driven by said differential leverage means and adapted to impart motion to its actuator.

3. In a calculating machine, a column of keys, a dial, a dial operating rock shaft actuated directly by the keys of higher denomination in said column, levers operated by the keys of lower denomination in said column, an actuator common to the keys of lower denomination and driven by the levers operated by said keys and disposed to receive motion from each lever proportionate to the value of the key controlling it, and means to drive said rock shaft by said actuator.

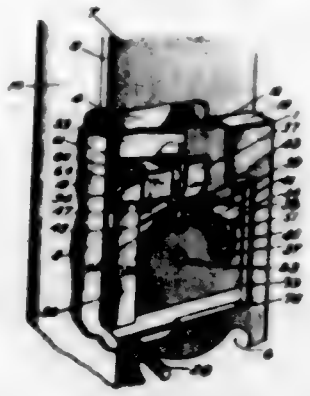
6. In a calculating machine, a plurality of keys, a dial, dial actuating mechanism comprising a movable member common to said keys, a stop carried by said member, a supplementary movable member common to said keys, a stop carried by said second member and adapted to cooperate with said first-mentioned stop to lock the first-mentioned member against rotation, means operable by the downward movement of a key to rotate said second member to unlock said first member, means operable by the same key to subsequently operate said first-mentioned member, springs for returning said members to normal, the stop on the supplementary member acting to limit the rebound of the first-mentioned member.

7. In a calculating machine, a plurality of keys, a dial, dial actuating mechanism comprising a rocker shaft common to said keys, a stop carried by said shaft, a supplementary shaft, a stop carried thereby and adapted to cooperate with said first-mentioned stop to lock said first-mentioned shaft against rotation, means operable by the downward movement of a key to rotate said second shaft to unlock the first shaft, means operable by the same key to subsequently operate the first-mentioned shaft, springs for returning said shafts to normal, the stop on the supplementary shaft acting to limit the rebound of the first-mentioned shaft.

1,301,074. PACKAGE-VENDING MACHINE. CHARLES A. MELCHNER and HENRY A. KOHLS, Kansas City, Mo., assignors to Automatic Machine Mf'g Co., Kansas City, Mo., a Corporation of Missouri. Filed Oct. 4, 1916. Serial No. 123,707. 6 Claims. (Cl. 194—63.)

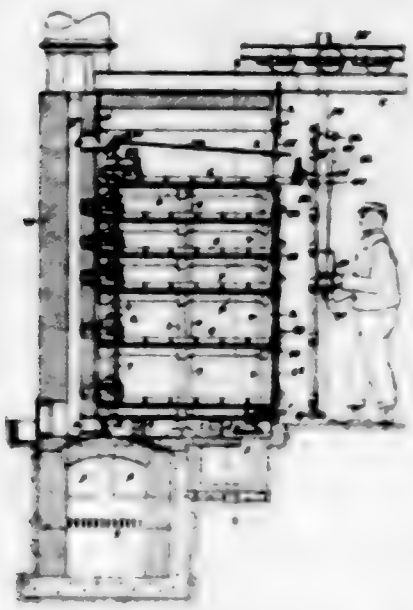
1. A vending machine comprising a housing, a pocketed delivery cylinder rotatably mounted in the housing, movable in either direction through a limited arc and adapted to receive an article therein and deliver an article therefrom by actuation in either direction, coin controlled latch members pivotally mounted on the housing for

locking the cylinder when at its opposite limits, coin cups fixed on the cylinder, means for delivering a coin into



one of said cups, and means for actuating the cylinder to move the coin into engagement with a locking latch to effect the release of the delivery cylinder.

1,301,075. CONVERTIBLE CORE-OVEN. EDWARD J. MOORE, Cleveland, Ohio. Filed Aug. 8, 1917. Serial No. 185,037. 19 Claims. (Cl. 34—40.)

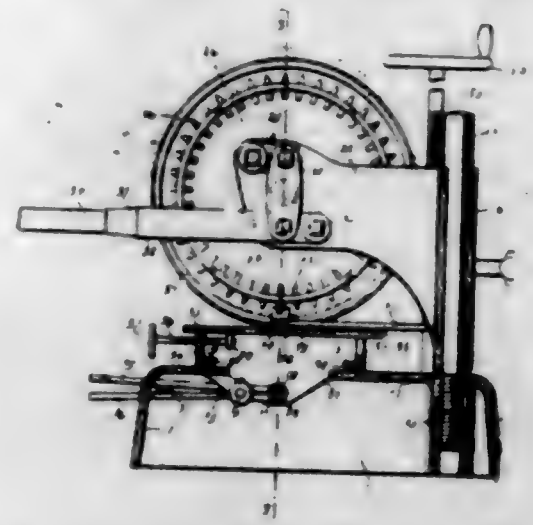


19. In core ovens, a supporting frame having rails at its sides, a grid and brackets fixed on the rear thereof having horizontal slots relatively above the sides of said grids, a shaft through said slots and wheels on said shaft at the rear and sides of the grid adapted to run on said rails.

1,301,076. MACHINE FOR MARKING VARIOUS ARTICLES. WILLIAM NEUBWANGER, Greeley, Colo. Filed July 30, 1917. Serial No. 183,511. 3 Claims. (Cl. 101—42.)

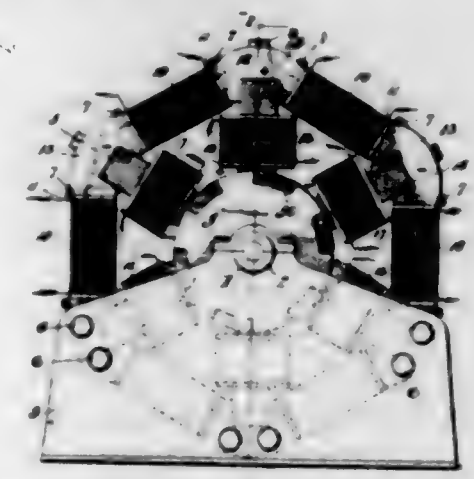
1. In a device of the class described, a rotary printing member having printing characters at its periphery, means for raising and lowering said printing member for performing a printing operation, an annular ring on said rotary member, a plurality of wedge-shaped centering devices mounted in said ring and arranged to correspond to the positions of the respective printing characters, and a V-shaped centering member adapted to selectively receive one of said centering devices when said means is lowered.

3. In a device of the class described, a rotary printing member having printing characters at its periphery, means for raising and lowering said rotary printing member for effecting a printing operation, an annular ring mounted on said rotary printing member having characters on its surface corresponding to the printing characters above mentioned, and an indicating or pointer finger arranged adjacent to said ring, the parts being so arranged that when the pointer is arranged adjacent to a



certain character on the ring, the corresponding printing character on the rotary member is in position for printing.

1,301,077. ELECTRICAL GENERATOR. WILLIAM D. PENNINGTON, French Lick, Ind., and JOHN R. PENNINGTON, Chicago, Ill. Filed Apr. 12, 1906, Serial No. 311,385. Renewed May 7, 1912. Serial No. 695,786. 7 Claims. (Cl. 171—252.)

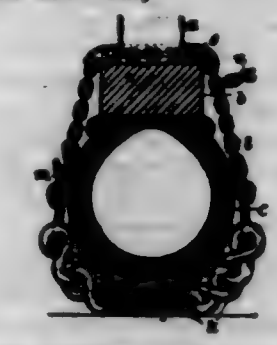


1. In an electrical generator, the combination of a series of primary coils arranged about a center, cores within the coils with like poles connected to a holder, a pole piece secured to each holder and projecting toward the center, a secondary coil about each pole piece, and a rotary inductor moving in proximity to all of said pole pieces.

4. A generator comprising a ring magnet with poles at intervals, each pole being provided with two pole pieces, one on each side of the ring, and a rotary centrally disposed inductor constructed with two members arranged side by side, said members having teeth of the same size and separated by spaces of the same size, the teeth of the two members being staggered with reference to one another thus to maintain the area of the inductor presented to each pair of pole pieces constant.

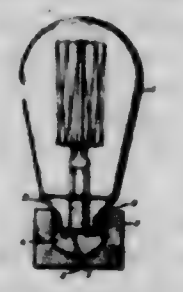
7. A device of the class specified comprising a ring shaped member provided at intervals with magnetic coils, U-shaped electromagnets carried by said member and having their middle portions secured to said member between the coils thereof, and their legs extending radially inward, and a rotary inductor member provided with two sets of projections which said projections coöperate with the inner ends of said U-shaped magnets, the projections of said two sets being staggered with reference to one another.

1,301,078. TRACTION ATTACHMENT FOR VEHICLE DRIVING-WHEELS. FRANKLIN EISENMIER, Paterson, N. J. Filed June 6, 1918. Serial No. 238,555. 5 Claims. (Cl. 152—14.)



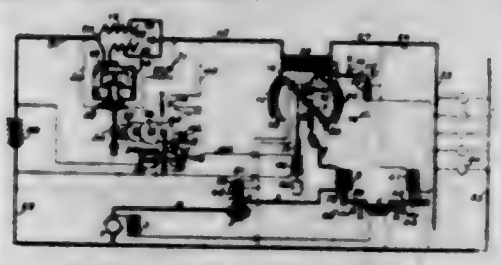
1. A traction attachment for a vehicle driving wheel including a flexibly connected series of members having means to secure it to the wheel with said members in contact with the tread face of the wheel, said members increasing in thickness one after another.

1,301,079. INCANDESCENT LAMP. WILLIAM L. VAN KEUREN, North Bergen, N. J., assignor to General Electric Company, a Corporation of New York. Filed June 15, 1918. Serial No. 240,179. 3 Claims. (Cl. 176—82.)



1. An incandescent lamp having a cast base of insulation, a lead exposed at the surface of the base, and a conductive coating on said base in contact with said lead and comprising an adhesive paste containing sufficient powdered metal to render it conductive.

1,301,080. ELECTRIC SYSTEM. JOHN L. CREVELING, Auburn, N. Y. Filed May 21, 1915. Serial No. 29,525. 27 Claims. (Cl. 171—313.)



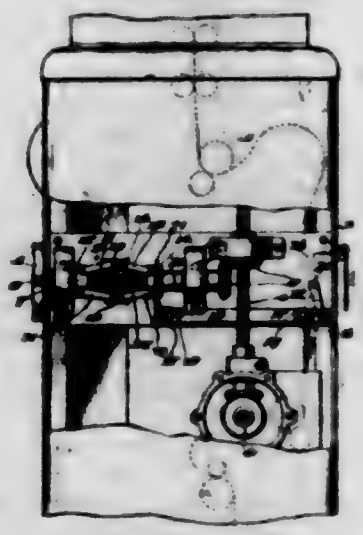
1. The combination with a source of electrical potential difference, a storage battery circuit and a translation circuit, of automatic means for connecting the source with the battery circuit under certain conditions and with the translation circuit under other conditions.

8. The combination with a source of electrical potential difference, a storage battery circuit and a translation circuit, of automatic means for connecting the source with the battery circuit and with the translating circuit, and automatic means for determining which of said connections shall be made.

19. The combination with a source of electrical potential difference, a storage battery, a battery circuit, translating devices and a translation circuit, of regulating means uniting the battery and translation circuits, means for connecting the source with the battery circuit under certain conditions and with the translation circuit under other conditions, and means for controlling the source.

26. The combination with a generator, storage battery circuit and translation circuit, of means for connecting the generator under certain conditions with the battery circuit and under other conditions the translation circuit, combined with means whereby the generator is controlled in response to current fluctuations only when connected with the battery circuit and in response to voltage fluctuations when connected with the translation circuit.

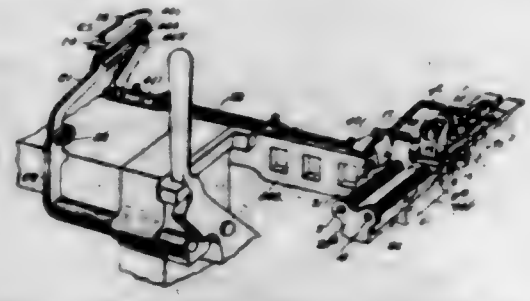
1,301,081. FIRE-SHUTTER FOR KINETOSCOPES. ROBERT J. EMORY, Newark, N. J., assignor to Baird Motion Picture Machine Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 25, 1914. Serial No. 821,020. 4 Claims. (Cl. 88—19.4.)



1. In a fire shutter for kinetoscopes, the combination of a shutter, a rack operatively connected therewith, a lever adapted to engage said rack, a shaft and means for operating said lever comprising a governor mounted on said shaft having a collar operatively connected with said lever, a compression spring guided on said shaft and acting on said collar to force the same in the direction opposite to the direction of movement caused by the actuation of the governor and a sleeve loosely mounted on said shaft, constituting a means for maintaining the spring out of engagement with the rotating shaft and acting as a stop to limit the movement of the collar when acted upon by the governor.

4. In a fire shutter for kinetoscopes, the combination with a stationary support, a rotatable shaft mounted on said support, a governor on said shaft and a lever actuated by said governor, of a movable support, a fire shutter designed to be moved bodily to and from an operative position, and comprising a spindle mounted on said support, and means engaging said spindle to raise the shutter, said means having a loose engagement with said lever positioned entirely on one side thereof and being normally held in operative engagement therewith by the weight of the shutter, said means separating from the lever as the movable support is moved away from the stationary support.

1,301,082. WEFT FEELER MECHANISM FOR LOOMS. SIMEON S. JACKSON, Boston, Mass., assignor to The Stafford Company, Readville, Mass., a Corporation of New Jersey. Filed Apr. 29, 1916. Serial No. 94,334. 8 Claims. (Cl. 139—85.)

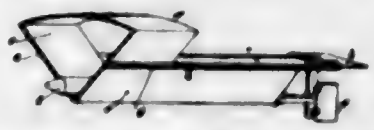


1. Weft or filling feeler devices comprising a primary contact-member constituted by a feeler-member or finger that is moved by the pressure of the shuttle-contained weft or filling-supply, at least during the earlier stages of

said supply; a secondary, assisting or coadjutor, contact-member constituted by a second feeler-member or finger that is given by the pressure of said weft or filling-supply a movement differentially correlated with that of the primary contact-member; a controller-rest that is actuated through the movement of the said primary contact-member, and in addition controlled by the said secondary or coadjutor contact-member and arranged to coact therewith in measuring the differential; and a controller for the devices that call a change in the operation of the loom.

2. Weft or filling feeler devices comprising a primary contact-member constituted by a feeler-member or finger that is moved by the pressure of the shuttle-contained weft or filling-supply, at least during the earlier stages of said supply; a secondary, assisting or coadjutor, contact-member constituted by a second feeler-member or finger that is given by the pressure of said weft or filling-supply a movement differentially correlated with that of the primary contact-member; a controller-rest that is actuated through the movement of the said primary contact-member, and in addition controlled by the said secondary or coadjutor contact-member and arranged to coact therewith in measuring the differential; and a controller for the devices that call a change in the operation of the loom, and having combined therewith means which, so long as the portion of weft or filling-supply that acts against primary contact-member exceeds a certain diameter, operates, through the controller to prevent the devices that are controlled by the latter from being called into action.

1,301,083. SELF-STABILIZING AEROPLANE STRUCTURE. MERIT R. WOLFARD, Cambridge, Mass. Filed Apr. 10, 1918. Serial No. 227,638. 13 Claims. (Cl. 244—12.)



1. In a self-stabilizing aeroplane structure, a V-wing arrangement in combination with a cover wing attached directly to the tips of the V, said cover wing terminating at either end substantially at its junction with the tips of the V, and less extensive wing-like structure being attached in the rear of said V-wing arrangement, whereby longitudinal stability is secured, while still permitting the covered V-wing portion to predominate in the structure as a whole.

3. In a self-stabilizing aeroplane structure, a V-wing arrangement in combination with a cover wing attached to the tips of the V, said cover wing being constructed to have appreciable inherent resistance to flexure combined with sufficient flexibility to permit a substantial upward deflection while carrying its normal load in flight, whereby flexure without fluttering is obtained.

12. In a self-stabilizing aeroplane structure, a V-wing arrangement in combination with a cover wing attached to the tips of the V, and an elevator, the lower portion of the V being extended to the rear of said cover wing, and longitudinal side keels secured to the sides of the V, said keels being adapted to support the elevator, substantially as illustrated.

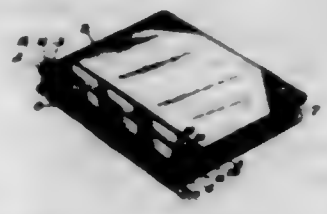
1,301,084. WELT-SHOE AND METHOD OF MAKING SAME. GEORGE H. BLACK, Rochester, N. Y., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 10, 1917. Serial No. 201,372. 18 Claims. (Cl. 12—142.)



4. That improvement in methods of obtaining close shanks in welt shoes which consists in disposing the sewing rib along the shank portion of the insole at an appropriately greater distance from the edge of the insole in the rear part of the shank than in the forepart to allow for the additional thickness of the upper materials caused by the stiffener wings in the rear part of the shank, and sewing the upper materials to the sewing rib so disposed.

12. A welt shoe insole having a marginal sewing rib folded inwardly at its rear end relatively to other portions of the sewing rib, and a fastening holding the sewing rib in said folded position for it to resist outwardly directed strain.

1,301,085. LOOSE-LEAF BINDER. CHARLES R. HADLEY, Los Angeles, Calif., assignor to Charles R. Hadley Company, Los Angeles, Calif., a Corporation of California. Filed Nov. 6, 1916. Serial No. 129,642. 8 Claims. (Cl. 129—18.)



3. In combination, binding strips having notches in their ends, cover members hinged to the binding strips, posts hinged in the notches of one binding strip and adapted to project through the notches of the other binding strip to the outer face thereof, nuts on the projecting ends of the posts to engage the outer face of the last named binding strip, and leaves between the covers having notches alined with the notches of the covers, the notches of the binding strips and leaves closely fitting the posts, and said nuts and posts being the sole fastening for the covers and leaves.

REISSUES.

14,632. ANTICREEPING DEVICE FOR RAILROAD-RAILS. TOMAIS H. ALFREDS, Chicago, Ill., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 19, 1918. Serial No. 212,790. Original No. 1,248,240, dated Nov. 27, 1917, Serial No. 190,281, filed Sept. 8, 1917. 22 Claims. (Cl. 238—4.)



12. A device of the kind described adapted to engage one side of the rail only, comprising a block having top and bottom members adapted for engagement upon the edge of the base of a rail, a depending flange on one end of the block, adapted to abut against a tie, a tie entering lug on said flange, and means associated with the top member and engaging with the upper surface of the rail base to lock said block to said rail base.

14,633. PROCESS OF PRESERVING FRUIT-JUICES AND OTHER ORGANIC FOOD AND VEGETABLE PRODUCTS. CARL ALSBERG KNOX, Mill Valley, Calif. Filed Mar. 8, 1918. Serial No. 221,561. Original No. 1,204,880, dated Nov. 14, 1916, Serial No. 98,626, filed June 28, 1915. 5 Claims. (Cl. 99—5.)

1. The process of preserving fruit juice, which consists in evaporating the juice to the consistency of syrup, adding cellulose material thereto and evaporating the mixture to dryness.

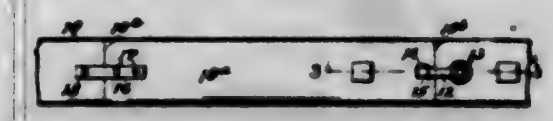
2. The process of preserving fruit juice so that it may be recovered in its original state, which consists in adding cellulose material to the juice and evaporating to dryness.

3. The method of preserving fruit juice, which consists in evaporating the juice to the consistency of syrup, adding thereto a sterile material which is not decomposed by the evaporated juice, and slowly drying the mixture.

4. The process of preserving fruit juice, which consists in adding to the juice a material which is not acted on by the juice to produce water soluble compounds and evaporating the mixture to dryness.

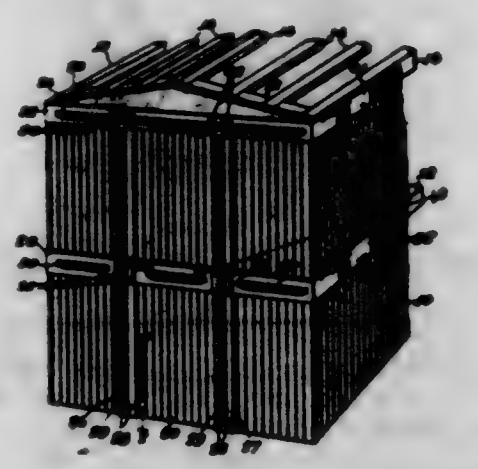
5. The process of preserving liquid food which consists in evaporating liquid therefrom, adding cellulose material thereto, and evaporating the mixture to dryness.

14,634. DETACHABLE WHEEL-RIM. CALVIN D. PAXSON, Cleveland, Ohio, assignor to The Paxson Rim Co., Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 12, 1918. Serial No. 211,628. Original No. 1,228,900, dated Apr. 24, 1917, Serial No. 128,468, filed Oct. 8, 1916. 6 Claims. (Cl. 152—21.)



2. A detachable rim for wheels composed of a main section constituting the major portion of the rim, and a minor section of substantial length bodily removable from the main section, one of said sections having nearer one end than the center thereof an opening for the valve stem of a tire to be seated on the rim.

14,635. RAILWAY-CAR. THOMAS N. RUSSELL, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1916. Serial No. 89,906. Original No. 1,171,663, dated Feb. 15, 1916, Serial No. 875,435, filed Dec. 4, 1914. 27 Claims. (Cl. 105—411.)

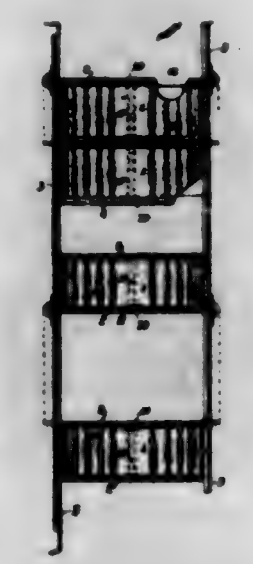


27. In a car end construction, the combination with wooden end and corner posts, end plate, end sill and side plates, of an external horizontal metallic reinforcing member opposite the end plate, and a vertical metallic reinforcing member opposite an end post connected to said end plate, end sill and horizontal member, and means for connecting said horizontal member to said side plates.

14,636. METHOD OF TREATING GRAPES. PAUL B. WELCH, Westfield, N. Y., assignor to The Welch Grape Juice Company, Westfield, N. Y., a Corporation of New York. Filed Feb. 18, 1918. Serial No. 277,877. Original No. 1,258,627, dated Mar. 5, 1918, Serial No. 184,470, filed Aug. 4, 1917. 22 Claims. (Cl. 99—11.)

22. The method of treating grapes comprising the crystallization of argol in a composite body of grape material including pulp and juice, and separating the crystallized argol from the pulp and juice.

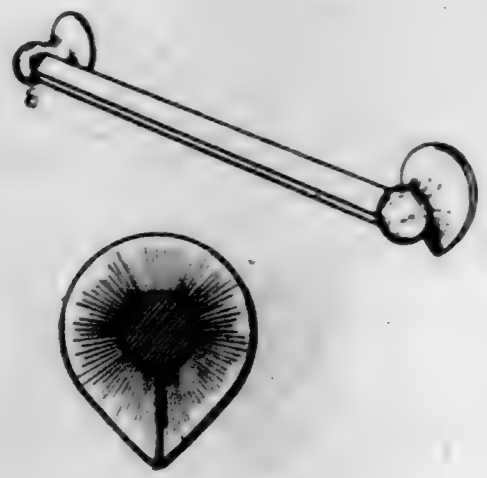
14,637. ELEVATOR-SHAFT DOOR. BENJAMIN WEILER, Brooklyn, N. Y., assignor to The Peelle Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 18, 1917. Serial No. 207,016. Original No. 1,179,882, dated Apr. 18, 1916, Serial No. 37,474, filed July 1, 1915. 2 Claims. (Cl. 189—46.)



1. An elevator shaft door embodying therein a vertically and downwardly movable door section comprising a metal frame having flanges having a metal sheet secured thereto, and other flanges projecting toward and substantially closing the gap between said sheet and the wall of the elevator shaft, guides upon opposite sides of the door section, and a vertically extending guide rail intermediate the sides of the door, within and extending from the top to the bottom flanges of said frame projecting toward the wall of the elevator shaft, guide rails with which the guides upon said door section respectively coöperate, and a shoe secured to the wall of the elevator shaft, adjacent the sill of the door opening coöperating with said intermediate guide rail, whereby when the door section is lowered, said shoe supports it intermediate the sides thereof and said intermediate guide rail stiffens the door section, and by engagement with said shoe holds the door at all times close to the wall of the elevator shaft.

DESIGNS.

53,191. TOWEL-BAR. STEPHEN D. BAKER, New York, N. Y. Filed Feb. 3, 1917. Serial No. 146,533. Term of patent 14 years.



The new and ornamental design for a towel bar, substantially as herein shown.

53,192. ARTICLE OF MANUFACTURE. EDITH C. BLUM, New York, N. Y., assignor to H. R. Mallinson & Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 7, 1918. Serial No. 261,556. Term of patent 3½ years.



The ornamental design for an article of manufacture substantially as shown and described.

53,193. CANE, UMBRELLA, WHIP, OR SWAGGER-STICK HANDLE. JOHN W. BLYTH, Great Falls, Mont. Filed Aug. 27, 1918. Serial No. 251,712. Term of patent 14 years.



The ornamental design for a cane, umbrella, whip, or swagger-stick handle, as shown.

53,194. BADGE, BUTTON, PIN, OR ARTICLE OF SIMILAR NATURE. FRANK C. BRENDZA, Cleveland, Ohio. Filed Jan. 27, 1919. Serial No. 273,488. Term of patent 3½ years.



The ornamental design for a badge, button, pin, or article of similar nature, as shown.

53,195. RING, BRACELET, BREASTPIN, BUCKLE, OR SIMILAR ARTICLE OF JEWELRY. SIMON CARLIN, Philadelphia, Pa. Filed Nov. 20, 1918. Serial No. 263,434. Term of patent 7 years.



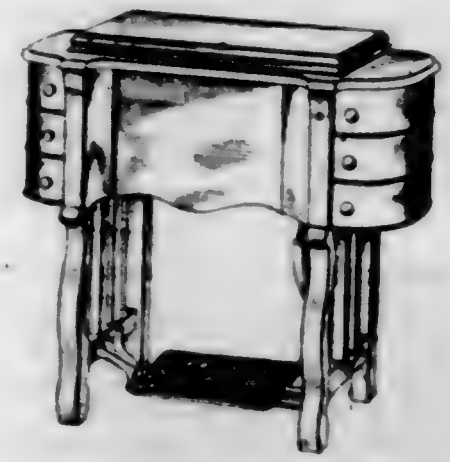
The ornamental design for a ring, bracelet, breast pin, buckle, or similar article of jewelry, as shown.

53,196. SEWING-MACHINE CABINET. WILLIAM C. FANN, Rockford, Ill. Filed Jan. 18, 1919. Serial No. 271,923. Term of patent 14 years.



The ornamental design for a sewing machine cabinet, as shown.

53,197. SEWING-MACHINE CABINET. WILLIAM C. FANN, Rockford, Ill. Filed Jan. 18, 1919. Serial No. 271,924. Term of patent 14 years.



The ornamental design for a sewing machine cabinet, as shown.

58,198. BROOCH, BADGE, BUTTON, INSIGNIA, EMBLEM. MELVIN E. GOLDSMITH, Milwaukee, Wis. Filed Jan. 17, 1919. Serial No. 271,745. Term of patent 3½ years.



The ornamental design for a brooch, badge, button, insignia, emblem, pin, or similar article of manufacture as shown.

58,199. BOX. EDMUND HOFFMAN, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 19, 1918. Serial No. 9,445. Term of patent 14 years.



The ornamental design for a box, as shown and described.

58,200. POWDER-CAN. EDMUND HOFFMAN, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 19, 1918. Serial No. 9,448. Term of patent 14 years.



The ornamental design for a powder can, as shown and described.

58,201. CAN-TOP. FRANK S. HYATT, Brooklyn, N. Y. Filed Nov. 12, 1914. Serial No. 871,792. Term of patent 14 years.



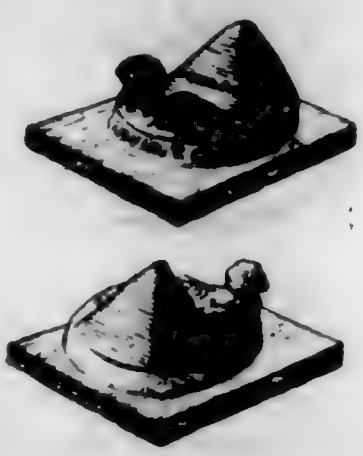
The ornamental design for a can top, as shown.

58,202. BUTTON-DISPLAY CARD. ADALBERT D. JOSEPHSON, New York, N. Y. Filed Jan. 30, 1919. Serial No. 274,150. Term of patent 14 years.



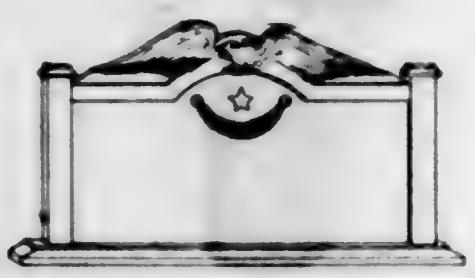
The ornamental design for a button display card, as shown.

58,203. PAPER-WEIGHT OR SIMILAR ARTICLE. RALPH S. LANGLEY, Detroit, Mich., assignor to The Straus Brothers Company, Ligonier, Ind., a Corporation of Indiana. Filed Feb. 10, 1919. Serial No. 276,080½. Term of patent 7 years.



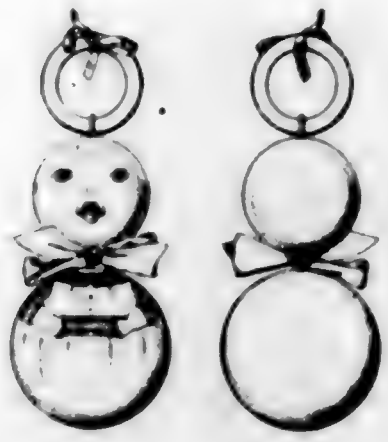
The ornamental design for a paper weight or similar article as shown.

58,204. MINIATURE HONOR-BOARD. HUDSON R. MEYERS, New Haven, Conn. Filed Jan. 14, 1919. Serial No. 271,151. Term of patent 3½ years.



The ornamental design for a miniature honor board, as shown.

53,205. CARRIAGE-RATTLE. LEO MOSES, New York, N. Y. Filed Oct. 22, 1918. Serial No. 259,276. Term of patent 3½ years.



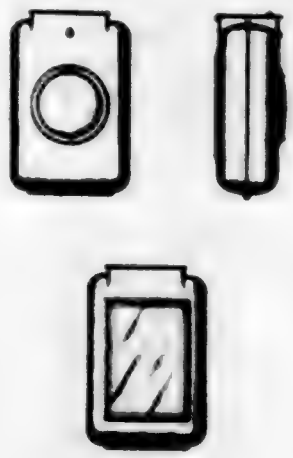
The ornamental design for a carriage rattle, as shown.

53,206. ARTICLE OF MANUFACTURE. FRANK H. PATRICK, Gandy, La. Filed Aug. 28, 1918. Serial No. 251,850. Term of patent 7 years.



The ornamental design for an article of manufacture as shown.

53,207. PORTABLE ELECTRIC LAMP. WARD E. PEARSON and HENRY G. O'NEILL, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,679. Term of patent 14 years.



The ornamental design for a portable electric lamp, as shown.

53,208. PORTABLE ELECTRIC LAMP. WARD E. PEARSON and HENRY GILSON O'NEILL, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,680. Term of patent 14 years.



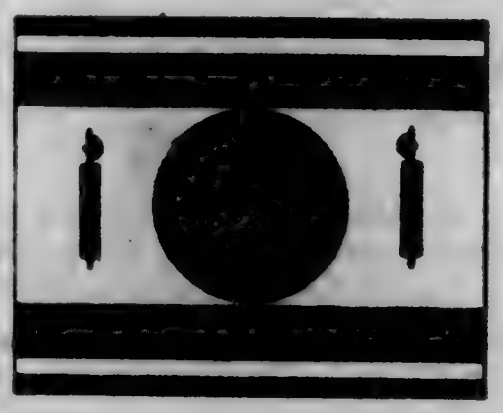
The ornamental design for a portable electric lamp, as shown.

53,209. PIN. MYRA F. POWELL, Motley, Minn. Filed Jan. 3, 1919. Serial No. 269,527. Term of patent 3½ years.



The ornamental design for a pin, as shown.

53,210. PEACE-FLAG. MAURICE DANIEL SHAFF, New York, N. Y. Filed Jan. 28, 1919. Serial No. 273,655. Term of patent 3½ years.



The ornamental design for a peace flag as shown.

53,211. BUFFET OR SIMILAR ARTICLE. HYMAN SILVER, Brooklyn, N. Y. Filed Feb. 12, 1919. Serial No. 276,668. Term of patent 3½ years.



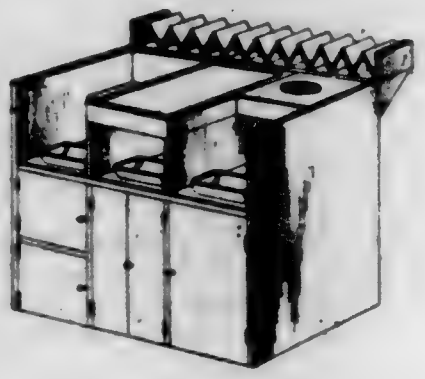
The ornamental design for a buffet or similar article, as shown.

53,212. BUFFET OR SIMILAR ARTICLE. HYMAN SILVER, Brooklyn, N. Y. Filed Feb. 12, 1919. Serial No. 276,669. Term of patent 3½ years.



The ornamental design for a buffet or similar article, as shown.

53,213. PRINTING DEVICE FOR PHOTOGRAPHERS. ZENO W. WEAR, Mound City, Ill. Filed July 14, 1916. Serial No. 109,295. Term of patent 14 years.



The ornamental design for a printing device for photographers, as shown.

TRADE-MARKS

OFFICIAL GAZETTE, APRIL 15, 1919.

[PUBLISHED MAY 3, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

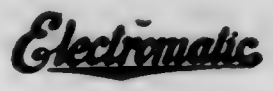
As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 90,080. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) KNOX MOTORS COMPANY, Springfield, Mass. Filed Oct. 25, 1915.



Particular description of goods.—Automobiles.
Claims use since about January, 1909.

Ser. No. 93,056. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CLARENCE B. STROUSE, Chicago, Ill., assignor to Electromatic System Company, Portland, Me., a Corporation of Maine. Filed Feb. 23, 1916.



Particular description of goods.—Automatic Electric Generating Units Comprising Electric Generators Driven by Internal-Combustion Engines, Electric Motors, Electric Lamps, Electric Heating Devices, and Self-Contained Electric Generating Units Composed of an Electric Generator, Also Serving as a Motor, an Electric Storage Battery, an Internal-Combustion Engine, a Starting-Motor, and Automatic Switches.
Claims use since March, 1915.

Ser. No. 93,869. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FORD COLLIERIES COMPANY, Pittsburgh, Pa., and Detroit, Mich. Filed Mar. 25, 1916.



The mark consists of the words "Deer Creek."
Particular description of goods.—Bituminous Coal.
Claims use since about the year 1910.

Ser. No. 99,605. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE REILY-TAYLOR COMPANY, New Orleans, La. Filed Nov. 28, 1916.



The trade-mark consisting of the name "Reily's" written in the characteristic handwriting of Wm. B. Reily.
Particular description of goods.—Teas.
Claims use since April, 1915.

Ser. No. 104,458. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SINCLAIR TOUSEY, New York, N. Y. Filed June 15, 1917.

SINTOSCOPE

Particular description of goods.—Spectacle Peep-Sight Disks Such as are Adapted for Use in Sighting or Aiming Firearms.
Claims use since June 1, 1917.

Ser. No. 106,080. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE STARR PIANO COMPANY, Richmond, Ind. Filed Sept. 5, 1917.



No claim is made to the representation of the portion of a musical instrument or to the words "Silver Grain Spruce" shown in the drawing except in association with the other features of the trade-mark shown in the drawing.
Particular description of goods.—Phonographs.
Claims use since Aug. 16, 1917.

Ser. No. 106,659. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CHICAGO APPARATUS COMPANY, Chicago, Ill. Filed Oct. 8, 1917.

Milray

Particular description of goods.—Scientific Instruments—Namely, Weights for Use on Weighing-Balances and Weighing-Scales; Acceleration Apparatus for Showing Experimentally the Relationship Between Time, Distance, Velocity, and Acceleration of a Freely-Falling Body; Spirometers, Linear-Expansion Apparatus for Determining Experimentally the Coefficient of Linear Expansion of Metal Rods and Tubes, Toepler-Holtz and Wimshurst Static Electric Generating-Machines, Static Electric Generating-Machines, Electrical Meters, Voltmeters, Ammeters, Millivoltmeters, Milliammeters, Volt-Ammeters, Wheatstone Bridges and Resistance-Boxes Combined for Measuring Resistance of an Element of an Electrical Circuit, Optical Disks for Demonstrating the Fundamental Laws of Optics, Refraction Apparatus for Use in Determining the Refraction of Liquids, Interferometers, and Tourmalin Tongs for Laboratory Use to Show Polarization of Light.

Claims use since Oct. 1, 1912.

Ser. No. 106,837. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS CO., INC., New York, N. Y. Filed Oct. 18, 1917.

SUPERFICIENCY

Particular description of goods.—Glass Globes and Reflectors.

Claims use since July 1, 1917.

Ser. No. 106,843. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RECIPROCITY SUPPLY COMPANY, Habana, Cuba. Filed Oct. 18, 1917.



The portrait shown being fanciful.

Particular description of goods.—Machetes and Cane-Cutting Knives.

Claims use since the 20th day of April, 1915.

Ser. No. 108,631. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ELEVATOR LOCKS CO., Peoria, Ill. Filed Jan. 25, 1918.

M·C·K

Particular description of goods.—Mechanically-Operated Automatic Safety Controller and Door-Locking Devices for Elevators and Parts Thereof and Mechanically-Operated Automatic Starting Cable-Holding Devices for Elevators and Parts Thereof.

Claims use since about the 6th day of January, 1912.

Ser. No. 108,654. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) PITTSBURG WATERPROOF COMPANY, Pittsburgh, Pa. Filed Jan. 26, 1918.



The exclusive appropriation of the word "Brand" is disclaimed apart from the mark shown in the drawing.

Particular description of goods.—Woven Cotton Padding; and Tarpaulin and Canvas Covers for Vehicles and other Articles.

Claims use since Mar. 27, 1917, as to woven cotton padding; since about December, 1890, as to the remaining goods.

Ser. No. 108,794. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GENEVA TRACTOR COMPANY, Geneva, Ohio. Filed Feb. 4, 1918.

ADAPTO-TRACTOR

No claim is made to the word "Tractor" apart from the mark shown in the drawing.

Particular description of goods.—Attachments for Converting Automobiles into Tractors and Parts Thereof—Namely, Frames, Springs, Axles, Wheels, (Not Including Tires,) and Driving-Gears.

Claims use since Jan. 9, 1918.

Ser. No. 108,858. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 7, 1918.

EBONEUR

The word "Eboneur."

Particular description of goods.—Pyroxylin in Mass or Sheet Form.

Claims use since Jan. 5, 1918.

Ser. No. 108,859. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 7, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Pyroxylin in Mass or Sheet Form.

Claims use since Jan. 5, 1918.

Ser. No. 109,068. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Parasol and Umbrella Tips, Parasol and Umbrella Caps, Parasol and Umbrella Ferrules, Parasol and Umbrella Handles, Parasol and Umbrella Rings, Parasol and Umbrella Case Rings, Parasol and Umbrella Washers, Parasol and Umbrella Eyelets, and Cane-Handles.

Claims use since Jan. 5, 1918.

Ser. No. 109,066. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Pyroxylin in Mass or Sheet Form.

Claims use since Jan. 5, 1918.

Ser. No. 109,069. (CLASS 2. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Rosettes, Ornaments, Monograms, and Initials for Harness; and Luggage-Tags, All of Said Articles Being Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 109,074. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Cord-Adjusters for Adjusting the Length of Electric-Light Cords, Push-Buttons, Push-Button Caps, Cut Transparent Coverings for Electric Advertising Devices.

Claims use since Jan. 5, 1918.

Ser. No. 109,077. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Tank-Pulls, Bath-Tub Seats, Towel-Rods, Toilet-Shelves, Handles for Bibs and Cocks, Molded Coverings for Closet Seats and Tanks.

Claims use since Jan. 5, 1918.

Ser. No. 109,078. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Cigar-Cases, Cigarette-Cases, Pipe-Bits, Cigar-Holders, Tobacco-Boxes, and Snuff-Boxes, All of Said Articles Being Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 109,082. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Cord-Adjusters for Adjusting the Length of Electric-Light Cords, Push-Buttons, Push-Button Caps, Cut Transparent Coverings for Electric Advertising Devices.

Claims use since Jan. 5, 1918.

Ser. No. 109,083. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Pyroxylin in Mass or Sheet Form.

Claims use since Jan. 5, 1918.

Ser. No. 109,086. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Cigar-Cases, Cigarette-Cases, Pipe-Bits, Cigar-Holders, Tobacco-Boxes, and Snuff-Boxes Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 109,091. (CLASS 2. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Rosettes, Ornaments, Monograms, and Initials for Harness; and Luggage-Tags, All of Said Articles Being Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 109,095. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Parasol and Umbrella Tips, Parasol and Umbrella Caps, Parasol and Umbrella Ferrules, Parasol and Umbrella Handles, Parasol and Umbrella Rings, Parasol and Umbrella Case Rings, Parasol and Umbrella Washers, Parasol and Umbrella Eyelets, and Cane-Handles.

Claims use since Jan. 5, 1918.

Ser. No. 109,177. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, INC., Cleveland, Ohio. Filed Feb. 23, 1918.

LIGHTOR

Particular description of goods.—Electric Batteries.

Claims use since Dec. 29, 1917.

Ser. No. 109,193. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CENTRAL STEEL AND WIRE COMPANY, Chicago, Ill. Filed Feb. 25, 1918.

CARBOX

Particular description of goods.—Welding-Wire Whose Composition Includes Iron.

Claims use since Jan. 1, 1915.

Ser. No. 110,050. (CLASS 43. THREAD AND YARN.) I. FLEISHER & SONS, Cincinnati, Ohio. Filed Apr. 8, 1918.



Particular description of goods.—Thread, Yarn, and Twist.

Claims use since Jan. 1, 1910.

Ser. No. 110,666. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Rosettes, Ornaments, Monograms, and Initials for Harness; and Luggage-Tags, All of Said Articles Being Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 110,668. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Cord-Adjusters for Adjusting the Length of Electric-Light Cords, Push-Buttons, Push-Button Caps, Cut Transparent Coverings for Electric Advertising Devices.

Claims use since Jan. 5, 1918.

Ser. No. 110,669. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

EBONEUR

The word "Eboneur."

Particular description of goods.—Cord-Adjusters for Adjusting the Length of Electric-Light Cords, Push-Buttons, Push-Button Caps, Cut Transparent Coverings for Electric Advertising Devices.

Claims use since Jan. 5, 1918.

Ser. No. 110,670. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Cigar-Cases, Pipe-Bits, Cigar-Holders, Cigarette-Cases, Tobacco-Boxes, and Snuff-Boxes, All of Said Articles Being Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 110,674. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Parasol and Umbrella Tips, Parasol and Umbrella Caps, Parasol and Umbrella Ferrules, Parasol and Umbrella Handles, Parasol and Umbrella Rings, Parasol and Umbrella Case Rings, Parasol and Umbrella Washers, Parasol and Umbrella Eyelets, and Cane-Handles.

Claims use since Jan. 5, 1918.

Ser. No. 110,675. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

EBONEUR

The word "Eboneur."

Particular description of goods.—Parasol and Umbrella Tips, Parasol and Umbrella Caps, Parasol and Umbrella Ferrules, Parasol and Umbrella Handles, Parasol and Umbrella Rings, Parasol and Umbrella Case Rings, Parasol and Umbrella Washers, Parasol and Umbrella Eyelets, and Cane-Handles.

Claims use since Jan. 5, 1918.

Ser. No. 110,668. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Tank-Pulls, Bath-Tub Seats, Towel-Racks, Toilet-Shelves, Handles for Bibs and Cocks, and Molded Coverings for Closet Seats and Tanks. The Products Enumerated are Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 110,680. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

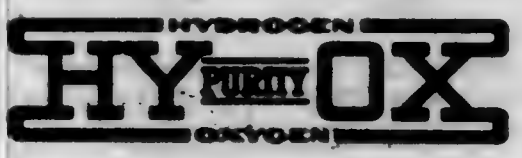
EBONEUR

The word "Eboneur."

Particular description of goods.—Tank-Pulls, Bath-Tub Seats, Towel-Racks, Toilet-Shelves, Handles for Bibs and Cocks, and Molded Coverings for Closet Seats and Tanks. The Products Enumerated are Made of Pyroxylin.

Claims use since Jan. 5, 1918.

Ser. No. 110,945. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BURDETT OXYGEN COMPANY, Denver, Colo. Filed May 17, 1918.



No claim is made to the words "Hydrogen" and "Oxygen" and "Purity" apart from the mark shown in the drawing.

Particular description of goods.—Hydrogen and Oxygen Gas.

Claims use since about Jan. 17, 1918.

Ser. No. 111,212. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ENTERPRISE CHEMICAL CO., St. Louis, Mo. Filed May 27, 1918.



Particular description of goods.—Chafing-Powder, Face-Powder, Vanishing Cream, Fragrant Balm, Talcum Powder, Hair-Tonic, Witch-Hazel, Petrolatum, Bay-Rum, Shampoo, Peroxid, Shaving-Lotion, Tooth-Powder, Tooth-Paste, Cold-Cream, Massage-Cream, Toilet Water, Cocoa-Butter Cream, Nail-Polish, and Rouge.

Claims use since Feb. 1, 1918.

Ser. No. 111,526. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE PICTORIAL REVIEW COMPANY, New York, N. Y. Filed June 12, 1918.

Pictorial Review

Particular description of goods.—Dress-Patterns.

Claims use since Sept. 15, 1899.

Ser. No. 111,553. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHERING & GLATZ, INC., New York, N. Y. Filed June 18, 1918.

ATOPHAN

Particular description of goods.—Phenylcinchoninic Acid or 2-Phenylquinolin-4-Carboxylic Acid, Useful in the Treatment of Gout and Rheumatism.

Claims use since July 19, 1911.

Ser. No. 111,572. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE OHIO BLOWER COMPANY, Cleveland, Ohio. Filed June 14, 1918.



Particular description of goods.—Exhaust-Heads, Steam and Oil Separators, and Steam-Traps Such as are Used in Power Plants.

Claims use since on or about June 8, 1918.

Ser. No. 111,615. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOWARD BRO'S. CHEMICAL CO., Buffalo, N. Y. Filed June 17, 1918.



The word "Buttermilk" being disclaimed except in connection with the other features of the mark.

Particular description of goods.—Toilet Cream.

Claims use since May 18, 1915.

Ser. No. 111,955. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DORFMANN BROS., Corona, N. Y. Filed July 3, 1918.

TRADE
DOROS
MARK

No claim being made to the words "Trade Mark" apart from the mark as shown in the drawing.

Particular description of goods.—Thermometers.

Claims use since June 21, 1918.

Ser. No. 112,105. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE CLOTHOMETER COMPANY, INC., New York, N. Y. Filed July 13, 1918.

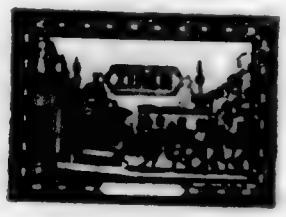
CLOTHOMETER

Consisting of the word "Clothometer."

Particular description of goods.—Measuring and Computing Machines to be Used and Operated for the Measuring of Cloths and Fabrics of Every Kind and Nature.

Claims use since May 1, 1918.

Ser. No. 112,478. (CLASS 17. TOBACCO PRODUCTS.) LUDGEN SONS & CO., London, England. Filed Aug. 2, 1918.



Particular description of goods.—Cigarettes.

Claims use since the 13th day of December, 1900.

Ser. No. 112,676. (CLASS 12. CONSTRUCTION MATERIALS.) A. H. ROTHSCHILD, New York, N. Y. Filed Aug. 12, 1918.

MARVELITE

Particular description of goods.—A Waterproofing Plastic or Semiplastic Compound Consisting of a Combination of Elastic Waterproof Gums Interwoven with Long-Fiber Asbestos Threads.

Claims use since Aug. 6, 1918.

Ser. No. 112,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL B. KINGMAN, Orange, N. J., and San Francisco, Calif. Filed Aug. 14, 1918.



Comprising a panel bearing the word "Happiness," the rest of the drawing being embellished by shading and artistic design.

Particular description of goods.—Food Products in Tins, Glass, and Packages—viz., Mayonnaise Salad-Dressing, Lobster Paste, Potted Chicken, Catsup, and Currant Jelly.

Claims use since July 29, 1918.

Ser. No. 112,742. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AIR-O-FLEX AUTOMOBILE CORPORATION, Detroit, Mich. Filed Aug. 16, 1918.

AIR-O-FLEX

Particular description of goods.—Automobiles, Automobile-Trucks, and Suspension-Cylinders Therefor.

Claims use since Feb. 15, 1918.

Ser. No. 112,786. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MICHAEL H. KIRSCHBAUM, Sioux City, Iowa. Filed Aug. 19, 1918.

PAYOLA

Particular description of goods.—Face-Cream.

Claims use since Feb. 1, 1918.

Ser. No. 112,788. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELLA LEWIS, St. Louis, Mo. Filed Aug. 19, 1918.

YUZIT

"Yuzit."

Particular description of goods.—Certain Pharmaceutical Preparations Used in Dressing the Hair and Cleansing the Scalp.

Claims use since the 1st day of June, 1918.

Ser. No. 113,193. (CLASS 39. CLOTHING.) JOHN B. GOLDSMITH, Philadelphia, Pa. Filed Sept. 16, 1918.

BRUXSHU

Particular description of goods.—Shoes, Slippers, Shoe-Soles, and Shoe-Linings, Said Goods Being Made of Leather, Fabric, Rubber, Composition, and Combinations Thereof.

Claims use since July 29, 1918.

Ser. No. 113,206. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, East Pittsburgh, Pa. Filed Sept. 16, 1918.

FARADOID

Particular description of goods.—Electrical Insulators.
Claims use since July 1, 1918.

Ser. No. 113,267. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) STANDARD COOPER-BELL CO., Chicago, Ill. Filed Sept. 18, 1918.



The conventional lining of the mark does not express any color.
Particular description of goods.—Varnishes, Ready-Mixed Paints, Japans, Paint-Driers.
Claims use since June, 1918.

Ser. No. 113,424. (CLASS 39. CLOTHING.) BATES STREET SHIRT COMPANY, Lewiston, Me. Filed Sept. 26, 1918.



Particular description of goods.—Men's Cotton, Linen, and Silk Fabric Overshirts, Undershirts, Underdrawers, and Night-Robes.
Claims use since on or about Sept. 1, 1908.

Ser. No. 113,523. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MERCER AUTOMOBILE COMPANY, Hamilton township, (near Trenton,) N. J. Filed Oct. 2, 1918.



No claim is made for the word "Mercer" except as shown.
Particular description of goods.—Automobiles and Automobile-Trucks.
Claims use since December, 1910.

Ser. No. 113,669. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAGE AND SHAW, INC., Cambridge, Mass. Filed Oct. 10, 1918.



The trade-mark consists of a rectangular gilt or yellow frame having a red background, having embedded in its upper side a shield having a gold or yellow border and a blue background, with the letters "P & S" displayed therein in gold or yellow. Said shield is surmounted by a gold or yellow plumed helmet. Embedded in the lower side of said frame is a circular background of blue, encircled by a gilt or yellow border. Ornamental scrollwork in gilt or yellow appears on the upper, lower, and right-hand sides of the frame. A pictorial representation of a lion in gilt or yellow appears on the left-hand side of the frame, said lion standing or rearing on its hind feet, which rest upon said scroll.
Particular description of goods.—Chocolates, Bonbons, and Candy.
Claims use since Apr. 15, 1895.

Ser. No. 113,680. (CLASS 39. CLOTHING.) SEXTON MANUFACTURING CO., Fairfield, Ill. Filed Oct. 10, 1918.



Particular description of goods.—Fabric Underwear and Nightwear for Men, Women, and Children—Namely, Union-Suits, Drawers, Undershirts, Pajamas, Night-Robes, Night-Shirts—and Work-Shirts for Outer Wear.
Claims use since June, 1907.

Ser. No. 113,721. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) NATIONAL VULCANIZED PRODUCTS COMPANY, Mishawaka, Ind. Filed Oct. 14, 1918.



Particular description of goods.—Trunks.
Claims use since Sept. 1, 1914.

Ser. No. 113,792. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind. Filed Oct. 18, 1918.

SKYLARK

Particular description of goods.—Self-Rising Flour.
Claims use since January, 1911.

Ser. No. 113,894. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BOOTT MILLS, Lowell, Mass. Filed Oct. 26, 1918.



The trade-mark consists of a rooster.
Particular description of goods.—Cotton Drills.
Claims use since 1853.

Ser. No. 113,944. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) HELEN KELLER FILM CORPORATION, Los Angeles, Calif. Filed Oct. 30, 1918.

"Deliverance"

Particular description of goods.—Motion-Picture Films.
Claims use since May 1, 1918.

Ser. No. 114,124. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATKINSON AND UTECH, INC., New York, N. Y. Filed Nov. 11, 1918.



The lining represents green.
Particular description of goods.—Steel Bars and Billets.
Claims use since Jan. 15, 1918.

Ser. No. 114,125. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATKINSON AND UTECH, INC., New York, N. Y. Filed Nov. 11, 1918.



The lining representing red.
Particular description of goods.—Steel Bars and Billets.
Claims use since Jan. 15, 1918.

Ser. No. 114,192. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SNYDER CHAFFER CO., Columbus, Ohio. Filed Nov. 15, 1918.

Meadowmilk

Particular description of goods.—Candy.
Claims use since January, 1915.

Ser. No. 114,316. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CURTIS & MARBLE MACHINE CO., Worcester, Mass. Filed Nov. 23, 1918. Under ten-year proviso.

CURTIS & MARBLE

The trade-mark consists of the words "Curtis and Marble."

Particular description of goods.—Machinery Appertaining to the Textile Industry—Namely, Willowing-Machines, Fiber-Dusting Machines, Mixing-Pickers, Burring-Pickers, Rag or Shoddy Pickers, Hair-Pickers, Picker-Feeding Machines, Single and Double Burring Machines, Bur-Cylinders, Reversible Rag-Cutters, Garnett Breasts for Carding-Machines, Flock-Cutting Machines, Flock-Renovators, Napping-Machines, Teazel-Slats, Cloth-Brushing Machines, Brush-Slats, Dewing and Spraying Machines, Loop-Thread-Cutting Machines, Cotton Shearing and Brushing Machines, Cloth-Shear Grinders, Chinchilla-Machines, Cloth-Singeing Machines, Worsted Sanding and Polishing Machines, Gigging-Machines, Cloth-Shearing Machines, Cloth-Pressing Machines, Cloth Spreading and Rolling Machines, Cloth-Spreader Rolls, Steam-Finishing Machines, Cloth-Drying Machines, Drier-Feeders, Cloth-Winders, Cloth-Folding Machines, Cloth Doubling and Winding Machines, Bandage-Cloth Splitting and Rolling Machines, Selvage-Straightening Machines, Cloth-Inspection Machines, Cloth Doubling and Tacking Machines, Factory Sewing-Machines, Belt and Hand-Power Railway Sewing-Machines, Cloth-Packaging Machines, Cloth-Stamping Machines, Calender Rolling-Machines, Trade-Marking Machines, Cloth-Rolling Machines, Plush-Finishing Machines, Felt Sanding and Pouncing Machines, Endless-Felt-Finishing Machinery, and Parts of Said Machines.
Claims use since the year 1863.

Ser. No. 114,872. (CLASS 39. CLOTHING.) COOPER UNDERWEAR COMPANY, Kenosha, Wis. Filed Nov. 26, 1918.

Sig-Knit-Sure

Particular description of goods.—Underwear Consisting of Woven and Knitted Union-Suits, Shirts, and Drawers for Men, Women, and Children, and Socks for Men and Children.
Claims use since about Sept. 28, 1918.

Ser. No. 114,411. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ADAPTI COMPANY, Cleveland, Ohio. Filed Nov. 29, 1918.

ADAPTI

Particular description of goods.—The Following Electrical Appliances, Namely: Conductors, Insulators, Terminal Blocks and Wire-Tape, Switch-Plates, Switch-Box and Outlet-Box Covers, Conduit-Supporting Straps and Clamps, and Fixture-Studs.
Claims use since about May 1, 1918.

Ser. No. 114,423. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) OLSON RUG COMPANY, Chicago, Ill. Filed Nov. 29, 1918.



No claim is made to the representation of the rug apart from the mark as shown in the drawing. The figure of the woman shown in the mark is a fanciful drawing.

Particular description of goods.—Woven Rugs.

Claims use since June, 1909.

Ser. No. 114,562. (CLASS 6. CHEMICALS, MEDICINES, and PHARMACEUTICAL PREPARATIONS.) HARRY G. FITZGERALD, Columbus, Ohio. Filed Dec. 9, 1918.

NA-OXO

Particular description of goods.—A Preparation for the Treatment of Pyorrhea.

Claims use since the 1st day of November, 1918.

Ser. No. 114,677. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Dec. 16, 1918.

HOME-CREST

Particular description of goods.—Woven Rugs and Carpets.

Claims use since on or about Sept. 21, 1917.

Ser. No. 114,683. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WAITE GRASS CARPET COMPANY, Oshkosh, Wis. Filed Dec. 16, 1918.

VOGUE

Particular description of goods.—Grass Rugs.

Claims use since about the month of January, 1916.

Ser. No. 114,725. (CLASS 39. CLOTHING.) THE ASHFORD UNDERWEAR CO., LIMITED, Ashford, England. Filed Dec. 20, 1918.

TWIXWOL

Particular description of goods.—Undervests, Pants, Drawers, Knickers, Trousers, Combinations, Night-Dresses, Bodices, Spencers, Sleeping-Suits, Chemises, Pajamas, Camisoles, Petticoats, Bloomers, Divided Skirts, Undershirts, Infants' Body-Wraps, Infants' Body-Binders, Infants' Wrapper-Vests, Pilchers.

Claims use since August, 1917.

Ser. No. 114,741. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LANCASTER MILLS, Clinton, Mass. Filed Dec. 20, 1918.

KALBURNIE

Consisting of the word "Kalburnie."

Particular description of goods.—Cotton Piece Goods.

Claims use since Dec. 2, 1918.

Ser. No. 114,753. (CLASS 6. CHEMICALS, MEDICINES, and PHARMACEUTICAL PREPARATIONS.) DANIEL SHUSTA, Cleveland, Ohio. Filed Dec. 20, 1918.



Being a portrait of myself.

Particular description of goods.—A Tonic or Medicinal Beverage for the Relief of Colds, Debility, and Measles.

Claims use since about August, 1918.

Ser. No. 114,756. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE ULMER LEATHER CO., Norwich, Conn. Filed Dec. 20, 1918.



Particular description of goods.—Leather Belting.

Claims use since Aug. 12, 1909.

Ser. No. 114,821. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MARY E. HEIMBRODINGER, Louisville, Ky. Filed Dec. 26, 1918.

88

Particular description of goods.—Hedge-Shears.
Claims use since August, 1918.

Ser. No. 114,824. (CLASS 39. CLOTHING.) THE JUVENILE SHOE CORPORATION OF AMERICA, St. Louis, Mo. Filed Dec. 26, 1918.



Particular description of goods.—Boots, Shoes, and Sandals of Kid, Leather, and Canvas.
Claims use since Dec. 9, 1918.

Ser. No. 114,854. (CLASS 39. CLOTHING.) THE HELMING-MCKENZIE SHOE COMPANY, Cincinnati, Ohio. Filed Dec. 28, 1918.



Particular description of goods.—Ladies' and Misses' Leather, Fabric, and the Combination of Leather and Fabric Shoes.
Claims use since September, 1901, for the words "Foot-Rest," and for the trade-mark in the form shown in the accompanying drawing since July, 1914.

Ser. No. 114,857. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LIBBY, MCNEILL & LIBBY, Chicago, Ill. Filed Dec. 28, 1918. Under ten-year proviso.



Particular description of goods.—Hams and Bacon, Condensed Milk, Evaporated Milk, Canned Corned Beef, Canned Cherries, Canned Tomatoes, Canned Salmon.
Claims use since Jan. 1, 1894.

Ser. No. 114,870. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SILVER MANUFACTURING COMPANY, Salem, Ohio. Filed Dec. 28, 1918. Under ten-year proviso.



Particular description of goods.—Feed-Cutters, Silo-Fillers, Fodder-Shredders, Feed-Grinders, Metal-Drilling Machines, Band-Saws, Swing-Saws, Saw-Tables, Wood-Jointers, Hub-Boring Machines, Spoke-Tenoning Machines, Sausage-Stuffers, and Lard-Presses.
Claims use since March, 1890.

Ser. No. 114,954. (CLASS 39. CLOTHING.) JOHN H. LANSING & CO. INC., Amsterdam, N. Y. Filed Jan. 2, 1919.



No claim is made to the words "Holland Sweater Mills, Amsterdam, N. Y." and the words "Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Sweaters.
Claims use since about Sept. 20, 1918.

Ser. No. 114,987. (CLASS 28. MEASURING AND SCIENTIFIC APPLIANCES.) DETROIT AUTOMATIC SCALE COMPANY, Detroit, Mich. Filed Jan. 4, 1919.

DETROMATIC

Particular description of goods.—Weighing-Scales.
Claims use since Aug. 20, 1918.

Ser. No. 115,115. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN F. BAUER CO., Elmira, N. Y. Filed Jan. 11, 1919.

Mo-Ko

Particular description of goods.—A Cereal Food-Drink.
Claims use since Mar. 20, 1897.

Ser. No. 115,157. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE PARA COMPANY, Trenton, N. J. Filed Jan. 13, 1919.



No claim is made to the exclusive use to the words "The Para Company, Tires, Trenton, N. J." as a trade-mark or to the mere representation of tires apart from the mark shown in the drawing.
Particular description of goods.—Rubber Tires and Tubes.
Claims use since February, 1918.

Ser. No. 115,204. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOLDEN-LEONARD COMPANY, New York, N. Y. Filed Jan. 15, 1919.

NENETTE

Particular description of goods.—Woolen Piece Goods.
Claims use since Jan. 1, 1919.

Ser. No. 115,206. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOLDEN-LEONARD COMPANY, New York, N. Y. Filed Jan. 16, 1919.

RINTINTIN

Particular description of goods.—Woolen Piece Goods.
Claims use since Jan. 1, 1919.

Ser. No. 115,245. (CLASS 15. OILS AND GREASES.) J. C. FRANCESCONI & COMPANY, New York, N. Y. Filed Jan. 17, 1919.

JASON

Particular description of goods.—Paraffin-Wax, Vegetable Waxes—Namely, Candelilla-Wax and Carnauba-Wax Used in the Manufacture of Candles—Candles, Petroleum, and Lubricating-Oils.
Claims use since Jan. 15, 1916.

Ser. No. 115,272. (CLASS 39. CLOTHING.) E & S MIDDY CO., New York, N. Y. Filed Jan. 17, 1919.

Skod Kit

Particular description of goods.—Middy-Blouses.
Claims use since Jan. 4, 1919.

Ser. No. 115,290. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) TAPLEX CORPORATION, New York, N. Y. Filed Jan. 18, 1919.

TAPLEX

Consisting of the coined word "Taplex."
Particular description of goods.—Bed-Warmers, Body-Warmers, Foot-Warmers, and Food-Warmers Using Dry Fuel Containing Charcoal as a Base.
Claims use since June, 1918.

Ser. No. 115,327. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE SIMMONS MANUFACTURING COMPANY, Cleveland, Ohio. Filed Jan. 20, 1919.

"RATTLE TRAP"

Particular description of goods.—A Device to Prevent Rattling of the Steering-Rods of Automobiles.
Claims use since Nov. 1, 1918.

Ser. No. 115,356. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. PUMPTER MANUFACTURING CO., St. Louis, Mo. Filed Jan. 21, 1919. Under ten-year proviso.



Particular description of goods.—A Medicinal Preparation for the Relief of Diseases and Disorders of the Kidneys and Liver.
Claims use since 1876.

Ser. No. 115,366. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. J. BRACH & SONS, Chicago, Ill. Filed Jan. 22, 1919.

ORANGE-ADS

No claim is made to the word "Orange" apart from the mark as shown.
Particular description of goods.—Hard Candies.
Claims use since Dec. 1, 1918.

Ser. No. 115,378. (CLASS 15. OILS AND GREASES.) MONARCH MANUFACTURING COMPANY, Council Bluffs, Iowa, and Toledo, Ohio. Filed Jan. 22, 1919.

VICTORY

Particular description of goods.—Lubricating-Greases and Lubricating-Oils.
Claims use since Mar. 1, 1918.

Ser. No. 115,381. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SPLITDORF ELECTRICAL COMPANY, Newark, N. J. Filed Jan. 22, 1919.

AERO

Particular description of goods.—Electrical Switches, Ignition-Generators, and Spark-Plugs.
Claims use since Dec. 31, 1918.

Ser. No. 115,388. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM GATES, Norfolk, Va. Filed Jan. 23, 1919.



No claim being made to the word "Original" apart from the mark shown in the drawing. The picture in the letter "G" of the trade-mark is a portrait of the applicant and owner of trade-mark.

Particular description of goods.—Candy Cough-Drops.

Claims use since October, 1917.

Ser. No. 115,434. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.

J.RUSSELL & CO.
GREEN RIVER WORKS

Particular description of goods.—Palettes; Spatulas; Table-Knives of Base Metal; and Beet, Vegetable-Corn, Tobacco, Kitchen, Butcher, Hunting, Canners', Fishing, Cotton, Putty, Scraping, Cake, Vegetable, Oil-Cloth and Shoe Knives.

Claims use since the year 1876.

Ser. No. 115,439. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919. Under ten-year proviso.



Particular description of goods.—Pen and Pocket Knives.

Claims use since the year 1884.

Ser. No. 115,442. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919.

J.R.&CO.



Particular description of goods.—Palettes; Spatulas; Table Knives and Forks of Base Metal; and Beet, Vegetable-Corn, Tobacco, Kitchen, Butcher, Hunting, Canners', Fishing, Cotton, Putty, Scraping, Cake, Vegetable, Oil-Cloth, and Shoe Knives.

Claims use since the year 1884.

Ser. No. 115,496. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. V. SMITH & COMPANY, Wauseon, Ohio. Filed Jan. 28, 1919.

VOILA

Particular description of goods.—A Medicinal Preparation for Influenza and Pneumonia.

Claims use since Dec. 1, 1918.

Ser. No. 115,544. (CLASS 39. CLOTHING.) CLUETT, PEABODY & CO. INC., Troy, N. Y. Filed Jan. 31, 1919.



The words "Troy" and "Tailored" are disclaimed apart from the mark shown on the drawing.

Particular description of goods.—Collars and Cuffs.

Claims use since Oct. 15, 1918.

Ser. No. 115,545. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CULTI-TRACTOR COMPANY, Minneapolis, Minn. Filed Jan. 31, 1919.



The word "Tractor" appearing in the mark is disclaimed apart from the mark as shown in the drawing.

Particular description of goods.—Traction-Engines.

Claims use since Mar. 28, 1918.

Ser. No. 115,553. (Class 39. CLOTHING.) MAX REISS, New York, N. Y. Filed Jan. 31, 1919.



No claim is made to the name "Reiss" apart from the mark as shown.

Particular description of goods.—Petticoats, Dress-Skirts, and Underskirts.

Claims use since Jan. 2, 1918.

Ser. No. 115,597. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ULYSSES G. MASON, Birmingham, Ala. Filed Feb. 3, 1919.



No claim being made to the words "Pneumonia," "Influenza," "Coughs," "Colds," "Salve," and "Trade-Mark."

Particular description of goods.—Salve for Coughs, Colds, Croup, Sore Throat, La Grippe, Wounds, and Sores.

Claims use since Sept. 2, 1918.

Ser. No. 115,615. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MABEL BOONE GOSNELL, Minneapolis, Minn. Filed Feb. 4, 1919.

SIS LIZA'S "OLD SOUTH"



Particular description of goods.—Fruit Preserves, Jams, Vegetable Pickle Relishes, and Pickles.

Claims use since the 12th day of December, 1918.

Ser. No. 115,617. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. GAMBRILL MANUF'G COMPANY, Baltimore, Md. Filed Feb. 4, 1919.

I·SPY

Particular description of goods.—Self-Rising Buckwheat-Flour.

Claims use since Dec. 24, 1918.

Ser. No. 115,679. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PILLSBURY FLOUR MILLS COMPANY, Minneapolis, Minn. Filed Feb. 7, 1919. Under ten-year proviso.



Particular description of goods.—Flour Made from Wheat.

Claims use since on or about Feb. 20, 1874.

Ser. No. 115,722. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALVIS H. DAVIS, Santa Maria, Calif. Filed Feb. 10, 1919.



Particular description of goods.—Medicinal Preparation for the Treatment of Typhoid Fever, Malaria or Chills, and La Grippe or Influenza.

Claims use for the treatment of typhoid fever, malaria or chills since Mar. 1, 1915; for the treatment of la grippe or influenza since Oct. 15, 1918.

Ser. No. 115,746. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VERNON WRIGHT, Detroit, Mich. Filed Feb. 10, 1919.

O O

ONLY
ORIGINAL

No claim being made to the words "Only Original" apart from the mark as shown.

Particular description of goods.—A Chemical Compound for Removing or Destroying Soot.

Claims use since Jan. 20, 1919.

Ser. No. 115,756. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) DOROTHY M. CROSBY, Duluth, Minn. Filed Feb. 11, 1919.

Dolly Winkle

Particular description of goods.—Dolls.

Claims use since November, 1918.

Ser. No. 115,763. (CLASS 39. CLOTHING.) JOSEPH GITTER CO., New York, N. Y. Filed Feb. 11, 1919.



The trade-mark consists of the word "Butterfly" woven in golden color and three butterflies woven in blue color, the largest butterfly resting on a blue-colored twig and golden lines ornamenting the wings of each one of the butterflies and the body portion of the largest butterfly, said butterflies being shown in light against a dark background.

Particular description of goods.—Ladies' Hats, Trimmed and Untrimmed.

Claims use since Dec. 1, 1918.

Ser. No. 115,765. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ITALIAN DRUGS IMPORTING CO., New York, N. Y. Filed Feb. 11, 1919.

GLICEROFOSFAL

Consisting of the coined word "Glicerofosfal."

Particular description of goods.—A Tonic Used to Alleviate Neurasthenia, Hysteria, and other Nervous Disorders and in Cases Involving Weakness and Exhaustion of the Nervous System.

Claims use since Jan. 28, 1919.

Ser. No. 115,777. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE PATHESCOPE CO. OF AMERICA, INC., New York, N. Y. Filed Feb. 11, 1919.

THE NEW PREMIER PATHESCOPE

Applicant disclaims exclusive right to the words "The New" apart from the mark as shown in the drawing.

Particular description of goods.—Motion-Picture-Projecting Machines and Parts Thereof.

Claims use since Jan. 8, 1918.

Ser. No. 115,780. (CLASS 39. CLOTHING.) BOLO SHOE CO., New York, N. Y. Filed Feb. 11, 1919.

PUSS-IN-BOOTS

The words "Puss-In-Boots."

Particular description of goods.—Children's Shoes Made Wholly or in Part of Leather.

Claims use since Jan. 2, 1919.

Ser. No. 115,791. (CLASS 15. OILS AND GREASES.) THE SCHOFIELD OIL CO., New York, N. Y. Filed Feb. 11, 1919.

RECTOR

Particular description of goods.—Lubricating-Oils.

Claims use since Feb. 5, 1919.

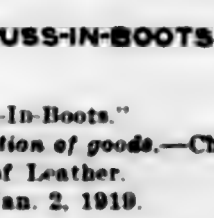
Ser. No. 115,792. (CLASS 15. OILS AND GREASES.) THE SCHOFIELD OIL CO., New York, N. Y. Filed Feb. 11, 1919.

AMAZON

Particular description of goods.—Lubricating-Oils.

Claims use since Feb. 5, 1919.

Ser. No. 115,830. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BLANTON RUBBER AND MANUFACTURING CO., Oklahoma, Okla. Filed Feb. 13, 1919.



"Bear Cat" and the fanciful representation of a bear-cat shown in the accompanying drawing, no claim being made to the representation of a tire apart from the mark shown in the drawing.

Particular description of goods.—A Rubber-Back Patch for Patching Punctures and Blow-Outs in Pneumatic Tires and for Patching other Articles of Rubber.

Claims use on or about October, 1918.

Ser. No. 115,834. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE DEMING COMPANY, Salem, Ohio. Filed Feb. 13, 1919.

COMET

Particular description of goods.—Spraying-Nozzles.

Claims use since about Jan. 25, 1919.

Ser. No. 115,835. (CLASS 12. CONSTRUCTION MATERIALS.) THE EDISON PORTLAND CEMENT COMPANY, West Orange, N. J. Filed Feb. 13, 1919.



The trade-mark has an orange background and includes the autograph name "Thomas A. Edison," no claim being made to the words "Trade Mark" and "Edison Portland Cement Company, New Village, N. J.," apart from the mark shown in the drawing.

Particular description of goods.—Portland Cement.

Claims use since the spring of 1902.

Ser. No. 115,836. (CLASS 12. CONSTRUCTION MATERIALS.) THE EDISON PORTLAND CEMENT COMPANY, West Orange, N. J. Filed Feb. 13, 1919.



The trade-mark has an orange background and includes the autograph name "Thomas A. Edison," no claim being made to the words "Trade Mark" and "Edison Portland Cement, New Village, N. J.," apart from the mark shown in the drawing.

Particular description of goods.—Portland Cement.

Claims use since the spring of 1902.

Ser. No. 115,881. (CLASS 39. CLOTHING.) M. M. MAYHOFF & CO., INCORPORATED, Norwalk, Conn. Filed Feb. 15, 1919.



Particular description of goods.—Men's Collar-Attached Work and Sport Shirts, Men's Pajamas, Women's Shirt-Waists, Shirt-Waist Suits, and Dresses.

Claims use since Feb. 12, 1919.

Ser. No. 115,922. (CLASS 26. MUSICAL INSTRUMENTS AND SUPPLIES.) MORRISON-WATERS PIANO COMPANY, Cincinnati, Ohio. Filed Feb. 17, 1919.

SMITH & NIXON

Particular description of goods.—Pianos.
Claims use since 1885.

Ser. No. 115,932. (CLASS 38. PRINTS AND PUBLICATIONS.) THE STRAUS BROTHERS COMPANY, Ligonier, Ind. Filed Feb. 17, 1919.

BONDS

Particular description of goods.—A Publication Issued Monthly Known as *Bonds*.
Claims use since Jan. 1, 1919.

Ser. No. 115,941. (CLASS 38. PRINTS AND PUBLICATIONS.) W. T. WELLSCH & Co., San Francisco, Calif. Filed Feb. 17, 1919.

THE RICE BOWL

Particular description of goods.—A Publication Issued Monthly Known as a House Organ.
Claims use since Jan. 1, 1919.

Ser. No. 115,945. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) STEPHEN T. BOWEN, Chicago, Ill. Filed Feb. 18, 1919.

DeBoy.

Particular description of goods.—A Liquid Polish for Furniture, Floors, and Automobile Bodies.
Claims use since Feb. 10, 1919.

Ser. No. 115,973. (CLASS 23. GLASSWARE.) THE DUNBAR-KAISER CO., Buffalo, N. Y. Filed Feb. 18, 1919.

VICTORY

Particular description of goods.—Sheet or Window Glass.
Claims use since Feb. 5, 1919.

Ser. No. 116,006. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PIEDMONT CHEMICAL WORKS, Atlanta, Ga. Filed Feb. 19, 1919.

Lamarine

Consisting of the word "Lamarine."
Particular description of goods.—A Laxative Wafer.
Claims use since Nov. 1, 1918.

Ser. No. 116,008. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POSTUM CEREAL COMPANY, Battle Creek, Mich. Filed Feb. 19, 1919.

CORN-FETTI

The word "Corn" except as a part of the mark shown is disclaimed.
Particular description of goods.—Cereal Breakfast Foods.
Claims use since Feb. 12, 1919.

Ser. No. 116,020. (CLASS 39. CLOTHING.) HIRSCHFIELD BROS.-ALBERSTEIN GARMENT CO., St. Louis, Mo. Filed Feb. 20, 1919.

The Darling

Particular description of goods.—Misses' and Ladies' Dresses.
Claims use since Jan. 1, 1919.

Ser. No. 116,039. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE F. SCHLESINGER, New York, N. Y. Filed Feb. 20, 1919.

GELINOS

Particular description of goods.—A Medical Jelly for the Nose.
Claims use since Jan. 1, 1918.

Ser. No. 116,066. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WORTHINGTON & RAYMOND, INC., New York, N. Y. Filed Feb. 21, 1919.

W&R

Particular description of goods. — Pliers, Engraving-Tools, Files, and Jewelers' Saws.
Claims use since Mar. 15, 1904.

Ser. No. 116,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM CROFT, Salem, N. H. Filed Feb. 26, 1919.



Particular description of goods.—Potato Chips.
Claims use since July 1, 1907.

Ser. No. 116,176. (Class 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 27, 1919.

Domino

Particular description of goods.—Meringue-Powder.
Claims use since Feb. 21, 1919.

Ser. No. 116,177. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 27, 1919.

Domino

Particular description of goods.—Honey.
Claims use since Feb. 21, 1919.

Ser. No. 116,225. (CLASS 37. PAPER AND STATIONERY.) THE WHITAKER PAPER COMPANY, Cincinnati, Ohio. Filed Feb. 28, 1919.

BASIC

Particular description of goods.—Writing and Printing Paper.
Claims use since Feb. 15, 1919.

Ser. No. 116,235. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE KOTLAR, Elizabeth, N. J. Filed Mar. 7, 1919.

LOCOLAK

The trade-mark consists of the word "Locolak."
Particular description of goods. — Liquid Preparation for the Alleviation of Consumption and other Lung Disease.
Claims use since Sept. 1, 1918.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 15, 1919.

125,118. COMPRESSED GASES. AIR REDUCTION COMPANY, INCORPORATED, New York, N. Y.
Filed October 31, 1918. Serial No. 112,956. PUBLISHED JANUARY 7, 1919.

125,119. IRONING-MACHINES. APEX APPLIANCE COMPANY, Chicago, Ill.
Filed November 4, 1918. Serial No. 114,030. PUBLISHED JANUARY 7, 1919.

125,120. TOILET SOAPS. THE ARMAND COMPANY, Des Moines, Iowa.
Filed March 6, 1917. Serial No. 101,898. PUBLISHED JANUARY 7, 1919.

125,121. FIRE-BRICK. ASHLAND FIRE BRICK COMPANY, Ashland, Ky.
Filed December 2, 1918. Serial No. 114,438. PUBLISHED JANUARY 7, 1919.

125,122. FIRE-BRICK. ASHLAND FIRE BRICK COMPANY, Ashland, Ky.
Filed December 2, 1918. Serial No. 114,441. PUBLISHED JANUARY 7, 1919.

125,123. PREPARATION FOR SCALP-TONIC, MENTHOL CREAM, HAIR-TONIC, MANGE REMEDY. BARLOW CHEMICAL COMPANY, Shawnee, Okla.
Filed April 8, 1917. Serial No. 102,690. PUBLISHED JANUARY 7, 1919.

125,124. BOOKLETS OR LESSONS ISSUED FROM TIME TO TIME. ALVIN A. BRATTON, Columbus, Ohio.
Filed April 5, 1918. Serial No. 110,002. PUBLISHED MAY 7, 1918.

125,125. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED AILMENTS. PHILIP CARADONNA, Philadelphia, Pa.
Filed October 19, 1918. Serial No. 113,806. PUBLISHED JANUARY 7, 1919.

125,126. ICE-CREAM. CHAPIN-SACKS MANUFACTURING COMPANY, Washington, D. C.
Filed March 4, 1918. Serial No. 109,284. PUBLISHED JUNE 11, 1918.

125,127. LINIMENT TO BE USED FOR CERTAIN NAMED AILMENTS. JOHN CHIMIELL CO., Boston, Mass.
Filed February 28, 1917. Serial No. 101,774. PUBLISHED JANUARY 7, 1919.

125,128. CERTAIN NAMED LUMBER. CLEAR LAKE LUMBER COMPANY, Clear Lake, Wash.
Filed September 18, 1917. Serial No. 106,296. PUBLISHED JANUARY 7, 1919.

125,129. PHONOGRAPHS AND PHONOGRAPH-RECORDS. COLONIAL PHONOGRAPH CO., Sheboygan Wis.
Filed September 20, 1918. Serial No. 113,277. PUBLISHED DECEMBER 17, 1918.

125,130. BEVERAGES, NON-ALCOHOLIC MALTLESS, OF A HERBAL AND VEGETABLE NATURE. DOMESTIC SUNDRIES COMPANY LIMITED, Vancouver, British Columbia, Canada.
Filed September 4, 1918. Serial No. 113,010. PUBLISHED DECEMBER 3, 1918.

125,131. ARMBANDS. EAGLE GARTER COMPANY, New York, N. Y.
Filed May 4, 1918. Serial No. 110,689. PUBLISHED DECEMBER 10, 1918.

125,132. CLEANSING COMPOUND IN POWDERED FORM FOR CERTAIN NAMED USES. ELDERFIELD CHEMICAL & MFG. CO., Sandwich, Mass.
Filed May 25, 1918. Serial No. 111,190. PUBLISHED DECEMBER 3, 1918.

125,133. CANDIES. CLINTON ELLIOTT, New York, N. Y.
Filed March 27, 1918. Serial No. 109,826. PUBLISHED APRIL 30, 1918.

125,134. TOMATO PASTE. EMMOLO BROS., Cloverdale, Calif.
Filed February 11, 1918. Serial No. 108,940. PUBLISHED JANUARY 7, 1919.

125,135. WRITING-PAPER. FOX RIVER PAPER CO., Appleton, Wis.
Filed October 22, 1918. Serial No. 113,847. PUBLISHED DECEMBER 10, 1918.

125,136. MONTHLY PUBLICATION. JAMES E. GATEWOOD, St. Louis, Mo.
Filed April 8, 1918. Serial No. 110,052. PUBLISHED DECEMBER 17, 1918.

125,137. THICK FRUITY SAUCE CONTAINING A SEASONING. GILLARD & CO., LIMITED, Walthamstow, London, England.
Filed July 27, 1918. Serial No. 112,859. PUBLISHED JANUARY 7, 1919.

125,138. ALIMENTARY PASTE—VIZ., MACARONI, SPAGHETTI, AND NOODLES. ALBERT J. HADSELL, New Rochelle, N. Y.
Filed November 19, 1918. Serial No. 114,241. PUBLISHED JANUARY 7, 1919.

125,139. LIMESTONE PREPARED FOR AGRICULTURAL PURPOSES. WILLIAM SEWARD HALLADAY, Jr., Waukesha, Wis.
Filed June 22, 1918. Serial No. 111,753. PUBLISHED JANUARY 7, 1919.

125,140. FLAKED LAUNDRY SOAP. THE HEWITT BROS. SOAP CO., Dayton, Ohio.
Filed May 15, 1918. Serial No. 110,904. PUBLISHED JULY 23, 1918.

125,141. POWDER FOR CLEANING METALS AND GLASS. ORRN HILL, Lawrence, Mass.
Filed September 19, 1918. Serial No. 113,252. PUBLISHED DECEMBER 17, 1918.

125,142. CANTEENS. HOCOTAHN MFG. CO., Tucson, Ariz.
Filed November 12, 1918. Serial No. 114,143. PUBLISHED JANUARY 7, 1919.

125,143. BLOOD-PURIFIERS. HOSHAW & HOPKINS, Hot Springs, Ark.
Filed November 14, 1917. Serial No. 107,369. PUBLISHED JANUARY 7, 1919.

125,144. FACE-CREAM. ARTHUR M. HULL, Chicago, Ill.
Filed April 19, 1918. Serial No. 110,226. PUBLISHED JANUARY 7, 1919.

125,145. CANNED EVAPORATED MILK. INDIANA CONDENSED MILK CO., Indianapolis, Ind.
Filed November 25, 1918. Serial No. 114,342. PUBLISHED JANUARY 7, 1919.

125,146. CANNED EVAPORATED MILK. INDIANA CONDENSED MILK CO., Indianapolis, Ind.
Filed November 25, 1918. Serial No. 114,341. PUBLISHED JANUARY 7, 1919.

125,147. SEMIMONTHLY, BIMONTHLY, AND ANNUAL PUBLICATION. INTERNATIONAL TRADE DEVELOPER, Chicago, Ill.

Filed July 20, 1918. Serial No. 112,230. PUBLISHED DECEMBER 17, 1918.

125,148. CARBON-PAPER. KEE LOX MANUFACTURING COMPANY, Rochester, N. Y.

Filed September 20, 1918. Serial No. 113,262. PUBLISHED DECEMBER 17, 1918.

125,149. REFILLABLE PENCILS OF MAGAZINE AND NON-MAGAZINE TYPE AND LEADS THEREFOR. CHARLES R. KEERAN, Chicago, Ill., assignor to Keeran Products Company, Chicago, Ill., a Corporation of Illinois.

Filed July 30, 1918. Serial No. 112,428. PUBLISHED NOVEMBER 5, 1918.

125,150. SALAD-OILS. LIBERTY SALAD OIL COMPANY, New York, N. Y.

Filed August 13, 1918. Serial No. 112,694. PUBLISHED JANUARY 7, 1919.

125,151. LIQUID PREPARATION FOR SCOURING VARIOUS FABRICS, SUCH AS SILK AND COTTON. MCCARTY ANILINE & EXTRACT COMPANY, INC., New York, N. Y.

Filed September 6, 1918. Serial No. 113,049. PUBLISHED DECEMBER 10, 1918.

125,152. SALVE FOR COLDS, COUGHS, PNEUMONIA, GRIPPE, BURNS, BITES, &c. MCCORMICK & CO., Baltimore, Md.

Filed November 15, 1918. Serial No. 114,187. PUBLISHED JANUARY 7, 1919.

125,153. GLYCERINIZED ASAFETIDA. MCCORMICK & CO., Baltimore, Md.

Filed November 15, 1918. Serial No. 114,189. PUBLISHED JANUARY 7, 1919.

125,154. CERTAIN NAMED FLAVORING EXTRACTS FOR NON-ALCOHOLIC BEVERAGES AND SOFT DRINKS. MCCORMICK & CO., Baltimore, Md.

Filed November 26, 1918. Serial No. 114,381. PUBLISHED JANUARY 7, 1919.

125,155. COCOA. MACDONALD & CO., San Francisco, Calif.

Filed September 30, 1918. Serial No. 113,494. PUBLISHED JANUARY 7, 1919.

125,156. OLIVE-OIL. RAFFAELE MARTORELLI, New York, N. Y.

Filed August 8, 1914. Serial No. 80,404. PUBLISHED OCTOBER 9, 1917.

125,157. MINCE-MEAT. MEDOMAK CANNING COMPANY, Rockland and Winslows Mills, Me.

Filed September 30, 1918. Serial No. 113,490. PUBLISHED JANUARY 7, 1919.

125,158. CIGARETTES. E. P. MORTHENS & CO. INC., New York, N. Y.

Filed September 29, 1917. Serial No. 106,510. PUBLISHED JANUARY 7, 1919.

125,159. SHINGLES. MILLER BROS. LUMBER CO., Bellingham, Wash.

Filed November 26, 1918. Serial No. 114,382. PUBLISHED JANUARY 7, 1919.

125,160. CANDIES. NATIONAL CANDY COMPANY, St. Louis, Mo.

Filed October 19, 1918. Serial No. 113,813. PUBLISHED JANUARY 7, 1919.

125,161. FIBROUS INSULATING MATERIAL FOR SOUND OR HEAT INSULATION OR FOR USE IN CONSTRUCTION-WORK. NORTHERN INSULATING COMPANY, St. Paul, Minn.

Filed June 15, 1918. Serial No. 111,597. PUBLISHED JANUARY 7, 1919.

125,162. TABLETS FOR TREATMENT OF LA GRIPPE AND COLDS. THE OZARK MEDICINE COMPANY, Springfield, Mo.

Filed November 7, 1918. Serial No. 114,060. PUBLISHED JANUARY 7, 1919.

125,163. CHEMICAL PREPARATION FOR EXTERMINATING RATS AND MICE. FRIEDOLIN PABST, Chicago, Ill.

Filed November 7, 1918. Serial No. 114,084. PUBLISHED JANUARY 7, 1919.

125,164. MONTHLY TRADE PUBLICATIONS. PARSONS TRADING COMPANY, New York, N. Y.

Filed October 19, 1918. Serial No. 113,815. PUBLISHED JANUARY 7, 1919.

125,165. SHOE-POLISH. ALEXANDER PASSKIEWICZ, Shenandoah, Pa.

Filed March 2, 1918. Serial No. 109,339. PUBLISHED DECEMBER 24, 1918.

125,166. CERTAIN NAMED CANNED VEGETABLES AND MEAT. J. T. POLK COMPANY, Greenwood, Ind.

Filed October 17, 1917. Serial No. 106,817. PUBLISHED JANUARY 7, 1919.

125,167. TOILET SOAP. THE REMEMBER SOAP COMPANY, Cincinnati, Ohio.

Filed October 25, 1918. Serial No. 113,889. PUBLISHED DECEMBER 10, 1918.

125,168. FIBER-BOARD. ROGERS FIBRE COMPANY, Kennebunk, Me.

Filed October 10, 1918. Serial No. 113,672. PUBLISHED DECEMBER 24, 1918.

125,169. CANNED TOMATOES, CANNED PEACHES, AND CANNED APRICOTS. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,353. PUBLISHED JANUARY 7, 1919.

125,170. CANNED APRICOTS AND CANNED PEACHES. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,359. PUBLISHED JANUARY 7, 1919.

125,171. CANNED APRICOTS AND CANNED PEACHES. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,357. PUBLISHED JANUARY 7, 1919.

125,172. CANNED PEACHES, CANNED APRICOTS, AND CANNED TOMATOES. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,355. PUBLISHED JANUARY 7, 1919.

125,173. CANNED TOMATO PASTE. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,362. PUBLISHED JANUARY 7, 1919.

125,174. CANNED TOMATOES WITH PURÉE FROM TRIMMINGS, CANNED PEACHES, AND CANNED APRICOTS. SAN FERNANDO CANNING CO., San Fernando, Calif.

Filed November 25, 1918. Serial No. 114,363. PUBLISHED JANUARY 7, 1919.

125,175. CARD-INDEX CABINETS, CARD-INDEX TRAYS, RECEIPT-CABINETS, LAW-BLANK CABINETS, AND LETTER-CABINETS. LOUIS SAINSBURY, New York, N. Y.

Filed November 21, 1918. Serial No. 114,277. PUBLISHED JANUARY 7, 1919.

125,176. SNAP-FASTENERS. SCHEIN BROTHERS, New York, N. Y.

Filed October 11, 1918. Serial No. 113,698. PUBLISHED DECEMBER 17, 1918.

125,177. CLAMP FOR BROOMS. M. G. SCOVILLE SONS COMPANY, Ogden, Utah.

Filed October 18, 1918. Serial No. 113,786. PUBLISHED DECEMBER 10, 1918.

125,178. FRESH APPLES AND FRESH CHERRIES. TONDEVOLD & LEWIS, Lewiston, Idaho.

Filed October 24, 1918. Serial No. 113,877. PUBLISHED JANUARY 7, 1919.

125,179. BELT-DRESSING. THE ULSTER LEATHER COMPANY, Norwich, Conn.
Filed November 4, 1918. Serial No. 114,045. PUBLISHED JANUARY 7, 1919.

125,180. ETHYL ALCOHOL FOR USE AS DENATURED ALCOHOL, FUEL, ANTIFREEZING SOLUTION, AND SOLIDIFIED ALCOHOL. U. S. INDUSTRIAL ALCOHOL CO., New York, N. Y.
Filed August 31, 1918. Serial No. 112,959. PUBLISHED JANUARY 7, 1919.

125,181. PREPARATION USED IN DESTROYING PESTS THAT ARE INJURIOUS TO COTTON AND OTHER GROWING CROPS. LEE WARD, Kingfisher, Okla.
Filed November 14, 1918. Serial No. 114,175. PUBLISHED JANUARY 7, 1919.

125,182. CEREAL FOOD IN THE NATURE OF GRANULATED CORN WHICH MAY BE USED AS A BREAKFAST FOOD. THE WHEATENA COMPANY, New York, N. Y., and Rahway, N. J.
Filed May 18, 1918. Serial No. 110,877. PUBLISHED JANUARY 7, 1919.

125,183. MONTHLY MAGAZINE. WOMAN'S NATIONAL MAGAZINE CO., Phoenix, Ariz., and Washington, D. C.
Filed November 9, 1917. Serial No. 107,275. PUBLISHED JANUARY 7, 1919.

125,184. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed November 7, 1918. Serial No. 114,076. PUBLISHED DECEMBER 10, 1918.

LABELS

REGISTERED APRIL 15, 1919.

21,209.—*Title:* "BENCOE BRAND SWEETENED CONDENSED MILK." (For Canned Condensed Milk.) BENCOE EXPORTING & IMPORTING CO., INC., New York, N. Y. Filed January 9, 1919.

21,210.—*Title:* "XTRAGOOD." (For Bread.) THE R. B. BISCUIT CO., Cleveland, Ohio. Filed December 31, 1918.

21,211.—*Title:* "MOTHER GOOSE BREAD." (For Bread.) HARVEY CONOVER, Chicago, Ill. Filed January 18, 1919.

21,212.—*Title:* "ALL-(EFANEM)-WOOL." (For Sponges for Automobile-Washing.) FRIEDRICH & MANSELL, New York, N. Y. Filed January 9, 1919.

21,213.—*Title:* "HOYE'S LIBERTY TEA AND SUGAR TABLET." (For "Mate" Tea and Sugar Tablets.) STEPHEN M. HOYE, New York, N. Y. Filed February 4, 1919.

21,214.—*Title:* "SULPHOZIN." (For Face and Skin Lotion.) SULPHOZIN CO., Newark, N. J. Filed August 31, 1918.

21,215.—*Title:* "PILLSBURY'S PANCAKE FLOUR." (For Pancake-Flour.) PILLSBURY FLOUR MILLS COMPANY, Minneapolis, Minn. Filed January 16, 1919.

21,216.—*Title:* "ROSS QUALITY IS ECONOMY." (For Tank-Bulbs.) ROSS MANUFACTURING COMPANY, Kansas City, Mo. Filed April 8, 1918.

21,217.—*Title:* "POM-ORA." (For A Grade A Marmalade.) JOSEPH E. SEE, New York, N. Y. Filed December 24, 1918.

21,218.—*Title:* "A NO. 1 ANTISEPTIC CUTTING COMPOUND." (For Chemical Compounds Prepared for Cooling Metal-Cutting Tools.) STANDARD CHEMICAL CO., Emeryville, Calif. Filed November 18, 1918.

21,219.—*Title:* "LAVISAN." (For a Preparation for the Scalp.) THAMES DRUG COMPANY, Beaumont, Tex. Filed March 1, 1918.

21,220.—*Title:* "PAWNEE ANT EXTERMINATOR." (For an Insecticide.) THAMES DRUG COMPANY, Beaumont, Tex. Filed March 1, 1918.

21,221.—*Title:* "WELCH'S GRAPELADE THE NATIONAL SPREAD." (For a Spread.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed January 16, 1919.

PRINTS

REGISTERED APRIL 15, 1919.

5,082.—*Title:* "COME IN, LET US SHOW YOU DETMER UNIVERSITY NOVELTIES LATEST SUITINGS." (For Detmer Woolens.) DETMER WOOLEN CO., New York, N. Y. Filed January 31, 1919.

5,083.—*Title:* "COME IN, LET US SHOW YOU DETMER UNIVERSITY NOVELTIES LATEST SUITINGS." (For Detmer Woolens.) DETMER WOOLEN CO., New York, N. Y. Filed January 31, 1919.

5,084.—*Title:* "STICK TO CINCO, IT'S SAFE." (For Cinco Cigars.) OTTO EISENLOHR & BROS., INCORPORATED, Philadelphia, Pa. Filed August 31, 1918.

5,085.—*Title:* "TASTYKAKE." (For Cake.) TASTY BAKING COMPANY, Philadelphia, Pa. Filed October 25, 1918.

5,086.—*Title:* "THE WILLIAMS WORLD BEATER." (For Crushers and Pulverisers.) WILLIAMS PATENT CRUSHER & PULVERIZER CO., St. Louis, Mo. Filed December 13, 1918.

5,087.—*Title:* "FIRE PROOF AND FOOL PROOF METAL, GRAVEL AND SAND KATCHER." (For Catchers of Metal and Like Foreign Substances that May Enter with the Feed in Reducing-Mills.) WILLIAMS PATENT CRUSHER & PULVERIZER CO., St. Louis, Mo. Filed February 24, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

COPPUS *v.* FIEUX AND WHEELER.

Decided October 31, 1917.

INTERFERENCE—PRIORITY—REDUCTION TO PRACTICE—EVIDENCE.

Where C. explained in his *prima facie* testimony how he came to make the invention and specified the instructions he gave to his workman, which testimony gives a good description of the machine which he built, and this testimony is corroborated by the workman, *Held* that the fact that when the machine was introduced in evidence during the taking of rebuttal testimony neither the applicant nor his workman was called to identify it is immaterial.

APPEAL from Examiners-in-Chief.

FAN-BLOWER.

Messrs. Fowler & Kennedy for Coppus.

Mr. Axel V. Becken for Fieux and Wheeler.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Board of Examiners-in-Chief affirming the decision of the Examiner of Interferences awarding priority of invention to Coppus, the junior party, on four issues, of which counts 1 and 4 are illustrative.

1. An air propelling device, comprising a fixed casing having an opening, a rotatable blower having vanes fitting closely in the plane of the opening creating a current of air composed of several components, one a main stream and another a stray stream tending to exert a choking effect between the vanes and the walls of the opening, and means for relieving the choking effect of the stray stream and for directing said stray stream into substantially the same path as the main stream, the casing being constructed to confine the main stream and deflected stray stream in a single path.

4. An air propelling device, comprising a rotatable blower having vanes constructed to create a current of air having several components, one of said components traveling substantially parallel to the axis of rotation of the vanes and the other of said components traveling in a generally radial direction with respect to said axis and a fixed casing of generally cylindrical contour surrounding said vanes providing an inlet opening of substantially the same diameter as that of the vanes and providing an outlet of larger diameter, the said vanes extending into said enlarged outlet.

The invention is a simple one, being an improvement in a rotary air-pump or blower, the improvement consisting in the provision of means to prevent the choking effect caused by centrifugal and longitudinal streams of air issuing from the edges of the fan. The specific way in which the applicants in interference have overcome this is by enlarging the pump-cylinder, the enlargement beginning on the circumferential edge of the fan-blades.

Coppus filed September 15, 1914, and Fieux and Wheeler September 2, 1914. Coppus is therefore the junior party and can only prevail by a preponderance of evidence.

Coppus alleges conception and disclosure November 19, 1912, and a reduction to practice in December of the same year; Fieux and Wheeler in October, 1913.

If Coppus has established his dates, it will be needless to discuss Fieux and Wheeler's record.

Coppus (Q. 7) explains in detail how he came to make the invention in November, 1912, for the Woburn Degreasing Company and how he told Lundgren, his pump-erector—

> * * * to take a sixteen inch fan casting, cut it off short, turn the flange of the sixteen inch fan casing, and also bore out a twenty inch fan casing so that the flange of the sixteen inch fan casing would fit snugly into the twenty inch fan casing, and fasten the sixteen inch fan casing in the twenty inch fan casing by means of screw bolts.

This is a fairly good description of Coppus's Woburn 1912 blower, introduced at the time of taking his rebuttal testimony.

Fieux and Wheeler objected to the introduction of this blower in rebuttal; but the Examiner of Interferences overruled the objection for reasons which it is not necessary to state, since Fieux and Wheeler have withdrawn their objections to this exhibit in the brief before me, (p. 2;) but they call attention to two unusual circumstances existing in this case—first, that although this exhibit (Woburn 1912 blower) was accessible when Coppus took his *prima facie* proofs it was not introduced, and, secondly, having finally introduced the machine and relied upon it for a reduction to practice Coppus or Lundgren, who made it for Coppus, was not called to identify it, the identification being left to O'Rourke; but in view of Coppus's clear description of this machine (Q. 7) in his *prima facie* proofs and of Lundgren's verbal description of it in his deposition (Q. 6) there was really no further use of its identification by them. Lundgren, for example, states:

> * * * He (Coppus) told me to use a sixteen-inch fan in a twenty-inch casing. To do so he told me to take a sixteen-inch fan casing and cut it off, turn the flange to fit into the twenty-inch fan casing, making the length not to exceed the fan.

In view of the simple nature of this invention this description is sufficient to identify the exhibit and in view of this description there was no use in having Lundgren or Coppus further identify it.

Lundgren fixes the date when this blower was finished and shipped December 12, 1912, (memoran-

dum book.) The correctness of this date was corroborated by O'Rourke, and since there is nothing in the testimony to cast any cloud on the proofs it is accepted as proving a reduction to practice by Coppus of the invention in issue in December, 1912.

There are other minor details in the testimony that might be discussed; but it is accurately analyzed in the decision of the Examiner of Interferences and need not be repeated here, since it is quite clear to my mind that the decision below was correct in adjudging priority to Coppus, and it is affirmed.

EX PARTE NEW ENGLAND FELT ROOFING WORKS.

Decided March 7, 1919.

TRADE-MARKS—"JUST RIGHT," FOR ROOFING—DESCRIPTIVE.

The words "Just Right" refused registration as a trade-mark for roofing, etc., on the ground that these words are descriptive of the goods with which they are used.

ON APPEAL.

TRADE-MARK FOR ROOFINGS, ASPHALT SHINGLES, READY-ROOFING, SHEATHING-PAPER, ETC.

Mr. Ellis Spear, Jr., for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing "Just Right," in script, the word "Just" being above and to the left of the word "Right," on the ground that the words are descriptive in character, the identical words having been passed upon in *ex parte F. B. Q. Clothing Company*, (119 O. G., 2236.)

Applicant contends that the words "Just" and "Right" are synonyms, that at best they are only a colloquial extravagant expression and really have no meaning when strictly construed, especially as applied to applicant's goods, and has filed a statement showing a large number of words identical or similar that have been recently registered.

I have carefully considered applicant's argument and showing; but the words "Just Right" are as descriptive to me as "good" or "bad." They are, I believe, in use all over the country, and their meaning cannot be mistaken, and it must be held, therefore, that the refusal of the Examiner was correct, and it is affirmed.

DECISIONS OF THE U. S. COURTS

Court of Appeals of the District of Columbia.

SARAH C. HACKLEY, ADMINISTRATRIX OF GEORGE T. HACKLEY, DECEASED, v. HENEMIER.

Decided December 2, 1918.

1. INTERFERENCE—PRIORITY—GIST OF THE INVENTION—IMMATERIAL DETAILS.

Where the real invention in issue consisted in placing a thumb-flange on the valve-casing of a tire-valve, the first inventor of this structure was the first inventor of the issue, although one count called for a sealing washer in a specified location.

2. SAME—SAME—DELAY IN FILING APPLICATION.

Held, that Henemier reduced the invention to practice about three years prior to the filing of Hackley's application and that he did not forfeit his rights by delay in filing his application.

Mr. C. V. Edwards and *Mr. F. A. Bosser* for the appellant.

Mr. J. H. Milans and *Mr. H. E. Myers* for the appellee.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding, in which priority was awarded to appellee upon an invention described in the following counts:

1. In a tire valve the combination of a tubular stem member having its outer end portion threaded to receive a standard size coupling of an inflating device and a screw valve member for closing the stem threaded thereto and provided with an integral manipulating flange of a diameter less than said outer end portion and of slight depth to lie close to said end portion when in position so as to be freely inclosed within the coupling to permit of the connection being made independent of the valve member whereby the latter is not subjected to the strains to which the coupling is subjected, said valve member being formed with a valve seat, a normally yielding valve plunger arranged to engage the valve seat and a packing washer interposed between the valve member and the stem to form a permanent seal therebetween.

2. In a tire valve, the combination of a tubular stem member having its outer end threaded to receive a standard size coupling of an inflating device and a self-contained valve unit threaded thereto and provided with an integral manipulating flange of a diameter less than said outer end portion and of slight depth to lie close to said end portion to be freely inclosed within the coupling, said valve unit being provided with a washer arranged to underlie the manipulating flange for sealing the stem by engaging the end thereof and an inwardly directed valve seat, and a yielding plunger engaging said seat.

It was old in the art to place the entire valve-casing within the tire-stem and screw it down by means of an inserted tool. The invention here, stripped of all confusing terms used in the claims, consists in placing a thumb-flange on the valve-casing, so that it may be screwed in place by hand, instead of by using a tool for that purpose. The exact location of the packing-washer is not important, since, as was said by the Commissioner,

> the inventor of the thumb flange for the stated purpose is the inventor of the issue,—for once given the thumb flange it is probably obvious to a mechanic, especially after a little experience, to put the sealing washer under the thumb flange.

Hackley was the first to file, hence appellee must show, at least, a prior possession of the completed invention. This, we think, he has done. He has established a making of the device in issue as early as 1911, almost three years prior to Hackley's filing date. But it is contended by appellant, that, even conceding that appellee made the invention, he concealed it for over three years before going into the Patent Office, and thereby abandoned it.

It must be remembered that we are not here dealing with a case where there is lack of diligence in making and completing an invention, but delay in applying for a patent. As said by the Commissioner:

> This case, however, must not be confused with a case of delay in completing the invention. Diligence in making an invention is one thing; diligence in patenting it is quite another. If Henemier had completed the invention in 1911, or in 1912, or in 1913, his right to a patent then accrued; and the question is only whether he lost his right as against Hackley by his laches, or by concealment or suppression. (*Mason v. Hepburn*, 13 App. D. C., 86.)

The case, therefore, turns upon the question of abandonment of the invention by appellee between the time he reduced to practice and the date of filing his application in the Patent Office. On this point we have examined the record with special care, and without stopping to review the testimony, agree with the conclusion reached by the Commissioner and the Board of Examiners-in-Chief that he has not forfeited his rights by the delay.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as required by law.

Affirmed.

Court of Appeals of the District of Columbia.

LAKE v. GUNN.

Decided February 3, 1919.

INTERFERENCE—PRIORITY—DILIGENCE.

Where L., who was the first to conceive and the last to reduce to practice, testifies that at the time he was given a contract by the Government for the construction of a submarine, which was prior to G.'s reduction to practice, it was his intention to place the device of the issue upon this submarine, but he is uncorroborated as to this and the testimony does not establish the making of drawings showing this device until after G.'s filing date, *Held* that L. was lacking in diligence and priority was properly awarded to G.

Mr. J. Edgar Bull and *Mr. W. H. Finckel, Jr.*, for the appellant.

Mr. Dean S. Edwards for the appellee.

SMYTH, *C. J.*:

The invention of this interference relates to fair-water doors and torpedo-tube caps used in launching torpedoes from the torpedo-tube of a boat.

Gunn's application was filed November 30, 1912, and Lake's April 7, 1914. Gunn is, therefore, the senior party, and the burden of proving priority by a preponderance of the evidence rests on Lake. (*Smith* v. *Smith*, 31 App. D. C., 518.) Neither party alleges an actual reduction to practice before filing his application. Gunn satisfactorily established invention in June, 1912. Lake claims conception and disclosure in Russia in 1906. Gunn became active in the latter part of June or about the 1st of July, 1912, and continued so until he filed in the following November.

Assuming that Lake was the first to conceive and disclose the invention, was he diligent when Gunn entered the field in June or July 1912? He claims that he was, and asserts in this connection that he was given a contract by the Government for the construction of a submarine in 1911, that it was then his intention to place the structure of the issue upon the boat and that this intention is disclosed by certain tracings in evidence prepared by him prior to March 15, 1913; but we are unable to discover in these tracings any evidence of such an intention, nor is there anything in his proposal to construct the boat or in any other document prepared by him or under his direction which supports his claim. Mills, a draftsman engaged by the Government, testified that a blue-print of a traced plan was received from Lake in December, 1912, (after Gunn had filed,) and that work on the fair-water doors was begun by Lake December 9, 1912. Esmond, of the Lake Company, places the dates of the drawings disclosing the fair-water doors in June, 1912, which, if correct, would show that Lake was at work on the invention of the issue before Gunn's constructive reduction to practice, but it develops that Esmond's memory of dates is not reliable—for example, he said that the contract with the Government was awarded to Lake in 1910, whereas Lake himself says that it was in 1911. He also said that materials for the construction of the doors were ordered in September and delivered in October, 1910, several months before the contract was awarded. This is not probable. We cannot accept his testimony.

In 1913, the Lake Company being unable to finish the boat within the contract time, surrendered it to the Government. Early in the same year it was equipped with the doors of the issue; but this in itself is not sufficient to establish that Lake intended from the beginning to supply the boat with the doors. His testimony that it was his purpose to do so is not corroborated. This is fatal to his case. (*Malcolm* v. *Richards*, 47 App. D. C., 582—588, and cases there cited.)

We think the decision of the Commissioner of Patents, awarding priority to Thomas McCheyne Gunn, is correct and should be affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

FIEUX AND WHEELER v. COPPUS.

Decided March 3, 1919.

INTERFERENCE—PRIORITY—REDUCTION TO PRACTICE.

Evidence *Held* to establish that a machine built by C. prior to the earliest date to which F. and W. are entitled embodied the invention and constituted a reduction to practice thereof and that priority was properly awarded to C.

ROBB, *J.*:

Appeals from concurrent decisions of the Patent Office in an interference proceeding in which priority was awarded the appellee Coppus. (See 261 O. G., 629.)

The claims are four in number and we reproduce the 1st and 4th as sufficiently illustrative:

1. An air propelling device, comprising a fixed casing having an opening, a rotatable blower having vanes fitting closely in the plane of the opening creating a current of air composed of several components, one a main stream and another a stray stream tending to exert a choking effect between the vanes and the walls of the opening, and means for relieving the choking effect of the stray stream and for directing said stray stream into substantially the same path as the main stream, the casing being constructed to confine the main stream and deflected stray stream in a single path.

4. An air propelling device, comprising a rotatable blower having vanes constructed to create a current of air having several components, one of said components traveling substantially parallel to the axis of rotation of the vanes and the other of said components traveling in a generally radial direction with respect to said axis and a fixed casing of generally cylindrical contour surrounding said vanes providing an inlet opening of substantially the same diameter as that of the vanes and providing an outlet of larger diameter, the said vanes extending into said enlarged outlet.

As stated by the Commissioner, who personally reviewed the decision of the Examiners-in-Chief, the invention is simple—

being an improvement in a rotary air pump or blower, the improvement consisting in the provision of means to prevent the choking effect caused by centrifugal and longitudinal streams of air issuing from the edges of the fan.

It will be noted that these are apparatus claims and that the language employed is quite general.

Coppus claims disclosure and reduction to practice late in 1912, which is earlier than the earliest date claimed by appellants. He has introduced in evidence a blower constructed and used in December of 1912, which each of the tribunals of the Patent Office has found embodies this invention. There is no doubt whatever that the blower was constructed and used at the time stated and, owing to the phraseology of these claims, we are prepared to accept the view of the Patent Office that it embodies the issue. It is true that the vanes do not extend very far "into said enlarged outlet," but it is equally true that claim 4 is silent as to how far they must extend. Since they extend to an appreciable degree, Coppus was entitled to whatever benefit flowed from such a construction, for—

a patentee is entitled to every use of which his invention is susceptible, whether such use be known or unknown to him. (*Potts v. Creager*, 155 U. S., 597.)

The decision is affirmed.

Affirmed.

Mr. Justice VAN ORSDEL dissents.

Court of Appeals of the District of Columbia.

VINCENT *v.* LANDSIEDEL.

Decided March 3, 1919.

INTERFERENCE—PRIORITY—APPEAL TO THE COURT OF APPEALS.

Where on an appeal from an award of priority the Commissioner held that the successful party could not make the claims and dissolved the interference, *Held* that appeal from his decision lay to the Court of Appeals of the District of Columbia.

Mr. F. P. Davis, *Mr. Reeve Lewis*, and *Mr. W. B. Kerkam* for the appellant.

Mr. J. D. Rippey and *Mr. L. C. Kingsland* for the appellee.

SMYTH, *C. J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference. The invention upon which the proceeding is based is an improvement in adding and recording machines, and the counts of the issue are:

1. In an adding machine, a series of keys, a series of plates movable by operation of said keys, an element settable to prevent movement of said plates and thereby locking said keys, a device for setting and holding said element in position to prevent movement of said plates, connections for operating said device, and means indicating when said device is in position to hold said element to prevent movement of said plates.

3. In an adding machine, a series of depressible keys, a series of plates for locking said keys, an element movable to and from position to cause said plates to lock said keys, an adjustable actuator controlling said element, means for setting said actuator in position to actuate said element at a predetermined occasion, means indicating the position of said actuator, means for holding said actuator in its different positions, means for releasing said actuator, and means for restoring said actuator to its starting point.

4. In an adding machine, an item counting device comprising a support, a numeral scale on said support, a second numeral scale adjustable with respect to the first one, a latching device whereby said second numeral scale may be held in any desired adjustment with respect to the first-named scale, an actuator for holding said latching device in engagement, a signaling element, and means operated by said second numeral scale for causing said signaling element to signal.

When the interference was declared it embraced four counts. Landsiedel, the junior party, moved to dissolve the interference. The motion was sustained by the Law Examiner as to counts 1, 2 and 4, and denied as to count 3. On appeal the Examiners-in-Chief reversed the Law Examiner as to counts 1 and 4 and affirmed him as to count 2. Vincent waived his right to appeal from the decision against him on count 2 and asked for judgment in his favor on the remaining counts. The request was granted and priority was awarded to him by the Examiner of Interferences as to those counts. From this decision Landsiedel appealed to the Examiners-in-Chief, who affirmed the action of the lower tribunal.

On appeal to the Commissioner the decision of the Examiners-in-Chief was reversed and the interference dissolved.[1]

Landsiedel, contending that this decision did not settle the question of priority between the parties, moves in this court to dismiss the appeal, on the ground that we are without jurisdiction to review the action of the Commissioner. In support of his position he cites *Carlin v. Goldberg* (45 App. D. C., 540) and *Field v. Colman* (47 App. D. C., 189.) We do not think that either case is in point.

In the Carlin case the question of priority was not presented to any of the tribunals of the Patent Office. The issue before each related solely to the contention that Carlin could not make the claims. The decision, then, was with reference to a purely ancillary matter and was in no sense final. This is made very clear by Mr. Justice Van Orsdel, who spoke for the court. He said:

A motion to dissolve is interlocutory, and appeal will not lie to this court from an order thereon.

The Field case is to the same effect. It was there observed that there was—

no judgment of priority entered by the Commissioner, but such a judgment could not have been entered, since the case was appealed through the various tribunals of the Patent Office upon the sole question of whether the motion to dissolve the interference should be sustained or denied. At no stage of the proceedings was the question of priority tried or determined.

The situation is quite different in the case before us. Here the question of priority was presented to each of the lower tribunals and passed upon. It was from the decision of the Examiners-in-Chief awarding priority to Vincent that Landsiedel appealed to the Commissioner. Undoubtedly Landsiedel had a right on that appeal to have the ruling of the lower tribunal on the motion to dissolve reviewed as a matter ancillary to the decision on the question of priority, and therefore nec-

[1] Note by the Patent Office.—This decision, in which it was held that Vincent could not make the claims, concludes as follows: "None of these claims have any logical support in Vincent's construction. The decision of the Examiners-in-Chief is reversed, and the interference is dissolved."

essarily involved in the appeal. (*Podlesak* v. *McInnerney*, 26 App. D. C., 399, 405; *Cooper* v. *Gold*, 34 App. D. C., 194, 198.) This court, speaking of the Commissioner in *in re Fullagar*, (32 App. D. C., 222, 228,) said that if he decided that Fullagar—

had no right to make the claims of the interference, because not disclosed in his application, he would necessarily have awarded priority to Emmett. (*United States, ex rel. Newcomb Motor Co.*, v. *Moore*, 30 App. D. C., 464.) The latter's application having been allowed, and Fullagar having been put out of the case, there would remain nothing else to do.

In re Crevoiling (46 App. D. C., 536; 247 O. G., 747) is authority for the proposition that where it was ruled on a motion to dissolve that a party could not make the claims, his remedy—

was to await a final decision in the interference proceeding, whatever might be the form of that decision, * * * and appeal therefrom to this court.

The question of priority, as we have noted, was before the Commissioner for decision in the instant case. If in addition to reversing the Examiners-in-Chief and dissolving the interference he had adjudged priority to Landsiedel, it would be clear that his decision would be appealable; but that in effect, albeit not in form, is what he did. In the language of the Fullagar case there was for him "nothing else to do." We think the motion to dismiss for want of jurisdiction must be overruled.

On the record it must be conceded that if Vincent had a right to make the claims, he is entitled to priority. The appellee's position with respect to this is that Vincent's application does not contain a disclosure affording a basis for the claims. The Board of Examiners-in-Chief went into the matter very thoroughly in their opinion upon the motion to dissolve, and reëxamined it upon the appeal from the decision of the Examiner of Interferences awarding priority to Vincent. They, as we have said, affirmed the action of the Examiner of Interferences. We are satisfied with their reasoning and conclusion, and therefore reverse the decision of the Commissioner of Patents and award priority of invention of the subject-matter of counts 1, 3 and 4 to Jesse G. Vincent.

Reversed.

Disclaimer.

1,244,861.—*Charles A. Juengst*, Croton Falls, N. Y. PAMPHLET-COVERER. Patent dated October 30, 1917. Disclaimer filed April 8, 1919, by the assignee, *American Assembling Machine Company*, patentee and former assignee assenting.

Enters this disclaimer—

"To those claims in the said specification which are in the following words, to wit:

"Claim 15. In a book covering machine, a cover breaking device vertically movable and having a slot extending vertically, a rotating member, a crank on said rotating member engaging said slot to impart a reciprocating motion to the cover breaking device irrespective of its said vertical movement, and means for lifting and lowering the cover breaking device.

"Claim 16. In a book covering machine, two oppositely disposed cover-breaking members adapted to be moved toward and away from each other, means for reciprocating said cover breaking members at an angle to their movement toward and away from each other, and actuating members parallel to the cover breaking members movable toward and away from the cover breaking members to actuate the latter and along which said cover breaking members reciprocate.

"Claim 17. In a book covering machine, a vertically movable support, two oppositely disposed cover-breaking members mounted on said support to move toward and away from each other, rockshafts extending parallel to the cover breaking members, means for rocking said rockshafts, means carried by said rockshafts for moving the cover breaking members toward and away from each other, another rockshaft extending parallel to the cover breaking members, means for connecting said other rockshaft with the support to lift and lower the same, and means for rocking said other rockshaft."

Patents Nos. 1,301,096 to 1,301,796.

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Trade-Marks	89—No.	125,185 to No. 125,264,	inclusive.
Labels	3—No.	21,222 to No. 21,224,	inclusive.
Prints	1—No.	5,093.	
Reissues	1—No.	14,638.	
Total	811		

You agree with the man on the W. S. S. whenever you buy one. He said:

"Buy what thou hast no need of and ere long thou shalt sell thy necessaries. It is easier to suppress the first desire than to satisfy all that follow it."

—Ben Franklin.

Notice—Trading and Communicating with Persons Residing in Certain Named Foreign Countries.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 19, 1919.

This Office is in receipt of a letter from the War Trade Board inclosing copies of regulations of that Board whereby persons in the United States are authorized, subject to the rules and regulations of the War Trade Board, to trade and communicate with persons residing in the following countries: That portion of Palestine and Syria which lies south of the line from Alexandretta to Aleppo and west of the Hejaz Railway; Servia and Roumania; those portions of Mesopotamia within the military occupancy or control of the Allied Governments; territory under the control of the Czecho-Slovak National Council; Bulgaria and the Turkish Empire; Grand Duchy of Luxemburg; the colonies controlled by Germany on August 1, 1914; German territory included within the area of military occupation by the American and Allied Armies; the ports of the Adriatic and territory adjacent thereto, including Albania, Montenegro, Croatia, Slavonia, Bosnia, Hersegovina, and Dalmatia; German Austria; Esthonia. (See W. T. B. B., Nos. 530, 551, 560, 594, 602, 604, 609, 610, 636, and 673.)

J. T. NEWTON,
Commissioner.

Disclaimer.

1,198,209.—*David S. Kennedy*, Brooklyn, N. Y. QUAD-BLOCK FOR SLUG-CASTING MACHINES. Patent dated August 1, 1916. Disclaimer filed April 17, 1919, by the patentee, the assignee, *Mergenthaler Linotype Company*, consenting.

"Enters disclaimer as follows:

"First: In respect to each of claims 5, 6, 7 and 9 of said patent, I hereby disclaim any combination of the recited elements except when and unless the body portion of the quad block is formed so as to be supported in a linotype machine in the regular way for coöperation with the mold employed in said machine.

"Second: In respect to claim 8 of said patent, I hereby disclaim any combination of the recited elements except when and unless the means to prevent the support of a matrix section in an improper position in the body portion of the quad block are distinct from or independent of the means or parts whereby the matrix sections are supported in said body portion.

"Third: In respect to each of claims 10 and 11 of said patent, I hereby disclaim any combination of the recited elements except when and unless the body portion of the quad block and the matrix section or sections are relatively constructed so that the latter may be supported in the former independently and without the aid of the ledge or longitudinal bar when engaged in the coöperating notches."

Notice—Attorney's Address.

Many letters are being returned to this Office for lack of street address. The attorney's full post-office address should be given in every power of attorney. The prompt delivery of communications will thereby be facilitated.

J. T. NEWTON,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 18, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Mar. 8	Feb. 18	194
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Preservative Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Dec. 6	Jan. 1	473
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Mar. 10	Dec. 17	168
234	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 6	Mar. 3	340
167	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter.	Jan. 22	Jan. 9	155
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Jan. 4	Jan. 24	315
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Feb. 19	Feb. 27	292
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 28	Apr. 1	102
221	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid ; Motors, Fluid-Current; Pumps; Marine Propulsion.	Sept. 25	Nov. 25	130
235	10. Carriages and Wagons; Motor Vehicles	Feb. 3	Mar. 18	402
184	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Jan. 27	Mar. 26	197
222	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Oct. 30	Oct. 28	371
239	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning	Dec. 16	Mar. 15	635
220	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 27	Apr. 2	199
366	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 2	Jan. 13	451
112	16. Electric Signaling-A; Radiant Energy; Telegraphy; Telephony	Dec. 6	Dec. 13	305
207	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Mar. 1	Mar. 15	104
229	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 20	Feb. 19	220
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Feb. 7	Feb. 1	230
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 18	Mar. 1	268
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 21	Jan. 6	265
249	22. Aeronautics; Firearms; Ordnance	Feb. 3	Mar. 11	206
217	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Jan. 15	Mar. 5	201
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 21	206
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Mar. 3	Mar. 7	153
108	26. Electricity, Generation; Motive Power	Oct. 17	Dec. 28	501
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 20	Jan. 21	490
225	28. Internal-Combustion Engines	Dec. 26	Jan. 8	554
147	29. Boring and Drilling; Chucks or Sockets; Coopering; Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Wood-working Tools.	Dec. 10	Jan. 17	231
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Feb. 1	Apr. 1	231
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 21	Jan. 20	200
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration	Oct. 10	Feb. 14	664
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roofs.	Dec. 10	Jan. 28	200
304	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners; Track-Sanders; Vehicle-Fenders.	Jan. 28	Feb. 3	207
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Mar. 15	Feb. 28	207
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Mar. 19	Mar. 5	402
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Nov. 14	Nov. 27	606
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 26	Mar. 14	142
220	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Water Distribution.	Dec. 11	Mar. 21	402
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 11	Feb. 17	344
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 28	Dec. 20	202
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electric Signaling	Nov. 18	Dec. 17	447
362	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 15	Mar. 13	96
253	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Nov. 21	Mar. 7	134
379	45. Clutches; Lubrication; Motors; Railway Brakes	Dec. 24	Jan. 20	346

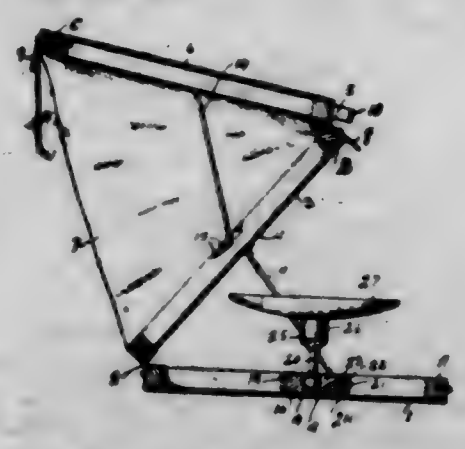
Oldest new case, Sept. 21; oldest amended, Oct. 28.
Total number of applications awaiting action 15,894

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Mar. 10	Apr. 4	606
	Designs	Feb. 22	Mar. 26	317
	Labels and Prints	Mar. 15	Mar. 26	108

PATENTS

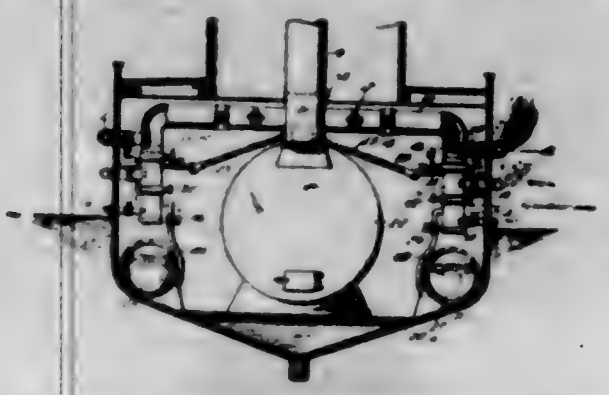
GRANTED APRIL 22, 1919.

1,301,096. EGG-TESTER. THOMAS R. AUSTIN, Iconium, Mo. Filed Oct. 2, 1918. Serial No. 256,576. 2 Claims. (Cl. 39—6.)



1. A reflecting device for an egg tester comprising a base member consisting of two hingedly connected sections, yielding means constantly urging the sections one toward the other, an arm having an end portion clamped between the sections and capable of swinging movement, and a reflector carried by said arm.

1,301,067. SYSTEM OF CAMOUFLAGE. CALVIN H. BARRICLE, Seattle, Wash. Filed July 19, 1918. Serial No. 245,004. 7 Claims. (Cl. 114—15.)

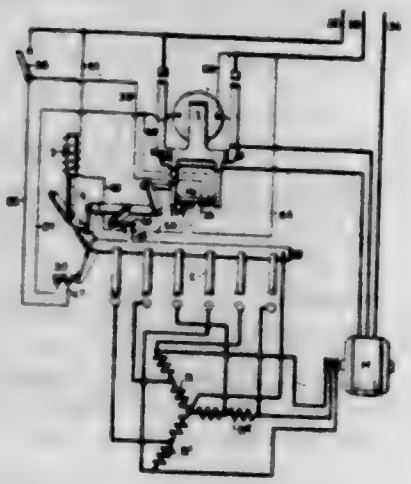


1. A system of the character specified, comprising in combination with a vessel, of a series of pipes extending longitudinally of the same at each side thereof and having perforations at their outer sides, said pipes gradually decreasing in diameter from above downward, a pipe extending from the smoke stack laterally toward each series of pipes and having a depending portion adjacent to the said series, a plurality of communications between each pipe of the series and its adjacent depending portion, a partition in each pipe between the communications, a valve in each communication, and means for supplying steam to the depending portion at the intermediate pipe, means for supplying oil to the depending portion at the lowest pipe and means for controlling each of the said supplying means.

4. A system of the character specified, comprising in combination with a vessel, a series of pipes extending longitudinally of the same at the opposite sides thereof and having perforations at their outer sides, means for connecting either or all of said pipes with the smoke stack, means for shutting off either of said pipes from the smoke stack, means for supplying steam to certain of the pipes, and means for supplying oil to others of the pipes.

7. Apparatus for screening a vessel from observation, comprising a series of pipes extending longitudinally of the vessel and having discharge openings opening away from the vessel, means for supplying steam and oil to sundry of the pipes, and means for supplying smoke to any or all of the pipes.

1,301,088. MOTOR-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 12, 1915. Serial No. 1,756. 13 Claims. (Cl. 172—280.)



1. In a motor controller, in combination, an electro-responsive power controlling device, a separately operable accelerating device biased to running position, a device for holding said accelerating device in starting position, means acting upon said last mentioned device to release said accelerating device upon operation of said power controlling device, and means to directly control said power controlling device for starting of the controlled motor.

1,301,089. ANIMAL-SHEARS. EDWIN STANLEY BARTLETT, Sr., Butte, Mont. Filed Mar. 6, 1917. Serial No. 152,631. 2 Claims. (Cl. 30—1.)

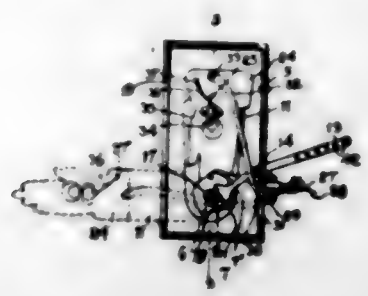


2. In shears, the combination with the fixed cutter and the movable cutter, of a vibrator having arms registering with the teeth of the movable cutter, each arm having a V-shaped recess and each tooth having a bearing for the arm consisting of oppositely arranged beveled surfaces meeting at the top of the tooth, shoulders being formed at the ends of the beveled surfaces for engagement by the arms to limit the longitudinal movement of the arms with respect to the cutter.

1,301,090. SIGNALING DEVICE FOR MOTOR-VEHICLES. LOUIS A. BEAN, Denver, Colo. Filed May 29, 1918. Serial No. 237,248. 9 Claims. (Cl. 116—31.)

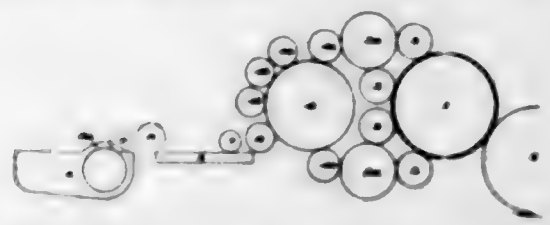
1. A signaling device of the character described, including a fixed support, a casing rotatably mounted upon said

support, a signaling arm fixed to the casing, a spring contained within the casing, said spring yieldingly retarding the rotation of the casing in one direction to maintain the



signaling arm in its normal position, and manually operable means to rotate the casing and dispose the arm in its indicative position.

1,301,091. INKING MECHANISM FOR PRINTING-PRESSES. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Apr. 26, 1916. Serial No. 93,697. 4 Claims. (Cl. 101—347.)



1. Inking mechanism for printing presses, comprising an ink drum and co-acting rollers, an ink supply, an ink distributing table intermediate the fountain and drum, and two reciprocating ductor rollers respectively adapted to take ink from the fountain and distribute it upon said table and to take ink from the table and deliver it to the drum.

1,301,092. DRAWING AND MEASURING INSTRUMENT. DAVID MEADE BERNARD, Jacksonville, Fla. Filed July 10, 1916. Serial No. 108,428. 31 Claims. (Cl. 33—1.)



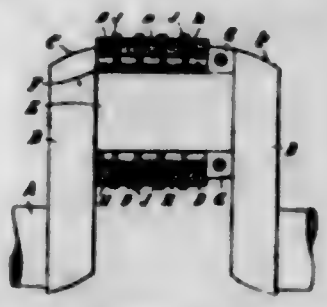
1. A drafting instrument having thereon a plurality of small polygons, not all of the same shape, each of which represents a measuring point and differentiates its function from that of some other of said measuring points and furthermore suggests, by reason of its geometric properties, the figure which the measuring point that it represents is designed primarily to aid in determining.

1,301,093. MAGNETIC THIMBLE ATTACHMENT. HENRY V. BRADFORD, Moose Jaw, Saskatchewan, Canada. Filed Mar. 23, 1918. Serial No. 224,171. 1 Claim. (Cl. 223—51.)



In combination with a thimble body provided at its smaller end with a circular opening defining an inturned flange surrounding the opening, a cylindrical member of magnetic material located in the body under said flange and provided in its periphery with a groove, a reduced extension on said member extending through said circular opening and having its extremity projecting beyond the smaller end of the thimble, the projecting end of said reduced extension being curved more abruptly than the end of the thimble, and a plurality of inwardly extending tongues stamped from said thimble body at a point spaced from the smaller end thereof and engaging within said groove.

1,301,094. PETROL-ENGINE BEARING. GRANVILLE E. BRADSHAW, Hersham, Walton-on-Thames, England. Filed Mar. 12, 1917. Serial No. 154,256. 2 Claims. (Cl. 74—17.)



1. In combination, a crank pin or shaft constituting an inner race common to a plurality of roller bearings, a plurality of integral rings constituting independent outer races of the same, and of such size as to be capable of passing along the shaft and over any crank webs thereon, a plurality of circles of rollers, such circles being in the annular space left between said outer races and the inner race aforesaid, means for separating each circle of rollers from any adjacent rollers, and a removable split ring on the same pin or shaft for preventing lateral displacement of said rollers and rings.

2. In combination, a crank pin or shaft constituting an inner race common to a plurality of roller bearings, a plurality of integral rings constituting independent outer races of the same, a plurality of circles of rollers, such circles being in the annular space left between said outer races and the inner race aforesaid, a plurality of thin annular disks for separating each circle of rollers from any adjacent rollers, and a removable split ring on the same pin or shaft for preventing lateral displacement of said rollers, rings and disks.

1,301,095. DIES. CHARLES H. BRISBIN, Yuma, Ariz. Filed June 19, 1918. Serial No. 240,755. 2 Claims. (Cl. 25—102.)



1. In set of dies, an upper die having annular depressions, a lower die having two plates, and having spiral springs, said plates being separated when not under pressure by said spiral springs; annular cores registering with the annular depressions threaded into the lower plate, each of the cores being surrounded by one of said springs; and enlarged into the upper plate, having shoulders and annular recesses, said shoulders fitting into said recesses substantially as described.

2. In a molding device a set of dies having depressions, an upper die, a lower die having two plates; spiral springs, cores registering with the depressions, each spring surrounding one of said cores, the cores being projected into the upper plate.

1,301,096. TAPER PIPE. LOUIS HENRY BROCKBAY, Winnipeg, Manitoba, Canada. Filed Mar. 25, 1918. Serial No. 224,565. 5 Claims. (Cl. 137—75.)

1. As a new article of manufacture, a taper pipe provided with a lengthwise extending slit and having the two

edges of the slit brought together and pivotally connected at the large end of the pipe and one edge of the pipe at the slit formed to present a lengthwise extending channel gradually increasing in depth from a point adjacent the pivot to the opposite end of the pipe and with the channel receiving slidably the opposite edge of the pipe.



2. As a new article of manufacture, a taper pipe provided with a lengthwise extending slit and having the two edges of the slit brought together and pivotally connected at the large end of the pipe and one edge of the pipe at the slit formed to present a lengthwise extending channel gradually increasing in depth from a point adjacent the pivot to the opposite end of the pipe and with the channel receiving slidably the opposite edge of the pipe and means for contracting the small end of the pipe and fastening it in the contracted position.

3. As a new article of manufacture, a taper pipe provided with a lengthwise extending slit and having one edge of the pipe at the slit lapped backwardly on itself and then forwardly to form a lengthwise extending tapering channel with the greatest depth of the channel at the small end of the pipe and with the channel adapted to receive slidably the other edge of the pipe.

4. As a new article of manufacture, a taper pipe provided with a lengthwise extending slit and having one edge of the pipe at the slit lapped backwardly on itself and then forwardly to form a lengthwise extending tapering channel with the greatest depth of the channel at the small end of the pipe and with the channel adapted to receive slidably the other edge of the pipe and means applied on the small end of the pipe for contracting and locking the same in the contracted position.

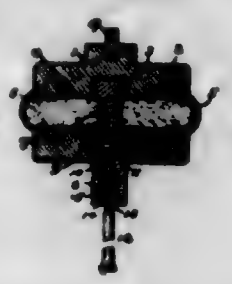
5. As a new article of manufacture, a taper pipe provided with a lengthwise extending slit and having one edge of the pipe at the slit lapped backwardly on itself and then forwardly to form a lengthwise extending tapering channel with the greatest depth of the channel at the small end of the pipe and with the channel adapted to receive slidably the other edge of the pipe and a fastening strap adjustably connected to the opposite edges of the pipe at the small end thereof.

1,301,007. RIM FOR VEHICLE-WHEELS. RICHARD S. BRYANT, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 4, 1914. Serial No. 822,297. 6 Claims. (Cl. 152—21.)



1. The combination of a wheel, a transversely split demountable rim therefor having its ends beveled on a plane inclined to the radius of the rim, plates attached to the inner face of said rim near such ends respectively, said plates having abutting edges beveled reversely to such rim ends, and radially inwardly directed lugs on said plates, said lugs having their outer edges beveled and being formed with transverse apertures, the lugs being adapted to coact with the wheel to form a driving connection for said rim.

1,301,098. BOMB. ARCHER A. BULL, Dahogu, Pa. Filed Nov. 12, 1918. Serial No. 262,215. 2 Claims. (Cl. 102—2.)



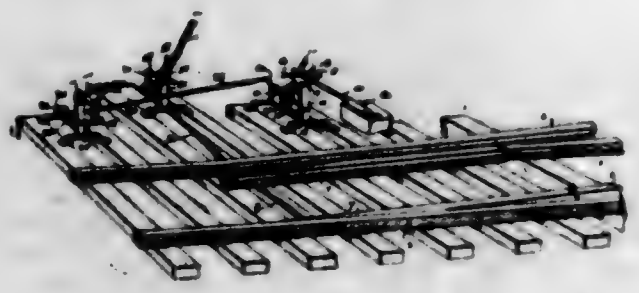
1. A bomb, comprising a body having a vertical opening and radial openings, the latter containing charges, a plug held in the vertical opening and having its side recessed in line with the radial openings, said plug having a centrally disposed longitudinal opening and other openings leading from the longitudinal openings into the said recesses and a firing pin held within the longitudinal openings of the plug.

1,301,099. NON-BINDING SWITCH. ELISHA L. BURTON, Thealka, Ky., assignor of one-half to Christian C. Henkel, Paintsville, Ky. Filed Oct. 19, 1918. Serial No. 258,864. 3 Claims. (Cl. 246—435.)



1. In combination with a rail and a movable switch point, a vertically disposed pivot secured in one of the parts in line with the web thereof, and an elongated U-shaped pivot plate having its arm fixed to the web of the other part and extending beyond the end thereof, said pivot pin being disposed between the connected ends of said arms.

1,301,100. AUTOMATIC SWITCH. ELISHA L. BURTON, Thealka, Ky., assignor of one-half to Christian C. HENKEL, Paintsville, Ky. Filed Oct. 19, 1918. Serial No. 258,865. 6 Claims. (Cl. 246—339.)



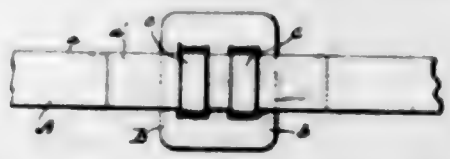
2. In combination with movable switch points, actuating mechanism therefor including a pivotally mounted trip member adapted to be engaged and actuated by means on a locomotive, a rock shaft, means operatively connecting the rock shaft to the movable switch points, connecting means between the rock shaft and said trip member, and a spring to yieldingly hold the trip member against pivotal movement in each direction and having a shiftable connection at one of its ends with said trip member.

1,301,101. OPTHALMIC MOUNTING. OSWALD B. CARSON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Nov. 30, 1917. Serial No. 204,681. 7 Claims. (Cl. 88—47.)



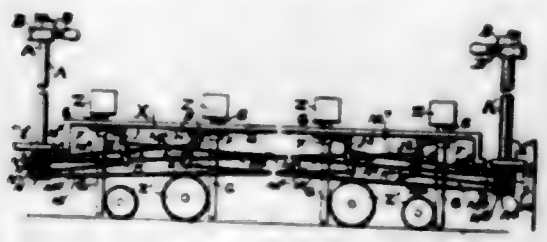
6. As an article of manufacture, a spectacle or eyeglass frame comprising metallic rim parts for engaging and holding the lenses, a bridge having connection at its opposite ends to the said metallic rim parts and continuous or endless non-metallic rim parts encircling the said metallic rim parts.

1,301,102. MEANS FOR JOINING METAL PACKAGE-BINDERS. SPENCER C. CARY, Brooklyn, N. Y., assignor to Cary Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed July 27, 1918. Serial No. 246,991. 7 Claims. (Cl. 24—28.)



6. A splice for metal package binders embodying a member provided with a loop struck up from the body of the member and producing therein a slot and forming a space for the free introduction of the end portions of the binder so as to position said end portions into lapping relation, said loop being displaceable by the application of lateral pressure for crimping the lapped portions into the slot of the splice member, and for effecting an interlocking engagement between the end portions and the splice member.

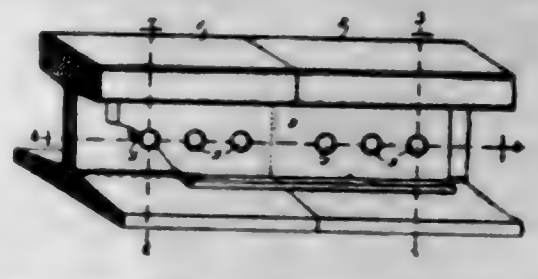
1,301,103. TRACK-SANDING DEVICE. JAMES CARSIDY, Chicago, Ill. Filed June 8, 1918. Serial No. 239,005. 3 Claims. (Cl. 291—26.)



1. A sanding device comprising vertical shafts rotatably mounted on platforms, wheels rigidly mounted on said shafts adjacent to the lower ends thereof, and additional wheels loosely mounted on said shafts, means connecting the rigidly mounted wheels to the loosely mounted ones so that upon the turning of said rigidly mounted wheels a measured angular distance further turning thereof will also turn said loosely mounted wheels, in combination with valves and connections between said wheels and said valves.

1,301,104. EXPANSION RAIL JOINT. CHARLES H. CLARK, Cleveland, Ohio, and EDWARD WALTER JANSEN, New York, and CHESTER F. GAILOR, Brooklyn, N. Y., assignors to Atlantic Welding Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 23, 1917. Serial No. 150,398. 3 Claims. (Cl. 239—4.)

1. An expansion rail joint comprising a pair of alined rail ends, fish plates on opposite sides of said rail ends each plate having one end welded to one rail end and the other end slidably engaging the other rail end and a bolt passing through the web of the rail and having one end continuous metallically with the free end of a plate and the other end completing metallic connection to the juxtaposed rail end.



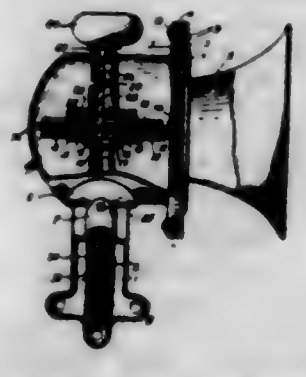
2. An expansion rail joint comprising a pair of alined rail ends, fish plates on opposite sides of said rail ends each plate having one end welded to one rail end and the other end slidably engaging the other rail end and a bolt passing through the web of the rail and having one end welded to the free end of one plate and the other end welded to an end of the other plate.

3. An expansion rail joint comprising a pair of alined rail ends, fish plates on opposite sides of said rail ends one plate having one end welded to one rail end and its other end slidably engaged with the other rail end while the second plate has one end welded to the last named rail and its other end slidably engaged with the first named rail and bolts welded to similar ends of different plates and passing through the rail web.

1,301,105. EXPLOSIVE AND PROCESS OF PRODUCING THE SAME. ARTHUR M. COMEY, Chester, Del., assignor, by mesne assignments, to E. I. du Pont de Nemours and Company, a Corporation of Delaware. Filed June 28, 1912. Serial No. 706,818. 12 Claims. (Cl. 52—3.)

10. An explosive containing a stabilized mixture of nitrated cane sugar and trinitro-glycerin.

1,301,106. SIGNAL-HORN. JOSEPH C. COULOMBE, Lowell, Mass. Filed Apr. 19, 1915. Serial No. 22,241. 12 Claims. (Cl. 116—1.)

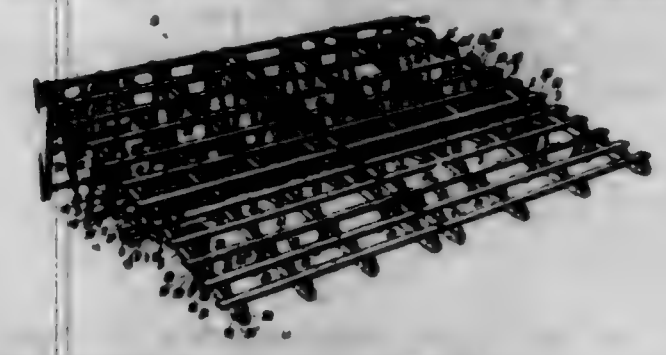


1. In a warning signal having a diaphragm and having a plurality of slidable hammers for flexing said diaphragm, a rotatable member upon which said hammers slide having a peripheral series of spaced up-turned lugs between which the hammers slide, each lug of a length to limit the outward sliding movement of a pair of adjacent hammers.

1,301,107. PORTABLE SEAT STRUCTURE. WILLIAM H. CURTIS, West Baden, Ind. Filed Nov. 24, 1917. Serial No. 208,730. 14 Claims. (Cl. 21—7.)

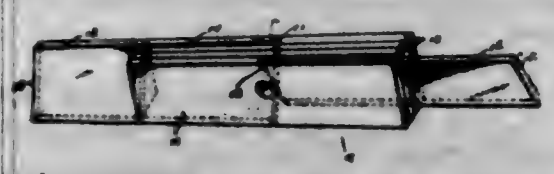
1. A portable seat structure comprising a plurality of sections, each comprising a plurality of seat elements to afford seats arranged in rows longitudinally of said sections, said plurality of sections being adapted to be extended in direction transversely of the sections into a substantially single inclined plane, in which condition each one of said rows of seats is supported at a mate-

rially different height from that of each other one of said rows of seats, and said plurality of sections being adapted to be drawn together in said direction transversely of said sections for transportation, and wheels on



said structure forming the sole support of said structure when said sections are drawn together as aforesaid, and rotatable in upright planes extending substantially longitudinally of said sections.

1,301,106. AEROPLANE-PROPELLER. CLIFFORD A. CUTLER, Buffalo, N. Y. Filed Aug. 21, 1916. Serial No. 117,849. 1 Claim. (Cl. 170—159.)



A wooden propeller constructed with a laminated hub-block having a longitudinal slot at each end; said slots extending diagonally entirely across the hub-block in opposite directions between the corners to the center of the hub block where the inner ends of the slots terminate across each other and end blades fitted into and occupying the whole width of the slots.

1,301,109. POTATO-HANDLING MACHINE. CLOYD DAVIS, Mineola, N. Y. Filed Sept. 6, 1917. Serial No. 190,009. 13 Claims. (Cl. 130—22.)



1. In a machine of the character described, the combination with a stationary body frame having tracks, of a grading frame comprising slotted end rails resting flat on the tracks and movable thereon, bolts mounted in the slots of said rails and projecting therefrom, and grading slats resting at their ends on the end rails and engaged at each end by the bolts and adjustable thereby along said rails, and means for reciprocating said grading frame, the rails and slats moving as a unit upon the tracks.

2. In a machine of the character described, the combination with a rigid body frame having inclosing walls and inwardly disposed continuous smooth tracks along opposite walls, at the bottom, of a grading frame comprising slotted end rails resting flat on the tracks and movable thereon, bolts mounted in the slots of said rails and projecting vertically therefrom, and grading slats resting at their ends on the end rails and engaged at each end by the bolts and adjustable thereby along said rails, and means connected to the grading frame for reciprocating the same, the rails and slats being rigidly connected by the bolts to move as a unit upon the tracks.

3. In a machine of the character described, the combination with the stationary body frame, of a movable grading frame mounted in the upper part thereof, a plurality of hoppers depending from the stationary frame below the grading frame and having a predetermined capacity, a slide in the bottom of each hopper, an upper slide common to all the hoppers and having an area sufficient to cover some of the hoppers, leaving the others uncovered, said upper slide being movably mounted in the stationary frame between the bottom of the grading frame and the tops of the hoppers and adapted to be reversed in position to cover and uncover certain hoppers alternately whereby the material assorted by the grading frame may be accurately measured.

7. In a machine of the character described, the combination with assorting means, a plurality of hoppers communicating with said means, and a slide common to all the hoppers and adapted to cover certain of the hoppers leaving the other uncovered, said slide having an inclined upper face.

13. An assorting device comprising a stationary body frame having inclosing walls and tracks along the inside thereof, a slatted frame movable on the tracks between said walls, means for reciprocating said slatted frame, hoppers supported on the body frame and depending therefrom and having their mouths communicating with the body frame below the slatted frame, and means mounted on the body frame below the plane of the slatted frame for cutting off or establishing communication between the hoppers and the assorting device.

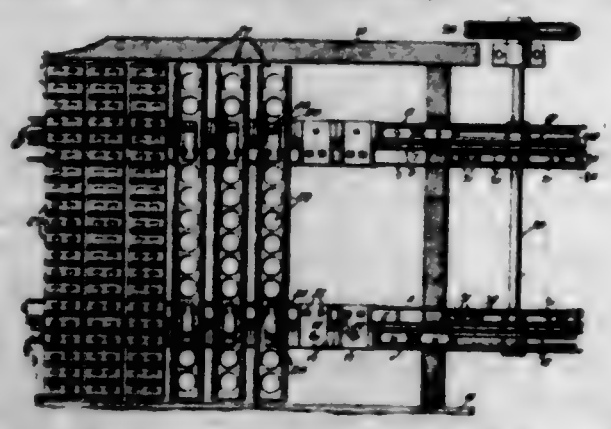
1,301,110. WALL CONSTRUCTION. ALEXANDER DICKSON, Brooklyn, N. Y. Filed May 23, 1918. Serial No. 236,148. 2 Claims. (Cl. 72—46.)



1. A wall comprising a plurality of studs having vertically spaced horizontally disposed lath supports, a single vertical series of laths extending horizontally between said studs and lying flat upon said supports, said laths substantially equaling said studs in width, and a plastic filler in the spaces between the laths and troweled over the edges of said laths in said studs.

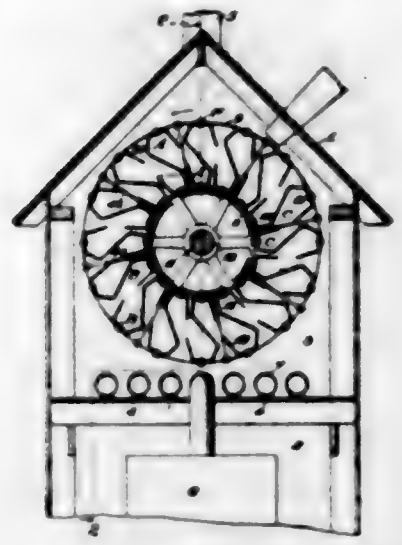
2. A wall comprising a plurality of studs having horizontal slots with their ends disposed at the inner and outer edges of said studs, a single vertical series of laths extending horizontally between said studs with their ends received in said slots, and a plastic filler in the spaces between the laths and troweled over the edges of said laths and said studs.

1,301,111. FURNACE. JAMES DONALD and THOMAS F. DOWNEY, Chicago, Ill. Filed Aug. 5, 1916. Serial No. 113,245. 10 Claims. (Cl. 110—40.)



2. A grate bar comprising a bar, a plate having a driving lug, and a member having a bearing device and a suspending device, said parts being detachably secured together.

1,301,112. DRIER. ROBERT DOUGLAS, Rochester, N. Y., assignor to Douglas Packing Company, Inc., Rochester, N. Y., a Corporation of New York. Filed Jan. 16, 1918. Serial No. 212,135. 5 Claims. (Cl. 34—5.)



1. A drier comprising a rotary cylinder adapted to permit the free transverse circulation of air and having inner and outer sets of peripheral pockets adapted to empty back and forth into each other as the cylinder is rotated, air openings being provided between the pockets.

1,301,113. SHOE AND METHOD OF MAKING SHOES. KARL ENGEL, Arlington, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 24, 1916. Serial No. 111,064. 13 Claims. (Cl. 12—146.)

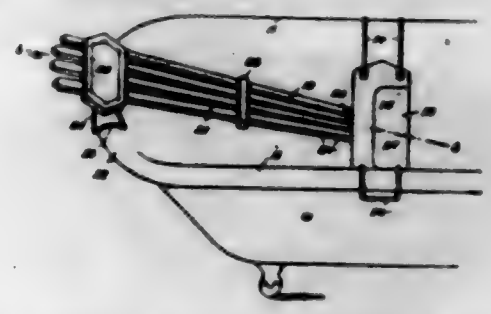


1. A shoe comprising an upper having its end portion formed of a plurality of sets of symmetrically shaped pieces of upper stock, said pieces having their adjacent edges convexed and stitched together with their convexed edges in parallelism.

9. The method of forming the end portion of a shoe upper which consists in cutting out a plurality of pieces of upper stock with their side edges convexed, arranging said pieces in symmetrical relation to each other with their adjacent convexed edges in parallelism and then securing the adjacent faces of said pieces together by stitches extending parallel to the convexed side edges.

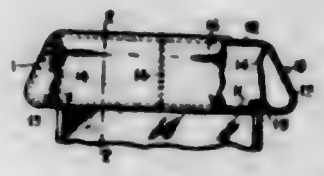
1,301,114. BATH-TUB ATTACHMENT. MARTHA EPPLER, New York, N. Y. Filed Dec. 11, 1917. Serial No. 206,704. 2 Claims. (Cl. 4—2.)

1. In a device of the class described, the combination of a relatively long back element designed to extend longitudinally of a bath tub and spaced from the sides thereof, said back element provided with a supporting member adjacent one end for spacing said end above the rear rim of the tub, a seat element provided with means for suspending the same below the upper edge of the tub, said seat element provided with a hanger plate depending therefrom and recessed to provide a back receiving opening, the end of the back opposite the end having the supporting member adapted to be inserted variable distances into said opening and supported in its adjusted positions by said plate, said seat being adjustable on the tub thereby to vary the angle of inclination of the back.



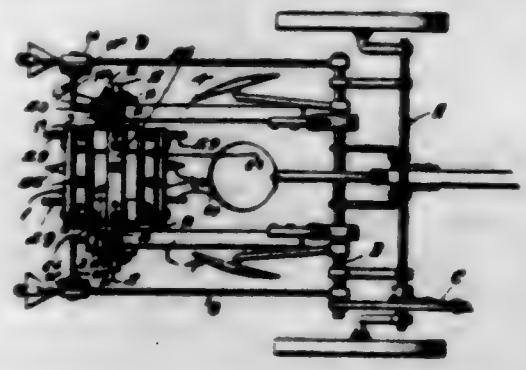
2. In a device of the class described, a back element comprising a plurality of spaced apart slats and means for fastening the slats together to form an open back adapted to permit fluids to flow therethrough, one end of said back constituting a shoulder rest, the shoulder rest end of the back provided with means for holding the same in place above the rear rim of a bath tub and the opposite end of the back provided with means for pivotally and adjustably supporting the same from a separate supporting member positioned below the rim of the tub whereby the back is inclined.

1,301,115. WIND-SHIELD HOOD. AMBROSE J. FINNEGAN, Fayette, Iowa. Filed Apr. 4, 1917. Serial No. 159,826. 8 Claims. (Cl. 21—148.)



1. A wind shield hood comprising longitudinally extending upper and lower supporting members, the members being disposed in different vertical planes, members connecting said upper and lower members and holding them in spaced relation, a cover of flexible material held to said longitudinal members and supported by the connecting members, and means on one of said longitudinal members for supporting the hood on a wind shield with the hood extending rearward of the shield, said means including laterally spaced clamps.

1,301,116. CULTIVATOR ATTACHMENT. JOHN EDWARD FRANKLIN, Udall, Kans., assignor to John F. Saya, Galena, Mo. Filed Aug. 21, 1918. Serial No. 250,828. 6 Claims. (Cl. 97—38.)



3. The combination with a cultivator having vertically movable shovel arms, of a roller adapted to operate in a lister furrow, said roller being provided with a plurality of ground-working elements adapted to engage and break up soil over which the roller is moved, connections between the roller and cultivator for dragging said roller in rear of the cultivator while permitting independent vertical movement thereof, and connections between the shovel arms and the roller for causing simultaneous and similar

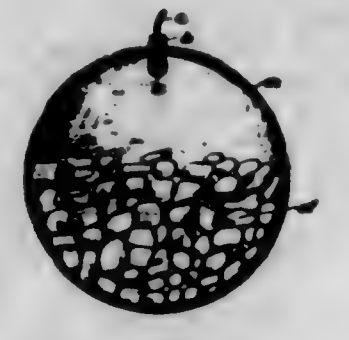
movement of said roller when the shovel arms are moved into or out of operative position, said connections being adapted to permit independent vertical movement of the roller.

1,301,117. DISPLAY DEVICE. ALFRED GARTNER, Washington, D. C. Filed Jan. 14, 1918. Serial No. 211,889. 3 Claims. (Cl. 40—1.6.)



1. In a device of the character described, means provided with an inscription constituting a question, and means normally concealed provided with an appropriate answer and with additional display means related to or connected with said answer, said concealed means being adapted to be withdrawn from the first mentioned means and exposed to view to present the answer together with the additional display means.

1,301,118. CONTAINER FOR CANDY, NUTS, AND THE LIKE. ALFRED GARTNER, Washington, D. C. Filed Jan. 14, 1918. Serial No. 211,890. 3 Claims. (Cl. 46—46.)

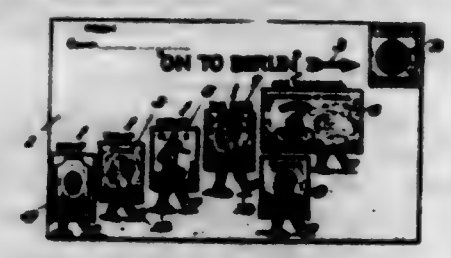


1. A confection explosive bomb consisting of a thin shell of eatable material and containing confection in its bottom, a fuse entering the container, and a predetermined amount of explosive connected with the inner portion of the fuse and located near the upper portion of the container, and above the confection, the explosive being only sufficient to gently break the shell without disturbing the confection.

1,301,119. DISPLAY DEVICE. ALFRED GARTNER, Washington, D. C. Filed Mar. 28, 1918. Serial No. 225,346. 8 Claims. (Cl. 40—125.)

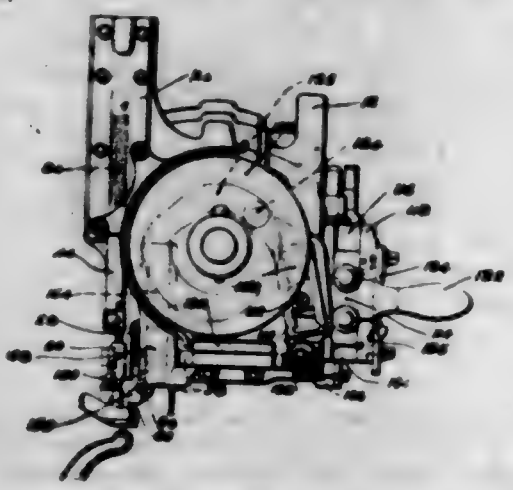
1. A display device comprising a support provided with a plurality of separately attached emblems, and means printed on the support and associated with each emblem to simulate that the emblems are moving in the same direction toward a designated point.

8. A display card provided with a stamp indicative of a point of destination, a group of stamps associated with the representation of legs in marching attitude, the stamps in the group being arranged one in advance and of and in a higher plane than the preceding stamp to indicate that



the group are advancing toward and up to the stamp indicative of the point of destination.

1,301,120. MACHINE FOR INSERTING FASTENINGS. GEORGE GODDU, Winchester, Mass., assignor, by mesne assignments to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 11, 1917. Serial No. 179,980. 14 Claims. (Cl. 1—19.)



3. In a fastening inserting machine, a frame, work feeding means, a lever for operating said work feeding means, a fulcrum for said lever, a member carrying said fulcrum, guiding means for said member, a locking plate mounted adjustably on said frame, and means on said member co-acting with said plate to lock said member in adjusted position.

9. In a fastening inserting machine, an awl bar comprising a plurality of sections, one of which fixedly carries an awl, and means for reciprocating said awl bar to feed the work, one of said sections being translatable relatively to the other in adjustment in a direction substantially transverse to the direction of feeding movement of the awl bar.

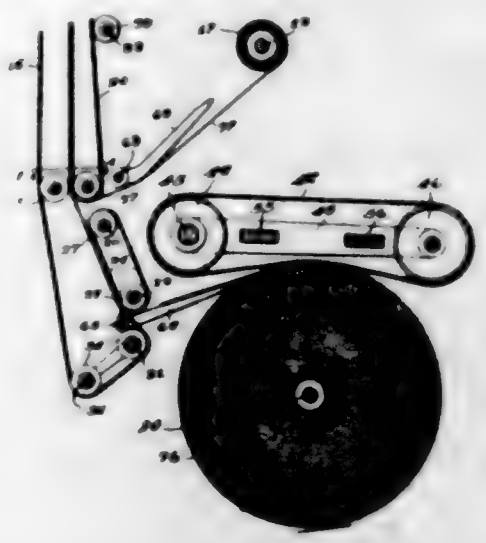
1,301,121. ROCK-DRILL. THOMAS GORDON and HUGH WILLIAM SIMPSON, Parson's Bridge, Vancouver Island, British Columbia, Canada. Filed July 23, 1918. Serial No. 246,387. 5 Claims. (Cl. 255—61.)



4. A drill of the class described including a drill socket, a pair of bits disposed back to back, longitudinally

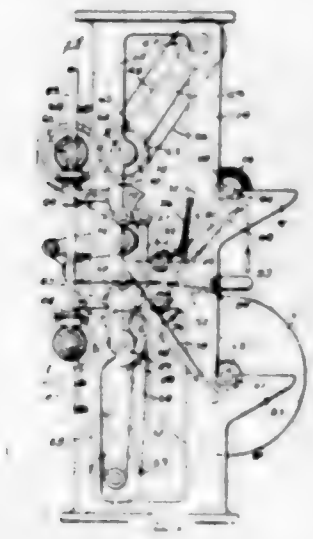
spaced arms on said drill bits at the upper ends, there being grooves in the socket accommodating said arms, and transversely disposed clamp means adapted to engage adjacent arms of the respective bits and secure the same to the socket.

1,301,122. CHANGE WEB-ROLL MECHANISM. SAMUEL G. GOSS, Glencoe, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1916. Serial No. 131,159. 37 Claims. (Cl. 242—58.)



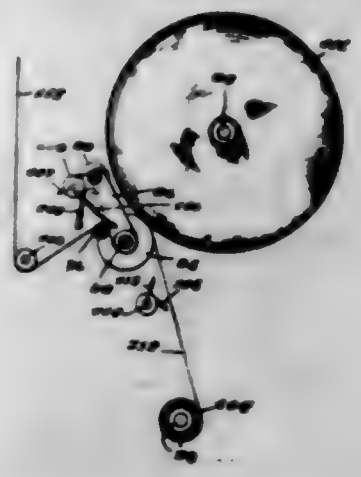
3. The combination of means for supporting a plurality of rolls in operative position for alternative use, means for rotating a fresh roll in either position while the web is being drawn from another roll, and means associated with said rolls for leading the end portion of the web from the fresh roll into contact with the web from the other roll when the latter is running at its normal speed.

1,301,123. CHANGE WEB-ROLL MECHANISM FOR PRINTING-PRESSES. SAMUEL G. GOSS, Glencoe, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1916. Serial No. 131,160. 23 Claims. (Cl. 242—58.)



2. A web changing apparatus comprising means for supporting in operative position for alternative use a fresh roll and a roll in use, and a plurality of driving devices movable into engagement with the surface of a fresh roll in either position, respectively, to rotate such fresh roll in the proper direction and at the proper speed to enable it to be spliced to the web in use.

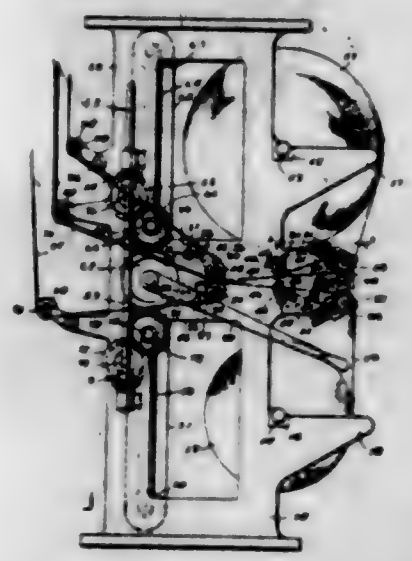
1,301,124. ROLL-CONTROLLING MECHANISM FOR PRINTING-PRESSES. SAMUEL G. GOSS, Glencoe, and ERNEST JAMES SMITH, Chicago, Ill., assignors to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1916. Serial No. 131,549. 21 Claims. (Cl. 242—58.)



9. The combination of means for supporting two rolls adjacent to each other for feeding the webs alternately therefrom, means for rotating either roll at substantially the same surface speed as that of the web fed from the other roll, a roller slidably mounted adjacent to one roll, a second roller swingingly mounted about the axis of said first-named roller adjacent to the other roll, and means for moving either roller toward its adjacent roll for carrying the web which runs between said rollers into contact with either roll as desired.

13. The combination of means for supporting two rolls, means for joining the leading end of a fresh roll to the substantially exhausted web from the other roll, and roll-controlling means adapted to be connected alternatively with either of said rolls for controlling the tension and lateral adjustment of the webs.

1,301,125. WEB-ROLL MECHANISM FOR PRINTING-PRESSES. SAMUEL G. GOSS, Glencoe, and ERNEST JAMES SMITH, Chicago, Ill., assignors to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1916. Serial No. 131,550. 20 Claims. (Cl. 242—58.)



1. The combination of a frame, means for revolubly supporting a web roll on said frame adjacent to a running web, means for rotating said web roll at a surface speed substantially equal to the speed of the running web, and intermittently operable means adapted to op-

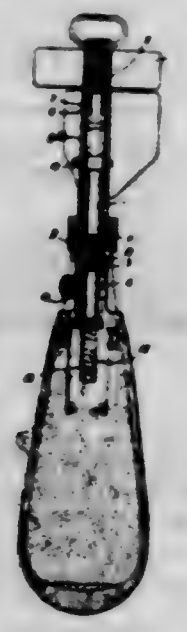
erate to automatically lead the end of the web from said web roll into contact with the running web when said roll is rotated.

13. The combination of a frame, means for revolubly supporting a web roll on said frame adjacent to a running web, a tape to which the end of the web from said roll is releasably secured to lead said web into contact with the running web, yielding means adapted to give said tape an operative actuation for carrying the tape forward when said roll is rotated, slightly weaker yielding means tending to draw said tape backward preparatory for an operative actuation, and other means for drawing said tape backward for connecting the end of the web from the roll thereto.

14. The combination of a frame, means for revolubly supporting a web roll on said frame adjacent to a running web, a tape to which the end of the web from said roll is releasably secured to lead said web into contact with the running web, yielding means adapted to give said tape an operative actuation for carrying the web forward when said roll is rotated, means for drawing said tape backward against the action of said yielding means for connecting the end of the web from the roll thereto, and latch mechanism for holding the tape against forward movement.

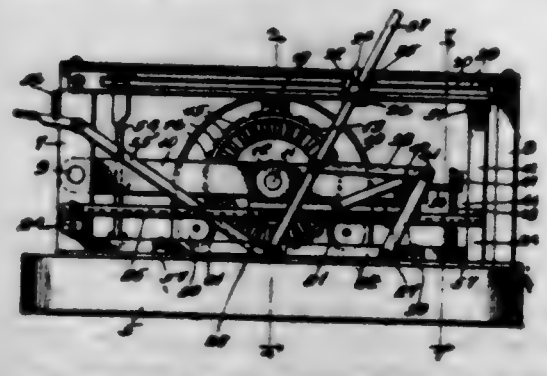
20. The combination of a framework, means for revolubly supporting two web rolls upon said framework adjacent to each other, means for rotating a fresh roll in either position at substantially the same surface speed as that of the web running from the other roll, yieldingly-actuated means adapted automatically to lead the end of the web from the fresh roll into contact with the running web when said roll is rotated, means for securing said two webs together when they are brought into contact with each other, and a blade swingingly mounted between the paths of the webs from said roll, respectively adapted to be swung into engagement with the web from either roll for severing said web.

1,301,126. EXPLOSIVE SHELL OR SIMILAR BODY. FREDERICK MARTEN HALE, Bromley, England. Filed Dec. 24, 1918. Serial No. 268,156. 5 Claims. (Cl. 102—2.)



1. A shell adapted to be discharged from aircraft and comprising a wind-vane device rotatable in relation to the body of said shell, a spindle fixed to said device, a detonater having a screw-connection with said spindle and adapted to be disengaged from said spindle by rotation of said spindle in relation to said detonator, and means for preventing the rotation of said detonater in relation to the body of said shell.

1,301,127. MACHINE FOR PROTECTING CHECKS AND THE LIKE. CHARLES H. HASBROUCK, Binghamton, N. Y. Filed Aug. 1, 1916. Serial No. 112,539. 11 Claims. (Cl. 197—6.4.)



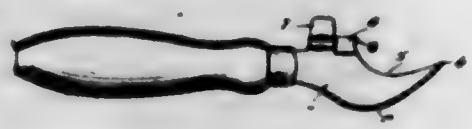
1. A mechanism of the character described including a base, a type wheel mounted thereon, means for rotating said type wheel, a grooved wheel mounted on the base adapted to co-act with the type wheel, means for adjusting the pressure of the type wheel, said means including a guide, a vertically movable member mounted in said guide and having operative connection with the type wheel, and a rod swiveled in the guide and threaded into the vertically movable member.

2. In a printing machine, a base, a pivoted and transversely movable frame mounted thereon, a type wheel mounted in the frame, a platen mounted on the base, means for bringing the characters of the type wheel selectively in alinement with the platen and shifting the type wheel across the same, and means for adjusting the pressure of the type wheel.

8. In a printing machine, a base, a pivoted and transversely movable frame mounted thereon, a type wheel mounted in the frame and carrying a pinion, a platen mounted on the base, a channel-shaped guide arranged adjacent the type wheel, a longitudinally movable rack bar mounted in the guide adapted to mesh with the pinion to rotate the type wheel, an indicator, a scale bar over which the indicator moves, means operatively connecting the indicator with the rack bar to indicate the resultant position of the type wheel when the rack bar is shifted, and a lever mounted on the base adapted to engage the frame to shift the same to move the type wheel into printing position with the platen.

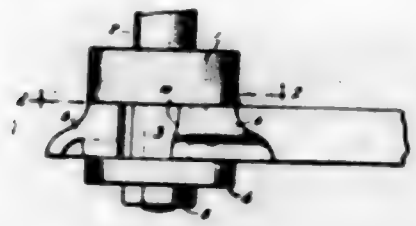
9. In a printing machine, a base, a rotatable and axially movable type wheel mounted thereon, the type wheel including a hub, and a plurality of partitions extending radially therefrom, a platen coöperating with the printing wheel, means for rotating the type wheel to bring its printing characters selectively in alinement with the platen, means for shifting the same into printing engagement with the platen, a horizontally disposed pin adapted to enter between a pair of the partitions during the axial movement of the type wheel, and means for adjusting the printing pressure of the type wheel.

1,301,128. CAN-OPENER. FRANK HIBNER, North Platte, Nebr. Filed Mar. 7, 1917. Serial No. 153,087. 1 Claim. (Cl. 30—3.)



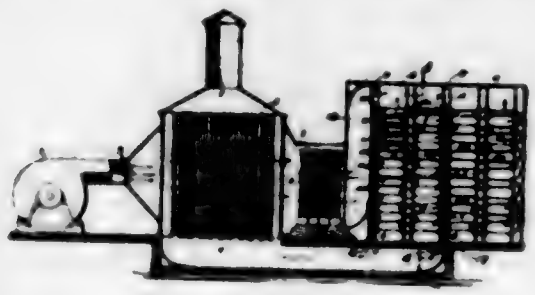
A device of the character described including a handle, a blade secured thereto and provided with a cutting edge, a pair of laterally offset extensions provided upon the edge of the blade opposite the cutting edge and being of different lengths, the inner edge of the short extension and the outer edge of the long extension being in alinement in the same vertical plane, and the said plane being at right angles to the vertical plane of the blade.

1,301,129. CUTTER-HEAD. HENRY HODAPP, Seymour, Ind., assignor of one-half to Edward A. Higgins, North Vernon, Ind. Filed June 24, 1916. Serial No. 105,660. 2 Claims. (Cl. 144—232.)



1. A cutter-head comprising a collar having two intersecting and eccentrically disposed grooves with tapered sides, a shank passing centrally through said collar, said collar, shank and the grooves having their respective axes all located in the same straight line, each of said grooves having its center located to one side of the axis of the shank, a pair of segmental bits each having two opposed cutting edges and constructed with ridges formed to correspond with and fit in the grooves and slide therein, said bits having pivotal axes in alinement with the axis of the cutter-head and angularly adjustable to bring either pair of cutting edges into operative position and for adjusting the cutting edges inward or outward from the center, a clamping plate fitting on the shank against said bits, and means for securing said clamping plate, substantially as set forth.

1,301,130. METHOD OF AND APPARATUS FOR DRYING MATERIALS. HARRY E. HOLLISTER, Irvington, N. J., assignor to Kalbperry Corporation, Elizabeth, N. J., a Corporation of New Jersey. Filed July 17, 1917. Serial No. 180,983. 19 Claims. (Cl. 34—39.)



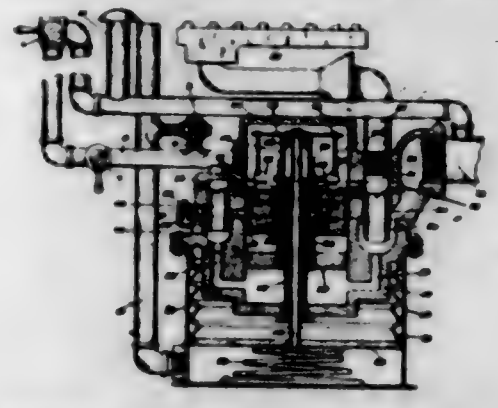
1. The process of drying materials, comprising heating the materials to cause evaporation thereof and passing air over the materials at such a temperature that it will act only to extract moisture given off by evaporation, the evaporating operation being carried on independently of the air currents.

3. The process of drying materials, consisting in heating air, passing it over successive portions of the material to be dried, evaporating the material independently of the heat of the air, and transferring heat from the exhaust air to incoming new air.

10. A drier, consisting of a preheater, a heater, a series of devices for holding material to be dried, means for heating each of said devices, means for conveying air through said preheater, through said heater, and successively over said devices, means for conveying the exhaust air through said preheater, and means for causing the air to travel in a path inclined to the surface of the material.

1,301,131. FLUID-CONTROL APPARATUS. PHILIP T. JACKSON, Toronto, Ontario, Canada. Filed Aug. 31, 1918. Serial No. 252,208. 28 Claims. (Cl. 67—18.)

1. In a fluid control apparatus, the combination of a diaphragm casing; a diaphragm across the same; a pipe forming a passage for conveying fluid under pressure to the space at one side of the diaphragm; means yieldingly tending to maintain the diaphragm in normal position; a valve in said pipe for controlling the flow of fluid therein; a second passage for fluid independent of the first passage; a valve mechanism controlling said second passage; a plunger connected with the diaphragm; and means whereby the plunger actuates said valve control mechanism.

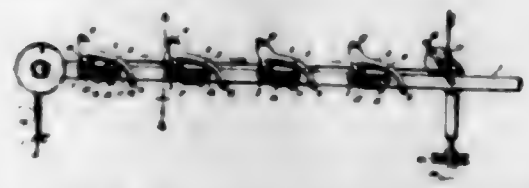


1,301,132. DUMP-BODY FOR TRUCKS AND THE LIKE. MEREDITH H. JENNINGS, Roanoke, Va. Filed Jan. 2, 1919. Serial No. 269,258. 1 Claim. (Cl. 21—20.)



The combination with sills, a dumping body tiltably mounted thereon and means connected to the sills and body for actuating the body, of a gate at the rear end of the body and having forwardly extending hinge members, detachable pivot devices connecting the body and the hinge members at the sides of the body, upper and lower sets of eyes upon the gate, a set of eyes upon the rear end of the bottom of the body, links anchored to the sills, and a rod detachably mounted within either set of the eyes on the gate for pivotally connecting said gate to either the links or the bottom of the body.

1,301,133. YARN-CLEANER. ROBERT G. JENNINGS, Elmira, N. Y. Filed Sept. 22, 1911. Serial No. 650,743. 23 Claims. (Cl. 28—20.)



1. In a cleaning unit for use with a running thread of yarn, gripping means comprising members provided with curved edges lying in the same plane and arranged to form a V shaped slot between them, said slot being wholly at one side of the line of travel of the yarn.

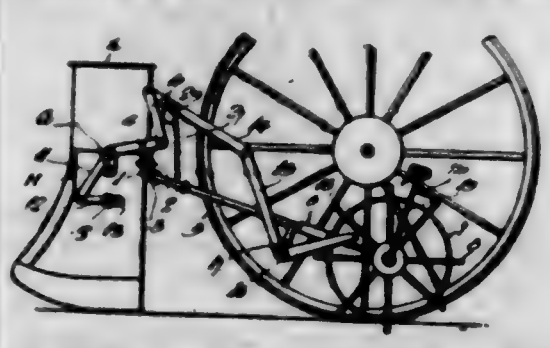
15. In a cleaning unit for use with a running thread of yarn, the combination of a bed provided with a surface which diverges from the line of travel of said yarn, and a pair of blades each provided with an edge opposed to and arranged so as to form a V shaped slot with said bed, one of said blades being provided with a corner bent toward the other blade to constitute a deflector.

18. In a yarn cleaner the combination of a plurality of cleaning units for detaching impurities from a running thread of yarn arranged in line, a revolubie gathering spindle adjacent to said line of cleaning units and adapted to receive the impurities from the units thereof and a

spring pressed packing pan for compacting said impurities upon said spindle.

22. In a yarn cleaner, the combination of an attaching bracket provided with driving means, a support provided with a cleaning unit, a tripping shaft and a gathering spindle, said support being detachably joined to said bracket, and means for operatively connecting or disconnecting said driving means to or from said tripping shaft and said gathering spindle.

1,301,134. ATTACHMENT FOR CORN-PLANTERS. FRANK A. JOHNSON, Danville, Ill., assignor of one-half to William J. Freeman, Danville, Ill. Filed Oct. 1, 1918. Serial No. 256,417. 4 Claims. (Cl. 111—23.)



2. An attachment for planters comprising an arm for longitudinal disposition and means for connecting it to the planter frame, a trailing wheel mounted on said arm and having a tappet, a bell crank mounted on said arm with one end in the path of said tappet, a link pivoted to and extending forwardly from the other end of said bell crank, a second bell crank to which said link is pivoted and means for mounting it on the planter frame, a second link depending from said second bell crank, a crank arm to which said second link is pivoted, and means for connecting said crank arm to the rock shaft for operating the seed dropping means of the planter; together with a pair of markers and means for mounting them on the planter frame for vertical movement, means for raising and lowering said markers, and a pair of flexible marker operating elements extending from said first named link to said markers, said flexible elements being normally slack but being tightened and brought into play by lowering of said markers.

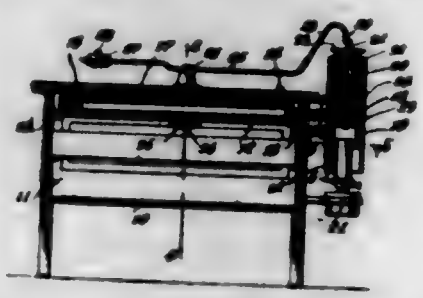
1,301,135. FIXTURE FOR USE WITH MAGNETIC CHUCKS. SAMUEL KARASICK, New York, N. Y., assignor to The Kar Engineering Company, New York, N. Y., a Corporation of Connecticut. Filed Mar. 28, 1917. Serial No. 158,079. 7 Claims. (Cl. 175—367.)



1. A work-supporting fixture for use with a magnetic chuck, comprising, in combination with said chuck, unitary work-supporting member formed of alternate magnetic and non-magnetic plates composing magnetic sections exceeding the number of poles in the face of the chuck, said member being freely movable in all directions over the chuck face and maintainable in all predetermined positions on said chuck face solely by the energizing of the magnetic chuck.

1,301,136. INCUBATOR. THOMAS KIRKWOOD, Brantford, Ontario, Canada. Filed Apr. 4, 1918. Serial No. 226,674. 1 Claim. (Cl. 237—8.)

An incubator having a body, a receptacle in the body provided with an inlet and an outlet, a conduit pipe communicating with the inlet, a heater having a casing with the conduit pipe extending through the wall into the interior of the casing, a tubular head carried by the conduit pipe within the casing in spaced relation to the walls thereof and open at both ends and a valve structure including a movable support and upper and lower valve disks, the lower valve disk being positioned beneath the lower end of the tubular head to close the lower end of



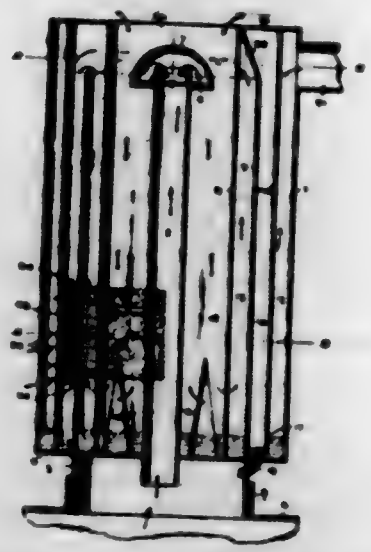
the tubular head when the upper valve disk is in a raised position and the upper valve disk being positioned above the casing to close the upper end of the said head when the lower disk is in a lowered position.

1,301,137. STEERING DEVICE FOR AUTOMOBILES. ALFRED DE LA BARRE, Minneapolis, Minn. Filed Jan. 10, 1918. Serial No. 211,123. 8 Claims. (Cl. 74—79.)



1. A steering device for motor vehicles comprising a steering shaft, a support for the lower end of said shaft, means for horizontally pivoting said shaft to said support to permit both rotary and oscillating movements of said shaft, a member movable along said shaft upon rotation of the latter, and connections between said movable member and the steering wheels whereby the latter may be placed in any desired steering position.

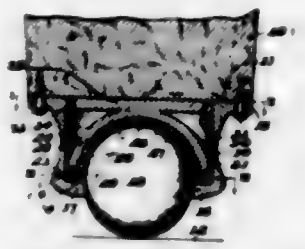
1,301,138. STEAM-CONDENSER, AIR-CLEANER, AND HUMIDIFIER FOR INTERNAL-COMBUSTION ENGINES. JESSE D. LANGDON, Waterville, Wash. Filed June 22, 1917. Serial No. 176,407. 6 Claims. (Cl. 123—25.)



5. The combination with the water circulating system and carbureter of an internal combustion engine, of a

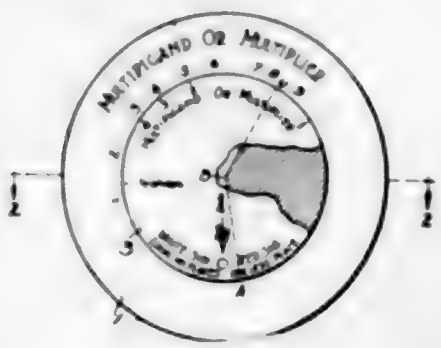
casing provided with means for connecting the same with the water circulating system and the air intake of the carbureter, a plurality of chambers within said casing, means to establish communication between said chambers, means for conducting steam into one of said chambers, means for the admission of air into the chamber surrounding the steam conducting means in a direction opposite to the direction of the flow of steam, a foraminous outlet between a certain two of said chambers, and means for admitting additional atmospheric air to commingle with the air and moisture issuing from said foraminous opening.

1,301,139. FURNITURE-CASTER. STANLEY LASKOWSKI, Indiana Harbor, Ind. Filed July 15, 1918. Serial No. 244,918. 2 Claims. (Cl. 16—151.)



1. A furniture caster comprising a socket member having an annular attaching flange at its upper end, said flange provided with apertures to receive fastening means for the securing of said socket member to an article of furniture, a disk closing the upper end of said socket member, an inverted bowl-shaped member secured centrally to the inner face of said disk and depending downwardly in said socket member to a point adjacent the lower end thereof, a bearing ball located in said bowl-shaped member and projecting partially through the central opening of said socket member, an anti-friction means interposed between said bearing ball and inner surface of said bowl-shaped member.

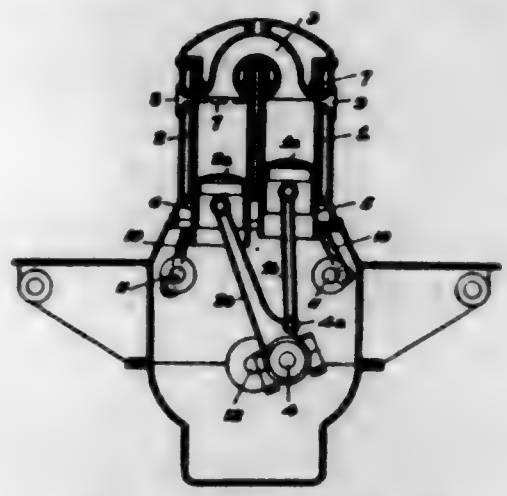
1,301,140. DECIMAL-DIAL. CHARLES E. LATSHAW, Minneapolis, Minn. Filed July 29, 1918. Serial No. 247,341. 4 Claims. (Cl. 235—84.)



4. In a decimal dial, the combination of a base, a movable member associated with said base, said base carrying thereon spaced in definite relation, the digits 1 to 9 inclusive; said movable member carrying thereon in definite relation the digits 1 to 9 inclusive, and coöperating signal means between said base and said movable member, and adapted to show one of two signals when a digit on said base is alined with a digit on said movable member.

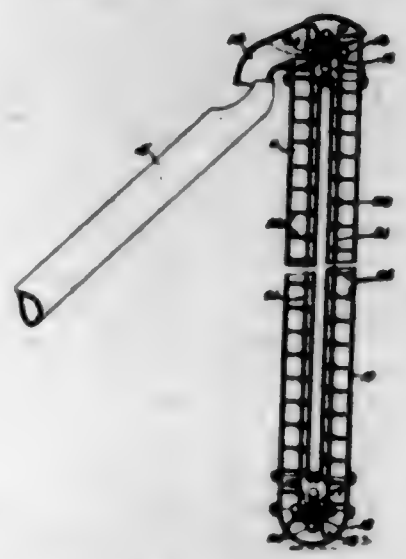
1,301,141. INTERNAL-COMBUSTION ENGINE. THOMAS ABNEY NAPIER LEADBETTER, Hale, ANDREW LAWSON KNOX GILCHRIST, Lytham, and WILLIAM HENRY TATE, Brooklands, England. Filed Sept. 18, 1917. Serial No. 191,930. 3 Claims. (Cl. 123—53.)

3. An internal combustion engine operating on the four stroke cycle in which the engine unit comprises, twin cylinders communicating at the head in an explosion chamber common to both cylinders; twin pistons reciprocating in the cylinders and connected to a crank pin common to both pistons; a single inlet and a single exhaust



port to the common explosion chamber, and sleeve valves controlling the inlet and exhaust ports and working between the pistons and the cylinders.

1,301,142. GRAIN-ELEVATOR. CHARLES M. LEVLER, Winston, Mont. Filed Oct. 19, 1917. Serial No. 197,482. 6 Claims. (Cl. 193—8.)



1. In a conveyer, the combination of a cable, a flat plate having a depression in one side forming a bucket and provided with a recess in its inner edge adapted to receive the cable therein, a second plate adapted to overlap the rear edge portion of the first plate and having a recess in its forward edge for receiving said cable therein, and means for securing said plates in overlapping relation to bind the cable therebetween.

1,301,143. GUN. SANDY H. LOVE, Colt, Ark., assignor of one-fourth to Archie L. Nunn and one-fourth to Armstu P. Hampton, Colt, Ark. Filed Mar. 6, 1918. Serial No. 220,765. 8 Claims. (Cl. 116—42.)



1. In a device as set forth, the combination, of a gun structure, a tread structure, means operable by the de-

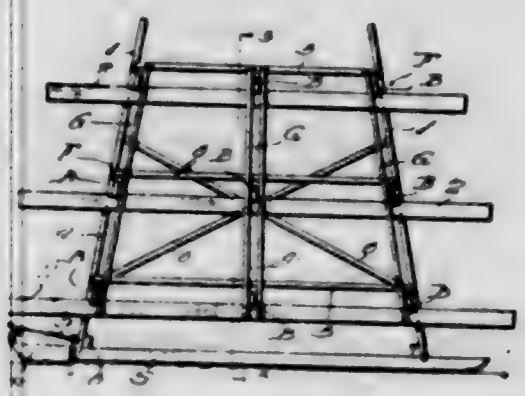
pression of said tread to discharge said gun structure, and means operable by the depression of said tread to recharge said gun structure.

1,301,144. FRONT-END CLOSURE. NEAL T. MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 18, 1918. Serial No. 212,455. 3 Claims. (Cl. 110—178.)



2. In apparatus of the class described, the combination of a smokebox ring and a door ring, one of them having in its face a circular groove with sloping sides the other having a complementary tongue, both of them having peripheral conical portions sloping outward and toward each other when the two rings are placed so the tongue and groove engage, an expansible band with an inner annular channel whose sides slope and are spaced so they will simultaneously engage the said conical portions when the band is contracted; and means to contract and expand the band.

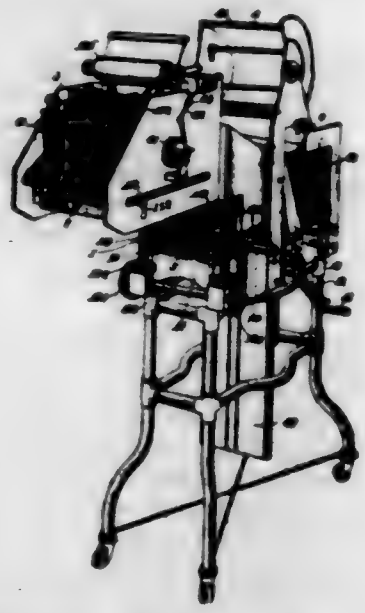
1,301,145. HAY-CURING RACK. JAMES A. MCLAUGHLIN, Jesup, Ga. Filed July 3, 1918. Serial No. 243,158. 8 Claims. (Cl. 34—26.)



6. A hay curing rack comprising a pair of side frames converging upwardly and hinged together at their upper ends, each frame including longitudinal bars, transverse bars extending between and beyond said side frames and resting on said longitudinal bars between the ends of the latter, and parallel strips crossing and secured to said longitudinal bars on opposite sides of said transverse bars.

1,301,146. TYPE-SETTING MACHINE. CHESTER A. MACOMBE, Chicago, Ill. Filed Nov. 2, 1918. Serial No. 260,867. 18 Claims. (Cl. 276—3.)

5. In a type-setting machine, a plurality of rows of type supports, duplicate sets of type on said supports, a second set of type supports in alinement with said first-mentioned set of type supports but spaced therefrom, a type holder adapted to support the type corresponding to a column or page of printed matter, said holder being located between the two sets of type supports, and means for differentially adjusting the type along one set of supports through the type holder into the second set of supports whereby selected type will come to rest in said type holder, said means for differentially adjusting the type being arranged



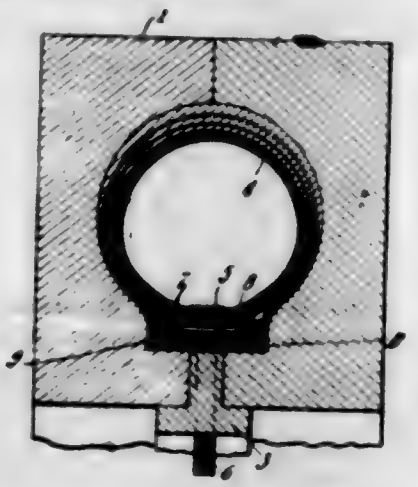
to become effective in succession with respect to the different type supports.

1,301,147. ATTACHMENT FOR CORNETS AND OTHER BRASS INSTRUMENTS. CARL J. MAGIN, Belleville, Ill., assignor of one-half to Ignatz Mayer, Belleville, Ill. Filed Dec. 30, 1918. Serial No. 268,896. 3 Claims. (Cl. 84—125.)



3. A device for changing the tone of musical instruments of the character referred to consisting of a relatively long, hollow, cone-shaped member open at its base end, an oppositely-disposed frusto-conical-shaped member arranged with its base end projecting into the base end of said cone-shaped member and secured to same, and elongated slots in the sides of said frusto-conical-shaped member, for the purpose described.

1,301,148. VULCANIZING DEVICE. MELVON A. MARQUETTE, Springfield, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed June 10, 1918. Serial No. 239,198. 6 Claims. (Cl. 18—45.)



1. The combination of a pressure bag for use in tire casing vulvanization with a separate flexible ring mem-

ber to bridge the space between the edges of a casing and transmit pressure from the bag to such edges when confined in a mold.

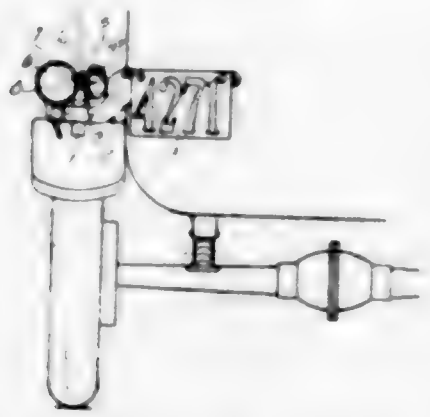
1,301,149. SPRAY-GUN. MILTON F. MARSHALL, Parsons, Kans. Filed Feb. 7, 1917. Serial No. 147,201. 3 Claims. (Cl. 47—37.)



1. A spray gun for use in killing weeds including a penetrating end having outstanding knives arranged thereon to cut and lacerate the root of a weed as the point is penetrated thereinto, said penetrating end provided with liquid discharge openings located inwardly beyond the knives, means to be actuated to inject a measured quantity of killing liquid through said openings into the root as prepared, and means to close the liquid discharge openings except during the interval of injection of the killing liquid into the root of the weed to thus guard against ingress of dirt.

2. A spray gun for use in killing weeds including a tubular reservoir shaped to provide a handle by which the implement may be held for use, a forcing barrel extending through one end of said tubular reservoir to project therefrom, a tube section connected with the outer end of the forcing barrel provided at its inner end with an overhanging flange having a liquid passage therethrough, a penetrating point mounted on said tube section, knives carried inwardly of the penetrating point, said forcing barrel having intake openings therethrough within the tubular reservoir and provided with discharge openings communicating with the interior thereof beyond the flange of the tube section, a piston mounted within the forcing barrel, a handle by which said piston is given reciprocatory movement within the barrel, a plunger valve mounted in the tube section to have slidable movement, and a spring mounted to bear against said valve to normally resiliently force the same to a position that the liquid discharge passages are closed against ingress of dirt and the liquid passage through the flanged end of said tube is closed against flow of liquid therefrom.

1,301,150. VISUAL TAIL-LIGHT REFLECTOR. JOHN C. MARTIN, Faulkton, S. D. Filed Oct. 1, 1917. Serial No. 194,255. 1 Claim. (Cl. 240—7.)



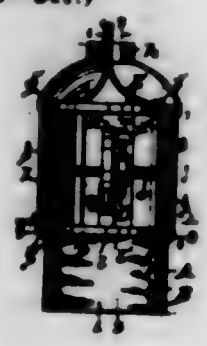
A device of the class described comprising a clamp for passage around a tail light, said clamp being formed of a single piece of wire bent into the form of a split ring with its ends bent to form alined eyes, one end of said wire, after forming one of said eyes, being extended laterally to form a bendable arm, a mirror supported by said arm, and a bolt passing through the aforesaid eyes for contracting the clamp around the tail light, bending of said arm permitting proper angular disposition of said mirror.

1,301,151. PRODUCING HYDROGEN. ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Alien Property Custodian. Filed June 25, 1914. Serial No. 847,824. 2 Claims. (Cl. 48—198.)

1. The process of producing hydrogen by passing carbon monoxid and steam over a heated catalytic agent containing an oxygen compound of a rare earth metal.

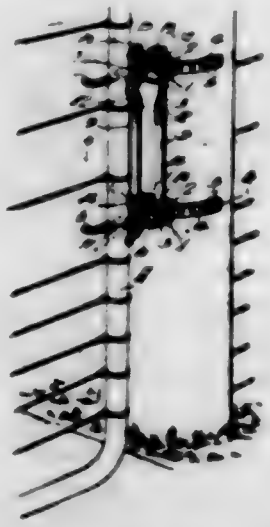
2. The process of producing hydrogen by passing carbon monoxid and steam over a heated catalytic agent containing cerium oxid.

1,301,152. LAMP-SOCKET. MILTON W. MORSE, Mount Vernon, N. Y. Filed Aug. 3, 1916. Serial No. 112,888. 3 Claims. (Cl. 173—347.)



1. As a new article of manufacture, a two filament lamp socket embodying a housing shell, partitions of insulating material positioned across the upper and lower portions of the shell, arcuate members positioned in complementary relation between said partitions and one of which members is electrically connected with a source of electrical energy, a shaft mounted at its opposite ends in said members, a commutator device mounted for rotation on said shaft and electrically connected with the current-carrying member, means for intermittently rotating said device, and contacts mounted on the upper face of the lower partition and adapted to coöperate with the commutator device, in combination with means, positioned beneath the lower partition, and supported thereby, for securing a multi-filament lamp in place, contacts on the under side of said lower partition, to be engaged by the corresponding contacts of the lamp associated with the socket, electrical connections between certain of the contacts on the under side of the lower partition and the corresponding contacts on the upper side thereof, and electrical connections between the remainder of the lamp engaging contacts and the source of electrical energy.

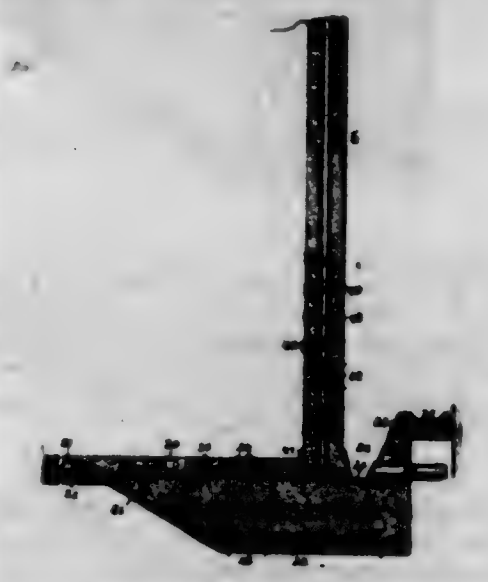
1,301,153. GATE-LATCH. MALCOLM B. MOYER, Montevideo, Minn., assignor to Moyer Manufacturing Company, Montevideo, Minn., a Corporation of Minnesota. Filed Jan. 2, 1918. Serial No. 210,000. 3 Claims. (Cl. 70—28.)



2. In a gate latch, an upper and a lower support each formed of a single length of angle iron, the horizontal flanges of said supports each having a pair of elongated

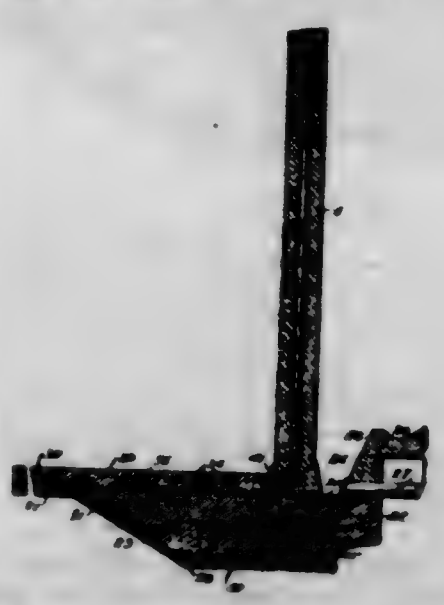
slots contiguous to the vertical flanges, upper and lower forks pivoted to the horizontal flanges of said supports, a pair of rectilinear, one-piece, vertical, strap-iron bolts passing slidably and non-rotatably through the slots of said horizontal flanges for controlling the movement of said forks, either bolt being sustained by the forks when the latter are moved to released position, and means for limiting the vertical sliding of said bolts, the inner edges of said bolts having notches cut therein to clear the upper fork when the bolts are raised, the upper ends of said bolts being given a lateral bend away from said vertical flanges to form releasing handles.

1,301,154. REINFORCED-CONCRETE RESERVOIR. WILLIAM MURRAY, New York, N. Y. Filed Apr. 2, 1915. Serial No. 18,061. 18 Claims. (Cl. 72—12.)



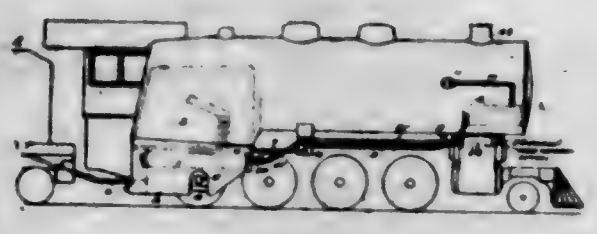
10. A reservoir or the like comprising a bottom provided with a beveled annulus near its edge, and a tubular wall having a beveled lower surface adapted to stand thereon.

1,301,155. TANK OR RESERVOIR OF REINFORCED CONCRETE. WILLIAM MURRAY, New York, N. Y. Original application filed Apr. 2, 1915, Serial No. 18,061. Divided and this application filed Oct. 17, 1917. Serial No. 197,125. 16 Claims. (Cl. 72—12.)



1. In a reservoir or tank, a bottom comprising an inner disk section, an annular conical section, and an outer disk section, all of concrete, and reinforcing means therefor, including a series of substantially radial bars having their inner portions embedded in the upper portion of the inner disk section, their outer portions embedded in the lower portions of the outer disk section and their intermediate portions embedded in the conical section.

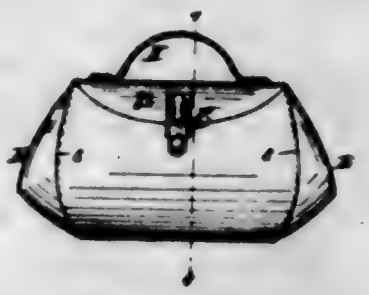
1,301,166. FEED-WATER APPARATUS. JOHN E. MUHLFELD, Scarsdale, N. Y. Filed Oct. 22, 1913, Serial No. 796,662. Renewed Dec. 22, 1916. Serial No. 138,498. 16 Claims. (Cl. 60—4.)



7. In apparatus of the character indicated, the combination with a boiler and main engines of a locomotive, of a primary feed-water heater, a secondary feed-water heater, both of said feed-water heaters mounted on the locomotive, means for permitting the feed-water to pass from the primary heater to the secondary heater, means for permitting the feed-water to pass from the secondary heater to the boiler, means for conveying to the primary heater steam exhausted from the main engines, and independent means for conveying to the secondary heater steam exhausted from the main engines.

15. In apparatus of the character indicated, the combination of a boiler, a furnace, a feed-water heater in contact with the bottom of the combustion chamber of the furnace, and means for allowing draft air to enter said furnace without passing between said feed-water heater and furnace.

1,301,167. HAND-BAG. NATHAN MUSLIN, New York, N. Y. Filed Jan. 9, 1919. Serial No. 270,276. 1 Claim. (Cl. 190—53.)



A hand bag of the character designated having a body portion made in one integral piece constituting the bottom, sides and closure flap, and end pieces attached to said body portion, said end pieces consisting each of a blank of relatively stiff bendable material formed with a folder-sector closed by textile fabric, for the purpose described.

1,301,168. MATCH-IGNITING DEVICE. JACOB E NEAHR, New York, N. Y. Filed Mar. 14, 1916. Serial No. 84,009. 15 Claims. (Cl. 206—20.)



1. In combination, a match-box comprising a match-receiving cavity and an opening for the insertion of matches, a base having an upstanding box-supporting socket within which a part of said box is inserted, an exposed hollow coil of ignition strip closely surrounding a part of said box, the box thus forming a backing for said coil at each match-striking operation, said match-

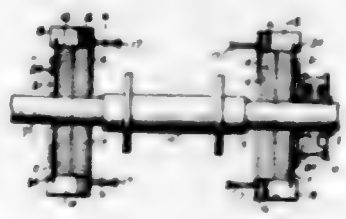
receiving cavity thus lying partly within said socket and partly within said coil, an outwardly directed flange upon said box, said flange surrounding said match-inserting opening and serving as a cap for said coil, and means upon said box for clamping said coil thereto.

1,301,159. WRENCH. JOSEPH NIBLANDER, Kokomo, Ind. Filed Dec. 1, 1917. Serial No. 204,902. 1 Claim. (Cl. 81—158.)



A wrench embodying a shank, a stationary jaw thereon, a toothed rack formed on said shank, a sleeved jaw mounted for movement along said shank, a shaft having one end pivotally mounted in the sleeve of the movable jaw, a locking member rotatably mounted on said shaft for engagement with the toothed rack, an operating dog also pivotally mounted in the sleeve of the movable jaw and means engageable with the pivot end of shaft, whereby the locking member will be yieldingly held in a locked or unlocked position.

1,301,160. DEMOUNTABLE DRIVING-WHEEL FOR MOTOR CYCLES. WILLIAM J. NOBLE, Kearney, Nebr. Filed Sept. 28, 1918. Serial No. 256,046. 9 Claims. (Cl. 64—89.)



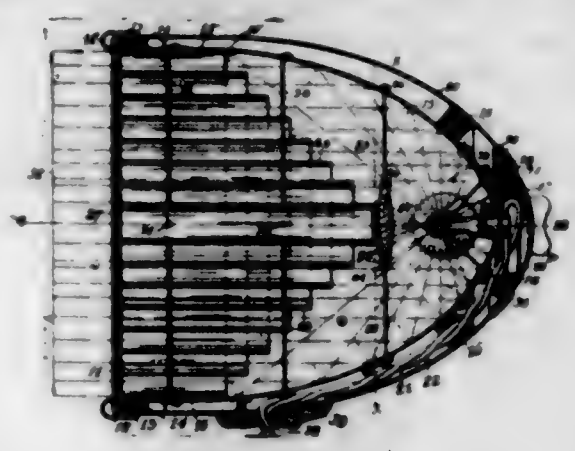
1. In a motor cycle, a drive wheel shaft, a drive wheel fixed thereon, separate sprocket wheel and brake drum shafts, and means for detachably coupling the drive wheel shaft to the sprocket wheel and brake drum shafts.

1,301,161. DEVICE FOR PACKING EGGS. KENJI OHARA, Awa Gun, Chiba Ken, Japan. Filed Nov. 17, 1916. Serial No. 131,826. 4 Claims. (Cl. 229—28.)



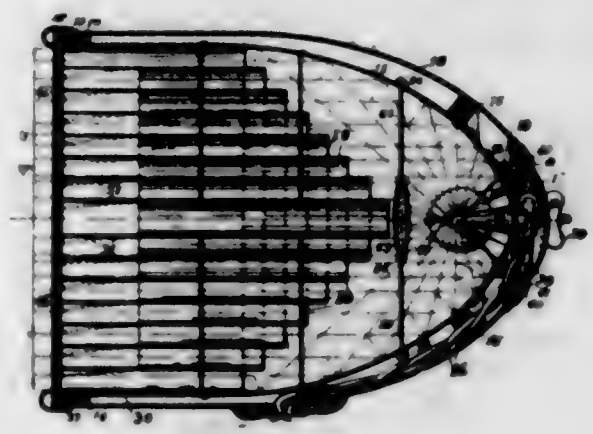
1. A packing device for eggs comprising an open-ended case having sides and false bottoms situated inwardly of its ends, each false bottom including relatively inclined layers having holes alining with the holes in the other false bottom and adapted to receive one end of an egg, the said holes in the inner layers of the false bottoms being larger than those in the respective outer layers so that the egg will fit the holes of both layers of each false bottom.

1,301,162. AUTOMOBILE-LAMP. OTHO M. OTTS, Jamestown, N. Y. Filed Feb. 26, 1917. Serial No. 150,887. 6 Claims. (Cl. 240—48.4)



1. In combination with a reflector having a closed rear end and a continuous reflecting surface, a source of light in front of said closed rear end, a cellular structure in the reflector, said structure being of pyramidal formation with its apex adjacent the source of light, and a lens arranged between the source of light and apex of the structure and alined with each.

1,301,163. AUTOMOBILE-LAMP. OTHO M. OTTS, Jamestown, N. Y. Filed Feb. 26, 1917. Serial No. 150,888. 10 Claims. (Cl. 240—48.4.)



1. In a reflector, a light controlling tube and planes shaped from a single sheet of metal comprising a lengthwise portion of said sheet as the tube portion, the central portion of the other lengthwise and longer part of said sheet of metal integrally attached to the center of said tube portion and two end portions also integrally attached to the ends of said tube portion to unite said two end portions in a single plane with said planes on opposite sides of the tube when said tube portion of said sheet of metal is turned into a tube.

1,301,164. GARMENT. GEORGE W. PRAHL, Pittsfield, Mass. Filed Apr. 5, 1918. Serial No. 226,810. 8 Claims. (Cl. 2—144.)

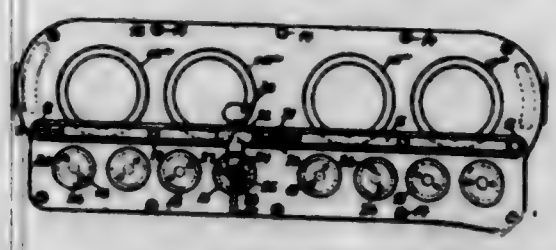
1. A union garment comprising a body portion and a trousers portion permanently secured together at the back and front, there being a portion of the back of the garment at approximately the waist line where the body portion is not attached to the trousers portion, and a member forming part of the trousers portion and extending above the free edge of the body portion, said

member being inside of the garment and being attached to the body portion at the upper extremity of the member, said member being provided with a fold or plait



above the free edge of the body portion, whereby a portion of said member may be moved relatively to the body portion in the direction longitudinally of the garment.

1,301,165. VALVE-GRINDER. MARSHALL A. PERSONS and CLARENCE G. FARMER, Newport, N. H. Filed May 15, 1918. Serial No. 234,785. 5 Claims. (Cl. 51—4.)



1. A valve-grinding attachment, comprising a guide having supporting standards at its opposite ends detachably engageable with a cylinder block and adapted to support the guide spaced from the block and substantially parallel with a row of valves therein, the guide being unobstructed between said supporting standards, a slide movable on said guide to any one of a plurality of operative positions relatively to said valves and provided with a spindle bearing, and a spindle rotatable and movable endwise in said bearing and having means for separably engaging either of said valves to rotate the same.

2. A valve-grinding attachment, comprising a guide having standards at its opposite end portions, a base attached to said standards and formed to bear on a cylinder block beside a row of valves therein, a holding-down screw-threaded bolt engaged with the central portion of the base and adapted to engage a tapped orifice in the block, and steady-pins projecting downwardly from the end portions of the base and adpated to loosely enter other orifices in the block, and prevent the base from swinging on said holding-down bolt.

3. A valve-grinding attachment, comprising a guide having standards at its opposite end portions, a base attached to said standards and formed to bear on a cylinder block beside a row of valves therein, the lower ends of said standards projecting below the base and constituting steady-pins adapted to loosely enter orifices in the block, and a holding-down screw-threaded bolt engaged with the central portion of the base and adapted to engage the internal thread of another orifice in the block.

4. A valve-grinding attachment, comprising a guide having supporting means detachably engageable with a cylinder block and adapted to support the guide spaced from the block and substantially parallel with a ryw of valves therein, a slide adapted to move endwise on said guide, an arm on said slide having a spindle bearing arranged substantially at right angles with the axis of the slide, and a spindle rotatable and movable endwise in said bearing and having means for separably engaging either of said valves to rotate the same, the spindle bearing being provided with a foot adapted to bear on a portion of the block outside the row of valves.

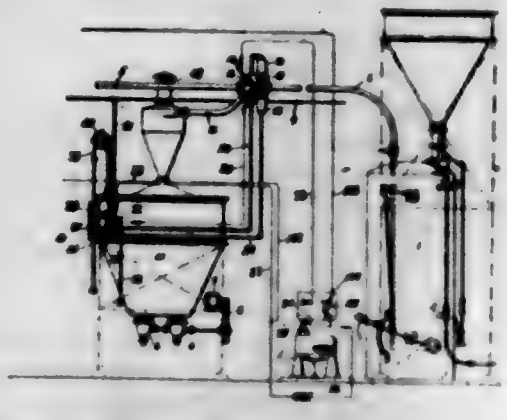
5. A valve-grinding attachment, comprising a guide having supporting means detachably engageable with a cylinder block and adapted to support the guide spaced from the block and substantially parallel with a row of valves therein, a slide adapted to move endwise on said guide, an arm on said slide having a spindle bearing arranged substantially at right angles with the axis of the slide, and a spindle rotatable and movable endwise in said bearing and having means for separably engaging either of said valves to rotate the same, the spindle bearing being provided with a foot adapted to bear on a portion of the block outside the row of valves, and the slide being provided with a confining set screw to engage the guide.

1,301,166. ATTACHMENT FOR JOINERS' SQUARES. JOSEPH H. PORTER, Seaside Heights, N. J. Filed Dec. 20, 1916. Serial No. 139,600. 1 Claim. (Cl. 33—92.)



An attachment for joiners' squares comprising an elongated body of greater width than thickness having transversely disposed and longitudinally extending slots at opposite sides of its transverse center and closed at their ends, and also having slots extending between its opposite edges and to its ends and intersecting the first named slots, headed and threaded bolts extending through the first-named slots and also through and at right angles to the second-named slots, wing nuts on said bolts, a threaded shank fixed to and extending laterally from one side of the body and spaced from one of the first-named slots, a wing nut on said shank, a lateral stop on said body side, at the opposite side of the slot to said shank, and a second lateral stop on said side of the body, at the opposite side of the transverse slot to the first named stop, and a marking blade pivotally mounted on said shank and arranged in different positions to bring up against said stops.

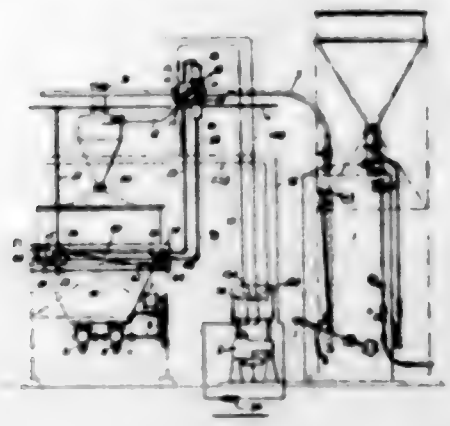
1,301,167. SEMI-AUTOMATIC COMPRESSED-AIR TRANSPORT SYSTEM. WILLIAM O. RENKIN, Oradell, N. J., assignor to Quigley Furnace Specialties Co., Inc., a Corporation of New York. Filed July 29, 1918. Serial No. 247,267. 10 Claims. (Cl. 193—10.)



1. In a fluid pressure transportation system comprising a main supply station, a plurality of branch storage stations, a main line conduit leading from the supply station, a branch conduit leading from said main line conduit to each branch storage station, means for forcing predetermined portions of the material at the supply station through the conduits to the branch stations, and switch valves at certain branch points controlling the branch and main line conduits at said points, the combination with said switch valves of a motor for automatically operating each of the valves, a resilient controlling device for each motor normally tending to assume the position which will cause the motor to operate its particular switch valve so as to close the branch conduit and open the main line conduit at that point, means for restraining said controlling device in the opposite position of adjustment whereby the valve is operated to open the

branch conduit and close the main line conduit at that point, and means operable from the supply station, by which any one or more of said controlling devices may be released from its restraining means.

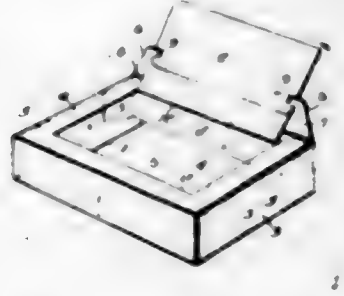
1,301,168. AUTOMATIC APPARATUS FOR DISTRIBUTING PULVERIZED FUEL. WILLIAM O. RENKIN, Oradell, N. J., assignor to Quigley Furnace Specialties Co., Inc., a Corporation of New York. Filed July 29, 1918. Serial No. 247,268. 12 Claims. (Cl. 193—10.)



1. In a device for automatically controlling the flow of material to a storage bin, the combination with a main line conduit and means for driving material therethrough, branch conduits therefrom, a valve controlling each branch conduit, and a storage bin at the end of each branch conduit, of a yielding support for each such storage bin, and mechanism connecting each bin and its valve, whereby the downward movement of a loaded bin tends to close the valve controlling its branch conduit and the upward movement of an emptied bin tends to open said valve.

2. The combination with a vertically movable bin and mechanism for raising and lowering the same, of a reversing member operated by said mechanism, comprising a swinging arm, a lost motion connection between said swinging arm and the bin, and independent means for completing the allowable travel of said arm in either direction after the lost motion connection has moved it through and beyond the point of mid travel.

1,301,169. DISPLAY-CARTON. RALPH R. RICHARDSON, Chicago, Ill., assignor to Chicago Carton Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1917. Serial No. 186,875. 6 Claims. (Cl. 206—44.)

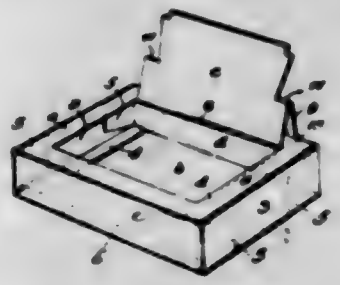


1. A paper carton having a lid and a pair of tongues hinged to the upper rear portion of the carton along substantially parallel lines, said tongues being arranged to engage the opposite side edges of the lid to hold the latter in raised position.

4. A carton having a hinged lid and having tongues hinged to the body portion of the carton in rear of the hinged edge of said lid, said tongues being adapted to be bent upwardly and extend across the side edges of the lid when the latter is turned to raised position, the free ends of said tongues being formed with extensions or hooks adapted to project inwardly over the opposite side edges of the lid.

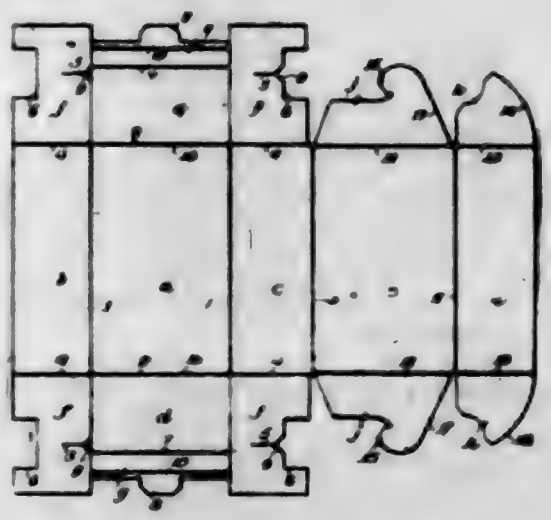
6. A paper carton having a lid cut out of the top wall and hinged thereto in front of its rear edge, and an upwardly bendable tongue hinged to the body of the carton in rear of the hinged edge of said lid and adapted to extend across the side edge thereof when the latter is turned to raised position, said tongue having an extension projecting inwardly therefrom arranged to hook over the side edge of the lid to hold the latter in raised position.

1,301,170. DISPLAY-CARTON. RALPH R. RICHARDSON, Chicago, Ill., assignor to Chicago Carton Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1917. Serial No. 186,876. 5 Claims. (Cl. 206—44.)



1. A carton having a hinged lid and having a bracing tongue formed from a portion of the lid and hinged thereto upon a line substantially parallel to the hinged edge of said lid, said tongue being adapted to be bent rearwardly and downwardly when the lid is turned to raised position and to be inserted into a slit in the carton.

1,301,171. FOLDING PAPER BOX. RALPH R. RICHARDSON, Chicago, Ill., assignor to Chicago Carton Company, of Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1917. Serial No. 186,877. 6 Claims. (Cl. 206—44.)



1. A paper box provided with a cover hinged to the back portion thereof, said cover having hinged flaps at its opposite ends arranged to engage the opposite end portions of the box and adapted to hold the cover either in closed position or down-turned in rear of the back portion of the box to support the latter in inclined position.

1,301,172. FOUNDER'S LADLE. DUDLEY G. ROWELL, Appleton, Wis. Filed Sept. 4, 1917. Serial No. 189,679. 3 Claims. (Cl. 22—86.)

3. A founder's ladle comprising a bowl formed integrally with a closed subsurface-pouring conduit extending from the lower to the upper part thereof and terminating at its upper end below the rim of the bowl in an outwardly projecting spout, an outwardly projecting

surface-pouring lip on the opposite side, and a depending base flange on the bottom; and a handle arm attached



to the bowl on one side midway between said spout and lip.

1,301,172. SPIKE. CHARLES D. RUSSELL, St. Paul, Minn. Filed Mar. 4, 1918. Serial No. 220,179. 7 Claims. (Cl. 85—21.)



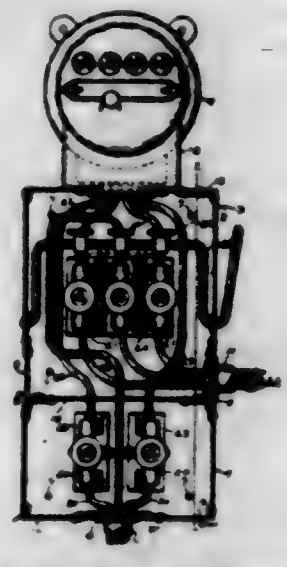
4. In a spike, a shank, a head on one end of said shank, a chisel edge at the opposite end of said shank formed by the convergence of the front and rear surfaces of the shank, said chisel edge being shorter than the width of said shank, longitudinal concave channels in the side surfaces of said shank, said channels extending from each end of said chisel edge to a point adjacent said head, a series of mortises in said front and rear surfaces, said mortises each comprising a quadrilateral depression having parallel side walls and inwardly convergent flat end walls, and webs between said mortises, the outer surfaces of said webs being flush with the outer surfaces of said shank.

1,301,174. SHIP-BED. ABRAHAM RYCKOFF, New York, N. Y. Filed Aug. 27, 1918. Serial No. 251,626. 4 Claims. (Cl. 5—60.)



1. In a bed, the combination with the side and end rails, a leg rail and a head or foot rail, of a corner piece having a socket adapted to receive the side rail, a socket adapted to receive the end rail, a socket adapted to receive the leg rail and a socket adapted to receive the head or foot rail.

1,301,175. ELECTRIC SERVICE AND METER TESTING SYSTEM. JOSEPH SACHS, Hartford, Conn. Filed May 11, 1918. Serial No. 27,360. 13 Claims. (Cl. 247—13.)



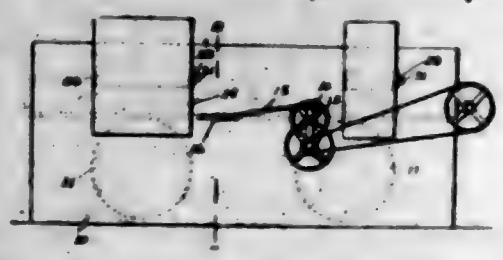
1. In a device of the character described, circuit-controlling means connectible on the service side of an electric meter, circuit-controlling means connectible on the load side of said meter, a box for inaccessible inclosing the service side connectible means, the load side connectible means being accessible, and means coöperatively associated with said service and load side connectible means whereby the meter may be tested through the medium of said service and load side connectible means.

1,301,176. CASKET-HANDLE. EDWARD R. SARGENT, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed June 2, 1917. Serial No. 172,466. 6 Claims. (Cl. 16—108.)



1. In a casket handle or the like, a socket plate having a slot extending therethrough, a slotted bridge piece secured to said socket plate at the rear thereof, and a sheet metal arm extending through the slots of the socket plate and bridge piece and having a turned over retaining lug at the back of the bridge piece.

1,301,177. CONVEYING DEVICE FOR WOOL-DRIERS. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Oct. 27, 1916. Serial No. 128,142. 1 Claim. (Cl. 193—60.)



In a drier for fibrous materials, the combination of a fixed supporting floor for the stock having a series of

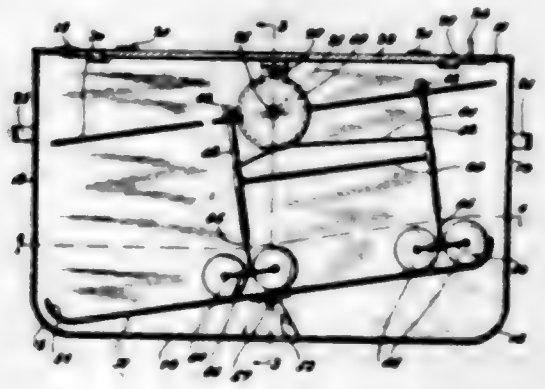
parallel narrow slots therethrough, a pair of reciprocable longitudinal bars, cross bars connecting them to constitute a supporting frame, means for confining the frame to a reciprocating motion in a plane, a series of longitudinal bars carried by the cross bars, each being located under one of said slots, and forwardly inclined teeth fixed on the last mentioned bars and projecting up through said slots throughout the entire operation of the bars to a level above the floor.

1,301,178. HAY-STACKER. GEORGE SCHREIBING, Columbus, Nebr. Filed June 29, 1918. Serial No. 242,597. 2 Claims. (Cl. 104—126.)



1. In a device of the class described, a pair of end supports each comprising top bars, bottom bars slidably assembled with the top bars; means for producing relative longitudinal movement between the top and bottom bars; means for holding the top and bottom bars in adjusted positions with respect to each other; connections uniting the top bars adjacent to their upper ends; hangers carried by the connections; a track mounted on the hangers; a carriage movable along the track; and load supporting means assembled with the carriage.

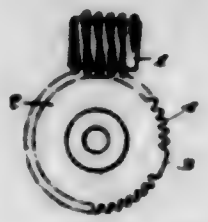
1,301,179. WASHING-MACHINE. CARL SCHULTE, Richmond, Va. Filed Nov. 20, 1918. Serial No. 263,248. 2 Claims. (Cl. 68—22.)



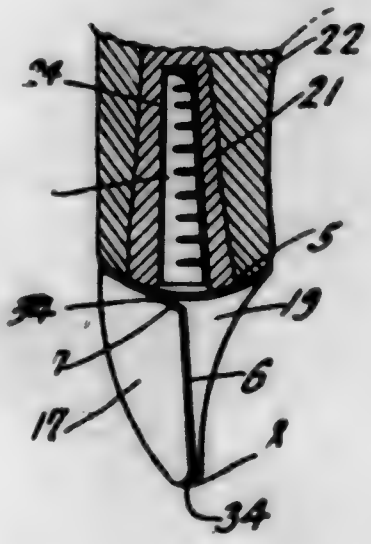
1. In a washing machine, the combination with an imperforate substantially rectangular tank and a cover hingedly engaged therewith, of a perforate plate pivotally mounted in said tank adjacent to the bottom thereof, corrugated rollers arranged in pairs adapted to roll longitudinally of said perforate plate, a frame connecting said rollers, a pair of rails pivotally suspended midway in their length from said cover, wheels guided on said rails, said wheels being connected with said frame, a shaft journaled in bearings below said cover, means for communicating oscillatory motion to said shaft, and means on said shaft for causing said frame to move longitudinally with said tank.

1,301,180. WORM-GEAR-LOCKING DEVICE. LEWIS L. SCOTT, St. Louis, Mo. Filed Nov. 15, 1918. Serial No. 262,655. 1 Claim. (Cl. 74—36.)

A worm, a worm wheel operated by said worm having a portion of its tooth space made solid so that it cannot make a complete revolution, a stop surface attached to the worm or its shaft which will contact with the solid portion of the worm wheel and lock same, when said worm wheel has moved a part of one revolution.



1,301,181. ARTIFICIAL-TOOTH ATTACHMENT. WILLIAM F. SHAW, Pueblo, Colo. Filed Apr. 23, 1918. Serial No. 230,332. 4 Claims. (Cl. 32—8.)



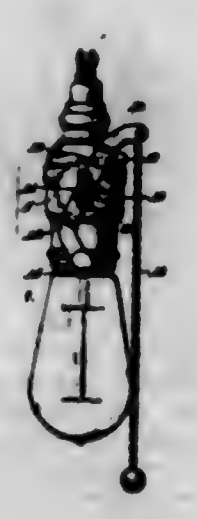
1. As an article of manufacture, a hollow longitudinally split denture-pin made of malleable metal, the pin being provided adjacent its longitudinal edges with external cement receiving recesses.

1,301,182. FLOW-METER. JOHN A. SHORBY, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1916. Serial No. 138,848. 8 Claims. (Cl. 73—31.)



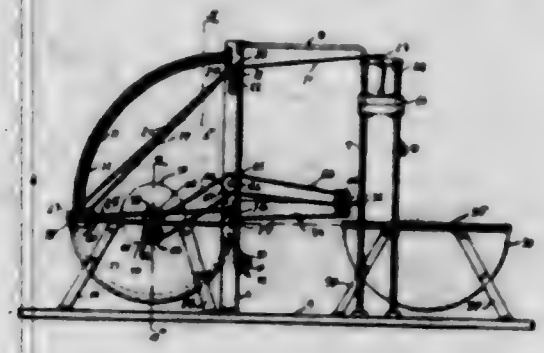
4. In a flow meter, the combination of a support, a base pivoted thereon, said base being adjustable to different angular positions, a U-tube carried by the base, pressure conducting conduits carried by the support, flexible conduits detachably connecting the two legs of the U-tube to said conducting conduits, and means comprising a U-tube connected in parallel with the first named U-tube for short-circuiting the first named U-tube.

1,301,182. ELECTRIC-LIGHT-SWITCH OPERATOR. EDMUND H. SHUTE, Chicago, Ill. Filed Mar. 5, 1918. Serial No. 220,444. 2 Claims. (Cl. 240—122.)



2. The combination with an electric light switch having a rotary stem and provided with a flattened turn button, of a cap embracing said turn button; pins traversing the mouth of said cap and engaging with the inner side of said button for locking said cap to said button; a ratchet fixed to said cap; a pawl arranged for coöperation with said ratchet; an oscillatory lever carrying said pawl and adapted, through gravity, to normally assume a position in which one end thereof will be elevated; and means depending from said end of said lever for actuating the latter, substantially as described.

1,301,184. MACHINE FOR DYEING STOCKINGS OR THE LIKE. FRANK SIKORA, Philadelphia, Pa. Filed Mar. 27, 1918. Serial No. 225,001. 10 Claims. (Cl. 8—19.)



1. In apparatus for dyeing stockings or the like, a relatively stationary tank, a perforated tank adapted for insertion within the stationary tank and pivotally supported near one end to be swung upwardly for assuming an elevated position, and a trough arranged near the pivoted end of the perforated tank to receive the stockings or the like therefrom and adapted to return the liquid to the stationary tank.

1,301,185. TONGS. NIELS CHRISTIAN SORENSEN, Chicago, Ill. Filed Mar. 5, 1918. Serial No. 220,462. 2 Claims. (Cl. 81—2.)

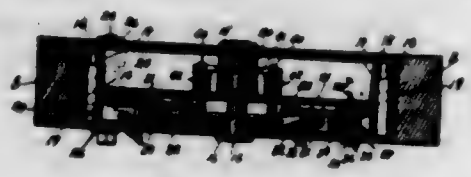
1. In a device of the class described, the combination of a pair of jaws having parallel longitudinally shiftable stems, relative shifting of said stems effecting movement of said jaws toward and from each other; and means for yieldingly holding said jaws in clamping relation with each other, substantially as described.

2. In a device of the class described, the combination of a pair of jaws having parallel longitudinally shiftable stems, relative shifting of said stems effecting movement of said jaws toward and from each other; and a helical compression spring for yieldingly holding said jaws in



clamping relation with each other, substantially as described.

1,301,186. FRICTION COUNTERPOISED WINDLASS-DRUM. THEODORE H. SORLIEN and OLE A. KNUDTSON, Minneapolis, Minn. Filed May 7, 1917. Serial No. 166,814. 2 Claims. (Cl. 254—186.)



1. The combination with a load to be raised, of a drum, means supporting the load from the drum, a revoluble friction plate, means for limiting the rotation of the friction plate to one direction, a friction coupling set under constantly applied frictional engagement with the drum and friction plate, said coupling also being set under such friction that it will not slip under the load but adapted to slip under a certain force in addition to the load and means for positively rotating the drum in either direction.

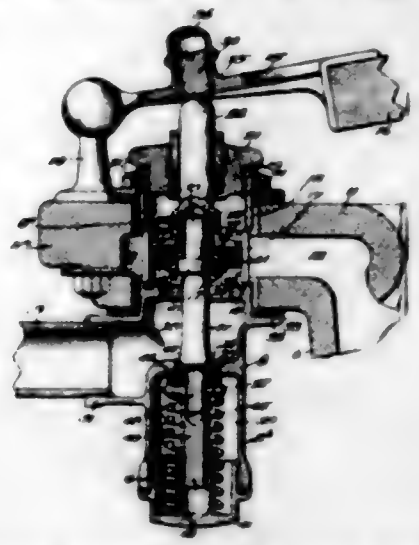
1,301,187. PYROXYLIN COMPOSITION. FIN SPARRE, Wilmington, Del., assignor to E. I. DU PONT DE NEMOURS AND COMPANY, Wilmington, Del., a Corporation of Delaware. Filed Mar. 10, 1917. Serial No. 153,858. 7 Claims. (Cl. 106—37.)

1. A nitro-cellulose composition containing titanium oxid.

1,301,188. FLUSHING DEVICE FOR WATER-CLOSETS. JULIAN E. STARK, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1917. Serial No. 176,966. 5 Claims. (Cl. 4—28.)

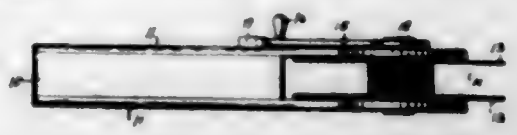
1. The combination of a closet bowl having a shelf provided interiorly with a walled flushing passage and formed therethrough with a vertical straight-way opening intersecting said passage, a flushing valve casing having its outlet portion constructed and arranged in said opening for direct communication with said passage, valvular means for said outlet portion movable in said casing, said means provided with an extension, relatively adjustable

securing means on said casing for securing the casing in the opening and closing the ends of said opening, and



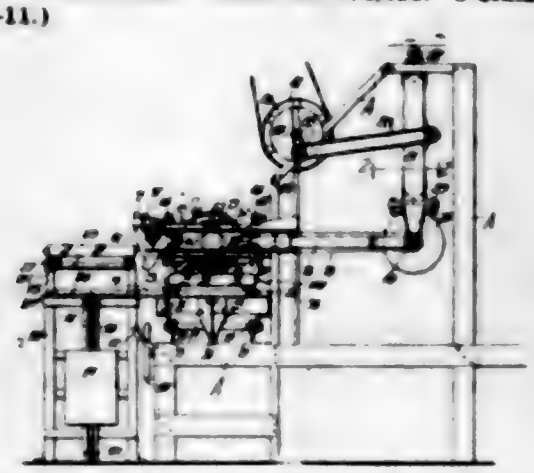
valve actuating means mounted on said shelf whereby to actuate said extension.

1,301,189. REEL. LOUIS M. STERN, Bisbee, Ariz. Filed Nov. 20, 1918. Serial No. 263,346. 3 Claims. (Cl. 242—96.)



3. A device of the character described comprising a handle having strips disposed in each side thereof, a reel shaft passing through the strips and carrying spaced disks, a crank arm attached to one end of the reel shaft, the crank arm having a handle projecting from it and disposed inward of the extremity of the crank arm, and a sliding keeper disposed upon one of the strips and adapted to engage the extremity of the crank arm, the keeper having portions extending down through spaced slots in the strip and then extending laterally between the strip and the handle proper.

1,301,190. FINISHING-MACHINE. BYRON F. STOWELL, Springfield, Mass., assignor to Barney & Berry, Inc., Springfield, Mass., a Corporation of Massachusetts. Filed June 11, 1917. Serial No. 174,135. 8 Claims. (Cl. 51—11.)



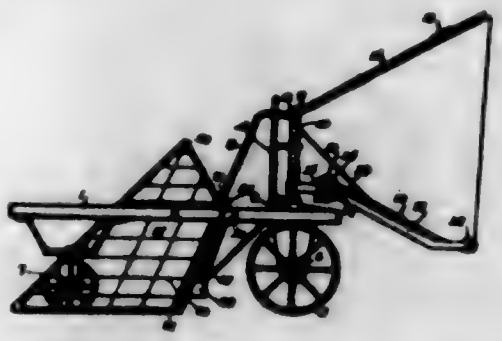
1. A finishing machine, comprising, a support for work to be finished, an arm, a finishing wheel mounted in one end thereof and adapted to engage the work, means pivotally connected with the other end of said arm to reciprocate the latter, and a motor reciprocable with said arm and connected to the wheel to drive the latter, said motor being so located that its weight is distributed equally on opposite sides of the pivotal connection of said arm, whereby its inertia may act to stabilize the reciprocable motion of the arm and wheel without tending to lift the latter from the work.

1,301,191. CLOTHES-PIN. JULIUS G. STRAUSS, Petersburg, Va., assignor, by mesne assignments, to L. H. Pritchett, Petersburg, Va. Filed Dec. 5, 1917. Serial No. 205,579. 1 Claim. (Cl. 24—139.)



A clothes pin, constructed from a single length of spring wire, the intermediate portion of its length being formed into a spring coil, one end portion of the wire beyond said coil and at one side thereof being extended and bent upon itself to form a loop, said loop being laterally bent and positioned in an alinement under the coil, the sides of the loop between the coil and the lateral bent portion being in parallelism, one of said sides being free and unattached throughout its length, whereby it may yield when forcing a wire clothes line between the loop and a spring tongue, and also when forcing a wire clothes line between it and the coil, whereby a wire clothes line may engage the laterally bent loop, the other end part beyond the coil constituting a tongue being bent at an acute angle to the coil and in diagonal relation to and between the sides of the loop, thereby constructing a clothes line receiving space adjacent the coil, the lower part of the tongue and the lower parts of the sides of said loop being curved outwardly, whereby a wire clothes line may cam the tongue and the loop apart, so that the clothes line may engage in the receiving space.

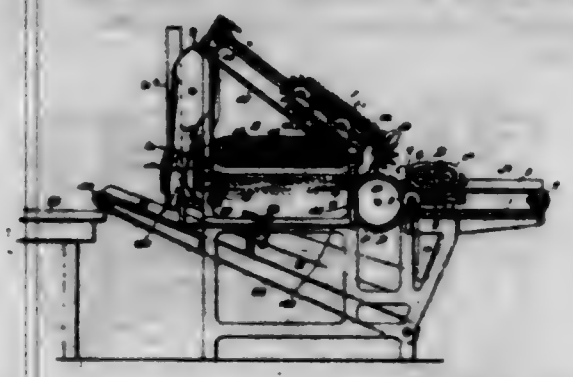
1,301,192. SHEAF-LOADER. HENRY AUBREY STRATTON, Moose Jaw, Saskatchewan, Canada. Filed Apr. 16, 1918. Serial No. 228,949. 2 Claims. (Cl. 214—132.)



1. In a sheaf loader, the combination with a wheeled frame having a lateral extension, of a sweep located to the side of the frame and in advance of the extension and mounted on the extension so that it can be raised vertically and swung laterally and a rest for the sweep in its elevated position.

2. In a sheaf loader, the combination with a wheeled frame having a lateral extension, of a load collecting sweep located to the side of the frame and in advance of the extension and provided on the ground side with forwardly extending gathering forks, a rearwardly extending lever permanently secured to the sweep and passing upwardly and over the extension, an elevated pivot connection securing the lever to the extension and constructed to allow of the raising and lateral swinging of the sweep in the manipulation of the lever and a gate at the rear side of the sweep in the load collecting position and adapted to be withdrawn in the elevated position of the sweep to release the load, means for drawing down the rear end of the lever and a bracket secured to the extension and adapted to act as a rest for the sweep in the elevated position thereof.

1,301,182. TOBACCO-STEMMING MACHINE. CHARLES V. GUECKLARS, Brooklyn, N. Y. Filed Dec. 7, 1905. Serial No. 290,775. 115 Claims. (Cl. 131—57.)



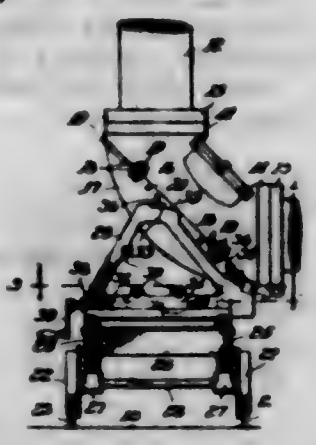
1. In a tobacco stemming machine, the combination with means for supporting a leaf, of a series of flails, and means for moving the flails in an orbital path and along the leaf stem for threshing the butt of the leaf to separate its lamina from its stem.

12. In a tobacco stemming machine, the combination with two coöperating series of forwarding members separated and arranged to form a stem-way, means for driving the members of each series at progressively increasing speeds, an oscillatory member projecting into the delivery end of the stem-way and adapted to be moved by a stem passing through said stem-way, and a pawl and ratchet mechanism connected with and operated by the oscillatory member for stopping the driving means when the oscillatory member is moved by a stem.

54. In a tobacco stemming machine, the combination with a primary forwarding chain, of sprockets over which said chain runs, a series of stem grippers carried by the chain, means for normally holding said grippers in closed position, means coöperating with the sprockets for opening the grippers as they successively pass over the sprockets, a secondary forwarding chain the operating run of which overlaps the operating run of the gripper chain said secondary forwarding chain being provided with clips arranged to automatically seize a leaf stem before it is released by one of the chain grippers and carry it to a point beyond the range of action of the gripper chain.

58. In a tobacco stemming machine, the combination with a leaf stripping rotary member having a plurality of axial peripheral ribs and a spiral diminishing stem-way formed in the ribs, of a reciprocatory knife provided with a plurality of stem receiving notches coöperative with one of said ribs to sever a stem at a point of predetermined thickness only, and cam actuated mechanism for reciprocating the knife at one point only during the rotation of the rotary member.

1,301,194. ASH-CONVEYING SYSTEM. ARTHUR P. SYMONS, Chicago, Ill., assignor to Green Engineering Company, East Chicago, Ind., a Corporation of Illinois. Filed Apr. 6, 1917. Serial No. 160,254. 10 Claims. (Cl. 137—78.)



1. In a conveying system, the combination of a pipe connecting fitting, comprising a body member having a removable wall section adapted to support a wear section for said fitting, and means independent of said pipe section for supporting said wall section when disconnected from said body member and for moving the same into and out of engagement with said body member.

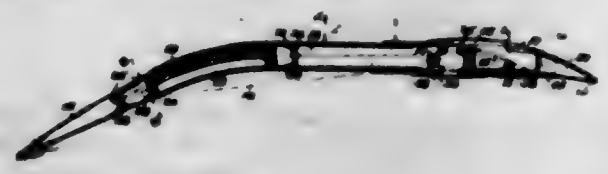
5. In a conveying system, the combination of a pipe connecting fitting, comprising a body member having a wall section detachably connected therewith and adapted to support a wear section for said pipe fitting, a truck movable beneath said detachable wall section, a supporting frame movably mounted on said truck, and means for actuating said frame into supporting engagement with said detachable wall section.

1,301,195. VENTILATOR. JOSEPH SYLVAN, Chicago, Ill. Filed Feb. 24, 1919. Serial No. 278,786. 6 Claims. (Cl. 98—2.)



6. A ventilator for roofs, skylights and the like, comprising an upright, tubular stem and a top rotatively mounted thereon, said top including a head and a hood, the head consisting of a rear wing plate and an upright front plate having a transversely rounded middle part, a rounded top part and outwardly and rearwardly extending side parts, said wing plate defining a downwardly facing mouth which opens into the stem and the side margins of said wing plates together with the side margins of said front plate, defining upright, laterally spaced, rearwardly facing side openings which also open into the stem, said hood providing a channel about said wing plate between said side openings, which conduit has an air inlet mouth above the rounded top part of the head, and a discharge mouth arranged in the plane of the bottom mouth of said head, and a vane fixed to the hood on its vertical, median line.

1,301,196. AEROPLANE. WILLIAM PHILLIPS THOMPSON, Liverpool, England. Filed July 16, 1917. Serial No. 180,924. 18 Claims. (Cl. 244—12.)

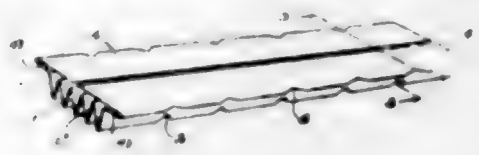


1. A flying machine formed with main girders and curved cross girders and having a variable breadth of wing, in which the wing tail when drawn out is automatically bent down at a less curvature than the curve of the cross girders adjacent thereto and carrying it; but is substantially in line with the rest of the wing and the girders when the wing is contracted, whereby the wings can be greatly extended in width and hold a large amount of air in their concavities in alighting or rising, but can be narrowed and of little resistance in ordinary flight.

1,301,197. CULINARY UTENSIL. FRANCIS W. TULLY, Brookline, Mass. Filed Mar. 29, 1917. Serial No. 158,426. 3 Claims. (Cl. 53—5.)

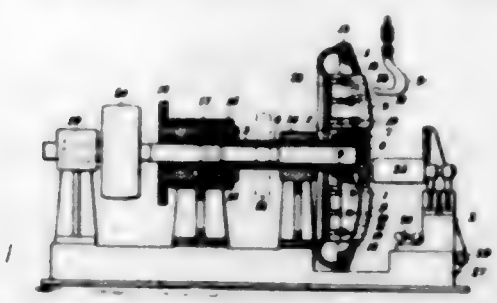
1. A culinary utensil composed of flexible paper-like material adapted to withstand heat at cooking temperatures, the utensil having a corrugated bottom portion pro-

vided with drip openings, and a flat portion having lateral extensions relative to said corrugated portion, as to permit



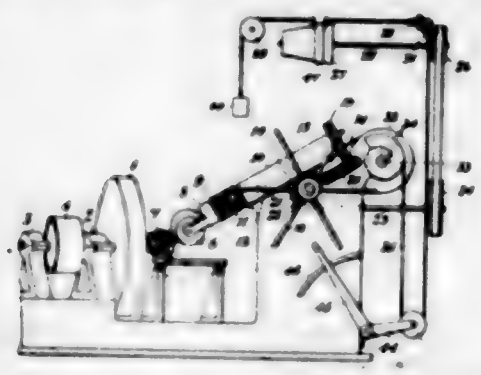
said lateral extensions to be flexed and folded over the corrugated portion and the food on the utensil.

1,301,198. BARK-STRIPPING MACHINE. WILLIAM WARREN, Stockholm, Sweden. Filed Nov. 22, 1918. Serial No. 263,735. 3 Claims. (Cl. 144—208.)



1. In bark stripping machines having a cutter disk and a protecting disk mounted one on the shaft of the machine and the other on a hollow shaft arranged concentrically therewith, the arrangement that the cutter disk and the protecting disk are fastened to their corresponding shafts by means of screw-threads running in opposite directions so that said disks may be removed as a whole by turning said shafts simultaneously in opposite directions.

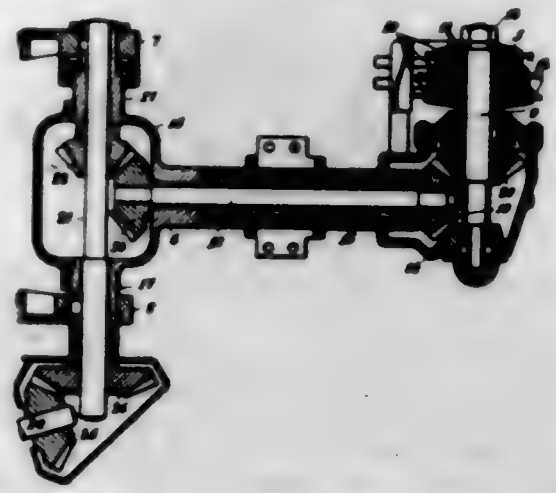
1,301,199. SPEED-CHANGING DEVICE FOR BARK-STRIPPING MACHINES. WILLIAM WARREN, Stockholm, Sweden. Filed Nov. 22, 1918. Serial No. 263,736. 6 Claims. (Cl. 144—208.)



1. In bark stripping machines provided with a feeding device adjustable with regard to trunks of different diameters and in which the trunk is rotated at the same time as it is fed forward lengthwise, the arrangement that the feeding device is connected with means for regulating the rate of feed in such a manner that the peripheral velocity of the trunk is automatically increased according as the diameter of the trunk decreases.

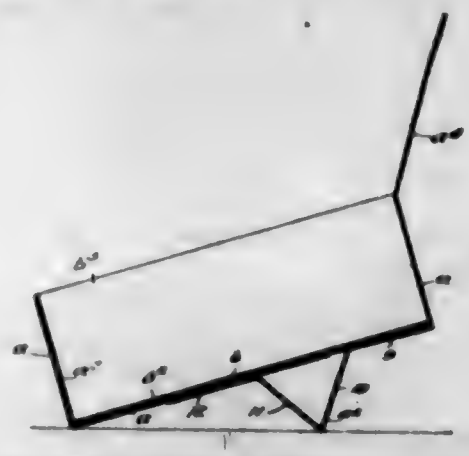
1,301,200. FEEDING DEVICE FOR BARK-STRIPPING MACHINES. WILLIAM WARREN, Stockholm, Sweden. Filed Nov. 22, 1918. Serial No. 263,737. 1 Claim. (Cl. 144—246.)

A feeding device for bark stripping machines and the like which are provided with a rotating feeding roller arranged at an angle relatively to the trunk and by means of which the trunk is rotated at the same time as it is moved lengthwise, characterised by the fact that the shaft of rotation of the feed roller being swingably mounted in bearings on an intermediate shaft arranged at an angle to said shaft of rotation, said intermediate shaft being swingably mounted in a hanging position on a main shaft arranged at an angle to the intermediate shaft, so that the feed roller may be adjusted in different angular positions relatively to the trunk for the purpose of varying the feed by being swung on the intermediate shaft, and



moved toward and away from the trunk by being swung on the main shaft, the feeding roller being arranged overhanging at the outer end of the shaft of rotation and at such a radial distance from the intermediate shaft that it may be raised or lowered by being swung on said shaft.

1,301,201. DISPLAY-BOX. PAUL WALKER, Chicago, Ill., assignor to Chicago Carton Company, Chicago, Ill., a Corporation. Filed Aug. 27, 1917. Serial No. 188,315. 10 Claims. (Cl. 206—44.)



1. A paper box comprising a bottom and side walls and a flap connected to the lower edge of one of said side walls, said flap and the box bottom having interlocking parts arranged to hold said flap either against the lower face of said bottom or with at least a portion of the flap spaced therefrom to form a support for holding the box in inclined position, substantially as described.

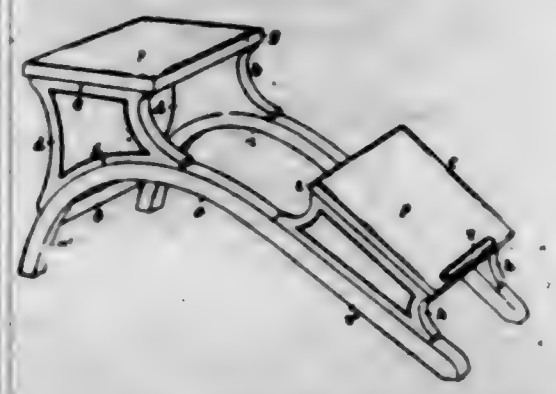
1,301,202. HAND OIL-CUP AND CHAIN PIPE WRENCH COMBINED. WILLIAM J. WALKER, Lacrosse, Wash. Filed June 22, 1918. Serial No. 241,376. 4 Claims. (Cl. 81—64.)



1. A wrench of the character described comprising a tubular handle open at both ends, a collar mounted upon

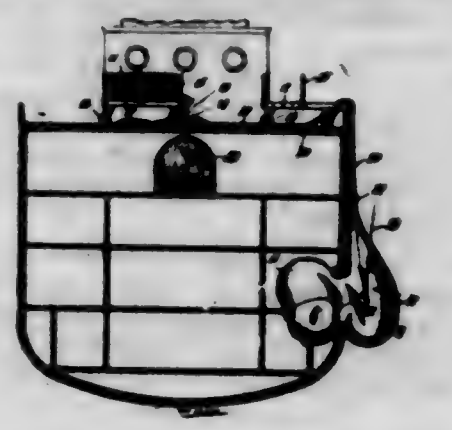
the handle, and a chain attached at one end to the collar and extending entirely through the tubular handle and beyond the free end thereof.

1,301,203. FITTING-STOOL. ALBERT WARNER, Jr., New York, N. Y. Filed Apr. 14, 1916. Serial No. 91,068. 4 Claims. (Cl. 155—22.)



1. An article of manufacture of the class described consisting of a pair of separate parallel arched bentwood basal side members each bent to substantially the form of the curve of a conic section and having one side of its arch arranged at a gradual incline and the other more precipitate, and means rigidly connecting said members including a seat arranged on the high parts and a foot-rest arranged on the gradual-incline parts of their arches.

1,301,204. SHIP'S PATCH. PAUL CHARLES WARNER, New Rochelle, and ROGER WILSON BLODGET, New York, N. Y. Filed Mar. 5, 1918. Serial No. 220,484. 1 Claim. (Cl. 114—227.)



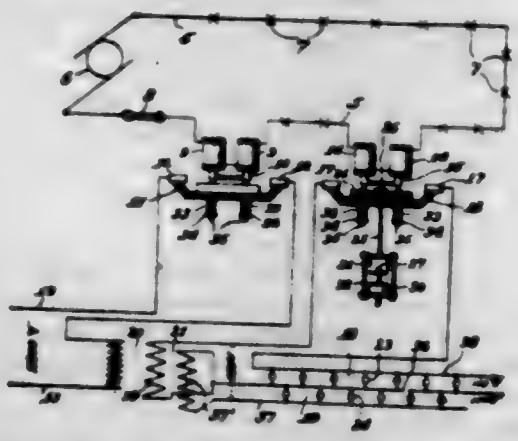
A ship's patch comprising a dedated, inflatable bag-like member, said bag-like member being adapted for introduction to the inside of a ship's hull through an aperture in the wall thereof; means for arresting said member when partially in said hull; and means for inflating said member after the same has been disposed as mentioned, whereby said member is held by said aperture so that said member cannot be ejected from said hull or forced thereinto.

1,301,205. MILK-CAN CLOSURE. SIMON WEISS, Allenton, Wis. Filed Mar. 13, 1916. Serial No. 83,700. 1 Claim. (Cl. 220—58.)



A milk can closure, comprising a cover provided at its edge with a horizontal portion and a vertical flange extending downwardly therefrom to form therewith an internal annular rabbet, a strip of yielding material seated in the rabbet and forming a gasket, an expanding ring of spring metal bearing with pressure against the inner edges of the gasket, a can neck having a rounded upper edge bearing against the gasket between the flange and the ring, and means for drawing the cover and can neck together.

1,301,206. ELECTRIC-LIGHTING SYSTEM. DANA R. WESTCOTT, South Bend, Ind. Filed Mar. 31, 1916. Serial No. 88,125. 5 Claims. (Cl. 171—97.)



1. An electric lighting system, comprising a constant current circuit, a primary circuit, means responsive to the condition of the constant current circuit for controlling the primary circuit, a plurality of lamp circuits arranged to derive power from the primary circuit, and a circuiting means for certain of the lamp circuits responsive for circuiting purposes to alternate energizations only of the constant current circuit.

2. An electric lighting system, comprising a constant current circuit, a primary circuit, means responsive to the energization and deënergization of the constant current circuit for controlling the primary circuit, a plurality of lamp circuits deriving power from the primary circuit, and means whereby certain of the lamp circuits may be deënergized through deënergization of the constant current circuit and maintained deënergized throughout a predetermined number of energizations and deënergizations of the constant current circuit.

3. An electric lighting system, comprising a constant current circuit, a switch for opening and closing said circuit, a plurality of lamp circuits, means directly responsive to each operation of said switch for controlling certain of said lamp circuits, and a circuiting control means for the remaining lamp circuits responsive for circuiting purposes to alternate closing operations only of said switch.

1,301,207. TIRE-PROTECTOR. JOHN L. WHEELER, St. Louis, Mo. Filed Aug. 10, 1917. Serial No. 185,428. 5 Claims. (Cl. 152—18.)



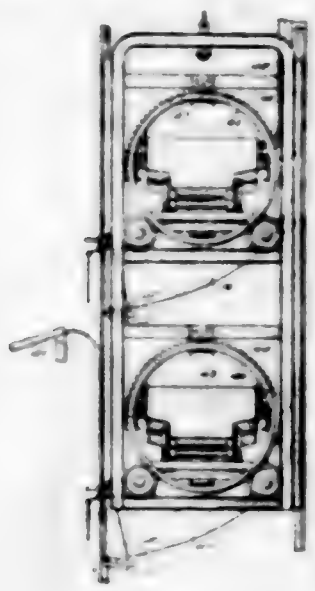
1. An armored lining for pneumatic tire casings, the same comprising a series of unattached, pliable, stave-

like plates arranged edge to edge and disposed transversely of the tire, and a superposed layer of plates of like character and arrangement, the respective plates of the one layer overlapping two adjoining plates of the other layer, each plate of the one layer being apertured between the middle and each margin thereof and each plate of the other layer having protuberances on its contiguous face and coincident with and entering the apertures of the overlapping plates, said protuberances being of smaller dimensions than said apertures, whereby the several plates are capable of limited sliding movement with respect to each other.

2. An armored lining for pneumatic tire casings, the same comprising a series of unattached, pliable, stave-like plates arranged edge to edge and disposed transversely of the tire, and a superposed layer of plates of like character and arrangement, the respective plates of the one layer overlapping two adjoining plates of the other layer, and the end portions of the plates of the one layer being rebent and overlapping the adjacent end portions of the respective plates of the layer with limited endwise clearance, each plate of the one layer being apertured between the middle and each margin thereof, and each plate of the other layer having protuberances on its contiguous face and coincident with and entering the apertures of the overlapping plates, said protuberances being of smaller dimensions than said apertures, whereby the several plates are capable of limited sliding movement with respect to each other.

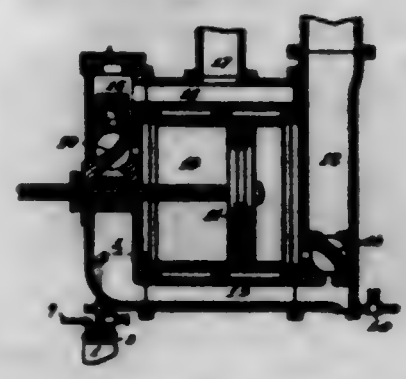
4. A tire protector comprising a multiplicity of pliable metal plates conformable to the inner contour of the tire casing, said plates being assembled the one upon another in a double layer and in staggered relation, the plates of one layer having openings therein and the contiguous faces of the plates of the other layer having protuberances entering said openings, said openings being larger than said protuberances so as to permit limited lengthwise and crosswise sliding movement of the several plates with respect to each other and the elevation of said protuberances being substantially the same as the thickness of the engaging plate.

1,301,208. **CAR HOISTING AND DUMPING APPARATUS.** ALEXANDER H. WOOD, Petros, Tenn., assignor to Wood Equipment Company, a Corporation of Illinois. Filed Sept. 23, 1916. Serial No. 121,809. 3 Claims. (Cl. 214—123.)



1. In a car hoisting and dumping apparatus, a cage adapted to receive a loaded car, a rotating car support within such cage, means for hoisting such cage, means acting through the movement of such cage to rotate such car support and overturn the car, a chute carried by such cage below the rotating car support, and a movable apron connected to such chute.

1,301,209. **DRAINAGE DEVICE FOR VACUUM-PUMPS AND THE LIKE.** EUCLID P. WORTHEN, Montclair, N. J., assignor to Henry R. Worthington, a Corporation of New Jersey. Filed Nov. 20, 1917. Serial No. 204,528. 5 Claims. (Cl. 230—32.)

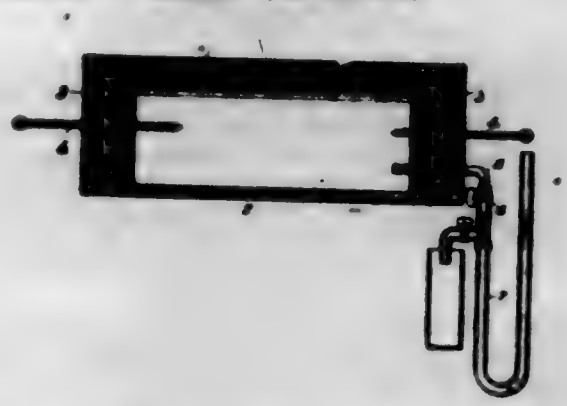


1. In combination with the cylinder a vacuum pump or the like, a drain passage having a pressure operated valve therein opening away from said cylinder, and a second passage connecting the cylinder with the drain passage outside the valve, whereby the suction and discharge pressures of the cylinder are applied alternately outside the valve for withdrawal and discharge of liquid.

3. In combination with a single cylinder two stage vacuum pump, a drain passage connected with the transfer passage of the pump, a pressure-operated valve within said passage and opening away from said transfer passage, and a second passage connecting the second stage end of the cylinder with said first mentioned passage outside said valve, whereby the pressures within said second stage are applied alternately outside said valve for withdrawal and discharge of liquid.

5. The combination with two-stage cylinder 10 and transfer passage 13, of chamber 8 having drain passage 2 connected with transfer passage 13, inlet valve 6 and outlet valve 7, and passage 4 connecting said chamber between the valves with the compression end of cylinder 10, whereby the pressures within said compression end are applied alternately between the valves for withdrawal and discharge of liquid.

1,301,210. **PROCESS OF PREPARING MEDICINAL ARTICLES AND PRODUCTS THEREOF.** HARRY ZUBLIN, Baltimore, Md. Filed Aug. 5, 1914. Serial No. 855,095. 4 Claims. (Cl. 167—7.)



1. The process of imparting additional medicinal properties to medicaments which comprises exposing such a medicament to the influence of high tension electricity passing in proximity thereto until such medicament becomes radioactive.

1,301,211. **FUEL-INJECTING DEVICE FOR COMBUSTION-ENGINES.** GUSTAF ABRAHAMSON, Hillevaag, pr. Stavanger, Norway. Filed Jan. 22, 1918. Serial No. 212,496. 2 Claims. (Cl. 137—17.)

1. The combination with a hollow plug, of a tubular nozzle support rotatably mounted in said plug and bearing against the front end of said plug, a nozzle carried by

the front end of said support and having its bore extending at an angle to the axis of said support, a fuel tube having a shoulder bearing against the rear end of said support and also having an extension which projects into



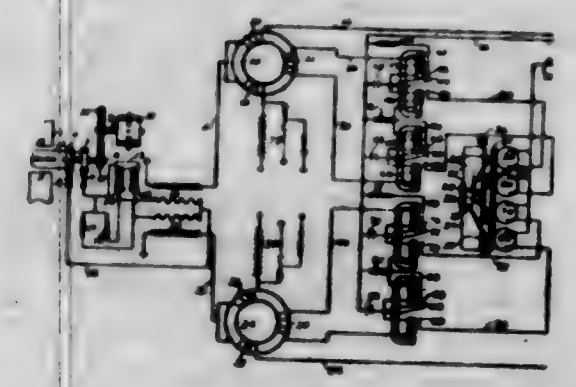
the bore of said support, a cap surrounding said fuel tube, bearing against said shoulder and secured to the rear end of the nozzle support, a collar fixed to said support and bearing against said plug, and a spring arranged between the cap and collar.

1,301,212. AUTOMOBILE SIGNALING DEVICE. GEORGE W. ALBRIGHT, Kansas City, Mo. Filed Mar. 9, 1917. Serial No. 153,753. 1 Claim. (Cl. 175—288.)



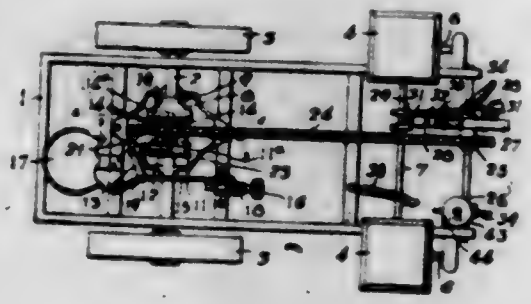
The combination with two contact members comprising each a spring plate having a push button attached thereto, of two pivoted catches arranged to respectively engage and hold said contact members in the closed position, a push button for simultaneously engaging and swinging said catches to positions in which the contact members will be released, and a spring for forcing said last named push button and said catches to a position in which the catches will be adapted to engage with the contact members when the latter are moved to the closed position.

1,301,213. DUPLEX PRINTING-TELEGRAPH SYSTEM. CHARLES G. ASHLEY, Toronto, Ontario, Canada, assignor to General Engineering and Construction Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario, Canada. Filed May 7, 1917. Serial No. 168,802. 4 Claims. (Cl. 178—30.)



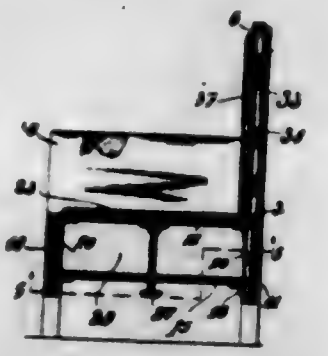
1. In a printing telegraph duplex, a pair of transformers, line conductors connected to earth through the secondaries of said transformers, transmitting apparatus connected to the primary of said transformers, a pair of retardation coils, balancing means for said line conductors, and receiving apparatus inductively linked to said line conductors through said retardation coils.

1,301,214. WIRELESS CORN-PLANTER. ETHEL BAILEY, Jenkins, Mo. Filed Sept. 15, 1917. Serial No. 191,552. 3 Claims. (Cl. 74—92.)



1. In a device of the character described, the combination with a rock shaft formed with a trip arm, of a drive shaft arranged in spaced and parallel relation to the rock shaft, a disk in the drive shaft, a series of radial rods mounted on the disk, trip rollers carried by the rods and means for locking the rods in various angular relations and in either a retracted or projected position, the trip rollers serving to engage the trip arm when locked in a projected position.

1,301,215. COLLAPSIBLE BED. DMYTRO BALYK, Medicine Hat, Alberta, Canada. Filed Aug. 30, 1916. Serial No. 117,617. 1 Claim. (Cl. 5—47.)

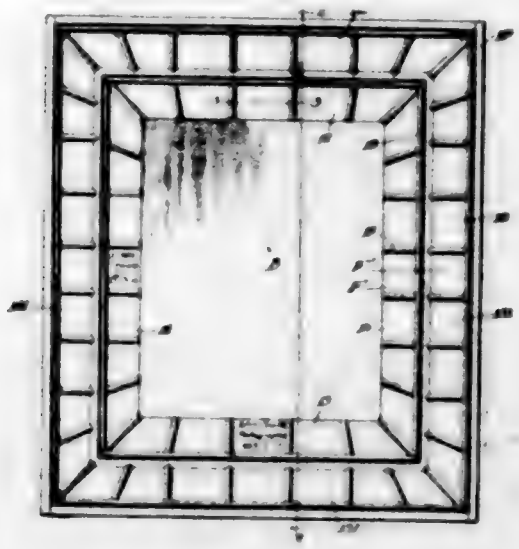


The combination with an open rectangular frame and a rigid recessed back extending vertically thereabove, of adjustable arm rests and a seat disposed over the opening in said frame, a pair of transverse bars affixed in said frame below said seat, set screws engaged with said bars for positively raising and lowering said seat, doors in said frame for allowing a ready access to said screws, guide ways formed in said frame in the front and rear elements thereof, brackets rigidly secured to said seat operable in said guideways, a mattress hinged at its lower edge to the frame adapted to be held in a vertical position or to be lowered over said seat, spring clips for normally holding said mattress vertically against said back, and means for adjusting said arm rests, said arm rests contacting in vertical position with the front side of said mattress near its end edges and when inclined permitting a lowering of the mattress, substantially as described and for the purpose set forth.

1,301,216. ADVERTISING DEVICE. LESTER STEWART RAMM and BENJAMIN STANLEY SIMMONS, Washington, D. C. Filed May 7, 1917. Serial No. 167,010. 2 Claims. (Cl. 40—64.)

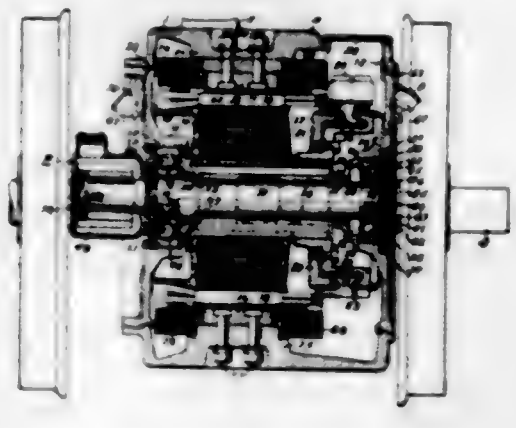
1. An advertising device comprising a bulletin board having on its front a space for bulletins or advertising, a plurality of substantially rectangular frames secured to

the front of said board and each entirely surrounding said space, each of said frames being offset with respect to the next inner frame, the advertisement-carrying surface of said frames being inclined to the plane of said board, and strips extending across and secured to one side of each of said frames to provide separate spaces on the frame for advertising cards or the like, each strip having



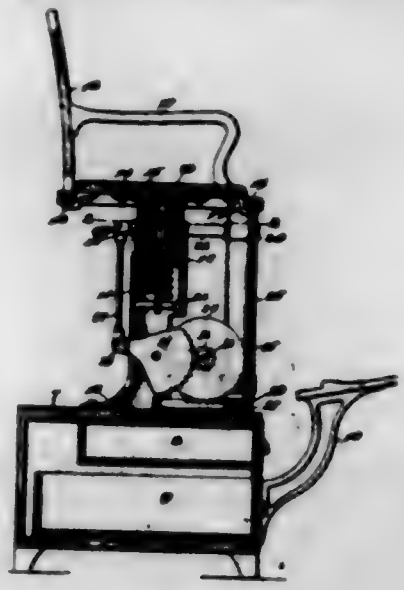
its edges under-cut to receive the edges of the advertising cards to hold them in place.

1,301,217. BALL-BEARING. WALTER J. BAUROTH, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Original application filed Apr. 17, 1913, Serial No. 761,754. Divided and this application filed June 30, 1917. Serial No. 177,905. 1 Claim. (Cl. 105—49.)



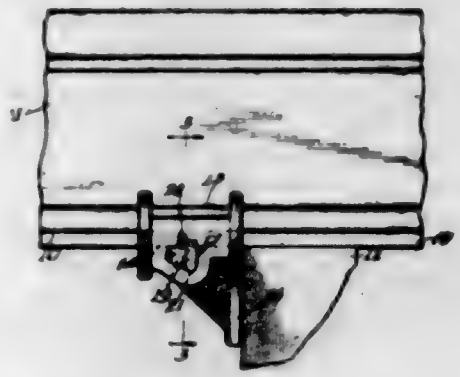
In a railway electric motor mechanism, having a driving axle, two track wheels rigidly connected thereto, power transmission gearing between the track wheels, a motor field frame hinged to the axle and positioned between the track wheels, an armature inclosed within the said frame, and an armature-shaft eccentric to the wheel axis, the combination with said motor frame of heads removably attached to the frame, and having inwardly-extending projections formed with outwardly-opening chambers, ball bearings for said shaft each comprising outer and inner raceways both removable outwardly from the chambers, outwardly-removable ringlike devices removably connected to the heads to retain the ball bearings in position, and means for supplying lubricant through the heads to the bearings, the fastening devices for the bearings being in the transverse planes of the heads and the heads being arranged close to the outermost planes of the frame.

1,301,218. SHOE-SHINING CHAIR. ARTHUR BRADLEY and LEALON BRADLEY, St. Louis, Mo. Filed Nov. 11, 1918. Serial No. 262,077. 3 Claims. (Cl. 185—3.)



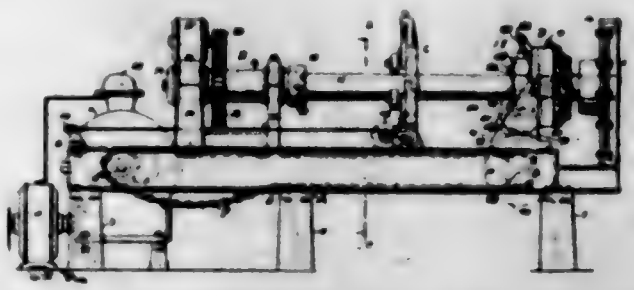
1. A shoe shining chair comprising a chair, a movable seat, a gear mechanism operated from the seat by the weight of the customer, a slug retaining means and a means for removing one of the slugs and depositing it into a depository, substantially as specified.

1,301,219. RAIL-ANCHOR. LAURENCE J. BERKELEY, Racine, Wis., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed July 30, 1918. Serial No. 247,403. 17 Claims. (Cl. 238—4.)



3. In a rail anchor, the combination of a rail engaging member provided with a part adapted to bear against a tie, and formed with a groove, and a revoluble key in said groove adapted to bite into the rail for holding said member in locked engagement with the rail.

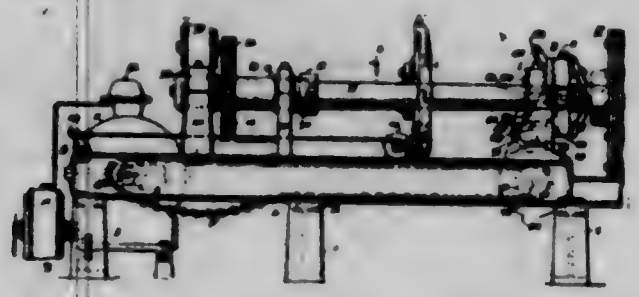
1,301,220. APPARATUS FOR DRAWING RODS AND TUBES OF VARYING DIAMETERS. LOUIS H. BRINKMAN, Glen Ridge, N. J. Filed Aug. 8, 1917. Serial No. 185,005. 17 Claims. (Cl. 90—12.)



1. In apparatus for drawing a tube or rod of varying diameters, the combination with a reducing pass, means for varying the diameter of the pass, means for draw-

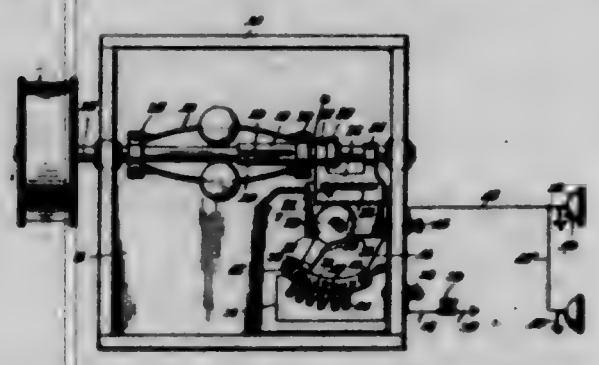
ing the stock through the pass and a common operating means for the reducing means and the said means for drawing the stock through the pass.

1,301,221. METHOD FOR DRAWING RODS AND TUBES OF VARYING DIAMETERS. Louis H. Reinman, Glen Ridge, N. J. Original application filed Aug. 8, 1917, Serial No. 185,005. Divided and this application filed Nov. 14, 1917. Serial No. 201,925. 9 Claims. (Cl. 80—62.)



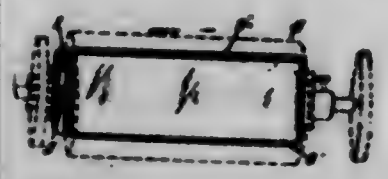
1. The method of forming a metal tube which consists in drawing heated metal through a pass adapted to reduce its diameter and chilling the metal immediately after it has been acted upon by the reducing member of the pass.

1,301,222. SWITCH-GOVERNOR. Adolf M. Bruns, Central Butte, Saskatchewan, Canada. Filed Apr. 12, 1917, Serial No. 161,486. Renewed Nov. 23, 1918. Serial No. 263,934. 1 Claim. (Cl. 171—229.)



In a device of the class described, a shaft, a governor operating thereabout with one end of the governor fixed thereto, a sleeve slidable upon the shaft and adapted to rotate therewith, the free end of the governor being fixed to the sleeve, a plate, a pin thereon, a rheostat, a toothed lever co-acting with the rheostat pivoted on said plate, and a substantially U-shaped member having one leg engaging the shaft and the other leg secured to the sleeve, said member being slotted to engage said pin and provided at its base with teeth co-acting with the toothed lever.

1,301,223. WINDING MECHANISM. Stephen C. Buellingame, Sterling, Conn. Filed Apr. 10, 1918. Serial No. 227,820. 2 Claims. (Cl. 242—61.)

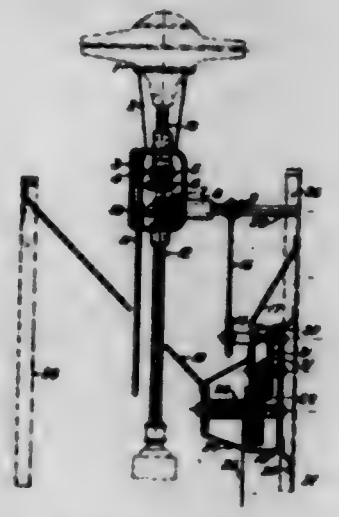


1. In winding mechanism, the combination of a frame of resilient material, and a support for the same over which the frame is stretched to be held thereon by the tension in the frame.

2. In winding mechanism, the combination of a frame of resilient material, a support for the same over which the frame is stretched to be held thereon by the tension in the frame, the frame extending beyond the sides of this support so that together with the material thereon, it may be removed from the support.

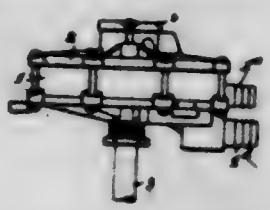
3. In winding mechanism, the combination of a frame of resilient material, a support for the same and flanges on the side over which the frame is stretched to be held thereon by the tension in the frame.

1,301,224. WINCH ATTACHMENT. Effert Edwin Bush, Galveston, Tex. Filed Jan. 15, 1917. Serial No. 142,577. 2 Claims. (Cl. 74—7.)



1. In a device of the kind described, a sectional drive shaft having abutting squared portions, a miter gear slidable on said portions, and in normal position connecting said shaft sections, a transmission shaft at right angles to said drive shaft, a gear thereon, and means for drawing the miter gear into meshed engagement with the transmission shaft gear, the drive shaft sections being disconnected during such gear engagement and automatic means for returning and holding the sliding gear in its normal position.

1,301,225. HYDRAULIC MOTOR. Thomas Cadwallader, Salem, Ohio. Filed May 31, 1918. Serial No. 237,637. 9 Claims. (Cl. 128—1.)

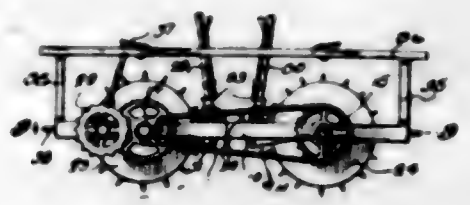


9. A hydraulic motor, comprising a motor casing provided with main inlet and outlet ports and abutments forming valve and piston chambers, an oscillatory piston in said piston chamber adapted to travel between said abutments, said valve chamber having end ports, an oscillatory main valve in said valve chamber provided with an undercut pocket communicating at all times with said main outlet port and alternately throwing the latter into and out of communication with said end ports, and a pilot valve mechanically controlled by said piston for operating said main valve and piston in coöperative relation to each other.

1,301,226. HARROW. Ulysses G. Cady, Durkee, Oreg., assignor of one-half to Edwin B. Graves, Durkee, Oreg. Filed July 16, 1918. Serial No. 245,167. 1 Claim. (Cl. 55—78.)

A harrow comprising a frame, shafts rotatably mounted in one side of said frame, toothed cylinders having corresponding trunnions connected to respective shafts by a universal joint, the other trunnions of said cylinders

being slidably engaged in slots respectively formed in the adjacent side member of the frame, levers pivoted

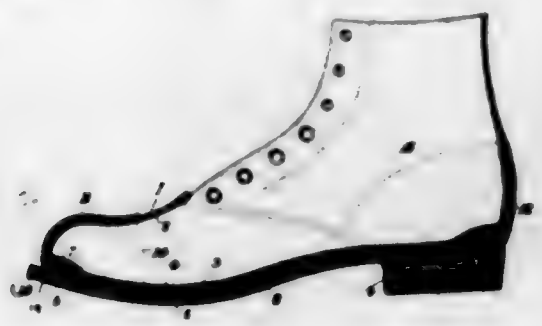


to the last named side of said frame, links connecting said levers to the adjacent trunnions of said cylinders, and means for locking said levers in an adjusted position.

1,301,227. VARIABLE RESISTANCE. THEODORE W. CASE, Scipio, N. Y. Filed Oct. 9, 1917. Serial No. 195,653. 4 Claims. (Cl. 219—76.)

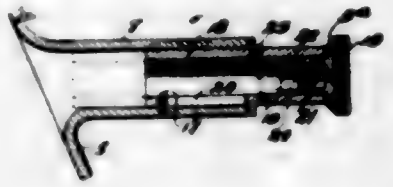
3. A resistance element formed of a material comprising a compound of thallium and sulfur.

1,301,228. SHOE. MYRON H. CLARK, Hastings-upon-Hudson, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company, a Corporation of Connecticut. Filed Jan. 6, 1915. Serial No. 753. 2 Claims. (Cl. 36—9.)



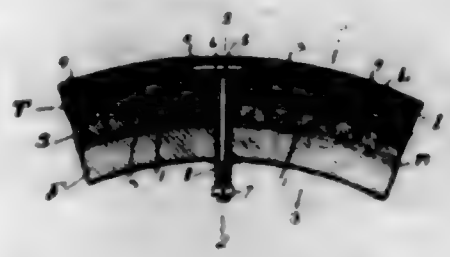
1. In a cloth top shoe, an upper having its lower portion comprised of inner and outer plies of fabric, the inner ply serving as a lining and the outer ply as an outer wearing surface, and a sole having upper supporting extensions at the toe and heel portions respectively extending part way around the sole, to form a box toe and counter respectively, said extensions being disposed between and in direct contact with the plies and vulcanized to the sole to form a unitary whole.

1,301,229. SANITARY VALVE FOR FLUID-DISPENSING APPARATUS. CLARENCE A. COKER, Cordova, Ala. Filed Sept. 3, 1918. Serial No. 252,825. 7 Claims. (Cl. 225—35.)



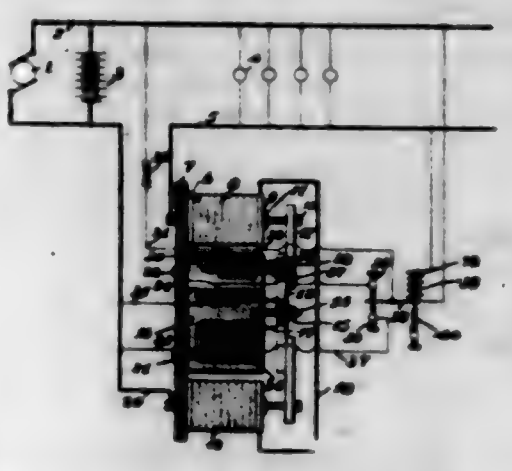
1. In a fluid dispensing apparatus, the combination with a delivery spout and plunger feed means to force fluid to be dispensed therethrough, of a plug having a hollow body which fits with a close sliding fit into the spout and has a spout closing head at its outer end, there being an intermediate discharge opening in said plug body, means in the plug to automatically close said discharge opening at the completion of the plunger's fluid expelling stroke to permit the suction stroke of the plunger to automatically retract the plug thereinto.

1,301,230. TIRE. JAMES H. COURTS, Snyder, Okla. Filed Nov. 2, 1918. Serial No. 260,804. 3 Claims. (Cl. 152—1.)



3. In combination with a rim, a tire of yielding material disposed circumferentially of the rim, a plurality of shanks having their inner end portions arranged within the tire, the outer portions of the shanks being loosely directed through the rim, and means for constantly urging the shanks inwardly of the rim.

1,301,231. ELECTRIC REGULATION. JOHN L. CHEVALIER, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed July 21, 1911. Serial No. 639,743. Renewed Sept. 19, 1918. Serial No. 254,805. 4 Claims. (Cl. 171—229.)



1. A circuit comprising a regulator; means associated with said circuit for actuating the regulator; a varying device connected with said means; means for actuating the regulator in opposition to the first named means; a controlling element in said circuit; and connections associated with said varying device and said second mentioned means for enabling the effect of said varying device to be nullified and second mentioned means to be energized.

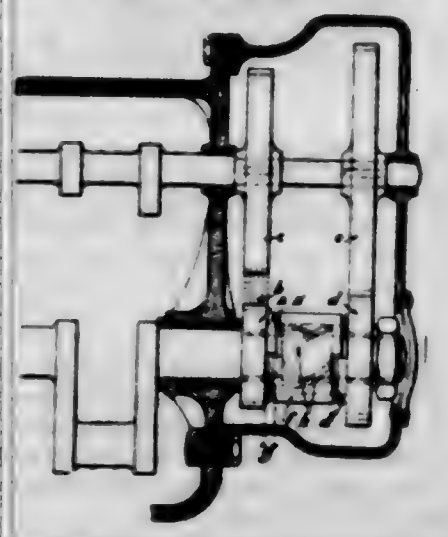
2. An electric circuit comprising a regulator; a coil associated with said circuit for operating the regulator; a variable resistance in series with said coil; and a second coil in multiple relation with the first coil and adapted to oppose the effect thereof; a voltage responsive element in said circuit; and connections controlled by said element for nullifying the effect of said resistance; and connecting said second coil to the circuit to be energized according to conditions in said circuit.

3. A circuit comprising a regulator; a coil associated with said circuit; an armature adapted to be attracted by said coil for actuating the regulator; a variable resistance connected with said coil; means carried by said armature for affecting said resistance; a voltage responsive element connected to said circuit; and connections controlled thereby for nullifying the effect of said variable resistance.

4. A circuit comprising a regulator; a coil connected across said circuit for actuating the regulator; a variable resistance in series with said coil; a second coil in multiple relation with the first coil for opposing the effect of the same; a short-circuit for said resistance; a switch adapted to be operated to close said short-circuit when

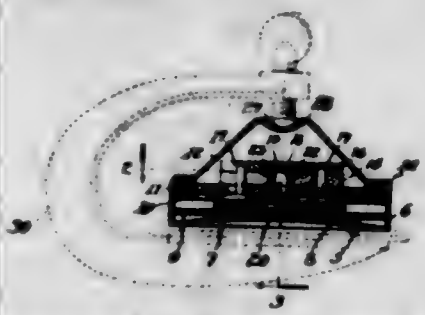
moved in one direction, and to close the circuit of the other coil when moved in the other direction, and a voltage responsive element for actuating the switch.

1,301,232. INTERNAL-COMBUSTION ENGINE. HENRY DURAUDS, Paris, France. Filed Feb. 10, 1919. Serial No. 276,057. 6 Claims. (Cl. 123—41.)



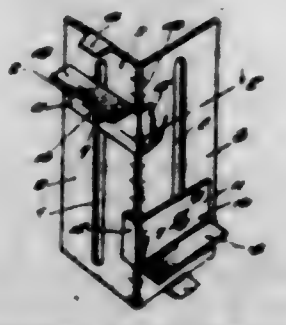
1. In an explosive engine, the combination with a crank shaft, of a cam shaft, spaced pinions mounted loosely on the crank shaft, means for locking either of said pinions to its shaft, a pinion fixed on the cam shaft and meshing with one of the pinions on the crank shaft, a second pinion fixed on the cam shaft, and a flexible driving connection between said last mentioned pinion and the other pinion on the crank shaft.

1,301,233. ELECTRIC VULCANIZER. OLIVER C. DENNIS, Wilmette, Ill. Filed Mar. 6, 1917. Serial No. 152,478. 9 Claims. (Cl. 219—19.)



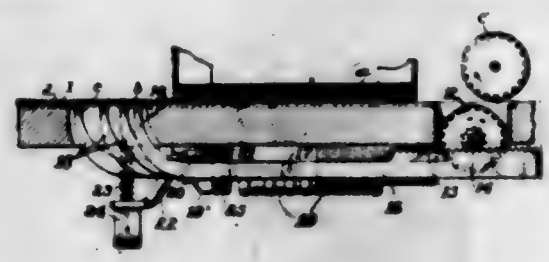
1. In an electric vulcanizer, the combination of a body, a resistance element, insulation and a metallic disk, said element, insulation and disk being disposed in superposed relation and clamped in the body to secure the element, insulation and body against relative displacement, an insulating clamp centrally disposed on said disk to which the terminal of the resistance element is connected, and conductors leading to said clamp.

1,301,234. GAGE. WILLIAM DEUBING, Cleveland, Ohio. Filed June 17, 1918. Serial No. 240,465. 6 Claims. (Cl. 33—44.)



1. A gage comprising a body formed of sheet metal bent to form a pair of right angularly disposed sections and to form scribing edges at right angles to the body sections, and abutment members adjustably carried by said body sections.

1,301,235. PRINTING APPARATUS WITH ADDING MECHANISM. FREDERICK C. DOLCATER, Washington, D. C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1915. Serial No. 14,539. Renewed May 6, 1919. Serial No. 281,071. 13 Claims. (Cl. 235—61.)



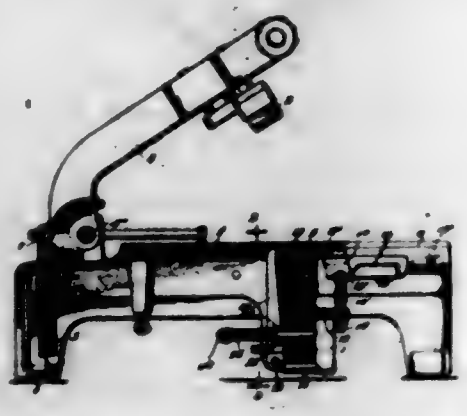
1. In combination in a printing machine, impression means, a series of printing plates, a hopper for the plates, a plate feeder for moving the plates step by step from the hopper to and past the impression means, said printing plates having value selecting means thereon, and item mechanism engaged by the selecting means and operated by one of the step by step movements of the printing plate, substantially as described.

1,301,236. LATHE-TOOL. GEORGE WILLIAM DOVER, Cranston, R. I., assignor to George W. Dover, Incorporated, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 31, 1918. Serial No. 260,577. 6 Claims. (Cl. 29—100.)



1. A lathe tool comprising a holding member, stop shoulders on the holding member, a pivoted member pivotally secured to one end of the holding member, and forming a continuation of the holding member, stop shoulders on the pivoted member, means for pivotally securing the pivoted member to the holding member, and a cutting member on the pivoted member and having outstanding ends formed into cutting points.

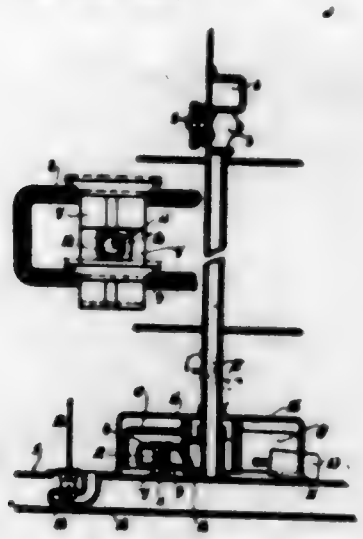
1,301,237. HAND ADDRESSING-MACHINE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 19, 1914. Serial No. 872,922. 7 Claims. (Cl. 101—66.)



1. In a machine of the character described, the combination of a base having a recess extending from print-

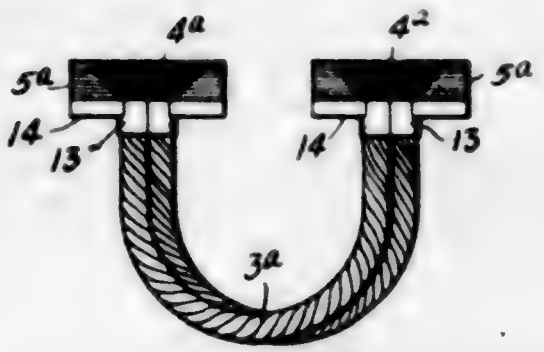
ing position through its front edge, an impression bed in printing position on said base, tracks extending from the bed outwardly adjacent said recess to support a printing device while being arranged in the machine upon said bed for the printing operation, means for ejecting the printing device from its position upon said bed, and manually controllable means in said recess to retain the printing device in printing position upon said bed.

1,301,238. SHIP. CHARLES V. A. ELSY, Birmingham, England. Filed Apr. 23, 1918. Serial No. 230,292. 12 Claims. (Cl. 114—68.)



1. In a ship the combination of a plurality of bulk-heads dividing the ship into a plurality of water-tight compartments; water pumps mounted adjacent each of said bulk-heads; conduits adjacent the bulk-heads and serving to discharge the water; valves in each of the two compartments adjacent said bulk-heads and serving to connect each of said compartments to said conduit; and floats in said compartments connected to each of said valves and adapted to automatically open them when the float rises for the purpose specified.

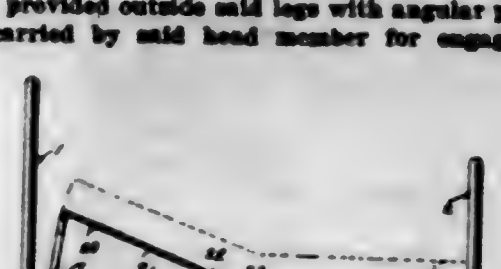
1,301,239. RAIL-BOND. HAROLD H. FERREY, Newark, N. J., assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 7, 1917. Serial No. 184,879. 14 Claims. (Cl. 173—278.)



1. A rail bond comprising a conductor and terminals on the ends thereof, said terminals having a transverse slot in one face thereof in which said ends are seated to mechanically secure the terminals on the conductor and enable each conductor end, its attached terminal, and a rail, to be united, each to the other, with the aid of heat in applying the rail bonds to the rails.

1,301,240. BEDSTEAD. WILLIAM A. FECKLEY, Delta, Iowa. Filed Oct. 23, 1918. Serial No. 259,307. 8 Claims. (Cl. 5—43.)

3. The combination with a bed stead having a head member provided with hollow legs slotted longitudinally on their inner faces, rack bars mounted to reciprocate longitudinally in said legs, a rod rotatable in said head member with its ends extending into the legs thereof and equipped with pinions meshing with said rack bars, said rod being provided outside said legs with angular portions, catches carried by said head member for engaging the

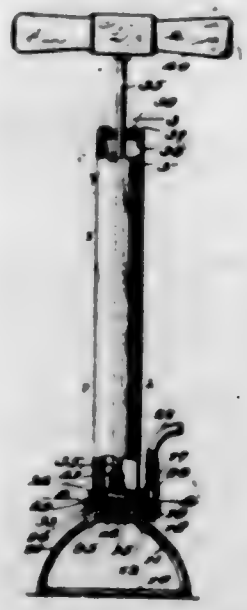


angular portions of the rod whereby it is locked against rotary movement, a head rest pivotally connected with said bed stead at points spaced from the head member thereof, and links carried by said head rest and detachably engaged with said rack bars, said links extending through the slots in said legs.

1,301,241. METHOD FOR REMOVING BULGES AND SWELLS FROM CANS AND TESTING THE SAME FOR LEAKS. CHARLES E. FENLON, Grays Lake, Ill. Filed Nov. 1, 1917. Serial No. 199,802. 5 Claims. (Cl. 73—51.)

1. A method of treating cans after sterilization consisting in subjecting them to air pressure in excess of the pressure within the cans, created by the sterilization, while the cans are still within the steriliser.

1,301,242. TIRE-PUMP. JESSE T. FINES, Fresno, Calif., assignor to Lisenby Mfg. Co., Fresno, Calif. Filed Apr. 2, 1918. Serial No. 226,238. 6 Claims. (Cl. 230—27.)



1. A pneumatic tire pump including a pump base recessed to provide a valve chamber and provided with a valve socket opening into the said chamber, a valve seat formed at the juncture of the socket with the chamber, the base being provided with an intake passage opening through a wall of said socket and with a discharge passage leading from the valve chamber, an intake valve including a stem slidably fitted in said socket, and a valve disk carried by the stem for movement within the valve chamber to coöperate with the said seat for controlling communication between the said passages, a guard plate for the valve overlying the valve chamber above the valve, a pump cylinder connected to the base, and a piston mounted to reciprocate within the said cylinder.

1,301,243. WATER-METER CONNECTION. EDWIN H. FORD, Wabash, Ind., assignor to Ford Meter Box Company, Wabash, Ind., a Corporation. Filed Nov. 20, 1918. Serial No. 263,256. 4 Claims. (Cl. 285—12.)



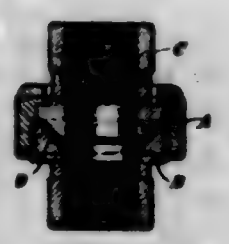
1. A water-meter coupling comprising a hollow sleeve for connecting the adjacent end of a service pipe, a cylinder extending through the hollow portion of said sleeve and having independent longitudinal and rotational travel therein, means for moving said cylinder longitudinally, a meter-spud connecting-means carried on and having both longitudinal and rotational travel of said cylinder, and means carried by said meter-spud connecting-means for temporarily engaging and for rotating said cylinder in unison with said connecting-means when the latter is moved longitudinally to effect such engagement.

1,301,244. ADJUSTABLE PIPE-COUPLING. EDWIN H. FORD, Wabash, Ind., assignor to Ford Meter Box Company, Wabash, Ind., a Corporation. Filed Nov. 20, 1918. Serial No. 263,257. 3 Claims. (Cl. 285—12.)



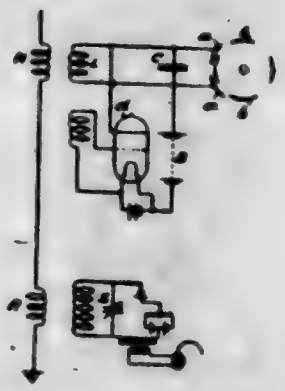
3. A device of the character described comprising a tube for connecting the end of a service pipe, threads on the external surface of said tube, a cylinder surrounding said tube and having a notch in its outer surface, threads arranged on the internal wall of the cylinder and operatively engaging the threads on the tube for moving said cylinder longitudinally when rotated, a sleeve arranged around said cylinder and having longitudinal and rotational travel independently of said cylinder, and a pin carried by said sleeve and adapted to engage the notch in the cylinder for simultaneously rotating said sleeve and cylinder at the will of the operator.

1,301,245. PIPE-COUPLING. GORDON FOX, Evanston, Ill., assignor to Anson Mark and Clayton Mark, Copartners doing business as Mark Manufacturing Company, Chicago, Ill. Filed Apr. 9, 1915. Serial No. 20,108. 2 Claims. (Cl. 285—120.)



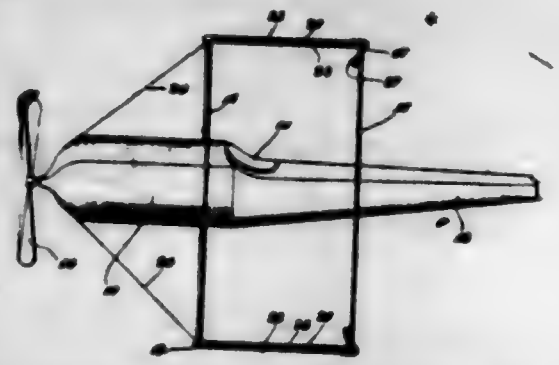
2. A pipe coupling composed of ferrous metal, consisting of a spud, a tail piece, a coupling nut, and a non-corrodible washer element permanently united by welding to one of the meeting faces of the coupling and being adapted to prevent corrosion between said faces, said washer being of sufficient thickness or body to adapt it to yield to such a degree as to compensate for irregularities of contact in the faces of opposing surfaces.

1,301,246. RECEIVER FOR WIRELESS SIGNALS. CHARLES SAMUEL FRANKLIN, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Feb. 26, 1919. Serial No. 279,396. 6 Claims. (Cl. 250—8.)



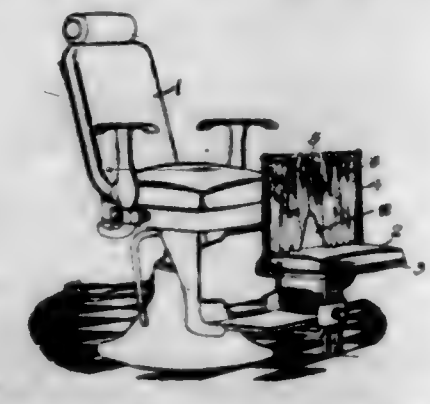
1. In an interference receiving apparatus for wireless signals, a circuit containing a generator of local oscillations, and means whereby the frequency of said local oscillations is caused to vary regularly and in a continuous manner.

1,301,247. SAFETY-DEVICE FOR FLYING-MACHINES. FRANK FUCIEL, Hamtramck, Mich. Filed Feb. 7, 1919. Serial No. 275,488. 3 Claims. (Cl. 244—21.)



1. In a safety attachment for flying machines, the combination with a rectangular frame engaged with the body of the machine, transverse plates secured to said frame above and below the body, leaf elements hingedly engaged with said transverse plates, means for normally holding said leaf elements closely confined to said plates, and means for releasing said leaf elements whereby they may be operatively extended, said releasing means becoming operative upon the failure of the motor of said machine.

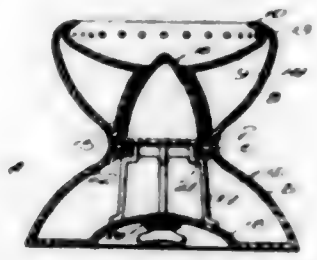
1,301,248. CHIROPODIST'S CABINET AND SCREEN. KARL E. FULLER, Detroit, Mich. Filed June 26, 1916. Serial No. 106,379. 1 Claim. (Cl. 155—9.)



The combination of a chiropodist's foot rest, uprights having the lower ends thereof connected to the ends of said foot rest contiguous to the rear edge of said rest, a

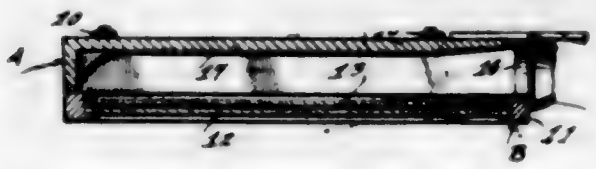
roll connecting said uprights, and a curtain adjustable on said rod having a slit intermediate the side edges thereof and at the lower edge thereof and through which a foot may be inserted, said slit being inverted V shape and approximately half the depth of said curtain.

1,301,249. CUSPIDOR. JOHN J. GOUGH and HUDSON H. STROW, Benton, Ky. Filed Feb. 6, 1919. Serial No. 275,334. 3 Claims. (Cl. 4—38.)



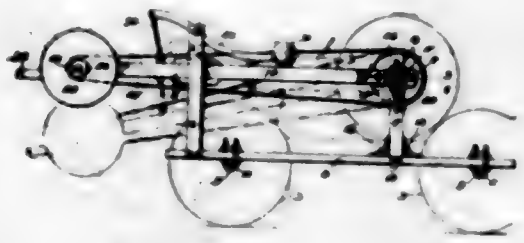
1. A cuspidor including a body portion, a mouth portion connected therewith, a dished flange carried by the mouth portion, a partition connected with the flange and extending into the hollow body portion and provided with openings adjacent its lower edge, said flange being provided with openings adjacent the upper edge of the mouth portion, and a valve adapted to seat in said partition to prevent leakage of the contents of the body when inverted.

1,301,250. LICENSE-NUMBER-DISPLAY DEVICE. CHARLES H. GRANBERG, Dover, N. J. Filed Apr. 16, 1915. Serial No. 21,721. 2 Claims. (Cl. 40—131.)



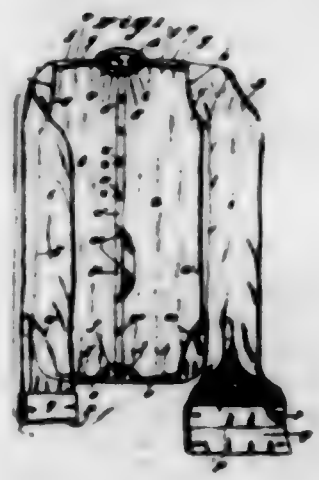
1. A license number display device comprising a box-like casing open at its front and having a flared open end, a frame fitted on the open front and having transparent and translucent symbol sections carried thereby, a reflector removably fitted within the casing and having a flared portion engaging the flared open end of said casing and extractable through said open end, a bracket carried by the casing at the open end, and a lamp detachably fitted on the bracket and having a front flared and abutting the flared open end of the casing to hold the reflector within said casing, said lamp being arranged to direct its light into the casing through the open end of the latter and between the reflector and the front portion of the casing.

1,301,251. SAWMILL. CLARENCE L. GRAVES, Eland, Wis. Filed Oct. 11, 1917. Serial No. 196,926. 1 Claim. (Cl. 143—46.)



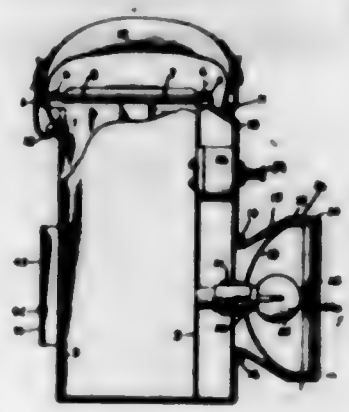
In a device of the class described, a longitudinally slotted beam, a clamping collar adjustably mounted upon said beam, a pivot bolt journaled in said collar and passed through the slot of the beam, and a boom mounted on the pivot bolt.

1,301,252. SHIRT. BLUMA GROSS, Jersey City, N. J. Filed Oct. 1, 1918. Serial No. 256,425. 1 Claim. (Cl. 2—41.)



A shirt including shirt sections characterized in that the latter are prepared for end-for-end reversal and attachment of their bottom ends to the other parts of the shirt at the top thereof.

1,301,253. PORTABLE ELECTRIC LANTERN. WILLIAM GRETHER, Dayton, Ohio. Filed July 9, 1917. Serial No. 179,334. 2 Claims. (Cl. 240—8.5.)

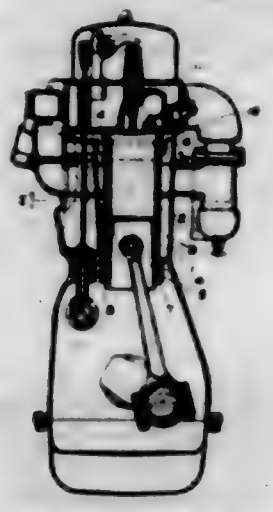


1. A portable electric lantern comprising a main casing, a reflector casing projecting therefrom, a lamp within the latter, a lens holder, a lens within said holder, inner bosses secured to the reflector casing, outer bosses secured to the lens holder, the outer bosses seated on the inner bosses, and screws passed through the outer bosses into the inner bosses to clamp the lens holder to the reflector casing.

1,301,254. INTERNAL-COMBUSTION ENGINE. EARL G. GUNN and ADOLPH L. NELSON, Indianapolis, Ind., assignors to Premier Motor Corporation, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 10, 1917. Serial No. 153,980. 8 Claims. (Cl. 123—173.)

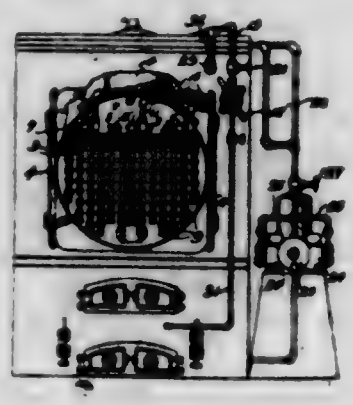
1. An internal combustion engine having a body and an insertible and removable cylinder sleeve separate from the body, said sleeve and body having two joint closing faces only, said faces lying in horizontal planes adjacent the outer and inner ends of the cylinder, the outer faces having metallic contact only, the outer end surfaces of the cylinder being flush with the adjoining surface of the body when the sleeve is seated, and a flexible packing gasket interposed between the inner faces of the sleeve and body, the vertical length of said sleeve between its said horizontal closing faces being less than the vertical distance between the corresponding faces of the body and proportioned to the compressibility of the gasket so that

when the cylinder sleeve is seated upon the upper face of the body the gasket will be compressed by the pressure



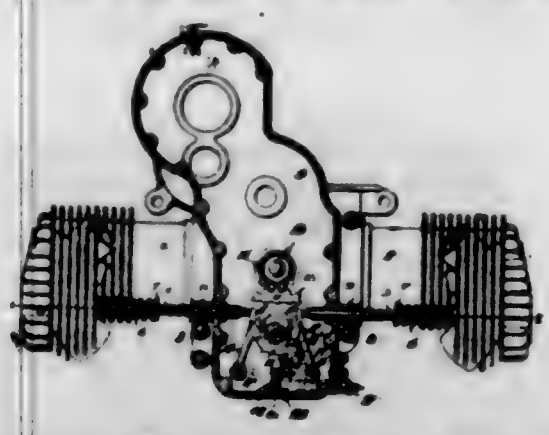
of the lower end but below the limit of compressibility of said gasket.

1,301,255. FIRE-TUBE-BOILER BLOWER. EDWARD C. HAFER, Chambersburg, Pa. Filed Jan. 6, 1917. Serial No. 140,965. 5 Claims. (Cl. 122—391.)



1. In a fire tube boiler blower, the combination of a plurality of headers, a bracket for each header arranged at the front end of the boiler and adapted to support the headers therein when in operative position, discharge tubes carried by the headers, supply pipes hinged to the headers to permit independent movement thereof into and out of the brackets, and means for securing the headers in the brackets.

1,301,256. COMPRESSION-RELIEVING MECHANISM. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Filed Sept. 19, 1917. Serial No. 192,116. 2 Claims. (Cl. 123—182.)



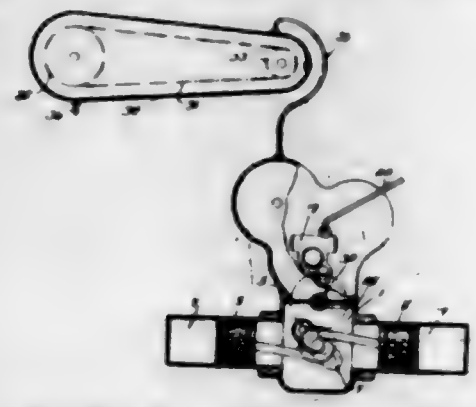
1. The combination with an engine cylinder, an exhaust valve therefor, and a lever for operating said valve, of means for actuating said lever including a shaft, a cam plate rotatable on said shaft and having a cam face for engaging said lever, a finger extending from the plate, a rock shaft, a pawl connected with said rock shaft for cooperation with said finger, said pawl having a pair of operating faces, means connected with said rock shaft for rocking the same to selectively engage either of the faces of the pawl with the finger, an intermediately pivoted spring having one end engaging said finger to hold the latter normally in engagement with one of the faces of said pawl, the finger being moved against the tension of said spring to engage the other pawl face therewith, and a stop adjacent the other end of the spring for engagement therewith, whereby to properly tension said spring.

1,301,257. SIDE-CAR BODY AND METHOD OF PACKING THE SAME. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Filed Sept. 13, 1918. Serial No. 253,893. 4 Claims. (Cl. 21—7.)



2. A side car of the class described comprising a body having an entirely open top, a detachable cowl for the forward end of the body, said cowl having a pin projecting rearwardly from each side edge, and a socket formed on each side of the body to receive one of said pins.

1,301,258. MOTOR-CYCLE-LUBRICATION SYSTEM. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Filed Sept. 13, 1918. Serial No. 253,893. 12 Claims. (Cl. 184—6.)



11. In a motorcycle lubricating system, a driven wheel, a motor including a crank case, a cylinder, a piston therefor, and a crank in the case, a driving connection between said wheel and the crank, an oil supply chamber disposed externally of the case, a pair of spaced ducts connecting the crank case and supply chamber, one of said ducts being alternately opened and closed, oil being alternately sucked from the supply chamber to the crank case and forced from the latter to the former by the movement of the piston and thereby atomized, means for intermittently directing atomized fluid onto said driving connection from the motor, and means for synchronizing the opening and closing of the last mentioned duct with the movement of said piston.

1,301,259. INTERLOCKING REINFORCING BAR FOR CONCRETE CONSTRUCTION. MORRIS C. HARRIS, San Jose, Calif. Filed May 3, 1917. Serial No. 166,152. 3 Claims. (Cl. 72—110.)

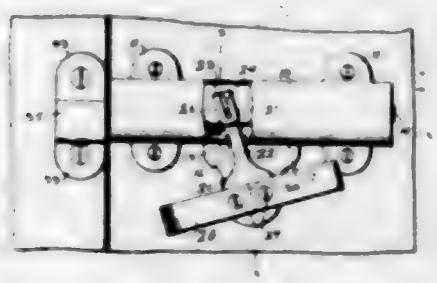
1. In interlacing and interlocking bars for reinforced concrete construction a plurality of metal bars, each of said plurality of bars having a plurality of uniform prolongations or projections from the perpendicular from

right to left and left to right by uniform bends or angles, adapted to form openings or pockets for holding and sustaining a plurality of transverse bars in place and position; in combination with a plurality of transverse bars, said transverse bars having notches or openings



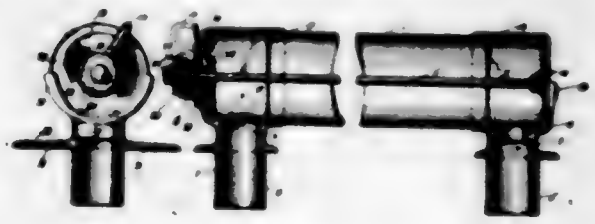
therein alternately positioned on opposite sides thereof and equidistant and midway between each other; adapted for receiving and interlocking with said first mentioned bars; both sets of said plurality of bars adapted to interlace, lattice and interlock, one with the other, at their points of contact, substantially as shown and described.

1,301,260. AUTOMATIC LATCH FOR DOORS. ERNEST HEINEMANN, Alma, Wis. Filed Sept. 4, 1918. Serial No. 252,574. 7 Claims. (Cl. 70—49.)



1. A latch of the character described comprising a housing, a bolt mounted in the housing for longitudinal movement but having oscillation, a knob spindle, an arm extending from the knob spindle and engaging the bolt, and a spring urging the bolt to its projected position, the housing being provided with a notch with which said arm is adapted to engage when the bolt is projected, the knob spindle being longitudinally movable and being yieldingly urged in a direction to hold the arm in engagement with the notch.

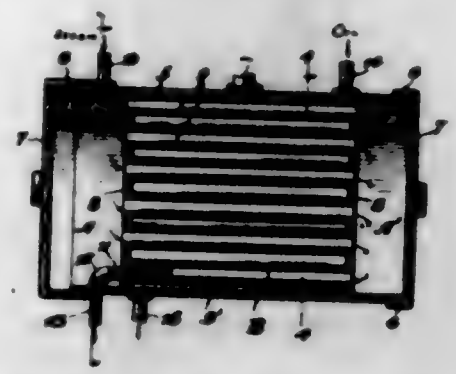
1,301,261. HEATER. EUGENE H. HELLER and ERNEST REICH, Chicago, Ill., assignors to The Hill Pump Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 24, 1917. Serial No. 203,829. 6 Claims. (Cl. 257—136.)



2. A heating device, comprising a tubular body member, caps forming closures for said body member, means for conducting a heating fluid through said caps and body member, and a curved plate conforming to the interior wall portions of one of said caps and in sliding engagement therewith, said plate controlling the communication with said conducting means.

4. A heating device, comprising in combination a tubular body member, chambered supports arranged at the ends of said body member, means for conducting a heating fluid through said supports and body member, a guard coextensive with the heating device, resilient means for maintaining said guard at a distance from said body member, and means integral with said supports for preventing longitudinal movement of said guard.

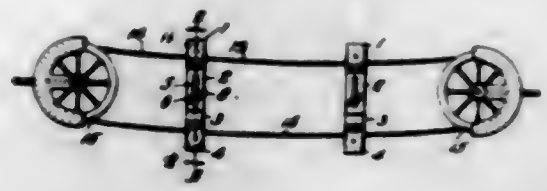
1,301,262. OIL-HEATER. JAMES FRANKLIN HIGGINS, New Orleans, La., assignor, by mesne assignments, to The Rogers-Higgins Co., Inc., New Orleans, La., a Corporation of Louisiana. Filed Mar. 23, 1918. Serial No. 224,234. 5 Claims. (Cl. 257—241.)



1. An oil-heater comprising a closed casing, partitions dividing the interior of the casing into end steam-chambers and an intermediate oil-chamber, tubes extending through the oil-chamber and opening through the partitions into the steam-chambers, a return-tube extending in the lower portion of the oil-chamber from one partition to the other and communicating at one end with one of the steam-chambers, and a pipe connected at the other end of the return-tube and leading from the heater, there being an inlet and outlet for the oil-chamber and an inlet to one of the steam-chambers.

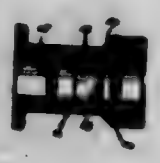
4. An oil pumping and heating apparatus comprising the combination of a closed casing, partitions dividing the casing into end steam-chambers and an intermediate oil-chamber, tubes extending through the oil-chamber and opening through the partitions into the steam-chambers, a return-tube extending in the lower portion of the oil-chamber from one partition to the other and communicating at one end with one of the steam-chambers, a pipe connected at the other end of the return-tube and leading from the heater, there being an inlet and an outlet for the oil-chamber and an inlet to one of the steam-chambers, a support carried by the casing, and a steam-actuated pump on said support arranged to deliver oil to said oil-chamber and exhaust-steam through said steam-chamber inlet.

1,301,263. CLOTHES-LINE SUPPORT. JOSEPH B. HILL, Evans Mills, N. Y. Filed Mar. 21, 1918. Serial No. 223,815. 1 Claim. (Cl. 68—3.)



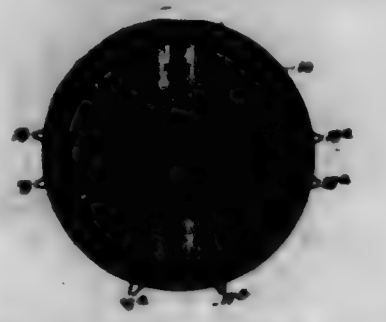
The combination with an endless clothes-line having upper and lower runs; of a support for the mid-length of said line comprising a pair of forks, each having its shank slotted longitudinally and overlapping the shank of the other fork and each provided with a shoulder adapted to abut the end of the other shank when the members are adjusted toward each other, a screw through the slots and having a wing-nut on one end, and grooved pulleys journaled in their respective forks, the upper pulley traveling upon the upper run of the line and the lower pulley below the lower run thereof, as described.

1,301,264. LIGHT-REGULATOR FOR PROJECTING MOVING PICTURES. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to H. P. Patents and Processes Company, Inc., a Corporation of New York. Filed Dec. 2, 1915. Serial No. 64,861. 2 Claims. (Cl. 88—24.)



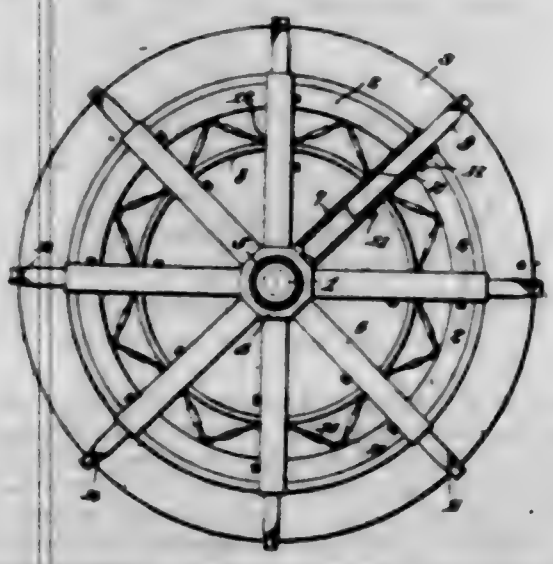
1. The combination with a lens barrel having a lens removably secured within one end thereof by means of a bushing having an internal configuration similar to the internal configuration of the barrel inwardly of the bushing, of an apertured diaphragm having a marginal flange and removably slidably positionable at points within the barrel inwardly of the lens or within the securing bushing at the outer side of the lens, substantially as described.

1,301,265. COLOR-FILTER FOR MOVING-PICTURE MACHINES. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to H. P. Patents and Processes Company, Inc., a Corporation of New York. Filed May 25, 1916. Serial No. 99,842. 1 Claim. (Cl. 88—16.4.)



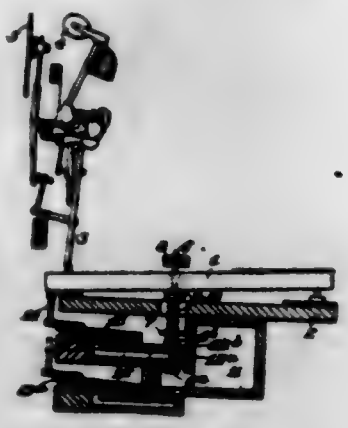
A color filter of the class described comprising an opaque body having a plurality of equally spaced exposure areas disposed concentrically to the center thereof and slightly larger than the size of each picture area of the picture strip affected, each exposure area of the body being divided into color divisions in the form of adjacent alternating stripes of a plurality of different colors, the colors of the stripes of one exposure area being different than those of the stripes of the succeeding exposure area.

1,301,266. ANTISKIDDING DEVICE. NOBLE R. HOLCOMB, Keystone, Okla. Filed Sept. 4, 1917. Serial No. 189,641. 1 Claim. (Cl. 21—218.)



An anti-skidding device comprising a hub; a rim; spokes connecting the hub and the rim; spuds slidable longitudinally on the spokes; means for holding the spuds in adjusted positions; and longitudinally adjustable tightening devices, independent of said means, disposed in zig-zag order about the rim and having their inner ends connected to the rim.

1,301,267. PIANO-KEY MECHANISM. ROBERT HOPE-JONES, deceased, late of North Tonawanda, N. Y., by Cecil Hope-Jones, temporary administratrix, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Nov. 14, 1914. Serial No. 872,180. 8 Claims. (Cl. 84—226.)

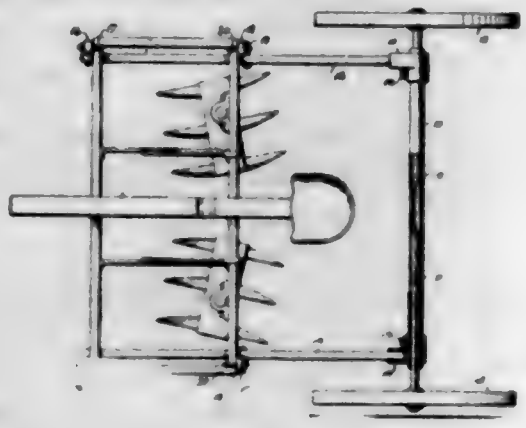


1. The combination with the key of a musical instrument, the mechanism operated thereby and a power device also adapted to impart movement to said mechanism, of a yieldable fulcrum for the key controlling the action of the power device.

2. The combination with a pivoted key of a musical instrument, and the action operated by the normal rocking movement of the key, of an auxiliary power device for imparting movement to the action means yieldingly supporting the key pivot controlling the operation of said power device and actuated by the depression of the key pivot.

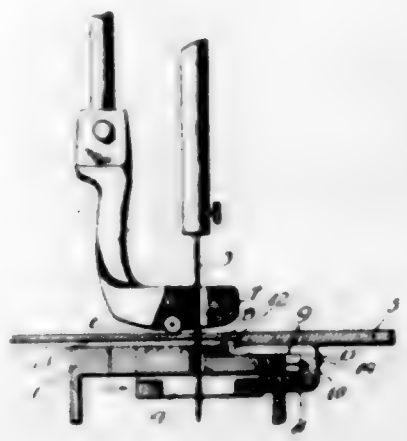
3. The combination with the key of a musical instrument and the action operated thereby, of an auxiliary power device for imparting movement to the action, and means governed by the movement of the key for effecting the conjoint operation of said key and power device upon the action.

1,301,268. CULTIVATOR ATTACHMENT FOR HARROWS. NATHAN B. JARRIEL, Ohoopee, Ga. Filed Sept. 9, 1918. Serial No. 253,227. 2 Claims. (Cl. 55—78.)



1. A device of the character described comprising an axle formed with a tubular sleeve, traction wheels, spindles carrying the traction wheels and adjustable in said sleeve, bars forwardly extending from the sleeve and adjustably connected thereto, and forward and rear pairs of brackets adapted to be engaged with and clamped on the frame of a harrow.

1,301,269. CHANNEL-CUTTER FOR SOLE-STITCHING MACHINES. WILLIAM FRANKLIN JAYNES, Evansville, Ind. Filed Oct. 29, 1917. Serial No. 199,119. 4 Claims. (Cl. 112—20.)



1. The combination with a sole stitching machine including a horisontal work support and a proceeding and receding feed dog below said support for feeding the work when the needle is raised, and a cutter operating yoke having parallel arms straddling said work support, the upper arm of said yoke having a channel cutter, and the lower arm of said yoke being operatively associated with said feed dog for moving said yoke to operate the cutter upon the receding strokes of said dog.

1,301,270. MARINE-VESSEL CONSTRUCTION. GUSTAVUS E. KASTENGREN, Seattle, Wash. Filed Feb. 26, 1918. Serial No. 219,296. 3 Claims. (Cl. 114—83.)

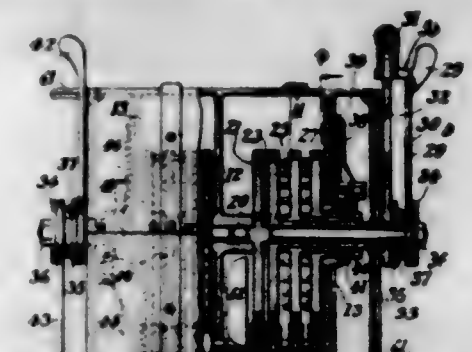


1. A marine vessel having a keelson provided with laminated vertical extensions at the stem and stern and a truss structure extending from end to end of the vessel and consisting of continuous beams of laminated construction that merge with and are secured to the laminated vertical extensions of the keelson.

2. The combination with the hull of the vessel, of a truss extending lengthwise in the medial plane and throughout the entire length of said hull, said truss being formed of an upwardly bowed member and a downwardly bowed member that have their ends secured together, the bow and stern ends of the keelson being solidly built up of a plurality of relatively small timbers bolted together, and the ends of said bowed truss members being secured to and forming a part of said built up end sections.

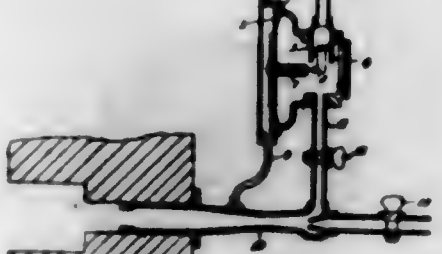
1,301,271. SIGNALING APPARATUS. JOHN ARTHUR KEESEY, Brooklyn, N. Y., and ALFRED SHEDLOCK, Cannondale, Conn.; said Shedlock assignor to said Keesey. Filed Sept. 28, 1917. Serial No. 193,631. 6 Claims. (Cl. 116—31.5.)

1. A central station signaling apparatus, comprising a plurality of message sending wheels and an equal number of message receiving wheels all on a common axis, adapted to be connected in pairs with a similar pair of message receiving and sending wheels of a signaling apparatus located at each of different substations, a dial having thereon a plurality of sets of messages, an operating handle provided with a pointer and adjustably connected to each of the message sending wheels, a pointer adjustably connected to each of the message receiving wheels, a gong common to all of the message receiving



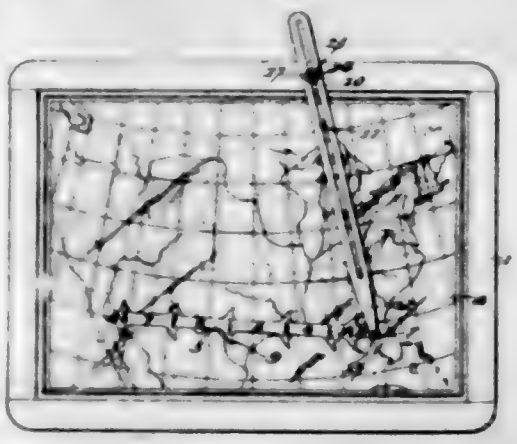
wheels and means actuated by each and all of the message receiving wheels for giving aural signals by the gong.

1,301,272. METHOD OF DELIVERING A MIXTURE OF GAS AND AIR. GEORGE KEITH, London, England, assignor of one-half to James Keith, London, England. Filed Sept. 19, 1916. Serial No. 121,030. 1 Claim. (Cl. 48—184.)



The herein described method of delivering a mixture of gas and a comburent medium for combustion, consisting in injecting the entire volume of one of the constituents of the mixture and thereby inducing the flow of the induced constituent and governing the pressure at which the induced constituent is supplied in direct proportion to the fluid pressure of the said mixture.

1,301,273. ZONE-INDICATOR. HERMAN H. KOLLORTH, Palatka, Fla. Filed July 12, 1917. Serial No. 180,158. 3 Claims. (Cl. 33—75.)



2. A device of the character described including a frame, a board mounted therein and having a map printed on the upper face thereof, a bar, opposed pairs of pointers projecting from the opposite marginal edges of the bar and indicative of various zones, a slotted bar, a pin projecting through the slotted bar and pivotally supporting the zone indicating bar, a bolt carried by the frame and engaged to the sliding bar so as to cooperate

with the slot in slidably and pivotally mounting the bar on the frame, and means for clamping the slotted bar in various adjusted positions with respect to the map.

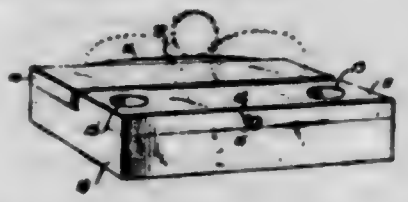
3. A device of the character described including a frame, a board supported in the frame and having a map indicated on its upper face, a bar, opposed pairs of pointers projecting from opposite marginal edges of the bar at suitably spaced intervals and indicative of various zones, an upright portion on one end of the bar, an ear projecting from the upright and provided with an opening, an adjustable bar having a longitudinal slot therein, a pin carried by the adjustable bar and pivotally engaged in the opening in the ear, a bolt carried by the frame for engagement with the adjustable bar to permit of sliding and pivotal movement thereof, means for clamping the adjustable bar in a substantially rigid position to hold the pin over the place from which mail is to be sent to consequently permit of the swinging of the zone indicating bar in determining the zone in which the place to which the mail is to be sent is situated.

1,301,274. BEDSTEAD. ALBERT G. KOPACKI, Bay City, Mich., assignor of one-half to Steve Budzinski, Bay City, Mich. Filed Mar. 26, 1917. Serial No. 157,443. 2 Claims. (Cl. 5—48.)



1. A combination bed-stead, including side rails, a head section pivotally connected to the side rails and arranged to lie in the plane of the same, brackets depending from the side rails and projecting inwardly and provided with openings, spiral gears confined in the brackets and having screw threaded apertures, pivoted screws depending from the head section and extending through the openings of the brackets and engaging the threaded apertures of the spiral gears, a transverse shaft extending across the bed-stead and journaled in the said brackets and having operating means at the side of the bed-stead, and spiral gears mounted on the transverse shaft and meshing with the spiral gears of the screws for moving the same upwardly and downwardly to raise and lower the head section.

1,301,275. HOLDER FOR USE IN REPAIRING EYE-GLASSES. OSCAR C. KRAEHMER, Galena, Ill. Filed May 27, 1918. Serial No. 236,960. 5 Claims. (Cl. 29—89.)



1. An eye-glass holder of the character described comprising a flat base having an upwardly extending clamping abutment on the upper face of the base, a clamping member slidably mounted upon the upper face of the base and having an edge parallel to and confronting the adjacent edge of the clamping abutment, and a spring urging the movable clamping member against the fixed clamping abutment.

1,301,276. SUPPORT FOR THE CORRECTION OF MALPOSITIONS OF THE CERVICAL VERTEBRÆ AND THE OCCIPUT. MARY M. KROETZ, San Francisco, Calif. Filed June 11, 1917. Serial No. 174,301. 3 Claims. (Cl. 128—76.)

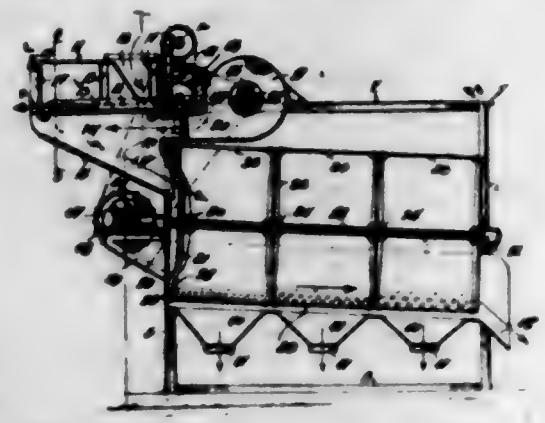


1. A support of the character described comprising a rigid support to engage the person along the entire length of the spinal column; an annular member slidably mounted upon the support to engage the occiput; means for rigidly retaining the support adjacent the spinal column; and adjustable means to engage the chin to retain the occiput rigidly within the annular member to retain the alinement of said occiput relatively to the spinal column.

2. A support of the character described comprising a rigid support to engage the person along the entire length of the spinal column; means for rigidly retaining the support adjacent the spinal column; an annular member slidably mounted upon the support to engage the occiput; and an apertured mask secured to the annular member to engage the chin to retain the occiput rigidly within the annular member whereby said occiput may be retained in alinement with the spinal column.

3. A support of the character described comprising a rigid support to engage the person along the entire length of the spinal column; means for rigidly retaining the support adjacent the spinal column; an annular member slidably mounted upon the support to engage the occiput; and an apertured mask secured to the annular member to engage the chin to retain the occiput rigidly within the annular member whereby said occiput may be retained in alinement with the spinal column; and means for adjusting the apertured mask relatively to the annular member.

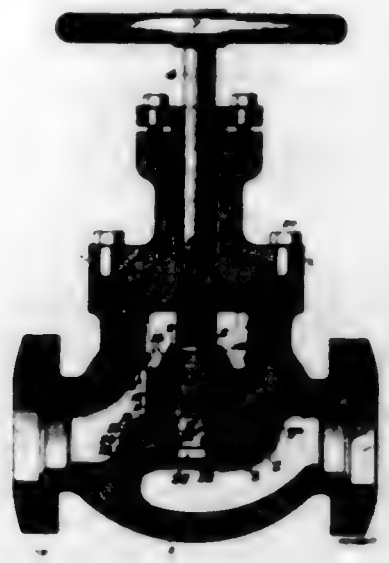
1,301,277. REVOLVING SEED-SELECTOR. CHRISTIAN KRONENBERG, Madison, Wis. Filed Jan. 24, 1917. Serial No. 144,215. 1 Claim. (Cl. 130—16.)



In a screening and separating machine, the combination of a skeleton frame including corner uprights, upper sills connecting said uprights and extended past the uprights at one end of the frame, a separator member mounted within the frame between the uprights and con-

nected with the uprights for support thereby, and a cleaner unit disposed between and supported by said extensions of the frame sills and including an inclosed hood having an air discharge opening at one end and a fan casing extension projecting from the other end thereof, the bottom of the hood being inwardly inclined to form a discharge mouth adapted to discharge toward the separator member.

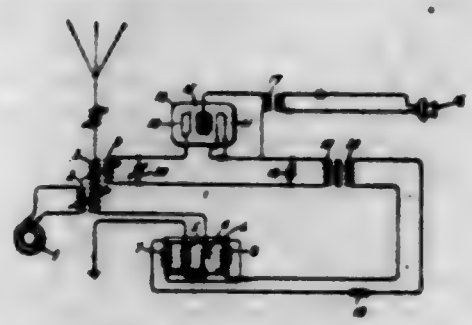
1,301,278. GLOBE-VALVE. OTTO AUGUST LABUS, Grand Rapids, Wis. Filed Jan. 19, 1918. Serial No. 212,681. 9 Claims. (Cl. 251—46.)



6. A valve having a valve seat of taper form with the entering end cylindrical, and a valve member for entering the valve seat comprising a bonnet portion, a ring portion carried by the bonnet portion and of a diameter to enter the cylindrical end of the valve seat, said ring portion having the edge remote from the bonnet portion doubly tapered and also provided with an intermediate interior web having a passage therethrough, a block provided with a stem extending through the web and screw threaded at the end for the reception of a nut to hold the block to the ring, with the block having a range of movement axially of the ring, said block having the end remote from the stem reversely tapered, with the taper at the end of the block adapted to fit the taper of the valve seat at its smaller end, and the other taper being away from the taper portion of the valve seat, and a gasket having one edge grooved to receive the taper portion of the ring and the other edge doubly tapered to correspond to the taper of the valve seat and the second-named taper of the block, said valve structure also being provided with a valve stem having a screw feed and swiveled to said bonnet portion, whereby the valve stem may be turned after the valve member is seated to expand the gasket without exerting twisting strains on said valve member.

1,301,279. METHOD OF AND MEANS FOR CONTROLLING ELECTRICAL ENERGY. IRVING LANGMUIR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 20, 1914. Serial No. 873,115. 25 Claims. (Cl. 250—19.)

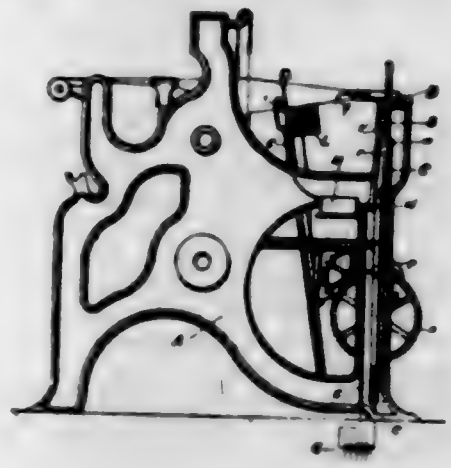
7. The combination in a wireless signaling system of an antenna circuit supplied by a source of high frequency current, a reactance coil in said antenna circuit, a second circuit including a magnetizing winding so related to said reactance coil that the impedance of the antenna circuit may be varied by varying the current in said magnetizing winding, means for diverting a portion of the energy from the antenna circuit, a third circuit having means therein for producing a pulsating current independently of the energy thus diverted, means for varying the amount of energy diverted from the antenna circuit in accordance with variations in the pulsating current flowing in said third circuit, and means for supplying energy thus diverted to the magnetizing coils.



10. The combination in a wireless signaling system of an antenna circuit supplied by a source of high frequency alternating current for transmitting wireless signals through space, means for diverting a portion of the energy from said antenna circuit, means for utilizing energy thus diverted to produce a varying magnetizing field, and means for subjecting the current in the antenna circuit to the action of said magnetizing field.

22. The method of transmitting wireless signals through space which consists in impressing a radio frequency current upon an antenna, diverting from the antenna a portion of the energy thus supplied, utilizing the energy thus diverted to produce a varying magnetizing field and utilizing the magnetizing field thus produced to vary the current in the antenna.

1,301,280. WEFT-THREAD-CONTROLLED ELECTRICALLY-ACTUATED AUXILIARY MECHANISM FOR LOOMS. CHARLES D. LANNING, Boston, Mass. Filed Jan. 13, 1906, Serial No. 295,837. Renewed Aug. 2, 1917. Serial No. 184,176. 18 Claims. (Cl. 139—54.)

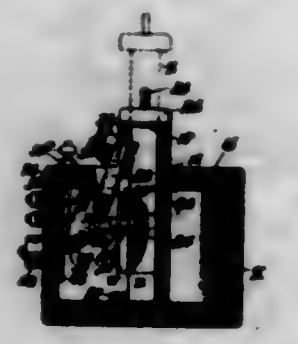


1. In a loom, weft-thread controlled electrically actuated auxiliary mechanism, consisting of an electric circuit having therein an electro-magnet and armature therefor and spaced terminal pieces of opposite polarity and circuit closing means secured to the loom structure, which spaced terminal pieces are adapted normally to be guarded by the weft-thread from the circuit closing means which is adapted to enter between and to plug said terminal pieces to close the circuit, when the terminals are unguarded by the weft-thread means to reciprocate the circuit closing means and the spaced terminal pieces one in relation to the other thereby to position the circuit closing means between said spaced terminal pieces and to put them into electrical contact when the weft-thread is not interposed, and thereby close the circuit and cause the magnet to operate its armature.

2. In a loom, weft-thread controlled, electrically actuated auxiliary mechanism, consisting of an electric circuit having therein an electro-magnet and armature therefor and spaced terminal pieces of opposite polarity secured to the loom structure, which terminals are adapted normally to be guarded, by the weft-thread, from contact by a circuit closer, fork or feeler means secured to the loom structure and adapted to act as circuit closing means with

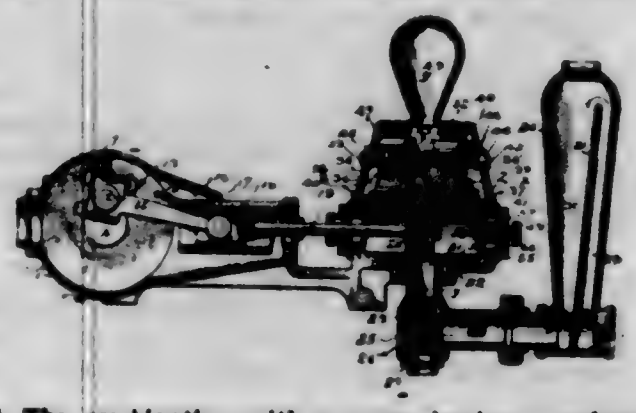
said terminals when a weft-thread is not interposed, means to reciprocate the feeler means and terminals one in relation to the other and to position the fork or feeler means between said spaced terminals to close the circuit and operate the armature of the magnet.

1,301,281. CAR-COUPLING. MICHAEL LARKINS, South Bethlehem, Pa. Filed July 13, 1918. Serial No. 244,761. 21 Claims. (Cl. 213—10.)



1. In a car coupling, the combination with a draw head, of a manually operable vertically movable locking pin having a horn at its lower end serving as a stop to limit the upward movement of the pin, a swinging knuckle, a latch for locking said pin in its raised position, said latch being located on the same side of the pin as the knuckle and engaging with a shoulder on the pin above the lower end thereof, connecting means between the knuckle and the latch to control the latter by the opening and closing of the knuckle, and a tail piece provided on the knuckle and located at that side of said means which is remote from the pivot of the knuckle and forming a rest or table to sustain the pin when released from the latch and hold the pin from locking the knuckle during the remainder of its opening movement and throughout the closing movement until completely closed.

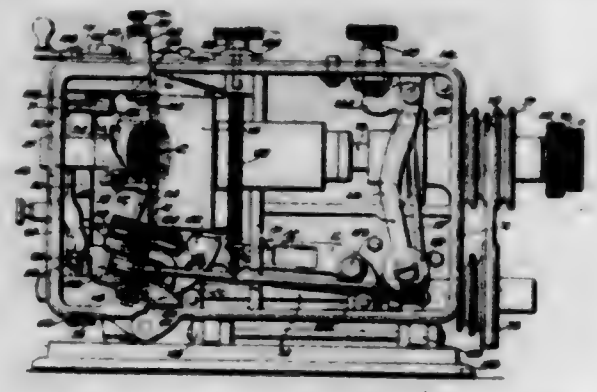
1,301,282. PUMP. EVERETT P. LARSH, Dayton, Ohio, assignor to The Burnett-Larsh Manufacturing Company, Dayton, Ohio, a Corporation of Ohio. Filed Feb. 12, 1916. Serial No. 78,061. 6 Claims. (Cl. 103—76.)



6. The combination with a pump having a pulsation chamber and a discharge chamber intercommunicating through a main valved discharge port, the discharge chamber having in the bottom thereof a depression or collecting cistern for the residue of fluid therein, and an intercommunicating port between said depression or cistern and the pulsation chamber substantially as and for the purpose specified.

1,301,283. SKIVING-MACHINE. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 12, 1918. Serial No. 216,734. 11 Claims. (Cl. 69—8.5.)

1. A skiving machine having, in combination, a tubular skiving knife, a gage member upon one side of the knife, a feed roll upon the opposite side of the knife, a pivoted carrier supporting the feed roll to permit a circumferential adjustment of the roll relative to the knife, and means for supporting the carrier having provision for adjustment of the carrier and feed roll transversely of the knife.

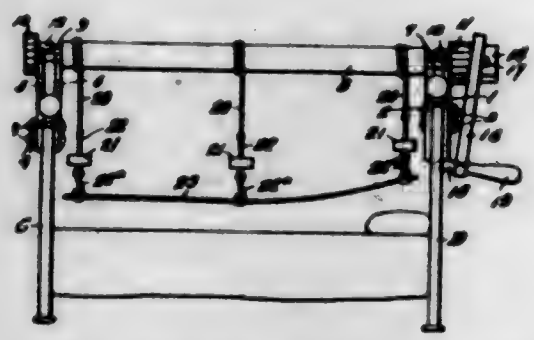


5. A skiving machine comprising a tubular skiving knife, a feed roll, means for supporting the feed roll including a frame pivoted to rock about an axis extending transversely to the axis of rotation of the knife, and means for locating the feed roll in a predetermined operative position including an eccentric member having an axis of rotation parallel to the rocking axis of the frame, and means for yieldingly retaining the frame in contact with the eccentric member.

7. A skiving machine comprising a tubular knife, a grinding disk disposed in operative relation to the outer surface of the knife, a pivoted arm supporting the disk, means for adjusting the disk angularly with respect to the arm, and means for rotating the disk.

10. A skiving machine comprising a tubular skiving knife, a feed roll normally positioned in close proximity to the knife edge, a head inclosing the feed roll and knife and including two parts hinged together, and means under the control of the operator for bodily moving the feed roll away from the knife edge.

1,301,284. LIFTING DEVICE. JOSIAH LEDAN, Hannibal, Mo. Filed May 8, 1918. Serial No. 233,820. 3 Claims. (Cl. 5—44.)



1. In a device of the class described, the combination with a pair of elements having alined bearings, a drum having trunnions rotatably mounted in said bearings, and ratchet wheels outside said elements, the trunnion being continued through one ratchet wheel in a finger and the outer side of this ratchet wheel rounded, of a crank having one end pivotally mounted on said finger, a handle at the other end of the crank having a stud projecting in line therewith and adapted to be engaged beneath the edge of one of said elements, a pawl engaging one ratchet wheel, and a supporting medium sustained from said drum.

1,301,285. EXPANSIBLE WELL-CASING. ROY E LEONARD, Los Angeles, Calif., assignor of one-half to Frank W. A. Finley, Pittsburgh, Pa. Filed Sept. 1, 1916. Serial No. 118,129. 4 Claims. (Cl. 166—4.)

1. An expansible well casing including a one-piece tubular section having peripheral walls which are continuous and imperforate from end to end, said walls being initially formed with an excess of metal to give the tubular section a relative small diameter so that it can be

readily lowered into position in the well opening, after which it is adapted to be expanded into a firm and perma-



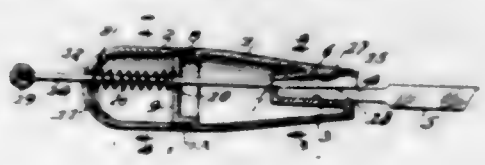
nent engagement with the walls of the well opening, said casing being sufficiently strong to withstand the pressure.

1,301,286. CANNING AND DRYING APPARATUS. JAMES ALFRED LITTLE and CARL PETER BLUM, Bismarck, N. D. Filed Aug. 7, 1918. Serial No. 248,801. 7 Claims. (Cl. 34—21.)



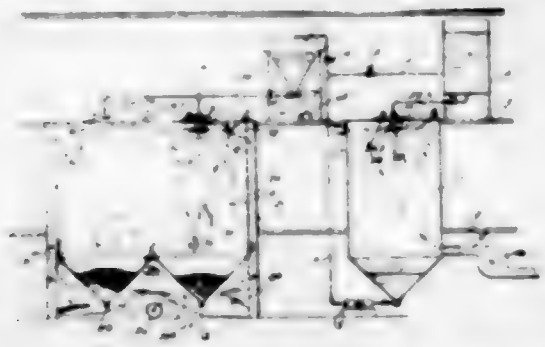
2. In an apparatus of the character described, a receptacle having foraminous side and bottom walls, a series of trays adapted to be arranged in superposed relation within said receptacle and each having a foraminous bottom wall provided with a central opening, a foraminous upstanding neck at the edge of said opening, and heat distributing means adapted to be arranged within the receptacle and extending through the necks of said trays.

1,301,287. TOOL-HANDLE. ELMER C. MCMAHON, Brothers, Oreg. Filed July 24, 1917. Serial No. 182,535. 2 Claims. (Cl. 279—87.)



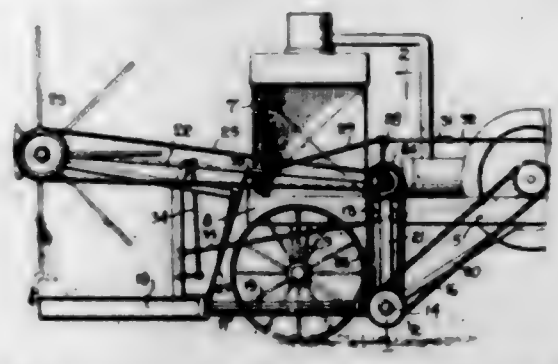
1. A tool handle including a main tubular section having the forward end formed with a socket adapted to receive a tool shank and having a portion of its wall tapered inwardly and having the opposite end reduced and threaded exteriorly, a rod slidably arranged through the socket and the inner end of the section, a wedge carried by the outer end of the rod for coöperating with the tapered portion of the wall of the socket for retaining the tool shank, a spring disposed about the rod and connected thereto and bearing against the inner end of the main section, a secondary tubular section detachably fitted on the inner end of the main tubular section and through which the rod is slidable, and a handle removably mounted on the inner end of the rod for facilitating the operation of the rod.

1,301,288. APPARATUS FOR GRANULATING HEAVY SEMIFLUID MATERIALS. JOHN C. MACLACHLAN, St. Paul, Minn. Filed June 4, 1917. Serial No. 172,589. 6 Claims. (Cl. 127—9.)



1. An apparatus for granulating pasty semi-fluid materials, comprising a rotary discharge head arranged to throw the material ejected therefrom, outward under the action of centrifugal force, a beater rotatable about said discharge head, in position to strike and beat the material ejected from and thrown outward by said discharge head, and means for rotating said head and beater at high speed.

1,301,289. GRAIN-HARVESTER. JOHN MALCOM, Elrod, S. D. Filed June 12, 1918. Serial No. 239,605. 2 Claims. (Cl. 56—32.)



1. The combination with a traction engine including a wheel supported frame, of a platform arranged in advance of said frame, hangers depending from opposite sides of said frame, a transversely disposed rod mounted in the lower ends of said hangers, a vertically disposed frame mounted at its ends upon said rod for swinging movement, spaced flexible connections between said swinging frame and the platform, guides for such connections mounted upon the engine frame, longitudinally extending spaced bars connected to the platform and loosely mounted upon said transverse rod, and means connected to said vertical frame to swing the same and raise or lower the platform with respect to the engine frame.

2. The combination with a traction engine including a frame and a forward supporting truck therefor, of a grain binder and a reel mounted in advance of said truck, a transverse tubular rod arranged beneath said frame, hangers depending from the frame in which said rod is secured, a standard loosely mounted at its lower end upon said rod, a connecting rod between the upper end of said standard and the reel, an operating shaft rotatably mounted in the tubular rod, driving means between said shaft and the engine shaft, a sprocket mounted upon the upper end of said standard, a driving connection between said sprocket and the reel shaft, a drive chain connecting said sprocket to the operating shaft, supporting bars for the binder platform loosely mounted upon said tubular rod, means for adjusting the reel, and additional means for raising and lowering the binder platform.

1,301,290. BRAKE-OPERATING MECHANISM. EZRA B. MEAD, Ottumwa, Iowa, assignor to Ottumwa Iron Works, Ottumwa, Iowa, a Corporation of Iowa. Filed July 20, 1914. Serial No. 851,891. 7 Claims. (Cl. 188—3.)



1. A power hoist, comprising in combination a hoist drum, a brake engaging said drum, means normally acting to tighten the brake, a brake cylinder, a tank for holding a supply of incompressible fluid under pressure,

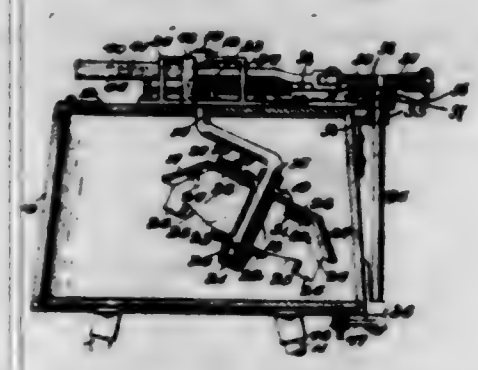
a sump, a pipe line connecting said cylinder, tank and sump, means for supplying said fluid from said sump to said tank, and a valve in said pipe line for interrupting the flow of liquid from the tank to the cylinder.

1,301,291. ATTACHMENT FOR PLANTERS. STUART G. MILLER, Crockett, Va. Filed Aug. 29, 1918. Serial No. 251,978. 2 Claims. (Cl. 97—37.)



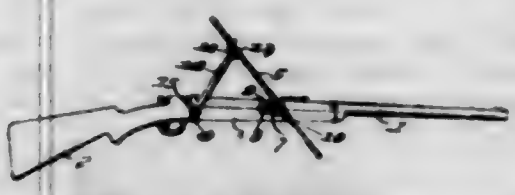
1. The combination with a planter having covering disks, a flexible connection uniting said disks and planter, a cross bar carried by said connection, a toothed rack carried by said bar, and a lever connected to actuate said connection and having means for engaging said rack to hold the disks in adjusted position.

1,301,292. WASHING-MACHINE. JOHN A. MINGER, Bern, Kans. Filed June 1, 1918. Serial No. 237,804. 3 Claims. (Cl. 68—15.)



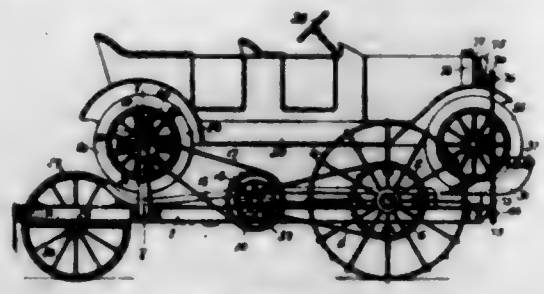
1. A washing machine comprising a shaft mounted for rotation and having a portion extending obliquely to the longitudinal axis thereof, a shell mounted for rotation on the obliquely directed portion of the shaft and divided by radial partitions into a plurality of downwardly opening air chambers whereby the chambers are consecutively compressed against the garments and elevated therefrom, an inwardly opening valve connected to each alternate air chamber, and an outwardly opening valve connected to each of the remaining alternate air chambers.

1,301,293. PROTECTIVE SHIELD FOR SMALL FIREARMS. JENS MOLVIG, Buxton, N. D. Filed May 19, 1917. Serial No. 169,635. 1 Claim. (Cl. 89—36.)



The combination with a firearm, of a rectangular shield formed with an opening through which there passes the barrel and fore-stock of a firearm, the opening being of sufficient size to permit sighting of the firearm therethrough, brackets adjustably secured on the rear of the shield and on either side of the opening, means for attaching the brackets to the fore-stock, a band mounted upon the fore-stock, ball sockets mounted on the rear of the shield above and to either side of the opening, supporting members each having one end connected with a ball socket, and means for attaching the remaining ends of the supports to the said band, whereby the shield is removably secured to the firearm with respect to which it may be given different angles of inclination to ricochet shots for the protection of the user of the firearm.

1,301,294. AUTOMOBILE-OPERATED MECHANISM. CHARLES E. MORRIS, Leavenworth, Kans. Filed Dec. 18, 1916. Serial No. 137,706. 5 Claims. (Cl. 180—1.)



1. In an automobile operated mechanism, a support for an automobile, rotary driven means thereon, resilient means on said support adapted to lift and support an automobile carried by said support and to shift the weight of the automobile from one of its driving wheels, and transmission means having driving connection with said driven means, and having releasable means for driving engagement with said driving wheel.

1,301,295. GROOVED AND RECESSED BALL-BEARING. MAX MOSSIG, Berlin, Germany. Filed Aug. 24, 1916. Serial No. 116,741. 1 Claim. (Cl. 64—36.)



An annular ball bearing consisting of two concentric resilient rings having in their confronting surfaces opposed ball-race grooves and side entrance slots or recesses for inserting balls between the rings by springing them apart, and a series of balls between the rings running in said grooves, the recess in one ring extending through both annular shoulders on opposite sides of the balls; one of said recesses being oblique to the axis of the ring and the other substantially parallel with said axis, and the recess extending through the annular shoulders in one ring having a depth equal to that of the ball-race while the recess in the other ring is of less depth than the ball-race, substantially as and for the purpose set forth.

1,301,296. RAMP AND ADJUSTABLE RAMP-SUPPORT. WILLIAM B. MURRAY, Danville, Ill., assignor to The Miller Train Control Corporation, Staunton, Va., a Corporation of Virginia. Filed Mar. 16, 1914. Serial No. 824,965. 5 Claims. (Cl. 246—1.)

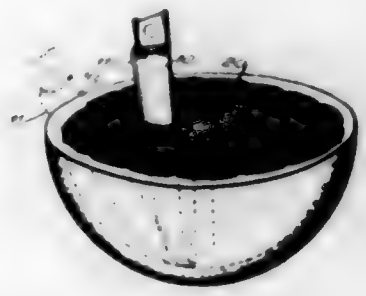


3. A longitudinally curved ramp comprising an elevating ramp-section approximately ninety feet long, a lowering ramp-section approximately sixty feet long, and a dead ramp-section approximately fifteen feet long, arranged between, connected with, and insulated from the inner ends of the elevating and lowering ramp-sections.

5. A ramp over 100 feet long and curved longitudinally in a substantially vertical plane and comprising elevating

and lowering ramp sections disposed in end to end relation, the elevating ramp section having a substantially greater length than the lowering ramp section.

1,301,297. FRUIT-KNIFE. RUTLEDGE H. NEWMAN, Chicago, Ill. Filed Dec. 9, 1918. Serial No. 265,837. 6 Claims. (Cl. 146—14.)



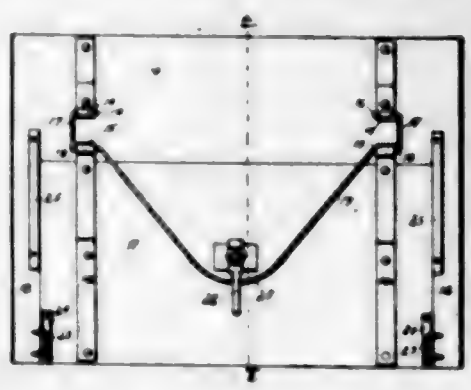
2. The combination with a knife blade, of a cross blade secured to the free end thereof and extending substantially perpendicular thereto, the front and rear edges of said cross blade being sharpened and the side edge thereof being blunted.

1,301,298. PICKING MECHANISM OF LOOMS. ARTHUR NEWTON-SMITH, Westminster, England. Filed Jan. 3, 1918. Serial No. 210,155. 6 Claims. (Cl. 139—21.)



6. A picking mechanism for looms, comprising in combination, a picking spindle of non-circular cross section, a picker without a picker foot mounted on said spindle and having a portion in engagement with the spindle and conforming to the contour thereof whereby angular movement of the picker with respect to the spindle is prevented, a shuttle buffer carried by the picker below the spindle, and a picking strap attached to the picker around the picking spindle.

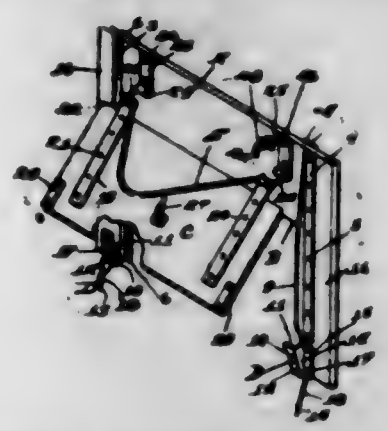
1,301,299. END-GATE. ALONZO L. NICHOLSON, Rockwell City, Iowa, assignor of one-half to Edwin W. Burch, one-fourth to Robert E. Conley, and one-fourth to Henry A. Murphy, Rockwell City, Iowa. Filed Feb. 16, 1915. Serial No. 8,645. 2 Claims. (Cl. 21—21.)



1. In a device of the type set forth, the combination with a main gate structure having a pair of laterally spaced depending side extensions unconnected at their lower ends and adapted to form an opening immediately over the floor of a wagon box through which the grain may have clear passage, of an auxiliary gate set in said opening between said depending side members, a bail member having its ends formed into bearing links for hingedly securing said main and auxiliary gates together, so that the auxiliary gate member will in closed position rest on the floor of the wagon box and in opening swing outwardly and upwardly at its upper end, a pair of pocket members having upwardly and outwardly slanting guide surfaces carried by the lower portion of the main gate structure adjoining the lower corners of said opening by which the lower corners of the auxiliary gate may be movably held to assist in holding said movable member in closed position and means secured on the outer face of said movable member adapted to releasably engage said bail member to coöperate with said pocket members and assist in locking the auxiliary gate closed.

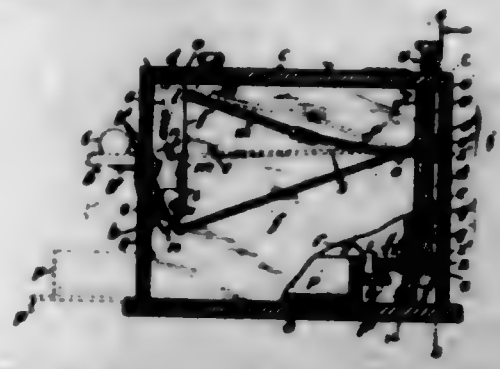
2. An end gate having an upper central portion, downwardly extending members at the ends thereof, a lower central movable member between said last members, horizontally alined hinge leaves on said first member, reinforcing hinge leaves on said movable member having portions extending above said lower central member forming horizontally alined bearings in vertical alinement with said first mentioned leaves, a bail having vertically arranged pairs of horizontal offsets near its ends journaled in said vertically alined leaves and a central body portion curved downwardly over the movable member, pocket members for holding the lower corners of the movable gate member closed, means on said movable gate member and coöperating with said pocket member for locking said movable gate member on the body portion of said bail and wear plates on said movable gate member within said pocket members.

1,301,300. WAGON END-GATE. ALONZO L. NICHOLSON, Rockwell City, Iowa. Filed Jan. 15, 1917. Serial No. 142,347. 1 Claim. (Cl. 21—31.)



In an end-gate, a stationary board having a gate opening, a bail hingedly supported on said board, a gate hingedly connected with said bail, guards at the sides of said opening, and a gate-board pocket near the lower ends of and separate from each of said guards having pin receiving openings spaced upwardly apart and a pin adapted to be inserted through any one of said openings to produce steps upon which the gate-board may rest in open position at selective elevation.

1,301,301. DISPENSING APPARATUS. THOMAS K. NISHIOKA, Portland, Oreg. Filed July 23, 1915. Serial No. 41,601. 1 Claim. (Cl. 211—8.)



In a dispensing apparatus comprising a case and inclined floor therein, a pit at the lower end of the latter and

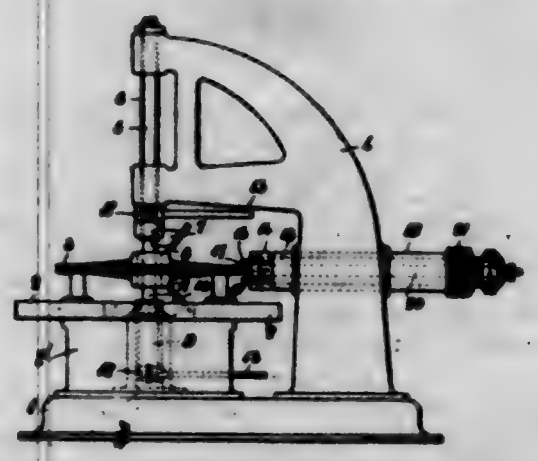
a door located above such pit, the combination of a rockable arm extending to said pit and carrying a pan normally resting in the latter, said door being provided with an inwardly projecting arm lying in the path of motion of one edge of said pan and whereby the door is opened upon the lifting of the latter, and means including a depressible rod for lifting said arm.

1,301,302. WASHER. FRANCIS A. NOLAN, St. Paul, Minn. Filed Dec. 3, 1917. Serial No. 205,042. 2 Claims. (Cl. 85—50.)



1. A washer having a conical countersink extending substantially from end to end of the washer and a continuous circumferential rim extending substantially parallel to the axis of the washer to completely embody a portion of the material, in which the washer may be embedded, said countersink extending to a greater depth than the height of said rim and said rim being adapted to prevent lateral spreading and displacement of material by said countersink.

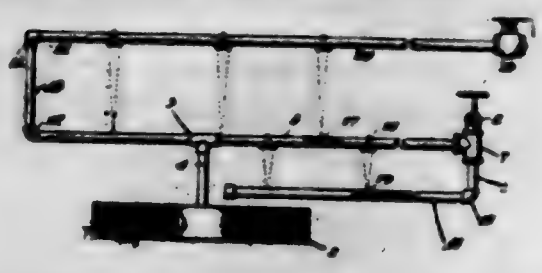
1,301,303. VERTICAL TURNING AND BORING MILL. CARL SIGFRID NYSTRÖM, Mellösa, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Oct. 11, 1917. Serial No. 196,030. 8 Claims. (Cl. 29—29.)



8. In a vertical turning and boring mill, especially adapted for machining circular bodies, the combination of a horizontal rotatable table supporting the body to be machined, a drill spindle coaxial with the center of rotation of said table, a tool holder disposed above said body, another tool holder disposed beneath the body, rotatable shafts parallel to said drill spindle and supporting said tool holders, tool holders disposed at the circumference of the body, rotatable members movable in radial direction of the body and each supporting one of the latter tool holders, a gearing driven by a rotating shaft and adapted to rotate one of said supporting members, another gearing driven by said shaft, and adjustable members actuated by the latter gearing and adapted to move the said supporting members in the said radial direction.

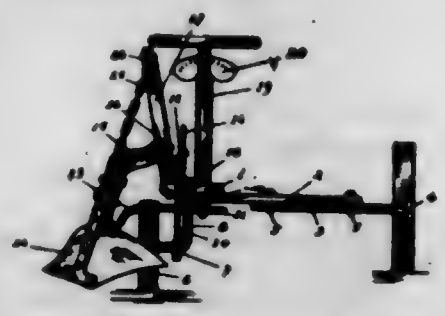
1,301,304. OIL-BURNER. HENRY ELIAS OLSON, Chicago, Ill. Filed Feb. 1, 1918. Serial No. 214,900. 4 Claims. (Cl. 158—62.)

1. An oil burner comprising a cup, a plurality of upper vaporizing pipes arranged in parallel relation upon the same horizontal plane, means connecting said pipes, a lower pipe supported in conjunction with said cup and connected to one of said first mentioned pipes, a bottom pipe connected to the inner end of said lower pipe, a valve interposed between said bottom and lower pipes for controlling the passage of fuel therethrough, and said bottom and lower pipes provided with fuel discharge ports arranged in spaced relation upon the upper faces of said



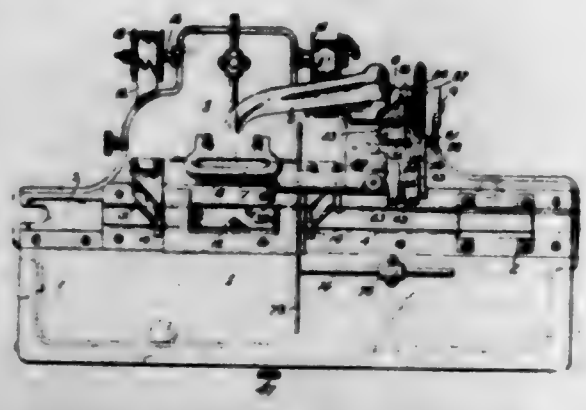
pipes and adapted to discharge gaseous fuel from said discharge ports into contacting engagement with the adjoining pipes.

1,301,305. TRACTOR CUT-OUT PLOW. JACOB T. ONSTOTT, Yuba City, Calif., assignor to Ernest E. Sowell, Sacramento, Calif. Filed May 28, 1917. Serial No. 171,295. 1 Claim. (Cl. 97—36.)



A plow comprising a main wheel-mounted supporting beam, a plow beam pivoted at one end of the supporting beam for horizontal and vertical movement relatively thereof, and a vertical post journaled near the opposite end of the supporting beam, a hand wheel on the post, an arm fixed to the lower end of the post and projecting at right angles thereto, a rigid bar pivoted to the arm and to the plow beam whereby horizontal movement may be imparted to the plow beam with the turning of the hand wheel, and a flexible suspension member between the supporting beam and the plow beam to set and maintain the vertical position of the latter and still allow of the horizontal movement thereof.

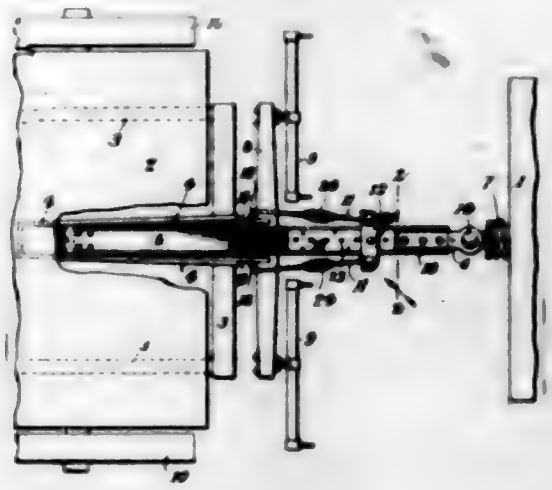
1,301,306. PRINTING APPARATUS. CHARLES OWENS, Chattanooga, Tenn., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1915, Serial No. 45,128. Renewed Mar. 6, 1919. Serial No. 281,075. 20 Claims. (Cl. 101—65.)



8. In printing apparatus, and in combination a table or bed, printing plates, means for feeding the printing plates, a hand operated impression member pivotally supported to have oscillating movement and having a handle and an impression head at its free end, feed means for the sheets to be printed upon comprising a wheel journaled at a fixed point with its lower edge at the

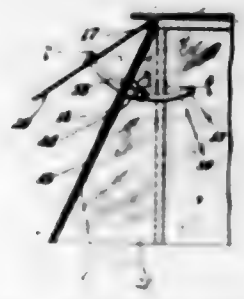
surface of the table and connections between the oscillating impression arm and said wheel to convert the back and forth movement of the arm into a rotary step by step forward movement of the wheel at said fixed point, substantially as described.

1,301,307. COUPLING DEVICE FOR VEHICLES. LOUIS C. OWENS, New York, N. Y. Filed Jan. 25, 1919. Serial No. 272,980. 4 Claims. (Cl. 213—67.)



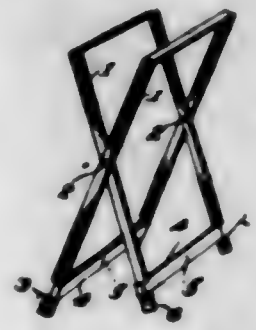
3. In a coupling device for vehicles a continuous rigid coupler body part having rigidly attached at its forward end means for connection with the drawbar of a tractor and having also laterally movable plates attached upon opposite sides at its rear end, a slidable sleeve adapted to move longitudinally over and engage with the coupler body part, longitudinally adjustable rods adapted to connect the slidable sleeve with a suitable fixed part of the vehicle, and means to move the plates into the desired lateral position and hold them there.

1,301,308. AUTO WIND-SHIELD. ENDER PAPP and PAUL NAGY, New York, N. Y. Filed May 20, 1918. Serial No. 235,518. 1 Claim. (Cl. 21—148.)



In a wind shield, the combination with a rigid frame, a transparent plate formed in two sections contained therein, the lower section being firmly engaged in said frame, the upper section being hingedly engaged at the top of said frame, a transparent outer cover plate also hingedly engaged at the upper portion of said frame, brackets secured upon the side elements of said frame, bent bars secured at their ends to said outer plates and passing through said brackets, lugs projecting rearwardly from said brackets, a hollow cap surrounding said lugs, and having two open slots, an inturned flange element on said cap, and an extending screw threaded stem on said cap, a knurled knob on said stem provided with a flanged base for securing said bars in adjustment, another pair of bent bars secured to the upper section of said transparent plate, said bars passing through brackets on said transparent plates, and through the slots in said cap, and a stem provided with a knurled head passing through said first named stem for clamping said last named bars in adjustment in said brackets.

1,301,309. JAR-HOLDER. RUFUS A. PARENT, South Tacoma, Wash. Filed July 18, 1918. Serial No. 245,540. 2 Claims. (Cl. 65—26.)



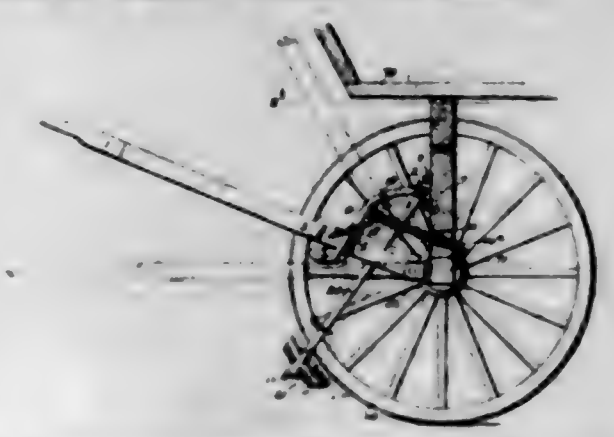
1. A jar holder comprising a pair of inverted substantially U-shaped jaws pivotally connected together near their center, each jaw being formed from a flat strip of metal, each jaw provided near its outer ends with notches having shouldered portions therein, a band in said notches and bearing against said shouldered portions and being prevented from accidental displacement off the jaw by said shouldered portions, and said band being stitched near its center, substantially as shown and described.

1,301,310. METAL SEAL AND FASTENER. ANTON J. PAROUBEK, Beacon, N. Y., assignor to American Metal Seal Company, Beacon, N. Y., a Firm consisting of Anton J. Paroubek and Henry Hurlimann. Filed June 1, 1918. Serial No. 237,714. 4 Claims. (Cl. 24—67.)



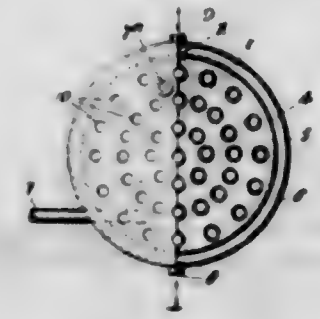
1. A seal and fastener comprising two opposed and separate members each adapted for attachment to a sheet of fibrous or flexible material, one member comprising a base portion having fastening prongs thereon and a tubular portion, and the second member having likewise fastening prongs and a tubular portion adapted to enter the tubular part of the first member, the tubes being of thin material which permits a portion of the wall of one to be crushed into the wall of the other to lock them together.

1,301,311. SAFETY TRUCK-BRAKE. OTTO H. PASCHKE, Yakima, Wash., assignor to Automatic Truck Brake Co., a Corporation of Washington. Filed Oct. 7, 1918. Serial No. 257,278. 6 Claims. (Cl. 21—6.)



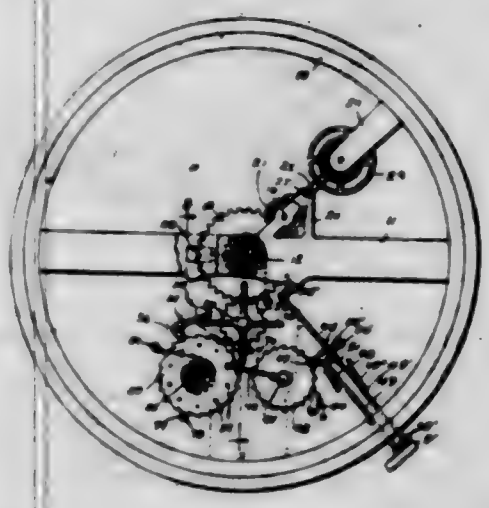
1. A brake mechanism for trucks that comprises, in combination with a wheeled axle, a brake frame hingedly mounted on the truck and including brake shoes arranged for contacting with the wheels, a tongue-like handle pivotally connected to the said axle independent of the brake frame to swing in the vertical plane and means cooperating with the handle and the brake frame automatically actuated by the predetermined lift or drop movements of the handle for moving the hingedly mounted brake frame into the applied position.

1,301,312. WATER-HEATER AND RADIATOR. NICHOLAS U. PARIS, Lancaster, Pa. Filed Apr. 8, 1918. Serial No. 227,310. 1 Claim. (Cl. 257—241.)



A water heater and radiator comprising a cylindrical casing having inlet and outlet openings to admit and exhaust the heating medium, an annular plate secured within the casing and forming therewith a circumferential heating chamber adapted to receive the heating medium, said annular plate and the side walls of the casing providing a water reservoir, inlet and outlet pipes for the reservoir, and a plurality of diagonally disposed and open-ended tubes passing through the reservoir and secured to the side walls of the casing, said tubes adapted to have air currents pass therethrough, substantially as set forth.

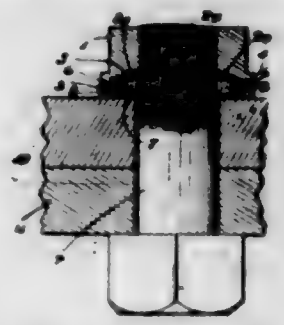
1,301,313. REGISTERING INSTRUMENT. ALBERT H. PERRY, Hartshorn, Alberta, Canada. Filed July 9, 1917. Serial No. 179,591. 2 Claims. (Cl. 235—104.)



1. In a registering instrument, a counting mechanism, means for actuating the same, a time indicating mechanism including a pinion adapted to complete one revolution during the passage of one second of time, resetting mechanism for returning the counting mechanism to zero including a pinion in meshing engagement with the first mentioned pinion, a resilient element associated with the second mentioned pinion and adapted to be placed under strain by rotation of said pinion when said rotation is induced by rotation of the first mentioned pinion, a pin on the second mentioned pinion, and a cam on the first mentioned pinion for engaging the pin of the second pinion, once during every revolution of the first mentioned pinion whereby to move the second mentioned pinion out of engagement with the first whereby to release the resilient element to permit actuation of the resetting mechanism, the second mentioned pinion returning to former engagement with the first subsequent to disengagement of the cam and pin.

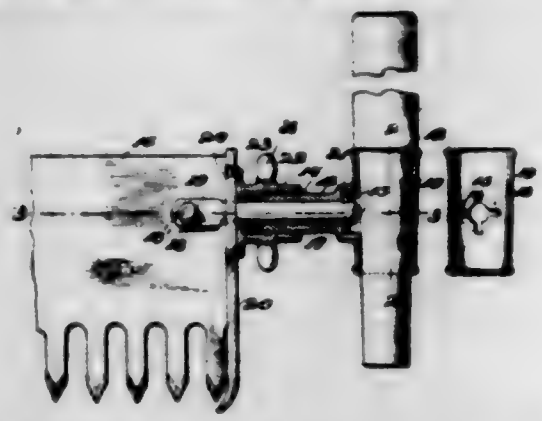
1,301,314. LOCK-NUT CONSTRUCTION. CHARLES C. PETERSON, Muskegon, Mich. Filed Jan. 26, 1919. Serial No. 273,629. 4 Claims. (Cl. 151—24.)

1. In combination, a bolt, a nut threaded on to the bolt, said nut having a recess in its inner side and guides projecting into said recess, and a locking element comprising a ring positioned around the bolt and two oppositely positioned outwardly extending lips turned at their ends toward each other, said locking element being



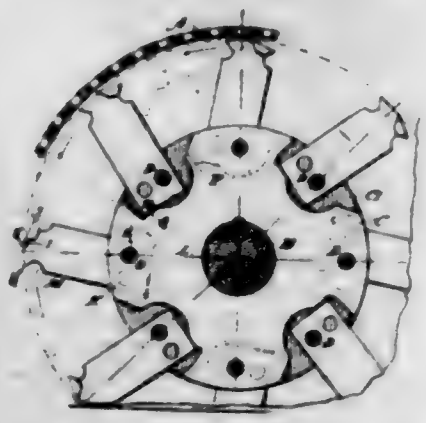
located in said recess in the nut and with the lips disposed between the guides, said inturned ends of the lips being adapted to engage with the threaded portion of the bolt, substantially as and for the purposes described.

1,301,315. DETACHABLE SAW-HANDLE. HERMAN J. PETERSON, Philomath, Oreg. Filed Aug. 7, 1917. Serial No. 184,920. 2 Claims. (Cl. 145—111.)



1. A detachable saw handle including a ferrule having a tubular sleeve formed integral therewith, the walls of said ferrule and sleeve being circumferentially continuous, there being laterally directed seats formed in the sleeve at its juncture with the ferrule and disposed at substantially right angles to each other, a pin extending longitudinally through the sleeve and having means at one end thereof for engagement with a saw, the pin between the saw engaging end and its opposite end being of uniform diameter, studs extending laterally from the pin and alternately engageable in said seats, a handle fitted to the ferrule and limiting the movement of said pin in one direction, and locking means applied to the sleeve and operating to apply strain between the saw and ferrule.

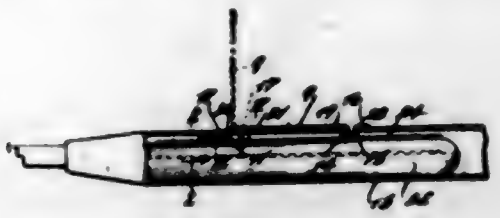
1,301,316. ROTARY HAMMER. HAROLD M. PLAISTED, Granite City, Ill. Filed June 17, 1918. Serial No. 240,393. 5 Claims. (Cl. 82—11.)



1. A rotary hammer comprising a flat bar shank having two holes at one end for pivotal mounting,—said holes

being located on opposite sides of a central longitudinal line,—and a T-head on said shank having four operative edges extending transversely in opposite directions from the faces of said shank,—each pair of said edges being substantially equi-distant from the center of the respective pivot holes, measured diagonally across the central longitudinal line.

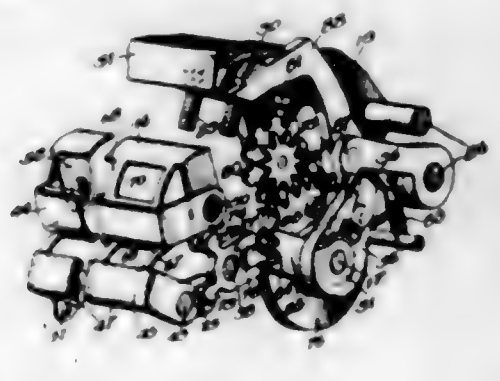
1,301,317. FOUNTAIN-PEN. LILLIAN PLANCHER, New York, N. Y., assignor to Marx Finstone, Brooklyn, N. Y. Filed Apr. 17, 1918. Serial No. 229,057. 6 Claims. (Cl. 120—46.)



2. In a fountain pen, a barrel having two openings in longitudinal alinement with each other, in combination with a sack contained in said barrel, a lever normally lying flat against the outside of said barrel, but adapted to be turned into upright position for compressing said sack, and a device interposed between said sack and the operating end of said lever and normally covering most of the top of said sack, the said lever having a part adapted to snap into one of these openings for holding the lever flat against the outside of said barrel and also having a part which enters the other opening to force said device against said sack and also with a shoulder, which provides a fulcrum for said lever by contact with the wall of the latter opening.

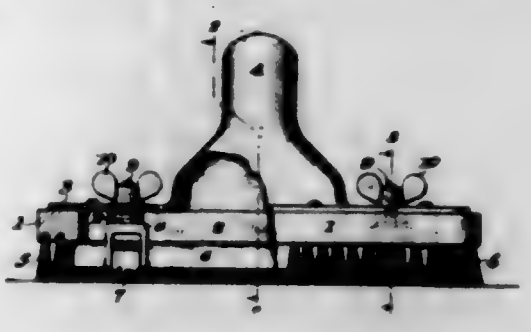
4. In a fountain pen, a barrel having an opening, in combination with a sack inclosed in said barrel and a lever loosely fulcrumed to said barrel in order that at will it may be raised to compress said sack or folded flat on the outside of said barrel, the said lever being provided with a bent resilient part for entering said opening as a catch to hold said lever flat and with a terminal part extending beyond said catch on the outside of the barrel for convenience in raising said lever.

1,301,318. CALCULATING-MACHINE. ARTHUR F. POOLE, Chicago, Ill., assignor to The Wahl Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 9, 1915. Serial No. 44,654. 20 Claims. (Cl. 235—59.)



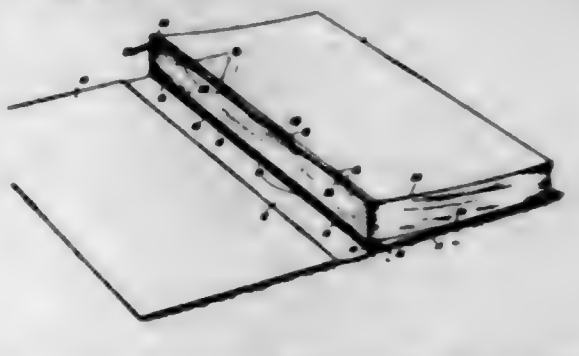
1. In a calculating machine, the combination of a bank of gear wheels, an actuating mechanism for said gear wheels, units inserting means independent of said actuating mechanism, an alining device normally in contact with said wheels and means between said units inserting means and said alining device to withdraw said alining device from the totalizer wheels at the beginning of the motion of said units inserting device, to hold said alining device withdrawn during the insertion of a unit and suddenly to restore said alining device to its original position at the completion of the motion of said units inserting device.

1,301,319. VACUUM CLEANING-BRUSH. JAMES P. QUAM, Milwaukee, Wis. Filed Feb. 2, 1918. Serial No. 75,666. 2 Claims. (Cl. 15—90.)



1. A vacuum cleaning brush comprising a body having a longitudinal slot in the lower side thereof and provided around the slot with bristles, an air deflector extending downwardly from the body around the slot inside the bristles and terminating above the lower ends of the bristles, and rollers arranged centrally within and lengthwise of the deflector and adapted to support the bristles and deflector in proper working relation to the surface to be cleaned.

1,301,320. BOOKBINDER. JOHN J. RALEK, New York, N. Y., assignor to Henry R. Huntting, Springfield, Mass. Filed Feb. 26, 1918. Serial No. 219,219. Renewed Mar. 14, 1919. Serial No. 282,734. 4 Claims. (Cl. 129—25.)



1. The herein described binding device for repeated use in binding books, the same comprising in combination a flexible back, a relatively stiff anchor member fixed along one edge of the back, and a plurality of movable devices carried by said anchor member for detachable connection with one element of the permanent binder for the book being bound therein.

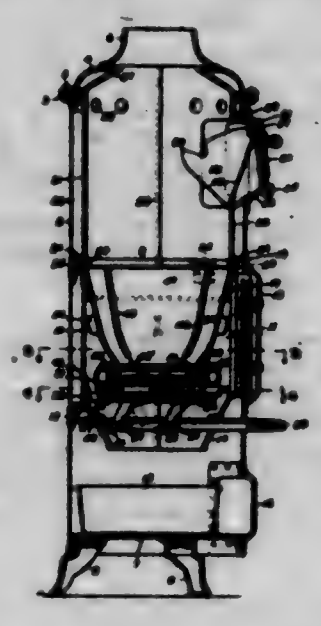
4. In a book binder, the combination with a plurality of units or signatures, cover strips embracing the same, a series of bendable holding devices passing through said cover strips and signatures, and a carrier for said holding devices extending along and parallel to one of said cover strips, said carrier constituting a means for temporarily holding the book during the binding operation.

1,301,321. POULTRY-ROOST. JOHN BARTHOLOMEW RAGAN, Bancroft, Iowa. Filed Sept. 17, 1917. Serial No. 191,908. 2 Claims. (Cl. 119—25.)



1. A device of the class described, comprising a perch bar and a trough arranged longitudinally beneath said bar, said trough being formed at one side with an outturned flange secured to said bar, and on the opposite side being spaced from said bar, the free margin of said trough being formed with an inturned flange.

1,301,322. INCINERATOR. EDWIN RUUD, Pittsburgh, Pa., assignor to Ruud Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 21, 1915. Serial No. 46,622. 4 Claims. (Cl. 110—18.)



2. In a furnace of the character described, a cylindrical lower portion provided with inclined outlet walls, a frame supported within the lower portion, a grate removably supported by said frame, an annular burner above the grate and supported by said frame, and a fire pot above and removably supported by said burner.

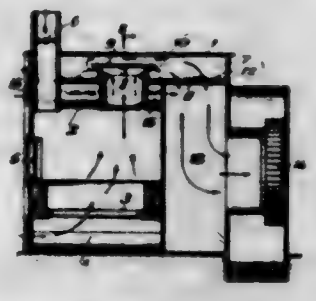
1,301,323. PROCESS OF MANUFACTURING ANTI-FRICTION-BEARINGS. JOHN W. SCHATZ, Poughkeepsie, N. Y., assignor of one-third to Herman A. Schatz and one-third to Grover H. Schatz, Poughkeepsie, N. Y. Original application filed Jan. 10, 1918, Serial No. 211,125. Divided and this application filed Sept. 21, 1918. Serial No. 255,066. 3 Claims. (Cl. 29—148.)



1. The described process of manufacturing an annular anti-friction bearing, consisting in shearing and swaging an integral steel ring or jacket at one of its inner edges in such manner as to form thereon an interiorly projecting ledge, forming two annular cup rings adapted to fit within the jacket and against said ledge and conjointly to constitute the outer race, forming a cone or interior race ring, assembling the said parts together with suitable balls into a unitary, self-contained bearing and permanently holding them as so assembled by forming an interiorly projecting ledge upon the opposite inner edge of the jacket and pressing it against the adjoining cup ring.

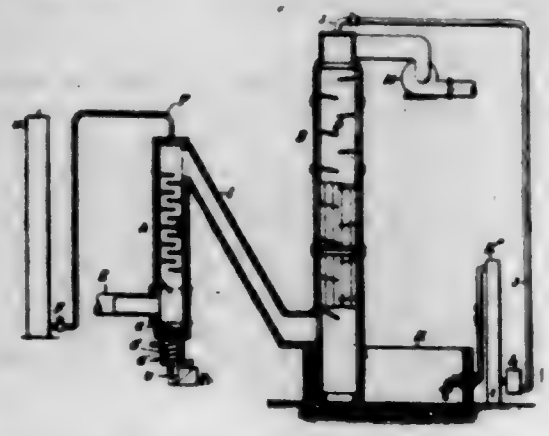
1,301,324. DEVICE FOR PRODUCING HOT AIR. JAKOB SCHLATTER, Zurich, Switzerland, assignor to Schlatter Freuth & Co., Zurich, Switzerland. Filed Nov. 29, 1918. Serial No. 264,725. 12 Claims. (Cl. 34—18.)

12. The combination with a furnace, of a receptacle, a filtering medium in the bottom thereof, means to admit flue gases and dust from the furnace into the receptacle above the filtering medium, means to admit fresh air beneath the bottom of the receptacle, a mixing chamber,



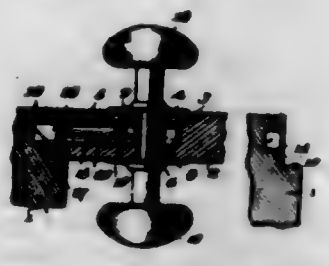
and a suction device to draw air from beneath the receptacle and gas through the filtering medium into the mixing chamber, for the purpose specified.

1,301,325. PRODUCTION OF HYDROFLUORIC ACID AND SALTS THEREOF. RALPH S. SHERWIN, East St. Louis, Ill., assignor to Aluminum Company of America, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 28, 1915. Serial No. 42,291. 10 Claims. (Cl. 23—1.)



5. The herein described method which comprises the successive steps of (a) generating hydrofluoric acid, (b) absorbing a portion of the hydrofluoric acid in water, (c) absorbing at least a portion of the remaining hydrofluoric acid in a liquid containing a base, all three of these operations being formed under pressure lower than atmospheric.

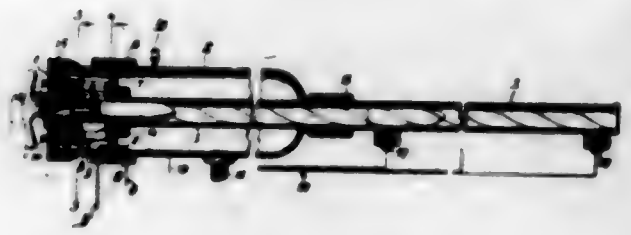
1,301,326. DOOR-LATCH. JOHN P. SILVA, Rockport, Mass. Filed June 7, 1916. Serial No. 102,264. 1 Claim. (Cl. 70—84.)



In a door latch, a latch casing having parallel side walls, a sliding bolt including a head movable inwardly and outwardly through one end of the casing, and a shank carrying said head, said shank being provided in its upper edge with a transverse notch adjacent to the head, a plate spring secured at one end to one side wall of the casing so as to lie longitudinally above and in the vertical plane of the bolt, the opposite end of said spring plate being free for flexing movements transversely of the bolt, a finger depending from the plate spring at a point between its ends, said finger being arranged to be engaged by one side of the bolt when the latter is projected, whereby the spring is bowed laterally in one direction and placed under tension, and said

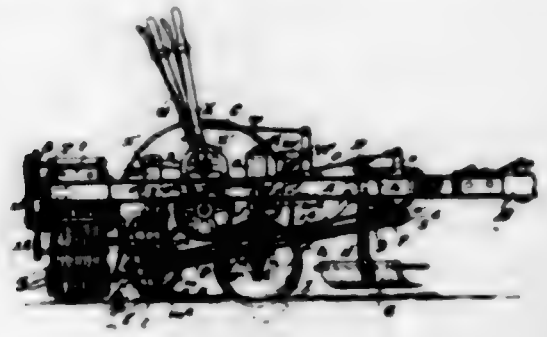
finger being adapted upon the retraction of the bolt to aline with the notch and thereby relieve the spring from tension and to be moved by the spring reaction into locking engagement with the notch in the bolt, and a device operated by contact with a door frame and movable through an opening in the opposite side wall of the lock casing across the bolt shank into engagement with the free end of the spring plate and press said plate laterally to withdraw the finger from the notch, leaving the bolt free for retraction, and knob actuated means for both projecting and retracting the bolt.

1,301,327. PNEUMATIC ELECTROMAGNETIC GUN. THOMAS B. SLATE, Washington, D. C., assignor to American Mechanical Improvement Company, (Incorporated,) Washington, D. C. Filed Jan. 9, 1918. Serial No. 211,023. 6 Claims. (Cl. 89—6.)



2. In a pneumatic electro-magnetic gun, the process of supplying a pneumatic fluid under pressure at the rear of a projectile continuously to drive the projectile from the barrel; lubricating the barrel by the pneumatic fluid flowing therethrough; and automatically cutting off the supply of pneumatic fluid when the projectile has passed a given point in the barrel, substantially as set forth.

1,301,328. BEET-TOPPER. GEORGE H. SMITH, Columbus, Ohio. Filed Dec. 16, 1913. Serial No. 807,046. 8 Claims. (Cl. 55—107.)



1. The combination of the main frame, the supplemental transversely arranged vertically movable H-shaped frame having the uprights L^2 adjacent to and braced by the side bars of the main frame and the cross bar L^2 intermediate of the ends of, and rigidly secured to, the uprights, the rotary transversely elongated gage drum having a shaft mounted in the said uprights, the cross shaft X^1 mounted on the main frame, the frame-suspending arms s carried by the said shaft, the links loosely connecting the cross bar of the supplemental frame with the said arms s, the springs s^2 interposed between the supplemental frame and the arms, and the topping cutter secured to the supplemental frame independently of the gage drum, said parts being arranged substantially as set forth, whereby the gage drum and the topping cutter are braced laterally against the side bars of the main frame and can rise and fall independently of the arms s but are positively limited in their downward movement by said arms.

3. The combination of the main frame, the transversely arranged frame having uprights adjacent to and braced by the side bars of the main frame and movable freely vertically and longitudinally relatively to the main frame and having the cross bar L^2 rigidly secured to the uprights, the transversely arranged elongated gage drum carried by the said supplemental frame and vertically movable with said frame and also independently thereof, the cutter below the drum secured to the supplemental frame and adjustable independently thereof longitudinally of the machine, the two pairs of elongated parallel links pivotally connected at their front ends to the supplemental frame and the rear ends of the two links of each pair being pivotally connected to one of the uprights by vertically adjustable pivotal connections, the means for suspending the supplemental frame from the main frame adapted to permit the supplemental frame to rise and to limit its downward movement with a positive stop at a predetermined point.

4. In a machine for topping root crops, the combination of a substantially horizontal topping cutter, an upright standard for supporting the cutter, the forward edge of which is sharpened to form a cutter, and a movable cutter coöperating with the said sharpened edge of the standard to produce a shearing cut action.

6. In a machine for topping root crops, the combination of a topping cutter and a central standard supporting the same, the forward edge of the standard being sharpened, a gage drum directly above the knife, and a rotating blade carried by the gage drum working against the cutting edge of the vertical standard.

8. In a machine for topping root crops, the combination of a horizontally disposed topping knife, a gage drum above the knife consisting of a series of disks spaced apart, and a central standard for supporting the cutter extending upward through the drum between two of the said disks.

1,301,329. BEET-TOPPING MACHINE. GEORGE H. SMITH, Columbus, Ohio. Filed Aug. 20, 1917. Serial No. 187,176. 5 Claims. (Cl. 55—107.)

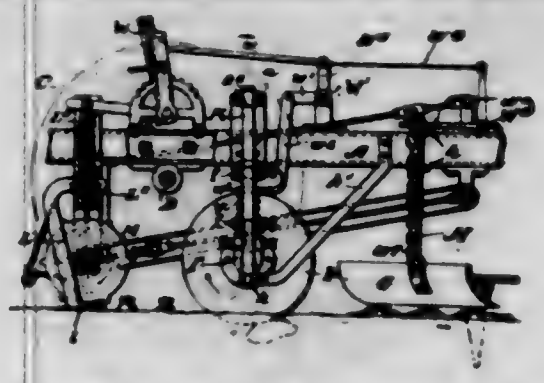


1. In a machine for topping beets while standing in rows, the combination of the main frame, the power transmitting ground wheels supporting the frame, devices for severing the leaves at points above the crowns, supplemental devices for severing the crowns from the beets, a longitudinally arranged horizontal rotary shaft positioned in rear of the crown severing devices and approximately in the central longitudinal plane of the machine, arms pivoted to the side of the machine and swinging vertically in transverse planes and supporting the said shaft at their inner ends, a series of rows of peripherally spaced brush tufts carried by said shaft, each tuft formed of flexible elastic filaments, and power devices actuated by the ground wheels and adapted to uniformly rotate the said shaft and brush filaments in all the positions, vertically, of the brush, said parts being arranged as set forth to cause said tufts to impinge on the surface of the ground, and to flex, under the action of gravity, on lines close to the beet rows, and after passing the beets to straighten, elastically, and throw the crowns laterally.

1,301,330. BEET-TOPPING MACHINE. GEORGE H. SMITH, Columbus, Ohio. Original application filed Dec. 16, 1913, Serial No. 807,046. Divided and this application filed Aug. 20, 1917. Serial No. 187,177. 5 Claims. (Cl. 55—107.)

1. The combination of the laterally elongated drum, the laterally elongated topping cutter, the opposed vertically

arranged disk cutters immediately in front of the topping cutter, and the supporting devices for the disk cutters



adapted to permit them to be adjusted laterally relatively to the outer ends of the topping cutter and of the drum.

1,301,231. ELECTRODE FOR ARC-WELDING. REUBEN STANLEY SMITH, Milwaukee, Wis. Filed Dec. 6, 1918. Serial No. 265,524. 16 Claims. (Cl. 219—12.)



1. An electrode for use in arc-welding, consisting of a metallic rod having thereon a covering of paper treated with a heat resisting compound.

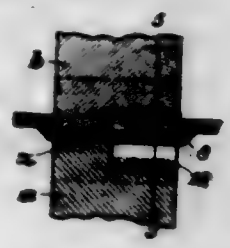
1,301,332. APPARATUS FOR MAKING PREPARED ROOFING. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed Oct. 5, 1918. Serial No. 257,078. 3 Claims. (Cl. 164—28.)



3. In a combination in a machine of the class described a punch roll having a punch rib extending circumferentially thereof, a die roll having an opening to receive the punch, said punch and die opening being of dovetail formation, both transversely and longitudinally, and said die opening communicating at its larger end with an adjacent free space for the discharge of the cuttings, substantially as described.

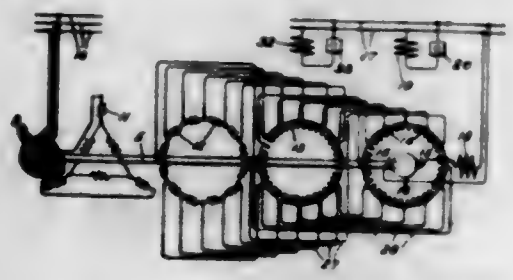
1,301,333. PUNCH AND DIE FOR EMBOSSING CHARACTERS AND RAISING BOSSES THEREFOR PREVIOUS TO THE EMBOSSING ACTIONS. CHARLES A. STICKNEY, Chattanooga, Tenn., assignor, by direct and mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1918. Serial No. 227,269. Renewed Mar. 6, 1919. Serial No. 281,076. 2 Claims. (Cl. 101—23.)

2. A punch and die for embossing metal plates, said die having a face with a character forming recess and a laterally disposed recess which in coöperation with the punch will displace the metal of the plate to form a raised base for the embossing of the next character thereon by said character forming portion, said laterally disposed recess having marginal ribs extending from one side of the die and projecting above the plane of the character



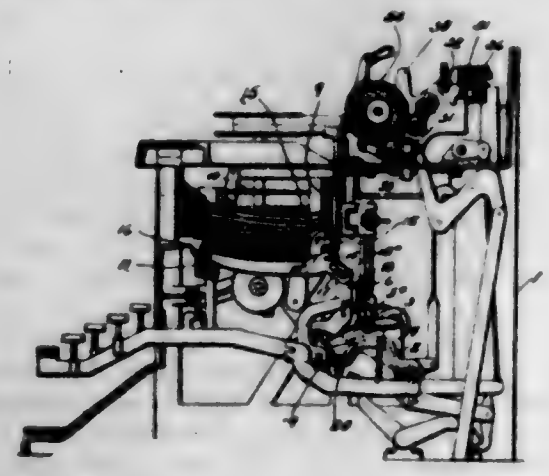
forming face and in line with the upper and lower portions of said face, said ribs being of a length substantially equal to the width of the character forming face, said punch having portions complementary to the character forming recess and the laterally disposed recess, substantially as described.

1,301,334. ELECTRICITY TRANSFORMING AND CONVERTING APPARATUS. HENRY B. SUMMERHAYES, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 7, 1917. Serial No. 166,854. Renewed Feb. 13, 1919. Serial No. 276,863. 7 Claims. (Cl. 171—123.)



2. An electricity transforming and converting apparatus comprising in combination means including a rotatable shaft for receiving polyphase alternating current electric energy and delivering direct current electric energy, a transformer having a magnetic core mounted on said shaft, an auxiliary dynamo-electric machine having an armature winding carried by said core, and means electrically connecting said armature winding to said first mentioned means and to the secondary winding of said transformer.

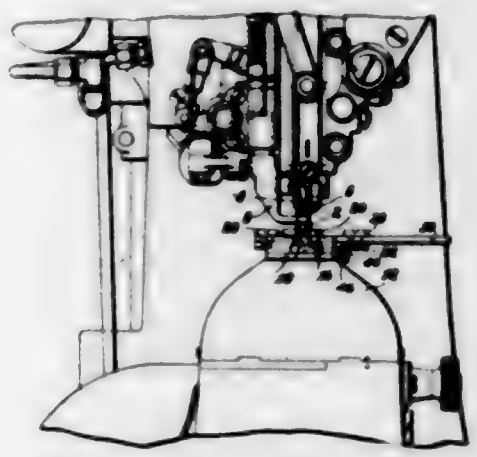
1,301,335. TYPE-WRITING MACHINE. OTTO THIEME, St. Louis, Mo., assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 9, 1916. Serial No. 124,650. 8 Claims. (Cl. 197—97.)



1. In a machine of the class described, a type basket mechanism including a shiftably mounted frame, type

bars pivoted therein, a universal bar mounted on the frame and operable by the type bars, rock shafts mounted on the frame and having pivotal connection with the universal bar whereby they are rocked upon movement of the latter, link connections between the rock shafts for equalizing their movements, operating means for the type bars, and means for transmitting movement from the rock shafts.

1,301,336. MACHINE FOR OPERATING UPON LEATHER. LAURENCE E. TOPHAM, Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 2, 1915. Serial No. 18,688. 10 Claims. (Cl. 112—20.)



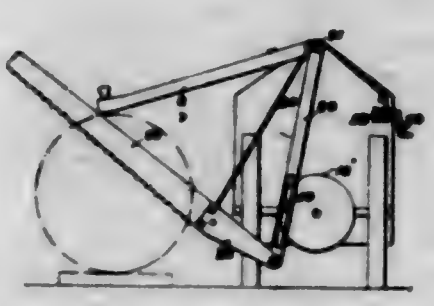
1. A machine for operating on leather having, in combination, mechanism for operating upon the work, a fixed support, edge gage mechanism mounted thereon comprising an edge gage, and mechanism for locking the gage and for moving the same including an operating and locking lever having an operating handle and constructed and arranged to be operated to unlock the gage and move the same from one operative position to another relative to the point of operation of the operating mechanism by a substantially continuous movement of the operating handle.

5. A machine for operating upon leather having, in combination, means for operating upon the work, an edge gage, an edge gage slide, a plate upon which the slide is mounted having a locking notch and an arc shaped face leading to the notch, a lever pivoted substantially at the center of the arc shaped face, and an operating and locking lever pivoted to the first lever and having a projection for engaging in the locking notch to lock gage, adapted to slide along the arc-shaped face of the plate when the operating and locking lever has been operated to disengage the projection from the notch and is moved bodily to move the gage.

7. A machine for operating on leather, having, in combination, mechanism for operating on the work, an edge gage, a movable edge gage carrier, mechanism for operating and locking the gage including an operating and locking lever pivotally movable to lock and unlock the gage and bodily movable to move the gage, and having a locking projection, and a plate upon which the edge gage carrier is mounted, having a locking notch to receive the projection, and a smooth contact face leading from the notch along which the locking projection on the lever is adapted to slide during the bodily movement of the lever.

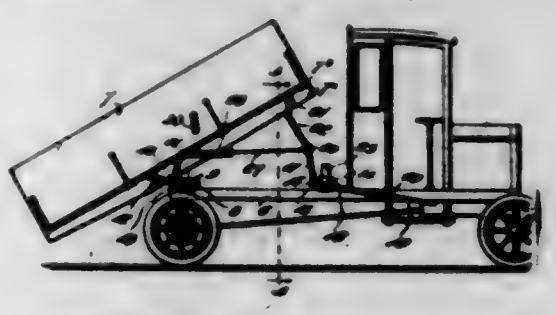
1,301,337. CUTTING-OFF MACHINE FOR TRUNK TIMBER. LOUIS NARCISSE THIVOLAY, Paris, France. Filed Sept. 26, 1918. Serial No. 255,843. 2 Claims. (Cl. 143—68.)

1. In a sawing machine, a fulcrum, a saw-supporting link pivotally carried by said fulcrum, a saw movable with said link, a lever arm pivotally mounted on said fulcrum and carrying a means for securing the lever to the log to be sawed, a winch, and a cable passing over said



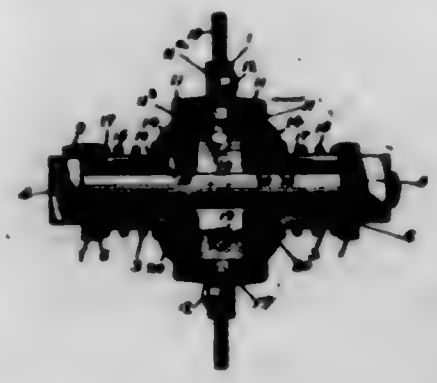
fulcrum and having one of its ends connected to the saw and its other end connected to said winch.

1,301,338. DUMPING MECHANISM FOR AUTOMOBILE TRUCKS. HERMAN UHLRIG, Wamego, Kans. Filed Aug. 8, 1918. Serial No. 248,918. 3 Claims. (Cl. 21—20.)



1. In a dumping vehicle comprising a supporting frame and a box mounted to be rocked on the frame; a lever fulcrumed on said frame, a link pivotally connected to said lever and to said box, and a flexible element connected to said box and to the pivotally connected lever and link, the said flexible element being just sufficiently long to cooperate with said box and lever in holding the said pivotal connection at a point slightly beyond the common axial plane of the fulcrum of said lever and the pivot that connects said link to said box, substantially as shown and described.

1,301,239. BEARING FOR GROUND-WORKING DISKS. WILLARD A. VAN BRUNT, Los Angeles, Calif. Filed Apr. 1, 1918. Serial No. 225,921. 8 Claims. (Cl. 64—27.)



1. In a bearing of the character described, an axle provided with an oil chamber, and a disk hub journaled on said axle about said chamber, said hub being extended inwardly toward the axis of said axle so as to inclose the bearing surface of said axle to a point above the bottom of said chamber in the working position of the parts, said chamber having an oil passageway leading to the bearing surfaces between the same and said hub.

1,301,240. AUTOMATIC AIR-VALVE FOR INTERNAL-COMBUSTION ENGINES. AUGUST L. WAGNUMB, Los Angeles, Calif., assignor, by mesne assignments, to U. S. Grant Hinton, Providence, R. I. Filed Feb. 27, 1917. Serial No. 152,141. 2 Claims. (Cl. 251—11.)



1. In a device of the character described comprising a removable cylinder, a shaft secured across the bore of said cylinder at right angles to the centerline and at one side thereof, a flapper valve rotatably mounted on said shaft, a lip formed from the material of said cylinder and bent at right angles thereto within said bore, a spring attached to said valve and interposed between the same and said lip for normally closing said valve, a stop formed from the wall of said cylinder and adapted to extend into the path of said valve, and a flange formed at the end of said cylinder for limiting the movement of the device when inserted into a carbureter intake pipe.

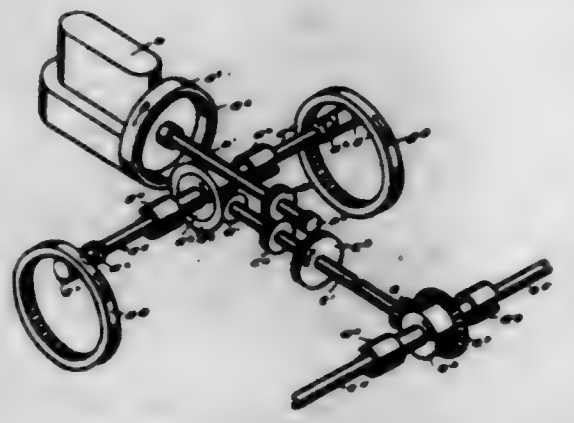
1,301,241. SELF-FEEDING PENCIL. JOHN C. WAHL, Chicago, Ill., assignor to The Wahl Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 5, 1918. Serial No. 210,517. 7 Claims. (Cl. 120—14.)



5. In a mechanical pencil, the combination of a casing, a tip, a spiral magazine rotatably mounted within said casing and having a central portion concentric with said tip, a plunger, and means to advance said plunger into said central portion.

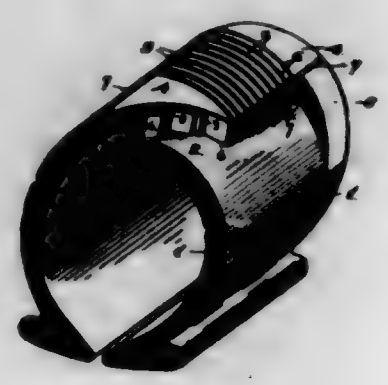
1,301,242. MOTOR-VEHICLE. MAURICE WALTER, New York, N. Y. Filed Sept. 12, 1916. Serial No. 119,842. 6 Claims. (Cl. 180—49.)

1. In a motor vehicle, in combination with the axles, the vehicle frame spring supported thereon, the four wheels and the motor shaft, driving shafts for the pairs of wheels, a differential gear for each pair of driving shafts, the front differential gear being mounted directly behind the motor, a power distributing shaft having pinions on its ends engaged operatively with said differ-



ential gears, a transmission casing in which the front differential is disposed and a housing for the rear differential mounted on the vehicle frame.

1,301,243. NON-SKID TIRE. HERBERT R. WATERMAN, San Francisco, Calif. Filed July 23, 1917. Serial No. 182,351. 2 Claims. (Cl. 152—14.)



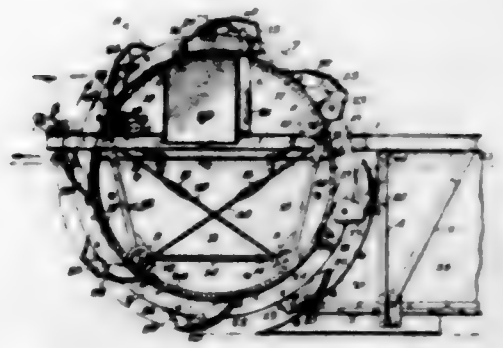
1. A non-skid tire comprising a casing; alternately diagonal strips of rubber arranged around the tread of the casing; vertically disposed strips of fabric secured between the diagonal rubber strips to engage the pavement to prevent a longitudinal and lateral movement of the casing relatively to a pavement; and circumferential side strips extending from the ends of the diagonal rubber and fabric strips to the sides of the casing.

2. A non-skid tire comprising a casing; a series of diagonal rubber strips arranged around the tread of the casing; a series of triangular rubber portions arranged at regular intervals between groups of the rubber strips to alternate the direction of adjacent groups; vertically disposed fabric strips arranged between the diagonal strips and triangular portions to engage a pavement to prevent a longitudinal and lateral movement of the casing relatively to the pavement; a circumferentially arranged strip on each side of the diagonal rubber portions and fabric strips; and a chamfered side strip extending from each circumferentially arranged strip to the sides of the casing.

1,301,244. TRENCH-DIGGING MACHINE. LEWIS WEHRUM, Milwaukee, Wis., assignor to Pawling and Harnischfeger Company, West Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 16, 1917. Serial No. 162,963. 8 Claims. (Cl. 37—29.)

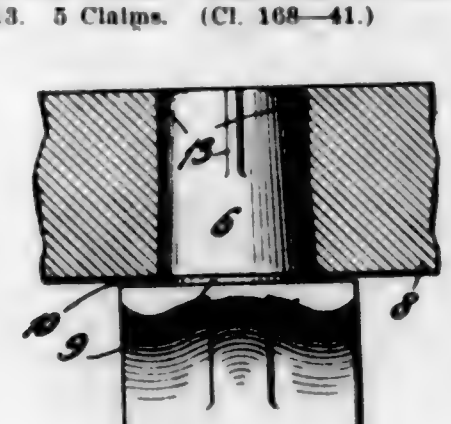
1. In a trench digging machine, a digging wheel comprising a pair of spaced angle rings set with their vertical sides adjacent to each other and forming a vertical

slot between them in open communication with the interior of the wheel, and buckets having vertical webs in-



serted and pivotally secured in said slot at intervals around the periphery of the wheel.

1,301,345. HORSESHOE-CALK. RICHARD WHITAKER, Jr., New Brunswick, N. J., assignor to Manufacturers Iron & Steel Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Aug. 27, 1918. Serial No. 251,613. 5 Claims. (Cl. 168—41.)



3. A horseshoe calk comprising a head and a tapered shank, the shank being provided with a plurality of ribs the outside edges of which lie parallel to the axis of the shank.

1,301,346. ATTACHMENT FOR SEED-PACKAGE-FILLING MACHINES. HERMAN H. WILLIAMS, Minneapolis, Minn., assignor to Northrup, King & Co., Minneapolis, Minn., a Corporation. Filed Dec. 3, 1918. Serial No. 265,153. 5 Claims. (Cl. 271—87.)



5. The combination, with a seed package delivering means, of a stationary trough whereto the filled packages of seeds are delivered, a receiving tray for said packages, standards projecting upwardly on each side of said trough and having vertical slots therein, and means mounted in said slots and adjustable therein toward and from said trough and under which the filled packages of seeds pass for tilting said packages backwardly so that their lower ends will be in advance of the upper portions thereof, for the purpose specified.

1,301,347. WELDER'S TOOL. ROY O. WILLIAMS, Columbus, Ohio. Filed Feb. 24, 1919. Serial No. 278,656. 6 Claims. (Cl. 219—8.)



1. In an electrode holder, a main structure, a jaw member pivotally carried by said structure, and an actuating handle for said member formed to include a heat resisting portion, said latter operating to maintain the temperature of the actuating end of the handle below that of the jaw member under working conditions.

1,301,348. CAN-FEEDING DEVICE. RAY O. WILSON and ARTHUR D. SUMNER, Los Angeles, Calif., assignors of forty one-hundredths to Franklin F. Stetson, Los Angeles, Calif. Filed Jan. 14, 1916. Serial No. 72,057. 10 Claims. (Cl. 193—1.)



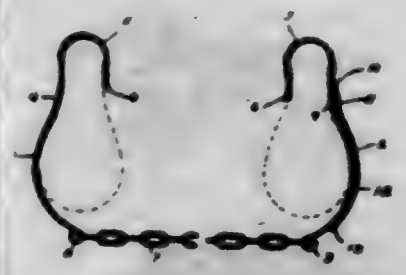
1. In a can feeding mechanism, a horizontally disposed rotatable disk, a series of radial slots formed therethrough, can engaging members operating through said slots and having vertical extending inner portions normally extending above the surface of the rotatable disk, and having outer portions normally below the surface of the rotatable disk, a can retarding means whereby the cans are retarded until engaged by the can engaging members, means for raising the outer portions of the can engaging members above the face of the disk, and a can run-way disposed above said disk whereby cans may be engaged and advanced by said mechanism.

6. In a can feeding mechanism, the combination of a pair of rotatable disks arranged horizontally alongside of each other, means for rotating said disks at corresponding peripheral speeds, a horizontal guide chute extending across one of said disks, a friction roller concentric with the last mentioned disk mounted to rotate in unison therewith, coöperating with the guide chute to engage cans in the latter and limit the speed of their advance, and means carried by said last-named disk for advancing the cans along said chute after being released by the friction member and for delivering them to the other disk.

8. A timing and delivering apparatus for timing and delivering articles to a given point at predetermined intervals of time comprising a rotating support, radial ribs associated therewith and movable with the support, stationary guides disposed eccentrically relative to axis of rotation of said support for moving the articles radially and for retarding the forward movement thereof for placing the articles in contact with the radial ribs.

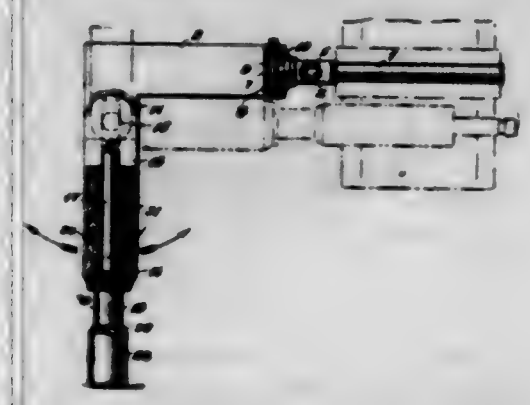
10. A can conveying and accelerating rotary disk having means for guiding the cans horizontally thereon, means movable to points above and below the surface of the disk for engaging the rear sides of the cans when on the outer part of the disk, and means for first spacing the cans near the center of the disk.

1,301,269. ANIMAL-HOPPLE. LEWIS D. WYLDE, Turlock, Calif. Filed July 11, 1918. Serial No. 244,604. 1 Claim. (Cl. 119—105.)



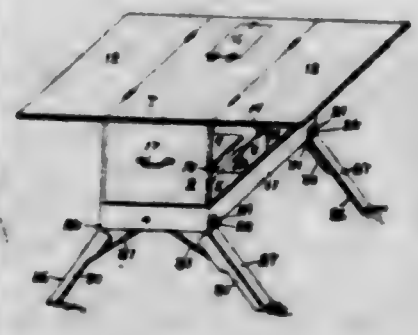
An animal hopple comprising a pair of leg engaging members, each member consisting of an arm of compound curvature provided at its rear end with a tendon embracing loop and at its front end with an eye, and a chain connected to the eyes, said arms being of considerable length to space their front portions beyond the front sides of the animal's legs when the hopple is in use, and said portions of the arms preventing the chain from engaging and chafing the animal's legs.

1,301,350. RADIUS AND CONTOUR CUTTING ATTACHMENT FOR GRINDING-MACHINES. ARTHUR ZEIDLER, Springfield, Mass. Filed Aug. 30, 1917, Serial No. 188,994. Renewed Mar. 15, 1918. Serial No. 222,908. 1 Claim. (Cl. 125—11.)



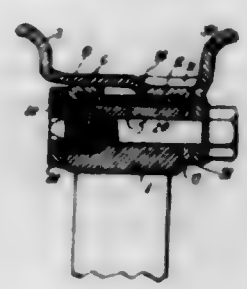
In a cutting attachment for grinding machines comprising a movable support, a cutter carrying rod passing through the support, and a plurality of detachably connected sleeves surrounding the portion of the rod between the support and the cutting extremity, one of the sleeves being detachably connected with the support.

1,301,351. PORTABLE COMBINED PROVISION-BOX AND TABLE. PAUL J. ACKELS and MATHIAS E. ACKELS, Sidney, Nebr. Filed Nov. 30, 1918. Serial No. 264,824. 5 Claims. (Cl. 190—12.)



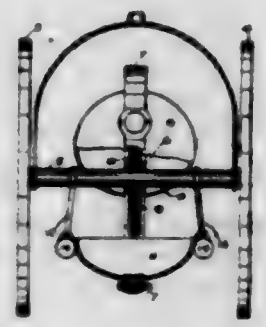
1. A portable combined provision box and table, comprising a rectangular box body, foldable legs, each composed of a piece of right angled angle-iron, an attaching flap spring hinged to an end of one flange of said angle-iron and adapted to be fastened to the vertical side of the box to normally swing said flange against the bottom of said box and the opposite flange against the vertical outer wall thereof, a brace rod having one end hinged intermediately to the leg and its opposite end shaped to form a head, a horizontal guideway on the bottom of the box to carry the head, a stop to engage the head to limit the outward swing of the leg, and a spring catch at the stop to releasably engage the head.

1,301,352. DEMOUNTABLE RIM. CHARLES E. F. AHLM, Cleveland, Ohio, assignor to William A. Neracher, Warren, Ohio, and Alfred Fritzsche, Cleveland, Ohio. Filed Feb. 8, 1917. Serial No. 147,412. 2 Claims. (Cl. 152—21.)



1. In a structure of the character described, the combination of a separable rim comprising a body portion having a part adapted to seat around a wheel felly, a tire engaging flange at one edge and an inwardly extending flange at the other adapted to abut the side of the felly, and a separable part carrying the other tire flange and having a substantially cylindrical flange overlying the body part, portions of said cylindrical flange being cut out and bent to lie alongside of the said inward flange of the body portion, and means for securing together said inward flange and said cut out portions.

1,301,353. TOY. ALBERT C. ARNOLD, East Hampton, Conn., assignor to The N. N. Hill Brass Co., East Hampton, Conn., a Corporation. Filed Dec. 16, 1918. Serial No. 267,015. 1 Claim. (Cl. 46—47.)



A wheel toy comprising a pair of wheels, an axle on which they are mounted, a bell-carrying rim smaller in diameter than the diameter of the wheels mounted on the center of the axle, bells secured to the said rim transversely thereto, and a striker loosely hung on the axle and adapted to come in contact with the bells as the toy is revolved.

1,301,354. HOSE CONSTRUCTION. CASSIUS M. CLAY BAIRD, Chicago, Ill. Filed July 11, 1917. Serial No. 179,857. 2 Claims. (Cl. 137—90.)

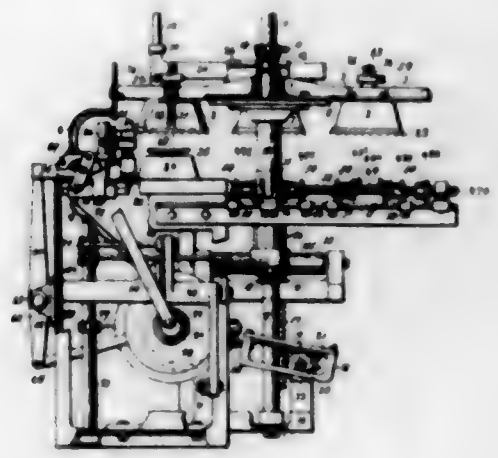
1. A hose, comprising an outer casing creased longitudinally so as to be flat when not in use, a rubber lining within said casing, a layer of cement attaching said lining to said casing intermediate said creases, leaving said lining free from said casing along and adjacent to said creases, laterally disposed reinforcing strips of fabric im-

posed upon the outer face of said lining along the free sections thereof, and strips of rubber imposed upon said



strips of fabric and secured to said lining but free from said casing.

1,301,355. BASKET-MAKING MACHINE. WILLARD F. BARNES, Mill Valley, Calif., assignor to S. V. Barnes, Mill Valley, Calif. Filed May 12, 1915. Serial No. 27,693. 14 Claims. (Cl. 93—41.)



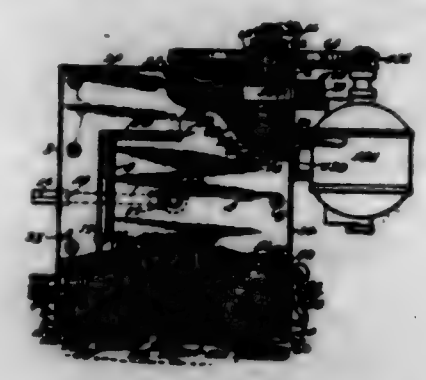
1. In a basket-making machine of the character described, a stationary mold-block, a cross-arm carrying formers on each arm, mechanism by which said cross-arm is raised and lowered, and also given a revolving movement so that the reciprocating formers will co-act with the mold-block, and means for folding slices over said mold-block, said means consisting of formers of such shape as to make the desired form of basket or other receptacle.

1,301,356. BEARING FOR CENTRIFUGAL EXTRACTORS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Co., Ltd., Chicago, Ill., a Corporation of New York. Filed Dec. 10, 1917. Serial No. 206,527. 6 Claims. (Cl. 64—48.)



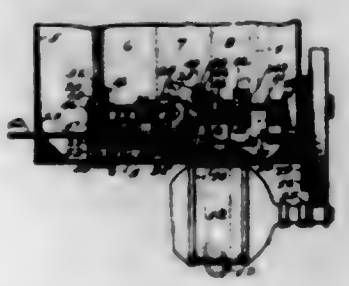
1. In a centrifugal extractor, a spindle bearing bushing having a laterally extending flange, a pair of bearing members engaging the said flange on its opposite sides, and means engaging one side only of the bearing members for spacing the latter apart from said bushing.

1,301,357. MOTION-PICTURE-ACTUATING MEANS. HERBERT S. BECKMAN, Los Angeles, Calif. Filed Aug. 17, 1917. Serial No. 187,718. 8 Claims. (Cl. 185—2.)



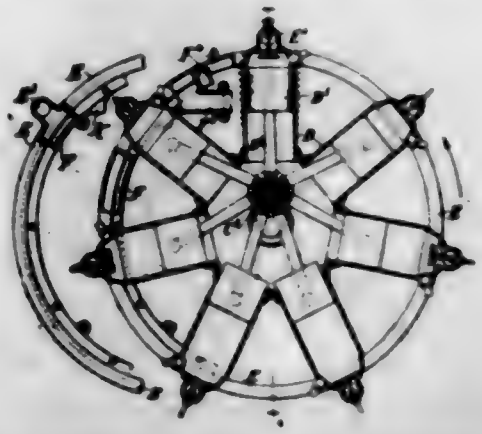
8. In a device of the character referred to, in combination, a housing, a spring motor within the housing, an electric motor detachably supported on the exterior of the housing, a driven element operably connected to a camera actuating shaft, gearing for connecting said motors with said driven element, means for selectively disconnecting said motors from said driven element, and means for rendering the spring motor inactive when the electric motor is in operation.

1,301,358. CAMERA-ACTUATING MECHANISM. HERBERT S. BECKMAN, Los Angeles, Calif. Filed Feb. 8, 1918. Serial No. 216,384. 7 Claims. (Cl. 185—40.)



4. In a camera actuating mechanism having a spring motor and an electric motor for winding the same, driving gearing operated by said spring motor, winding gearing connecting said electric motor with said driving gearing, intermittently operable elements actuated by and at each revolution of said driving and winding gearing for a portion of a revolution at each operation, and a switch alternately actuated by said elements for opening and closing the electric motor circuit for regulating the winding of said spring motor.

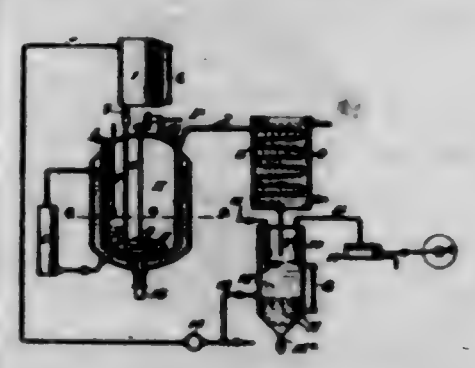
1,301,359. EXPLOSIVE-MOTOR. RICHARD BECKMAN and HERMANN WOLLBERN, New York, N. Y. Filed Mar. 27, 1918. Serial No. 224,976. 7 Claims. (Cl. 123—44.)



5. In an explosive engine, the combination with a plurality of cylinders which are rotatable about a common center, of a channel ring movable with the cylin-

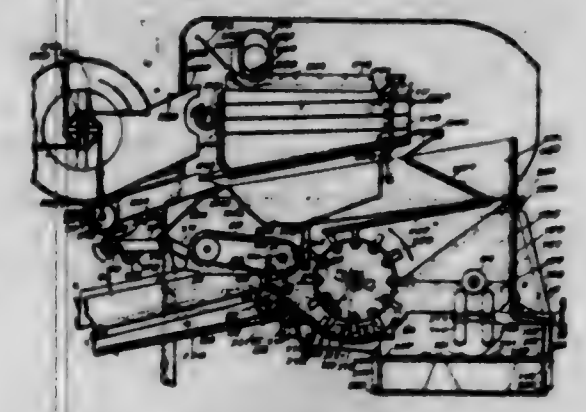
ders, fluid-conducting means leading from the channel ring to the cylinders, a stationary channel section arranged to form a fuel chamber with part of the channel ring during rotation of the latter, sealing devices between adjacent walls of the channel members, and a closure at each end of the stationary channel section.

1,301,300. PROCESS OF SULFONATION OF AROMATIC HYDROCARBONS. ANDREW EBNDER, Bogota, N. J., assignor of one-third to Edward S. Beach, Ridgefield, Conn. Substitute for application Serial No. 244,726, filed July 12, 1918. This application filed Sept. 12, 1918. Serial No. 253,778. 3 Claims. (Cl. 23—24.)



2. The herein-described process of making benzene sulfonic acid consisting in subjecting in vacuo and under a temperature of from about 120° C. to about 130° C. a mixture of benzene sulfonic acid, sulfuric acid and water having a ratio of water to free sulfuric acid of about 22:78, thereby reducing the ratio of the water to free sulfuric acid to below 22:78 and making the sulfuric acid remaining in the mixture available for further reaction with benzene.

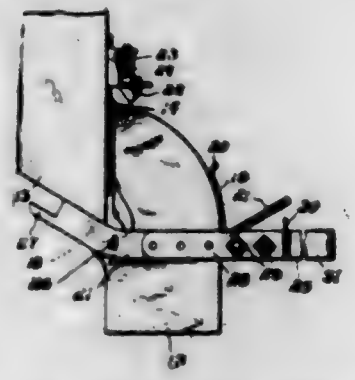
1,301,361. HARVESTER-THRESHER. BERT R. BENJAMIN, Oak Park, Ill., assignor, by mesne assignments, to International Harvester Company, a Corporation of New Jersey. Filed Nov. 19, 1914. Serial No. 872,924. 19 Claims. (Cl. 130—27.)



4. In a harvester thresher, a thresher cylinder, separator screens disposed directly above said cylinder, mechanism for delivering to said screens material threshed by said cylinder, and means for creating a blast of air between the screens to separate the chaff from the tailings and threshed grain and discharging the chaff from the machine, the path of the discharged chaff being free and unobstructed.

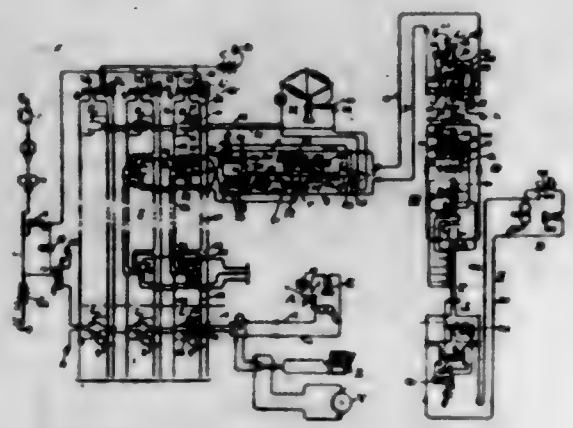
1,301,362. BAGGING MECHANISM FOR HARVESTER THRESHERS OR STRIPPERS. BERT R. BENJAMIN, Oak Park, Ill., assignor, by mesne assignments, to International Harvester Company, a Corporation of New Jersey. Filed Jan. 12, 1916. Serial No. 71,886. 8 Claims. (Cl. 130—46.)

1. In combination, a grain box having an inclined floor and an upwardly extending outer wall provided with a grain opening therein, a grain chute pivotally mounted on said box and disposed in said opening having its receiving end movable into engagement with said



bottom to close said opening, and means carried by said chute for preventing the escape of grain between said box and said chute in all positions of adjustment of said chute.

1,301,363. TELEPHONE SYSTEM. SIDNEY A. BEYLAND, Rochester, N. Y., assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Sept. 28, 1914, Serial No. 863,843. Renewed Feb. 17, 1919. Serial No. 277,647. 3 Claims. (Cl. 179—42.)



1. In a telephone system, the combination of an intercommunicating system, an attendant substation therein, a telephone exchange, a trunk line connecting the exchange to the intercommunicating system, a holding device for said trunk line, apparatus for connecting the attendant's station to the trunk line, electromagnetic mechanism associated with the trunk line controlling the holding device, a circuit for said electromagnetic mechanism governed by said apparatus, locking mechanism for said electromagnetic mechanism, including contacts governed by said electromagnetic mechanism and a trunk relay in said trunk having contacts in said locking mechanism controlled by said trunk relay.

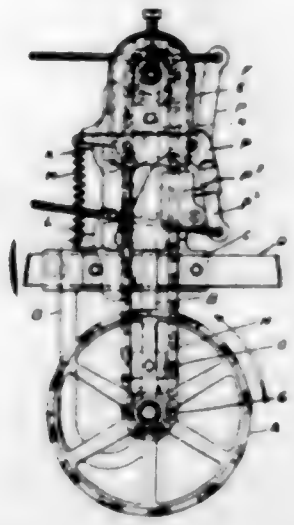
1,301,364. FORM FOR CONCRETE SILO CONSTRUCTION. BENJAMIN BIGGS, Seattle, Wash. Filed Jan. 6, 1919. Serial No. 269,780. 5 Claims. (Cl. 25—124.)

2. A form for molding silos and like circular concrete walls comprising segmental ribs extending about the form,



vertical staves, surfacing sheets secured to said staves, and means for supporting the staves from the ribs to permit supporting them at variable distances from the edge faces of the ribs, to thereby vary the radius of curvature.

1,301,365. PLOW. GEORGE COWLEY BINGHAM, Heybridge, Maldon, England, assignor of one-half to Edmund Ernest Bensall, Maldon, England. Filed Dec. 31, 1918. Serial No. 269,141. 5 Claims. (Cl. 97—54.)



1. The combination of an implement frame, a standard vertically movable thereon, a ground wheel on the standard, a sprocket wheel at the upper end of the standard, an endless chain passing over said sprocket wheel and operatively connected to the ground wheel, a catch lever connected with the frame and having a chain engaging catch and means for moving the lever to engage the catch with the chain to raise the frame and a catch automatically engaging the standard to retain the frame in raised position.

1,301,366. POWDER-GUN. DAVID B. BIRD, Chicago, Ill. Filed May 11, 1918. Serial No. 233,904. 3 Claims. (Cl. 43—14.)



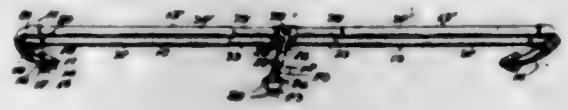
1. In a powder gun or the like, a hollow resilient collapsible container, a tube thereacross ported centrally within the hollow member and projected therefrom, and a collapsible resilient agitator revoluble on the tube, whereby the container and agitator may be grasped and plied.

1,301,367. ARTIFICIAL HAND. BARTHOLOMEW BOWLER, Toronto, Ontario, Canada. Filed Feb. 25, 1919. Serial No. 279,069. 3 Claims. (Cl. 3—12.)



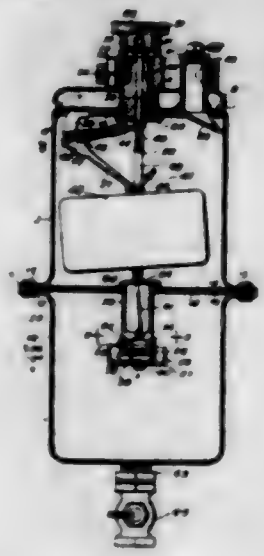
1. The combination of a hand provided with a boss for attachment to an artificial arm member; jaws formed on said boss; a hook member having a shank fitted between said jaws; a pivot pin passing through said jaws and shank, the shank above the pivot pin being divided or slotted; a latch pivoted in the shank, a notched quadrant being formed on one of the jaws with which said latch is adapted to engage; and a spring engaging the latch and the shank tending to retain the lever in any one of the notches in the quadrant with which it is engaged.

1,301,368. CURTAIN-HANGER. JAMES H. BOYD, Chicago, Ill. Filed Feb. 21, 1917. Serial No. 149,994. 11 Claims. (Cl. 156—19.)



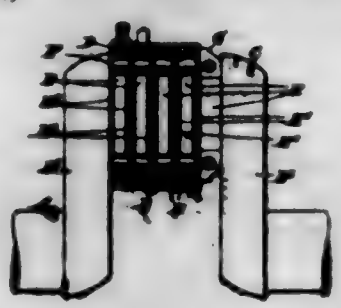
1. In a curtain hanger for double windows, the combination with end brackets and an intermediate T-bracket, of independent curtain rods between said T-bracket and end brackets, respectively, each of said rods being removably engaged with and supported by one of said end brackets and one arm of said T-bracket.

1,301,369. VACUUM-TANK. CLIFFORD C. BRADBURY, Oak Park, Ill. Filed Apr. 18, 1918. Serial No. 229,347. 18 Claims. (Cl. 156—36.)



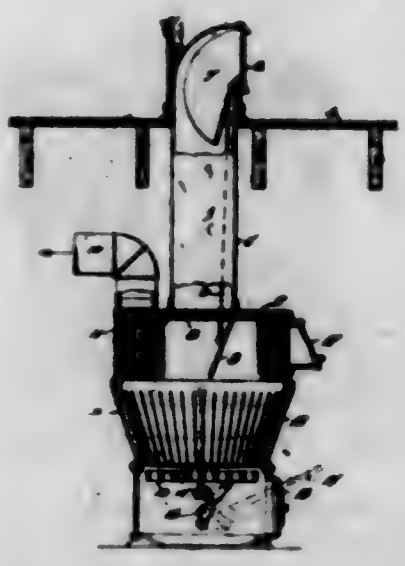
7. In a vacuum tank, a suction receptacle having an open end and a closed end and provided with an inwardly extending portion adjacent its closed end, and means coacting with the closed end of said suction receptacle to form an expansion chamber sealed from said suction receptacle comprising a plate and means for securing said plate to said receptacle with its periphery in sealing contact with said inwardly extending portion.

1,301,370. PETROL-ENGINE BEARING. GRANVILLE EASTWOOD BRADSHAW, Walton-on-Thames, England, assignor to himself and A. B. C. Motors Limited, Walton-on-Thames, England. Original application filed Mar. 12, 1917, Serial No. 154,356. Divided and this application filed May 15, 1918. Serial No. 234,836. 3 Claims. (Cl. 74—17.)



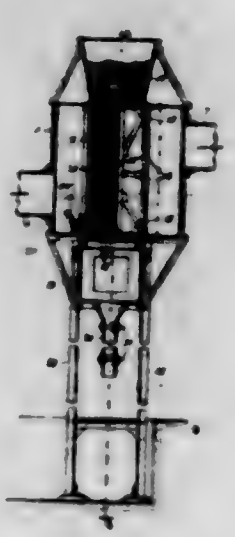
1. In a roller bearing for crank pins or shafts, of the kind in which the crank pin or shaft constitutes the inner race, the combination with said pin or shaft of an integral ring constituting the outer race, a circle of rollers between said inner and outer races, the relative sizes of said ring and rollers being such as to allow the ring to be passed upon the shaft and over any crank webs thereon, and a removable split ring upon the same pin or shaft adjacent to one side of the integral ring aforesaid, for the purpose of holding the said ring in position.

1,301,371. GARBAGE AND RUBBISH INCINERATOR. JOHN H. BRENNAN, Milwaukee, Wis. Filed Apr. 10, 1918. Serial No. 227,695. 1 Claim. (Cl. 198—22.)



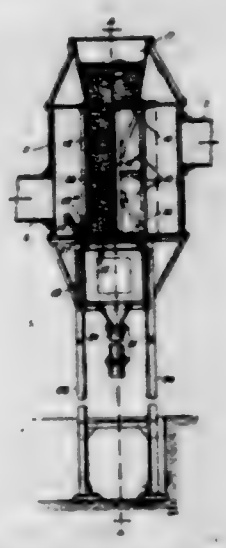
In an incinerator of the class described, a combustion chamber having a top provided with a central circular opening, a vertical receiving chute having its lower open end coincident with said circular opening, the upper end being disposed laterally and having its inlet opening positioned vertically, a flue pipe communicating with said top between said central opening and the wall of the combustion chamber, a cover hinged on the inlet end of the said chute at the lower edge of the opening thereof, a receiving hopper formed of a bottom and side walls and carried by said cover, said hopper bottom closing the chute upon the opening of the cover, a gate valve hinged to said chamber top at one edge of said central opening and movable to completely close the latter, and a flexible connection between said gate valve and the hopper bottom whereby said valve and hopper bottom will simultaneously close the chute upon the opening of said cover.

1,301,372. PROCESS FOR PURIFYING GASES AND FOR PRODUCING BRIQUETING MATERIAL. THOMAS LYNTON BRIGGS, Flushing, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed June 1, 1916. Serial No. 101,170. 7 Claims. (Cl. 183—122.)



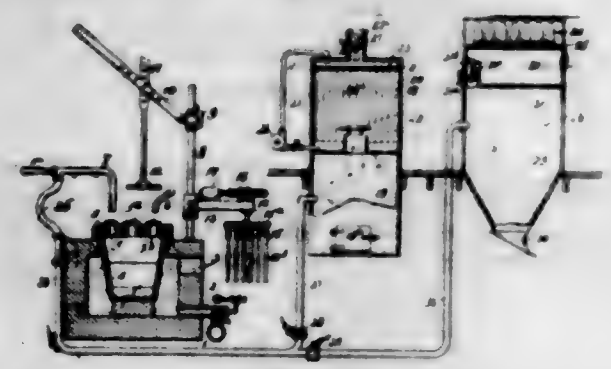
3. The process of purifying burner gas containing sulfuric acid which comprises passing the gas through a layer of granular material at a temperature above the condensation point of the contained sulfuric acid but below that at which sulfuric anhydrid begins to be formed in substantial amounts.

1,301,373. APPARATUS FOR PURIFYING GASES AND FOR PRODUCING BRIQUETTING MATERIAL. THOMAS LYNTON BRIGGS, Flushing, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Original application filed June 1, 1916, Serial No. 101,170. Divided and this application filed May 15, 1917. Serial No. 168,705. 3 Claims. (Cl. 183—46.)



1. An apparatus of the kind described comprising a chamber having an inlet and outlet, a pair of vertical screens spaced from each other and located in said chamber between said inlet and outlet, a layer of granular material in the space between said screens, said layer extending from the top to the bottom of said chamber, a series of grate bars in the bottom of said chamber in registry with the space between said screens whereby material may be removed from the bottom of said layer and a hopper at the top of said chamber communicating with the space between said screens whereby said layer may be coincidentally replenished at the top.

1,301,374. APPARATUS FOR RECOVERING METAL FROM SCRAP MATERIAL. JOHN W. BROWN, Lakewood, Ohio. Filed July 15, 1914. Serial No. 851,057. 8 Claims. (Cl. 266—16.)



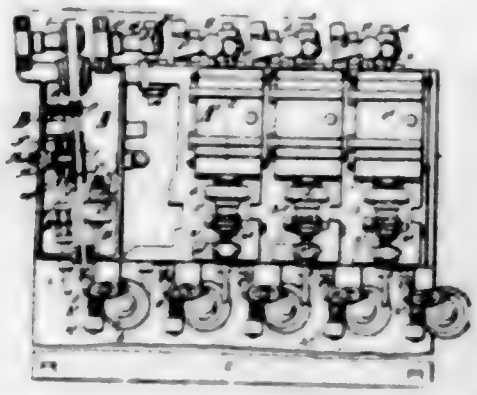
1. Apparatus for the recovery of metal from scrap metal material, comprising a melting pot, means for applying heat to such pot, and means for forcefully applying pressure to the material within said pot for the purpose of disrupting any globules in said material.

7. An apparatus for recovery of metal from scrap metal material comprising a melting pot, means for heating said pot, a stirring device associated with the pot, a conduit adapted to be maintained under suction, and a fume arrester comprising two chambers divided by a partition but communicating through an opening therein, one of said chambers receiving heavier particles, and means in the other chamber affording a large surface of contact between fumes and a condensing liquid.

1,301,375. GRINDING-MACHINE. LOUIS NAGLER BUGUIN, Zurich, Switzerland. Filed Nov. 8, 1916. Serial No. 130,281. 4 Claims. (Cl. 51—11.)

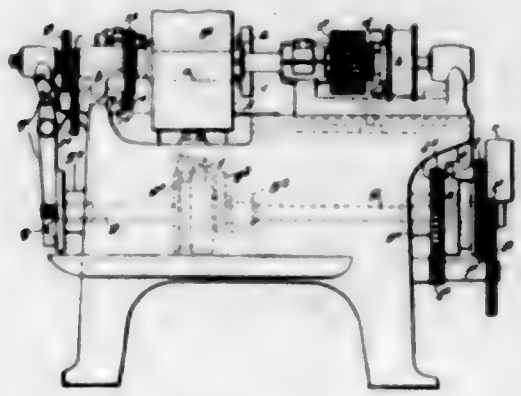
1. In a machine for grinding bottle mouths, the combination of a diamond tool, a slightly rotating top arm

carrying the same, a spring-controlled shaft slightly inclined from the vertical carrying said top arm and upright lever for turning said shaft and arm slightly in



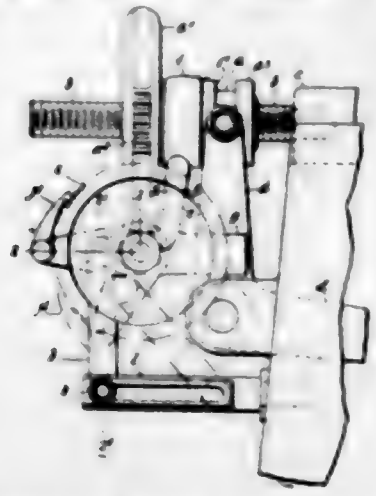
one direction counter to the spring, a cam for operating said lever, an adjusting screw at one end of said lever, and a projection carried by said shaft and coöperating with the adjusting screw, substantially as described.

1,301,376. MACHINE FOR GRINDING GLASS BOTTLES AND OTHER ARTICLES. LOUIS NAGLER BRUNER, Zurich, Switzerland. Filed Nov. 8, 1916. Serial No. 130,283. 3 Claims. (Cl. 51—3.)



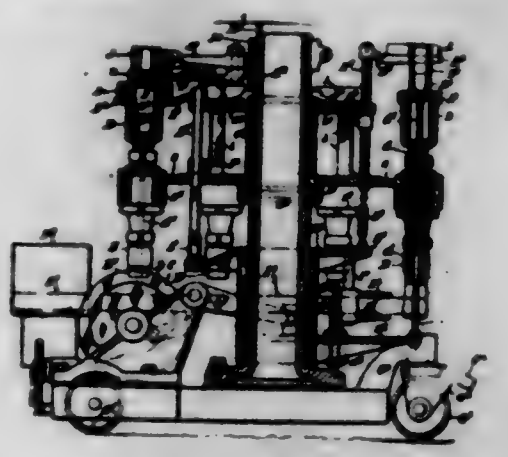
1. In a machine for grinding glass bottles, the combination of a chuck arrangement for holding the bottle at both ends, a rotary feed drum, a grinding disk and cams for automatically controlling the action of said chuck, drum and disk, substantially as described.

1,301,377. MACHINE FOR GRINDING OR TRUING BOTTLE-STOPPERS AND OTHER ARTICLES. LOUIS NAGLER BRUNER, Zurich, Switzerland. Filed Nov. 13, 1916. Serial No. 131,163. 2 Claims. (Cl. 51—3.)



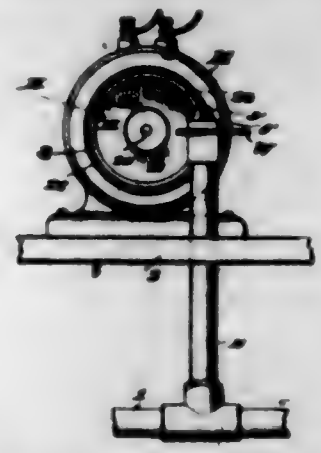
1. In a grinding or truing machine of the kind referred to, the combination of a slide carrying the grinder, a threaded stud connected with said slide, a grooved hub on said stud, a worm and worm gear for partly rotating such hub at each stroke, and a presser lever engaging in said grooved hub, substantially as described.

1,301,378. APPARATUS FOR MANUFACTURING HOLLOW GLASSWARE. LOUIS N. BRUNER, Zurich, Switzerland, and SIMON DOKE OLIVER, Hunslet, Leeds, England. Filed Oct. 12, 1917. Serial No. 196,425. 7 Claims. (Cl. 49—29.)



1. In a machine for the manufacture of hollow glass ware, the combination of a rotatable mold, a cup inside said mold to receive the molten glass and from which the glass spreads over the wall of the mold by the centrifugal action, and means for rotating said mold and cup, substantially as described.

1,301,379. CUTTING DEVICE FOR COPYING-MACHINES. GEORGE D. BUCK, St. Louis, Mo., assignor of one-third to Hickman P. Rodgers and one-third to Stephen D. Rodgers, St. Louis, Mo. Filed July 14, 1917. Serial No. 180,617. 3 Claims. (Cl. 29—103.)



1. A rotary saw comprising a rotatable saw holder having a lateral flange provided with an internal annular seat, projections extending inwardly from said internal annular seat, a saw blade provided with openings for the reception of said projections, said saw blade being in the form of a circular band fitted to said internal annular seat and extending laterally from one side of said saw holder, an expansible ring surrounded by said circular band and fitted to the inner face thereof, and means for securing said expansible ring so as to maintain the saw in firm engagement with said annular seat.

1,301,380. INCENDIARY PROJECTILE. JAMES FRANK BUCKINGHAM, Coventry, England. Filed July 2, 1917. Serial No. 178,264. 4 Claims. (Cl. 102—29.)



1. A hollow projectile comprising a metal shell provided with a front and a rear opening, and a filling for said shell comprising a homogeneous incendiary sub-

stance and provided with a passage therethrough adapted to register with said front and rear openings, said substance being adapted to melt when the propulsive charge of the projectile is fired.

1,301,281. INCENDIARY PROJECTILE. JAMES FRANK BUCKINGHAM, county of Warwick, England. Filed July 2, 1917. Serial No. 178,265. 5 Claims. (Cl. 102—29.)

1. In a hollow projectile of the kind described provided with a discharging orifice, a phosphorus filling and a heat conducting substance mixed with the phosphorus filling.

1,301,282. INCENDIARY PROJECTILE. JAMES FRANK BUCKINGHAM, Coventry, England. Filed July 2, 1917. Serial No. 178,266. 3 Claims. (Cl. 102—29.)



1. A hollow projectile comprising a hollow shell having an opening in the side, a plug for the rear of the shell, easily meltable incendiary substance within the shell and a fusible substance plugging the entrance to the opening, for the purpose specified.

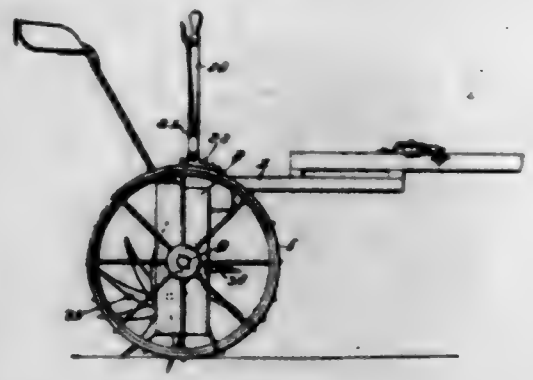
1,301,283. ANIMAL-FEEDING DEVICE. WILLIAM C. BUSSELL, Kankakee, Ill. Filed Aug. 10, 1918. Serial No. 249,251. 12 Claims. (Cl. 119—54.)



1. In an animal feeding device, a container having a delivery-port, a receptacle having a communication with said port, and means, including a medially pivoted gate mounted in said communication, a closure for the receptacle, and a resilient tension element operatively assembled and adapted to effect a closure of said communication when the closure is lowered and open the communication when the closure is raised.

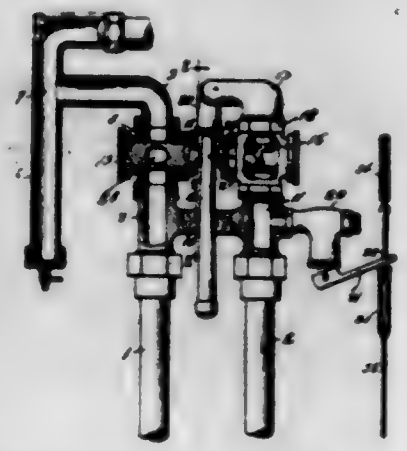
1,301,284. PULVERIZER. JESSE N. CARTER, Americus, Ga. Filed Jan. 9, 1918. Serial No. 210,997. 3 Claims. (Cl. 97—73.)

1. A pulverizer of the kind set forth comprising a frame, a shaft mounted for rotary movement in said frame, sleeves carried by the shaft in such a way as to permit their angular movement relative to the shaft, the sleeves being polygonal in cross-section, and a gang of tines carried by each sleeve, all the tines being formed with eyes conforming in shape to the cross-sectional shape of the sleeves with the eyes of each different in relative position from the eyes of the other tines, so that a whole



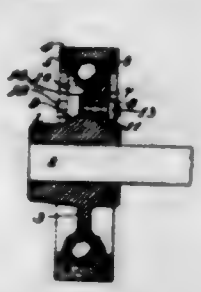
gang may be carried on a sleeve in such a manner that the free ends define a spiral.

1,301,285. FLUID-DISPENSING CONTROL. JOHN J. CATRON, Bonham, Tex. Filed May 7, 1918. Serial No. 233,063. 6 Claims. (Cl. 277—7.)



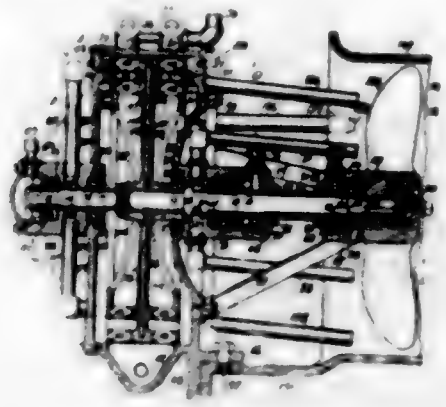
3. In a fluid dispensing control, an air admitting valve, a fluid discharge valve, an air cut-off valve, and a common operating member for all of said valves, in combination with an air release valve normally open, and means for closing said air release valve when said other valves are operated.

1,301,286. CLOSURE-HOLDING MEANS FOR ANTI-FRICTION-WHEELS. FRED CHEVALIER, Waterloo, Iowa. Filed Sept. 16, 1918. Serial No. 254,343. 2 Claims. (Cl. 164—36.)



1. An anti-friction wheel having a relatively fixed discoidal center and an annular rim rotatable thereround, said center and said rim having registering raceway grooves, anti-friction balls in said raceway, said center having a recess opening into the raceway, said recess having a concave ball-passage leading into the raceway to permit introduction or removal of balls into or from the raceway, a closure for said recess formed to fit its contours and having a convex boss adapted to fit said ball-passage to interlock therewith against sidewise displacement, and fastening-means for securing the block removably in said recess and passage.

1,301,387. COMPOUND TWO-STAGE TURBINE. CHARLES T. COX, Kearney, N. J. Filed Mar. 6, 1916. Serial No. 82,368. 5 Claims. (Cl. 286—8.)

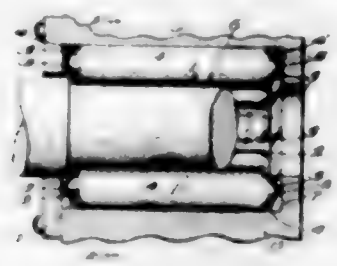


1. In a turbine the combination of a casing an impeller in the casing, a stuffing box for the casing, a vacuum chamber for the stuffing box, a duct spaced from the casing, piping leading from the stuffing box into said duct, a shaft for the impeller extending through the casing, the stuffing box and into the duct, and a fan wheel in the duct fastened to said shaft.

1,301,388. **PROCESS FOR THE PURIFICATION OF CRUDE PHTHALIC ANHYDRID.** COURTNEY CONOVER, Philadelphia, Pa., and HARRY D. GIBBS, San Francisco, Calif. Filed June 28, 1918. Serial No. 242,631. 7 Claims. (Cl. 23—24. (Filed under the act of Mar. 3, 1883, 22 Stat. L., 625.)

1. A process for the purification of phthalic anhydrid, which process consists in treating phthalic anhydrid and the substances which commonly accompany it in the crude state with a non-aqueous solvent, at a temperature above 30° centigrade, filtering, treating the solution with a substance capable of adsorbing color from non-aqueous solutions, crystallizing phthalic anhydrid from the partially decolorized solution by lowering the temperature, separating out the impurities by further lowering the temperature, and using the mother liquor again to dissolve the crude material.

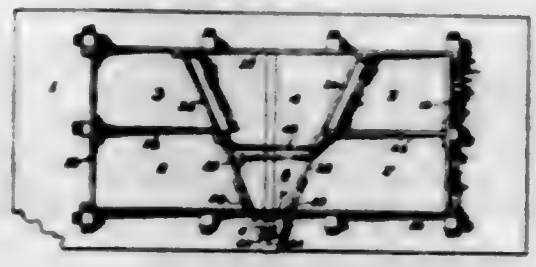
1,301,389. **ROLLER-BEARING.** GEORGE W. CONROW, Brooklyn, N. Y. Filed Mar. 13, 1918. Serial No. 222,074. 6 Claims. (Cl. 64—62.)



1. A roller bearing structure including a cage comprising ribs and flanges joined by the ribs; and bearing rollers between which said ribs are disposed, said flanges and the ends of said rollers having interengaging formations for assembling the flanges and rollers, at least one of said flanges having roller engaging portions that are each individual to a roller and are relatively movable across the general plane of such flange.

1,301,390. **FISH-SCOW.** WILLIAM COOK, Seattle, Wash. Filed Dec. 11, 1916. Serial No. 136,177. 2 Claims. (Cl. 114—0.5.)

1. A fish scow having a series of bins built upon its deck, the bins along one side having controllable discharge connection with a central compartment and a discharge chute communicating with said central compartment, the bins along the opposite side of the scow



having free discharge communication with said central compartment, whereby the scow may be listed to secure flow of fish to the discharge chute.

1,301,391. **COIN-CONTROLLED DELIVERY APPARATUS.** BENSON P. COOPER, Ithaca, N. Y. Filed Oct. 18, 1917. Serial No. 197,363. 2 Claims. (Cl. 194—97.)



1. In coin controlled delivery apparatus, the combination of a suitable casing having a coin chute, one wall of which terminates in an inwardly extending flange, an oscillatory delivery means mounted in said casing, a pivotally mounted dog for locking said means, and said flange extending beneath said locking dog.

1,301,392. **RELEASING-HOOK FOR LIFE-BOATS.** IRVING CORBER, Portland, Oreg. Filed July 17, 1918. Serial No. 245,367. 8 Claims. (Cl. 9—23.)

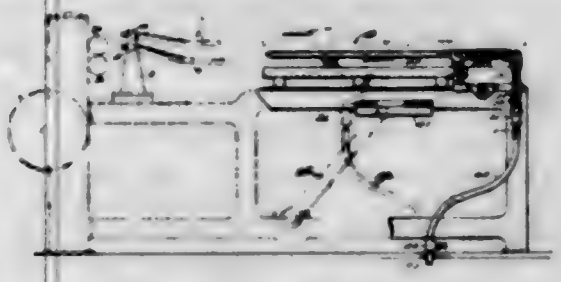


7. The combination of a supporting plate having a stop member at its upper end and a lug in advance of and spaced from said stop member, the intervening edge of the plate being indented, a hook pivoted upon said lug and having a rearwardly extending bill adapted to bear against the stop member, the under edge of the bill merging into the indented portion of the edge of the plate and the shank of the hook having an angular notch at its lower rear corner and having a curved edge at its

lower extremity, a dog pivoted upon the plate in rear of and below the hook and having its upper forward corner arranged to engage said notch, the forward edge of the dog at the upper extremity thereof being cut away to permit the dog to be disengaged from said notch while still holding the hook in closed position, and means for operating said dog.

8. The combination of a support, a hook pivoted thereon and coöperating therewith to retain a suspending device, and a dog pivoted upon the support and normally engaging the hook to hold the same in closed position, the hook being provided with an eccentric portion arranged to ride on and depress the dog when the latter is moved toward released position.

1,301,393. BAG-TURNING MACHINE. LOUIS C. COULTER, Portland, Oreg. Filed Aug. 2, 1918. Serial No. 248,816. 10 Claims. (Cl. 139—47.)



10. In a bag turning machine, combination pusher and blower members having combination pusher and discharge ends adapted to push and blow against the material of the bag, means for supplying air under pressure thereto, and means for operating the same in turning bags.

1,301,394. PROCESS FOR TREATING ALUNITE. ROY CROSS, Kansas City, Mo., assignor to F. H. Thwing, Kansas City, Mo. Filed Feb. 23, 1918. Serial No. 218,631. 4 Claims. (Cl. 23—18.)

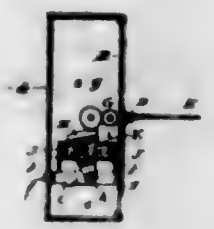
1. The process of utilizing alunite which comprises mixing such alunite with salt and calcining in the presence of steam.

1,301,395. DRILLING APPLIANCE. FRANK M. DALE, Sullivan, Ind. Filed June 21, 1918. Serial No. 241,116. 4 Claims. (Cl. 255—72.)



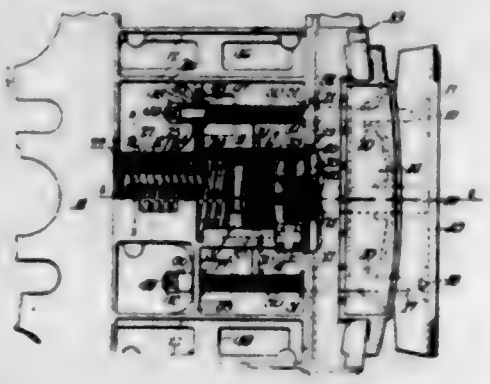
1. A drilling appliance having a rotative hollow core bit having boring cutters, core severing means, means for controlling the operation of said severing means normally rotatable with the bit and automatically operable by the contact of the core therewith to establish a relative rotative relation between the same and the bit, and including means for effecting the operation of said severing means by said relative rotation of the parts.

1,301,396. TRAFFIC-SIGNAL. WILLIAM A. DAU, Detroit, Mich. Filed Apr. 19, 1916, Serial No. 92,182. Renewed Mar. 15, 1919. Serial No. 282,963. 1 Claim. (Cl. 40—52.)



In a traffic signal, the combination with a suitable supporting means, an operating mechanism mounted thereon, of an indicator pivotally mounted on the supporting means and operatively associated with the operating mechanism, said indicating means comprising fixedly related wings disposed at an angle to each other to constitute separate indicating members as for "Go" and "Stop," the mounting of the indicator with reference to the supporting means being such that the respective indicating members in their indicating position occupy relatively different predetermined positions with reference to the supporting means.

1,301,397. BUFFING MECHANISM FOR CARS. ARTHUR C. DAVIDSON, Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company, a Corporation of Illinois. Filed Feb. 27, 1913. Serial No. 750,961. 25 Claims. (Cl. 213—39.)



1. In a buffing mechanism, the combination of a car underframe, a buffer beam and a pair of longitudinally extending parallel spaced members arranged in fixed relation to said underframe, said members having inwardly projecting gear-supporting flanges and bearing ribs, substantially as described.

1,301,398. SCREW FOR ATTACHING METAL PLATES. EDGAR K. DAY, Wheeling, W. Va., assignor of one-half to H. E. Dunlap, Wheeling, W. Va.. Filed Nov. 12, 1917. Serial No. 201,448. 6 Claims. (Cl. 85—41.)

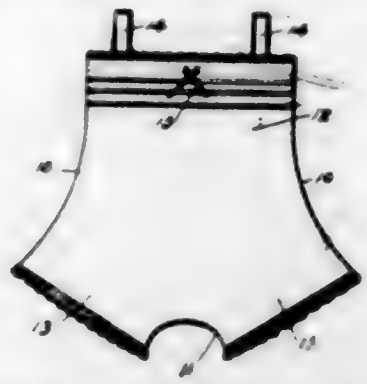


1. A screw for attaching metal plates, comprising a threaded body and a cap-like hollow head, said body having the threads thereof extending to a point within the hollow of said head, said screw having axially disposed means adapted for engagement with a driving tool whereby it may be advanced for drawing underlying portions of penetrated plates into cupped relation to said head.

1,301,399. COMBINATION-UNDERGARMENT. SARA E. D. DEANE, Wrentham, Mass. Filed Nov. 9, 1918. Serial No. 261,915. 1 Claim. (Cl. 2—144.)

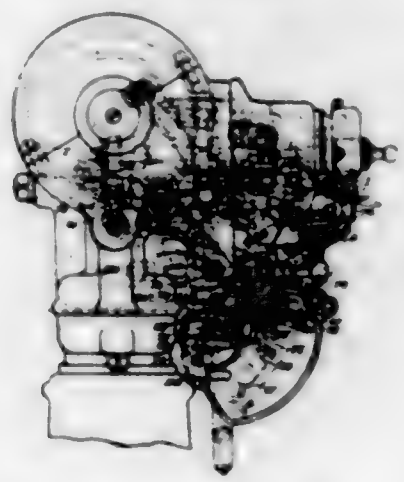
A combination under-garment formed of two similar front and back pieces, said pieces being continuous and

without a central entering opening and sewed together at their side edges and also for a short distance centrally at their bottom edges, the unsewn top portion being of a



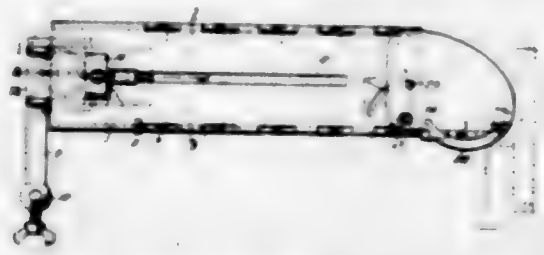
width sufficient to receive the body of the wearer and each of the unsewn bottom portions being sufficient in extent to be drawn aside for toilet purposes.

1,301,400. SEWING-MACHINE. MARK THOMAS DENNE, Rushden, England. Filed Sept. 22, 1914. Serial No. 863,025. 3 Claims. (Cl. 112—20.)



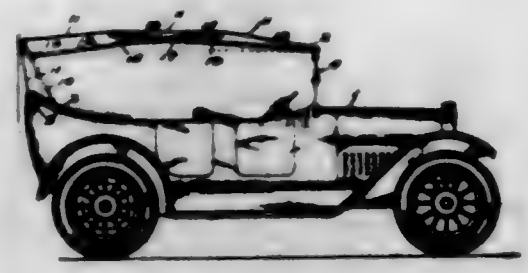
1. In a sewing machine, the combination with a work-table, of presser-foot, stitch-forming mechanism, a take-up lever, and thread measuring means controlled by the presser-foot and comprising a pivotally mounted pull-off lever coupled on the one hand to the said presser foot and on the other hand to the said take-up lever by slotted link to draw off a length of thread for each stitch proportional to the thickness of the work.

1,301,401. JOINTER-GUARD. JOHN A. DE NOOS, Buffalo, N. Y. Filed May 17, 1918. Serial No. 235,163. 2 Claims. (Cl. 144—251.)



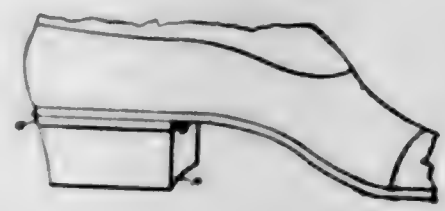
1. A jointer guard comprising a plate, a series of gates hinged to each edge of the plate, all of said gates being hinged to swing freely in one direction only, springs for returning the gates, an extension plate pivoted to one end of the first named plate to swing into alinement therewith, or in superposed position on the first named plate, a spring normally holding the extension plate in alinement, and a gate suspended from the front edge of the extension plate, means for limiting the forward swinging of the gate, said gate being free to swing rearwardly, and a spring for returning the gate.

1,301,402. AUTOMOBILE-TOP. HARRY W. DE RUITER, Toledo, Ohio. Filed July 27, 1916. Serial No. 111,500. 11 Claims. (Cl. 21—62.)



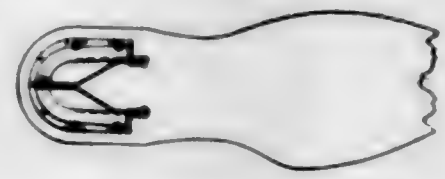
10. In a device of the class described, the combination of a supporting member, a first forwardly extending bow jointed intermediate its ends and pivoted at one of its ends to said support, a second bow, pivots pivoting the two bows together, and a tension member which together with the first and second mentioned pivots constitute the sole means for holding the bows in extended position on the supporting member.

1,301,403. DETACHABLE HEEL. ALFRED VICTOR DES MOINEAUX, Denver, Colo. Filed June 8, 1918. Serial No. 239,048. 3 Claims. (Cl. 36—42.)



1. A device of the class described comprising a holder, means for attaching the holder to the heel portion of the sole, a heel slidable into and out of engagement with the holder, interlocking means carried respectively by the heel and holder, a key for engaging the locking means of the heel to hold the same disengaged from the locking means on the holder, and separate means on the heel for holding the key engaged therewith to hold the locking means thereof inoperative.

1,301,404. REMOVABLE HEEL. ALFRED VICTOR DES MOINEAUX, Denver, Colo. Filed July 1, 1918. Serial No. 242,900. 4 Claims. (Cl. 36—42.)

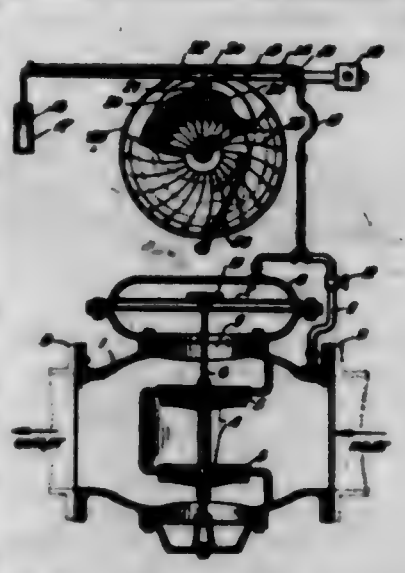


1. A removable heel comprising, in combination, a holder adapted to be secured to the heel portion of the sole and including a U-shaped plate, tubular posts carried by the plate, said posts having slots formed therein, a pair of levers pivotally connected to the plate, screw posts carried by the heel and having notches formed therein for registry with the slots when the screw posts are engaged in the tubular posts, and a spring associated with the levers for yieldably holding the same in said slots and notches.

1,301,405. AUXILIARY CONTROL FOR PRESSURE-REGULATORS. MACDOUGALD DEXTER, Columbus, Ga. Filed Aug. 20, 1917. Serial No. 187,228. 7 Claims. (Cl. 50—13.)

1. A fluid pressure regulating means comprising a valve normally responsive in its movements to a variable factor

of the fluid to be controlled, means to modify the normal action of said valve by pneumatic pressure under predetermined conditions, and means to control said pneumatic pressure by liquid pressure.



1,301,406. STUDENT'S DESK. JOHN DUBBS, San Francisco, Calif. Filed Aug. 7, 1916. Serial No. 113,588. 3 Claims. (Cl. 46—26.)



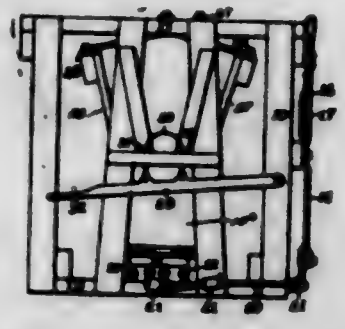
1. In a student's desk, the combination of an inclined book support, a pair of pivotally mounted inclined bars upon which said book support is mounted, a secondary pair of bars pivotally mounted on said bars, means for adjusting the inclination of said secondary bars relatively to the first mentioned bars, a book support secured to said secondary bars, a main support provided with a vertical side member, a plurality of horizontal bars hinged together and hinged to said vertical side member and means for adjustably supporting said first mentioned bars relatively to the horizontal bars.

1,301,407. SASH-LOCK. EDWIN AARON DONAT, Lynnport, Pa. Filed July 18, 1917. Serial No. 181,282. 1 Claim. (Cl. 16—80.)



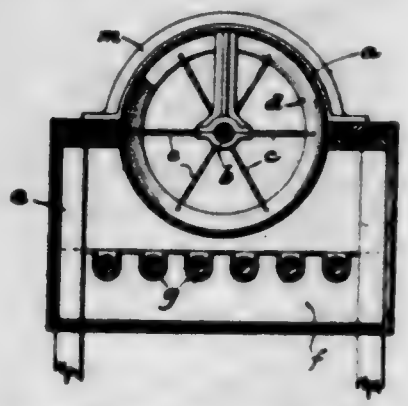
In a device of the class described, the combination of a base having a vertically extending headed rivet, a spring case rotatably mounted upon said rivet and having a cavity for receiving said head, a latch carried upon the spring case, means for turning the spring case in one direction, releasable latching means engaging the latch for holding the latch in a set position, a keeper carried adjacent said base, and a spring plate formed of a strip comprising a semicircular body having outwardly extending ends, one of said ends being fixed upon said latch while the remaining end engages the latch, whereby the spring plate is capable of expansion and contraction, said spring plate bearing upon said keeper for tilting said latch, thus causing the latching means to release the latch whereupon the latch will be moved by the spring into engagement with said keeper, while said spring plate will move to hold the latch in engagement with the keeper and prevent the latch from rattling.

1,301,408. HOG-RINGING CRATE. ELSWORTH DOWNING, Collins, Iowa. Filed Aug. 19, 1918. Serial No. 250,497. 2 Claims. (Cl. 119—98.)



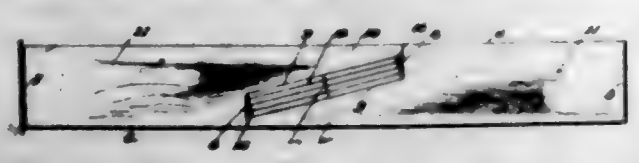
1. In a device of the class described, the combination of a suitable frame with a platform therein mounted on rollers, said platform having at its rear end at its sides, upright guide members, a removable rear end adapted to be engaged in said guide members, side crate members being pivoted at their lower ends on said main frame, means for swinging said side crate members simultaneously toward or from each other, and for locking them in various positions of their movement, means for moving said platform fore-and-aft in the machine, and for locking it in various positions of its movement, said frame having at its front end a substantially V-shaped opening, a lever at the front end of said frame, and a loop on said lever.

1,301,409. DRIER FOR NITROCELLULOSE. FRANCIS I. DU PONT, Wilmington, Del. Filed July 18, 1917. Serial No. 181,227. 2 Claims. (Cl. 34—45.)



2. In a drier for nitrocellulose, the combination with a heating chamber, a cylinder extending within the chamber, the upper part of the cylinder being formed of relatively light material so that it will readily rupture in the event of explosion, and a relatively heavy support extending over the cylinder.

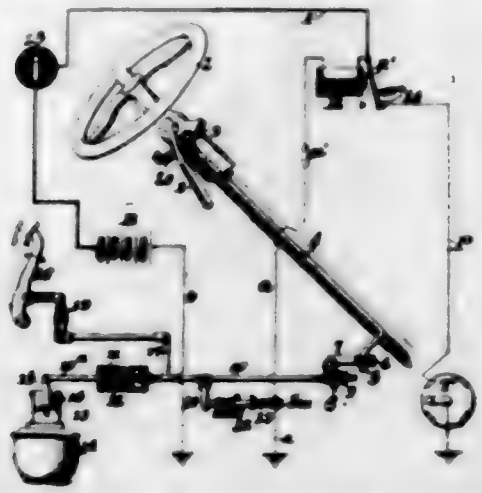
1,301,410. METHOD OF CONSTRUCTING CARTS. DAYTON A. DUSENBERY, Ionia, Kans. Original application filed Dec. 31, 1917, Serial No. 209,669. Divided and this application filed Sept. 4, 1918. Serial No. 252,603. 5 Claims. (Cl. 144—309.)



1. The herein described method of cutting the sides, handles and cleats of a vehicle body from a single blank,

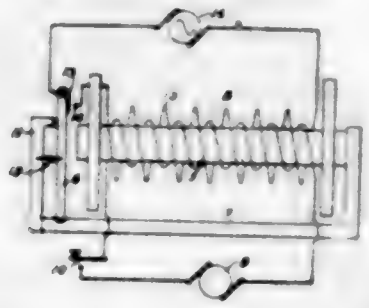
which consists in forming spaced incisions in the intermediate portion of the blank and extending inwardly from the opposite longitudinal edges thereof, and connecting said transverse incisions by a plurality of longitudinal incisions directed obliquely to the longitudinal plane of said blank.

1,301,411. AUTOMATIC IGNITION CONTROL. WILLIAM M. EDMONT, Duluth, Minn. Filed June 8, 1918. Serial No. 238,009. 11 Claims. (Cl. 123—98.)



1. Instrumentalities for automatically controlling an automobile engine by opening and closing the ignition circuit, comprising in combination with the throttle controlling lever, an electric ignition switch associated therewith and automatically operated by the movement thereof, closing the ignition circuit when the throttle is open, and opening the ignition circuit when the throttle is closed.

1,301,412. ELECTROMAGNETIC DEVICE. GUSTAF W. ELMEN, Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 10, 1917. Serial No. 195,723. 2 Claims. (Cl. 175—336.)



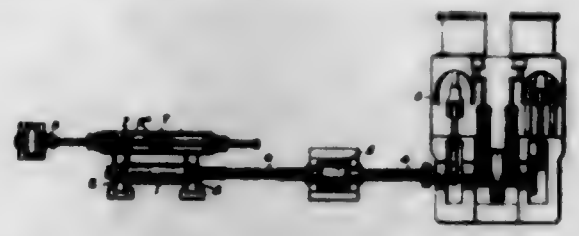
1. In an electromagnetically-operated device, a core, an armature in operative relation thereto, an actuating winding, and means operative upon the actuation of said armature to cause alternating lengthwise magnetization of said core.

1,301,413. ERASER AND ERASER-HOLDER. THOR ENGSTROM, Pittsburgh, Pa. Filed Sept. 6, 1918. Serial No. 252,836. 11 Claims. (Cl. 120—36.)



1. An eraser holder comprising a looped strip of spring metal having its ends terminating in angularly disposed faces for engaging different surfaces of a strip of erasing material and biased to exert pressure on said eraser strip through all of the engaged surfaces.

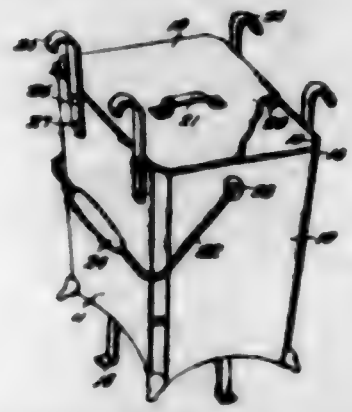
1,301,414. ROLLING-MILL. JOSEPH E. FAWELL, Pittsburgh, Pa. Filed May 4, 1916. Serial No. 95,224. 3 Claims. (Cl. 80—34.)



1. A rolling mill having in combination a pair of horizontal rolls, a reversible means for rotating such rolls, a pair of vertical rolls and non-reversible means for rotating the vertical rolls, the horizontal rolls being made of a length sufficiently greater than the combined diameters of the vertical rolls and the normal operative distance between the vertical rolls that portions of the horizontal rolls at one side of the vertical rolls may be utilized as a return pass for the article.

1,301,415. [WITHDRAWN.]

1,301,416. FEEDING-RECEPTACLE. MARY ROBERTS FOSTER, Durango, Colo. Filed Oct. 4, 1918. Serial No. 256,859. 2 Claims. (Cl. 119—71.)



1. In a feeding device of the class described, the combination of a receptacle which is substantially rectangular in cross section, the corners of the receptacle being bent to form obliquely extending corner walls, an upwardly convexed bottom carried by said receptacle, said bottom sloping downward to each corner of the receptacle, and nursing means carried by said receptacle at the lowest portion of said corner walls, whereby animals standing around the receptacle will not crowd each other, although the corner walls will prevent injury to the nursing animals, while the arrangement of the bottom allows the contents of the receptacle to be entirely drained therefrom.

1,301,417. CONNECTING DEVICE. RAY W. FRANKLIN, Monticello, Iowa, assignor to Franklin Barn Equipment Company, Monticello, Iowa, a Corporation of Maine. Filed Apr. 6, 1918. Serial No. 227,148. 1 Claim. (Cl. 287—54.



In combination, a body having an opening, a beam having one extremity mounted within the opening of said body to engage its opposite inner walls, a sleeve fixedly mounted on said beam and having forks spanning and engaging opposite outer faces of said body, all said parts being orificed in line, the orifices in said forks be-

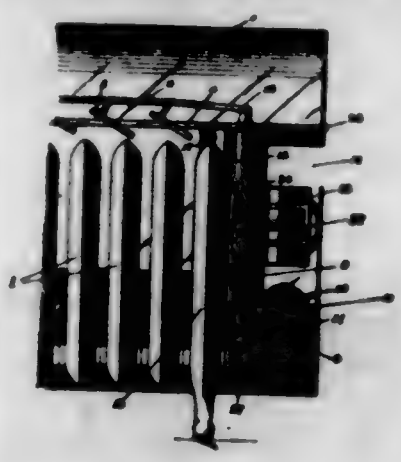
ing elongated longitudinally, a pivot-bolt seated in said alined orifices, and securing-means adjustably mounted on said pivot-bolt to secure said parts together in engagement while permitting swinging movements in one plane only to said beam relative to said body.

1,301,418. GARTER-PACKAGE. GEORGE A. FROST, Newton, Mass. Filed Nov. 30, 1918. Serial No. 264,846. 11 Claims. (Cl. 206—44.)



2. As an element of a garter package having garters housed therein, a container consisting of a single sheet of paper or cardboard formed to provide a garter-supporting member and a cover foldable upon the garters, said garter-supporting member being provided with an outwardly tapered tongue adapted to engage the garters and hold them within the container.

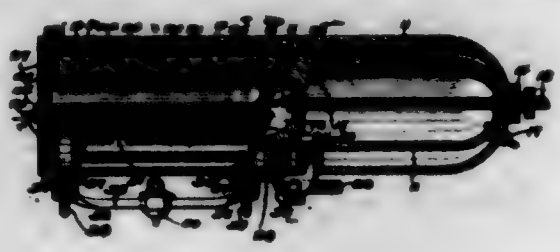
1,301,419. RADIATOR-CASING. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Nov. 20, 1916. Serial No. 132,462. 14 Claims. (Cl. 237—2.)



2. In combination, a radiator, a casing therefor, dampers controlling the circulation of air through said casing, an air-passage having an outlet opening adjacent its upper end, one wall of said passage comprising a plate of heat-conducting material in contact with said radiator, a conduit in communication with said passage, means insulating said conduit from the heating influence of said radiator and passage, and thermosensitive means in the current of air flowing through said conduit and operatively connected to said dampers.

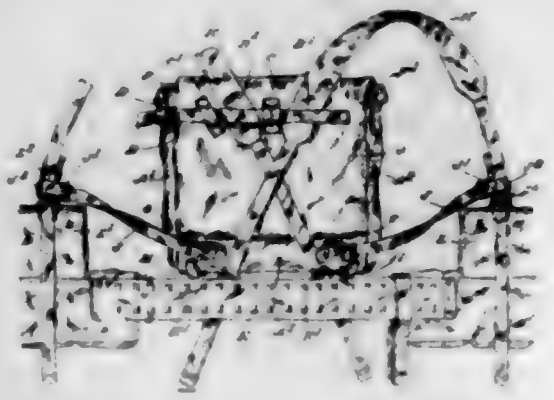
1,301,420. INTERNAL-COMBUSTION ENGINE. ORVILLE R. GALBRAITH, Asquith, Saskatchewan, Canada. Filed Jan. 3, 1918. Serial No. 210,218. 7 Claims. (Cl. 123—62.)

1. In an internal combustion engine, the combination of a cylinder having an enlarged bore at one end and a counter bore at its other end, a piston fitting in the bore and having an inner chamber open at one end and provided therein with an outstanding flange adapted to engage the wall of the counter bore, and a head closing the end of the cylinder and projecting into the open end of the piston to close the same, the head and piston forming a charge receiving chamber within which said flange is adapted to move, the cylinder having ports communicating the opposite ends of said chamber with the interior of the piston and the forward end of the cylinder and adapted to be controlled by movement of the piston, said



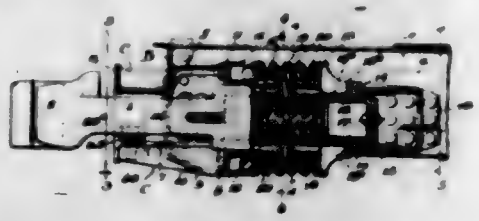
piston having ports adapted to register with the ports of the cylinder to alternately open said chamber to the interior of the piston.

1,301,421. MILITARY EQUIPMENT. ALBERT ALEXANDER LETHEREN, London, England, assignor, by mesne assignments, to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 25, 1917. Serial No. 198,534. 3 Claims. (Cl. 224—11.)



1. In a military equipment the combination with a cartridge-carrying or other belt, and crossed braces connected at their ends to the said belt, of a haversack having connected therewith a strap such as B arranged horizontally on the upper part of the back or inner wall so as to form two loops through which the braces are passed, and having also two detachable straps which run from the bottom corners of the haversack to intermediate points in the length of the braces as set forth.

1,301,422. RAILWAY DRAFT-RIGGING. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed Aug. 31, 1917. Serial No. 189,134. 14 Claims. (Cl. 213—64.)

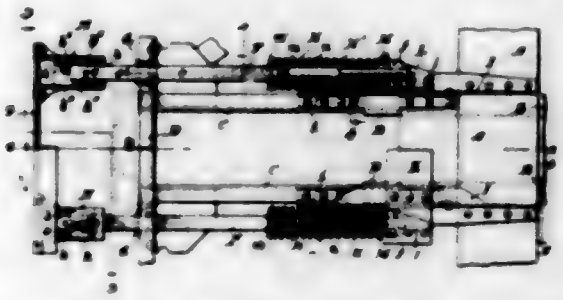


1. In a draft rigging a front stop casting adapted to bridge the space between and be rigidly attached to the center sills, said casting having downwardly extending sides spaced from each other to permit the removal downwardly of the coupler shank, there being a center top front stop on the bridge portion of said casting and bottom side front stops on the downwardly extending sides of the casting.

1,301,423. RAILWAY BUFFING MECHANISM. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed Dec. 8, 1917. Serial No. 206,266. 7 Claims. (Cl. 213—39.)

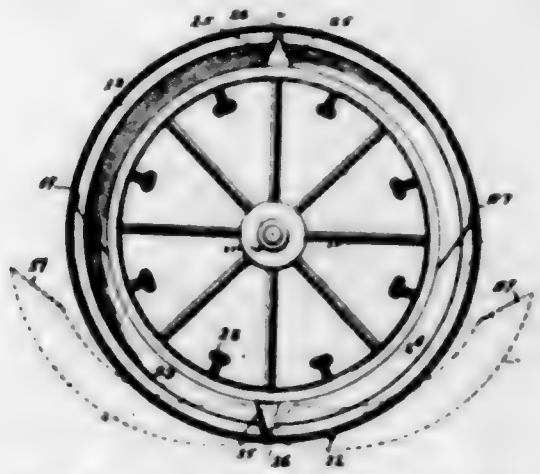
1. A buffer mechanism for railway cars embodying buffer stems, yielding supports for holding the stems ad-

vanced, and a buffer face plate adjustably mounted on the projecting ends of the stems, whereby the face plate may



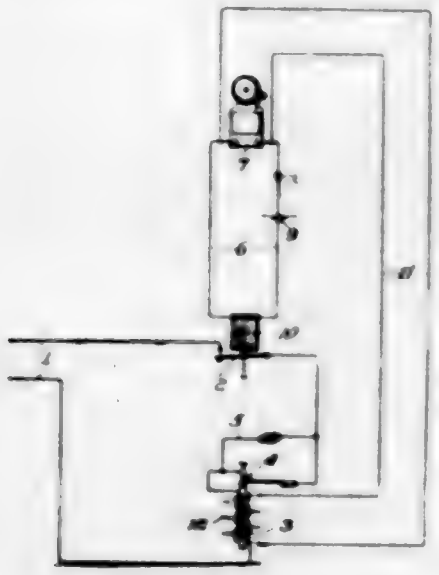
be positioned normally a greater or less distance from the end sill of the car.

1,301,424. WORK-HOLDER. DAN GALVIN, Paducah, Ky. Filed Oct. 19, 1918. Serial No. 258,793. 3 Claims. (Cl. 144—288.)



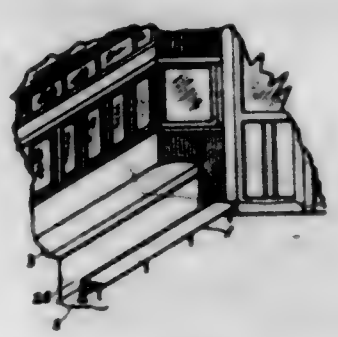
2. A work holder of the class described comprising a wheel having a tire supporting surface composed of sections, some of which are hingedly connected, and set screws carried by said wheel and engaging said sections whereby the sections may be individually projected or retracted at the will of the operator.

1,301,425. DIRECT-CURRENT SIGNALING SYSTEM. BENJAMIN FULTON GARDNER, Chicago, Ill., assignor of one-half to Seymour Stedman, Chicago, Ill. Filed Nov. 24, 1917. Serial No. 203,680. 4 Claims. (Cl. 177—7.)



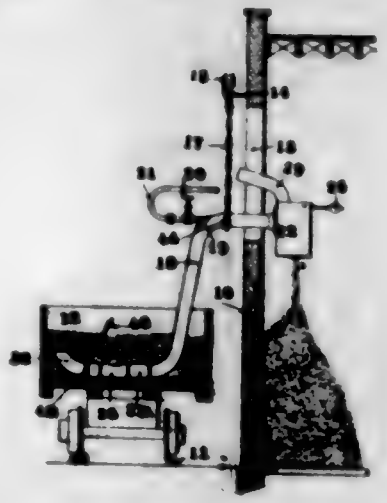
1. In a system of the class described, a relatively high potential service line, an induction coil therein and including a magnetically operable circuit interrupter, a signaling circuit including a source of potential and a relay winding, a contact device operable by the relay and adapted to open and close the service line, and connections between the secondary winding of said induction coil and the said signaling circuit for energizing the latter from the former.

1,301,426. FOOT-FENDER. RICHARD GARVEY, Venice, Calif. Filed Dec. 5, 1918. Serial No. 265,451. 2 Claims. (Cl. 105—229.)



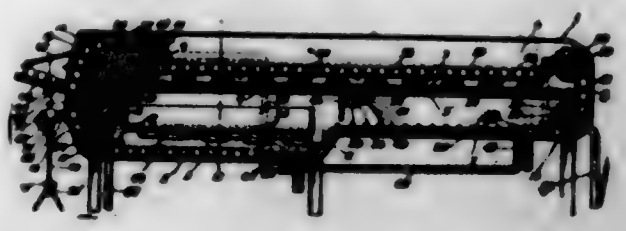
1. In a foot fender, vertical frames, a sheet metal body mounted upon the frames and forming a chamber and an opening to the rear side of the chamber, legs for hingedly connecting the rear side of the body to the floor of a car, and rigid legs for supporting the front part of the body.

1,301,427. VACUUM-UNLOADER FOR RAILWAY-CARS AND THE LIKE. FREDERICK GIRTANNER, St. Louis, Mo., assignor, by mesne assignments, to Girtanner Engineering Company, a Corporation of Missouri. Filed Dec. 27, 1917. Serial No. 208,022. 4 Claims. (Cl. 193—10.)



1. An unloading device comprising a normally horizontal tubular portion provided with an air inlet and an inlet for the material to be unloaded, an upwardly extending continuation of said tubular portion provided at its upper end with a discharge chamber, and independently operated means arranged at the upper and lower ends of said upwardly extending portion for raising and lowering the device.

1,301,428. PASTEURIZER. KURT R. GITTERMAN, Brooklyn, N. Y. Filed Dec. 23, 1916. Serial No. 138,560. 10 Claims. (Cl. 126—272.)



4. In a pasteurizer, a pasteurizing chamber, a cooling chamber, a cooling-medium-containing pan adjustably lo-

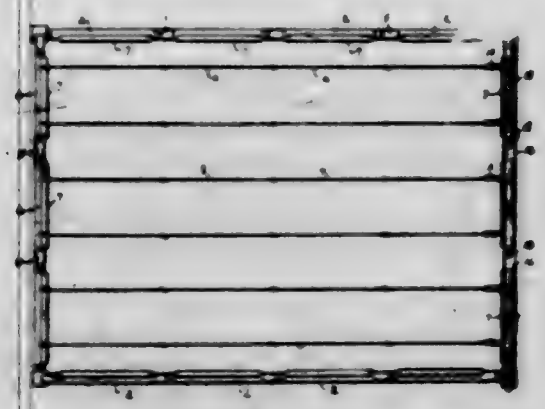
cated in said cooling chamber and having a perforated bottom, an article carrying conveyer movable through the cooling chamber below the pan, and a cooling coil interposed between the conveyer and the bottom of said pan.

1,301,426. CHAIR. ABRAHAM GIVENS, Baltimore, Md. Filed Jan. 30, 1918. Serial No. 213,837. 4 Claims. (Cl. 155—34.)



1. A chair comprising a seat, a support, a pivotal connection between the support and one end of the seat to permit tilting of the seat, a pair of toggle bars extending between the support and the other end of the seat, said bars being normally in alinement and adapted to be thrown out of alinement when the seat is tilted, and resilient means resisting the last mentioned movement of the toggle bars.

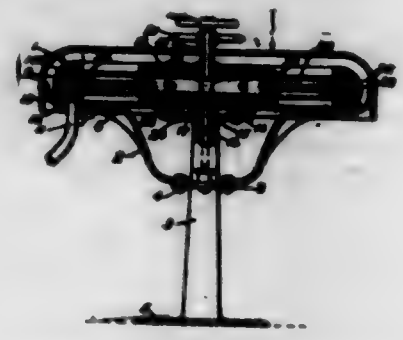
1,301,430. CARPET-BEATING RACK. KATIE GRATER, Sterling, Ill. Filed Nov. 22, 1918. Serial No. 263,790. 3 Claims. (Cl. 211—15.)



2. A device of the class described, comprising suitable supports, frame sections detachably united, and removably connected with said supports, and sectional supporting devices detachably connected with said frame sections, the lengths of said sections being such that the size of said device can be changed from that suitable for the support of an article of conventional size to that of an article of a differing conventional size.

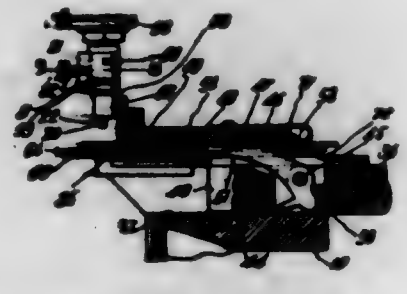
1,301,431. RETREAD-VULCANIZER. EDWARD HARRIS, Los Angeles, Calif. Filed Dec. 5, 1918. Serial No. 265,450. 4 Claims. (Cl. 18—17.)

1. A retread vulcanizer comprising, an annular mold, compression screws mounted radially in the mold, shoes for insertion into the tire casing against a filler, means for operating the screws, and a puller mounted upon one



screw and adapted to grip the tire casing and pull the casing loose from the mold.

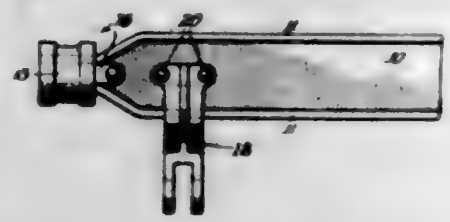
1,301,432. LACING-STUD-SETTING MACHINE. ARTHUR R. HAVENER, Wayland, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Sept. 20, 1917. Serial No. 193,871. 15 Claims. (Cl. 218—17.)



1. A machine for applying lacing studs to shoe uppers having, in combination, means for feeding an upper, means for feeding a reinforcing strip in a direction at an angle to the direction in which said upper is fed and means for setting a stud in said upper and reinforcing strip, whereby the same are connected together.

7. A machine for setting a lacing stud in the upper of a boot or shoe and in a reinforcing strip therefor having, in combination, a punch and anvil, a die adapted to coöperate with said punch, mechanism adapted to move said punch and anvil longitudinally thereof toward said die, mechanism adapted to subsequently move said die out of alinement with said punch while said punch is inserted in said upper and reinforcing strip, means adapted to sever said strip from the portion which has been punched, mechanism adapted to move said punch laterally thereof to feed said upper and said severed portion of said strip and means operated by said die adapted to impart a step by step feeding movement to said reinforcing strip.

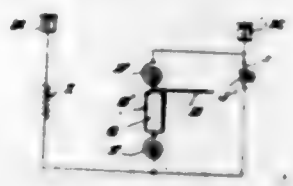
1,301,433. BRAKE-BEAM. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 30, 1917. Serial No. 158,736. 1 Claim. (Cl. 188—22.)



In a brake beam, the combination of a commercial I-beam, the depth of which is reduced by compression at its ends, the width of the flanges, and thickness of the web being substantially unchanged, and integral sleeves

fitted over the ends of said beam, said sleeves having inwardly projecting attaching ears for engagement by a transverse rivet, substantially as described.

1,301,434. ELECTRIC METER. EDWIN JOSEPH HEITMAN, Philadelphia, Pa., assignor to the Brown Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 14, 1917. Serial No. 174,695. 3 Claims. (Cl. 171—95.)



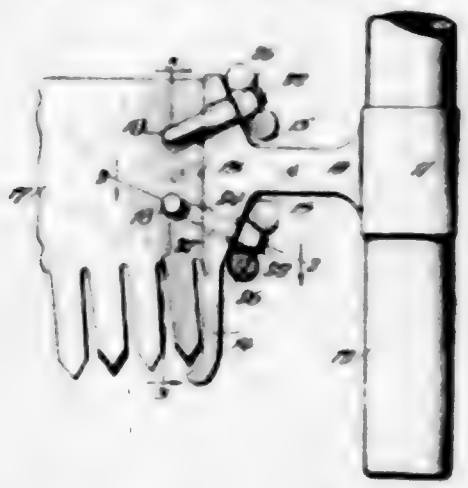
1. An electric meter comprising a movable element, including a coil or winding inclosed in a magnetic field produced by a permanent magnet or magnets, a permanent magnet for creating such magnetic field, a resistor forming a part of the meter instrument, and in combination therewith means for short circuiting said coil without including the resistor in order to damp the oscillations of said movable element.

1,301,435. BUTTON-FASTENER. LYDIA C. HELLER, Chambersburg, Pa. Filed Feb. 21, 1919. Serial No. 278,412. 2 Claims. (Cl. 24—103.)



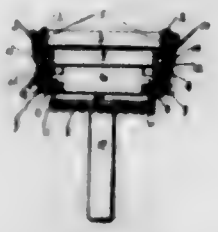
1. A button fastener consisting of a single piece of spring wire comprising spring arms, a spring coil connecting said arms, and offset jaws carried by said arms and having oppositely extending pointed parts substantially in line with each other.

1,301,436. SAW-HANDLE. CHARLES S. B. HENRY, Raymond, Wash., assignor of one-half to Orville J. Lovering, Raymond, Wash. Filed Apr. 12, 1916. Serial No. 90,596. 2 Claims. (Cl. 145—111.)



1. The combination with a saw blade having spaced openings adjacent its end, of a handle including a shank having a head at one end provided with an outer face at right angles to the axis of the shank, and with inner angular faces at opposite sides of the shank, said outer face of the head being provided with a longitudinal slot to receive the end of the saw blade, hook bolts disposed upon relatively opposite sides of the blade and having outer angular ends extending through the blade openings in relatively opposite directions, and inner threaded ends, said head having angular openings therethrough upon opposite sides of the axis of the shank at right angles to the said inclined faces of the head and through which the inner ends of the bolts project and are laterally shiftable, said inclined faces of said head having concavities therein at the outer ends of the said openings, convex washers surrounding the inner ends of the bolts and disposed in the said concavities, and clamping nuts engaging the threaded ends of the bolts and bearing against the said washers for the purpose described.

1,301,437. COMBINATION STROPPING DEVICE AND SAFETY-RAZOR. LEONARD HEUBER, New York, N. Y. Filed Apr. 26, 1918. Serial No. 231,047. 6 Claims. (Cl. 30—12.)



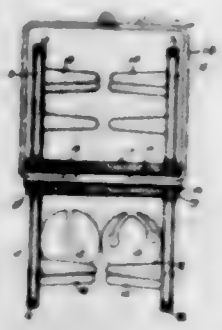
1. In a device—a frame having a lip doubled to the bottom at the right and left sides thereof—and adjacent to the comb at the forward end of said frame—two projections facing straight upward one on each side near the rear of said frame—said projections having holes near the upper ends; said lips, comb and projections being integral parts of said frame.

1,301,438. PISTON-RING. JOHN P. HIGLEY, St. Louis, Mo., assignor of one-fourth to Joseph Ruggaber and one-fourth to George Flannery, St. Louis, Mo. Filed Feb. 1, 1917. Serial No. 145,833. 4 Claims. (Cl. 121—108.)



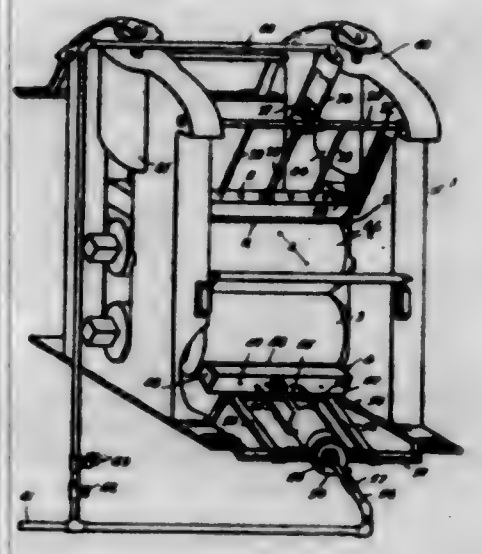
1. An improved piston-ring, composed of twin primarily-separated complete circular one-piece split rings, placed side by side and having oppositely-alined recesses in their outer edges, and separate binding devices in the form of U-shaped spring clips having their opposite ends mounted in said recesses, to yieldingly and detachably bind said rings together, and prevent their relative rotation.

1,301,439. TOY. NORMAN N. HILL, East Hampton, Conn., assignor to The N. N. Hill Brass Co., East Hampton, Conn., a Corporation. Filed Dec. 16, 1918. Serial No. 266,920. 1 Claim. (Cl. 46—47.)



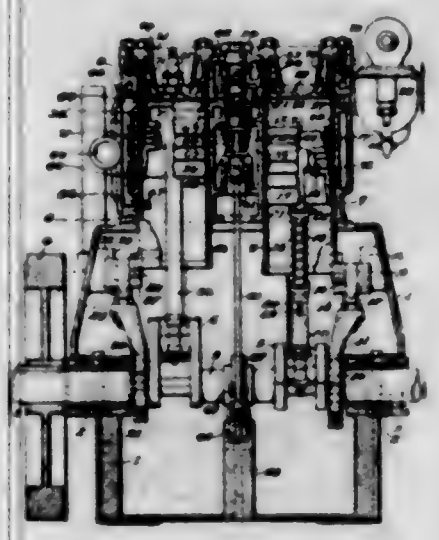
A toy comprising a pair of wheels, an axle on which they are mounted, said wheels each formed with a series of inwardly projecting integral fingers forming a cage, and sounders inclosed by the cage.

1,301,440. POLISHING APPARATUS FOR TIN OR SHEET MILLS. SAMUEL HITCHINES, South Pasadena, Calif. Filed Sept. 19, 1918. Serial No. 254,854. 1 Claim. (Cl. 51—4.)



The combination with a frame and a sheet mill roll, of guideways secured to the inner face of the frame, a supporting bar mounted in the frame at the opposite ends of the guideways from the roll, a polisher holder mounted with its ends in the guideways, a polisher in the polisher holder and adapted to engage the roll, a piston cylinder mounted upon the supporting bar, a piston in the piston cylinder, a piston rod connecting the piston to the polisher holder, means for supplying fluid pressure to the cylinder to advance the polisher holder, and means for withdrawing the polisher holder a sufficient distance to allow of the operation of the roll and the passage of sheets forwardly over the roll.

1,301,441. INTERNAL-COMBUSTION ENGINE. SAMUEL P. HOWE, Merchantville, and WARD D. KERLIN, Camden, N. J. Filed Apr. 7, 1915. Serial No. 19,645. 12 Claims. (Cl. 123—68.)



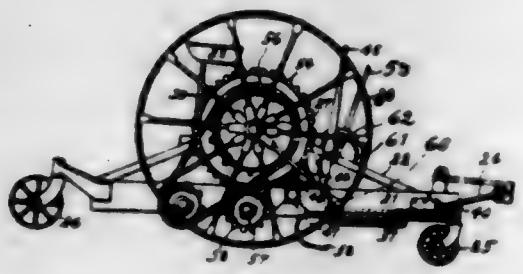
11. In a two-cycle internal combustion engine, the combination of a compression cylinder provided with inlet and outlet valves and a piston, and an explosion cylinder provided with inlet valve and a power piston, said explosion cylinder being provided with a main exhaust port adjacent the head end of said explosion cylinder and an auxiliary exhaust port located near the crank end of said explosion cylinder, a transfer passage connecting said compression and explosion cylinders, and a valve for said explosion cylinder for controlling said inlet port and said main and auxiliary exhaust ports.

1,301,442. GARDEN IMPLEMENT. HIYAKUMATSU IKE, Buena Park, Calif. Filed July 20, 1918. Serial No. 245,800. 3 Claims. (Cl. 97—41.)



1. In a garden implement, a plant shield having opposed shield members, a central shaft having a socket in the end thereof, parallel links connecting the shield members with the central shaft, a plunger working in the socket and operating against the parallel links, a spring within the socket and actuating the plunger, stops on the links to limit the movement thereof, an independently revoluble and tubular shaft member disposed concentrically upon the central shaft, handles fixed to the tubular shaft member, a disk suspended from the tubular shaft member, soil tilling elements carried by the disk and movable in circular paths around the shield members, and a supporting standard for the tubular shaft member.

1,301,443. COMBINED HARROW AND PULVERIZER. HIYAKUMATSU IKE, Buena Park, Calif. Filed Sept. 5, 1918. Serial No. 252,673. 8 Claims. (Cl. 55—85.)

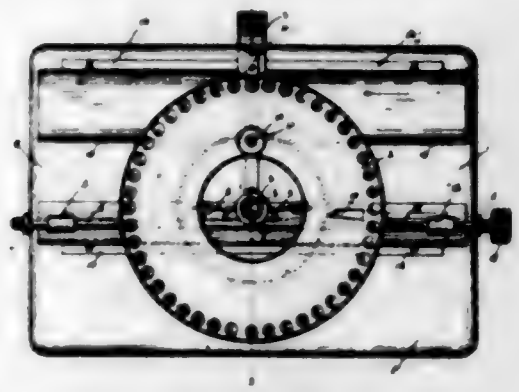


1. In a harrow, a rectangular frame, standards integral therewith, a main shaft journaled in the standards, master wheels driving the main shaft, rotary harrows mounted in the frame and transversely disposed relative thereto, spring means to retain the harrows in yielding relation to one another, teeth on said harrows, and driving means connecting the main shaft and harrows whereby opposed harrow teeth are rotated at different speeds and in opposite directions.

1,301,444. SINGLE-COMPOUND-KEY TYPE-WRITER. DAVID JANKOWER, New York, N. Y. Filed Feb. 14, 1918. Serial No. 217,098. 2 Claims. (Cl. 197—47.)

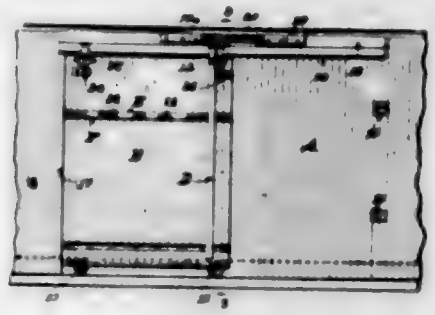
1. A compound-key typewriter consisting of a universally supported tilting key-plate having downwardly projecting blades, the said key-plate having secured near its center a cut-away downwardly projecting cylinder with type-characters on its lower end; in combination with a second cylinder, limited to vertical movements and having V-shaped punched-out slots around its circumference adapted to coöperate individually with the corresponding

blades of the before mentioned key-plate; the whole in combination with a paper-shifting mechanism, and means



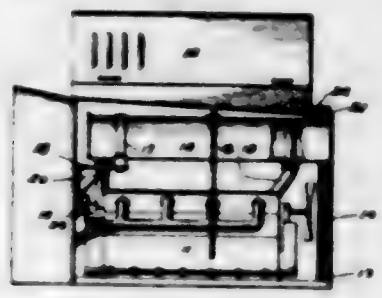
for bringing the several movable parts to their original positions after a letter has been printed.

1,301,445. MECHANISM FOR OPERATING BOX-CAR DOORS. HENRY F. JEROLAMAN, Chicago, Ill. Filed Jan. 24, 1919. Serial No. 272,883. 9 Claims. (Cl. 268—6.)



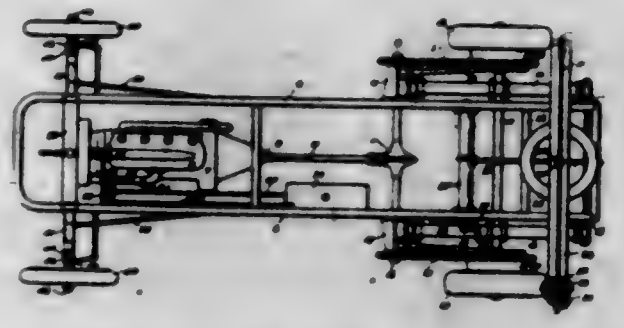
1. Mechanism for opening and closing the doors of box cars, comprising, in combination, car body, a slidable door, a fulcrum secured to the car body above said door in close proximity to the supper edge of the door, a lever pivotally connected to said fulcrum, said lever being constructed to swing pendulum-fashion across the face of the door, a bar, said bar being longitudinally secured to the face of the door, said bar having a series of spaced-apart projections which said lever is constructed to engage to open and close said door by a step-by-step movement of said lever.

1,301,446. AUTOMOBILE RADIATOR-TANK. WILLIAM JOHNSON and GURNEY E. SCHOFFSTALL, Pilot Mound, Iowa. Filed Apr. 27, 1917. Serial No. 165,029. 1 Claim. (Cl. 123—170.)



In a device of the class described, the combination of an automobile frame and an engine thereon having a water jacket, and a hinged hood, with a comparatively shallow cooling tank supported beneath the hood above the engine, means for connecting said tank and said water jacket, a grid mounted on the frame in front of the engine after the removal of the ordinary radiator, to support the forward end of said tank, said tank having its forward end projected beyond said hood adapted to support the front end of the hood and provided with an inlet pipe adapted to limit the forward movement of the hood.

1,301,447. AUTOMOBILE. WILLIAM H. B. JOHNSON, THEODORE E. LIND, and THOMAS W. CLARKE, Seattle, Wash. Filed Dec. 7, 1916. Serial No. 135,706. 2 Claims. (Cl. 21—137.)



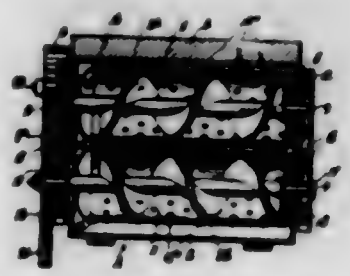
1. In combination with the chassis of a motor vehicle including side rails and a rear end rail, a cross brace secured to said side rails forwardly of said rear end rail, a transverse beam secured to said chassis between the end rail and the cross brace, an annular plate having studs secured to said end rail, cross brace, and transverse beam, and a lumber bunk pivoted intermediate its ends to said transverse beam and resting on said annular plate.

2. In combination with the chassis of a motor vehicle, a lumber bunk mounted on the rear end portion thereof, said bunk comprising a strip having one end portion thereof bent upwardly and provided with an aperture, an upwardly extending bracket arm carried by the other end of said strip, a guide roller journaled on said bracket arm, a windlass drum revolubly mounted on said other end of said strip, and a cable associated with said drum guided by said roller and having a hook on its free end engageable in said aperture.

1,301,448. PROCESS OF TREATING MATCHES IN ORDER TO RENDER THEM IMMUNE TO THE ACTION OF MOISTURE. FRED JOHNSTON, Calgary, Alberta, Canada, assignor of one-half to Andrew Orr, Calgary, Alberta, Canada. Filed Mar. 4, 1918. Serial No. 220,394. 1 Claim. (Cl. 91—68.)

The process of waterproofing matches, which consists of dipping them head downward in a mixture composed of two parts by weight of resin, and one part by weight of beeswax, heated to a temperature a few degrees below boiling, thereby coating the igniting material and the stem portion, all substantially as described.

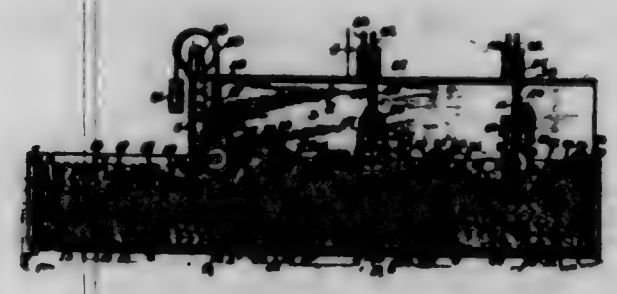
1,301,449. GRINDER. CHARLES R. JOLITZ, Denver, Colo. Filed Mar. 13, 1918. Serial No. 222,150. 1 Claim. (Cl. 83—12.)



In a machine of the class described, the combination with a casing, parallel sleeve shafts journaled through one end thereof and having intermeshing gears on their outer extremities, parallel solid shafts journaled through the other end of the casing and extending into the sleeves, these solid shafts also having intermeshing gears on their outer extremities, and means for applying power to one of said solid shafts; of hollow foraminous grinding drums, each having one end closed and fast on one of said solid shafts and its other end open, spiral conveyors mounted on said sleeve shafts within the drums, and

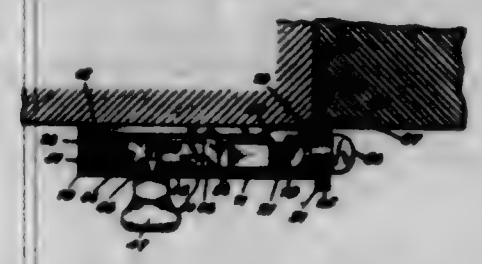
means for connecting one of the said shafts with one of the sleeve shafts so that the conveyers rotate in a reverse direction to their respective drums and more rapidly.

1,301,450. HOG SCALDING, DEHAIRING, AND CLEANING MACHINE. ROBERT E. JORDAN, Chicago, Ill., assignor to The Allbright-Nell Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1915, Serial No. 5,163. Renewed Mar. 6, 1917. Serial No. 152,875. 50 Claims. (Cl. 17—11.)



47. In a dehairing machine, means for loosely supporting and conveying a carcass, and dehairing mechanism acting upwardly through said means for dehairing the carcass.

1,301,451. LOCK. JOSEPH KAUFMAN, New York, N. Y., assignor of one-half to William Klemert, New York, N. Y. Filed Dec. 14, 1918. Serial No. 266,705. 11 Claims. (Cl. 70—75.)



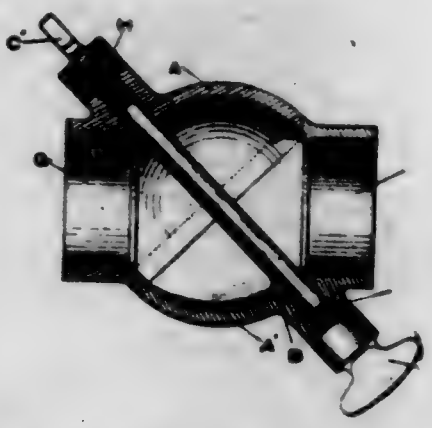
1. A lock comprising a casing adapted to be applied on a door or the like, a bolt movable inwardly and outwardly of the casing, spaced eyes adapted to be applied on the jamb of the door in opposition to the bolt, and gripping elements on the bolt exteriorly of the casing for releasably engaging the eyes when the bolt is moved inwardly of the casing following its outward movement.

1,301,452. BAG-FASTENER. JOHN W. KAUFMANN, Baltimore, Md. Filed Dec. 14, 1918. Serial No. 266,709. 6 Claims. (Cl. 70—116.)



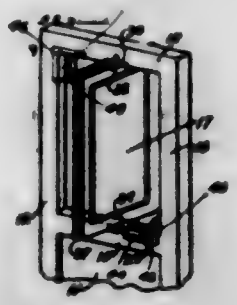
2. In a bag, the combination with the hinged frame members, of a catch for connecting the said members, said catch comprising a spring operated latch bar carrying a catch and supported by one of the frame members, the other frame member supporting a keeper for engaging the catch, a plate mounted to rock on the bar and having an outwardly extending lug normally pressed outwardly by the spring support of the latch bar and adapted to engage the other frame member to hold the latch bar depressed and releasable from the frame member by the separation of the said members, said catch being within the bag and the latch bar having means extending outside of the bag for operating the latch bar.

1,301,453. SANITARY FITTING OR COUPLING FOR PIPES. IRA HUNT KENDALL, Potsdam, N. Y. Filed July 20, 1918. Serial No. 245,905. 3 Claims. (Cl. 285—97.)



3. In a pipe coupling, coupling members having parts thereof shaped like a sphere of the said radius, cylindrical projections projecting from the said spherical parts, the faces of the said cylindrical projections being coincident with a diameter of the said sphere, a bolt coincident with the said diameter and having threaded ends projecting from the said cylindrical projections, threaded locking means adapted to co-act with the threaded ends of the said bolt so as to force said coupling members together in the direction of the said bolt, said coupling members each having parallel ground conical faces inclined to the said bolt, the axes of the said conical faces being coincident with the axis of the said bolt, the said conical faces being symmetrically disposed with respect to the diameter perpendicular to the axis of the bolt, said coupling members having lips comprising cylindrical faces and disk-like faces perpendicular thereto above and below the said conical faces, the axes of the said cylindrical faces being coincident with the axis of the said bolt, the ground face of one coupling member having dimensions identical with the ground face of the other coupling member.

1,301,454. CLEAR-VISION WINDOW. GEORGE C. KERR, Brainerd, Minn., assignor of one-third to Henry I. Cohen, and one-third to W. H. Gemmell, Brainerd, Minn. Filed Mar. 15, 1917. Serial No. 154,993. 4 Claims. (Cl. 20—58.)

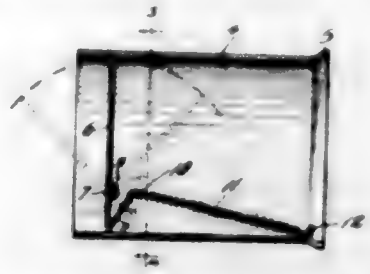


1. In combination with a window frame and a sash mounted to swing about a vertical axis in said frame, flanged stop members slidably carried by the frame at each side of said axis and extending outside of the frame on opposite sides of the sash when in closed position a distance equal to the thickness of the frame, said stop members having central flanges engageable by opposite sides of the sash on each side of the axis when the sash is in either of its closed positions.

1,301,455. AIR-REGULATING ATTACHMENT. OSCAR KINNEY, Dallas, Tex. Filed Apr. 30, 1918. Serial No. 231,701. 2 Claims. (Cl. 251—11.)

1. In an air regulating attachment for carbureters, a sleeve adapted to be mounted at the air inlet of a carbureter, a disk valve hinged transversely of the sleeve,

said valve having a transverse axis, and a coiled spring mounted within the sleeve and having one end attached



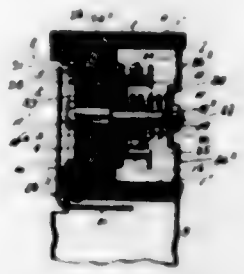
to the sleeve and the other end attached to the valve at substantially the same elevation as that of the transverse axis.

1,301,456. SOCKET FOR INCANDESCENT LAMPS. OSCAR KUPFERMAN, Brooklyn, N. Y. Filed Apr. 6, 1917. Serial No. 160,303. 1 Claim. (Cl. 173—362.)



In a lamp socket, a shell having angular recesses at its upper end, a cover to fit around the upper end of said shell and having projections adapted to engage the said recesses and form therewith a bayonet joint, a spiral spring in said cover of which one end is fixed to the latter and the free end of which has the tendency to project into the shell, a comparatively thin disk of insulating material loosely mounted in said cover and adapted normally to rest on the said projections of the latter and to be acted upon by said spring, but upon assembling the said shell and cover to be engaged by the said shell and moved against the tendency of the said spring whereby the said shell and cover when connected by the bayonet joint become firmly locked with each other.

1,301,457. LAMP-SOCKET. OSCAR KUPFERMAN, Brooklyn, N. Y. Filed May 1, 1918. Serial No. 231,839. 9 Claims. (Cl. 173—354.)



3. In a switch operating mechanism for pull sockets or the like, the combination with a spindle, of a motion transmitting device consisting of a chain operated pulley having on one of its faces oppositely arranged flanges, a spring member loosely engaging between said flanges and a member keyed to said spindle and having cam surfaces with which said spring is adapted to coöperate to transmit motion from said pulley to said spindle.

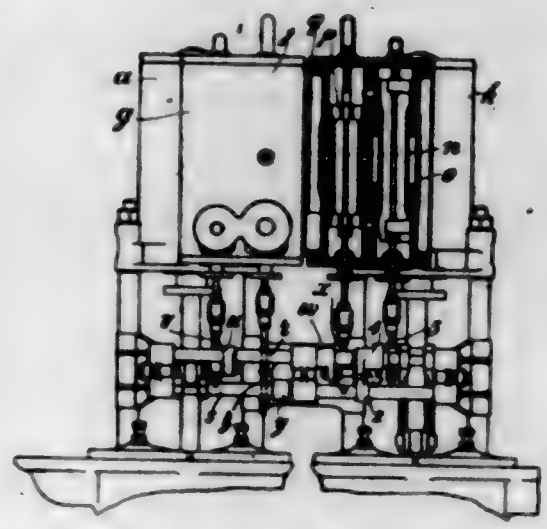
1,301,458. SOUND-BOX MOUNTING. WILLIAM T. LAKIN, Long, Md. Filed Jan. 8, 1918. Serial No. 210,873. 8 Claims. (Cl. 274—23.)

1. A tone arm having a bent end terminating in an integral coupling member, a sound conduit having a cooperating coupling member at one end applied to said tone arm coupling member and being curved to place the axis of the open end of the sound conduit at right angles to the axis of the end of the coupling, a reproducer neck



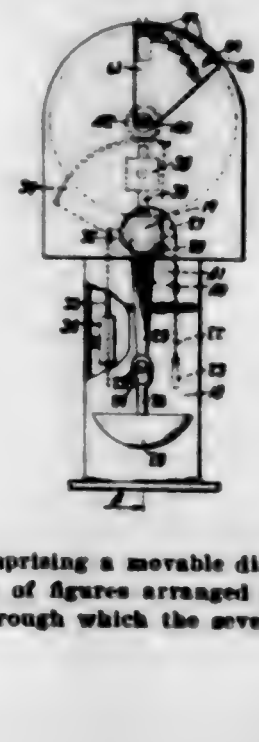
radially adjustable in said open end and in a plane parallel to the axis of the coupling, and a radially adjustable reproducer mounted on the end of said neck.

1,301,469. DUPLEX PUMP. CHARLES RUSSELL LANG, Cathcart, Glasgow, Scotland, assignor to G. & J. Weir, Limited, Cathcart, Glasgow, Scotland. Filed Mar. 12, 1918. Serial No. 221,906. 8 Claims. (Cl. 121—4.)



2. A duplex pump having two steam cylinders, a valve for each cylinder which controls the points of admission and cut-off of steam and the point of release with respect to that cylinder, an independent valve for each cylinder which controls solely the point of compression with respect to that cylinder, each valve having a lost motion connection included in its drive, and means for adjusting the said lost motion connections independently for each of the four valves.

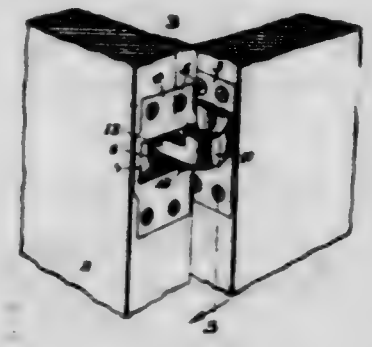
1,301,460. COUNTING-SCALE. NIELS H. LARSEN, Detroit, Mich. Filed Aug. 15, 1918. Serial No. 249,835. 9 Claims. (Cl. 265—37.)



1. A scale comprising a movable dial having thereon a plurality of sets of figures arranged in rows, a member having a slot through which the several sets are visible,

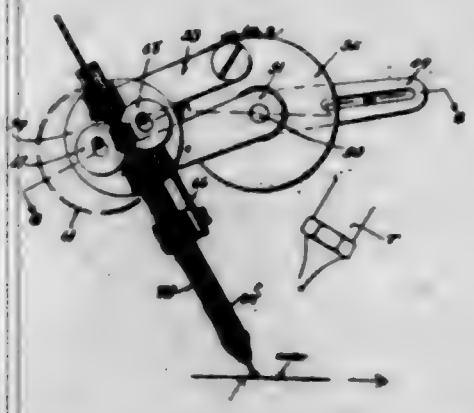
and a selector having relative movement in respect to said slot and lengthwise of the rows of figures, said selector being formed to screen the figures in such manner as to expose the figures of one set only at a given time, the particular set so visible depending on the position of the selector.

1,301,461. DETACHABLE HINGE. FREDERICK A. LEEWARD, Detroit, Mich. Filed Dec. 9, 1918. Serial No. 265,891. 3 Claims. (Cl. 16—5.)



2. A hinge construction comprising two members, one having an opening therein and a lug projecting from the lower edge of said opening and formed with a socket and with a channel extending from said socket to the lower edge of said opening, and the other having an arm insertible through said opening and carrying a pintle for which said channel forms a guide-way to register the pintle with the socket.

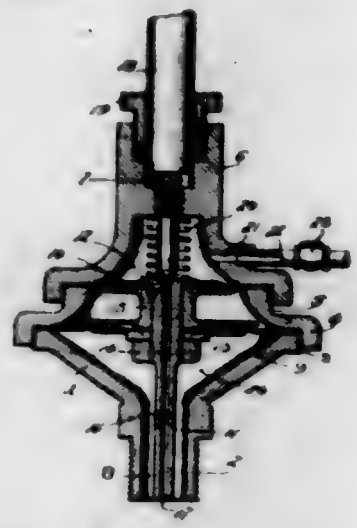
1,301,462. WELDING-MACHINE. HENRY J. LEWIS, Milwaukee, Wis., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Filed Oct. 3, 1918. Serial No. 256,680. 7 Claims. (Cl. 113—59.)



1. In a machine of the class described, the combination with a torch, a work holding member, the flame from the torch being directed on the work carried by the member, means for providing a relatively rapid uninterrupted intermittent feed of soldering material, or the like, to supply the same in a step by step movement to the piece of work, and means for continuously moving the work holding member and work carried thereby during the rapid, uninterrupted, intermittent feeding of the soldering material.

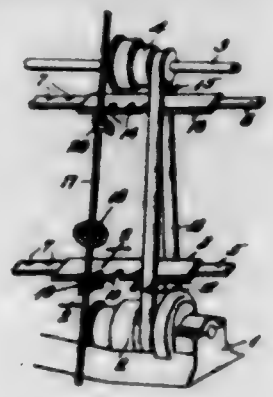
1,301,463. AUTOMATIC LIQUID-INJECTOR FOR INTERNAL-COMBUSTION ENGINES. CHRISTIAN E. LEBENSBERG, Erith, England. Filed Mar. 23, 1917. Serial No. 157,062. 5 Claims. (Cl. 123—25.)

1. In an injector of the class described, the combination with a casing, two spaced diaphragms therein dividing its interior into inlet, air, and pressure compartments respectively, the last named compartment being adapted for connection with an engine cylinder and the first-named compartment being connected with a source of liquid supply, of a spacer between the diaphragms, an upright tube through both diaphragms and the spacer and having a



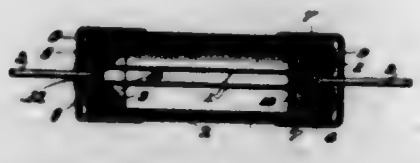
nozzle at its lower end, and a valve seat at its upper end, and a valve adapted to co-act with said seat.

1,301,464. BELT-SHIFTER. CHRISTIAN E. LEBENSBERG, Chester, Pa. Filed Aug. 27, 1918. Serial No. 251,678. 6 Claims. (Cl. 64—4.)



1. A belt shifter comprising a track having notches in one edge thereof, a casing slidable upon the track, projections carried by the casing for engaging the belt, a projection formed on the casing for engaging the notches of the track, and means for sliding the casing.

1,301,465. SAFETY INCLOSED FUSE. WILLIAM D. LOOS, Montclair, N. J. Filed June 21, 1915. Serial No. 35,488. 2 Claims. (Cl. 175—273.)



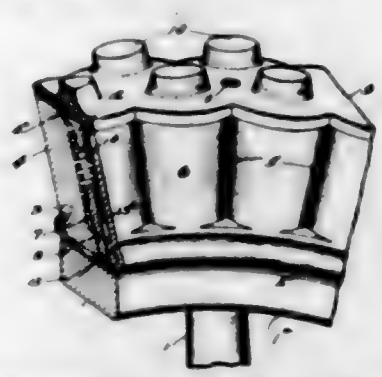
1. In an inclosed safety fuse, the combination of a casing, a terminal at one end having a perforation, a terminal at the other end having a perforation, a fusible element all parts of which can pass through said first perforation and whose forward end can pass through said second perforation, the inner end of said second perforation flaring so as to be of approximately the same diameter as the internal diameter of said casing and act as a guide for the forward end of said element when inserted through said first perforation, said terminals being provided with screw-threaded external projections having cross-cuts for the ends of said element, and caps inclosing the ends of said casing and having screw-threaded openings making engagement with said projections, and clamping the ends of said element.

1,301,466. LOCK. GUILLERMO LINLAUD, Buenos Aires, Argentina. Filed Sept. 24, 1917. Serial No. 192,891. 1 Claim. (Cl. 70—47.)



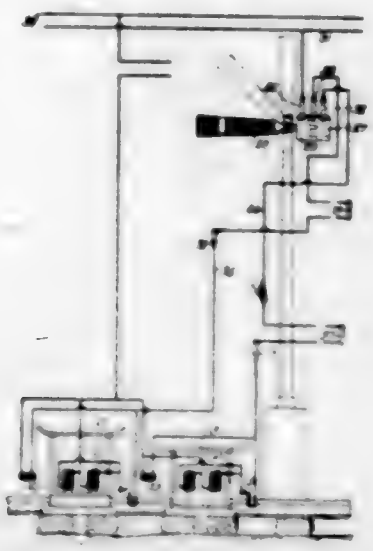
In a lock of the nature disclosed, a plurality of tumblers; said tumblers being provided with projecting extremities; and means for adjustably positioning said extremities.

1,301,467. VEHICLE-TIRE. JOHN LORENZ, Milwaukee, Wis. Filed Feb. 15, 1917. Serial No. 148,847. 4 Claims. (Cl. 152—8.)



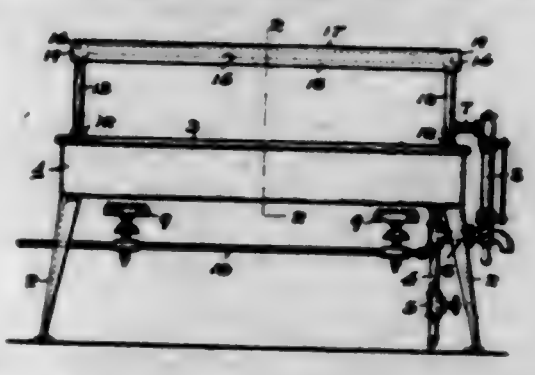
4. In a wheel tire, a body portion formed with longitudinal grooves and with radial grooves to divide said body portion into a plurality of lateral faces, said body portion being formed, further, with a plurality of cavities extending inwardly from its outer face and with apertures extending into said cavities from its inner face, a tread removably secured to the outer face of said body portion, protuberances formed upon said tread and disposed over the several cavities of said body portion, floating buttons disposed in said cavities, plugs disposed in said cavities and apertures, and expansion springs yieldingly separating said last named members whereby they are retained, respectively, in engagement with said tread and with the rim of the wheel.

1,301,468. TRAIN-STOP. WILLIAM HUGHES LOWELL and MAX THEODORE WINTSCH, Lancaster, Pa. Original application filed Jan. 24, 1918, Serial No. 213,521. Divided and this application filed Aug. 16, 1918. Serial No. 250,164. 5 Claims. (Cl. 246—171.)



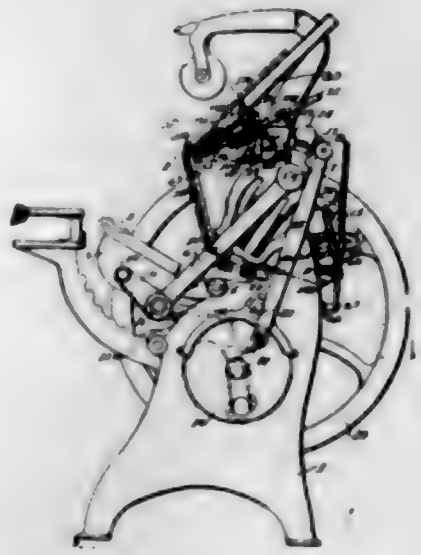
5. In a train stop, a pair of gravitationally-operable shoes, electromagnetic means for each of the shoes adapted to engage the shoe in the raised position, a normally closed circuit to each of the electromagnetic means, a double switch in said closed circuit operable by a railway signal and whereby either of the circuits may be broken and, therefore, either of the shoes allowed to drop, an electromagnet for raising each shoe in shunt with the electromagnetic means of the corresponding shoe, and a switch in each shunt adapted to be open when the shoe is in raised position and closed when the shoe is in the lowered position.

1,301,469. HEATING OR STEAMING APPARATUS. ALEXANDER LUBAN, Newark, N. J. Filed Jan. 21, 1918. Serial No. 212,884. 11 Claims. (Cl. 126—33.)



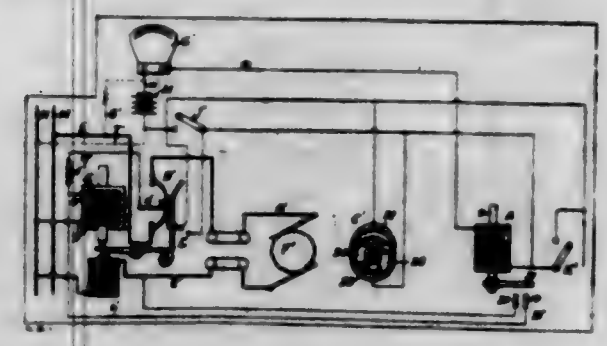
1. In an apparatus of the character specified, a receptacle adapted to contain a heating medium, a portion of said receptacle providing a table for the placing of dishes thereon, hollow supporting and heat-medium conveying standards connected with and in communication with the interior of said receptacle, and means mounted upon said standards for conveying the heating medium from said receptacle and standards in a downward direction toward and upon said table.

1,301,470. PRINTING-PRESS. WILLARD M. LUDWIG, Chicago, Ill., assignor to Kier Letter Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1917. Serial No. 168,943. 21 Claims. (Cl. 101—62.)



1. In a printing press, the combination of a press frame having a bed plate, a chase rotatably mounted on said bed plate, a ring rotatably mounted on said bed plate concentrically with said chase, ratchet means connecting said ring and chase, means for rotating said ring so as to rotate said chase, and a detent mounted on said bed plate and adapted to be controlled by said ring, said chase being provided with a recess therein adapted to receive said detent, said detent being adapted to enter said recess and hold said chase in printing position when said ring is in one position and to be cammed out of coaction with said chase by said ring when said ring is in another position.

1,301,471. ENGINE-STOP. GEORGE H. MCFEATERS, Johnstown, Pa. Original application filed Sept. 25, 1908, Serial No. 454,804. Divided and this application filed Apr. 14, 1915. Serial No. 21,407. 4 Claims. (Cl. 175—294.)



1. In a power plant the combination of a generator having an overload circuit breaker, an engine for driving the generator having a centrifugal governor, an engine stop to which said governor is operatively connected, and electrical means connecting said circuit breaker and engine stop, said means being adapted to stop the engine and the generator when either the governor or the circuit breaker is actuated.

1,301,472. WRENCH. JOSEPH MACHOVIC, Pittsburgh, Pa. Filed Feb. 26, 1918. Serial No. 219,227. 3 Claims. (Cl. 81—57.)



1. A wrench comprising a head, a stationary shaft carried thereby, a gear seated on the head and revolving about said shaft and provided with a collar, means carried by the shaft and engaging with the collar for retaining the gear on the shaft, a nut gripping element detachably connected with the gear by said collar, and revolved by the latter with said gear, a rotatable shank provided with a fixed gear meshing with and driving the first mentioned gear, a shaft projecting from and rotating with the shank and extending through the head, and means carried by the rotatable shaft to prevent length-wise shifting of the shank.

1,301,473. REFLECTOR FOR USE IN WIRELESS TELEGRAPHY AND TELEPHONY. GUGLIELMO MARCONI and CHARLES SAMUEL FRANKLIN, London, England, assignors to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Feb. 26, 1919. Serial No. 279,410. 3 Claims. (Cl. 250—11.)



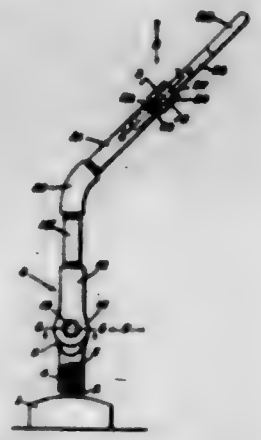
1. In a wireless telegraphy, a reflector comprising a plurality of reflector members arranged on a substantially parabolic surface, each of said members including a plurality of elements, each element being in tune with the aerial.

1,301,474. SHOCK-ABSORBER. CHARLES MARTENS, Springfield, Ill. Filed July 30, 1918. Serial No. 247,447. 4 Claims. (Cl. 267—49.)

1. A two-fluid shock absorber for vehicles, comprising a stationary hanger, an axle box adapted to slide in the hanger; a stationary first cylinder within the hanger; a second cylinder mounted on the axle box and adapted to telescope in said first cylinder; a third cylinder in operative relation to said telescoping first and second cylinders and containing a relatively non-compressible fluid; a spider stationary in said third cylinder and having a central opening adapted to accommodate a slidable stem; a piston adapted to slide in said third cylinder and having a stem adapted to slide in the central opening of the spider; packing on both sides of said piston; means for conveying said non-compressible fluid from said third cylinder into said telescoping first and second cylinders; and means for supplying on one side of said piston a compressed fluid such as compressed air acting to oppose movement of said piston in one direction.



1,301,475. ADJUSTABLE GEAR-SHIFT LEVER FOR AUTOMOBILES AND THE LIKE. GUSTAV A. E. MELLIN, Los Angeles, Calif. Filed Sept. 11, 1918. Serial No. 253,613. 3 Claims. (Cl. 74—37.)

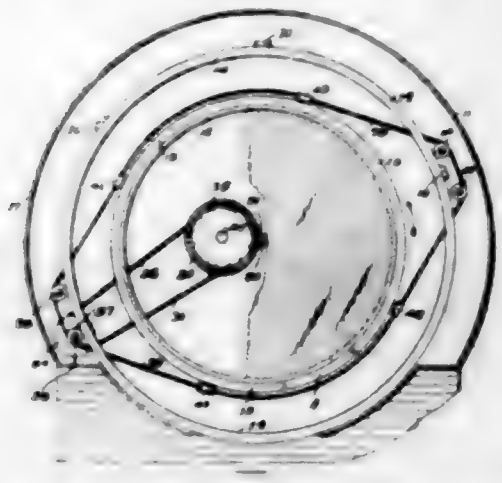


1. In an adjustable gear shift lever a stem; a clamping jaw rigid with the stem and having a flat corrugated side face in a plane parallel with the axis of the stem, and having a spring seat extending from the corrugated face and a bolt hole extending from the spring seat; a torsion and expansion spring mounted in the spring seat and held against rotation; a second clamping jaw having a corrugated side face fitting the corrugated side face of the first jaw, and having a second spring seat extending from the corrugated face and a bolt hole extending from the second spring seat, the other end of the spring being mounted in the second spring seat under tension and held against rotation, and a bolt inserted through the bolt holes for adjustably compressing the spring to bring the teeth of one corrugated face into motion more or less with the teeth of the other corrugated face to provide lost motion between the two clamping jaws.

1,301,476. AMUSEMENT RIDING DEVICE. JOSEPH W. MICHAEL, Woodburn, Iowa. Filed May 6, 1918. Serial No. 232,904. 3 Claims. (Cl. 46—27.)

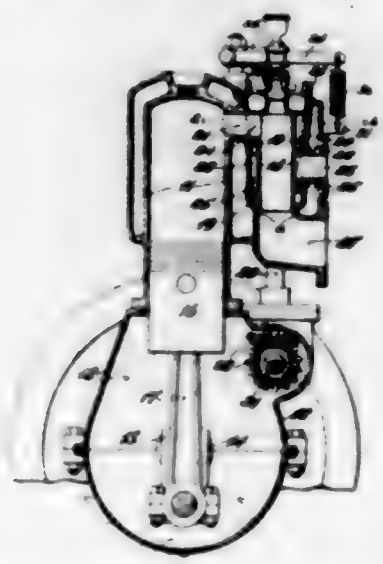
2. In a device of the class described, a pair of spaced substantially parallel tracks opening toward each other and having wave-like form, a series of cars connected together, each having at each end a pair of axles, one pair of axles being mounted for limited vertical tilted movement with relation to the car on which it is mounted, yokes at the ends of each pair of axles, for connecting

the axles, vertically arranged rollers on the axles, and horizontally arranged rollers supported on said yokes



and located between the respective pairs of rollers and the adjacent ends of the pairs of axles.

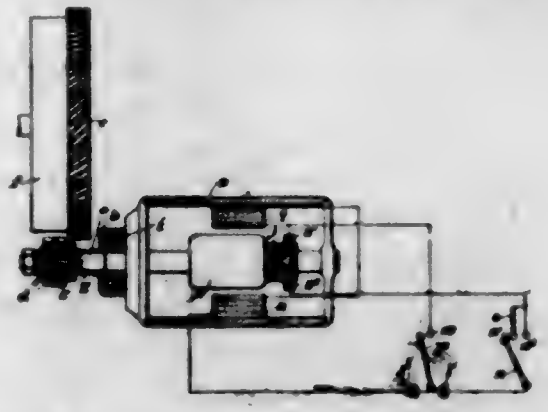
1,301,477. VALVE FOR EXPLOSION-ENGINES. ONESIME E. MICHAUD, St. Louis, Mo., assignor of one-half to Fritz A. Muller, McGehee, Ark. Continuation in part of application Serial No. 105,590, filed June 24, 1916. This application filed Jan. 2, 1917. Serial No. 139,998. 5 Claims. (Cl. 123—59.)



1. An explosive engine having a series of parallel cylinders arranged in sets of two, rotary valves arranged in chambers formed in the side of each cylinder and spring pressed arms bearing on the tops of the valves for retaining them in said chambers, and means operated from the crank shaft and arranged between the valves of each set for rotating the valves in sets of two, whereby the valves of each set rotate in the same direction.

1,301,478. STARTER FOR INTERNAL-COMBUSTION ENGINES. ALBERT HENRY MIDGLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, Acton Vale, England. Filed Feb. 20, 1915. Serial No. 9,717. 2 Claims. Cl. 290—38.)

1. An electric starter for internal combustion engines for automatically effecting the coupling of the engine and starting motor, comprising in combination with the engine shaft an electric motor having a longitudinally displaceable armature shaft, a helical gear having two coöperating members, one of which constitutes a driving member and is mounted on the longitudinally displaceable armature shaft in such a manner as to be capable of both rotating therewith and of sliding thereon in a longitudinal direction, and means for simultaneously rotating the armature shaft and longitudinally displacing it, together with the said driving member mounted thereon, to a position of initial coupling between the two shafts through the intermediary of the driving member, whereby the further rotation of the armature shaft, after the said



initial coupling, causes the one member of the helical gear to shift longitudinally relatively to the other member thereof, thereby completing the coupling between the two shafts, as set forth.

1,301,479. TIME-FUSE FOR SHELLS. ALBERT HENRY MIDGLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, Acton Vale, England. Filed May 23, 1917. Serial No. 170,542. 6 Claims. (Cl. 102—38.)



1. A time fuse for shells having a fuse holder, a covered fuse mounted thereon and having two adjacent parts, a separating movable member arranged between the adjacent parts of the fuse, an opening provided in said separating movable member, a movable member for covering the adjacent parts of the fuse, and a punching hole provided in the latter movable member and arranged to register with the opening in the separating movable member, as set forth.

1,301,480. TIME-FUSE FOR SHELLS. ALBERT HENRY MIDGLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, Acton Vale, England. Filed May 23, 1917. Serial No. 170,543. 9 Claims. (Cl. 102—36.)

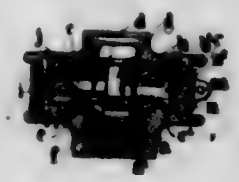


1. A time fuse for explosive shells having a fuse holder, a covered fuse mounted on the fuse holder and having two adjacent parts, a gap in one of the two adjacent parts of the fuse, a movable member for covering the adjacent parts of the fuse and a punching hole in said movable member for punching the fuse laterally, as and for the purpose set forth.

1,301,481. PERCUSSION-FUSE FOR EXPLOSIVE PROJECTILES. ALBERT HENRY MIDGLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, Acton Vale, England. Filed May 23, 1917. Serial No. 170,544. 4 Claims. (Cl. 102—39.)

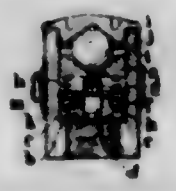
1. A percussion fuse for explosive projectiles having a fuse holder, two separate blocks capable of relative axial

movement, a striker provided on one of the blocks, a percussion cap provided on the other block, a safety member arranged to lie directly between the striker and the cap and means provided outside the fuse holder for retain-



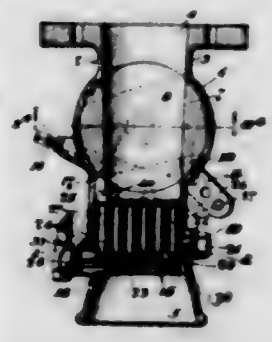
ing the safety member in its safety position, said means being a constituent part of the fuse and capable of becoming automatically disengaged from the fuse holder together with the said safety member during the flight of the projectile, as set forth.

1,301,482. PERCUSSION-FUSE FOR EXPLOSIVE PROJECTILES. ALBERT HENRY MIDDLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, of Acton Vale, England. Filed May 23, 1917. Serial No. 170,546. 7 Claims. (Cl. 102—39.)



1. A percussion fuse for explosive projectiles having a fuse holder, two members capable of relative axial movement, a striker provided on one of the members, a percussion cap provided on the other member, a positive safety member for keeping the two members carrying the striker and the percussion cap apart from each other, a tape provided outside the fuse holder for keeping the safety member in its safety position, and means for pivotally attaching the tape to the safety member, as set forth.

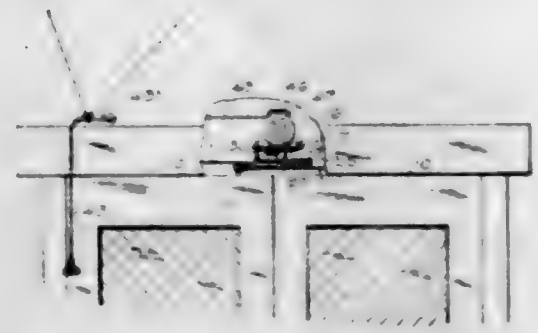
1,301,483. CARBURETER. HARRY A. MILLER and FRANK M. ADAMSON, Los Angles, Calif. Filed May 1, 1916. Serial No. 94,549. 8 Claims. (Cl. 261—41.)



7. A carbureter comprising a float chamber having an outlet port, a body having a passage therethrough and having a slot, a nozzle support projecting through said slot into said passage and provided with a head at its outer end and provided with a duct registering with said outlet port of the float chamber, screws passing from the head of the nozzle support into the float chamber, and a nozzle for the nozzle support communicating with said duct.

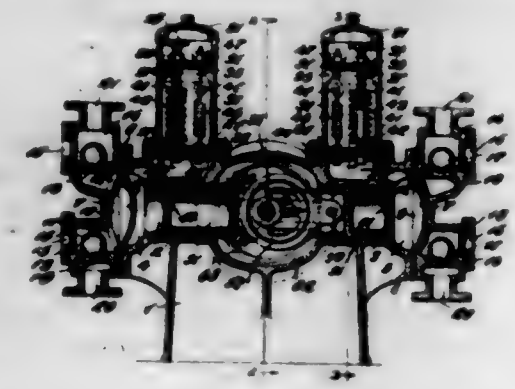
1,301,484. DOOR-OPERATING MECHANISM. JOSEPH M. MOHR, Eldora, Iowa. Filed Aug. 9, 1918. Serial No. 249,184. 8 Claims. (Cl. 268—9.)

1. In a door-operating mechanism, the combination with a movable door; of an electric-motor driven shaft, a crank arm on said shaft and having an operative connection with the door, a switch controlling the motor circuit, a ratchet member operatively connected to the switch, pawls engageable with the ratchet member for actuating the same, levers carrying the pawls, actuating



means for one of the levers, a movable actuating member for the other lever, and trips on the aforesaid crank arm operating said actuating member after the switch has been closed.

1,301,485. PUMP. HILMAR MUELLER, Trenton, N. J. Filed Dec. 17, 1918. Serial No. 267,094. 14 Claims. (Cl. 103—10.)

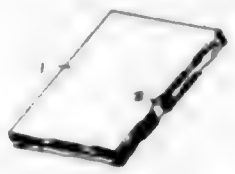


13. The combination of a housing containing opposed cylinders that are in axial alinement with each other and opening at their outer ends into chambers, diaphragms dividing said chambers into actuating compartments, wherewith the cylinders communicate, and pumping compartments, the latter having valve controlled inlet and outlet ports, the housing having a central chamber into which the cylinders open, a unitary piston structure having end portions within the cylinders and a central skeleton portion connecting the end portions, a driving shaft supported transversely of the central chamber, driving connections between the shaft and piston structure, means for driving the shaft, the housing having passageways opening through the top of the housing and communicating with the actuating compartments, a plate closing the outer end of each passageway, said plate having through ports one of which is surrounded by a valve seat on the outer side of the plate and the other by a valve seat on the inner side of the plate, an open top casing surmounting each plate and containing an accumulating chamber, a removable cover closing the upper end of each casing, a valve for coöperation with each valve seat of each plate, springs tending to maintain the valves closed, and means within the casings for adjusting the tension of certain of said springs and accessible through the open ends of the casings.

1,301,486. THUMB-HOLD FOR BOOK-LEAF TURNING. RUDOLPH MUESSEL, Toledo, Ohio. Filed Dec. 30, 1918. Serial No. 268,847. 2 Claims. (Cl. 281—15.)

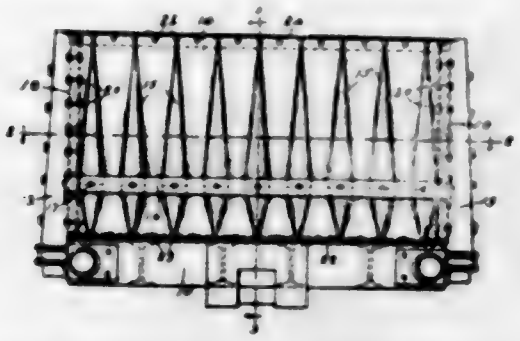
1. A rough edged book having a recess in its front edge formed by cutting the edges of the leaves of the book, the recess extending through the body of the book and having

a smooth surface located substantially at right angles to the front and the back of the book when the book is



closed and forming a thumb hold for delivering the pages in succession.

1,301,487. VERTICALLY-CORRUGATED SHEET-METAL CAR END. WALTER P. MURPHY, Chicago, Ill. Original application filed Nov. 8, 1913, Serial No. 799,968. Divided and this application filed June 5, 1916. Serial No. 101,682. 10 Claims. (Cl. 105—410.)



1. A sheet metal car end structure comprising an end sheet formed with vertical corrugations, the cross sectional areas of which are greatest at points between the horizontal center line of the end and the floor and which taper in width and depth toward their extremities.

1,301,488. RECLINING-SEAT. JOHN W. MYERS, Des Moines, Iowa. Filed Sept. 9, 1918. Serial No. 253,316. 1 Claim. (Cl. 21—43.)



In a device of the class described, an automobile body having side members and a bottom member, said side members being provided with parallel opposite guideways near their lower portions, a front seat member, a seat back member having side frame members provided with parallel longitudinally elongated slots, a transverse rod mounted in the sides of said body and received in said slot, the parts being so arranged that when the seat back member is in its normal position, the side frame members thereof have their lower ends received in said guide ways and said rod is in the upper portion of the slots and adapted partially to support the weight of the seat back member, and being so arranged that when the seat back member is raised, its side members may be swung to clear said guide.

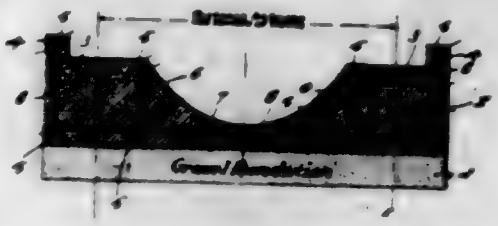
1,301,489. NECK-FORM DEVICE. ALBIN THOMAS NALEWAJA, Los Angeles, Calif. Filed Apr. 12, 1918. Serial No. 228,245. 3 Claims. (Cl. 211—24.)

1. A device of the character described, comprising a substantially vertical part, and a pair of substantially semi-circular parts extending in a horizontal plane from the upper end of the vertical part and having their free ends somewhat spaced apart, said vertical part being relatively narrow in its upper part and relatively wide in its lower part, and said lower part having laterally



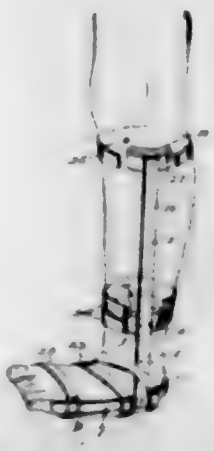
projecting portions adapted to project on opposite edges of a supporting clip which engages the vertical portion of the device.

1,301,490. VEHICLE-TRACK FOR PUBLIC HIGHWAYS. MILTON L. NEES, New Ross, Ind. Filed Feb. 20, 1917, Serial No. 149,756. Renewed Dec. 27, 1918. Serial No. 268,493. 1 Claim. (Cl. 104—178.)



A vehicle track comprising a body having conduits, tread surfaces formed upon said body, integral flanges formed upon the edges of the tread surfaces, longitudinally extending reinforcing members extending through the body and flanges, vertically disposed reinforcing members extending through the body and flanges, and transversely extending reinforcing members in the body and inter-crossing the vertically and longitudinally extending reinforcing members.

1,301,491. DEVICE FOR STRAIGHTENING DEFORMED OR CLUB FEET. GUSTAVE A. NELSON, Galloway, Wis. Filed Apr. 30, 1918. Serial No. 231,641. 2 Claims. (Cl. 128—80.)

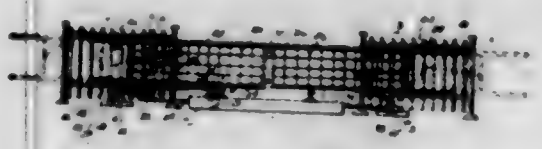


1. A device of the character described including an attaching pad, a lever movably connected to the pad, a foot engaging member pivotally connected to the lower end of the lever, means for clamping the member to a foot, means for securing the pad to the leg of the wearer and means for connecting the upper end of the lever to the leg of the wearer.

1,301,492. AUTOMATIC RAILWAY STOCK-GATE. WILLIE W. NELSON, Monticello, Miss. Filed Mar. 22, 1917. Serial No. 156,684. 1 Claim. (Cl. 246—307.)

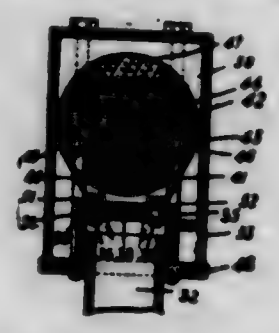
A railway stock gate including a pair of gates slidable toward and away from each other and across a railway.

crank shafts mounted on opposite sides of the railway, springs carried by the shafts for holding them yieldably in normal position and serving to close the gate, a rod slidable transversely beneath the railway, links pivotally connected to the ends of the rod and to the respective crank shafts, a depressible member located adjacent one



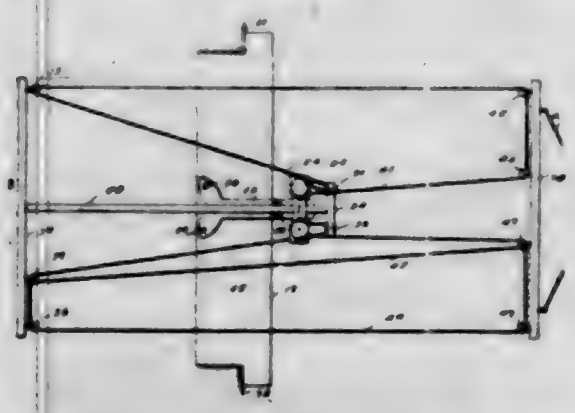
of the rails of the railway, a crank shaft mounted adjacent the depressible member and in parallel relation thereto, links connected to the depressible member and the last-named crank shaft and a link connected to the last-named crank shaft and to one of the first-named crank shafts.

1,301,493. THEFT-ALARM FOR AUTOMOBILES. WILLIAM H. NIEMEYER, Los Angeles, Calif. Filed June 25, 1917. Serial No. 176,910. 1 Claim. (Cl. 175—306.)



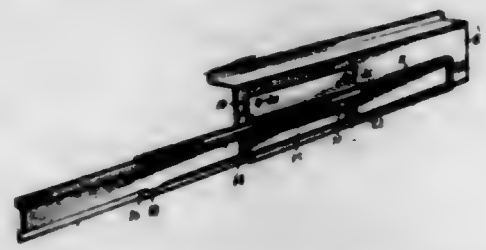
In a theft alarm for automobiles and the like, a contact cap, insulating bushings mounted through the cap, binding posts extending through the bushings, resilient contact fingers having ends inserted under the nuts of the binding posts, and a drum adapted to be clamped upon a steering post shaft; said drum comprising two halves, screws connecting the two halves together; the drum having a cut-away portion; and an insulating block screwed in the cut-away portion; the periphery of the drum being circular and the drum being electrifiable except the insulating portion; so that a circuit may flow through the contact fingers and through the drum except when the insulating portion is in contact with one of the fingers.

1,301,494. LAUNDRY-HANGER. NICK ORLOFF, Sparrows Point, Md. Filed Sept. 11, 1918. Serial No. 253,519. 4 Claims. (Cl. 68—3.)



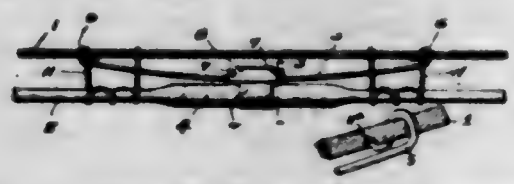
1. A clothes hanger comprising a support adapted to be mounted upon a window sill, a head on said support, a bar slidably mounted through said head, a rod upon the inner end of the bar adapted for movement inwardly and outwardly of a window, a plate upon the outer end of said bar, a beam outwardly of the plate, and endless lines anti-frictionally connected between the said rod, beam, head and plate constantly maintained in a taut position.

1,301,495. SUSPENSION FOR DRAWERS AND SIMILAR RECEPTACLES. OTHO M. OTTE, Jamestown, N. Y., assignor to Steelwhite Company, Jamestown, N. Y., a Corporation. Filed Mar. 25, 1918, Serial No. 224,421. Renewed Mar. 15, 1919. Serial No. 282,965. 5 Claims. (Cl. 45—77.)



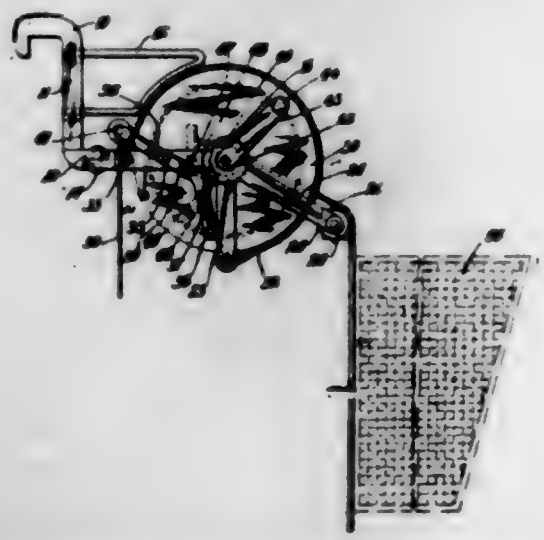
2. In a drawer suspension and the like, an outer longitudinally channeled member, a central member in the channels of the outer member and itself being longitudinally channeled on its outer side, said central member having a longitudinal slot, a lug on the outer member extending into the slot, and an inner member having its side edges received in the channels of the central member and having a longitudinal channel between its side edges to receive said lug.

1,301,496. CABLE SUSPENSION. HERBWARD J. PEELS, St. Louis, Mo. Filed Mar. 10, 1917. Serial No. 153,918. 14 Claims. (Cl. 248—33.)



1. A cable suspension device comprising an adjustable suspension member arranged for engagement with a supporting strand at points spaced apart a substantial distance longitudinally thereof, abutment members adapted to be secured to the supporting strand in coöperation with the suspension member to retain it against movement longitudinally of the supporting strand, and an attaching means between the suspension member and the suspended cable, which attaching means comprises an adjustable portion adapted to grip the supported cable and portions operable for connection with the suspension member intermediate its extremities.

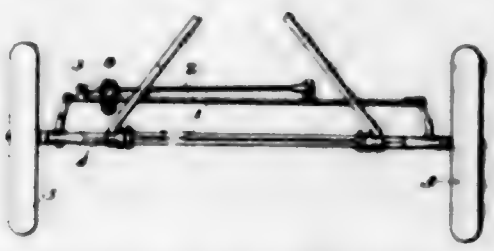
1,301,497. FIRE-ESCAPE. FRANK PFEIL, Livingston, Ill. Filed Mar. 9, 1918. Serial No. 221,849. 1 Claim. (Cl. 227—22.)



In a fire-escape, the combination with a pair of arms, of hooks pivotally engaged therewith, said hooks being

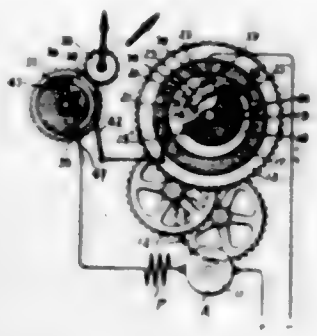
engageable with the sill of a window, guide-arms pivotally secured in brackets at the inner sides of said hooks, a shaft mounted in the outer end of said arms, a pair of spaced chains engaged with said shaft, a ratchet wheel mounted on said shaft, a dog pivoted in said arms engageable with the said ratchet, means for manually rotating said shaft, means for normally holding said dog in engagement, said means permitting the release of said dog, a spring adapted to release said dog, braking means operated by the descent of an operator, means for manually reducing the action of said braking means and an open wire basket attached to said chains, substantially as described, and for the purpose set forth.

1,301,498. AUTOMOBILE-LOCK. CHARLES POHL, Los Angeles, Calif. Filed May 16, 1917. Serial No. 168,958. 1 Claim. (Cl. 70—90.)



The combination with the steering knuckle connecting rod and steering rod of an automobile, of similar locking leaves of rectangular outline hinged to one another at one end, a lock inserted in the other end of one of the leaves and engageable with the other end of the other leaf, the adjacent faces of the leaves being irregular and closely fitting one another and being provided with semicircular grooves, the grooves extending transversely to the axis of the lock, the grooves in one leaf registering with those in the other leaf and the grooves being adapted to fit the connecting and steering rods respectively, one of the grooves in each leaf being out of parallelism with the other groove as regards both horizontal and vertical planes passing through the longitudinal axes of the grooves to prevent relative endwise movement between the connecting and steering rods, there being openings in one of the leaves between the grooves therein, and lugs projecting from the other leaf between the grooves therein and engageable with the openings.

1,301,499. ELECTRIC WINDING MECHANISM FOR CLOCKS AND THE LIKE. EUGENE PONS, Schenectady, N. Y., assignor of fifteen thirty-seconds to Frank J. Seabolt, one-fourth to Mabel H. Hall, and one thirty-second to Charles D. Knight, Schenectady, N. Y., and one-fourth to Edward F. Pickford, Washington, D. C. Filed July 25, 1912, Serial No. 711,444. Renewed Sept. 30, 1918. Serial No. 256,349. 22 Claims. (Cl. 58—41.)



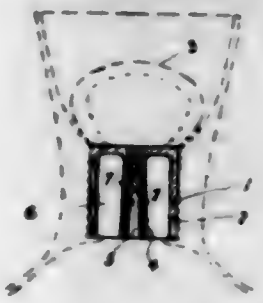
1. The combination with a clock mechanism, of an electromagnetic device for winding the same, and means whereby the winding device operates periodically at a predetermined time as indicated by the hands of the clock to restore in the mechanism the energy which has been expended since the last winding operation.

1,301,500. CLOTHES-HANGER. RALPH V. REYNOLDS, Chicago, Ill., Filed Aug. 3, 1916. Serial No. 112,974. 1 Claim. (Cl. 46—13.)



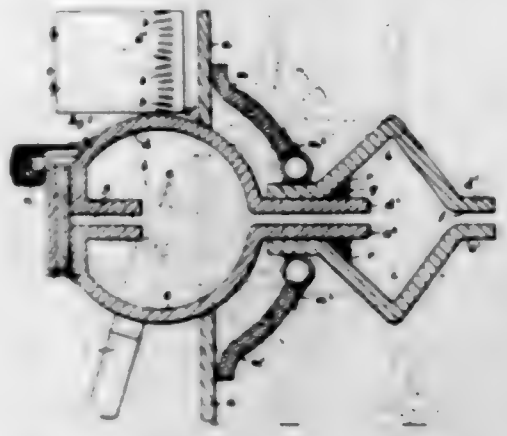
In a device of the class described, the combination with a chambered peripherally flanged base plate having apertures therein, of a unitary plate stamped to provide a plurality of arms integrally connected and of successively shorter lengths from the upper to the lower arm, said arms being vertically alined and provided with notches and apertures to receive coat hangers, and laterally directed offset lugs all disposed in the same plane at right angles to and integral with said arms, said lugs engaged through said apertured base plate to permit said lugs to seat in said chambered base plate to rigidly hold said arms in position.

1,301,501. CORK. ALEXANDER ROCKS ROBERTSON, Vancouver, British Columbia, Canada. Filed June 29, 1918. Serial No. 242,595. 2 Claims. (Cl. 215—52.)



1. In combination with a hot water bag, a cork or stopper therefor provided with a meltable portion adapted to be melted if the hot water in the bottle exceeds a temperature likely to burn the skin of the person using it.

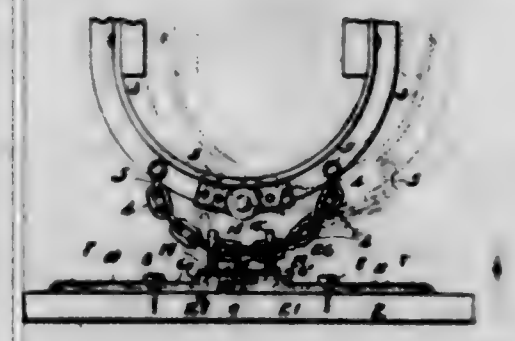
1,301,502. SIGHTING DEVICE. JOHN HOGG ROBERTSON, London, England. Filed July 30, 1918. Serial No. 247,392. 10 Claims. (Cl. 88—1.)



1. A sighting device for armored vehicles, gun shields, turrets and the like, comprising upper and lower members of bullet-resisting material, said members being arranged to form a passage affording a narrow horizontal slot at its front end, bullet-deflecting faces upon said members to afford protection for the user and arranged above and below said slot, the rear end of the passage being also in the form of a narrow horizontal slot, and

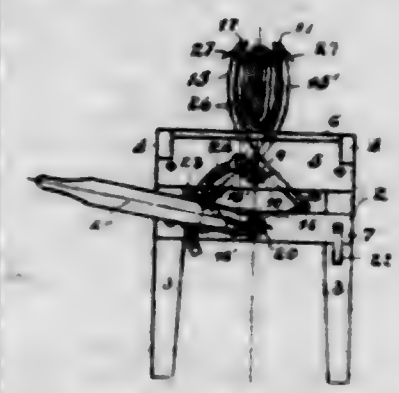
a supporting base for said members, said members projecting from said base and being arranged to allow an observer to look for sighting purposes through the length of the passage..

1,301,503. CATTLE-ALINING DEVICE. ALVIN V. ROWE, Galesburg, Ill., assignor to Rowe Manufacturing Company, Galesburg, Ill., a Corporation of Illinois. Filed Apr. 4, 1918. Serial No. 226,863. 3 Claims. (Cl. 119—149.)



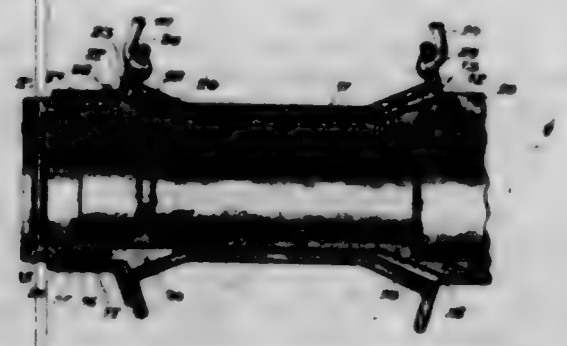
1. The combination with a swinging element, of links, each having a boss provided with a transverse opening in its top and a longitudinally arranged opening in one of its ends, swivels, each comprising an eye, a stem, and a head, said swivel heads adapted to be passed through said transverse openings and the stems moved in the longitudinal openings to permit said swivel heads to be engaged within said bosses, and a chain passing through said swivel-eyes and engaged with the swinging element.

1,301,504. SACK-BALER. ALVIN V. ROWE and GEORGE W. ERICSON, Galesburg, Ill., assignors to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed Dec. 24, 1917. Serial No. 208,624. 11 Claims. (Cl. 100—31.)



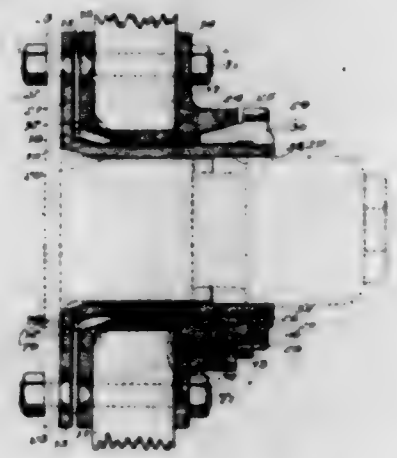
1. In a baler, a frame, a shaft mounted therein, means for rotating it, a pair of chains secured to opposite sides of the shaft, and a pair of compression levers secured each to one of said chains.

1,301,505. WHEEL-HUB. JOHN RUSS, Akron, Ohio. Filed Oct. 14, 1916. Serial No. 125,578. 2 Claims. (Cl. 21—31.)



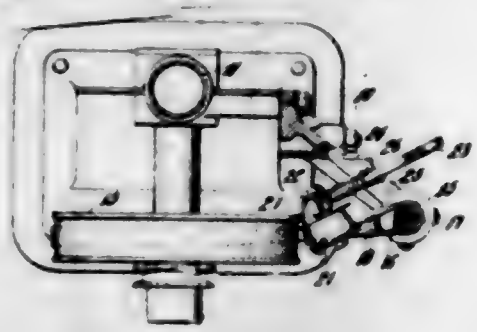
1. In a hub for detachable wheels, the combination of driving and driven hub members, a wedge nut for pressing said members into operative relation, a lock ring connected to one of said members, and a spring connecting said wedge nut and lock ring, whereby the lock ring may be rotated on said nut to store energy in said spring tending to tighten said nut.

1,301,506. WHEEL-HUB. JOHN RUSS, Chicago, Ill. Filed Aug. 17, 1917. Serial No. 186,967. 3 Claims. (Cl. 21—31.)



1. In a hub for detachable wheels, the combination of inner and outer hub members having interlocking portions, a flange member connected to the outer hub member and having a beveled portion, a nut having wrench notches and engaging the inner hub member and having a wedge portion engaging the beveled portion of the flange member to hold the inner and outer hub members in interlocking engagement, and a spring pressed pin mounted in said flange member and engageable with a wrench notch in said nut to positively lock the nut against accidental movement.

1,301,507. BELT DRIVING CONNECTION. CHARLES K. SALISBURY, Milwaukee, Wis., assignor to Standard Separator Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 29, 1913, Serial No. 744,843. Renewed Jan. 29, 1919. Serial No. 273,887. 2 Claims. (Cl. 64—5.)



1. Means for relieving a separator driving engine from its load, comprising the combination with a driven member and its spindle of an engine and its flywheel, a grooved pulley on the spindle, a belt connecting the grooved pulley with the flywheel, an idle pulley receiving the belt from the flywheel, a swinging arm, a tightener pulley on the swinging arm receiving the belt from the idle pulley, a handle member connected with the arm, a guide through which the handle member passes, a spring for moving the swinging arm, and a projection from the handle member adapted to engage the guide for holding the handle member against the action of the spring.

1,301,508. PUMP CONNECTION FOR PNEUMATIC TIRES. CARL SCHROEDER, San Diego, Calif. Filed Dec. 2, 1915. Serial No. 64,677. 1 Claim. (Cl. 284—19.)

In a pump connection, the combination of a hose connecting element provided with a reduced exterior and an

enlarged interior portion on its lower end forming a valve seat, a cylindrical element secured to the lower end of said connecting element provided with a recess in its lower end, a partition portion above said recess forming the bottom of said recess, a plurality of ports extending through said partition portion and upwardly therefrom in the inner walls of said cylinder-forming by-passes through said partition and in the inner surface of the wall of said cylinder, a plunger reciprocally mounted in said cylinder so that its upper end will pass the upper



end of said by-passes when at the end of its downward stroke but will close said by-passes when raised slightly and provided with a downwardly extending portion adapted to engage the valve stem when in its downward position, a rubber gasket mounted in the recess in said cylindrical element adapted to fit snugly over the top end of a valve stem, and means for compressing the outer edge of said gasket whereby it will be made to fit snugly on the valve supporting stem.

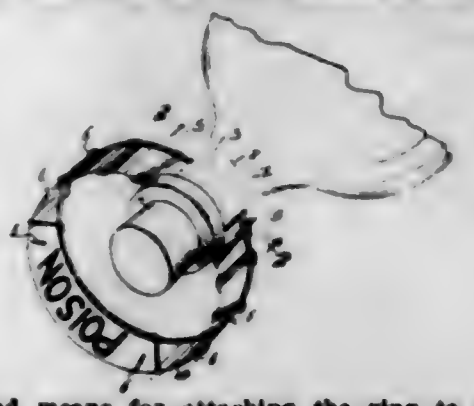
1,301,509. HOT-WATER BOTTLE. CHARLES F. SCHUH, Newark, N. J., assignor to Andrew Albright, Jr., New York, N. Y. Filed Oct. 14, 1918. Serial No. 257,936. 5 Claims. (Cl. 128—258.)



1. A hot water bottle having an integral tab at the mouth thereof formed integrally with projections for facilitating the manual gripping of the tab while the bottle is being filled with water.

1,301,510. GUARD FOR POISON-BOTTLES. FLORRA SCOTT, Sugar Grove, Va. Filed Nov. 8, 1918. Serial No. 261,630. 1 Claim. (Cl. 215—113.)

A poison bottle indicator comprising a ring, a series of spring wires wound around the ring and having their free ends inserted transversely through the material of the ring so that these free ends project radially to form



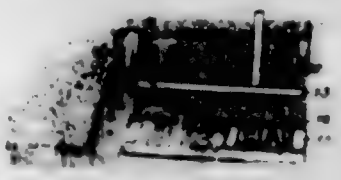
prongs, and means for attaching the ring to the neck of a bottle.

1,301,511. WINDOW-LOCKING DEVICE. CHARLES J. SELASKY, Pittsburgh, Pa. Filed July 24, 1918. Serial No. 246,549. 1 Claim. (Cl. 16—142.)



In a device of the class described, a toothed rack for attachment on the side rail of one sash of a window frame, a locking bolt for attachment on the meeting rail of the other sash of said window frame, the locking bolt having a slotted end straddling the teeth of the rack and having a projection formed within the slot for engagement in the slots between the teeth of the rack, and means for locking the locking bolt so that the said projection is maintained either in or out of engagement with the said slots of the rack.

1,301,512. HARVESTER-REEL. EDWARD C. SELLERS, Green Mountain, Iowa. Filed Oct. 22, 1918. Serial No. 259,271. 2 Claims. (Cl. 56—22.)

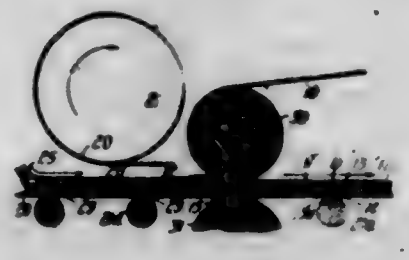


1. The combination with a harvester reel comprising a reel shaft, arms extending radially therefrom, and reel blades secured to the ends of said arms, intermediate of the ends of said blades, of a protecting blade secured to the outer end of each reel blade and extended toward and disposed radially relative to said shaft.

1,301,513. METHOD OF MAKING PLASTER LATH OR THE LIKE. JAMES P. SEXTON, Los Angeles, Calif. Original application filed June 28, 1915, Serial No. 36,657. Divided and this application filed May 27, 1916. Serial No. 100,416. 5 Claims. (Cl. 154—2.)

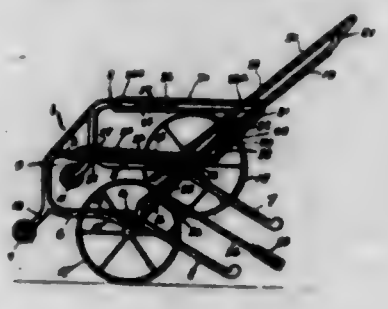
1. The herein described method of forming plaster lath or the like, embodying placing a sheet having perfora-

tions and surrounding depressions on a smooth flat base surface with the depressions facing the surface, applying a layer of plastic substance to the back of the sheet of such consistency that the plastic substance flows re-



strictedly through the perforations but does not fill the depressions, and then applying pressure to the layer of plastic substance to form it into a layer of uniform thickness and to force it through the perforations to form protuberances in the depressions, substantially as described.

1,301,514. BABY-CARRIAGE. GEORGE STANLEY SHAW, Vancouver, British Columbia, Canada. Filed May 31, 1918. Serial No. 237,528. 5 Claims. (Cl. 21—12.)



1. In a baby carriage, an axle having wheels, a frame and a handle therefor, said frame being fulcrumed on the wheel axle and adapted to be swung thereabout forwardly or rearwardly by respective upward or downward movements of the handle, and means for holding the axle stationary during such movements.

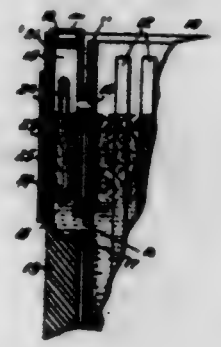
1,301,515. INFLATABLE MARINE LIFE-SAVING APPLIANCE. DAVID JOSEPH SMITH, London, England. Filed July 26, 1915. Serial No. 41,989. 4 Claims. (Cl. 9—19.)



1. The combination of a boat including rigid longitudinal frame members connected together to fold together laterally and to be spread apart in open boat forming position, a flexible gas receptacle connected with the laterally folding longitudinally frame members, and a gas generator associated with the gas receptacle adapted upon the entrance of water thereto to supply gas to the flexible receptacle, the flexible gas receptacle being adapted by its inflation to laterally spread apart the longitudinal frame members in open position.

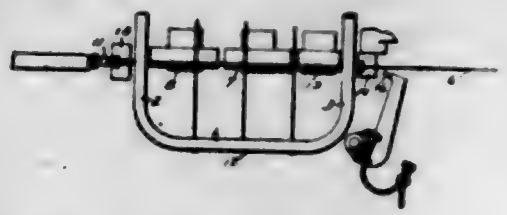
1,301,516. INDICATOR. FRANKLIN G. SMITH, Circleville, N. Y. Filed July 5, 1918. Serial No. 243,411. 3 Claims. (Cl. 265—45.)

1. The combination with a casing containing a cell for holding liquid and having a cavity in one wall, of a receptacle for a hydrometer seated in said cavity and opening into the cell at its lower end, said receptacle having a transparent outer wall substantially flush with the outer surface of the casing through which wall the hy-



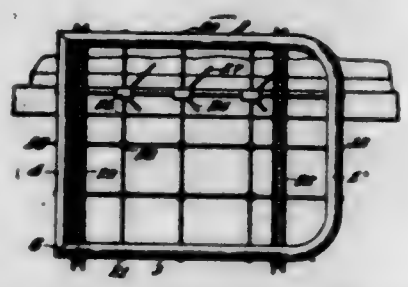
drometer may be seen, and a closure hinged to said casing for covering said wall to protect the same.

1,301,517. METHOD OF SECURING WIRE FILLINGS TO FRAMES. WILLIAM H. SOMMER, Peoria, Ill., assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, a Corporation of Ohio, and William E. Stone, Peoria, Ill., trustees. Filed May 24, 1915. Serial No. 30,184. 13 Claims. (Cl. 29—148.)



1. The method of attaching a wire filler to a frame, which consists in passing the ends of the respective cross wires through the opposite reach bars of the frame, heading the opposite ends of each wire, and uniting the wires where they intersect.

1,301,518. METHOD OF SECURING WIRE FILLINGS TO FRAMES. WILLIAM H. SOMMER, Peoria, Ill., assignor, by mesne assignments, to The First Trust & Savings Company, Cleveland, Ohio, a Corporation of Ohio, and William E. Stone, Peoria, Ill., trustees. Original application filed May 24, 1915, Serial No. 30,184. Divided and this application filed Oct. 1, 1917. Serial No. 194,166. 1 Claim. (Cl. 140—11.)

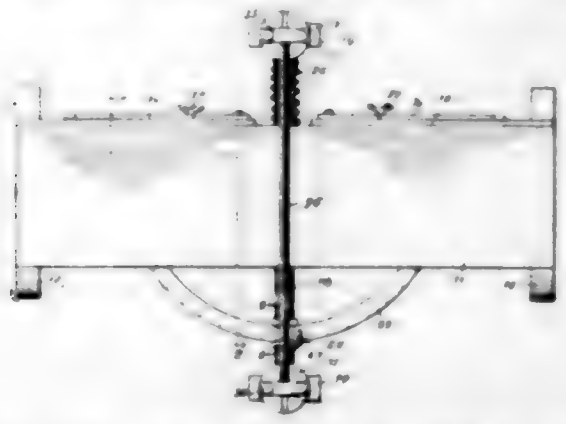


The method of securing the intersecting portions of the cross wires of a frame, which consists in applying tie wires to said intersecting wires, a row at a time, and moving said frame in a step-by-step movement so as to progressively present the rows of intersecting portions of said wires to said tie-wire applying devices.

1,301,519. MITER-BOX. CLARENCE W. SPAULDING, Muskegon Heights, Mich. Filed Oct. 2, 1915. Serial No. 53,841. 2 Claims. (Cl. 143—38.)

1. A miter box including a base, a back, a pivoted supporting block, a shaft rotatably and slidably mounted in said block, rods carried by the ends of the shaft, saw guides and supports carried by said rods, a bar located

between and adjustably secured to said rods, an arm pivotally secured at its lower end to said back on each side of said shaft, means adapted to secure said arms in various angular positions with relation to the vertical,



said arms being adapted to coöperate with the bar to support the bar in various angular positions with relation to the vertical, means by which said block may be secured against movement, and means by which the shaft may be held against rotation with relation to said block.

1,301,520. CULTIVATOR ATTACHMENT. EARL STEWART, Des Moines, Iowa. Filed Oct. 14, 1918. Serial No. 258,074. 3 Claims. (Cl. 97—1.)



3. A cultivating tool comprising a flat blade having a plurality of upwardly and rearwardly extending arms, bars secured to the rearward ends of said arms having spaced upwardly extending cutter blades, and a supporting arm on said first blade a cutter wheel on said supporting arm having a plurality of notches each formed with one sharp edge arranged substantially radially of the wheel and adapted to cut weeds or the like with a shearing movement with relation to said arm.

1,301,521. TIRE-CHAIN CLAMP. HARVEY H. STONER, Springfield, Ohio, assignor of one-half to Willis D. Stoner, Springfield, Ohio. Filed Aug. 9, 1918. Serial No. 248,889. 2 Claims. (Cl. 24—68.)



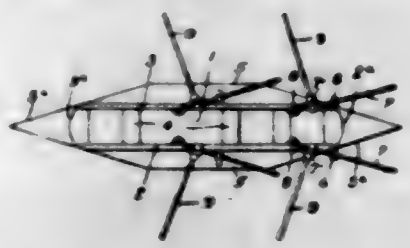
2. A tire clamp comprising a pair of U shaped members pivotally connected together at intermediate points on their legs, each U-shaped member having hooks formed at the ends of its legs and in an opposed position to the hooks on the legs of the other member, a staff journaled in one U-shaped member near the transverse portion of the latter, the shaft having a crank formed therewith, and a cable one end of which is connected to the transverse portion of the other U-shaped member and the remaining end connected to the shaft, whereby the turning of the crank will operate to move the hooked ends of the U-shaped members toward each other for the useful purpose specified.

1,301,522. REMOVABLE SAW-HANDLE. WILLIAM B. SULLIVAN, St. Louis, Mo. Filed Apr. 29, 1918. Serial No. 231,510. 1 Claim. (Cl. 145—113.)



A removable handle for saw-blades, in combination, a handle having a saw-blade receiving slot, a plurality of suitably spaced interlocking fasteners carried thereby and adapted to span the saw-blade receiving slot thereof; a saw-blade having a plurality of fastener receiving slots formed at one end thereof and so arranged that when the upper fastener of the handle is inserted into its receiving slot in the saw-blade it acts as a hinge upon which the handle may swing in a downward turning movement for inserting the remaining lower fasteners into their respective slotted openings in the saw-blade, a lock lip formed at one end of the saw-blade below the lowermost fastener receiving slot, a spring locking catch fixed to the lower face of the handle provided with a slotted opening adapted to receive the lock lip and a portion of said spring catch adapted to engage behind said lock lip for holding the handle in a normally locked position upon one end of the saw-blade.

1,301,523. BOAT. ADJUTOR LOUIS PHILIPPE TALBOT, Montreal, Canada. Filed Aug. 31, 1918. Serial No. 252,277. 3 Claims. (Cl. 9—3.)



1. A boat comprising a body having vertical side and end walls and a flat bottom; a pair of air chambers arranged symmetrically on opposite sides of said body and having their inner walls formed by the adjacent side walls of the body; and V-shaped bow and stern members arranged in front and in rear of the corresponding ends of said body and having extensions which form the end walls of the air chambers and serve to close the same.

1,301,524. MAGNETO-ELECTRIC MACHINE. BERTRAM JOHN TURNER, New Southgate, London, England. Filed Aug. 25, 1917. Serial No. 188,241. 1 Claim. (Cl. 173—324.)

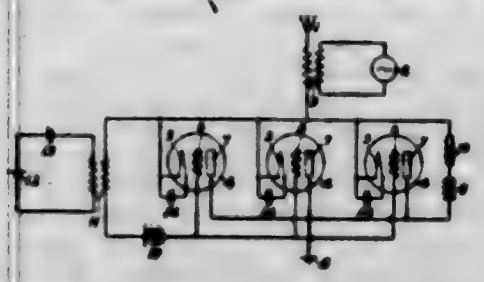
In magneto-electric machines, a contact fitting, comprising an insulating tube, a spiral spring by which said

insulating tube is outwardly thrust, a contact pin carried at the end of the said insulating tube, a second spiral spring by which the said contact pin is outwardly thrust,



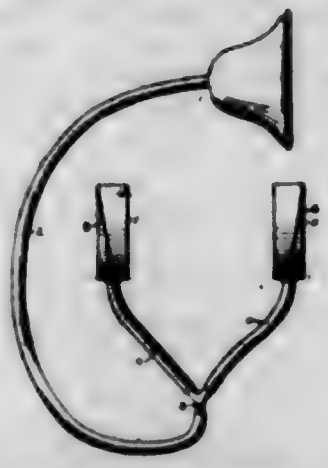
said insulating tube being provided with an extending flange at its outer end to cover and to shield the contact pin and the contact surface, substantially as described.

1,301,525. RADIO TRANSMISSION. HENDRIK JOHANNES VAN DER BIJL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 30, 1915. Serial No. 47,993. 14 Claims. (Cl. 250—6.)



1. A modulating system comprising an antenna to be supplied with signal waves, means for supplying high frequency power to be modulated to said antenna, an audion having a cathode and anode and an auxiliary electrode, means for serially introducing the impedance between said anode and cathode into said antenna, and means for controlling the potential of said auxiliary electrode in accordance with a signal.

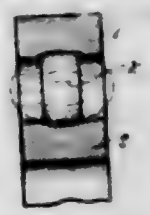
1,301,526. SOUND-AMPLIFIER. JAMES J. WARD, Greene, Ohio, assignor of thirty-five one-hundredths to Ivo C. De Beuckelaere and twenty one-hundredths to Walter G. Matthews, Dayton, Ohio. Filed Sept. 19, 1917. Serial No. 192,184. 4 Claims. (Cl. 181—20.)



1. A sound amplifier comprising a hollow member closed at one end and having a hole in the side portion thereof to admit sound waves, and a diaphragm within said member, one end of which is secured to the latter in such a manner as to project its other end into the direct path of the sound waves entering the member through said hole, for a vibratory movement by said waves.

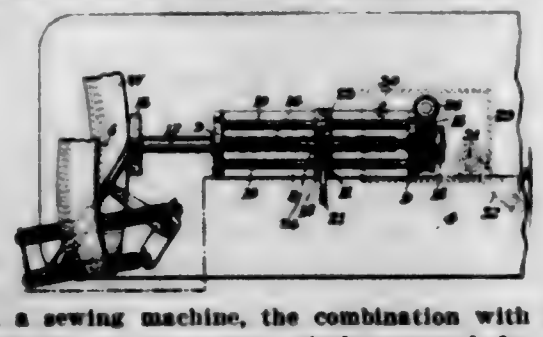
1,301,527. BALL-BEARING. ERNST HJALMAR WALDOT WERBULL, Gottenborg, Sweden. Filed Sept. 17, 1918. Serial No. 254,490. 3 Claims. (Cl. 64—39.)

1. In an antifriction bearing, the combination of two bearing rings spaced apart and having oppositely disposed grooves curved transversely, and a roller located between said rings and having flattened sides and a transversely curved periphery, the distance through the cen-



ter of the roller and normal to the axis being less than any diagonal distance through the center of the roller and included within the curved periphery.

1,301,528. SEWING-MACHINE ATTACHMENT. CORNELIUS WEISS, Brooklyn, N. Y. Filed Oct. 11, 1915. Serial No. 55,149. 9 Claims. (Cl. 112—24.)



1. In a sewing machine, the combination with a supporting table and a machine shaft mounted for rotary movement beneath the table, of an attachment including a box demountably positioned beneath said table and designed to contain a lubricant, a vertically extending shaft having its lower end journaled in said lubrication box and extending upwardly through said table, a driving connection between the machine shaft and the vertical shaft, said connection positioned in said box so as to be embedded in the lubricant, a frame mounted on top of the table, material feeding means carried by said frame, a feed screw operatively connected to said means to advance the same and a driving connection between said vertical shaft and said feed screw.

1,301,529. SPRING-OILER. GUY L. WOODJARD, San Diego, Calif. Filed June 27, 1918. Serial No. 242,145. 6 Claims. (Cl. 184—1.)



6. In a spring oiler the combination of a thin flat metallic portion adapted to be inserted between the two leaves of a vehicle spring, provided with a slot therein, adapted for an oil retainer, a reservoir supported by said insert portion resting against the outer face of the spring, a piece of felt mounted between said reservoir and the edges of the leaf of the spring, an oil hole in the upper surface of said reservoir and means for covering said oil hole.

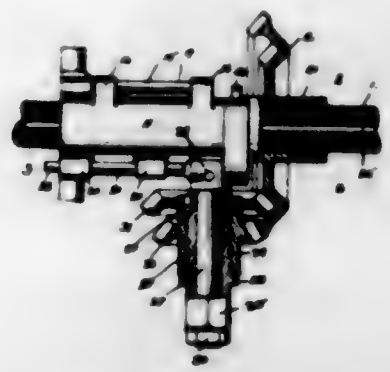
1,301,530. CLUTCH. EDWARD D. WOODS, Cleveland, Ohio, assignor, by mesne assignments, to Woods Steel & Process Corporation, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 15, 1916. Serial No. 137,173. 3 Claims. (Cl. 74—53.)



1. In a clutch, a cylinder clutch member, an arm rotatable upon a common axis, a lever pivoted thereon, a grip means intermediate of said lever and cylindrical

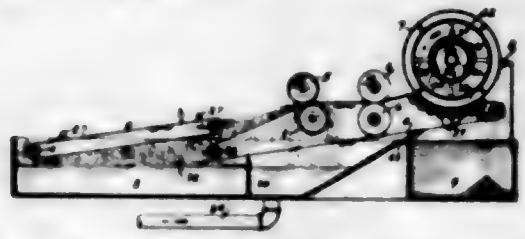
clutch member, and a separate means for securing said grip member upon said lever, said securing means permitting also of circumferential adjustment of the periphery of said gripping means to counteract the effects of wear.

1,301,531. DRILL-OPERATING MECHANISM. JOHN O. ACKERMAN and JOHN MOE, Des Moines, Iowa. Filed July 3, 1918. Serial No. 243,181. 2 Claims. (Cl. 74—40.)



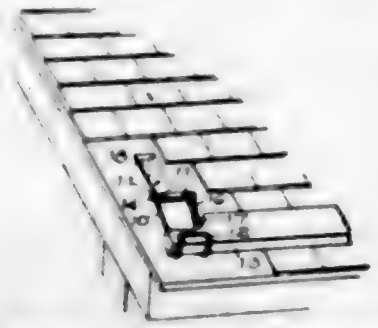
2. In a device of the class described, an internal screw-threaded bearing, a screw threaded shaft mounted therein, a sleeve rotatably but non-slidably mounted on said bearing, having a double gear formed thereon, means for connecting said sleeve with said shaft for causing the shaft to rotate with the sleeve, a second bearing on said first bearing, a shaft therein, a gear on said shaft meshing with one of said first gears, a sleeve on said shaft, a gear on said sleeve meshing with the other of said first gears, and means for selectively operating either sleeve on said shaft.

1,301,532. METHOD OF AND APPARATUS FOR SEPARATING MINERALS. HENRY W. ALLEN, Earlysville, Va. Filed July 3, 1918. Serial No. 243,100. 10 Claims. (Cl. 34—12.)



2. The method of separating pulverulent material from froth, which comprises disintegrating the froth bubbles to liberate the air and to effect drainage of liquid therefrom, further drying the remaining solid constituents by heating, and finally treating the partially dried constituents to produce a dry powder by subjecting the same to a reduced pressure.

1,301,533. ROOF-BRACKET. JOHN N. ANDERSON, Madison, Wis. Filed July 13, 1918. Serial No. 244,784. 3 Claims. (Cl. 20—86.)



1. A roof bracket comprising a hook-shaped frame, a split shaft rotatably mounted in the frame and having means whereby it may be rotated and locked from reverse rotation, the shaft being split to receive the extremity of a metallic supporting strip.

1,301,534. SUBMARINE TELESCOPE. WILLIAM S. ARMSTRONG, San Antonio, Tex. Filed July 24, 1916. Serial No. 111,017. 1 Claim. (Cl. 88—1.)



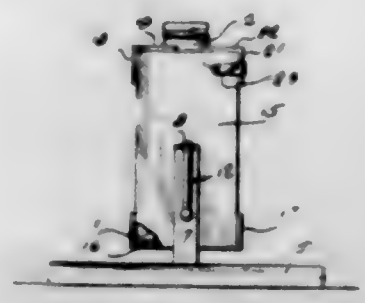
In a device as described, in combination, a boat, a pair of longitudinal tubes, a telescope arranged in one of said tubes, a lens mounted upon the lower end of the other tube, an electric light bulb arranged within the last-named tube above said lens, a pair of chains adapted to be secured to said boat and also to said tubes intermediate their ends, another pair of chains also secured to said boat and extending down into a body of water, weight secured to the lower portions of the last-named chains, and rigid rods extending outwardly from said tubes and formed with terminal eyes in which the last-named chains project.

1,301,535. NON-SKID DEVICE. BAILEY O. BRADLE, Beaconsfield, Iowa. Filed Nov. 30, 1917. Serial No. 204,792. 1 Claim. (Cl. 152—14.)



In a non-skid device, a series of plates each comprising a body portion longer than it is wide and having its line of greater length extending circumferentially of the wheel, each of said body portions having at each end a V-shaped extension, with diverging arms, as illustrated, said body portions and arms each having an outwardly extending rib, whereby there is provided a traction device having more rib surface available for preventing sidewise skidding, than for traction, and means for securing said plates successively circumferentially on the tire.

1,301,536. CHURN. FRANK BEE, Velpen, Ind. Filed June 13, 1918. Serial No. 239,797. 1 Claim. (Cl. 248—58.)



A churn comprising a box-like structure having a bottom, a pair of cleats fixed across two opposite edges of the same, upright side boards rising from the remaining edges of the bottom, a fixed cleat and fixed top section rigidly connecting the upper portions of said side boards, the top section having a notch at its inner

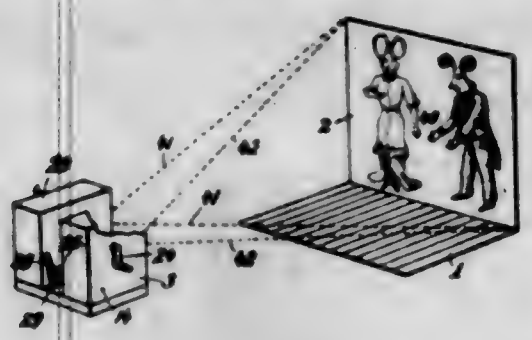
edge, a second cleat and second top section fixed to it and having a complementary notch, a hinge connecting one end of this cleat with one side board, and a latch mechanism connecting the other end of this cleat with the other side board; whereby a fruit jar may be removably seated on said bottom between said side boards and cleats and with its neck engaged by said notches, and means for supporting the structure and revolving it.

1,301,537. TOY. JOSEPH W. BLANCHARD, ALFRED J. SCHNEEMAN, and LOUIS A. MINES, St. Paul, Minn.; said Schneeman assignor to said Blanchard and said Mines. Filed May 17, 1917. Serial No. 169,354. 3 Claims. (Cl. 46—47.)



1. In a toy having a frame with a handle formed on one end, arms formed of thin sheet material rigidly fixed to and projecting in a longitudinal direction from the other end of said frame, said arms being spaced apart, a wheel pivotally held between said arms and extending in close proximity to the forward end of said frame, cross head guides secured to the top and bottom edges of said frame and extending from the same, cross heads adapted to be slidably held in said cross head guides, cylinders having air whistles secured to said frame and connected to said cross heads and means connecting said cross heads with said wheel to reciprocate said cross heads and operate said whistles when said wheel is rotated.

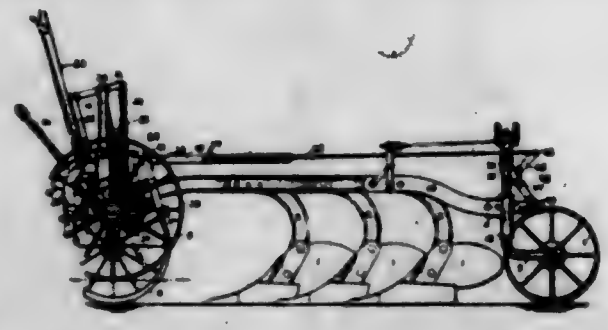
1,301,538. APPARATUS FOR MAKING MOTION-PICTURES. LURA S. BRAINERD, Meriden, Conn. Filed Mar. 8, 1915. Serial No. 11,662. 7 Claims. (Cl. 88—16.)



1. In an apparatus for making moving picture films, a cartoon carrier, a series of cartoon pictures mounted on the carrier, a projecting apparatus to display such pictures, a screen located in front of the projecting apparatus to receive said projected pictures, means including a rotatable member for imparting movement to said carrier, a camera focused on said screen to take the cartoon pictures as they are successively displayed on the screen by movement of said carrier, said camera apparatus including a rotatable member, an operative connection between said carrier and camera apparatus for simultaneously operating the same and including a clutch for connecting and disconnecting said apparatuses, and means for operating said connecting and disconnecting means.

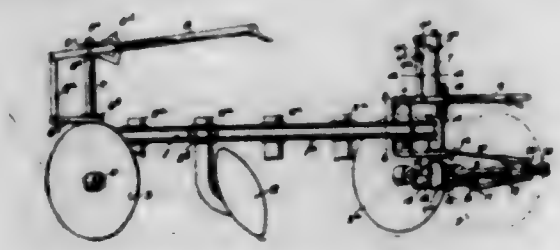
1,301,539. PLOW. WILLIAM WALLACE CAMERON, La Crosse, Wis., assignor to La Crosse Plow Company, La Crosse, Wis. Filed July 2, 1917. Serial No. 178,255. 8 Claims. (Cl. 97—36.)

1. In a plow, the combination of a supporting structure, a plow carrying structure, a shifting connection between the two structures, means for operating the connection, a rear carrying wheel, shifting means between the rear of the plow carrying structure and the rear wheel, and a connection between the supporting structure and the rear shifting means comprising an arm pivoted on the front



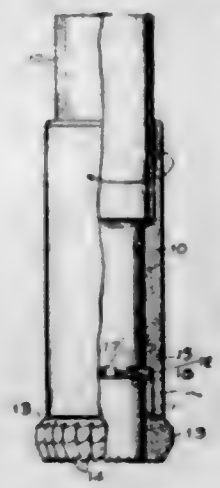
of and operated by the plow carrying structure and a rigid link, whereby the ends of the plow carrying structure are simultaneously shifted, and means for operating the latter connection.

1,301,540. PLOW. WILLIAM WALLACE CAMERON, La Crosse, Wis., assignor to La Crosse Plow Company, La Crosse, Wis. Filed Sept. 6, 1917. Serial No. 189,967. 24 Claims. (Cl. 97—36.)



1. In a plow, the combination of a frame, with a pair of vertically spaced longitudinally arranged draft bars, means for attaching the rear ends of the bars to the front of the frame at vertically spaced points, a draft link, and means for loosely connecting the forward ends of the draft bars with the link for free vertical self adjustment of the latter with respect to the ends of the draft bars when draft is applied.

1,301,541. ROTARY CORE-CUTTING DRILL FOR WELLS. JARRETT L. CAMERON, Edgerly, La., assignor of one-half to Evangeline Iron Works Ltd., Vinton, La., a Corporation of Louisiana. Filed July 18, 1918. Serial No. 244,715. 5 Claims. (Cl. 255—72.)



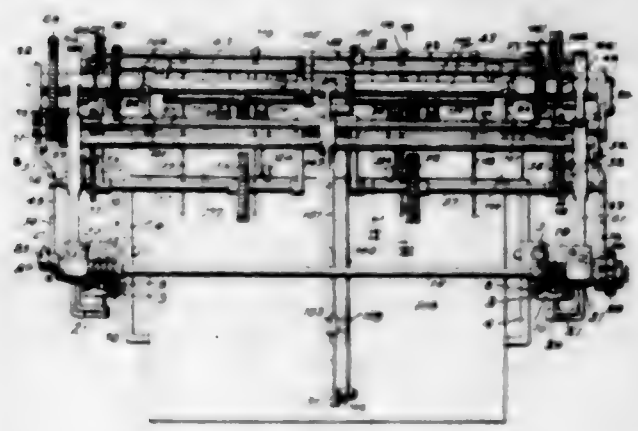
1. A tool of the character described comprising an annular body, including a cutting head, a freely rotatable non-expansible core retaining ring disposed within the body and held from longitudinal movement relative to the body, the ring having an inwardly and rearwardly beveled face, beveled to a slightly smaller circle than the interior diameter of the cutting head and having longitudinally extending grooves.

1,301,542. LAMP-SOCKET HOLDER. CHARLES E. CAPITO, Los Angeles, Calif. Filed Apr. 24, 1918. Serial No. 230,566. 1 Claim. (Cl. 240—37.)



A lamp socket holder comprising a single piece of spring wire bent to form two helical coils connected together; supporting arms extending from the helical coils; and gripping arms extending from the supporting arms, said gripping arms being adapted to expand and engage the inner face of an oil lamp construction and to locate the coils substantially equal distances on each side of the oil lamp burner so as not to obstruct the oil lamp burner; and the coils being adapted to grip electric lamp sockets.

1,301,543. COMBING PILE-FEEDER. CARL E. CHRISTOPHEL, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Sept. 19, 1917. Serial No. 192,105. 58 Claims. (Cl. 271—38.)



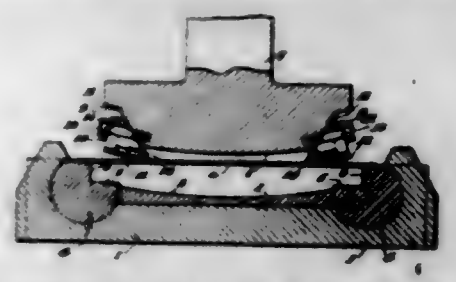
1. In a machine of the character described, sheet-feeding means, a table for holding a pile of sheets to be fed by said sheet-feeding means, and means controlled by the period of activity of said sheet-feeding means for changing the elevation of one end of said table relatively to the other.

1,301,544. GYROSCOPIC SEDIMENTATION APPARATUS. BENJAMIN B. CHOMBIE, Port Chester, N. Y. Filed May 6, 1918. Serial No. 232,757. 6 Claims. (Cl. 210—5.)



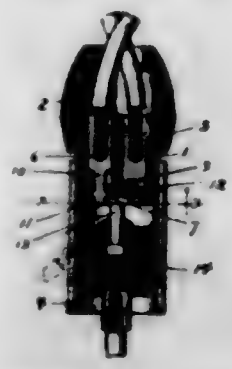
2. In a gyroscopic separator, the combination with a vertically mounted cylindrical tank, of an inlet pipe entering said tank in such manner as to cause the contents to gyrate therewithin, a funnel in said tank adapted to receive the upper stratum of liquid within said tank when in rapid gyratory motion, means for delivering liquid entering said funnel outwardly of said tank, and means for separating the sedimentary matter from the lighter liquid contents of said tank.

1,301,545. MACHINE FOR MAKING METAL PLATES. HARRY O. DAVIDSON, Cleveland, Ohio. Filed May 8, 1915. Serial No. 26,918. 8 Claims. (Cl. 153—12.)



1. In a machine or tool of the character described, the combination of a die having a concave surface and a roller at each end of said surface, each of said rollers having a recess therein, one wall whereof is adapted to form an extension of the concave die surface and the other wall whereof extends at substantially right angles to such concave wall, a punch coöperating with the die and having a convex surface complementary to a portion of the concave surface of the die and provided at each end of such surface with a recess having a surface which is inclined downwardly toward the central portion of the die and with a stop above such inclined surface, and a block slidably mounted in each recess and each adapted to move along the corresponding inclined surface of its recess and each being arranged to constitute an extension of the convex surface of the punch when in engagement with its stop, each of said blocks also having a wall extending at substantially right angles to the convex surface thereof and coöperating with the corresponding wall of its roller.

1,301,546. ELECTRIC FITTING. JULIUS O. EIS and EDWARD J. KNAUFF, Chicago, Ill. Filed Aug. 29, 1917. Serial No. 188,713. 3 Claims. (Cl. 173—328.)

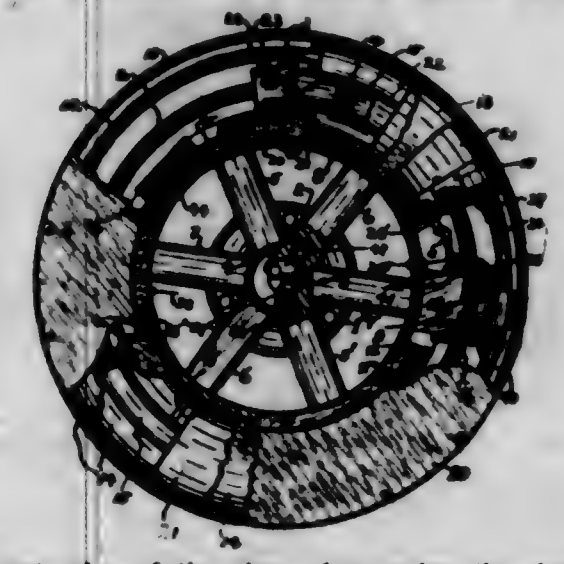


1. In an attachment plug for a socket, an insulator having a pair of bores extending from one of its ends to a larger bore at its other end, a pair of wire terminals mounted respectively in the first named bores, a contact plate housed by the larger bore and prevented from lateral movement by the walls of said larger bore, said plate being secured to one of the wire terminals and insulated from the second wire terminal, a member carried by the insulator and disposed for affording an electrical socket connection to said second wire terminal, and means independent of said insulator for insulating the contact plate from the first wire terminal and from the said member.

1,301,547. REVOLUBLE ENGINE. ALBERT C. FISCHER, Kansas City, Mo. Filed Feb. 15, 1917. Serial No. 148,579. 12 Claims. (Cl. 123—18.)

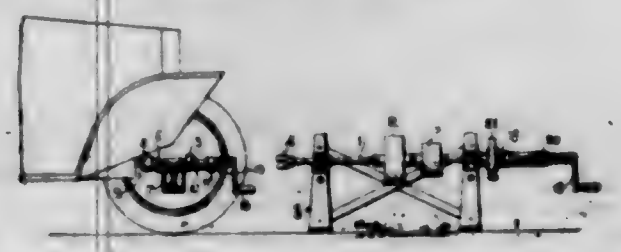
2. In a revoluble engine, a support, a circular casing circumscribing the support, a ring gear within the cas-

ing, a cylinder within the casing, a piston arranged for longitudinal reciprocation within the cylinder and having a tubular extension circumscribing the ring gear and projecting outwardly of the cylinder, a clutch on the tu-



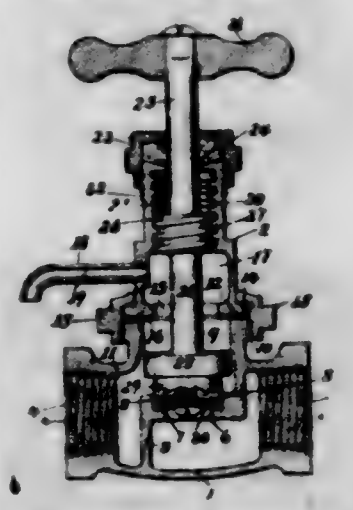
bular extension of the piston for moving the ring gear during one of the movements of said piston, and means for communicating the movements of the ring gear to the casing.

1,301,548. POWER-TRANSMITTING DEVICE. FRANK W. FOSS, Belpre, Ohio. Filed May 15, 1918. Serial No. 234,629. 5 Claims. (Cl. 74—33.)



1. In combination with a motor driven vehicle and the crank shaft of an internal combustion engine carried thereby, a swinging arm engaged with the body of the vehicle, and a crank carried by the arm for coaction with the crank shaft.

1,301,549. CUT-OFF AND DRAIN VALVE. HOWARD B. FOSLER, Baltimore, Md. Filed May 26, 1916. Serial No. 99,947. 1 Claim. (Cl. 251—23.)



A cut-off and drain valve comprising a body-member with a main and a house connection with a partition between said two connections said partition being provided with a supply-port and having an annular chamber around the port said body-member further having a circular passage 9, directly over the supply-port; a hollow member detachably secured to the body-member and communicating with said passage and provided with a drain passage leading therefrom; a stem having at its inner end an integral head and an integral reduced circular plug valve which latter has a diameter to snugly close against the wall of the said annular chamber said integral head being of a size to engage the wall of the said passage 9, and the distance between the upper side of said head and the inner end of the passage 9, when the valve is closed being less than the depth of the annular chamber around the supply port.

1,301,550. ICE-MAKING APPARATUS. ALBERT MUDGE FOWLER, Los Angeles, Calif. Filed Mar. 21, 1918. Serial No. 223,728. 4 Claims. (Cl. 62—159.)

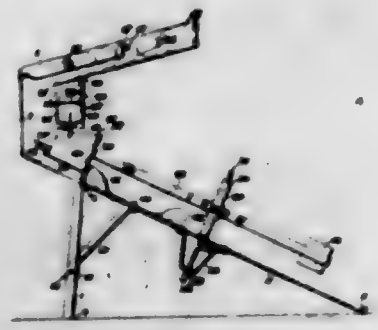


1. The combination with an ice forming container, of means for causing complete circulation of the fluid within the container consisting of an air and water jetting member located wholly within the upper central region of the tank and having an air supply pipe, an air nozzle connected to the supply pipe, and a casing surrounding the nozzle in fixed spaced relation, the upper end of which casing is enlarged to form a liquid intake, and the lower discharge end of which projects beyond the discharge end of the said air nozzle.

1,301,551. DIFFERENTIAL FLOTATION CONCENTRATION OF SULFID ORES AND RAW-ORE PRODUCTS. CHARLES CUTHBERT FERRMAN, Broken Hill, New South Wales, Australia. Filed Mar. 30, 1916. Serial No. 87,789. 8 Claims. (Cl. 83—85.)

1. A process for preferentially separating galena from mixed sulfid ore pulp or concentrates, which consists in submitting said mixed pulp to agitation-aeration flotation in and collecting the float from a dilute aqueous solution of alkaline carbonate and in such operation floating one sulfid while substantially excluding other sulfids from the float, such operation being conducted while excluding contact of the flotation bath with metallic copper and metals electro-negative to copper and also salts of said metals which are soluble in said solution.

1,301,552. MECHANICAL TOY. VINCENT S. GAINES, Webster Groves, Mo. Filed Apr. 22, 1918. Serial No. 230,118. 10 Claims. (Cl. 46—37.)



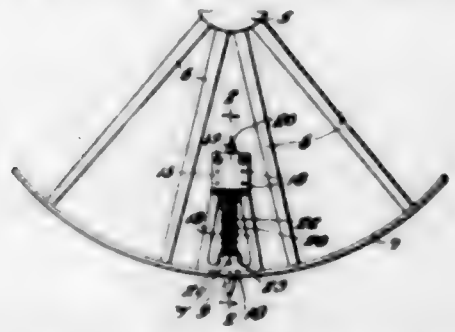
1. A mechanical toy, comprising a frame, a hopper supported by said frame, a chute from said hopper, a swinging arm supported by said frame upon an inclined axis, a container on one end of said arm for receiving a load from said chute, a counterweight on the other end of said arm, and means for discharging the load from the chute into said container, whereby said arm is caused to swing upon its axis.

1,301,553. BEDCLOTHES-RETAINER. HENRY GARNER, Media, Pa. Filed June 22, 1918. Serial No. 241,313. 3 Claims. (Cl. 24—73.)



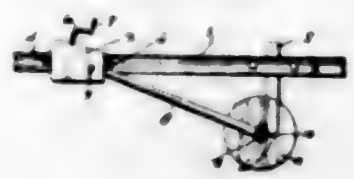
1. In a bed clothes retainer of the character stated, a head provided with a channel adapted to have a rail of a bedstead received therein, means on said head for clamping it on said rail, an arm extending from an end of said head offset therefrom adapted to form a recess between said arm and said rail for the reception of relative portions of the bed clothes and a wedging device adapted to enter said recess and engage said arm and said portions of the bed clothes.

1,301,554. SELF-ADJUSTING TRACTION DEVICE. DAVID H. GOOD, Kansas City, Mo. Filed May 8, 1917. Serial No. 167,221. 2 Claims. (Cl. 21—212.)



1. A traction device for a vehicle wheel having a rim provided with an opening, a reinforcing shoe surrounding said opening and secured to the inner surface of the rim, angle bars extending from said reinforcing means and connected in pairs by a web portion, said webs being provided with vertically disposed sets of openings, a block adjustably mounted in the upper end of the angle bars and between the webs, means passing through the webs for securing the block in its adjustment, a traction tooth extending through the reinforcing shoe and the opening in the rim, and a spring engaging the block and traction tooth.

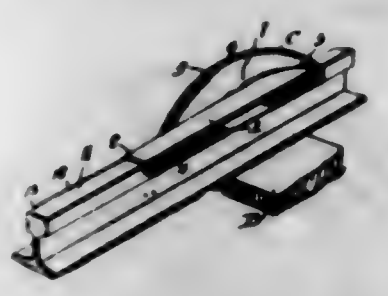
1,301,555. CULTIVATOR ATTACHMENT. PAUL GORTON, Remus, Mich. Filed Aug. 26, 1918. Serial No. 251,477. 3 Claims. (Cl. 97—13.)



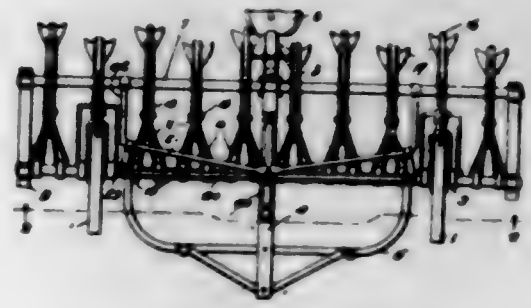
1. A cultivator attachment comprising a cultivator frame, a box mounted upon the frame, a bar pivotally mounted in the boxing and carrying a shield element at one end, the opposite end being arranged to swing in the boxing, a crank provided with a screw threaded shank having one end extended into the boxing and engaged with the said end of the bar for adjusting the bar within the boxing to raise and lower the shield element.

1,301,556. DERAILER. JAMES C. GRAVIS, Laredo, Tex. Filed Nov. 7, 1917. Serial No. 200,735. 4 Claims. (Cl. 246—163.)

1. A derailer comprising a plate, a retaining flange formed on one edge of the plate, a lip formed on the opposite edge and including an extension having a tapered end extending beyond the end of the said plate, a deflector comprising a longitudinally curved ridge having one surface merging into the said plate near one end thereof.

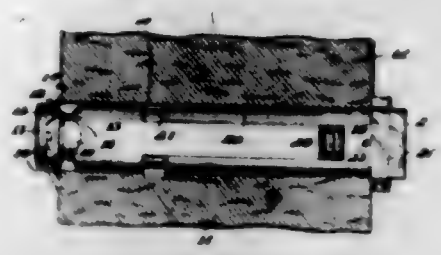


1,301,557. CULTIVATOR. FLEMING H. GRAHOUSE, Terryton, Kans. Filed Dec. 18, 1918. Serial No. 267,277. 3 Claims. (Cl. 97—34.)



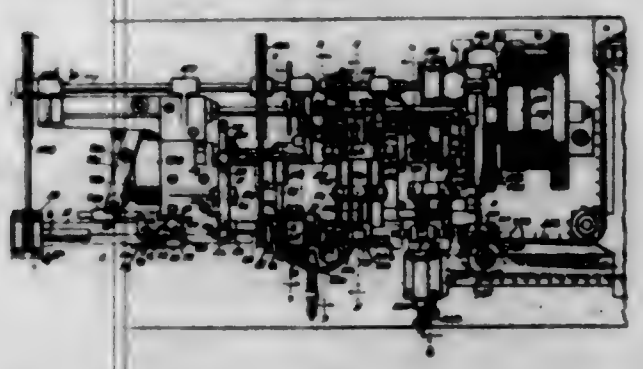
2. A cultivator of the class described including a wheel supported axle, a tongue thereon, a pipe upon the tongue and connected at its ends to the axle, upwardly extending crossed arms upon the axle and pipe and adjustably connected, beams connected to the axle, furrow opening blades upon the beams, rods extending from the beams and slidably engaging certain of the arms thereabove, and springs upon the rods and bearing downwardly upon the beams.

1,301,558. BOLT. LUKE GAGNE, Chicago, Ill. Filed June 24, 1918. Serial No. 241,562. 2 Claims. (Cl. 85—3.)



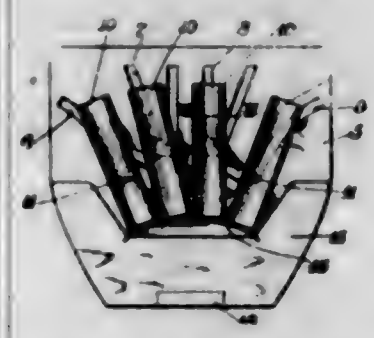
1. A bolt comprising a shank having a disk at one end of the same diameter as the shank and further provided with cutaway portions inwardly of the head, substantially semi-circular ears hinged to the shank adjacent the head adapted for seating within said cutaway portions forming a substantially unbroken surface for the shank, automatic projecting means for said ears whereby the latter are normally positioned radially of the shank, the said shank having a threaded axial bore and oppositely reduced portions at the opposite end thereof from said head, a sleeve having arcuate bifurcations slidably mounted upon said reduced portions of the shank with a perforation through the outer end of the sleeve, a screw journaled in said perforation operatively engaging in the bore of the shank, and ratchet connections between the screw and sleeve adapted for preventing a reverse releasing rotation of the screw.

1,301,559. MACHINE FOR MAKING COATED ARTICLES. WALTER H. HEMINGWAY, Chicago, Ill., assignor, by mesne assignments, to The Hump Hairpin Manufacturing Company, Chicago, Ill., a Corporation of West Virginia. Filed Oct. 5, 1914. Serial No. 865,201. 13 Claims. (Cl. 140—87.)



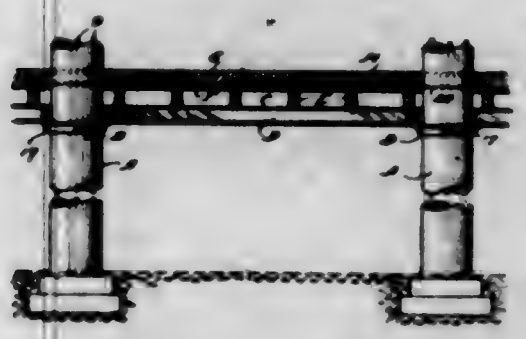
1. In an apparatus of the character described, the combination with means for forming wire into a plurality of hairpins, of means for applying a protective coating to said hairpins, and means for delivering the hairpins from the forming machinery to the coating machinery.

1,301,560. FINGER-EXERCISING DEVICE. WALTER H. HILL, Columbus, Ohio. Filed Oct. 30, 1918. Serial No. 260,270. 5 Claims. (Cl. 46—69.)



1. A finger spreader including, in combination, a bed piece, finger rests supported thereon and reciprocable substantially in the direction of the length of the fingers, guiding means for said rests, and means whereby the operative angular relation of the reciprocations of said finger rests to each other may be varied.

1,301,561. METHOD AND APPARATUS FOR PROVIDING CONCRETE STRUCTURES. MEYER HIRSCHTHAL, New York, N. Y., assignor of one-third to Frank D. Hyde, New York, N. Y. Filed Sept. 18, 1916. Serial No. 119,895. 4 Claims. (Cl. 25—131.5.)



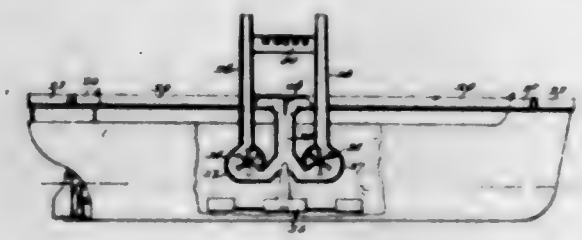
1. The method of erecting cementitious structures, comprising forming permanent spaced columns for the structure, mounting ledges directly and detachably on the columns, supporting removable centering on the ledges, and molding a connecting slab on the centering integral with the columns.

1,301,562. SPARK-PLUG. WILSON HOUSMAN, Elkhart, Ind. Filed Nov. 26, 1917. Serial No. 204,046. 3 Claims. (Cl. 123—169.)



1. A spark plug including a shell or casing having a bore eccentric to the axis thereof, a core of cylindrical form in cross section rotatably mounted in said bore, a stationary electrode carried by the shell or casing, a central electrode carried by the core, said central electrode being arranged axially of the core and said electrodes being in axial alinement with each other and at all times a fixed distance apart, the construction being such that by rotary adjustments of the core in the eccentric bore the central electrode may be adjusted to bring different portions of the electrodes into coacting relation.

1,301,563. SMOKE-DISPENSER. IRENMIE IRINA, Dayton, Ohio. Filed June 4, 1918. Serial No. 238,163. 1 Claim. (Cl. 114—15.)



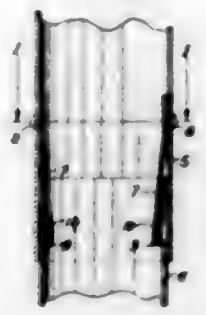
In an apparatus for the purpose specified, the combination with a transportation vehicle, of a smoke stack disposed substantially in a horizontal plane and extending throughout the length of the vehicle, the said stack having fork terminals both at the forward and rear ends of the vehicle, valves adjacent the forks by which smoke passing through the stack may be directed through any leg of the fork, a smoke generating means by which smoke may be discharged into the stack, and a valve in the stack adjacent the point where it communicates with the smoke generating means whereby the smoke from said means may be directed to one or the other of the forked terminals.

1,301,564. ADJUSTABLE HANDLE FOR BROOMS. JOSEPH H. JACOBS, Denver, Colo., assignor to The Jacobs Specialties Manufacturing Company, a Corporation of Colorado. Filed May 1, 1917. Serial No. 165,782. 1 Claim. (Cl. 287—17.)



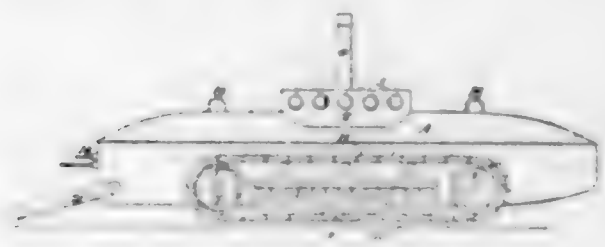
In combination, a broom having a shank transversely perforated, a band surrounding the shank, a handle having a ferrule provided with arms engaging the band on opposite sides, the band and arms being perforated to register with the perforations in the shank, the engaging parts of the band and arms being toothed to interlock, a bolt passing through the perforations in several parts, and a nut for locking the parts in the adjusted relation.

1,301,565. JOINT AND LOCKING MEANS FOR STOVE-PIPES. JOSEPH H. JACOBS, Denver, Colo. Filed July 2, 1917. Serial No. 178,103. 1 Claim. (Cl. 285—185.)



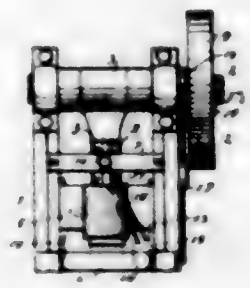
Locking means for stove pipes comprising in combination with two telescoping pipe sections, an interiorly located pawl, one end of which is secured to one pipe section, while the other end is outwardly offset, the other section having a part bent inwardly forming an opening and arranged to interlock with the outwardly offset end of said pawl, said opening adapted to be exteriorly closed by the telescoping part of the other section.

1,301,566. SUBMARINE TRACTOR. ALBERT JAMES, Eureka, Calif. Filed June 7, 1917. Serial No. 173,412. 2 Claims. (Cl. 114—16.)



2. A submarine tractor comprising an inclosed hull, tractors supporting the hull, means for driving said tractors, spuds or flukes carried by the tractor adapted to be lowered to anchor the tractor to permit the tractor to be used as a crawling anchor, means for carrying a hawser to be attached to a ship, and means for paying out or hauling in on the hawser when the tractor is operated.

1,301,567. PUNCH PRESS GUARD. JOHN M. JELSEMA, Grand Rapids, Mich. Filed June 8, 1918. Serial No. 239,079. 2 Claims. (Cl. 74—105.)



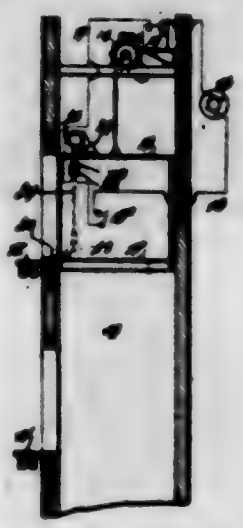
1. In combination with a punch press and its plunger, a girt secured to the frame of the press front of the plunger, an arm pivotally mounted near one end at the longitudinal center of the girt, a gear wheel connected with the pivotal element of the arm, and a rack connected with the plunger in position to operate the gear wheel to swing the arm from side to side by the vertical reciprocations of the plunger.

1,301,568. LUMINOUS JEWELRY. ALBERT S. JOHNSON, Washington, D. C. Filed Feb. 27, 1918. Serial No. 219,544. 1 Claim. (Cl. 41—17.)



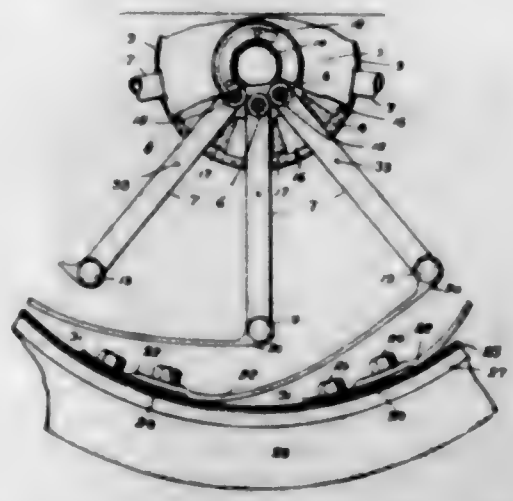
Luminous jewelry, comprising an article of jewelry with a visible reflecting surface and a substantially round drop of radio-active material on and projecting from said surface and of circumscribed area with relation thereto.

1,301,569. DUMB-WAITER CAR. FRANK JOHNSON, New York, N. Y., assignor to Elevator Supplies Company, Inc., a Corporation of New Jersey. Filed Aug. 4, 1917. Serial No. 184,875. 13 Claims. (Cl. 187—88.)



2. In apparatus such as described, the combination of an elevator car, means for operating said car, the floors of a building, a movable bridge to provide a passageway between said elevator car and any one of said floors, means independent of said floors for operating said bridge, comprising a combined pull and push rod connected with said bridge, said bridge operating means being controlled from the means for operating said car, to move said bridge into and out of using position relatively to said car and any one of said floors.

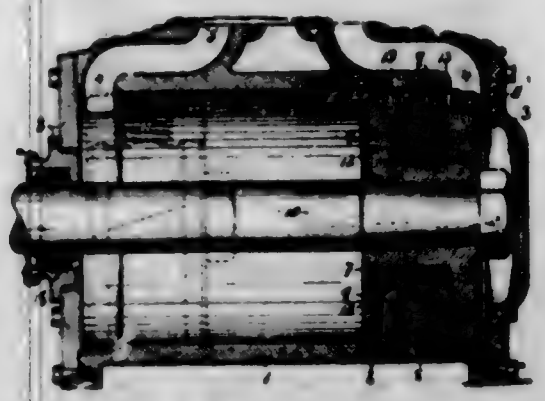
1,301,570. RESILIENT WHEEL. ARTTURI JUTILA, Duluth, Minn. Filed Sept. 4, 1915, Serial No. 48,969. Renewed Nov. 11, 1918. Serial No. 262,070. 5 Claims. (Cl. 152—49.)



3. In a resilient wheel of the character described, having rigid pivotal spokes, the combination with the spokes

of a housing carried adjacent the hub end of each spoke and upon one side thereof carrying a resilient spoke engaging member normally held from engagement with the adjacent spoke, as and for the purpose described.

1,301,571. STEAM-ENGINE. JOSEPH M. KERN, Oswego, N. Y. Filed Oct. 24, 1918. Serial No. 259,464. 6 Claims. (Cl. 121—104.)



1. In a steam engine, the combination of a horizontally extending cylinder having the usual steam inlet ports, a piston reciprocally movable in the cylinder and provided with an annular recess extending the greater portion of its length, a split packing ring fitting said recess and spring-pressed against the walls of the cylinder, said ring having radial openings therethrough near the ends thereof to alternately register with the steam-inlet ports for equalizing the steam pressure on the inner and outer sides of the ring as they are registered with their respective ports.

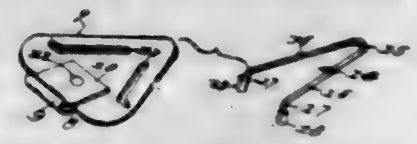
1,301,572. PADLOCK. JAMES S. KIRBY, Denver, Colo. Filed Aug. 14, 1918. Serial No. 249,767. 4 Claims. (Cl. 70—17.)



3. A flat lock casing, a flexible sheet metal shackle secured flatwise to one side of said casing, a passage through said casing parallel to the flat sides thereof, and of a width to receive said shackle, engaging means on one edge of said shackle, and a reciprocating locking member, said member comprising a bolt mounted in a recess in the casing and guided thereby, and a spring arm on one end of said bolt having means to engage said engaging means.

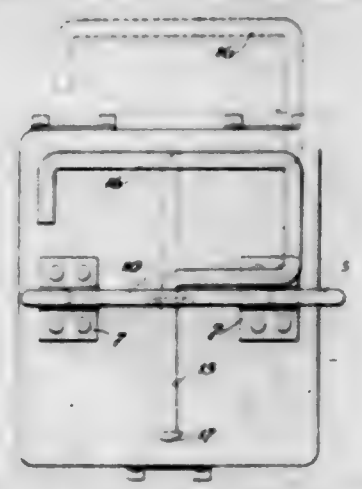
1,301,573. SEPARABLE FASTENER. FREDERICK M. KLOPF, Newark, N. J., assignor of one-half to Joseph H. Lehman, East Orange, N. J.; Jessie L. Klopf administratrix of said Frederick M. Klopf, deceased. Filed Feb. 9, 1918. Serial No. 216,237. 2 Claims. (Cl. 24—222.)

1. A device of the character described consisting of an anchoring plate of a triangular configuration formed with spaced slots positioned near the sides of the plates and converging toward the vertex thereof, tongues projecting from the base portion of each plate and rolled to form a sleeve for swingingly connecting the plate, a securing flange formed on the terminal of the tongue and secured to the main portion of the plate, an attaching element formed from a single piece of resilient wire bent upon itself to provide side arms, hooks formed on the ends of the side arms for engagement in the slots in the plate, and



oppositely projecting heads on the terminals of the hooks for preventing accidental disengagement of the arms.

1,301,574. COMBINED HOOK AND HANDLE FOR LANTERNS. JAMES W. KNOBLOCK, New York, N. Y., assignor to American La France Fire Engine Co., Inc., Elmira, N. Y., a Corporation of New York. Original application filed June 19, 1917, Serial No. 175,626. Divided and this application filed Mar. 22, 1918. Serial No. 223,964. 3 Claims. (Cl. 240—52.)



3. In a device of the character described, the combination of a lamp casing, with a bail, ears secured to the casing and engaging said bail for hinging it to the casing, a swivel bar engaged by said ears within the bail, said bar formed with a central perforated flattened web and a hook formed with a heated rod, extending through the opening of said swivel bar, whereby both the bail and hook can be adjusted into position against the casing or extended into operative relation thereto.

1,301,575. ARTIFICIAL ARM. JOSEPH KRAWCZYNSKI, Worcester, Mass., assignor of one-half to John H. Mathews, Worcester, Mass. Filed Jan. 14, 1918. Serial No. 211,793. 3 Claims. (Cl. 3—12.)

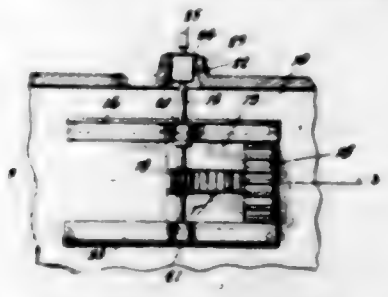


1. An artificial arm comprising an upper and lower frame, an elbow hinged connection for the said frames, a socketed rack upon one of said frames, a swivelly mounted pivoted latch upon the other frame adapted for engaging the sockets of said rack during the adjusted positions of the frames.

1,301,576. AUTOMOBILE-LOCK. CARL A. KURZ, Columbus, Ohio. Filed Feb. 12, 1918. Serial No. 216,772. 1 Claim. (Cl. 70—90.)

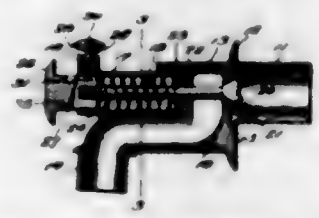
The combination with a transmission including a casing having a rotatably mounted shaft therein with a gear rigid

upon the shaft; of parallel laterally spaced tracks mounted on said casing, bearings on said tracks, a shaft rotatably mounted in said bearings with one end provided with a lock, a pinion carried by said shaft, a plate mounted to slide on said tracks, a toothed head carried by said plate



for engaging the gear when the plate is in one position, a rack carried by said plate meshing with said pinion, and means for actuating said lock to turn the pinion carried shaft whereby the head is brought into and out of engagement with the transmission gear to lock the latter or release it at the will of the operator.

1,301,577. FAUCET. LLOYD LA VALLEY, Schofield Barracks, Hawaii. Filed June 28, 1917. Serial No. 177,545. 1 Claim. (Cl. 251—137.)



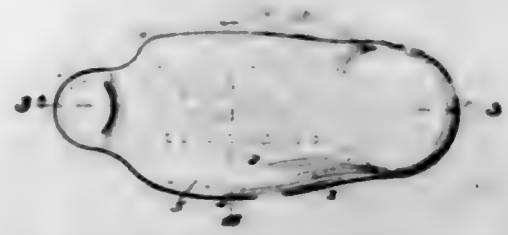
A faucet comprising the body cast in a single piece and provided with a sinuous mouth, an exteriorly threaded nipple integral with and projecting from the inner end of the body, an annular and exteriorly extending escutcheon integral with the body and positioned at the inner end of the nipple, a transverse wall formed in the body and positioned in alinement with the escutcheon and formed with an opening constituting a valve seat and also establishing communication between the nipple and the mouth, the body being formed in its forward end with a hollow cylinder which alines substantially with the nipple and has the inner end formed with an opening alining with the valve seat, a valve disposed in the nipple and designed for engagement with the seat, a stem projecting from the valve and arranged through the seat and the opening in the cylinder, a plunger detachably connected to the opposite end of the stem and slidably arranged in the cylinder, a spring positioned in the cylinder and about the stem for yieldingly holding the plunger in a forward position and the valve against the seat and a yieldingly mounted locking bolt in the cylinder and engageable with the plunger for normally preventing rotation of the plunger and for locking the plunger, at times, in a depressed position so as to releasably hold the valve in an open position.

1,301,578. CORE-BOX. WILSON K. LEVERING, Ruxton, Md. Filed Jan. 29, 1918. Serial No. 214,326. 3 Claims. (Cl. 22—13.)



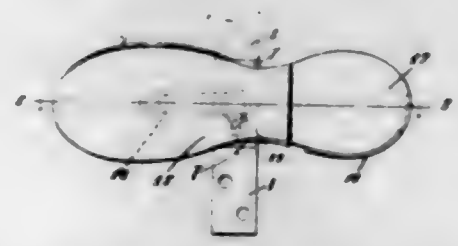
1. A core box comprising a base, a plug projecting upwardly therefrom, a pivot pin projecting horisontally from said plug, and a pair of pattern sections pivotally mounted on said pin and adapted to embrace said plug, said sections and plug together defining the mold cavity.

1,301,579. ARCH-SUPPORT. FRANK S. LEWIS, Denver, Colo. Filed Apr. 30, 1918. Serial No. 231,676. 4 Claims. (Cl. 36—71.)



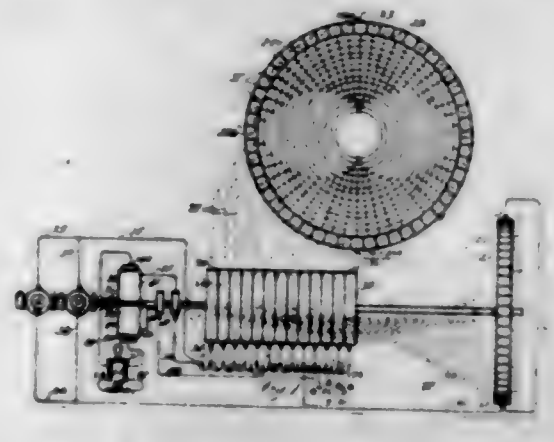
1. An arch support comprising a metal plate having longitudinal corrugations and provided with a plurality of uniformly spaced perforations, a cementitious compound applied on either side of the plate and secured in place thereon by the perforations through which it filters, the said compound being of a character to permit its drying, and forming a solid mass, whereby a core is formed, and top and bottom coverings adhesively secured to the core.

1,301,580. FOOT-CONTROLLED ACCELERATOR. THEODORE LIND, Taylorville, Ill. Filed Jan. 16, 1919. Serial No. 271,408. 3 Claims. (Cl. 74—81.)



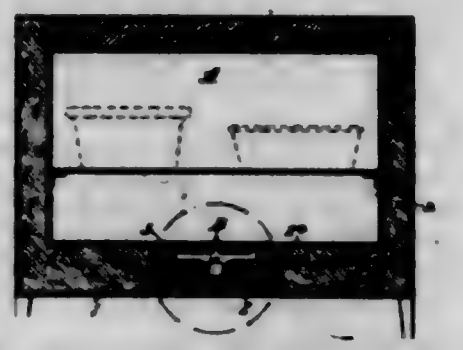
1. The combination with a spindle mounted for rotation and adjustably supported means constituting a bearing for the spindle, of means operated by the rotation of the spindle for controlling the carbureter, a foot rest, and a stem extending from the foot rest and detachably engaging the spindle.

1,301,581. RECTIFIER. WILLIAM B. LUCAS, Oak Park, Ill., assignor of one-half to Eugene L. Markey, Evanston, Ill. Filed July 31, 1916. Serial No. 112,315. 14 Claims. (Cl. 175—364.)



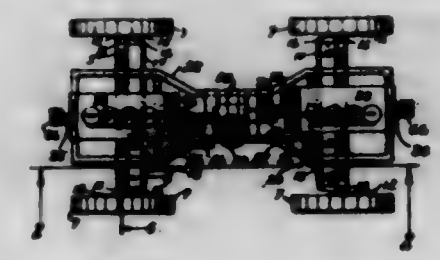
1. A source of alternating current, rotary rectifying means therefor, a motor adapted for driving said rectifying means in synchronism with the alternating current, and means for boosting the voltage on each side of the peak of the alternating current voltage curve, so as to produce a substantially uniform current during nearly a complete half cycle.

1,301,552. COOK-STOVE. EDWARD L. MCBRIDE, St. Louis, Mo. Filed Nov. 12, 1918. Serial No. 262,152. 6 Claims. (Cl. 126—39.)



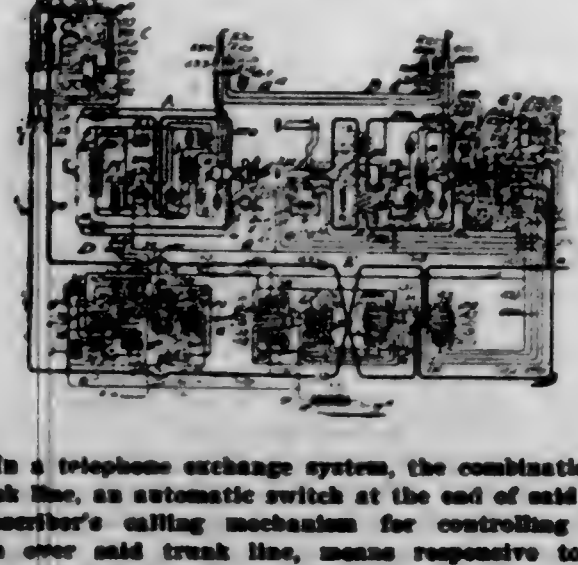
1. A cook stove, comprising an oven or chamber provided in one of its outer walls with an opening, a member rotatably mounted in said wall so as to form an air-tight closure for said opening, and a heating device in said member for supplying heat to said chamber or oven when said member is in one position, said member being adapted to be turned over so as to render said heating device inoperative.

1,301,555. TRACTOR. CHARLES A. MARSHALL, Denver, Colo., assignor of one-half to Louis H. Bloeger, Edgewater, Colo. Filed Apr. 18, 1916. Serial No. 228,490. 4 Claims. (Cl. 180—45.)



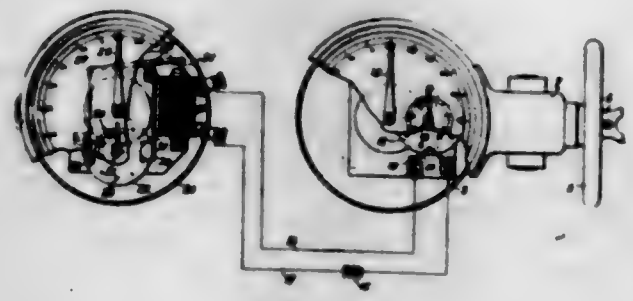
1. In a tractor, a chassis, a pair of wheels mounted on each end thereof, a motor mounted on each end of the chassis, and connections between each of said motors and all of said wheels for driving the latter, said connections comprising a single transmission to which both of said motors supply power.

1,301,584. COMBINED AUTOMATIC AND MANUAL TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Nov. 14, 1906. Serial No. 343,409. Renewed Aug. 1, 1918. Serial No. 247,869. 33 Claims. (Cl. 179—27.)



1. In a telephone exchange system, the combination of a trunk line, an automatic switch at the end of said line, a subscriber's calling mechanism for controlling said switch over said trunk line, means responsive to the calling subscriber for automatically seizing the trunk line, means for manually connecting with said line, an operator's calling mechanism for controlling said switch over said line, and means for preventing automatic selection of said trunk line when it is in use for connecting a manual subscriber's line with an automatic subscriber's line.

1,301,585. SHIP'S LOG. CHARLES P. MAXSON, West Mystic, Conn. Filed Apr. 3, 1918. Serial No. 226,462. 1 Claim. (Cl. 177—351.)



A ship's log comprising a whirling controlling member; a rotary index operatively connected with said member; a rotary member operatively connected with said index for making and breaking an electric circuit in correspondence with the operation of said index, said rotary member having a disk embodying a series of outwardly-extending pins, an electric circuit embodying a resilient switch member, a source of electric power, a magnet, and wires for completing the circuit when said switch member is closed; a second rotary index for operating in correspondence with the first-mentioned rotary index, said second rotary index having a pointer for indicating on the face of said index; a driving mechanism for said pointer, said driving mechanism incorporating said magnet, a rocking lever, a disk having a series of pins extending from the face thereof, and a swinging hook operatively connected with said rocking lever, and adapted to engage successively the pins in said disk for moving said disk and parts connected therewith, including said pointer.

1,301,586. ELECTRIC SIGN. EARL M. MILLER, Elizabethtown, Pa. Filed Apr. 3, 1918. Serial No. 226,539. 3 Claims. (Cl. 40—133.)



3. In a sign, the combination with a box-shaped frame provided with an opening and means forming grooves along the upper and lower edges of the opening, illuminating means adapted to project the light outwardly toward said opening, and perforated character plates the upper and lower edges of which are adapted to engage said grooves, one of said grooves being of sufficient depth to allow the plates to be moved vertically until they clear the other groove, a plurality of said plates each provided with a groove along one side edge adapted to be engaged by the side edge of an adjacent plate.

1,301,587. POULTRY-FEEDER. CLARENCE J. MINGES, Rochester, N. Y. Filed Sept. 30, 1918. Serial No. 256,268. 4 Claims. (Cl. 119—70.)

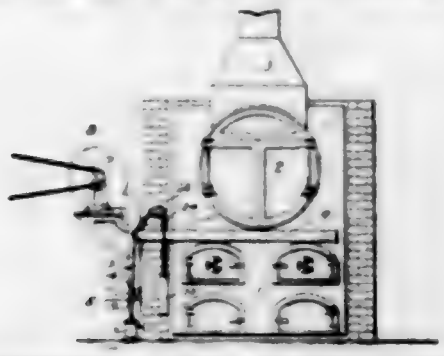
2. In a poultry feeder, a food container having apertures in its bottom, a scratching box suspended to swing below said container, a swinging food receiver carried

by said box and positioned to receive the discharge from said apertures, said receiver being positioned above said



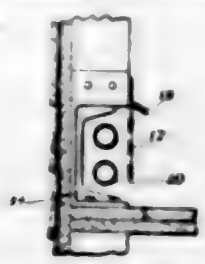
box and adapted to retain the food until dislodged by the swinging of the box, and to discharge it into the box.

1,301,588. SMOKE-CONSUMER. SAMSON P. MUNN, St. Louis, Mo., assignor of fifty-five one-hundredths to Justin T. Flint, St. Louis, Mo. Filed Aug. 27, 1917. Serial No. 188,262. 2 Claims. (Cl. 110—55.)



1. In combination, a furnace including a fire box, grate and ash pit, a fan, a main pipe leading from the fan to the ash pit, a branch pipe connecting the main pipe and the fire box, a pivot adjacent the juncture of the main and branch pipes, a damper mounted on the pivot and adapted to be swung to either close the open end of the branch pipe leading from the main pipe, or to close the main pipe, an arm extending from the pivot, means including a weight connected to the outer end of the arm to normally operate the damper to close the branch pipe, and means connected to the arm for permitting of quick operation of the damper to close the main pipe and open the branch pipe to permit air from the fan to pass to the fire box, said means preventing the quick movement and permitting the slow movement of the damper to close the branch pipe under the influence of the weight and open the main pipe to permit air to pass from the fan to the ash pit.

1,301,589. BASE-BOARD-CONCEALED RADIATOR. CLAUDE C. NUCKOLS, Menands, N. Y. Filed June 7, 1915. Serial No. 32,636. 3 Claims. (Cl. 257—133.)

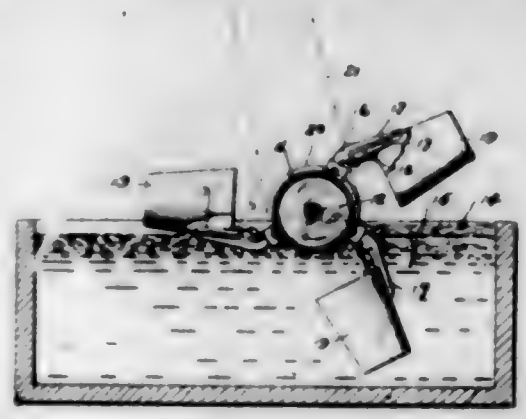


1. As an article of manufacture a casing for concealing a radiator within the wall of a room, comprising in combination, a channel-shaped member the bottom of which is secured to the floor and the top of which is secured to the lower end of a wall stud thereby forming a continuation of the latter, said channel-shaped member being so positioned that it lies wholly within the wall with its channeled surface facing toward the room and adapted to receive the radiator therein; a grille plate secured in position substantially flush with the wall and overlying the channel-shaped member and radiator; and an outwardly and downwardly projecting lip secured to said grille plate near the upper and outer edge thereof.

2. As an article of manufacture a casing for concealing a radiator within the wall of a room, comprising in combination, a channel-shaped member the bottom of which is secured to the floor and the top of which is secured to the lower end of a wall stud thereby forming a continuation of the latter, said channel-shaped member being so positioned that it lies wholly within the wall with its channeled surface facing toward the room and adapted to receive the radiator therein, a grille plate secured in position substantially flush with the wall and overlying the channel-shaped member and radiator, said grille plate being in spaced relation with respect to the floor to provide a substantially continuous opening adjacent said floor; and an outwardly and downwardly projecting lip secured to said grille plate near the upper and outer edge thereof.

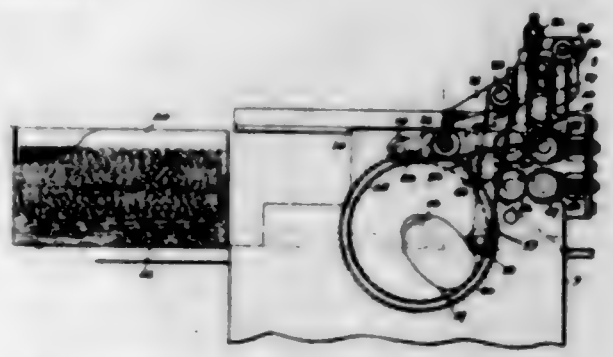
3. Means for concealing a radiator within the wall of a room, comprising a channel-shaped member, the bottom of which is secured to the floor and the top of which is provided with a pair of spaced upstanding flanges, adapted to receive therebetween and to be secured to the lower end of a wall stud, said channel-shaped member being so positioned that it lies wholly within the wall with its channeled surface facing toward the room and adapted to receive the radiator therein.

1,301,590. GALVANIZING APPARATUS. JOHN P. O'DONNELL, Providence, R. I. Filed Feb. 27, 1919. Serial No. 279,505. 3 Claims. (Cl. 91—12.6.)



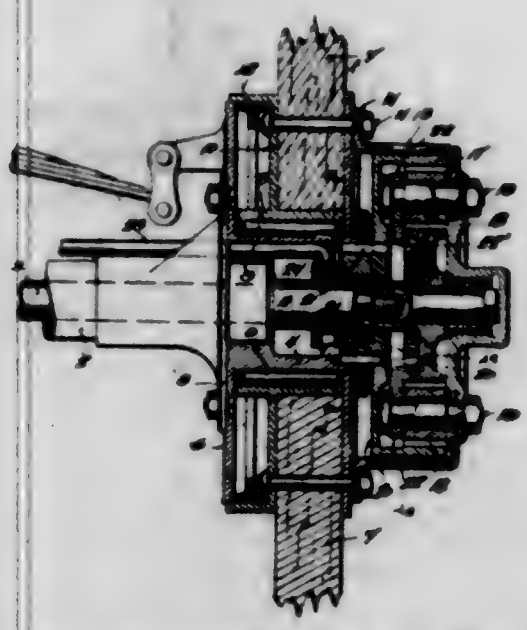
1. An apparatus for coating metal articles, comprising a tank, a carrier body mounted to rotate in said tank and arranged to form a barrier to confine the floating flux, and means on said carrier for receiving and conducting the work through the flux and coating material in the tank as said carrier rotates.

1,301,591. MACHINE FOR MAKING FABRIC SHINGLES. FREDERICK C. OVERBURY, Rutherford, N. J., assignor to Flintkote Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed July 14, 1915. Serial No. 39,884. 6 Claims. (Cl. 270—83.)



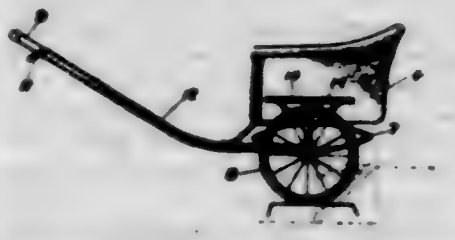
1. In a machine for making fabric shingles, the combination with means for indicating nail holes in the shingle, means for producing marks on the shingle to indicate the amount of overlap, means for bending back that portion of the shingle in which the nail holes are indicated and a common driving means for said nail hole indicating, overlapping, marking and bending means.

1,301,502. TRANSMISSION MECHANISM. JOHN E. OVREN, Stoughton, Wis., assignor of one-half to Jokum Johnson, Stoughton, Wis. Filed Oct. 13, 1917. Serial No. 196,399. 5 Claims. (Cl. 74—34.)



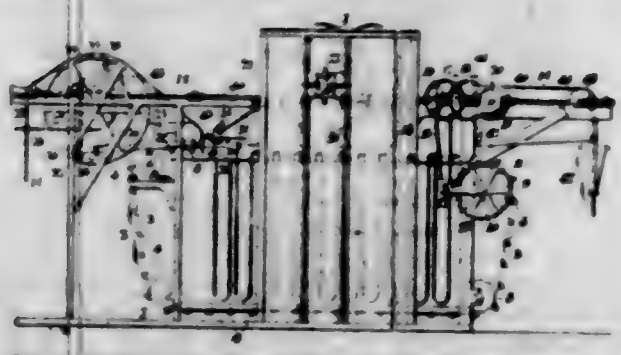
1. A transmission mechanism of the class described comprising a drive axle, a wheel therefor, a master gear rotatable with the axle, an internal gear, a pinion carried by the wheel and meshing with the master gear and internal gear, and a locking member movable with respect to the internal gear and with respect to the wheel and engaging the internal gear for selectively holding the internal gear against rotation to procure a reduced speed of the wheel with respect to said drive axle, or for locking the internal gear to the wheel to rotate the wheel directly from its drive axle.

1,301,593. ATTACHMENT FOR BABY-CARRIAGES. JOHN PANZNER, Cuyahoga Falls, and JOSEPH PEKAR, Akron, Ohio. Filed October 24, 1918. Serial No. 259,480. 5 Claims. (Cl. 21—12.)



1. An attachment for wheeled carriages, comprising plates adapted to form tracks for the wheels, radial supporting rods projecting from the axle and attached to said plates, clutches between the wheels and said rods, adapted to swing the latter to raise or lower the plates, and means to operate the clutches.

1,301,594. DRYING-MACHINE. BERTRAND A. PARKES, Philadelphia, Pa., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1916. Serial No. 121,403. 8 Claims. (Cl. 34—12.)



1. In a drying machine, the combination of a drying chamber; a conveyer for the material to be dried passing through the said chamber, means for forming festoons upon the conveyer; and an air nozzle coöperating with the said festoon forming means.

1,301,595. MAGNETO-ELECTRIC POCKET-LAMP. MARC ANTOINE PATTAY and EUGÈNE JAQUEMOT, Geneva, Switzerland. Filed Nov. 2, 1918. Serial No. 260,832. 4 Claims. (Cl. 240—8.5.)



1. In a magneto-electric pocket lamp the combination with the two side-bars and the distance-stays forming the framing of the mechanism and of two kinds of starting devices connected therewith, one with an alternating rocking arm, and the other with a continuous crank movement, of two side-sheets partly surrounding said bars with sunk portions and provided on three sides with inwardly directed flanges, of a somewhat flexible metallic band bent so as to apply to said flanges and of two fasteners held in place by said sheets and the whole arranged so as to be easily disconnected after the withdrawal of one of said fasteners and to be remounted again after the replacing of the same for the purpose set forth.

1,301,596. ADVERTISING DEVICE FOR FINGER-BOWLS. JOHN G. PATTON, Philadelphia, Pa. Filed Jan. 16, 1914. Serial No. 812,514. 2 Claims. (Cl. 65—15.)

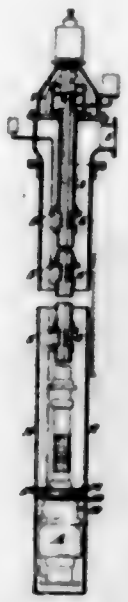


1. In a device of the character stated, the combination with the finger bowl having its top open and unobstructed and having its inner side wall wider at its top than at its bottom, of a removable sanitary lining for said finger bowl, consisting of a paper body having a substantially flat base and an upwardly diverging annular wall provided with flutes or corrugations which gradually increase in width from their bottoms to their tops to render such side wall capable of expansion and contraction to closely engage the inner side wall of finger bowls of different internal diameters near their inner upper edge when liquid is poured into the lining, said liquid serving as a means to retain said lining in assembled position with respect to the finger bowl.

1,301,597. DEEP-WELL-PUMP COLUMN. ALBERT C. PAULSMEIER, Alameda, Calif., assignor to Byron Jackson Iron Works, West Berkeley, Calif., a Corporation of California. Filed Nov. 24, 1914. Serial No. 873,770. 4 Claims. (Cl. 253—199.)

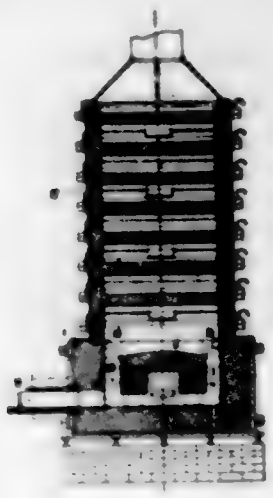
1. In a deep well pump, the combination of an outer casing, a line shaft, a tube surrounding and spaced from the shaft, an impeller secured to the shaft, a casing inclosing the impeller and supported by the tube, said shaft and tube, together with the impeller and its casing being

suspended from above entirely independent of the outer casing, whereby the tube and shaft are placed in tension



and independent of the casing, and a diaphragm member connected with the pump and coacting with the casing to center the pump within the casing.

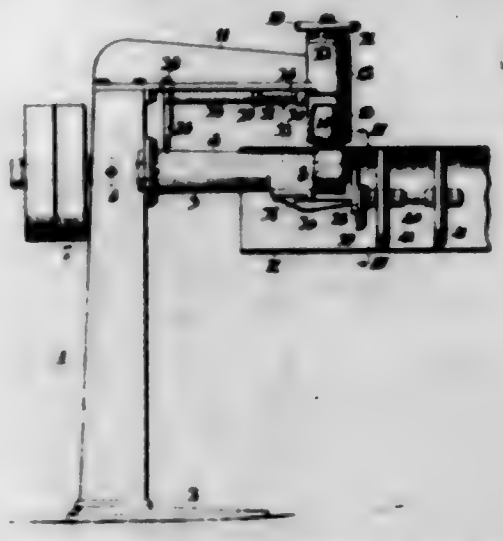
1,301,598. CONCENTRATION OF SULFURIC ACID. FERNAND PERRIN, Volvic, France. Filed Feb. 7, 1919. Serial No. 275,654. 1 Claim. (Cl. 23—1.)



In an apparatus for the concentration of sulfuric acid the combination with a regenerator and a saturator, of longitudinal partitions in said saturator dividing the same into a plurality of flues, i. e., a central flue and lateral flues, a baffle plate projecting into the central flue so as to force the hot gases to pass under the said partitions into the lateral flues, baffle plates projecting into the lateral flues, forcing the hot gases to pass under the said partitions back into the central flue, and a means for forcing the hot gases back once more into the lateral flues.

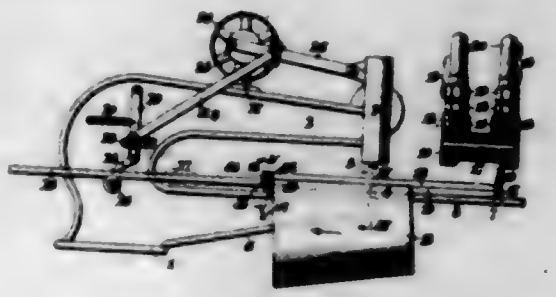
1,301,599. CALENDERING-MACHINE. JAMES F. PRINCE, Glynrich, Del., assignor to American Vulcanized Fibre Co., Wilmington, Del., a Corporation of Delaware. Filed Mar. 30, 1917. Serial No. 158,765. 12 Claims. (Cl. 93—83.)

1. In a calendering machine the combination of a support, a roll, means disposed at one end of the roll for supporting the same whereby a tubular article to be calendered may be placed over said roll, means for rotating said roll, a second roll mounted to rotate freely and adapted to coöperate with the first mentioned roll, means for adjusting the distance between the rolls and means for changing the angular position of the axis of rotation



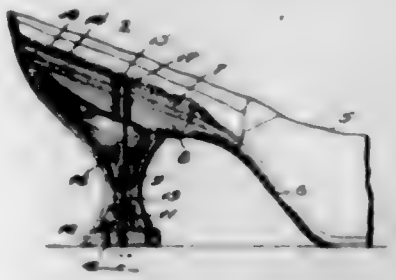
of the second mentioned roll relative to the first mentioned roll.

1,301,600. RIVETING-MACHINE. JAMES F. PRINCE, Glynrich, and HARRY A. HEINEL, White Clay Creek Hundred, Del., assignors to American Vulcanized Fibre Co., Wilmington, Del., a Corporation of Delaware. Filed Apr. 12, 1917. Serial No. 161,420. 7 Claims. (Cl. 218—2.)



1. The combination with a supporting base, of a work supporting arm projecting therefrom, an anvil supported on said arm, an overhanging arm carried by said base, a riveting head mounted on said overhanging arm and including a riveting tool with which said anvil is adapted to coöperate, a work holder for supporting and feeding the work as it is riveted including means for engaging the edges of the material to be riveted, and means for feeding and positioning the work whereby rivets are placed at predetermined points in the material.

1,301,601. DETACHABLE SHOE ELEMENT. WILLIAM PURNHAGEN, St. Louis, Mo. Filed Oct. 24, 1918. Serial No. 259,585. 1 Claim. (Cl. 36—41.)



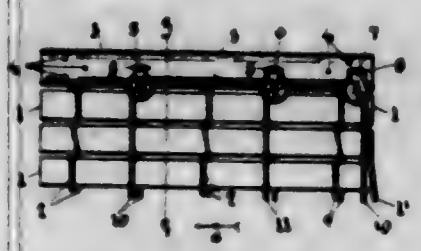
In combination a shoe having an inner-sole and a filler, a hollow metallic heel having a nail block secured at its outermost extremity, a leather lift secured to the nail block of said heel, a threaded sleeve in threaded engagement with the heel and the nail block of said heel, and a screw passing through the inner-sole, filler, heel, and being in threaded engagement with said sleeve and passing through said leather lift.

1,301,602. GRIDDLE. HARRIET RUTH RAINEY, WAUSAU, Wis. Filed May 11, 1917. Serial No. 167,945. 1 Claim. (Cl. 53—5.)



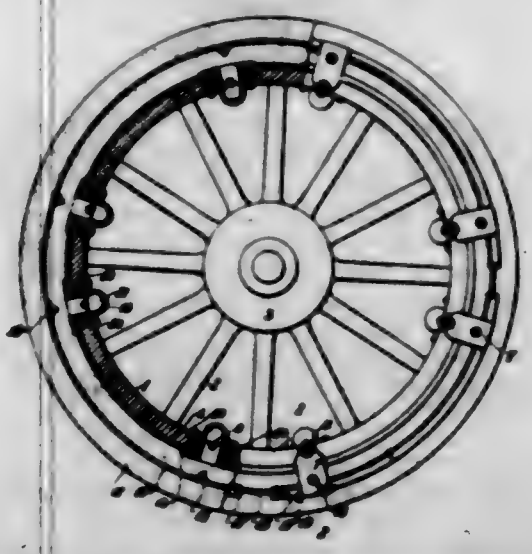
In a device as described, in combination, a circular member, said circular member being formed at diametrically-opposite sides with substantially L-shaped slots, a smooth circular plate fitting within said circular member, an upstanding annular rim upon said circular plate being formed at diametrically-opposite points with flat lugs located below the upper edge of said rim and adapted to engage in the horizontal portions of said L-shaped slots, whereby said upstanding rim will be flush with the outer edge of said circular member, upstanding brackets upon the said annular rim, and a baffle attached to the lower edge of said circular member.

1,301,603. PORCH SHADE OR BLIND. HENRY E. RATHBUN, Worcester, Mass. Original application filed Feb. 25, 1915, Serial No. 10,583. Divided and this application filed May 24, 1916. Serial No. 99,529. 1 Claim. (Cl. 156—16.)



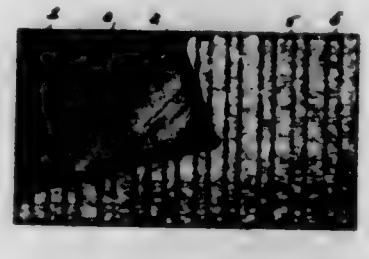
A cord and pulley attachment for porch shades or blinds, comprising a pulley frame having a loop extension, and located on one side of the top edge of the shade, and a cord holder having eyes, and located on the other side of said top edge, and a staple passing through the loop extension in said pulley frame, and passing through the eyes in said cord holder, to secure said pulley frame and cord holder to said top edge.

1,301,604. CUSHIONED WHEEL. EUGENE E. REDDEN, Springfield, Mass. Filed Aug. 20, 1918. Serial No. 250,674. 8 Claims. (Cl. 152—29.)



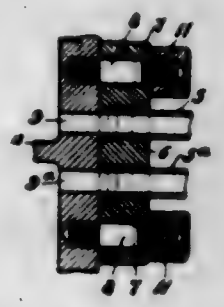
1. A cushion tire having in combination with the felly of a wheel, a rim on the felly, a plurality of cup shaped members located in the felly, a cushion in each of the members, a tire of solid rubber constituting the tread of the wheel, means for slidably connecting the tire to said members and for transmitting the blows incident to travel over the roadway to the cushions in said members.

1,301,605. REINFORCED CORRUGATED PAPER. HERMAN RINGEL, Newark, N. J. Filed Dec. 2, 1918. Serial No. 264,881. 2 Claims. (Cl. 154—55.)



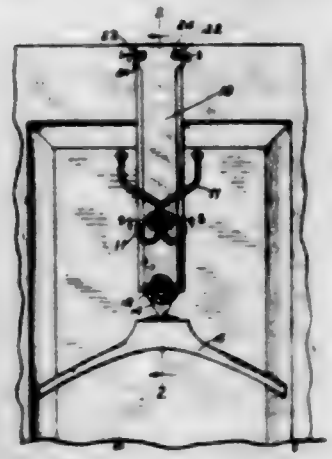
1. A duplex water proof and craped material consisting of a plurality of sheets of paper, cheese cloth interposed between said sheets and having a water proof compound securing said sheets of paper and cheese cloth.

1,301,606. STEAM-SUPERHEATER. JOHN GEORGE ROBINSON, Manchester, England, assignor to Superheater Corporation, Limited, London, England. Filed Oct. 23, 1916. Serial No. 127,280. 2 Claims. (Cl. 122—462.)



1. In a superheater, a header provided with holes for steam in its side wall, superheater elements having their end portions arranged at an angle to their main portions, screwthreaded studs which project from the side wall of the header, fastening blocks secured to the end portions of the superheater elements and provided with holes for engaging with the said studs, said blocks having also slots or channels formed crosswise in them at the ends of their stud holes and slidable laterally over the studs, and nuts on the studs for securing the blocks to the header.

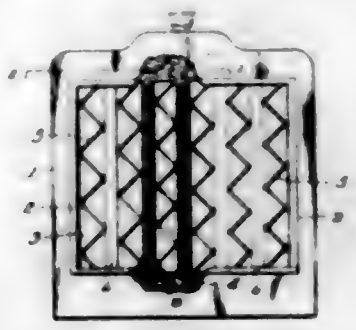
1,301,607. CLOTHES-HANGER FOR DOORS. ALBERT ROTHERY, Bridgeport, Conn. Filed Apr. 23, 1918. Serial No. 230,335. 1 Claim. (Cl. 45—13.)



A clothes hanger of the character described comprising a supporting member having a pad-like foot projecting from the inner face near one end, an attaching plate

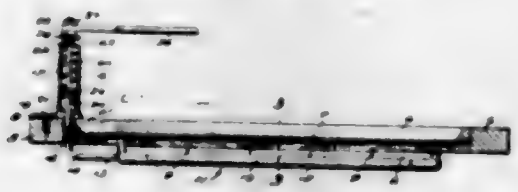
having a recessed body and an overhanging lip, the other end of said supporting member fitting within the recessed portion of said attaching plate, and garment supporting means carried by said supporting member.

1,301,608. RADIATOR. FRANK SATZ, Reading, Pa. Filed May 28, 1918. Serial No. 236,996. 2 Claims. (Cl. 257—130.)



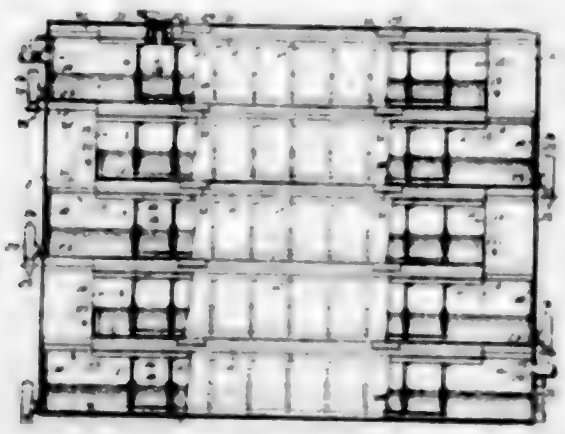
1. A radiator for automobiles, a series of tubular members horizontally arranged, each member having a plurality of vertical ribs on one side thereof adapted to contact with the wall of a neighboring tubular member, thus forming a water space between the said two tubular members and said water space being closed at the front and rear, and a removable fin member located within each tubular member.

1,301,609. STREET-CAR-WINDOW CLEANER. DONALD C. SCOTT, Seattle, Wash. Filed Jan. 22, 1919. Serial No. 272,438. 3 Claims. (Cl. 15—59.)



1. A cleaner for street car windows, comprising in combination, a hollow post provided with a flange adapted to seat against and be secured to the rear side of a sash frame, a rod bent to afford rectangularly disposed stem and arm elements, said stem adapted to extend axially through said sash and the post and terminating beyond the latter in a screw-threaded end, a journal bearing provided for said stem interiorly of the post, a handle connected to said stem, nuts engaging the threaded portion of said stem at opposite sides of said handle, a squeegee connected to said rod arm and including a flexible strip, and a helical spring surrounding said stem between said bearing and the adjacent nut to cause the squeegee strip to be pressed against the front surface of the sash pane.

1,301,610. CARBURETER. OLIVER L. SCOTT, San Francisco, Calif. Filed Feb. 15, 1917. Serial No. 148,734. 1 Claim. (Cl. 261—100.)



In a carbureter, a casing having spaced inlet and outlet openings, vertically spaced pairs of opposing strips secured to the inner side walls thereof and having their upper edge portions inwardly offset, a plurality of closed oil pans each having an air inlet in one end and an outlet in the opposite end communicating with the inlet of a next adjacent pan whereby a current of air will follow a zig-zag course through the pans for contact with the oil therein, the inlet of the first pan communicating with the inlet opening of the casing and the outlet of the last pan communicating with the outlet opening of the casing, and strips transversely arranged on the pans and provided with downturned ends engaging over the inwardly offset upper edges of the first strips to prevent bulging of the side walls of the casing.

1,301,611. THREADING-EYE FOR SHUTTLES. JOHN C. SHAMBOW, Woonsocket, R. I., assignor to Shambow Shuttle Company, Woonsocket, R. I., a copartnership. Filed Sept. 24, 1918. Serial No. 255,425. 10 Claims. (Cl. 139—46.)

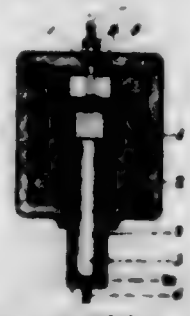


1. In a shuttle, a sectional threading eye, one of the sections having a complete longitudinal concaved threading passage, and the other section abutting the outer side of said passage so as to form a joint to one side of the transverse center of the passage.

1,301,612. PROCESS OF MAKING FRICTION-FACINGS. SUMNER SIMPSON, Bridgeport, Conn., assignor to Raybestos Company, a Corporation of Connecticut. Filed May 22, 1918. Serial No. 236,055. 2 Claims. (Cl. 91—70.)

1. A process of making friction facings which consists in forming an asbestos facing, mixing a hard bitumen with a suitable oil by melting the bitumen into the oil and then adding to this mixture a volatile vehicle, and finally saturating the facing with a binder formed as above stated.

1,301,613. TIMING DEVICE. FRANK W. SMITH, Westfield, N. J. Filed Mar. 2, 1916. Serial No. 81,623. 11 Claims. (Cl. 161—25.)

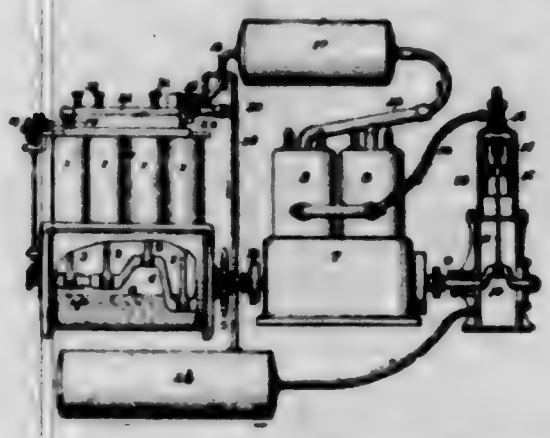


1. A timing device comprising a stationary electromagnet, a movable element, and interposed between the two a movably mounted casing containing a body of fluid and a member adapted to move from one position to another therein at a rate determined by the rate of displacement of the fluid, the several parts being so operatively combined that on the energization of the electromagnet the movable element will be actuated but only after the time interval required for the member within the casing to move from one position to another therein.

1,301,614. MOTOR FOR VEHICLES. FRANK A. SNYDER, Pittsburgh, Pa. Filed Sept. 5, 1918. Serial No. 252,690. 1 Claim. (Cl. 60—17.)

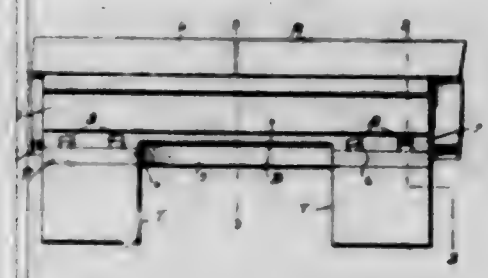
In a pneumatic motor for vehicles, the combination of a cylinder and piston, devices for connecting the piston with the running gear of the vehicle, a low pressure air

reservoir connected with the cylinder, an air compressor and an auxiliary motor for driving the same, a high pressure air reservoir connected with the cylinder and with the air compressor, a connection between the cylin-



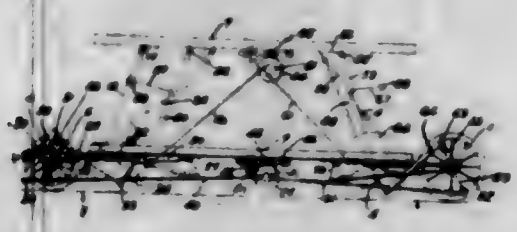
der and the low pressure reservoir, connections between the auxiliary air compressor and the low and high pressure air reservoirs, and devices for opening and closing the connections.

1,301,615. RAIL-JOINT. JOHN SOVICK, Clairton, Pa. Filed Nov. 1, 1918. Serial No. 260,720. 1 Claim. (Cl. 239—6.)



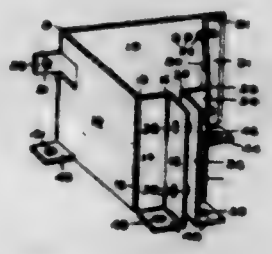
In combination with the meeting ends of rails, splice bars engaging opposite sides thereof between the heads and flanges of the rails, the upper marginal portions of the bars being spaced from and in close proximity to the under surfaces of the heads of the rails, the upper and lower marginal portions of the bars being provided with inwardly directed beads having their contacting surfaces surrounded, each of said bars adjacent its opposite ends being provided with outwardly directed extensions, each of said extensions having spike-openings adjacent its opposite end, plates extending beneath the rails and adapted to rest upon supporting ties, said plates being provided with openings with which the openings in the extensions of the bars register, said plates being provided with upstanding abutments with which the outer ends of the extensions of the bar engage.

1,301,616. VERTICALLY-ADJUSTABLE PLATFORM-TRUCK. AXEL G. STEPHENSON and HARRY H. BARSBY, Denver, Colo. Filed Dec. 22, 1917. Serial No. 208,502. 11 Claims. (Cl. 21—118.



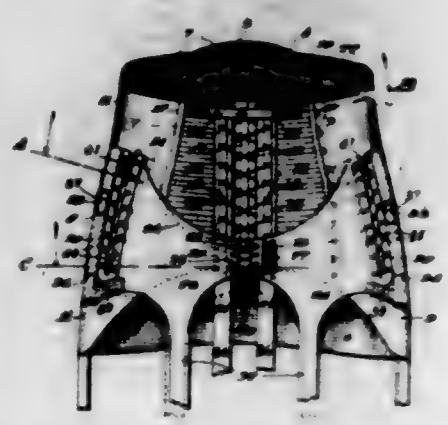
1. A truck including front and rear wheeled axles, a platform, a foldable connection between the platform and the axles to permit simultaneous longitudinal travel of the axles and vertical adjustment of the platform, means connected to said foldable connection for imparting lift to the platform, said means including a link, a lever fulcrumed on the axle structure and connected at one end with the link and the other with a power connection.

1,301,617. DEVICE FOR SECURING TABLE-LEGS. GEORGE W. STOLL and GEORGE H. DRECHSEL, Indianapolis, Ind. Filed Mar. 1, 1919. Serial No. 280,068. 2 Claims. (Cl. 45—48.)



1. A table leg attaching device comprising a plate bent to provide a back, side, front member and a clamping-wing, integrally formed ears on said plate for securing the latter to the table top, an adjustable side-member susceptible of adjustment along the face of the back for varying the distance between the side members of the device, and means for impinging the side members of the device against the tenon of the table leg.

1,301,618. ADJUSTABLE ABDOMINAL SUPPORTING-CORSET. BERTHA M. STRADLING and EMMA E. WASHBURN, Blair, Nebr. Filed June 17, 1918. Serial No. 240,417. 6 Claims. (Cl. 2—73.)

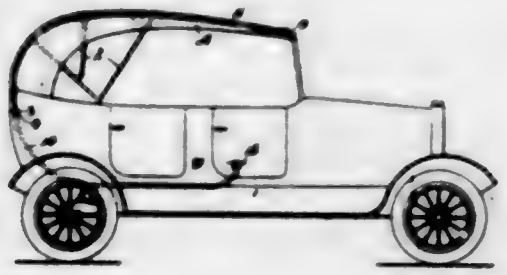


1. An adjustable abdominal supporting corset, comprising an integral back of non-elastic fabric, having a top edge high at the center and inclined downwardly to near the waist line at the sides, close fitted to the back and hips throughout and stayed by vertical bonings spaced throughout its width; a front consisting of vertical side strip sections of nonelastic fabric stitch-seamed to the side edges of said back, vertical strips of elastic fabric having one edge secured to the front edges of said side strips and their opposite opposed edges finished with lacing busks to receive a full vertical lacing, the top edge coincident with the top edge of said back at the side seams and descending to approximately the waist line along the central front and the lower edge arched across to clear the thighs of the wearer when sitting; an abdominal support of nonelastic fabric having wide base ends stitched into the side seams uniting said back and front, a vertical lacing through its central narrow front to adjust the length thereof, and disposed outside to overlap the top of the arched lower edge of the corset front and extend downwardly and across to support the abdomen therebelow when the wearer assumes a straightened posture.

1,301,619. AUTOMOBILE-TOP. STEFAN SZEMANSKI, San Francisco, Calif. Filed Apr. 10, 1918. Serial No. 227,763. 5 Claims. (Cl. 21—62.)

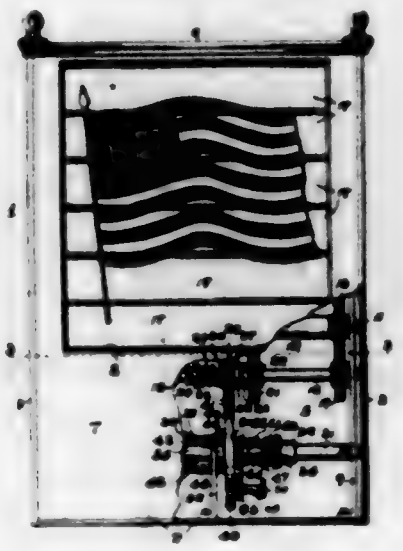
1. In combination with an automobile top, two lazy-tongs connected thereto, a rotatable element extending

transversely of the top and a pair of means for each of the respective lazy-tongs carried by and movable longitudinally of the element and connected to the lazy-tongs



whereby upon turning of said element said means and thereby the lazy-tongs will be contracted or expanded according to the direction of rotation of the element.

1,301,620. ADVERTISING OR SIGNALING APPARATUS. CHARLES M. TATOSIAN, Newark, N. J. Filed Aug. 11, 1917. Serial No. 185,635. 3 Claims. (Cl. 40—96.)



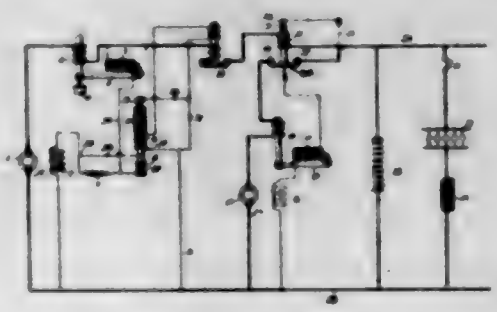
3. An advertising or signaling device comprising a body having a display portion, a plurality of rollers mounted in said body, a plurality of display-aprons movably mounted upon said rollers, a set of intermeshing pinions mounted upon journal-portions of said rollers, a main driving shaft within said body, a sprocket-wheel upon said shaft, a non-rotatable rod within said body, a sprocket-wheel loosely and rotatably mounted upon said rod, a link-chain mounted upon said sprocket-wheels, a crank-disk mounted upon said main driving shaft, a spring-controlled toothed disk loosely mounted upon said rod, a link connecting said crank-disk with said toothed disk, a cam-element slidably mounted upon said rod, a projection extending from the sprocket-wheel upon said rod in engagement with said cam-element, an auxiliary shaft, a pinion secured in a fixed position upon said auxiliary shaft, a second pinion loosely mounted upon said auxiliary shaft, a ratchet-like means of connection between said pinions, and a third pinion also secured in a fixed positon upon said auxiliary shaft, said last-mentioned pinion being in mesh with said set of intermeshing pinions, substantially as and for the purposes set forth.

1,301,621. SCRIBER. EMILE TINTANNT, Camaguey, Cuba. Filed June 5, 1918. Serial No. 238,324. 7 Claims. (Cl. 33—27.)

1. A scriber consisting of a supporting leg, a marking implement, a resilient member connecting the marking implement and the leg, said resilient member urging the marking implement in a direction away from the leg, a flexible member operatively engaged with the marking implement, and means carried by the leg for frictionally engaging the flexible member.

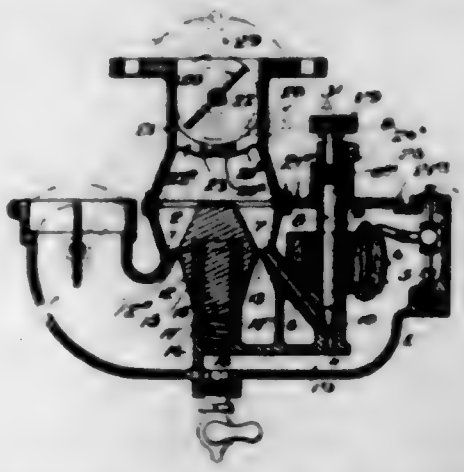


1,301,622. SYSTEM OF ELECTRICAL REGULATION. WILLIAM A. TURBAYNE, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Sept. 26, 1912, Serial No. 722,502. Renewed Sept. 13, 1918. Serial No. 253,984. 9 Claims. (Cl. 171—318.)



1. In a car lighting system, the combination of two independent generators connected in parallel, storage batteries charged thereby, and means limiting the output of the generators to cause the batteries to float at full charge.

1,301,623. CARBURETER. ROY M. UPTON, Rutherford, N. J., assignor of one-half to Thomas J. Norton, Rutherford, N. J., and one-half to Upton Carburetor Company, Inc., a Corporation of New York. Filed Oct. 12, 1914. Serial No. 866,209. Renewed Sept. 12, 1918. Serial No. 253,830. 2 Claims. (Cl. 261—38.)



1. In a carbureter, a casing having a fuel chamber, a carbureting chamber, a passage providing communication between said chambers, a standard extending toward the carbureting chamber and having a bore opening at its upper end, a valve having a recess receiving said standard and having a stem entering said bore whereby said

valve is guided to rise and descend upon said stem relatively to said passage, and a spring within said bore bearing against said stem and normally compressed by said valve.

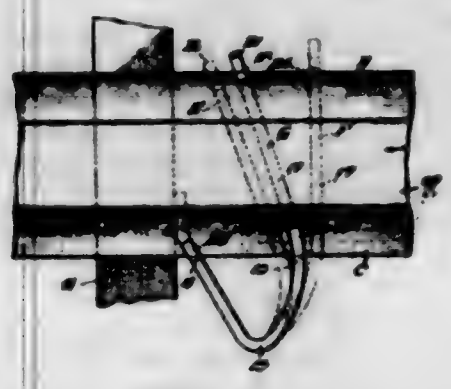
2. In a carbureter, a casing having a fuel chamber, a carbureting chamber, a passage communicating with the fuel chamber and having an orifice communicating with the carbureting chamber, a mixing chamber, a series of arms within the mixing chamber spaced above said orifice and having a stop, said arms providing spaces therebetween, the side surfaces of said arms being inclined upwardly at an angle to the vertical to divert the mixture flowing from the carbureting chamber, a valve to coact with said stop, and a throttle above said arms.

1,301,624. SILO. FRANK J. VAN COTT, Unadilla, N. Y. Filed July 31, 1916. Serial No. 112,431. 1 Claim. (Cl. 20—1.4.)



In a device of the class described, the combination of a foundation, a silo supported thereon, a plurality of spaced flexible anchoring devices having their ends secured in said foundation in a circle around said silo, outside the silo but near thereto, and means for detachably securing the upper ends of said flexible anchoring devices to the lower part of the said silo.

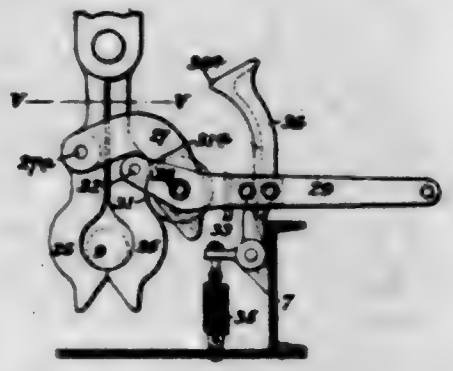
1,301,625. RAIL-ANCHOR. HAROLD G. WARR, Chicago, Ill., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 17, 1917. Serial No. 197,102. 24 Claims. (Cl. 238—4.)



11. A one-piece rail anchor formed at one end with a substantially V-shaped portion adapted to flex at the apex of the V providing a tie abutting member and formed at the other end with a jaw adapted to be sprung into operative position on the rail.

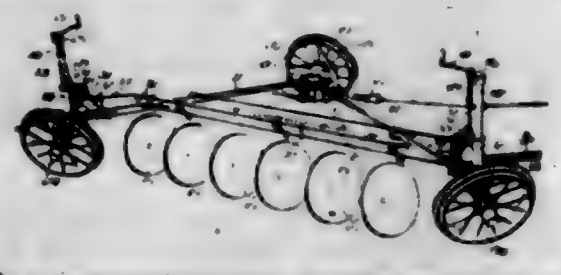
1,301,626. GRAB-BUCKET. WILLIAM E. WATTERS, Melrose Park, Ill. Original application filed Jan. 10, 1912, Serial No. 670,442. Divided and this application filed Oct. 9, 1916. Serial No. 124,444. 2 Claims. (Cl. 37—30.)

1. Grab bucket mechanism, consisting of an upper frame, a lower frame movably relatively to the upper frame, an operative connection between the frames consisting of a pin attached to one of the frames and a split eye attached to the other of said frames, the split eye consisting of two hook members normally locked together in closed position by links pivoted to said hook members and to each other



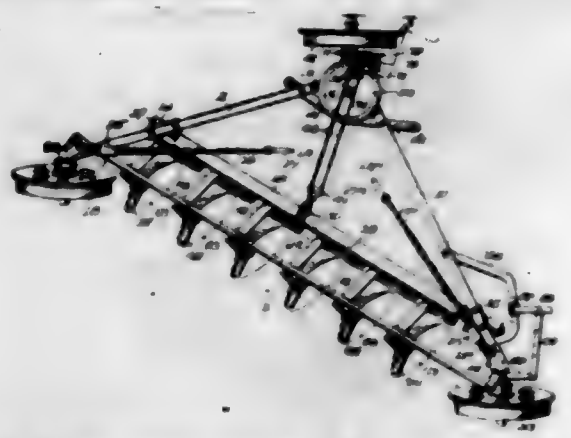
to form a toggle joint, and mechanism for allowing the eye to open for release or engagement of the pin.

1,301,627. GANG-PLOW. IRA A. WEAVER, Springfield, Ill., assignor, by mesne assignments, to Montgomery Ward & Co., Incorporated, Chicago, Ill., a Corporation of New York. Filed June 15, 1914. Serial No. 845,094. 12 Claims. (Cl. 97—54.)



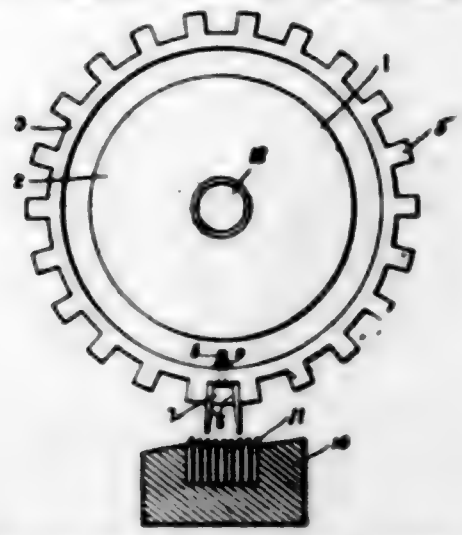
1. In a construction of the character described, the combination of a plow-support, a plurality of plows carried thereby, a pair of lifting means connected to said support at different points, a power-driven rotary member, and a pair of connections between said pair of lifting means and said rotary member at one side of the axis thereof and disposed at an angle to each other and at different angles to said rotary member in substantially the plane of rotation thereof, whereby when one connection operates relatively rapidly on its lifting means the other operates relatively slowly on its lifting means, and vice versa, substantially as described.

1,301,628. PLOW. IRA A. WEAVER, Springfield, Ill., assignor, by mesne assignments, to Montgomery Ward & Co., Incorporated, Chicago, Ill., a Corporation of New York. Filed Aug. 10, 1914. Serial No. 855,964. 11 Claims. (Cl. 97—54.)



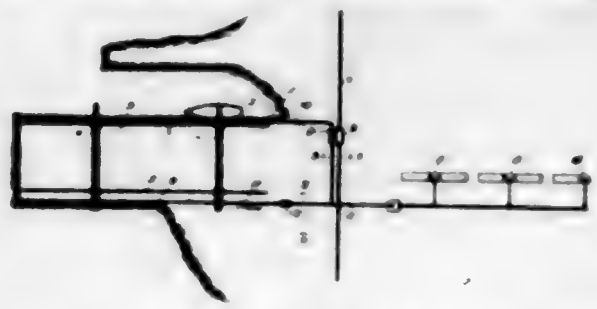
3. In a plow-construction, the combination of a frame, carrying-wheels for said frame, a plow-beam rockingly mounted on said frame, one or more plows carried by said plow beam, a substantially horizontal rotary member rotated by one of the carrying-wheels, and a rigid eccentric connection between said rotary member and said plow-beam whereby the latter may be rocked to raise and lower the plows, substantially as described.

1,301,629. BEATING-MACHINE FOR PAPER-PULP. ANDREW J. WEIS, Dayton, Ohio. Filed Nov. 12, 1917. Serial No. 201,440. 3 Claims. (Cl. 92—22.)



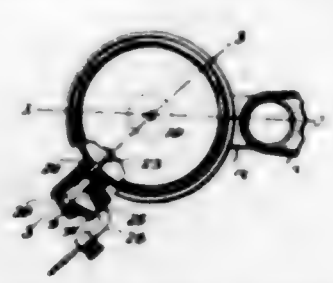
1. In a pulp beater, the combination, with a wheel having a central portion, and a peripheral ring portion connected with the central portion by a depressed flange, of radially projecting ribs integral of said ring portion spaced apart to form a substantially rectangular shaped space therebetween, two knives between each two adjacent ribs, a wedge between said two knives and pressing said knives against said ribs, and means passing through the peripheral ring and operable to force said wedge toward said ring.

1,301,630. COAL RECEIVING AND STORING PLANT. CHARLES S. WILLIAMSON, Chicago, Ill. Filed Oct. 6, 1916. Serial No. 124,046. 3 Claims. (Cl. 214—14.)



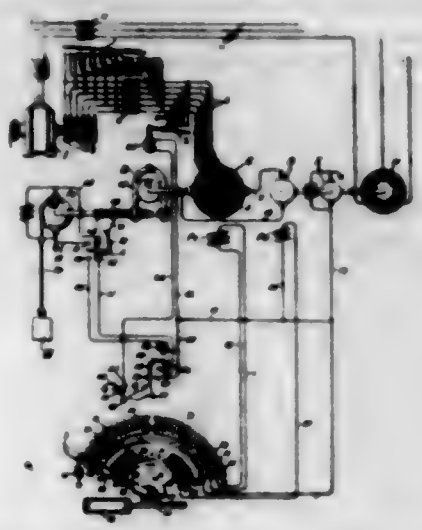
3. In combination in a coal handling plant, a dock, an unloading device thereon, a railroad track adjacent said dock and having a car dumper, a concentrating hopper, a cable road on said dock and arranged to selectively receive coal or the like from said dumper and said unloading devices and deposit the same in said concentrating hopper for subsequent removal to a consuming unit.

1,301,631. REPRODUCING DEVICE FOR GRAPHOPHONES. HENRY ROLLAND ADAMS, Wayside, Tex. Filed May 20, 1918. Serial No. 235,604. 1 Claim. (Cl. 274—35.)



In a device of the class described, a casing, a diaphragm mounted within the casing, an arm connected with the diaphragm, a needle holding device comprising a cone member, a casing therefor including a stationary casing element and a detachable threaded element having a bore of varying cross section, receiving the cone member, a fibrous sleeve between the casing and cone member, a spring for retaining the cone member and sleeve in positive contact, an extension carried by the cone member, and a needle mounted in said extension.

1,301,632. SPEED CONTROL OF INDUCTION-MOTORS. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., and DAVID C. PRINCE, Springfield, Ill., assignors to General Electric Company, a Corporation of New York. Filed Mar. 17, 1917. Serial No. 155,468. 15 Claims. (Cl. 172—274.)



3. The method of carrying an induction motor from subsynchronous to supersynchronous speed, by means of a rotary converter electrically connected to the induction motor secondary, which consists in maintaining a direct current voltage on the armature of the converter, gradually bringing the speed of the converter armature to zero, reversing the converter field when the armature speed is substantially zero, and then permitting the armature to gradually accelerate in the opposite direction.

1,301,633. PROCESS OF SOLDERING ALUMINUM. ARMAND HENRI ALEXANDRE, Levallois-Perret, France, assignor to Societe E. H. Moll & Cie., Paris, France. Filed Nov. 2, 1917. Serial No. 199,912. 2 Claims. (Cl. 148—26.)

2. A solder for use with aluminum, consisting of approximately 61 per cent. tin, 36 per cent. zinc, and one to two per cent. each of silver and brass.

1,301,634. CLAMP FOR BRACING WIRES OR CABLES OF AIRCRAFT AND OTHER STRUCTURES. ALLAN LINDSAY ANDERSON, Gorton, and ROBERT ANDERSON, Manchester, England. Filed Mar. 7, 1918. Serial No. 220,955. 6 Claims. (Cl. 244—31.)

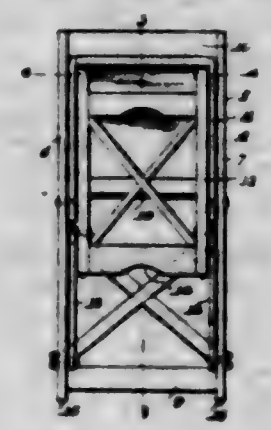


1. A clamping device for the cross bracing wires of aircraft and other structures constructed of streamline conformation and comprising two clamping members rounded or inclined to the front and tapering to the rear provided with transversely disposed slots to receive the bracing wires substantially as described.

1,301,635. FOLDING CHAIR. HARRY S. APPLEGATE, Pasadena, Calif. Filed Apr. 13, 1918. Serial No. 228,436. 1 Claim. (Cl. 155—8.)

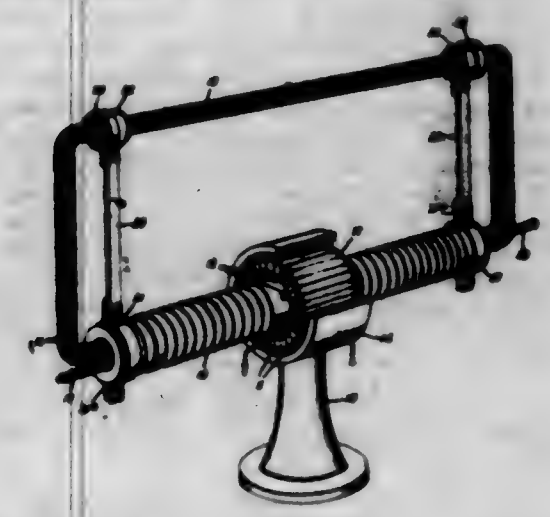
A folding chair comprising a back frame, consisting of vertical members and cross pieces connecting said members together, a seat frame pivoted to said vertical members and adapted to be swung upwardly between said members, said seat frame having its side members projecting rearwardly and contacting with one of the cross pieces when the seat frame is swung downwardly, a front frame pivoted in the front end of the seat frame and fitting in said frame when the chair is folded, with its lower end contacting with some of the cross pieces of the back frame to

hold the chair in folded position, said lower end having a cut out portion to form a finger hold for unfolding the chair, braces pivotally connected with the lower part of



said front frame and clamping bolts connecting the rear ends of said braces to the lower ends of the vertical members of the back frame.

1,301,636. HIGH-VOLTAGE-CURRENT TRANSFORMER. LYMAN ARNOLD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 28, 1916. Serial No. 128,340. 3 Claims. (Cl. 175—358.)



1. An electrical device comprising an insulating tube, a support for said tube, a winding threaded through said tube, and supports for the exterior loop of said winding mounted on the ends of said tube.

1,301,637. GRINDING-MILL. JAMES A. BAIR, Tampa, Fla. Filed Mar. 1, 1918. Serial No. 219,872. 7 Claims. (Cl. 83—18.)



1. A grinding mill comprising a tapered rotor with its smaller end disposed downwardly, a tapered grinding shell in which said rotor is received, said shell being formed of super-imposed rings of different diameters, a downwardly tapered retainer for said shell, and spiral cams on the periphery of said rings contacting with said retainer to convert any turning tendency of said rings into an upward thrust thereon, whereby to effectively engage the shell and cone with each other.

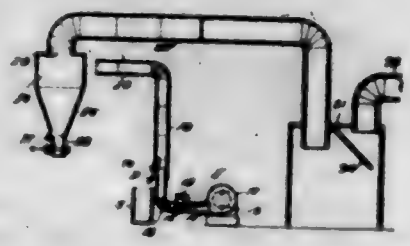
2. A structure as specified in claim 1, each of said rings having a peripheral flange and the outer edges of the several flanges being shaped to form said spiral cams.

3. A grinding mill comprising a plurality of superimposed grinding rings, a retainer for said rings comprising an upper and a lower annulus and vertical bars connecting them, a rotor surrounded by said rings and having a tendency to rotate the latter, and peripheral cams on said rings engaging said vertical bars to utilize any rotating tendency of said rings for more securely holding them in said retainer.

4. A grinding mill comprising a supporting ring, a shell beneath said ring composed of a plurality of superimposed grinding rings and a retainer therefor, a rotor surrounded by said grinding rings and exerting a tendency to rotate those rings as well as said retainer, means for utilizing any rotating tendency of said grinding rings to more securely hold them in said retainer, and means for supporting said retainer from said supporting ring and for utilizing any rotating tendency of the former to more forcibly secure it to the latter.

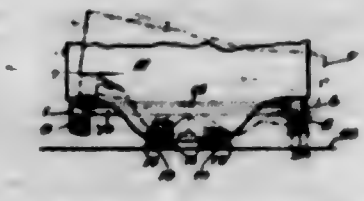
7. A retainer for the herein described mill, comprising an upper and a lower annulus, vertical bars connecting them, and inclined lugs on the periphery of the upper annulus.

1,301,638. TOBACCO-CLEANING APPARATUS. LAURENCE F. BANNON, Kingston, N. Y. Filed Aug. 30, 1918. Serial No. 252,041. 3 Claims. (Cl. 130—17.)



1. A sorting and separating machine embodying a rotary fan or blower, a conveyer pipe having one end communicating therewith, a baffle located in said pipe adjacent said fan or blower, a separating drum communicating with the opposite end of said pipe, a valve controlled opening in the bottom of said drum, a discharge opening in the top of the drum above the conveyer pipe and a discharge spout located in the conveyer pipe between the baffle and the drum.

1,301,639. DIRECT AND LATERALLY LEANING, ROCKING, FIRM-STANDING, AND PIVOTAL CHAIR. PARRISH BARNES, San Francisco, Calif. Filed Nov. 7, 1917. Serial No. 201,168. 14 Claims. (Cl. 155—18.)



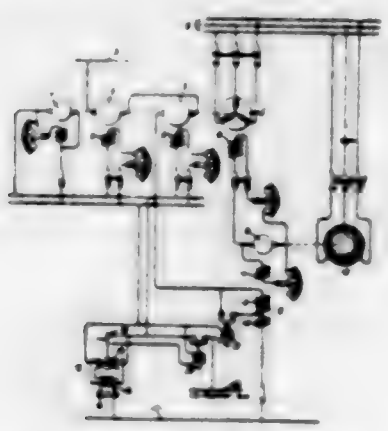
2. A rocking chair having its rocker tread formed of rise and having a forward portion of its rocker tread constructed to an arc drawn to an axis that is horizontal when the chair is erect, and having at the rear of such arc, a rocker tread constructed to an arc drawn to an axis that is inclined to said horizontal axis so that the chair leans to one side when the chair rests on such rear rocker tread.

5. A rocking chair having a forward tread formed of ribs the transverse traces of said tread being horizontal when the chair is erect, and a rearward tread formed by other ribs, the transverse traces of said rearward tread being aslant when the chair is erect.

9. A rocking chair having a pair of side rockers formed with a tread, one section of which practically conforms to to the periphery of a cylinder the axes of which are normal to the transverse traces of the chair, and having rocker sections composed of ribs conforming to a segment of a cylinder, the axis of which is oblique to said traces.

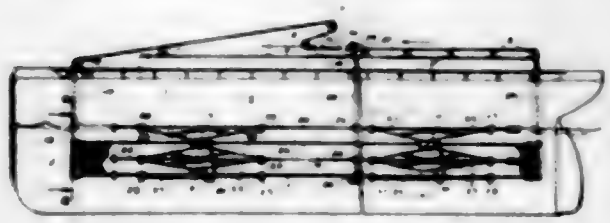
14. A rocking chair having rocker means provided with crowns that are offset relative to each other to form a stable support for the chair at one position; said rocker means being provided with various treads drawn to different axes which are oblique to each other so that in one position the chair may be rocked directly forward and back, and in another position it is supported in a laterally leaning position and may be rocked while thus supported leaning to one side.

1,301,640. SYSTEM FOR THE TRANSFORMATION OF ELECTRICAL ENERGY. DAVID BASCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 2, 1917. Serial No. 159,264. 7 Claims. (Cl. 171—241.)



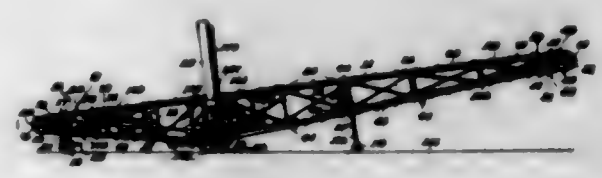
3. The combination with an alternating current circuit and a direct current circuit, of a motor generator set, comprising a synchronous motor and a direct current dynamo-electric machine, interposed therebetween and adapted to transfer power from either circuit to the other, an exciter for said synchronous motor adapted to be compounded by the power current traversing said dynamo-electric machine, and means controlled by said power current for maintaining the direction of the magnetomotive force produced in said exciter by said power current the same regardless of the direction of flow of said power current.

1,301,641. TORPEDO-NET. ARTHUR J. BRADLEY, San Francisco, Calif. Filed Feb. 16, 1918. Serial No. 217,087. 2 Claims. (Cl. 114—240.)



1. A torpedo net for vessels comprising an endless net mounted to move on board in a horizontal position from the stern to bow, and in a vertical position in the water from bow to stern; means for passing the [illegible] from the bow of the vessel and for turning said net from a horizontal to a vertical position; means for receiving the net at the stern of the vessel and for turning said net from a vertical to a horizontal position; submerged collapsible means for slidably engaging the top and bottom edges of the net portion in the water to retain said portion at a distance from the side of the vessel; means for collapsing said submerged collapsible retaining means to move the net inwardly toward the side of the vessel to facilitate docking or boarding; and means for simultaneously taking up the slack in the horizontal portion of the net on board occasioned by said inward movement of the vertically positioned portion of the net.

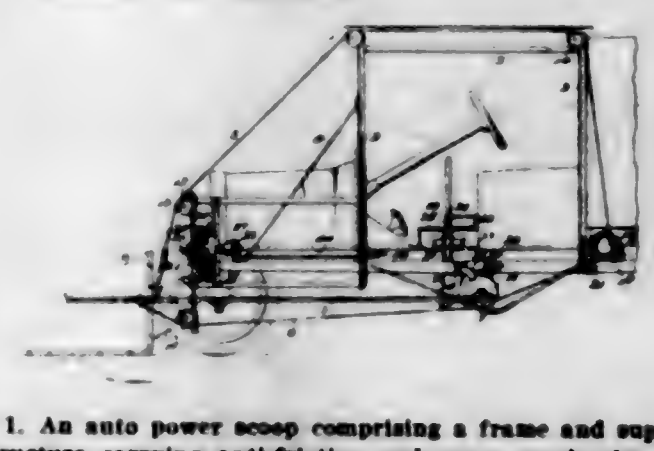
1,301,642. MOTOR-OPERATED ADJUSTABLE CONVEYER. JAMES O. BRADNEY and HENRY PRIESTER, Middletown, N. Y., assignors to Bradney Machine Company, Inc., Middletown, N. Y., a Corporation of New York. Filed Nov. 3, 1917. Serial No. 200,120. 11 Claims. (Cl. 193—3.)



1. A conveyer comprising a truck, a vertically shiftable frame upon the truck, an endless conveyer upon the frame, positive elevating and lowering means for the frame, controlling means for the elevating and lowering means extending to points adjacent the opposite ends of the frame and actuating means for each end of the controlling means arranged at opposite sides of the frame.

7. A truck conveyer having an endless traveling belt, propelling means for the truck and belt, reversing gears for the truck and belt, and separate controllers for the said gears for controlling the direction of travel of the truck and belt arranged in pairs at the opposite ends of the machine.

1,301,643. AUTO POWER-SCOOP. CHARLES A. BLANK, Miller, Ind. Filed Mar. 15, 1918. Serial No. 222,726. 7 Claims. (Cl. 214—131.)

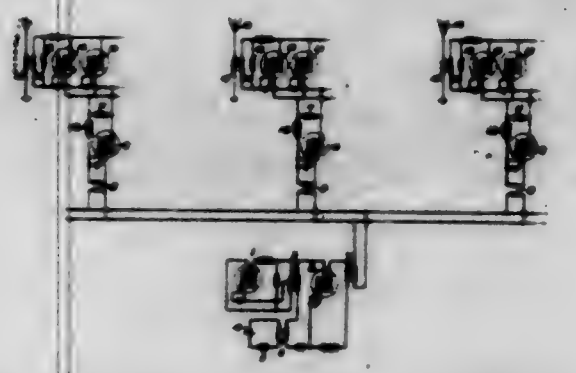


1. An auto power scoop comprising a frame and superstructure carrying anti-friction and power mechanism, a pivotally mounted scoop frame and scoop, means connected with the scoop and power mechanism for positively raising and lowering said scoop, means within the control of the operator for causing the scoop to be raised and lowered, and means actuated by the scoop frame for disengaging the power mechanism from the scoop raising and lowering mechanism at a predetermined position.

1,301,644. DIRECTIVE SENDING SYSTEM. OLIVER E. BUCKLEY, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 12, 1915. Serial No. 50,462. 4 Claims. (Cl. 250—11.)

2. In a system for radio communication, a plurality of sending antennæ, successive antennæ being separated by a distance suitable for obtaining directive sending, a

power supplying amplifier of the unilateral type associated with each of said antennæ, and a central source



of low power modulated high frequency oscillations connected with said amplifiers and controlling their operation.

1,301,645. COAT AND TROUSERS HANGER. LOUIS R. BULLITT, San Jose, Calif. Filed Nov. 8, 1918. Serial No. 261,645. 1 Claim. (Cl. 211—13.)



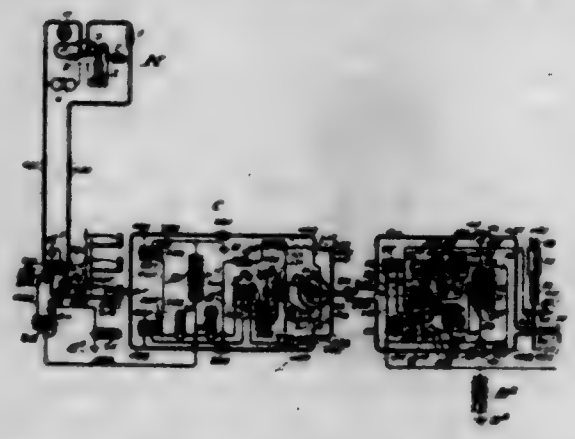
The combination with a coat hanger having oppositely extending duplex arms, of a trousers hanger formed from a single piece of wire bent intermediate its ends to form a cross bar, eyes at the terminals of the cross bar for embracing the side portions of one of the duplex arms of the coat hanger, those portions continuing from the eyes being extended toward each other and twisted together to form a depending hanger shank, horizontally disposed trouser cuff supporting arms projecting at right angles from the lower end of the shank and arranged in closely spaced parallel relation with respect to each other and positioned directly beneath the coat hanger, oppositely extending guides projecting outwardly at right angles from the outer portions of the trouser supporting arms, hangers rising from the outer ends of the guides and arranged in spaced parallel relation to each other, and eyes formed at the upper terminals of the hangers and embraced about the side portions of the other arm of the coat hanger.

1,301,646. EXPLOSIVE COMPOUND. FRANK R. BURROWS and JOSEPH G. BURROWS, Port Arthur, Ontario, Canada. Continuation in part of application Serial No. 774,267, filed June 17, 1913. This application filed Oct. 13, 1917. Serial No. 196,555. 3 Claims. (Cl. 52—6.)

1. An explosive compound including ammonium perchlorate potassium nitrate, 30-mesh porous, jagged-surfaced aluminium granules, prepared as set forth, and alpha-trinitrotoluene.

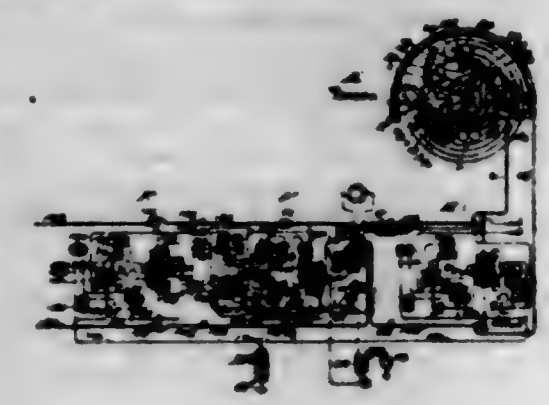
1,301,647. TELEPHONE SYSTEM. WILSON L. CAMPBELL and TALBOT G. MARTIN, Chicago, Ill., assignors, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Dec. 16, 1905. Serial No. 292,005. Renewed July 31, 1916. Serial No. 112,475. 53 Claims. (Cl. 179—27.)

1. In a telephone system, calling and called subscribers' lines temporarily connected together through the medium of an operator's cord-circuit and automatic trunk-selecting and line-connecting switching machinery, supervisory apparatus for the operator's cord-circuit, means at the calling and called subscribers' stations for



controlling said supervisory apparatus, and a calling device at the called subscriber's station for automatically calling other subscribers in the same exchange.

1,301,648. AUTOMATIC AND MANUAL TELEPHONE-EXCHANGE SYSTEM. WILSON L. CAMPBELL and TALBOT G. MARTIN, Chicago, Ill., assignors, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Apr. 28, 1907. Serial No. 369,808. 29 Claims. (Cl. 179—27.)

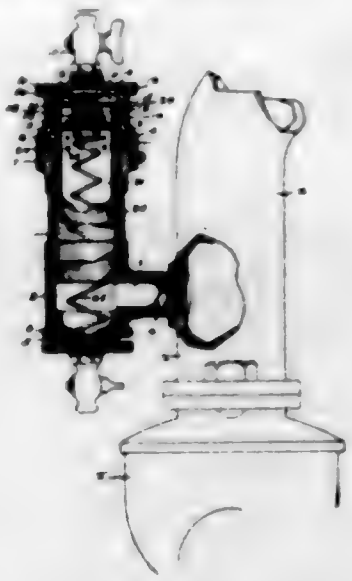


24. A telephone system, comprising an originating operator's cord circuit, a trunk line adapted to be connected therewith provided at one end with a trunking operator's cord circuit, a relay associated with said trunking operator's cord circuit, a signal controlled by said relay, an automatic switch, a trunk line leading from the trunking operator's cord circuit to the automatic switch, an impulse sender at the trunking operator's position for controlling said automatic switch to find the called line, a circuit for energizing said relay to display said signal when a connection is made between said trunking cord and trunk, and a switch for deënergizing said relay upon the response of the called subscriber.

1,301,649. AUXILIARY AIR-INLET DEVICE FOR INTERNAL-COMBUSTION MOTORS. PATRICK R. CAMPION, San Francisco, Calif. Filed Apr. 22, 1914. Serial No. 834,957. 5 Claims. (Cl. 137—153.)

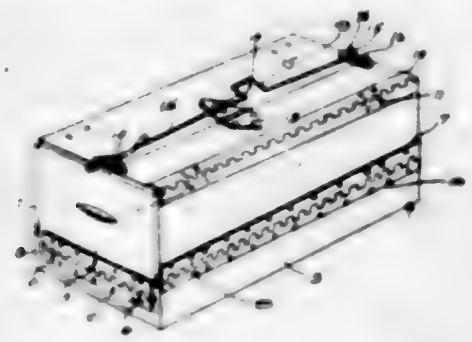
1. A device of the character described comprising a casing provided with an air inlet passage, an annular air chamber communicating therewith, suction passages communicating with said chamber, and an air outlet, means for controlling the volume of air passing from said annular air chamber through the suction passages, a tubular valve member mounted to reciprocate within said casing and having perforations in the wall thereof positioned to coincide with said suction passages, said valve member having a shut-off portion contiguous to the perforations, said valve member communicating at one end with the interior of said casing, and a spring for normally maintaining said valve member with its perforations in regis-

ter with said air passages, said valve being movable under suction in opposition to said spring to bring said shut-off portion opposite to said air passages.



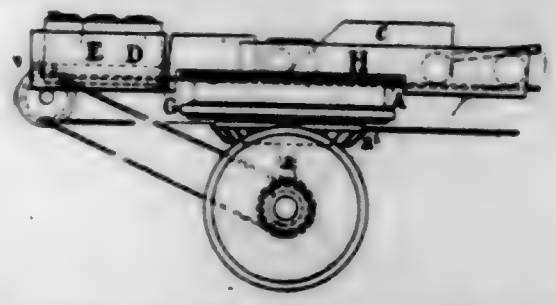
4. A device of the character described comprising a casing provided with air passages extending through the wall thereof and also having an air outlet near one end, a tubular valve member mounted to reciprocate within said casing and having perforations in the wall thereof and a shut-off portion contiguous to the perforations, said valve member communicating at one end with the interior of said casing, a spring for normally maintaining said valve member with its perforations in register with said air passages, said valve member being movable under suction in opposition to said spring to bring said shut-off portion opposite to said passages, an adjustable stop for said valve, and means coöperating with said stop for preventing hammering of said valve member.

1,301,650. COLLAPSIBLE EGG-CASE. LEMUEL W. CHAPMAN, Indianapolis, Ind., assignor of one-half to William E. Wachtel, Indianapolis, Ind. Filed Jan. 22, 1916. Serial No. 73,687. 1 Claim. (Cl. 220—17.)



In a collapsible crate, a bottom wall provided with vertical end and side flanges, end walls hingedly secured to the upper edges of said end flanges and foldable downwardly and inwardly between the side flanges, side walls hingedly secured to the upper edges of the side flanges, top sections hingedly secured to the upper edges of the side walls, one of said side flanges being provided with spaced securing staples projecting from the outer face thereof and the top section carried by the side wall secured to this flange being provided adjacent its inner edge with correspondingly spaced staples, hasps secured to the other top section and adapted to receive said staples, and a locking rod insertible through the staples in front of the hasps, the locking rod coöperating with the staples carried by said top section, and the staples carried by said flange and the hasps to lock the crate in either extended or folded condition optionally, said locking rod being provided with an intermediate offset portion providing a handle for transporting the crate.

1,301,651. MACHINE FOR TRIMMING MOLDED ARTICLES. ARTHUR RICHMOND CHRISTIAN, Huddersfield, England. Filed Dec. 5, 1917. Serial No. 205,586. 5 Claims. (Cl. 164—61.)

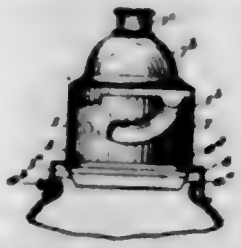


1. A machine for trimming or cutting the edges of molded articles of rubber or other composition constructed with an approximately horizontal rotary blade mounted on an approximately vertical spindle, a cutter wheel mounted on an approximately vertical spindle working in conjunction with rotary blade and a chute to deliver the articles on to the top of the rotary blade near its point of contact with the cutter wheel substantially as described.

1,301,652. PROCESS OF TREATING CELLULOSE. ROBERT HENRY CLAYTON, Manchester, JULIUS HUBBUM, Cheadle Hulme, and HERBERT ERNEST WILLIAMS, Manchester, England, assignors to The Manchester Oxide Company Limited, Manchester, Lancaster, England. Filed Jan. 4, 1919. Serial No. 269,692. 4 Claims. (Cl. 106—40.)

1. The process of treating a cellulose substance in the production of solutions and viscous or gelatinous bodies or masses thereof, which consists in heating the cellulose substance with a thiocyanate solution.

1,301,653. LAMP-FIXTURE. WESLEY E. COCHRAN, Cleveland, Ohio. Filed July 19, 1918. Serial No. 245,593. 15 Claims. (Cl. 240—115.)



15. An interchangeable lamp socket and shade holder, comprising a cylindrical insulating base having peripheral oppositely arranged curved bayonet grooves and a threaded socket chamber, said insulating base having an annular flange extending from one end and surrounding said socket chamber, a relatively fixed member carried by said annular flange, and a socket cover surrounding said cylindrical insulating base and having internal projections interlocking with and advanced on said curved bayonet grooves toward said relatively fixed member and flange in clamping relation thereto when moved circumferentially.

1,301,654. DETACHABLE HEEL. HENRY COLLIN, New York, N. Y. Filed Jan. 10, 1919. Serial No. 270,547. 2 Claims. (Cl. 36—42.)



1. In combination with a sole member which includes a welt sole, a heel, a plurality of pliable members carried

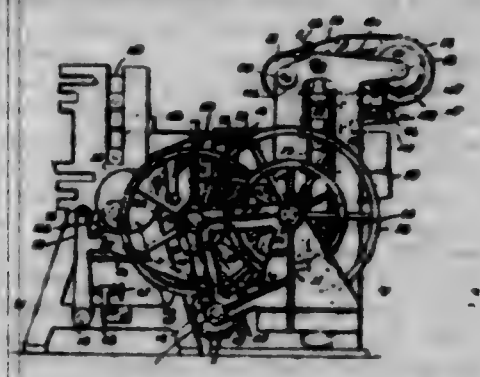
by the heel, and adapted to engage the inner face of the welt sole, and means engaging through the welt sole, and engaging the heel to secure the same to the welt sole.

1,301,655. BONNET FOR THE CAPS OF RAILWAY SIGNAL-FUSEES. WILLIAM A. CONLEY, Needham Heights, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 6, 1918. Serial No. 261,401. 2 Claims. (Cl. 102—94.)



1. A cap for railway signal fusees having an exposed complementary igniting composition on its end, a tape extending over the igniting material, a paper bonnet wrapped around the cap at its said end and extending beyond the cap end, the extended end of the bonnet and the tape folded and pasted together over the end of the cap and leaving an end of the tape projecting from the bonnet folds to be pulled for the purpose described.

1,301,666. AUTOMATIC SHEET-FEEDING MECHANISM. FREDERICK M. COWAN, Elizabeth, N. J., assignor to The Metals Plating Company, New York, N. Y., a Corporation of New Jersey. Original application filed Oct. 31, 1917, Serial No. 199,416. Divided and this application filed Mar. 19, 1918. Serial No. 223,287. 10 Claims. (Cl. 197—19.)



1. In sheet feeding mechanism, the combination of a pair of slotted supports provided with a guides along the edges of the slots and upon the inner face of each support adjacent one edge of the slot therein, movable members mounted upon the supports and having rollers within the slots engaging the guides along the edges thereof and other rollers engaging the guides upon the inner faces of the supports, sheet holding means adjustably mounted between and supported upon the movable members, a rack bar attached to each movable member, a set of gears operatively connected to each rack bar, and means for producing an intermittent actuation of the said sets of gears to impart a step-by-step movement to the rack bars to raise progressively the sheet holding means.

2. In sheet feeding mechanism, the combination of a pair of supports, means slidably mounted on said supports for holding a stack of sheets, a rack bar attached to each side of the holding means, a pinion engaging each rack bar, a gear wheel associated with each pinion, a shaft provided with pinions engaging both of said gear wheels, a ratchet wheel, a gear loosely mounted on said shaft, a pinion connecting said ratchet wheel to the last named gear, a clutch for connecting the last named gear to the shaft upon which it is loosely mounted, a pawl associated with the ratchet wheel, a driving shaft, means operated by said driving shaft and connected to the pawl whereby an intermittent movement may be imparted to the ratchet wheel to cause an intermittent movement of the sheet holding means, and means for adjusting the movement of said pawl to control the lifting movement imparted to the sheet holding means.

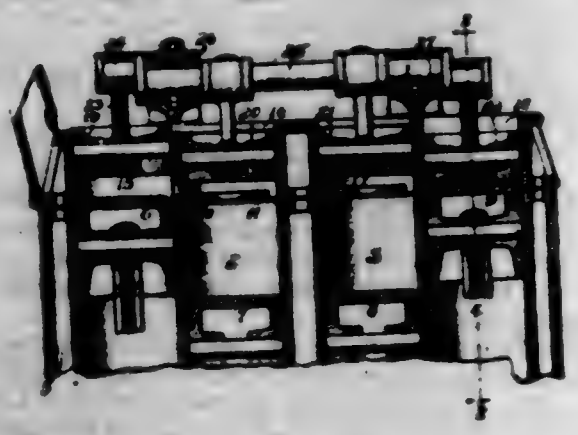
3. In sheet feeding mechanism, the combination of supports, means movably mounted on the supports for holding a stack of sheets, rack bars associated with said sheet holding means, a set of gears associated with the rack bars, a shaft adapted to be continuously driven, a second set of gears, means actuated by the shaft for producing an intermittent movement of the second set of gears, means for operatively connecting the first named set of gears to the second set of gears to cause an intermittent movement to be imparted to the sheet holding means, and braking means for preventing motion of said first set of gears when disconnected from the second set of gears.

1,301,667. POWER-TRANSMISSION DEVICE FOR MOTOR-VEHICLES. RALPH F. CRAWFORD, Monticello, N. Y. Filed Nov. 26, 1918. Serial No. 264,195. 2 Claims. (Cl. 74—30.)



2. In power transmission gearing for motor vehicles, longitudinal channel-form frame beams, a horizontal bridge plate bolted to and connecting said frame beams, an apertured reinforcing member bolted to one of said beams, a bracket depending from said bridge plate, alined drive shaft sections, clutch members one of which is slidable carried by the opposing ends of said sections, a countershaft located above and at right-angles to the forward shaft section, a gear upon the countershaft, a gear loosely mounted upon the forward shaft section, constantly in mesh with the first-named gear and provided with a clutch member, a coöperating slidable clutch member upon the forward shaft section, a journal box for the countershaft bolted to the said bridge plate and having an extension surrounding the countershaft and engaging the aperture of said reinforcing member, and a journal box for the end portion of the forward shaft section, bolted at one end to the first-named journal box and at its other end bolted to said bracket.

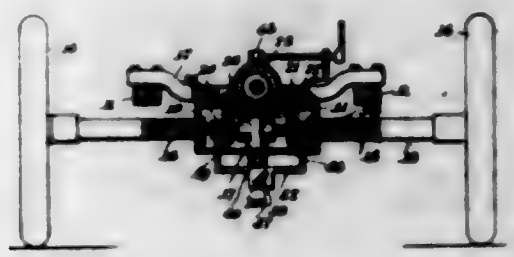
1,301,668. GAS-ENGINE. HENRY H. CUTLER, Brookline, Mass. Filed May 18, 1917. Serial No. 169,290. 11 Claims. (Cl. 123—78.)



4. In an explosive engine, the combination with a plurality of engine cylinders, each having an explosion cham-

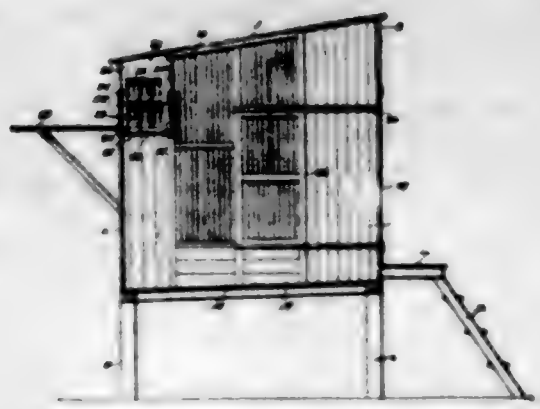
ber therein, of auxiliary means mechanically and operatively independent of the engine shaft and operated by the explosion of a charge in the other cylinders for scavenging each cylinder of the products of combustion after an explosion has taken place.

1,301,659. AUTO-TURNING DEVICE. GYORGY CSIPPAN, Philadelphia, Pa. Filed July 19, 1918. Serial No. 245,697. 4 Claims. (Cl. 180—17.)



1. The combination with a vehicle having a pivoted front axle formed in two sections, and a motor for operating the vehicle, of means for connecting each section of the axle with the motor for rotating the connected section, and means including a yoke slidable along said axle and controlled by means extending to within convenient reach of the driver for selectively connecting the section.

1,301,660. PIGEON-LOFT. AUGUSTE DU COEUR, Rosebank, N. Y. Filed May 11, 1918. Serial No. 233,969. 1 Claim. (Cl. 119—21.)



A pigeon loft comprising a pair of partitions dividing the same into a pair of compartments and a hallway, an entrance chamber located in the front of said loft at the upper part thereof and extending across the front end of the hallway, wings formed on the ends of said chamber at the lower part thereof, doorways in the ends of the wings leading to the compartments, other doorways in the ends of the chamber above the wings, the tops of said wings acting as platforms for the upper doorways, entrance doorways leading into the entrance chamber and trap doors controlling said doorways.

1,301,661. TWO-STROKE INTERNAL-COMBUSTION ENGINE. HENRI JOSEPH LÉON MARIE DE LA CHEVARDIÈRE DE LA GRANDVILLE and ANDRÉ GUÉNET, Paris, France. Filed Oct. 23, 1917. Serial No. 197,980. 5 Claims. (Cl. 123—59.)

1. A multi-cylinder two-stroke internal combustion engine having a charging pump for each cylinder, each cylinder having a piston therein and also provided with a surrounding conduit, means for connecting the exhaust port of each pump to the said conduit and to the inlet ports of all cylinders, and means for controlling the covering and uncovering of the exhaust ports of the pumps and the inlet ports of the cylinders in such a manner that as



long as the exhaust port of a charging pump remains uncovered, the inlet port of at least one of the cylinders remains also uncovered.

1,301,662. SULFONATED-MINERAL-OIL-SLUDGE PRODUCT AND PROCESS OF MAKING. ROBERT R. DIVINE, Cincinnati, Ohio. Filed Apr. 16, 1917. Serial No. 162,456. 8 Claims. (Cl. 23—24.)

1. The process of making sulfonates from sludge formed by sulfonating a portion of the contents of a mineral oil distillate, which consists in dissolving the acid sludge in water, removing any free oil, treating the water solution with a neutralizing material capable of combining with the free sulfuric acid to form a precipitate insoluble in water, and at the same time forming a water-soluble combination with the sulfonic acid, filtering off the precipitate, then salting from the separated solution the water-soluble sulfonate of the neutralizing material, and separating the mineral oil sulfonate from the saline solution.

2. The process of making sulfonates from sludge formed by sulfonating a portion of the contents of an oil of petrolic origin, comprising, mixing the sludge with water, separating the water solution from the undissolved sludge contents, adding to the water solution a base having the property of forming with the acids in solution, sulfates insoluble in water, and sulfonates soluble in water, and salting out the said sulfonates from said solution.

4. A mineral oil sulfonate of a sludge sulfonic acid formed by sulfonating a portion of the contents of a mineral oil distillate, consisting of a body having detergent properties, readily soluble in water, substantially neutral, and the sulfonic acid component of which is more readily soluble in water than in ether.

5. The herein described process of forming a substantially colorless alkalin earth metal sulfonate from sludge formed by sulfonating a portion of the contents of a mineral oil distillate, which consists in making a solution of the sludge, treating with an alkali earth to combine with the sludge sulfonic acid in solution, and salting the sulfonate from the solution with a reagent which will leave the sludge coloring components in solution and separating the sulfonate from the colored sludge solution.

8. The herein disclosed sulfonates of sulfonic acids water-extracted from a sludge formed by sulfonating a portion of the contents of an oil of petrolic origin, consisting of a neutral body having detergent properties, the sulfonic acid components of which are more readily soluble in water than in oil.

1,301,663. PRODUCT AND PROCESS OF PRODUCING AN ALKALI-METAL SULFONATE HAVING THE PROPERTIES OF A DETERGENT. ROBERT R. DIVINE, Cincinnati, Ohio. Filed Dec. 8, 1917. Serial No. 206,202. 8 Claims. (Cl. 23—24.)

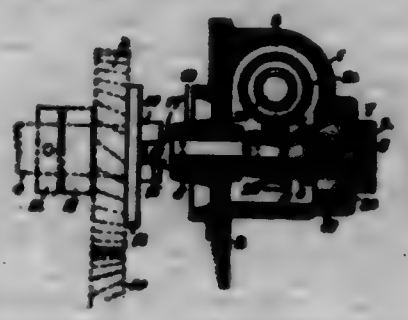
1. A detergent consisting of an alkali sulfonate of sulfonic bodies water-extracted from the sludge formed by sulfonating a portion of the contents of an oil of petrolic

origin, and consisting of a neutral body readily soluble in an equal volume of water.

2. A detergent consisting of an alkali sulfonate of sulfonic bodies water-extracted from the sludge formed by sulfonating a portion of the contents of an oil of petrolic origin, and consisting of a neutral body readily soluble in an equal volume of water, and having the characteristic of not being readily salted out of a concentrated water solution.

3. The herein described process of forming a detergent which consists in mixing a mineral oil sludge with water to dissolve out the sulfonic bodies, separating the solution, combining with a base to form a sulfate insoluble in water and a water soluble sulfonate, filtering off the sulfate, salting the sulfonate out of solution to free from the sludge coloring matter, dissolving the sulfonate, decomposing with carbonate of soda, and separating the precipitated calcium sulfate from the sodium sulfonate.

1,301,664. BEARING. THEODORE DOUGLAS, Scarboro, N. Y. Filed Dec. 27, 1917. Serial No. 208,181. 8 Claims. (Cl. 64—25.)

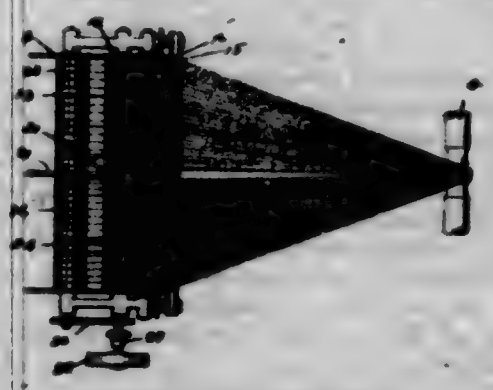


1. The combination of a pair of shafts having operative connection with each other, and means comprising a spring-pressed element and an anti-friction ball mounted therein to engage one of said shafts to impel the same toward the other of said shafts to maintain said connection.

2. The combination of a pair of shafts arranged in axial alinement and connected together, and means comprising a spring-pressed element and an anti-friction ball mounted therein to engage the end of one of said shafts and exert pressure thereon in the direction of the axis of the same toward the other shaft.

3. The combination of a shaft, a transmission element thereon, a bearing for the shaft, a second shaft connected to the first shaft and means for maintaining the efficiency of said connection and maintaining the element in proper relation to the bearing.

1,301,665. METHOD OF AND APPARATUS FOR BEAMING YARN. JOHN F. DOYLE, Taunton, Mass. Filed Mar. 7, 1918. Serial No. 220,899. 2 Claims. (Cl. 28—14.)



2. A method of beaming yarn which consists in dividing each of a plurality of yarn beams into a plurality of separate sections, the corresponding sections of each beam being mounted in approximate transverse alinement with the corresponding sections of the opposite beam, winding a set of warp threads onto said beams by leading each alternate thread of this set to its corresponding section in its opposite beam and rotating all the beam sections in unison.

1,301,666. POST-DRIVING HEAD. JOHN HENRY DOWNS, Jersey City, N. J. Filed May 13, 1918. Serial No. 234,248. 2 Claims. (Cl. 189—28.)



1. A post driving head comprising a block adapted for contact with one side of the post, the upper end of said block being increased in size and having a lateral shoulder to rest upon the post, said block having a pair of parallel vertical flanges extending beyond said shoulder to receive the post therebetween, and means associated with said flanges for fixedly securing the entire head upon the post.

1,301,667. KID HAIR-CURLER. JOHN N. EIDT, Anaconda, Mont. Filed Apr. 19, 1916. Serial No. 92,095. 3 Claims. (Cl. 132—18.)

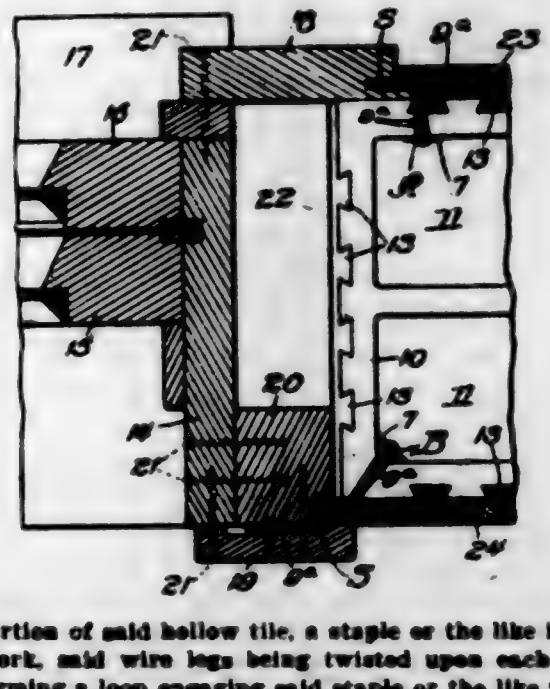


2. A hair curler comprising an elongated flexible metallic body member, enlarged head members fixedly secured at the ends of said body member, a single sheet of flexible cover material disposed about and hemming the body member and head members, and stuffing disposed about the body member within the cover sheet between the head members, said covering being constricted at the inner portions of the head members to prevent movement of the head members inwardly of the ends of the cover sheet.

1,301,668. ANCHOR OR TIE FOR BUILDING CONSTRUCTIONS. FRANCIS M. ELLIS, Oak Park, Ill. Filed May 25, 1916. Serial No. 99,741. 2 Claims. (Cl. 72—101.)

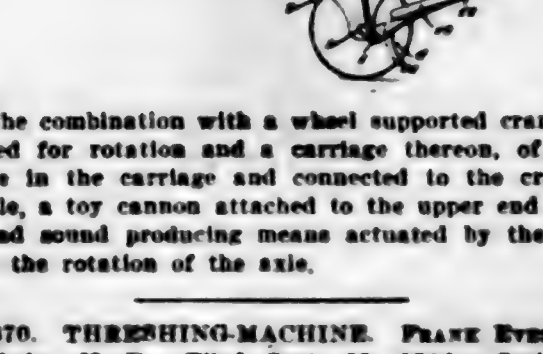
1. An anchor or tie for securing woodwork to tile construction comprising in combination a head of substantially flat metal having two holes therethrough and a substantially U-shaped wire having the legs thereof in said holes, the bend in said wire lying close to said head and holding the head loosely whereby it may adjust itself against various retaining surfaces on inside portions of contiguous tiles, both legs of said wire extending from one side of said head, said wire being of tough, strong, and readily flexible metal capable of having the two end portions twisted upon each other against the resistance of a retaining element in the woodwork, substantially as set forth.

2. In building construction, the combination of hollow tile wall construction, woodwork such as a window or door frame part adjacent to said wall construction, an anchor comprising a head piece and a pair of wire legs connected to and extending therefrom, said head lying against an in-



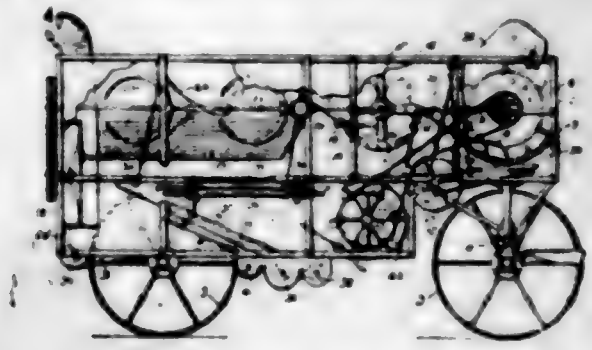
side portion of said hollow tile, a staple or the like in said woodwork, said wire legs being twisted upon each other and forming a loop engaging said staple or the like whereby the woodwork is drawn and held tightly in rigid association with said wall construction.

1,301,669. TOY GUN. EDWIN H. L. ENGLUND, Muskegon, Mich. Filed Aug. 16, 1918. Serial No. 250,185. 8 Claims. (Cl. 46—47.)



1. The combination with a wheel supported crank axle mounted for rotation and a carriage thereon, of a rod slidable in the carriage and connected to the crank of the axle, a toy cannon attached to the upper end of the rod, and sound producing means actuated by the crank during the rotation of the axle.

1,301,670. THRESHING-MACHINE. FRANK EVES, Devils Lake, N. D. Filed Sept. 22, 1916. Serial No. 121,649. 10 Claims. (Cl. 130—22.)



4. In a threshing machine, troughs arranged side by side, running lengthwise of the machine, whipping arms mounted above said troughs upon each side of the center of the machine for whipping and beating the straw and throwing it laterally and longitudinally of said troughs, and a stacker tube arranged to receive the straw from said troughs.

1,301,671. THRESHING-MACHINE. FRANK EVES, Devils Lake, N. D. Filed Sept. 22, 1916. Serial No. 121,650. 10 Claims. (Cl. 130—22.)



2. In a threshing machine, a plurality of concaves, arranged transversely in series lengthwise of the machine, a cylinder mounted to deliver the straw to the first of said series, beaters mounted above said concaves and operating to move the straw lengthwise of said concaves, and from one concave to the adjacent one, and arms arranged between said concaves and over which the straw is delivered from one concave to another.

5. In a threshing machine, transverse concaves arranged in series, beater arms mounted above said concaves for beating and whipping the straw and throwing it from one concave to another, shafts mounted transversely of the machine between said concaves, arms carried by said shafts transversely of said concaves and over which arms the straw is directed from one concave to another, and means for rocking said shafts to tilt said arms.

7. In a threshing machine, a plurality of concaves arranged transversely in series lengthwise of the machine, beater shafts mounted above said concaves respectively, beater arms secured on said shafts, said arms being arranged in pairs, the arms of the first concave having their hubs mounted on the middle portion of the shaft of that concave and projecting therefrom toward the sides of the machine, said arms being curved to beat and whip the straw outwardly on the concave, the arms of the remaining concaves being mounted on the middle and end portions of their shafts respectively, and those of the same concave extending in the same direction and oppositely arranged with respect to the arms of the adjacent succeeding concave, whereby a movement laterally of the machine will be imparted to the straw in addition to its lengthwise movement thereof.

8. In a threshing machine, a plurality of concaves arranged transversely in series lengthwise of the machine, a cylinder mounted to deliver the straw to the first of said series, shafts mounted in the machine frame above said concaves respectively, beater arms mounted on said shafts and arranged in pairs extending lengthwise of the concaves and transversely of the machine, the arms of the adjoining concaves being reversely arranged for imparting a movement to the straw transversely of the machine as well as lengthwise thereof.

9. In a threshing machine, a plurality of concaves arranged transversely in series lengthwise of the machine, a cylinder mounted to deliver the straw to the first of said series, shafts mounted in the machine above said concaves respectively, beater arms mounted on said shafts and arranged in pairs extending lengthwise of the concaves and transversely of the machine, the arms of the adjoining concaves being reversely arranged for imparting a movement to the straw transversely of the machine as well as lengthwise thereof, and means between the concaves for guiding the straw from each concave to the next succeeding one.

1,301,672. STAIR-JACK. CALLO D. FARNSEY, Cambridge, Mass. Filed Jan. 24, 1919. Serial No. 272,554. 3 Claims. (Cl. 248—30.)

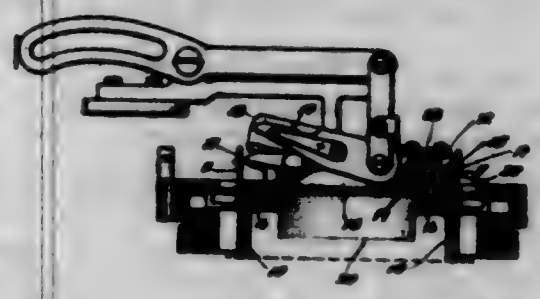
2. A stair jack having a horizontal platform with one of its ends adapted to rest on and partly overlap one of

the steps, supports for the other end of the said platform resting on a lower step and a portion to be pressed by



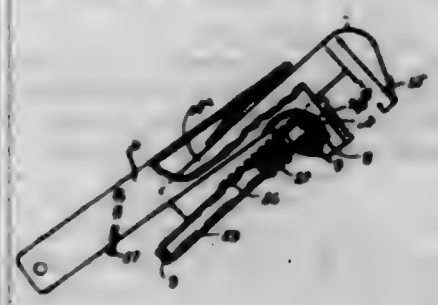
the knee of the operator against an intervening step while manipulating the load on the said platform.

1,301,672. ELECTROSTATICAL DEVICE FOR CIRCULAR-KNITTING MACHINES. CURT FEIG, Philadelphia, Pa., assignor to Venango Knitting Mills, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1917. Serial No. 210,061. 13 Claims. (Cl. 66—12.)



1. Apparatus of the character stated, comprising knitting mechanism, a thread binder and a thread cutter in combination with an electrostatic device disposed adjacent the knitting mechanism and with which device the work frictionally engages as it leaves the knitting mechanism to electrify said device whereby the strands of a discontinued thread are caused to adhere to said device during at least a portion of its travel to said binder and cutter.

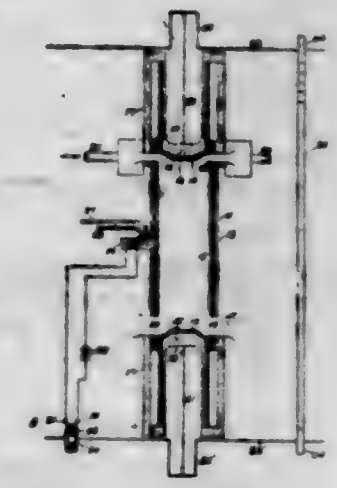
1,301,674. WRENCH. ROBERT B. FERGUSON, Los Angeles, Calif., assignor to Robert B. Ferguson, trustee. Filed July 30, 1918. Serial No. 247,878. 2 Claims. (Cl. 81—79.)



1. A wrench comprising an inner jaw having a handle U-shaped in cross-section; an outer jaw having a shank slidably mounted in the handle, the inner end of said shank being adapted to oscillate in the trough of said handle, said shank having rack teeth on the outer edge thereof; a worm shaft pivotally connected to the inner jaw, said jaw having a stop to limit the outward movement of the free end of said shaft; a worm revolubly mounted on said shaft and engaging the rack teeth of the shank of the outer jaw when positioned for use; and a spring secured to the handle adapted to normally keep the worm and rack in engagement.

2. A wrench comprising an inner jaw having a handle U-shaped in cross-section; an outer jaw having a shank slidably mounted in the handle, the inner end of said shank being adapted to oscillate in the trough of said handle, said shank having rack teeth on the outer edge thereof; a worm shaft pivotally connected to the inner jaw, said jaw having a stop to limit the outward movement of the free end of said shaft; a worm revolubly mounted on said shaft and engaging the rack teeth of the shank of the outer jaw when positioned for use; a sleeve on said shaft to hold the worm near the jaw, said sleeve terminating a little short of the outer end of said shaft; a spring secured to the handle adapted to normally keep the worm and rack in engagement, and a loop swingingly mounted in the handle adapted to be turned over the end of the worm shaft and thereby hold the jaws with their faces parallel.

1,301,675. METHOD OF AND APPARATUS FOR HEAT INSULATION. REGINALD A. FESSENDEN, Brookline, Mass. Filed Mar. 6, 1916. Serial No. 82,417. 2 Claims. (Cl. 123—191.)



1. The combination of a high temperature chamber and a thermo insulator for said chamber, consisting of a coating formed by heating an alloy of a high temperature point metal and a metal whose oxid is a good thermal insulator at high temperatures.

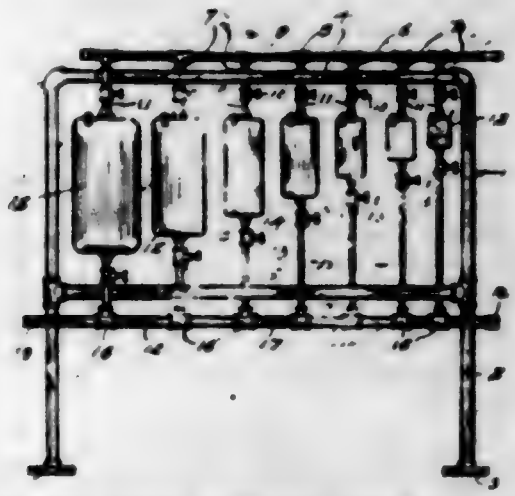
2. A heat insulating liner for thermal motors consisting of a coating formed by heating an alloy of a metal of the iron group and chromium.

1,301,676. CONTAINER-COVER. THOMAS W. FITZGERALD, New York, N. Y. Filed Jan. 2, 1918. Serial No. 210,024. 1 Claim. (Cl. 220—60.)



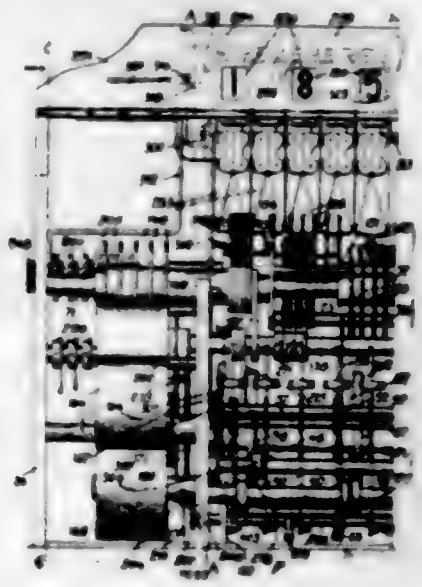
The combination with a container having a threaded neck portion, of a cap threaded thereon and including a head and a reduced neck portion, a flexible device secured to the container, a ring on said device and loosely encircling the neck, the neck being of resilient material and being split vertically, providing elements retaining the ring and securing device from displacement.

1,301,677. OIL AND GASOLENE MEASURE. EMIL R. FRANK, Sioux City, Iowa, assignor of one-half to Hugh R. Dealy, Sioux City, Iowa. Filed Dec. 15, 1917. Serial No. 207,321. 1 Claim. (Cl. 221—95.)



A measuring device comprising vertically disposed and relatively spaced supporting legs, upper and lower relatively spaced longitudinally extending members connecting said legs and having spaced alining openings, inlet and outlet pipes extending through the openings of the upper and lower members respectively, transparent measuring receptacles of different sizes connecting the inlet and outlet pipes, valves controlling the flow of fluid through said pipes, collars formed on the inlet pipes and resting on the upper longitudinal member for supporting the receptacles, means supplying fluid to the inlet pipes and a main outlet pipe connected to the outlet pipes.

1,301,678. CASH-REGISTER. FREDERICK L. FULLER, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio. Filed July 10, 1915. Serial No. 39,113. 79 Claims. (Cl. 235—2.)

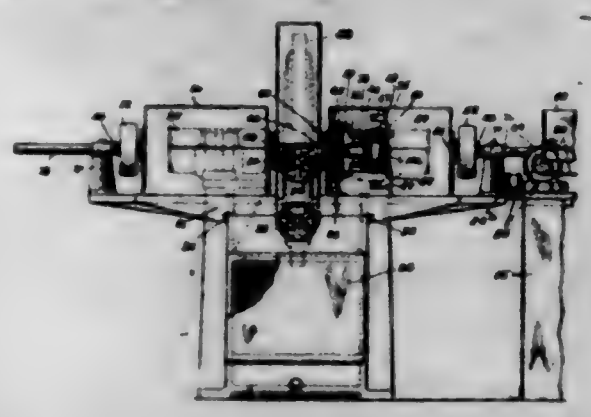


1. In a ten key machine, the combination of item wheels adjustable to represent amounts and classes of transactions, and devices whereby said item wheels may be adjusted by a varying number of key operations to represent different amounts and classes.

19. In a machine of the class described, the combination with a main operating mechanism, of a plurality of item wheels, an actuator for the item wheels, keys for actuating the actuator, means positively operated by the keys for shifting the item wheels successively into operative relation with the actuator, and means operated by the main operating mechanism for shifting the item wheels to normal position.

55. In a machine of the class described, the combination with a series of keys, of differential mechanism adapted to be controlled by any of said keys, accounting mechanism controlled by said differential mechanism, and means operated by certain of said keys for preventing the control of said accounting device by the differential mechanism.

1,301,679. ROD-TURNING MACHINE. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Feb. 8, 1918. Serial No. 216,993. 10 Claims. (Cl. 51—4.)



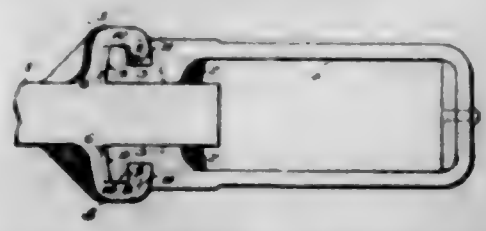
1. In a rod-turning machine, a hollow rotary shaft, a lever pivoted eccentrically thereon and having a centrifugal weight at one side of its pivot, a rod-gripping friction wheel journaled on said lever at the other side of its pivot, and means for positively rotating said wheel on its axis.

1,301,680. DRAFT-RIGGING. ENOCH GROSSE, Jr., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1917. Serial No. 176,521. 8 Claims. (Cl. 213—42.)



1. In a draft rigging, the combination with a drawbar, of a draft yoke pivotally connected thereto, and a sleeve embracing said drawbar and yoke, said drawbar being provided with means for engaging and limiting the forward movement of said sleeve, and the portion of said sleeve engaged by said limiting means being curved to permit said drawbar to have pivotal movement with respect thereto.

1,301,681. DRAFT-RIGGING FOR RAILWAY-CARS. ENOCH GROSSE, Jr., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1917. Serial No. 176,522. 5 Claims. (Cl. 213—42.)



1. In a device of the character indicated, the combination with a draft yoke provided at its coupler engaging end with a plurality of oppositely facing substantially U-shaped portions each forming a plurality of coupler engaging shoulders on its interior and a plurality of cou-

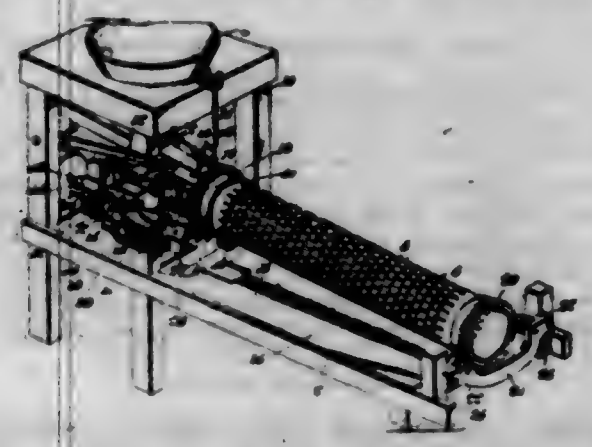
pler engaging shoulders on its exterior, and a coupler provided with shoulders respectively adapted to coöperate with said shoulders of the yoke, all of said shoulders having a common pivotal axis.

1,301,662. MAIL-CRANE. EMMETT R. GIBSON, Gabbett, Ala. Filed Jan. 22, 1919. Serial No. 272,748. 6 Claims. (Cl. 250—32.)



1. A mail crane including an upright standard, a sleeve slidable thereon, upper and lower mail bag supporting arms projecting from the sleeve, the lower arm being pivotally mounted, a weight on the lower arm for swinging it downwardly when the mail bag is removed, a latch for locking the sleeve in a raised position, and an operative connection between the latch and the lower arm for releasing the latch when the lower arm drops downwardly under the action of the weight.

1,301,681. METHOD OF AND APPARATUS FOR SORTING MATERIALS. GEORGE GOSSU, Winchester, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 2, 1918. Serial No. 208,929. 86 Claims. (Cl. 83—56.)



1. In a machine of the class described, a sifting drum mounted for rotation, and means for rotating said sifting drum progressively in one direction constructed and arranged to impart intermittently to said drum a movement of rotation in the opposite direction.

2. In a machine of the class described, a frame, a sifting drum, mechanism for mounting said drum on said frame, said mechanism being unobstructed on one side so that the drum may be lowered into said mechanism or lifted therefrom and gearing associated with said frame and said drum for imparting a to and fro oscillating movement to said drum.

3. In a machine of the class described, an arc-shaped sifter and means for imparting a to and fro oscillating movement to said sifter constructed and arranged to impart to said sifter an oscillating movement in one direction of greater amplitude than the oscillating movement in the opposite direction.

4. In a machine of the class described, a sifter, operating means for said sifter constructed and arranged to impart to said sifter movements in a forward direction and further constructed and arranged to impart to said sifter movements in the opposite direction to said forward movements of less extent than said forward movements.

5. In a machine of the class described, a sifting drum and automatic means for imparting uni-directional movements of rotation to said drum intermittently.

1,301,684. PROCESS FOR CLEARING CLAYEY ORES. EDWARD F. GOLTRA, THOMAS S. MAFFITT, and JESSE D. DANA, St. Louis, Mo., and ROBERT W. ERWIN, Waukon, Iowa, assignors, by mesne assignments, to Mississippi Valley Iron Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 5, 1914. Serial No. 810,530. 13 Claims. (Cl. 83—54.)



1. The process of clearing ores having iron as an economic component, having clay as a gangue and containing both free and combined moisture, comprising, preliminarily heating the ore together with its iron component and its gangue to drive off the free moisture, tumbling the ore and gangue to break up the same, then subjecting the dried ore and gangue to a separate and complete heating operation to drive off the combined moisture, tumbling the ore and its gangue to loosen the gangue from the ore, and subjecting the ore and its gangue to a blast which removes the gangue from the ore.

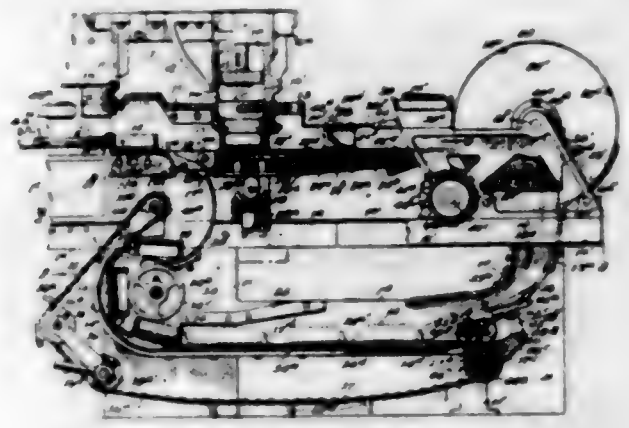
2. The process of clearing ores, having iron as an economic component, having clay as a gangue and containing both free and combined moisture, comprising preliminarily heating the ore together with its iron component and gangue to drive off the free moisture, then subjecting the ore and gangue to a separate heating operation to drive off the combined moisture, and separating the gangue from the ore.

3. The process of clearing ores having iron as an economic component, having clay as a gangue and containing both free and combined moisture, comprising, heating the ore together with its iron component and gangue to drive off the free moisture, subjecting the ore and gangue to a separate heating operation to drive off the volatile matter, tumbling the ore and gangue to loosen the gangue from the ore, and subjecting the ore and gangue to a blast which separates the gangue from the ore.

4. The process of clearing ores, having iron as an economic component, having clay as a gangue and containing both free and combined moisture, comprising, preliminarily and gradually heating the ore together with its iron component and its gangue to drive off the free moisture, subjecting the ore and its gangue to a separating heating operation to drive off the combined moisture, tumbling the ore and its gangue to loosen the gangue from the ore, and subjecting the ore and its gangue to a blast which removes the gangue from the ore.

5. The process of clearing ore, having iron as an economic component, of its gangue, comprising heating the ore together with its iron component and its gangue, crushing the resultant ore and gangue, tumbling the crushed ore and gangue to loosen the gangue from the ore, and subjecting the ore and its gangue to a blast which removes the gangue from the ore.

1,301,685. APPARATUS FOR MAKING BRICKS. HENRY W. B. GRAHAM, New London, Ohio, assignor to The Arnold-Crenger Company, New London, Ohio, a Corporation of Ohio. Filed Mar. 9, 1916. Serial No. 83,052. 53 Claims. (Cl. 25—2.)



1. The combination with means for filling molds with material, of rotatable devices for inverting each mold to dump the bricks therefrom, said devices including means carried thereby permitting separation of each mold and the bricks molded therein from each other, and means for feeding the molds to the filling means and then to said inverting devices.

6. The combination of means for dumping brick molds, means for feeding the molds to said dumping means, and differential means actuated by the mold feeding means for positioning pallets one for each mold, on said dumping means to receive the bricks dumped from the molds.

14. The combination of rotatable means for dumping bricks from molds, mechanism for successively feeding the molds to said dumping means, means for moving the dumped bricks off of said dumping means, and devices operating to elevate each mold to separate it from and hold it out of engagement with the dumped bricks while they are being moved from said dumping means.

23. The combination with means for filling molds with material for making bricks, of a rotatable carrier for receiving a mold and a pallet and inverting each mold to dump the bricks therefrom, devices for successively feeding the molds to said filling means and then to said carrier, means for moving each pallet carrying bricks from said carrier, a chute arranged to receive empty molds from said carrier, means for returning the empty molds from said chute to a position for actuation by said feeding means, and means for regulating the discharge of the molds from said chute to said return means.

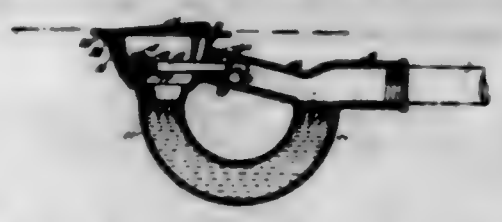
1,301,686. BRAKE-LINING. JAMES E. GROSJEAN, Lima, Ohio, assignor of one-half to Leon F. Montgomery, Fort Recovery, Ohio. Filed Feb. 4, 1918. Serial No. 215,882. 6 Claims. (Cl. 74—13.)



1. A brake lining comprising a plurality of laminations of fabric assembled in flatwise relation and presented edgewise to form a friction face, and a flexible backing united to the face formed by the opposite edges of said laminations.

1,301,687. FLOOR-DRAIN. FRED E. GROSVOLD, Eau Claire, Wis. Filed Aug. 2, 1918. Serial No. 248,194. 3 Claims. (Cl. 182—10.)

1. A drain including a clean-out pipe extending laterally from the drain, a cover for said drain, a plug for said pipe, and a member on said plug and movable therewith, in the opening of the plug, in a transverse path

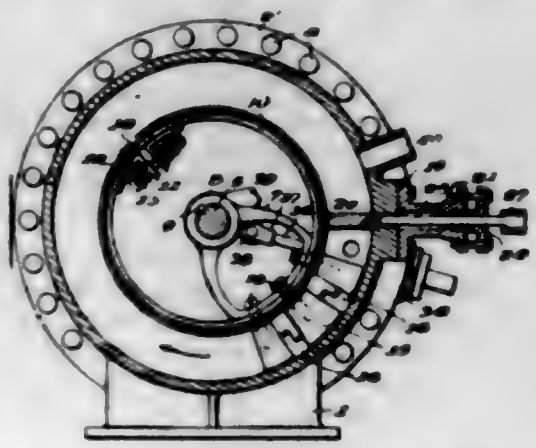


below the cover to a position to obstruct the closing of said cover until the plug is replaced in the clean-out pipe.

1,301,688. SOLDERING ALLOY. LOUIS J. GUREVICH and RAYMOND W. WOODWARD, Washington, D. C. Filed July 16, 1918. Serial No. 245,217. 2 Claims. (Cl. 75—1.) (Filed under the Act of Mar. 3, 1883, 22 Stat. L., 624.)

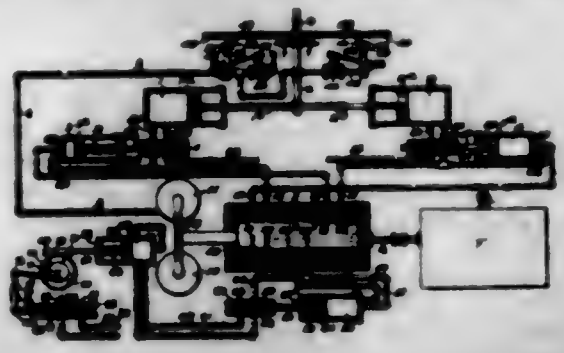
1. An alloy for securedly soldering metals containing a prepondering amount of lead, ten per cent. of cadmium, and ten per cent. of tin.

1,301,689. ROTARY ENGINE. JOHN HAGEL, Goldfield, Nev. Filed July 12, 1917. Serial No. 180,151. 3 Claims. (Cl. 121—70.)



1. In a rotary engine, a power shaft, a rotor chamber having an annular way formed in the inner surface thereof, a circular band T-shaped in cross section rotatable in said way, means for yieldably connecting the adjacent ends of the band, a rotor in said rotor chamber, a segment mounted on the power shaft and connected to the band and the rotor, an abutment slidable through said rotor chamber, an intake valve secured to one side and connected with the rotor chamber, an exhaust port in the rotor chamber, and means on said power shaft for actuating the abutment and intake valve at predetermined intervals.

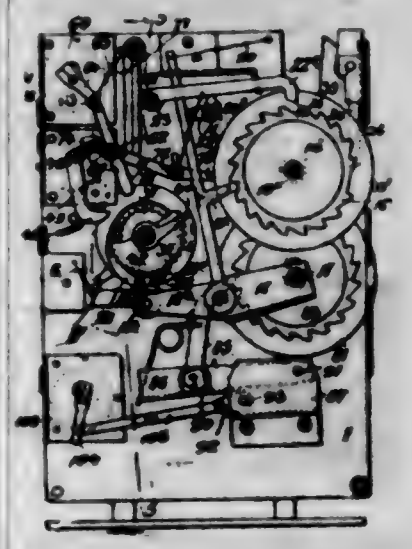
1,301,690. SYSTEM OF TELEDYNAMIC CONTROL. JOHN HAYS HAMMOND, Jr., Gloucester, Mass. Filed Feb. 4, 1914. Serial No. 816,600. Renewed Apr. 6, 1916. Serial No. 89,483. 16 Claims. (Cl. 114—21.)



16. A system of utilizing radiant energy comprising a plurality of differently tuned circuits arranged to be en-

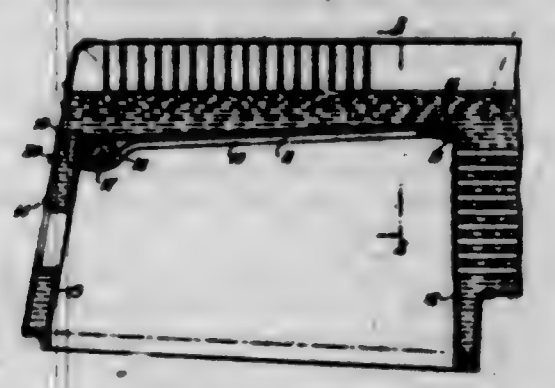
energized as a result of the action of radiant energy, a controlled circuit arranged to be energized by the combined action of said differently tuned circuits, and a plurality of operative devices arranged to be separately and selectively controlled by said controlled circuit.

1,301,031. REGISTER. HOMER J. P. HAMPTON, Jersey City, N. J. Filed Apr. 20, 1912, Serial No. 692,047. Renewed Sept. 8, 1915. Serial No. 49,613. 4 Claims. (Cl. 235—110.)



1. A register comprising a numbering wheel, means to operate said wheel, means to retain the wheel in a normal position, a spring, a disk separate from the numbering wheel and connected with said spring, a movable member and coacting stop on said disk and numbering wheel, and means to release said member from said stop to permit the disk to be rotated reversely by said spring.

1,301,082. BOILER SAFETY-TUBE. VICTOR HANSEN, Wallace, Idaho. Filed Dec. 3, 1918. Serial No. 265,180. 3 Claims. (Cl. 226—16.)



3. In a steam boiler having a fire box, a safety tube disposed longitudinally in the fire box of the boiler adjacent to the crown sheet, and extending at its ends through the fire sheet and door sheet of the boiler to communicate at both its ends with the water space of the boiler, said tube having a strength inferior to that of the sheets and walls of the boiler to have a greater tendency to be disrupted upon the water level falling below said tube.

1,301,088. PROCESS OF PRODUCING RUBBER COMPOSITIONS AND VULCANIZATION PRODUCT THEREFROM. ROBERT C. HARTMAN, Akron, Ohio, assignor to Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 30, 1917. Serial No. 158,525. 14 Claims. (Cl. 106—38.)

2. The process of forming a rubber composition which consists in adding to rubber, water holding a composition ingredient in a fine state of subdivision, mixing the water and the ingredient held thereby with the rubber, volatilizing the water, whereby the ingredient is left disseminated through the mix and heating the mix with a vulcanizing agent to effect vulcanization.

4. The process of forming a rubber composition which consists in adding to rubber a composition ingredient in the condition of a gel, mixing the gel with the rubber, volatilizing the solvent from the gel whereby the ingredient is left disseminated through the mix, and heating the mix with a vulcanizing agent to effect vulcanization.

8. The process of forming a rubber composition which consists in adding to rubber a wet precipitate of barium sulfate, which precipitate has been formed in the presence of a colloidal gel, mixing the resultant precipitate with the rubber, drying the mix, and heating the mix with a vulcanizing agent to effect vulcanization.

10. The method of preparing barium-sulfate for use as a composition ingredient in rubber products which consists in precipitating the barium-sulfate in a solution containing animal glue, whereby the nascent precipitate is coated with glue.

14. The homogeneous vulcanized product formed by adding to rubber animal glue formed into a gel by water, mixing the gel with the rubber, driving off the water, and heating the resultant dry mix with a vulcanizing agent to effect vulcanization.

1,301,094. GARBAGE-RECEPTACLE ATTACHMENT. JOSEPH A. HEALY, Saugus, Mass. Filed May 22, 1918. Serial No. 236,000. 1 Claim. (Cl. 220—115.)



The combination with a substantially cylindrical receptacle of the class described, of a receptacle bottom, a projecting rim surrounding said bottom, a bottom support comprising a cylindrical part slidingly fitted to said projecting rim and of substantially equal diameter therewith, and a trunco-conical part integral with said cylindrical part of the bottom support beyond said projecting rim.

1,301,095. DEMOUNTABLE RIM. ALFORD B. HENSON, Franklin, Ky. Filed Apr. 13, 1917. Serial No. 161,844. 2 Claims. (Cl. 152—21.)



2. A wheel having the periphery of its felly provided with a circumferential recess, a demountable tire carrying rim associated with said felly, transverse cleats on the inner periphery of said rim bearing upon the periphery of said felly and provided with transverse notches, a circumferentially movable ring disposed within said recess, inclined lugs on the outer periphery of said ring disposed within said notches, a plurality of rack teeth formed on the inner periphery of said ring, a plurality of ratchet teeth formed on the inner periphery of said ring adjacent said rack teeth, a bar pivoted within a recess in said felly and provided with teeth normally engaging said ratchet teeth, the end of said bar adjacent said rack teeth being provided with a curved recess, said curved recess and said rack teeth being adapted for the

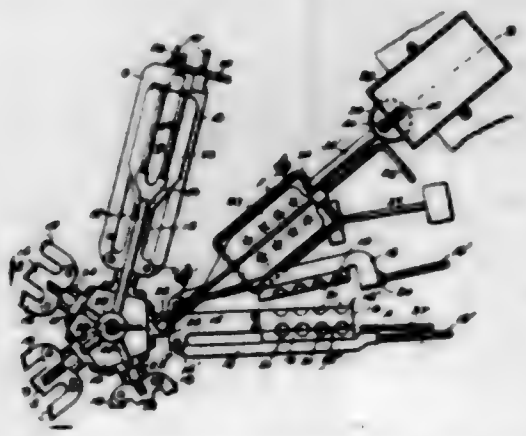
engagement of means for moving said ring circumferentially, engagement of said means within said curved recess moving said bar out of engagement with said rack teeth.

1,301,696. RIBBON-SPOOL. EDWARD B. HESS, New York, and LEWIS C. MYERS, Brooklyn, N. Y., assignors to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 15, 1919. Serial No. 271,218. 9 Claims. (Cl. 242—70.)



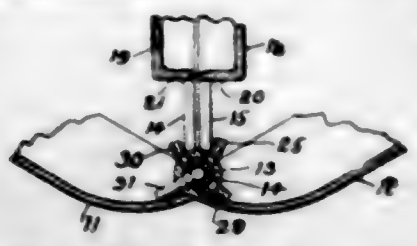
3. A ribbon spool for typewriting machines, comprising upper and lower disks, a hub formed by integral parts of one of the disks bent inwardly toward the central axis of the disk and having their ends secured to the other disk, an integral projection on the lower disk for connecting it with a spool support, and means carried by said lower disk for actuating the ribbon-reversing mechanism of a typewriting machine.

1,301,697. ICE-CREAM-CONE MACHINE. SELDEN HOSKINS, Seattle, Wash. Filed Aug. 22, 1918. Serial No. 250,950. 5 Claims. (Cl. 107—68.)



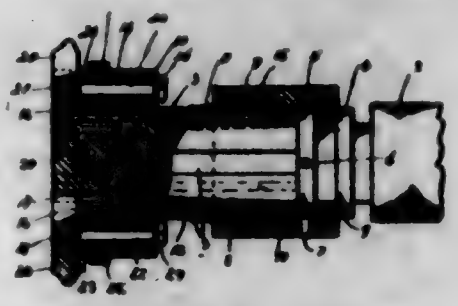
4. In apparatus of the class described, the combination with a separable mold, a cover plate connected thereto for relative vertical and horizontal movements, and formers depending from said plate, of a batter-containing pan, a cup communicatively connected therewith, means to effect coincident vertical movements to said pan and cup, a batter reservoir having a discharge opening, a spring-closing valve for said opening, and means rendered operable to open said valve by the lowering of said pan and cup to replenish the same with batter.

1,301,698. CIGARETTE-CASE. HERBERT DORRANCE HOUGH, Cranston, R. I., assignor to Wightman & Hough Company, Providence, R. I., a Corporation of Rhode Island. Filed July 10, 1917. Serial No. 179,669. 1 Claim. (Cl. 206—41.)



A cigarette case of the character described comprising a pair of lids provided with complemental hinge eyes, a holder formed of two side members each having complemental hinge eyes, a pintle passed through the hinge eyes of the lid and the holder members, torsional spring wires each having a longitudinally disposed body carried by the hinge pintle and ends offset at an angle to the axis of the body, one offset end of each spring acting on a holder member to move it to closed contrained position, the other offset end of each spring bearing against a portion of the lid on the corresponding side of the case and acting to move the lid to open position, the hinge eyes of the lids and holder members forming a continuous cover for the hinge pintle, whereby the springs are concealed when the lids are closed.

1,301,699. ADJUSTABLE CUTTING-HEAD FOR LATHES. SAMUEL HOUGH, Ateo, N. J. Filed Sept. 11, 1917. Serial No. 190,706. 7 Claims. (Cl. 77—58.)

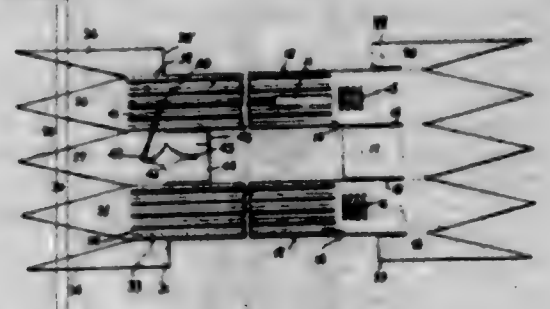


1. An adjustable cutting head comprising a supporting member having longitudinal inclined grooves therein, a tool holding member on said supporting member adapted to carry tools, the inner ends of which ride in the inclined grooves, a nut having threaded engagement with the tool holding member and provided with an inturned flange and a pair of spaced collars carried by the supporting member, one located on the outside and the other on the inside of the flange of said nut whereby the latter will be swiveled to the supporting member.

4. A cutting head comprising a tool holding member having a body and shank, the latter being of less diameter than the former, said body having radial tool receiving slots in its outer face and provided with holes passing through the body, one of which is in alinement with each slot, said holes being of greater size at the ends where they communicate with the slots than at the other ends, tools slidably mounted within said slots, means passing through the holes and attached to the tools for holding the latter in the slots and means engaging the inner ends of said tools for adjusting the same.

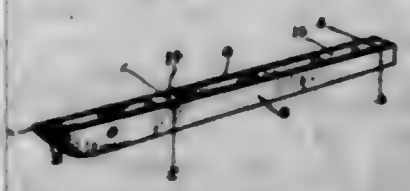
7. An adjustable cutting head for lathes comprising in combination with a spindle having a plurality of grooves in its outer end, the inner walls of said groves being inclined from the outer end of the spindle outwardly to a point intermediate the length of said spindle, a sleeve or tool holding member consisting of a body and shank having a central bore therethrough for registration with the spindle, the body being of greater diameter than the shank and provided with a plurality of radial slots in its outer face, said slots alining with the grooves in the spindle, said body also having holes therethrough communicating with the radial slots, said holes being of greater size at their outer ends than at their inner ends, tools located in the radial slots, said tools having threaded openings therein, bolts passing through the holes in body and threaded into the holes in the tools, the heads of said bolts having convex inner faces to permit of a swinging movement of said bolts during the adjustment of the tools inward or outward, a stationary collar carried by the spindle to the rear of the inclined slots, a removable collar carried by the spindle and spaced from the stationary collar and a nut having threaded engagement with the shank of the sleeve and provided with an inturned flange adapted to register with the space between the two collars, said nut when rotated, moves the sleeve along the spindle and changes the position of the tools with relation to the inclined surfaces of the grooves for adjusting the tools.

1,301,700. MANUFACTURE OF SHEET-METAL BLANKS. FRANK H. HULSCHER, Atlanta, Ga. Filed Sept. 20, 1917. Serial No. 191,042. 8 Claims. (Cl. 113—116.)



1. As an article of manufacture, a blank comprising a plurality of longitudinally extending members spaced apart and providing a longitudinal opening, said longitudinally extending members terminating in tapered portions and said blank being provided with a tapered portion at each end opposite the ends of the opening, and said blank being provided with a tongue projecting into one end of the opening and cut away to form thread guiding means.

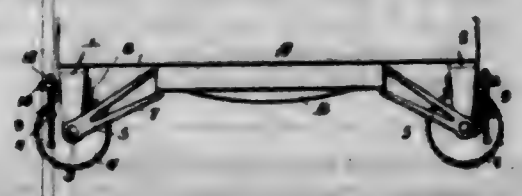
1,301,701. PICKER-STICK. FRANK H. HULSCHER, Atlanta, Ga. Filed Apr. 27, 1918. Serial No. 231,207. 2 Claims. (Cl. 139—46.)



1. A picker stick constructed from a blank of bendable metal scored longitudinally and bent upon its scores to provide parallel sides and a right angular base, spacing blocks between the sides and base, and means between the base and blocks for securing the blocks to the base and for permitting a limited longitudinal adjustment of said blocks thereon.

2. A picker stick comprising a body constructed of channeled metal which is notched at one of its ends and having its corners, opposite the notch rounded, its sides, adjacent said rounded corners having aligning openings, the bottom of the member, adjacent to the ends thereof having elongated slots, spacing blocks in the channeled member arranged over the slots, and headed securing elements passing through the slots and entering said blocks.

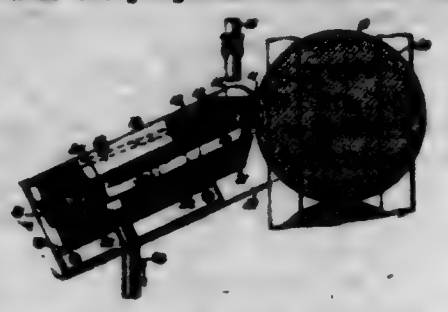
1,301,702. CLAMP. CHARLES IRWIN, Jeannette, Pa. Filed March 20, 1918. Serial No. 223,063. 1 Claim. (Cl. 77—55.)



A clamp comprising a stationary bracket, a ratchet wheel supported for rotation thereby a bifurcated arm rigidly connected to the wheel so as to have arcuate movements, a brake element connected to the bracket and acting against the teeth of said ratchet wheel and a rod pivoted to the wheel and having a limited slidable connection with said bracket.

1,301,703. WATER-BOX FOR CALENDERING-MACHINES. WILLIAM H. JACKSON, Lockport, N. Y. Filed June 5, 1918. Serial No. 238,321. 5 Claims. (Cl. 92—76.)

1. In a water box for a calender roll, an inclined strip of fabric material in tangential position relative to the peripheral face of the calender roll and in contact at its upper end with the peripheral face of the calender roll,



and an inclined surface abutting the lower end of the said strip for carrying off water passing down the said strip.

1,301,704. DOOR FOR GRAIN-CARS. MICHAEL J. JOYCE, Chicago, Ill., assignor of one-half to George Thompson, Oak Park, Ill. Filed Oct. 31, 1916. Serial No. 128,673. 1 Claim. (Cl. 20—30.)



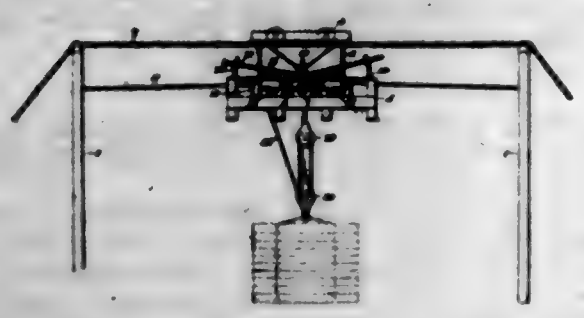
A grain door for cars comprising two interlocking door elements forming an arch, said door elements having grooved edges along their outer extremities adapted to engage the corner posts of the car door frame and interlocking edges at their inner extremities whereby said door elements are maintained in position when pressure is exerted from within.

1,301,705. ELASTIC-FLUID TURBINE. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 9, 1918. Serial No. 249,092. 8 Claims. (Cl. 253—77.)



7. A bucket for a turbine having a bendable projection thereon located approximately midway between its ends and extending at an angle other than a right angle thereto.

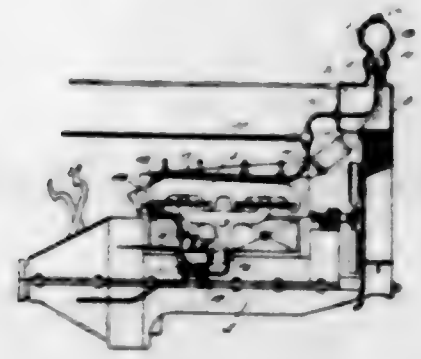
1,301,706. LOADER. PATRICK KANE, Bruno, Minn., assignor to Anna Gertrude Kane, Bruno, Minn. Filed Sept. 21, 1918. Serial No. 255,116. 1 Claim. (Cl. 212—125.)



In a loading apparatus, a carriage, an engine mounted on said carriage, a friction pulley on the shaft of said

engine, a pair of shafts journaled in said carriage at the sides of and in spaced parallel relation to said engine shaft, friction pulleys on said second named shafts in position to be engaged selectively by said first named friction pulley, means for shifting said first named pulley into engagement with either of said second named pulleys, a block supported above said first named pulley, levers pivoted upon said block, brake shoes on said levers engageable with said second named pulleys and means for holding said levers in selected positions for controlling or preventing rotation of said drums.

1,301,707. FUEL-VAPORIZING MEANS FOR VEHICLE-MOTORS. HENRY A. KNUTEL, St. Louis, Mo. Filed Feb. 21, 1918. Serial No. 218,542. 1 Claim. (Cl. 123—25.)



The combination with the internal combustion engine of a motor vehicle, its carbureter, intake and exhaust manifolds, and radiator; of a tube passing into said radiator and rising therein to a point above the water level, said tube leading vertically downward from said radiator to said exhaust manifold and extending rearwardly along the upper side of said manifold substantially throughout the length of the latter, and then downwardly behind the rearmost branch of said exhaust manifold, said tube then extending forwardly and downwardly to the carbureter, being coiled around the fuel bowl of said carbureter, and finally discharging into said intake manifold, a valve in said first named downwardly extending portion of said tube, and a control rod for said valve leading rearwardly in a horizontal direction to operate said valve from the dash of the machine.

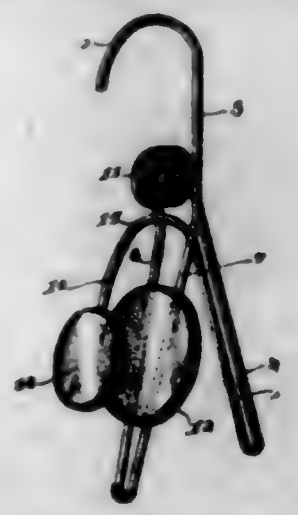
1,301,708. BANDAGE. ALFRED H. KNUTSON, McVille, N. D. Filed Jan. 15, 1919. Serial No. 271,240. 1 Claim. (Cl. 128—275.)



A device of the class described, comprising a sack-like member having loops on its outer wall and means for holding the same expanded, said means comprising a plate having holes therein and rods extending through the holes and engaging the loops.

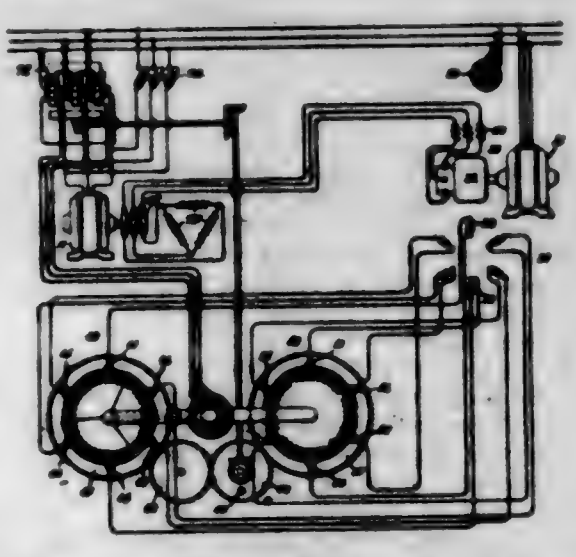
1,301,709. GARMENT-HANGER. BENJAMIN KOLBER, Chicago, Ill. Filed Aug. 17, 1918. Serial No. 250,341. 3 Claims. (Cl. 211—13.)

1. As an improved article of manufacture, a garment hanger consisting of a wire having at one of its ends a hook and provided with a body portion consisting of two substantially parallel strands terminating at one of their ends in a longitudinally disposed looped clamping member, one of said strands having a coil in its portion adjacent to said hook and provided rearwardly of said strands with an arm extended longitudinally of said strands yet spaced therefrom, one of said strands of said



arm being extended between and forwardly of the upper portion of the strands of the body part and then downwardly and having on its lower portion clamping means.

1,301,710. INDUCTION-MOTOR CONTROL. WILLEM C. KONTHALS-ALTES, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 18, 1916. Serial No. 98,490. 9 Claims. (Cl. 172—274.)



6. In combination, a source of supply, an induction motor connected thereto, a commutator machine concatenated with said motor and provided with an exciting winding, a frequency changer provided with movable brushes, means for supplying current to said frequency changer from said source of supply, means for connecting said brushes to said exciting winding, and means responsive to the load upon said motor for varying the voltage supplied to said frequency changer.

1,301,711. STOPPER FOR WATER-BOTTLES OR THE LIKE. HENRY P. KRAFT, Ridgewood, N. J. Filed Nov. 1, 1918. Serial No. 260,967. 5 Claims. (Cl. 128—39.)



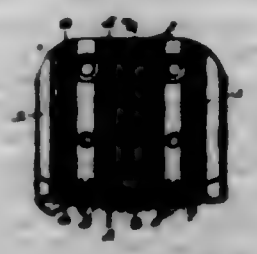
1. In a device of the character described, the combination of an open-topped neck member provided with an aperture in its bottom, and a screw-threaded socket member connected to said neck member at its aperture, and supported solely by such connection.

4. In a device of the character described, the combination of an open-topped neck member provided with an aperture in its bottom, a screw-threaded socket member

connected to said neck member at its aperture, and means for draining any liquid from the neck member into the bottle, said means comprising holes formed in the screw-threaded member.

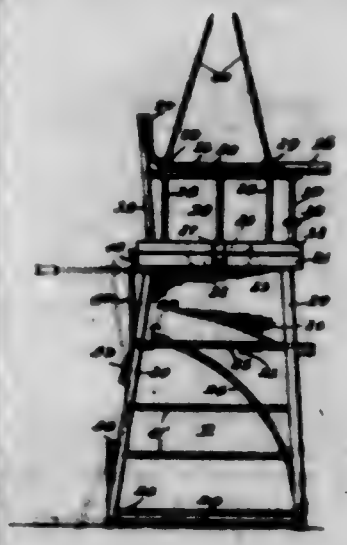
5. In a device of the character described, the combination of an open-topped neck member constructed in one piece, and provided with an aperture in its bottom and a screw-threaded socket member of larger diameter than said aperture, said socket member being provided with an internal flange, and said neck member being formed with a flange turned over upon said first-named flange, whereby to connect the parts and to form a seat for the stopper-said socket member being supported solely by such connection.

1,301,712. HAIR-CLIPPER. FREDERICK W. EHAWK, North Bend, Oreg. Filed Jan. 10, 1918. Serial No. 276,520. 2 Claims. (Cl. 30—1.)



1. A clipper of the class described, comprising a comb plate, having the lower edge of its tooth part cut away at an angle beginning at the center and extending upwardly to each side.

1,301,713. CONVERTIBLE CHAIR, SWING, STOOL, AND CRADLE. HORACE F. KNIGHT, Baltimore, Md. Filed Sept. 14, 1918. Serial No. 254,089. 8 Claims. (Cl. 155—12.)



1. A convertible chair having a seat unit and a support unit provided respectively with a seat member and a top having registering openings, a closure for the opening in the seat, a hinged shelf carried by the support unit below the plane of its said top, and means for securing the seat member and top in operative relation.

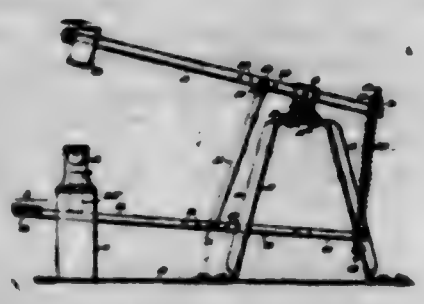
1,301,714. METHOD OF AND APPARATUS FOR FORMING GLASS TUBES. KARL KRUMME, Aachen, Germany. Filed Sept. 9, 1912. Serial No. 720,942. 11 Claims. (Cl. 49—84.)

1. A process for the production of glass tubes of exact inner form and dimensions, which consists in mounting the tube on the outside of a suitably shaped mandrel or core of a size and shape corresponding to the size and shape to be given to the said tube, next heating the walls of the glass tube while on the mandrel sufficiently to soften the



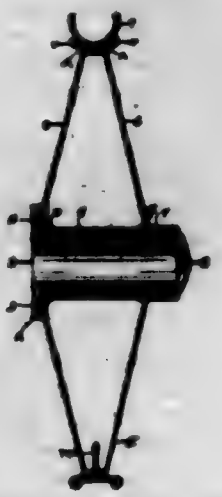
same, and while in a softened state, pressing the softened walls inwardly, in successive stages lengthwise of the tube, into conformation with said mandrel or core.

1,301,715. HAMMER. FRANK KUSS, Philadelphia, Pa. Filed June 18, 1918. Serial No. 240,594. 1 Claim. (Cl. 78—82.)



A device of the character described, comprising a framework, a bifurcated hammer bar mounted to swing on the framework, intermediate the ends of the hammer bar, a yoke formed by the bifurcated end of the hammer bar, said yoke being at the rear end of the bar and in the rear of the framework, contractile springs connected to the framework, adjusting means on the ends of the yoke and connected to the springs for the adjustment of the latter, a foot lever mounted to swing on the framework and extending forwardly beneath the hammer bar, and a link having adjustable connection with the hammer bar and with the foot lever, whereby connection between the link and the hammer bar and connection between the link and the foot lever can be changed independently.

1,301,716. SEPARABLE WHEEL. JESSE D. LANGDON and MARIE V. BURBANK LANGDON, Waterville, Wash., assignors of one-half to Erwin Greer, Chicago, Ill. Filed Sept. 5, 1917. Serial No. 189,763. 1 Claim. (Cl. 21—69.)



In a separable wheel, a hub provided with a flange at one end, a side member engaging said flange and pro-

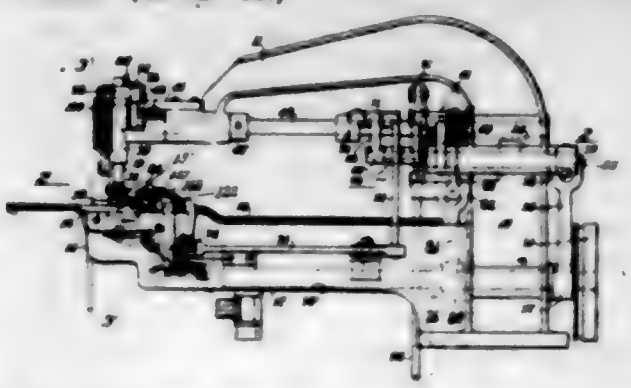
vided at its outer end with an angularly disposed peripheral flange, means for retaining said side member in contact with the hub flange, an outer side member adapted to engage the outer end of said means and provided with an angularly disposed peripheral flange at its outer end, means for clamping said outer side member in position, and a tire rim comprising coöperating separable members having peripherally extending angular seats upon the under face thereof adapted to receive the flanges of said side members.

1,301,717. GRAIN-BINDER ATTACHMENT. HERMAN LAQUA, Zumbro Falls, Minn. Filed Feb. 17, 1919. Serial No. 277,567. 2 Claims. (Cl. 56—472.)



1. A grain holding attachment for self-binders including a spring rail engaging and supporting bracket, a sectional arm composed of an inner section and an outer section, means for pivotally connecting the inner end of the inner section to the bracket, means for clamping the outer sections in various positions of angular adjustment with respect to the inner section, and resilient means between the outer section of the arm and the bracket for yieldingly holding the outer section of the arm against the deck of the binder.

1,301,718. FOLDING-MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio, assignor to Lorens Muther, Newton, Mass. Filed June 26, 1916. Serial No. 105,928. 8 Claims. (Cl. 12—55.)



1. In a folding machine the combination of a work-table, an overhanging arm arranged above said work-table, feeding means and a presser-foot mounted on the end of said arm and means whereby said feeding means and said presser-foot may be moved upwardly away from the work-table during the operation of the machine to permit work to be inserted between the work-table and said feeding means and presser-foot into the space between the overhanging arm and the work-table; said means comprising a shaft and treadle operated means for rocking said shaft.

6. In a folding machine, the combination with feeding, fold-turning and pressing devices of an overhanging arm carrying one or more of said devices and a work-table having a depressed portion under the said arm to facilitate the passage of the work between said arm and said work-table.

1,301,719. SPRAYING-NOZZLE FOR INTERNAL-COMBUSTION ENGINES. CHARLES E. H. LLOYD, Los Angeles, Calif. Filed Apr. 8, 1918. Serial No. 227,293. 5 Claims. (Cl. 137—82.)

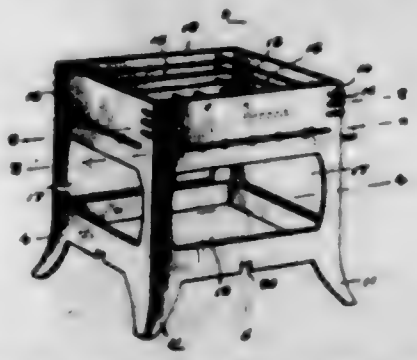
1. In a spraying nozzle, a hollow nozzle member having a fluid inlet leading thereto and a fluid outlet leading therefrom, a valve mounted in said member, a spring bearing against said valve to normally close said fluid outlet, and a spring of less tension than the first named spring to actuate said valve to open said outlet when the tension of the first named spring is overcome, the tension of said spring being overcome by the introduction of a fluid under pressure to said nozzle member.



2. In a spraying nozzle, a hollow nozzle member having a fluid inlet leading thereto and a fluid outlet leading therefrom, a reciprocating valve mounted in said member, resilient means coöperating with said valve to seat the same in the fluid outlet opening, and resilient means to retract said valve to open said outlet when said first named resilient means is rendered inoperative.

4. In a spraying nozzle, a nozzle member having a centrally disposed bore therein terminating at the outer end in an oil outlet orifice, said nozzle adapted to be secured in the wall of an ignition chamber of an engine, said member being further provided with an oil inlet opening in its bore, a recessed cap secured to the inner end of said nozzle member, a metallic diaphragm secured between the nozzle member and said recessed cap, a closure rod having oil ways communicating with the outlet end of said nozzle member mounted in the bore of said nozzle member, a resilient means acting on said rod to unseat the same at intervals, a resilient means mounted in the recessed cap member and normally bearing against the closure rod to close the outlet orifice in the nozzle member, and means to increase or diminish the tension of said last named resilient means.

1,301,720. SOAP-HOLDER. WILLIAM JAMES LONG, Black Hills, Yukon Territory, Canada. Filed Apr. 24, 1918. Serial No. 230,509. 2 Claims. (Cl. 45—28.)



1. A soap holder comprising a receptacle having a soap receiving compartment therein, horizontally disposed wires threaded through openings in the side walls of the receptacle and woven to provide a reticulated bottom for the compartment, means located in the compartment for preventing the soap from contacting with the side walls thereof and a drip pan located beneath the compartment.

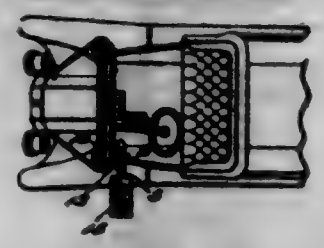
1,301,721. VULCANIZER. ISAAC E. MCELROY and LOREN RISK, Minneapolis, Minn.; said McElroy assignor of his right to Charles H. Rogers, St. Paul, Minn. Filed Apr. 14, 1917. Serial No. 161,964. 8 Claims. (Cl. 18—18.)



1. A vulcanizing device comprising a pair of pliers, an anvil plate attached to one of the levers thereof, the coöp-

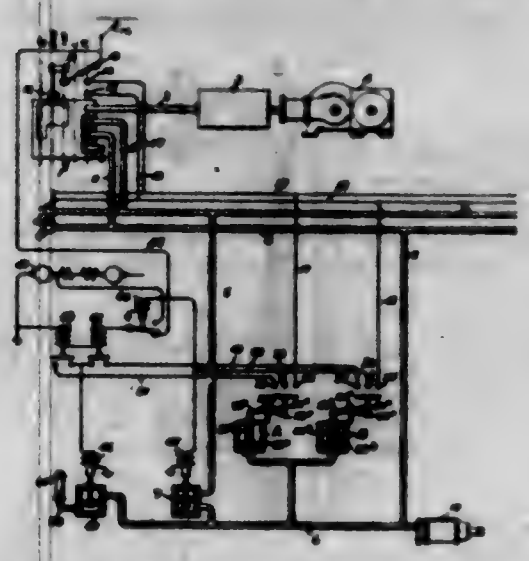
cating lever of said pliers having a split pin with normally expanded end, for detachable engagement with the perforated bar of a fuel pan, or the like.

1,301,722. GUIDE-LIGHT. DANIEL J. MCGUIRE, Akron, Ohio. Filed Aug. 14, 1918. Serial No. 249,880. 1 Claim. (Cl. 40—77.)



A device of the class described comprising a casing having transparent sides, a sleeve connected to one of the ends of the casing, a hollow shaft passing through said sleeve with its ends projecting into the casing, an electric lamp carried by said end, a screw-threaded sleeve engaging with the outer end of the shaft, a plate on said screw threaded sleeve having a slot and openings therein, some of said openings receiving the supporting screws, a lever passing through the slot and having its end engaging the first mentioned sleeve and a pawl on the lever adapted to engage with a pair of the holes in the plate for holding the casing in its two positions.

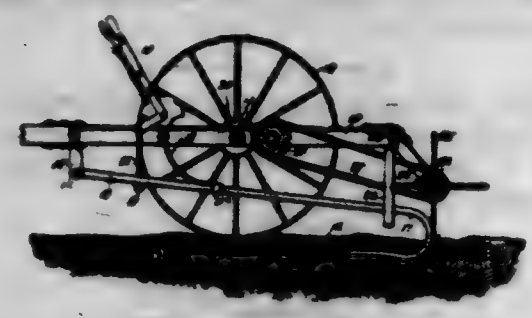
1,301,728. AUTOMATIC DECELERATING AIR-BRAKE EQUIPMENT. GEORGE MACLOSKIE, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1918. Serial No. 261,768. 14 Claims. (Cl. 188—72.)



1. In a fluid pressure brake system, a brake cylinder, a magnet release valve, means automatically operated at one speed of the train for completing a circuit for said valve when the fluid pressure in the cylinder is above a predetermined value, and means automatically operated at a different speed for completing another circuit for said valve when the fluid pressure is below the predetermined value.

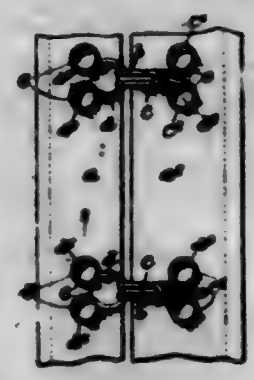
1,301,734. PLOW. FERDINAND MANNING, Geneseo, Kans. Filed Aug. 8, 1918. Serial No. 248,921. 2 Claims. (Cl. 97—2.)

1. A plow including a shovel, a standard presenting a forwardly extending lower end carrying said shovel and an upwardly extending member behind and distant from the end of the shovel, and a transverse rotary cleaner presenting fingers turning in a path at a side of the upwardly extending member of the standard and behind said shovel;



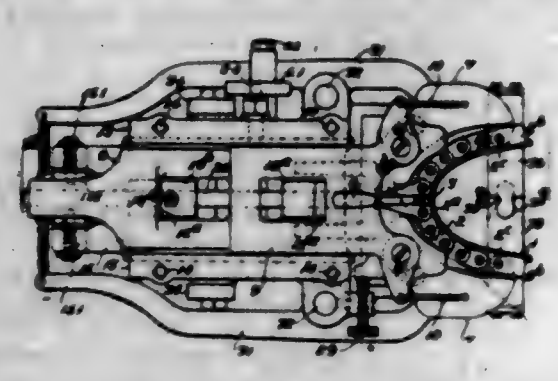
together with means to drive said cleaner in a direction to cause said fingers to turn forwardly at the under side of the axis of rotation and rearwardly above said axis.

1,301,735. GARMENT-FASTENING DEVICE. DAVID MARINSKY, New York, N. Y. Filed Apr. 19, 1918. Serial No. 229,522. 3 Claims. (Cl. 24—229.)



1. The herein described means for securing fastening devices having rings or eyes to a strip of flexible material which is perforated at predetermined intervals, comprising hollow knobs or balls provided with enlarged heads, reduced necks and base flanges and which pass through said perforations, said rings or eyes of said fastening devices being sprung over the enlarged heads of said knobs or balls to bring said rings or eyes in engagement with the reduced necks thereof to secure said fastening devices to said strip of flexible material.

1,301,736. LASTING-MACHINE. FRANK W. MERRICK, Boston, Mass., assignor to Union Lock Stitch Company, Boston, Mass., a Corporation of Maine. Filed Oct. 2, 1916. Serial No. 122,216. 15 Claims. (Cl. 12—14.)



1. In end-lasting mechanism, the combination with wiper-devices, of a flexible wiping-band adapted to be combined removably with such devices for the wiping operation, which engages with the upper to effect the wiping thereof, and which is adapted to remain applied to the shoe as a binder.

2. The improvement in the method of lasting which consists in employing a removable, flexible, wiping-band as the working face of the wiper-devices employed in end-

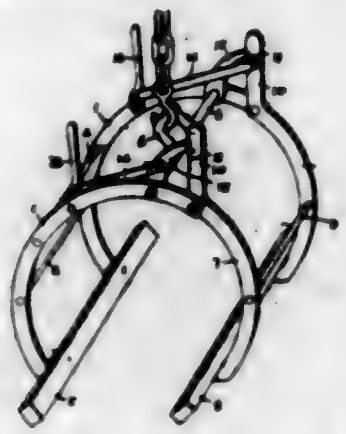
lasting a shoe and by means of the said band wiping the shoe-upper into place around the end of the last, and then fastening the said wiping-band to the shoe so that it constitutes a binder for the shoe upper.

1,301,727. PENCIL-SHARPENING INSTRUMENT. ROBERT POCOCK MESSENGER, Copenhagen, Denmark. Filed June 8, 1918. Serial No. 238,959. 6 Claims. (Cl. 120—90.)



1. A pencil sharpening instrument comprising a casing having substantially coextensive upper and lower sides between which may be clamped an edged blade, and a handle adjustably secured to the casing, which latter is notched to expose the blade to permit application of a portion of its edge to a pencil.

1,301,728. GRAPPLE. FRANK MILNE, Calgary, Alberta, Canada. Filed Feb. 23, 1918. Serial No. 218,677. 6 Claims. (Cl. 57—40.)

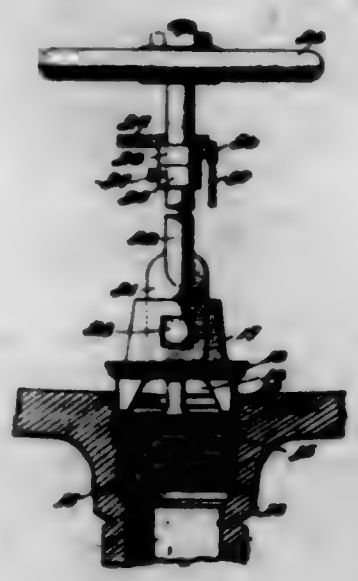


1. A grapple comprising, a pair of pivotally connected members adapted to embrace the load, a cranked member rotatably supported in one of said members and having the crank portion connected to the lifting device, and means secured to the cranked member engaging the other pivotal member and forcing it inwardly in locking contact with the load.

5. A grapple, comprising, a pair of arc-shaped bars parallelly arranged and rigidly connected together, a second pair of arc-shaped bars parallelly arranged and rigidly connected together and pivotally connected to the aforesaid bars and having projections extending upwardly from the pivots, a rod rotatably supported between the ends of the first pair of bars and having a crank formed intermediate of its length, pawls secured to said crank bar and adapted to engage the extensions of said pivot bars to swing them upon their pivots and to lock them, means for releasing said pawls and locking them in their open positions, a lever pivotally connected to one of the first mentioned arc-shaped bars, a link having one end pivotally connected to said lever and the other end pivotally connected to the pivotal arc-shaped bars and adapted upon the operation of the lever to swing said bars on their pivots.

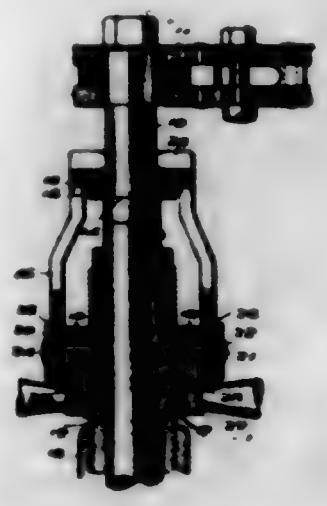
1,301,729. OUTLET-VALVE AND OPERATING MECHANISM FOR TANK-CARS. GEORGE H. MITTINGER, Youngstown, Ohio. Filed Sept. 27, 1917. Serial No. 193,437. 1 Claim. (Cl. 220—124.)

A valve mechanism for tank cars, comprising a member at the bottom of the car having a vertically disposed opening, the upper edge of the wall of the opening provided with a horizontally arranged outwardly tapered valve seat, the opening having internal screw-threads below the valve seat, in combination with a valve member having a horizontally arranged upwardly tapered flange to co-act with the before mentioned valve seat, the valve member having a downwardly projecting reduced hollow



portion provided with external screw-threads, the screw-threads thereof adapted to mesh with the internal screw-threads of the before-mentioned vertically disposed opening, the reduced hollow portion having transverse openings below the flange, and means for turning the valve member on and away from its seat, substantially as and for the purpose described.

1,301,730. TAPPING-MACHINE. ROBERT H. MUELLER, Decatur, Ill. Filed June 7, 1917. Serial No. 173,226. 9 Claims. (Cl. 77—22.)

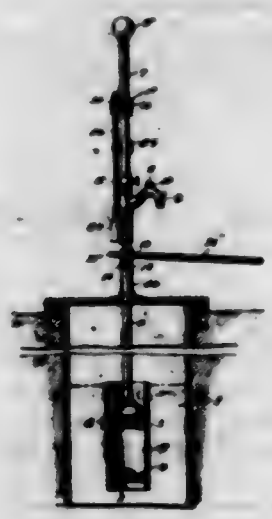


9. In a tapping machine, a boring bar, a feed nut and a feed yoke pivotally connected to said nut and having rotary movement relative thereto.

1,301,731. FLUID-ELEVATING MEANS. JOHN MUNEY, Warba, Minn. Filed May 29, 1917. Serial No. 171,738. 1 Claim. (Cl. 103—5.)

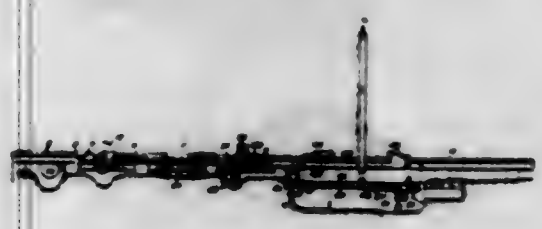
In a water elevating means, a water containing tube, a pipe arranged in the tube and vertically movable with respect thereto, a hollow valved piston in the tube and connected with the pipe, a removable weighted element closing the upper open end of the pipe, a valved outlet spout for the pipe, a globe valve above said spout, a frame comprising adjustable uprights and a transverse member connecting said uprights, means for sustaining the uprights adjusted, and a bearing on the transverse member for the pipe, a cross arm on the pipe, flexible elements

secured thereto, guide wheels on the frame for the flexible elements, weights secured to the ends of the said elements, transversely extending arms on the pipe, and a



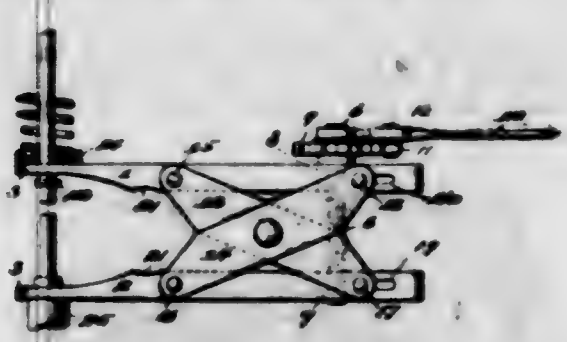
platform having an outer hinged end and an inner bifurcated end that straddles the pipe and rests on the arms, all as and for the purpose set forth.

1,301,722. SAFETY DEVICE FOR MINES. JAMES A. NOLAN, Bowerston, Ohio, assignor to The Mining Safety Device Company, Bowerston, Ohio. Filed June 26, 1916, Serial No. 106,431. Renewed Mar. 21, 1919. Serial No. 284,205. 8 Claims. (Cl. 187—97.)



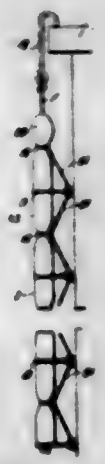
1. In combination, a cage, pivoted steps, a stationary arm, actuating means for the steps normally lying in a position to engage said arm in the movement of the cage and means for moving said first means to a position where the first means will not engage said arm.

1,301,723. VALVE-SPRING LIFTER. CHARLES W. PALMER, Sandpoint, Idaho. Filed May 1, 1918. Serial No. 231,806. 6 Claims. (Cl. 29—87.1.)



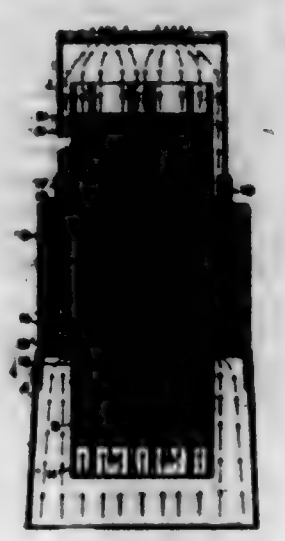
1. A tool for lifting the valve springs of internal combustion engines, comprising a pair of jaws having ends adapted respectively to coöperate with the spring and with a support on the engine, a screw located toward the opposite ends of the jaws and connecting them for moving said jaws apart to lift the spring, and means for maintaining parallelism between the jaws during relative movement between them.

1,301,734. FIRE-ESCAPE. JOHN B. PATTERSON, Primghar, Iowa, assignor of one-half to Helen A. Patterson, Primghar, Iowa. Filed Nov. 5, 1917. Serial No. 200,949. 3 Claims. (Cl. 226—6.)



1. In a fire escape, a pair of flexible stiles, foot rests arranged in spaced relation upon said stiles, and connecting the latter, and spacing members inclosing said stiles and being arranged between said foot rests.

1,301,735. AIR-BLAST TRANSFORMER. EDWIN R. PRAEGER, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 27, 1913. Serial No. 47,392. 4 Claims. (Cl. 175—361.)

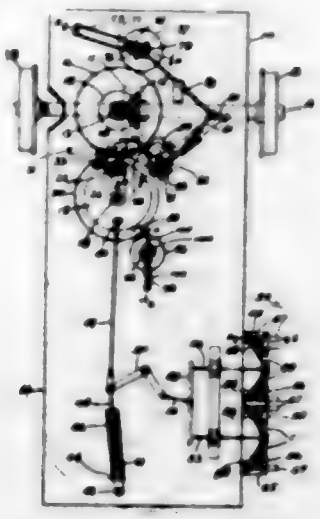


1. An air blast transformer of the shell type having a core comprising two laminated sections each comprising a magnetic circuit, arranged in spaced relation to form two outer legs and a central leg with a vertical duct open at its sides dividing the central leg, said sections being formed with vertical ducts through the laminations, and coils on said central leg disposed in spaced relation to each other and to the core to provide vertical ducts between the coils and between the coils and core; transverse passages being provided adjacent the top and bottom of said central leg, the bottom passage arranged to connect with the ducts through the laminations and with the ducts between the core and coils, the top passage arranged to connect with the said same ducts and with the vertical duct dividing the central leg.

1,301,736. DOOR OPENING AND CLOSING DEVICE. ANTON FISHER, Cleveland, Ohio. Filed Feb. 21, 1918. Serial No. 218,414. 5 Claims. (Cl. 296—7.)

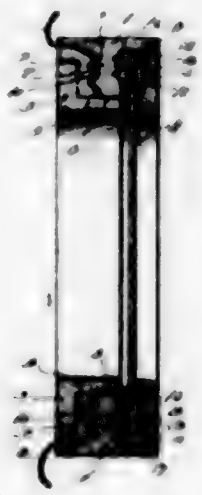
1. The combination with a car body of a frame, a beveled gear secured on the axle of the car, a beveled gear mounted on the frame and meshing with the beveled gear on the axle, a driving gear arranged to turn with the beveled gear on the frame, a driven gear having teeth on only a portion of its perimeter and arranged

to mesh with the driving gear, resilient means for causing the driven gear to complete a full revolution after said driven gear has been partially revolved by the driving gear, automatically operating means for holding the driven gear against movement, automatically operating means for releasing the holding means and means forming an operative connection between said driven gear and the doors of the car for opening and closing said doors.



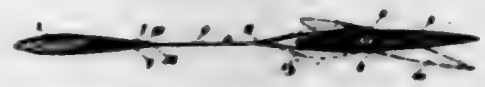
2. The combination with a car body of a frame, a driving gear mounted on said frame and operatively connected with the axle of the car so as to be driven thereby, a driven gear meshing with the driving gear, said driven gear having teeth on only a portion of its perimeter, a crank pin carried by the driven gear, a cylinder pivoted on the frame, a piston in said cylinder, a piston rod, a spring arranged on the piston rod within the cylinder, a connecting rod connecting the piston rod with the crank pin on the driven gear and means forming an operative connection between the connecting rod and the doors of the car so that a movement of the rod in one direction will close the doors and a movement of the rod in the opposite direction will open the doors.

1,301,737. COUPLING. FREDERICK K. PIERCE, Jersey City, N. J. Filed Dec. 6, 1917. Serial No. 205,788. 2 Claims. (Cl. 285—79.)



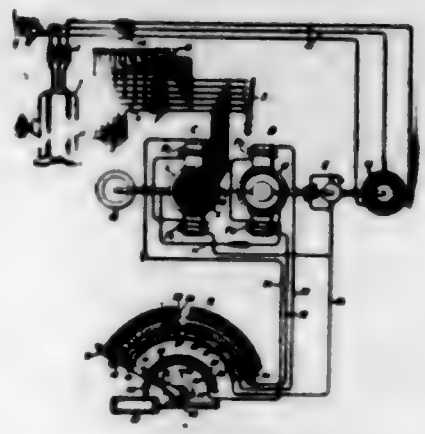
1. A coupling for clamping an element to a sheet of flexible material, comprising a ring widened in a direction parallel to its axis, said ring having between its edges an inwardly extending annular flange provided at its inner edge with screw threads, the inner side of said ring at one side of said flange also having screw threads, a second ring whose edge is provided with threads interengaging said threads of the first named ring, said second ring serving to clamp the aforesaid element against one side of said flange, and a third ring for clamping the flexible sheet against the other side of said flange, said third ring being L-shaped in transverse section with one flange substantially parallel to said inwardly extending flange and with its other flange provided with screw threads engaging the threads of said first named flange.

1,301,738. SUBMERGIBLE AND TOWABLE SUPPLY-BASE. WILLIAM WOODBURN POTTER, Philadelphia, Pa. Filed Oct. 7, 1915. Serial No. 54,515. 7 Claims. (Cl. 114—16.)



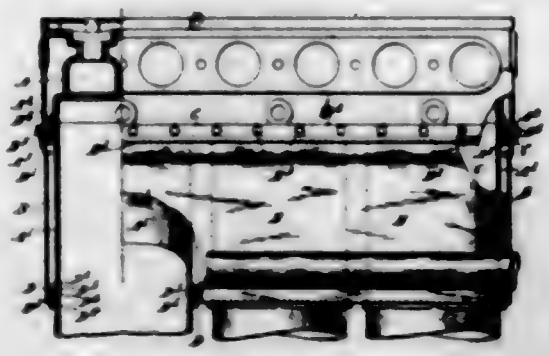
1. In combination a submarine, a submergible barge in tow thereof, electric means for controlling the buoyancy and the course of the towed vessel from the submarine and electric means of indicating on the submarine the submergence and course of the towed vessel whereby the relative position of the tow is indicated on the submarine.

1,301,739. SPEED CONTROL OF INDUCTION-MOTORS. DAVID C. PRINCE, Springfield, Ill., assignor to General Electric Company, a Corporation of New York. Filed Mar. 17, 1917. Serial No. 155,458. 12 Claims. (Cl. 172—274.)



1. The combination, with an induction motor having a phase wound secondary, of means for controlling the speed thereof comprising a rotary converter and an adjustable source of direct current voltage, the alternating current side of the converter being electrically connected to said induction motor secondary and the direct current side of the converter being connected to said direct current source and means for reducing the inductance of the direct current circuit including said direct current source and said rotary converter.

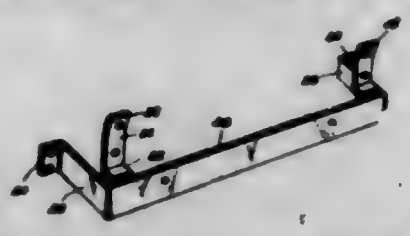
1,301,740. CONSTRUCTION OF WATER-JACKETED ENGINE-CYLINDERS. THOMAS CHARLES WILLIS PULLINGER, Dumfries, Scotland, assignor of one-half to Sir William Beardmore, baronet, Parkhead, Glasgow, Scotland. Filed Apr. 4, 1918. Serial No. 226,735. 1 Claim. (Cl. 123—172.)



The combination with a cylinder-block wherein the head end is provided with a continuous outwardly-pro-

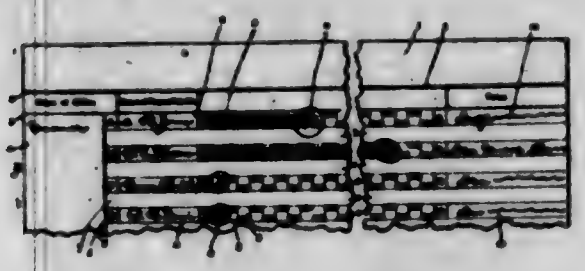
jecting shoulder which faces toward the other end of the cylinders, of a water-jacket surrounding all the cylinders, having a corresponding internal shoulder at the head end, a portion which extends beyond the said internal shoulder to engage the side face of the shoulder portion on the cylinder-block, the bottom of the water-jacket being filled in with a plate provided with holes to permit the extension through it of the cylinders and glands secured in the plate and engaging circular exterior faces which are circumferential to the cylinders, substantially as set forth.

1,301,741. AUTOMOBILE-SIGNAL. ALOYSIUS N. RAUL and PHILIP S. SPRINGER, Chicago, Ill. Filed July 18, 1917. Serial No. 181,247. 1 Claim. (Cl. 40—122.)



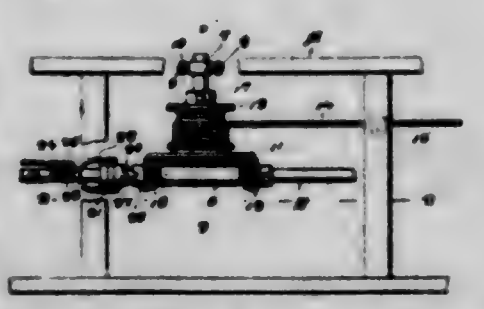
A signal comprising a casing, signal lamps therein, a bracket including a longitudinally disposed U-shaped member adapted to be secured to the vehicle, laterally extending arms carried by said U-shaped member, said arms being offset to provide a seat for the signal casing and means for securing the license tag to said member, whereby the said tag will be positioned directly beneath and within the rear edge of the signal casing.

1,301,742. TALLY-SHEET. JOSIAH B. REEVES, Omaha, Nebr. Filed July 3, 1914. Serial No. 848,972. 2 Claims. (Cl. 282—42.)



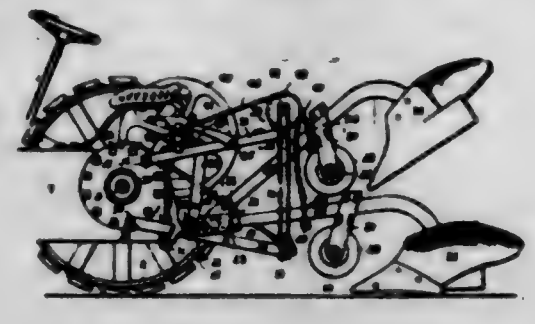
1. A tally-sheet having printed thereon lines forming horizontal single rows of tally-spaces, each tally-space having a shaded portion, the successive tally-spaces in each row having the shaded portions thereof arranged alternately at the tops and bottoms of the spaces, and the successive shaded portions of each row numbered serially in arithmetical progression.

1,301,743. AUTOMOBILE-PULLER. BENJAMIN A. REIFORD, Alton, Ill. Filed Feb. 8, 1919. Serial No. 275,833. 2 Claims. (Cl. 254—106.)



1. In combination with the frame and drive shaft of a motor vehicle, a bearing member revolubly associated with the drive shaft, a stub shaft extending from said bearing member, a pivoted bearing member receiving the free end of said stub shaft and connected with said frame, a drum rotatable upon said stub shaft, a bevel gear secured to said drum, and rotatable therewith, a bevel gear revoluble upon said drive shaft and meshing with said first named gear, manually controlled means for locking said second named gear for rotation with said drive shaft, and a cable connected at one end with said drum and having its other end provided with attaching means.

1,301,744. TRACTOR-PLOW. ARTHUR W. REYNOLDS, Newtown, Conn., assignor of one-half to Edward Benedict, Newtown, Conn. Filed Dec. 5, 1918. Serial No. 265,340. 10 Claims. (Cl. 97—30.)



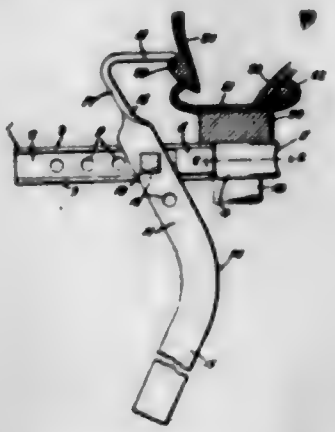
1. In a plow of the class described, the combination of a frame including guide slots, a draw bar also adapted to be attached to the tractor, plow beams movably mounted in the slots of the frame and connected to the end portion of the draw bar, and means connecting the two plow beams for raising and lowering the same.

1,301,745. COLLAR-FASTENER. WILLIAM H. REYNOLDS, De Soto, Mo. Filed Aug. 28, 1918. Serial No. 251,810. 1 Claim. (Cl. 24—261.)



A collar button formed of wire comprising a body part, a head part formed by an extension loop located midway the ends of the body part, the extreme end of said head being slightly raised and a spring finger connected with the upper side of the body part and extending through same into the loop of the head part, said finger having a kink at its end and terminating an appreciable distance from the inner curve of the end of the head part so that the collar and shirt band are gripped by the two parts of the head part and said finger.

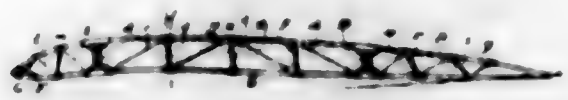
1,301,746. TIRE-TOOL. JAMES HERMAN ROBSON, Columbus, Miss. Filed Nov. 7, 1916. Serial No. 130,082. 1 Claim. (Cl. 157—6.)



A tire tool comprising a channel bar shaped to form a shank and a hook, the flanges of the bar extending around

the inner curve of the hook, the body of the bar being concaved transversely, between the flanges and at the curve of the hook to stiffen the hook in combination with the flanges, the body of the shank having a plurality of openings, and the flanges extending along the shank to offset the weakness caused by the openings; a resilient guard extended along the inner curve of the hook and held between the flanges; a pivot element interchangeably mounted in the openings; and a lever fulcrumed on the pivot element in contact with the edges of the flanges, the lever having an angular lip overhanging the hook.

1,301,747. LIGHT FRAMED STRUCTURE SUCH AS AIRCRAFT-WINGS AND THE LIKE. ALLIOTT VERDON ROE, Hamble, England. Filed May 12, 1917. Serial No. 168,226. 6 Claims. (Cl. 244—31.)



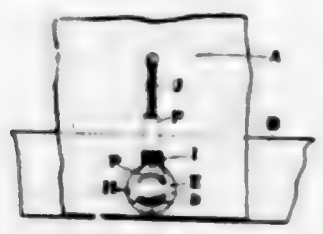
1. In light framed structures of the class described, the combination of two or more longitudinal members, with bracing and strut members each of which is formed with a channel section body and forked ends, and a rivet or other pin connection passing through the said forked ends and the longitudinal members, all substantially as and for the purpose set forth.

1,301,748. STRUT CONNECTION. ALLIOTT VERDON ROE, Hamble, England. Filed Nov. 2, 1917. Serial No. 199,975. 4 Claims. (Cl. 244—31.)



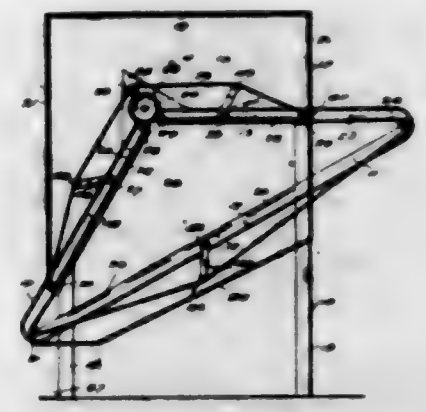
1. A strut connection comprising a semi-spherical or parti-spherical seating and means of attaching same to the structure to be stayed, in combination with a pin projecting from the said seating and adapted to enter a perforated seating member on the strut, whereby some angular variation in the position of the strut may be obtained without disturbance to other elements of the mechanism.

1,301,749. FASTENER FOR COVERS. ALLIOTT VERDON ROE, Hamble, England. Filed Jan. 8, 1918. Serial No. 210,934. 4 Claims. (Cl. 70—82.)



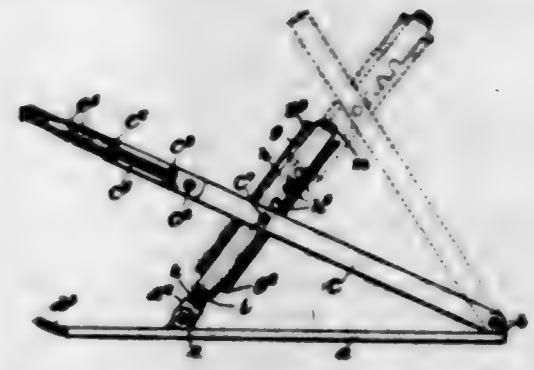
1. In a fastening device of the class described, the combination of a cover having a hole with a slotted extension in one direction within the periphery of its edge, an overhanging projection on the part to which the cover is to be fastened disposed within the limits of the said hole, a clasp having a shank with a bend in it, the said bent portion passing through the slotted extension of the cover hole and adapted substantially to close in the cover hole, means for engaging the said clasp with the said projection, and means on the inside of the said cover for retaining the clasp and the projection in engagement.

1,301,750. MECHANICAL PHOTOGRAPH AND BLUE-PRINT DRIER. CLIFTON F. SAUNDERS, Ancon, Canal Zone. Filed Nov. 4, 1918. Serial No. 260,722. 8 Claims. (Cl. 34—12.)



1. In a mechanical drier for photographs, blue prints and the like, a frame comprising substantially triangular side portions suitably connected, supporting means therefor, a plurality of hot plates supported by the frame, a casing over the same producing an oven, and heating and drying aprons movably supported by the frame and designed to receive and deliver the photographs, blue prints and the like, heating means within the casing supported by the frame and drive means for said aprons.

1,301,751. AIR-PUMP. PATRICK M. SCANLAN, Brooklyn, N. Y. Filed Jan. 24, 1918. Serial No. 213,511. 12 Claims. (Cl. 230—29.)



1. A device of the class described, comprising a base, and an air pump mechanism involving a pump cylinder, a piston in said cylinder and a rod connected with said piston and passing out through one end of said cylinder and pivoted to said base, a frame surrounding said cylinder and in which the same is adjustably mounted, and an operating lever pivoted to said base and loosely connected with said frame.

4. A portable pump device of the class described, comprising a base, an air pump mechanism involving a pump cylinder, a piston in said cylinder and a rod connected with said piston and passing out through one end of said cylinder, said rod being pivotally connected with said base at a predetermined distance from one end thereof, a frame member surrounding said pump cylinder and in which said cylinder is adjustably mounted, and an operating lever pivoted to said base at one end thereof and adjustably engageable with said frame member, said operating lever being provided with a detachable handle.

7. A device of the class described, comprising a base and an air pump mechanism involving a pump cylinder, a piston in said cylinder and a rod connected with said piston and passing out through one end of said cylinder, means for pivoting the outer end of said rod to said base, a

frame member surrounding said pump cylinder the opposite sides of which are provided with a plurality of apertures, an operating lever pivoted to said lugs and the opposite sides of which are provided approximately centrally thereof with stub pins which are adapted to operate in connection with the apertures in the sides of the frame member, and means for reinforcing the operating lever adjacent to the location of the stub pins therein.

9. An air pump mechanism of the class described, involving a cylinder, a piston movable in said cylinder, a rod connected with said piston and passing out through one end of said cylinder, caps mounted on the ends of said cylinder, valves mounted in said caps, a valve device mounted in the piston end of said rod, a frame, and devices for adjustably mounting said cylinder and the end caps thereof in said frame.

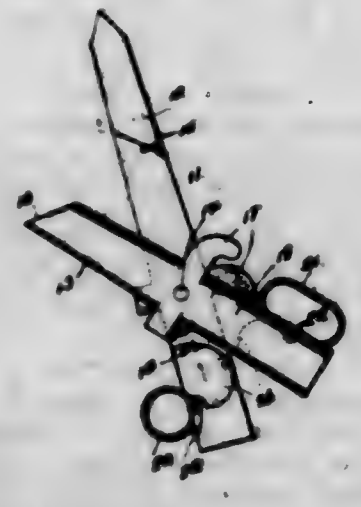
10. An air pump mechanism of the class described involving a cylinder, a piston movable in said cylinder, a rod connected with said piston and passing out through one end of said cylinder, caps mounted on the ends of said cylinder, a stationary valve device secured to one of said caps, a movable valve device secured to the other of said caps, a valve device mounted in the piston end of said rod, a frame, and devices for supporting said pump mechanism in said frame and for adjusting the same longitudinally therein.

1,301,752. ANTIFRICTION-BEARING. JOHN W. SCHATZ, Poughkeepsie, N. Y., assignor of one-third to Herman A. Schatz and one-third to Grover H. Schatz, Poughkeepsie, N. Y. Filed Jan. 10, 1918. Serial No. 211,125. 5 Claims. (Cl. 64—26.)



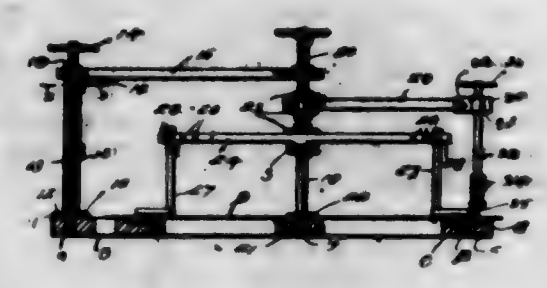
1. A self-contained, annular, unitary bearing embodying an inner race, an outer race comprising two unbroken annular cup rings, an exterior integral ring like jacket having an annular and substantially flat outer surface and having also inside of each of its inner edges an inwardly projecting integral ledge against which the two cup rings of the outer race are supported respectively, and balls between the inner and outer races.

1,301,753. BAYONET. STEPHEN SEBIW, Chicago, Ill. Filed Feb. 5, 1919. Serial No. 275,219. 3 Claims. (Cl. 42—99.)



3. A combined bayonet and shear comprising a pair of pivoted blades, means for removably securing the blades in the end of a rifle to permit of their use as a bayonet, cooperating cutting edges formed on said blades to provide shears and a pivoted finger receiving loop for each of said blades.

1,301,756. SANDPAPER-CUTTING MACHINE. JAMES SMITH, Pittsburg, Calif. Filed May 16, 1918. Serial No. 235,325. 3 Claims. (Cl. 164—52.)



1. A machine of the class described comprising a circular base provided with spaced circumferentially extending grooves, a brace secured centrally to the base and having one end extending beyond the periphery thereof, a hollow member secured to the extended end of the brace, a shaft slidably mounted in the hollow member, an arm rotatably mounted about the shaft and upon the upper end of the hollow member, a clamping shaft carried by the free end of the arm and engaging the base, a clamping arm mounted upon the clamping shaft, a knife carrying arm journaled to the shaft, and a knife journaled to the last named arm for rotation therewith about the base.

1,301,760. HAIR-CURLING APPARATUS. CHARLES JOHN SORRELL, New York, N. Y. Filed Dec. 29, 1917. Serial No. 209,501. 5 Claims. (Cl. 132—19.)

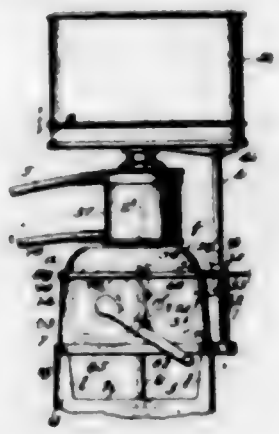


1. In a device of the class described, an apertured base, a stem mounted on the base, said stem being enlarged and slotted lengthwise at its free end, devices at opposite end of the stem for retaining the hair wound thereon, a tubular member removably carried by the base, a moistening pad between the stem and tubular member, and a heating device inclosing said member.

1,301,756. GEARING FOR CREAM-SEPARATORS. JACOB STAMPFER, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,273. 14 Claims. (Cl. 74—30.)

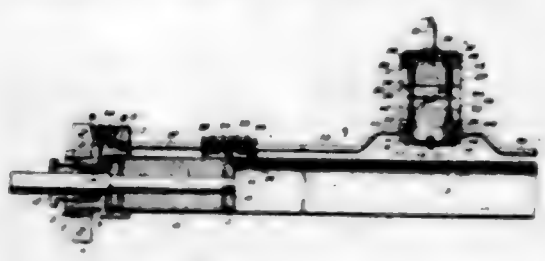
1. In a separator of the class described, the combination of an upright bowl-supporting spindle rotatively mounted in suitable bearings, a worm on said spindle, a main driving shaft rotatively mounted, a worm wheel supported by the main driving shaft and in toothed engagement with said worm, driving gear mechanism operatively connected with said worm wheel and comprising a main gear wheel adapted to be connected in fixed relation to the main driving shaft and released from fixed connection with said shaft, and securing means connected with the main driving shaft and adapted to connect said shaft with said main gear wheel and said worm wheel alternatively.

2. In a separator of the class described, the combination of an upright bowl-supporting spindle rotatively mounted in suitable bearings, a worm on said spindle, a main driving shaft rotatively mounted, a worm wheel supported by the main driving shaft and in toothed engagement with said worm, driving gear mechanism operatively connected with said worm wheel and comprising a main gear wheel mounted concentrically with respect to the main driving shaft, securing means connected with the main driving shaft and adapted to connect the main gear wheel in fixed relation to and release the same from fixed connection with said shaft, and means connected and rotatable with the worm wheel and adapted to be connected with said securing means, for securing the worm wheel in fixed relation to the main driving shaft when the main gear wheel is released from fixed connection with said shaft.



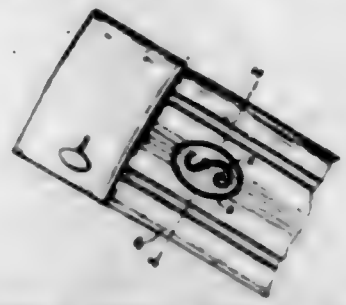
14. In a separator of the class described, the combination of an upright bowl-supporting spindle mounted in suitable bearings, a worm on said spindle, a main driving shaft rotatively mounted, a worm wheel mounted in concentric relation to the main driving shaft and in toothed engagement with said worm, a clutch member mounted in position to engage the worm wheel at one side of the same, said clutch member having an annular sleeve portion encircling the main driving shaft and encircled by the worm wheel, means for operatively connecting said clutch member with the shaft, and adapted to permit the same to be released from fixed connection with the shaft, a weighted clutch member rotatively mounted in sliding engagement with said sleeve and movable into and out of clutching engagement with the worm wheel on the opposite side of said wheel from that which is in engagement with the sleeved clutch member, and a clutch-controlling member connected with the main driving shaft and in engagement with said weighted clutch member, for operating the same.

1,301,757. DOOR-OPERATING MECHANISM. PETER STEFFES, Winona, Minn. Filed Mar. 16, 1917. Serial No. 155,329. 4 Claims. (Cl. 121—46.)



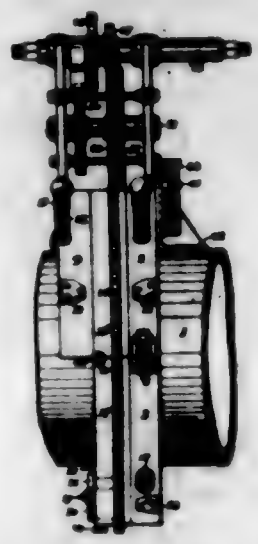
1. In combination with a cylinder and a piston arranged for reciprocating movement in the cylinder, a controlling valve having motor fluid connections with the ends of the cylinder, and also having an inlet valve and an exhaust valve for each of said connections, means to normally close each inlet valve, normally restraining means tending to close each exhaust valve, and means to simultaneously open the inlet valve of either of said connections and permit the closing of the exhaust valve thereof.

1,301,758. EMBROIDERY-MOUNT. ARNOLD STERN, Hollis, N. Y. Filed Feb. 15, 1918. Serial No. 217,354. 3 Claims. (Cl. 2—147.)



1. An embroidery patch consisting of a permanent, form maintaining base of diaphanous material, for non-obscuring superposition upon a textile article, said base bearing an embroidered emblem, and an edge binding embroidered border for said patch.

1,301,759. APPARATUS FOR CUTTING IRON PIPES IN SITU. ROBERT PERCY STEWART, Burwood, Sydney, New South Wales, Australia. Filed Oct. 18, 1918. Serial No. 258,740. 5 Claims. (Cl. 81—190.)



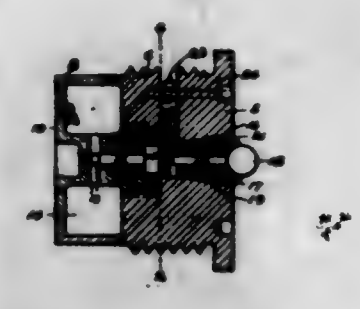
1. In apparatus for cutting pipes *in situ*, an annular frame divided into two halves hinged together, a duplicate upper half to the frame, full bows secured to the two upper halves of the frame connecting them together, and radial centering screws working in female screw bearings in the three parts of the frame, for centering the frame concentrically with the pipe as and for the purposes specified.

5. In apparatus for cutting pipes *in situ*, an annular frame in two halves hinged together, a duplicate upper half to the frame, full bows connecting together the two upper halves of the frame, half bows carried by the lower half of the hinged frame, a rack-ring divided into two halves hinged together and adapted to revolve between the two upper halves of the frame, antifriction rollers carried by the full bows and by the half bows, such rollers bearing against the periphery of the rack-ring, and differential gear supported on standards carried by the upper halves of the frame, such differential gear meshing with the teeth of the annular rack projecting from the ring, and means for driving the differential gear in order to cause the rack-ring and the tools it carries to revolve around the pipe to be cut, all as and for the several purposes herein set forth.

1,301,760. FUSE FOR SHELLS. ANDREW J. STONE and LEA W. ROCKWELL, Washington, D. C., assignors to the Government of the United States. Filed Mar. 27, 1918. Serial No. 225,095. 8 Claims. (Cl. 102—39.)

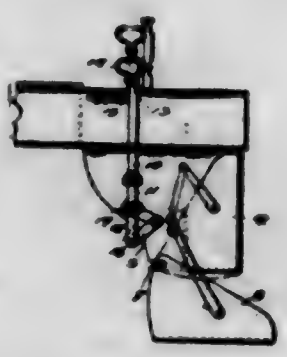
1. A fuse comprising a cylindrical body member having a flange at its rear portion, a plate member defining with said flange a chamber for the booster charge, a boss in-

tegral with said plate member having its outer end threaded for engagement with said body member and provided with a detonator cavity and passages affording



communication between said cavity and said chamber, a detonator in said cavity, and means for exploding said detonator.

1,301,761. CAR-STEP. HENRY B. STRATTON, Warrensburg, Mo. Filed May 24, 1918. Serial No. 236,304. 4 Claims. (Cl. 105—447.)



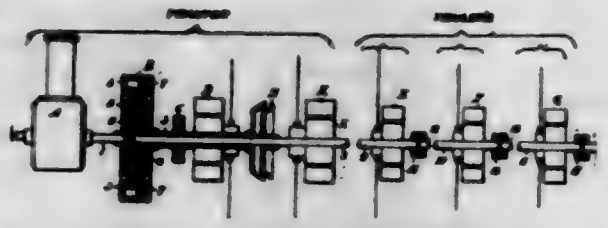
1. The combination with car steps, a pivoted frame beneath the next to the lowermost step, an extension step having the inner end of its side portion connected with said frame, and means for swinging the frame rearwardly whereby the extension step is drawn rearwardly and downwardly to allow the same to drop by gravity to operative position.

1,301,762. BOTTLE. THOMAS H. SUFFOLK, Elizabeth, Pa. Filed Mar. 23, 1915. Serial No. 16,444. 1 Claim. (Cl. 215—78.)



The combination with a bottle whose neck is internally cylindrical with the exception of an enlargement at its mouth producing an annular shoulder, the wall of the neck being thickened from the mouth downward for a distance and provided with an external groove between the thickened portion and the remainder of the neck; of a stopper having a head of a size to fill said enlargement and a shank appreciably smaller than the bore of the neck and of a length to have its lower end stand substantially opposite said groove when its head rests on said shoulder, and a packing ring of compressible material surrounding said shank and of equal length therewith, its upper end contacting with said head and its lower end standing substantially opposite said groove, for the purpose set forth.

1,301,763. POWER TRANSMISSION ON RAIL AND ROAD TRAINS AND THE LIKE. JOHN GODFREY PARRY THOMAS, Kensington, London, England, assignor to Thomas Foreign Patents Limited, Kensington, England. Filed Dec. 12, 1916. Serial No. 136,502. 7 Claims. (Cl. 290—14.)



1. An electromechanical power transmission system for trains comprising upon the tractor a prime motor, two dynamo electric machines, gearing interconnecting said machines and motor so that their speeds are interdependent, a driving connection between one of said machines and wheels of the tractor and trailers, dynamo electric machines upon the trailers in driving connection with their wheels, controller elements upon said tractor, interconnecting the machines on said tractor and causing each in turn to operate as a motor and take power electrically from the other, and further controller elements for disconnecting the machine driving the wheels from the other machine on the tractor and for connecting in its place the machines upon the trailers.

1,301,764. JARRING-TOOL FOR DRILLING WELLS. DAVID R. TRIPPLEHORN, Wichita, Kans. Filed June 11, 1917. Serial No. 173,983. 2 Claims. (Cl. 255—27.)

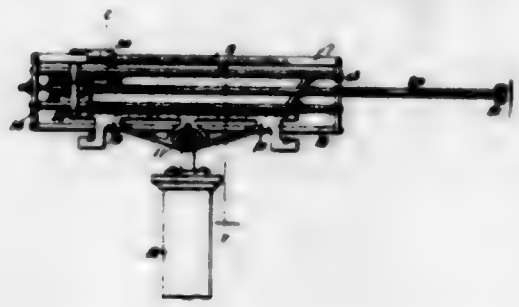


1. A metal bumper of less diameter than the tube in which it works, having its upper end to conform to the shape of the inner side of said tube and which has near its upper end an elongated slot cut on one side in parallel lines, the upper end of said slot being higher in the middle than at its sides; said bumper also being provided with a vertical hole at its upper end, in combination with a swivel of such size and shape to fit in the slot of said bumper, having a hole circular in form vertically through its center and a cone shaped opening on its lower side.

1,301,765. WEIGHT PLACING AND PROVING ATTACHMENT. GEORGE G. VOLAND and EMIL L. VOLAND, New Rochelle, N. Y. Filed Apr. 17, 1918. Serial No. 229,072. 5 Claims. (Cl. 265—54.)

1. In a weighing scales, a graduated scalebeam adapted for the support of balance members superposed thereon; a weight carrier frame having a scale of graduations duplicating the graduations on said scale beam; a carrier mounted on said frame for placing said balance members, said carrier having a vernier member readable in correspondence with the graduations on said scalebeam for indicating the fractions of a division in said graduations where said balance members rest.

2. In a balance scales; a rocking scalebeam having a scale of graduation adapted to support balance members when superposed thereon; a second scale duplicating the first-mentioned scale in exposed relation thereto; a rocking carrier slidably mounted between said graduations; and a vernier plate fixedly connected to said carrier to move lengthwise of said scale in correspondence with the movement of said carrier, said vernier having graduations to be read in conjunction with the second-mentioned graduations, the calibrations on said vernier plate registering with the zero markings of both of said graduations.



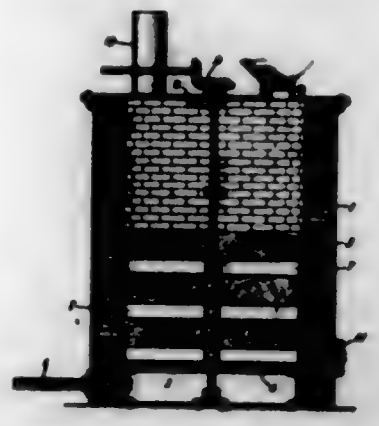
3. In a balance scales; a rocking scalebeam having a scale of graduations adapted to support balance members when superposed thereon; a second scale duplicating the first-mentioned scale in exposed relation thereto; a rocking carrier slidably mounted between said graduations; a vernier plate fixedly connected to said carrier to move lengthwise of said scale in correspondence with the movement of said carrier, said vernier having graduations to be read in conjunction with the second-mentioned graduations, the calibrations on said vernier plate registering with the zero markings of both of said graduations; and means for varying the zero adjustment of said carrier and vernier plate.

4. In a balance scales; a rocking scalebeam having a scale of graduations adapted to support balance members when superposed thereon; a second scale duplicating the first-mentioned scale in exposed relation thereto; a rocking carrier slidably mounted between said graduations; a vernier plate fixedly connected to said carrier to move lengthwise of said scale in correspondence with the movement of said carrier, said vernier plate having graduations to be read in conjunction with the second-mentioned graduations, the calibrations on said vernier plate registering with the zero markings on both of said graduations; and means for varying the zero adjustment of said carrier and vernier plate, said means embodying a brace slidably mounted in guides, said brace furnishing a bearing for said carrier, and adjustable positioning collars fixedly mounted on said carrier at opposite sides of said brace.

5. In a weighing scales; a rocking beam having a scale of graduations and adapted to support in superposed relation thereto, movable balancing members; a guide frame mounted in juxtaposed relation to said rocking beam, said guide frame having a second scale graduated in correspondence with the scale on said beam; a carrier slidably mounted in said frame for movement lengthwise thereof; and means provided on said carrier for engaging to lift and transfer said balance members; a vernier plate connected with said carrier and disposed in juxtaposed relation to the graduations on said frame to register therewith and to be read thereon for indicating the fractional division of the placement of any of the balance members.

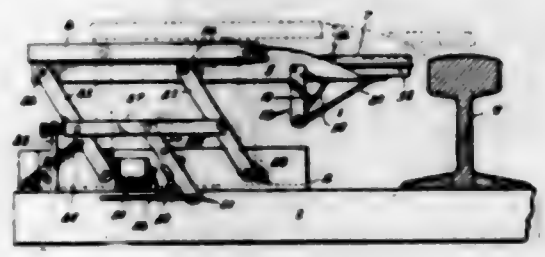
1,301,706. PREPARATION OF ANHYDROUS MAGNESIUM CHLORID. CURTIS C. WALLACE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 22, 1916. Serial No. 92,821. 4 Claims. (Cl. 23—13.)

2. The process of dehydrating hydrous ammonium magnesium chlorid which consists in heating a charge of said chlorid to a temperature high enough to cause dehydration but materially below the temperature at which



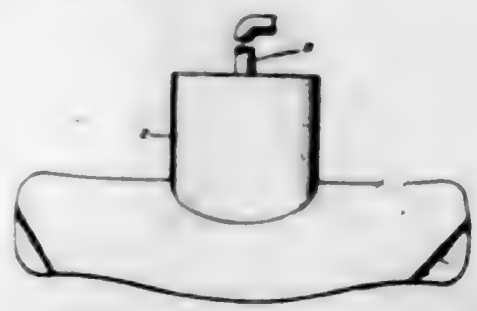
appreciable dissociation of said double chlorid occurs, and passing a gas unsaturated with moisture through said charge during the continuance of said heating.

1,301,767. TORPEDO ALARM-SIGNAL. GEORGE CARL WALSH, Sawtelle, Calif. Filed Aug. 1, 1917. Serial No. 183,911. 6 Claims. (Cl. 246—212.)



1. In a railroad torpedo-placing mechanism, a torpedo holding device, means for moving said device to carry a torpedo in and out of the path of the car-wheels, a torpedo magazine adapted to feed torpedoes to said device, means normally restraining the movement of torpedoes from said magazine to said device, and means adapted to be actuated by the explosion of a torpedo carried by said device to release the last-mentioned means.

1,301,768. TOY SUBMARINE. ROGER L. WALTERS, Fort Dodge, Iowa. Filed July 20, 1918. Serial No. 246,921. 1 Claim. (Cl. 46—37.)



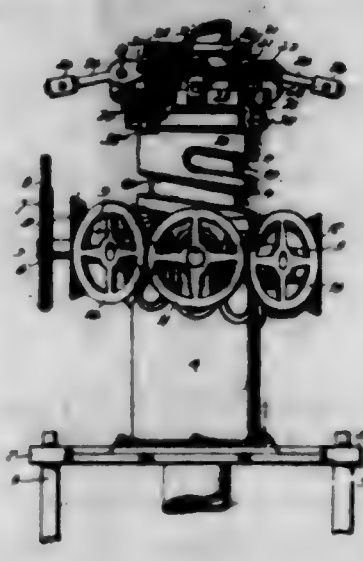
A toy of the class described comprising a hull made from a single piece of material bent on its medial line with the edges of the material spaced apart and their ends brought together and soldered, a conning tower forming an air tight chamber and a periscope.

1,301,769. CASING-JACK. JAMES H. WATSON, Riverton, Wyo. Filed Sept. 24, 1918. Serial No. 255,423. 14 Claims. (Cl. 254—31.)

1. In a power jack of the class described, the combination of a support or standard, a screw revolubly mounted

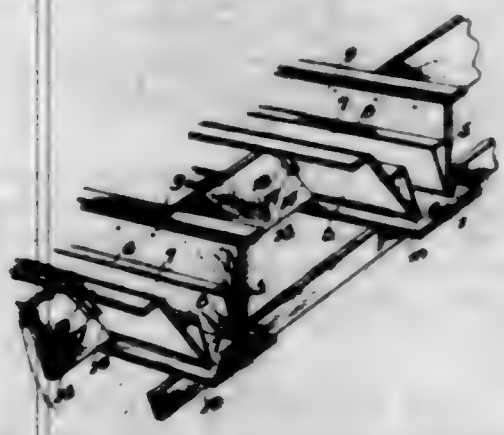
thereon, and actuating means sustaining the screw on said standard having operative connection with the screw to rotate the same and thereby raise and lower the screw.

12. In a well casing jack of the class described, the combination with a support and jack-screw and means for actuating the same, of gripping mechanism mounted on said screw consisting of a gripper head having a central open-



ing, interchangeable gripping blocks mounted about said opening for engagement with the well casing when introduced into the opening, levers pivotally mounted on said head, connecting means intermediate said levers for actuating all of the same from any one thereof, and means intermediate the blocks and the levers for imparting gripping action to the blocks or releasing the same at will.

1,301,770. FORM FOR CONCRETE JOISTS. HEWITT L. WELLS, Washington, D. C. Filed Oct. 2, 1917. Serial No. 194,377. 6 Claims. (Cl. 25—131.5.)

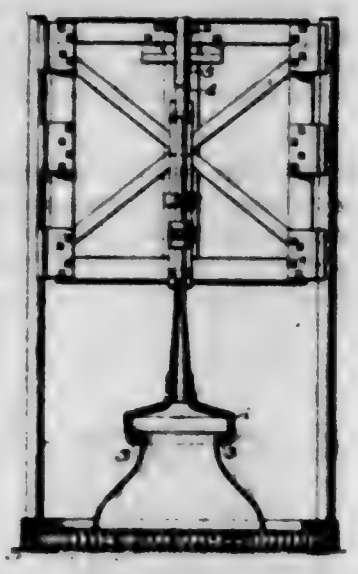


1. Means for forming concrete T-beams including complementary side members each of said side members having an inclined surface, and cores secured to the inclined surface of said side members and having a vertically disposed wall and a horizontal portion.

1,301,771. METHOD OF DRAWING HOLLOW GLASS ARTICLES. OTIS A. WELLS, Arnold, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 7, 1914. Serial No. 865,490. 8 Claims. (Cl. 49—83.1.)

1. In the art of drawing hollow glass articles from a molten bath by the use of a bait having a temperature below that at which the glass would fuse thereto, the method of preventing relative movement between the engaging portions of the bait and article, which consists in heating the bait while forming the novel and before it is withdrawn from the molten glass bath to a temperature below that at which the glass will fuse thereto, and which is sufficiently high to cause the radial contraction of the bait during the draw to be substantially equal to that of the glass novel, substantially as described.

3. In the art of drawing hollow glass articles, the method which comprises using a heated bait having a temperature below that at which glass will fuse thereto, but high enough to have substantially the same radial contraction during the draw as that which occurs in the novel of the glass article being drawn, substantially as described.



4. In the art of drawing hollow glass articles, the method which comprises dipping a hollow bait having an interior novel-supporting surface into a body of molten glass and forming a novel on such surface, and retaining the bait within the glass before withdrawal until it has attained a temperature below that at which the glass will fuse thereto, but which is sufficiently close to the temperature of the glass novel to have substantially the same amount of radial contraction as the novel during the draw, and then drawing, substantially as described.

5. The method of drawing hollow glass articles with a bait having an internal glass-supporting surface, which consists in heating the bait prior to the time that it is withdrawn from the glass bath in which it is immersed to start the draw to a temperature below that at which glass will fuse thereto and sufficiently high to cause the radial contraction of the bait during the draw to be substantially equal to that of the glass novel, substantially as described.

6. The method of drawing hollow glass articles from a bath of molten glass, which consists in using a hollow bait having an opening at one end and having a re-entrant flange surrounding said opening, said flange having a substantially vertical article-engaging wall, and heating said bait before it is withdrawn from the glass bath to a temperature below that at which the glass will fuse thereto and which is sufficiently high to cause the radial contraction of the bait during the draw to be substantially equal to that of the glass novel, substantially as described.

1,301,772. CUTTER FOR PENCIL-SHARPENERS. ALLEN P. WILSON, Weston, Mass., assignor to Boston Pencil Pointer Company, Waltham, Mass., a Corporation of Massachusetts. Filed Aug. 23, 1917. Serial No. 187,799. 12 Claims. (Cl. 120—96.)



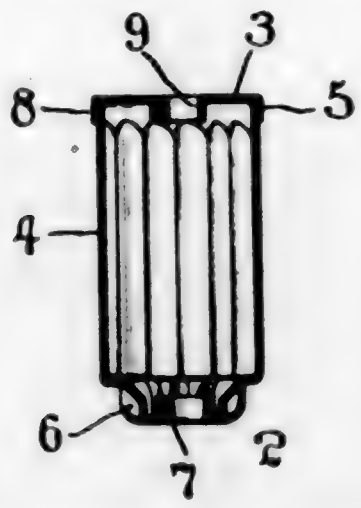
1. A cutter for pencil sharpeners comprising a tube having its side walls distorted to form one or more exterior pencil sharpening ribs of greater length than width, each rib being imperforate along its outer edge.

2. A cutter for pencil sharpeners comprising a tube having a gear and a shaft bearing at one end thereof and a second shaft bearing at the opposite end, the side walls of the tube being distorted to form one or more pencil sharpening ribs of greater length than width.

8. A cutter for pencil sharpeners comprising a tube having one end developed into a driving element, the side walls of the tube being distorted but unbroken to form one or more exterior pencil sharpening ribs of greater length than width.

11. A cutter for pencil sharpeners comprising a tube having one end developed into a driving element and a shaft bearing, the side walls of the tube being distorted to form one or more exterior pencil sharpening ribs of greater length than width, and a member fitted to the other end of the tube developed into a second shaft bearing.

1,301,773. CUTTER FOR PENCIL-SHARPENERS. ALLEN P. WILSON, Weston, Mass., assignor to Boston Pencil Pointer Company, Waltham, Mass., a Corporation of Massachusetts. Filed Aug. 23, 1917. Serial No. 187,800. 8 Claims. (Cl. 120—96.)



1. A cutter for pencil sharpeners comprising a tube having its side walls distorted but unbroken to form one or more straight exterior pencil sharpening ribs of greater length than width.

3. A cutter for pencil sharpeners comprising a tube having one end developed into a gear, the side walls of the tube being distorted to form one or more straight exterior pencil sharpening ribs of greater length than width.

5. A cutter for pencil sharpeners comprising a tube having one end developed into a shaft bearing, the side walls of the tube being distorted to form one or more straight exterior pencil sharpening ribs of greater length than width and a member fitted to the other end of the tube developed into a second shaft bearing.

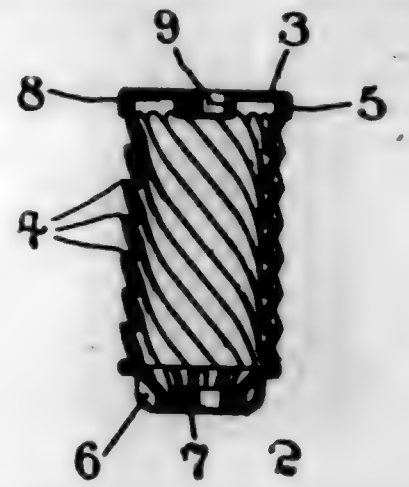
7. A cutter for pencil sharpeners comprising a tube having one end developed into a gear and a shaft bearing, the side walls of the tube being distorted to form one or more straight exterior ribs of greater length than width for sharpening the pencil and a member fitted to the other end of the tube developed into a second shaft bearing.

1,301,774. METHOD OF PRODUCING CUTTERS FOR PENCIL-SHARPENERS. ALLEN P. WILSON, Weston, Mass., assignor to Boston Pencil Pointer Company, Waltham, Mass., a Corporation of Massachusetts. Original application filed Aug. 23, 1917, Serial No. 187,799. Divided and this application filed July 2, 1918. Serial No. 243,073. 16 Claims. (Cl. 120—96.)

1. The method of producing cutters for pencil sharpeners comprising distorting the side walls of a tube to form one or more exterior pencil sharpening ribs of greater length than width without perforating the outer edges of the ribs.

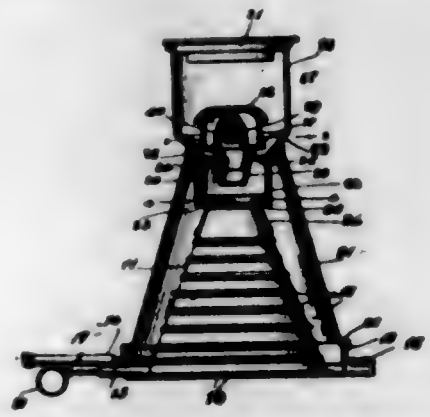
8. The method of producing cutters for pencil sharpeners comprising distorting the side walls of a tube to form one or more exterior ribs of greater length than width without perforating the outer edges of the ribs and sharpening said ribs.

10. The method of producing cutters for pencil sharpeners comprising developing a tube at one end into a driving element and a shaft bearing, distorting the side walls of the tube to form one or more exterior ribs of greater length



than width, developing a member into a second shaft bearing and applying it to the other end of the tube and sharpening said ribs.

1,301,775. MILK STRAINER AND COOLER. GEORGE A. WILSON, Louisville, N. Y. Filed Sept. 6, 1916, Serial No. 119,057. Renewed Feb. 21, 1919. Serial No. 278,514. 3 Claims. (Cl. 257—180.)



1. In a milk cooler, a bottom plate, a frusto-conical body supported on said bottom plate, inlet and overflow pipes connected with said hollow body, a flexible member extending through said overflow pipe and into said hollow body, and an agitator connected with the inner end of said flexible member.

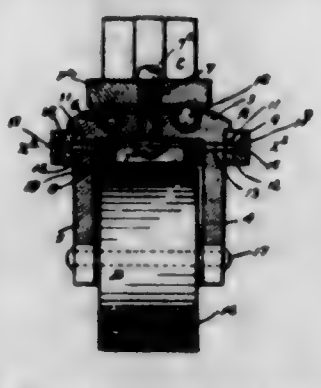
1,301,776. SHOE HOLDER AND STRETCHER. PATRICK F. WOODS, Buffalo, N. Y. Filed Sept. 2, 1916. Serial No. 118,231. 12 Claims. (Cl. 12—181.)



1. A shoe holder and stretcher comprising a frame, side pieces arranged longitudinally at the sides of said frame, a clamping plate arranged on said frame and longitudi-

sally adjustable thereon and provided with an upwardly extending post, a supporting plate loosely mounted on said post and provided with a longitudinal guide, a compression spring adapted to press said supporting plate upwardly relatively to the frame, a sliding block arranged in the guide of said supporting plate, links pivotally connected at their inner end to said block and at their outer ends to the side pieces, means for adjusting said block relatively to said supporting plate, and means for causing said links to diverge more or less when the block is moved longitudinally on the supporting plate.

1,301,777. CASTER. JOHN SIMON YOUNG, EDWARD W. YOUNG, and JOHN L. SCHEUCHER, Los Angeles, Calif. Filed Mar. 27, 1917. Serial No. 157,758. 1 Claim. (Cl. 16—72.)



A caster including a yoke member formed with annular side walls and a top having an annular raceway therein, anti-friction balls loose within the raceway; a pivot pin extending upwardly from the top at the center of the raceway, integral furcations projecting downwardly from opposite sides of the yoke, a roller journaled between the furcations, and a buffer ring extending around the annular side walls of the yoke and projecting on all sides beyond the roller and yoke.

1,301,778. UPHOLSTERY BACK-SPRING CONSTRUCTION. LEONARD A. YOUNG, Detroit, Mich. Filed Mar. 3, 1919. Serial No. 280,249. 6 Claims. (Cl. 155—25.)



1. In back spring construction, a back, upright arches connected to the back at the lower portions and provided with abutments depending from inrolled and crowned upper portions of the arches on which the arches rock when the abutments contact with the back, flexible upholstered fabric on the arches attached to the back and adapted to limit the outward movement of the arches and body springs normally holding the arches in spaced relation to the back.

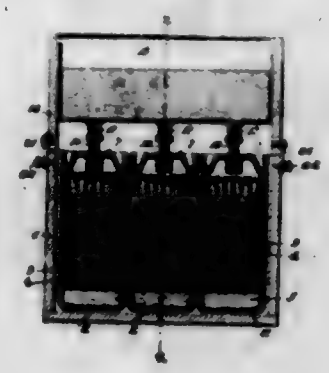
1,301,779. CLOSET-SEAT GUARD. WILLIAM STEELE YOUNG, London, England. Filed Aug. 26, 1915. Serial No. 47,223. 1 Claim. (Cl. 4—18.)

A closet seat guard comprising in combination a base made to conform to an annulus-like closet seat and having a plurality of slots in it and strips of flexible material the ends of which project from the slots on the underside of said base and are adapted to embrace the margin of



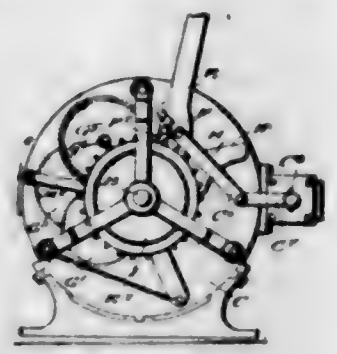
said seat and a pad or block of superimposed adhering separable paper sheets secured to said base, substantially as described.

1,301,780. STORAGE BATTERY. JOHN L. LOTSCH, Brooklyn, N. Y. Filed Aug. 14, 1918. Serial No. 249,787. 10 Claims. (Cl. 204—29.)



1. A battery, comprising a non-transparent jar, adapted to contain a liquid, an opening in one side of said jar, a transparent panel fitted in said opening, and a well fixed to and carried by said panel and projecting into and communicating with the interior of the jar, and a hydrometer in said well exposed to view through said panel and opening.

1,301,781. METER-ACTUATED CUT-OFF DEVICE. NORMAN ANDERSON, Duluth, Minn. Filed Jan. 25, 1916. Serial No. 74,226. 12 Claims. (Cl. 221—101.)

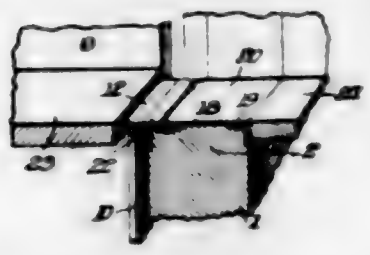


1. In a liquid metering machine, the combination of a motor operable by liquid pressure, a valve to control the flow of liquid through the motor, so that when the valve is closed the motor will stop, mechanism for connection with a source of power to operate said motor as a pump, having a clutch to control the transmission of power to the pump, and means to predetermine the quantity of liquid which it is desired to have pass through the machine and to automatically open said clutch and close said valve, whereby the machine whether operating as a motor or a pump is automatically stopped after the passage of the predetermined quantity of liquid.

6. In a meter and automatic cut-off machine, a rotary fluid motor, mechanism including a clutch to operate the motor as a pump, a valve, a lever connected to control said valve and also said clutch, a catch to hold said lever

in position to hold the valve open and the clutch closed, a rotary device which rotates continuously while the machine is in operation and which serves automatically to release said catch after a predetermined quantity of fluid has passed through said motor, gearing to connect said motor with said device so that said device will rotate more slowly than the motor, and a spring to automatically restore said lever and valve and clutch to the inoperative position thereof when the catch is released.

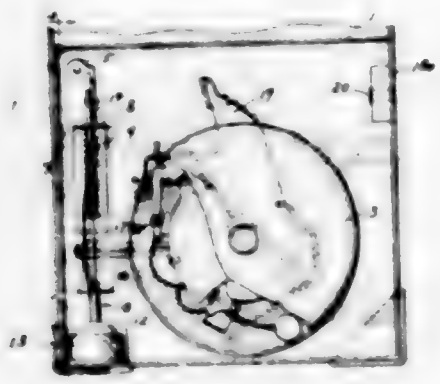
1,301,782. FIRE-DOOR. WALTER H. BARRY, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,481. 5 Claims. (Cl. 189—48.)



1. In combination a wall having a doorway therethrough, said doorway having a sill, vertical guides at the sides of said doorway and a rigid door movable in said guides in front of said doorway, said door having a horizontal flange at the upper end substantially along the full width thereof, adapted to engage the edge of said sill the sill having a sunken space at its edge to receive said horizontal flange.

2. In combination a wall having a doorway therethrough, said doorway having a sill, a door movable in front of said doorway in a vertical direction, said door having a horizontal flange at its upper end along substantially the full width thereof, said flange being adapted to engage said sill, a metal plate lying on said sill, said plate being cut away adjacent the edge of the sill to permit the flange to lie flush with the plate and an angle member at the edge of the sill upon which said flange is adapted to rest when the door is open.

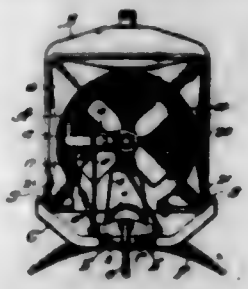
1,301,788. ALARM MECHANISM. JAMES M. BUTCHER, Chicago, Ill. Filed Oct. 10, 1916. Serial No. 125,791. Renewed Jan. 31, 1919. Serial No. 274,360. 12 Claims. (Cl. 116—44.)



11. The combination with an alarm mechanism, of a carrier for the same, a lever pivoted on the carrier for releasing the alarm mechanism, a guide fast upon the carrier, a revoluble element carried by the carrier and adapted to project beyond a surface of the latter, and means controlled by the position of the revoluble element for moving the said lever; said means including a member slidably mounted on the guide and continuously engaging the lever, a pendulum carried by said element and engaging the revoluble element, and a spring interposed between the guide and the said member and normally pressing the latter and the pendulum respectively against the lever and the revoluble element.

1,301,794. AUXILIARY ENGINE-COOLING MEANS. ADDISON N. CALKINS, Quincy, Ill., assignor to Electric Wheel Company, Quincy, Ill., a Corporation of Illinois. Filed Oct. 26, 1917. Serial No. 198,588. 8 Claims. (Cl. 123—171.)

1. A motor vehicle having, in combination, an engine shaft, a radiator located in a plane above said shaft, a base, a rear bearing on said base, a shaft mounted in said bearing and connected to the end of the engine shaft, a pulley on said shaft, a fan supported by the base and driven by the second mentioned shaft, said fan being



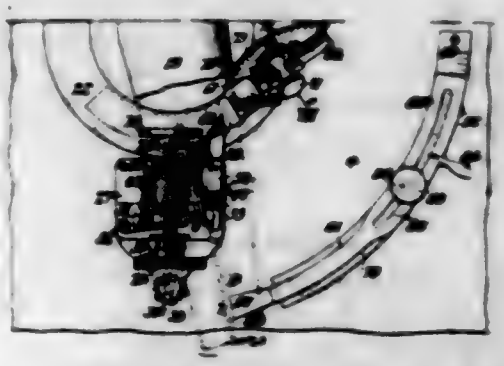
located directly in front of said radiator, a front bearing on said base, a starting crank rotatably mounted in said front bearing, and means on the front end of the second mentioned shaft for engagement by said starting crank.

1,301,785. SULFONATION OF HYDROCARBONS. CHARLES R. DOWNS, Cliffside, N. J., assignor to the Barrett Company, a Corporation of New Jersey. Filed May 13, 1918. Serial No. 234,208. 14 Claims. (Cl. 23—24.)



1. The process of recovering a sulfonic acid which comprises the steps of subjecting a mixture of the sulfonic acid and sulfuric acid to a high vacuum and a temperature below that at which the sulfonic acid decomposes sufficient to distil sulfuric acid therefrom.

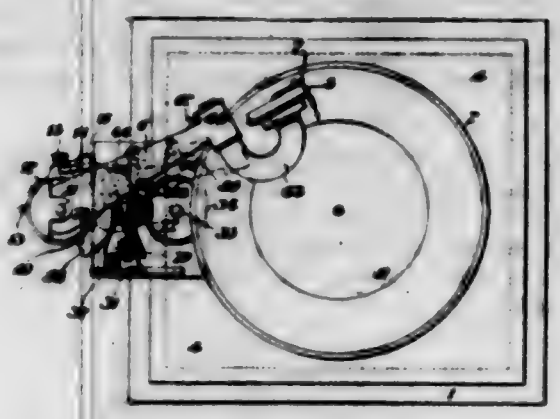
1,301,786. TALKING-MACHINE. EDWARD A. ESCHINGER, Philadelphia, Pa., assignor of one-half to Joel G. Clemmer, Philadelphia, Pa. Filed Mar. 20, 1918. Serial No. 223,525. 19 Claims. (Cl. 274—15.)



1. In a sound reproducing machine; the combination with a casing; of a motor arranged to turn a sound

record table on said casing; an arm carrying a sound box arranged to cooperate with a sound record on said table; an initial stop device, including a base fixed with respect to said casing, and a slide bar on said base, limiting the initial position of said arm at the outer limit of its movement with respect to the axis of said table; a terminal stop device, including a gear and gear rack slide bar, both journaled on said arm and limiting the terminal position of said arm at the inner limit of its movement toward the axis of said table; means arranged to raise said box and arm from said terminal position, shift them away from the axis of said table, and lower them to their initial position, including a cam revoluble on a horizontal axis; driving mechanism for said cam; gearing arranged to connect said motor and driving mechanism; a lever detent for said driving mechanism, fulcrumed on said casing, normally preventing rotation of said cam, but arranged to be encountered by said gear rack bar, whereby movement of the latter, caused by movement of said arm toward its terminal position, releases said detent and permits said driving mechanism to operate to return said arm and box to their initial position.

1,301,787. TALKING-MACHINE. EDWARD A. EECHIN-OZA, Philadelphia, Pa., assignor of one-half to Joel G. Clemmer, Philadelphia, Pa. Original application filed June 16, 1917, Serial No. 175,082. Divided and this application filed May 6, 1918. Serial No. 232,966. 7 Claims. (Cl. 274—15.)



1. In automatic feed mechanism for talking machine sound boxes; the combination with a sound record turn table; of a motor arranged to turn said table; a sound box including a vibratory diaphragm; means pivotally supporting said box for oscillation toward and away from the axis of said turn table; a stylus carried by said box, arranged to traverse a groove in a record on said table; a terminal stop member limiting the movement of said box toward the axis of said table; means arranged to raise said box from said terminal position, shift it away from the axis of said table, and lower it to its initial position, including a rotary cam; driving mechanism for said cam; means including a detent for said driving mechanism, normally preventing rotation of said cam; and means operatively connecting said detent and terminal stop member, whereby movement of the latter caused by movement of said box, toward its terminal position, releases said detent and permits said driving mechanism to operate to return said box to its initial position.

1,301,788. DIE-CASTING MACHINE. PHILIP E. GARNER, Detroit, Mich. Filed Oct. 25, 1916. Serial No. 127,349. Renewed Mar. 7, 1919. Serial No. 281,278. 4 Claims. (Cl. 29—87.)

4. In a casting machine, the combination of horizontally-extending guides, a table member movable longitudinally of said guides, a die or mold comprising vertically separable parts, one of said parts mounted on said

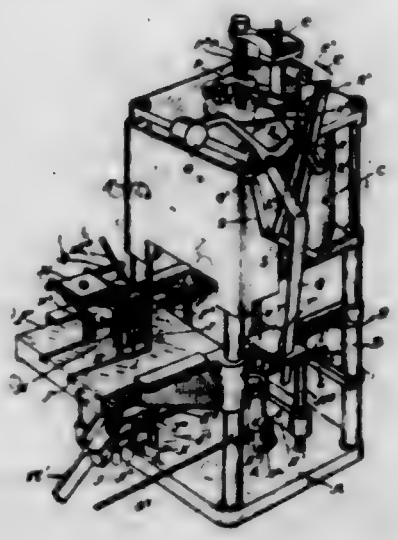
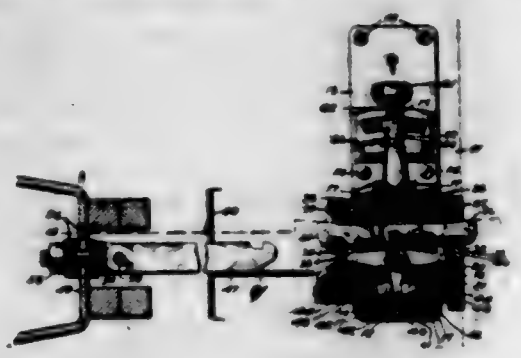


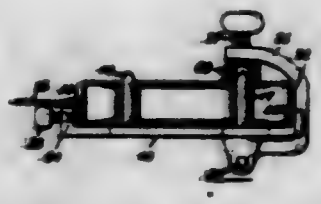
table member, and means for separating said parts at a predetermined time of movement of said table member upon said guides.

1,301,789. LOCK MECHANISM FOR SLIDING DOORS. FRANK E. HOWARD and CHARLES P. HOWARD, Hartford, Conn., assignors to James L. Howard & Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 2, 1910. Serial No. 575,116. 36 Claims. (Cl. 70—31.)



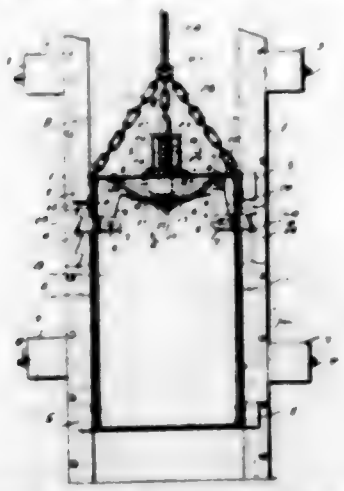
8. The combination, in door latch mechanisms, of reversely disposed spring actuated latches and keepers, an oscillatable spindle for retracting the said latches independently, a handle for operating said spindle and locking means independent of said handle and operated by movement of the handle for retaining the spindle at either of the positions at which the respective latches are retracted.

1,301,790. MANUFACTURE OF HOLLOW METALLIC DOORS. FRANK E. HOWARD, Hartford, Conn., assignor to James L. Howard & Company, Hartford, Conn., a Corporation of Connecticut. Filed July 25, 1914. Serial No. 853,119. 7 Claims. (Cl. 29—89.)



1. Apparatus for locating interior members in hollow structures, having gaging means for locating the apparatus upon the structure and having projections adapted to extend within the hollow structure to support the said interior members in a definite position therein.

1,301,791. SAFETY-ELEVATOR. THOMAS W. JONES, Bicknell, Ind. Filed Nov. 2, 1918. Serial No. 260,891. 1 Claim. (Cl. 187—84.)



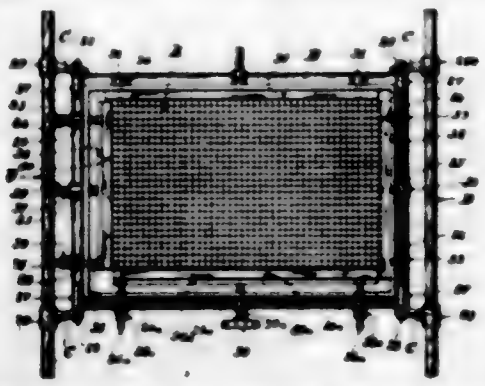
The combination with spaced guide rails provided with upwardly and inwardly inclined teeth, of a cage slidable between said rails, a lifting cable secured to said cage for raising and lowering the same, bell crank levers rockably mounted within the cage, locking members projecting through the side walls of said cage and connected to the outer arms of the bell crank levers so as to be moved outwardly into position for engagement with the teeth of the rails when the inner arms of the bell cranks are depressed, a plunger slidable through the top of the cage and connected at its upper end to said cable so as to be raised thereby when the cable is tensioned, a connecting pin inserted through said plunger adjacent the lower end thereof, blocks secured on the ends of the pin at opposite sides of and equidistant from the plunger, and bow spring carried by said blocks and pressing against the top of the cage so as to force the plunger downwardly, said connecting pin being inserted through the inner ends of the inner arms of the bell crank levers and said arms being longitudinally slotted to receive said pin.

1,301,792. NECKTIE-HOLDER. WALLIE LINKOWSKI, Detroit, Mich. Filed Aug. 10, 1918. Serial No. 249,294. 3 Claims. (Cl. 24—56.)



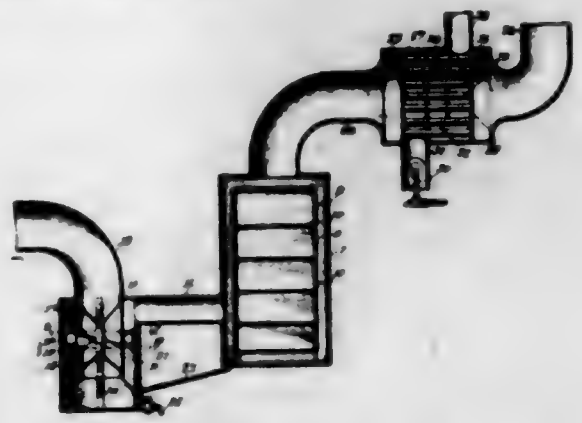
1. As a new article of manufacture, a neck tie holder having a lower tie receiving loop, an upper frame for the connection of tie parts, button engaging portions disposed in said frame and connected thereto and also connected to the lower loop, and collar engaging means extending from the upper portion of the upper frame.

1,301,793. CLAMPING-FRAME FOR RADIATOR-CORES. CHARLES F. SPERY, Chicago, Ill., assignor to Hooven Radiator Co., Chicago, Ill., a Corporation of Oklahoma. Filed Oct. 1, 1918. Serial No. 256,484. 4 Claims. (Cl. 113—59.)



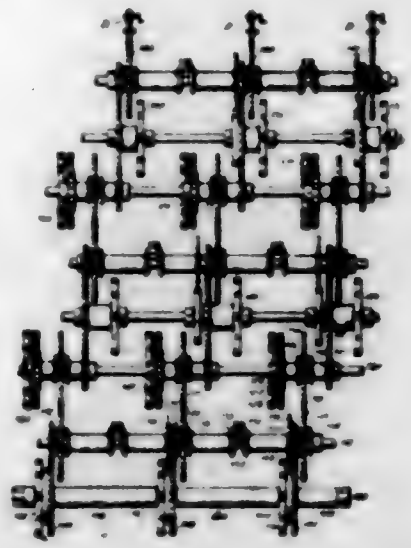
1. A dipping frame for radiator cores, comprising a metallic substantially rectangular frame, means in said frame for compressing said core, including bars, set-screws for moving said bars, screw-rods having adjusting nuts for limiting the movement of said bars, links at the corners of said frame, and rods in said links by which said frame may be handled and suspended.

1,301,794. COOLING SYSTEM. CHESTER ROWELL SUTTON, Tucson, Ariz., assignor to Perfection Cooling and Ventilating Company, Tucson, Ariz., a Corporation of Arizona. Filed Nov. 19, 1917. Serial No. 202,705. 8 Claims. (Cl. 62—189.)



1. In a cooling appliance of the character described, the combination of a humidifying chamber, a conduit in said chamber open to the outer atmosphere and spaced away from its wall, a fan in said chamber, and means to drive said fan and supply moisture to the current of air, whereby the air traverses said conduit and the space between the walls of said conduit and said chamber and becomes cooled and humidified, substantially as described.

1,301,795. ACCOUNTING MECHANISM. CHARLES H. TALLMADGE, Buffalo, N. Y., assignor to William R. Heath, Buffalo, N. Y. Original application filed Oct. 10, 1913, Serial No. 794,426. Divided and this application filed July 14, 1916. Serial No. 109,222. 15 Claims. (Cl. 235—61.)



1. In combination three registers one of which is arranged to indicate the difference between the indications of the other two, together with means for effecting digitation in any order of either of the two registers last mentioned and a plurality of differential gear sets, corresponding order sets of all of said registers being connected with different elements of the same differential gear set.

8. In combination three registers, means for connecting each order of one of the registers with the corresponding orders of the other two, and means for effecting digitation in any order of either of the two registers last mentioned.

10. In an accounting system a plurality of registers adapted to indicate the magnitude of different generic and

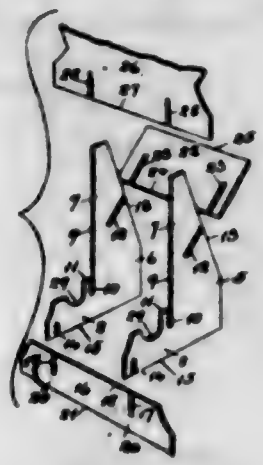
specific accounts or items, the several orders of each register assigned to a specific account or item being connected with a corresponding order of a register assigned to a more generic account or item, and differential carrying mechanism for the registers assigned to more generic accounts or items as aforesaid.

15. The combination with a pair of registers of a third register, means for permanently connecting each order of the first register with each of the corresponding orders of the third register, and means for effecting digitation in one of the pair of registers without actuating the other of said pair of registers.

1,301,796. PROCESS OF PURIFYING CARBAZOL. JOHN M. WEISS, New York, N. Y., assignor to The Barrett Company, a Corporation of New Jersey. Filed Oct. 25, 1918. Serial No. 259,708. 6 Claims. (Cl. 23—24.)

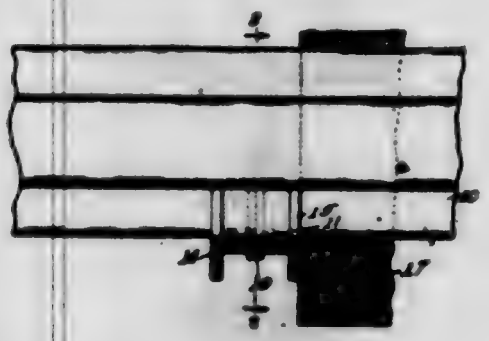
1. The herein described process, which comprises adding sufficient concentrated sulfuric acid at normal temperature to mixtures containing carbazol to dissolve the carbazol and sulfonate other constituents of the mixture, and adding sufficient water to cause carbazol to be precipitated.

1,301,797. KNOCKDOWN DISPLAY-RACK. OSCAR G. ZIBOLEN, Halethorpe, Md., assignor to A. Hoen & Company, Baltimore, Md., a Firm. Filed Jan. 21, 1919. Serial No. 272,259. 4 Claims. (Cl. 211—24.)



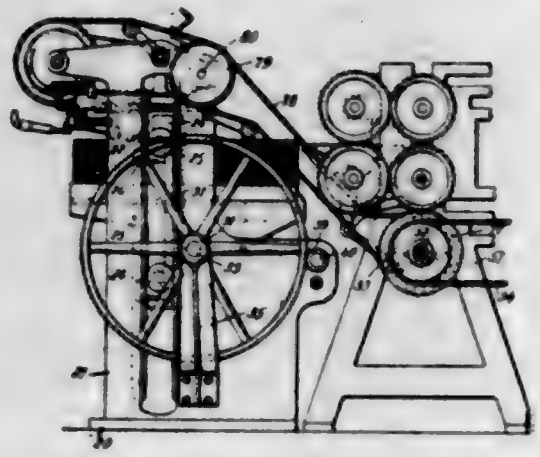
1. In a display rack the combination with two separate upright supports, of a detachable front bar connecting said supports at the lower front portion of the latter and holding the same spaced apart; a separate rear plate detachably connecting the upper portion of said supports at the rear, and a detachable upright partition plate sustained by the supports between the lower front bar and the upper rear plate.

1,301,798. RAIL-ANCHOR. LAURENCE J. BERKELEY, Racine, Wis., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed July 30, 1918. Serial No. 247,402. 18 Claims. (Cl. 238—4.)



1. In an anti-creeping device, the combination of a recessed member adapted to engage the base flange of a rail, said member having a key-way arranged transversely of the rail, an angular key adapted to be driven into said key-way, and means in the key-way for deforming the key to force an edge thereof into biting engagement with the rail.

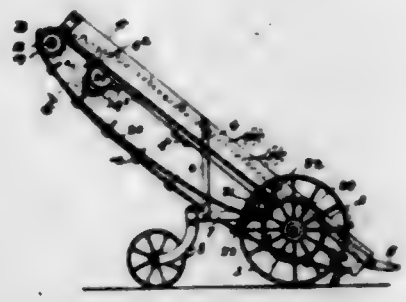
1,301,799. AUTOMATIC SHEET-FEEDING MECHANISM. FREDERICK M. CONRAN, Elizabeth, N. J., assignor to The Metals Plating Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 31, 1917. Serial No. 199,416. 17 Claims. (Cl. 271—28.)



1. In sheet feeding mechanism, the combination of means for bending the entire rear edge portion of the topmost sheet of a stack of sheets above the plane of the sheet, means for lifting said first-named means to elevate the bent rear edge of the topmost sheet, together with the adjacent portions of the sheet, above the underlying sheet, means for supplying a separating fluid beneath the elevated part of the topmost sheet, means engaging the rear edge of the topmost sheet when in elevated position to carry the sheet off of the top of the stack of sheets, and means for operating the bending means, the lifting means, the fluid means, and the carrying means in timed relation to each other.

REISSUES.

14,638. VEGETABLE-LOADER. BARTHOLOMEW O. CUDDIGAN, Wadena, Minn., assignor of one-third to W. H. Gehr, Wadena, Minn. Original No. 1,273,040, dated July 16, 1918, Serial No. 218,856, filed Feb. 23, 1918. Application for reissue filed Dec. 11, 1918. Serial No. 266,806. 7 Claims. (Cl. 130—22.)



1. In a potato loading machine, a suitably inclined elevator frame mounted on ground wheels, a series of longitudinally arranged parallel bars extending from the lower end to the upper end of the frame, fixed upward fingers at the lower ends of the parallel bars, an endless skeleton carrier apron arranged in the elevator frame with one rim above and the other below the series of parallel bars and operative connection between the apron and the ground wheels, fingers secured to said carrier

apron and arranged to pass between the fixed fingers and move upward along the upper side of the parallel bars and a laterally inclined chute arranged to convey the potatoes from the upper end of the frame.

2. In a potato loading machine having a rearwardly inclined wheel supported elevator frame, a skeleton bottom mounted within the frame and means for elevating potatoes upwardly along said bottom to a delivery chute near the top of the frame, fixed fingers arranged near the lower end of the skeleton bottom adapted to prevent the downward escape of potatoes.

3. A potato loading machine comprising a rearwardly inclined wheel supported elevator frame, a transversely arranged potato chute mounted under the rear end of the frame, a series of longitudinal parallel bars extending from near the front end of the frame to the potato chute and means for elevating potatoes upwardly along the parallel bars to said potato chute, special bars bridging the chute to prevent objects other than potatoes from dropping thereinto.

4. In a vegetable loading machine, an inclined elevator frame, a skeleton bottom therefor, a carrier within the frame arranged to travel upwardly above the skeleton bottom and with a space between, means beneath the carrier for preventing vegetables dropping below the lower end of the skeleton bottom and means depending from said carrier adapted to engage the vegetables and to carry them upwardly to a point of discharge, substantially as described.

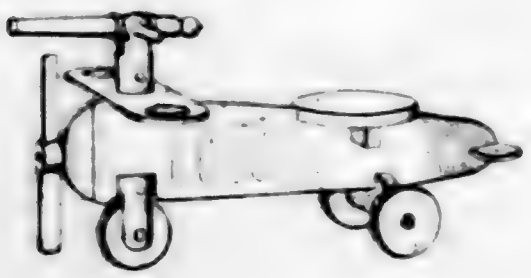
5. In a vegetable loading machine, an inclined supporting frame, a skeleton bottom therein, a traveling carrier with a space between it and the skeleton bottom adapted to carry vines upon its upper surface and to allow the vegetables to drop through the skeleton bottom, said bottom preventing the downwardly escape of the vegetables and means on the carrier for elevating the vegetables to the point of discharge, substantially as described.

6. In a vegetable loading machine, the combination with an elevator frame, carrier means for separating and elevating the vines and vegetables upwardly, delivery means at the upper end of the frame and means beneath the carrier for preventing the downward escape of the vegetables below the frame.

7. In a vegetable loading machine, an inclined frame, a skeleton bottom therefor, an endless carrier traveling in its upward movement above the skeleton bottom with a space between, the carrier being adapted to receive the vines on its upper surface and to allow the vegetables to drop through to the skeleton bottom and means on the carrier for elevating the vegetables along the skeleton bottom.

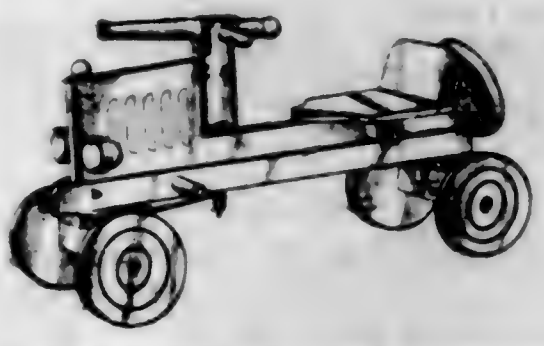
DESIGNS.

53,214. TOY AEROPLANE. CLARENCE W. BENNETT, New York, N. Y., assignor to Arden Manufacturing Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1919. Serial No. 271,926. Term of patent 3½ years.



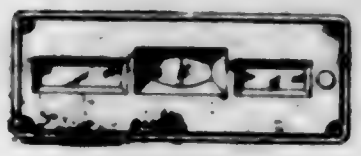
The ornamental design for a toy aeroplane, as shown.

53,215. TOY AUTOMOBILE. CLARENCE W. BENNETT, New York, N. Y., assignor to Arden Manufacturing Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1919. Serial No. 271,927. Term of patent 3½ years.



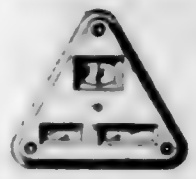
The ornamental design for a toy automobile, as shown.

53,216. SPEEDOMETER FACE-PLATE. JOSEPH BANCA, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Jan. 6, 1919. Serial No. 269,949. Term of patent 14 years.



The ornamental design for a speedometer face plate as shown.

53,217. SPEEDOMETER FACE-PLATE. JOSEPH BANCA, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Jan. 6, 1919. Serial No. 269,950. Term of patent 14 years.



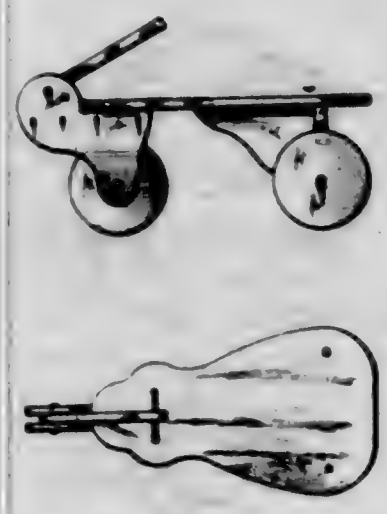
The ornamental design for a speedometer face plate, as shown.

53,218. LAMP. ALBERT BOSSELMAN, Meriden, Conn., assignor to Edward Miller & Co., Meriden, Conn., a Corporation of Connecticut. Filed Feb. 24, 1919. Serial No. 278,984. Term of patent 3½ years.



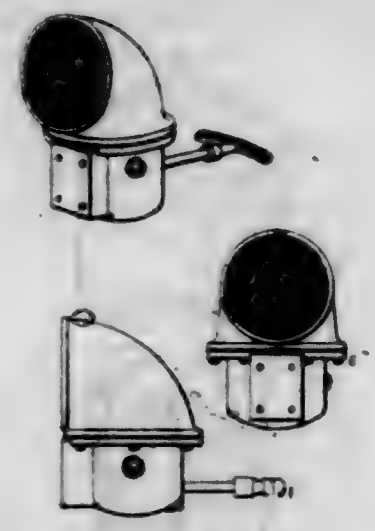
The ornamental design for a lamp, substantially as shown.

58,219. TOY CAR. OTTO M. BRAUER, Gothenburg, Nebr. Filed Feb. 8, 1919. Serial No. 274,811. Term of patent 7 years.



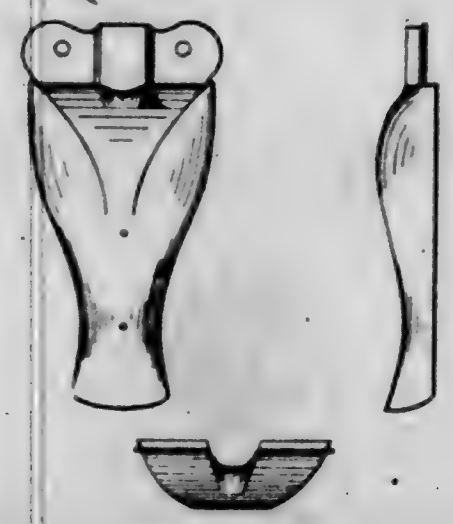
The ornamental design for a toy car as shown.

58,220. SIGNAL-HORN. JOHN E. GENN, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Aug. 21, 1918. Serial No. 250,286. Term of patent 3½ years.



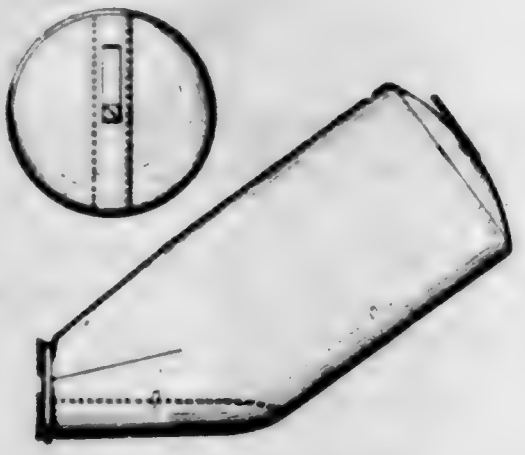
The ornamental design for a signal horn as shown.

58,221. STOVE-FOOT. FREDERICK A. GERICKE, Oakland, Calif. Filed June 8, 1918. Serial No. 239,060. Term of patent 14 years.



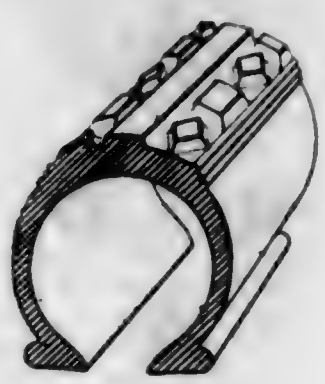
The ornamental design for a stove foot, as shown.

58,222. BAG FOR SUCTION-SWEEPERS. HOWARD EARL HOOVER, Chicago, Ill., assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed June 3, 1918. Serial No. 238,056. Term of patent 14 years.



The ornamental design for a bag for suction sweepers as shown.

58,223. TIRE. ERNEST HOPKINSON, New York, N. Y. Filed Feb. 11, 1919. Serial No. 276,441. Term of patent 14 years.



The ornamental design for a tire as shown.

58,224. LAMP. ANGUS S. MACDONALD, Great Neck Station, N. Y., assignor to The Snead & Co. Iron Works, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 6, 1919. Serial No. 281,096. Term of patent 7 years.



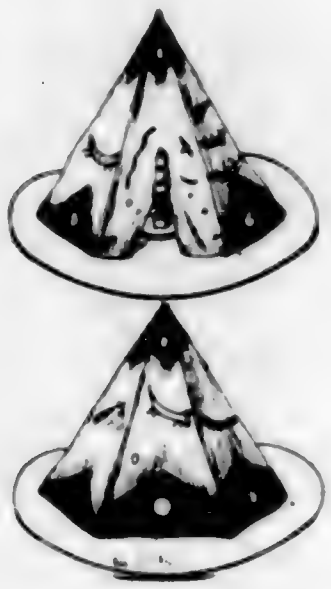
The ornamental design for a lamp, as shown.

53,225. LAMP. ANGUS S. MACDONALD, Great Neck Station, and ALFRED W. PARSSEY, New York, N. Y., assignors to The Snead & Co. Iron Works, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 14, 1919. Serial No. 282,754. Term of patent 7 years.



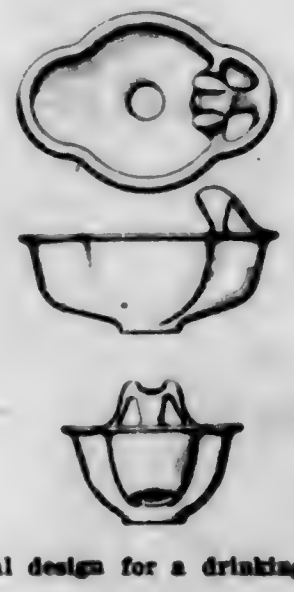
The ornamental design for a lamp as shown and described.

53,226. INCENSE-BURNER. ERNEST A. F. SCOTT, Pasadena, Calif. Filed Jan. 14, 1919. Serial No. 271,150. Term of patent 3½ years.



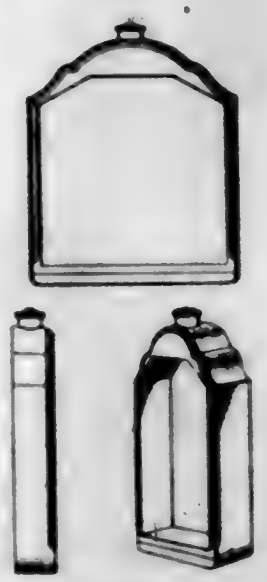
The ornamental design for an incense burner, as shown.

53,227. DRINKING-FOUNTAIN BOWL. HALSEY W. TAYLOR, Warren, Ohio. Filed Feb. 15, 1919. Serial No. 277,367. Term of patent 14 years.



The ornamental design for a drinking fountain bowl, as shown.

53,228. RADIATOR-FRAME FOR AUTOMOBILES AND OTHER VEHICLES. JAMES R. WAY, Buffalo, N. Y., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Filed Jan. 8, 1919. Serial No. 270,215. Term of patent 14 years.



The ornamental design for a radiator frame for automobiles and other vehicles, substantially as shown.

TRADE-MARKS

OFFICIAL GAZETTE, APRIL 22, 1919.

[PUBLISHED MAY 7, 1918.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 90,656. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MUSIC MASTER CO., Sturgis, Mich. Filed Nov. 15, 1915.

MUSIC MASTER.

Particular description of goods.—Cabinet-Phonographs.
Claims use since on or about Nov. 1, 1915.

Ser. No. 98,524. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) PACIFIC SANITARY MANUFACTURING COMPANY, San Francisco, Calif. Filed Oct. 9, 1916.



Particular description of goods.—Bath-Tubs, Shower-Bath Receptors, Lavatories, Sanitary Drinking-Fountains, Toilets, Flush-Tanks, Urinals, Lavatory-Basins, and Sinks.
Claims use since June 1, 1912.

Ser. No. 96,788. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE POLK SANITARY MILK CO., Indianapolis, Ind. Filed Oct. 20, 1916.



Particular description of goods.—Sweet Milk, Sour Milk, Buttermilk, Cream.
Claims use since May, 1904.

Ser. No. 100,067. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FAWCETT & FAWCETT, Brooklyn, N. Y. Filed Jan. 17, 1917.



Particular description of goods.—Dental Cements, Dental Alloys, Dental Gold, Dental-Instrument Sterilizers, Dental Vulcanizers, Dental Air-Compressors, Dental Instruments, Dental Modeling Compound, Dental Rubber, Hypodermic Needles, and Artificial Teeth.
Claims use since Feb. 25, 1915.

Ser. No. 105,540. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRED CLARKE, Arctic, R. I. Filed Aug. 8, 1917.

WARWICK CLUB

Particular description of goods.—Ginger-Ale, Sarsaparilla, Orangeade, and Birch Made from Highly-Carbonated Water Sweetened with Can-Sugar and Flavored with Oil of Sweet Birch.
Claims use since May 1, 1916.

Ser. No. 106,780. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ESTELLE ALLISON, New York, N. Y. Filed Feb. 4, 1918.

FANIE

Particular description of goods.—Dolls.
Claims use since June 1, 1916.

Ser. No. 108,932. (CLASS 17. TOBACCO PRODUCTS.) E. M. SCHWARZ & CO. INC., New York, N. Y. Filed Feb. 9, 1918.

MOZART



The portrait shown being that of the famous dead composer Mozart.

Particular description of goods.—Cigars, Cheroots, and Little Cigars.

Claims use since Mar. 9, 1912.

Ser. No. 109,062. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

VERNALEUR

The word "Vernaleur."

Particular description of goods.—Watches, Clocks, Watchcases, Clock-Cases, Watch-Dials, and Clock-Dials.

Claims use since Jan. 5, 1918.

Ser. No. 109,090. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE CELLULOID COMPANY, New York, N. Y. Filed Feb. 18, 1918.

AMBERLEUR

The word "Amberleur."

Particular description of goods.—Watches, Clocks, Watchcases, Clock-Cases, Watch-Dials, and Clock-Dials.

Claims use since Jan. 5, 1918.

Ser. No. 109,193. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CENTRAL STEEL & WIRE COMPANY, Chicago, Ill. Filed Feb. 25, 1918.

HYFLUX

Particular description of goods.—Special-Alloy Magnet Steel.

Claims use since Feb. 1, 1911.

Ser. No. 109,619. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AUTOMOBILE ACCESSORIES CO., Baltimore, Md. Filed Mar. 16, 1918.

SUPERSEAL

No claim being made to the word "Seal" apart from the mark shown in the drawing.

Particular description of goods.—Piston-Rings.

Claims use since Jan. 1, 1918.

Ser. No. 109,631. (CLASS 39. CLOTHING.) THE PHOENIX RUBBER CO., Akron, Ohio. Filed Mar. 18, 1918.



PHOENIXHIDE

Particular description of goods.—Finished Vulcanized Boots and Shoes and Soles and Heels for Boots and Shoes.

Claims use since Feb. 28, 1918.

Ser. No. 110,106. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) LYON METALLIC MANUFACTURING COMPANY, Montgomery, Ill. Filed Apr. 10, 1918.

LYON

Particular description of goods.—Metal Shelving and Metal Storage-Racks and Parts Thereof—Namely, Metal Panels and Metal Partitions.

Claims use since about the 1st day of December, 1913.

Ser. No. 110,346. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HEALEY & CO., New York, N. Y. Filed Apr. 20, 1918.

Healey & Co.

Consisting of the words and character "Healey & Co.," written in the handwriting of General Warren M. Healey, the president of the said corporation and the founder of the business.

Particular description of goods.—Horse-Drawn Vehicles—viz., One-Man Speed-Wagons with and without Tops, Physicians' Phaetons with Tops; Ladies' Driving-Phaetons with and without Rumble-Seat—*i. e.*, Seat at the Rear for Servant; Four-Passenger Phaeton with and without Tops, Extension-Top Phaeton, One-Half-Leather-Top Phaeton; Cabriolets, One Horse and Two Horse, with Leather Top; Victoria; Grand Victoria—*i. e.*, on Plain Spring and Double Suspension; Wagonettes—*i. e.*, with Side Seat, Rear-Door Entrance; Brakes for Breaking in Young Horses; Landaus, All-Leather-Top Glass-Front Landau with Glass in Front Quarter; Electric Vehicles—viz., Electric Broughams; Electric Landaulet—*i. e.*, Brougham for Two on Interior; Landaulet with Folding Top or Four on Interior, Top Outside Seat for Footman, all for Pleasure Purposes; Motor-Car Bodies—viz., Small Coupé for Two on Interior, Larger for Four or Five on Interior; Landaulet—*i. e.*, Same Cars with Folding Top at Rear; Collapsible—*i. e.*, Folding Top All Around; Roadsters for Two People, in Addition to the Seating of Two People Turn-Out Seat for the Seating of One or Two Persons; Touring-Car—*i. e.*, with Extension Canvas Top and Leather Top Folding Down Front or Up with Side Curtain.

Claims use since Jan. 1, 1905.

Ser. No. 110,690. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

SHELLEUR

The word "Shelleur."

Particular description of goods.—Watches, Clocks, Watchcases, Clock-Cases, Watch-Dials, and Clock-Dials.

Claims use since Jan. 5, 1918.

Ser. No. 110,691. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE CELLULOID COMPANY, New York, N. Y. Filed May 6, 1918.

EBONEUR

The word "Ebonеur."

Particular description of goods.—Watches, Clocks, Watchcases, Clock-Cases, Watch-Dials, and Clock-Dials.

Claims use since Jan. 5, 1918.

Ser. No. 110,723. (CLASS 15. OILS AND GREASES.) VACUUM OIL COMPANY, Rochester, N. Y. Filed May 6, 1918.

MOBILOIL

Particular description of goods.—Lubricating-Oils.

Claims use since May 1, 1904.

Ser. No. 111,354. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DIAMOND EXPANSION BOLT CO., New York, N. Y. Filed June 4, 1918.

DIAMOND X

Particular description of goods.—Expansion-Bolts, Expansion-Shields.

Claims use since on or about 1915.

Ser. No. 111,379. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) G. S. NICHOLAS & SON, LTD., New York, N. Y. Filed June 5, 1918. Under ten-year proviso.

BERKELEY

Particular description of goods.—Whisky.

Claims use since June, 1879.

Ser. No. 111,785. (CLASS 37. PAPER AND STATIONERY.) MINNESOTA WAX PAPER COMPANY, St. Paul, Minn. Filed June 24, 1918.

HERCULES



Particular description of goods.—Mailing-Envelops.

Claims use since December, 1917.

Ser. No. 111,966. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHRISTINE M. KERNAN, Philadelphia, Pa. Filed July 6, 1918.



Particular description of goods.—Candy.

Claims use since Oct. 28, 1913.

Ser. No. 112,035. (CLASS 37. PAPER AND STATIONERY.) JAMES MAYNARD WILLIAMSON, Pittsburgh, Pa. Filed July 10, 1918.

PUZZLETTER

Particular description of goods.—Pictorial Correspondence-Cards.

Claims use since about Apr. 15, 1918.

Ser. No. 112,157. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE WINSTED HARDWARE MFG. CO., Winsted, Conn. Filed July 15, 1918.

DUVABILT

Particular description of goods.—Bath-Room Fixtures—Namely, Towel-Bars, Glass Towel-Bars, Swinging Towel-Bars, Towel-Pins, Soap-Dishes, Soap-Holders, Glass Shelves, Bath-Sprays, Bath-Seats, Soap and Sponge Holders, Soap and Tumbler Holders, Tooth-Brush Holders, Tumbler-Holders, Tumbler and Tooth-Brush Holders, Toilet-Paper Holders, and Robe-Hooks.

Claims use since May 15, 1918.

Ser. No. 112,247. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WILLIAM F. CRADDICK, Seattle, Wash., assignor to Vit-O Net Manufacturing Company, a Corporation of California. Filed July 22, 1918.

VIT-O-NET

No claim being made to the word "Net" apart from the mark shown.

Particular description of goods.—Garments for Imparting Electric Heat and Radiation to the Human Body for Therapeutic Purposes.

Claims use since June 1, 1918.

Ser. No. 112,291. (CLASS 39. CLOTHING.) ISRAEL, MILLER & CO., Fall River, Mass., and New York, N. Y. Filed July 29, 1918.

SUPERBA

Consisting of the word "Superba."

Particular description of goods.—Women's, Misses', and Children's Coats and Suits in One and Two Pieces and Waists and Dresses and Woven Flat Underwear in One and Two Pieces.

Claims use since Dec. 15, 1917.

Ser. No. 112,647. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HISPANIC TEXTILE CO. INC., New York, N. Y. Filed Aug. 9, 1918.

DON DINERO

Particular description of goods.—Cotton Piece Goods.
Claims use since on or about Oct. 1, 1917.

Ser. No. 112,748. (CLASS 12. CONSTRUCTION MATERIALS.) INSULATION MANUFACTURING COMPANY, Salt Lake City, Utah. Filed Aug. 16, 1918.

Cal-O-Air

Particular description of goods.—A Heat, Cold, and Sound Insulating Material of the Nature of a Plaster and Composed of a Natural Diatomaceous Material Consisting of the Bodies of Small Cellular Animals.
Claims use since Feb. 1, 1918.

Ser. No. 112,793. (CLASS 2. RECEPTACLES.) AMERICAN CAN COMPANY, New York, N. Y. Filed Aug. 19, 1918.

DAMP TITE

Particular description of goods.—Cans, Boxes, and Cartons of Paper or Fiber.
Claims use since May, 1912.

Ser. No. 112,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRIET HUBBARD AYER, New York, N. Y. Filed Aug. 29, 1918.

WEE-TOT

Particular description of goods.—Almond-Meal, Antiseptic Washing-Water, Aromatic Ozonizer, Aromatic Vinegar, Astringent for Relaxed Tissue, Bandoline, Bath Essence, Bath-Salts, Bath Vinegar, Bay-Rum, Benzoin; Brilliantine, (Liquid;) Adeps Lanæ Cream, Cold-Cream, Cuticle-Cream, Face-Cream, Finishing-Cream, Foot-Cream, Freckle-Cream, Massage-Cream, Non-Greasy Cream, Non-Greasy Shaving-Cream for Use After Shaving, Perspiration-Deodorizer, Strawberry Cream, Theatrical Cream, Toilet Cream, Tooth-Cream, Vanishing Cream, Cocoa-Butter, Camphor-Ice, Cologne-Water, Complexion-Balm, Cuticle-Acid, Cuticle-Ice, Cuticle-Softener; Depilatory, (Dry;) Depilatory, (Liquid;) Depilatory, (Paste;) Disinfectant, Eyebrow-Pencils, Face-Bleach, Foot-Ice, Frost-Bite Salve, Grease Paint, Hair-Bleach, Hair-Color, Hair-Dye, Hair Essence, Hair-Oil, Hair-Tonic, Hair-Whitener, Hand-Salve, Hand-Whitener, Headache-Cologne, Incense, Lip-Pencil, a Healing-Lotion for Use After Shaving, Almond-Honey-Cucumber Lotion, Eye-Lotion, Face-Lotion, Foot-Lotion, Freckle-Lotion, Frost-Bite Lotion, Hand-Lotion, Head-Lotion, Honey Lotion, Moth and Freckle Lotion, Mouth-Lotion, Toilet Lotion, Skin-Lotion, Strawberry Lotion, Menthol-Pencils, Milk of Cucumber, Mouth-Tablets, Mouth-Wash; Mutton-Tallow, (Refined and Perfumed;) Nail-Acid; Nail-Bleach, (Liquid;) Nail-Enamel, Nail-Polish; Nail-Polish, (Cake;) Nail-Tint, Body-Perfume, Handkerchief-Perfume, Non-Alcoholic Perfume, Room-Perfume, Perfume-Pencils, Perfume-Tablets, Synthetic Perfumes, Pomade; Pomade, Brilliantine; Pomade, Hair; Pomade, Lip; Pomade, Nail; Alkanna Powder, Bath-Powder, Cuticle-Powder, Face-Powder; Face-Powder, (Liquid;) Face-Powder, (Pomade;) Foot-Powder, Glove Perfume-Powder, Hair-Powder, Nail-Bleach Powder, Nail-Powder, Oatmeal Powder, Rice Powder, Satchet-Powder, Shampoo-Powder; Talcum Powder, (Dry;) Theatrical Powder, Toilet Powder, Tooth-Powder, Powder-Papers, Cheek-Rouge, Lip-Rouge, Nail-Rouge; Rouge, (Dry;) Rouge-Leaves; Rouge, (Liquid;) Rouge, (Paste;) Rouge, (Pomade;) Theatrical Rouge, Talcum, (Liquid;) Theatrical-Make-Up Toilet Vinegar, Tooth-Paste, Tooth-Wash, Toilet Borax, Toilet Cerate, Toilet Glycerin, Toilet Paste, Toilet Water, Troche for the Breath; Shampoo, (Liquid;) Smelling-Salts, Stick-Cosmetic, Skin and Tissue Builder; Skin-Whitener, Strawberry Vinegar, Water-Softener, Wrinkle-Eradicator.
Claims use since the 15th day of April, 1918.

Ser. No. 113,251. (CLASS 39. CLOTHING.) WILLIAM HALL, New York, N. Y. Filed Sept. 19, 1918.

ESSENTIAL

Consisting of the word "Essential."
Particular description of goods.—Men's, Women's, and Children's Knitted Garments—viz., Hosiery and Underwear in One and Two Piece Garments.
Claims use since Sept. 12, 1918.

Ser. No. 113,307½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELIAS WELLS KELLOGG, Milwaukee, Wis. Filed Sept. 21, 1918.



No claim being made to the representation of a chick apart from the mark shown on the drawing.
Particular description of goods.—Chicks and Eggs.
Claims use since May 1, 1917.

Ser. No. 113,348. (CLASS 39. CLOTHING.) L. E. EVANS' SON COMPANY, Wakefield, Mass. Filed Sept. 25, 1918.

Pac-mac.

No claim being made to the word "Pac" except in association with the remainder of the mark.
Particular description of goods.—Play Leather Shoes for Children.
Claims use since July 1, 1917.

Ser. No. 113,364. (CLASS 39. CLOTHING.) THE LINEN UNDERWEAR CO. INC., Greenwich, N. Y. Filed Sept. 25, 1918.



Particular description of goods.—Linen Underwear—Namely, Men's Undershirts, Drawers, and Union-Suits, Women's Vests, Drawers, Pants, and Union-Suits, and Children's Undershirts, Drawers, Pants, and Union-Suits.
Claims use since February, 1918.

Ser. No. 113,396. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) A. G. SPALDING & BROS., New York, N. Y. Filed Sept. 25, 1918.



The words "Spalding Ball" are disclaimed.
Particular description of goods.—Playing-Balls Comprising a Round Ball Approximately Seventeen and One-Half Inches in Circumference, with a Loop-Handle Attached to the Same, the Ball Being Covered with Pebbled-Grain Leather.
Claims use since the 10th of August, 1918.

Ser. No. 113,457. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MALINDA RICHIE & Co., Jacksonville, Fla. Filed Sept. 27, 1918.



Particular description of goods.—Growing and Dressing Hair-Oil.
Claims use since March, 1916.

Ser. No. 113,460. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WESTERN ROPE & MANUFACTURING COMPANY, Tulsa, Okla. Filed Sept. 27, 1918.

WESTCO

Particular description of goods.—Steam, Gas, and Internal-Combustion Engines and Steam, Water, and Air Pumps.
Claims use since the 1st day of September, 1917.

Ser. No. 113,520. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE VIBOCACAO COMPANY INC., New York, N. Y. Filed Oct. 2, 1918.



Particular description of goods.—A Medicated Food Product in Powder Form to be Mixed with Milk or Water and Used as a Beverage and Containing Chocolate, Phosphate, Malt, Milk, and Egg.
Claims use since May 5, 1918.

Ser. No. 113,741. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) L. A. YOUNG INDUSTRIES, INC., Detroit, Mich. Filed Oct. 14, 1918.

POWERMAKER

No claim is made to the exclusive use of the word "Power" apart from its use with the word "Maker."
Particular description of goods.—Power-Transmission Units Which Can be Placed in Contact with the Rear Wheels of an Automobile to Secure Power to Drive Extraneous Machinery.
Claims use since the 20th day of May, 1918.

Ser. No. 113,742. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AIGI AMAMOTO, Nagasaki, Japan. Filed Oct. 15, 1918.



Wherein the Japanese characters mean "Registered Trade Mark, Permitted Officially, Rokushingan, Dozacho Nagasaki, Amamoto Aimeido," no claim being made to the exclusive right to the use of said Japanese characters meaning "Registered Trade Mark, Permitted Officially, Dozacho Nagasaki, Amamoto Aimeido" apart from the mark shown in the drawing.
Particular description of goods.—A Medicinal Preparation for Diseases or Disorders of the Stomach, Intestines, and Respiratory Tract, Such as Colds, Cholera, Fever, Indigestion, Diarrhea, Dysentery, Dyspepsia, and Typhoid.
Claims use since Dec. 1, 1896.

Ser. No. 113,770. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HARVARD BREWING COMPANY, Lowell, Mass. Filed Oct. 17, 1918.

Harvard

Particular description of goods.—Non-Alcoholic Carbonated Beverages Not of a Cereal Nature.
Claims use since the 2d day of September, 1918.

Ser. No. 113,933. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) H. B. WIGGIN'S SONS COMPANY, Bloomfield, N. J. Filed Oct. 29, 1918.

CLOVER LEAF PLASTER

No claim is made to the registration of the word "Plaster" as a registered trade-mark apart from the mark shown in the drawing, but without waiving any common-law or other rights incident thereto other than the disclaimer specifically set forth above.
Particular description of goods.—Plaster of Paris for Dental, Medical, and Surgical Purposes.
Claims use since Aug. 6, 1918.

Ser. No. 114,238. (CLASS 39. CLOTHING.) GRAND RAPIDS DRY GOODS COMPANY, Grand Rapids, Mich. Filed Nov. 19, 1918.



LINCOLN MILLS

The picture being that of Abraham Lincoln, deceased, no claim being made to the word "Mills" except in association with the mark as shown.
Particular description of goods.—Knit Underwear—Namely, Boys' Union-Suits; Misses' Union-Suits, Pants, Vests, and Underskirts; Ladies' Union-Suits, Pants, Vests, and Underskirts; Men's Union-Suits, Drawers, and Shirts; Infants' Bands and Vests, and Children's Underwaists; Also Knitted Clothing—Namely, Ladies' Mittens, Gloves, Bathing-Suits, Leggings, Hosiery, and Sweaters; Men's Mittens, Gloves, Bathing-Suits, Socks, and Sweaters; Misses' Gloves, Mittens, Bathing-Suits, Hosiery, Leggings, Cap and Scarf Sets, Caps, and Sweaters; Boys' Gloves, Mittens, Bathing-Suits, Hosiery, Hockey-Caps, and Sweaters; Children's Leggings, Three-Piece Sets—Namely, Cap, Sweater, and Drawer-Gaiters; Infants' Mittens, Socks, Hose, and Sacks; Juvenile Caps and Sweaters, and Youths' Sweaters.
Claims use since March, 1915.

Ser. No. 114,269. (CLASS 17. TOBACCO PRODUCTS.) LUCKETT-WAKE TOBACCO CO., Louisville, Ky. Filed Nov. 21, 1918.



Particular description of goods.—Leaf-Tobacco.
Claims use since 1910.

Ser. No. 114,476. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ANDROSCOGGIN MILLS, Lewiston, Me. Filed Dec. 4, 1918. Under ten-year proviso.



Particular description of goods.—Cotton Piece Goods.
Claims use since about 1861.

Ser. No. 114,684. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE WILLIAM CAIL BITMO COMPANY, New York, N. Y. Filed Dec. 17, 1918.

OTELLO

Particular description of goods.—Liquid Ready-Mixed Paint and Varnish.
Claims use since the 20th day of November, 1918.

Ser. No. 114,704. (CLASS 39. CLOTHING.) J. J. PAPA & CO., New York, N. Y. Filed Dec. 18, 1918.

ACE-HY!

Particular description of goods.—Men's, Boys', and Children's Outer Wearing-Apparel Consisting of Coats, Vests, and Trousers.
Claims use since May 1, 1918.

Ser. No. 114,705. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FEDERAL SNAP FASTENER CORPORATION, New York, N. Y. Filed Dec. 21, 1918.



Particular description of goods.—Snap-Fasteners and Placket-Fasteners.
Claims use since Oct. 4, 1918.

Ser. No. 114,770. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PURE CANE MOLASSES CORPORATION, New York, N. Y. Filed Dec. 21, 1918.

CANE MOLA

No claim is made to the ownership of the word "Cane" or the exclusive right to use the same apart from the other feature of the trade-mark.
Particular description of goods.—Molasses.
Claims use since the 12th day of September, 1918.

Ser. No. 114,796. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Dec. 24, 1918.

Greenwich Village Prints

No claim is made to the word "Prints" apart from the mark as shown.
Particular description of goods.—Fabrics of Silk and Silk Mixtures.
Claims use since about June, 1918.

Ser. No. 114,844. (CLASS 38. PRINTS AND PUBLICATIONS.) ART METAL CONSTRUCTION CO., INC., Jamestown, N. Y. Filed Dec. 28, 1918.

The Office Economist

Particular description of goods.—A Magazine or Journal Issued Monthly.
Claims use since Dec. 1, 1918.

Ser. No. 114,918. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE MONTELAISE MERCANTILE CO., Detroit, Mich. Filed Dec. 31, 1918.

OLD SAHARA

Particular description of goods.—A Non-Intoxicating Maltless Fruit Beverage Containing Not More Than One-Half of One Per Cent. Alcohol and Sold as a Soft Drink.
Claims use since Mar. 18, 1918.

Ser. No. 114,952. (CLASS 37. PAPER AND STATIONERY.) CHARLES DRURY JACOBS, New York, N. Y. Filed Jan. 2, 1919.



The lining of the background in the drawing is to indicate shading or difference in light-transmitting or light-reflecting power, usually in the water-mark of the paper.
Particular description of goods.—Writing and Printing Paper.
Claims use since Dec. 20, 1918.

Ser. No. 114,969. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CROWN PERFUMERY COMPANY, New York, N. Y. Filed Jan. 3, 1919. Under ten-year proviso.



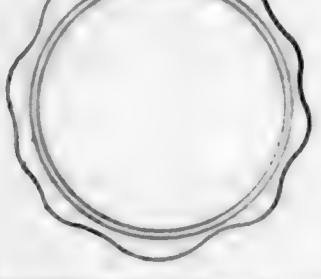
The lining on the drawing is not for the purpose of indicating special color, but is for shading only.
Particular description of goods.—Perfumed Soaps.
Claims use since Aug. 1, 1872.

Ser. No. 114,970. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CROWN PERFUMERY COMPANY, New York, N. Y. Filed Jan. 3, 1919. Under ten-year proviso.



Particular description of goods.—Cosmetics for the Hair, Hair-Oils, Perfumes, Tooth-Paste, Tooth-Powders, Toilet Powders, Hair-Washes.
Claims use since Aug. 1, 1872.

Ser. No. 115,004. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE CONGOLEUM COMPANY, Philadelphia, Pa. Filed Jan. 6, 1919.



Particular description of goods.—Prepared Floor-Coverings of the Oiled-Cloth Type.
Claims use since December, 1917.

Ser. No. 115,194. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AUTO COMPONENTS INC., Chicago, Ill. Filed Jan. 15, 1919.



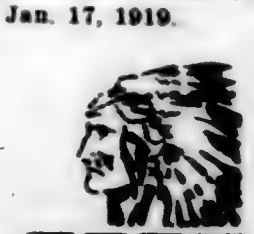
Particular description of goods.—Timers for Internal-Combustion Engines.
Claims use since the 11th day of January, 1919.

Ser. No. 115,199. (CLASS 39. CLOTHING.) CHICAGO MERCANTILE COMPANY, Chicago, Ill. Filed Jan. 15, 1919.



We hereby disclaim the verbal mark "Frick Tailored Hats" apart from the mark shown on the drawing.
Particular description of goods.—Women's Hats.
Claims use since Nov. 18, 1918.

Ser. No. 115,256. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE ROSSENDALE-REDDAWAY BELTING & HOSE CO., Newark, N. J. Filed Jan. 17, 1919.



Particular description of goods.—Belting. The Material Used in Making the Belts is Stitched and Impregnated Canvas.
Claims use since December, 1918.

Ser. No. 115,258. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE ROSSENDALE-REDDAWAY BELTING & HOSE CO., Newark, N. J. Filed Jan. 17, 1919.



Particular description of goods.—Belting. The Material Used in Making the Belts is Woven Asiatic Hair.
Claims use since December, 1918.

Ser. No. 115,260. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE ROSSENDALE-REDDAWAY BELTING & HOSE CO., Newark, N. J. Filed Jan. 17, 1919.



Particular description of goods.—Belting. The Material Used in Making the Belts is Stitched and Impregnated Canvas.
Claims use since December, 1918.

Ser. No. 115,261. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE ROSSENDALE-REDDAWAY BELTING & HOSE CO., Newark, N. J. Filed Jan. 17, 1919.



Particular description of goods.—Belting. The Material Used in Making the Belts is Asiatic Hair and Cotton.
Claims use since December, 1918.

Ser. No. 115,271. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE UNIVERSAL BEARING COMPANY, Lorain, Ohio. Filed Jan. 17, 1919.

UNIVERSAL

Particular description of goods.—Bearing-Metal.
Claims use since September, 1914.

Ser. No. 115,325. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BLACKBURN PRODUCTS CO., Dayton, Ohio. Filed Jan. 21, 1919.

CADOMENE

Consisting of the word "Cadomene."

Particular description of goods.—A Medicinal Tonic in Liquid or Tablet Form for the Treatment of Anemia, Nervousness, Sleeplessness, Nervous Indigestion, Sluggish Circulation, General Debility, Lack of Energy, Weakness, Trembling, and Kindred Conditions Requiring an Invigorating Tonic.

Claims use since about Jan. 1, 1909.

Ser. No. 115,326. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BLACKBURN PRODUCTS CO., Dayton, Ohio. Filed Jan. 21, 1919.

SULPHERB

Consisting of the word "Sulpherb."

Particular description of goods.—A Laxative Tonic for Treatment of Constipation, Inactivity of the Liver and Consequent Malassimilation, Often Being Manifested by Loss of Appetite, Headache, Coated Tongue, Dizziness, and other Symptoms of Auto-Intoxication.

Claims use since about Jan. 1, 1909.

Ser. No. 115,379. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEW YORK MILLS CORPORATION, New York Mills, N. Y. Filed Jan. 22, 1919.



Particular description of goods.—Uncoated Fabrics Piece Goods.

Claims use since April, 1917.

Ser. No. 115,416. (CLASS 39. CLOTHING.) CHIPMAN KNITTING MILLS, Easton, Pa. Filed Jan. 25, 1919.



The trade-mark is lined for shading, but not for color, the word "Hosiery" forming no part of the mark.

Particular description of goods.—Hosiery for Men, Women, and Children.

Claims use since Dec. 30, 1918.

Ser. No. 115,430. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARSONS CHEMICAL WORKS, Grand Ledge, Mich. Filed Jan. 25, 1919.

PAR-DIP

The word "Dip" being disclaimed except in the particular relation shown.

Particular description of goods.—An Insecticide and Disinfectant for Live Stock.

Claims use since Dec. 12, 1918.

Ser. No. 115,431. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH C. PAULUS AND COMPANY, Philadelphia, Pa. Filed Jan. 25, 1919.

BELTINE

Particular description of goods.—Dressing to be Applied to Leather and Belting.

Claims use since about Jan. 1, 1900.

Ser. No. 115,487. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPIRITINE CHEMICAL CO., Wilmington, N. C. Filed Jan. 28, 1919.

PINE-NENE

Particular description of goods.—Rubber Filler and Wood-Preserving Oil.

Claims use since November, 1917.

Ser. No. 115,495. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE WONDER STONE CO., Boston, Mass. Filed Jan. 28, 1919.

WONDER

The word "Wonder."

Particular description of goods.—Abrasive Materials and Tools—Namely, Scythe-Stones, Whetstones, Ax-Stones, Hones, Stones for Grinding Purposes, and Grinding Disks and Wheels.

Claims use since Jan. 13, 1919.

Ser. No. 115,527. (CLASS 2. RECEPTACLES.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Jan. 30, 1919.



Particular description of goods.—Burlap Bags.

Claims use since on or about Dec. 5, 1918.

Ser. No. 115,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KENLOR FLOUR MILLS COMPANY, St. Louis, Mo. Filed Feb. 1, 1919.

DOUGHBOY

"Doughboy."
Particular description of goods.—Wheat-Flour.
Claims use since Jan. 1, 1919.

Ser. No. 115,612. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 4, 1919.

Spuntex

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 115,685. (CLASS 2. RECEPTACLES.) WORTENDYKE MANUFACTURING COMPANY, Richmond, Va. Filed Feb. 7, 1919.

SILVER STEEL

Particular description of goods.—Paper Bags.
Claims use since September, 1913.

Ser. No. 115,700. (CLASS 39. CLOTHING.) THE STETSON SHOE COMPANY, INC., Weymouth, Mass. Filed Feb. 8, 1919.

Particular description of goods.—Leather Boots and Shoes for Men, Women, and Children.
Claims use since Jan. 6, 1919.

Ser. No. 115,810. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WILLIAM ETSWEILER & COMPANY, Philadelphia, Pa. Filed Feb. 12, 1919.

WM. ETSWEILER & CO. MANUFR'S PHILADELPHIA, PA.

SPECIAL BLACK

No claim is made to the words "Wm. Etsweiler & Co., Manufr's," to the words "Philadelphia, Pa.," or to the words "Special Black" apart from the mark shown in the drawing.
Particular description of goods.—Tanned-Leather Belting.
Claims use since June 1, 1916.

Ser. No. 115,812. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. FILLAUER, Chattanooga, Tenn. Filed Feb. 12, 1919.

ABBODIN

Particular description of goods.—Medicines for Constipation, Biliousness, Indigestion, and Backache.
Claims use since Dec. 15, 1918.

Ser. No. 115,862. (CLASS 49. MALT BEVERAGES, EXTRACTS, AND LIQUORS.) PENINSULA PRODUCTS COMPANY, Wilmington, Del. Filed Feb. 14, 1919.

Quex

Particular description of goods.—Soft Drinks Containing Malt and Less Than One-Half of One Per Cent. of Alcohol, by Volume.
Claims use since on or about the 3d day of January, 1919.

Ser. No. 115,970. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BEAUDETTE & GRAHAM ENGINEERING CO., Boston, Mass. Filed Feb. 19, 1919.

ELECTRIC LIGHT FOR COUNTRY HOMES

No claim being made to the exclusive use of either the words "Electric Light for Country Homes" or the word "Light" as associated with "Syco" apart from the mark shown.
Particular description of goods.—Electric-Lighting Plants.
Claims use since Apr. 30, 1918.

Ser. No. 115,979. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THOMAS GILL SOAP COMPANY, INC., Brooklyn, N. Y. Filed Feb. 19, 1919.

"MOHAWK"

Particular description of goods.—Foot-Soaps.
Claims use since Sept. 15, 1915.

Ser. No. 116,026. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Feb. 20, 1919.

Casino

Particular description of goods.—Silk Piece Goods.
Claims use since the 21st day of January, 1919.

Ser. No. 116,044. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GEORGE M. WATTERS, Minneapolis, Minn. Filed Feb. 20, 1919.

LIBERTY

Particular description of goods.—Spark-Plugs.
Claims use since Jan. 4, 1919.

Ser. No. 116,120. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR STORES COMPANY OF AMERICA, Jersey City, N. J., and New York, N. Y. Filed Feb. 24, 1919.

NO FRILLS

Particular description of goods.—Cigars, Cigarettes, and Smoking and Chewing Tobacco and Snuff.
Claims use since Feb. 8, 1919.

Ser. No. 116,208. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PALMER CANDY COMPANY, Sioux City, Iowa. Filed Feb. 28, 1919.

MARVELII

Particular description of goods.—Candy.
Claims use since Feb. 17, 1919.

Ser. No. 116,217. (CLASS 12. CONSTRUCTION MATERIALS.) THE STANDARD PAINT COMPANY, Bound Brook, N. J., and New York, N. Y. Filed Feb. 28, 1919.

PLUS

Particular description of goods.—Composition Roofings and Building-Papers.
Claims use since Feb. 11, 1919.

Ser. No. 116,218. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANKLIN STEPHENS, Atlantic City, N. J. Filed Feb. 28, 1919.

Gran Mave

Particular description of goods.—A Headache Remedy.
Claims use since Jan. 1, 1918.

Ser. No. 116,224. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED DRUG COMPANY, Boston, Mass. Filed Feb. 28, 1919.

TRUFLOR

Particular description of goods.—Perfumery.
Claims use since Oct. 1, 1918.

Ser. No. 116,232. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Mar. 1, 1919.

Toga

Particular description of goods.—Silk Piece Goods.
Claims use since the 29th day of January, 1919.

Ser. No. 116,233. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Mar. 1, 1919.

Gondola

Particular description of goods.—Silk Piece Goods.
Claims use since the 29th day of January, 1919.

Ser. No. 116,246. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN NICANIDE COMPANY, Los Angeles, Calif. Filed Mar. 3, 1919.

NICANIDE

Particular description of goods.—A Solid Chemical Compound for Extracting Copper and other Metals from Ores and the Like.
Claims use since the 23d day of January, 1919.

Ser. No. 116,256. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES C. GAFFNEY, New York, N. Y. Filed Mar. 3, 1919.

"MERCHANT MARINE."

Particular description of goods.—Playing-Cards.
Claims use since Feb. 25, 1919.

Ser. No. 116,257. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES C. GAFFNEY, New York, N. Y. Filed Mar. 3, 1919.

"AEROPLANE"

Particular description of goods.—Playing-Cards.
Claims use since Feb. 25, 1919.

Ser. No. 116,258. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES C. GAFFNEY, New York, N. Y. Filed Mar. 3, 1919.

DEMOCRACY

Particular description of goods.—Playing-Cards.
Claims use since July 25, 1918.

Ser. No. 116,283. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Mar. 4, 1919.

Poletex

Particular description of goods.—Pile Fabrics in the Piece.
Claims use since the 23d day of January, 1919.

Ser. No. 116,284. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Mar. 4, 1919.

MANDARINE

Particular description of goods.—Rouge.
Claims use since about 1911.

Ser. No. 116,317. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JULIEN VIRET, New York, N. Y. Filed Mar. 5, 1919.

SPORT

Particular description of goods.—Veils, Hair-Nets, and Combination Veils and Nets.
Claims use since November, 1916.

Ser. No. 116,326. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CONTINENTAL SCALE WORKS, Chicago, Ill. Filed Mar. 6, 1919.

HEALTH-O-METER

Particular description of goods.—Weighing-Scales.
Claims use since Jan. 25, 1919.

Ser. No. 116,330. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Mar. 6, 1919.

Lagoon

Particular description of goods.—Silk Piece Goods.
Claims use since the 29th day of January, 1919.

Ser. No. 116,331. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EMPIRE SILK COMPANY, Wilmington, Del., and New York, N. Y. Filed Mar. 6, 1919.

Minaret

Particular description of goods.—Silk Piece Goods.
Claims use since the 29th day of January, 1919.

Ser. No. 116,333. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES F. FERRERY, Collingdale, Pa. Filed Mar. 6, 1919.

BRNALL

Particular description of goods.—A Compound for Improving Combustion of Coal and Coal-Siftings.
Claims use since December, 1918.

Ser. No. 116,417. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JERSEY SILK MILLS, New York, N. Y. Filed Mar. 8, 1919.

T/1

Particular description of goods.—Broad Silks in the Piece.
Claims use since January, 1914.

Ser. No. 116,474. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF NEW YORK, New York, N. Y. Filed Mar. 11, 1919. Under ten-year proviso.

DEVOE'S

Particular description of goods.—Refined Oil for Lighting, Heating, and Power Purposes.
Claims use since 1869.

Ser. No. 116,490. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Mar. 12, 1919.

Velangora

Consisting of the word "Velangora."
Particular description of goods.—Woolen Piece Goods.
Claims use since Feb. 1, 1919.

Ser. No. 116,491. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Mar. 12, 1919.

Duvella

Consisting of the word "Duvella."
Particular description of goods.—Woolen Piece Goods.
Claims use since Feb. 1, 1919.

Ser. No. 116,626. (CLASS 2. RECEPTACLES.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed Mar. 15, 1919.

FARMER BOY

Particular description of goods.—Galvanized Iron Baskets.
Claims use since Nov. 17, 1902.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 22, 1919.

125,185. DENTIFRICE AND ALKALOIDS IN SOLUTION FOR TREATING AND PREVENTING PYORRHEA, ABSORPTION OF TISSUES AND GLANDS. ALVORNA CHEMICAL COMPANY, Chicago, Ill.
Filed May 31, 1918. Serial No. 111,256. PUBLISHED JANUARY 14, 1919.

125,186. WINDOW-SHADE SUPPORT. GEORGE ANDERSON, Chicago, Ill.
Filed September 1, 1917. Serial No. 106,006. PUBLISHED JANUARY 14, 1919.

125,187. DENTIFRICE. BARCLAY & Co., Wilmington, Del., and New York, N. Y.
Filed July 26, 1918. Serial No. 112,382. PUBLISHED JANUARY 14, 1919.

125,188. TABLE-SALT. THE BARTON SALT Co., Hutchinson, Kans.
Filed April 23, 1917. Serial No. 103,199. PUBLISHED AUGUST 13, 1918.

125,189. CANDIES, SHELLED AND UNSHELLED NUTS, AND NUT-CANDIES. BITNOSS COMPANY, Milwaukee, Wis.
Filed November 12, 1918. Serial No. 114,138. PUBLISHED JANUARY 7, 1919.

125,190. CERTAIN NAMED FARM IMPLEMENTS. BLOUNT PLOW WORKS, Evansville, Ind.
Filed September 25, 1918. Serial No. 113,344. PUBLISHED JANUARY 7, 1919.

125,191. BROOMS. THE BOARD OF CONTROL OF THE COLORADO INDUSTRIAL WORKSHOP FOR THE BLIND, Denver, Colo.
Filed October 28, 1918. Serial No. 113,908. PUBLISHED JANUARY 14, 1919.

125,192. PREPARATION FOR RHEUMATISM. A. BAIDIME, Pratt City, Ala.
Filed April 23, 1918. Serial No. 110,887. PUBLISHED DECEMBER 24, 1918.

125,193. ENAMEL. BRIGGS BITUMINOUS COMPOSITION COMPANY, New York, N. Y.
Filed November 15, 1917. Serial No. 107,384. PUBLISHED DECEMBER 3, 1918.

125,194. BRONZE BUSHINGS. THE BUNTING BRASS & BRONZE Co., Toledo, Ohio.
Filed December 3, 1917. Serial No. 107,716. PUBLISHED JANUARY 7, 1919.

125,195. HOG MEDICINES TO BE ADMINISTERED FOR WORMS, SCOURS, AND AS TONICS. KARL BERNSON, Chicago, Ill.
Filed August 8, 1918. Serial No. 112,487. PUBLISHED JANUARY 21, 1919.

125,196. ELECTRIC INSULATED WEATHERPROOF WIRES AND FRICTION-TAPE. CENTRAL ELECTRIC COMPANY, Chicago, Ill.
Filed September 9, 1918. Serial No. 113,075. PUBLISHED JANUARY 7, 1919.

125,197. CHILLI-CON-CARNE AND TAMALES. ERNEST E. CLEARY, Spokane, Wash.
Filed May 16, 1918. Serial No. 110,920. PUBLISHED JANUARY 14, 1919.

125,198. FACTORY, FOUNDRY, PLATERS' BRUSHES. THE CLEVELAND OSBORN MANUFACTURING COMPANY, Cleveland, Ohio.
Filed May 22, 1918. Serial No. 111,095. PUBLISHED JANUARY 14, 1919.

125,199. MOLDERS' BELLOWS. THE CLEVELAND OSBORN MANUFACTURING COMPANY, Cleveland, Ohio.
Filed May 22, 1918. Serial No. 111,097. PUBLISHED JANUARY 7, 1919.

125,200. CERTAIN NAMED TABLE-WATER AND SOFT DRINKS. CLYSMIC SPRING Co., New York, N. Y.
Filed March 14, 1918. Serial No. 109,553. PUBLISHED JANUARY 14, 1919.

125,201. TWINE. COLUMBIAN ROPE COMPANY, Auburn, N. Y.
Filed November 2, 1918. Serial No. 114,023. PUBLISHED JANUARY 14, 1919.

125,202. TWINE. COLUMBIAN ROPE COMPANY, Auburn, N. Y.
Filed November 2, 1918. Serial No. 114,025. PUBLISHED JANUARY 14, 1919.

125,203. VARNISHES. JESSE B. CORNISH, Chicago, Ill.
Filed August 14, 1918. Serial No. 112,704. PUBLISHED JANUARY 14, 1919.

125,204. INSECT-EXTERMINATOR AND DISINFECTANT. HYMAN DRITCHMAN, Chicago, Ill.
Filed November 11, 1918. Serial No. 114,129. PUBLISHED JANUARY 21, 1919.

125,205. EXPANSION-BOLTS AND EXPANSION-SHIELDS. DIAMOND EXPANSION BOLT Co., New York, N. Y.
Filed September 4, 1918. Serial No. 113,014. PUBLISHED DECEMBER 31, 1918.

125,206. EXPANSION-BOLTS, EXPANSION-SHIELDS, AND SCREW-ANCHORS. DIAMOND EXPANSION BOLT Co., New York, N. Y.
Filed September 4, 1918. Serial No. 113,011. PUBLISHED JANUARY 7, 1919.

125,207. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED AILMENTS. AGOSTINO DINOVO, South Chicago, Ill.
Filed October 31, 1918. Serial No. 113,960. PUBLISHED JANUARY 21, 1919.

125,208. IMPRESSION-WAX FOR DENTAL USE. JAMES H. DOWNIE, San Antonio, Tex.
Filed November 12, 1918. Serial No. 114,139. PUBLISHED JANUARY 14, 1919.

125,209. MEDICINES FOR THE RELIEF OF HAY-FEVER. DUNSDIN & SAINSBURY, Melbourne, Victoria, Australia.
Filed November 16, 1918. Serial No. 114,199. PUBLISHED JANUARY 21, 1919.

125,210. MEDICINES FOR THE RELIEF OF HAY-ASTHMA. DUNSDIN & SAINSBURY, Melbourne, Victoria, Australia.
Filed November 16, 1918. Serial No. 114,198. PUBLISHED JANUARY 21, 1919.

125,211. SUITCASES, GRIPS, AND HAND-BAGS. J. W. EICHENBUSCH Co., INC., Chicago, Ill.
Filed September 12, 1917. Serial No. 106,197. PUBLISHED FEBRUARY 5, 1918.

125,212. DENTAL-FLOSS HOLDERS. WILLIAM T. ELSINGA, Mill Valley, Calif.
Filed April 3, 1917. Serial No. 102,084. PUBLISHED JANUARY 14, 1919.

125,213. MILKING-MACHINES AND PARTS THEREOF, THEREOF. EMPIRE CREAM SEPARATOR COMPANY, MILKING-MACHINE SYSTEMS AND PARTS Bloomfield, N. J.
Filed June 27, 1918. Serial No. 111,847. PUBLISHED JANUARY 7, 1919.

125,214. FLAKED OATS. FLEMING AND COMPANY LIMITED, Gore, New Zealand.
Filed August 11, 1917. Serial No. 105,593. PUBLISHED JANUARY 14, 1919.

125,215. MASSAGE-CREAM. NICOLINO FORGIONE, New York, N. Y.
Filed October 9, 1918. Serial No. 113,623. PUBLISHED JANUARY 21, 1919.

125,216. CONDENSED MILK. FRANKLIN COUNTY CREAMERY & CONDENSED MILK COMPANY, North Bangor, N. Y.
Filed June 11, 1918. Serial No. 111,491. PUBLISHED JANUARY 14, 1919.

125,217. COMPOUND OR LIQUID FOR TREATING THE EYES. JOHN A. GRANSTRAND, Walla Walla, Wash.
Filed April 23, 1918. Serial No. 110,395. PUBLISHED JANUARY 14, 1919.

125,218. AMMONIUM SULFOICHTHYOLICUM. GIUSEPPE W. GUIDI, New York, N. Y.
Filed November 18, 1918. Serial No. 114,211. PUBLISHED JANUARY 21, 1919.

125,219. MIXED PAINTS. HARLAND AND LITTLE, INC., New York, N. Y.
Filed October 11, 1918. Serial No. 113,692. PUBLISHED JANUARY 7, 1919.

125,220. MIXED PAINTS. HARLAND AND LITTLE, INC., New York, N. Y.
Filed October 11, 1918. Serial No. 113,690. PUBLISHED JANUARY 7, 1919.

125,221. NON-ALCOHOLIC MALTLESS BEVERAGE SOLD AS A SOFT DRINK. HARRIMAN SPRING COMPANY, Gorham, N. H.
Filed November 8, 1918. Serial No. 114,096. PUBLISHED JANUARY 14, 1919.

125,222. MEDICINAL PREPARATION FOR CERTAIN NAMED DISEASES. THE HEYDEN CHEMICAL WORKS, New York, N. Y.
Filed November 16, 1918. Serial No. 114,202. PUBLISHED JANUARY 21, 1919.

125,223. MEDICINAL PREPARATIONS FOR CERTAIN NAMED DISEASES. THE HEYDEN CHEMICAL WORKS, New York, N. Y.
Filed November 16, 1918. Serial No. 114,201. PUBLISHED JANUARY 21, 1919.

125,224. TOILET-PAPER, PAPER TOWELS, PAPER NAPKINS. THE JOHN HOSMER COMPANY, Green Bay, Wis.
Filed July 24, 1918. Serial No. 112,300. PUBLISHED SEPTEMBER 10, 1918.

125,225. PREPARATION FOR CERTAIN NAMED AILMENTS, AND LINIMENT. OSCAR HUNSAKER, St. Louis, Mo.
Filed November 11, 1918. Serial No. 114,131. PUBLISHED JANUARY 21, 1919.

125,226. ARTIFICIAL TEETH AND DENTAL ARTICULATORS. HENRY D. JUSTI, Philadelphia, Pa.
Filed November 14, 1918. Serial No. 114,166. PUBLISHED JANUARY 14, 1919.

125,227. STARCH. THE KENYON STARCH CO., Columbus, Ohio.
Filed October 16, 1918. Serial No. 113,756. PUBLISHED JANUARY 21, 1919.

125,228. LAUNDRY BLUING. JAMES C. KELLOGG, New York, N. Y.
Filed August 10, 1918. Serial No. 112,657. PUBLISHED JANUARY 21, 1919.

125,229. VEGETABLE EXTRACT USED TO STABILIZE, STIMULATE, AND GIVE ZEST TO CERTAIN NAMED BEVERAGES. WILLIAM A. KOCH, Seattle, Wash.
Filed September 12, 1918. Serial No. 113,142. PUBLISHED DECEMBER 31, 1918.

125,230. VANISHING CREAM, COLD-CREAM, MENTHOL CREAM, AND PEROXID CREAM. S. S. KRESGE COMPANY, Detroit, Mich.
Filed November 12, 1918. Serial No. 114,144. PUBLISHED JANUARY 21, 1919.

125,231. CERTAIN NAMED PAPER AND STATIONERY. S. S. KRESGE CO., Detroit, Mich.
Filed January 20, 1918. Serial No. 83,970. PUBLISHED MAY 14, 1918.

125,232. LEATHER. A. C. LAWRENCE LEATHER CO., Boston, Mass.
Filed December 22, 1916. Serial No. 100,093. PUBLISHED JANUARY 7, 1919.

125,233. LEATHER. A. C. LAWRENCE LEATHER CO., Boston, Mass.
Filed December 22, 1916. Serial No. 100,094. PUBLISHED JANUARY 7, 1919.

125,234. VARNISH. THE LOWE BROTHERS COMPANY, Dayton, Ohio.
Filed August 27, 1918. Serial No. 112,392. PUBLISHED JANUARY 7, 1919.

125,235. WHEAT-FLOUR. MCDANIEL MILLING CO., Carthage, Mo.
Filed April 30, 1918. Serial No. 110,569. PUBLISHED DECEMBER 17, 1918.

125,236. LINSEED-OIL, TURPENTINE, DRY AND READY-MIXED PAINTS, AND VARNISHES. WM. MCDONAGH & SONS, New York, N. Y.
Filed December 4, 1918. Serial No. 114,481. PUBLISHED JANUARY 7, 1919.

125,237. PRINTED BOOKS. MCLOUGHLIN BROS. INC., New York, N. Y.
Filed October 25, 1918. Serial No. 113,896. PUBLISHED DECEMBER 3, 1918.

125,238. EYEGLASS MOUNTINGS AND FRAMES. THE C. & E. MARSHALL COMPANY, Columbus, Ohio.
Filed September 21, 1917. Serial No. 106,208. PUBLISHED DECEMBER 31, 1918.

125,239. CERTAIN EDIBLE OILS. STE. ANNE DES HUILERIES MAUREL & H. PROM & MAUREL FRÈRES, Bordeaux, France.
Filed November 5, 1917. Serial No. 107,170. PUBLISHED JANUARY 14, 1919.

125,240. MEDICINAL PREPARATION FOR TREATMENT OF CERTAIN NAMED DISEASES AND AILMENTS. H. A. METZ LABORATORIES, INC., New York, N. Y.
Filed November 8, 1918. Serial No. 114,101. PUBLISHED JANUARY 14, 1919.

125,241. LUBRICATING OILS AND GREASES. MONARCH MANUFACTURING COMPANY, Council Bluffs, Iowa, and Toledo, Ohio.
Filed July 19, 1918. Serial No. 112,219. PUBLISHED JANUARY 14, 1919.

125,242. HERRING, EITHER KIPPERED OR PACKED IN TOMATO SAUCE. ISIDOR MOSS, New York, N. Y.
Filed October 17, 1918. Serial No. 113,778. PUBLISHED JANUARY 14, 1919.

125,243. MARMALADE. CHARLES H. MOSS, Malden, Mass.
Filed October 31, 1918. Serial No. 113,961. PUBLISHED JANUARY 14, 1919.

125,244. BRONZE CASTINGS AND BABBITT ALLOYS. THE MUREY-LYON CO., LTD., Detroit, Mich.
Filed June 20, 1918. Serial No. 111,706. PUBLISHED JANUARY 21, 1919.

125,245. MALT BEVERAGE MADE FROM CORN-SYRUP, YEAST, AND HOPS. NARRAGANSETT BREWING CO., Cranston, R. I.
Filed May 3, 1918. Serial No. 110,638. PUBLISHED JANUARY 14, 1919.

125,246. GAME-BOARDS AND PIECES THEREFOR. GEORGE HENRY PARKER, Stamford, Conn.
Filed July 21, 1917. Serial No. 105,177. PUBLISHED JANUARY 14, 1919.

125,247. FACE-POWDER. PRIMO PRODUCTS COMPANY, San Francisco, Calif.
Filed October 26, 1918. Serial No. 113,906. PUBLISHED JANUARY 21, 1919.

125,248. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. WM. JAMES QUINN, Jr., Wheeling, W. Va.
Filed December 2, 1918. Serial No. 114,455. PUBLISHED JANUARY 14, 1919.

125,249. CERTAIN NAMED CUTLERY AND MACHINERY. ROSENBAUM & MOGAL, Brooklyn, N. Y.
Filed July 29, 1918. Serial No. 112,410. PUBLISHED JANUARY 14, 1919.

125,250. MANIFOLDS FOR GAS-ENGINES. SHURNUFF MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 15, 1918. Serial No. 114,193. PUBLISHED DECEMBER 31, 1918.

125,251. BACON AND HAMS. PAUL F. SKINNER, Omaha, Nebr.
Filed November 8, 1918. Serial No. 114,105. PUBLISHED JANUARY 14, 1919.

125,252. HAIR-GROWER. CATHERINE M. SLAVIN, Calgary, Alberta, Canada.
Filed July 11, 1918. Serial No. 112,073 PUBLISHED JANUARY 21, 1919.

125,253. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. THE STAR LUBRICATING OIL CO., Cleveland, Ohio.
Filed September 30, 1918. Serial No. 113,502. PUBLISHED DECEMBER 31, 1918.

125,254. REMEDIES FOR THE TOBACCO HABIT. THE STERLING REMEDY COMPANY, Jersey City, N. J.
Filed October 26, 1918. Serial No. 113,947. PUBLISHED JANUARY 21, 1919.

125,255. BABBITT ALLOY. SYRACUSE SMELTING WORKS, Brooklyn, New York.
Filed October 19, 1918. Serial No. 113,818. PUBLISHED JANUARY 14, 1919.

125,256. ICE-CREAM CONES. SUCCESS CONE COMPANY, INC., New York, N. Y.
Filed October 19, 1918. Serial No. 113,817. PUBLISHED JANUARY 14, 1919.

125,257. MANGANESE STEEL AND MANGANESE STEEL IN CAST, FORGED, AND ROLLED FORM. TAYLOR-WHARTON IRON AND STEEL CO., High Bridge, N. J.
Filed September 7, 1918. Serial No. 113,070. PUBLISHED JANUARY 14, 1919.

125,258. GASOLENE, NAPHTHA, AND BENZIN. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed November 1, 1918. Serial No. 114,017. PUBLISHED JANUARY 21, 1919.

125,259. MEDICINAL PREPARATION FOR INTERNAL USE IN THE TREATMENT OF STOMACH-ACHE AND NERVOUS DEBILITY. SANTI TRINGALI, New York, N. Y.
Filed July 25, 1918. Serial No. 112,328. PUBLISHED JANUARY 21, 1919.

125,260. ELECTRIC BATTERIES. UNITED BATTERY CORPORATION, New York, N. Y.
Filed September 26, 1918. Serial No. 113,478. PUBLISHED DECEMBER 31, 1918.

125,261. POTATO CHIPS. LEONARD G. WARDLAW, Dallas, Tex.
Filed July 12, 1917. Serial No. 105,011. PUBLISHED JANUARY 14, 1919.

125,262. SACCHARIN. JOHN J. WHITE, INC., Newark, N. J., and New York, N. Y.
Filed November 15, 1918. Serial No. 114,195. PUBLISHED JANUARY 21, 1919.

125,263. SHEARS AND SCISSORS. JAMES L. E. WICKOFF, North Woodbury, Conn.
Filed March 19, 1918. Serial No. 109,663. PUBLISHED DECEMBER 24, 1918.

125,264. WHISKY. ALEXR. YOUNG DISTILLING COMPY, Philadelphia, Pa.
Filed November 20, 1918. Serial No. 114,261. PUBLISHED JANUARY 14, 1919.

LABELS

REGISTERED APRIL 22, 1919.

21,222.—*Title:* "JOLLY TIME POP CORN." (For Popcorn.) AMERICAN POP CORN COMPANY, Sioux City, Leeds, and Schaller, Iowa. Filed January 6, 1919.

21,223.—*Title:* "BIG CHIEF POP CORN." (For Popcorn.) AMERICAN POP CORN COMPANY, Sioux City, Leeds, and Schaller, Iowa. Filed January 6, 1919.

21,224.—*Title:* "STAY THERE." (For a Hair-Tonic.) BEAMON, JEFFORDS & BEAMON CO., Los Angeles, Calif. Filed December 10, 1918.

PRINTS

REGISTERED APRIL 22, 1919.

5,088.—*Title:* "ICE CREAM." (For Ice-Cream.) WOLF ADVERTISING CO., New York, N. Y. Filed January 9, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE EAGER.

Decided January 21, 1913.

1. PATENTABILITY—CLAIMS MUST SPECIFY THE NOVELTY.

Where applicant's combination is new as a whole and performs a new and useful function, but a claim is presented which covers only a part thereof, which is literally met in the prior art, it is not patentable.

2. SAME—CHANGE OF LOCATION—NEW FUNCTION PERFORMED.

A claim for a reaming-tool having an air-inlet in a specified location, which adapts it for reaming the bung-hole of a barrel, while permitting the withdrawal of shavings to prevent them from falling into the barrel, is patentable over a reamer of the prior art having an air-inlet in a different location, where it would not perform the same function.

[Note.—This application has resulted in Patent No. 1,262,470.]

APPEAL from Examiners-in-Chief.

APPARATUS FOR REAMING BUNG-HOLES OF BARRELS.

Mr. Charles J. Hedrick for the applicant.

NEWTON, *Commissioner:*

This is an appeal from a decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 1 to 10, inclusive, and 13, 14, and 15, of which claims 1, 4, 5, and 13 are examples:

1. A reaming tool which comprises first a hollow body that is adapted to be held by one end and has both a longitudinally disposed slot through its peripheral wall and also an appropriately located air withdrawing passage, and second a longitudinally disposed knife that is carried by said body and has its cutting edge adjacent to said slot beyond said body, the tool as a whole being designed for withdrawing the cuttings in their entirety from the tool body in suspension in the air current and for confining said cuttings within the tool body until so withdrawn, substantially as described.

4. A reaming tool which comprises first a hollow body that has an air withdrawing passage at one end, an air inlet of smaller diameter at its opposite end, and a longitudinally disposed slot through the intermediate peripheral wall, and second a longitudinally disposed knife that is carried by said body and has its cutting edge opposite said slot beyond said body, in combination with means for holding said tool by its air withdrawing end and for rotating said tool, and also with air exhausting means which communicate with the hollow interior of said body for inducing air currents inward through said slot and said air inlet and for conveying away the cuttings made by said knife, substantially as described.

5. A reaming tool which comprises first a hollow body that is adapted to be held by one end, that has both a longitudinally disposed slot through its peripheral wall, and also an air withdrawing passage, and that, in addition to said slot and passage, has an air conveying channel for delivering air into the chamber into which the said body may be inserted, and second a longitudinally disposed knife that is carried by said body and has its cutting edge opposite said slot beyond said body, substantially as described.

13. A reaming tool which comprises first a hollow body that has a longitudinally disposed slot through its peripheral wall, that is screw threaded at one end beyond said slot and that is provided at such end with a removable knife securing appliance in a portion of the screw threaded space, second a longitudinally disposed knife that is carried by said body, that fits at one end under said appliance and that has its cutting edge opposite said slot beyond said body, and third a collar that incloses said body and said knife securing appliances and occupies a part only of said screw threaded space, the screw threaded portion of said body thus extending beyond said collar and being applicable to the attachment of said tool to means for holding said tool by the end and for rotating said tool, substantially as described.

The references are: Kirby, 25,512, September 20, 1859; Critchley, 51,568, December 19, 1865; Whitmore, 132,883, November 5, 1872; Littlejohn, 141,511, August 5, 1873; Duffey *et al.*, 244,439, July 19, 1881; Stoner, 489,340, January 3, 1893; Dodge, (reissue,) 11,549, June 23, 1896; Sutton, 771,186, September 27, 1904; Fruhling, 776,049, November 29, 1904; Carlesimo, 909,543, January 12, 1909; Askew, 934,081, September 14, 1909; Shaull, 754,350, March 8, 1904; Lloyd, 952,916, March 22, 1910; Stevenson, 965,664, July 26, 1910; Davis, 1,046,739, December 10, 1912.

The appealed claims cover a reamer for barrel bung-holes, to be used after the preliminary boring in order to enlarge and taper the opening.

These reamers broadly are not new, as shown, for example, by the Lloyd device; but so far as the references show it is new to ream a bung-hole and at the same time prevent the small shavings or particles of wood cut off during the reaming operation from falling into the barrel.

Applicant performs this function by attaching his reamer to a tube-holder and sucking through the tube-holder by means of an air-pump a sufficient volume of air to carry up the fine shavings, and thus prevent their falling into the barrel.

Claims 1, 5, and 7 have been rejected as improperly distinguishing from Lloyd in view of the air-exhaust of Shaull.

Neither Lloyd's nor Shaull's mechanism would perform the function of applicant's—that is, to ream a previously-bored bung-hole and prevent the shavings from falling inside the barrel; but claim 1, for example, does not clearly include any air-withdrawing mechanism. It only specifies "an appropriately located air withdrawing passage;" but Lloyd has a passage in the top of his reamer, Figures 3 and 4, through which air might pass, and it was agreed at the hearing that this claim should be amended to more clearly distinguish from Lloyd, and applicant has submitted an amendment to this claim, which the Examiner is authorized to admit

and allow the claim unless better references are found.

Claim 2 calls for a legitimate combination between the reamer, the means for holding the tool by one end and for rotating it and the air-exhausting means and should be allowed, since this combination is suggested in none of the patents cited and was made for the specific function of preventing the fine shavings from dropping into a barrel, being very hard to remove, both the function and the combination being new.

Claim 3 calls for—

an air withdrawing passage at its holding end and an air inlet of smaller diameter at its opposite end.

together with a longitudinal slot. None of the references show these features in one patent. Lloyd's reamer, Figs. 3 and 4, has no air-inlet of smaller diameter at its lower end. Shaull has air-inlets on the side of the tube. (See Fig. 3.) Applicant sets forth that this opening at the lower end is a decided improvement, since the side slot is liable to become clogged in places, and when so clogged the final shavings would fall into the barrel and the air would fail to carry them out, and a careful study of the operation of this machine will show the reasonableness of this conclusion. Applicant therefore in solving a problem that was not contemplated in either of the references is not met in both of the references combined, and this claim should be allowed.

At the hearing applicant suggested that claims 7 and 8 were on the same lines as claims 1 and 2 and would be dropped if claims 1 and 2 were allowed.

Claims 4 and 10 should be allowed on the same ground as claim 2.

Claims 5 and 6 call for—

an air conveying channel (meaning applicant's channel 1) for delivering air into the chamber.

This feature is new so far as the references show, and no good reason is seen for rejection of this claim.

Claim 9 includes the upper opening, of "large diameter," the lower opening in the reamer, "of smaller diameter," and is therefore similar in scope to claim 3 and should be allowed.

Claim 13 calls for—

a removable knife securing appliance in a portion of the screw threaded space, * * * a * * * knife * * * that fits at one end under said appliance and that has its cutting edge opposite said slot beyond said body, and * * * a collar that incloses said body and said knife securing appliances and *occupies a part only of said screw threaded space*, the screw threaded portion of said body thus extending beyond said collar.

Not even an approximation of this specific construction is shown in the references, and this claim is clearly allowable, as is claim 14 drawn on the same lines.

Claim 15 calls for—

a tool and shaft having one of them at least provided with inlets for admission of air to its interior on the shaft side of the cutting portion of said tool.

This claim has been rejected on the air-passages F of the Stoner patent; but this claim is for a combination for reaming and at the same time withdrawing the shavings and should not be rejected on a device in pneumatic grain-elevators, which shows only one feature included in the claims.

The decision of the Examiners-in-Chief is affirmed as to present claims 1, 7, and 8 and reversed as to the other claims.

EX PARTE GEE.

Decided January 14, 1919.

PATENTABILITY—NOVEL COMBINATION—INVENTION.

In order to negative invention in a novel combination "it is necessary to find in the prior art not merely a device which might be modified to make this construction, but somewhere a suggestion, not only that the modification ought to be made but how to make it."

[Note.—This application has resulted in Patent No. 1,276,642.]

APPEAL from Examiners-in-Chief.

FUEL-TRANSFER MECHANISM FOR STOKERS.

Messrs. Gillson & Gillson and *Mr. Louis K. Gillson* for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from the affirmance by the Examiners-in-Chief of a rejection of two claims to a locomotive-stoker in the following terms:

1. A stoker including a fuel transfer mechanism comprising a main conveyer chute, an elevating chute arranged at an angle thereto, a rectilinearly reciprocating conveyer in said main chute, an elevating conveyer connected to said first mentioned conveyer and reciprocating in said angularly disposed elevating chute, and fuel advancing blades pivotally carried by said conveyers.

2. A fuel transfer mechanism for stokers including a main conveyer chute having a guideway, an upwardly directed elevating chute arranged at one end of the main chute, and having a guideway, a main advancing conveyer frame slidably mounted in the guideway in said main chute, fuel advancing members pivotally carried by the main conveyer frame and being substantially co-extensive with the interior dimensions of the main chute, an elevating conveyer frame slidably mounted in the guideway of the elevating chute, and a plurality of pivotally mounted fuel advancing members progressively decreasing in vertical height as they approach the end of the conveyer frame.

The Examiner cited seven references, of which the following are sufficiently illustrative: Crawford, 1,035,162, August 13, 1912; Young, 1,000,658, April 15, 1911; Rice, 521,817, June 26, 1894.

The rejection was not for anticipation, but for lack of invention, it being held by the Examiners-in-Chief, substantially, that the applicant describes no special advantage for his stoker with two articulated conveyers in place of the single conveyer of the prior art, except that this form economizes space and that a mere mechanic could assemble the prior conveyers in two connected sections. I cannot escape the conviction that the applicant did more than thus suggested. The prior stoking devices were for underfeeding—that is, pushing the fuel up through the grate of the fire-box—and this could be done without raising the fuel above the floor connecting the engine and tender. The applicant's problem was to provide an overfeed or scatter feed, which necessitates raising the fuel to a point higher than the floor of the engine. If the stokers of the prior art were capable of feeding the coal on top of the floor of the engine, the case would be different; but the conditions would prohibit the mere lifting of the elevator of the Crawford patent, so that it would feed over the fire instead of under it. This would require it to pass through the floor of

the engine or the platform connecting with the tender.

The applicant's defined structure is new, and it seems to me that in order to negative invention it is necessary to find in the prior art not merely a device which might be modified to make this construction, but somewhere a suggestion not only that the modification ought to be made but how to make it. I do not think the Rice patent is any suggestion, not only because it is in the foreign art of wool-washing, where there are no limitations of space or direction, but also because the Rice structure seems to require a lot of mechanism above the conveyer, which would be impossible in a locomotive-stoker. So far as the problem of lifting to a greater height is concerned the Crawford reference is plainly impossible, and the Rice reference solves no problem. The applicant must have one horizontal conveyer and one inclined conveyer, and these two are defined as articulated together and reciprocating, with pivotal blades. The Rice device is not a reciprocating device and has not pivotal blades, and the Crawford device does not inform one how the coal could be lifted above the floor of the engine nor how two relatively-inclined sections could be reciprocated together.

The prior art not suggesting the function applicant attains nor how that function could be attained, I can see no ground upon which to reject his appealed claims, and the decision of the Examiners-in-Chief is therefor reversed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

THE ATLAS UNDERWEAR COMPANY *v.* B. V. D. COMPANY.

Decided March 3, 1919.

1. TRADE-MARKS—OPPOSITION—TRADE-MARK USED BY THE OPPOSER NOT NECESSARY.

In order that an opposition may be sustained it is not necessary that the opposer establish a trade-mark use of the mark. It is sufficient if he has acquired a right to use the mark, though not an exclusive one, prior to the applicant's adoption of the mark.

2. NAMES—SIMILARITY.

A mark for underwear consisting of an oval within which is the picture of a young man wearing a union-suit being measured with a tape-line *Held* not registrable where it appeared that the opposer had, prior to the applicant's date of adoption of the word, used upon its catalogues and the boxes containing its goods a picture of a man dressed in underwear only and inclosed in a circle.

Mr. C. H. Duell and *Mr. F. P. Warfield* for the appellant.

Mr. Hosea v. Briesen for the appellee.

SMYTH, *C. J.*:

The B. V. D. Company opposed the application of the Atlas Underwear Company for the registration of a trade-mark for underwear, consisting of an oval within which is the picture of a young man wearing a union-suit while he is being measured with a tape-line extending from the crotch to the right shoulder, where it is held by two hands of a second person. A decision in favor of the opposer was given by the Commissioner of Patents.

It is clearly established that for many years the opposer has been engaged in the distribution and sale of men's union-suits throughout the United States and in foreign countries, and that for some time it has been accustomed to use representations quite similar to applicant's in its catalogues and on the boxes containing its goods; that the covers of some of these boxes, and advertising-matter put out by it, carry a picture of a man dressed in underwear only, and inclosed in a circle similar to the one in the mark which the applicant seeks to register. The illustrations on the boxes have been in use by the opposer since 1912, and those in the catalogues since 1910. Applicant claims no use of its mark prior to April 1, 1915.

Applicant does not deny the identity of the marks, as we understand the argument, but contends that its mark is registrable in the absence of a superior right in the opposer; that the latter has failed to prove trade-mark use, or use analogous thereto, of its mark, and therefore it has not a superior right and is not entitled to object to the registration of applicant's mark.

We do not think the opposer is required to show a superior right in order that it may successfully resist the application. If it is on an equal footing with the applicant and can show probable damage, that will be enough. This court has declared more than once that a trade-mark use of a mark by an opposer is not necessary in a proceeding such as the one before us. (*Natural Food Company* v. *Williams*, 30 App. D. C., 348, 350; *H. W. Johns-Manville Company* v. *American Steam Packing Company*, 33 App. D. C., 224, 226; *Electro Steel Company* v. *Lindenberg Steel Company*, 43 App. D. C., 270, 278.) The record discloses that the opposer was using the mark under consideration in connection with its business prior to the applicant's coming into the field. It thereby acquired a right to its use, although not necessarily an exclusive one. If registration is granted to the applicant's mark, that right would be sequestered and the applicant given a monopoly of the mark. This would likely result in damage to the opposer; hence, the latter has a right to resist the registration.

The decision of the Commissioner of Patents, sustaining the opposition of the B. V. D. Company and denying to the Atlas Underwear Company the registration of the mark shown in its application on the goods therein specified is affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

IN RE CUTLER.

Decided March 3, 1919.

RES JUDICATA—CLAIMS COPIED FROM PATENT AFTER ADVERSE DECISION ON PRIORITY.

In an interference between H. and C. priority was awarded to H. and a patent was granted to him. Thereafter C. discovered an earlier-filed application which supported some of the claims of H.'s patent and sought an interference, which was denied because the

application was in issue and the proposed claims were for a different species. Thereupon a divisional application was filed containing such claims and an interference was declared, which was dissolved on the ground of *res judicata*. Upon appeal from an *ex parte* rejection on this ground *Held* that the question of priority was *res judicata*, since the claims were in H.'s application during the first interference and in accordance with *New Departure Mfg. Co.* v. *Robinson* (39 App. D. C., 504; 188 O. G., 1055) should then have been made by C., even though it had been necessary to declare another interference. (*In re Curtiss*, 46 App. D. C., 183; 238 O. G., 650, distinguished.)

Mr. Frank H. Hubbard for the appellant.

Mr. T. A. Hostetler for the Commissioner of Patents.

VAN ORSDEL, *J.*:

This appeal was taken from the decision of the Commissioner of Patents rejecting appellant's application for an invention relating to starters for electric motors. It is unnecessary to state the claims, since the appeal turns upon a single question of law.

It appears that appellant filed an application for a patent on February 10, 1902, on which patent issued September 28, 1915. This will hereafter be referred to as the original application. On February 27, 1907, he filed a division of the original application, which will be referred to as the divisional application. He also filed an application on April 9, 1904, on which patent was issued November 5, 1912, herein referred to as the 1904 application.

The 1904 application was involved in an interference with one Hall, which resulted in a judgment of priority for Hall. Hall secured a patent July 3, 1906. Appellant's 1902 application was not involved in the interference. Subsequently, appellant discovered claims in his original application, which would have supported claims in Hall's application. He, therefore, under Office Rules 78 and 165, on December 24, 1906, sought to insert in the original application then in course of issue an amendment, consisting of certain claims taken from the Hall patent. This petition was denied, on the ground that the claims were directed to a species different from that claimed in the application.

Appellant then filed the divisional application—the application at bar—claims 1 and 3 of which correspond to claims 13 and 17, respectively, of the Hall patent. A second interference between appellant and Hall was declared. This interference was dissolved in successive appeals to the Commissioner, on the ground that the judgment in the former interference was *res judicata*. The application was then returned to the Primary Examiner, where it was rejected on the same ground. The rejection was affirmed by the Board of Examiners-in-Chief, and also by the Commissioner, who based his decision both on *res judicata* and equitable estoppel. From that decision, this appeal was taken.

The tribunals below rejected claims 2, 4, 5 and 6, on the ground that they were drawn substantially to the same subject-matter as claims 1 and 3, and were not patentably different from those claims. With this holding, we are in accord. This leaves the single question, whether or not the judgment in the first interference is *res judicata* of appellant's right to make claims 1 and 3, which correspond with claims of the Hall patent.

When the Examiner of Interferences decided in favor of Hall in the first interference, appellant appealed to the Board of Examiners-in-Chief, who affirmed the Examiner. No appeal was taken from that decision, and the judgment of the Board became final between the parties as to the cause of action there involved and as to every issue which was, or might have been, decided therein. (*Blackford* v. *Wilder*, 21 App. D. C., 1.) The present claims were in Hall's application. Appellant's original application was in the Patent Office, and had he brought it into the case, his right of priority over Hall could there have been decided and settled. Even had a nominal second interference been necessary, the interferences would have been one and could have been considered on a single record, since the claims were common to both inventions. (*Cross* v. *Rusby*, 42 App. D. C., 341; *New Departure Mfg. Co.* v. *Robinson*, 39 App. D. C., 504.)

Clearly, under our ruling in the Robinson case, appellant was estopped to prosecute his second interference. That being so, the same rule will apply to the present case. Nor can he take refuge behind our decision in the case of *in re Curtiss*, (46 App. D. C., 183.) In that case, it appeared that in an earlier interference (*Janin* v. *Curtiss*, 45 App. D. C., 362) the count in issue called for a hydroaeroplane capable of rising from and alighting upon the water, while the claims of the later divisional application related to a device—

> capable of safe operation at high speed on the water, regardless of whether the machines are constructed so as to be able to subsequently rise from the water and fly in the air.

We held the decision in the interference was not *res judicata* of the claims of the divisional application under consideration in the later case. The machine involved in the interference and the one involved in the later application were entirely different and performed different functions. In that case (*in re Curtiss*) we held the causes of action were different, but here the cause of action is the same in both cases. They are directed to the same device or invention—a starter for an electric motor which automatically cuts out resistance. The distinction between the Curtiss case and the case at bar is supported by the rule of *res judicata* announced in *Cromwell* v. *County of Sac*, (94 U. S., 351,) where the suit was upon four county bonds and four coupons thereto attached. A judgment had been returned upon earlier-maturing coupons attached to the same bonds, which, it was claimed, constituted an estoppel to the second suit between the same parties. The Court, speaking through Mr. Justice Field, said:

> In considering the operation of this judgment, it should be borne in mind, as stated by counsel, that there is a difference between the effect of a judgment as a bar or estoppel against the prosecution of a second action upon the same claim or demand, and its effect as an estoppel in another action between the same parties upon a different claim or cause of action. In the former case, the judgment, if rendered upon the merits, constitutes an ab-

solute bar to a subsequent action. * * * But where the second action between the same parties is upon a different claim or demand, the judgment in the prior action operates as an estoppel only as to those matters in issue or points controverted, upon the determination of which the finding or verdict was rendered.

The decision of the Commissioner of Patents denying the claims to appellant on the ground of *res judicata* is right. The decision is, therefore, affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

HAUSCHILD, BY THE ASSIGNEE OF HIS ENTIRE INTEREST, BECKER, *v.* SPEIDEL.

Decided March 3, 1919.

INTERFERENCE—PRIORITY—DILIGENCE.

Where during the prosecution of an application S., who was a resident of Germany, introduced amendments which embodied the invention in issue, but which the Examiner held to be new matter in that application, and two months thereafter he canceled this amendment, stating that it was removed "for probable presentation elsewhere," and then four months thereafter filed the application involved herein, *Held* that S., who was the first to conceive the invention, was not lacking in diligence and that priority was properly awarded to him.

SMYTH, *C. J.:*

Hauschild, by his assignee Becker, appeals from a decision against him in an interference proceeding relating to a process for soldering chain-links made from wire in which the solder is contained as a core. The issue is expressed in eight counts, of which 1, 2, 6 and 7 are typical. They read:

1. A process of soldering chain made from solder wire, consisting in coating the chain with a soldering salt, removing the said coating except from the joint surfaces, and then closing the joints by heating the chain with said joints so coated and the rest of its surface bare or uncoated with soldering salt.

2. A process of soldering chain made from solder wire, consisting in coating the chain with a soldering salt, removing the said coating except from the joint surfaces of the links, and then closing the joints with a soldering flame.

6. Process of preventing intersoldering of solder-cored metal chain links, consisting in applying a deoxidizer to the work piece, removing it again therefrom except at the joints, heating the work piece until a compound of the metal component of the shell of the links is produced on the surface of the links, and then continuing the heat to the fusing point of the solder core, substantially as set forth.

7. In the method of automatically soldering chains, applying a flux to the joints of the links, removing the surplus flux, and subjecting the joints to an oxidizing heat capable of fusing the solder.

When heat was applied to the solder for the purpose of forming a joint, the solder would run out from the joints and freeze the links together, thus producing what is called stiff solder. How to overcome this was the problem which claimed the attention of the inventors.

Speidel obtained a patent for a process relative to the subject in February, 1912, upon an application filed April 22, 1910. While this application was pending he presented certain amendments. One was filed in August, 1910, one in February, 1911, and one in May, 1911. All were objected to by the Examiner as constituting new matter. The application here involved was filed by him February 23, 1912. Hauschild's application was filed October 14, 1911. The Examiner gave the claims to Hauschild. His action was reversed by the Board of Examiners-in-Chief, and on appeal the Commissioner in a carefully-prepared opinion affirmed the Board.

Hauschild asserts that the process revealed in his application is different from that disclosed in Speidel's patent, but admits that there is no difference between his process and the process of Speidel's present application. He urges, however, that since Speidel did not reduce to practice until February, 1912, his filing date, he, Hauschild, having filed in October, 1911, is entitled to priority.

We agree with the Commissioner that there is no difference between the process of the Speidel patent and that disclosed in Hauschild's application. He says:

If it be a fact as contended by Hauschild, that diluted sulfuric acid will not form a protective coating on the copper, but will assist only in removing the borax crystals, then the same is true of the process in which the chain is treated with sawdust moistened with diluted sulfuric acid. On the other hand, if in Speidel's process the acid does form a protective coating, then necessarily it must do the same in Hauschild's process, where the sand is similarly moistened.

Moreover, if we accept the Hauschild theory that the preheating apparently contemplated by the claims means only that as the metal is raised to a soldering temperature, oxid is first formed, the invention was disclosed by Speidel when he tendered the amendments to his original application which we have referred to above.

In the amendment of February, 1911, he said:

I can make use of the oxid coating which forms *eo ipso* upon the heat at the soldering place being gradually raised to the point of melting the solder core.

This was repeated in the following May when he withdrew the amendments. Each date being prior to Hauschild's filing date, Speidel is entitled to prevail if he was diligent between the date of his disclosure and the filing of his present application. Both parties were residents of Germany. The Patent Office letter informing Speidel that his amendments contained new matter was mailed on July 17, 1911. In the following October he canceled the new matter, stating that he removed it "for probable presentation elsewhere." Within four months after this he filed the present application. Considering the fact that he was a resident of Germany and the time necessary to communicate between the two countries, we think he was diligent and therefore is entitled to a date of disclosure prior to that of Hauschild.

The decision of the Commissioner is affirmed and priority of invention of the subject-matter awarded to Eugen Speidel.

Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 4, 1919.

Colonial Leather Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Dural Rubber Corporation, Flemington, N. J., for registration of a trade-mark and trade-mark registered December 26, 1911, No. 84,598, to the Colonial Leather Company, 811–817 Reese street, Chicago, Ill., and a notice of such declaration sent by registered mail to the said Colonial Leather Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Colonial Leather Company, its assigns or legal representatives, shall enter an appearance therein within thirty

days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1919.

William J. Lickel, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Richard H. Heinrichs, of 2140 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered March 7, 1905, No. 44,281, to William J. Lickel, of 410 Cumberland street, Brooklyn, N. Y., and a notice of such declaration sent by registered mail to said William J. Lickel at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William J. Lickel, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 9, 1919.

Francis J. Underwood, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alfred Wright, Inc., 639 North Broad street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered September 6, 1898, No. 51,940, to Francis J. Underwood, 736 Main street, Hartford, Conn., and a notice of such declaration sent by registered mail to said Francis J. Underwood at said address having been returned by the post-office undeliverable, notice is hereby given that unless said Francis J. Underwood, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1919.

Hamburger & Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Henry M. Rynehart Co., 17 Fulton street, Brooklyn, N. Y., for registration of a trade-mark and trade-mark registered December 15, 1896, No. 29,804, to Hamburger & Company, No. 20 West Third street, New York, N. Y., and a notice of such declaration sent by registered mail to the said address of record having been returned by the post-office undeliverable, notice is hereby given that unless said Hamburger & Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Patents Nos. 1,301,800 to 1,302,489.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 261—No. 5. TUESDAY, APRIL 29, 1919. Price—$5 per year.

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Patents	502	No. 1,301,800 to No. 1,302,489,	inclusive.
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Labels	None.		
Prints	None.		
Reissues	3	No. 14,639 to No. 14,641,	inclusive.
Total	747		

Yes agree with the man on the W. S. S. whenever you buy one. He said:

"He that murders a pound destroys all that it might have produced, even scores of pounds."

—Ben Franklin.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 9, 1919.

Francis J. Underwood, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alfred Wright, Inc., 629 North Broad street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered September 6, 1898, No. 51,948, to Francis J. Underwood, 739 Main street, Hartford, Conn., and a notice of such declaration sent by registered mail to said Francis J. Underwood at said address having been returned by the post-office undeliverable, notice is hereby given that unless said Francis J. Underwood, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1919.

Hamburger & Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Henry M. Rynehart Co., 17 Fulton street, Brooklyn, N. Y., for registration of a trade-mark and trade-mark registered December 15, 1896, No. 59,204, to Hamburger & Company, No. 20 West Third street, New York, N. Y., and a notice of such declaration sent by registered mail to the said address of record having been returned by the post-office undeliverable, notice is hereby given that unless said Hamburger & Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1919.

Robert A. Brachvogel, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Chic-Mint Gum Co., 223 French street, Wilmington, Del., for registration of a trade-mark and trade-mark registered June 19, 1906, No. 54,032, to Robert A. Brachvogel, 1206 Tacoma Building, 181 La Salle street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Robert A. Brachvogel at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Robert A. Brachvogel, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Notice—Marking Drawings for Identification.

The attention of the attorneys is called to Rule 52, paragraph (*g*), which reads in part as follows:

* * * "The title should be written with pencil on the back of the sheet."

A compliance with this suggestion will avoid trouble in identifying the application to which the drawing belongs, especially in design cases, where more than one application is filed by the same inventor.

Whenever a substitute or additional drawing is filed, the serial number of the application should be written on the back of the drawing.

J. T. NEWTON,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 25, 1919.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Planting; Scattering Unloaders; Trees, Plants, and Flowers.	Mar. 10	Feb. 19	317
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Paper Files and Binders; Medicines; Pneumatics; Preserving; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Dec. 26	Jan. 1	460
175	3. Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Metal Treatment; Plastic Metal Working.	Mar. 10	Dec. 17	163
234	4. Conveyers; Elevators; Excavating; Hoisting; Material or Article Handling; Pneumatic Despatch; Pushing and Pulling Implements; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 28	Mar. 26	332
107	5. Book-Making; Books, Strips and Leaves; Harvesters; Jewelry; Manifolding; Music; Printed Matter; Tying Cords or Strands.	Jan. 28	Jan. 9	165
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Substance Preparation.	Jan. 7	Jan. 24	.....
312	7. Educational Appliances; Games and Toys; Optics; Velocipedes	Mar. 3	Mar. 14	362
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 8	Apr. 5	169
221	9. Air and Gas Pumps; Hydraulic Motors; Injectors and Ejectors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Oct. 15	Nov. 26	334
295	10. Carriages and Wagons; Motor Vehicles	Feb. 11	Mar. 18	328
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Feb. 13	Mar. 31	186
323	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Nov. 16	Oct. 26	984
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 16	Mar. 18	659
325	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Packaging Liquids; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 10	Apr. 5	179
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Jan. 27	Jan. 18	450
113	16. Radiant Energy; Telegraphy; Telephony	Dec. 11	Dec. 13	605
207	17. Label Pasting and Paper Hanging; Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Mar. 1	Mar. 15	113
229	18. Fluid-Pressure Regulators; Liquid Heaters and Vaporizers; Power Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 30	Feb. 24	548
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Feb. 7	Feb. 3	230
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 25	Mar. 8	200
212	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 30	Jan. 6	363
249	22. Aeronautics; Firearms; Ordnance	Feb. 3	Mar. 12	289
317	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Jan. 16	Feb. 4	217
144	24. Apparel; Apparel Apparatus; Garment Supporters; Sewing-Machines	Sept. 21	Jan. 21	382
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Mar. 8	Mar. 25	182
105	26. Electricity, Generation; Motive Power; Prime Mover and Dynamo Plants	Oct. 17	Dec. 17	612
214	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 20	Jan. 21	631
235	28. Internal-Combustion Engines	Jan. 11	Jan. 10	572
147	29. Boring and Drilling; Chucks or Sockets; Coopering, Fire-Escapes; Ladders; Rod Joints or Couplings; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Feb. 10	Jan. 27	566
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Feb. 1	Apr. 9	261
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Feb. 12	Feb. 5	292
278	32. Gas and Liquid Contact Apparatus; Heat Exchange; Refrigeration	Oct. 10	Feb. 14	663
70	33. Bridges; Hydraulic and Earth Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving; Roads and Pavements; Roofs.	Dec. 10	Jan. 28	256
104	34. Railways; Railway Rails and Joints; Railway Rolling Stock; Railway Switches and Signals; Railway Ties and Fasteners; Railway Wheels and Axles; Track-Sanders; Vehicle-Fenders.	Jan. 28	Feb. 1	304
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Mar. 24	Mar. 25	272
204	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Mar. 21	Mar. 11	482
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, General Applications	Nov. 23	Dec. 4	440
278	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Mining, Quarrying, and Ice-Harvesting; Stationery; Stone-Working; Wells.	Mar. 24	Mar. 22	142
230	39. Joint Packings; Multiple Valves; Packed Shaft or Rod Joints; Pipe Joints or Couplings; Valved Pipe Joints or Couplings; Valves; Water Distribution.	Nov. 29	Dec. 26	470
273	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 22	Mar. 24	343
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Jan. 8	Dec. 28	280
114	42. Electricity, Conductors; Electricity-Transmission to Vehicles; Electricity, Conduits; Electric Signaling	Nov. 20	Dec. 21	444
283	43. Baths and Closets; Dispensing; Dispensing Beverages; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Nov. 29	Apr. 1	95
253	44. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Ships	Nov. 21	Mar. 7	148
279	45. Clutches; Lubrication; Motors; Railway Brakes	Jan. 13	Feb. 28	228

Oldest new case, Sept. 21; oldest amended, Nov. 29.
Total number of applications awaiting action..... 16,662

168	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Mar. 26	Apr. 11	979
	Designs	Mar. 8	Apr. 1	223
	Labels and Prints	Mar. 15	Mar. 28	134

PATENTS

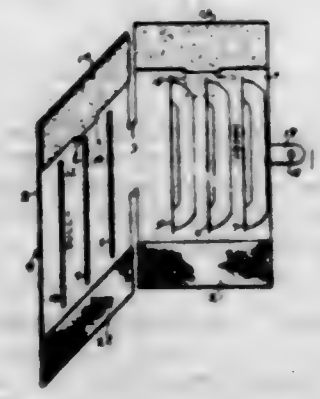
GRANTED APRIL 29, 1919.

1,301,800. **DIFFERENTIAL GEAR FOR MOTOR-CARS.** ALBERT AICHELE, Baden, Switzerland. Filed Jan. 5, 1918. Serial No. 210,539. 7 Claims. (Cl. 74—7.)



1. In a motor car differential gear without toothed gear wheels, the combination with each half of a divided hind wheel axle, of a set of two claw clutches located concentrically to each other, and a spring having a constant tendency to keep said clutches in engagement, one clutch of each set having approximately straight-faced claws for transmitting the driving power to its respective hind wheel axle half, and the other clutch of the same set having inclined-faced claws whose face-inclination is such as will prevent self-jamming, and also open the straight-faced claw clutch axially against said spring whenever the two hind wheels are revolving at different speeds.

1,301,801. **RAZOR-STROPPING DEVICE.** HARRY ALEXANDER ADAMS, New York, N. Y., assignor to Serviceable Inventions Corporation, New York, N. Y., a Corporation of New York. Filed May 11, 1917. Serial No. 167,917. 1 Claim. (Cl. 51—16.)



A book for holding safety razor blades and sharpening means therefor comprising a pair of oblong covers having in their inner faces a plurality of longitudinal slits for holding blades, and a plurality of transverse slits, a pair of opposed removable transverse honing members, each at one and the same end of the respective covers and each having a projection fitting a corresponding transverse slit, opposed stropping members at the opposite ends of the covers on the inner face thereof, and a flexible hinge connecting the covers and retaining the hone and strop members opposed in pairs.

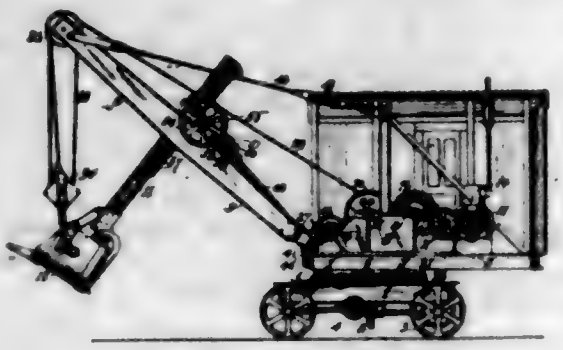
1,301,802. **TOOL-HANDLE.** JOHN EDWARD ANDERSON, Rockford, Ill. Filed Feb. 1, 1918. Serial No. 214,926. 2 Claims. (Cl. 279—93.)

1. In a tool handle, a shank having one flat portion, a longitudinally slotted grip terminating at one end in a head, the slotted portion of said grip having pivotally arranged therein the flat portion of said shank, and a longitudinally slotted sleeve encompassing said grip and



movable with relation thereto, one end of the slot of said sleeve being widened to receive the flat portion of the said shank.

1,301,803. **EXCAVATING-MACHINE.** HARRY J. BARNHART, Marion, Ohio, assignor to The Osgood Company, Marion, Ohio, a Corporation. Filed Feb. 7, 1917. Serial No. 147,046. 8 Claims. (Cl. 214—135.)

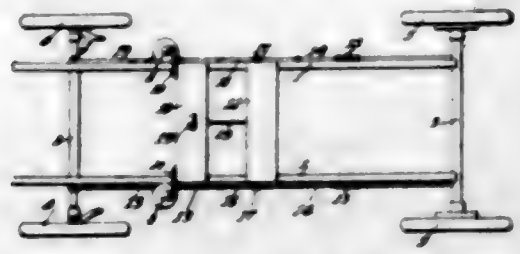


3. In an excavating machine of the described character, a rotatable body, a boom pivoted at its heel upon said body, a horizontal shaft which forms such pivot, means for the vertical adjustment of the point of said boom upon said pivot shaft, a dipper-arm reciprocable on said boom, gears on said boom for actuating the dipper-arm, gears on said pivot-shaft, operative connections between said two gears, an engine, driving connections between the engine and the gears on said pivot-shaft, and means for throwing said latter gears into and out of operative relation with said driving connections.

1,301,804. **PNEUMATIC SUSTAINING MEANS FOR VEHICLES.** WILLIAM H. BATES, Vancouver, Wash. Filed July 5, 1917. Serial No. 178,804. 1 Claim. (Cl. 21—105.)

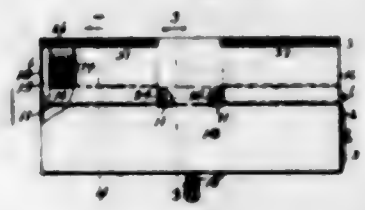
The combination with a vehicle including a frame and a running gear having front and rear axles, of a lever having one end connected to one axle, a cushion carried by the frame connected to said lever between its ends, a floating lever pivotally connected between its ends with the frame and having one end coöperable with the other

end of the first mentioned lever, and a third lever fulcrumed between its ends to the frame and having one



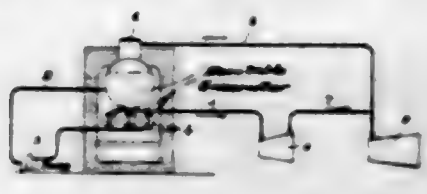
end connected to the other end of the floating lever and is other end connected to the other axle.

1,301,805. SANITARY HEATED STOCK-FOUNTAIN. THEODORE J. BENDLAGE, Marshalltown, Iowa. Filed Dec. 4, 1916. Serial No. 135,065. 4 Claims. (Cl. 119—73.)



2. A sanitary heated stock fountain, comprising a suitable sheet metal frame formed with a horizontal partition whereby the frame is divided into horizontal compartments, said frame being formed with a door in one end of its lower compartment and ventilating ports in said door, said frame also being formed with egress ports in the adjacent end wall of its upper compartment, the partition being formed with a flue-hole adjacent said door and at one side of the center of said partition, whereby a lamp may be mounted in the lower compartment with its flue extending through said hole, a trough rigidly mounted in said frame and spaced at one end from the end wall of said frame farthest from the door, the bottom of the trough being concaved and engaging the upper face of said partition whereby the upper compartment is divided through its longitudinal center save at the spaced end thereof, and means for supplying water to the trough.

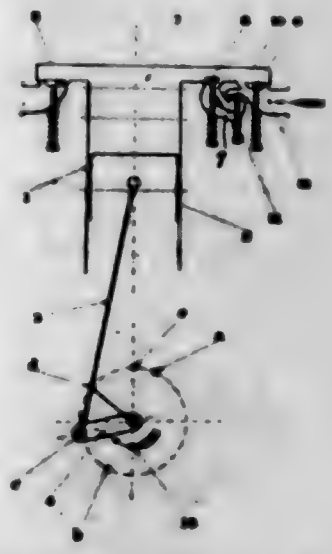
1,301,806. STEAM PLANT. JOHAN VIKTOR BLOMQUIST, Djursholms Ösby, Sweden. Filed Mar. 27, 1918. Serial No. 225,009. 1 Claim. (Cl. 60—48.)



In a steam plant of the character described, a low pressure boiler having a fire box, a plurality of revoluble steam generator vessels arranged within the fire box beneath the boiler and between the same and the grate or fire, a pipe connected with the boiler to supply preheated water to the revoluble vessels, a steam pipe leading to the boiler, a low pressure engine connected with the steam pipe, a high pressure engine having its exhaust connected with the steam pipe, and a second steam pipe connected with the revoluble vessels and the intake of the high pressure engine.

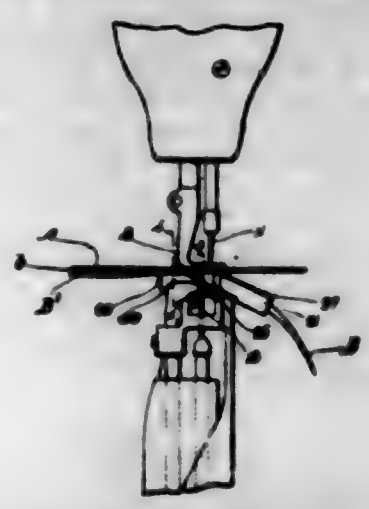
1,301,807. INTERNAL-COMBUSTION ENGINE. JOSEPH BOUTELLE, Paris, France. Filed July 29, 1918. Serial No. 247,248. 7 Claims. (Cl. 123—105.)

1. An internal combustion engine comprising means for producing a substantially uniform compression in the explosion chamber, said means including means for allowing the explosive mixture to escape from the said



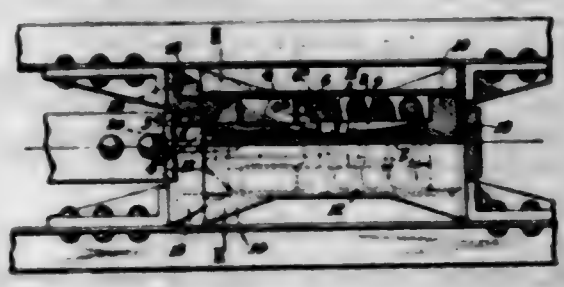
chamber at a predetermined position of the piston in the compression stroke.

1,301,808. SEWING-MACHINE. FRANK A. BRACKETT, Manchester, N. H., assignor to W. H. McElwain Company, a Corporation of Massachusetts. Filed May 21, 1917. Serial No. 169,917. 7 Claims. (Cl. 112—8.)



1. A sewing machine comprising means to sustain a strip having a depending fold and a sole superposed on said strip, means to form a series of lines of stitches at the base of said fold, and means to turn said fold over one of said lines of stitches.

1,301,809. SHOCK-ABSORBING MECHANISM FOR RAILWAY-CARS. CHESTER K. BROOKS, Mentor, and ERNEST H. SCHMIDT, Cleveland, Ohio, assignors to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 26, 1916, Serial No. 93,506. Renewed Sept. 25, 1918. Serial No. 255,695. 5 Claims. (Cl. 213—24.)



1. In frictional shock absorbing mechanism, a longitudinally-extending included friction member having a plurality of radially-disposed arms, each arm having longitudinally-tapered friction faces, a plurality of fric-

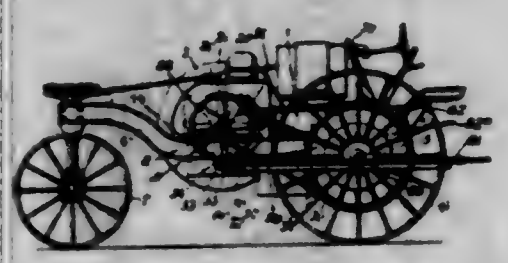
tion shoes arranged between said arms and in frictional engagement with the side faces thereof, each shoe having an inclined wedging face, and an integral wedge member encircling said included member and engaging the wedging faces of said shoes to compress the shoes against the included member, and a compression spring, the said shoes being adapted to be moved longitudinally of the included friction member by a wedge, and to be moved transversely of the included member by the taper on the arms thereof.

1,301,810. CARTRIDGE-CARRIER. JOHN M. BROWNING, Ogden, Utah, assignor to Colt's Patent Fire Arms Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 28, 1917. Serial No. 204,451. 5 Claims. (Cl. 102—12.)



1. A cartridge comprising a shell and a projectile, the shell being peripherally roughened to coöperate with a belt to prevent accidental movement of the cartridge with respect to the belt.

1,301,811. POWER-TRANSMISSION GEARING. EDWARD W. BURGESS, Chicago, Ill., assignor, by mesne assignments, to International Harvester Company, a Corporation of New Jersey. Filed Sept. 22, 1915. Serial No. 52,066. 12 Claims. (Cl. 180—53.)



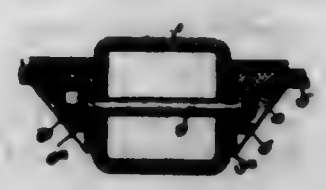
1. Power transmission gearing including, in combination, a driving shaft, a pinion secured to said shaft, a gear sleeve journaled upon said shaft, a spider having its hub secured to said sleeve, orbital gears journaled upon said spider and driven by said pinion, a rotatable element having internal gear teeth meshing with said orbital gears and journaled upon the hub of said spider, a countershaft, a gear connection between said countershaft and said gear sleeve, and means for holding said rotatable element against rotation.

1,301,812. CORNER-FASTENER FOR SCREEN-FRAMES. REINHART J. BURGER, Kirkwood, Mo., assignor to Walter Scott, St. Louis, Mo. Filed May 12, 1918. Serial No. 234,318. 2 Claims. (Cl. 20—92.)



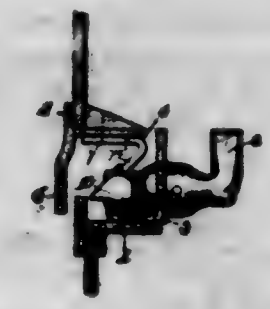
2. A corner piece for frames comprising a one piece sheet metal U-shaped member, the sides of the arms thereof being provided with opposing parallel flanges formed with inwardly turned lips, wings punched from the arms and bent in planes substantially parallel thereto but in opposite direction therefrom, the free ends of the wings terminating in inwardly turned lips.

1,301,813. FASTENING DEVICE. WILLIAM H. BURK, Chicago, Ill., assignor to American Steel Window Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1918. Serial No. 219,000. 6 Claims. (Cl. 189—2.)



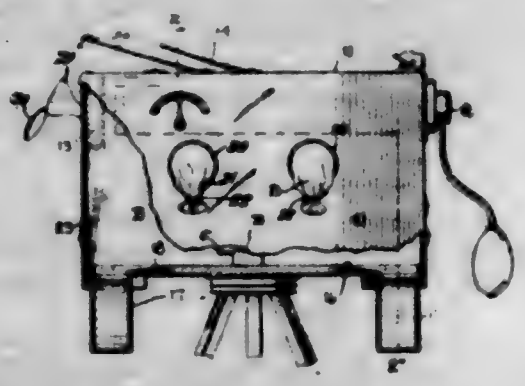
1. In structures of the character described and including a partition frame and a sash frame having marginal outstanding flanges and a glass seated within such flanges and a beveled retaining wall of putty within the angle between the glass and flanges, a chambered fastener interposed in the putty wall and extending therethrough, and a bolt having its head seated in said chambered fastener and arranged to clamp said sash frame to said partition frame.

1,301,814. LATCH. WILLIAM H. BURK, Chicago, Ill., assignor to American Steel Window Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1918. Serial No. 219,100. 6 Claims. (Cl. 70—49.)



5. A fastening device comprising a keeper and a latch consisting of a pivoted rocking arm and a rigidly connected oppositely arranged handle of preponderating weight tending to urge said arm toward said keeper, said arm at its end being formed on one side with a cam face arranged to automatically coöperate with the keeper when moved against it to effect rocking of the arm, and on the other side being formed with an initial engaging face and with a cam face adjacent said engaging face and arranged to coöperate with the keeper by manual operation of the handle.

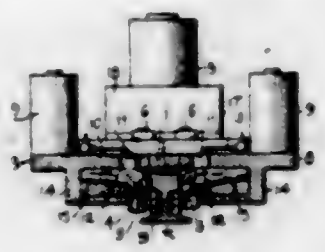
1,301,815. PHOTOGRAPHIC CAMERA. WILLIAM J. BURROWS and HORACE B. LAWRENCE, Vernon, Ala. Filed Aug. 31, 1918. Serial No. 252,223. 2 Claims. (Cl. 95—12.)



1. A camera of the character described comprising a casing divided into a photographing compartment, a plate developing and fixing compartment and a print developing, fixing and printing compartment, the first compartment being provided with means for supporting the photographic plate and with a lens, the second and third named compartments being provided with tanks adapted

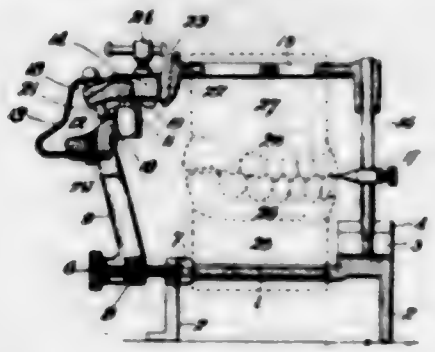
to contain developing and fixing solutions, the printing compartment having therein a lamp, the side walls of the casing being provided with sleeves through which the operator may insert his hands to thereby permit the manipulation of the plate and the printing paper.

1,301,816. OILING DEVICE. JUNIUS E. BUSBY, Trafford, Ala., assignor of one-half to Charles Henry Keith, Trafford, Ala. Filed Dec. 22, 1917, Serial No. 208,349. Renewed Sept. 18, 1918. Serial No. 254,676. 9 Claims. (Cl. 184—3.)



3. An oiler of the character described comprising a body, longitudinally alined wheels carried by the body adapted to ride upon the tread portion of a rail of a track-way, arms pivotally engaged with the body and extending beyond opposite sides thereof, and oil applying means carried by the outer end portions of the arms.

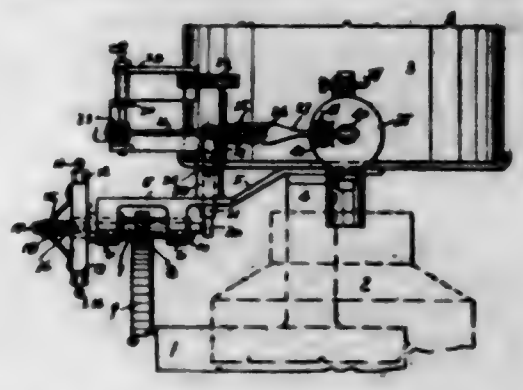
1,301,817. DENTAL ARTICULATOR. DAYTON D. CAMPBELL, Kansas City, Mo. Filed Oct. 7, 1918. Serial No. 257,104. 2 Claims. (Cl. 32—1.)



1. A dental articulator comprising a standard having widely spaced rearwardly-facing shoulders, a base plate slidingly connected for back-and-forth movement, to the standard and supporting the latter, and provided at the front end with a longitudinal guide of V form in cross section, a set screw mounted in the base plate and engaging the standard in the longitudinal plane of said guide, a horizontally-arranged T-shaped member overlying the standard and base plate and provided at the ends of its head with pins depending onto the top of the standard and engaging the rearwardly-facing shoulders thereof, and with a depending finger resting on said V-shaped guide, and a spring applying downward pressure on the head of the T-shaped member to hold the same yieldingly depressed.

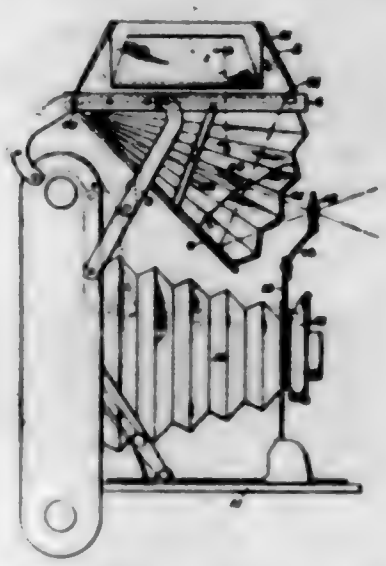
1,301,818. AUTOMATIC FEEDING DEVICE FOR CREAM-SEPARATORS. CARL V. CARLSON, Chatcolet, Idaho. Filed Dec. 13, 1917. Serial No. 206,875. 2 Claims. (Cl. 137—140.)

2. In combination, a cream separator, a tank above the separator, a spout extending from the tank and disposed to discharge to the separator, a valve in the spout, a spring to normally close the valve, an arm extending from the valve, a governor, a rod, a lever extending from the rod, and adapted to be operated upon by the governor, a lever extending from the upper end of the rod and positioned to contact with the arm extending from the valve, a second rod, a crank arm at the bottom of said second rod, a connection between the crank arm and the lever on the upper end of the first mentioned rod, an indicating lever on the upper end of said second mentioned rod, and a curved plate provided with a scale with which the



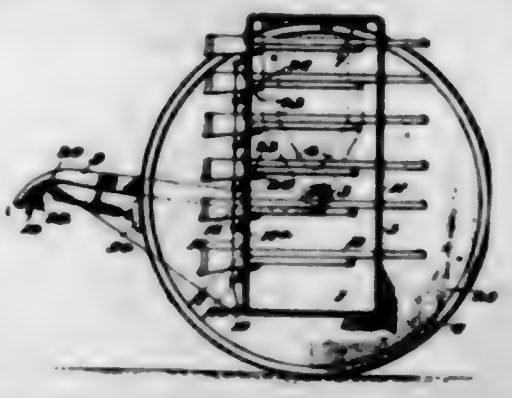
indicating lever coöperates, whereby, when the governor operates the valve, the indicating lever will indicate on the scale, the movement of the valve.

1,301,819. FOCUSING-FINDER ATTACHMENT FOR CAMERAS. FRED P. CLARK, Seattle, Wash., assignor of one-half to Jerome P. Coffin, Seattle, Wash. Filed June 3, 1918. Serial No. 237,912. 8 Claims. (Cl. 95—44.)



1. A finder for folding cameras comprising a frame hinged exteriorly of the camera frame and adapted to swing into a position substantially paralleling the focal axis of the camera lens, a reflecting plate hinged to swing into an angular position at the inner side of said frame, a ground glass fixed in said frame and a focusing lens mounted to move with the camera lens and placed in front of said mirror.

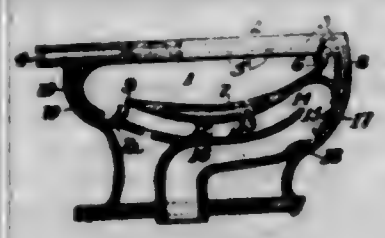
1,301,820. FIELD-GUN. WILLIAM T. CLINGER, Oil City, Pa. Filed Sept. 5, 1918. Serial No. 252,742. 8 Claims. (Cl. 89—1.)



2. In combination, an open frame, wheels for supporting the frame, guns mounted in the frame, handles extend-

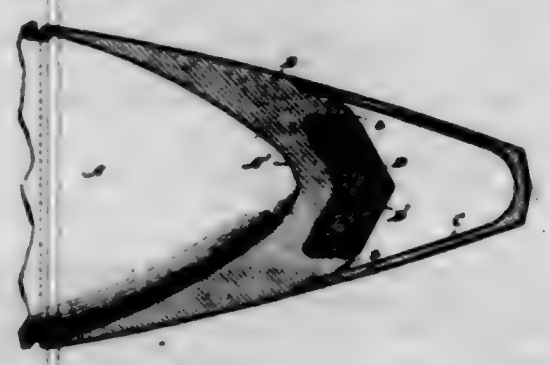
ing from the frame, brakes between the handles and the wheels to lock the latter and the frame together, and means for simultaneously firing all the guns.

1,301,821. SIPHON-BOWL. HARRISON TAYLOR CRONK, New York, N. Y., assignor to Cronk-Salter Company, New York, N. Y., a Corporation of New York. Filed Jan. 26, 1914. Serial No. 814,278. 6 Claims. (Cl. 4—22.)



1. A closet bowl comprising a pair of superposed, relatively long, similarly shaped and slightly concave refuse receiving ledges forming a relatively shallow trap therebetween, and each having a sharp edge constituting a dam, and said dams being disposed at opposite ends of the ledges, rounded side walls curving downwardly and inwardly respectively into each ledge at the ends thereof opposite the dams, means for directing a flushing fluid down each of said rounded walls, an outlet from said trap and means for siphoning the material from said trap.

1,301,822. ARMOR-PIERCING PROJECTILE. WILLIAM DALTON, Washington, D. C., assignor to Washington Steel & Ordnance Company, Washington, D. C., a Corporation of West Virginia. Filed Dec. 22, 1917. Serial No. 208,474. 4 Claims. (Cl. 102—28.)

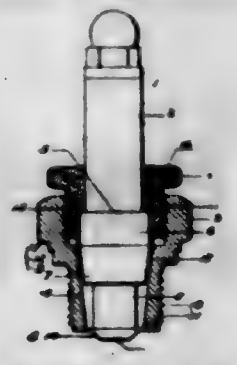


1. A striking member of an armor piercing projectile of the type in which the striking member is of relatively hard metal and is placed on the forward portion of the soft metal nose which surrounds the hardened nose of the projectile, characterized by having its rear face shaped to substantially conform to the shape of and provide a bearing for a considerable area of the surface of the hardened nose of the projectile when the latter is brought into contact with the striking member upon impact.

1,301,823. POLISH. ALBERT DE BARY, Jr., New York, N. Y. Filed Aug. 1, 1918. Serial No. 247,790. 2 Claims. (Cl. 134—24.)

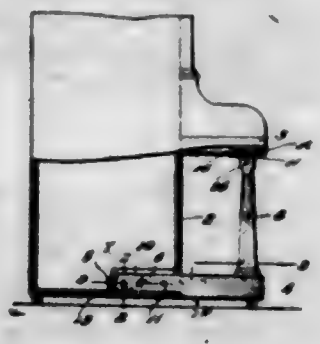
1. A liquid composition adapted to the removal of grease and dirt from polished surfaces of motor cars, furniture, wood-work, linoleum and any painted surface whatsoever which will take or acquire a polish through the application of a polishing liquid on the surface thereof and a quick drying, hard, non-cracking polish to which neither dust nor dirt adheres; comprising 80 c. c. paraffin oil, 10 c. c. turpentine oil, 12 c. c. linseed oil, 7 grams powdered gum arabic, 8 c. c. lime water, 5 c. c. ammonia water containing 10% ammonia and pure water to make 100 c. c.

1,301,824. SPARK-PLUG. CHARLES HUGH DUFFY, Chevy Chase, Md. Filed Apr. 16, 1918. Serial No. 228,936. 16 Claims. (Cl. 123—169.)



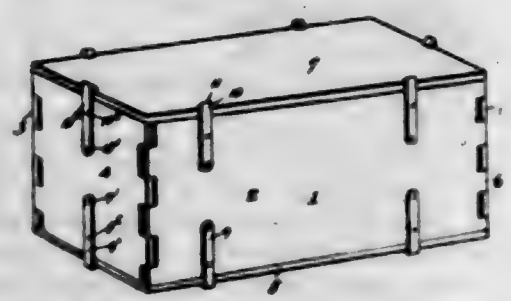
1. A spark-plug of the type in which the insulating core and the metal shell are provided with slightly tapered portions complemental to each other, an insulating core having a sticking taper, a metal shell having a sticking taper complemental to the sticking taper of the insulating core, and a metal band closely encompassing the sticking taper of the insulating core, said plug including means providing for rotation of said insulating core and metal band with relation to the shell to progress the insulating core and metal band inwardly of the shell, said metal band and closely conforming to the complemental sticking taper in the metal shell.

1,301,825. PIANO CONSTRUCTION. MICHAEL J. DUNN, Philadelphia, Pa. Filed Aug. 31, 1917. Serial No. 189,159. 2 Claims. (Cl. 84—52.)



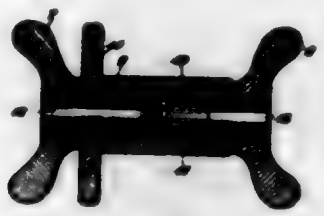
2. In a piano, a toe piece carried thereby, means for slidably securing said toe piece to said piano, a truss connected with the outer extremity of said toe piece, and means for removably securing upper end of said truss to said piano.

1,301,826. EGG-CRATE. WILLIAM ERNEST FISHER, Toronto, Ontario, Canada. Filed Sept. 27, 1918. Serial No. 255,954. 2 Claims. (Cl. 217—56.)



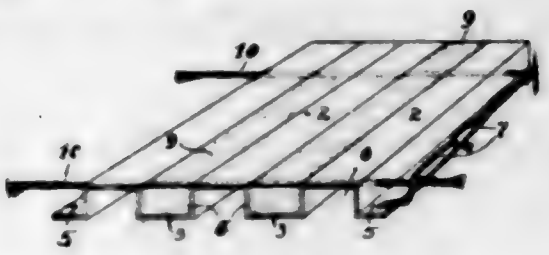
1. An egg crate comprising sides and ends hingedly connected together, spring fingers extending outwardly from the edges of the crate and having ratchet-shaped upper ends, and top and bottom members adapted to engage such ratchet-shaped upper ends so as to spring them simultaneously outward to allow the top and bottom members to pass beneath the ratchet-shaped ends against the top and bottom of the crate.

1,301,827. TEST-CONNECTOR. WILLIAM L. FLYE, Glen Ridge, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Oct. 2, 1917. Serial No. 194,383. 2 Claims. (Cl. 173—324.)



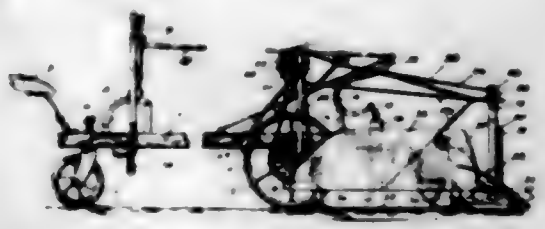
1. A device for connecting sections of a line comprising a contact member, one end of which is externally threaded and the other end of which forms a wing nut, a sleeve member threaded internally at one end and having a wing nut at its other end, said sleeve member being adapted to coact with said contact member, a second contact member fitting inside of said sleeve member, each contact member being permanently fastened to a section of the line connected.

1,301,828. PLASTER-BOARD. SILAS M. FORD, St. Paul, Minn. Filed May 25, 1916. Serial No. 99,820. 6 Claims. (Cl. 72—124.)



1. As an article of manufacture, a plaster-board comprising a sheet of fibrous material corrugated to form interspaced lath projections and intermediate valleys, anchoring instrumentalities passing through the board and into the valleys on the plastering face of the board, and fillings of cementitious material disposed lengthwise of said face-valleys and filling the same, and adherent to said anchoring instrumentalities.

1,301,829. BEAN-CUTTER. HORACE S. FOUTS, Modesto, Calif. Filed Jan. 31, 1918. Serial No. 214,598. 4 Claims. (Cl. 56—1.)



1. A bean cutter comprising a support, a lever fulcrumed to move in a vertical plane on the support, a goose neck lever fulcrumed to move in a vertical plane on the support and pivotally connected at one end to the first named lever, a cutting mechanism suspended from the other end of the goose neck lever, comprising a rectangular frame pivoted to said lever and arranged for vertical movement relative to the support, a V-shaped frame pivotally mounted at the lower end of said rectangular frame, back of the center of gravity of the V-shaped frame, vertical and horizontal cutters suitably mounted to said frame, a supporting wheel rotatably mounted in the V-shaped frame, and spring tension means between the support and the forward end of the cutter mechanism whereby a downward tipping motion of the same will be yieldably restricted.

1,301,830. PULLEY-SUPPORTING BRACE. PHILIP A. FUCHS, Milwaukee, Wis. Filed Apr. 2, 1917. Serial No. 159,131. 1 Claim. (Cl. 182—1.)



The combination with a sewer cleaner, of a cable for drawing the same through the sewer, a pulley supporting brace adapted to extend obliquely from the bottom of the sewer adjacent to the man-hole, across the man-hole into contact with its opposing wall, a pulley connected with the brace in a position to be supported thereby near the lower end thereof and adjacent to one wall of the man-hole, said cable being extended around said pulley and upwardly through the man-hole and adapted to draw the upper end of the brace against the opposing wall, and the lower end of the brace against the bottom of the sewer, said brace having a pivoted foot piece at its lower end, and an extensible section at its upper end terminating in a wedge shaped extremity adapted for biting anchorage in the wall of the man-hole.

1,301,831. LIFE-PRESERVER. HARRY WILLIAM GAIN, Toronto, Ontario, Canada, assignor to Freyseng Cork Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario, Canada. Filed June 11, 1918. Serial No. 239,428. 2 Claims. (Cl. 9—17.)

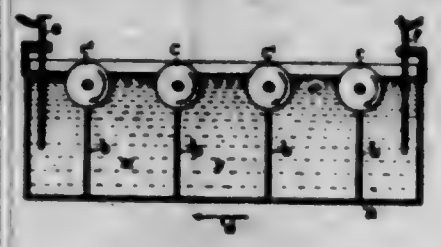


1. A life preserver comprising an apron-like portion having a central opening through which the head of the wearer is designed to extend and forming back and front apron portions extending respectively over the chest and back of the wearer, pockets formed in the front and back apron portions containing buoyant material, loops secured to the intermediate portion of the apron in a line with the back portion of the central opening, loops extending from the front apron portion and tapes secured to the intermediate portion of the apron in front of the loops adjacent to the central opening and adapted to pass rearwardly from their point of attachment through the loops adjacent to the central opening and then forwardly and downwardly through the loops carried by the front portion of the apron whereby when the preserver is in position upon the wearer the central portion of the apron can be drawn together over the shoulders and the back portion of the apron drawn upward on to the shoulders by the downward pull upon the tapes prior to tying of the tapes together, and a tape secured to the back portion of the apron in proximity to its end and adapted to pass around the body of the wearer in front of the front portion of the wearer and to be tied together.

1,301,832. DEVICE FOR CARRYING OUT CHEMICAL PROCESSES BY ELECTROLYSIS. VIKTOR GENSER, Baden, Switzerland. Filed Jan. 14, 1919. Serial No. 271,075. 4 Claims. (Cl. 204—5.)

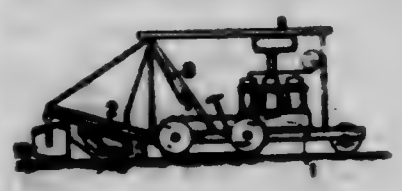
2. A device for carrying out chemical processes by electrolysis, comprising a receptacle subdivided into cells

containing electrolytes, a positive electrode arranged in the cell provided at one end of the receptacle, a negative electrode arranged in the cell provided at the opposite end of the receptacle, metallic rolls provided between adjacent cells adapted to act as carriers for the substances adhering



thereto when current is supplied to said electrodes, and means for moving said metallic rolls so that the part of each roll situated in one cell is alternately brought into the adjacent cell owing to the movement imparted to said roll.

1,301,823. TRENCHING MACHINE. HENDRIK LODEWIJK GEVEKE, Hilversum, Netherlands, assignor to Naamlooze Vennootschap Geveke & Co.'s Technisch Bureau, Amsterdam, Netherlands, a Company of Netherlands. Filed Jan. 31, 1918. Serial No. 214,644. 9 Claims. (Cl. 97—12.)



9. In a trenching-machine, the combination of a carriage, a cutting-tool having in section the shape of the trench to be made and having a side wall provided with an opening for discharging the soil elevated, a screw-shaped boring-tool which is rotatable about its axis and substantially inclosed by the said cutting-tool with a tunnel-shaped member secured to the carriage behind the said opening and adapted to mold the discharged soil into a continuous dam.

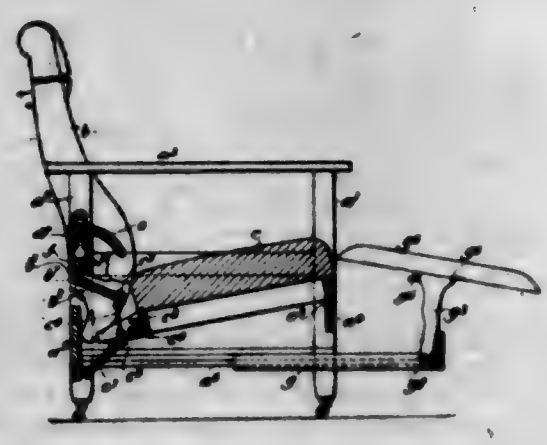
1,301,824. MULTIPLE FORM-SHEET. ARTHUR S. GILMAN, Cleveland, Ohio. Filed Feb. 2, 1916. Serial No. 75,600. 8 Claims. (Cl. 283—12.)



1. An integral strip of paper folded zigzag and forming a multiplicity of slips for manifold purposes, different slips being of different color and the colors being substantially coextensive with their respective slips.

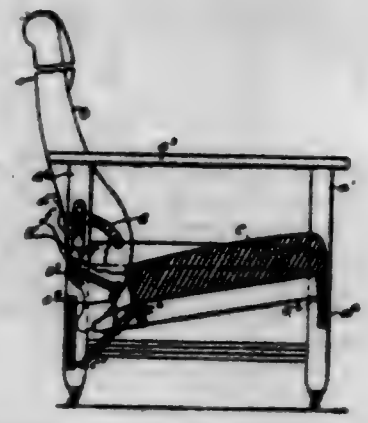
1,301,835. CHAIR, COUCH, OR THE LIKE. ALBERT GLENISTER, High Wycombe, England. Filed Aug. 26, 1916. Serial No. 116,977. 2 Claims. (Cl. 155—28.)

1. A chair or couch, comprising, in combination, a frame embodying pairs of front and rear uprights, and cross-rails connecting the same; a back member pivotally mounted between the rear uprights and provided with a substantially-horizontal cross-plate which is located below its pivotal axis; a seat pivotally mounted at its front end upon the front cross-rail; a plate secured to the under face of said seat at the rear end thereof and projecting rearwardly beyond said end and beneath said cross-plate; and



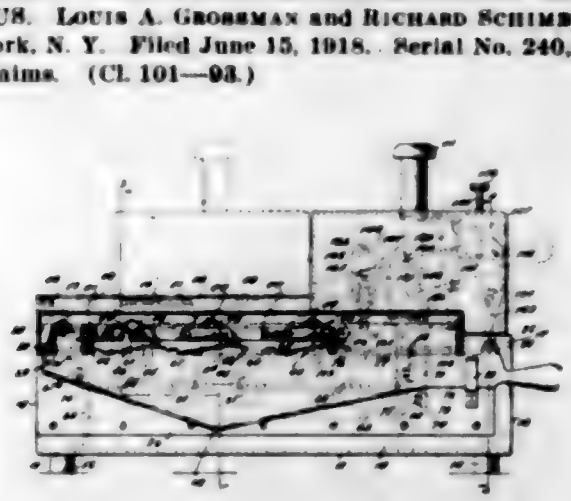
depending eye-bolts pivoted at their upper ends to said cross-plate and at their lower ends to said projecting plate, so as to lift the rear end of said seat when said back member is swung rearwardly into inclined position.

1,301,836. CHAIR, COUCH, OR THE LIKE. ALBERT GLENISTER, High Wycombe, England. Original application filed Aug. 26, 1916, Serial No. 116,977. Divided and this application filed Dec. 5, 1917. Serial No. 205,570. 2 Claims. (Cl. 155—28.)



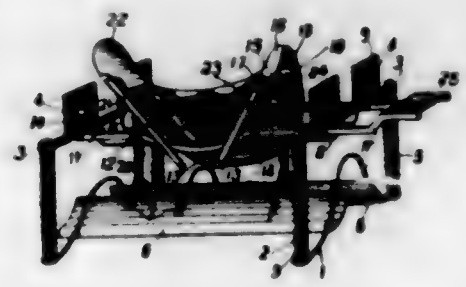
1. A chair or couch, comprising, in combination, a frame comprising front and rear uprights, one of the rear uprights being formed with a horizontal aperture which opens through its opposite side faces; a back member pivotally mounted between said rear uprights and having a notched plate secured to its outer side face directly opposite the inner end of said aperture; a bearing plate secured to the outer side face of the apertured upright, and provided with an opening registering with the outer end of the said aperture; a lever fulcrumed intermediate its ends on the bearing plate; a bolt slidably mounted in said aperture and projecting at its inner end through the inner end of the aperture for engagement with the notched plate, the outer end of said bolt projecting through the opening in said bearing plate and being pivotally connected to the adjacent end of said lever; and a spring in said aperture encircling said bolt and tending to force it inwardly therethrough to engage said notched plate, thereby holding the free end of said lever away from said bearing plate.

1,301,837. WRAPPING-PAPER-DISPENSING APPARATUS. LOUIS A. GROSSMAN and RICHARD SCHIMEK, New York, N. Y. Filed June 15, 1918. Serial No. 240,198. 7 Claims. (Cl. 101—93.)



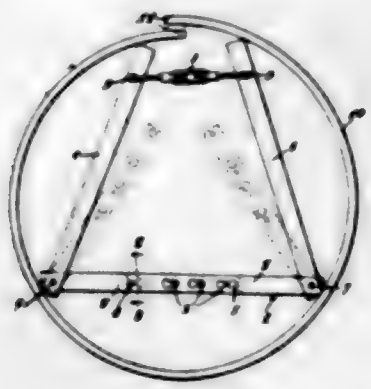
1. In a wrapping paper dispensing apparatus, the combination of means for holding the paper in position to receive a printing impression, a carriage carrying a printing mechanism and movable to and from a printing position, a knife for severing the paper, and means whereby the cutting stroke of the knife will effect the movement of the carriage away from the printing position.

1,301,838. RIDING-SADDLE. JESUS SANCHEZ GUERRERO, Tlajomulco, Mexico. Filed Dec. 10, 1918. Serial No. 266,027. 1 Claim. (Cl. 54—44.)



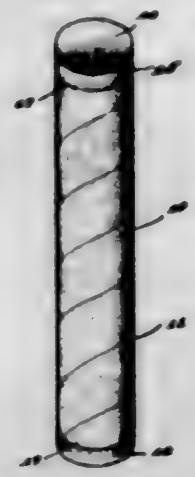
A riding saddle comprising a pack saddle, vertically projecting posts attached to said pack saddle, bridges resiliently supported for reciprocation on said posts, a horizontal saddle frame suspended in springs from said bridges, a riding saddle rigidly mounted on said saddle frame, and straps adjustably connected between the pack saddle and the riding saddle.

1,301,839. RIM-TOOL. CHARLES H. GUILES, Addison, N. Y. Filed Jan. 3, 1919. Serial No. 269,422. 2 Claims. (Cl. 157—1.)



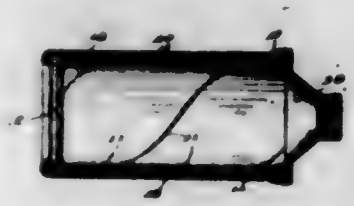
1. A rim expander comprising a multipart base member; means for connecting the parts of the base member adjustably to vary the length thereof; a rim engaging bars each pivoted at one end to the outer end of one of the parts of the base member; and an expansion means connecting the other ends of the rim engaging bars.

1,301,840. WATERPROOFED PAPER CONTAINER. EDWIN C. HAWKINS, Noblesville, Ind. Filed July 6, 1918. Serial No. 243,685. 8 Claims. (Cl. 229—5.)



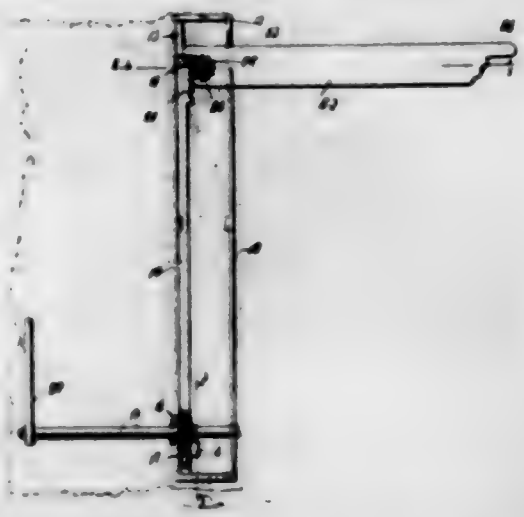
1. A water-proof container, comprising a paper container coated with a vulcanized rubber film which was applied in solution in a plurality of coats and vulcanized in position.

1,301,841. PROCESS OF COATING PAPER CONTAINERS. EDWIN C. HAWKINS, Noblesville, Ind. Filed July 6, 1918. Serial No. 243,686. 4 Claims. (Cl. 91—68.)



1. The process of water-proofing a paper container having joints in its surface, which consists in applying over the joints in the surface of such container a solution of rubber in a volatile solvent, permitting the solvent to evaporate to leave a film of rubber spanning such joints, and vulcanizing such film of rubber.

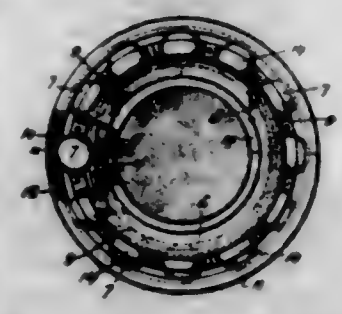
1,301,842. AUTOMOBILE-SIGNAL. WILLIAM HAY, Holyoke, Mass. Filed June 11, 1918. Serial No. 239,393. 1 Claim. (Cl. 116—31.)



A signal comprising an upright box-like casing adapted to be secured to the wind shield of an automobile and having an upright slot in the side thereof, guides therein, a signal arm pivotally mounted in the upper portion of the casing and adapted to swing into and out of the same through said slot, a pinion fixed to the signal arm around its pivot, a shaft journaled in the lower portion of said casing and extending through its other side and inward

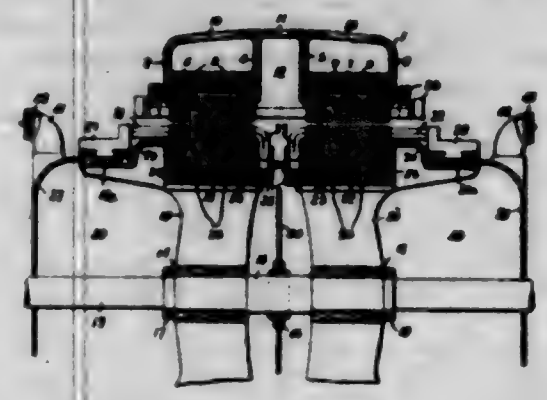
along the floor of the automobile, a lever on said shaft for rocking the same, a pinion fast on said shaft within the casing and standing in a plane at right angles to that of the other pinion, a bar slidable in said guides, a rack at the lower end of said bar in engagement with the pinion on the shaft, and a rack at the upper end of said bar in engagement with the pinion on said signal arm.

1,301,843. BALL-BEARING. THEODORE HEGELMAN, Oak Park, Ill. Filed Sept. 16, 1917. Serial No. 190,422. 4 Claims. (Cl. 64—58.)



1. A ball-bearing unit comprising an inner holder having an outer circumferential race, an outer holder having an inner circumferential race, an annular cage interposed between said holders, and balls retained thereby that travel in said races; said holders being divided into sections, and the end portions of the races in said sections being made deeper and wider, and means for securing the sections in circular relation.

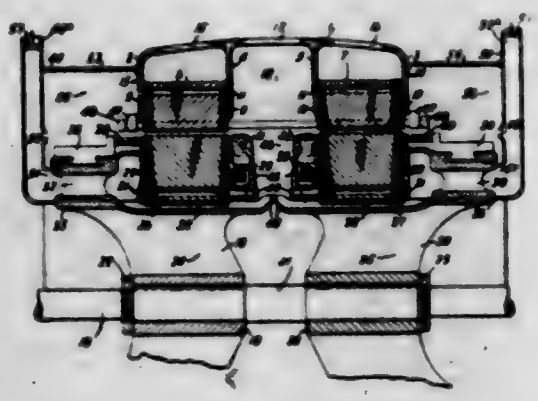
1,301,844. DYNAMO-ELECTRIC MACHINE. RUDOLF E. HELLMUND, Pittsburgh, and RALPH B. FERRIS, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1916. Serial No. 75,932. 8 Claims. (Cl. 171—252.)



1. The combination with a dynamo-electric machine comprising an inclosing frame, a plurality of pairs of relatively rotatable members located in spaced relation within said frame, the said members being provided with radial passages and spaces below said passages in said rotatable members, of external means for creating a circulation of air, and further means for directing the circulation of air into said spaces from each end of said frame and radially outward through the said passages and into the space between the said members.

1,301,845. DYNAMO-ELECTRIC MACHINE. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 4, 1916. Serial No. 76,152. 7 Claims. (Cl. 171—252.)

1. In a dynamo-electric machine, the combination with an inclosing frame, a plurality of pairs of relatively rotatable magnetizable members located in spaced relation and provided with longitudinal passages, and commutator cylinders carried by the rotatable members, of external means for creating a circulation of air, and further means for



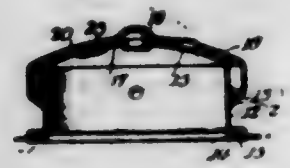
directing the circulation of air through said passages and over the surface of said commutator cylinders.

1,301,846. COMBINATION-LOCK. HARRY J. HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (Incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed July 2, 1915. Serial No. 37,705. 14 Claims. (Cl. 70—53.)



2. A lock including a rotatable stem, a locking plate eccentrically, swiveled crosswise on said stem, a latch on the stem normally having locking engagement with the plate, a stop on the latch, and means operable into the path of the stop to prevent a disengagement of the latch.

1,301,847. SIFTER-TOP FOR TALCUM-POWDER CANS AND THE LIKE. EDMUND HOFFMAN, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 31, 1916. Serial No. 75,216. 7 Claims. (Cl. 221—64.)



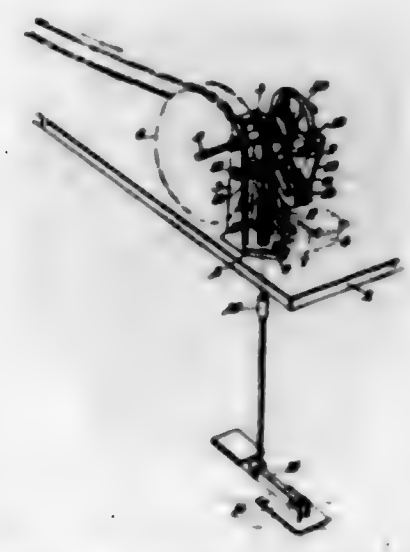
1. A sifter top for talcum powder cans and the like, comprising a fixed top having sifting perforations, a first movable closure having sifting perforations adapted to register with the perforations of the top or to be moved out of registry therewith, a second movable closure having sifting perforations adapted to register with those of the top and those of the first closure, when the latter are in registry, and adapted also to be moved out of registry with the perforations of the top and of the first closure.

1,301,848. INDICATOR FOR CARTRIDGE-FUSES. SLAUGHTER W. HUFF, Brooklyn, N. Y. Filed Aug. 21, 1914. Serial No. 857,903. 1 Claim. (Cl. 175—273.)



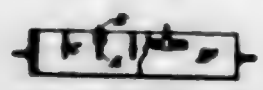
In an indicator fuse having two end caps, an inclosing case having an opening in the wall thereof, a breech closure for the inner end of said opening, a charge of explosive substance in the opening near the inner end thereof and adjacent to the breech closure, a seal consisting of plastic material filled in through the outer end of said opening and resting directly upon the explosive substance, and igniting means comprising a conductor connected to the two end caps of the fuse and extending past and in contact with said explosive substance.

1,301,849. APPARATUS FOR WINDING MOTION-PICTURE FILMS. ROBERT W. JONES, Wilkes-Barre, Pa., assignor of one-fourth to Lyman H. Howe and one-fourth to Stewart M. Walkinshaw, Wilkes-Barre, Pa. Filed Nov. 29, 1916. Serial No. 134,154. 3 Claims. (Cl. 74—46.)



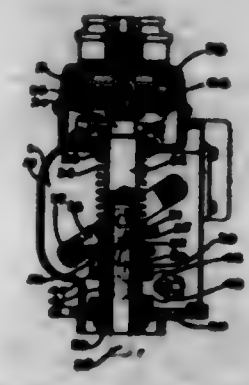
1. A machine of the class described including in combination, a frame, a reel shaft rotatably supported thereon, a brake wheel secured to the shaft, a drive shaft disposed below said frame, normally inoperative driving means connecting said drive and reel shafts, a rock shaft on the frame and having an arm, a brake shoe carried by said arm to coöperate with said wheel, means connected to said arm between the shaft and said shoe to control said driving means, manually operable means to turn the rock shaft in the direction to release the brake shoe and render the driving means operative including a second arm secured on the rock shaft for angular adjustment, a pedal, and a rod connecting the pedal and second arm; and a spring operative on said second arm to turn the rock shaft in the opposite direction to thereby apply the brake and render the driving means inoperative.

1,301,850. LIFTING-BAR OF MOLDING-BOXES. JAMES KENYON, Bolton, England. Filed Feb. 11, 1919. Serial No. 276,264. 6 Claims. (Cl. 22—111.)



3. A molding box lifting bar comprising two cramps extending beyond the ends thereof and having returned portions spaced from said ends.

1,301,851. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Filed May 25, 1916. Serial No. 99,796. 10 Claims. (Cl. 123—117.)



1. In ignition systems for combustion engines, the combination with an engine, of an ignition system therefor, including a sparking circuit; means for opening and closing said circuit; and means automatically controlled by the operation of the engine for advancing or retarding the closing and opening of said circuit in accordance with the predetermined power curve of the engine, whereby, for a given engine speed, the degree of advance or retard will be correct for maximum power performance.

2. In an ignition system for combustion or explosion engines, the combination with an engine, of an ignition system therefor, including a sparking circuit having a timing device; means controlled by the operation of the engine for automatically adjusting said timing device to advance and retard the spark in the ignition circuit in accordance with the predetermined power curve of the engine for effecting the adjustment of the timing device by varying increments for equal increments of change of engine speed.

3. In an ignition system for combustion and explosion engines, the combination with an engine, of an ignition system therefor, including a sparking device having a timer capable of adjustment throughout a given range of advance and retard; and means controlled by the operation of the engine for adjusting said timing device, and comprising an element responsive to the operation of the engine, a timer adjusting element and provisions for transmitting motion from the said responsive element to the timer adjusting element in accordance with the predetermined power curve of the engine whereby equal increments of movement of said responsive element will effect varying increments of adjustment of the timer.

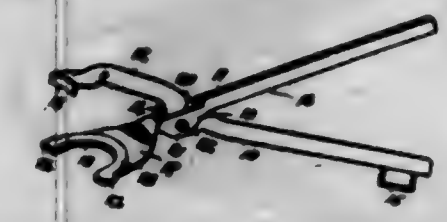
4. In an ignition system for combustion or explosion engines, the combination with an engine, of an ignition system therefor, including a sparking circuit having a timing device and a distributing device associated therewith; said timing and distributing device being capable of adjustment throughout a given range of advance and retard; and speed controlled means having provisions acting in accordance with the predetermined power curve of the engine for adjusting said timing and distributing device by varying increments throughout a given range, upon equal increments of change of speed.

5. In an ignition system for combustion or explosion engines, the combination with an engine, of an ignition system therefor, including a sparking circuit; means for opening and closing said circuit, including a movable element provided with a slot of varying angularity; and means operable in accordance with the speed of the engine associated with said slot for automatically advancing the closing and opening of said circuit different degrees throughout a given range, upon equal increments of movement of the means operable in accordance with the speed of the engine.

1,301,852. CUSPIDOR-TONGS. THOMAS H. LEATON, Nashville, Ark. Filed Apr. 18, 1917. Serial No. 162,900. 2 Claims. (Cl. 37—111.)

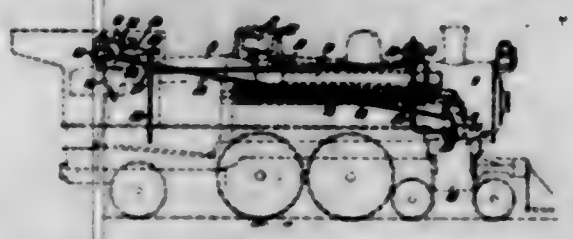
1. As an article of manufacture a cuspidor lifter and carrier including a pair of pivoted members one of which

is formed from a single metal blank and comprises a shank portion, a head portion having a bifurcation therein, and being wider than the shank laterally and oppositely extending apertured wings arranged on opposite sides of the shank, and an arcuate portion connected to the outer end of the bifurcation and folded back thereon with its inner curved edge registering with the inner curved edge of the bifurcation, the inner ends of said arcuate portion having lugs folded to embrace the adjacent ends of the bifurcation; the other member comprising a shank portion, a head portion, and wing portions, said first member being formed with an elongated slot between the wings thereof, and receiving the second member therethrough.



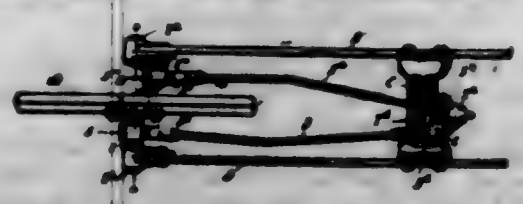
2. A blank for forming one of a pair of cuspidor gripping members including a shank having oppositely directed apertured ears on the side edges thereof, one end of the shank being formed with a head having a circular opening therein, the outer edge portion of said head being parallel to the wall of the opening, whereby an arcuate portion is formed which is separated from the remainder of the head by transverse fold lines, and laterally directed tabs on the outer curved edge of the arcuate portion disposed outwardly of the fold lines.

1,301,853. DRIFTING-VALVE DEVICE FOR LOCOMOTIVES. RALPH M. LICKLEY, East Cleveland, Ohio. Filed Feb. 17, 1916, Serial No. 78,872. Renewed Feb. 23, 1917. Serial No. 150,622. 7 Claims. (Cl. 121—14.)



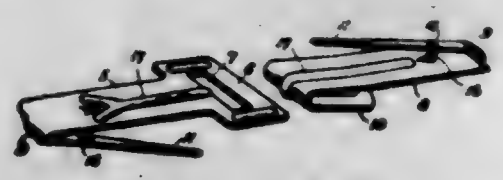
1. A drifting valve device for locomotives, comprising a pressure reducing valve having a connection with the steam chests of the locomotive and having a connection with the steam compartment of the boiler to admit saturated steam under reduced pressure to the said steam chests, the said pressure reducing valve having means to close it automatically when the steam in the steam chests reaches a predetermined pressure, a controlling valve under the control of the engineer and connected with the boiler and with the said pressure reducing valve at the high pressure side thereof to render the same operative and inoperative, the controlling valve having an outlet for relieving the drifting valve of steam pressure.

1,301,854. MECHANICAL MOVEMENT. ALBERT C. LINDGREN, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed Dec. 7, 1910. Serial No. 596,006. 1 Claim. (Cl. 74—5.)



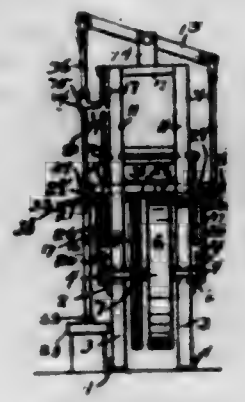
In a mechanical movement, the combination of a driving member rotatable about a horizontal axis, a driven member rotatable about a vertical axis, a vertically arranged driving element connected with the driving member to rotate the same, two cranks on the driving member at opposite sides of the driving element, two cranks on the driven member, a connecting rod loosely connected at one end with one of the cranks on the driving member and loosely connected at its other end with the corresponding crank on the driven member, and a second connecting rod loosely connected at one end with the other crank on the driving member and loosely connected at its opposite end with the corresponding crank on the driven member, the said cranks on the driving member being separated a greater distance from each other axially than the separation of the cranks on the driven member; whereby there will be no interference of the connecting rods with the driving element in the transverse swing of the ends of the connecting rods where they join the cranks on the driven member.

1,301,855. GARMENT-FASTENER. JOSEPH LINHART, Elmhurst, N. Y. Filed Apr. 18, 1918. Serial No. 229,243. 3 Claims. (Cl. 24—227.)



1. In garment fasteners, the combination of coöperating parts one having a hook and the other a socket or eye, pins at the opposite ends of the hook and socket, shoulders at the upper ends of the pins, and spurs to engage the garment when the fasteners are located.

1,301,856. PUMP-JACK. WILLIAM LIVELY, Quanah, Tex. Filed Mar. 26, 1918. Serial No. 224,874. 4 Claims. (Cl. 103—82.)



1. A pump jack for double-acting pumps comprising a frame, a power wheel and an actuating wheel provided with a shaft journaled in said frame, exterior and interior piston rods, a vertically reciprocating cross head for said interior pump rod, and a vertically reciprocating cross head for said exterior pump rod, cranks rigid with said shaft and pitman rods connecting said cranks to said lower cross-head, and operative connections whereby said actuating wheel reciprocates both cross heads in opposite directions simultaneously.

1,301,857. POTATO-DIGGING MACHINE. WILLIAM WELLINGTON LYNNS, Kamloops, British Columbia, Canada. Filed June 11, 1918. Serial No. 239,426. 1 Claim. (Cl. 55—57.)

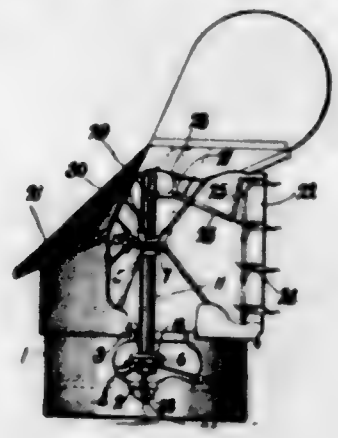
In combination a frame comprising side bars, rings supported thereon at front and rear, a cylindrical basket of spirally arranged wire revolubly mounted in said rings, a toothed rack surrounding the basket, a shaft extending transversely of the basket above the same, carrying wheels, gearing between said transverse shaft and the carrying wheels, a gear on the transverse shaft meshing with

the rack on the basket, pivotally mounted supporting means for the transverse shaft whereby the said shaft



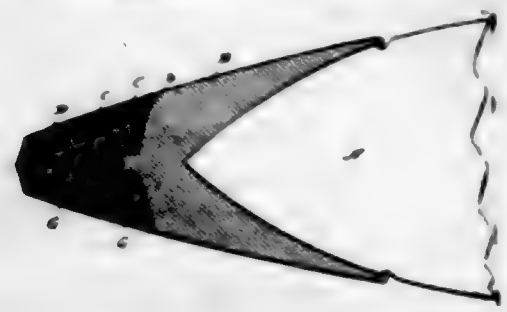
with its gear may be lifted, connections manually operable for moving said support, and digging means at the forward end of the basket, substantially as described.

1,301,858. VENTILATOR. JOHN MCCLELLAND, Kansas City, Mo. Filed Dec. 2, 1916. Serial No. 134,603. 2 Claims. (Cl. 98—3.)



2. A ventilator comprising an air conducting tube, spiders carried by said tube, race members carried by said spiders, a standard rotatably mounted in said race members and comprising T-members, having their bases in abutment and having projecting wings, race caps having openings therein for the standard, and having flanges fixed to the standard wings, whereby the standard is supported by the lower race members, a cowl supported by the standard and having louvers, mechanism, including a lever, for actuating the louvers, and a rod lying in one of the standard recesses and extending through the race members, the upper end of the rod being connected with said member, and the lower end turned beneath the standard and extended in axial alinement therewith.

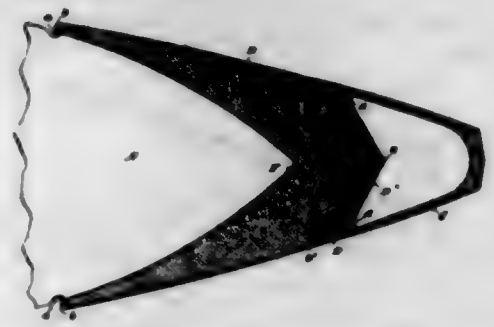
1,301,859. ARMOR-PIERCING PROJECTILE. ALEXANDER G. MCKENNA and WILLIAM DALTON, Washington, D. C., assignors to Washington Steel & Ordnance Company, Washington, D. C., a Corporation of West Virginia. Filed June 12, 1917. Serial No. 174,347. 1 Claim. (Cl. 102—28.)



A cap for armor piercing projectiles formed of a plurality of separate transverse sections of metal of successively increasing degrees of hardness toward the front end of the cap, the meeting faces of the sections being of forwardly directed conical formation and with the radial angle of the conical faces decreasing toward the front end of the cap

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1,301,860. ARMOR-PIERCING PROJECTILE. ALEXANDER G. MCKENNA and WILLIAM DALTON, Washington, D. C., assignors to Washington Steel & Ordnance Company, Washington, D. C., a Corporation of West Virginia. Filed Aug. 8, 1917. Serial No. 185,163. 5 Claims. (Cl. 102—28.)



1. A cap for armor piercing projectiles comprising a body portion of relatively soft metal formed to inclose the hardened point of the projectile and having incorporated therein at its forward end a separately formed striking portion of exceedingly hard and tough metal, the contacting faces of the soft and hard metal of the cap being formed to mutually support each other in resisting lateral deformation at the moment of impact.

1,301,861. GASOLENE-DISPENSING PUMP. JEREMONT J. MACBETH, Dayton, Ohio. Filed Aug. 1, 1918. Serial No. 247,827. 2 Claims. (Cl. 221—99.)



1. In a gasolene dispensing pump, a frame, a gasolene tank mounted thereon having a quantity-measuring indicator, a gasolene pump, a gasolene supply pipe communicating with said pump, a gasolene discharge pipe communicating with said pump and said tank, an air-driven motor geared to the gasolene pump, and an air supply pipe supplying air to said motor and to the upper portion of the gasolene tank, substantially as specified.

1,301,862. SPARK-PLUG. JEREMONT J. MACBETH, Dayton, Ohio. Filed Aug. 26, 1918. Serial No. 251,412. 1 Claim. (Cl. 123—169.)

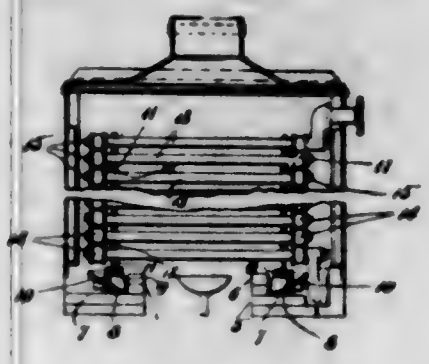
In a spark plug, the combination of an outer shell having a rounded end, an inner insulator body filling the rounded end of said shell and having a reduced portion of uniform diameter extending beyond said end, a straight electrode member extending through said inner insulator body and the reduced extended portion thereof, an outer

insulator body formed to receive the rounded end of the outer shell and into which the reduced portion of the



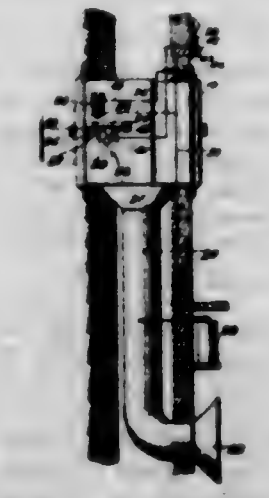
inner insulator projects, and a nut engaging said electrode member and supporting the same on said outer insulator body.

1,301,863. HEATER. JOHN W. F. MACDONALD, Brighton, Mass., assignor to The Merrill Process Company, a Corporation of Massachusetts. Filed Sept. 24, 1918. Serial No. 255,538. 3 Claims. (Cl. 122—356.)



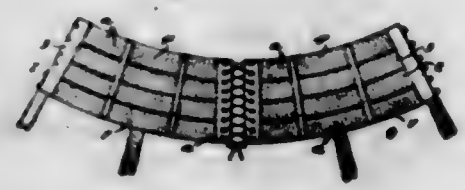
1. A heater comprising a fire box, a series of substantially horizontal tubes extending above said fire box, a series of return headers connecting end portions of said tubes in pairs, and baffle members spaced inwardly from the inner portions of said headers, said baffles contacting with the lower walls of said tubes to divert liquid from said walls and a receptacle for said liquid.

1,301,864. GROCERY-CABINET. CHARLES R. MASON and EDWARD W. TRIGG, Youngstown, Ohio. Filed Mar. 6, 1918. Serial No. 220,857. 2 Claims. (Cl. 232—41.)



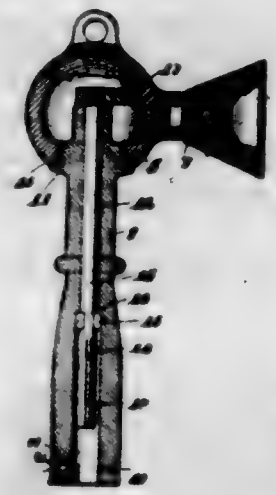
1. A cabinet open at opposite ends, doors forming closures for said ends, a keeper connected to one door, a hooked locking bar pivotally connected to the cabinet and adapted to engage the keeper when the door is closed, a retaining device pivotally connected to the locking bar, said retaining device having a hook on the upper end adapted to engage the end of the keeper when the door is closed, and the hook on the locking bar and the top of the keeper when the locking bar is raised for allowing the door to open, and means operable by the other door for raising the locking bar when the door is opened for releasing the locking bar from the keeper to allow the opposite door to be opened.

1,301,865. FABRIC. SAMUEL T. MEYS, Brooklyn, N. Y., assignor to Victory Corset and Girdle Co., Inc., a Corporation of New York. Filed July 19, 1918. Serial No. 245,629. 3 Claims. (Cl. 2—188.)



3. An article of apparel of substantially frusto-conical shape, and comprising an elastic body portion composed of a plurality of curved elastic longitudinal strips secured edge to edge in succession, the convex edges of the strips being stretched relative to the adjacent concave edges of the strips to which they are secured.

1,301,866. MASSAGE-VIBRATOR. GEORGE W. MOORE, Chicago, Ill., assignor to Moore Electric Corporation, Chicago, Ill., a Corporation of Delaware. Filed Nov. 4, 1918. Serial No. 260,921. 4 Claims. (Cl. 128—35.)

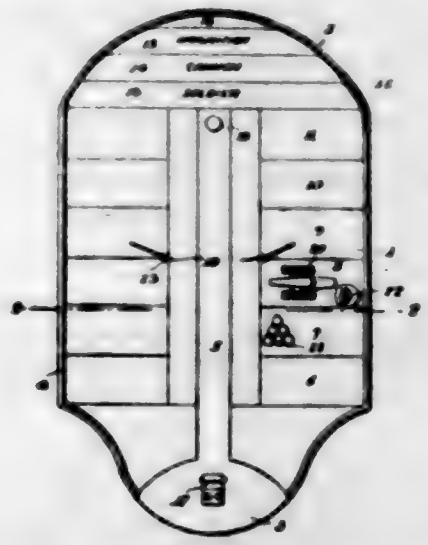


1. A vibrator comprising a hollow head; a detachable handle for said head; a shaft mounted in said handle and extending into said head, said shaft being mounted in said handle to permit of free outward longitudinal movement thereof but to prevent free inward movement; and an eccentric weight removably secured to the inner end of said shaft, said weight serving to removably secure said shaft in position in said handle, substantially as described.

1,301,867. GAME-BOARD. EDWARD S. NOVAK, Glassport, Pa. Filed June 14, 1918. Serial No. 240,006. 2 Claims. (Cl. 46—61.)

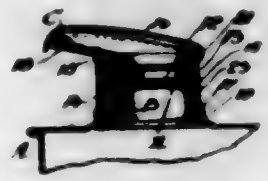
1. The herein described game apparatus comprising a board having a field at one end divided into spaces and

provided at the opposite end with a disk projecting device, the board being also provided at opposite sides with game



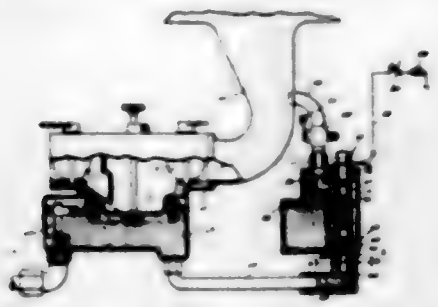
piece receiving spaces; a disk, and game pieces for arrangement in the said game piece spaces.

1,301,868. POURING-SPOUT. CHARLES H. NOWACK, Oak Park, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 3, 1916. Serial No. 81,779. 12 Claims. (Cl. 221—23.)



1. A spout adapted for ready attachment about the nozzle of a container comprising a lip extending outwardly at one side, and a spring flange of sheet metal adapted to engage about said nozzle and having its ends meeting at the rear side of said nozzle opposite to said lip.

1,301,869. PRIMER. LOUIS H. OSBAHICH, Indianapolis, Ind. Filed Dec. 21, 1917. Serial No. 208,221. 17 Claims. (Cl. 123—180.)



1. In combination, a carbureter having a throttle and a constant level fuel chamber, an intake manifold to which said carbureter is connected, a primer by-pass connected to said fuel chamber and to said intake manifold around said throttle, a reservoir connected to said by-pass and to the atmosphere respectively below and above the liquid level in the fluid chamber, and a valve in said by-pass between its connection to said reservoir and the fuel chamber.

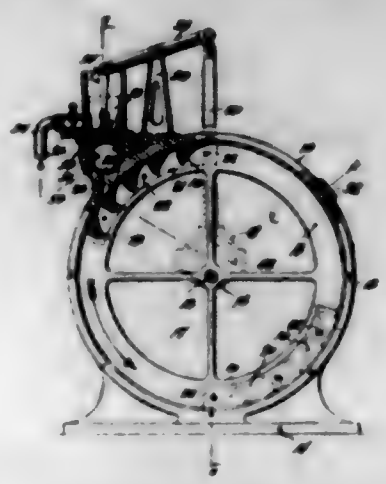
1,301,870. SPARK-PLUG. WILLIAM J. O'GORMAN, New York, N. Y. Filed Apr. 29, 1918. Serial No. 231,321. 6 Claims. (Cl. 123—169.)

4. In a spark plug, the combination of a metallic body, an insulating core fitting within said body, an insulating block, a metallic fastening plate secured to said block, means for detachably joining together said metallic body and said fastening plate, conducting wires extending through said core and terminating in chambers in said



block to form two artificial spark gaps, a terminal post on said block connecting with one of said spark gaps and a return wire embedded in said block and connecting with the other of said spark gaps and engaging said fastening plate.

1,301,871. ROTARY INTERNAL-COMBUSTION ENGINE. JOHN PAULY and HENRY EICHINGER, Appleton, Wis. Filed Oct. 14, 1918. Serial No. 258,002. 1 Claim. (Cl. 60—41.)



A rotary engine including a rotor casing, a roter in the casing provided with a series of pockets, a valve casing adjacent the rotor casing, a compression cylinder, a piston in said cylinder, a port connecting the compression cylinder and the valve casing, a port connecting the valve casing provided with a port adapted to register with the compression cylinder port and with a port adapted to register with the rotor chamber port, said rotor chamber port being normally in registry with the corresponding valve port and the other ports being normally out of registry, means for operating the compression cylinder piston including a reciprocating member connected therewith and with the rotor, an intermediately pivoted lever connected with the reciprocating member for rocking movement upon reciprotation of said member, a lever connected with the valve shell, and yieldable dogs on said levers having cam surfaces whereby said dogs move past each other in one direction of rotative movement and engage in the other direction of rotative movement to rock the valve shell lever.

1,301,872. UNION-GARMENT. GEORGE W. PRAGE, Pittsfield, Mass. Filed Sept. 10, 1918. Serial No. 253,881. 2 Claims. (Cl. 2—144.)

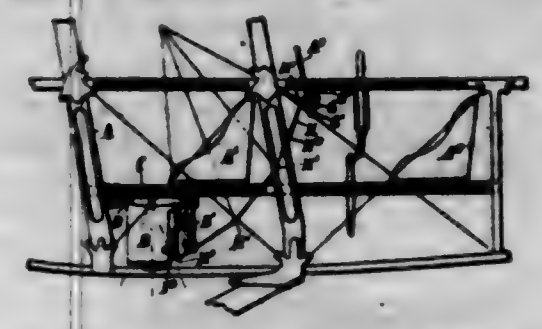
1. A garment comprising a body portion and a trousers portion permanently united at the back and front, there being a portion of the garment at the back thereof at which the body portion is not secured to the trousers portion, a member attached to the trousers portion and extending upward inside of the body portion, means for securing said member to the body portion at a point dis-

tant from that part of the body portion which is free of the trousers portion, an element stitched along its upper and side edges to the inside of the back of the body por-



tion to form a pocket open at its bottom only, the upper portion of the member being disposed within the pocket whereby the member may be moved relatively to the body portion and the element.

1,301,872. SPRING-MOTOR CONTROL. NIELS PEDERSEN, Philadelphia, Pa., assignor to Arthur Brock, Jr., Philadelphia, Pa. Filed Oct. 10, 1916. Serial No. 124,770. 3 Claims. (Cl. 88—18.)



1. The combination with an air craft, of a camera including a spring motor adjustably mounted thereon with freedom to adjust itself to compensate for pitching or rolling movements of the air craft; and speed controlling mechanism for said motor including a flexible power transmitting connection leading away from the camera.

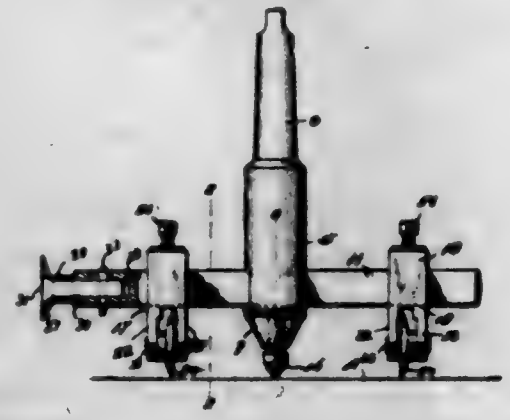
1,301,874. IRONING-BOARD. EDWARD F. POLAND, Boston, Mass. Filed Dec. 18, 1917. Serial No. 207,756. 3 Claims. (Cl. 68—10.)



1. An ironing board comprising a back-piece to be connected to a support, a base to which the ironing board is to be attached, a bar having unchanging pivotal connections with the base and with the back-piece, a plurality of engaging means arranged at different elevations on the back-piece and arranged in a line extended downwardly and outwardly from the back-piece, and means on the base to engage either of said engaging means, said bar holding the base substantially horizontal under such engagement.

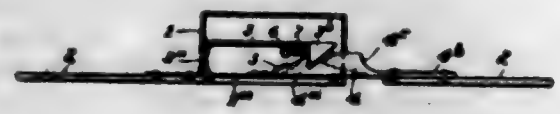
1,301,875. CUTTING DEVICE. GEORGE FROMME, Portland, Oreg. Filed Jan. 16, 1918. Serial No. 212,007. 1 Claim. (Cl. 164—32.)

In a device of the character described, the combination of a tool bar holder having a shank extending therefrom and provided with a tapered lower end, said holder having a rectangular opening extending transversely therethrough and being provided with a tongue extending down into the opening to form side grooves, a centering point having a threaded shank extending through the tapered end of said holder and projecting into said opening, an elongated supporting bar having a longitudinal groove in one edge thereof thus forming parallel ribs upon each side of the groove, whereby said bar may pass through the opening of said holder and receive said tongue, thus causing the fitting of the ribs within said grooves to steady the bar,



a friction plate carried within said opening and engaging the under surface of said bar, said stem bearing upon said friction plate to firmly hold the same in a set position whereby the bar will be held against accidental shifting, knife carriers comprising elongated vertical bodies having transverse openings therein, said carriers having tongues extending into the openings to fit within the groove of said bar, set screws carried by said carriers and binding upon said bar within the groove thereof, thus binding said carriers in set positions upon said bar, and rotary cutters carried by said carriers.

1,301,876. MAIL-BAG LOCK. ROBERT C. RICE, New Castle, Pa., assignor to Joseph S. Rice and John N. Rice, New Castle, Pa. Filed Sept. 19, 1918. Serial No. 254,783. 1 Claim. (Cl. 70—2.)

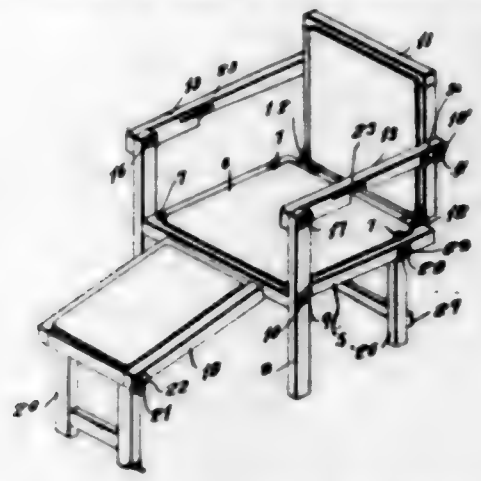


In combination, a base plate, a sheet metal casing secured thereto having an opening in its end, a spring bar having a downwardly turned end riveted to the rear wall of the casing opposite said opening and having a beveled lug on the under surface of its free end, a dog insertible through said opening and having a beveled end and shoulder, a step for said dog having an inclined portion overlying the beveled end of the dog and preventing upward movement thereof, said casing having a key opening in its vertical side wall, and a key insertible in said opening for lifting the spring dog.

1,301,877. ADJUSTABLE FOLDING CHAIR. LOUIS J. RIEMENSCHNEIDER, Hoboken, N. J. Filed Sept. 28, 1917. Serial No. 193,736. 1 Claim. (Cl. 155—20.)

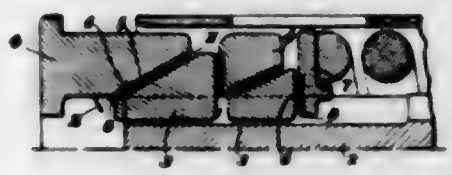
A chair of the character described, comprising a seat; a horizontally hinged back carried by the seat; a horizontally hinged foot rest carried by the seat; supporting legs pivotally secured to the foot rest; forward supporting legs pivotally secured intermediate their ends to said seat; arm rests pivotally secured at their end portions to said forward legs and back; rear legs pivotally secured to said

seat at points spaced inwardly from its rear end; and means to retain the chair in an adjusted position, said



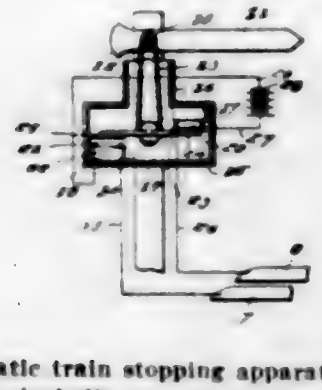
chair being collapsible and adapted for adjustment to various positions.

1,301,878. SHOCK-ABSORBING MECHANISM. ERNEST H. SCHMIDT, Lakewood, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 17, 1916. Serial No. 98,006. Renewed Mar. 12, 1919. Serial No. 282,197. 2 Claims. (Cl. 213—64.)



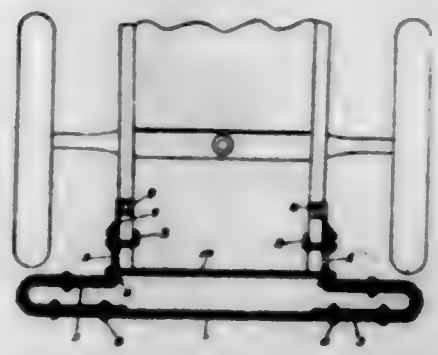
1. In frictional shock absorbing mechanism, a friction element, friction members arranged about said friction element and in friction engagement therewith, and having wedging non-friction faces, a wedge member engaging the non-friction faces of the friction members, and a soft metal member interposed between the wedge member and the non-friction face of a friction member spacing said members apart, the softer metal member seating in a recess in one of said members, and being adapted to prevent said members from sticking together as the pressure abates.

1,301,879. AUTOMATIC TRAIN-STOP. WILLIAM A. SEEDS, Cripple Creek, Colo. Filed Dec. 20, 1916. Serial No. 137,981. 1 Claim. (Cl. 246—195.)



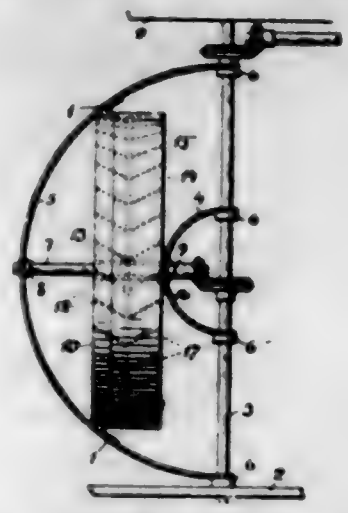
In an automatic train stopping apparatus, a semaphore signaling device including a standard and a pivoted arm, a casing mounted on the semaphore standard, a normally open track carried circuit, two pairs of spaced contacts arranged in the circuit and positioned in said casing, a sprocket wheel mounted within the casing, a sprocket wheel mounted upon the arm, a chain mounted upon the sprocket wheels, an insulated bar secured to the lowermost of the sprocket wheels within the casing, and a contact block on each end of the bar adapted to engage the stationary contact members to close the circuit, as and for the purpose specified.

1,301,880. FENDER FOR MOTOR-CARS. BURTON H. SILLS, Toronto, Ontario, Canada, assignor of one-fourth to Abraham Lipsen, Toronto, Canada. Filed Oct. 16, 1918. Serial No. 258,219. 7 Claims. (Cl. 293—55.)



3. A vehicle fender comprising a pair of arms having inner ends adapted for connection to the chassis of the vehicle, each arm being bent laterally and outwardly and then inwardly to form an inwardly facing U-shaped chain support; a chain connected to said arms and extending between the supports; and means preventing vertical displacement of said chain on the supports.

1,301,881. MOTOR-WHEEL. JOHN STOLPE, McPherson, Kans. Filed Aug. 14, 1918. Serial No. 249,861. 1 Claim. (Cl. 170—4.)

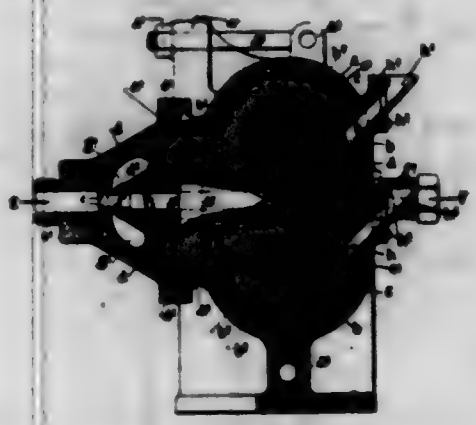


A motor wheel, comprising a vertical shaft at its upper and lower ends suitably journaled in a supporting frame, and having fast collars, forwardly projecting inner and outer concentric semi-circular hangers having their rear ends loosely engaging said shaft and resting upon the collars thereof, a transverse or horizontal shaft loosely journaled in the central portions of said hangers and having a bevel-gear driving connection with said vertical shaft, a stationary cylindrical casing located in the interval between the inner and outer hangers the forward circumferential edge of said casing at diametrically opposite points rigidly secured to the outer hanger, the forward half of said casing having a radial series of inclined vanes, and a rotary wheel or motor wheel proper working within the rear half of said casing and having also a radial series of vanes inclined with respect to the shell and hub thereof and inclined oppositely with respect to the stationary vanes of said casing, said vertical shaft having a driving connection with a dynamo or other engine.

1,301,882. EXTRUDING LEAD AND THE LIKE. JOHN STRATTON, Bowden, and ERNEST ALEXANDER CLAREMONT, High Legh, England. Filed Apr. 18, 1918. Serial No. 229,407. 4 Claims. (Cl. 207—4.)

1. A machine for extruding lead or the like in the shape of a pipe or other desired form comprising in combination a chamber internally in the form of two parallel cyl-

inders intersecting one another to form in cross section approximately the outline of the figure 8 and wherein molten lead is partially cooled or solidified to a plastic condition, revoluble intereugaging toothed rollers within said cylinders and approximately filling the area thereof,



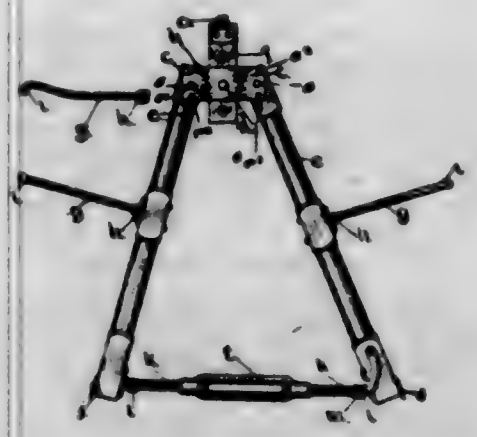
means for introducing molten lead to said 8-shaped chamber, a pressure chamber communicating with said chamber and having an extrusion opening, and means for shaping the extruded lead as desired in its passage through said extrusion opening.

1,301,883. JOINT. CHRISTOPHER ERSOM, Alliance, Ohio. Filed Mar. 29, 1918. Serial No. 225,506. 2 Claims. (Cl. 74—17.)



1. A device of the character described comprising a plurality of elements provided with openings, a tapered pin passed therethrough, a spring member having connection with said pin and one of the elements, and a spring tension adjusting means having connection with said spring member and one of said elements.

1,301,884. RIM BREAKER AND EXTENDER. HARLEY TANNEHILL, Fort Wayne, Ind., assignor to himself and Fred G. Schwier, Fort Wayne, Ind. Filed June 13, 1917. Serial No. 174,480. 1 Claim. (Cl. 157—1.)



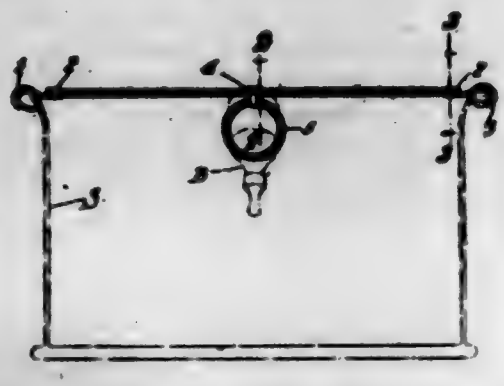
A tool for removing tires from split demountable rims and replacing them thereon comprising a pair of converging bars, means for pivotally connecting the converging ends of said bars, adjustable contractible and expansible means pivotally connecting the diverging ends of said bars to hold said parts in any adjusted position, means carried by the first named connecting means and by the diverging ends of said bars for detachably connecting the tool to the tire rim, and hook arms pivotally connected to said bars for connection with the tire rim.

1,301,885. SUPPORTING-CLAMP. CARL T. TOBIASON and OLOF SWANSON, Sycamore, Ill.; said Tobiason assignor to said Swanson. Filed June 13, 1917. Serial No. 174,559. 4 Claims. (Cl. 24—260.)



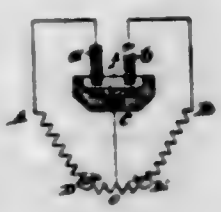
4. In a supporting clamp, a U-shaped bracket, a binding ring adjustably carried by said bracket, apertured claws hinged to said bracket and spaced away from each other, and inwardly bent teeth formed in the sides of said bracket and projected through the apertures in said claws and, under pressure of said binding ring, having a bearing upon the apertured portions of said claws.

1,301,886. BOTTLE-HOLDER. CHARLES W. TOCKNELL, Kenilworth, N. J. Filed Dec. 21, 1918. Serial No. 267,818. 1 Claim. (Cl. 248—20.)



A holder for nursing bottles, comprising support engaging hooks, a coiled spring constituting the sole connection between the hooks, a loop mounted to slide and swing upon the spring, and a bottle gripping ring comprising an endless coiled spring extending through and supported by the loop.

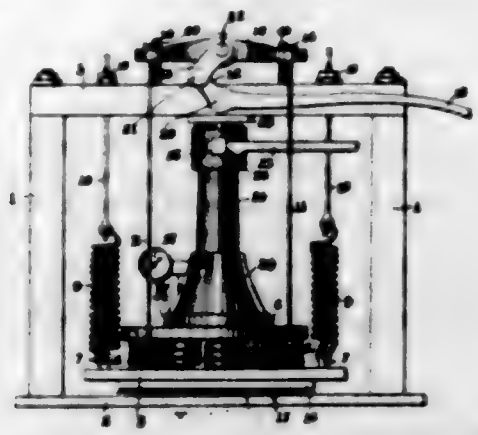
1,301,887. SUPPLY OF ELECTRICAL ENERGY TO FURNACES OR OTHER APPLIANCES. WILLIAM TRAVIS, Sheffield, England. Filed Feb. 13, 1919. Serial No. 276,754. 4 Claims. (Cl. 204—64.)



1. In connection with electric arc furnaces, resistance furnaces and other similar electrical energy consuming appliances having unequal resistances, the improved method of distributing three phase currents so that the supply phases tend to have balanced loads both in the power and power factor, consisting in the arrangement of the three transformer secondary windings grouped in open delta fashion so that the two windings connected to the two top electrodes or groups of electrodes are connected to the ends of the transformer windings connected to the furnace hearth or bottom electrode and each make a vector angle of 120° therewith, the two first named trans-

former windings being identical in voltage and capacity, and the last named transformer winding being less than either of the other two and varying in its relation thereto according to the relative resistance of the furnace hearth to the normal resistance of the electric arc of the furnace between the two upper electrodes and the charge in the furnace, substantially as herein described.

1,301,888. MATRIX-DRYING PRESS. WALTER H. WALTON and HARRY D. TAPPAN, Philadelphia, Pa. Filed Apr. 21, 1917. Serial No. 163,758. 9 Claims. (Cl. 100—67.)



1. In a matrix drying press, the combination with the drying table, press frame and platen, of a positive acting hydraulically operated compressor having a direct downward thrust and elastic yielding devices operatively situated between the platen and the press frame.

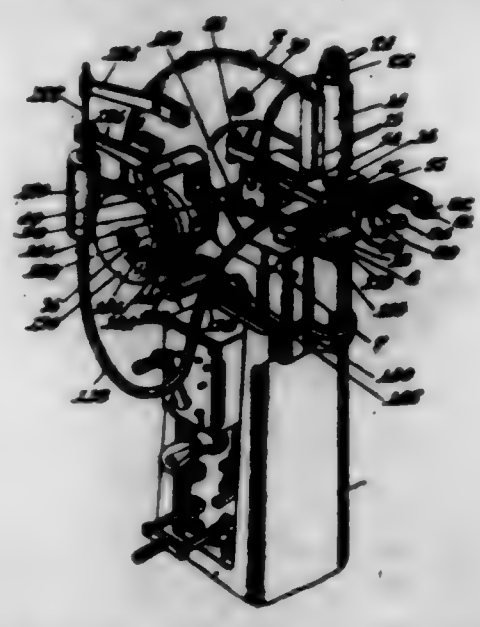
1,301,889. WINDOW-GUARD. MICHAEL WILSON, Brooklyn, N. Y. Filed July 11, 1917. Serial No. 180,011. 3 Claims. (Cl. 20—71.)



1. The combination with a window sash of a guard comprising a guard frame having a plurality of bars spaced apart and fillers between said bars, a plurality of rods parallel with and secured to the lower sash, a hook upon each of said rods, means upon one of said bars engaging said hooks, a ball nut upon each of said rods and a plurality of metallic members upon said sash through which said rods are adapted to pass said ball nuts engaging the uppermost of said metallic members to retain said rods and said guard in operative relation.

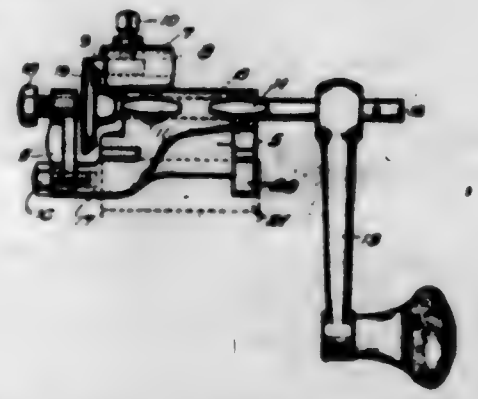
1,301,890. STAMPING OR EMBOSSING MACHINE. HENRY W. WINTER, Methuen, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 6, 1914. Serial No. 870,700. 20 Claims. (Cl. 41—7.)

1. A stamping machine comprising a reciprocatory stamping head to receive a die for impressing in the work a design in color, a work support, a holder for a strip of color-medium, and mechanism for automatically cutting off successive portions from the end of the strip and then



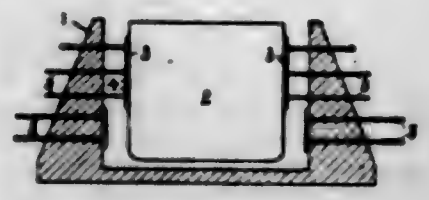
placing on the work between the surface which is to receive the design and the impression portion of the die a portion of the strip preliminarily to each reciprocation of the head.

1,301,891. VALVE-REFACING TOOL. FRANK O. ALBERTSON, Sioux City, Iowa, assignor to Albertson & Company, Sioux City, Iowa, a Corporation of Iowa. Filed July 19, 1918. Serial No. 245,594. 3 Claims. (Cl. 82—1.)



1. A valve grinder comprising a body member provided with a bore for receiving the stem of a valve and having a second bore spaced from said first-named bore and disposed at an angle thereto, a cutting tool secured in said second bore, a set screw for clamping the valve stem against one side of said first-named bore, and means for holding the head of the valve against the cutting edge of said tool.

1,301,892. APPARATUS FOR CASTING REINFORCED-CONCRETE VESSELS. HARALD ALFSEN, Porsgrund, Norway, assignor to John Möller Larsen, Chicago, Ill. Filed Nov. 21, 1918. Serial No. 263,622. 2 Claims. (Cl. 25—130.)



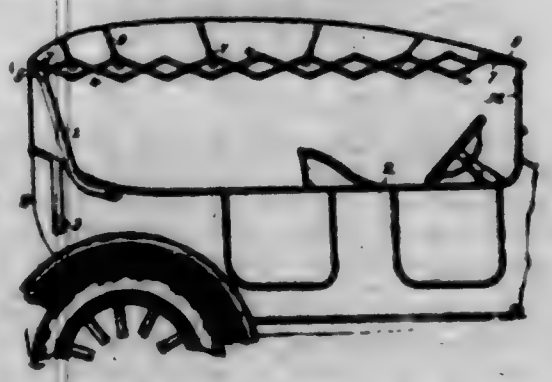
1. In an arrangement for casting vessels and the like of reinforced concrete an outside mold sheeting consisting

of separate boards or sheets, a permanent stationary frame-work or dock at a certain distance from the said outside mold sheeting and removable wedges covering two or more sheeting boards between the said stationary frame-work and the exterior sheeting for keeping the latter in position.

1,301,893. PLASTER-BOARD COMPOSITION. MORGAN K. ARMSTRONG, Winnetka, Ill., assignor to Bestwall Manufacturing Company, Chicago, Ill., a Corporation of Delaware. Filed Mar. 21, 1918. Serial No. 223,721. 2 Claims. (Cl. 106—34.)

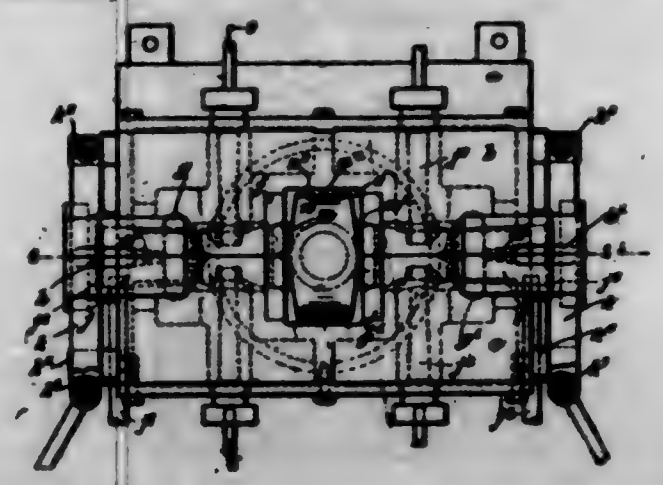
2. A plastic composition comprising approximately eighty-five pounds of calcined gypsum, approximately fifteen pounds of ground tan bark, and approximately two pounds of hastener, mixed dry, the combined dry mixture having added to it about thirty pounds of water for approximately each one hundred pounds of dry mixture.

1,301,894. FOLDING TOP FOR AUTOMOBILES. ANTONIO ARPIA, Chicago, Ill. Filed Apr. 27, 1918. Serial No. 231,100. 1 Claim. (Cl. 21—62.)



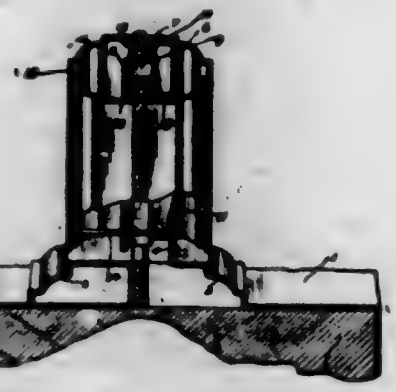
In a folding top for automobiles, the combination of supporting brace hinged at its lower end to the automobile body, a series of pairs of crossed links pivotally connected together to constitute an extensible frame, the rear pair of links comprising an inner link and a pair of outer links pivotally attached to the sides of the upper end of the brace aforesaid, a sleeve sliding on said brace and having pivot ears between which the aforesaid inner link is pivoted, the pivot end of said inner link being provided with an extension heel adapted to abut against the brace and limit upward movement of said sleeve, and a front standard attached to the automobile body and connected to the front end of the extension frame when extended, substantially as set forth.

1,301,895. CASTING-APPARATUS. JOSEPH H. BAMBERG, Toledo, Ohio, and HERMAN H. DOEHLER, Brooklyn, N. Y., assignors to Doehler Die-Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 12, 1917. Serial No. 148,025. 7 Claims. (Cl. 22—126.)



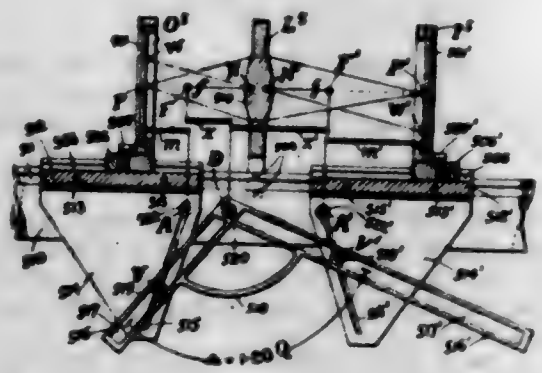
4. A casting apparatus embodying therein a plurality of mold parts capable of relative movement, each of said parts having a portion of a horizontal, cylindrical mold cavity and of an ingate, leading thereto, formed therein, metallic cores penetrating said mold cavity and movably mounted in said mold parts, a support for said mold parts, and means whereby a frangible inside core may be stationarily supported between said mold parts when the mold is open.

1,301,896. WINDOW CONSTRUCTION. OSCAR LEONARD BAXTER, Columbus, Ohio. Filed Aug. 27, 1917. Serial No. 188,300. 2 Claims. (Cl. 189—78.)



1. The combination with a window frame provided with an upwardly projecting lip, of a fixed muntin half cut out at its lower inside portion to pass over said lip, a loose muntin half, a reinforcement member fitting within said fixed muntin half provided with a rib projecting beyond said fixed half toward said loose half, said member being of a size to cause said lip to snugly fit between said member and said fixed muntin half, and a screw passing through said loose muntin half, through said member, and into said lip.

1,301,897. PHOTOGRAPHIC CAMERA. JOSEPH BECKER, Washington, D. C., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 11, 1915. Serial No. 66,871. 11 Claims. (Cl. 95—44.)

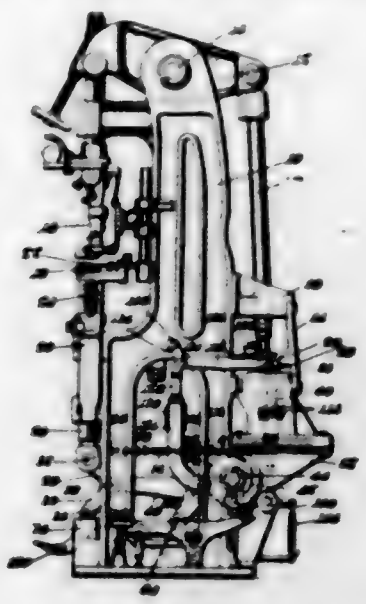


11. A photographic camera having a focuser of the radial cam type whose basic angle delta (Δ) is obtuse, and whose structural sector angle is equal to the acute angle supplement gamma (γ) of the said basic angle delta (Δ).

1,301,898. HEELING-MACHINE. JOHN M. BENJAMIN, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 28, 1917. Serial No. 183,314. 11 Claims. (Cl. 1—32.)

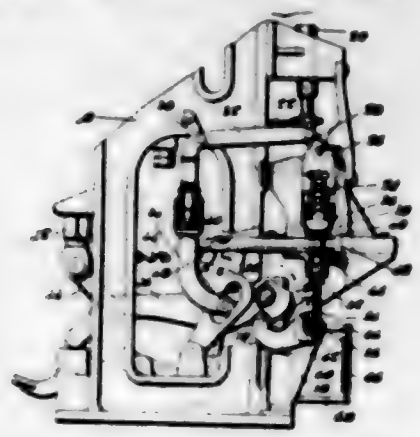
1. In a heeling machine, the combination of a stationary nailing die, nail drivers maintained permanently in the die but vertically reciprocable therein, measuring and

final pressure mechanisms coöperating with the die to apply pressure to the work, and means for initially re-



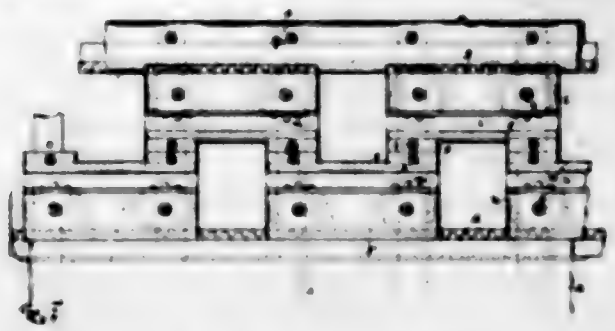
tracting the drivers from a position of rest and then advancing them to drive the nails.

1,301,899. HEELING-MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J., a Corporation of New Jersey. Filed July 30, 1917. Serial No. 183,488. 5 Claims. (Cl. 1—41.)



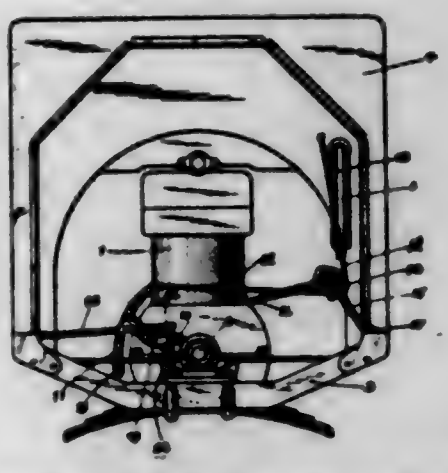
2. In a heeling machine, the combination of a measuring screw, frictional means for locking the screw to a stationary part of the machine, and means for releasing the screw.

1,301,900. BATTEN-STRUCTURE FOR NARROW-WARE LOOMS. FREDERICK BENZ, Jr., Haledon, N. J., assignor to Joseph Frank, New York, N. Y. Filed Aug. 20, 1918. Serial No. 250,683. 1 Claim. (Cl. 139—19.)



In combination, with the batten proper, a race-forming structure upstanding therefrom and including two tiers of spaced blocks superimposed one upon the other and so that the spaces between the blocks in each tier register with the blocks in the other tier, each upper block having in its under side and each lower block having in its upper side a recess conforming with the space registering with such block, and said spaces forming weaving spaces and the blocks in each tier having alined shuttle-guiding grooves in a plane traversing the spaces between them.

1,301,901. MECHANICAL STARTER. ELLIS P. BRINSON, Columbus, Ohio. Filed Sept. 22, 1915, Serial No. 52,047. Renewed Mar. 6, 1919. Serial No. 281,078. 2 Claims. (Cl. 74—54.)



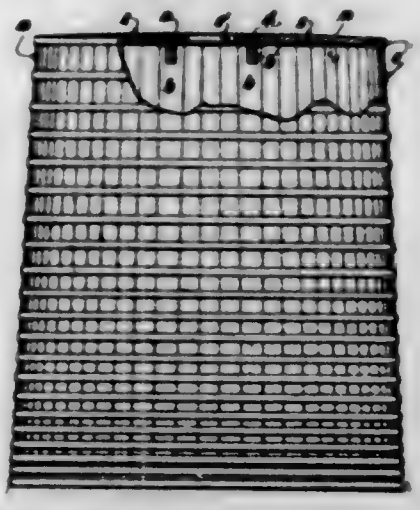
1. A mechanical starter for internal combustion engines comprising a ratchet wheel adapted to be secured to the crank shaft of an engine, an actuator arm pivotally mounted to swing about the engine crank shaft as a center, a pawl pivoted to said arm and arranged to engage said ratchet, a laterally projecting flange on said arm above said pawl, a spring secured at one end to said arm and at its other end to the framework in such relation that it rests on said flange to avoid contact with said pawl when said arm is swung about its center, a flexible cable secured at one end to said arm, and a sheave supported in line with the movement of said arm.

1,301,902. MOUNTING. WILLARD C. BRISTOL, New York, N. Y. Filed Sept. 26, 1917. Serial No. 192,292. 6 Claims. (Cl. 154—46.)



5. A backing for maps or the like comprising corrugated board having a plane exposed surface on one side and a cork surface layer on the opposite side.

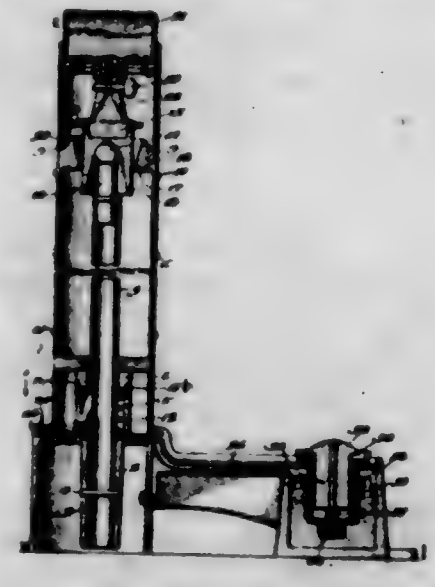
1,301,903. WOOD VAT OR TANK. HENRY BUCKLEY and JOSEPH EDWARD BUCKLEY, Manchester, England. Filed Dec. 20, 1918. Serial No. 267,711. 5 Claims. (Cl. 217—4.)



8. A large wood vat or tank, comprising a body part and a head part, the latter having a man hole, and a

quadrant cover with self-closing lid for said man hole, beams with arched or cambered upper faces resting at their ends in openings in the top edge of the vat or tank, and upon which the head part rests, substantially as herein set forth.

1,301,904. ANIMAL-OPERATED LIQUID-DISTRIBUTER. WILLIAM C. BURRELL, Kankakee, Ill. Filed Sept. 29, 1916. Serial No. 122,852. 8 Claims. (Cl. 119—157.)



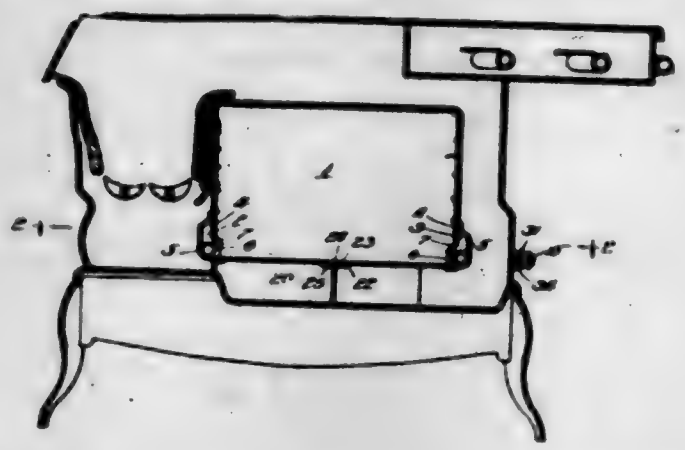
1. An animal operated liquid distributer including a rubbing bar mounted to be elevated by an animal rubbing upon the same; a liquid receptacle carried by the bar and movable upwardly therewith, this liquid receptacle having a discharge mouth at the bottom thereof; and a liquid containing cup located beneath the discharge mouth and receiving such mouth, when the bar is lowered, to seal the same normally to prevent liquid from being discharged from said receptacle and from which cup the mouth is removed when the bar is raised.

1,301,905. START AND STOP MECHANISM FOR TALKING-MACHINES. JOSEPH B. CHERNEY, Milwaukee, Wis., assignor, by mesne assignments, to Columbia Graphophone Manufacturing Company, Bridgeport, Conn., a Corporation of Delaware. Filed Apr. 6, 1915. Serial No. 19,515. 22 Claims. (Cl. 74—46.)



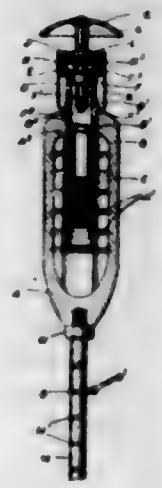
19. The combination with a rotating element and a traveling element coacting therewith, of an abutment movable with the traveling element, a stop device, longitudinally displaceable means operating by reaction against said abutment to effect the actuation of said stop device, and resilient means for restoring said displaceable means to normal position.

1,301,906. COMBINED COAL AND GAS RANGE. GEORGE W. CLARK, Oak Park, Ill. Filed July 9, 1917. Serial No. 179,520. 12 Claims. (Cl. 126—36.)



10. The combination with an oven, of chambers or flues extending along the sides of the oven and each communicating with the interior of the oven through a long narrow opening, burners mounted in said flues in such a manner that the air passing from the flues through said openings is prevented from flowing behind and underneath the burners but must pass across the top of the latter, and a valve-controlled smoke outlet in the lower portion of the oven.

1,301,907. PROJECTILE. JAMES BROOKS CLOSE, Sittingbourne, England. Filed Nov. 8, 1917. Serial No. 200,165. 19 Claims. (Cl. 102—29.)



1. In a projectile the combination of a casing containing an explosive charge, a detonator for this charge carried by the casing, a sleeve fixed to the casing, a striker member mounted in the fixed sleeve so that it can slide therein toward the detonator, a member which projects forwardly from the projectile and is adapted on impact to act on and impart sliding movement to the striker member, a plurality of locking members carried loosely in radial passages formed through the fixed sleeve, each locking member being of such shape and dimensions that while the outer end of the radial passage in which it lies is closed, the locking member will project within the sleeve and engage the striker member, a loose sleeve mounted on the fixed sleeve so that it can slide rearwardly thereon by reason of its inertia when the projectile is discharged this loose sleeve when in its initial position serving to close the outer ends of the radial passages in the fixed sleeve and maintain the locking members in engagement with the striker member, a shearing wire which passes through the fixed sleeve and the striker member, and means for preventing such rearward movement of the loose sleeve as will release the locking members until the projectile is discharged as set forth.

1,301,908. PIANOFORTE-ACTION. FREDERICK CLUTSAM, London, England, assignor of one-half to Josiah Beldow, Upper Norwood, England. Filed May 15, 1916. Serial No. 97,466. 4 Claims. (Cl. 84—26.)

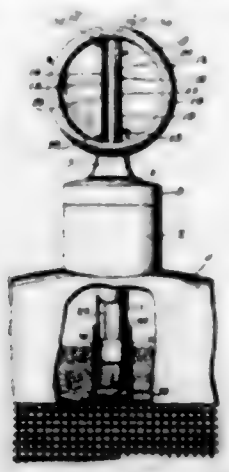


1. An upright piano action, comprising a hammer having a butt, a jack arranged to engage the butt and actuate the hammer, a counter-check projecting rearwardly from the hammer butt over the jack, a projection on the rear side of the jack, and a resilient compression member between the counter-check and said projection on the jack, the line of thrust passing between the pivotal support of the jack and the pivotal support of the hammer when the parts are not in use, and passing onto that side of the jack which is remote from the hammer when a note has been struck and the jack is in check, substantially as described.

1,301,909. MANUFACTURE OF SYNTHETIC CARBOLIC ACID. FABRICIUS CORELLIS, Philadelphia, Pa. Filed Feb. 9, 1917. Serial No. 147,545. 2 Claims. (Cl. 23—24.)

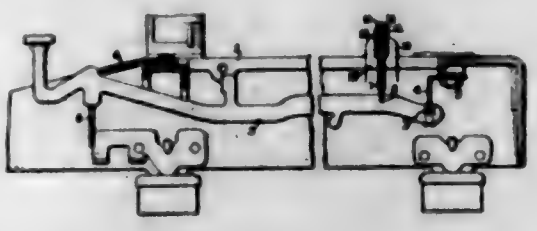
1. The process of manufacturing phenol or its derivatives, and also barium sulfate and zinc sulfid, which consists in neutralizing sulfuric acid solution and benzene sulfonic acid with a zinc compound, with production of the corresponding zinc sulfate, and zinc sulfonate, adding thereto barium sulfid, whereby barium sulfate and zinc sulfid are precipitated, leaving barium benzene sulfonate, and producing the desired phenol derivative therefrom.

1,301,910. COMBINED LIQUID-GAGE AND TEMPERATURE INDICATOR. WILLIAM DANIAL COLLINS, Cazenovia, N. Y., assignor of one-half to George W. H. Allen, Cazenovia, N. Y. Filed June 11, 1918. Serial No. 239,442. 8 Claims. (Cl. 73—52.)



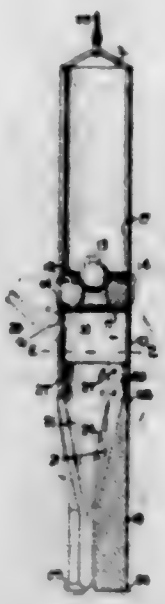
1. A combined gage and temperature indicator comprising a shield, means to fasten the shield to a radiator cap, a housing connected with the shield, a thermometer tube having its upper portion protected by the shield and having its lower portion within the housing, a temperature indicating agent in the tube, a float in the housing, and a liquid gage indicating member fastened at its lower end to the float and having its upper portion protected by the shield, there being two parallel vertical slots extending from face to face of the shield and accommodating the upper ends of the thermometer tube and liquid gage indicating member.

1,301,911. TYPE-WRITING MACHINE. JOSEPH L. COXE, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Oct. 23, 1918. Serial No. 259,321. 9 Claims. (Cl. 197—33.)



1. In a typewriting machine, the combination with a series of springs and square-headed adjusting screws for regulating said springs, of a sheet metal bar bent to form a concavity for coöperation with the square heads of said screws.

1,301,912. DEEP-WELL DRILL. JOHN C. COOPER, Cushing, Okla. Filed Jan. 13, 1917, Serial No. 142,247. Renewed Mar. 1, 1919. Serial No. 290,193. 2 Claims. (Cl. 255—64.)



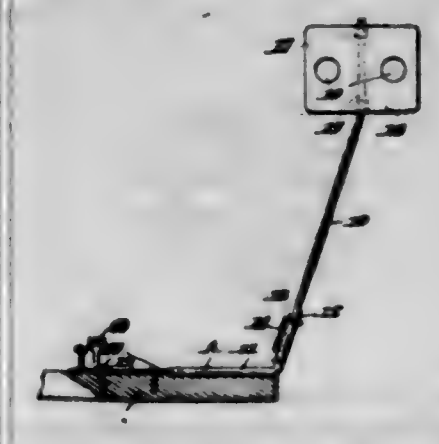
2. A well drilling mechanism including a hollow cylindrical body, open at its opposite ends, and a plurality of drills attached to the lower end of the body and extending downward therefrom, each drill at its upper end having a relatively thin curved web engaging the body, the transversely curved webs of all of the drills completing a circle, the sides of each drill shank being downwardly and inwardly beveled, the inner face of each shank extending upward for a distance from the cutting edge of the drill and then being beveled outward and upward to said web, there being a shoulder formed upon the outer face of the drill at the junction of the web with the body of the drill, this shoulder supporting the hollow cylindrical body.

1,301,912. CRUET ATTACHMENT FOR CAFETERIA-CHAIRS AND THE LIKE. GEORGE FREDERICK COBEY, Toronto, Ontario, Canada. Filed Aug. 9, 1918. Serial No. 249,206. 2 Claims. (Cl. 155—22.)



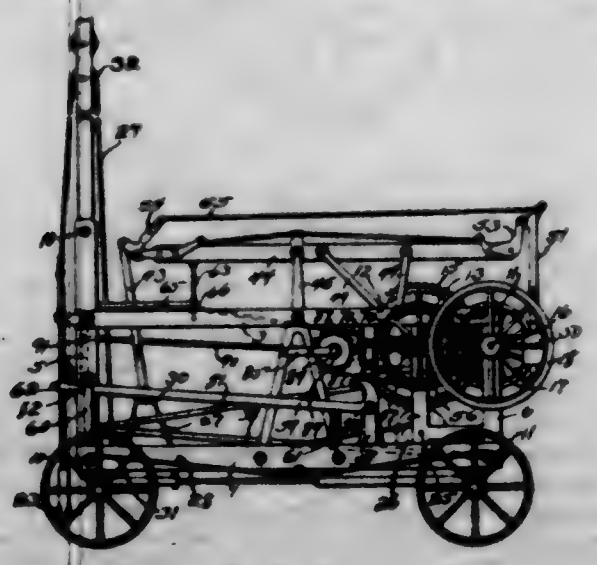
2. In a cruet attachment for cafeteria chairs and the like, a chair arm, a cruet stand support sliding in brackets mounted on the under side of said arm and comprising a wire folded double and having its strands bent outwardly at right angles between said brackets forming steps, and having one of its strands projecting outwardly beyond the chair edge and looped forming a handle and extending inwardly and with the remaining portion of said wire being bent downwardly and outwardly forming loops, receptacles loosely supported in said loops and chains limiting the movement of said receptacles.

1,301,914. PORTABLE RAILWAY-SIGNAL. ALEXANDER LAWRENCE CURRIE, Sorel, Quebec, Canada. Filed Sept. 21, 1918. Serial No. 255,122. 10 Claims. (Cl. 246—477.)



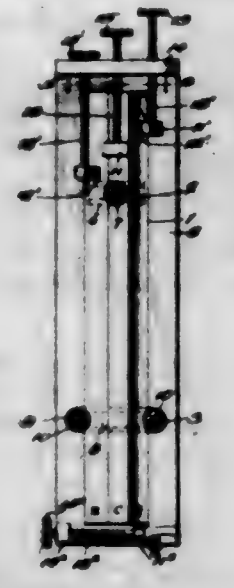
1. A portable signal comprising a tubular rod offset intermediate of its length, a rod rotatably mounted on the shorter arm of the tubular rod, a rod rigidly attached to the longer arm of the tubular rod, attaching means connected to the last said rod, a flag carried by the first said rod, and lateral wings on the flag.

1,301,915. WELL-DRILLING MACHINE. WILLIAM L. DAYTON and JOHN M. SCOTT, Fort Worth, Tex. Filed June 22, 1918. Serial No. 241,325. 14 Claims. (Cl. 255—12.)



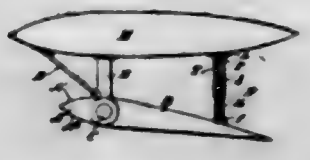
1. A well drilling machine having a frame, a derrick pivotally mounted at the work end of said frame, a roller carried thereby, a cable spool journaled in said frame, a cable attached thereto and mounted on said roller and a drill attached to said cable, and means for operating said cable consisting of a walking beam fulcrumed on said frame and carrying a cam arm, means on one end of said beam for pulling said cable and a weight on the other end of said beam for coöperating with an actuating means, and an actuating means for alternately engaging and releasing said cam arm for actuating said beam.

1,301,916. SOUND-PRODUCING DEVICE. JEFFERSON CLAUDE DRAGAN, Chicago, Ill. Filed Oct. 24, 1917. Serial No. 198,270. 5 Claims. (Cl. 84—31.)



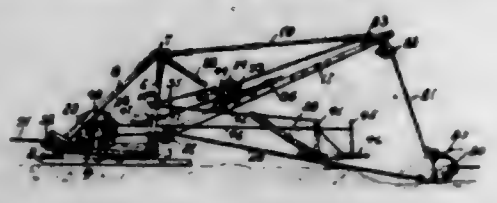
5. A sound producing bar in combination with a damper in engagement with a side face thereof and adjustable longitudinally of said face.

1,301,917. HYDROCRAFT PLANING-SURFACE. SERGE VINCENT DE BOLOTOFF, London, England. Filed Feb. 1, 1918. Serial No. 214,867. 3 Claims. (Cl. 114—66.5.)



1. In a hydrocraft, the combination of, a composite plane comprising leading and trailing portions respectively, means to support the plane from the hydrocraft in such position that it is situated bodily below the level of the "floating-surface" of the hydrocraft, means for hinging the said trailing-portion at its forward end relatively to the leading-portion and the supporting-means, to swing about an axis that is transverse to the direction of travel and more or less horizontal, and yielding means operatively connecting the said trailing-portion to the supporting-means at a point behind the said axis of hinging, for the purpose described.

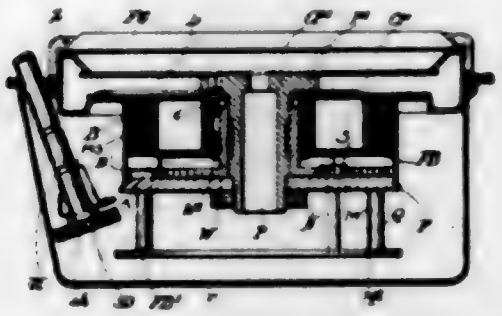
1,301,918. EXCAVATOR. ROBERT A. DENOVAN, Dalkeith, Ontario, Canada. Filed Oct. 15, 1917. Serial No. 196,646. 2 Claims. (Cl. 37—10.)



2. An excavator comprising in combination a supporting frame, a movable frame carried thereby, a scoop

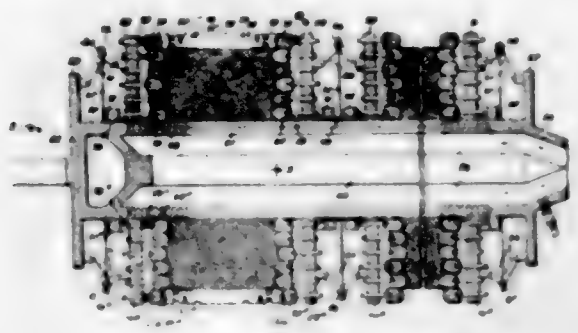
adapted to be supported by said movable frame, means for raising said scoop, said means for raising the scoop adapted to move said frame, a loading drum, a cable adapted to be wound upon said loading drum, one end of said cable being connected to said scoop, whereby the cable will draw the scoop over the ground, and means under the control of the operator for retarding the movement of said scoop.

1,301,919. BEZEL-WOUND TIMEPIECE. PRIMUS OTTO DOREN, London, England, assignor to S. Smith & Sons (Motor Accessories) Limited, London, England. Filed Nov. 23, 1917. Serial No. 203,613. 4 Claims. (Cl. 58—46.)



1. In a time-piece having the winding mechanism located in front of the movement, the combination of the movement frame, a central hollow forwardly projecting pillar fixedly carried on the front plate thereof, a gear wheel for actuating the movement rotatably mounted on the pillar, a main spring surrounding the pillar and having one end attached to the gear wheel, an inclosing member surrounding the main spring and connected to the other end thereof, the inclosing member being rotatable relatively to the movement frame in only one direction, and a bezel mounted on the front of the inclosing member for winding the main spring, substantially as described.

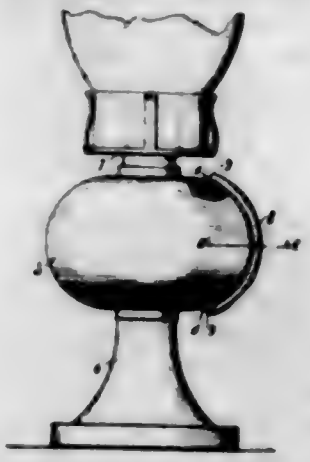
1,301,920. DYEING-MACHINE. HOWARD M. DUDLEY, Philadelphia, Pa. Filed Feb. 2, 1918. Serial No. 215,054. 8 Claims. (Cl. 8—17.)



1. In a fabric treating device, in combination, a foraminous cylinder capable of having fabric wound thereon, a series of inner members abutting upon the foraminous cylinder, slidable thereon and capable of closing a portion of the openings therein, a series of outer slidable members abutting upon the inner members and upon each other, toggle means for abutting the inner and outer members upon the edges of fabric wound upon the cylinder and for maintaining them in said abuttable position.

1,301,921. LAMP. HOMER H. ELLIOTT, Rose, Kans. Filed Apr. 19, 1918. Serial No. 229,605. 3 Claims. (Cl. 73—54.)

1. In a device of the class described, the combination of a bowl having openings formed in its top and bottom, said bowl having necks extending therefrom and surrounding said openings, a gage tube curved throughout its entire length to conform to the contour of said bowl, said tube having inwardly extending ends, said ends being carried by said necks and communicating with the interior of said bowl, thus accurately disclosing the oil level



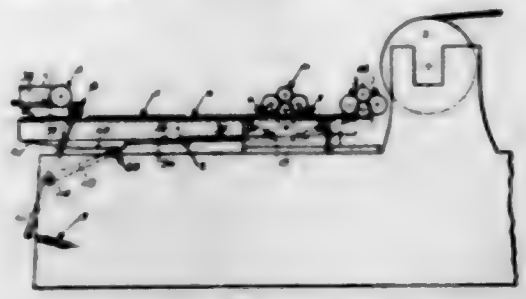
within said bowl, said inwardly extending ends and said necks holding said tube against accidental displacement independent of secondary securing means.

1,301,922. VARIABLE-SPEED MOTOR. CHARLES ENDORF, Jr., Chicago, Ill., assignor to The Lindstrom, Smith Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,095. 1 Claim. (Cl. 171—221.)



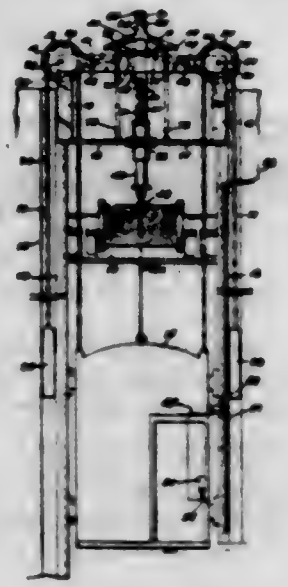
In a device of the class described the combination with the field coils and armature of a motor, of a shaft supporting said armature, a commutator secured thereon, a stationary bearing bracket for the shaft at the commutator end thereof, a bushing threaded into said bracket to afford a bearing for said shaft, brushes bearing on said commutator, an arm rigidly secured to said bushing and bracket supporting one of said brushes, a second arm pivotally mounted on said bushing supporting the other brush, a curved conductor for the movable brush to afford an electric contact therefor in various positions of adjustment, said movable brush when adjusted serving to vary the speed of rotation of the armature.

1,301,923. INKING DEVICE FOR FLAT-BED PRINTING-PRESSES. FRED S. ENGLISH, New London, Conn. Filed June 26, 1917. Serial No. 176,949. 15 Claims. (Cl. 101—345.)



1. In a printing press the combination of a reciprocating bed having a form and an ink table, of ink rollers comprising a form roller and a table roller, said table roller coöperating with said table and being so disposed that at least some portion of the form passes thereunder, and means for automatically causing a periodical separation of certain of said ink rollers and the bed.

1,301,924. SAFETY DEVICE FOR ELEVATORS. DOMINICK EVANGELIST, New York, N. Y., assignor of one-half to Thomas Costanso, New York, N. Y. Filed Jan. 13, 1919. Serial No. 270,890. 6 Claims. (Cl. 187—71.)



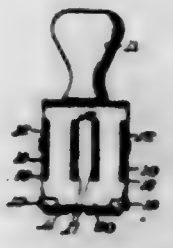
6. The combination of a frame adapted to be mounted in the upper part of the shaft over the car of the elevator, two movable weights counterbalancing the car, two brakes on the frame associated with the weights, mechanism on the frame, associated with the cable of the car, said mechanism being operable with the separation of the cable from the car to cause the brakes to operate whereby the travel of the car will be stopped by stopping the movements of the weights, a normally open electric circuit, a magnet interposed in the circuit and associated with the mechanism, and a switch in the car also interposed in the circuit, said switch being operable to close the circuit to energize the magnet for causing the mechanism to be reversely operated whereby the brakes will be released to allow the weights to move the car.

1,301,925. INCLINOMETER FOR AIRPLANES. GEORGE W. FARTHING, Dry Fork, Va. Filed Mar. 8, 1918. Serial No. 221,806. 1 Claim. (Cl. 33—215.)



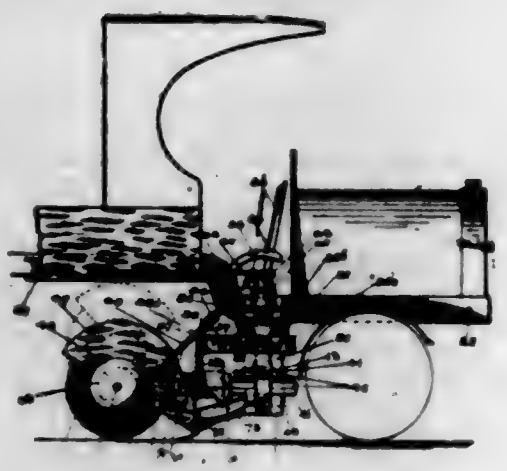
In an inclinometer for airplanes, a base plate arranged to be mounted on the airplane, having top and bottom pointers and crossed rulings, a plumb ring mounted over the base plate and including horizontal and vertical arms normally coinciding with the crossed rulings and terminating in a hub in the center, a top pointer normally coinciding with the top pointer of the base plate, a weight at the bottom normally coinciding with the bottom pointer of the base plate, a pivot pin passing through the hub and supporting the plumb ring, and a washer on the pivot pin between the plumb ring and base plate, to provide a space and prevent the top pointer and bottom weight of the plumb ring from binding on the base plate when the airplane tilts to the front or rear.

1,301,926. HAND-STAMP. HARRY S. FOLGER and JOSEPH C. JULIEN, Chicago, Ill., assignors, by direct and mesne assignments, to R. D. Swisher Manufacturing Company Chicago, Ill., a Corporation of Illinois. Filed July 27, 1916. Serial No. 111,579. 2 Claims. (Cl. 101—111.)



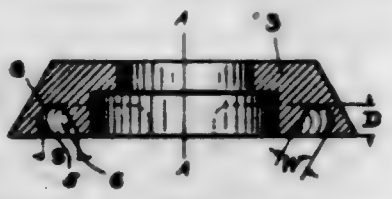
1. The combination with a hand stamp having a frame, a screw secured thereto, and a handle held in place by the screw, of a U-shaped guard extending over the top of the frame and having a hole therein to receive said screw, said guard being clamped to said frame by said handle acting as a nut.

1,301,927. STREET-SWEEPER. BRUCE FRAME, Portland, Oreg. Filed Apr. 15, 1918. Serial No. 228,788. 5 Claims. (Cl. 15—17.)



1. In a street sweeper, a vehicle; a broom attached to said vehicle and extending transversely therefrom; means whereby said broom may move toward said vehicle upon contacting with an obstruction; means whereby the operator may cause said broom to move toward said vehicle to avoid an obstruction; and means to cause said broom to return to its initial position after the operation of either of the first mentioned two means.

1,301,928. PROJECTILE-FUSE TIME-TRAIN RING. EMIL GATHMANN, Baltimore, Md. Filed Aug. 30, 1917. Serial No. 188,934. 6 Claims. (Cl. 102—36.)

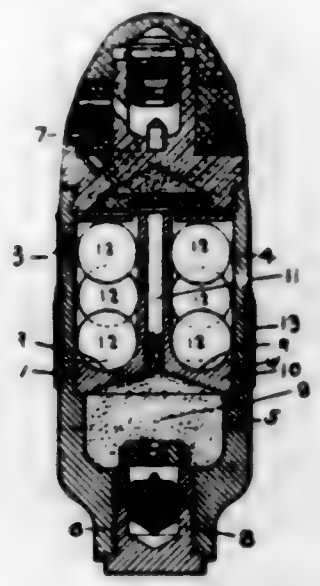


1. A projectile-fuse time-train ring provided with a powder composition groove open to the rear end and having approximately parallel retaining side walls, none of the elements of the said side walls being parallel with the longitudinal axis of the fuse.

1,301,929. GRENADE-PROJECTILE. EMIL GATHMANN, Baltimore, Md. Filed Aug. 31, 1917. Serial No. 189,103. 4 Claims. (Cl. 102—29.)

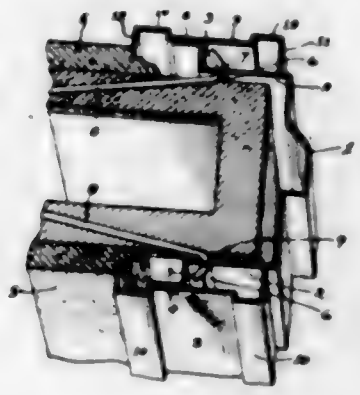
1. A grenade projectile for rifled cannon consisting of a cylindrical casing, having a contracted rear portion, a

band on its outer cylindrical portion, a conical cylindrical gun charge powder container having its forward portion seated upon the cylindrical casing aforesaid in rear of the said band, said container being fitted with a primer for ignition of the gun charge, the contracted rear portion



of the grenade casing entering into but not being in contact with the said container, a percussion fuse mounted within and retained in said contracted rear portion of the casing and a time fuse mounted on and retained by the forward portion of the said casing.

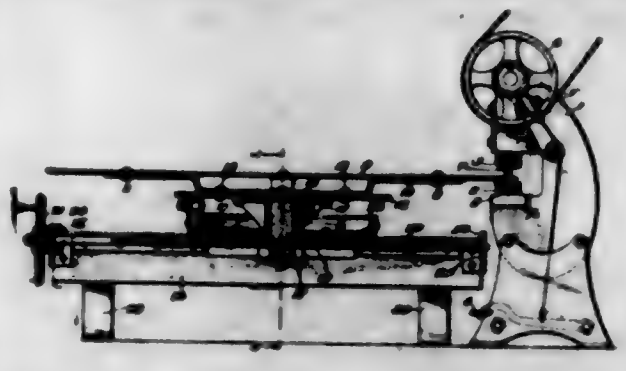
1,301,930. METAL DOOR OR WINDOW FRAME STRUCTURE. HARRY R. GOGAY, Columbus, Ohio, assignor to The Solar Metal Products Company, Columbus, Ohio, a Corporation of New York. Filed Feb. 20, 1917. Serial No. 150,959. 1 Claim. (Cl. 189—46.)



A metal frame structure comprising a jamb of integral substantially U shaped configuration formed to incase the edges of a wall opening, the ends of said jamb being disposed to extend parallel with the sides of the wall and being further formed to terminate in substantially L shaped flanges, and a pair of trim members each provided with a flat portion arranged to flushly engage with the outstanding portions of said flanges, whereby said trim members may be welded to said flanges.

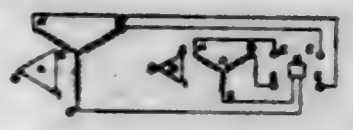
1,301,931. PUNCHING-MACHINE. PHILIP S. GRAVER, Chicago, Ill. Filed Jan. 17, 1916. Serial No. 72,451. 2 Claims. (Cl. 164—87.)

1. The combination of a frame, a bearing plate slidably mounted on the frame, a vertical shaft extending through the bearing plate, a bearing sleeve rotatable on the shaft with its lower end in engagement with the bearing plate and having interengagement with the shaft, a turn-table



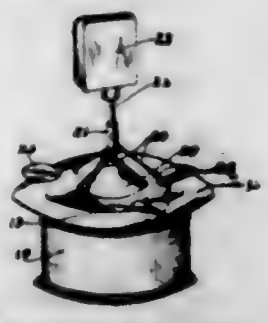
supported by the bearing sleeve, a work support on the turn-table, and means coacting with said shaft to slide the bearing plate relatively to the frame.

1,301,932. ELECTRIC FURNACE. HENRY ARNOLD GRAVES and HARRY ETCHELLS, Sheffield, England. Filed Feb. 18, 1919. Serial No. 277,880. 7 Claims. (Cl. 204—64.)



1. In electric furnace installations of the kind referred to having two or more sets of transformer windings, the improved connections comprising the inversion of polarity or the rotation of phase of 90°, 120°, 180°, 240°, or 270° of one group of transformer windings relatively to the phase or phases of other group or groups of transformer windings, substantially as and for the purpose set forth.

1,301,933. SMOKER'S UTENSIL. JERRY GARSON, Garfield, N. J. Filed Dec. 4, 1917. Serial No. 205,821. 1 Claim. (Cl. 131—51.)



A device of the character described, comprising a cylindrical container, a base for said container, a beading at the upper portion of the container, an annular flange resting on said beading, a cover integral with said flange having a flaring edge and a slanting surface at its central portion with a central opening, elastic legs secured to said cover, adapted to carry a sleeve at their free ends, a plunger in said sleeve adapted for vertical reciprocation, a hood secured to the lower end of said plunger and adapted to cover the opening in said cover, and a plurality of curved open holders for supporting lighted cigars, etc., in such a position that the ashes will drop upon said cover and slide through the opening thereof into said container, substantially as described and for the purpose set forth.

1,301,934. GREENHOUSE CONSTRUCTION. CHESTER P. GUION, Chicago, Ill., assignor to John C. Monlnger Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1917. Serial No. 150,296. 4 Claims. (Cl. 108—26.)

1. A structure of the character described including in combination a supporting column having a head, said

head having a laterally and downwardly extending bracket member on each side thereof, the ends of which are angled upwardly, a sheet metal gutter formed of sections of concaved shape with their marginal portions bent upwardly



at an angle to form parallel side gutters which fit in and are supported by said bracket members, the end portions of each section being cut out to receive the head therein, the remaining flanges of said sections being secured together.

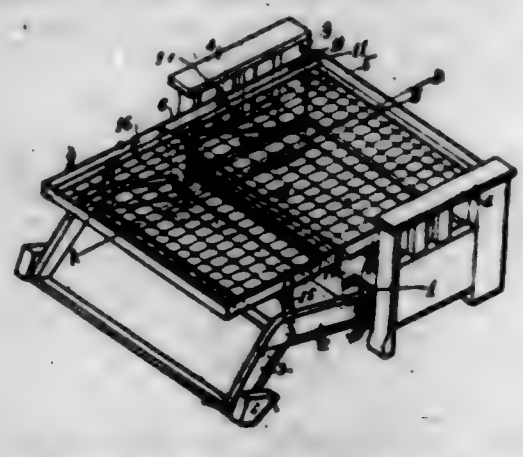
1,301,935. PROCESS OF MAKING VALVE-CASINGS FOR WIND MUSICAL INSTRUMENTS. EDWARD J. GULICK, Elkhart, Ind., assignor to C. G. Conn, Ltd., a Corporation of Indiana. Filed June 12, 1918. Serial No. 239,731. 2 Claims. (Cl. 29—148.)



2. The process of making one piece valve casings for wind musical instruments which consists in producing a ductile metal tube of substantially uniform diameter and desired length one end whereof has a substantially cylindrical reduced portion, then supporting around said tube reduced portion a die member formed with screw threads arranged adjacent and encompassing the exterior surface of said tube reduced portion, then uniformly increasing the diameter of said tube for a portion of its length by expansion and simultaneously forcing the metal of said tube reduced portion into the die thread interstices to form screw threads thereon, then forming suitable air passages in the smaller tube portion, and then dressing the casing body to desired dimensions.

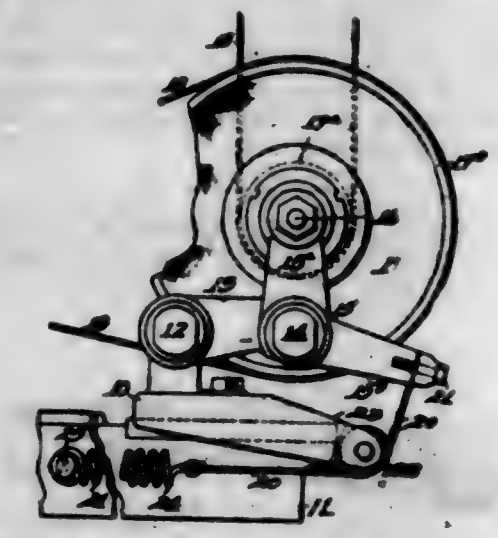
1,301,936. SOFA-BED. HENRY HARTUNG, Baltimore, Md. Filed Feb. 3, 1917. Serial No. 146,404. 1 Claim. (Cl. 5—61.)

A sofa bed comprising a frame, a seat and back pivotally mounted to said frame, a mattress frame consisting of a plurality of parts operatively secured together by joints preventing buckling of the parts in bed position, an intermediate part pivotally mounted to a member relatively stationary with reference to said seat and back, a locking device on said member securing said intermediate section in open position when the bed is in open position, and means of permitting the other sections of the mattress frame to adjust themselves with reference to the main frame and seat in opening and closing and cooperating



with said locking device in holding them secure at the limits of movement.

1,301,937. BELT-TIGHTENER. JAMES N. HEALD and ALDEN M. DRAKE, Worcester, Mass., assignors to Heald Machine Company, a Corporation of Massachusetts. Filed Dec. 17, 1917. Serial No. 207,488. 10 Claims. (Cl. 64—5.)



1. A belt tightener having, in combination, a stand, a member pivotally mounted on said stand, a lever pivotally mounted on and supported by said member, a pair of pulleys rotatably mounted on said lever and having belts leading therefrom in different directions, and a single means acting on said lever and member effective to yieldingly move said pulleys to tension both of said belts simultaneously.

1,301,983. DUST-CAP FOR TIRE-VALVES. CHESTER A. HEALD, Rochester, N. Y., assignor to D. H. Wright, Webster, N. Y. Filed May 23, 1918. Serial No. 236,200. 4 Claims. (Cl. 152—12.)



1. A dust cap for an externally threaded tire valve comprising a cap body having a chamber for receiving the stem

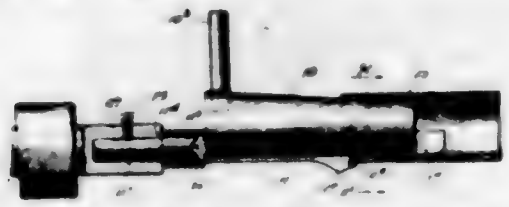
of the tire valve, said chamber having a cross section which prevents the rotation of the body on the stem, manually operable devices movable on the cap body for engaging with and to disengage from the threads of the stem, and resilient means on the body for acting on a vehicle wheel about the stem.

1,301,939. ELECTRIC FAN AND CASING. JOHN P. HOTZ, Watertown, Mass. Filed July 8, 1918. Serial No. 243,993. 8 Claims. (Cl. 230—1.)



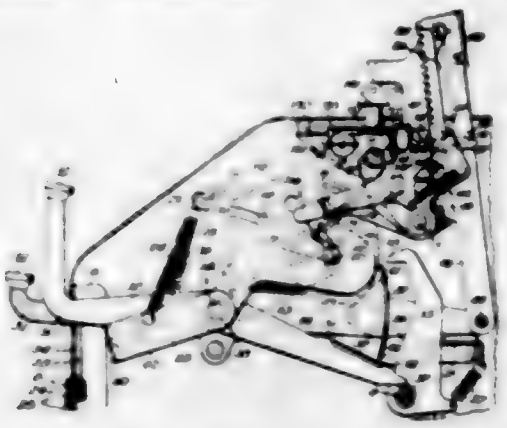
1. A device of the character described having, in combination, a casing provided with a chamber, a door to said casing opening out of said chamber, a fan in said chamber, an electric motor adapted to rotate said fan, a switch in electric circuit with said motor and means to simultaneously open said door and actuate said switch to close said circuit and vice versa.

1,301,940. BEADING-TOOL. FREDERICK J. HOWE, Aurora, Ill. Filed Dec. 8, 1913. Serial No. 805,419. 6 Claims. (Cl. 153—79.)



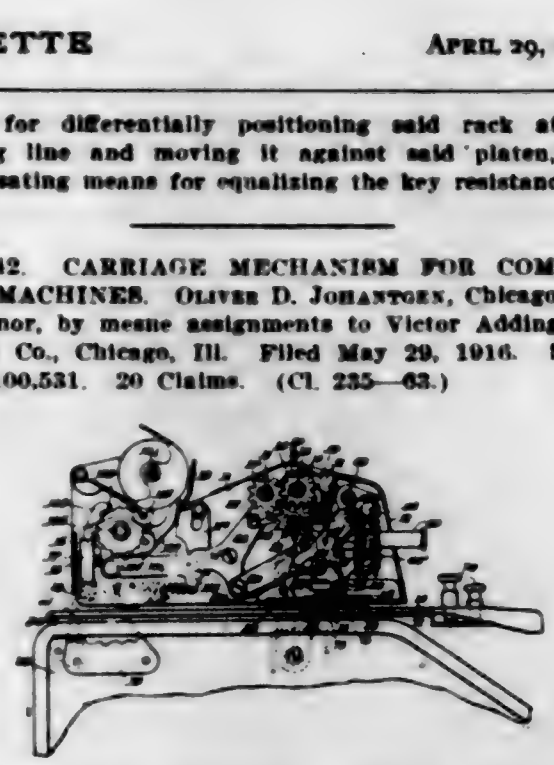
1. In a device of the class described, a guide member, a beading member reciprocably mounted on said guide member, a reciprocating member directly connected to said beading member to positively reciprocate the same, and a coil spring mounted on said beading member and engaging said guide member to maintain the latter in a tube to be beaded.

1,301,941. TEN-KEY ADDING AND LISTING MACHINE. OLIVER D. JOHANTGEN, Chicago, Ill., assignor, by mesne assignments, to Victor Adding Machine Co., Chicago, Ill. Filed May 29, 1916. Serial No. 100,530. 30 Claims. (Cl. 235—59.)



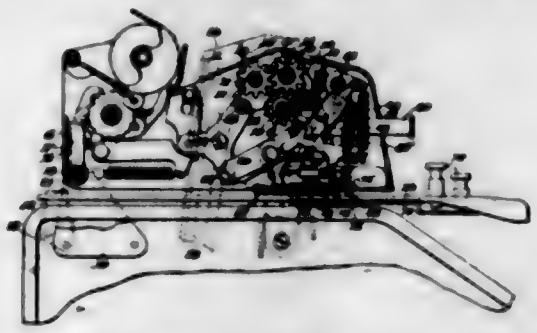
1. In a computing machine, a combined accumulator actuating rack and type rack, a platen, key controlled means for differentially positioning said rack at the printing line and moving it against said platen, and compensating means for equalizing the key resistance.

1,301,942. CARRIAGE MECHANISM FOR COMPUTING-MACHINES. OLIVER D. JOHANTGEN, Chicago, Ill., assignor, by mesne assignments to Victor Adding Machine Co., Chicago, Ill. Filed May 29, 1916. Serial No. 100,531. 20 Claims. (Cl. 235—63.)



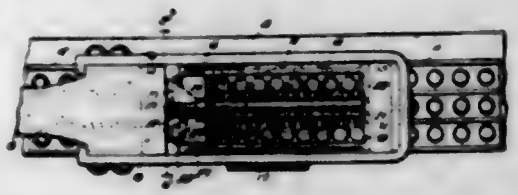
1. In a carriage mechanism, a series of accumulator wheels, a single actuating rack therefor, spring locks for said wheels, and means associated with said rack arranged to render inoperative the lock of each wheel as it is engaged by said rack.

1,301,943. REGISTER MECHANISM FOR COMPUTING-MACHINES. OLIVER D. JOHANTGEN, Chicago, Ill. Original application filed May 29, 1916, Serial No. 100,531. Divided and this application filed Oct. 29, 1917. Serial No. 198,959. 7 Claims. (Cl. 235—134.)



1. An adding machine carriage, comprising a plurality of idler wheels, a plurality of numeral wheels, and a plurality of register wheels, said idler wheels being arranged to reverse the movement of said numeral wheels, a transfer mechanism consisting of a series of fingers normally engaged between the teeth of said register wheels, means turning with said register wheels for throwing said fingers to directly advance the wheels engaged thereby, means associated with said fingers for limiting said movement to a single tooth, and means for restoring said fingers to normal position.

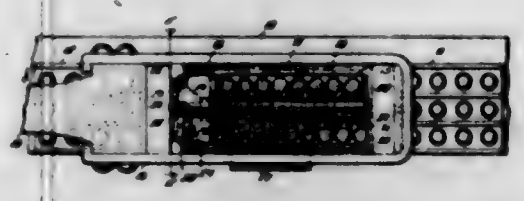
1,301,944. FRICTION-GEAR FOR RAILWAY-CARS. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Dec. 26, 1916. Serial No. 138,795. 2 Claims. (Cl. 213—64.)



1. In a friction gear, the combination with a friction shell, of a friction post mounted within the shell, the distance between the surfaces of the friction post and friction shell gradually decreasing from the outer ends of

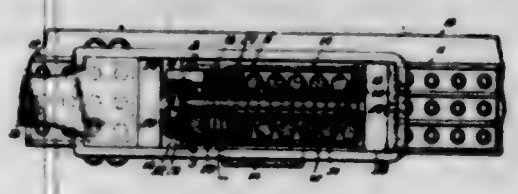
the shell and post toward the inner ends thereof, a series of friction shoes disposed around said post and longitudinally slidable on the latter, a series of friction shoes surrounding the first named series of shoes and having direct wedging contact therewith and engaging the shell, and spring means for resisting movement of said shoes.

1,301,945. FRICTION-GEAR. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Dec. 26, 1916. Serial No. 138,796. 9 Claims. (Cl. 213—64.)



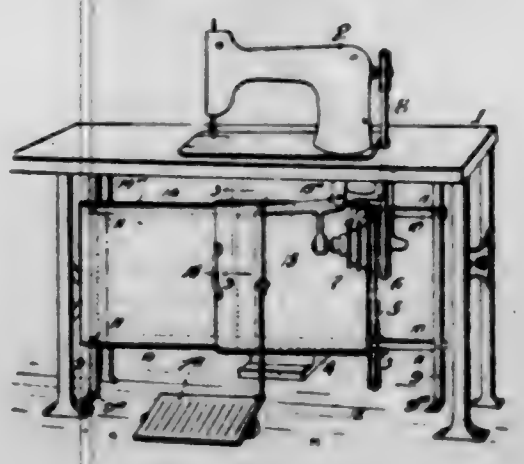
1. In a friction gear, the combination with a set of friction members capable of relative movement and having a substantially uniform frictional resistance to said movement during the compressive operation of the gear, of spring means co-acting with one of said friction members for restoring the parts to normal condition after said action, said frictional resistance being obtained independently of said spring means.

1,301,946. RAILWAY-DRAFT-RIGGING FRICTION-GEAR. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 2, 1917. Serial No. 140,012. 9 Claims. (Cl. 213—64.)



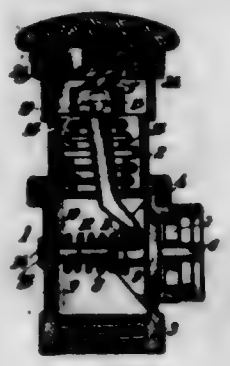
1. In a friction gear, the combination with a friction shell, of friction shoes coöperable therewith, a wedge co-acting with said shoes, means for maintaining a predetermined and substantially constant degree of friction between said shoes and shell, and a release spring.

1,301,947. PROTECTOR FOR MECHANISM. OSCAR I. JUDELSHON, Brooklyn, N. Y. Filed Nov. 9, 1918. Serial No. 261,894. 8 Claims. (Cl. 74—56.)



1. A protector for mechanism, comprising a frame having spaced horizontal bars and spaced upright bars secured together and adapted to be secured between a table top and a floor, and a protecting member slidably mounted upon said horizontal bars.

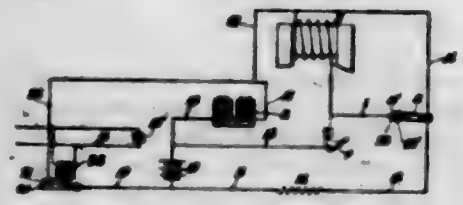
1,301,948. VALVE. JACOB KAPLAN and ISRAEL LACK, Brooklyn, N. Y. Filed Apr. 25, 1917. Serial No. 164,506. 9 Claims. (Cl. 251—31.)



6. A valve normally spring pressed, comprising a valve proper, a pivoted lever for opening said valve proper, and a tubular corrugated diaphragm for packing said valve, attached to said lever near its pivotal plane, said diaphragm being reduced in diameter near its point of connection to the lever, said lever having a long arm and a short arm, the long arm being adapted to impart opening movement to the valve proper, and a cam-plate contacting with said short arm for operating said lever.

8. A valve, comprising a casing, a valve proper, a spring, a lever for opening said valve and a projection for guiding the spring, said casing and projection having parts fitting together, and said valve and projection having parts telescoping with each other, said spring pressing said valve to its seat and pressing said projection against the casing.

1,301,949. SIGNAL. ALLEN B. KENDALL and OSCAR S. FIELD, Elizabeth, N. J., assignors to Hall Switch & Signal Co., a Corporation of Maine. Filed Feb. 19, 1916. Serial No. 79,273. 10 Claims. (Cl. 246—130.)



1. In a signal, the combination of a signal indicator, electro-magnetic means for holding said indicator in clear position, a circuit for said holding means under the control of a track relay, a motor for vibrating said signal member to give a danger indication, a circuit for said motor open at two points, one of which points is closed upon initial movement of the signal indicator from clear position and the other of which points is closed by said signal indicator during each movement of the indicator in a direction toward clear position, thereby closing the circuit of the motor and supplying energy to continue the vibrating of said signal member.

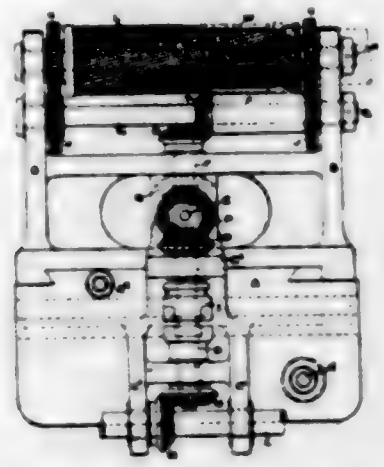
1,301,950. SHEET-GLASS-CUTTER HOLDER. GEORGE W. KLAGES, Pittsburgh, Pa. Filed Sept. 21, 1916. Serial No. 121,380. 5 Claims. (Cl. 33—28.)



1. A device of the character described comprising a diamond holder, a carrier therefor, said diamond holder being arranged to be adjusted within the carrier, a support for the carrier, said support having a guide for the carrier arranged to permit the carrier and holder to be adjusted about the point of the diamond, means to secure the carrier in its adjusted position to the support, a holding

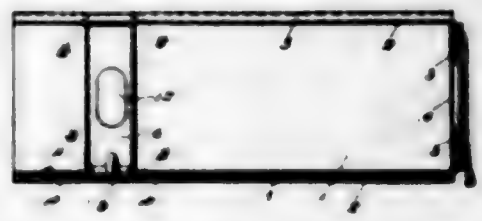
bar, supporting connections between the holding bar and the support arranged to permit the support to be adjusted about the point of the diamond at right angles to the adjustment of the carrier on the support, and means for securing the support in its adjusted position, substantially as described.

1,301,951. MILLING-LATHE. ALFRED LANE, Rawdon, and THOMAS MORE, Leeds, England. Filed Aug. 21, 1916. Serial No. 116,195. 1 Claim. (Cl. 90—16.)



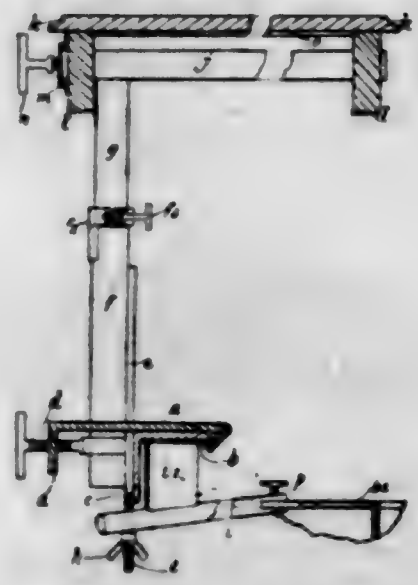
A milling lathe for cutting bearings, collars, and wheel seats on an axle, comprising in combination, a bed-plate U, front and back head-stocks 1 carrying said axle, a variable speed motor 7, a longitudinal feed shaft 6 coupled to said motor, a pair of milling cutters L built up to the required composite formation and located at opposite ends of the machine so as to be operative respectively on opposite ends of the axle, a pair of base saddles A and pedestals B adapted to support the respective milling cutters and their operating mechanism, means for longitudinal adjustment of each said base saddle upon the bed-plate, means for transverse adjustment of each said pedestal upon its respective base saddle a variable speed motor 4, a longitudinal side shaft C coupled to said motor and supported in bearings carried by said base saddles, shafts and gearing supported by said base saddles and pedestals for separately transmitting rotary movement from said side shaft to the respective milling cutters, and clutch mechanism I, 3 for separately disengaging either or both of said milling cutters, whereby said pair of milling cutters are operative either simultaneously or otherwise, substantially as herein set forth.

1,301,952. NON-REMOVABLE PRINTER'S GALLEY-LOCK. JAMES EDGAR LEE, Grand Haven, Mich., assignor to The Challenge Machinery Co., Grand Haven, Mich., a Corporation of Michigan. Filed July 2, 1917. Serial No. 178,303. 2 Claims. (Cl. 276—43.)



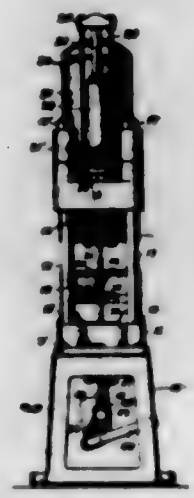
1. In combination, a printer's galley comprising a bottom, upwardly extending sides and end, one end being open, an outwardly projecting rib in a side of the galley whereby a longitudinal groove is formed on the inner side of said galley side, a galley lock comprising substantially an inverted channel form disposed between the sides of the galley, the ends of the flanges of said channel form being provided with projecting lugs to enter said groove, and an inverted U-shaped extension to the web of said channel form turned over the upper edge of said galley side and frictionally bearing against the outer side thereof to hold the lugs in said groove, substantially as described.

1,301,953. BED-TABLE. FRANCIS JOSEPH LEWIS, Cheltenham, England. Filed Mar. 1, 1917. Serial No. 151,812. 1 Claim. (Cl. 45—92.)



In a device of the class described, a support for a bed table adapted to be clamped in vertical position to the side rail of a bedstead, the lower end of the support extending below the rail and being screw threaded, a brace rod provided adjacent, one end with a transverse aperture to slidably receive the screw threaded lower end of the said support and provided also with an upwardly extending plate adjacent the said end to abut against the under side of the rail and to be held thereagainst by means of a nut engaging the said screw threaded end, the opposite end of the brace rod extending diagonally to the rail at the head of the bed and being adapted to be secured thereto.

1,301,954. PRESS. EUGENE L. MCGARY, Chicago, Ill. Filed Nov. 8, 1916. Serial No. 130,117. 13 Claims. (Cl. 25—84.)

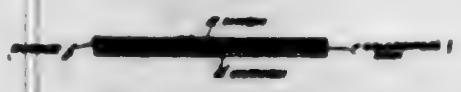


1. In a press, the combination of coacting die members, fluid pressure mechanism for operating one of the members to and from the other, a product ejector and a trip device for the ejector supported by and operatively connected to said mechanism, and manually operable to retract the ejector at all times while the members are separated.

11. In a press, the combination of a stationary bed, brackets secured on the bed, a removable die carrying member mounted on the brackets, a movable coacting die-carrying member, fluid pressure mechanism for operating said movable member, a product ejector slidably mounted in the stationary member, a transverse bar disposed between said brackets and to which the ejector is secured, end-bars to which said cross-bar is removably secured, a cross-head below the bed, rods slidably mounted in the bed and secured to said end bars and to the cross head, and means

operated by said fluid-pressure mechanism for operating the ejector comprising a trip lever operable to release the cross-head for retraction of the ejector while the fluid pressure mechanism is idle.

1,301,955. FABRIC FOR GAS-BAGS OF AIRCRAFT AND METHOD OF MANUFACTURING THE SAME. JAMES MCKECHNIE, Barrow-in-Furness, England, assignor to Vickers Limited, Westminster, England. Filed July 6, 1917. Serial No. 179,041. 6 Claims. (Cl. 154—40.)



1. The herein described method of manufacturing fabric for the gasbags of airships or balloons which consists in proofing a fabric to constitute a basic material, applying a single layer of goldbeater's skin as a lining for the basic material, and varnishing the exposed side of the said layer.

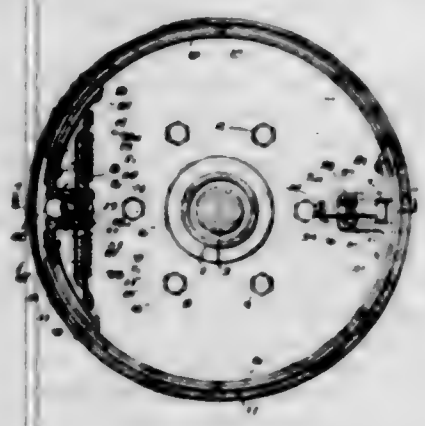
2. The herein described method of manufacturing fabric for the gasbags of airships or balloons which consists in coating a linen fabric with rubber, applying a layer of goldbeater's skin to the said fabric, drying the surface of the skin and varnishing said surface with linseed oil.

3. The herein described method of manufacturing fabric for the gasbags of airships or balloons which consists in coating a single ply of linen fabric with a layer of unvulcanized rubber, drying said rubber, coating it with French chalk, applying to said fabric goldbeater's skin previously treated with naphtha and coating with a thin film of varnish.

5. A fabric for the gasbags of airships or balloons comprising a basic material of linen, a single layer of goldbeater's skin forming a lining to said material and a film of varnish applied to the exposed side of the said lining.

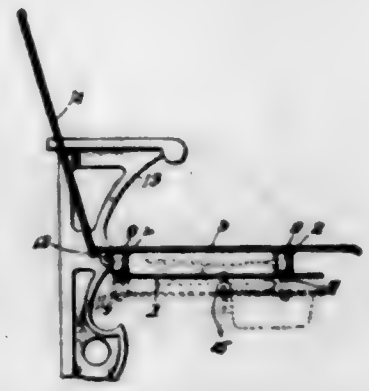
6. A fabric for the gasbags of airships or balloons comprising a basic material of linen, goldbeater's skin forming a lining and a film of varnish applied to said lining.

1,301,956. AUTOMOBILE WHEEL-BRAKE. ARTHUR C. MASON, Flint, Mich, assignor, by mesne assignments, to Chevrolet Motor Company, a Corporation of Delaware. Filed Sept. 9, 1915. Serial No. 49,664. 2 Claims. (Cl. 74—13.)



1. In an automobile brake, a split spring braking element, a cam, one arm of which is provided with a slot, means secured to the free ends of the split spring braking element for engagement with the cam, a spring element, one portion of which passes through the slot in the cam for holding the free ends of the split braking element in engagement with the cam, a U-shaped element arranged opposite to the split in the spring braking element, means engaging with the inner surface of the U-shaped element for supporting the spring braking element, and means for moving the spring braking element radially.

1,301,957. GARMENT-RACK. FRED W. MAYER, Chicago, Ill. Filed Oct. 4, 1917. Serial No. 194,698. 8 Claims. (Cl. 155—26.)



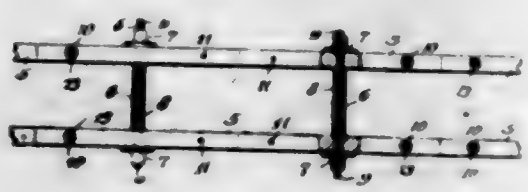
1. In a device of the class described, the combination of a support, a wire frame, the sides and back of which are substantially in the form of a U and the front of which is doubled in upon itself, also substantially in the form of a U with the base thereof located substantially centrally with respect to the sides and back, and extensible members connecting said frame to said support.

1,301,958. NUT AND BOLT LOCK. CLARENCE M. MENDENHALL, New Rochelle, N. Y. Filed Oct. 20, 1916. Serial No. 126,654. 1 Claim. (Cl. 151—28.)



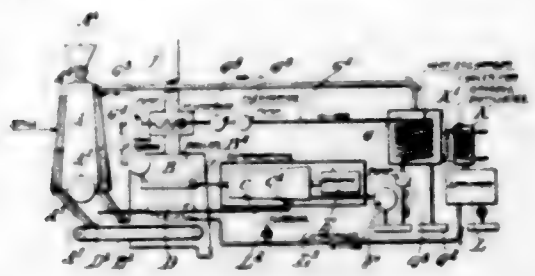
A device adapted for application to a structure comprising parts threaded together, to keep said parts screwed tight, consisting of a coiled spring having provisions at its ends for engaging and thereby tending to relatively rotate parts of said structure relatively rotatable about an axis parallel to the axis about which the spring is coiled, and in combination with said spring a bond for holding said spring under tension during its application of said structure and readily releasable after such application.

1,301,959. MOLD OR FORM FOR CONCRETE STRUCTURES. ERNEST MERRICK, Elizabeth, N. J., assignor to Agnes R. Merrick, Elizabeth, N. J., trading under the name of Merrick Fireproof Construction Co. Filed Apr. 9, 1918. Serial No. 227,415. 8 Claims. (Cl. 25—131.)



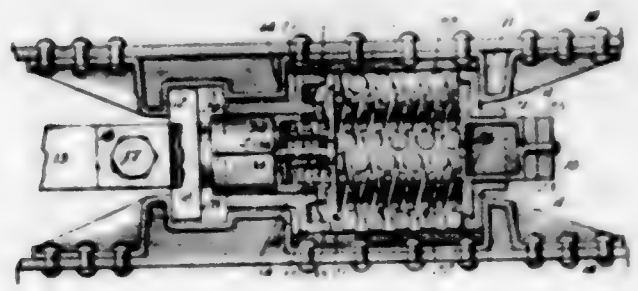
6. A mold for use in forming a wall from plastic material, the same comprising a plurality of sections arranged end to end and one upon another, and each of which sections is made up of two side members spaced apart from and rigidly connected with one another by transversely extending connecting members, the ends of which are connected with said side members, and dowel pins located at and projecting from the edges of said side members and adapted to enter holes provided in the abutting edges of other side members.

1,301,960. USE OF SOLID FUEL FOR POWER PRODUCTION. ARTHUR CUMMING MICHIE, Newcastle-Upon-Tyne, and EDMUND GEORGE WEEKS, Northumberland, England, assignors to Charles Hesterman Merz and William McLellan, Westminster, London, England. Filed Mar. 2, 1918. Serial No. 219,998. 7 Claims. (Cl. 60—67.)



1. The method of generating power from coal, comprising the steps of feeding coal to a retort, then passing at least some of the coke from the retort to a steam generating plant in which it is consumed to generate steam, passing the steam from the steam generator to a motor, delivering the bleed steam from the motor to the retort, returning the exhaust steam from the motor through a heat exchanger to the steam generator, and also passing the gases from the retort through the heat exchanger to partially condense said gases, substantially as described.

1,301,961. RAILWAY DRAFT-RIGGING. WILLIAM H. MINER, Chazy, N. Y. Filed Mar. 4, 1918. Serial No. 220,224. 1 Claim. (Cl. 213—64.)



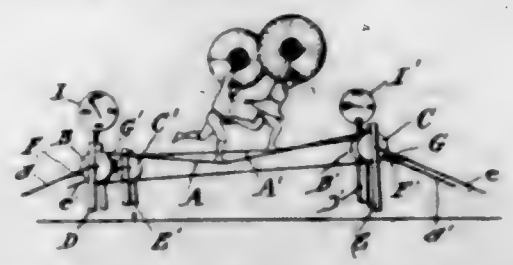
In a railway draft rigging, the combination with draft sills, of stop castings secured to the inner faces thereof, each of said castings having a rear main stop, a front main stop and an auxiliary front stop, a friction shell having shoulders at its rear end normally engaging said rear main stops and provided also with shoulders near its front end normally spaced a predetermined distance from said auxiliary front stops, friction elements cooperable with said friction shell, a follower interposed between said elements and the front main stops, spring means within said shell coacting with said friction elements, a draw bar, yoke-acting means, and a rear spring follower movable relatively to the friction shell for a limited distance under draft.

1,301,962. DUMPING-CARRIAGE. FERDINAND NORTHLICH, Ute, Iowa. Filed Oct. 25, 1918. Serial No. 259,730. 7 Claims. (Cl. 21—20.)



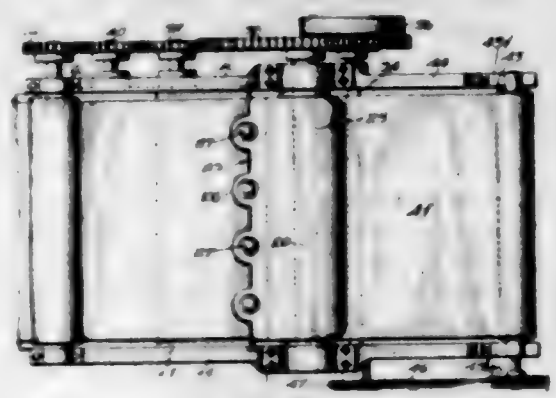
1. A dumping carriage, comprising a box having a bottom formed with leaves hinged at their sides and opening from the center, a locking-bar mounted for reciprocation in the center of said bottom and adapted to be spring-drawn in one direction and automatically stop-operated in the opposite direction through forward movement of said carriage, arms on said leaves, plates on said locking-bar adapted to engage said arms at times, trucks supporting said box and means for drawing said trucks.

1,301,963. THEATRICAL APPLIANCE. MYRON ORTON, Vineland, N. J. Filed May 8, 1917. Serial No. 167,169. 3 Claims. (Cl. 46—70.)



1. A theatrical device for tight rope racing embodying a pair of sheaves spaced apart and one of which is positioned at a higher elevation than the other, an endless flexible tight rope encircling the sheaves and on which tight rope a performer is adapted to run, for the purpose of imparting longitudinal movement to the tight rope, and means associated with one of the sheaves for indicating the distance traveled by the runner.

1,301,964. SHINGLE-STRIP MACHINE. FREDERICK C. OVERBURY, Hillsdale, N. J., assignor, by mesne assignments, to The Flintkote Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1915. Serial No. 49,248. 5 Claims. (Cl. 164—68.)

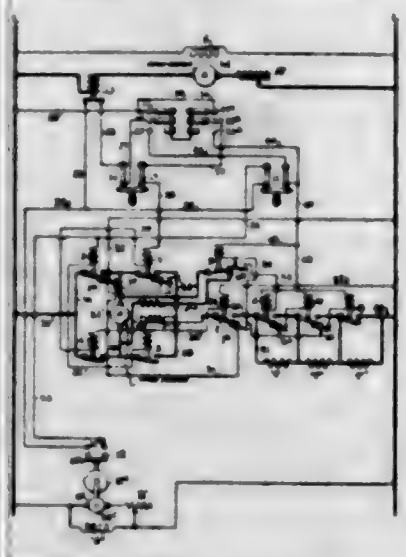


1. In a machine for cutting non-metallic flexible sheet roofing into shingle strips, the combination with a frame and feeding rolls for the sheet, of a stationary shear block arranged transversely of the direction of feed of the sheet, and having a cutting edge comprising a plurality of alternating straight portions and recessed portions, and a rotary cutter having a continuous straight cutting blade to coöperate with the straight edge portions of the shear block to sever a strip transversely from the sheet, and having a plurality of spaced supplemental blades complemental to the recessed edge portions of the shear block, to cut recesses in the end of the sheet.

1,301,965. MOLD. CHARLES PACK, Brooklyn, N. Y., assignor to Doehler Die Casting Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 5, 1917. Serial No. 140,711. 5 Claims. (Cl. 22—188.)

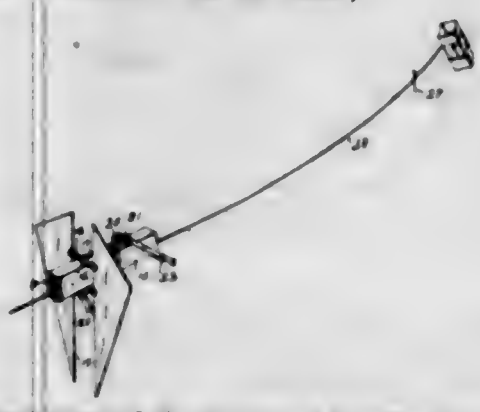
1. A mold adapted for the production of intricate finished metal castings formed of plaster of Paris and a granular, porous, non-fibrous, absorptive material having an affinity for plaster of Paris, the material of said mold being devoid of free moisture and moisture normally combined with the solids thereof, the composition of the mold being a substantially homogeneous mass of substantially uniform density.

1,301,966. CONTROLLER FOR MOTOR-DRIVEN MACHINES. CHARLES W. PARKHURST, Johnstown, and FRANCIS J. BURD, Wilkinsburg, Pa., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 8, 1917. Serial No. 147,341. 12 Claims. (Cl. 172—239.)



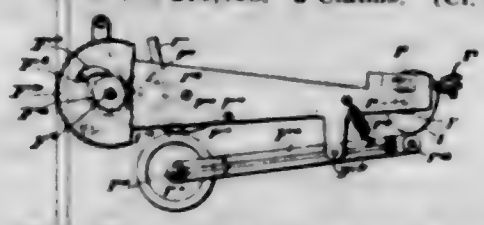
1. The combination with a work performing motor, of means for varying the relation of said motor and its work and automatic control means for the former means to restrict the same to action intermittently in a predetermined manner subject to variation by the load conditions of said motor.

1,301,967. AERIAL PHOTOGRAPHY. SAMUEL PARKS, Las Cruces, N. Mex. Filed Oct. 19, 1918. Serial No. 258,835. 9 Claims. (Cl. 95—12.5.)



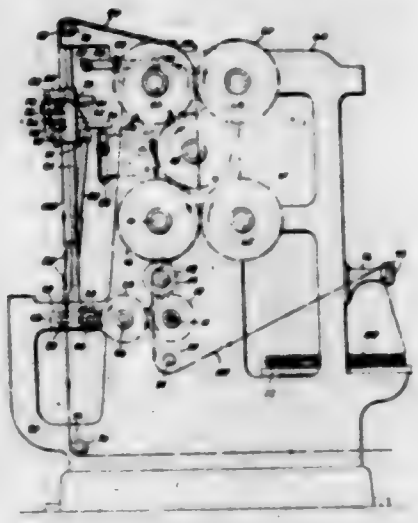
1. An apparatus of the character described including a supporting line, means for supporting the line in the air at an inclination, a traveling carrier movable along the line, a tripping device on the carrier, an instrument supported by the carrier and having actuating means operatively connected to said tripping device, propelling means for causing the movement of the carrier up the line by wind pressure, and means for actuating the tripping device after the carrier has reached a predetermined point to thereby actuate the instrument and simultaneously render said propelling means inoperative and permit the descent of the carrier by gravity.

1,301,968. SPRING-MOTOR CONTROL. NIELS PEDERSEN, Philadelphia, Pa., assignor to Arthur-Brock, Jr., Philadelphia, Pa. Original application filed Oct. 10, 1916, Serial No. 124,770. Divided and this application filed Jan. 15, 1918. Serial No. 211,902. Renewed Jan. 7, 1919. Serial No. 270,098. 6 Claims. (Cl. 185—46.)



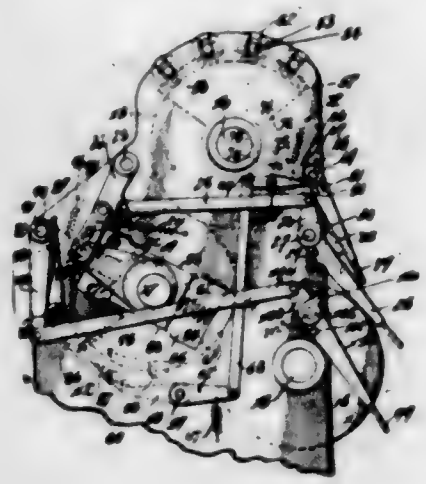
1. In combination a spring motor provided with an escapement release and a controlling pendulum therefor comprising two oscillating parts pivotally connected to one another and oscillating about separate axes, and means for varying the distance between said axes.

1,301,969. WEB-PRINTING DEVICE. ROBERT H. PLASS, Upper Montclair, N. J., assignor to The Riegel Sack Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 2, 1917. Serial No. 194,301. 8 Claims. (Cl. 101—181.)



1. In a web printing machine, in combination, a revoluble web printing means, means for revolving the printing means at a uniform speed during printing and non-printing periods and means whereby a continuously moving web will be gripped and an increased amount thereof withdrawn between the periods of printing.

1,301,970. PRINTING-PRESS. CARL G. PRITCHARD, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Feb. 12, 1916. Serial No. 77,818. 94 Claims. (Cl. 101—218.)

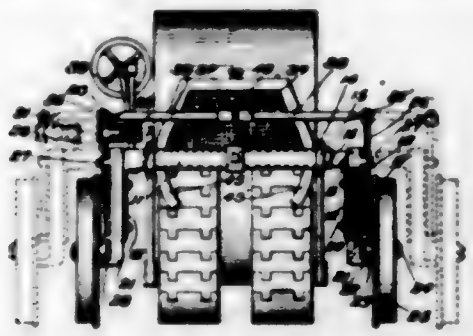


1. In a printing-press having a form-cylinder, a transfer-cylinder and an impression-cylinder, inking mechanism for the form-cylinder, means for separating the cylinders to throw off the impression, and means for throwing off the inking mechanism normally held in inoperative position and placed in operative position by the separation of said cylinders.

1,301,971. ADJUSTABLE AXLE FOR TRACTORS. ANDREW H. REED, Kansas City, Mo. Filed Mar. 15, 1918. Serial No. 222,697. 3 Claims. (Cl. 21—5.)

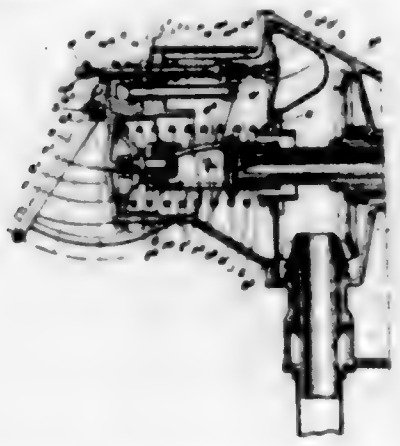
1. In a tractor, a frame having a transverse end member, an axle comprising a bar centrally pivoted to and of substantially the same length as the frame member, and having a longitudinally extending rib thereon, inner and outer laterally adjustable wheel carrying sections

mounted on said bar; the inner section being adapted to slidably receive said bar rib and the outer section being telescopically mounted on the inner section, and clamp



devices inclosing both of said sections and said bar at its opposite ends to lock the said sections at any laterally adjusted position.

1,301,972. APPARATUS FOR REGULATING THE SPEED AND POWER OF INTERNAL-COMBUSTION ENGINES. HARRY RALPH RICARDO, London, England. Filed Feb. 5, 1919. Serial No. 275,262. 10 Claims. (Cl. 123—97.)



1. In an internal combustion engine the combination of an inlet valve, mechanism for operating this valve which is adjustable so as to vary the time of closing the valve, mechanism actuated by liquid under pressure and operative to adjust valve operating mechanism, a valve controlling the flow of liquid to and from this mechanism, and means for actuating this controlling valve in accordance with variations in the atmospheric pressure as set forth.

1,301,973. BED. ALFONSO A. RICHARDSON, New York, N. Y. Continuation of application Serial No. 13,818, filed Mar. 12, 1915. This application filed Aug. 28, 1916. Serial No. 117,215. 9 Claims. (Cl. 5—4.)



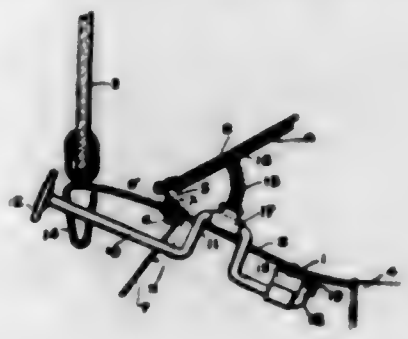
9. In a bed, the combination with rigid supporting means, of a bed frame, comprising relatively movable sections, arranged within said means and loosely suspended therefrom by said sections, said frame being expansible and contractible, and provided with a bedding supporting medium connected with portions of said frame and adapted to automatically expand said frame and stretch said medium when a suitable weight is imposed on said medium.

1,301,974. RUBBER HEEL. EDWIN L. ROBERTSON, New York, N. Y. Filed June 20, 1918. Serial No. 241,050. 8 Claims. (Cl. 36—32.)



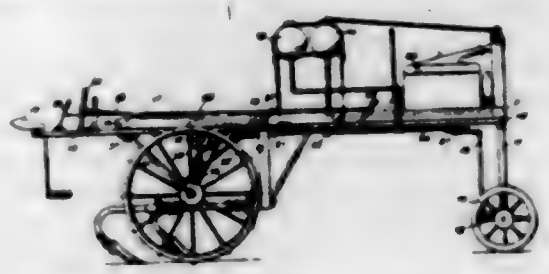
8. In an elastic boot and shoe heel, a cup, and a sectional heel therein, each of the sections being compressible and meeting in a surface which is approximately normal to the tread surface of the heel.

1,301,975. VENTILATING APPARATUS. RALPH C. ROOT, Indianapolis, Ind. Filed Aug. 15, 1917. Serial No. 186,284. 11 Claims. (Cl. 98—22.)



1. The combination with a compartment having an opening in its wall, of a hinged shutter therefor, an operating mechanism for said cover having a member movable toward and away from said shutter and an extensible spring connection between said shutter and said member arranged to be extended beyond its normal length in the closed position of said shutter.

1,301,976. FARM-TRACTOR. JOSEPH G. ROUNTREE, Beeville, Tex. Filed May 8, 1918. Serial No. 233,285. 3 Claims. (Cl. 180—41.)



1. A tractor of the character described comprising a main frame, steering wheels supporting the forward end of the frame, an engine mounted upon the forward end of the frame, a crank shaft supporting the rear end of the frame and having traction wheels thereon, internal gears connected to said traction wheels, a transversely extending driving shaft operatively connected to the engine, means for supporting the transverse driving shaft from the cranked axle, and means for raising and lowering the cranked axle relative to the frame.

1,301,977. SEWAGE-DISPOSAL SYSTEM. CORNELIUS WELKER RUSSELL, Burlington, Iowa. Filed Sept. 9, 1918. Serial No. 253,221. 3 Claims. (Cl. 4—20.)

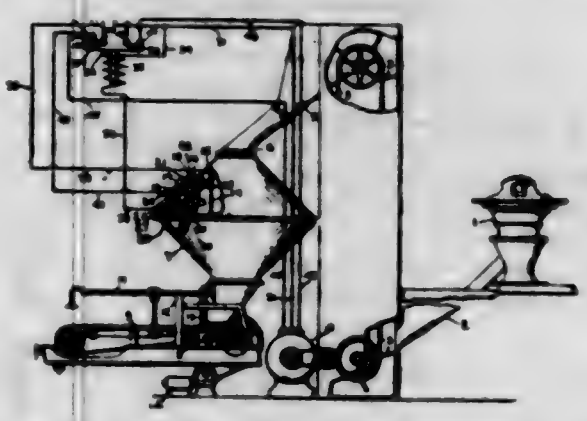
1. A sewage disposal system, including a vertically disposed cylindrical member, a cover for said member, an overflow pipe within said member and having an opening

within the member and near the bottom thereof, the said pipe extending from the member between the bottom and



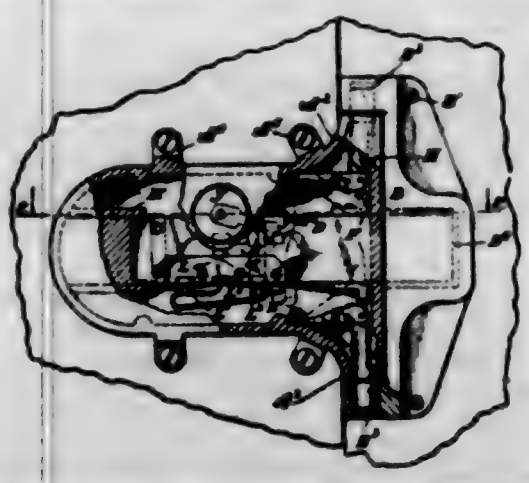
top thereof, and a vent pipe extending from the overflow pipe and communicating with the upper portion of the cylindrical member.

1,301,978. SUPPLY MECHANISM. JOHN C. SCHAFFER, Tiffin, Ohio. Filed Jan. 23, 1917. Serial No. 144,096. 2 Claims. (Cl. 83—44.)



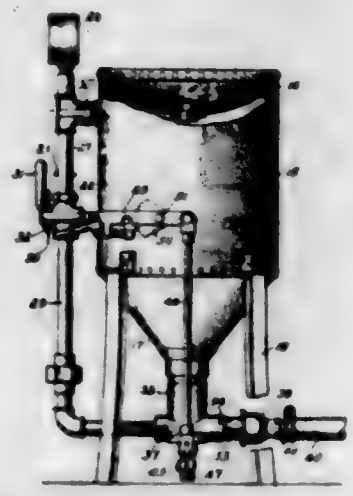
1. A feeder consisting of a uniform delivery conveyer, supply means therefor including a supply conveyer of greater capacity than the conveyer, a material reserve reservoir with a hopper between said supply and delivery conveyers, said reservoir having therein a movable device adapted to move away from material accumulating in said reservoir, and a controlling device operable by the movement of said movable device for controlling the operation of said supply conveyer.

1,301,979. LOCK. LEOPOLD SCHONWALD, New York, N. Y. Filed Oct. 26, 1917. Serial No. 198,576. 7 Claims. (Cl. 70—74.)



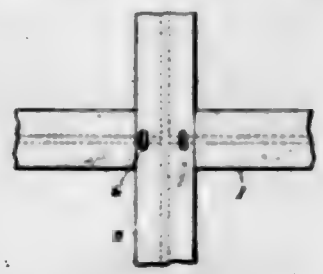
1. The combination of a bolt, a part connected with said bolt and movable angularly with respect thereto, means for moving the said bolt, a fixed part mounted adjacent thereto and means for causing the engagement of said movable part and the said fixed part at different points in the movement of the bolt, said movable part having recesses arranged to be engaged successively and intermittently by the bolt-moving means, and said fixed part having recesses which are engaged by the said movable part when the bolt-moving means are out of operating engagement with said movable part.

1,301,980. SAND-BLAST APPARATUS. PAUL SCHROEDER, Chicago, Ill., assignor to Mott Sand Blast Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 17, 1913. Serial No. 742,557. 7 Claims. (Cl. 51—12.)



1. In a device of the class described, a sand chamber with a hopper bottom, a plug connected to said bottom having a vertical sand outlet conduit therethrough, a valve at the top end of said conduit, said plug having another vertical passage therethrough, a valve stem extending through said second named passage, said stem being bent over at its upper end and carrying said valve, and means to engage said stem at its lower end and thereby actuate said valve.

1,301,981. METAL SASH OR FRAME JOINT. HERBERT L. SMITH, Westerly, R. I., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1914. Serial No. 861,163. 1 Claim. (Cl. 189—36.)

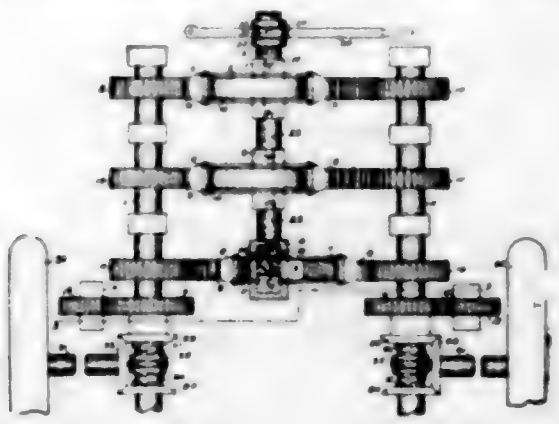


A metal sash or frame comprising T-shaped intersecting members, the flanges of one member being removed at the intersection to expose the web and form a repository for the flanges of the other member and projections on the second-named member intersecting the webs of the first-named member and welded thereto.

1,301,982. POWER-TRANSMITTING MECHANISM. ROBERT W. J. SMITH, Houston, Tex. Filed Apr. 6, 1918. Serial No. 227,089. 5 Claims. (Cl. 74—54.)

5. The combination with a driving shaft, of a driven shaft, a plurality of cams mounted on the driving shaft, means for varying the eccentricity of said cams, a yoke reciprocated by the respective cams, roller clutches mounted on the driven member and actuated by the respective yokes to successively rotate said driven shaft, when the

yokes are actuated in one direction, and a train of gears actuated successively by the respective yokes and operatively connected with said driven shaft, to continue the rotation of said shaft when the yokes are actuated in the opposite direction.

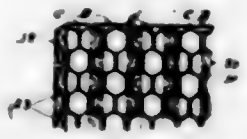


1,301,983. PRESSURE-GAGE. IRA H. SPENCER, West Hartford, Conn., assignor, by mesne assignments, to The Spencer Turbine Company, a Corporation of Connecticut. Filed May 5, 1916. Serial No. 95,708. 16 Claims. (Cl. 73—31.)



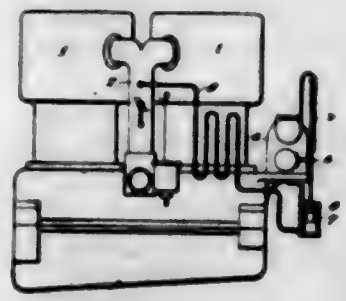
2. A gage including a body having a chamber therein, a U shaped indicating tube to contain a measuring medium and having one end communicating with the interior of the body and the other end communicating with the atmosphere, and self actuating means for normally closing one end of said tube to shut off communication with the chamber in said body.

1,301,984. RADIATOR FOR AUTOMOBILES, MOTOR-TRUCKS, AND SIMILAR VEHICLES. CHARLES F. SPERY and PHILMORE F. SPERY, Chicago, Ill. Filed July 28, 1917. Serial No. 183,306. 2 Claims. (Cl. 257—130.)



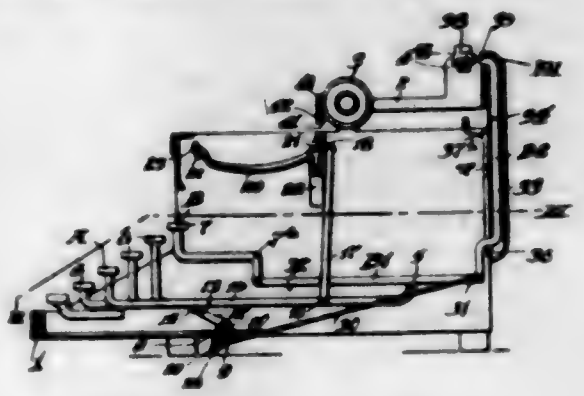
1. In a radiator of the nature described, a core, said core comprising a multiplicity of alike units, each unit consisting of two plates in parallel spaced relationship, said plates being connected to form a rectangular structure, there being at the marginal edges of said plates spaced-apart, semi-hexagonal projections extending in opposite directions, the space between the two plates affording an air passage, there being adjacent said semi-hexagonal projections short, arcuate, projections, there being between the said arcuate projections semi-hexagonal projections connecting the marginal projections, said connecting projections being approximately one half the height of the marginal projections, two of said units when placed side by side with the projections on one plate engaging the interstices between the projections of the opposing plate forming between them a vertical water passage of a length equal to the distance between the projections on the margins of said plates, and of a width substantially equal to the height of said marginal projections, said water passages being true, vertical, through-passages having alternately at one, and then at the other, side enlargements or chambers, there being in said air passage a filler strip, said filler strip being semi-hexagonally corrugated with the apexes of the corrugations contacting with the apexes of the corrugations of an adjacent core-unit, to complete the hexagonal, cellular, formation of the core.

1,301,985. IGNITION OF INTERNAL-COMBUSTION ENGINES. JOHN G. P. THOMAS, Kensington, London, England, assignor to Thomas Foreign Patents Limited, Kensington, London, England, a Corporation of Great Britain. Filed Dec. 22, 1915. Serial No. 68,180. 18 Claims. (Cl. 123—117.)



1. In an internal combustion or like engine the combination of an ignition device controlling mechanism therefor, a control cylinder, a movable member in said cylinder in mechanical connection with said controlling mechanism and a pipe joining said cylinder to the intake of the engine and of substantial negligible volume relatively to that of said cylinder.

1,301,986. CIPHER-PRINTING MECHANISM. FERDINAND J. TILLMAN, St. Louis, Mo. Filed Aug. 13, 1917. Serial No. 185,813. 9 Claims. (Cl. 197—113.)

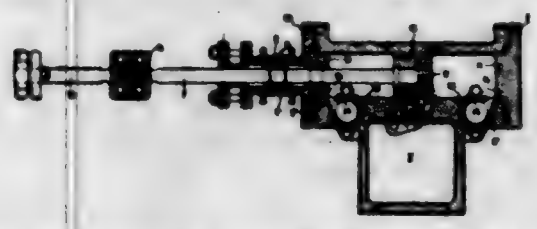


1. In combination, an operating key, a typing bar cooperable with said key, a printing device carried by said bar for printing a plurality of characters during one operation of said key, a tabulating stop pawl coöperable with said key, and a movable member for causing said printing device to omit the printing of one of its characters.

1,301,987. GAS-COMPRESSOR. CARL W. VOLLMANN, Montreal, Quebec, Canada. Filed Feb. 2, 1918. Serial No. 215,222. 1 Claim. (Cl. 230—34.)

A gas compressor including a cylinder, a piston within the cylinder, inlet and discharge valves located at each end of the cylinder, the latter having a port at each end thereof effecting communication between the interior of the cylinder and the said inlet and discharge valves said cylinder having a radially extending groove in its end

constituting an extension of said port and a second groove constituting an inward longitudinal extension of said port the port with extensions constituting a constantly open



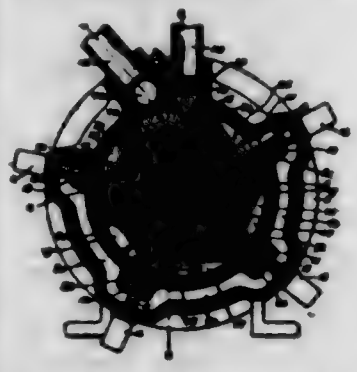
by-pass for effecting communication between the high pressure and low pressure sides of the piston when the latter is at the ends of the cylinder.

1,301,988. ANTISKID DEVICE FOR VEHICLE-WHEELS. FLORIAN W. WEBER, Chicago, Ill. Filed Oct. 23, 1916, Serial No. 127,260. Renewed Jan. 18, 1919. Serial No. 271,887. 5 Claims. (Cl. 24—115.)



5. In a device of the class described, the combination of two elongated slender elements; means for connecting said elements together comprising a pair of connecting members arranged one on each of said elements, each of said connecting members having one end wrapped around the corresponding element; and a tongue on one of said connecting members having a reduced end engaging with a slot in the other of said connecting members, said slotted connecting member being offset to accommodate one side of said tongue and to form a shoulder adapted to engage with the last mentioned end of said member to hold the same in operative position and for engagement with shoulders on said tongue to prevent relative lateral tilting, substantially as described.

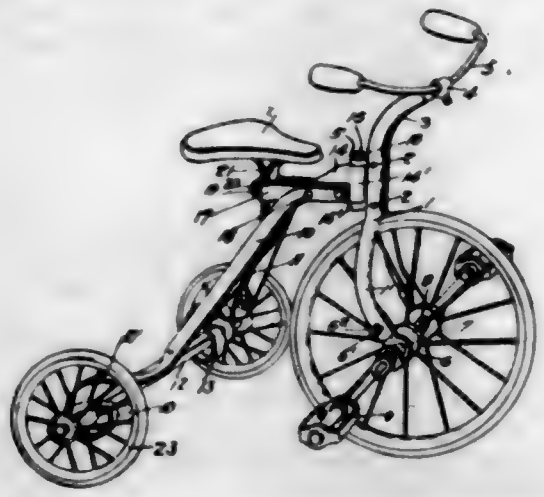
1,301,989. ROTARY STEAM-ENGINE. HERMAN A. WEIDENBACH, Buffalo, N. Y. Filed Feb. 11, 1918. Serial No. 216,516. 6 Claims. (Cl. 121—68.)



1. A rotary steam engine comprising a casing and a rotor, the casing being formed with a continuous expansion chamber provided with a plurality of steam passages communicating with the interior of the casing, an expansion chamber inlet port connecting one end of the chamber with the interior of the casing, the rotor being provided in its periphery with a plurality of piston chambers, arranged to communicate with the chamber inlet port and said steam passages, and a plurality of sliding valves carried by the casing and engageable with the surfaces of the piston chambers.

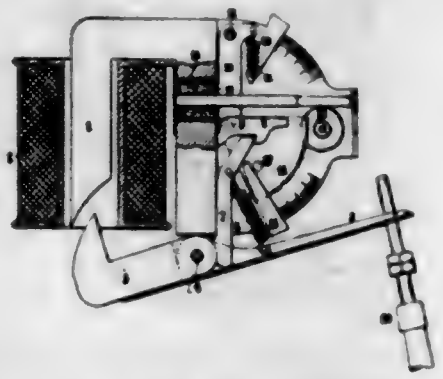
1,301,990. VELOCIPEDE. CHARLES HAROLD WHITE and GEORGE VEZINA, Toronto, Ontario, Canada, assignors to The Gendron Manufacturing Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario. Filed Aug. 24, 1918. Serial No. 251,289. 4 Claims. (Cl. 206—118.)

1. In a velocipede, the combination with a front fork formed of two members fastened together intermediate of their length, a bracket secured between the members of the fork where they come together, a backbone having forwardly extending upper ends, a second bracket, said back bone ends extending on each side of said second bracket and being supported thereby, reinforcing bars for the back



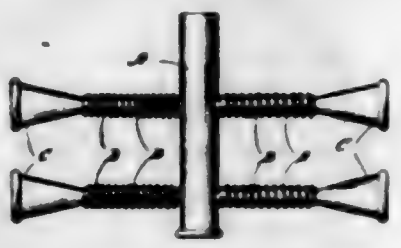
bone and a bolt connecting the two brackets and means for connecting the lower members of the front fork and the back bone to the front and rear axles, respectively.

1,301,991. MAXIMUM-TIME RELAY. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Filed Nov. 17, 1915. Serial No. 62,000. 10 Claims. (Cl. 175—270.)



1. In a maximum time limit relay circuit breaker, the combination of an electromagnet, a movable armature, a counter spring normally acting on the armature, connective mechanism between the armature and the counter spring comprising a pair of trip elements, a time mechanism, means for driving the time mechanism, and a movable member mounted on an element of the connective mechanism and which a small movement of the armature moves into driving contact with the time mechanism, and after a predetermined time releases the trip elements and thereby releases the armature from the influence of the counter spring.

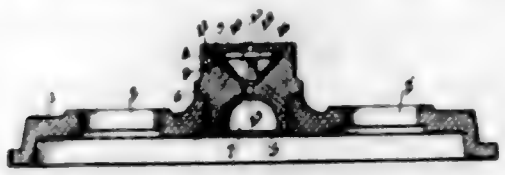
1,301,992. ATTACHMENT FOR MILKING APPARATUS. CARL OSCAR ANDERSON, Springfield, Ill. Filed June 5, 1918. Serial No. 238,876. 3 Claims. (Cl. 31—73.)



1. An attachment for milking apparatus comprising a connector pipe having nipples projecting therefrom in opposite directions, and resilient tubes extending from said nipples each having a teat cup on its free end; said tubes being adapted to project normally in straight lines and to be bent toward each other and applied to the teats and

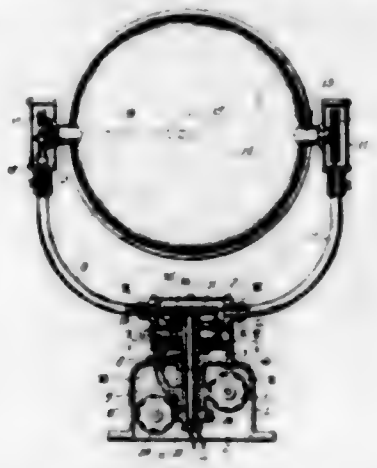
when so applied to exert a downward and outward pull acting uniformly on all of the teats and to spring back to normal position when released.

1,301,993. BATTERY-VENT. CHESTER M. ANGELL, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1918. Serial No. 252,932. 4 Claims. (Cl. 137—53.)



1. Vent mechanism comprising a funnel-shaped element, a cover plate therefor having a vent opening and a conical sealing member in the funnel-shaped element adapted to have sliding motion therein, said conical sealing member and funnel-shaped element being constructed to establish a gas passage therebetween.

1,301,994. SIGNAL-LAMP. CHARLES E. ARCHER and EDWARD C. HUMPHREYS, Detroit, Mich. Filed June 6, 1918. Serial No. 238,469. 1 Claim. (Cl. 242—61.)



A signal lamp comprising a pedestal, an adjustable yoke rotatable on said pedestal, a lamp trunnioned in said yoke, vertically disposed concentric shafts in said pedestal adapted for independently imparting movement to said yoke and said lamp, superposed gears on the lower ends of said shafts, horizontal worms in said pedestal at opposite sides of said shafts and meshing with said gears, a control board at a point remote from said pedestal, flexible shafts extending from said control board into said pedestal and adapted for imparting movement to said worms, and means on said control board for holding said shafts in adjusted positions.

1,301,995. ELECTRIC WATER-HEATER. GUY ARTHUR, Ritzville, Wash. Filed Nov. 4, 1916. Serial No. 129,485. 14 Claims. (Cl. 219—63.)



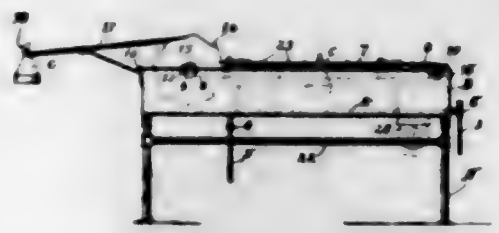
1. A heater for a cylindrical water tank comprising an electric heater of sufficient length to engage the periphery of the tank throughout a portion of the circumference thereof, a band embracing said tank and heater, said heater being slidably supported on the band to permit the heater to be shifted circumferentially about the tank independently of said band.

1,301,996. SQUARE FOR TOOLS. ROBERT H. BARR, Kelso, Wash. Filed June 22, 1917. Serial No. 176,408. 2 Claims. (Cl. 33—117.)



1. In a square, a blade having a graduated straight edge, a handle having an edge portion inclined at an obtuse angle to the straight edge, said handle being provided with a recess in which one end of said blade is secured, said handle having a pocket adjoining the recess, a second blade having graduations and having one end pivoted in said pocket, whereby the blade may enter the pocket or may be thrown open at right angles to the straight edge, thereby constituting a square, a pin at one end of the pocket to be engaged by the edge of the second blade for limiting the second blade at right angles to the straight edge, and means carried by the handle and provided with a device extending through the wall of the pocket and engaging the second blade to hold the same in said pocket.

1,301,997. APPARATUS FOR BOILING EGGS. VALENTINE G. BECKER, St. Paul, Minn. Filed July 2, 1917. Serial No. 178,318. 3 Claims. (Cl. 53—1.)



1. In apparatus of the class described, the combination with a comparatively long tank, of a transverse horizontal shaft journaled on one end of the tank and at the upper edge thereof, means for actuating said shaft, a second shaft parallel to said first-named shaft journaled on the opposite end of the tank, a sprocket wheel rigidly mounted on each of said shafts, an endless conveyer chain meshing with and operatively connecting said sprockets to actuate said second shaft, notched disks rigidly secured on said second shaft and arranged one on either side of the chain, the openings of said notches being directed upwardly to form shoulders, an outwardly and downwardly inclined track on the tank terminating at its high end between said disks and below the upper peripheral edge thereof, and egg holders removably carried by said chain and formed to straddle said chain and disks and engage said shoulders to be lifted thereby and deposited on said inclined track when said first-named shaft is actuated.

1,301,998. AUTOMOBILE-TIRE. JOHN F. BEIDELMAN, East Chicago, Ind. Filed Jan. 23, 1919. Serial No. 272,729. 2 Claims. (Cl. 152—18.)

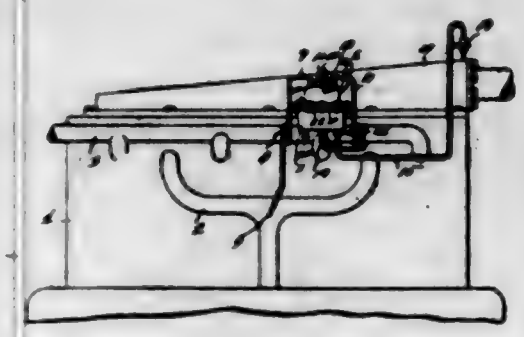
1. In a device of the class described, a casing; a helical spring therein; a protector coöperating with the inner

portions of the convolutions of the spring and comprising plates having their ends overlapped circumferentially



of the casing; means for connecting the plates slidably; and a flexible band surrounding the plates.

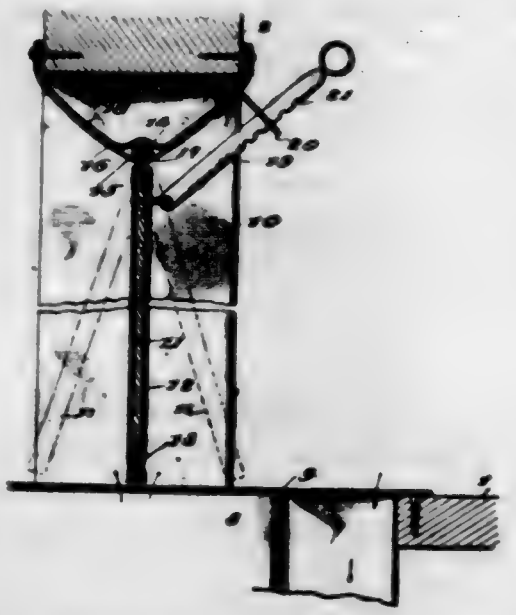
1,301,999. CHARGE-PREHEATER. THOMAS R. BILLINGS, Bieber, Calif. Filed June 22, 1917. Serial No. 176,353. 2 Claims. (Cl. 123—25.)



2. In a charge preheater for internal combustion engines the combination with intake and exhaust manifolds, of a boiler on the exhaust manifold having water supply connections with the water jacket of the engine and provided with automatically operated means to control the water into the boiler; a steam chest on the boiler, a plate interposed between the steam chest and the boiler and provided with means communicatively connecting the interiors of the boiler and the chest, a tube having one end connected to the bottom of the boiler, its other end passing through the steam chest and connected to the top of the boiler communicatively therewith, and its intermediate portion coiled about the exhaust manifold, the portion of said tube between its coils and the bottom of the boiler being below the boiler and adapted to trap the cooler water from the boiler filling the coils deriving heat from the exhaust manifold, whereby it may rise in the tube above the coils and reënter the boiler through its portion passing through the steam chest, maintaining a circulation and unifying the temperature of the water and aiding in the generation of steam in the boiler, and a pipe, one end thereof connected to the top of the steam chest, its other end to the intake manifold, and its intermediate portion coiled about the exhaust manifold.

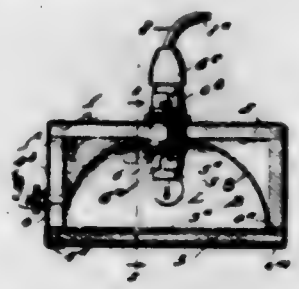
1,302,000. HEAT-DISTRIBUTING DEVICE. HENRY BOESSER, Kramer, N. D. Filed Mar. 5, 1918. Serial No. 220,613. 4 Claims. (Cl. 98—54.)

1. The combination with a floor, and a partition erected on the floor and having an opening through its lower portion immediately at the floor, said opening being uncovered at both sides, of a register fitted in the floor and extending through said opening in the partition, a heat distributer pivotally suspended at its upper end upon the partition and within the opening therein and depend-



ing to but terminating short of the register, and means for holding said distributer in a set position.

1,302,001. VISUAL SIGNAL FOR AUTOMOBILES. ELMER A. BOGERT, Montclair, N. J. Filed Dec. 31, 1918. Serial No. 269,064. 1 Claim. (Cl. 40—130.)



A visual signal box for automobiles comprising a box having its back, top, bottom and side pieces made of wood, and intermediate wooden partitions dividing the box into compartments, each compartment being open at front; a metal casing inclosing the box but open at front to form a metal frame around the front edges of the wooden box, said casing having an opening therein at one side of the box, a glass plate inserted through the opening into the frame and closing the front of the compartments, a distinctive signaling means for each compartment; illuminating means for the compartments; a retainer closing the opening in the side of the box through which the glass plate is inserted; and means for securing said retainer to the casing.

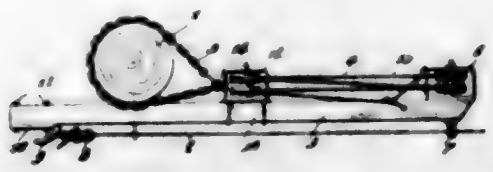
1,302,002. CITRUS-FRUIT-SIZING MACHINE. ORIN N. BOYER, Ontario, Oreg. Filed May 28, 1918. Serial No. 237,104. 6 Claims. (Cl. 130—32.)



1. A sizing machine comprising a frame, rotatable members mounted in said frame, endless members carried by the rotatable members and actuated thereby, a series

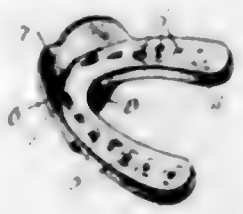
of rollers carried by said endless members in spaced relation to each other, pivoted levers carried by said endless members, said levers being provided with slots, a series of rollers having axles pivoted in the slots of said levers, tracks for said rollers and means engageable by the levers during the travel of the endless members for moving the slots along the last named roller axles, whereby said rollers will be moved away from the first named rollers.

1,302,003. WIRE-STRETCHER. GILBERT BRANAN, Gravity, Iowa. Filed Apr. 7, 1917. Serial No. 160,501. 2 Claims. (Cl. 254—63.)



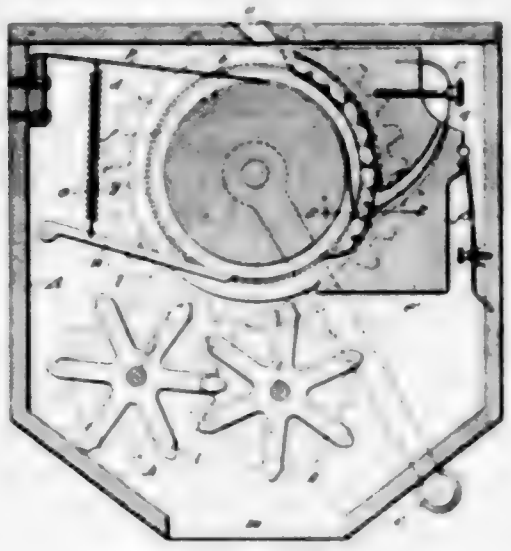
1. A wire stretcher comprising a bar slidably mounted upon a fence post, a member secured to one end of the bar, and extending transversely thereof, said member projecting above and below said bar, gripping means movably attached to said member, and means connected with the other end of the bar for moving the same horizontally with relation to the post.

1,302,004. MOUTH-PROTECTOR. THOMAS W. BROWN, Chicago, Ill. Filed Jan. 16, 1919. Serial No. 271,453. 4 Claims. (Cl. 128—136.)



1. A mouth protector of the character described, comprising a substantially U-shaped, resilient body portion, forming the entire U-bend and adapted to be gripped between the teeth of the user, and having a web portion along its forward edge; substantially as and for the purpose set forth.

1,302,005. GREEN-PEA-HULLING MACHINE. THOMAS PERRY BULLARD, Roseboro, N. C. Continuation in part of application Serial No. 231,314, filed Apr. 29, 1918. This application filed Jan. 9, 1919. Serial No. 270,355. 8 Claims. (Cl. 130—30.)



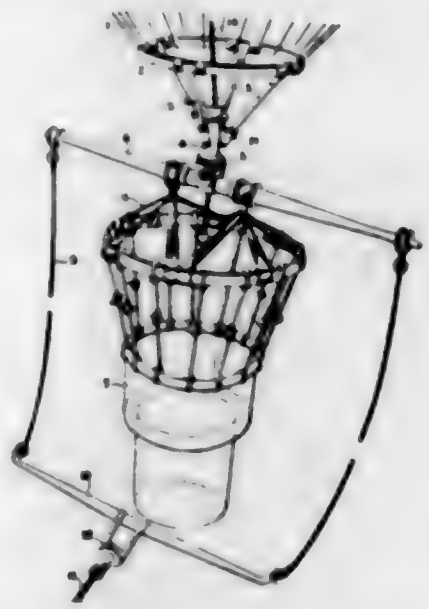
1. In a green-pea huller, a frame, a wheel-member journaled therein, a breast segment member, means for pressing one member normally toward the other, said segment being provided with a groove which together with the periphery of the wheel forms a curved passageway or throat for the peapods, and devices entering said passageway for longitudinally slitting the pods.

1,302,006. LUBRICATING-CUP. THOMAS W. BURR, Stoneham, Mass. Filed July 6, 1918. Serial No. 243,672. 6 Claims. (Cl. 184—70.)



3. A lubricating cup having a partition therein arranged to separate the interior thereof into an upper and a lower chamber, and an outlet pipe for the cup having a liquid-tight connection with said partition, to prevent the passage of liquid thereto directly from said lower chamber, said partition having an opening therethrough, one portion of which is disposed in register with the inlet passage to said outlet pipe and another portion of which communicates with said lower chamber, and a fine wire screen attached to said partition over said opening and arranged to extend downwardly from points at one side of said pipe to points thereover.

1,302,007. BALLOON. EVERARD RICHARD CALTHROP, London, England. Filed Sept. 21, 1915. Serial No. 51,873. 4 Claims. (Cl. 244—4.)

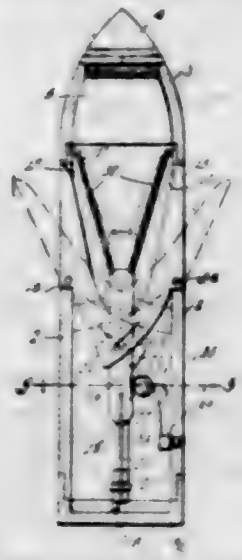


1. The combination with a captive balloon and a car therefor of a universal suspension member between said balloon and car a bar rotatably associated with said universal suspension member arms at each end of said bar, a bar normally positioned beneath said car, a holding cable rotatably secured to said bar means for connecting said last mentioned bar with the arms carried by the first mentioned bar and means for rotating said bar.

1,302,008. SHELL. WILLIAM CAMERON, Oak Grove, Mich. Filed Aug. 16, 1918. Serial No. 250,189. 5 Claims. (Cl. 102—29.)

1. A projectile comprising a case; knives fulcrumed intermediate their ends on the case; an actuating member movable longitudinally in the case; means for connecting the actuating member with the inner ends of the knives; means for moving the actuating member in one direction

to advance the knives; means for moving the actuating member in an opposite direction to retract the knives;



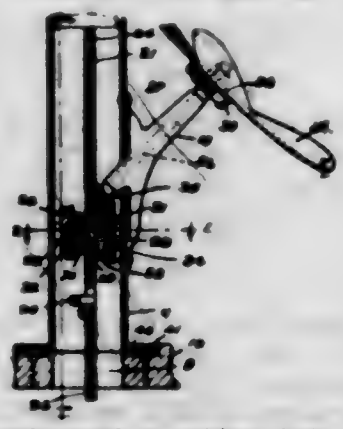
and centrifugally releasable means responsive to the rotation of the projectile for holding the actuating member and the knives releasably retracted.

1,302,009. PIPE AND NUT WRENCH. RICHARD MICHAEL CARROLL, Coogee, near Sydney, New South Wales, Australia. Filed May 20, 1918. Serial No. 235,509. 4 Claims. (Cl. 81—130.)



1. A pipe wrench comprising a casing member having segmental slots therein, a tooth faced fulcrum member having segmental trunnions mounted in said slots, and a rack member having teeth normally engaging the teeth of the fulcrum member which is rotatable with and operable as a fulcrum for the rack member.

1,302,010. COMBINED CHAIR AND FAN. ERNEST CATTINARI, Seattle, Wash. Filed Feb. 8, 1918. Serial No. 216,132. 2 Claims. (Cl. 230—7.)

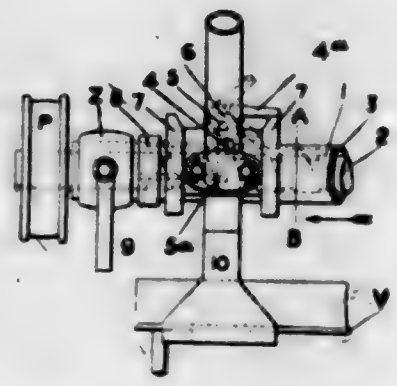


1. The combination with a rocking chair, of an upright elongated casing having its lower end rotatably secured to the top face of an arm of said chair, a rotatable fan carried by said casing, a lever fulcrumed on a rocker of said chair, a rod connected at its lower end with the forward end of said lever, means to normally hold the rear end of said lever in contact with the floor, rack bars mounted for longitudinal movement within said casing, a ball and socket joint connecting said rack bars with the upper end of said rod whereby said rack bars will be reciprocated by the rocking movement of said chair and whereby said casing may be turned about its longitudinal axis so as to adjust the fan to deliver a draft of air in a desired direction, and mechanism in said casing for converting the reciprocatory motion of said rack bars to rotatably drive said fan.

1,302,011. METHOD OF PRODUCING METHYL ALCOHOL FROM ALKYL FORMATES. JENS ANTON CHRISTIANSEN, Copenhagen, Denmark. Filed Dec. 6, 1918. Serial No. 265,635. 3 Claims. (Cl. 23—24.)

1. Method of producing methyl alcohol from an alkyl formate consisting in treating an alkyl formate with hydrogen in the presence of a catalyzer.

1,302,012. APPARATUS FOR STRIPPING CARDING-ENGINES. JOHN WILLIAM COOK, THOMAS ERNEST LEIGH, JOHN JOWETT, and NORMAN COOK, Manchester, England. Filed July 2, 1918. Serial No. 243,059. 5 Claims. (Cl. 19—15.)



8. An apparatus for stripping carding engines of the type described, comprising a fixed supporting tube having a longitudinal slot, a screw rotatable in said tube, a carriage movable and adapted to turn on said tube, and a screw-engaging member movably connected with the carriage, projecting therefrom through the slot and withdrawable from the slot to permit the carriage to turn on the tube.

1,302,013. INSULATING MATERIAL FOR ELECTRICAL CONDUCTORS. WILLIAM E. COOK, New York, N. Y., assignor to Insulation Development Corporation, a Corporation of New York. Filed Apr. 24, 1917. Serial No. 164,308. 5 Claims. (Cl. 173—320.)



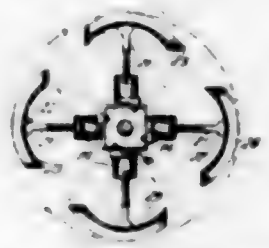
1. Insulating material for electrical conductors consisting of a strip or ribbon having a fibrous, matted, absorbent body folded longitudinally thereof upon, and about, a relatively smaller continuous strand of flexible, non-conductive material and a binder between said body and said strand whereby movement of one relative to the other, as the material is being applied to a conductor, is prevented.

1,302,014. DISPENSING APPARATUS FOR OILS AND THE LIKE. JOHN B. DAVIS, Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed Mar. 6, 1917. Serial No. 152,642. 7 Claims. (Cl. 221—103.)



1. In a dispensing apparatus, the combination with a pump cylinder, its piston and piston rod, of an operating member for said rod and depending therefrom, mechanism to lift said member and arranged alongside the cylinder, a casing to inclose the pump and its operating mechanism, said casing having an extension to inclose the piston rod and said member in its reciprocatory movement, an actuating crank for said mechanism and located below the top of the pump cylinder, a slot in said extension, and a part movable with the piston and visible from the exterior of the casing whereby the pump may be operated and a measure of the pump's operation observed without opening the casing.

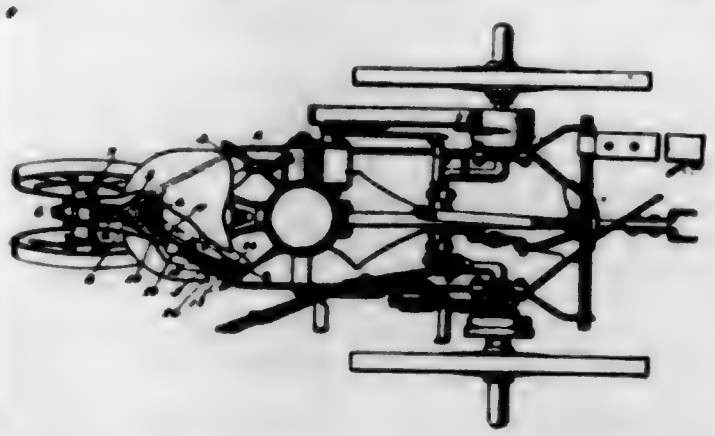
1,302,015. ROTATABLE CHOPPER-HEAD. HAYWOOD GUION DEWEY, Rochester, N. Y., assignor to Jackson Brandt, Baltimore, Md. Filed June 7, 1918. Serial No. 238,698. Renewed Mar. 13, 1919. Serial No. 282,494. 2 Claims. (Cl. 97—61.)



2. A rotatable chopper-head comprising a hub formed hollow and polygonal in cross-section for providing flat apertured faces, said faces carrying bosses secured thereto, tubular couplings having inner enlarged openings pivotally receiving the bosses and outer openings formed polygonal in cross-section, cranks radially secured to the tubular couplings, and carrying locking elements adapted for insertion within the apertures of the flat faces, rods having inner portions formed polygonal in cross-section and adapted for insertion within the polygonal openings of the tubular couplings, and cutter blades secured to the rods.

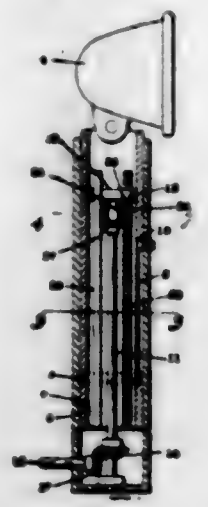
1,302,016. CASTER-WHEEL LOCK FOR AGRICULTURAL IMPLEMENTS. HARRY S. DICKINSON, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Original application filed Feb. 21, 1917, Serial No. 149,981. Divided and this application filed Oct. 5, 1917. Serial No. 194,883. 2 Claims. (Cl. 97—36.)

1. The combination of a frame, a member movably mounted therein, a shiftable locking latch sustained by the frame and adapted to interlock with said member, a fore-and-aft extending foot lever pivoted between its ends to the frame, and movable endwise to a limited extent on its pivot, said foot lever being provided on its rear end with a foot pad adapted to engage the frame, a fore-and-aft extending rod connected at its forward end to the forward end of the foot lever, and connected at its rear end



to the latch, and a link pivoted at its rear end to the frame and at its forward end to the foot lever between the foot pad and pivot of the lever, the relation of the several pivots to the pivotal connection of the rod with the foot lever being such, that the foot lever when depressed will "pass center" and lock the latch in retracted position.

1,302,017. HEADLIGHT FOR AUTOMOBILES. ERNEST F. DILLMANN, Newark, N. J. Filed Aug. 9, 1917. Serial No. 185,285. 13 Claims. (Cl. 240—61.)

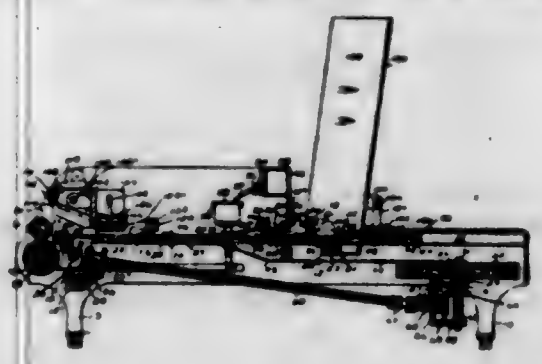


1. In a headlight, the combination with a lamp adapted to be arranged at the front of an automobile, of a mounting for said lamp having telescopic members, and means for extending said members and rotating the lamp-carrying member without further extension when in extended position.

1,302,018. STAMP-AFFIXING AND ENVELOP-SEALING MACHINE. FREDERICK R. S. DITMARS, Kansas City, Mo., assignor to Clark Mailing Machine Company, a Corporation of Missouri. Substitution for application Serial No. 739,969, filed Apr. 9, 1913. This application filed June 1, 1918. Serial No. 237,695. 18 Claims. (Cl. 216—3.)

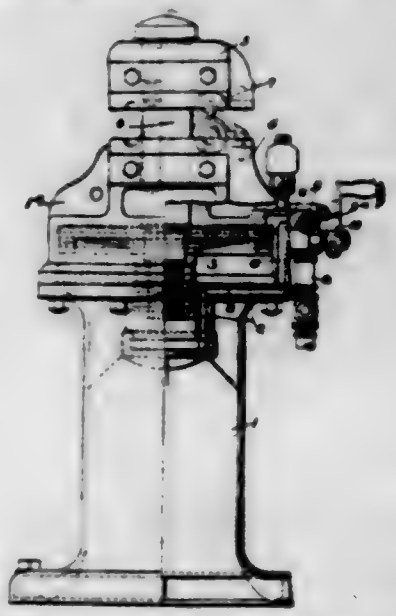
8. In a stamp-affixing machine for envelops, the combination with the frame of the machine and its bed, and the stamp-separating and affixing devices, of a reciprocating envelop-feeding carriage-frame movable in the direction of the stamp-feeding and affixing devices, and an independent envelop-guiding frame suspended above the

rear portion of said machine at the point of introduction of the envelop and having its forward end in gravity con-



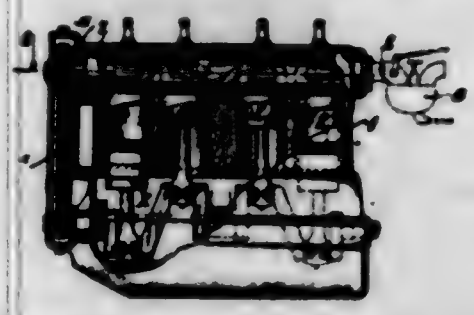
tact with the upper surface of the bed of the machine and adapted to control the movement of said envelops upon said bed.

1,302,019. DRILL-SHARPENER. JESSE DITSON, Littleton, Colo., assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo., a Corporation of Colorado. Filed June 30, 1917. Serial No. 178,028. 4 Claims. (Cl. 76—8.)



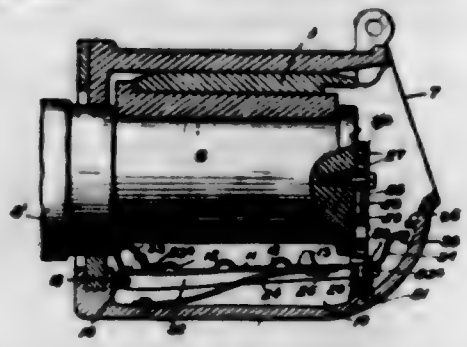
1. In a drill sharpening machine, in combination, a base, a cylinder contained within said base, a fluid operated piston therein, a single rod mounted centrally of said cylinder and base and extending from said piston, said rod carrying a crosshead offset therefrom, and coöperating jaw members of a vise, one formed on said base and the other formed in said crosshead, said vise being opened and closed by movement of said piston.

1,302,020. INTERNAL-COMBUSTION ENGINE. JOHN C. DITTMANNER, Indianapolis, Ind. Filed Dec. 26, 1917. Serial No. 208,887. 10 Claims. (Cl. 123—59.)



4. In an explosive engine, the combination with a cylinder and piston operable therein, of a rotatable sleeve for controlling the supply of gas to the cylinder, said sleeve having a continuous spiral fin projecting from the inner periphery thereof and constituting gas impelling means.

1,302,021. JOURNAL-LUBRICATING DEVICE. IRA S. DOWNING and EDWIN S. PEARCE, Indianapolis, Ind. Filed May 24, 1918. Serial No. 236,282. 15 Claims. (Cl. 64—24.)



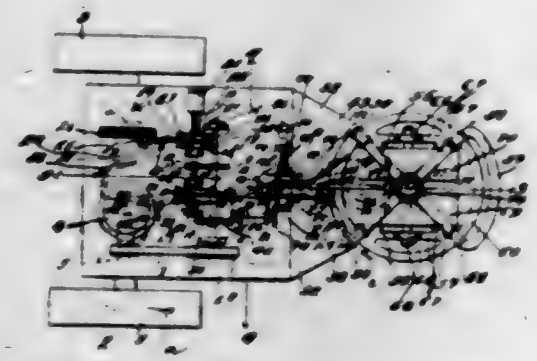
1. The combination with a journal box and its journal, and an oil chamber below said journal, of a vibratory lubricating device therefor comprising a plate member provided with vertically directed oil-projecting means, said member hinged in said chamber on an axis disposed substantially at right-angles to the journal axis, and means operative during rotation of the journal for vibrating said plate.

1,302,022. EXPANSION-JOINT. THOMAS DREWRY, Forest Gate, England, assignor to J. Stone and Company, Limited, Deptford, England. Filed July 31, 1918. Serial No. 247,562. 2 Claims. (Cl. 285—162.)



1. An expansion telescopic joint for pipes comprising a tapered end portion on the inner sleeve adapted to be distended by fluid pressure into contact with the outer sleeve, and a non-distending portion on the inner sleeve having an external diameter smaller than the internal diameter of the outer sleeve substantially as set forth.

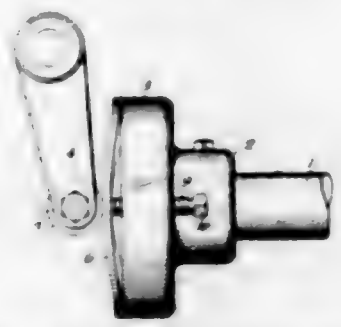
1,302,023. TRACTOR. JOSEPH E. DUAIME, West De Pere, Wis. Filed Oct. 15, 1915. Serial No. 56,046. 1 Claim. (Cl. 180—42.)



In a machine as set forth, a frame having rear supporting wheels and provided with a forward arch portion, said arch portion being formed from two arching members having their rear ends integral with the side sills of the frame and their forward ends connected by an integral brace, said connection of the rear ends and the forward ends preventing the springing or bending of the arching portions when the tractor is in movement over rough ground, one of each of the rear and forward ends of the arch portions being on either side of the longitudinal center line of the tractor, said rear and forward ends being provided with U-shaped brackets which house anti-frictional rollers and vertically dis-

posed side thrust rollers, a horizontally arranged gear mounted in said anti-frictional rollers, a shaft mounted in bearings of the horizontal gear, wheels on said shaft and means meshing with the horizontal gear for pivotally rotating the same for steering the tractor.

1,302,024. CAM. WILLIAM M. EVENSEN, Chicago, Ill., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Original application filed Nov. 30, 1915, Serial No. 64,273. Patent No. 1,247,943. Divided and this application filed Nov. 13, 1917. Serial No. 201,725. 4 Claims. (Cl. 74—1.)



3. A face cam having a resilient member constituting a part of its face and of the cam track and means for raising and lowering said member to vary and regulate the throw of the cam.

1,302,025. ORCHARD-HEATER. BIAGIO FALCONIERI, Oakland, Calif., assignor of one-half to John B. Arena, Oakland, Calif. Filed July 24, 1918. Serial No. 246,430. 2 Claims. (Cl. 159—91.)



1. An orchard heater comprising a liquid fuel containing receptacle having a close fitting hood provided with a combustion stack, and an imperforate conical funnel arranged on said hood and opening into the receptacle above the level of the liquid fuel therein and disposed with its axis intersecting the bottom of the receptacle, the inner end of the funnel being of less diameter than the stack whereby the draft up the stack produces a draft through the funnel and against the surface of the fuel.

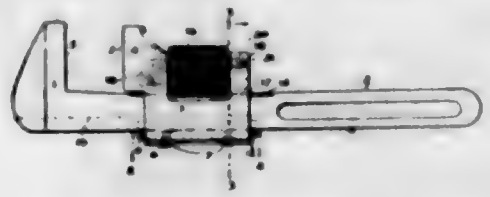
1,302,026. RAIL-JOINT. GEORGE A. FETHER, El Dorado, Pa. Filed Jan. 25, 1916. Serial No. 74,244. 1 Claim. (Cl. 238—188.)

In a rail joint, the combination with the separate joint ties, of joint bars each having an upright web portion and a continuous rail supporting base formed with a tie engaging angle portion at each end, each of said latter portions including a spiking flange projecting laterally from the side of the bar and adapted to seat on the upper face of the tie, and another spiking flange disposed at right angles to the first mentioned flange and adapted to engage the outside face of the tie, and the said tie engaging angle portions presenting included angles open-



ing toward each other to provide for maintaining the joint ties within the length of the bars.

1,302,027. WRENCH. JOHN H. FOXES, Oakland, Calif. Filed July 9, 1918. Serial No. 244,048. 4 Claims. (Cl. 81—157.)



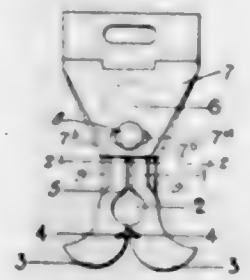
1. A wrench having a stem having a longitudinally extending rack, a stationary jaw on said stem, a carrier movable on said stem, a jaw carried by said carrier, a longitudinally extending shaft carried by said carrier, a screw eccentrically rotatable on said shaft and adapted in one position on said shaft to engage said rack and in another position being free from said rack, and means for yieldingly maintaining said screw in a central position lengthwise of said shaft, said means functionally opposing the turning movement of said screw.

1,302,028. SHEET-HANDLING IMPLEMENT. JOHN C. FUCHS, Pittsburgh, and OTTO W. COOK, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 13, 1914. Serial No. 850,642. 2 Claims. (Cl. 57—9.)



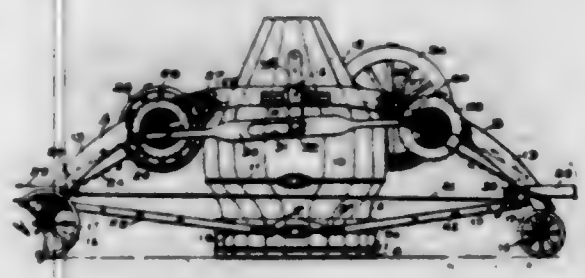
1. A sheet-handling implement comprising a handle and a suction cup provided with a laterally projecting ear at one side of its edge.

1,302,029. LAPPET FOR SPINNING AND LIKE MACHINES. JOSEPH SHAW GAUNT and HARRY DYSON, Manchester, England. Filed May 10, 1917. Serial No. 167,680. 5 Claims. (Cl. 242—137.)



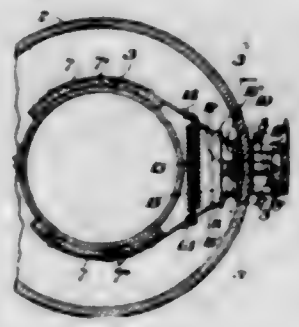
4. In combination, a bifurcated eyelet holder adapted to be secured to a support and formed to project therefrom, said holder having eyelet-gripping jaws, an eyelet-positioning member at the inner portions of said jaws, and wings projecting outwardly from the jaws, said wings being spaced apart to form a threaded passage, and an eyelet formed to be gripped by said jaws and having a yarn-receiving slot at one side, and a positioning member complemental to the first-mentioned positioning member and diametrically opposite said slot, whereby the eyelet slot is held in alinement with said thread passage.

1,302,030. HAY AND STRAW STACKER. SAMUEL M. GENO, Grantsville, W. Va. Filed Aug. 3, 1918. Serial No. 248,171. 7 Claims. (Cl. 214—9.)



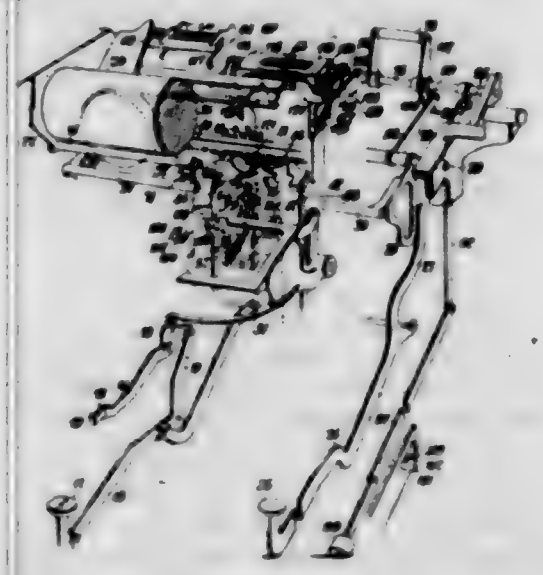
1. A stack former of the character described including a form open at its upper and lower ends and designed to rest upon the ground, a frame coacting therewith including two sections pivotally connected to each other at their inner ends, said conjoined ends of the two sections embracing said form and the two sections converging upwardly, and means mounted on the sections for conveying material upward on said sections and discharging it into the upper end of the form.

1,302,031. CENTRIFUGAL MACHINE. GERALD D. GROSSMAN, West Chester, Pa., assignor to Sharples Specialty Company, West Chester, Pa., a Corporation of Pennsylvania. Filed Nov. 28, 1917. Serial No. 204,338. 5 Claims. (Cl. 74—13.)



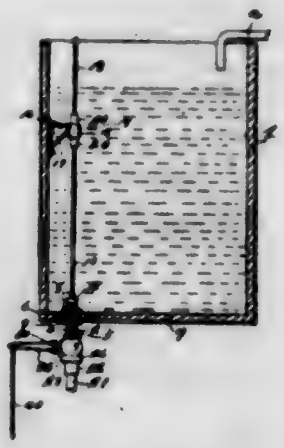
1. The combination with a revoluble suspended bowl, of oscillatory clamps adapted for engaging the periphery of said bowl near its bottom, and means for holding said clamps alternately in and out of engagement with said bowl.

1,302,032. COMBINED TYPE-WRITING AND COMPUTING MACHINE. WILLIAM L. GUMPRECHT, Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1916. Serial No. 89,015. 16 Claims. (Cl. 235—59.)



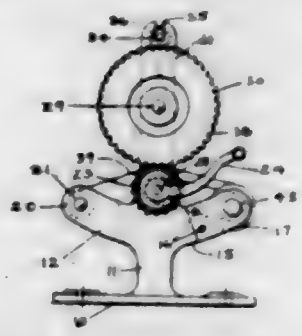
1. In a combined typewriting and computing machine, the combination of a carriage, a variable feed escapement for said carriage, an element traveling with said carriage, means controlled from said element for permitting double-space movement of the carriage at predetermined positions in its travel, printing mechanism, a case shift key, computing mechanism, a disconnect key for rendering said computing mechanism inoperative, and means controlled from either the case shift key or the disconnect key for rendering said double-space permitting means ineffective.

1,302,033. VALVE FOR DOMESTIC AND FARM WATER-TANKS. JACOB P. HAFFNER, Howardsville, Va. Filed Mar. 29, 1918. Serial No. 225,465. 1 Claim. (Cl. 137—21.)



In a valve, a casing, a tank to the bottom of which said casing is fixed, said casing having a valve seat, a valve coöperating with the seat and provided with upwardly and downwardly projecting tubular stems having a passage of communication through the valve, whereby air is allowed to enter the casing from above the surface of the water, the lower end of the downwardly extending tubular stem being flared transversely, a rockable arm mounted in the valve casing and engaging the flared end of the valve stem for opening the valve, said flared end of the tubular stem being flared to such an extent that it will form an outlet of greater size than the passage in the tubular stem when the rockable lever is in contact with the end of the tubular stem, means for guiding the upward movement of the valve and tubular stems so that the transverse flared end of the downwardly extending tubular stem will at all times contact with the rockable arm at substantially a right angle thereto, and means for rocking the rockable arm.

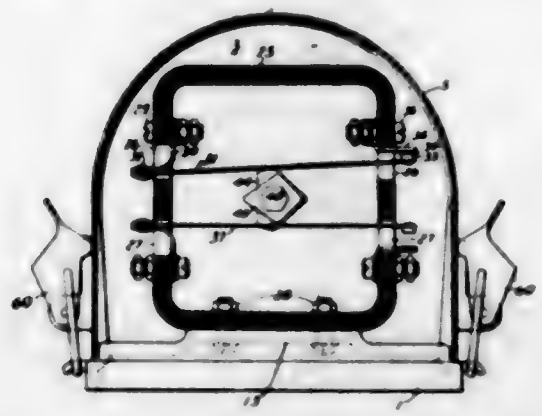
1,302,034. PRINTING-MACHINE. FRANK HALENAR, Clayville, N. Y. Filed Mar. 30, 1918. Serial No. 225,627. 1 Claim. (Cl. 101—228.)



In a printing machine, the combination with a pair of vertical standards, and a base on which they are engaged, of a pair of lateral arms extending outwardly from said standards upon one side thereof, a single arm rigidly extending oppositely from the other side of said standard, a single arm bolted to said standard so as to be removed therefrom, opposite to said right arm, spindles carried in said pairs of arms, one of said spindles being made in sections, a head on said latter spindle extending through

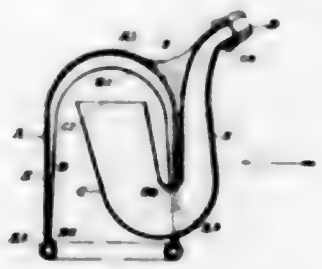
the arm bolted to the standard, rollers mounted on said spindles adapted to carry the readily removable and exchangeable roll of material to be printed, an impression roller revolubly mounted in said standard, means for rotating said impression roller, a type carrying roller rotatable thereabove, connections between said rollers, an ink roller arranged at the top of said machine adapted to convey ink to the type on said type carrying roller, a pulley on the shaft of the type-carrying roller on the outside of said standards, a second pulley on the shaft of the ink conveying roller also on the outside of said standards, and a crossed belt guided over both pulleys, substantially as described, and for the purpose set forth.

1,302,035. RELAY DEVICE. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 13, 1917. Serial No. 174,474. 3 Claims. (Cl. 175—281.)



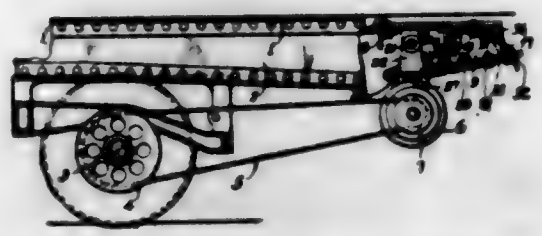
1. The combination with a hollow supporting frame and a rotatable member located within said frame, of a plurality of binding-screws secured to the sides of said frame, stationary terminal members attached to said binding-screws, a plurality of lever members extending across the frame and each having one end mounted upon the terminal members on one side of the frame and the free other end located near the terminal members on the other side of the frame, and cam surfaces positioned on said rotatable member for effecting predetermined engagement of the free ends of said lever members with the adjacent stationary terminal members, and means for biasing said rotatable member to a predetermined position.

1,302,036. EAR-TRUMPET. HENRY HAMANN, Chicago, Ill. Filed May 15, 1916. Serial No. 97,591. 1 Claim. (Cl. 181—25.)



An ear trumpet, comprising a receptacle or chamber, said receptacle having its upper end closed; a tapering passage leading out of said receptacle, said passage having its larger portion extending into said receptacle; its larger opening facing the closed end of said receptacle, said passage also carrying on its small end means adapted to the human ear; a diaphragm having a dome shaped end interposed between said closed end of said receptacle and the larger opening of said passage, said diaphragm being formed with a conical body extending to the base or open end of said receptacle and securely sealed thereto.

1,302,037. DYNAMO SUSPENSION. CARL HARTMANN, Lancaster, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed July 30, 1915. Serial No. 42,681. 10 Claims. (Cl. 105—106.)



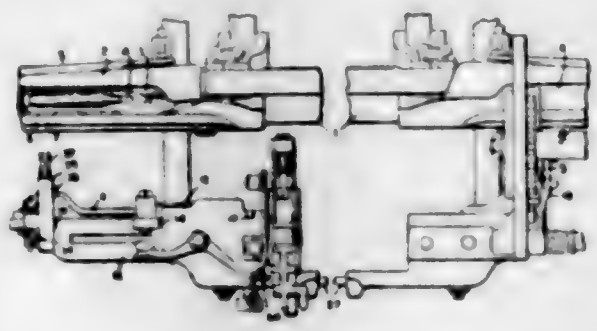
1. A dynamo suspension having in combination with a car and its axle, two members extending transversely of the car and secured to the underneath side of the car body, a supporting member secured on top thereof, means for adjusting said supporting member on the transverse members, a dynamo pivotally suspended from said supporting member, a belt driving the dynamo from the car axle, and a spring tending to swing the dynamo around its pivotal point away from the car axle, and means for adjusting the tension of said spring.

1,302,038. TOILET ACCESSORY. JAMES HAYES, Cleveland, Ohio. Filed Nov. 1, 1917. Serial No. 199,680. 5 Claims. (Cl. 2—95.)



1. A sleeve protector, attachable to the wrist of the operator, consisting of an elastic tube, engaging the said wrist, a stiff conical guard, attached to said tube foldable on itself to form an outwardly flaring cup in a forward direction on a line intermediate of its ends, means of limiting the line of folding of the conical guard and means reinforcing the outer edge of said conical guard.

1,302,039. FEELER MECHANISM FOR AUTOMATIC LOOMS. UBALD HEBERT, Manchester, N. H., assignor to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed May 11, 1918. Serial No. 233,821. 4 Claims. (Cl. 139—85.)



1. An automatic loom supplied with filling carriers having barrels provided with elongated slots extending parallel to their axes comprising means for effecting a change in the operation of the loom, a multi-point feeler mounted with its points distributed in line with, and adapted to enter, the slot in a filling carrier when boxed at the detecting end of the loom, and means actuated by or through the entry of either feeler point into said slot for effecting the operation of said change effecting means at such a period as to leave sufficient filling remaining upon the filling carrier to maintain continuity of filling in the cloth until the change is effected.

1,302,040. DYNAMO-ELECTRIC MACHINE. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 22, 1914. Serial No. 826,554. 10 Claims. (Cl. 172—120.)



6. A core member for a dynamo-electric machine provided with a winding slot which is in part open and in part closed by bridges of material integral with said core member at each abutment.

1,302,041. CONTROL SYSTEM. RUDOLF E. HELLMUND, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Sept. 25, 1914, Serial No. 863,506. Divided and this application filed Nov. 7, 1917. Serial No. 200,654. 9 Claims. (Cl. 172—179.)



1. In a system of control, the combination with a supply circuit and a main dynamo-electric machine of the series type for driving a mechanical load and having an armature and a field winding, of an auxiliary machine connected to excite said field winding, and an auxiliary motor energized independently of said supply circuit for driving said auxiliary machine, whereby the speed and voltage thereof may be maintained after an interruption of supply-circuit energy.

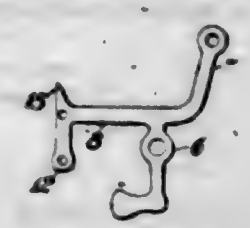
1,302,042. FOLDING TABLE. FREDERICK L. HEMMER, Lincoln, N. J., assignor of one-third to Albert Hemmer, Lincoln, N. J. Filed May 21, 1918. Serial No. 235,858. 7 Claims. (Cl. 45—116.)



1. A folding table including a top having a fixed panel, drop leaves swingingly mounted at opposite side edges of the said panel and foldable to depend therefrom, crossed supporting leg frames pivotally connected to the fixed panel, said frames being movable outwardly to active position projecting at opposite sides of the fixed panel for supporting the drop leaves in a plane therewith and being foldable inwardly to inactive position lying within the lines of the said panel, and cam means operable for wedging said frames in opposite directions to the limit of their outward movement in active position.

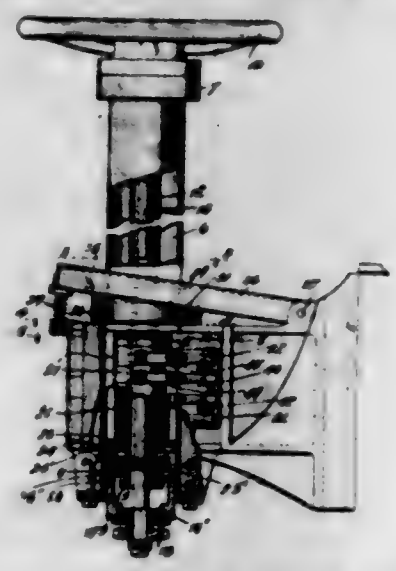
1,302,043. OPTHALMIC MOUNTING. WILLIAM T. HENDERSON, Oklahoma, Okla. Filed Dec. 18, 1918. Serial No. 267,370. 3 Claims. (Cl. 45—45.)

1. A guard for an opthalmic mounting, comprising an attaching portion, a pair of arms extending therefrom in opposite directions, and each having an aperture formed near its end for attachment of a bearing member, one of



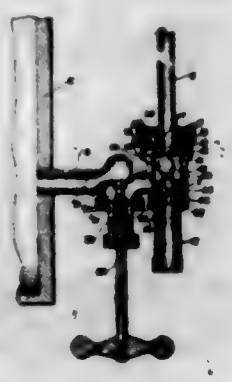
said arms being upwardly curved and the other of said arms being outwardly looped and having a lateral extension adapted to be looped to embrace a guard ear.

1,302,044. STEERING-COLUMN. DANIEL E. HENNESSY, Holyoke, Mass., assignor to Herbert W. Cowan, J. Lewis Wyckoff, and Edward M. White, trustees doing business as The Cowan Truck Company. Filed June 30, 1917. Serial No. 177,995. 12 Claims. (Cl. 74—89.)



1. In a steering column for electrically propelled vehicles in combination, a rotatable steering shaft, an independently rotatable tube surrounding said shaft and having an electric controller drum thereon and adapted to be turned by the operator to various running positions, and means tending at all times to return said controller tube to its initial position of no running.

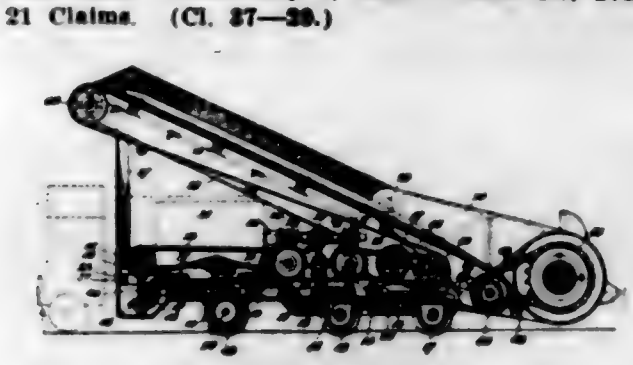
1,302,045. AUTOMATIC GAGE-GLASS VALVE. ASHBY J. HOCKMAN, Las Animas, Colo., assignor of fifty one-hundredths to Alfred C. Hartman, Las Animas, Colo. Filed Jan. 16, 1918. Serial No. 212,069. 1 Claim. (Cl. 73—54.)



An automatic valve structure for gage glasses comprising a valve body adapted to be connected to one end of a gage glass and having an extension in alinement with the gage glass and a second extension at an angle thereto and adapted to be connected to a source of pressure, a ring member mounted in said valve body below said second extension and having a longitudinal passage in aline-

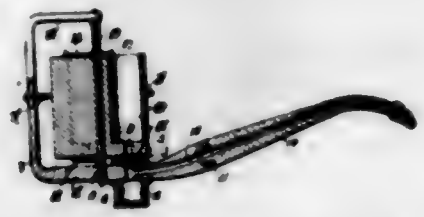
ment with the first mentioned extension and also provided with spaced webs forming ports therein and a valve seat, a member fitted in the first named extension and having a valve seat and a ball valve normally engaged with the first named valve seat and adapted to engage the seat in said second named member to cut off the pressure through said gage glass.

1,302,046. ORE-LOADER. SYLVESTER H. HUNT, Bessemer, Mich. Filed July 5, 1917. Serial No. 178,690. 21 Claims. (Cl. 37—29.)



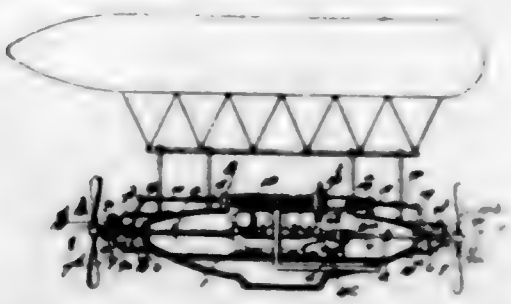
1. In apparatus of the character set forth, the combination with a truck comprising connected sections relatively movable in a lateral direction, of a carriage pivoted to one section and having a movable bearing on the other, and material shoveling and elevating mechanism mounted on the carriage.

1,302,047. TOBACCO-PIPE. CLYDE HUNT, Tupelo, Ark. Filed June 10, 1918. Serial No. 239,210. 2 Claims. (Cl. 131—12.)



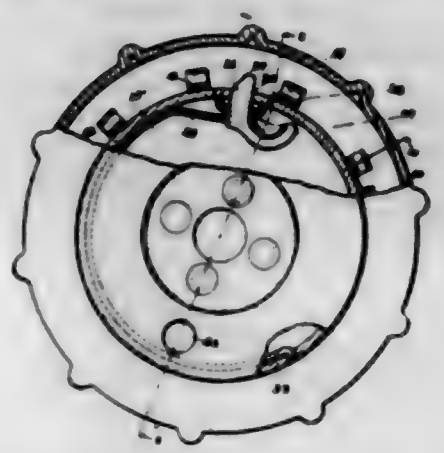
1. A tobacco pipe of the class described comprising a stem, a base formed at one end thereof, a bowl rotatably supported upon said base and having a plurality of magazines therein each of which is adapted for communication with the smoke passage in the stem, a bracket carried by said base resilient means supported by said bracket and engaging said bowl for maintaining the same in adjusted positions, and a retaining ring also supported by said bracket and surrounding said bowl in spaced relation.

1,302,048. ASCENDING, DESCENDING, AND DRIVING MEANS FOR DIRIGIBLE AIRSHIPS. JESS ORVIS HUXFORD, Wainwright, Ala. Filed Oct. 31, 1918. Serial No. 260,475. 1 Claim. (Cl. 244—25.)



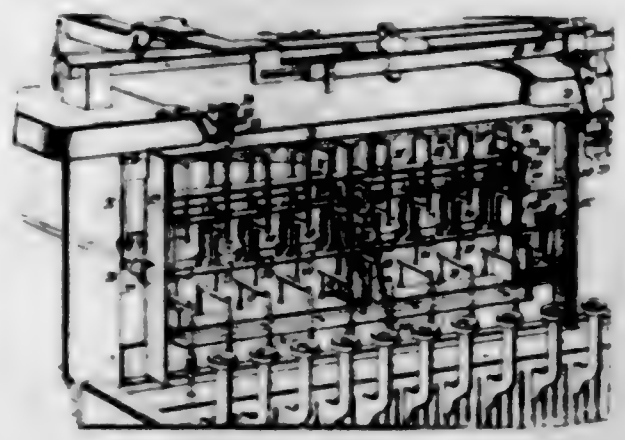
In a device as set forth, the combination with a body of an airship, of a motor driven shaft mounted therein and having bearings in the forward and rear ends of said body, motor shaft sections having universal connections with the opposite ends of the motor shaft, guides on the body, cross heads in the guides in bearings of which the motor shaft sections are mounted, angular levers pivotally mounted on the guides axially in alinement with the universal connections and having link connections with said cross heads, right and left threaded screws connected to the angular levers and means connecting the right and left threaded screws for moving them toward and from each other whereby the motor shaft sections may be inclined upwardly or downwardly, and reversed bladed propellers carried by the motor shaft sections.

1,302,049. HUB STRUCTURE. EMIL ISACH, Philadelphia, Pa., assignor to Budd Wheel Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed June 7, 1918. Serial No. 238,694. 5 Claims. (Cl. 21—31.)



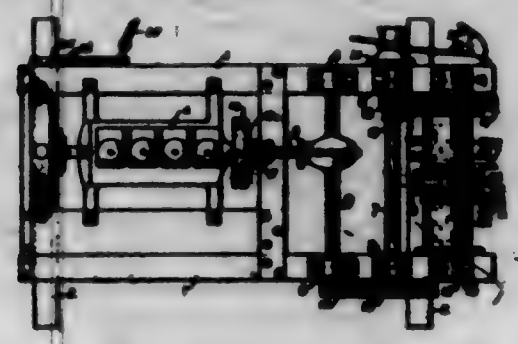
1. In a hub and wheel structure having an outer or wheel hub, a cap to hold said wheel hub on an inner hub, the outer hub being formed to provide a circumferential pocket about the cap, and a locking mechanism for locking said cap from backing off, a part of which is mounted in said cap and includes a pivotal element; a stop therefor including a marginal plate adapted to engage the side of the circumferential pocket and be secured thereto, and projecting members or tongues adapted to engage the side of said circumferential pocket and be secured thereto, the tongues being disposed for engaging a projecting portion of the pivotal element whereby the cap is held from backing off.

1,302,050. COMBINED TYPE-WRITING AND COMPUTING MACHINE. OSCAR L. INGRAM, Walla Walla, Wash., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1914, Serial No. 866,886. Renewed Sept. 9, 1918. Serial No. 253,164. 58 Claims. (Cl. 225—59.)



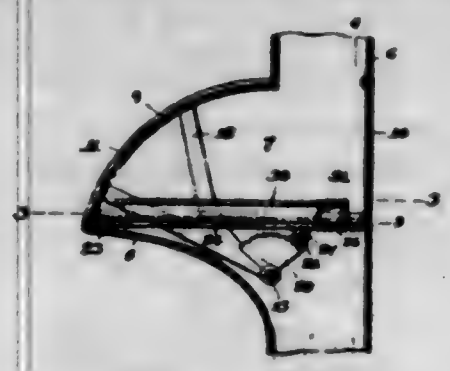
1. The combination with gearing, of a series of duplex rack bars for driving gearing alternately in one direction or the other, a shifting frame for moving said rack bars in either direction, including pivotally-mounted side plates and a rod extending through said rack bars and connecting said side plates, a cam engaging said rod to shift the same, and a lever for actuating said cam.

1,302,051. NURSERY-TREE DIGGER. EDGAR A. JACKSON, Cupertino, Calif. Filed Dec. 26, 1918. Serial No. 268,220. 2 Claims. (Cl. 254—134.)



1. A nursery tree digger comprising a pair of parallel, spaced runners, a pair of parallel, spaced supporting beams mounted thereon and at right angles thereto, a motor mounted on said beams, a driving-shaft having a clutch therein operatively mounted with respect to said motor, three horizontal parallel shafts revolubly mounted on said beams at right angles to said driving shaft, fixed gear connections between the driving shaft and the first of said parallel shafts, fixed gear connections between the first and second of said parallel shafts, a gipsy-spool mounted on one end of the second of said parallel shafts, disengageable gear connections between the second and third of said parallel shafts, a pair of cable operating drums revolubly mounted on said third parallel shaft, a differential drive connecting said drums to said last mentioned shaft, and adjustable means operated through the medium of said gipsy-spool and its driving mechanism for moving said device.

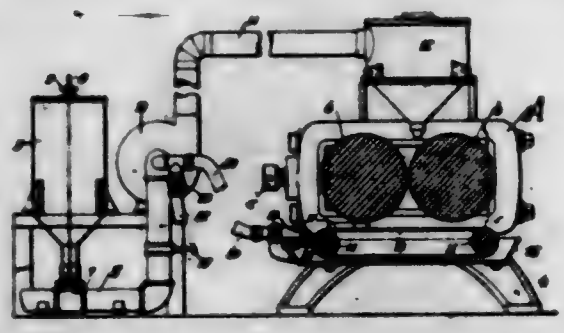
1,302,052. DISPENSING DEVICE. OTTO JANSEN, Elkins Park, Pa., assignor to Harry S. Kelsey, Boston, Mass. Filed Aug. 22, 1917. Serial No. 187,527. 3 Claims. (Cl. 223—1.)



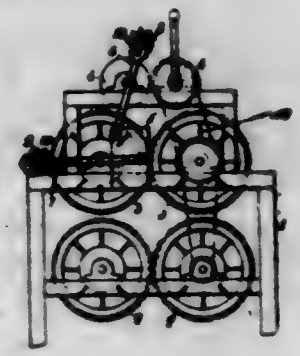
1. In a dispensing apparatus, a casing providing a compartment having oppositely disposed outlet and inlet openings, a pair of parallel grooved guiding bars at the base of the compartment, a plate supported between said grooved guide bars and adapted to be slidingly reciprocated therein to and from said outlet opening, a pair of rack bars on the under face of said plate, a transversely disposed rotatable shaft, with connecting actuating devices between said shaft and said rack bars, a pivotally mounted door, means to support and move the door to open and close said outlet opening, connecting actuating devices between said door-supporting means and said shaft, gravity-actuated means normally inoperative, with means to release the same, to actuate said rotatable shaft, whereby coördinated motion is imparted to said plate-actuating means and door-operating means, in both directions.

1,302,053. FEEDING MECHANISM FOR MIXING-MILLS. WILLIAM JAMESON, Chicopee Falls, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed May 10, 1917. Serial No. 167,676. 3 Claims. (Cl. 18—2.)

1. The combination with the rolls of a mixing mill, of a hopper to feed material thereto, a storage container for said material at a distance from the hopper, pneumatic means to convey the material, which passes through the rolls and is unmixed thereby, back to the hopper to be subsequently fed to the rolls, and means to connect said container to said pneumatic means when desired, whereby a charge of material may be delivered from the container to the hopper.

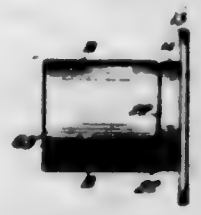


1,302,054. INTESTINE-CLEANER. OLE JENSEN, Copenhagen, Denmark. Filed Dec. 20, 1918. Serial No. 267,676. 4 Claims. (Cl. 17—12.)



1. In an intestine cleaner, the combination of a pair of coöperating scraping cylinders each having its periphery composed of narrow strips of spring steel; a pair of coöperating guide cylinders located above the scraping cylinders for feeding the intestines thereto; and means for driving the scraping rollers at a greater peripheral speed than the guide rollers.

1,302,055. FRICTION SHOCK-ABSORBING MECHANISM. BRADLEY S. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 4, 1918. Serial No. 220,255. 9 Claims. (Cl. 213—64.)

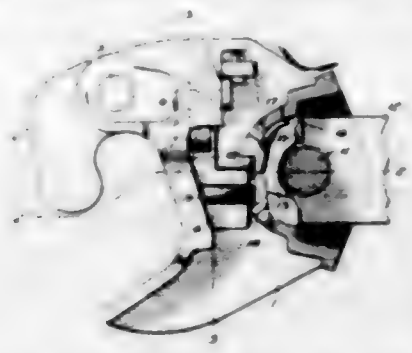


1. In a friction shock absorbing mechanism having a friction shell, friction shoes, a wedge, main spring resistance, and a follower between said resistance and the shoes; means for always insuring transmission of pressure from approximately the center of each shoe at its periphery to said follower in substantially a single line parallel to the axis of the shell, and adjacent the friction surface of the latter.

1,302,056. CAR-COUPLING. WILLIAM KELSO, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1918. Serial No. 209,927. 6 Claims. (Cl. 213—14.)

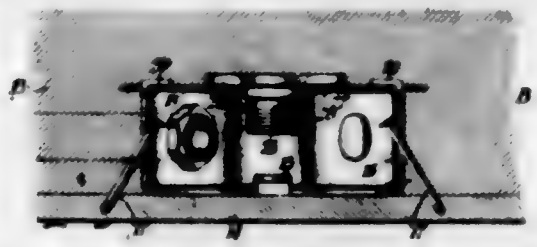
1. In a car coupler, the combination of a coupler stem, a coupler head pivotally mounted on said stem, a knuckle,

a lock for said knuckle, and means mounted on said head for maintaining said lock in unlocked position while the knuckle is in closed position, said means involving a mem-



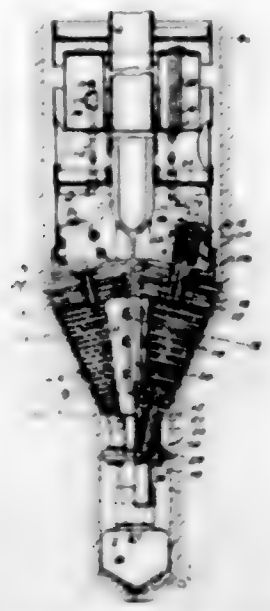
ber mounted on said coupler head to the rear of said lock and adapted under the influence of gravity to move forwardly and support said lock in unlocked position.

1,302,057. OUTLET-BOX. JULIAN GORDON KNIGHT, New York, N. Y. Filed Feb. 26, 1914. Serial No. 821,114. 1 Claim. (Cl. 247—5.)



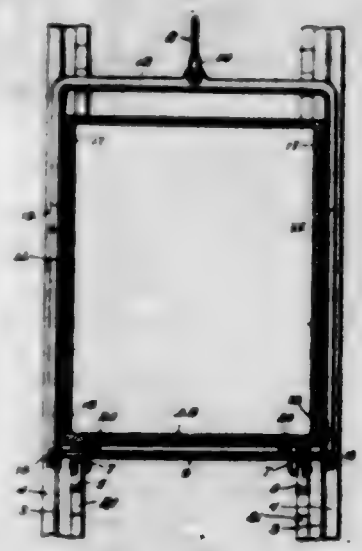
An outlet box adapted to be entirely embedded within the ceiling or wall of a room, and having a peripheral wall adapted to be placed upon the temporary form before the pouring of the concrete and provided with apertures to receive electric conductors, a separate circular top wall adapted to be secured to said peripheral wall after the placing of the latter and the attachment of said conductors, said top wall being of materially larger diameter than said peripheral wall and having its entire peripheral portion extending outwardly beyond said peripheral wall in all directions to constitute an anchorage for said top wall around the entire peripheral wall within the concrete, and a fixture support depending from said top wall within said box and supported primarily by the peripheral anchorage of said top wall and independent of said peripheral wall.

1,302,058. DRILLING APPARATUS. MAHLON E. LAYNE, Houston, Tex. Filed Dec. 1, 1913. Serial No. 803,888. 25 Claims. (Cl. 255—73.)



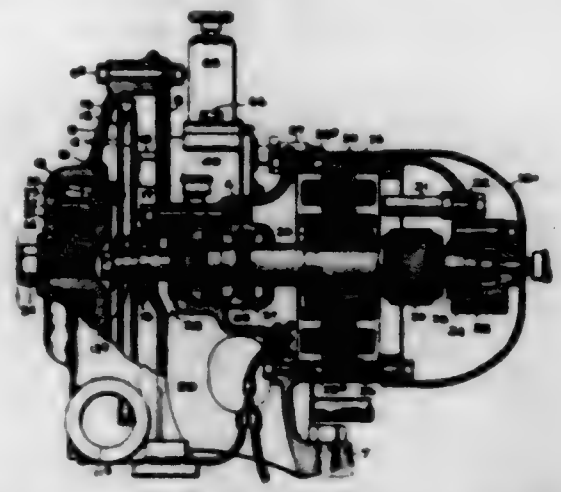
23. In combination in apparatus for drilling holes in the ground, a rotatable frame, a plurality of rotatable conical drums carried thereby, and a drilling member with a cutting point carried by the frame in advance of the drums and adapted to drill a hole of a diameter less than that cut by the upper ends of the drums and greater than that cut by the lower ends of the drums.

1,302,059. ELEVATOR. JOHN A. LINN, Denver, Colo. Filed Mar. 3, 1919. Serial No. 280,236. 3 Claims. (Cl. 187—82.)



1. The combination with an elevator car, and the raising and lowering cable thereof, of oppositely extending catches having their outer extremeties normally within the vertical plane of the car, brackets on the bottom of the car to which said catches are pivoted between their ends and having supporting shoulders to brace the catches when the latter move to their catching positions, the inner ends of said catches overlapping and being formed with longitudinal slots, an inverted U-shaped hanger attached to said cable and having pendant arms at opposite sides of the car, and a rod carried by the lower ends of said arms and working in the slots of the catches.

1,302,060. TURBINE-DRIVEN ELECTRIC-GENERATOR SET. LOUIS C. LOWENSTEIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 12, 1916. Serial No. 77,987. 8 Claims. (Cl. 253—59.)

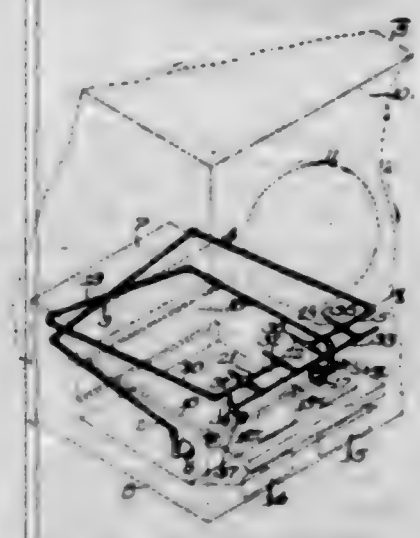


1. In an apparatus of the character described, the combination of a main frame having a bearing, a shaft in the bearing having an overhung end, a turbine wheel on such end, a cover for the wheel fastened to the main frame, and a magnetic brake for the turbine located between the turbine wheel and the cover, said brake comprising relatively movable elements, one of which is fixed and the other carried by the turbine wheel.

4. In an apparatus of the character described, the combination of a housing, a shaft therein, a turbine wheel

on the shaft, a nozzle for directing steam to the turbine wheel, and means through which steam is fed to the nozzle, said means comprising a casing fixed directly to the housing, a steam separator therein, said casing having an orifice in one of its walls, means carried by the casing and forming a passage connecting the orifice to the nozzle, and a pressure reducing valve in said passage controlled by the steam pressure therein for throttling the flow of steam to the nozzle.

1,302,061. SMOKE-CONSUMING FURNACE. OSCAR LOX, Chicago, Ill. Filed Oct. 28, 1914. Serial No. 869,003. 5 Claims. (Cl. 110—60.)



3. The combination with the four walls of a furnace, of an uninterrupted conduit for conveying air from the ash-pit to the front wall of said furnace, said conduit arranged to be heated by all of said four walls, and means for discharging said air from said front wall into the interior of said furnace.

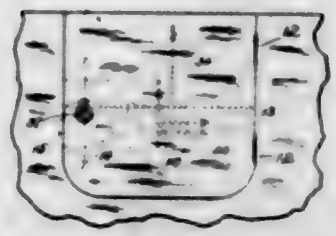
1,302,062. TOURNIQUET. ROBERT E. MCFARLANE, Duluth, Minn. Filed Aug. 6, 1918. Serial No. 248,536. 7 Claims. (Cl. 128—327.)



5. A tourniquet comprising a flexible loop or band arranged to surround a limb to be treated, and a lever handle fulcrumed on the loop and having a compressing member projecting out of line with the fulcrum and the free end of the handle in the plane of the loop.

1,302,063. DOOR-LATCH. JOHN J. MALOFF, New Haven, Conn. Filed Aug. 6, 1915. Serial No. 44,013. 20 Claims. (Cl. 70—42.)

1. The combination with a door frame and a door hinged thereto, of a spring device normally holding the door open, a bolt head for locking the door to the frame adapted to be projected by said spring device, detent mechanism for connecting said bolt head with said spring



device, means for releasing said detent mechanism, and means for retracting the bolt head when said detent mechanism is released; substantially as described.

1,302,064. IMPREGNATION OF FABRICS FOR BALLOONS AND THE LIKE. JOSEPH HAROLD MANDLEBERG, Pendleton, Manchester, England. Filed Jan. 18, 1919. Serial No. 271,917. 2 Claims. (Cl. 91—68.)

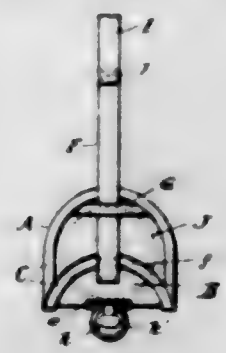


1. The process of rendering the coated fabric of balloons and like gas containers more impermeable to the gaseous content of the said containers, consisting in the impregnation of the said fabric only with hydrocarbon jelly, as set forth.

1,302,065. COMPOSITION FOR IMPREGNATING AND COATING BALLOON AND LIKE FABRICS. JOSEPH HAROLD MANDLEBERG, Pendleton, Manchester, England. Filed Jan. 18, 1919. Serial No. 271,918. 4 Claims. (Cl. 137—17.)

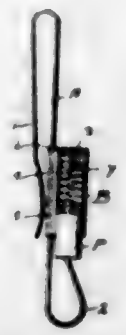
1. An impregnating and coating composition for balloon and like fabrics, containing 100 parts per weight of rubber, 1 to 5 parts of wax, ½ to 2 parts of litharge, and 2 to 4 parts of sulfur, said ingredients being thoroughly mixed.

1,302,066. WATCH-CARRIER. JAMES F. MANSFIELD, Long Island City, N. Y. Filed Aug. 16, 1917. Serial No. 186,434. 3 Claims. (Cl. 224—4.)



3. A watch carrier embodying a pouch provided at its base with an opening for inserting a watch, a flap for sealing said opening and provided with an auxiliary opening through which only the bow and crown of the watch may downwardly project, an opening in the side of the pouch through which the face of the watch is visible, and a strap and keeper for holding the flap in closed position, said strap serving further as a means for suspending the watch from the wearer or other support.

1,302,067. KEY-RING HOLDER. WILLIS H. MANDELSOHN, Gardena, Calif. Filed Oct. 26, 1916. Serial No. 259,793. 3 Claims. (Cl. 24—3.)



1. As a new article of manufacture, a key ring holder compromising a member provided with engaging means and with a hook, a sleeve secured to the member inwardly of the hook, and a plunger mounted within the sleeve and constantly urged toward the free end of the hook and normally in contact therewith, said member being provided with a recess, and the sleeve being provided with a flange fitting within said recess whereby the sleeve is held against movement longitudinally of the member.

1,302,068. SYSTEM OF CONTROL. HUGH T. MORRIS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 29, 1915. Serial No. 69,183. 11 Claims. (Cl. 172—276.)



1. In a control system, the combination with a commutator motor having armature and field-magnet windings, of limit switches in the circuit of said field windings and electro-responsive means controlled by said limit switches for automatically varying the voltage supplied to the field windings in direct proportion to the value of the current supplied thereto.

1,302,069. CLOTHES FOLLOWER OR PRESSER. ARTHUR L. MULL, Richmond, Va., assignor to H. W. Rountree & Brother Trunk and Bag Co. Incorporated, Richmond, Va. Filed July 15, 1918. Serial No. 245,030. 5 Claims. (Cl. 190—36.)



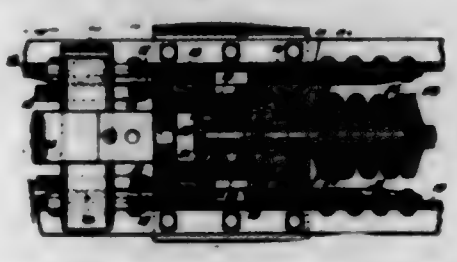
1. A follower device for garment compartments of wardrobe trunks comprising in combination with upper and lower pairs of guides on the opposite walls of the garment compartment; an upper pressor bar, side arms attached thereto having their free ends horizontally slidably engaging the lower set of guides and forming fulcrums, means for locking the said free ends of the side arms at their slidably adjustable positions on the said set of lower guides and finger released latches on the upper bar that normally interlock with the upper pair of guides, when the device is swung up to the closed position.

1,302,070. RAIL-JOINT. VICTOR NELSON, Dubois, Wyo. Filed Sept. 24, 1918. Serial No. 255,458. 2 Claims. (Cl. 238—188.)



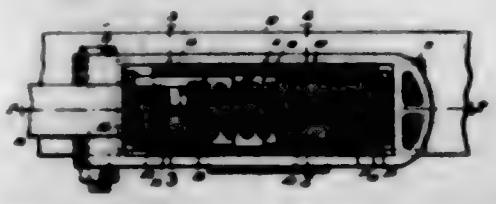
1. A rail joint comprising a pair of like splice bars each of angular section formed with a vertical member to bear against the web of the connected rails and an outwardly extending angular member to bear on the rail flanges, an inwardly turned upper edge to fit the angle between the web and head of the rails, a horizontal foot plate integral with said angular member and extending inwardly from its edge below the rails, and a vertical rail spacing web integrally connecting the foot plate and the angular member intermediate the ends of the splice bar.

1,302,071. RAILWAY DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 23, 1917. Serial No. 156,916. 5 Claims. (Cl. 213—64.)



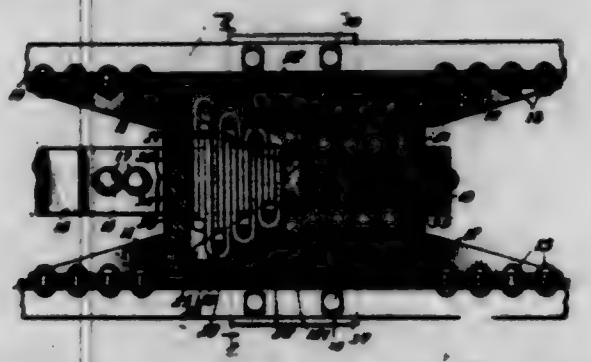
1. In a draft rigging, the combination with draft sills and followers, of friction elements interposed between and actuated by the followers, a draw bar, a horizontal yoke operatively connecting the draw bar with the followers, spring means located outside of the followers, and means, disposed above and below the yoke interposed between the friction elements and said spring means for compressing the latter simultaneously upon both ends upon actuation of the friction elements.

1,302,072. DRAFT-GEAR FOR PASSENGER EQUIPMENT. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 23, 1917. Serial No. 156,917. 4 Claims. (Cl. 213—64.)



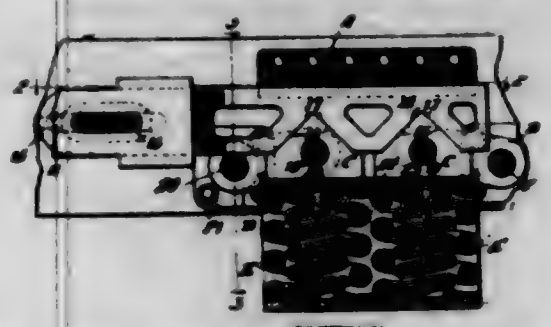
1. In a draft rigging, the combination with a friction shell having friction elements coöperable therewith, of two alined springs adapted to simultaneously resist movement of the friction elements relatively to the shell in one direction, and key means passing through said shell and interposed between the adjacent ends of the springs arranged to prevent transmission of pressure applied to the spring furthest from the friction elements to the other spring when the gear is operated in the opposite direction.

1,303,078. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 20, 1917. Serial No. 155,626. 9 Claims. (Cl. 213—64.)



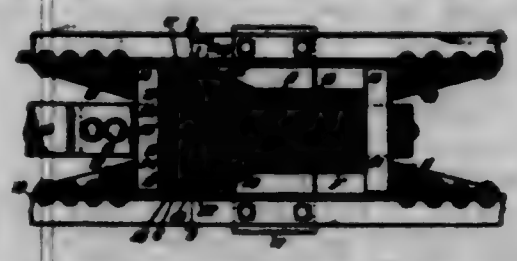
1. In a shock absorbing mechanism for railway cars, the combination with draft members, stops associated therewith, a draw bar, a shell, means for operatively connecting the shell to the draw bar, and a follower, of spring means within the shell, said shell having an inwardly tapered throat at one end, friction shoes within said throat and disposed opposite each other and extending lengthwise of the throat, friction plates extending transversely between said shoes and held in engagement with each other by said spring means, said friction plates being adapted to slide upon each other on movement of the friction shoes, the ends of some of said friction plates on one side being attached to one shoe and the ends of other friction plates on the other side being attached to the other shoe.

1,302,074. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 12, 1918. Serial No. 221,926. 5 Claims. (Cl. 213—64.)



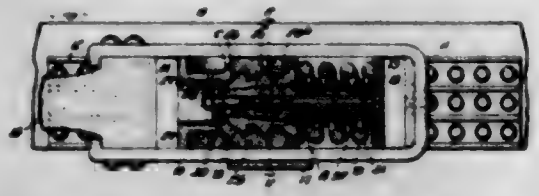
1. In a friction shock absorbing mechanism, the combination with a wedge member movable back and forth in one line, of a second member coöperable with the wedge member and movable in a line at right angles to the first named line, spring means resisting movement of the second named member, said spring means including a coiled spring having its axis parallel to the line of movement of said second member and in alinement therewith and adapted to be directly compressed thereby, and movable holding means by which said second named member is carried.

1,302,075. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 12, 1918. Serial No. 221,927. 3 Claims. (Cl. 213—64.)



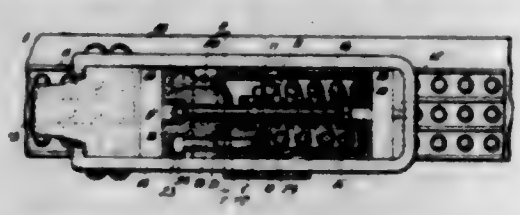
1. In a shock absorbing mechanism, the combination with a friction shell having wedge faces, of an outer follower, friction blocks interposed between and engaging said follower and said wedge faces and transversely movable upon relative approach of said follower and shell, separable wedge blocks engageable with said friction blocks and also movable transversely of said shell lengthwise of said friction blocks, an inner follower, and a spring resistance, said wedge blocks being adapted to separate said two followers upon inward movement of said wedge blocks.

1,302,076. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 12, 1918. Serial No. 221,930. 2 Claims. (Cl. 213—64.)



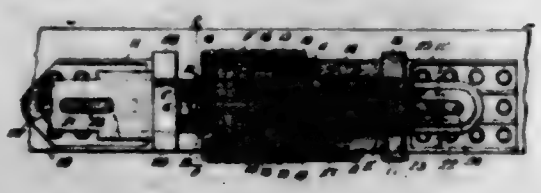
2. In a friction shock absorbing mechanism, the combination with a central friction post having a tapered section; of an outer friction shell having a series of sets of wedge faces on the interior thereof, each set comprising a plurality of wedge faces and arranged at a relatively blunt angle with respect to the axis of the shell; a series of friction blocks, each block having an inner wedge face coöperable with the tapered section of the post and a set of wedge faces engaging and coöperable with one of the sets of wedge faces of the shell; and spring means for resisting relative movement between the blocks and post.

1,302,077. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 12, 1918. Serial No. 221,932. 6 Claims. (Cl. 213—64.)



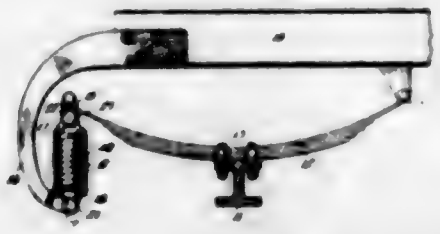
1. In a friction shock absorbing mechanism, the combination with a friction shell, of a wedge, a plurality of friction elements movable in unison with and attached to the wedge all of said elements having direct frictional engagement with the shell, shoes having wedge faces coöperable with said wedge, said shoes co-acting with said elements to force the latter against the shell, and spring means resisting relative movement between the shell and shoes.

1,302,078. FRICTION-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 1, 1918. Serial No. 225,886. 3 Claims. (Cl. 213—64.)



2. In a friction shock absorbing mechanism, the combination with an expansible shell comprising a plurality of elements and a yieldable surrounding medium, of a plurality of friction elements disposed within said shell and coöperable therewith, and spring means disposed within said shell and adapted to resist relative movement between the shell and said friction elements.

1,302,079. SHOCK-ABSORBER. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 27, 1918. Serial No. 231,101. 8 Claims. (Cl. 267—46.)



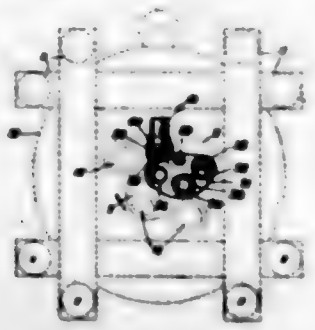
1. A shock absorber adapted to be interposed between two members of a vehicle or the like and including, two elements, each of said elements comprising a double coiled spring, the coils of one element being frictionally interlocked with the coils of the other element.

1,302,080. FRICTION SHOCK-ABSORBING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 23, 1918. Serial No. 255,240. 2 Claims. (Cl. 213—64.)



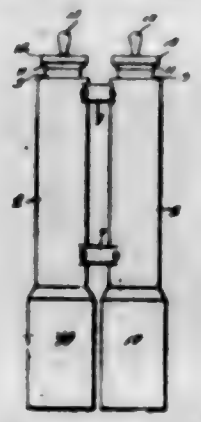
1. In a friction shock absorbing mechanism, the combination with a friction shell, a plurality of friction shoes having inner wedge faces and coöperable therewith, and spring means to resist relative movement between said shoes and shell; of wedging means coöperable with the shoes, said wedging means including a wedge proper having a plurality of flat wedge faces corresponding in number to the wedge faces of the shoes and opposed thereto, an anti-friction roller interposed between each wedge face of a shoe and the corresponding wedge face of the wedge proper, and a roller keeper formed to fit over the wedge faces of the wedge proper, the portions of the keeper interposed between the wedge proper and shoes being of lesser thickness than the diameter of the rollers, said keeper having slots therein to accommodate said rollers and maintain the latter in proper position.

1,302,081. DIVING-BELL. KARL A. OLSON, Plainfield, N. J. Filed Sept. 25, 1918. Serial No. 255,650. 7 Claims. (Cl. 61—69.)



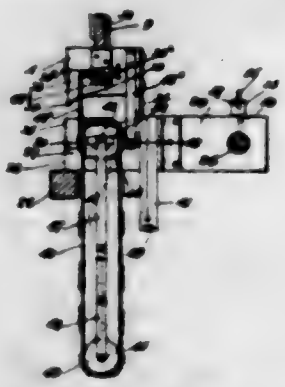
1. In an apparatus of the class described, a hose coupling adapted to be connected with the hull of a sunken vessel and comprising a main body portion having a central bore, and a supplemental body portion rotatably mounted on the main body portion and having a port or passage placed in communication with the bore of the main body portion, a flexible tube coupled with said supplemental body portion, and the main body portion being provided with means to permit of its connection with the hull of a sunken vessel.

1,302,082. THERMOMETER-CASE. HERMAN C. PARSONS, Monument, Oreg. Filed June 4, 1918. Serial No. 238,156. 3 Claims. (Cl. 167—3.)



3. The combination with a casing for containing an antiseptic solution, of a plunger casing having a conical thermometer chamber, a thermometer having means on one end for engagement with the wall of the thermometer chamber for holding the thermometer in its chamber, said first casing comprising an upper tubular section and a bottom tubular section having its lower end closed, said sections being detachably united, one within the other, said upper tubular section acting as a guide for the plunger casing, the lower end of the thermometer chamber terminating in lateral ports, through which the solution may be forced into the thermometer chamber, when the plunger is moved downwardly, and allowed to return into the lower section of the casing, when the plunger is moved upwardly and a disk carried by the lower end of the plunger casing to contact with the lower end of the tubular section to limit the plunger casing in its upward movement.

1,302,083. INDEX CUTTER AND PRINTER. JOSEPH C. PELLETIER and DAVID RONDEAU, Winnipeg, Manitoba, Canada. Filed July 5, 1917. Serial No. 178,793. 2 Claims. (Cl. 101—78.)

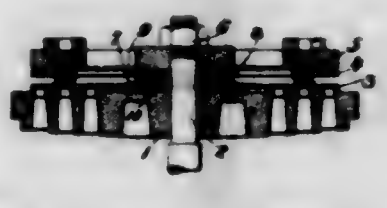


1. In an index cutting and printing machine, the combination with a lower knife carriage, a substantially L-shaped knife blade mounted on the carriage, an upper suitably mounted knife carriage, a substantially L-shaped upper knife carried by the upper carriage and means for manipulating the upper knife carriage to bring the knives into cutting relation, of an endless indexing printing strip carried by the lower knife carriage and located at one end thereof and presenting a series of printing characters, means for inking the strip, a platen carried by the upper knife carriage and means for automatically bringing the indexing characters successively to a position under the platen to effect the printing of a character each time the knives are brought into cutting relation.

1,302,084. PLATE-VALVE. ARTHUR E. PERKINS, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 5, 1917. Serial No. 166,541. 2 Claims. (Cl. 251—119.)

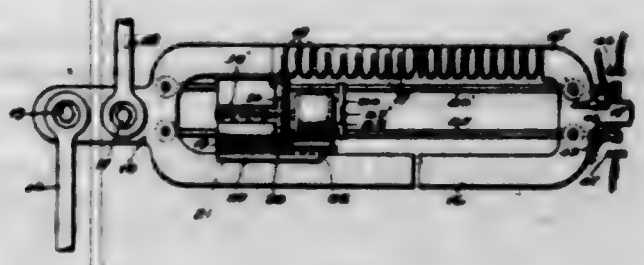
1. In a plate valve construction comprising a seat, an annular valve section covering valve ports in said seat, an

integral central section on said valve section secured to a post binding the valve seat and valve section together, said central section having raised sections secured thereto



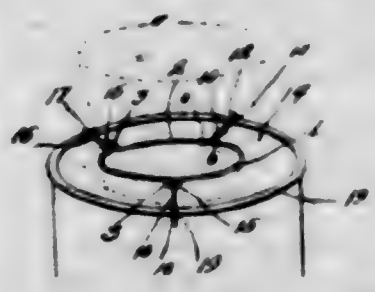
upon either side to position the central section midway between the limits of movement of the annular valve section.

1,302,085. ELECTRIC SCALE. WILLIAM A. PETERSEN, Excelsior Springs, Mo., assignor of one-half to Wilson L. Doyle, Whitehall, Ill. Filed July 24, 1917. Serial No. 182,508. 6 Claims. (Cl. 265—7.)



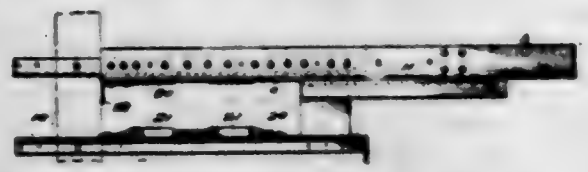
1. In a scale of the character described, the combination with a pivoted beam provided with a longitudinal set of notches, of a support adapted to slide longitudinally upon a portion of the pivoted beam, a roll pivoted to the support and provided with a screw-thread to operate within the notches of the beam, a motor secured to the support and having its armature shaft connected with the roll to turn it, means to cause the motor to operate in one direction when the pivoted beam is swung upwardly, and means to cause the motor to operate in an opposite direction when the beam is swung downwardly.

1,302,086. HOLDER FOR STRAINING-FUNNELS. PAUL T. PITLICK, Okobojo, S. D. Filed June 30, 1915. Serial No. 37,234. 1 Claim. (Cl. 226—33.)



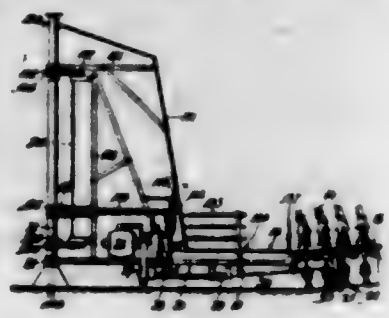
In a holder for a straining funnel, a funnel receiving and supporting ring having a plurality of eyes equally spaced from each other, said ring being constructed from a single length of spring wire, the ends of said wire being so connected as to form one of said equally spaced eyes, a pair of hooks connected to two of the eyes and extending radially from the ring, one of said pair of hooks having its hooked end disposed at a right angle to the ring and adapted to engage the upper edge of the receptacle, the other hook having its hooked end in a horizontal plane and adapted to engage a member on the upper edge of the receptacle so as to prevent concentric movement of the ring, a spring having one of its ends connected to the eye formed by the ends of the ring wire and a receptacle engaging hook connected to the other end of the spring adapted to engage the upper edge of the receptacle for maintaining the ring concentrically suspended in the upper end of the receptacle.

1,302,087. CAR-UNDERFRAMING. HERMAN C. PRIESS, Blue Island, Ill. Filed May 2, 1918. Serial No. 232,026. 8 Claims. (Cl. 105—420.)



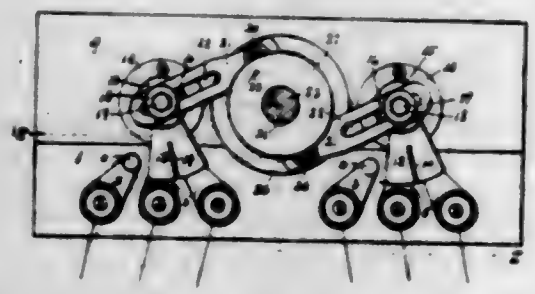
1. In an underframe construction, in combination, a main center sill composed of two separated beams, a draft sill associated therewith comprising two flanged channel irons adapted to be supported by the center sill members along their upper edges, L-shaped angle irons on the adjacent sides of the center sill beams and securing the draft sill members to the center sill members, a transverse end sill above the draft sill members and at one end of the center sill members, angle irons secured to each center sill member abutting the end sill, vertically disposed tie bolts passing through the end sill and flanges of the draft sill members adapted to prevent relative longitudinal and lateral movement of the end sill with respect to the draft sill members, and malleable iron castings secured to the vertical sides of said draft sill members for supporting the draft rigging.

1,302,088. AMUSEMENT DEVICE. THOMAS W. PRIOR and FREDERICK A. CHURCH, Venice, Calif. Filed Apr. 28, 1917. Serial No. 164,071. 10 Claims. (Cl. 46—27.)



1. An amusement device comprising an outer rotatable platform, rider supports on said outer platform, means for moving said rider supports backward and forward with respect to the platform during its rotation, means for driving said outer platform, an inner rotatable platform, stationary objects on said inner platform, and means for driving said inner platform in the opposite direction to the outer platform.

1,302,089. SWITCH. BENJAMIN K. READ, Detroit, Mich., assignor to Harry W. Beggs, Vincennes, Ind. Filed June 26, 1916. Serial No. 105,883. 5 Claims. (Cl. 171—312.)



1. In a switch, the combination of a shaft adapted to revolve in either direction, a ring carried by the shaft, means carried by the shaft to support and frictionally engage the ring and turn it in either direction, a series of contacts, a pivotally mounted plate adapted to engage said contacts, and means connected to said ring to swing said plate across said contacts.

1,302,090. PROCESS OF TREATING PRESERVATIVES. SAMUEL H. REEVES, Alamosa, Colo., assignor of one-half to Charles E. Bollier, Alamosa, Colo. Filed Nov. 24, 1917. Serial No. 203,778. 1 Claim. (Cl. 134—51.)

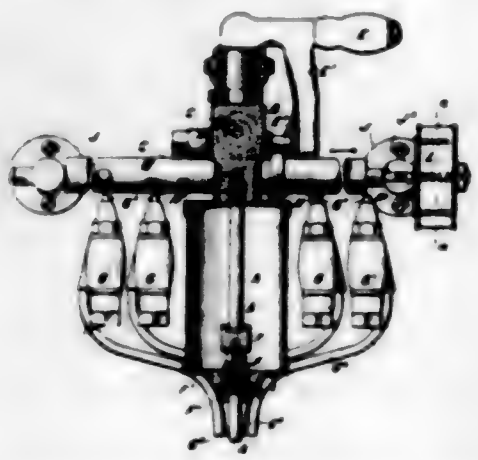
The herein described process of treating a plastic bituminous preservative material to render the same impervious to moisture which consists in first adding an inflammable liquid thereto and igniting the same, said inflammable liquid being in quantity substantially one per cent. of the material, and then adding a readily evaporable liquid to the material to reduce the consistency thereof, said last named liquid being in quantity substantially twenty per cent. of the material.

1,302,091. TIRE. ELDRO M. REID, Pocatello, Idaho. Filed Dec. 20, 1917, Serial No. 208,061. Renewed Mar. 15, 1919. Serial No. 282,948. 1 Claim. (Cl. 152—8.)



A tire for a wheel comprising an outer spring steel wire mesh of heavy gage, an inner spring steel wire mesh of a lighter gage, and an intermediate filling constructed of a composition of rubber and canvas.

1,302,092. APPARATUS FOR DELIVERING AERATED WATERS AND OTHER EFFERVESCING BEVERAGES. JOHN SHEEHAN, Melbourne, Victoria, Australia, assignor to Ludwig Owen Menck, William James Ballantyne, and John Sheehan, trading as The Aerated Water Machinery Company, Melbourne, Australia. Filed July 11, 1917. Serial No. 179,826. 6 Claims. (Cl. 225—26.)



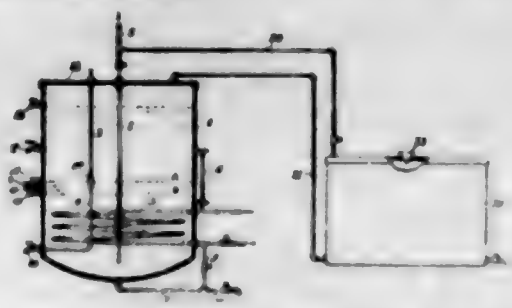
1. In apparatus for delivering aerated waters and the like of the class described having a plurality of syrup valves a device for selecting any particular syrup and causing the valve controlling the same to be actuated by the operation of the handle or lever consisting of a slidable rod or bar having a number of cams mounted thereon at different circumferential positions with means for setting the said bar so that any particular cam shall engage its corresponding syrup valve when the bar is moved longitudinally substantially as described.

1,302,093. SAFETY-SHUTTER. WESLEY PRICE SHOMAKER, Richmond, Va. Filed May 7, 1918. Serial No. 233,150. 9 Claims. (Cl. 189—60.)

1. In a safety shutter, a frame, vertical channel guides mounted in said frame, upper and lower series of coupled shutter slats in said guides, means for tilting the outer faces of the opposing walls of said slats, said guides constituting abutment means against which the coupling means abut, when the slats are collapsed, thereby rendering the slats rattle-proof.

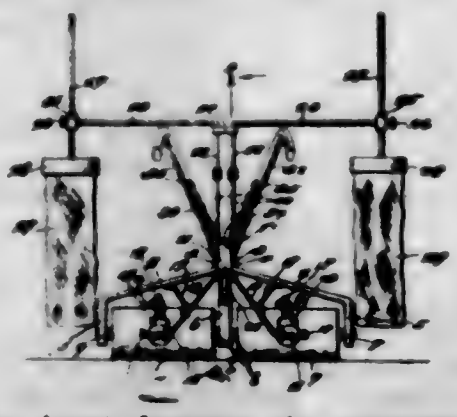


1,302,094. PROCESS OF SEPARATING OIL. CHARLES J. SKIDMORE, Brooklyn, and PETER F. COMMITT, New York, N. Y. Filed Oct. 24, 1914. Serial No. 868,205. 5 Claims. (Cl. 210—10.)



1. The process of purifying lubricating oil containing carbon particles due to the incomplete combustion of liquid fuel, which comprises violently agitating a charge of said oil with a body of liquid whose specific gravity is greater than that of the charge and incapable of chemically re-acting with the oil, the amount of said liquid being materially greater than is required to effect the ultimate collection of the carbon particles of the charge and sufficient to form a layer of such liquid below the layer of collected carbon, then allowing the mixture to settle in layers one of which will be substantially clear oil, the mixture being heated to a temperature not les than 90° F. while the preceding operations are performed and finally separating the layer of clear oil from the other layers.

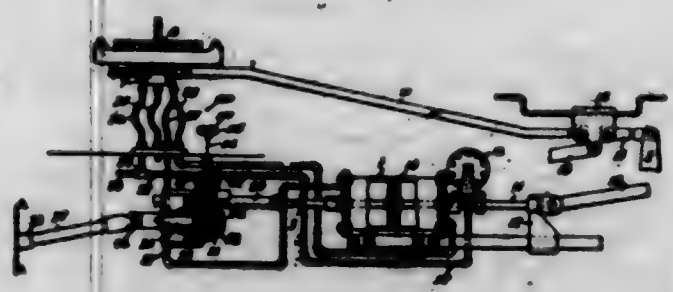
1,302,095. INSECT-DESTROYER. DANIEL D. SMITH, Valdosta, Ga. Filed Dec. 19, 1918. Serial No. 267,441. 5 Claims. (Cl. 43—5.)



1. In an insect destroyer, the combination with a frame, of heat generating means below and carried in the

frame and adapted to traverse the soil between the rows of plants, insecticide containers supported over the rows of plants, vibrating supports on the frame, and adjustable connections between the containers and the supports.

1,302,096. STEAM-ENGINE REVERSING-GEAR. JACOB RUSH BYERS, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed Sept. 18, 1916. Serial No. 120,715. 42 Claims. (Cl. 121—98.)



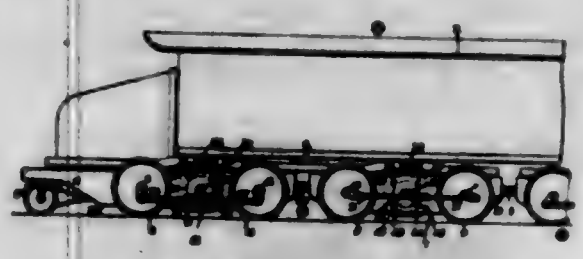
5. In combination, valve reversing mechanism for a locomotive, valve reversing mechanism for a tractor or auxiliary locomotive, and actuating means arranged to control the movement of both of said mechanisms simultaneously, said actuating means including disconnectible means arranged to allow for the control of the locomotive valve mechanism independently of the valve mechanism on the tractor or auxiliary locomotive.

1,302,097. STENCIL-CUTTING. CARL B. STOLPER, Kansas City, Mo. Filed May 29, 1918. Serial No. 237,290. 7 Claims. (Cl. 41—3.5.)



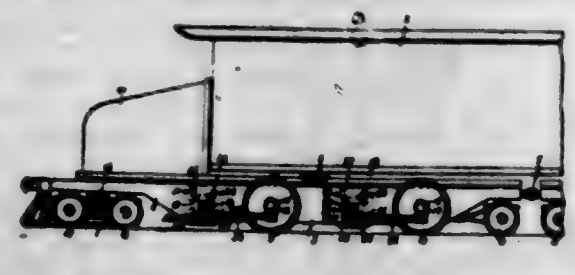
1. A type carrying member a multiple card engaging member carried by the first mentioned member, to engage one edge of each of a plurality of cards, and separate card engaging means, one for each card on the first mentioned member.

1,302,098. LOCOMOTIVE. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 30, 1916. Serial No. 128,410. 8 Claims. (Cl. 105—121.)



1. In a locomotive, the combination with a cab, of two articulated running gears pivotally connected thereto, each of said running gears comprising two four-wheel pivotal trucks and a two-wheel guiding truck, and means located between the pairs of wheels of each of said pivotal trucks for propelling the same.

1,302,099. LOCOMOTIVE. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 30, 1916. Serial No. 128,411. 11 Claims. (Cl. 105—122.)



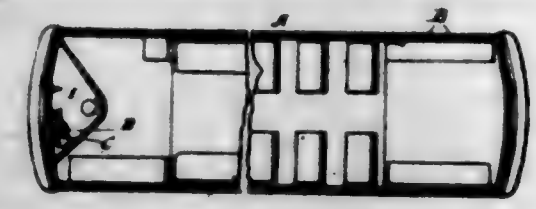
1. In a locomotive, the combination with a cab, of two articulated running gears pivotally connected to the cab, each of said running gears comprising two pairs of driving wheels, a four-wheel outer guiding truck, and a two-wheel inner truck.

1,302,100. TRANSPARENT PAPER AND PROCESS OF MAKING THE SAME. WILLARD E. SWIFT Worcester, Mass., assignor to United States Envelop Company, Springfield, Mass., a Corporation of Maine. Filed Mar. 1, 1915. Serial No. 11,219. 2 Claims. (Cl. 91—68.)

1. A transparent paper formed by applying rapidly drying transparent liquid having resinous matter in solution to the surface of a semitransparent nonabsorbent paper having a hard smooth surface.

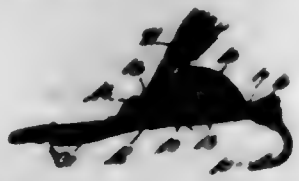
2. The herein described process of treating a semitransparent nonabsorbent paper having a hard smooth surface by the application thereto of a rapidly drying transparent liquid having resinous matter in solution.

1,302,101. SAFETY APPLIANCE. WILLIAM W. TAYLOR, Kansas City, Mo. Filed July 23, 1917. Serial No. 182,334. 2 Claims. (Cl. 21—231.)



2. In combination with a car and its controller, a stop to hold the controller handle in off position, a core fixed at one end to said stop, an arm carried by said core, a two colored signal glass carried by said arm, a case inclosing the stop, the core and the signal glass and provided with a sight opening, a spring to normally hold the stop out of the path of the controller handle and expose one color of the glass at the sight opening, a coil surrounding the core, a circuit to energize said coil, cause the core to move the stop in the path of the controller handle and expose the other color of the glass at the sight opening, a circuit closer to close said circuit, and means on the car door to open said circuit closer when the door is closed.

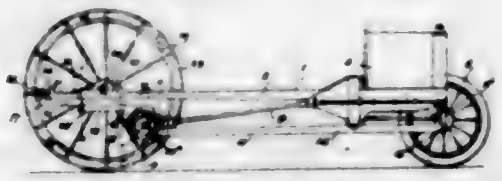
1,302,102. FISH-BAIT. ORLEY C. TUTTLE, Old Forge, N. Y. Filed Apr. 25, 1918. Serial No. 230,776. 5 Claims. (Cl. 43—30.)



1. In a fish bait, a fish hook, a tuft of fluffy and compressible filaments arranged lengthwise of the shank of the fish hook, a wrapping element around said filaments

and hook at a point spaced from one end of said tuft, and a second wrapping element around said filament and spaced from the first said wrapping element, said wrapping elements embracing the tuft so tightly that said tuft is thereby considerably constricted adjacent thereto while remaining fluffy and expanded at portions forward and rearward of said wrapping elements, one of said fluffy ends being formed to simulate the head of a living creature, the portion between said wrapping element simulating the body of a living creature, the constricted portion adjacent to said head simulating the neck of the living creature.

1,302,103. TRACTOR-WHEEL ATTACHMENT FOR AUTOMOBILES. VICTOR UNDERHILL, Reston, Manitoba, Canada. Filed Apr. 17, 1917. Serial No. 162,666. 1 Claim. (Cl. 180—16.)

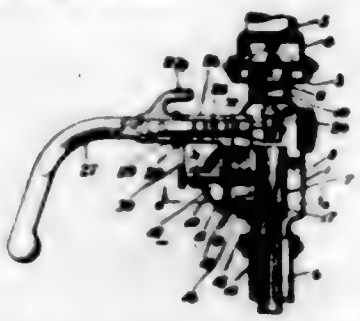


The combination with an automobile chasis having the rear carriage wheels removed, of a tractor frame passing beneath the chassis and secured permanently thereto and having the rear end thereof formed with an upstanding offset providing a rearward elevated frame extension, sliding blocks mounted on the frame extension screw means for adjustment of the blocks toward and away from the chassis, a transverse traction shaft carried by the blocks, traction wheels mounted on the ends of the traction shaft, internal gear wheels secured to the traction wheels and pinions mounted to rotate with the rear axle of the chassis and engaging with the gears.

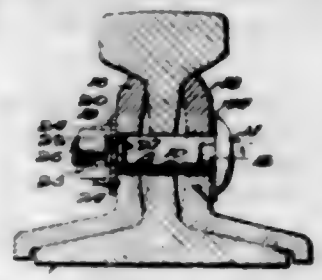
1,302,104. AUTOMATIC VACUUM CLOSING-VALVE. MILFORD T. VANDERVOORT, Grand Rapids, Mich., assignor of one-half to John Mill Wright, Grand Rapids, Mich. Filed Dec. 4, 1918. Serial No. 265,288. 5 Claims. (Cl. 137—139.)

1. In a construction of the character described, a casing through which liquids are adapted to pass, a valve movably mounted in the casing to take two different positions, one permitting the passage of liquids and the other stopping such passage, a handle, means mounted on the casing and associated with the valve to move it to said first position, said handle being connected to said means for moving the same, brake means frictionally engaging the handle to hold it in any position to which it may be moved, and means automatically operable through the passing of liquid through the casing for releasing said brake means to permit the handle to take its normal position and stop passage of liquid through the casing, substantially as described.

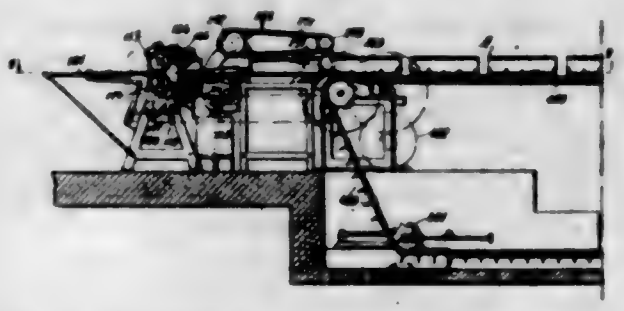
1,302,105. NUT-LOCK. JAMES A. WARREN, Council, Idaho, assignor of forty-nine one-hundredths to Wilbrod G. Ste. Marie, Shaniko, Oreg. Filed Apr. 2, 1918. Serial No. 226,232. 1 Claim. (Cl. 151—11.)



In a device of the class described, a bolt having a portion other than round between the threads thereof and the body of the bolt, a stop member having marginal teeth and provided with an aperture, said stop member having protruding flanges adapted to engage the other than round portion of the bolt, a nut engaging member rotative relatively to the bolt and having means for locking the same to the nut, and a stop pawl carried by the nut engaging member and coacting with the teeth of the stop member.



1,302,106. APPARATUS FOR PLATING METALS. WILLIAM EWART WATKINS, New York, N. Y., assignor to The Metals Plating Company, New York, N. Y., a Corporation of New Jersey. Filed June 10, 1916. Serial No. 102,977. 56 Claims. (Cl. 91—12.1.)

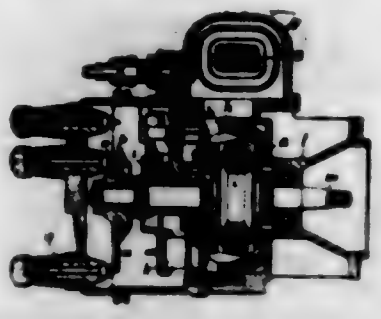


1. In an apparatus for plating metal with metal, the combination of a furnace, means for maintaining sheets of metal in arched form, and for delivering said sheets into said furnace for treatment therein.

28. In an apparatus for plating metal with metal, the combination of a furnace, a conveyer passing through said furnace, means for delivering arched sheets of metal to said conveyer for delivery to and through said furnace, means for stripping the arched sheets from the conveyer and means for forwarding the sheets beyond the stripping means.

56. The combination with a furnace and an endless conveyer arranged to carry a series of flexible sheets therethrough while said sheets are supported at their edges only, a pair of stationary receiving guides located at the receiving end of said conveyer and spaced apart a distance approximately equal to the span of the sheets while supported at their edges only on said conveyer, and an endless pusher chain provided with fingers arranged to strike the rear end of each sheet while it is in the stationary guides and push said sheet through said guides onto said conveyer.

1,302,107. IGNITION APPARATUS FOR INTERNAL-COMBUSTION ENGINES. ERNEST ANSLEY WATSON, West Orchard, Coventry, England, assignor to The M-L Magneto Syndicate Limited, West Orchard, Coventry, England. Filed Feb. 19, 1918. Serial No. 218,119. 6 Claims. (Cl. 123—149.)



1. In ignition apparatus for internal combustion engines, consisting in part of an induction coil, a circuit

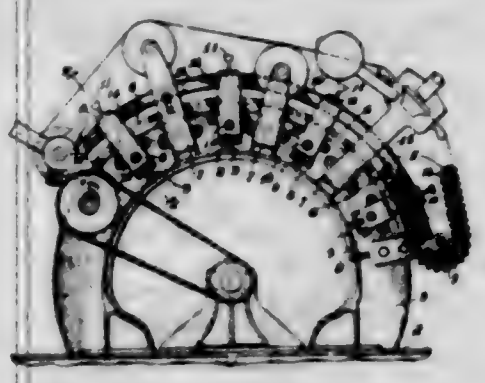
breaker, and means independent of the circuit breaker, whereby magnetism is separately supplied to the induction coil during the open circuit period of the coil, substantially as described.

1,302,108. WEARING-APPAREL. MAX ARNO WETZEL, Merrill, Wis. Filed Sept. 12, 1918. Serial No. 253,781. 1 Claim. (Cl. 2—98.)



The combination with a garment having a plurality of slits arranged therein, of a plurality of heads secured to the garment adjacent said slits, said heads being arranged in rows extending throughout the length of said slit, a plurality of sockets secured to said garment adjacent said slits, said sockets being arranged in rows extending throughout the length of said slits, a triangular-shaped removable inset provided with a plurality of heads and a plurality of sockets, the heads carried by the inset being arranged to engage the sockets carried by the garment, the heads carried by the garment being arranged to engage the sockets carried by the inset, the heads and sockets of the garment being adapted to engage each other when the inset is removed to retain the edges of the garment adjacent said slit in engagement with each other.

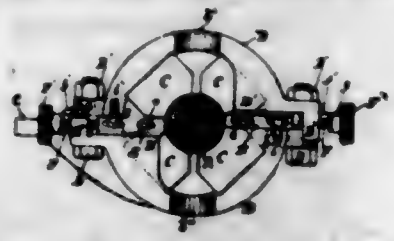
1,302,109. CARDING-MACHINE. GEORGE M. WHITIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed July 31, 1917. Serial No. 183,654. 10 Claims. (Cl. 19—23.)



1. In a revolving flat card, a curved suspension track, and means for suspending the flats from the track while passing beneath it through the portion of their travel in proximity to the cylinder.

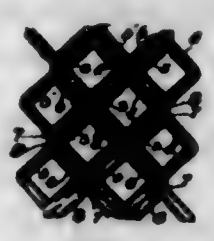
1,302,110. SHAFT-FINISHING TOOL. CLINTON H. WILSON, Erie, Pa. Filed Jan. 30, 1918. Serial No. 214,495. 3 Claims. (Cl. 82—36.)

2. In a device of the class described, a pair of semi-cylindrical shell members, means to secure said members together, a plurality of bearing blocks secured inside of said members, and adapted to engage a shaft placed therein and maintain said shells in spaced relation thereto, an inclined radial shoulder on each of said semi-cylindrical shells outside of said shell members, a cutting blade secured on each of said shoulders adapted to engage and cut



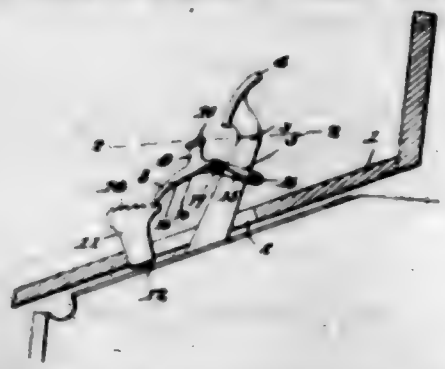
a shaving from a shaft placed in said shell, means to adjust said cutting blades radially, and means to hold said shell members against rotation, substantially as described.

1,302,111. AUTOMOBILE-RADIATOR AND METHOD OF CONSTRUCTION. THOMAS M. WILDER, Highland Park, Ill. Filed May 31, 1917. Serial No. 171,854. 3 Claims. (Cl. 257—130.)



1. In a radiator the combination of a plurality of elongated sections arranged side by side and secured together along their longitudinal edges, each of said sections comprising a pair of strips previously joined together side by side by connected abutting corresponding inwardly extending projections, said strips being longitudinally concaved on the outer faces thereof and the abutting projections being provided with matching perforations so that when the sections are joined together a longitudinal passageway is formed therebetween communicating laterally through the said matching perforations into a corresponding passageway at each side thereof.

1,302,112. AUTO ATTACHMENT. WENDELL W. WILKINS and SHELL I. WILKINS, Canisteo, N. Y. Filed Oct. 7, 1918. Serial No. 257,224. 1 Claim. (Cl. 74—81.)

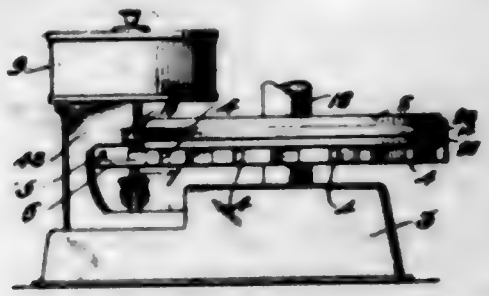


In a device of the class described, a gear-shift pedal; a clamp comprising parts located on opposite sides of the pedal; front and rear securing devices connecting the ends of the parts of the clamp; a dog pivoted on the rear securing device between the rear ends of the parts of the clamp; a fixed keeper wherewith the dog is adapted to engage when depressed; and a spring having its intermediate portion engaged with the rear securing device, one end of the spring being engaged with the front securing device, and the other end of the spring being engaged with the dog to elevate the dog.

1,302,113. BRAKE FOR BRICK-PRESSES. CHARLES W. WILKINSON, Plant City, Fla., assignor of one-half to Eugene M. Le Clair, Plant City, Fla. Filed May 1, 1917. Serial No. 165,737. 5 Claims. (Cl. 25—66.)

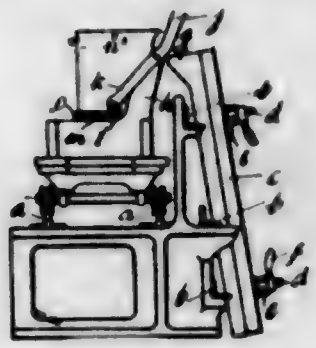
5. A brick press comprising a base; a rotary table carried by the base; supporting columns carried by the base;

a driven shaft journaled through one of said supporting columns; an arm keyed to said shaft, said rotary table having vertically disposed peripheral slots therein, and adapted to receiving the arm carried by said driven shaft, said arm being adapted for intermittently rotating said



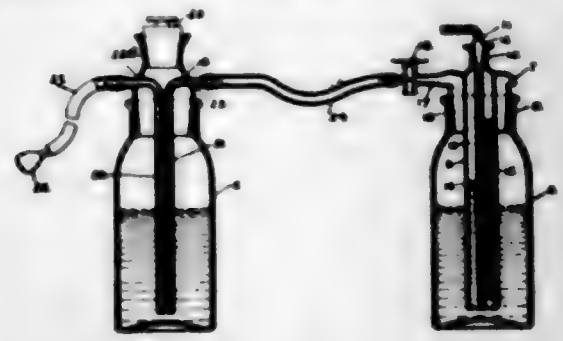
table, and a brake belt connected with said columns and normally having contact with the periphery of said table, said brake being adapted to be released from contact with said table upon the flexing of one of said columns as the result of the engaging of said arm with the table.

1,302,114. MEANS FOR CASTING METAL. WILLIAM HENRY WILLIAMS, Birmingham, England. Filed Mar. 19, 1918. Serial No. 223,445. 6 Claims. (Cl. 22—79.)



1. For casting metals and alloys the combination of a cradle for a crucible of molten metal or alloy, means for raising and tilting said cradle, said means comprising a forked lever with the fork ends connected to the cradle, and a stand portion providing a fulcrum for said lever adjacent to the portion occupied by the spout of the crucible when in said cradle.

1,302,115. RADIUMIZER. HARRY M. WILLIAMSON and SCHUYLER H. ALEXANDER, Denver, Colo. Filed Apr. 17, 1916. Serial No. 91,555. Renewed Jan. 7, 1918. Serial No. 210,773. 3 Claims. (Cl. 167—7.)

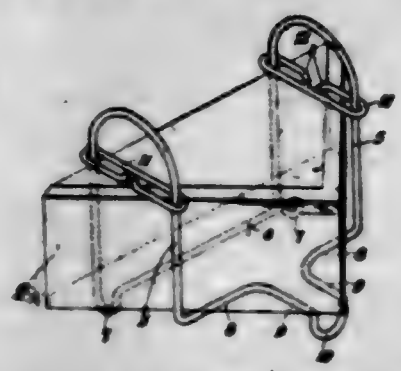


1. A radiumizer, comprising a radium preparation containing receptacle, a radium emanation receiving and storage receptacle in communication with first named receptacle, a tube depending into said first named receptacle and forming an air purifying chamber, said tube being extended into the radium preparation in said first named receptacle, a second tube extending into said first named tube and having one extremity in communication with the atmosphere while its other extremity is in communication with said first named tube, a third tube vertically positioned in said first named tube, said third tube having its upper extremity in communication with the chamber formed by said first named tube and its lower extremity in communication with the first named receptacle, and said first named receptacle having an eduction passage.

2. A radiumizer, comprising a radium preparation containing receptacle, a radium emanation receiving and storage receptacle in communication with said first named receptacle, a tube depending into said first named receptacle and extending into said radium preparation therein, said tube adapted to contain an air purifying chemical, a second tube extending into said first named tube and having one extremity in communication with the atmosphere while its other extremity is in communication with the first named tube submerged in said air purifying chemical; a third tube disposed vertically in said first named tube and having its upper extremity in communication with said first named tube above the level of the air purifying chemical therein while its lower extremity is in communication with said first named receptacle submerged in the radium preparation contained in said first named receptacle, said second named receptacle adapted to contain a liquid preparation in which said radium emanation is adapted to be precipitated, an induction tube having its discharge extremity submerged within said liquid preparation, and an eduction tube having one extremity submerged in said liquid preparation and its other extremity in communication with the exterior of the said second named receptacle.

3. A radiumizer, comprising a radium preparation containing receptacle, a radium emanation receiving and storage receptacle, a stopper for said first named receptacle, a member forming an air induction passage integrally formed with said stopper and depending into said first named receptacle, the discharge orifice of said air induction passage adapted to be submerged in the radium preparation in said first named receptacle, a stopper for said second named receptacle, a member forming an induction passage integrally formed with said stopper and depending into said second named receptacle, the discharge extremity being adapted to be submerged in a liquid contained within said second named receptacle, while the other extremity thereof is in communication with said first named receptacle, and an eduction member integrally formed with said last named stopper and depending into said last named receptacle, one extremity thereof being submerged in the liquid contained in said last named receptacle, while the other extremity thereof is exposed to the exterior of said last named receptacle.

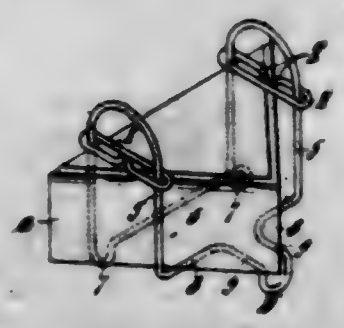
1,302,116. PACKAGE. COURTNEY P. WINTER, Holyoke, Mass., assignor, by mesne assignments, to Japanese Tissue Mills, Holyoke, Mass., a Corporation of Massachusetts. Filed Apr. 20, 1917. Serial No. 163,408. 2 Claims. (Cl. 206—57.)



1. As an element of a dispensing fixture having buckling members, a package of paper articles to be drawn between said buckling members, said package comprising a plurality of articles folded into substantially triangular form, thereby to present diverging cam edges for coöperation with the buckling members of the fixture, and whereby, upon withdrawal of an article, said edges are adapted for coöperation with the buckling members to free said article from the next, each of said articles being folded to produce upper and lower substantially tri-

angular parts of which the upper is shorter than the lower, whereby the top article of the stack may be removed therefrom by grasping the short upper fold without touching the napkin therebelow.

1,302,117. DISPENSING-FIXTURE. COURTNEY P. WILSON, New Brunswick, N. J., assignor to Japanese Tissue Mills, Holyoke, Mass., a Corporation of Massachusetts. Original application filed Apr. 20, 1917, Serial No. 165,408. Divided and this application filed Oct. 2, 1918. Serial No. 256,520. 4 Claims. (Cl. 211—29.)



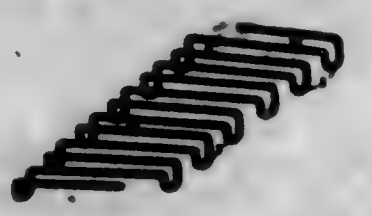
1. A dispensing fixture for a stack of triangularly shaped articles, comprising a base portion to support the stack, a pair of spaced and substantially parallel uprights upstanding from each end of said portion, each of said pairs being arranged in spaced and substantially parallel relation and adapted to receive therebetween one corner portion of said stack leaving one triangular and forwardly extending portion of the stack exposed, and a centrally arranged member projecting forwardly from said base portion as a continuation thereof to support the base of the stack at the last-named corner.

1,302,118. BEET-HARVESTER. HENRY C. WULFHORST, Newark, Ohio. Filed Jan. 5, 1918. Serial No. 210,577. 8 Claims. (Cl. 55—106.)



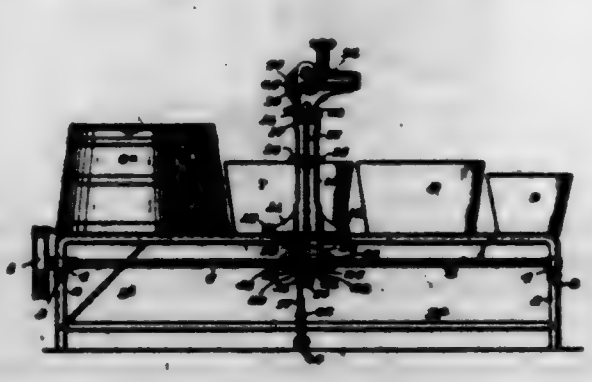
6. In a beet harvester, the combination with means for effecting the removal of beets from the soil, said means comprising a rotary member, resiliently separable jaws carried by said element and arranged to pick up and receive beets from the soil, of a table situated in the path of movement of said jaws, said table being adapted to release beets from engagement with said jaws and to receive the discharged beets, and means operable in unison with said jaws to remove beets from said table.

1,302,119. UPHOLSTERY SPRING CONSTRUCTION. LEONARD A. YOUNG, Highland Park, Mich. Filed Mar. 8, 1919. Serial No. 280,248. 12 Claims. (Cl. 155—23.)



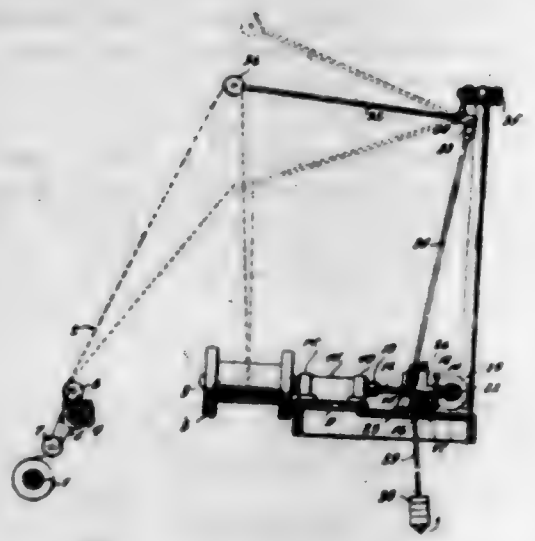
2. In upholstery spring construction a spring band comprising a wire or strip of spring material bent between the ends thereof into oppositely extending loops lying in the same plane, with the end lights of the loops bent into planes transverse to the main plane of the loops.

1,302,120. DRIVING MECHANISM. ALPHEUS W. ALTORFER, Peoria, Ill. Filed Jan. 22, 1915. Serial No. 3,778. 12 Claims. (Cl. 74—59.)



1. In a machine of the character described, in combination a support, a frame movably mounted thereon, a wringer mounted on said frame, a driving shaft, a shaft arranged at right angles to the driving shaft, gearing connecting said shafts, a clutch controlling said gearing, an upright shaft, gearing connecting said upright shaft with said second mentioned shaft, gearing connecting said upright shaft with said wringer, means controlling said clutch, and means controlling the operation of the gearing between said upright shaft and said second mentioned shaft.

1,302,121. WINDING-MACHINE. JAMES C. ANDERSON, Rutherford, N. J., assignor to Varley Duplex Magnet Company, a Corporation of New Jersey. Filed Mar. 25, 1918. Serial No. 224,440. 6 Claims. (Cl. 242—45.)

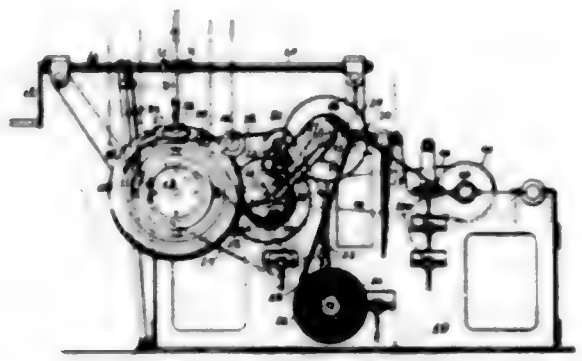


2. In a machine of the character described, the combination of a supply spool, rotated by the pull of the winding spindle exerted upon the strand, a friction brake therefor, a source of power independent of the pull of the strand, and means for applying said power to accelerate the rotation of the spool.

1,302,122. TIRE-MAKING MACHINE. LOUIS P. ARNOLD, Norwalk, Conn. Filed Mar. 7, 1916. Serial No. 82,522. 7 Claims. (Cl. 154—10.)

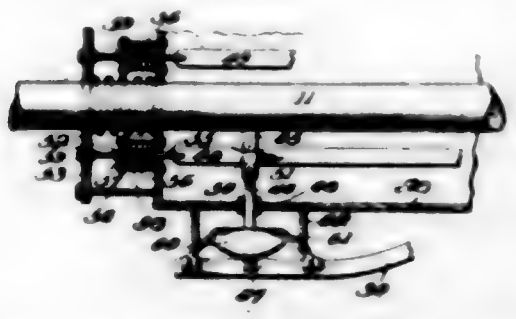
1. A machine of the class described, comprising a rotary core, a stretching drum, means for delivering a strip of tire fabric already under a greater stretching tension at

its center than at its edges to the rotary core, and means for promoting a driving contact between the rotary core



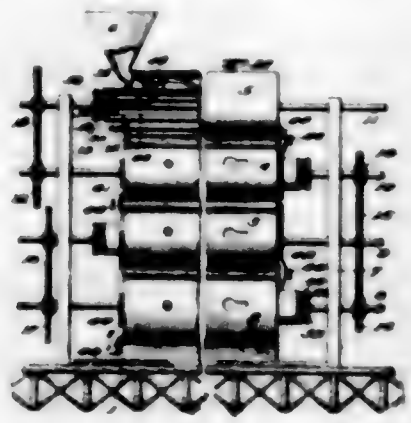
and the stretching drum consisting of a swinging frame carrying the drum and a weight by which it is constantly drawn in contact with the core.

1,302,123. CEREAL-ROASTER. SAMUEL I. BEAN and ROBERT M. BIZZELL, Asheville, N. C. Filed July 17, 1917. Serial No. 181,125. 9 Claims. (Cl. 193—18.)



1. A roasting apparatus, comprising an annular oven chamber having a sectional spiral conveyer mounted therein, sectional studs for supporting the sections of said conveyer, said studs having slidably mounted outer sections, spring-actuated pressure bars for holding said slidably mounted stud sections in extended position, and governor balls carried by said slidably mounted stud sections contacting with said conveyer sections.

1,302,124. CEREAL-ROASTER. SAMUEL I. BEAN and ROBERT M. BIZZELL, Asheville, N. C. Original application filed July 17, 1917, Serial No. 181,125. Divided and this application filed May 7, 1918. Serial No. 233,076. 3 Claims. (Cl. 34—7.)



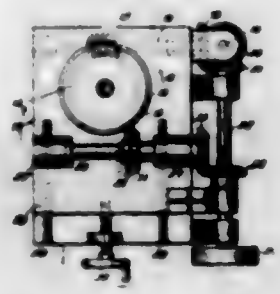
1. A roasting apparatus, comprising a series of superposed units, each unit having an annular oven chamber surrounded by an annular product of combustion chamber, a burner chamber disposed beneath said product of combustion chamber of each unit and communicating therewith, and a conveyer mounted in each oven chamber contacting with the wall of said oven chamber.

1,302,125. SELF-LOCKING RETAINER FOR MILK-BOTTLES. FERDINAND N. BECHOFF and MAURICE M. SAMUELS, New York, N. Y. Filed Mar. 6, 1919. Serial No. 280,927. 5 Claims. (Cl. 232—41.)



4. In a device of the character specified, the combination of a hinged cover positioned to be opened against springs on its hinged end and to be held against these springs in the open position, with the retainer either empty or containing an empty bottle, by an interlocking bar actuated by another spring exercising pressure to keep said interlocking bar in engagement, with a movable bottom carrying said interlocking bar positioned to be moved away from the cover by the weight of a filled bottle and to disengage the interlocking bar and the cover and thus allow the latter to be actuated by its own springs and to be returned to its closing position and means to keep the cover locked in this position.

1,302,126. PROCESS OF CUTTING WORM-GEARS. ANDREW BENSON, Chicago, Ill., assignor to Benson Gear Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 8, 1913. Serial No. 788,551. 6 Claims. (Cl. 90—3.)



2. The process of cutting worm-gears adapted for use with worms of the "Hindley" screw type, which consists in rotating a cutter and a worm-gear blank simultaneously and at a predetermined ratio of speeds about two axes perpendicular to each other, the cutter being rotated to traverse the peripheral edge of the blank in one direction to cut the faces of all the teeth facing in one direction to an approximate final contour, then advancing the blank angularly, slightly, relatively to the cutter and taking a final finish cut on each of said faces, then changing the relation of the cutter and blank so that the cutter is rotated to traverse the peripheral edge of the blank in the opposite direction to cut the faces of all the teeth facing in the opposite direction to those cut by the first operation to an approximate final contour and finally advancing the blank angularly, slightly, relatively to the cutter and taking a final finish cut on each of the last named faces of the blank, substantially as specified.

1,302,127. SHOT-HOLE SCRAPER AND TAMPER. JOHN H. BITZ, Mount Pleasant township, Westmoreland county, Pa. Filed Sept. 7, 1916. Serial No. 118,920. 2 Claims. (Cl. 255—60.)

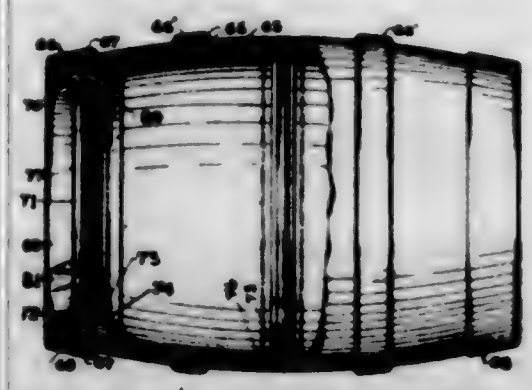
1. A mining tool comprising, in combination, a bar forming a handle, said handle having a parallel sided

strap on one end and a ferrule on the other, and a hinged blade on the strap end of the handle, said blade having a tongue on one edge extending between the sides of said strap, means for pivotally connecting said tongue to the strap, the outer end of said strap having



a projection engaging with the blade to limit swinging movement of the blade in one direction, and one edge of the blade having shoulders engaging with the strap to restrict swinging movement of the blade in the opposite direction.

1,302,128. **PAPER BARREL.** ROBERT S. BOLGER, Richmond Hill, N. Y., assignor of one-half to George F. Whistler, Brooklyn, N. Y. Filed Mar. 23, 1916, Serial No. 86,121. Renewed Jan. 2, 1919. Serial No. 269,890. 6 Claims. (Cl. 229—67.)



1. A bilged barrel body composed of a continuous web of paper wrapped upon itself to form a barrel body embodying a plurality of superimposed plies, and a bilge-sustaining expansion ring located within the barrel body and midway between the ends thereof, said ring being expansible after its insertion in the barrel body.

1,302,129. **SENDER FOR HERTZIAN WAVES UTILIZING POLYPHASE GENERATORS.** VICTOR BOUCHARDON, Paris, France. Filed July 27, 1914. Serial No. 853,370. 2 Claims. (Cl. 250—27.)



1. In apparatus for the production of damped Hertzian waves the combination of an *n*-phase alternating current generator, a battery of *n*-condensers of equal capacity connected in mesh, conductors connecting the *n* terminals of the generator with the *n* corners of the mesh connected condensers and conductors connecting the *n* corners of the mesh connected condensers to *n* points of a spark producing device, connectors connecting two points of said spark producing device with the primary of an oscillation transformer, and means forming a part of the spark producing device for successively effecting discharge through the primary of the transformer of the condensers at the moment at which their terminals have the maximum potential differences.

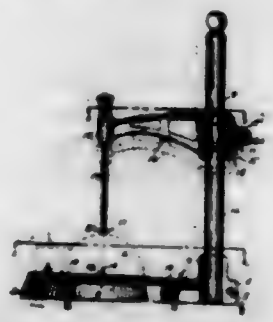
1,302,130. **AUTOMOBILE-SIGNAL.** MARVIN O. BOWERS, Success, Saskatchewan, Canada. Filed May 28, 1918. Serial No. 237,074. 1 Claim. (Cl. 116—31.)

In combination with a vehicle body, of a signal comprising a plate fixed upon said body and having a signal indicating legend, said plate having spaced knuckles upon its lower edge, a covering plate having spaced apart knuckles interposed between the knuckles of the indicating plate, a shaft passing through said knuckles and being keyed to the knuckles of the covering plate, whereby as said shaft is turned, said covering plate will be moved to cover the said indicating plate or may be swung away to expose the same, an L-shaped link fixed upon the outer end of said shaft, a coiled spring surrounding said shaft



and bearing upon said link and said covering plate for normally holding the covering plate in engagement with the indicating plate, a rod having a bifurcated end pivotally mounted upon said link, and means for drawing upon said rod for shifting the link, whereby said shaft will be turned to move said covering plate from the indicating plate against the tension of the coiled spring, although when the rod is released, said coil spring will return the covering plate to bear on the indicating plate.

1,302,131. **CENTERING-GAGE.** RAY L. CARTER, Syracuse, N. Y. Filed Oct. 29, 1918. Serial No. 260,187. 4 Claims. (Cl. 33—191.)



1. A centering gage, comprising a flat top bed having a centering socket facing upwardly adapted to receive a centering-pin for positioning the work, said bed having a rearwardly projecting neck, the said neck having a split boss which is bored out vertically, an upright guide telescoping said boss and clamped therein, said guide having a V-shaped groove facing the split in said boss, a vertically adjustable arm having an apertured head slidable on said guide, the free end of said arm adapted to support a vertically movable centering punch, and means comprising a square key slidable in said groove and a set-screw for holding said arm in different adjusted positions on said guide.

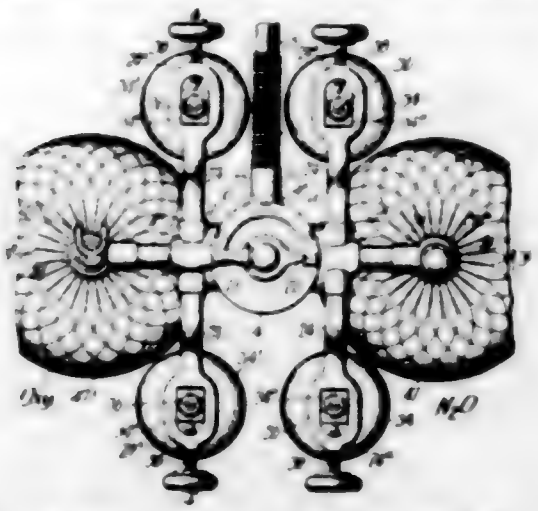
1,302,132. **SEALED CONTAINER TO FACILITATE THE OPENING THEREOF.** CHARLES GRANT CAMPBELL CHRISTIE, Strathfield, near Sydney, Australia. Filed May 29, 1917. Serial No. 171,724. 3 Claims. (Cl. 220—51.)



1. In a container provided with a flanged closure and a frangible seal, means for rupturing said seal and opening

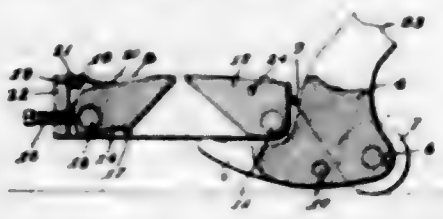
said closure consisting of a filament having two stops attached thereto at intervals, said stops depending inside the container at opposite sides thereof, the filament intermediate the stops passing between the container and flanged closure and across the top outside of the latter.

1,302,133. ANESTHETIC APPARATUS. ALBERT CHARLES CLARK, Chicago, Ill. Filed Mar. 26, 1912. Serial No. 686,252. 20 Claims. (Cl. 128—203.)



1. In an apparatus of the class described, the combination of a casing having two gas inlet ports and containing a mixing chamber and a valve chamber, the mixing chamber being around the valve chamber which communicates with said inlet ports and is provided with a port communicating with the mixing chamber, and a valve in the valve chamber for governing said ports for administering a gas from either inlet port separately or from both inlet ports simultaneously in variable proportions.

1,302,134. BOLT OR SPIKE PULLER. HARRY F. CLAYPOOL, East St. Louis, Ill. Filed Feb. 8, 1919. Serial No. 275,740. 3 Claims. (Cl. 254—23.)



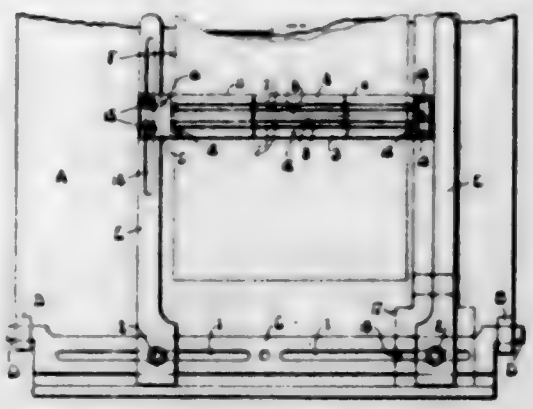
2. A bolt puller comprising an operating handle, a bifurcated jaw formed on the lower end thereof, a shaft mounted in the lower end of the said handle, rollers mounted on said shaft, a U-shaped frame pivoted in advance of the rollers and below the axis thereof, a gripping jaw mounted in the rear end of said frame, a shaft mounted in the forward end of the frame, a spring pressed and adjustable gripping jaw mounted on said shaft, and a set screw mounted in the forward end of the frame for adjusting the adjustable jaw or different diameters of bolts.

1,302,135. TRACK IMPLEMENT FOR AIR-BRAKE SYSTEMS. PATRICK J. CLIFFORD, Avoca, Pa., assignor to Clifford Automatic Train Stop Company, Scranton, Pa., a Corporation of Delaware. Filed Sept. 26, 1917. Serial No. 193,328. 3 Claims. (Cl. 246—204.)



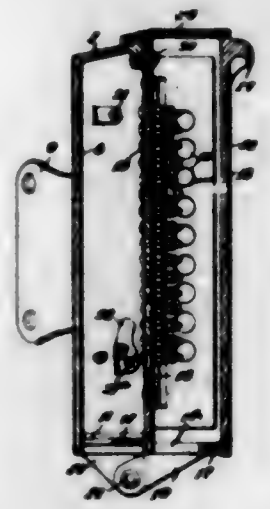
3. In train stopping apparatus a track contact device comprising an elongated guide member having an open top, a contact member guided in said guide member and having a reversely inclined upper face projecting through said open top, said contact member having end lugs engaging beneath shoulders on the casing and having a central downwardly extending projection, a leaf spring having its central portion connected to said lug, cross pins on the guide member on which the ends of the springs slidingly rest, and means connected with said projection on the contact member for holding it depressed when the track is clear.

1,302,136. SCORING ATTACHMENT FOR PRINTING-PRESSES. EDWARD A. CLOONAN, St. Louis, Mo. Filed Sept. 12, 1918. Serial No. 253,796. 10 Claims. (Cl. 164—98.)



1. A printing press provided with a sheet-receiving platen, a holder comprising a pivotally mounted member and a gripper arm member extending therefrom, said pivotally mounted member being movable to carry said gripper arm member toward and away from said platen, and a scoring device extending from said gripper arm member so as to engage the paper on the platen, said scoring device being at a right angle to said gripper arm member and one end of the extended scoring device being detachably secured to said gripper arm member.

1,302,137. ELECTRIC TERMINAL BOX. IRVIN M. COOK, Cleveland, Ohio. Filed Dec. 27, 1917. Serial No. 209,154. 2 Claims. (Cl. 247—13.)



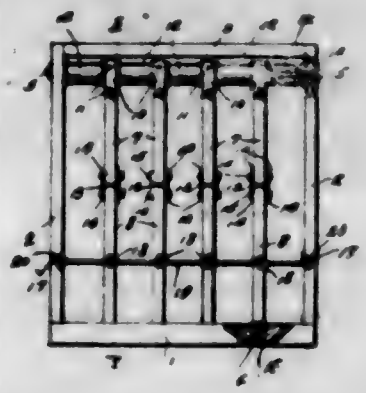
1. An electric terminal box comprising a back casing section having hinge members projecting downwardly below the bottom thereof, a panel board frame having an outwardly projecting flange at the bottom thereof and also having downwardly projecting hinge members pivoted to said hinge members below the bottom of the box, whereby said frame may swing to reversed position away from and below the casing, and a front casing section removably attached to said rear section and adapted to inclose said frame and its flange.

1,302,123. ROTARY ENGINE. McKee Cooper, New York, N. Y., assignor of one-half to Robert R. Reynolds, New York, N. Y. Filed May 10, 1918. Serial No. 233,741. 6 Claims. (Cl. 60—41.)



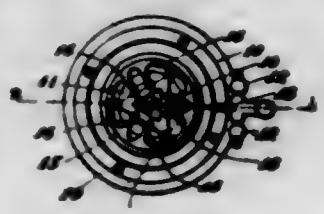
5. In an engine of the type described, the combination with a rotary element, a main shaft on which its rotor is mounted, a row of cylinders, reciprocating pistons therein connected with cranks on said main shaft, a carbureter, inlet manifold, branches therefrom to the several cylinders, and check valves in said branches; of tanks alongside the cylinders, a conduit connecting them with said rotary element, a box secured to the head of each cylinder and the adjacent tank and containing a combustion chamber, and spring-closed valves from the cylinder to the box and from the box to the tank.

1,302,139. FLOOD-GATE. Thomas Wiley Cooper, Hugo, Okla. Filed Nov. 12, 1918. Serial No. 262,226. 7 Claims. (Cl. 39—4.)



2. A flood gate comprising a frame having openings in the lower end thereof, a rod extending transversely of the frame adjacent the top, and pivotally connected sectional arms hung from the rod and adapted to have their lower ends received in the openings in the frame.

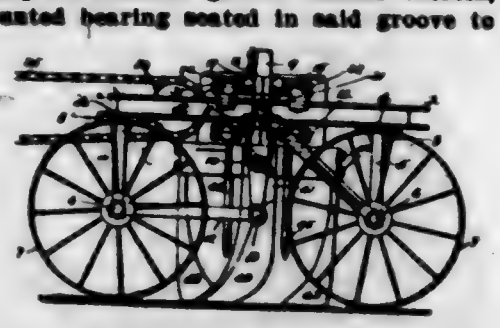
1,302,140. REPRODUCER FOR TALKING-MACHINES. Henry T. Crapo, Boston, Mass. Filed Jan. 23, 1918. Serial No. 213,404. 1 Claim. (Cl. 274,27.)



In a reproducer comprising a sound box, a vibrating diaphragm, and a needle bar whose free end portion is adapted to engage said diaphragm, a plate formed on the said free end portion of the needle bar, a plurality of magnetized spurs located adjacent to said plate and in opposition to the diaphragm.

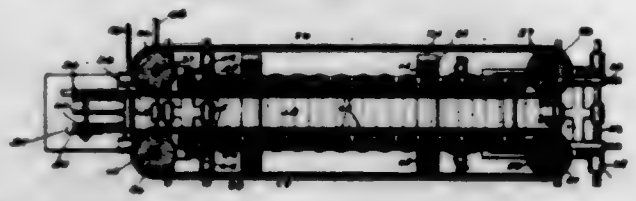
1,302,141. CULTIVATING-PLOW. Carl E. Dournowsky, Norwich, Conn. Filed Feb. 26, 1918. Serial No. 219,281. 3 Claims. (Cl. 97—51.)

1. In a cultivator, a frame, a worm wheel having oppositely extending elongated hub portions, each hub portion having an annular groove formed therein, a rotatably mounted bearing seated in said groove to support



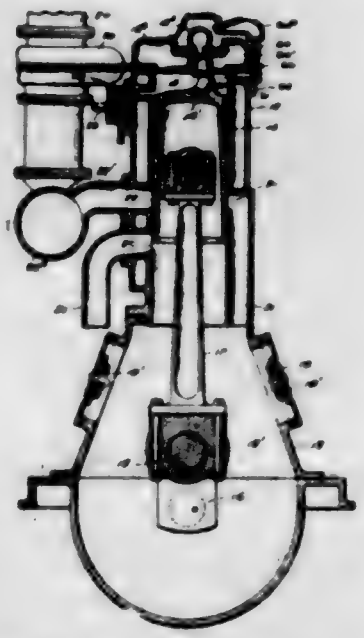
said worm wheel, cultivator implements carried by said worm wheel, a worm mounted on the frame to engage said worm wheel, and means for rotating said worm.

1,302,142. LABEL-AFFIXER. James J. Donovan, Brooklyn, N. Y. Filed July 12, 1918. Serial No. 244,629. 13 Claims. (Cl. 216—9.)



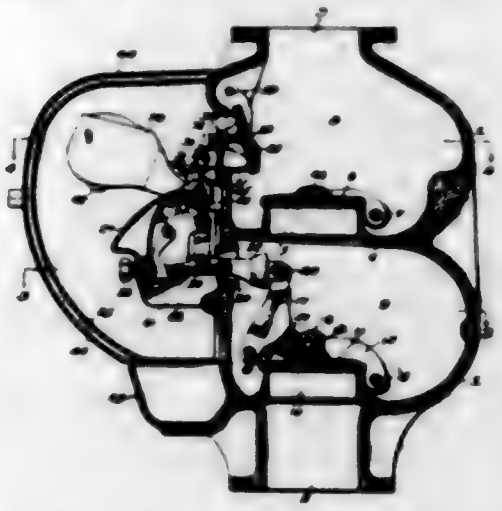
1. Mechanism for finishing the application of previously pasted and initially applied hinge strips to boxes comprising, means for grasping the box between a plurality of its sides and for exerting lateral pressure thereagainst to effect a final impingement of a previously gummed strip thereagainst, said grasping means embodying a lateral elastic member consisting of plies of materials wherein one of said plies is of a different degree of elasticity from the other.

1,302,143. INTERNAL-COMBUSTION ENGINE. Carl Engel, Seattle, Wash., assignor of one-half to Eric Johnson, Seattle, Wash. Filed May 14, 1917. Serial No. 168,363. 4 Claims. (Cl. 123—32.)



1. In an internal combustion engine, the combination with a system of conduits leading to the power cylinders of the engine, and pumps for forcing fuel oil through said conduits, of a reservoir for compressed air, a second system of conduits leading from said reservoir to said cylinders, devices for controlling the flow of air through the second-named conduits, eccentrics mounted on the engine shaft, and adjustable means actuated by said eccentrics whereby either the first or second-named conduits may be used selectively to the exclusion of the others.

1,302,144. DRY-PIPE VALVE. POWELL EVANS, Philadelphia, Pa. Filed June 16, 1916. Serial No. 103,866. 18 Claims. (Cl. 169—23.)



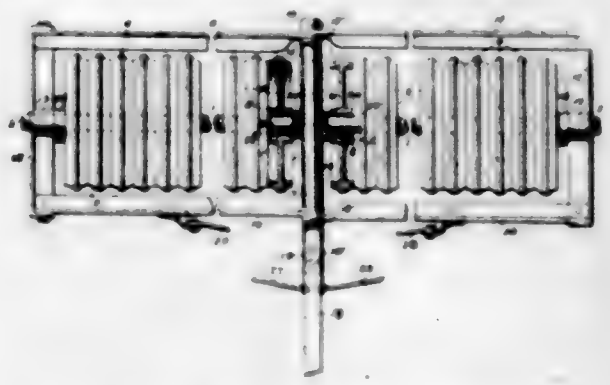
1. The combination in a dry pipe valve of a casing; main air and water valves and an auxiliary air valve; a lever mounted outside of the casing; means whereby said lever is normally prevented from swinging by the auxiliary air valve; means operatively connecting said lever with the water valve and including a member passing through the wall of the casing; with a link additional to said means connecting said member to said lever.

1,302,145. STANDARD. ARTHUR M. EVENSON, Spring Grove, Minn. Filed Feb. 28, 1917. Serial No. 151,825. 3 Claims. (Cl. 21—54.)



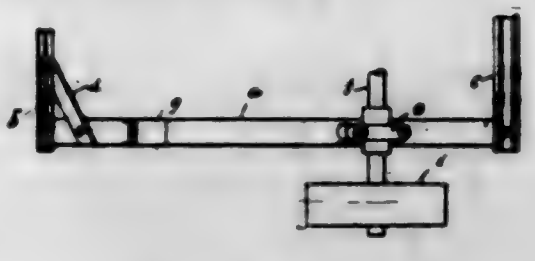
1. A wagon standard comprising a base plate, a concaved standard pivoted to said plate, ears on said standard, a supporting member pivotally connected to said ears, an angular projection on said base plate supporting the free end of said supporting member, and means for releasably attaching said member to said projection.

1,302,146. PULVERIZER AND ROLLER. WILLIAM FETZER, Springfield, Ill. Filed Oct. 29, 1914. Serial No. 869,188. 6 Claims. (Cl. 55—47.)



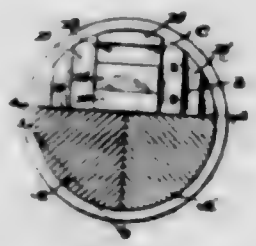
3. A device of the class described having sections flexibly connected together for relative swinging movement in a vertical plane, each of said sections comprising an axle, means for connecting the adjacent ends of the axles together including a longitudinal pivot shaft, hinge members engaging the shaft and each having a part provided with a socket receiving the end of one of the axles and rigidly connected thereto, and pulverizing means rotatably mounted on the said axles and on the said socket members.

1,302,147. POWER-TRANSMISSION DEVICE. JOHN W. FITZGERALD, Detroit, Mich., assignor to L. A. Young Industries, Inc., Detroit, Mich., a Corporation of Michigan. Filed July 20, 1915. Serial No. 40,874. 3 Claims. (Cl. 74—106.)



1. In a combined jack and power transmission device, the combination of a pair of channel iron elbows forming short resistance arms of levers and long arms which are to operate as the handles of the lever, connecting bars for the elbows, and journals and pulleys on the long arms of the elbows, the said frame being formed by these members being arranged to support the axle of an automobile, near the turn of the elbows, the said frame being insertible under an automobile axle to lift the same and throw the load over the vertical line passing through the center of the fulcrums which are the ends of the short arms of the elbows while the ends of the long arms of the elbows are brought against the ground and held there when the load passes over the vertical plane that passes through the fulcrums.

1,302,148. HEADLIGHT FRONT OR LENS. FREDERICK H. FOAD, Milwaukee, Wis., assignor to The Totalux Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 4, 1918. Serial No. 210,329. 6 Claims. (Cl. 240—48.4.)

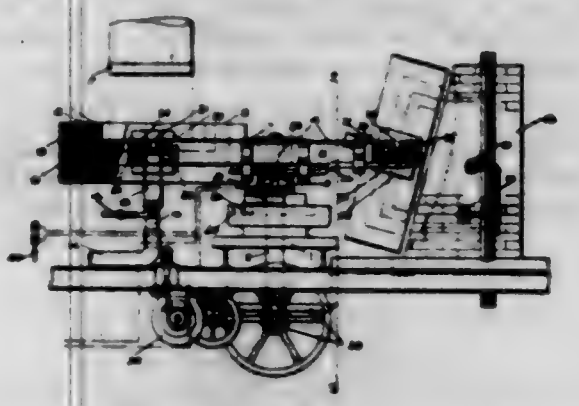


1. A lens for head-lights in which substantially half the front is provided with a plurality of sets of refracting prisms inclined toward each other to refract the light passing through them downwardly and in which the other half of the front is provided with a central section of horizontally disposed prisms and end sections of vertically disposed prisms.

1,302,149. DRAWING-POT FOR GLASS. ROBERT L. FRINK and FRED J. FRINK, Lancaster, Ohio; said Fred J. Frink assignor to said Robert L. Frink. Filed Feb. 27, 1914. Serial No. 821,206. 14 Claims. (Cl. 49—53.)

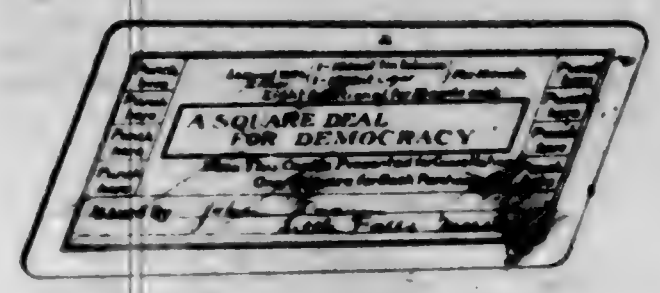
1. The combination of a support rotatable about a substantially vertical axis; a glass-working receptacle borne by said support; heating means radially adjacent to the path of travel of said support, said means being adapted to heat the glass in said receptacle, said receptacle being tiltable about a substantially horizontal axis transversely disposed of a radial line to the axis of said support into operative relation with said means; and means adapted automatically thus to tilt said receptacle incidentally to the rotation of said support.

7. In mechanism of the class described, the combination with a heating chamber having one side open and the front of its rear wall inclining upwardly and rearwardly,



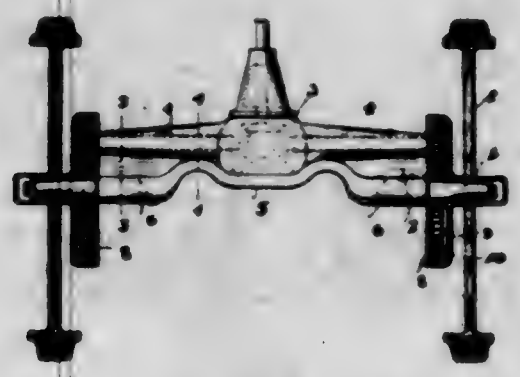
substantially as described, and a tiltable pot adapted in one position to lie with its top opposite such chamber-side and similarly inclined.

1,302,150. REBATE-CARD. ROBERT T. FROST, Minot, N. D., assignor of one-half to Orrin M. Pierce, Minot, N. D. Filed Jan. 16, 1918. Serial No. 212,110. 3 Claims. (Cl. 283—48.)



1. A rebate card bearing upon its face a statement as to the selling price of an initial one of a number of articles and a statement as to the selling price of an additional number of such articles, the said card also bearing upon its face delineated spaces for cancellation corresponding in number to the number of additional articles mentioned upon the card.

1,302,151. AXLE-HOUSING CONSTRUCTION. DOUGLAS CAULKINS GOFF, Knoxville, Tenn. Filed Dec. 12, 1918. Serial No. 266,448. 7 Claims. (Cl. 180—38.)



6. An axle housing construction comprising a load axle and a chambered live axle housing integrally connected throughout their length.

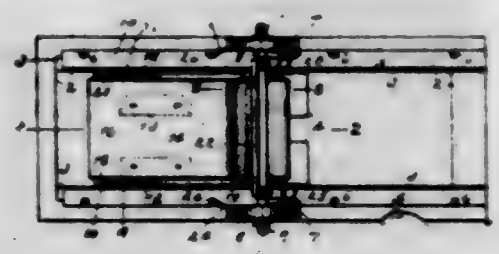
1,302,152. ARTIFICIAL TOOTH. GEORGE GOLDWOOT, Cork, Ireland. Filed Aug. 24, 1916. Serial No. 116,712. 3 Claims. (Cl. 32—9.)

1. An interchangeable artificial tooth having a portion of the vertical and lingual bases so shaped as to form a right or an acute angle, or a curve of which the tangents to the extremities thereof form a right or an acute angle



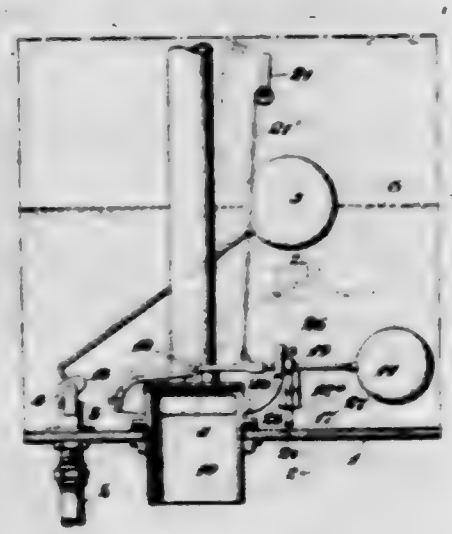
to each other, and provided with a tube or passage adapted to receive a post secured on the superior or upper surface of a backing.

1,302,153. CIGAR-BUNCH-MAKING MACHINE. WALTER T. GREEN, Galesburg, Ill. Filed May 3, 1918. Serial No. 232,340. 8 Claims. (Cl. 131—41.)



1. In a machine of the class described, a carriage having a transversely arranged groove in its upper surface, a compressor-belt overlying said surface and adapted to be depressed into said groove, a transversely arranged element adapted to be engaged by the belt whereby to take up a portion of the latter, and an element adapted to be moved into a filler-compressing position between the carriage and said transversely arranged element.

1,302,154. VALVE-CONTROLLING MEANS FOR FLUSH-TANKS. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed Oct. 25, 1916. Serial No. 127,548. 8 Claims. (Cl. 4—6.)

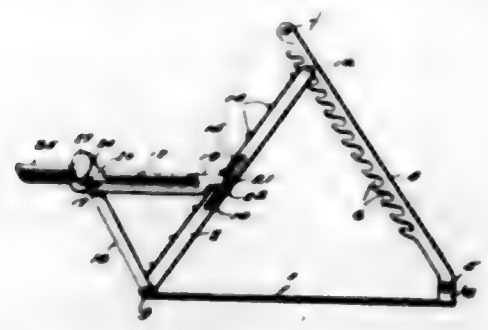


2. In combination, a pivotally movable valve structure for closing a port of a flush tank, means for opening and closing the said valve structure, and means extending transversely of the plane of movement of and contacting with the said valve structure for holding the same in closed position when once closed, and the said valve structure when lifted to open position acting upon said means to lift the same.

1,302,155. COMBINED BACK-REST AND TABLE. JOSEPH V. GNOLLS, Sunnyvale, Calif. Filed Aug. 9, 1918. Serial No. 249,126. 2 Claims. (Cl. 5—48.)

1. In combination with a back rest, arms secured to the back rest, extensions formed on the arms, hooks formed

on the arms adjacent the extensions, and a table received on the extensions, said table having pins secured to and



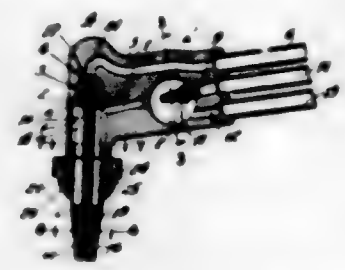
spaced from one edge adapted to engage beneath the hooks on the arms.

1,302,156. DEMOUNTABLE RIM. HARRY D. HAMILTON, Kenosha, and JULIUS GOODMAN, Racine, Wis. Filed Dec. 17, 1917. Serial No. 207,495. 1 Claim. (Cl. 152—21.)



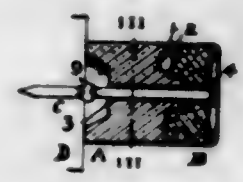
In a structure of the class described, a two-part separable rim, the inner side portion of the rim parts being cutaway on opposite peripheral faces and overlapped, said lapped portions extending substantially equal distances from the center of the rim, a series of transverse wheel engaging ribs on the inner periphery of that rim part which is cutaway on its outer peripheral portion, said ribs extending throughout the entire width of the rim part, a series of transverse ribs on the other rim part extending from its outer edge to its cutaway portion and in alinement with the first named ribs, said second named series of ribs being of consequently lesser length than the first named ribs, and connecting bolts extending rigidly from the first named series of ribs and passed through the second named series of ribs.

1,302,157. CUTTING-TORCH. JOHN HARRIS, Cleveland, Ohio, assignor to Carbo Hydrogen Company of America, Pittsburgh, Pa., a Corporation of Delaware. Filed July 31, 1916. Serial No. 112,223. 10 Claims. (Cl. 158—27.4.)



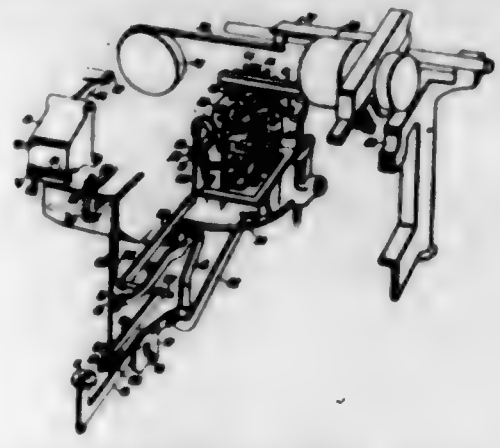
1. In a burner of the character described, the combination of a head and a tip, said head having a passageway for conducting a mixture of a combustible fluid and a combustion-supporting fluid to said tip, said head having a cylindrical chamber with which the inlet end of said passageway communicates at one side of the axis of said chamber, an injector carried by the head and projecting into said chamber in substantially axial alinement with the inlet to said passageway, a conduit for supplying a combustion-supporting fluid to said injector, and a conduit discharging tangentially into said chamber and conducting a combustible fluid thereto.

1,302,158. INSULATOR. JOHN R. HARRIS, Chartiers township, Allegheny county, Pa. Filed July 11, 1917. Serial No. 179,841. 6 Claims. (Cl. 173—314.)



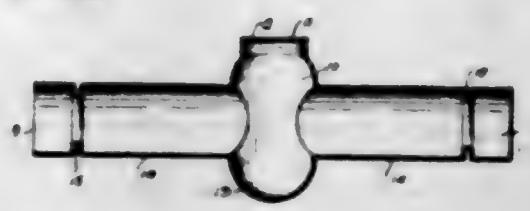
1. A wire supporting knob of the character described, comprising clamping sections of suitable insulating material having parallel registering wire receiving grooves and axial rectangular apertures, and a rectangular nail which passes through the apertures in said sections.

1,302,159. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1916. Serial No. 88,982. 36 Claims. (Cl. 235—59.)



1. In a combined typewriting and computing machine, the combination of a typewriter carriage, means for propelling said typewriter carriage, reciprocating escapement devices which ordinarily permit the carriage to move single letter space distances, a totaliser arranged to travel with the typewriter carriage, and means controlled from said totaliser for allowing the typewriter carriage to move more than a single letter space by a single reciprocation of said escapement devices.

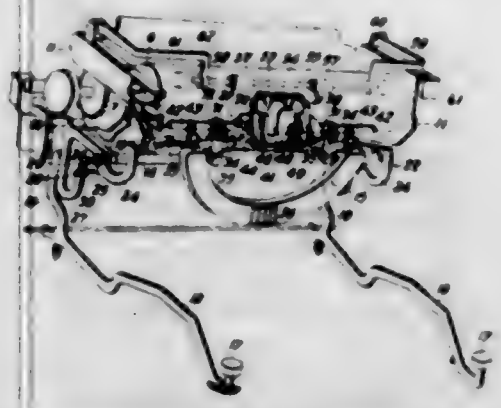
1,302,160. POISON-CONTAINING TRAP. WILLIAM HEDRICH and WALTER STOCK, Trochu, Alberta, Canada. Filed Jan. 18, 1919. Serial No. 271,793. 3 Claims. (Cl. 43—22.)



3. A poison holder of the character described comprising a container, the upper end of the container being formed with a neck, a cap engaging the neck, and a tubular runway opening into the container, the container

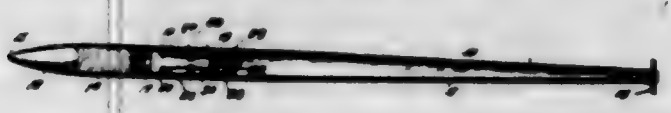
extending downward below the bottom of the runway, said runway being relatively elongated and being open at its outer end and formed adjacent its outer end with an inwardly directed annular flange.

1,302,161. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 18, 1917. Serial No. 169,448. 20 Claims. (Cl. 197—135.)



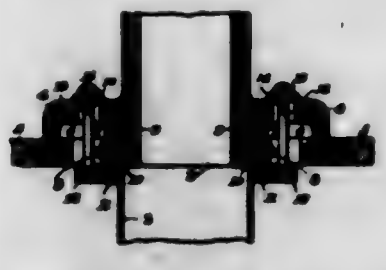
1. In a typewriting machine having a main framework, the combination with a carriage and a platen thereon, of a support located upon said framework in juxtaposition to said platen to remain stationary during the travel of the platen, a holder loosely fulcrumed on said support and rocking forwardly and backwardly between operative and inoperative positions near and away from said platen, and two-ways acting springs maintaining said holder on said support and automatically locking it in both its positions of adjustment.

1,302,162. TORPEDO. GUSTAF EMIL HESSE, Brooklyn, N. Y., assignor of one-half to George H. Robinson, New York, N. Y. Filed June 5, 1917. Serial No. 172,878. 11 Claims. (Cl. 102—2.)



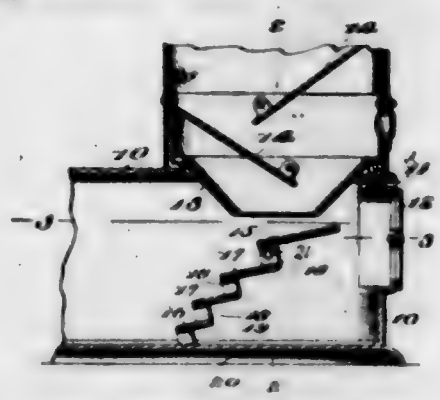
1. A torpedo having a propeller and means for effecting the rotation of the torpedo on its projection from a gun or tube.

1,302,163. FLOOR-JOINT FOR WATER-CLOSET BOWLS. CHARLES C. HINCHMAN, Pottstown, Pa. Filed Aug. 7, 1918. Serial No. 248,736. 5 Claims. (Cl. 285—34.)



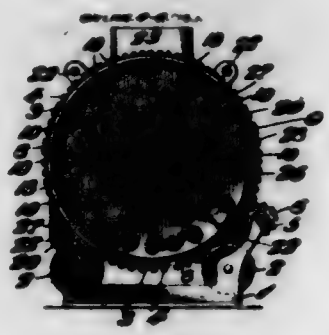
1. The combination with a water closet bowl or similar fixture having a depending flange, and a soil pipe receiving such flange, of a gasket surrounding said flange, an annular ring surrounding the soil pipe and engaging said gasket; the wall of said ring being outwardly flared and spaced from the soil pipe, a gasket disposed between said ring and soil pipe and engaging both parts, an annular collar in engagement with said second gasket, and securing means connected to said collar and in engagement with the water closet bowl whereby said parts may be retained in place and the gaskets compressed to insure a fluid-tight joint between the bowl and soil pipe.

1,302,164. GRATE FOR HEATING APPARATUS. GEORGE A. HOLLENBECK, Sault Ste. Marie, Mich. Filed May 21, 1918. Serial No. 235,827. 2 Claims. (Cl. 110—32.)



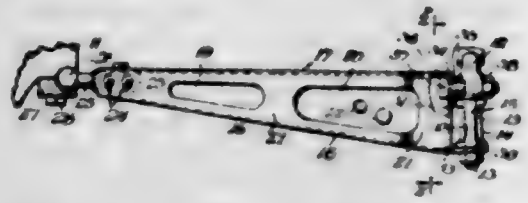
1. A grate comprising a plurality of plates arranged in steps decreasing in width toward the discharge end, the adjacent edges of the plates lapping and being disposed in spaced relation.

1,302,165. DRYING APPARATUS. CHARLES W. HOTTMANN, Philadelphia, Pa. Filed Dec. 8, 1917. Serial No. 206,344. 6 Claims. (Cl. 34—5.)



1. In a drying apparatus, in combination, anti-friction devices, an outer cylinder supported on said anti-friction devices, an inner cylinder connected with said outer cylinder and forming therewith a chamber to receive material, end members closing the ends of said chamber and provided with a series of ports, a stationary member having discharge passages with which said ports are brought into register during the revolution of said cylinders, means to revolve said cylinders, and means to pass fluid through said inner cylinder.

1,302,166. RADIUS-ROD. WALTER G. HOY, Chicago, Ill. Filed Jan. 11, 1919. Serial No. 270,621. 3 Claims. (Cl. 21—182.)



1. In a device of the class described, the combination of a frame, a front axle, a universal joint on said frame in rear of the axle, a bolt extending through said axle from top to bottom, a head on said bolt provided with a transverse aperture, a radius rod of suitable cross-section, to resist bending strains efficiently, and extending from the universal joint to the axle, and having a lower lug extending below the axle, fitting and receiving the shank of said bolt, an upper abutment on said rod, the upper

part of said axle being provided with an opposing abutment, and a tie member extending through said aperture for holding said abutments in engagement, said lug and abutment on said rod being rigidly connected together adjacent the front end of said rod.

1,302,167. PROJECTILE. ALEXANDER HUBBARD, London, England. Filed June 27, 1917. Serial No. 177,332. 14 Claims. (Cl. 102—26.)



1. A projectile comprising a hollow tapering tube, four helical blades arranged on the outside of said tube extending from end to end thereof and terminating in a flat head.

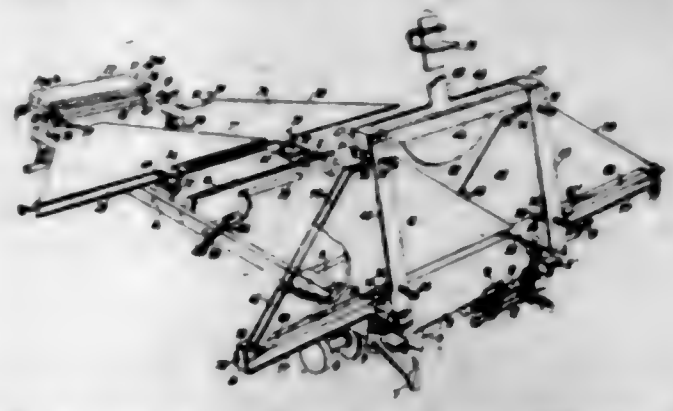
1,302,168. DOOR-CATCH. STANLEY R. HUGHES, Hereford, Tex. Filed Apr. 30, 1918. Serial No. 231,646. 2 Claims. (Cl. 16—78.)



1. A door catch comprising a casing, a detent pivoted in said casing and normally recessed therein and having a portion adapted to be projected from said casing and engage a door when the detent is adjusted to operative position, means for releasably retaining said detent in its operative position, means operable from the exterior of the casing to move the last named means to releasing position, means operated by contact with a door and connected to said detent for adjusting the same to operative position, and means absorbing the shock of the contact between the door and the last named means and also returning said detent to normal position when released.

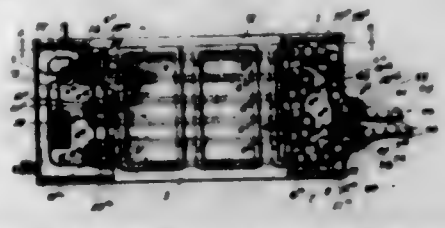
1,302,169. TYPE-WRITING MACHINE. ARTHUR A. JOHNSON, Lyndhurst, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 3, 1917. Serial No. 194,441. 28 Claims. (Cl. 197—134.)

1. In a typewriting machine, the combination with a traveling carriage and a rotating platen thereon, of means for guiding work-sheets around said platen, means for guiding separate sheets in between said work-sheets at



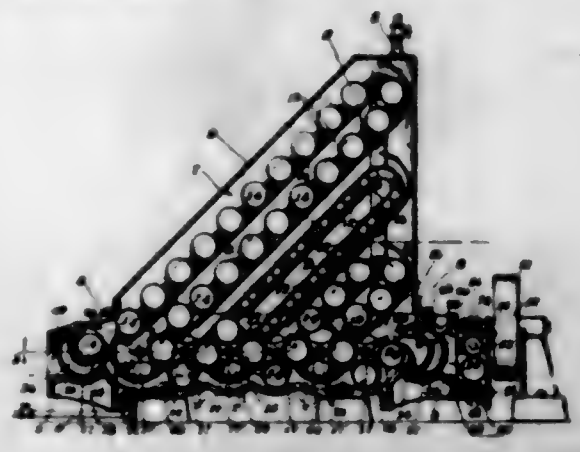
points near the platen, and means for automatically removing said last-named sheets after the whole body of sheets has passed together around the platen.

1,302,170. COOKER. AXEL JOHNSON, Oakland, Calif. Filed Mar. 6, 1917. Serial No. 152,491. 1 Claim. (Cl. 126—272.)



In a cooker, a tank having a cylindrical valve chamber formed in one wall thereof, said chamber having ports communicating with the exterior and the interior of said tank respectively; a cylindrical valve member rotatably mounted within said chamber, said valve having a pocket formed therein of the contour of a can and adapted to receive a can through one of said ports and to discharge the same through the other said pocket formed in the base throughout its length with a recess; means for rotating said valve; a lineally disposed rod mounted for oscillation within said valve and projecting from the end thereof; an arm carried by said rod for reception in said recess without destroying the contour of said pocket and adapted to engage the can within said pocket; a pair of oppositely disposed fingers carried upon the projecting end of said rod; a stationary member for engagement with one of said fingers during the rotation of said valve to move said arm to seated position within said pocket to permit of the reception of a can within said pocket and a stationary member adapted for engagement by the other of said fingers during the rotation of said valve to positively actuate said arm to eject the can from said pocket.

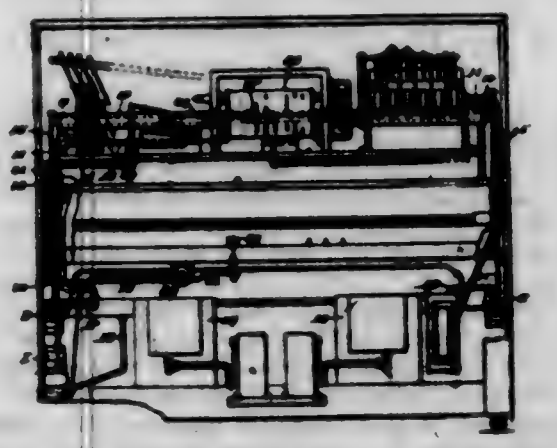
1,302,171. COOKER. AXEL JOHNSON, Oakland, Calif. Filed Apr. 22, 1918. Serial No. 230,149. 10 Claims. (Cl. 126—272.)



2. A cooker including a closed cooking chamber provided with valve controlled receptacle inlet and discharge

openings, a plurality of independent upwardly inclined conveyers within said chamber and each of a different length, and a receptacle directing gate associated with each conveyer for directing the receptacles delivered into said chamber relatively to said conveyers to control the cook of the contents thereof.

1,302,172. EXPRESSION-CONTROLLING DEVICE FOR MECHANICAL MUSICAL INSTRUMENTS. OTIS M. KENNEDY, Philadelphia, Pa., assignor to The Cunningham Piano Company, a Corporation of Pennsylvania. Filed May 15, 1918. Serial No. 234,741. 3 Claims. (Cl. 84—160.)



1. In a mechanical musical instrument, comprising a divided hammer rail and string dampers, the combination therewith of a plurality of pneumatic instrumentalities, connecting actuating devices between each of two of said pneumatic instrumentalities and each of the sections of said hammer rail and between the remaining pneumatic and the string dampers, a unitary controlling valve having ports communicating separately with each of said pneumatics, and with the atmosphere, a manually operable lever for operating said valve, and means forming part of said valve and movable adjustably by said lever to actuate said pneumatic instrumentalities selectively.

1,302,173. RUBBER OR ELASTIC VEHICLE TIRE. WILLIAM J. KENT, Brooklyn, N. Y., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Dec. 29, 1914. Serial No. 879,459. 2 Claims. (Cl. 152—9.)



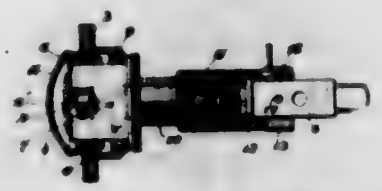
1. In combination with a metallic base member having a plurality of openings therein, a rubber body portion vulcanized to one side thereof and extending through said openings, and pockets formed in the side opposite the said body portion and communicating with said openings to form heads of rubber extending laterally of the openings.

1,302,174. TOY FOR CATS. EDITH F. KETTLER, Medford, Mass. Filed Nov. 20, 1918. Serial No. 264,814. 1 Claim. (Cl. 46—80.)



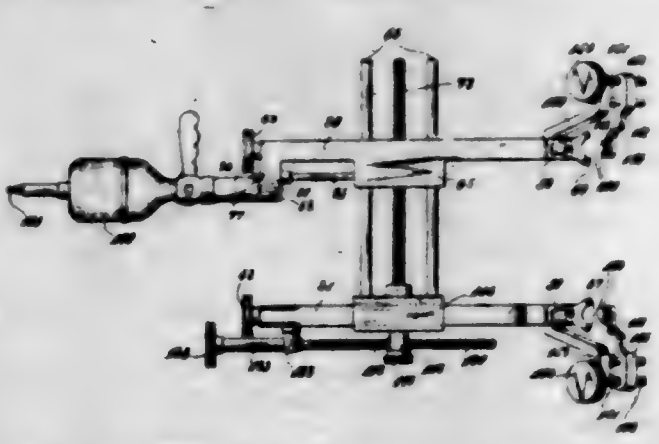
A toy for cats comprising a cylindrical shell and two perforated ends forming between them a catnip-receiving chamber, each end having a peripheral flange which overlies and is secured to the inner walls of the shell, the perforated portion at least of each end being of relatively thin and easily-destructible material, and both ends being situated a slight distance from the edges of the shell whereby the portions of the shell that project beyond the ends constitute a flange which the cat may grasp in playing with the toy.

1,302,175. METHOD OF SECURING HOLLOW TAPERING BOILER-PLUGS. FREDERICK E. KEY, St. Louis, Mo., assignor to Key Boiler Equipment Co., St. Louis, Mo., a Corporation of Missouri. Filed May 27, 1918. Serial No. 236,910. 4 Claims. (Cl. 220—124.)



4. The method of tightening hollow tapering boiler plugs which comprises exerting outward pressure within the plug by rolling an annular portion of the inner face of the plug, at the same time advancing the tapering plug in the plug receiving opening, thereby tightening the plug in the opening, and then pressing and smoothing the annular portion of the inner face of the plug which lies opposite to the wall of said opening, so as to make the corresponding annular portion of the outer face of the plug conform precisely to the wall of the opening.

1,302,176. BONE-CLAMP. ROBERT E. KLETT, New York, N. Y., assignor to Klett Manufacturing Co., Inc., a Corporation of New York. Filed July 25, 1917. Serial No. 182,606. 4 Claims. (Cl. 128—92.)

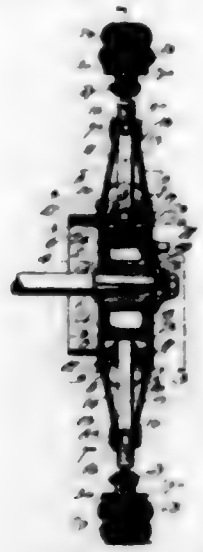


1. In a bone clamp, the combination with a pair of rigid bars having one end bent at an angle and containing a longitudinal slot, of a claw pivotally engaged with the end of said bars, means for clamping said pivoted claws in an adjusted position, plungers slidable in the mentioned slots, claws formed at the extremities of said plungers, said claws opposing the first named claws, means for actuating said plungers whereby the opposed pairs of claws are brought to or from each other, a holder slidably engaging one of said bars, a plurality of rods extending from said holder, slidably engaged with the other of said bars, extensions formed with said holder, means for clamping said extensions rigidly together, and a screw operatively combined with said extensions whereby the bar engaged in the holder may be moved longitudinally with relation thereto.

1,302,177. RESILIENT WHEEL. JAMES A. KOLBY, LOUIS P. LARSON, and CHRISTIAN P. NIELSEN, Ephraim, Utah, assignors to Kolby Wheel Company, Salt Lake City, Utah. Filed Feb. 13, 1919. Serial No. 276,776. 2 Claims. (Cl. 152—31.)

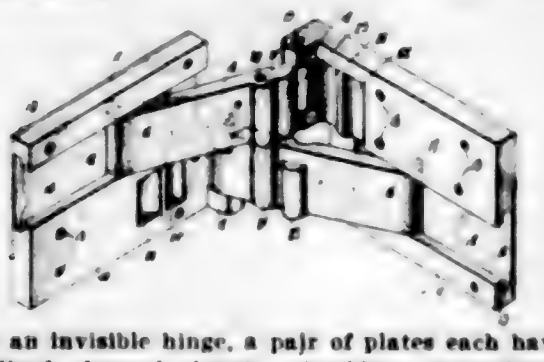
1. In a resilient wheel, a hub structure, a plurality of sliding spokes radiating from said hub structure and car-

rying a rim, and cushioning means for said spokes; together with a pair of spoke-bracing disks secured to said hub structure on opposite sides of said spokes, said disks being inwardly stamped between the spokes, thus forming hollow ribs receiving said spokes, said inwardly stamped portions being secured together, spoke-receiving, metal



sleeves in the outer ends of said ribs, and wear-resisting bushings in said sleeves, both ends of said sleeves being inwardly curved around the ends of the bushings to retain them in place and to allow either end of the sleeves to be inserted first into the ribs, said ribs being inwardly stamped around the curved ends of said sleeves to retain the latter against removal.

1,302,178. INVISIBLE HINGE. FRED J. KOAD, Chicago, Ill. Filed July 15, 1918. Serial No. 245,093. 6 Claims. (Cl. 16—105.)



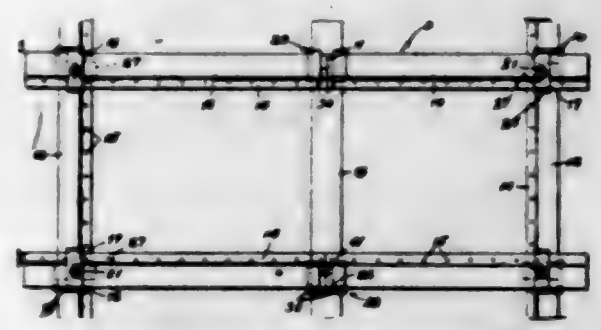
3. In an invisible hinge, a pair of plates each having a longitudinal channel therein, shoulders protruding into said channels, a pair of arms hingedly connected together at one end, lugs protruding from the edges of said plates at the free ends thereof and slidably engaged behind said shoulders, a second pair of hingedly connected arms pivoted at their outer ends to said plates, and pivot pins connecting the arms of said second pair with the arms of the first pair.

1,302,179. BOOT-ROBE. MELVIN E. KNOTTER, Pemberville, Ohio. Filed Apr. 24, 1918. Serial No. 230,546. 2 Claims. (Cl. 2—80.)



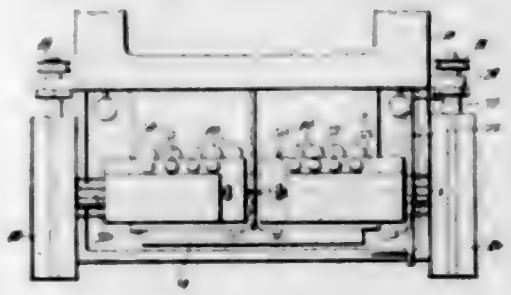
1. The combination with a lap robe provided with an aperture near one lower corner thereof, of flexible boot shaped foot coverers adapted for detachable connection with the robe at either side thereof about the edge of the aperture therein.

1,302,180. CURTAIN-STRETCHER. MAXWELL KRUM, Brooklyn, N. Y. Filed Sept. 14, 1916. Serial No. 120,166. 3 Claims. (Cl. 45—24.)



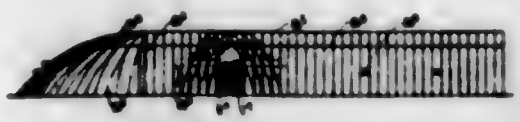
1. In a curtain stretcher, a series of rabbeted sections of equal length having stretching pins secured to the faces of said rabbeted portions, said frame being assembled to provide sides and ends, each side comprising two sections with their ends abutted together, connecting means for the abutting ends of said sections of the sides, fittings receiving said abutting ends, said fittings each comprising a substantially U-shaped member having end portions and oppositely extending and overhanging jaws engaging said sections at the shoulders provided by the rabbeted portions, and a clamping screw at the U-shaped portion, a cross brace received by said U-shaped portions and clamped to the abutting ends by said screws, and fittings connecting the sides to the ends.

1,302,181. TYPE-WRITING MACHINE. WILLIAM P. LAMAR, Washington, D. C. Filed July 26, 1915, Serial No. 41,971. Renewed Oct. 1, 1918. Serial No. 256,469. 6 Claims. (Cl. 197—19.)



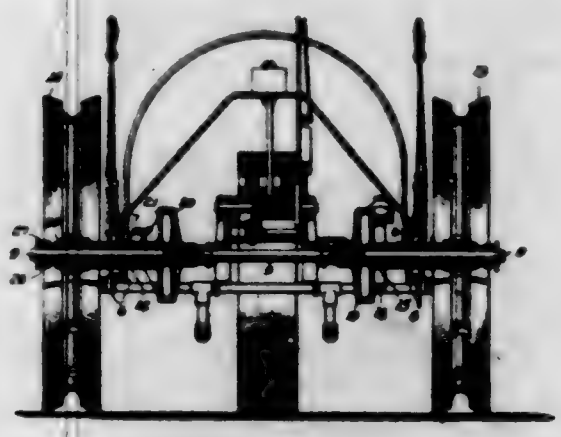
1. The combination with a typewriting machine having a keyboard, of devices movable over the keyboard and each provided with a plurality of keys less in number than the keys of the keyboard, and connections whereby any key of the keyboard may be operated by said devices.

1,302,182. CONSTRUCTION OF TENTS FOR FIELD-HOSPITALS, DEPOTS, AND LIKE PURPOSES. FREDERICK WILLIAM LANCHESTER, London, England. Filed Feb. 11, 1919. Serial No. 276,379. 5 Claims. (Cl. 135—1.)



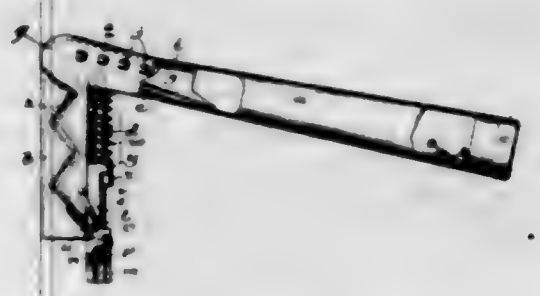
5. A tent comprising a body portion having its lower edge secured by means of a substantially air tight joint, a series of ropes extending across said body portion and reinforcing the same, a passageway extending through the wall of said body portion and having one of its ends located in the interior of the body portion and its other end located outside of the body portion, and doors provided at the ends of said passage-way and operative independent of each other.

1,302,183. TRACTION-WHEEL CONNECTION FOR POWER-DRIVEN VEHICLES. COLONEL W. LANHAM, Chicago, Ill. Filed Apr. 23, 1918. Serial No. 230,256. 9 Claims. (Cl. 192—8.)



1. In a machine of the character set forth, the combination of a frame, a rotatable shaft, a supporting wheel journaled on said shaft at the outer side of said frame, a sleeve-member on said shaft, a bearing on said frame and in which said sleeve is journaled, means releasably engaging said sleeve for connecting said sleeve and shaft together to cause them to be relatively non-rotatable, and means for operatively connecting said sleeve and wheel together to cause them to be non-rotatable relatively to each other.

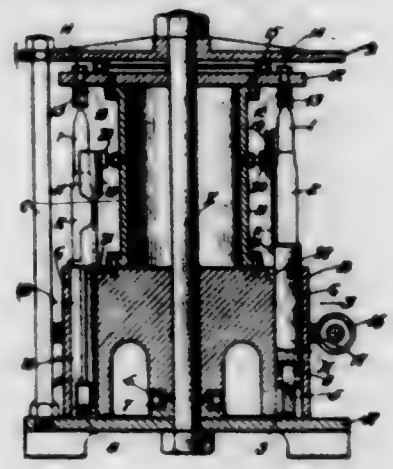
1,302,184. HAMMER. JOHN J. LEFEBER, Calvary, Wis. Filed Dec. 7, 1918. Serial No. 265,738. 7 Claims. (Cl. 1—45.)



5. In a hammer the combination of a magazine handle; a head having a zigzag undercut feed slot communicating at its upper end with the magazine; a driving pin rigid with the head; an upwardly yielding plunger guided on said pin and formed with a recess in alinement therewith and opening through the lower end and adjacent sides of the plunger, the opening on one side registering with the lower end of the feed slot when the plunger is thrust upward; a spring tending to thrust the plunger downward and to hold it normally projecting below the head and driving pin; and a finger pivoted in the plunger and having an arm adapted by engagement with parts of the head to move the finger into and out of position to grasp a nail below its head and push it into and hold it in position for driving below said pin as the plunger is released and thrust downward by the spring and thrust upward by a blow in driving a nail.

1,302,185. PRESS FOR ASSEMBLING SHELLS. FRANK LEMING, Hingham, Mass. Filed Aug. 28, 1918. Serial No. 251,831. 17 Claims. (Cl. 86—43.)

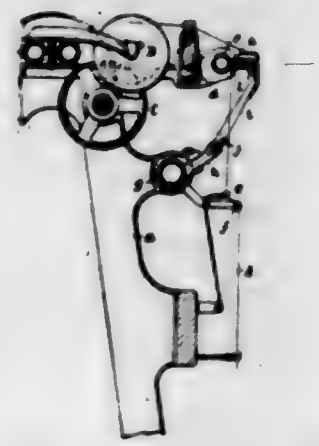
1. A machine for automatically forcing a bullet into a casing of a shell having a movable carrier provided with a plurality of movable plungers, a plurality of casing and bullet holders mounted on the carrier, and means whereby each plunger forces a casing into engagement with a bullet each time a plunger reaches a predetermined point in its travel with the carrier.



1,302,186. METHOD OF MAKING LEAD ARSENATE. IRVIS P. LIBMS, Lakewood, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 7, 1918. Serial No. 261,465. 3 Claims. (Cl. 23—13.)

1. The method of making lead arsenate which consists in reacting between lead oxid and arsenic acid in the presence of formic acid, substantially as described.

1,302,187. MEANS FOR UNITING TEXTILE STRANDS. EMORY J. LIPPS, Fountain Hill borough, Pa. Filed Mar. 8, 1917. Serial No. 152,220. 6 Claims. (Cl. 28—34.)

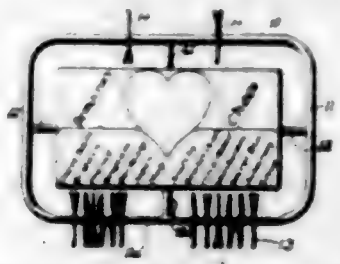


2. In combination, with means to draw the strands longitudinally and means, spaced from the first means, to hold the strands under tension while being advanced, a rotary twister arranged between the said means, means to support the twister and means to rotate the twister back and forth, said twister having a bearing surface for the taut advancing strands extending substantially coincident with a chord of a circle having the twister's axis of rotation as its center.

1,302,188. PUZZLE. FRANK ALBERT MCCABE, Blackfoot, Mont. Filed Feb. 14, 1919. Serial No. 276,937. 3 Claims. (Cl. 46—41.)

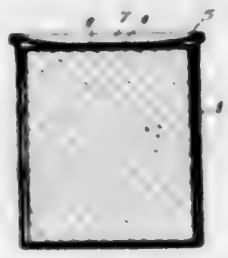
1. A puzzle comprising a support, a rail around the support having a section of smaller diameter than the remainder thereof, a series of arms extending from the support to the rail and including an arm arranged intermediate the ends of said reduced rail section having a diameter greater than that of the remaining arms, a series of disks each having a central opening and a radial slot extending through its peripheral edge from said opening, the opening being of a diameter greater than the reduced section of the rail and less than the remainder of the rail, and the slot exceeding in width the diame-

ters of all of the supporting arms, and a pair of disks each having a central opening and a radial slot extending through its edge from said opening, said opening being of a diameter exceeding that of the rail and said slot being of a width less than the diameter of the larger



arm and greater than the diameter of the other arms, each of said disks of said series and said pair having their portions upon opposite sides of the slots thereof flared in relatively opposite directions, for the purpose described.

1,302,189. METHOD OF CANNING AND CAN. FRANCIS P. MCCOLL, Ridgewood, N. J., and WALTER WILLIAM WILLISON, New York, N. Y., assignors to Thermokept Products Corporation, New York, N. Y., a Corporation of Maine. Original application filed Sept. 1, 1917, Serial No. 189,292. Divided and this application filed Nov. 28, 1917. Serial No. 204,323. 4 Claims. (Cl. 99—8.)



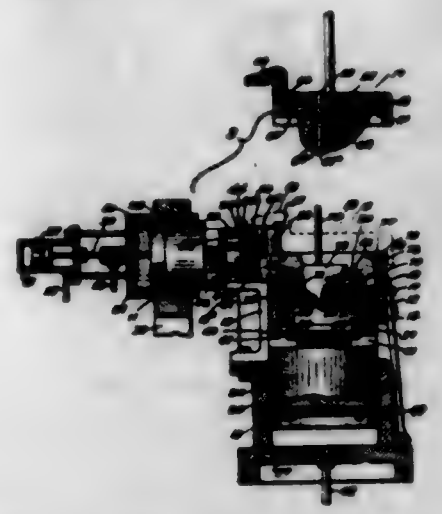
1. The method of canning consisting in placing the alimentary substance to be canned in an inner container, placing said inner container in an outer container, placing a cap on outer container and creating a vacuum within said container whereby when exposed to atmospheric pressure the cap will dish so as to bear on the inner container to prevent movement of said inner container within the outer container.

1,302,190. FLAGSTAFF. OLLIFF L. MCCORMACK, Norwood, Ohio. Filed June 29, 1918. Serial No. 242,574. 2 Claims. (Cl. 116—12.)



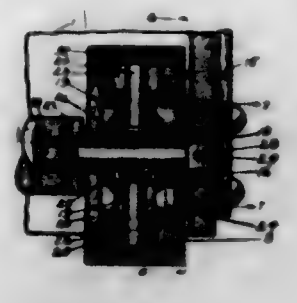
2. A flagstaff comprising a plurality of telescoping sections, an end section being of a length greater than the remaining sections and having its outer end closed, and a head engaged with the outer end portion of the second end section and engagable within the inner end portion of the first named section for maintaining the sections in compacted relation.

1,302,191. MACHINE FOR MOLDING CERAMICS. DANIEL W. MCNEIL, Cincinnati, Ohio, assignor to The John Douglas Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 19, 1917. Serial No. 155,714. 5 Claims. (Cl. 25—23.)



1. A molding machine comprising a movable bottom having telescopic sections, a top coöperating with the bottom, said bottom having a hollow formed therein and said top having a projection adapted to enter the hollow, front, side and back walls surrounding the bottom, the front and side walls being adapted to engage the top, the back wall being spaced from the top, and a movable wall located in the space between the top and the back wall, said movable wall having a series of telescoping portions, and means adapted to move said movable bottom and wall to bring said telescoping portions into engagement with material located in the space between said walls, bottom and top.

1,302,192. VACUUM-CLEANER. FRANCIS C. MASON, Grand Rapids, Mich., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Dec. 6, 1915. Serial No. 65,347. 2 Claims. (Cl. 15—60.)

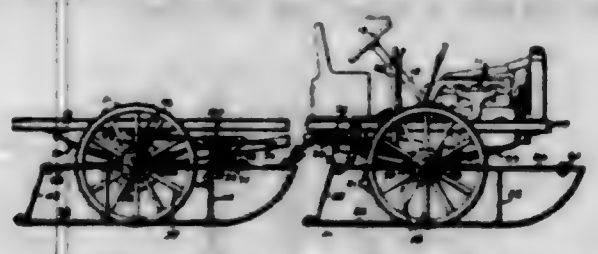


1. In a combined vacuum cleaner and carpet sweeper, the combination of a nozzle casing, a rotary carpet sweeper brush supported within the nozzle casing having eccentric adjusting means, floor wheels at the ends of said carpet sweeper brush, a gearing disposed within one of said wheels comprising beveled pinions carried by the outer shell thereof, a stationary beveled gear secured to the adjusting eccentric and meshing with the said pinions, and a driven beveled gear meshing with the said pinions at the opposite side and connected to drive the said brush, coacting substantially as described.

1,302,193. SELF-PROPELLED SLED. CARLL W. MATSON, Prairie City, Oreg. Filed Mar. 6, 1918. Serial No. 220,785. 8 Claims. (Cl. 180—6.)

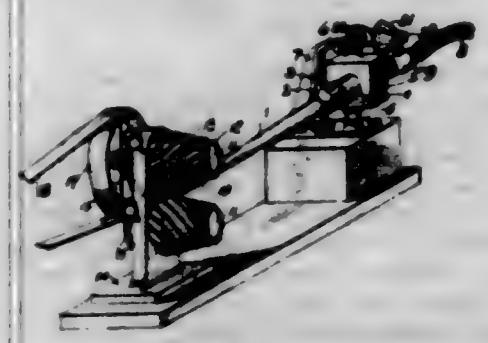
1. In a motor sled, the combination with a runner, of a shaft, an eccentric bearing block mounted on the run-

ner for the shaft, a traction wheel mounted on the shaft, means for turning said bearing block to raise and lower



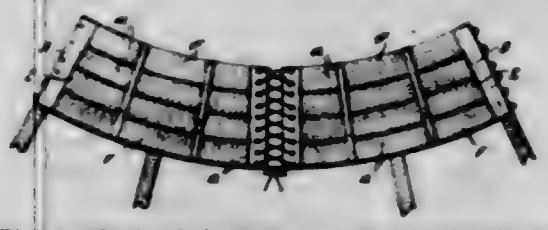
the shaft and project the traction wheel at various distances below the runner, and driving means connected to the shaft.

1,302,194. MACHINE FOR THE TREATMENT OF SAUSAGE-CASINGS. OSCAR GOTTFRIED MAYER, Chicago, Ill. Filed Aug. 20, 1918. Serial No. 250,750. 13 Claims. (Cl. 17—12.)



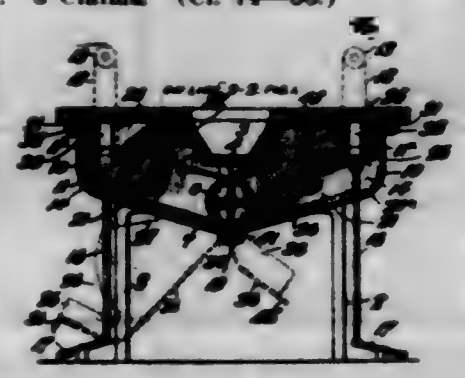
10. In a machine of the character described, a spindle, a pair of rollers, conical jackets fitted on said rollers, said jackets being provided with a plurality of grooves, and means for actuating both of said jackets in opposite direction while in contact with the spindle.

1,302,195. METHOD OF MAKING FABRICS. SAMUEL THEO MEYS, Brooklyn, N. Y., assignor to Victory Corset and Girdle Co., Inc., a Corporation of New York. Filed Oct. 11, 1918. Serial No. 257,817. 2 Claims. (Cl. 2—188.)



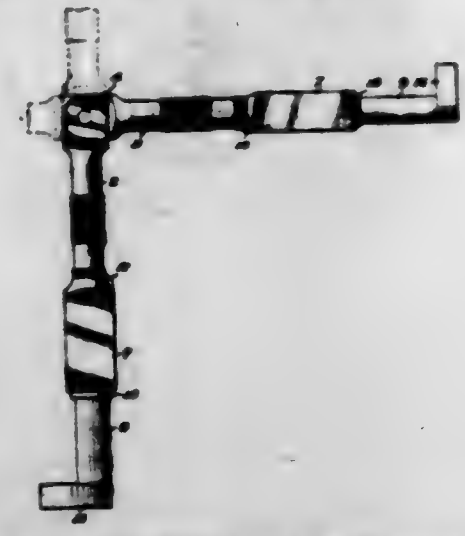
1. The method of forming an elastic fabric having a curved edge in which the rubber strands are substantially parallel with the curved edge consisting in stretching one edge of an elastic strip relatively to an edge of another elastic strip, then uniting the said edges, and then releasing the stretched edge.

1,302,196. MACHINE-GUARD. LOUIS STANLEY MEILLIOR, Philadelphia, Pa. Filed Nov. 8, 1918. Serial No. 261,671. 3 Claims. (Cl. 74—56.)



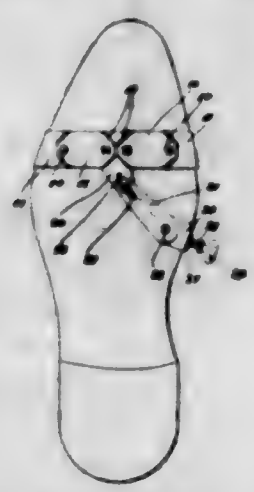
1. In a machine of the class described, the following elements in combination:—a supporting table,—a machine mounted thereupon,—a driving line shaft beneath said table,—a transmission mechanism operatively interposed between said machine and said line shaft so as to connect the machine with the shaft,—and a guard for inclosing said transmission mechanism, which consists of a casing hinged beneath the line shaft and adapted beyond its hinged end to be connected with or disconnected from the table, and of a lid similarly hinged beneath the line shaft and similarly adapted beyond its hinged end to be connected with or disconnected from the table.

1,302,197. WRENCH. MELCHIOR MILLER and ALFRED D. BURG, Le Mars, Iowa; said Alfred D. Burg assignor to L. J. Burg, St. Paul, Minn. Filed Mar. 16, 1916. Serial No. 84,859. 1 Claim. (Cl. 81—119.)



A wrench comprising hand grip shanks having abutting ends hinged together, the opposite ends of said shanks having longitudinal sockets formed therein, jaw shanks fitting within said sockets and having means for holding them against rotary movement and having heads formed thereon and provided with jaws and gripping faces in planes parallel substantially with the axes of said jaw shanks and eccentric with respect thereto, the jaws of said shanks being of varying size to adapt the wrench for nut and bolt heads of different sizes, each hand grip shank being mounted for angular adjustment with respect to the other shank, or for alinement with each other, and either jaw shank and head thereon forming a hand grip for rotating the tool and the other jaw shank when said hand grip shanks are in line with each other.

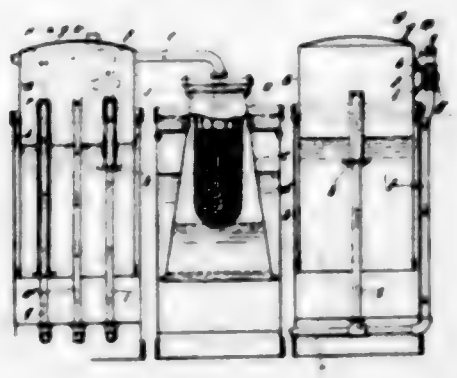
1,302,198. CREEPER ATTACHMENT. ANTHONY M. MOCHULSKY, New York, N. Y. Filed Jan. 17, 1919. Serial No. 271,572. 2 Claims. (Cl. 36—64.)



1. In a creeper, the combination with a pair of side plates having angular extensions adapted to engage with the sole of a shoe, of a pair of rectangular plates, having angularly outturned spur corners pivotally engaged with

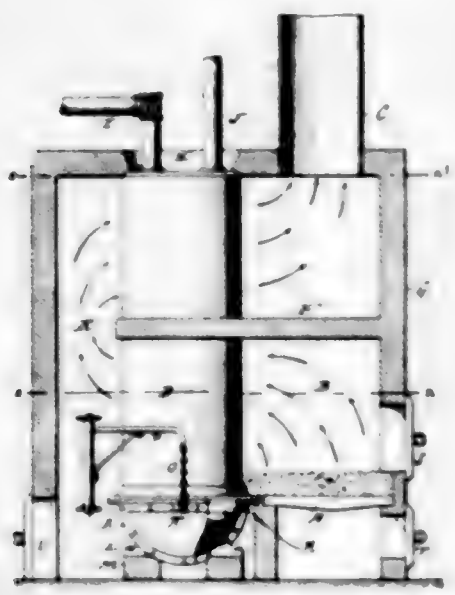
the first named plates, a center plate engaged with said spur plates, means for adjusting the spur plates on said center plate, a link pivotally engaged with said center plate, and means for securing said link to the sole of a shoe.

1,302,199. CONSTRUCTION OF GAS-GENERATING APPARATUS. JOHN MCVICKER MORRIS, Mayfair, London, England, assignor of two-thirds to Tredegars Limited, London, England. Filed Aug. 25, 1917. Serial No. 188,190. 2 Claims. (Cl. 48—5.)



1. In a gas generating apparatus of liquid displacement type, the combination of a gas holder adapted to rise and fall, a gas supply pipe leading from the gas generator and provided with two branches extending into the holder, each of said branches being connected exteriorly of the holder to said gas supply pipe, water-sealed caps disposed within the holder one on each of said branches, and a stop cock disposed exteriorly of the holder on one of said branches adapted to be actuated by said holder for controlling the supply of gas thereto by way of the water-sealed cap on the last named branch, the water-sealed cap on the other of said branches being adapted to permit excess gas to enter the holder when said stop cock is closed.

1,302,200. CRUDE-OIL STILL. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 7, 1916. Serial No. 129,923. 4 Claims. (Cl. 196—6.)



1. A coking still for crude oil, comprising a vertical tubular receptacle for said oil open at its lower end, a receptacle for coke disposed directly below said oil receptacle and having in its upper side an opening registering with said open end of said oil receptacle, and means disposed above said coke receptacle for heating said oil receptacle; the said coke receptacle being of elongated form and protruding through a wall of a casing, and a removable closure being on said protruding end.

1,302,201. SHEET-METAL RADIATOR. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,599. 1 Claim. (Cl. 257—145.)

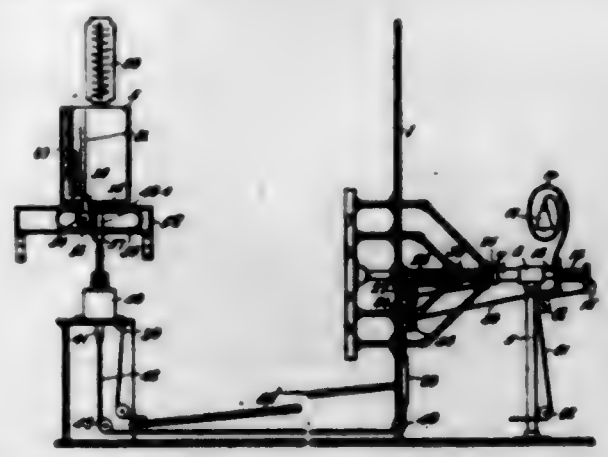


As a new article of manufacture and sale, a radiator of sheet metal, comprising integrally a bottom member formed by bending a sheet of metal in tubular form and electrically welding the meeting edges, end closures for said bottom member having fluid inlet and outlet openings, and a plurality of separate tubes, the said bottom member having a flat upper surface with openings and upwardly extending flanges surrounding said openings, and the said tubes being electrically welded at their corresponding ends to said flanges.

1,302,202. PROCESS FOR PREPARING GELATINIZED PROPELLENT EXPLOSIVES. FREDERIC LEWIS NATHAN and WILLIAM RINTOUL, Stevenston, and FRANK BAKER, deceased, Stevenston, Scotland, by Henry Baker, administrator, Eaton, Windsor, England, assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Filed Feb. 26, 1914. Serial No. 821,335. 4 Claims. (Cl. 52—3.)

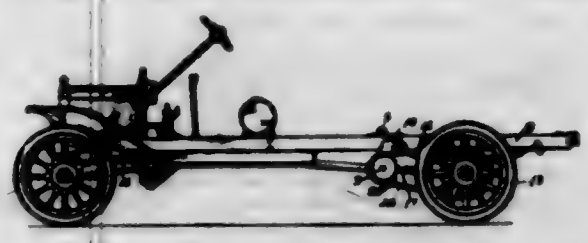
1. The process for producing a gelatinized and stabilized propellent explosive which comprises mixing together nitroglycerin, nitrocellulose and a urea derivative containing in the amido groups at least one unsubstituted hydrogen atom, and at least one aromatic radical capable both of gelatinizing nitrocellulose and of stabilizing nitric esters, and a second body also possessing both these properties one of the latter two bodies possessing the first mentioned property to a smaller extent and the second mentioned property to a larger extent than the second mentioned body, and then gelatinizing the mixture.

1,302,203. GAME. HENRY NIPPER, New York, N. Y. Filed Feb. 13, 1918. Serial No. 216,866. 16 Claims. (Cl. 46—59.)



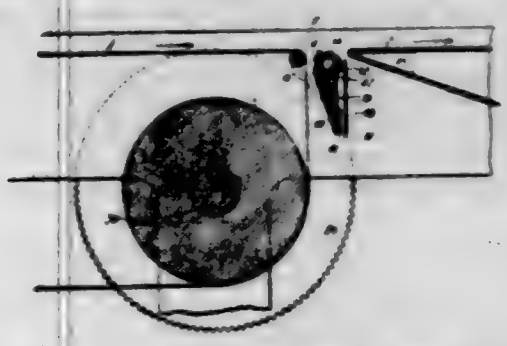
13. A game of the class described comprising a target, an indicator, means for moving said indicator, and a marking device coöperating with said indicator, and means for moving said marking device laterally.

1,302,204. CONVERTIBLE TRUCK. CHARLES D. NORRIS, Chicago, Ill. Filed Jan. 22, 1916. Serial No. 73,572. 9 Claims. (Cl. 180—16.)



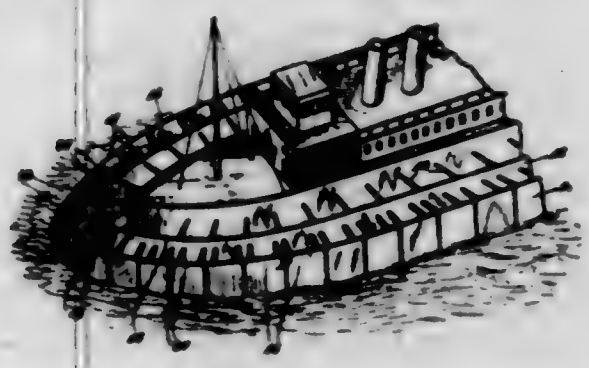
2. In apparatus of the class described, a pleasure car chassis having axles mounted therein, a truck frame, means for connecting the truck frame at its forward end to the pleasure car chassis, means on the truck frame for removably and revolubly holding the pleasure car rear axle, said means comprising a two part clamp rigidly connected with the truck frame, and driving means adapted to be substituted for the rear wheels of the pleasure car for driving the truck substantially as described.

1,302,205. CHOCOLATE-COATING MACHINE AND THE LIKE. ANTONIO PAGLIUCA, Boston, Mass., assignor, by mesne assignments, to National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 4, 1917. Serial No. 205,423. 16 Claims. (Cl. 91—2.)



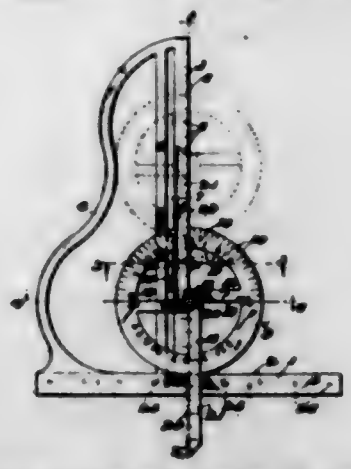
1. An apparatus for eliminating disfiguring tails in coated confections or the like, comprising, two conveying means located one forwardly of the other for the transfer of the confections from one to the other, while the coating on the confections is workable, and means independent of the conveying means and located between the adjacent ends of the conveying means to contact with and wipe off the tails of the coated confections formed in leaving the rear conveying means.

1,302,206. ANTISUBMARINE DEVICE. WASIL PAZAYCHUK and WASYL PATZ, New Castle, Del. Filed Apr. 18, 1918. Serial No. 229,857. 3 Claims. (Cl. 114—240.)



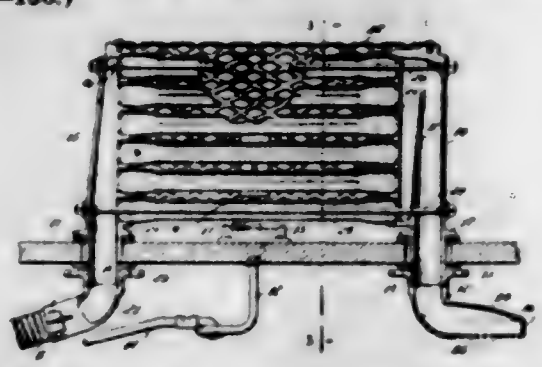
1. In an anti-submarine device, the combination with the hull of a ship and a plurality of rigid bars extending horizontally outward therefrom, of an integral armor plate adjacent to the hull of said vessel, engaged with the ends of said bars, a plurality of tubular elements secured to the exterior of said rigid armor plate, a plurality of independent rectangular armor plates, tubular elements engaged upon the inner sides thereof, said tubular elements being telescopically receivable within the first named tubular elements, means for limiting the motion of said second tubular elements, and a plurality of springs encircling both of said tubular elements, whereby said movable plates are extended normally outward.

1,302,207. DRAFTING INSTRUMENT. WILLIAM R. PEARSON, Portland, Oreg. Filed May 28, 1918. Serial No. 237,022. 1 Claim. (Cl. 33—94.)



The improved instrument herein set forth comprising a head, a straight edge blade extending therefrom at a right angle thereto and provided with a longitudinal slot, an annular head provided with a hub, oppositely disposed arms extending from the hub to the rim portion of said head, a connecting bar extending angularly from one of said arms near the inner end thereof to the rim portion of the head and having on its under side a longitudinal rib fitting slidably in the longitudinal slot of the blade, means on the under side of said rib to retain same in the slot of the blade, and a protractor blade pivotally mounted on the hub of the annular head.

1,302,208. HEATER FOR MOTOR-DRIVEN VEHICLES. CLYDE S. PELTON, Cleveland Heights, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 5, 1916. Serial No. 76,336. 5 Claims. (Cl. 257—136.)



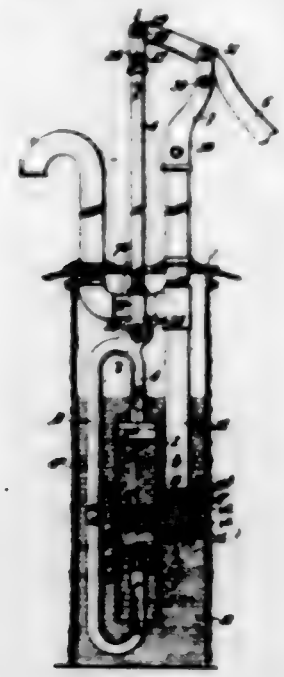
2. In a heater for motor-driven vehicles, a pair of parallel headers, a plurality of tubes connecting the same, each of said headers having one end open and having near that end a floor flange, the opposite end of said headers being closed, one of said headers being narrowed from a point near said flange to its closed end and the other of said headers having a septum therein whereby it is narrowed in the opposite direction at a substantially equal rate, and said last header having a passageway therein around said septum.

5. In a heater for motor-driven vehicles, a pair of headers, a plurality of parallel thin metal tubes secured to and connecting said headers and carried thereby, and cushioning and bridging members securely clamped around said tubes intermediate their ends whereby said tubes are prevented from vibrating.

1,302,209. ROOFING-FELT. RAY P. PERRY, Upper Montclair, N. J., assignor to The Barrett Company, a Corporation of West Virginia. Filed Sept. 29, 1917. Serial No. 193,985. 6 Claims. (Cl. 92—21.)

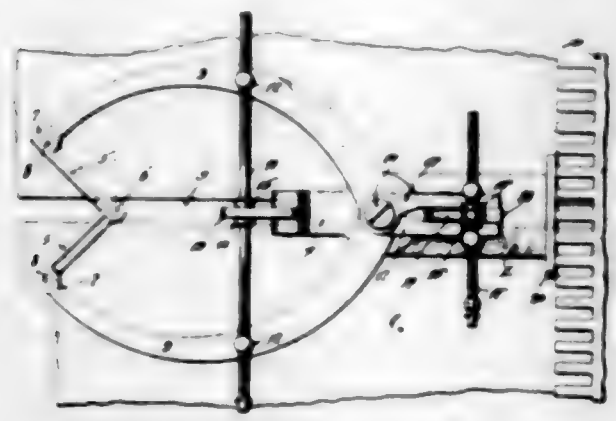
1. As an article of manufacture, a porous, flexible, sheet of construction material consisting of relatively large particles of resinous material and other material.

1,302,210. DOUBLE-ACTING WELL-PUMP. THEODORE PETERS, Ferdinand, Ind., assignor to The Peterson Pump Company, Ferdinand, Ind., a Corporation of Indiana. Filed May 26, 1917. Serial No. 171,312. 2 Claims. (Cl. 103—81.)



1. A double acting well pump, comprising two cylinders arranged in vertical alinement with each other, a structure arranged between said cylinders and composed of two members each of which is attached to one of the cylinders, a partition plate interposed between said members and clamped between same, two separated chambers in one of said members, a discharge space in the other member, ports in said partition plate that establish communication between said chambers and said discharge space, a double flap valve connected intermediate its ends to said partition plate for controlling said ports, and means for establishing communication between each of said cylinders and one of said chambers.

1,302,211. CUTTING-MACHINE. CHARLES F. PFLANER, St. Louis, Mo. Filed July 2, 1917. Serial No. 178,095. 19 Claims. (Cl. 164—59.)



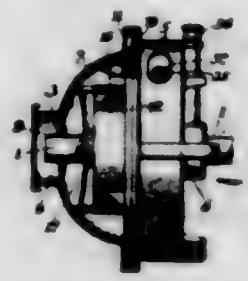
1. In a cutting machine, a work table, a blade for cutting the work on said table, a gage for predetermining the location of the work relative to said blade, said gage comprising diverging gage members arranged to form an angular recess for the work, a gage holder to which diverging gage members are secured, an oscillatory carriage to which said gage holder is pivoted, said gage holder being movable about the axis of its pivot to locate said diverging gage members in different positions relative to the work, and adjustable means whereby said oscillatory carriage is stepped in its two extreme positions.

1,302,212. RECLINING-CHAIR. ANDREW J. PHILLIPS, Washington, D. C. Filed Mar. 3, 1919. Serial No. 280,345. 3 Claims. (Cl. 155—27.)



1. In a reclining chair, the combination of a seat, a back pivotally supported in coöperative relation to said seat and movable to varying positions, a spring for impelling said back forward, a gear movable with the back, a second gear meshing with the first mentioned gear and movable with the spring, a ratchet wheel movable with said gearing, and a pawl under the control of the operator for engaging said ratchet wheel and thereby controlling the position of the back with respect to the chair, substantially as described.

1,302,213. ENGINE-STARTER. CHARLES POHL, Los Angeles, Calif., assignor to Globe Manufacturing Company, Los Angeles, Calif., a Corporation of Arizona. Filed Sept. 9, 1918. Serial No. 253,193. 1 Claim. (Cl. 123—185.)

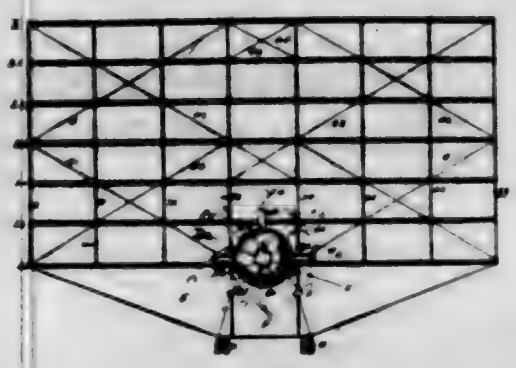


An engine starter comprising a housing, a shaft journaled in the housing, a rotary member journaled on the shaft, a pawl pivoted to the rotary member, a ratchet wheel fixed to the shaft and adapted to be engaged by the pawl, a spring connected at one end with the housing and at its opposite end with the rotary member to cause the ratchet wheel to be turned in one direction when the pawl is in engagement with the ratchet wheel, the pawl being adapted to be thrown out of engagement with the ratchet wheel by turning of said wheel in the opposite direction, an arm pivoted to the rotary member and adapted to engage the pawl to move the pawl toward the ratchet wheel, means to yieldingly hold the pawl out of engagement with the ratchet wheel, and a flexible connection attached to the arm whereby the arm may be swung against the pawl and rotated about the shaft.

1,302,214. AEROPLANE. JAMES PORTEOUS, Fresno, Calif. Filed Mar. 6, 1918. Serial No. 220,861. 8 Claims. (Cl. 244—14.)

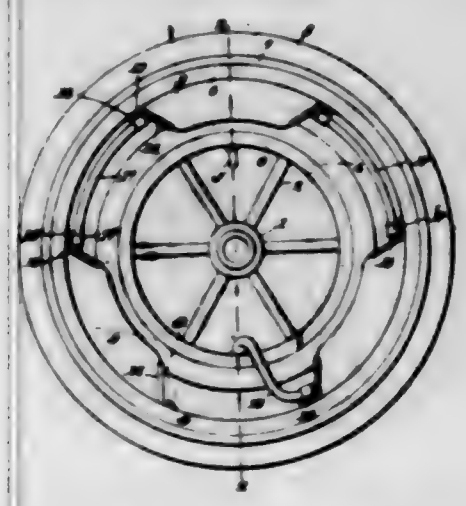
1. In an aeroplane, the combination of a frame, a plurality of planes arranged along approximately horizon-

tal lines a fixed distance apart, and connected to said frame, a closed carriage attached to said frame, a plurality of supports extending outwardly from the wall of said inclosure, slideways within said support, and an



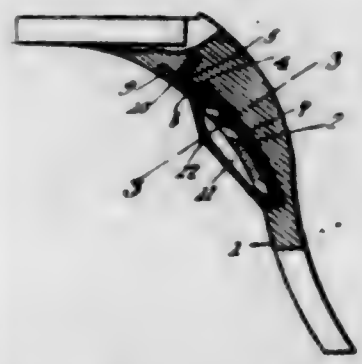
engine having a propeller attached thereto, and fitted within a frame constructed to slide within said slideway, substantially as described and for th purposes set forth.

1,302,215. RESILIENT WHEEL. ROSCOE C. RACER, Salt Lake City, Utah. Filed Sept. 11, 1918. Serial No. 253,585. 1 Claim. (Cl. 152—33.)



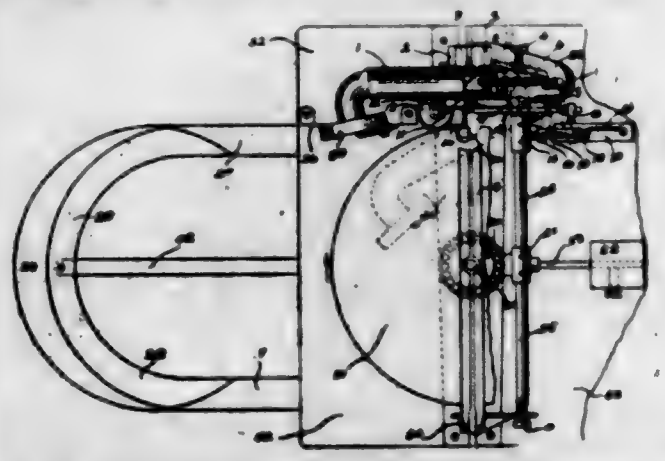
A resilient wheel, including an inner wheel, a resilient tire on the inner wheel, an outer rim concentric with and spaced from the resilient tire, boxes secured to the inner face of the outer rim and spaced circumferentially thereof, pneumatic cushions in the boxes and engaging the resilient tire, and detachable elements on the boxes for securing the cushions in place.

1,302,216. RIB FOR LINTERS AND GINS. WILLIAM ARDON RAGSDALE, Harrisburg, Pa. Filed July 22, 1918. Serial No. 246,325. 7 Claims. (Cl. 19—18.)



6. The combination with a rib for linters and gins, having a recess therein, of a block of abrading material secured in the recess and projecting from one face of the rib.

1,302,217. PHONOGRAPH. CLEMMA R. RANEY, Chicago, Ill. Filed Mar. 31, 1916. Serial No. 88,034. 93 Claims. (Cl. 274—10.)

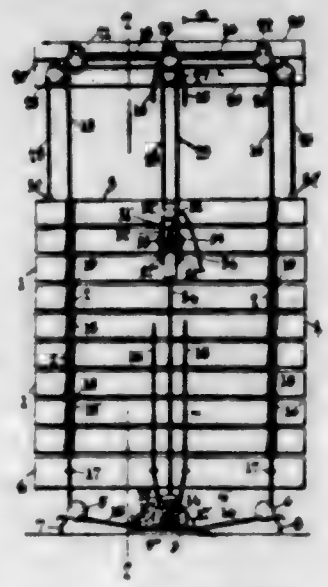


1. In a phonograph, a record rotating member movable bodily to discharge a record therefrom, and means controlled thereby for supplying a new record thereto.

9. In a phonograph, a record rotating table movable to discharge a record therefrom, and coöperating record centering means disposed in operative relation therewith in one position of said table.

37. In a phonograph, a record rotating and discharging table, reproducing mechanism movable over a record thereon, means controlled by said table for applying said reproducing mechanism to a record, and means controlled by said reproducing mechanism for substituting records on said table.

1,302,218. PORCH SHADE OR BLIND. HENRY E. RATHBUN, Worcester, Mass. Filed May 24, 1916. Serial No. 99,691. 1 Claim. (Cl. 156—16.)

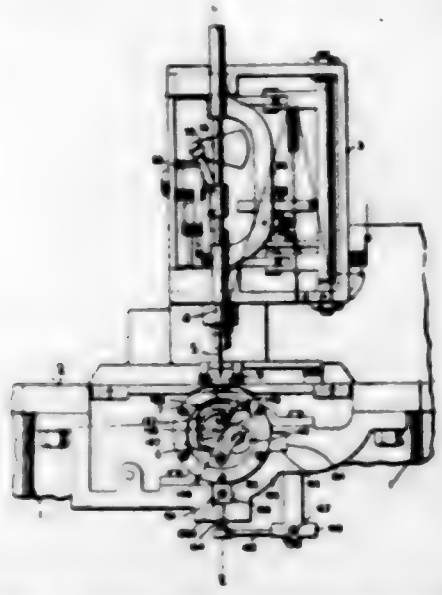


The combination with a porch shade or blind, comprising a series of strips or slats, and strands to secure them together, of mechanism to lower or raise said shade from the top, said mechanism, comprising pulleys attached to a stationary bar or fixture, a cord attached to the shade, and passing over said pulleys, a cord holder for said cord, and a second cord attached in a fixed position at one end, and adjustably connected with said cord holder at its other end, and means for adjustably connecting said cord with said cord holder.

1,302,219. SEWING-MACHINE. FRANKLIN A. REECE, Hopkinton, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Original application filed Dec. 18, 1915, Serial No. 67,683. Divided and this application filed June 11, 1917. Serial No. 173,913. 7 Claims. (Cl. 112—22.)

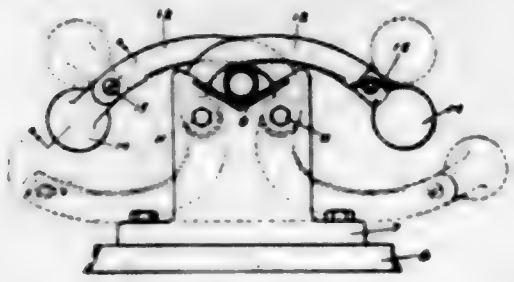
1. In a sewing machine, the combination with a frame having a work-supporting portion and ways beneath said

work-supporting portion, of a supporting member slidably mounted in said ways, a shuttle case mounted on said supporting member, a shuttle driver rotatably mounted in said supporting member, a shaft section also journaled in



said supporting member and connected to the shuttle driver, and means operatively connected to said shaft section in different adjusted positions of the supporting member to rotate said shaft section.

1,302,220. VISE. DAVID W. REESE, East Cleveland, Ohio, assignor to John Hoehn and Martha Hoehn, East Cleveland, Ohio. Filed Aug. 21, 1918. Serial No. 250,768. 1 Claim. (Cl. 81—19.)



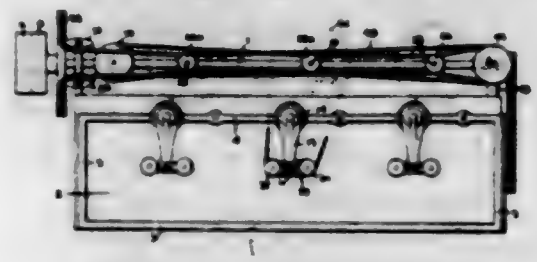
A vise comprising a base provided with upright seat members, swinging jaws pivoted to the members and adapted to grip the work thereon, and weights pivoted to the outer ends of the swinging jaws, for adjustment thereon.

1,302,221. STOKER-GRATE. FRANK J. REMMLEIN, Philadelphia, Pa. Filed Feb. 2, 1918. Serial No. 215,049. 2 Claims. (Cl. 110—40.)



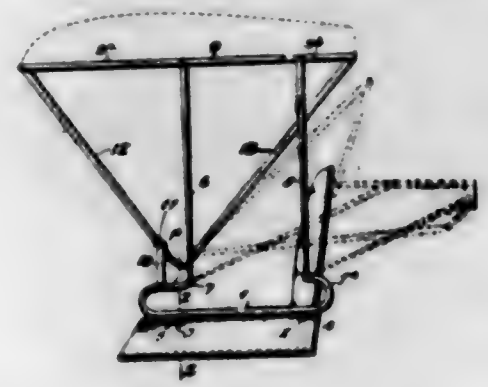
1. In a device of the character stated, the combination with grate bars having at their ends bottom lugs with recesses in their under side and provided with apertures communicating with said recesses and counter-sunk at their upper ends, of fastening devices having heads to seat in said recesses and stems to pass through said apertures, nuts in threaded engagement with said stems, sprocket chains, and pins extending laterally through said sprocket chains and through the heads of said fastening devices.

1,302,222. POWER TRANSMISSION FOR GRINDING AND SIMILAR MACHINES. EDWARD RIVETT, Hull, Mass. Original application filed Mar. 29, 1916, Serial No. 87,607. Divided and this application filed Jan. 12, 1917. Serial No. 142,067. 9 Claims. (Cl. 74—21.)



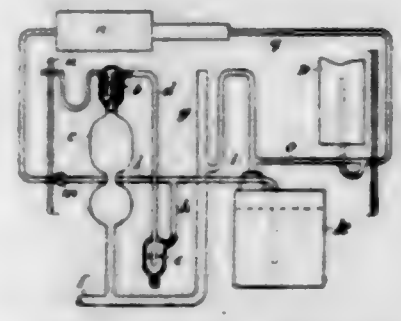
1. A metal working machine comprising a plurality of laterally movable vertical tool spindles, a corresponding plurality of vertical driver spindles, a main shaft, an endless belt drive from each driver spindle to its tool spindle acting to drive said spindle in various positions of lateral adjustment, and a single endless belt drive from the main shaft to all of the driver spindles.

1,302,223. SEAT-RAIL ATTACHMENT FOR TOP-CARRIAGES. OTHO N. ROBARDS, Henderson, Ky. Filed July 11, 1916, Serial No. 108,652. Renewed Mar. 14, 1919. Serial No. 282,735. 1 Claim. (Cl. 21—45.)



The combination with a carriage top having horizontally arranged jointed braces and a seat-rail whose front end is curved upwardly and rearwardly, of vertical bows 6 and 8 and inclined front and rear bows 12 and 13, the latter two being pivoted to the lower portion of the intermediate bow 6 and a hook pivoted to the front end of the seat-rail and adapted to engage the front bow 12 for holding the carriage top distended, as shown and described.

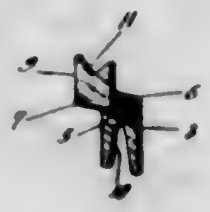
1,302,224. GAS-ANALYZING APPARATUS. OLOF RODHE, Stockholm, Sweden, assignor to Aktiebolaget Ingeniörsfirma Fritz Egnell, Stockholm, Sweden. Filed Jan. 29, 1917. Serial No. 145,206. 1 Claim. (Cl. 23—3.)



Automatically operating gas analyzing apparatus for two or more individual analyses of a gas mixture continuously streaming through the apparatus, comprising first measuring apparatus, absorption apparatus, second or final measuring apparatus and registering apparatus,

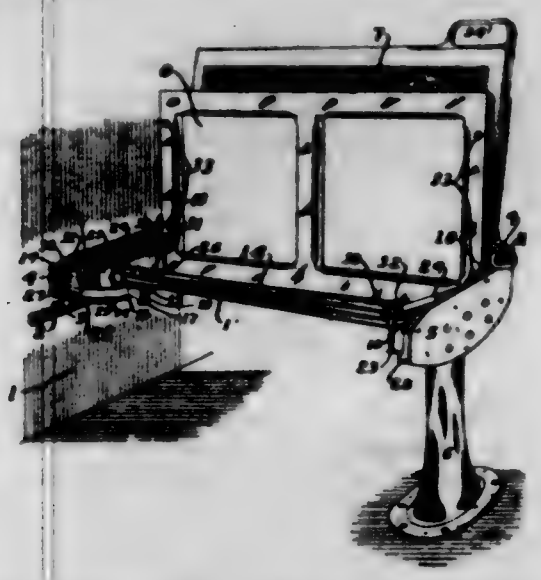
means for connecting said apparatus to allow the flow of gas through the same, in two channels having one or more of said apparatus in common but each channel having other of said apparatus independent of the other channel, and controlling means for causing the gas flow to take one or the other channel, through the first and final measuring apparatus always in the same direction.

1,302,225. NECKTIE-ADJUSTER. CHARLES M. SANDERS, Guthrie, Okla. Filed Feb. 13, 1918. Serial No. 216,757. 4 Claims. (Cl. 24—56.)



1. A tie holder of the character described formed from a strip of metal bent in substantially Z shaped formation, one end of the strip being formed with a slot adapted to receive the shank of the collar button, the opposite end of the strip being provided with a notch for the reception of the knot of the tie.

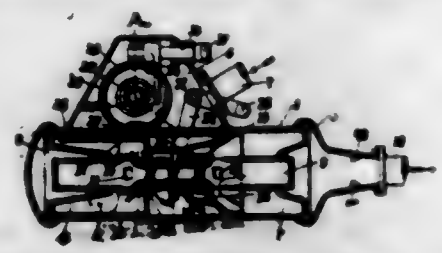
1,302,226. SEAT. BERNARD SCHECHTER, St. Louis, Mo. Filed Oct. 31, 1918. Serial No. 260,493. 5 Claims. (Cl. 155—2.)



1. The combination of a pair of end plates and parts contained in each, the said parts consisting in a movable seat-rocker, a seat-rocker guide fixed to the adjacent plate, a projection from the seat-rocker containing a socket, a stud projecting into the said socket, a seat-rocker lever upon which the said stud is mounted, a seat-rod, with which the said seat-rocker lever is in fixed connection, a seat-back lever fixed to the said rod, a seat-back, pivotal connection between the seat-back and the said lever, another lever pivoted to the seat-back, another seat-rod, the same being in pivotal connection with the other end of the said last-mentioned lever, and a tie-plate having fixed thereto a hooked tongue for binding the seat-rocker in place.

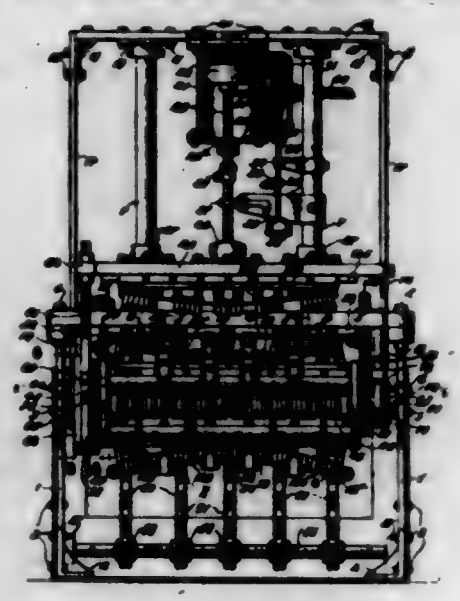
1,302,227. REGULATING DEVICE FOR WATERING-CARTS AND THE LIKE. GUSTAV SCHLATTER, Steinach, and GUSTAV SROIN, Arbon, Switzerland, assignors to Firma Adolphe Saurer, Arbon, Switzerland. Filed Apr. 13, 1917. Serial No. 161,875. 6 Claims. (Cl. 137—64.)

5. In a regulating device for watering carts, a regulating valve operated by water pressure and mounted to move lengthwise relatively to the spray head and also to turn relatively thereto, longitudinal movement of said valve determining the length of the spray while its rotation determines the width of the spray, and two inde-



pendent manually operated devices, one for effecting the longitudinal movement of the regulating valve, and the other for turning it.

1,302,228. MACHINE FOR FORMING METAL BODIES. CHARLES F. SCHULTIS, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 2, 1915. Serial No. 64,684. 9 Claims. (Cl. 153—51.)



6. In a machine of the character set forth, the combination of a table, a templet carried thereby, a head movable toward and from said table and having a templet complementary to the templet of the table, the table being movable to shift its templet from operative relation to the templet of the head, mechanism for moving the head, and means actuated by the movement of the head for clamping articles to the first mentioned templet and to retain them during the movement of the table.

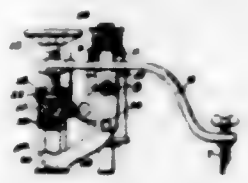
1,302,229. LIGHTNING-ARRESTER. EDMUND O. SCHWEITZER and NICHOLAS J. CONRAD, Chicago, Ill., assignors to Schweitzer & Conrad, Chicago, Ill., a Corporation of Illinois. Filed Oct. 18, 1917. Serial No. 197,179. 11 Claims. (Cl. 175—30.)



2. In a protective device, a pair of blocks having flat end faces, a lateral recess in each block, a common elec-

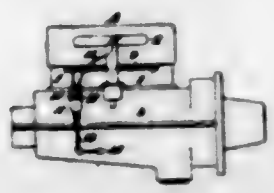
trode member projecting through the adjacent end face of each block into the chambers and other electrode members projecting into the recesses in the blocks to form spark gaps with the common electrode member.

1,302,230. MAGNETIC RIVET-HEATER AND SPOT-WELDER. THOMAS J. SHEA, Portland, Oreg. Filed Sept. 24, 1918. Serial No. 255,480. 10 Claims. (Cl. 219—2.)



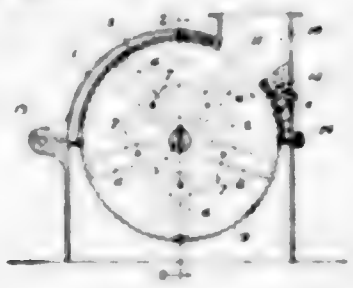
9. A tool comprising a frame, an electric heating point carried thereby, a magnet carried by the frame and adapted to attach itself to the work, and means to yieldingly press the point against the work.

1,302,231. OIL-SAVER. DAVID S. SHEHADY, San Francisco, Calif. Filed June 13, 1918. Serial No. 239,907. 8 Claims. (Cl. 184—18.)



1. The combination with the cylinder, the piston and the crank case in an internal combustion engine, of means for removing and collecting the surplus oil delivered to the cylinder, and means connected with the intake manifold on the engine for removing the oil collected by suction and for returning the collected oil to the crank case.

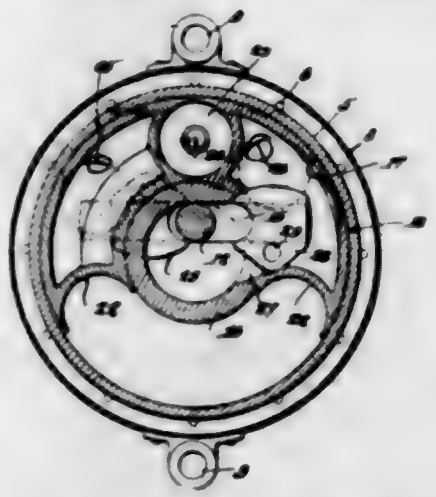
1,302,232. PULVERIZER. HARRY J. SHELTON, St. Louis, Mo. Filed Nov. 4, 1918. Serial No. 261,104. 2 Claims. (Cl. 83—11.)



1. A pulverizer having a grinding chamber with revolving hammers and an inlet duct, and a pocket for foreign material, the said pocket being formed by and between the adjacent walls of the said chamber and said inlet duct, and opening upwardly directly into the latter.

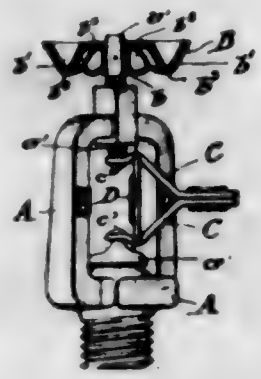
1,302,233. ROTARY ENGINE. LESLIE M. SHERIDAN, El Paso, Tex. Filed May 31, 1917. Serial No. 171,950. 3 Claims. (Cl. 123—11.)

1. In a device of the class described, a stator; a pair of pistons having orbital movement in the stator and conforming to the inner curve of the stator, the ends of the pistons being provided with coöperating recesses extended entirely thereacross and defining expansion chambers when the ends of the pistons abut, the expansion chambers being open at their ends throughout the entire diameter of the expansion chambers, the pistons being relatively movable circumferentially of the stator to enlarge and diminish the chambers, the stator having in one side, an inlet port, and being provided in one side with an exhaust port, the ports communicating at different times with each chamber; a shaft journaled in the



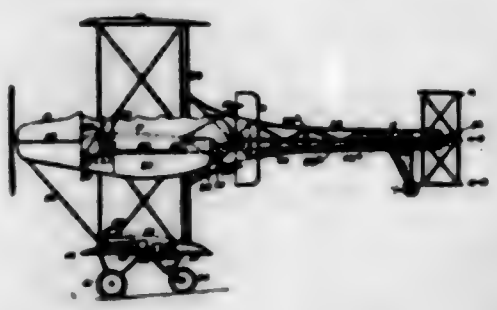
stator; means for operatively connecting the shaft with the pistons; and an ignition device carried by one side of the stator and coöperating with the chambers, throughout the entire diameter of each chamber.

1,302,234. FUSIBLE LINK OR STRUT. EDWARD F. SHIPMAN, Woodhaven, N. Y. Filed Mar. 7, 1917. Serial No. 153,178. 15 Claims. (Cl. 169—5.)



1. A fusible link for fire sprinklers embodying two levers of the first class pivoted on separate fulcrums, with the work arms of the levers spaced apart and in substantially parallel relation and the portions of the power arms thereof adjacent the fulcrums converging to bring the remaining portions of the power arms into face-abutting relation, and fusible solder uniting said face-abutting portions of the power arms.

1,302,235. AEROPLANE. SELDEN S. SLOTER, Fairmont, W. Va., assignor of one-half to Chester C. Shinn, Fairmont, W. Va. Filed Feb. 15, 1918. Serial No. 217,826. 6 Claims. (Cl. 244—14.)



1. In a flying machine of the triplane type, the combination with the main transverse front frame, of a plurality of fuselages each having a tractor type power unit and including a central and a right and left fuselage, with the central one disposed in the transverse and vertical

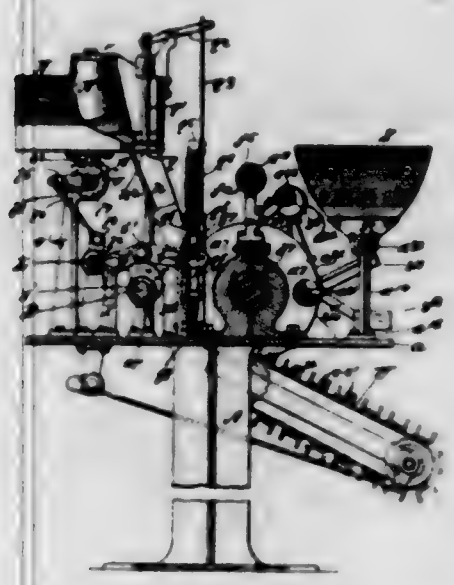
center of the front frame minus the angle of incidence, and projected forwardly of the front frame for a greater distance than the other fuselages, whereby centralization of the propelling power units in the center of the supporting area is effected.

1,302,236. COVERED BOX. HARRY B. SMITH, Brooklyn, N. Y. Filed May 4, 1915. Serial No. 25,678. 2 Claims. (Cl. 229—40.)



1. As a new article of manufacture, a permanently "set up" non-stayed covered box shell formed from a foldable one-piece board blank and a covering wrapper, said blank having side and end wings, the side wings having end laps, the said blank and wrapper being assembled in superposed relation in a non "set-up" condition and thereafter folded into box form with marginal portions of the wrapper infolded over the edges of and adhesively attached to the inner faces of the side and end walls of the box, whereby the wrapper constitutes the sole means for permanently holding the side wings and end laps of the shell in fixed relation.

1,302,237. MEANS FOR FORMING BATTERY ELEMENTS, &c. SAMUEL SOKOLOW and SAMUEL POLINSKY, New York, N. Y., assignors to Conrad Hubert, White Plains, N. Y. Filed Feb. 23, 1917. Serial No. 150,439. 27 Claims. (Cl. 18—5.)



27. An automatic machine for forming battery elements, such machine having, in combination, a mold, means for automatically inserting an electrode rod into the mold, and means for automatically feeding the electrode rods to said rod-inserting means, said automatic feeding means including means for discharging defective electrode rods.

1,302,238. TOY ROCKER. BENJAMIN H. STEVENSON, Alliance, Ohio. Filed July 23, 1918. Serial No. 246,322. 5 Claims. (Cl. 46—22.)

1. A device of the character described, comprising a pair of rocker bodies having openings in the side portions thereof, means for removably closing said openings, a seat carried by said rocker bodies, and means carried at

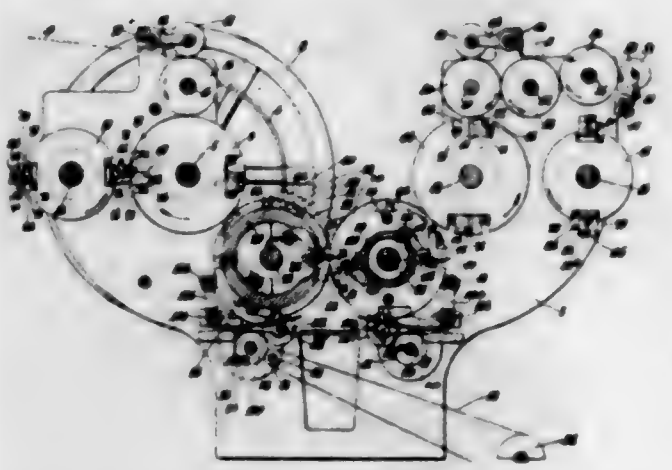


the forward portions of said bodies for preventing displacement from the device.

1,302,239. AUTOMOBILE-HEADLIGHT LENS. JOHN B. SUBSS, Seattle, Wash. Filed Dec. 10, 1918. Serial No. 266,302. 1 Claim. (Cl. 240—48.4.)

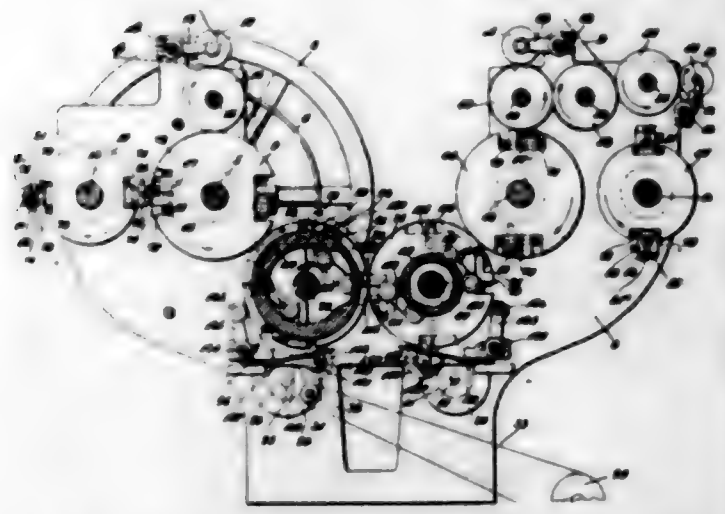
A headlight lens comprising a glass plate having a small transparent integrally formed diverging lens in its center, a matted section of substantially one-third the diameter of the headlight lens surrounding said central diverging lens, a matted section extending across the bottom of said headlight lens, and a matted section at the upper portion of said headlight lens and extending around the outer portion of said headlight lens to substantially the horizontal axis thereof, the medial portion of said upper matted section extending downwardly and merging with said central matted section.

1,302,240. PAPER-INTERFOLDING MACHINE. CLYDE E. SWICK, San Francisco, Calif., assignor, by mesne assignments, to Hawley Pulp and Paper Company, a Corporation of Oregon. Filed Oct. 8, 1915. Serial No. 54,828. 58 Claims. (Cl. 270—39.)



1. In a paper web interfolding machine, cutting elements having means for partially severing webs of paper at alternate points along the lengths of said webs, and means for folding said sheets at each of the partially severed portions and completely severing the web which has been partially severed at that point.

1,302,241. METHOD OF INTERFOLDING PAPER. CLYDE E. SWICK, San Francisco, Calif., assignor to Hawley Pulp and Paper Company, a Corporation of Oregon. Original application filed Oct. 8, 1915, Serial No. 54,828. Divided and this application filed Dec. 21, 1917. Serial No. 208,285. 16 Claims. (Cl. 270—39.)



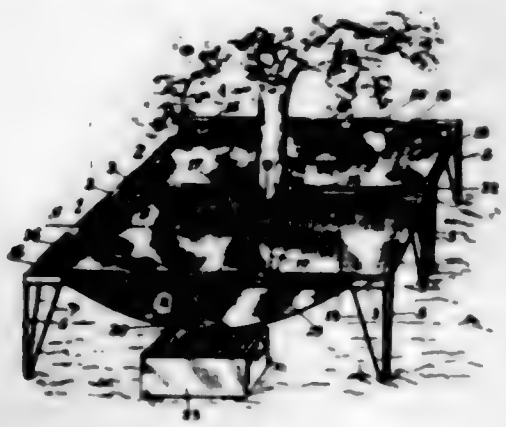
5. A method of interfolding paper which comprises partially severing webs of paper at alternate points along their lengths, folding the webs at each of the partially severed points, and completely severing each web at the points which have been previously partially severed.

1,302,242. TIE-HOLDING ATTACHMENT FOR COLLARS. LAWRENCE HENRY TAYLOR, Red Cloud, Nebr. Filed Oct. 23, 1917. Serial No. 198,120. 2 Claims. (Cl. 2—71.)



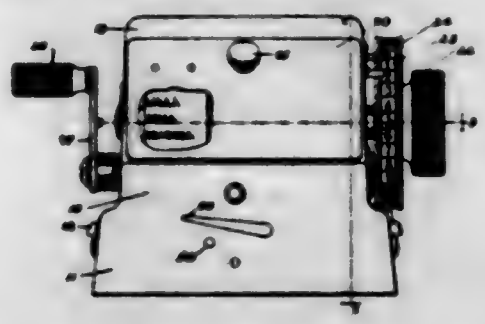
1. A turn-over collar construction including inner and outer folds, the inner fold at its ends being formed with flaps provided with buttonholes and adjacent the flaps being formed with substantially U-shaped clefts the sides of which are directed upwardly, the tabs defined by the clefts being bent outwardly and upwardly to provide upwardly directed hooks disposed between the folds of the collar, two of these hooks being formed at each end of the collar and at different elevations.

1,302,243. FRUIT-GATHERER. RALSIGH E. TRAGUE, Hanford, Calif. Filed July 18, 1918. Serial No. 245,454. 2 Claims. (Cl. 56—99.)



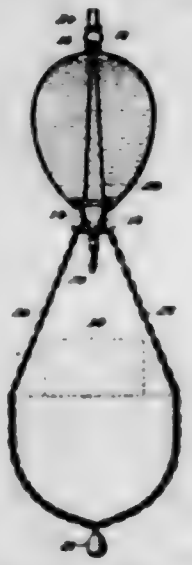
2. A fruit gatherer comprising a pair of independent rectangular frames of equal size to form a square when abutting one against the other, brace plates under each corner of each frame, legs depending from the plates, a centrally positioned semicircular piece projecting inwardly from the abutting edges of the frames and adapted to surround the trunk of a fruit tree, and canvases hung on the frames with their lowest points on the vertical plane of the edges of the frames farthest from the tree, and central thereof, the canvases being each provided with an orifice at such lowest points for the passage of the fruit therethrough.

1,302,244. CHECK-WRITING MACHINE. CHARLES G. TIRVAL, Rochester, N. Y., assignor to Todd Protectograph Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 24, 1916. Serial No. 116,661. 18 Claims. (Cl. 197—64.)



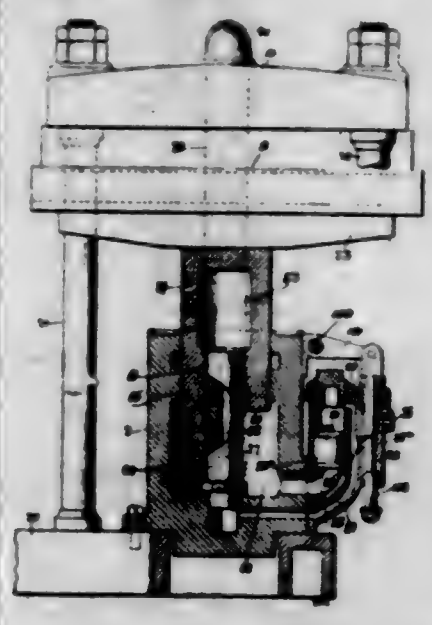
1. In a printing apparatus, a type drum having fixed on its cylindrical surface a plurality of type forms of various lengths, and movable to bring said forms, selectively, to printing position; a platen, said drum and platen having a relative impressing movement; a plurality of stop shoulders extending in a direction normal to the plane of movement of the carrier, one for each of the type forms and inversely corresponding thereto in length; means for feeding the work; a movable device, said device and shoulders having a fixed relative movement in the direction of extent of the shoulders; a contact part resiliently connected to said device and arranged to be moved by said relative movement of the device and shoulders through distances controlled in extent by contact with said shoulders, said part and shoulders being relatively movable by said selective movement of the carrier to bring them selectively, into coöperative relation, and a connection between said part and feeding means to move the latter an extent proportional to the length of the type form printed.

1,302,245. SHIP-RAISING DEVICE. NAZZERENO TOGNACCI, Kincaid, Ill. Filed Mar. 4, 1918. Serial No. 220,819. 4 Claims. (Cl. 114—53.)



1. A device of the class described comprising a hollow vertical float, an inlet head at the lower end of the float, a vessel engaging chain suspended from said head, air supplying hose attached to said head, and a water exhausting pipe connected to the upper end of the float.

1,302,246. MACHINE FOR FORMING OIL-CAKES. RUSSELL A. TRACE, Dayton, Ohio, assignor to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed July 30, 1917. Serial No. 183,430. 8 Claims. (Cl. 183—17.)



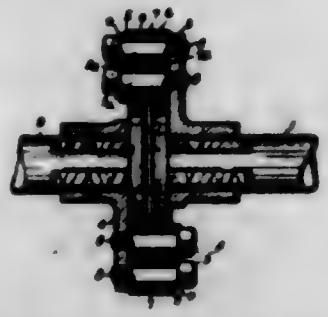
1. In a hydraulic press, the combination, with the ram and a plurality of constantly separate force chambers, of a three-way valve for admitting fluid under pressure to a force chamber, and means controlled by the movement of the ram for establishing communication between said chambers, whereby the fluid pressure is introduced successively into said chambers for operating the ram at varying powers, and a gravity valve coöperating with the three-way valve to permit discharge of the fluid from said chambers.

1,302,247. COMB. JOHN H. TROY, New York, N. Y. Filed Apr. 20, 1918. Serial No. 229,710. 7 Claims. (Cl. 132—8.)



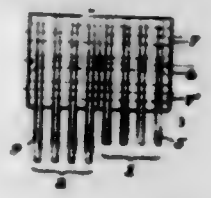
7. In a molding comb, the combination of a shell or casing having a longitudinal slot, a body member rotatively mounted in the casing, a unitary toothed element eccentrically trunnioned on the body and arranged in such manner that the teeth are forced outwardly through the slot in the shell into operative position by the rotative movement of the body in the shell.

1,302,248. FLEXIBLE COUPLING. GUSTAV A. UNGAR, Cleveland, Ohio, assignor to F. E. Blair & Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 9, 1917. Serial No. 141,863. 40 Claims. (Cl. 64—26.)



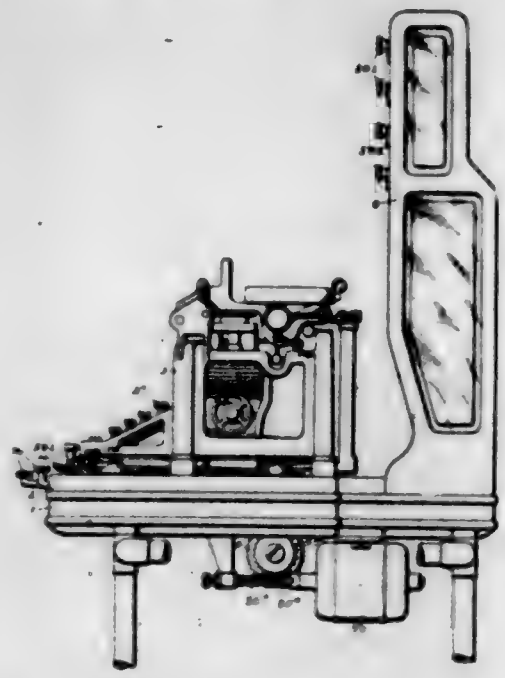
1. A device of the character described comprising, in combination, two driving members, a flexible torque transmitting element, means adapted to cause a tractive effect between each of said members and said torque transmitting element at circumferentially spaced points around the element, including attaching means having rotative parts and a locking element adapted to lock mutually a plurality of said rotative parts.

1,302,249. PUNCH FOR PERFORATING FILMS. OTTO VOGTRAM, Brooklyn, N. Y., assignor to Duplex Machine Co., a Corporation of New York. Filed Jan. 15, 1919. Serial No. 271,191. 1 Claim. (Cl. 164—90.)



In a punch for punching films, in combination, a punch block composed of a plurality of plates secured together, the adjacent plates being of less width to leave spaces between the projecting portions of the alternately positioned wider plates, and a plurality of punch members each positioned in one of said spaces and held between the said projecting portions of the plates on either side thereof.

1,302,250. CALCULATING-MACHINE. RICHARD VON RAFFERT, St. Louis, Mo. Filed Dec. 18, 1917. Serial No. 207,682. 91 Claims. (Cl. 235—62.)

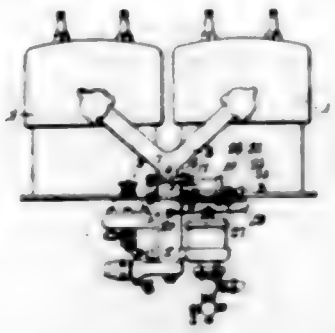


1. In a calculating machine, totalizing mechanism, an item register adapted to be set to represent an item, keys adapted to effect the printing of the numerals 0 to 9, respectively, and means adapted to be operatively connected with and disconnected from said keys to set the register, said item register constituting means for actuating the totalising mechanism.

1,302,251. MAXIMUM-SPEED GOVERNOR FOR AUTOMOBILES. WILSON R. VOORHEES, Perth Amboy, N. J. Filed Feb. 16, 1918. Serial No. 217,557. 6 Claims. (Cl. 137—153.)

3. An attachment for explosion engines for establishing a predetermined limit at which the engine may be run by an operator, comprising means for controlling the amount of fuel directed to the engine, pressure-respon-

sive means connected to the controlling means to cause the latter to act when the desired speed limit has been attained, and means for sealing against unauthorized manipulation all parts of the attachment through which

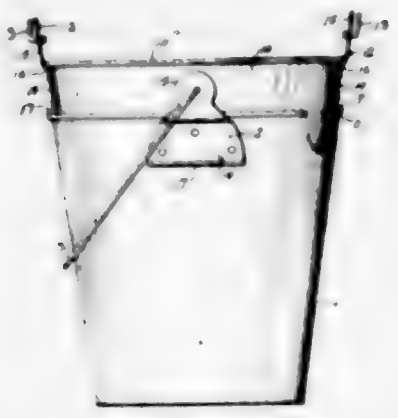


change of adjustment may be effected, whereby the attachment when installed and adjusted is proof against the running of the engine above a predetermined speed.

1,302,252. METHOD OF MAKING MOTHER-OF-PEARL TILING. ALBIN VUILLERMET and CESAR VUILLERMET, Philadelphia, Pa. Filed Feb. 13, 1918. Serial No. 216,980. 1 Claim. (Cl. 18—47.5.)

The herein described method of producing a shell and cement tile or slab, consisting in crushing a quantity of shells to obtain therefrom the mother-of-pearl, thoroughly mixing the mother-of-pearl with a plastic mass of cement to insure the cement being thoroughly impregnated with the pieces of mother-of-pearl, molding this mass into the slab or tile, grinding the surface of the slab or tile to smooth off the rough particles of cement and polish and smooth out the exposed mother-of-pearl and subjecting the finished surface of cement and mother-of-pearl simultaneously to a coat of white damar.

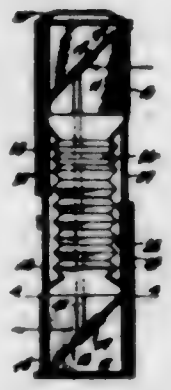
1,302,253. CANNING BUCKET. VENEMON L. WALLACE, Murray, Utah. Filed Jan. 8, 1919. Serial No. 270,196. 3 Claims. (Cl. 220—91.)



1. A bucket having thereon oppositely disposed ears and a bail engaging the ears, each of the ears being provided with an outwardly projecting flange at its lower edge adapted to engage the rim of a bucket within which the first named bucket is supported to thereby support the buckets in spaced relation.

1,302,254. OBSERVATION DEVICE. HARRY W. WARNECKE, New York, N. Y. Filed Jan. 10, 1919. Serial No. 270,465. 2 Claims. (Cl. 88—1.)

2. In an observation device, a plurality of extensibly connected box-members, said box-members being open at opposite sides thereof, an apron carried by each box to overlie the open side of its coöperating box when said device is collapsed, mirrors carried by each box, having their reflecting surfaces presented toward each other,



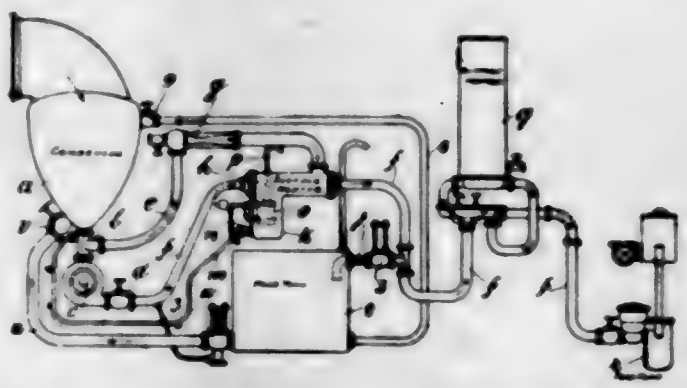
tubular telescoping supports connecting said boxes, and a collapsible light excluding duct connecting said boxes.

1,302,255. FOCUSING DEVICE FOR CAMERAS. EDGAR E. WEBSTER, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,532. 5 Claims. (Cl. 95—44.)



1. A range finder for cameras comprising an adjustable lens standard, an auxiliary telescopic focusing lens carried transversely of and by said standard, means for adjusting said lens standard, a rail along which said standard is movable, and a cam interposed between said rail and said focusing lens so as to effect a simultaneous adjustment of the camera and auxiliary lens.

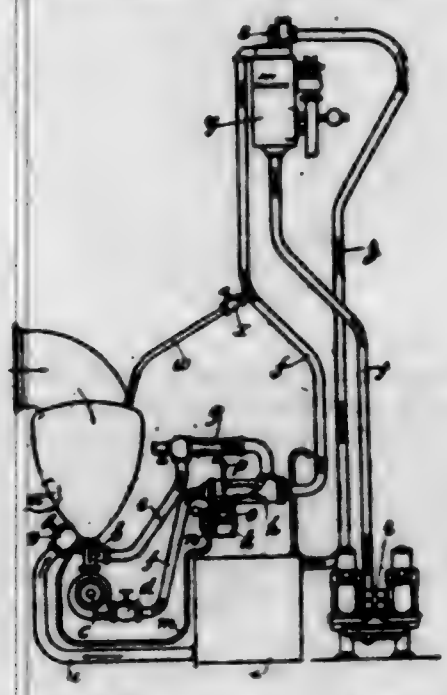
1,302,256. FEED-WATER-TREATMENT ARRANGEMENT IN STEAMSHIPS. WILLIAM WEIR, Glasgow, Scotland, assignor to G. & J. Weir, Limited, Glasgow, Scotland. Filed Apr. 27, 1917. Serial No. 164,973. 8 Claims. (Cl. 257—24.)



1. In a steamship, in combination, a main condenser, a boiler feed pump, a main feed pipe extending from the said condenser to the said boiler feed pump, a water-extraction pump for the withdrawal of the water of condensation, i. e., the feed water, from the said condenser, and the delivery of the same under pressure into the said feed pipe, a surface feed heater on the said main feed pipe, a steam-

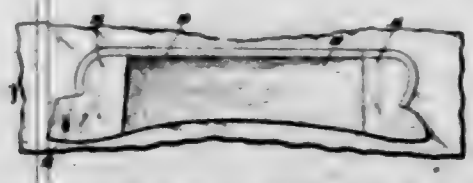
jet air ejecter for the extraction of the air, with vapor, from the said condenser and the delivery of the same into the said surface heater, the said heater being arranged for the heating of the feed water by the condensation of the steam from the ejector, a feed tank, an admission pipe connection between the said main feed pipe and said feed tank, an automatic non-return loaded valve on said pipe connection, a discharge pipe connection from said feed tank, an automatic non-return valve on said last mentioned pipe connection, a return pipe connecting the said feed tank with the said condenser, and a hand-controlled valve on said return pipe.

1,302,257. FEED-WATER-HEATING APPARATUS. WILLIAM WEIR, Glasgow, Scotland, assignor to G. & J. Weir, Limited, Glasgow, Scotland. Filed Apr. 28, 1917. Serial No. 165,219. 4 Claims. (Cl. 257—24.)



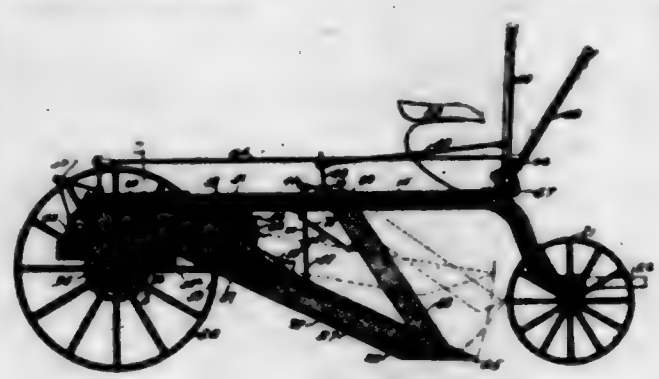
1. In a steamship, in combination, a main condenser, a main feed pipe, a pump for the withdrawal of the water of condensation, *i. e.*, the feed water, from the said condenser, and the delivery of the same under pressure into the said main feed pipe, a surface heater condenser on the said main feed pipe, a steam-jet air injector for the extraction of the air, with vapor, from the said condenser and the delivery of the same into the said surface heater condenser, the said surface heater condenser being arranged for the heating of the feed water by the condensation of the steam from the ejector, means for returning this condensed steam to the suction of the said pump, an elevated direct-contact heater on the main feed pipe beyond the said surface heater condenser and arranged for the further heating of the feed water by admixture with steam, a return pipe connecting the main condenser with the main feed pipe at a point between the surface heater condenser and the direct-contact heater, and a hand-controlled valve on the said return pipe.

1,302,258. COLLAR AND METHOD OF MAKING THE SAME. FRANK P. WELCH, Poughkeepsie, N. Y., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del., a Corporation of Delaware. Filed May 16, 1918. Serial No. 234,841. 12 Claims. (Cl. 2—72.)



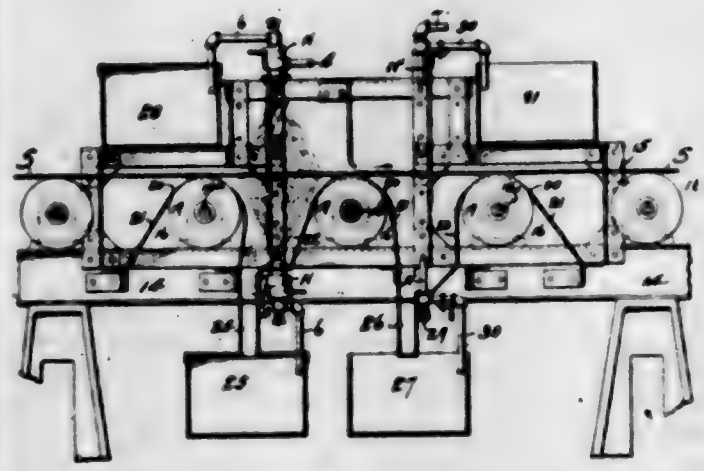
9. A collar comprising a plurality of layers of fabric united by, and between sheets of, a cellulose ester extending the full width of the collar, one layer only of said fabric extending throughout the length of the collar.

1,302,259. BEET-HARVESTER. FRANK J. WESTON, Cheyenne, Wyo. Filed May 24, 1917. Serial No. 170,581. 8 Claims. (Cl. 55—9.)



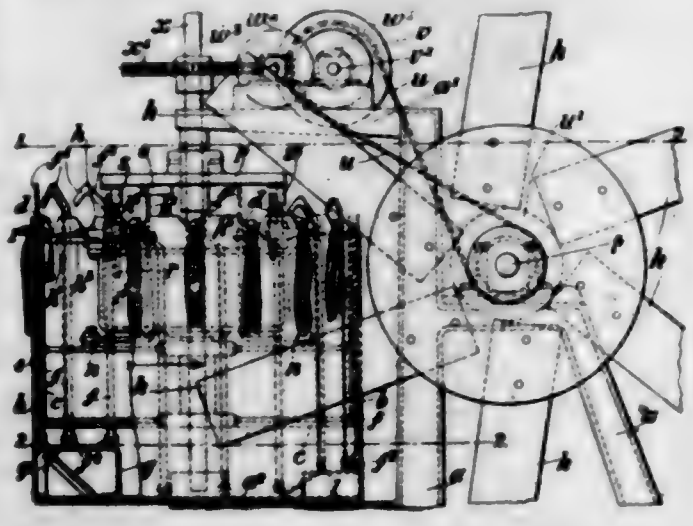
1. In a beet harvester, a pair of digger bars, a frame to which the upper and rear ends of said bars are rigidly attached, a shaft on which the frame is pivotally supported, a transverse bearing in the frame and above the shaft, rollers journaled in the frame and driven by said shaft, rollers on the digger bars, and endless belts rove around the said rollers for conveying the beets up the diggers and through the frame.

1,302,260. COATING PROCESS FOR BUILDING MATERIAL. HERBERT E. WHITE, Youngstown, Ohio. Filed Sept. 9, 1915. Serial No. 49,757. 2 Claims. (Cl. 91—68.)



1. A coating process of the class described which consists in consolidating with a fibrous body, by atomization, a hot mixture of stone-forming materials.

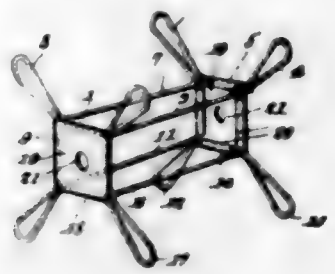
1,302,261. SCUTCHING OF FLAX AND LIKE FIBERS. JAMES ALEXANDER WILLIAMSON, Portadown, Ireland. Filed June 24, 1918. Serial No. 241,488. 15 Claims. (Cl. 13—18.)



4. Flax scutching apparatus having a plurality of open-topped cylinders, notches in the upper ends of the cylin-

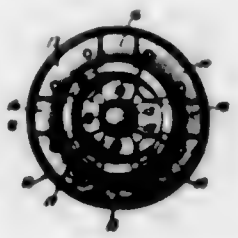
ders, clamping means coöperating with the cylinders for holding the flax in the notches, means for revolving the cylinders, scutching blades, and means for operating the scutching blades.

1,302,262. WIRE-REEL. REUBEN D. WIRT, Philadelphia, Pa. Filed Apr. 5, 1918. Serial No. 226,866. 4 Claims. (Cl. 242—77.)



1. A reel including a frame member made of a single piece of wire fashioned into radial arms and a connection uniting the arms; and end pieces secured to the ends of the frame member to form a complete reel.

1,302,263. FASTENER. JOSEPH V. WOODWORTH, Brooklyn, N. Y., assignor of one-half to James H. Devereux, Sagaponack, N. Y. Filed Feb. 18, 1919. Serial No. 276,716. 3 Claims. (Cl. 24—216.)



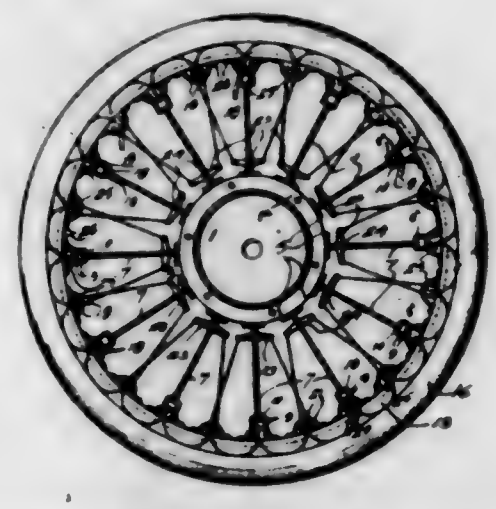
1. A stud holding member for a fastener, comprising a body having resilient retaining members adapted to freely yield in one direction throughout the lengths of the retaining members to allow easy passage of the head of a stud and to engage the under side of the said head to hold the stud in place, and retaining means engaging the said retaining members intermediate the ends thereof to resist movement of the said retaining members in an opposite direction.

1,302,264. SUBMARINE VESSEL. HAROLD E. YARROW, Glasgow, Scotland. Filed Oct. 30, 1917. Serial No. 199,309. 6 Claims. (Cl. 114—16.)



1. In a submarine vessel, a boiler, furnaces in the boiler with burners supplied with oil fuel, air doors to the furnaces, a funnel, a hinged valve for closing the funnel, and means by the operation of which the oil fuel supply to the furnaces, the said air doors and hinged valve are closed in predetermined sequence.

1,302,265. PNEUMATIC WHEEL. SAMUEL B. ZARTMAN, Niles, Mich., assignor of one-half to Benjamin F. Barber, Niles, Mich. Filed Dec. 28, 1917. Serial No. 209,316. 7 Claims. (Cl. 152—29.)

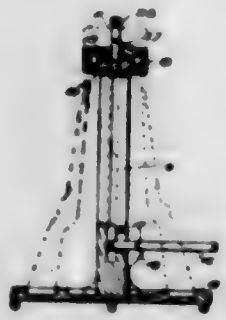


4. A pneumatic wheel including an inner or hub section having an air chamber and provided with cylinders communicating with the air chamber, main spokes having piston heads operating in the cylinders, said main spokes being provided at their outer ends with arms arranged in pairs, auxiliary spokes arranged in pairs at opposite sides of the main spokes and pivotally connected at their inner ends with the same and crossed intermediate their ends, and a flexible rim including sections extending across the space between the main and auxiliary spokes and pivotally connected with the latter and with the arms of the former.

1,302,266. PROCESS OF TREATING RUBBER AND THE PRODUCT PRODUCED THEREBY. RUBEN ZAMUCHS, Torreon, Mexico. Filed Aug. 10, 1916. Serial No. 114,256. 4 Claims. (Cl. 18—50.)

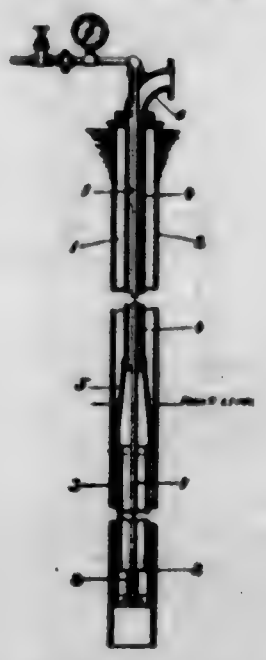
1. The process of treating rubber to increase its elasticity both as to quality and time, which consists in subjecting the rubber to the action of a resinous gummy preserving juice in its natural state, substantially as described.

1,302,267. GUN-RACK. JOHN F. ZINK, Allegany, N. Y. Filed Feb. 17, 1919. Serial No. 277,546. 3 Claims. (Cl. 211—14.)



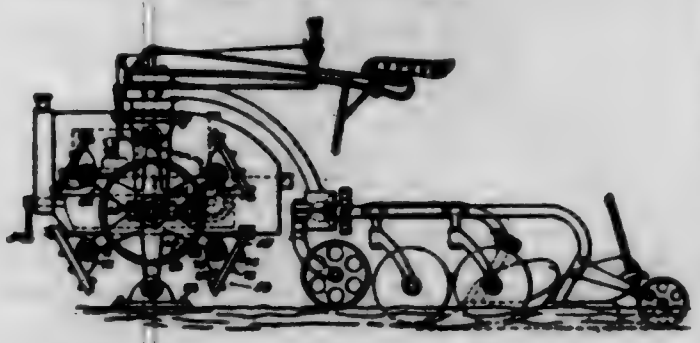
1. A gun rack including a recessed base plate, a recessed holder plate arranged thereover, a retaining plate provided with a depending flange adapted to overlie the recessed holder plate and prevent unauthorized removal of guns from the rack, a foot lever, and means connecting the foot lever with the retaining plate for manually operating the latter.

1,302,268. APPARATUS FOR ELEVATING FLUIDS BY COMPRESSED AIR. HERBERT T. ADAMS, Orange, N. J., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 2, 1915. Serial No. 37,829. 1 Claim. (Cl. 103—84.)



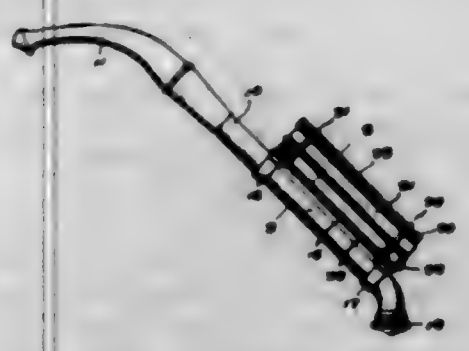
An eduction pipe for a... ..., the cross section of which varies in steps and the minimum cross section of which is adapted to be disposed substantially at the water level when the pipe is operatively disposed while the maximum cross section is adapted to be submerged.

1,302,269. TRACTOR-WHEEL. SHERMAN T. ALLEN, Los Angeles, Calif. Filed Apr. 15, 1918. Serial No. 228,772. 4 Claims. (Cl. 21—230.)



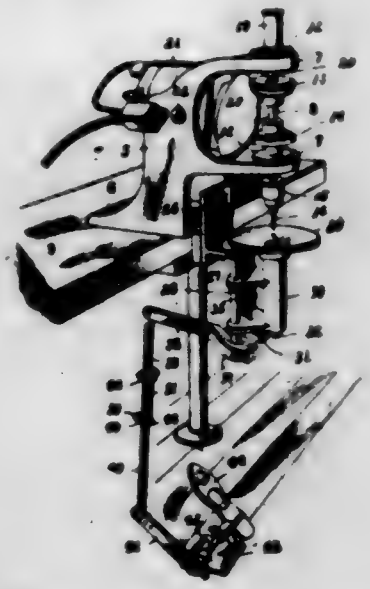
1. A tractor wheel comprising a hub, a rigid frame extending outwardly from the hub, bearing members extending outwardly from the frame, and tractor feet having slotted bearings to slide endwise on to said bearing members, so as to pivotally mount the feet upon the frame.

1,302,270. TOBACCO-PIPE. EMIL ALTMANN, Sheridan, Wyo. Filed Aug. 5, 1918. Serial No. 248,451. 2 Claims. (Cl. 131—12.)



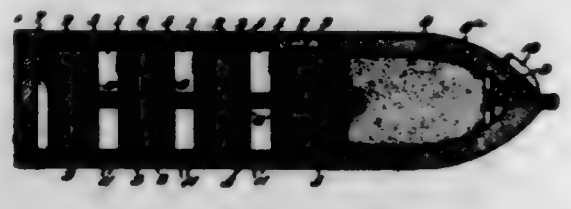
1. In a smoking pipe, a stem, a tobacco receiving device mounted thereon, means for connecting the bore of the stem with the interior of the receiving device, said receiving device including a plurality of sections, one of which is hinged upon the other and includes a semi-cylindrical member having flanges extending at an acute angle with reference to its edges, said flanges being turned back on themselves, providing a space between which the edges of the other of said sections are received.

1,302,271. TAPPING-MACHINE. NILS H. ANDERSON, Bridgeport, Conn. Filed Jan. 27, 1917. Serial No. 144,820. 11 Claims. (Cl. 10—136.)



4. In a tapping machine of the class described, the combination of a frame, an electric motor pivotedly mounted in the frame, a spherical driving disk mounted upon the motor shaft and adapted to be raised and lowered by the pivotal adjustment of the motor, means for securing the motor in its adjusted positions, a longitudinally movable tap spindle, a pair of friction members secured thereto and adapted to engage the face of the spherical disk, on the opposite sides of the axis, a vertically movable work table, a bracket for supporting the table, means for raising and lowering the table, and a spring for yieldably supporting the table.

1,302,272. SHELL. RICHARD G. AUGHSTEN and OTTO L. AUGHSTEN, Galveston, Tex. Filed Nov. 4, 1918. Serial No. 261,071. 5 Claims. (Cl. 102—29.)

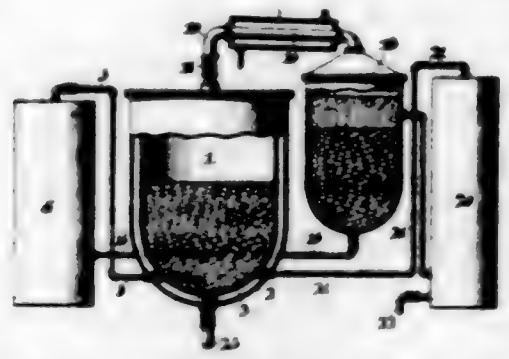


2. In an explosive shell, sub shells designed to contain gas and a high explosive, respectively, and arranged end to end and joined through a comparatively weak portion whereby when the shell is exploded the sub-shell containing gas will be thrown a considerable distance from the remainder of the shell.

1,302,273. PROCESS OF MANUFACTURING BENZALDEHYDE. ALAN I. APPELBAUM, Trenton, N. J., assignor to The Import and By Products Company, Incorporated, Trenton, N. J., a Corporation of Delaware. Filed May 17, 1918. Serial No. 235,073. 10 Claims. (Cl. 23—24.)

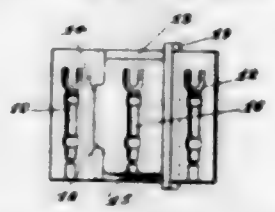
3. The process of producing aldehydes from the aromatic hydro-carbon series, which consists in treating a

hydro-carbon belonging to said series with an oxidizing agent and a catalytic in the presence of an acid and



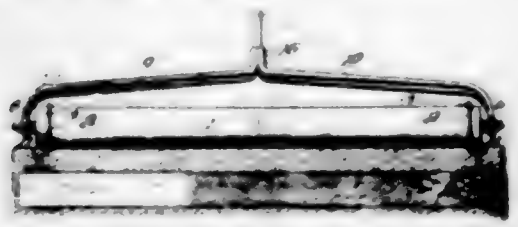
thereafter separating from the mass the aldehyde produced.

1,302,274. COMPOSITE DIE FOR DROP-HAMMERS AND THE LIKE. ALBERT F. ARTHUR, Cleveland, Ohio, assignor to The Cleveland Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1916. Serial No. 93,834. 3 Claims. (Cl. 78—60.)



1. A composite die for drop hammers, hydraulic presses and the like, comprising a shoe or holder having spaced side portions with one or more roughing-out dies and having between the side portions a recess, and a finishing die removably secured in said recess and comprising a body having a finishing pattern formed on its face and provided with a locking projection fitting into a suitably shaped portion of the recess.

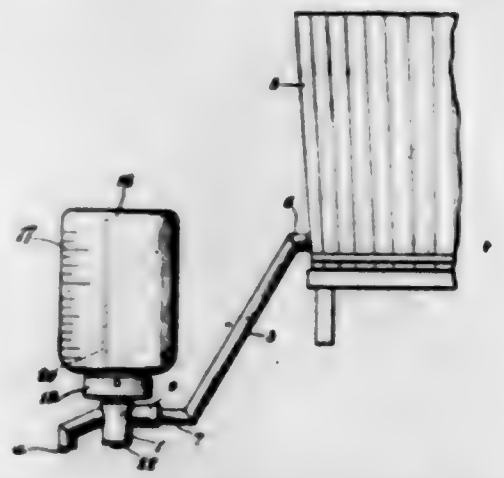
1,302,275. ROLLER FOR FINISHING AND SMOOTHING CEMENT AND CONCRETE PAVEMENTS. WALTER L. ASHMORE and WILLIAM T. MORGAN, Jr., Macon, Ga.; W. T. Morgan, Sr., temporary administrator of said William T. Morgan, Jr., deceased. Original application filed Mar. 27, 1916, Serial No. 87,099. Divided and this application filed May 18, 1918. Serial No. 235,342. 3 Claims. (Cl. 94—6.)



1. A device for finishing concrete pavements and the like between the rails of a railway track, consisting of a roller for working and finishing the surface of the pavement between the rails, and means carried by the roller near its ends for forming grooves in the pavement beside the track rails adapted to receive the flanges of the car wheels.

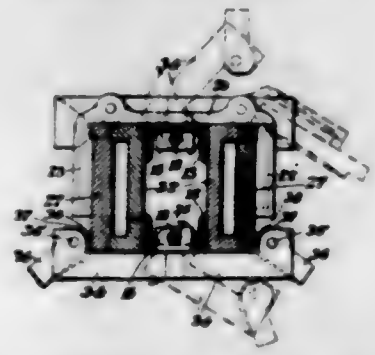
1,302,276. SANITARY MEASURING-FAUCET. ALEXANDER BALLARD, Miltonvale, Kans. Filed May 23, 1916. Serial No. 99,384. 1 Claim. (Cl. 221—116.)

A measuring device comprising a tapered barrel having inlet and outlet openings in substantially the same plane with each other, an inlet pipe connected to said inlet opening and adapted to be connected to a supply source, an outlet pipe connected to the outlet opening, a tapered plug rotatably mounted in said barrel and having a passage including horizontal and vertical branches, said vertical branches extending through the upper end of the plug, said horizontal branch adapted to be moved to communicate with the inlet and outlet openings, a cup-shaped member formed on the upper end of the plug, a measuring



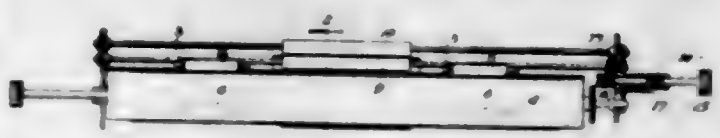
receptacle detachably secured to said cup-shaped member, a vent tube located in said receptacle and extending through the cup-shaped member and eccentrically of the plug, a plate closing the lower end of the barrel, and a set bolt securing the plate to the plug.

1,302,277. MOLD FOR INGOTS. FRANCIS M. BANGS, Deep River, Conn. Filed Jan. 31, 1919. Serial No. 274,225. 7 Claims. (Cl. 22—146.)



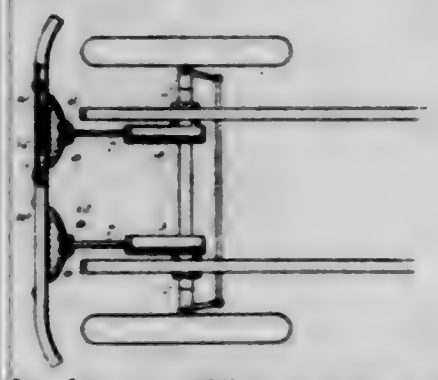
1. A mold comprising a frame, a mold back member supported in said frame, a hinge member associated with said frame, a mold front member supported by a part of the said hinge member which is adapted to swing so as to bring the mold front member relatively into position with the mold back member, and means for clamping the mold members together.

1,302,278. TYPE-WRITER. AUGUSTUS C. BARLOW and MERRITT E. ROBERTS, Chicago, Ill. Filed May 18, 1918. Serial No. 235,267. 6 Claims. (Cl. 197—128.)



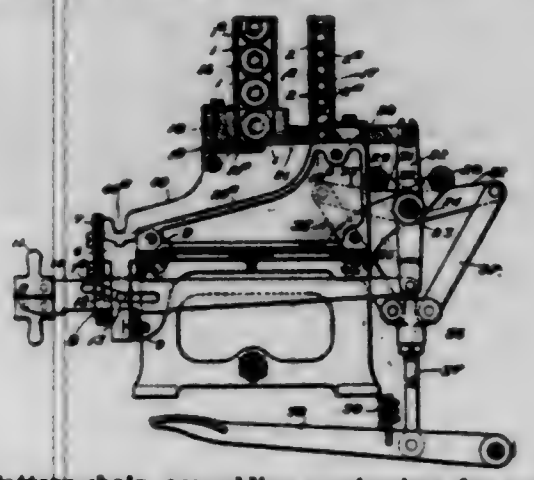
1. The combination with a cylindrical rotatable platen and rolls opposing parts thereof to feed a ledger sheet, leaving other parts free for the independent feed of a statement, of statement feed-rolls adapted to feed a statement sheet of less width than the platen in the direction generally parallel to that of the sheet carried by the platen, means for guiding the two sheets into position, one outside the other, when in the line on the platen to be struck by the type of the typewriter and means, for at will, rotating the platen and the statement feed-rolls each independently of the other or together in unison in similar directions.

1,302,279. BUMPER. HERBERT BARNETT, Kingston, Ontario, Canada. Filed Dec. 18, 1918. Serial No. 267,282. 2 Claims. (Cl. 293—55.)



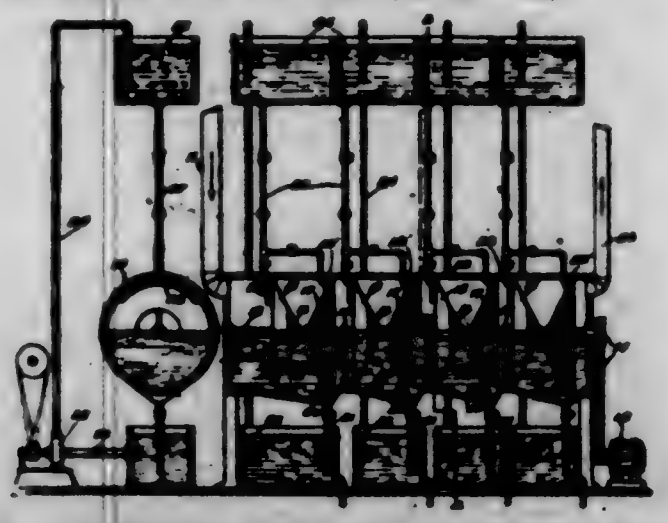
1. A fender for automobiles comprising a casing, a coiled spring therein, a piston in the casing acting against said spring, a rod connected with said piston, a curved spring connected with said rod, a bumper connected with said curved spring and a spiral spring connected with the curved spring for resisting spreading movement of the same.

1,302,280. ASSEMBLING-MACHINE. FRANK E. BATCHELDER, Worcester, Mass. Filed Feb. 6, 1918. Serial No. 215,696. 34 Claims. (Cl. 29—34.)



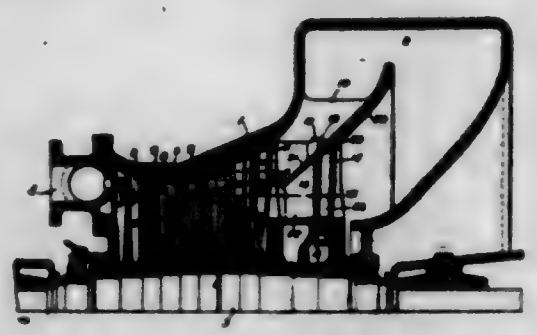
1. Pattern-chain assembling mechanism for use in assembling a series of pattern-chain elements of different sizes and a supporting-bar therefor, comprising a series of element-positioners respectively adjustable into positions in which the openings of the said elements of different sizes are alined with one another so that the supporting-bar may be combined with the series by placing it in the said alined openings, and means for combining a supporting-bar with said alined series.

1,302,281. METALLURGICAL SMOKE-FILTER. WILLIAM H. BATES, Jr., Boston, Mass. Filed Nov. 30, 1917. Serial No. 204,706. 6 Claims. (Cl. 261—92.)



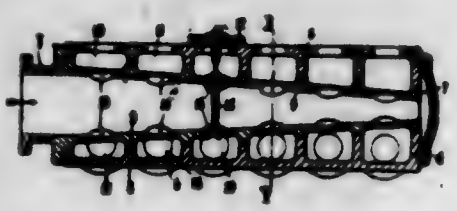
2. A metallurgical smoke filter, comprising a closed tank having means associated therewith for circulating liquid therethrough and for circulating fumes therethrough, spaced apart rotary baffles mounted and operated in said tank, and spaced apart reticulated rotary filters of conical form mounted for operation in said tank adjacent baffles.

1,302,282. STEAM-TURBINE. KARL BAUMANN, Urmston, England, assignor to The British Westinghouse Electric & Manufacturing Company Limited, a Company organized under the laws of Great Britain. Filed June 23, 1916. Serial No. 105,409. 9 Claims. (Cl. 253—69.)



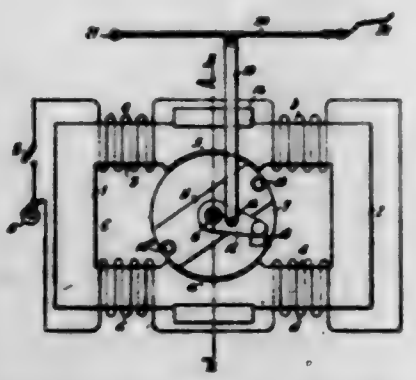
1. In an axial flow steam turbine, a stage or section provided with means for dividing the steam flowing therethrough into annular portions having different ratios of expansion.

1,302,283. STEAM-TURBINE. KARL BAUMANN, Urmston, England, assignor to The British Westinghouse Electric and Manufacturing Company Limited, a Company organized under the laws of Great Britain. Filed Aug. 24, 1917. Serial No. 187,964. 7 Claims. (Cl. 253—39.)



1. In a steam chest for steam turbines, an outer casing, and inner casing formed separately from the outer casing and spaced therefrom, partitions between said casings dividing the space therebetween into a plurality of compartments adapted to be respectively connected to various nozzle boxes or steam admission ports of the turbine, valve seats in said inner casing and valves coöperating with said seats for controlling the flow of steam from the interior of the inner casing to said compartments.

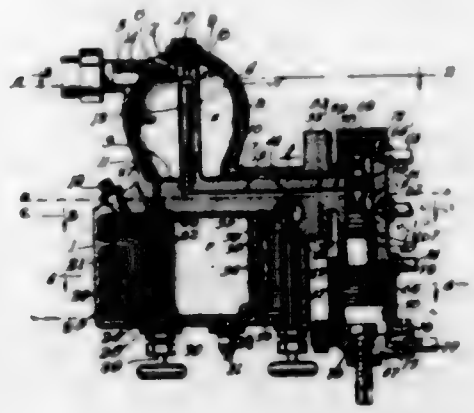
1,302,284. ELECTROMAGNETIC DEVICE. CHARLES R. BEALL, Swissvale, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 2, 1916. Serial No. 75,770. 5 Claims. (Cl. 175—281.)



1. An electromagnetic device comprising a ring-like field member having pole-faces on opposite legs thereof, an

armature located between said pole-faces and mounted to oscillate, windings on said field member for creating magnetic flux in two paths comprising the armature and the portions of the field member on opposite sides thereof respectively, the fluxes in said two paths passing through the armature in the same direction and the distribution of the flux in said armature being substantially symmetrical so that the magnetic attraction on the armature is substantially balanced in all directions, a winding on said armature whereby torque is exerted thereon by alternating flux in said paths, a shunting member of low reluctance bridging said opposite legs adjacent the pole-faces, and a closed circuit of low resistance around said shunting member.

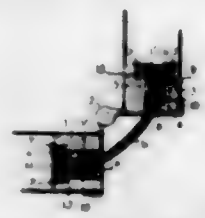
1,302,285. HYDROSTATIC LUBRICATOR AND VALVE MECHANISM THEREFOR. ARTHUR C. BECKWITH, Chicago, Ill. Filed June 13, 1918. Serial No. 239,807. 28 Claims. (Cl. 184—50.)



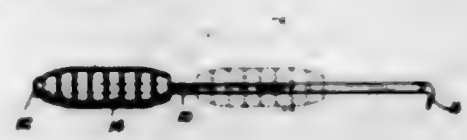
20. In a lubricator of the kind described and in combination, a casing provided with an oil reservoir and with a chamber at one side thereof, an oil conductor having its inlet end in the oil reservoir adjacent the top thereof, and its outlet end in said adjacent chamber and provided with a nozzle in said chamber with the outlet thereof substantially in alinement with the top of the reservoir and the inlet end of said conductor in said reservoir, said casing provided with a condensing chamber above the reservoir having a steam inlet near the top thereof and provided with its steam outlet substantially in alinement with said inlet, said condensing chamber provided with a discharge opening in the bottom communicating with the oil reservoir, and means connected with said opening for conducting the condensing water into the oil reservoir below the top thereof and thence discharge the same substantially at the top, means for controlling the passage of water through said conducting means, said casing provided with an auxiliary water chamber adjacent said condensing chamber, a check valve arranged between said condensing and water chambers adjacent the top thereof for preventing the passage of fluid from the water chamber to the condensing chamber, said casing provided with an outlet for said water chamber, a water feed pipe operatively communicating with said outlet, and means for controlling the passage of water between said water pipe to said outlet from said water chamber and between said outlet from said water chamber to the steam outlet of said condensing chamber.

1,302,286. DOOR-CHECK. WALTER J. BEHN, Detroit, Mich. Filed July 30, 1917. Serial No. 183,527. 3 Claims. (Cl. 16—6.)

3. The combination of a stationary member a movable member hinged thereto, a socket set in the inner face of one of said members, the inner wall thereof being screw-threaded, a nipple screwed in said socket, a cable having one end secured to one of said relatively movable members and the other end loosely extending through said nipple, a head on the end of said cable free to move with said cable, a coil spring about the end of said cable and between the nipple and the head and adapted to cushion said head relative to said nipple when the movable member has an excessive opening movement relative to the stationary member.



1,302,287. COTTER-PIN PULLER. GUSTAF A. BANG, Chicago, Ill. Filed June 30, 1915. Serial No. 37,169. 3 Claims. (Cl. 29—86 1.)



1. A cotter pin extractor comprising a rod member having a hook formed at one end for engagement with the eye of a cotter pin and having an abutment formed at the other end, and an impact member through which the rod member passes and which is movable longitudinally from said abutment to the hooked end, whereby a cotter pin may be inserted by successive impacts upon its head or withdrawn by successive impacts against the abutment.

1,302,288. MACHINE FOR AFFIXING FABRIC COVERINGS. ATTILIO BIANCHI and JOHN OCCHIPINTI, New York, N. Y. Filed Jan. 19, 1918. Serial No. 212,818. 5 Claims. (Cl. 154—41.)

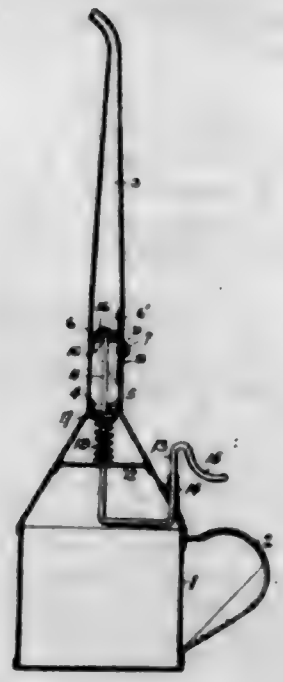


5. An apparatus of the class described comprising a bed, means thereon for holding the two sheets of material and a supporting plate, folding mechanism on said plate, a spring plunger on the bed, a plunger on the supporting plate and means for operating the last mentioned plunger to form the knob-receiving opening in the sheets of materials.

1,302,289. OIL-CAN. ALBION BINDLEY, North Charierol, Pa., assignor to Pittsburgh Steel Products Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 26, 1917. Serial No. 171,141. 2 Claims. (Cl. 221—45.)

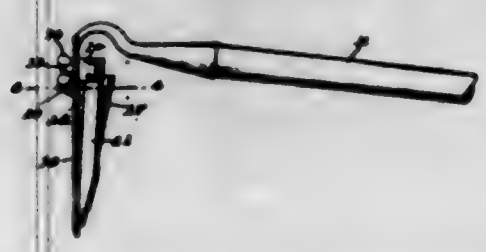
1. An oil can comprising a main reservoir for the oil, a spout connected thereto, a permanent horizontal partition in said spout having an opening therein, an adjustable partition in said spout above said first-named partition having an opening therein, a rod extending through the openings in said partitions, said rod extending to a point without said can whereby said rod may be moved up and

down, valves carried by said rod, a valve closing the opening in said first-named partition being spring-actuated and



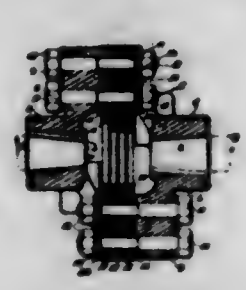
held normally in closed position, the valve at the upper end of said rod being normally unseated.

1,302,290. GARDEN-TOOL. ROBERT C. BLACK and LEAMAN A. MAIDEN, Dunnellon, Fla. Filed Oct. 30, 1918. Serial No. 260,280. 3 Claims. (Cl. 56—30.)



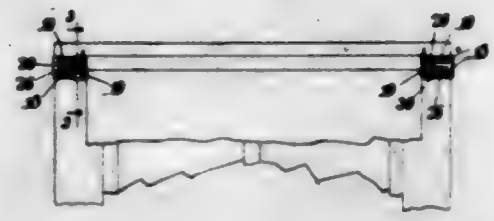
1. A hoe or like implement having a vertically disposed series of spaced blades on one of the faces thereof, the cutting edges of said blades being arranged at an inclination and the width of certain of the blades, at the upper portion thereof being greater than that of the remaining blades.

1,302,291. FLEXIBLE COUPLING. FRANK ROSS BLAIR, Glen Ridge, N. J., assignor to F. R. Blair & Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 22, 1918. Serial No. 229,956. 11 Claims. (Cl. 64—26.)



1. In a torque-transmitting flexible coupling, in combination, a flexible disk, means adapted to connect said disk to another element for transmission of torque comprising clamping jaws between which the disk is interposed, and means adapted to effect clamping of the disk between the jaws, each of said jaws including a rigid member having teeth the lengths of which lie transversely of the line of torque strain adapted to positively clutch said disk.

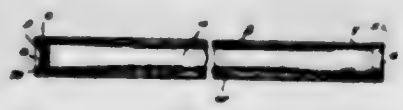
1,302,292. SHADE AND CURTAIN HOLDER. JOHN H. BLAKE, Harlan, Ky. Filed Dec. 6, 1918. Serial No. 265,501. 5 Claims. (Cl. 156—28.)



1. A shade support comprising a pair of plates having means for engaging the sides of a window frame, each plate having offsets on its underface to hold it spaced from the frame, a shade bracket adjustably carried by said plate, and means attached to said plates for adjustably clamping them to the frame.

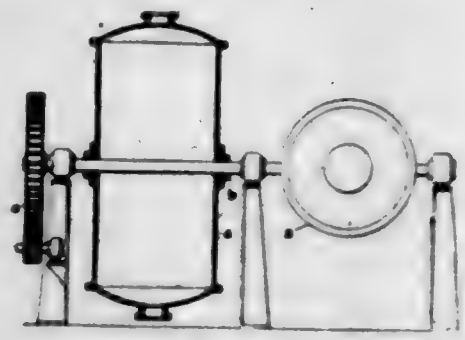
5. In a shade and curtain holder, a pair of frame plates adapted to be secured one to each side of a window frame, a connecting plate, ears projecting outwardly from the opposite ends of the connecting plate, an ear projecting outwardly from the inner end of each of the said frame plates, ribs on the under face of each plate to rest upon the face of the window frame to maintain the said plates spaced therefrom, brackets adjustably mounted upon each of the said plates, rods connecting the ears of the frame plates with the ears of said connecting plates, and turnbuckles in each rod, the said connecting plate being unsupported except by said rods.

1,302,293. AEROPLANE-FRAME CONSTRUCTION. EARL H. BLAZER, Kansas City, Mo. Filed Nov. 4, 1916. Serial No. 129,592. 2 Claims. (Cl. 189—34.)



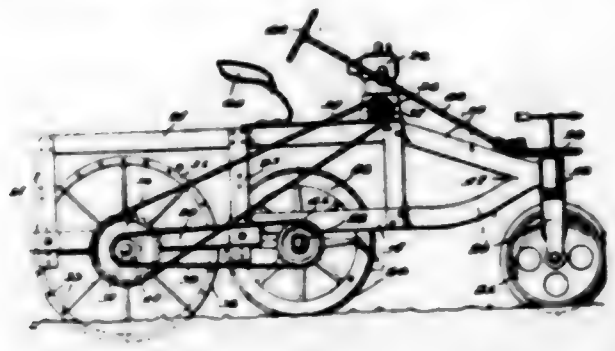
1. A structural element for aircraft, comprising a metal tube having internal annular shoulders in the opposite ends thereof, a core within and extending throughout the length of said tube and having a head at one end bearing against one of said shoulders, and a nut threaded on the opposite end of said core and bearing against the shoulder at the other end of said tube.

1,302,294. MIXING APPARATUS. JOSEPH BOGAERTS, Sutton, England. Filed Oct. 21, 1918. Serial No. 259,165. 2 Claims. (Cl. 259—81.)



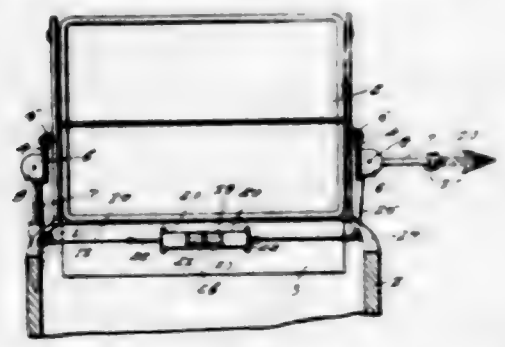
1. In a device for mixing oil and acid, in combination, a shaft, a series of symmetrical cylindrical containers symmetrically mounted on said shaft with their axes of revolution intersecting the shaft perpendicularly, said containers being balanced in staggered fashion upon the shaft so as to balance on the shaft, whereby the rotation proceeds smoothly and evenly.

1,302,295. AGRICULTURAL TRACTOR. WALTER C. BOTSFORD, Eltopia, Wash. Filed Jan. 24, 1917. Serial No. 144,239. 1 Claim. (Cl. 97—72.)



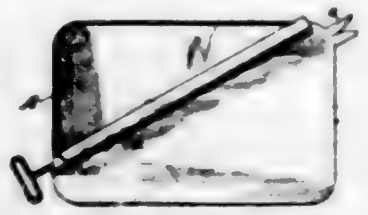
In an agricultural tractor, a frame having pairs of vertical members at the opposite sides of its rear portion, a driving and regulating wheel having an axle mounted in fixed bearings with which the front portion of the frame is provided, side members having their ends slidably connected to the vertical frame members for vertical adjustment on said vertical frame members, means to hold said side members in adjusted position, a tilling wheel having its axle mounted in bearings with which said vertically adjustable side members are provided, sprocket wheels on the axles of said first named wheels, an endless sprocket chain connecting said sprocket wheels, a motor mounted on the frame and having a driving shaft provided with a sprocket wheel, a sprocket wheel on the axle of the tilling wheel and an endless sprocket chain connecting the last named sprocket wheels, so that the tilling wheel is driven directly by the motor and the driving wheel is driven by power transmitted thereto from the tilling wheel.

1,302,296. DIRECTION-INDICATOR FOR MOTOR-VEHICLES. LEVI M. BOWMAN, Tulsa, Okla., assignor of one-half to William A. Smith, Tulsa, Okla. Filed Apr. 20, 1917, Serial No. 163,468. Renewed Aug. 1, 1918. Serial No. 247,872. 5 Claims. (Cl. 177—327.)



4. A direction indicator for motor vehicles comprising a pair of relatively spaced solenoids, a core having its ends disposed in said solenoids, direction indicating means connected to each end of the core, and electrical means for energizing the solenoids to move the direction indicating means into signaling position.

1,302,297. SARDINE OR OTHER CAN COVER. ALBERT HENRY BOYSEN, Buffalo, N. Y. Filed May 2, 1918. Serial No. 232,058. 3 Claims. (Cl. 220—52.)



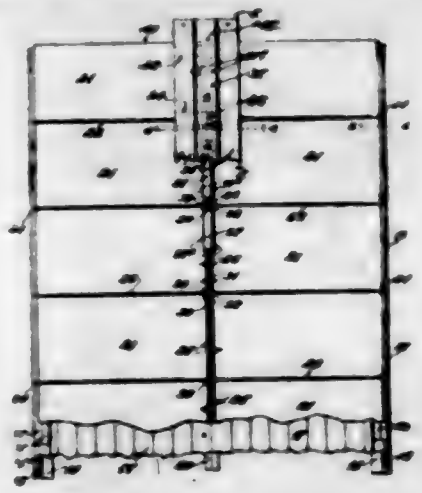
3. A can cover of the type provided at one corner with a lug engageable by a key, the cover being adapted to be rolled into cylindrical form upon said key as a core in the removal of the cover from the can, having formed thereon at another corner spaced tines normally disposed against one side of the can and movable to extend in the same plane as the cover whereby said tines will extend beyond one end of the rolled cover when the cover is removed whereby to serve as a fork.

1,302,298. CAR-ROOF. WILLIAM A. BREWER, Pittsburgh, and EDWARD F. HOPPER, New Kensington, Pa., assignors to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1918. Serial No. 266,567. 11 Claims. (Cl. 105—5.)



1. A car roof comprising a pair of roof sheets arranged end to end on opposite sides of the ridge, said roof sheets being spaced apart at the ridge and having upstanding flanges at their ridge margins, and a clip for anchoring each pair of sheets at the ridge, said clip being secured to the ridge of the car between the ridge ends of the sheets and having flanges loosely engaging the upstanding ridge flanges of said roof sheets.

1,302,299. CAR-ROOF. WILLIAM A. BREWER, Pittsburgh, and GUSTAVE A. GRUENDLING, New Kensington, Pa., assignors to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Dec. 20, 1918. Serial No. 267,585. 14 Claims. (Cl. 105—5.)



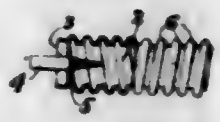
1. An outside metal car roof comprising roof sheets extending from eaves to ridge on opposite sides of the car, said roof sheets having upstanding flanges at their ridge margins and being movably connected along their side margins, ridge caps spanning the ridge margins of the oppositely disposed roof sheets, clips located at the ridge of the car beneath said ridge caps, said clips resting on the roof substructure between the ridge margins of the roof sheets and having inverted U-shaped side marginal flanges adapted to fit over the ridge corner portions of the upstanding flanges of the adjacent roof sheets for spacing and holding said sheets in position, and means for holding said ridge caps and said clips in position.

1,302,300. MUFFLER. LOUIS H. BRINKMAN, Glen Ridge, N. J., assignor to Titeflex Metal Hose Corporation, a Corporation of New York. Filed Jan. 17, 1913. Serial No. 742,570. 10 Claims. (Cl. 121—116.)

1. A muffler for internal combustion engines, comprising a single flexible spirally corrugated conduit extending from the exhaust port at the engine to the end of the muffler.

5. A muffler comprising a conduit having a plurality of folds therein adapted to produce a circular motion of the exhaust gases, and means at the end of the conduit acting to oppose said spiral motion of the gases.

10. A muffler comprising a flexible conduit having an unobstructed passage through the main portion thereof and having spiral corrugations for giving the exhaust gases passing therethrough a spiral motion, the outside surfaces of the corrugations being exposed to the atmo-



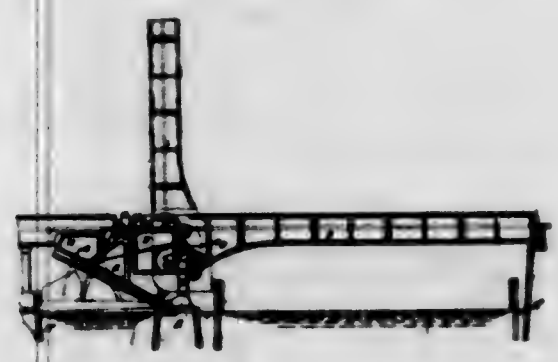
phere to increase the dissipation of heat therefrom and thereby cool the exhaust gases to decrease their volume and consequently the noise, and means in the outer end of the conduit tending to obstruct the flow of gases therefrom.

1,302,301. AUTOMOBILE-CREEPER. WILLIAM J. BROOMS, Los Angeles, Calif. Filed Feb. 1, 1918. Serial No. 215,531. 2 Claims. (Cl. 5—9.)



1. An automobile creeper comprising foldable side rails and transverse end rails removably attached thereto, cleats spanning the distance between said side rails and supported on said end rails, and a bed of fabric or the like attached to said cleats and adapted to be stretched over the tops of said end rails, said cleats having transverse slots formed therein, and bolts extended through said end rails and through said slots for adjustably holding the bed in position on said rails.

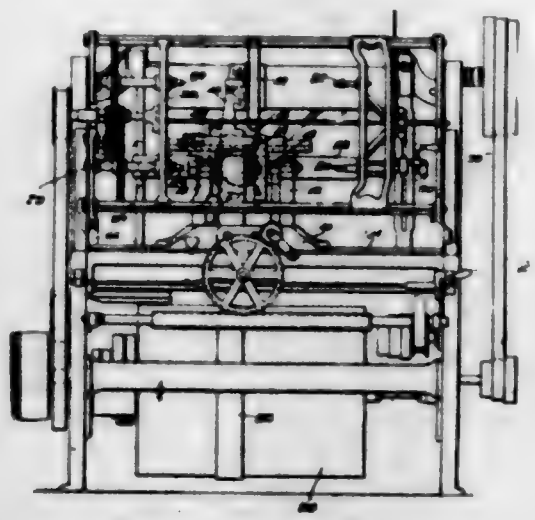
1,302,302. BASCULE-BRIDGE. THOMAS E. BROWN, New York, N. Y. Filed Nov. 13, 1916. Serial No. 131,174. 3 Claims. (Cl. 14—36.)



1. In a bascule bridge, the combination of a pivoted bridge, a counterweight pivoted to a fixed support at a point lower than said counterweight, a tensional connection from said counterweight to said bridge and means having a curved surface supporting said connection to vary the lever arms of said connection about the pivot of said bridge and the pivot of said counterweight to effect the balance of said bridge in all its positions, substantially as described.

1,302,303. GRADING MECHANISM FOR PATTERN-REPRODUCING MACHINES. FRANK S. BUCK, Springfield, Vt., assignor, by mesne assignments, to Fits-Empire Double Pivot Last Co., Rochester, N. Y., a Corporation of Maine. Filed Sept. 7, 1915. Serial No. 49,415. 29 Claims. (Cl. 142—15.)

1. A pattern grading apparatus comprising essentially a primary carrier, a secondary carrier, a model instrumentality mounted upon one of said carriers and a work instrumentality mounted on the other carier, and a motion adding mechanism comprising a stationary guide bar adapted to be placed at an inclination to the directions in which said carriers travel, a slide engaged with said bar and carried by the primary carrier and toothed gearing for converting the displacements of said slide into uniform increments of movement of the secondary carrier.



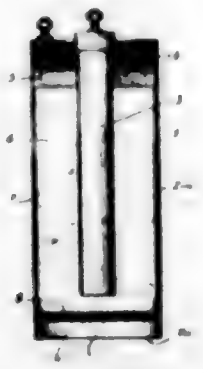
5. A grading apparatus comprising a primary carrier guided to move in a fixed path, a secondary carrier guided to move relatively to the primary carrier in approximately the same directions, motion transmitting rack and pinion gearing mounted on the primary carrier and engaged with the secondary carrier for imparting movement to the latter relatively to the primary carrier, an actuator for the said mechanism, and an adjustable guide stationary relatively to the carrier with which said actuator is engaged, said guide being adapted to impart movement to the actuator transverse to the paths in which the carriers travel.

8. A grading apparatus comprising a model guide carrier, a pattern reproducer carrier, said carriers being guided to move in parallel paths and one of them being thus movable relatively to the other, a rack secured to one of said carriers, a gear wheel mounted rotatably on the other carrier and meshing with said rack, and actuating means for rotating said wheel when the carrier mounting said wheel is moved, whereby a uniformly increased movement is transmitted from this carrier to the other carrier.

13. In a machine of the class described, model holding and model following instrumentalities; work holding and reproducing instrumentalities; two carriages, each carrying one instrumentality of each pair, and means for moving the carriages to effect relative traverses between these instrumentalities taken in pairs, comprising mechanism constructed and arranged to maintain a constant velocity ratio of arbitrary magnitude between the said traverses throughout the production of a piece of work, said mechanism comprising a member having, when the said ratio is different from unity, a movement proportional to the said ratio and transverse to the movement of the member when the said ratio is unity.

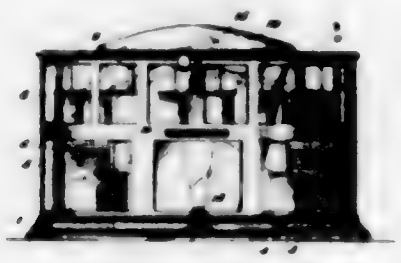
29. In a machine of the class described, model holding and model following instrumentalities; work holding and reproducing instrumentalities; two carriages, each carrying one instrumentality of each pair, means for moving the carriages to effect relative traverses between these instrumentalities taken in pairs, comprising a connecting mechanism between the carriages having a member constructed and arranged for rectilinear movement transverse to the line of action of the mechanism to alter the effective length of the mechanism, and means for imparting to the member a velocity proportional to the velocity of one of the said relative traverses.

1,302,304. DRY CELL. CHARLES F. BURGESS, Madison, Wis., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis., a Corporation of Wisconsin. Filed Mar. 16, 1916. Serial No. 84,595. 1 Claim. (Cl. 204—38.)



In the dry cell a metal container exposed to the electrolyte, said container having zinc sides and a tin bottom and an electrolyte and coöperating electrode in said container.

1,302,305. SEWING-CABINET. JULIUS CAESAR BYERS, Reno, Nev. Filed May 14, 1918. Serial No. 234,443. 2 Claims. (Cl. 223—53.)



1. A sewing cabinet consisting of a circular base, a drawer in said base, a casing of cylindrical shape hinged to said base, a cover hinged to said casing, spool supporting means within the casing, a work-basket centrally arranged in said casing, and means for withdrawing the thread from the spools through said casing.

2. A sewing cabinet comprising a base, a cylindrical casing hinged thereto, a series of windows formed in said casing, spool supporting means in said casing, a work basket centrally arranged in said casing, eyes on said work-basket for receiving the threads from the spools, guiding means for leading the threads from the eyes to the exterior of the casing, a cover hinged to the casing having an opening therein located above the work-basket, and a second covering closing said opening and hinged to the first cover.

1,302,306. SPRING-WHEEL. STEPHEN CARPENTER, South Gibson, Pa. Filed Mar. 16, 1918. Serial No. 222,956. 3 Claims. (Cl. 152—29.)

1. In a resilient wheel, the combination of a hub, a tread, a flange formed integrally with the main body of the hub and surrounding the same, a plurality of spoke holding disks encircling said hub, a clamping collar encircling said hub, tie bolts extending through said flange, collar and disks, a plurality of series of spring spokes rectangular in cross section and having their inner ends connected to said disks and having their outer extremities attached to the tread, said disks having concave and convex meeting faces and being formed with spoke receiving slots of progressively increasing width transversely of the hub and in an inward direction, and each of the spokes having a correspondingly flared inner end portion filling the respective slots of the adjacent disk,



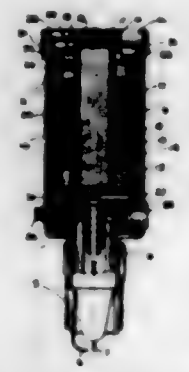
whereby a dovetailed connection is obtained between each spoke and its holding disk.

1,302,307. CONSTRUCTION OF ROOF OF OPEN-HEARTH AND REVERBERATORY FURNACES. GEORGE CAMPBELL CARSON, San Francisco, Calif. Original application filed Jan. 15, 1907, Serial No. 352,468. Divided and this application filed June 26, 1915. Serial No. 36,496. 3 Claims. (Cl. 266—24.)



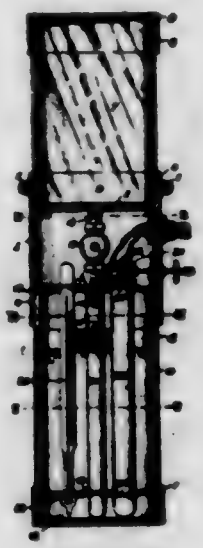
2. The method of protecting the walls of an open hearth or reverberatory furnace which consists in feeding the ores or fettling materials into the furnace chamber near the upper part thereof, and in causing the same to form a sloping embankment resting upon the floor of the furnace chamber and along the walls within the chamber between the bath and walls.

1,302,308. SPARK-COIL FOR IGNITION. JOHN F. CAVANAGH, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed May 31, 1918. Serial No. 237,409. 9 Claims. (Cl. 123—148.)



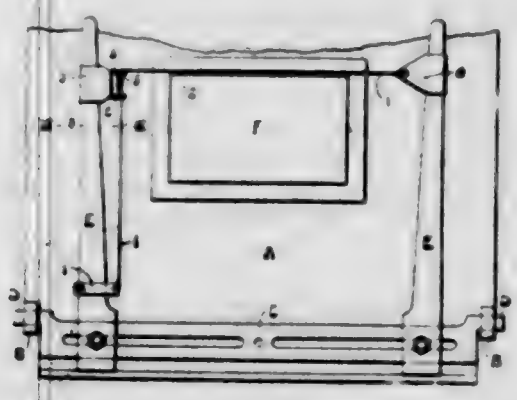
1. In a spark plug unit, the combination with a spark plug, of a coil carried thereby and comprising a secondary winding, a primary winding about said secondary winding, and a condenser about said primary winding.

1,302,309. COMBINED WATER HEATER AND DRIPPER. HERBERT W. CHRISTIAN, Detroit, Mich. Filed Aug. 19, 1918. Serial No. 250,594. 7 Claims. (Cl. 219—38.)



1. A combined water heater and dripper comprising a body, a main reservoir connected to the upper end thereof, an auxiliary reservoir, connected to the lower end of said body, means in said body establishing communication between said main reservoir and said auxiliary reservoir, electric heating elements in said auxiliary reservoir, and means in said body adapted to regulate the operation of said electrical elements.

1,302,310. SHEET-RETAINING ATTACHMENT FOR PRINTING-PRESSES. EDWARD A. CLOONAN, St. Louis, Mo. Filed Sept. 12, 1918. Serial No. 253,797. 12 Claims. (Cl. 101—408.)



1. A printing press provided with a platen, arms movable toward and away from said platen, and a sheet retaining attachment comprising a flexible sheet retaining string extending approximately from one of said arms to the other, an anchor securing said string to one of said arms and a slack adjuster whereby the string is tightened and secured to the other arm.

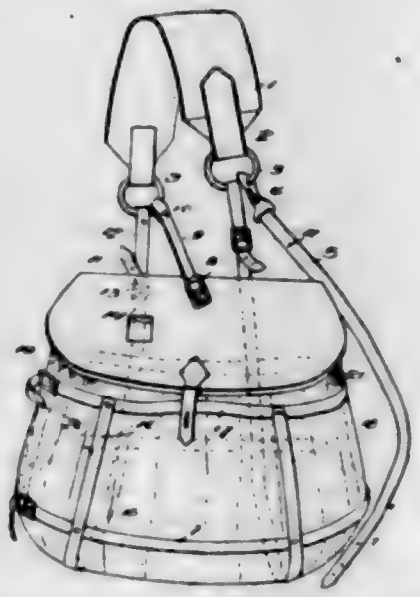
12. In a sheet retaining attachment for a printing press provided with a platen and a pair of arms movable toward and away from said platen, a string anchor comprising a U-shaped sheet metal clip adapted to be adjustably mounted on one of said arms, a U-shaped sheet metal clip adapted to be adjustably mounted on the other arm, a pair of gripping jaws carried by the last mentioned clip, a slack adjuster comprising a U-shaped clip adapted to frictionally engage the last mentioned arm, and a sheet retaining string having its respective ends secured to said anchor and slack adjuster, an intermediate portion of said string being arranged between and adjustably secured by said gripping jaws.

1,302,311. SCALE-HOLDER. JAMES W. COMPOS, Cleveland, Ohio. Filed Feb. 19, 1919. Serial No. 278,012. 12 Claims. (Cl. 24—3.)



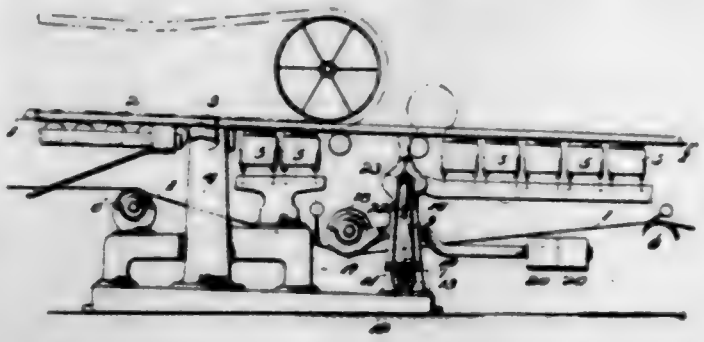
3. In a device of the character described, a body, a cross bar carried thereby, and a leaf spring secured to the body and having a portion behind the cross bar concave on its face toward the cross bar.

1,302,312. FISH-BASKET OR CREEL SUPPORTING HARNESS. JAY J. COOK, Iron River, Mich. Filed Dec. 6, 1918. Serial No. 265,565. 1 Claim. (Cl. 224—5.)



A creel supporting harness including a shoulder engaging strap, rings connected to the ends thereof, a body engaging strap connected with the rings, a receiver composed of a pair of sectional straps, each of the sectional straps including inner and main sections, the inner sections of the sectional straps being connected with the rings, the main sections being adjustably connected to the inner sections and arranged in a U-shaped form embodying an intermediate portion and spaced side portions, and upper and lower straps arranged in rectangular form and having their side portions connected with the main sections and having their adjacent terminal ends adjustably connected with each other.

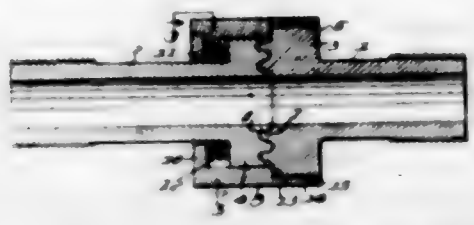
1,302,313. TIGHTENER FOR PAPER-MAKING WIRES, FELTS, AND THE LIKE. BENJAMIN DENVER CORPAGE, Wilmington, Del. Filed July 27, 1917. Serial No. 183,197. 5 Claims. (Cl. 92—44.)



1. In a machine of the character described, the combination of an extensible and contractible belt, a tension

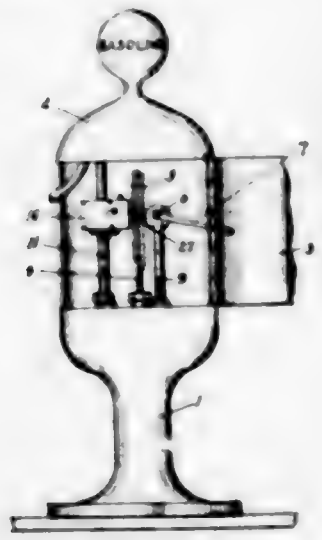
roll acting by its weight to apply tension to the belt, a pair of fulcrumed members each member having a bearing for removably supporting said roll, and an arm for receiving counter-weights to relieve a part of the tensioning weight of said roll off said belt.

1,302,314. SWIVEL JOINT OR COUPLING FOR PIPES. HERBERT V. CORNELL, Akron, Ohio, assignor of one-half to Charles R. Butler, Akron, Ohio. Filed Apr. 30, 1918. Serial No. 231,653. 1 Claim. (Cl. 285—96.)



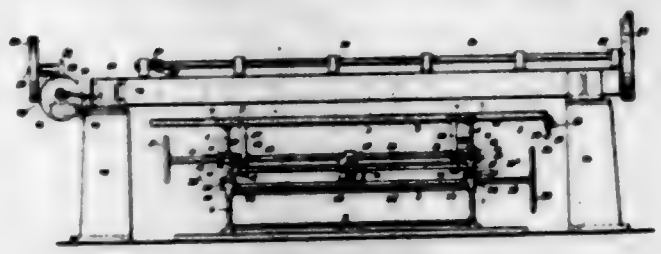
A device of the character described including a pair of pipe sections, annular flange-like heads formed on the adjacent ends of the sections, one of the heads being smaller in diameter than the other, the large head being formed with exteriof screw threads, the adjacent faces of both of the heads being formed with concentric series of grooves which are complemental to each other, concentrically arranged annular ribs provided between the grooves and designed for sliding and rotary engagement with the grooves in the adjacent head, the grooves being of a depth equal to the height of the ribs, a sleeve arranged about the heads, an inwardly extending flange formed on one end of the sleeve, the sleeve being reduced on its inner surface near its opposite end to form an annular shoulder and the reduced portion being provided with threads for detachable engagement with the threads on the large head, the small head being arranged in close relation with the inner surface of the sleeve, and an expansion coil spring disposed about one of the pipe sections within the sleeve and having its respective ends bearing against the small head and the flange on the sleeve and exerting its tension to normally hold grooves in engagement with the ribs yet permitting of a relative sliding and rotary movement between the heads.

1,302,315. RECORDING DEVICE. LEORA K. COSGROVE, Billings, Mont. Filed Aug. 20, 1917. Serial No. 187,229. 1 Claim. (Cl. 74—14.)



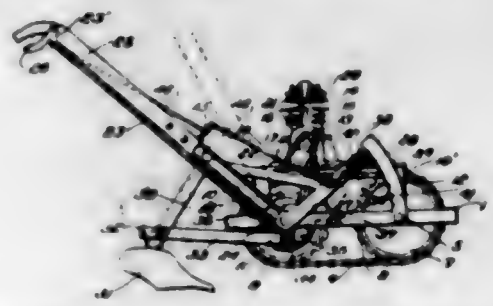
In a recording device for a dispensing apparatus, the combination with a winding device including a shaft for a winding reel, of a reciprocable rack bar and a train of driving mechanism including gears as described, a loose gear wheel on said shaft operated by said train of driving mechanism, a housing and a friction spring between the housing and said loose gear wheel.

1,302,316. GLASS-POLISHING MACHINE. FREDERICK COTTERELL, Melbourne, Victoria, Australia. Filed Apr. 28, 1917. Serial No. 165,263. 3 Claims. (Cl. 51—11.)



1. In a glass polishing machine having side frames, guide beds in said side frames, slidable extension rails arranged in said guide beds, adjustable sliding base plates positioned upon said rails, brackets secured to said base plates and a pair of adjustable tables hinged to and carried by said brackets, one of said tables being of greater width than the other, a rotatable shaft for each table, said shafts being provided with pinion teeth and a worm wheel, vertically disposed toothed racks meshing with said teeth, a rotating spindle having a worm pinion in mesh with said worm wheel, and a hand operating wheel on said spindle.

1,302,317. CULTIVATOR. JOHN A. COWAN, Kansas City, Mo. Filed Mar. 29, 1918. Serial No. 225,456. 11 Claims. (Cl. 97—42.)



1. In a cultivator, a supporting frame, front and rear wheel carrying axles on the frame, handles pivotally mounted on the rear axle and adjustable vertically at their outer ends, a ground working tool suspended from the handles and means for locking the handles at different positions relative to the frame to retain the tool at an adjusted position and permit tilting of the front of the frame, the rear axle serving as the pivot.

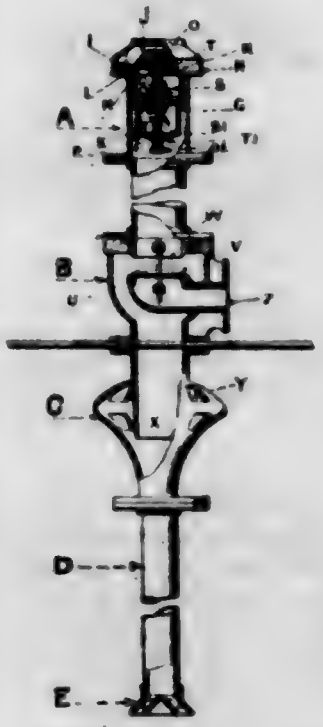
2. In a cultivator, a supporting frame, front and rear wheel carrying axles on the frame, handles pivotally mounted on the rear axle and having forwardly projecting integral extensions, guides on the frame adjustably engaged by the ends of the forward extensions of said handles, and a ground-working tool extending from the handle.

3. In a cultivator, a supporting frame, front and rear wheel-carrying axles on the frame, guideways fixed on the forward portion of the frame, frame-tilting and ground-tool supporting handles pivotally mounted on the frame at its opposite end and extending rearwardly therefrom, and having upwardly directed extensions projecting from their mounting ends and adjustably engaging the guideways, a ground working tool suspended by said handle and latch devices on said handle, extensions whereby said handles may be adjustably retained to hold the tool at a set position and at the same time be in position to tilt the front of the frame on the rear axle.

1,302,318. VENTILATING, FIRE-EXTINGUISHING, AND STEAMING APPARATUS FOR GASOLENE OR OTHER TANKS. THOMAS A. CROMPTON, Jr., Ilford, England. Filed Jan. 31, 1916. Serial No. 75,259. 2 Claims. (Cl. 220—86.)

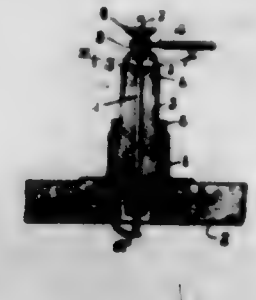
1. In apparatus for ventilating and steaming containers for volatile liquids, the combination with a con-

tainer, of a main conduit having one end portion opening into the same, an intermediate or second portion constituting a valve chamber, and the other end or third portion opening into the valve chamber by way of an upper valve seat therein, a branch conduit having one end terminating at a lower valve seat in the valve chamber, and a double-faced lift valve adapted to be



seated alternately on said seat and normally seated on said lower seat and in this position closing the said end of the branch conduit, whereby the container is normally in open communication with the said third portion of the main conduit, but is shut off therefrom when the said valve is lifted against the said upper seat by fluid under pressure entering the valve chamber through the branch conduit.

1,302,319. SPARK-PLUG. TIMOTHY P. CRONIN, St. Louis, Mo. Filed Mar. 18, 1918. Serial No. 223,225. 1 Claim. (Cl. 123—169.)



A spark plug provided with an insulator, a metal dome cemented to the upper end of said insulator to provide a sealed air-tight chamber, an upper electrode comprising a screw threaded into said dome and extending into said air-tight chamber, a lower electrode near the lower end of said insulator, an intermediate electrode arranged in said insulator and extending from said air-tight chamber to the lower end of the insulator, said intermediate electrode being separated from said upper and lower electrodes to form a main spark gap at the lower end of the plug and an auxiliary spark gap in said air-tight chamber, the inner end of the threaded upper electrode being pointed and the intermediate electrode being provided with an enlarged bead opposing said pointed end, and a binding nut fitted to said threaded upper electrode.

1,302,320. FURNITURE AND AUTOMOBILE POLISH. WILLIAM H. DAMON, Los Angeles, Calif. Filed Aug. 7, 1918. Serial No. 248,768. 4 Claims. (Cl. 134—24.)

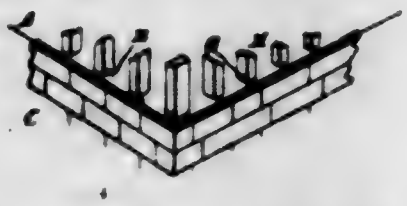
2. A polish composed of ingredients in the proportion as stated, water 90 gallons, soap 10 pounds, a mild abrasive of low specific gravity 80 pounds, wax 30 pounds, a hydrocarbon solvent for wax 90 gallons, and a non-drying oil 18 gallons.

1,302,321. BABY WALKING-CHAIR. STEV DANIEL, Hazel Green, Wis. Filed Oct. 24, 1916. Serial No. 127,319. 1 Claim. (Cl. 155—45.)



A walking chair for twin babies of the character described comprising a substantially recangular frame having rounded corners and smoothed edges, slotted tubular legs supporting said frame, sliding bars within said legs, clamp nuts locking said bars in their adjusted positions, rollers at the lower ends of said legs, a central plate in said frame, adapted to carry toys, recessed plates at opposite sides of said central plate and sliding in said frame, fixed plates in said frame in front of said sliding plates having a recess supplementing the recess in said sliding plates to form openings for the children's bodies, a seat and back therefor below one of said recesses, a friction wheel at the lower end of one of said legs, a bevel gear upon the extending stem of said wheel, a vertical shaft, a gear at the lower end of said shaft in mesh with said bevel gear, a horizontal shaft, a gear at the upper end of said vertical shaft, gears at the ends of said horizontal shaft, one in mesh with said last named gear of the vertical shaft, and the other adapted to operate means for rotating said toys.

1,302,322. WALL CONSTRUCTION. WILLIAM CHARLES DAVIS, Melbourne, Victoria, Australia. Filed Sept. 27, 1917. Serial No. 193,494. 1 Claim. (Cl. 72—19.)

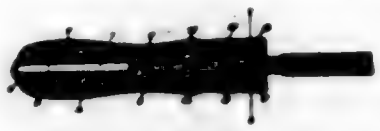


A wall construction comprising, concrete stone blocks grooved at their edges, and laid in courses for the "outer part," and wooden studs for the "inner", reinforcing wires in a continuous manner in said grooves, in combination with cleats projected at intervals from said studs to engage the reinforcing wires.

1,302,323. TOOL-HANDLE. BURT W. DECATUR, Springfield, Mass. Filed Mar. 29, 1918. Serial No. 225,539. 2 Claims. (Cl. 279—96.)

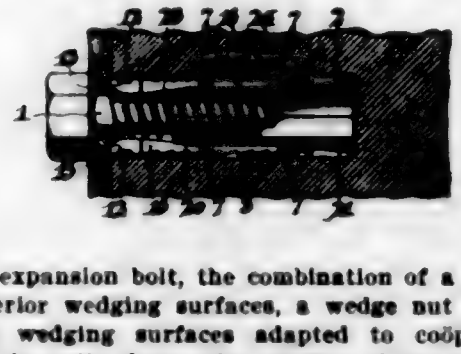
1. A tool handle having a counter-bore in one end, a socket member of less diameter than and arranged concentrically in the counter-bore and having a slot extending diametrically there-through for the reception of a tool shank, a sleeve member on the socket member and having

corresponding slots in opposite sides, and a coil member around and detachable from the sleeve member, and fitted in the counter-bore and engaging the wall thereof,-



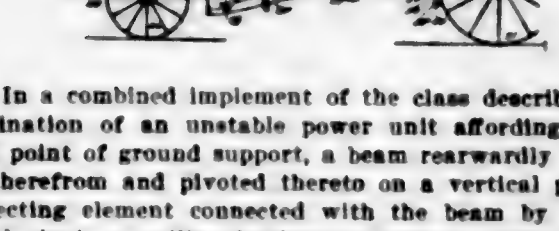
the convolutions of said coil member extending across the slots of the sleeve member and being arranged to directly engage the narrow edges of the tool shank.

1,302,324. EXPANSION-BOLT. THOMAS FRANK DEVLIN, Philadelphia, Pa. Filed May 15, 1917. Serial No. 168,654. 1 Claim. (Cl. 85—2.4.)



In an expansion bolt, the combination of a split sleeve with interior wedging surfaces, a wedge nut with corresponding wedging surfaces adapted to coöperate with those of the split sleeve, the relation of the wedging surfaces of the sleeve to those of the nut being such that as the wedge nut is advanced into the sleeve there occurs a preliminary expansion of the far end of the sleeve followed by a subsequent simultaneous expansion of both ends of the sleeve.

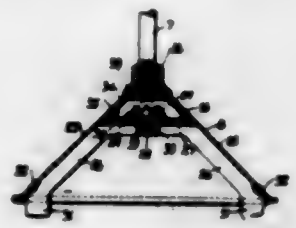
1,302,325. TRACTOR CONNECTION FOR HARVESTING-MACHINES. HARRY S. DICKINSON, Moline, Ill., assignor to Moline Plow Company, Moline, Ill., a Corporation of Illinois. Filed Sept. 20, 1916. Serial No. 121,190. 24 Claims. (Cl. 56—33.)



5. In a combined implement of the class described, the combination of an unstable power unit affording a forward point of ground support, a beam rearwardly extending therefrom and pivoted thereto on a vertical pivot, a connecting element connected with the beam by a horizontal pivot, a trailing implement having a tilting frame affording a rear point of ground support, a stub tongue pivoted at its rear end to the frame of the trailing implement and pivotally connected at its forward end with respect to the connecting element, a walking beam connected at its forward end to the connecting element and connected at its rear end to the frame of the trailing implement, and a connection between an intermediate portion of the walking beam and the connecting element, substantially as described.

1,302,326. WASHING-MACHINE POUNDER. LOUIS E. DIETZ, Cincinnati, Ohio. Filed Feb. 10, 1916. Serial No. 77,477. 1 Claim. (Cl. 68—19.)

In a washing machine pounder, a body part forming a hood, a plate therein near the top of said hood and spaced therefrom, a valve seat in said plate, said valve seat surrounded by spaced protuberances, a number of port holes in said hood above said plate, a sphere for said valve seat capable of moving on and off thereof, a number of diverging agitating ribs in the inner side of said hood, said ribs extending into the hood and vertically



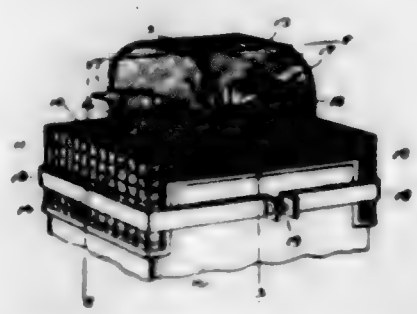
downward beyond the edge of the hood, the lower peripheral edge of the hood extending laterally beyond the vertical ends of the ribs.

1,302,327. WARP SELECTING AND SEPARATING MECHANISM. WILLIAM DOBSON, Blackburn, England. Filed Dec. 21, 1914, Serial No. 878,292. Renewed Feb. 1, 1917. Serial No. 145,997. 11 Claims. (Cl. 139—94.)



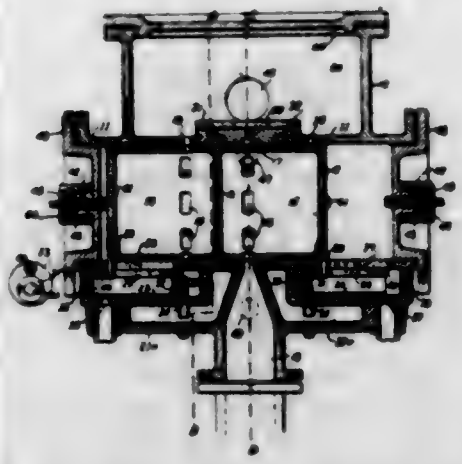
1. Mechanism for selecting and separating threads, comprising in combination, a base plate having serrations or teeth on one edge, a selector hook movable forwardly and diagonally across the plate, a comb lever also movable forwardly and diagonally across the plate, a feeler lever pivoted to the plate, means for moving the selector hook and comb lever to and fro, and springs for holding the selector hook, the comb lever and the feeler lever yieldingly in their normal positions, the said base plate having slots with beveled and straight sides, and the selector hook and comb lever having projections which pass through the slots, substantially as herein set forth.

1,302,328. SPARK-ARRESTER. NANNIE A. DONALD, Meridian, Miss. Filed Aug. 19, 1918. Serial No. 250,563. 2 Claims. (Cl. 183—70.)



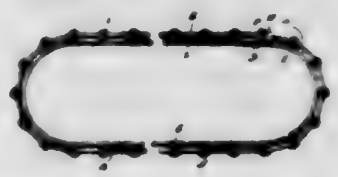
1. A spark arrester embodying a screen formed of wire mesh and adapted to be placed transversely across the flue, side and end flanges extending from said screen, a second screen secured over and covering the first mentioned screen, said second screen being formed into a central transversely disposed dome shaped chamber, the top wall of which is spaced above the first mentioned screen and the side walls spaced inwardly from the end of said first mentioned screen and provided with openings at their lower ends.

1,302,329. WATER-FEED APPARATUS FOR STEAM-BOILERS OR THE LIKE. LEONID DOUNAEW, New York, N. Y. Filed June 19, 1918. Serial No. 240,854. 7 Claims. (Cl. 137—101.)



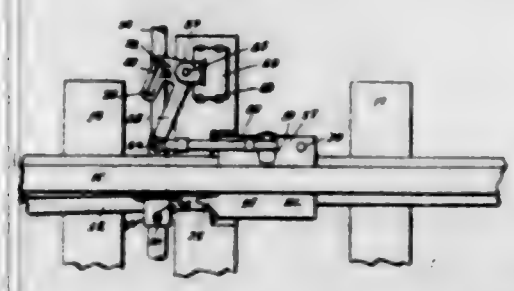
1. In a water feeding device for steam boilers or the like, the combination of a hollow reciprocating member, having two separate compartments suitably disposed to alternately receive feed water and discharge it into the boiler by such reciprocation, means for supplying steam from the boiler alternately to each of said compartments as it discharges its water contents, and means controlled by the reciprocation of said member for directing the steam supplied to said compartments alternately behind the ends of said member to cause its reciprocation.

1,302,330. POWER-TRANSMISSION BELT. SAMUEL E. DOWDEN, Chelsea, Okla. Filed Mar. 23, 1918. Serial No. 224,108. 2 Claims. (Cl. 74—65.)



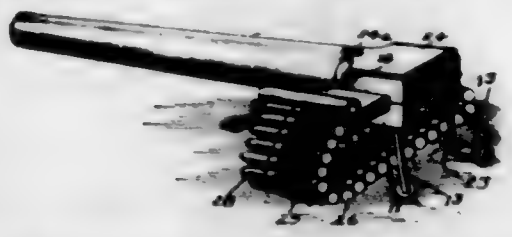
1. A power transmission belt of the class described comprising an open inner belt having its ends arranged in overlapping relation, a chain on the outer side of the inner belt, and means to secure the ends of the chain detachably together, the ends of the chain being substantially coincident with those of the belt, and certain of the links of the chain being attached to the belt to prevent the removal of the chain therefrom.

1,302,331. SAFETY SWITCH-LOCK. JOHN A. DUNN, Augusta, Ga. Filed Nov. 17, 1917. Serial No. 202,592. 4 Claims. (Cl. 246—448.)



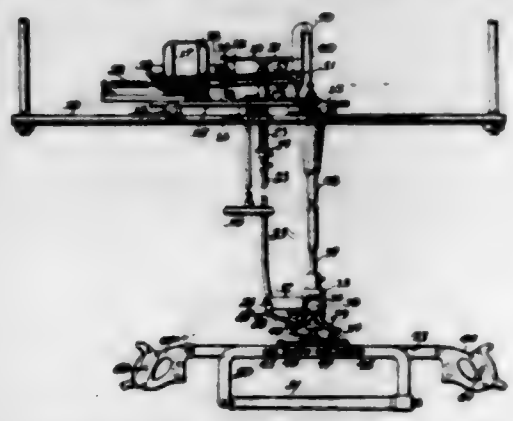
1. In a device of the class described, a reciprocable locking member including a locking shoulder adapted to engage the point of a switch rail, a connecting rod pivotally secured to the reciprocable member, a lever pivoted to the connecting rod, said lever including a deflected portion having a slot therein, a switch operating rod, and an engaging device on the rod last named and coöperating with the slot.

1,302,332. TOY MACHINE-GUN. FRANCIS VICTOR DU PONT, Wilmington, Del. Filed Feb. 17, 1919. Serial No. 277,498. 7 Claims. (Cl. 124—13.)



1. The combination with a gun having a barrel and a breech in communication with, and opening at opposite sides of the rear of, the said barrel, of ammunition therefor including a plurality of connected holders and projectiles movable into and out of the holders, the said holders having internal springs for expelling the projectiles through the barrel, against which the projectiles are compressed within the holders in the breech, said breech having a casing provided with a laterally projecting flared receiving mouth through which the ammunition is initially movable, as described.

1,302,333. POWER-DRIVEN MEAT-SAW. EMIL EMANUEL EHRLICH, Kankakee, Ill. Filed Nov. 27, 1916. Serial No. 133,637. 10 Claims. (Cl. 143—68.)



1. A power driven saw structure of the character described comprising a saw support, a reciprocable saw carried thereby, a movable carriage carrying said saw support, means associated with said saw support for reciprocating said saw, manually controlled operating mechanism for positioning said saw and carriage in a plurality of different positions so as to permit said saw to operate in a plurality of parallel planes whereby it is adapted to cut slices of meat, and means whereby said saw may be tilted vertically independently of said carriage.

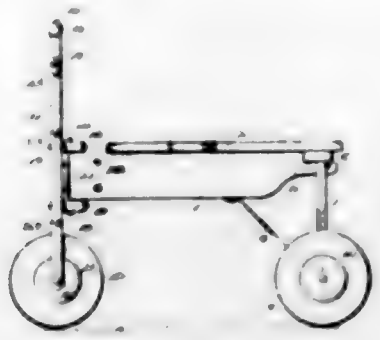
1,302,334. POCKET. HERBERT ELOESSER, San Francisco, Calif. Filed Aug. 8, 1918. Serial No. 248,969. 1 Claim. (Cl. 2—15.)



A garment pocket for accommodating articles of different lengths, comprising a back, a front attached to the back along the sides and bottom to form a pocket entrance at the top, and an extension piece attached to the said back at the sides, the lower portion of the said extension piece extending into the pocket formed by the said front

and the upper portion of the said extension piece extending a distance above the top of the said front, the said extension piece forming with the said back an upward extension to the pocket, the entrance of the extended pocket being a distance above the top of the said front.

1,302,335. **CHILD'S CAR OR VEHICLE.** EDGAR P. ELZEY, Parkersburg, W. Va., assignor to the Au-To Play Goods Company, Parkersburg, W. Va., a Corporation of West Virginia. Filed Aug. 19, 1918. Serial No. 250,562. 9 Claims. (Cl. 208—165.)



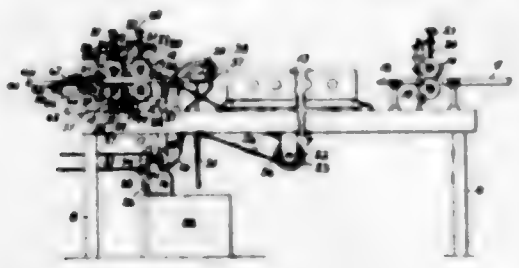
1. A child's vehicle comprising a coupler, a seat board fixed thereon, said coupler notched at its upper rear corner, a cross bar in said notch and against the under side of the seat board, a bolster provided with a wheeled axle, and vertical supporting posts at their lower ends fixed to the end portions of the bolster and at their upper ends fixed to the end portion of the cross bar.

1,302,336. **ARTIFICIAL LEG.** OTTO H. ERICKSON, Minneapolis, Minn. Filed Dec. 9, 1918. Serial No. 265,849. 4 Claims. (Cl. 3—2.)



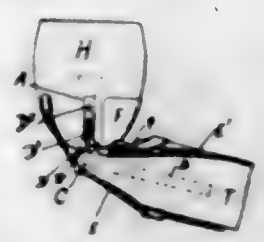
1. An artificial leg comprising leg sections having cooperating external and internal screw-threaded elements connecting the two leg sections for rotation on the major axis of the leg and to thereby vary the length of the leg and the foot angle.

1,302,337. **MACHINE FOR HARDENING HACKSAWS.** CARL L. ERICSON, Longmeadow, Mass., assignor to American Saw & Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed Feb. 9, 1918. Serial No. 216,421. 18 Claims. (Cl. 266—3.)



7. The combination, in a machine of the class described, with the feed mechanism of the machine, such mechanism being adapted to handle a chain of objects connected by links which have feet that extend below the undersides of said objects, of means to elevate each of said links, after it passes said feed mechanism, and an inclined member in the path of the elevated link to tip it out of engagement with the objects connected thereby.

1,302,338. **ARTIFICIAL LEG.** EMIL BARNT, London, England. Filed May 15, 1917. Serial No. 168,844. 4 Claims. (Cl. 3—2.)



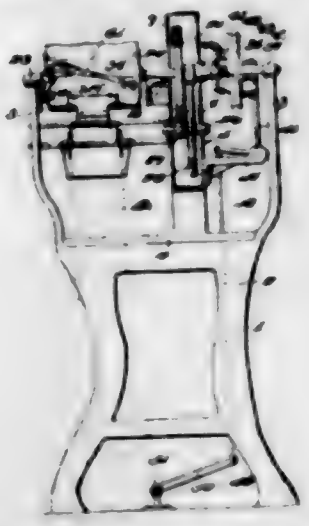
1. In artificial legs for hip-amputations, a hip-joint member for connecting the hip-stump socket to the thigh part and releasable means for normally locking said hip-joint member against movement.

1,302,339. **WHEELED PLOW.** CONRAD ESPING, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed Aug. 15, 1916. Serial No. 114,954. 1 Claim. (Cl. 97—36.)



In a plow, the combination of a frame comprising a transverse portion and a longitudinal frame member extending rearwardly therefrom, carrying wheels mounted on the transverse portion of the frame, plow beams extending longitudinally one at each side of the longitudinal frame member and connected with said transverse portion of the frame, and a draft rod coupled with the longitudinal frame member in rear of said transverse portion and adapted for the attachment of the draft team.

1,302,340. **MACHINE FOR CUTTING GAUNTLET-CUFF OR OTHER BLANKS OF FABRIC, PAPER, OR OTHER MATERIAL.** FRANK R. EVANS, Zanesville, Ohio. Filed Feb. 7, 1918. Serial No. 215,814. 78 Claims. (Cl. 164—73.)



1. In a machine of the class described, a moving work support, means upon the support for coaction with the

surface thereof to grip the work, a cutting element, means for imparting motion to the support, means for actuating the cutting element, and means for moving the cutting element across the support.

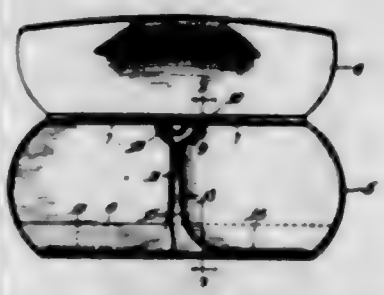
20. In a machine of the class described, a work support, a cutting element mounted for movement across the support, means for actuating the cutting element, and means upon the support for gripping work to be acted upon by the said cutting element, the said means including a trip member, a gripping finger connected thereto, and a guide for the finger coacting with the finger to guide the same toward the said support as the finger is moved by actuation of the trip member, into active position, and means for automatically actuating the trip member in timed relation to the actuation of the cutting element.

38. In a machine of the class described, a work support, a cutting element mounted for travel across the support, means for actuating the cutting element, a gripping element movable into and out of position to grip the work to be acted upon by the cutting element and in timed relation to the actuation of the cutting element, a work piercing point upon the support in juxtaposition to the gripping element, and means for automatically disengaging the work from said piercing point when the gripping element is moved to inactive position.

58. In a machine of the class described, cutting mechanism including a rotary shaft, an eccentric fixed thereon, a knife race having one side formed with a ball race slot and disposed against one face of the eccentric, a knife having a head mounted for reciprocatory motion in the race and having a ball socket located opposite the slot, the face of the eccentric having an annular groove formed therein, a ball race ring removably fitted in said groove, and a ball element seated in the said races and engaging in the socket.

78. In a machine of the class described, a rotary cylinder, work gripping and cutting mechanism thereon, and means for tensioning and guiding work gripped by the said gripping means upon the cylinder, the said tensioning and guiding means including an oscillatory member having a bearing portion arranged to engage the material and hold the same against the wall of the cylinder, means for yieldably holding the member oscillated in a direction to provide for such engagement, a second oscillatory member, a bearing tongue carried thereby and arranged to engage the work and hold the same against the first-mentioned oscillatory member, and operative connection between the oscillatory members whereby the same may be moved in unison to engage or disengage from the work.

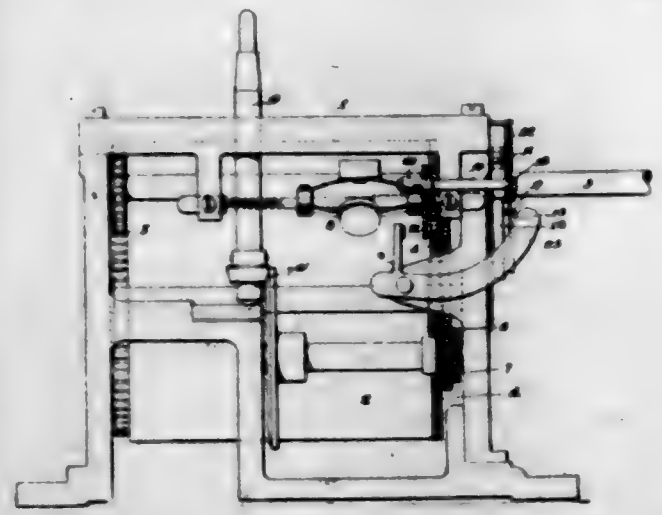
1,302,341. **STRENGTHENER FOR EYEGLASS-CASES.** CHARLES FALB, Estherville, Iowa. Filed Feb. 14, 1919. Serial No. 276,912. 3 Claims. (Cl. 206—5.)



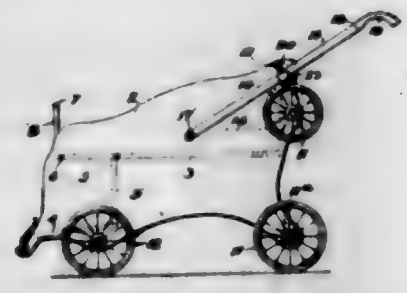
1. A strengthener for eye-glass cases, consisting of an elongated body having portions thereof in the same plane and provided at one of its ends with diverging resilient members and between its ends with a support extended from said plane.

1,302,342. **MOTOR.** PINCUS FARR, Newark, N. J., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed May 8, 1917. Serial No. 167,879. 7 Claims. (Cl. 185—39.)

7. In a talking machine, a spring actuated motor, a shaft for winding the spring, means whereby the unwinding of the spring will rotate the turn-table spindle of the motor, and means actuated by the winding shaft for automatically arresting the revolution of the turn-table spindle during the rewinding of the spring.



1,302,343. **BABY-BUGGY.** CHARLES M. FARRER, Seattle, Wash. Filed Feb. 2, 1918, Serial No. 215,166. Renewed Mar. 8, 1919. Serial No. 281,553. 6 Claims. (Cl. 155—12.)



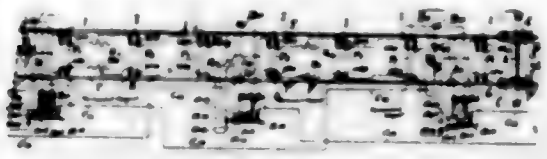
2. A convertible chair and carriage comprising a body structure with two sets of wheels, one to support it upright in chair forming position and one to support it in longitudinal position to form a carriage, a transverse panel forming a carriage bottom and terminating short of one end of the body to form a leg space, a swinging section to close said space and form a portion of the bottom, and back rest forming panels, at angles to each other, at diagonally opposite corners of the structure.

1,302,344. **ORNAMENTAL ARTICLE AND METHOD OF PRODUCING THE SAME.** JOHN A. FENTON, Oakland, Calif. Filed Dec. 1, 1917. Serial No. 204,992. 1 Claim. (Cl. 41—39.)



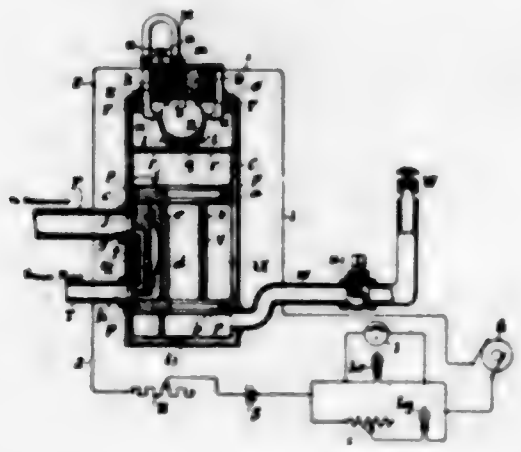
An article of manufacture comprising a body having a surface provided with a design in sharp relief, the areas not taken up by the design being covered by depressions and projections of a contour conforming to the grain of the material of which said body is formed, said areas being colored in contrast to the design and with the depressions and projections colored in contrast to each other.

1,302,345. SYSTEM OF TRAIN CONTROL. GEORGE P. FINNIGAN, Wilton-on-James, near Richmond, Va. Filed July 10, 1914. Serial No. 850,075. 40 Claims. (Cl. 246—47.)



4. The combination with a traveling vehicle, of a permanent magnet disposed in the path of travel of said vehicle, an electric circuit on said vehicle inductively influenced by said magnet, a translating device in said circuit responsive in different degrees to different magnitudes of current in said circuit, means controlled to different degrees by said translating device as it responds in different degrees, a circuit including a source of current and a winding associated with said magnet, and means controlling the strength of current in said last named circuit for varying the inductive effect of said magnet upon said vehicle circuit.

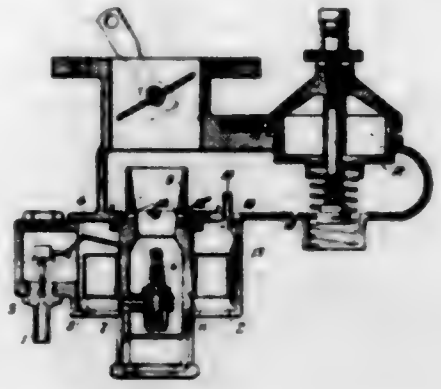
1,302,346. SYSTEM OF AUTOMATIC SPEED CONTROL. GEORGE P. FINNIGAN, Wilton-on-James, near Richmond, Va. Filed Dec. 29, 1914. Serial No. 879,431. 5 Claims. (Cl. 188—72.)



1. The combination with a vehicle, of an air brake system thereon, valve mechanism held in normal position by pressure exerted on opposite sides having different areas, a member having a port communicating with a region of different pressure and with the space adjacent one of said sides, an armature member normally closing said port, magnetic means holding said armature in port closing position, means causing release of said armature member by said magnetic means at predetermined vehicle speed, whereby said port is opened and said valve mechanism causes application of the brakes, said magnetic means restoring said armature member to normal position in response to resultant change in vehicle speed, whereby said port is closed and said valve mechanism causes release of said brakes.

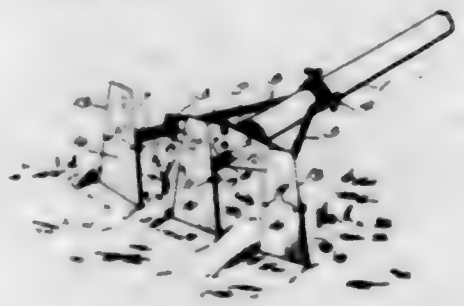
1,302,347. CARBURETER. LEONARD V. FLECHTER, New York, N. Y., assignor to L. V. Flechter & Company, a Corporation of New York. Filed Dec. 12, 1912, Serial No. 736,272. Renewed May 9, 1918. Serial No. 233,604. 8 Claims. (Cl. 261—41.)

7. A carbureter comprising a carbureting tube, a fuel spraying nozzle therein, a main air inlet to said carbureting tube, a mixing chamber into which the carbureting tube is extended, and an auxiliary air inlet opening into said mixing chamber, and a secondary fuel nozzle located in said mixing chamber, said carbureting tube having means located below said secondary fuel nozzle to prevent



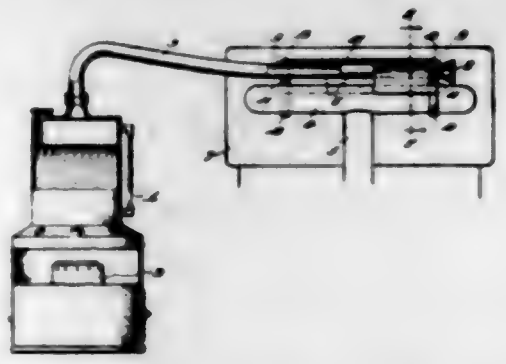
the accumulation of any condensed fuel in said mixing chamber.

1,302,348. GARDEN-TOOL. JOSEPH JAMES FLEMING, Boone, Iowa. Filed Sept. 19, 1918. Serial No. 254,832. 2 Claims. (Cl. 55—39.)



2. A garden tool comprising a shank bent laterally at its front end, a relatively short bar riveted to the front portion of said shank and bent laterally at its front end in the opposite direction from said shank end, the bent ends of said shank and bar being alined, and an earth working blade riveted to said bent shank and bar ends.

1,302,349. MANIFOLD-HEATER. SAMUEL G. FOSTER and PERCY G. FOSTER, Westfield, N. J. Filed Dec. 17, 1917. Serial No. 207,558. 4 Claims. (Cl. 123—179.)

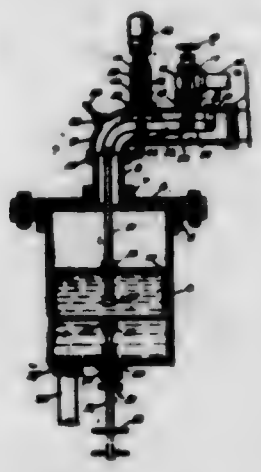


1. A manifold heater comprising a tube adjacent the manifold and having means for spraying steam onto the same, and a steam generator from which said tube leads.

1,302,350. AUTOMATIC CONTROL FOR BOILER FEED-PUMPS. WALTER L. FOSTER, Whittier, Calif., assignor of one-fourth to Robin S. Oller, Whittier, Calif. Filed Mar. 20, 1918. Serial No. 223,659. 2 Claims. (Cl. 137—101.)

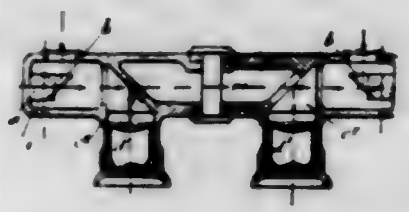
1. In a boiler feed control, an equalizing chamber having a bucket therein, a connecting rod upon which said

bucket is adjustably mounted, and an adjusting rod slidably extending into the equalizing chamber disposed so as



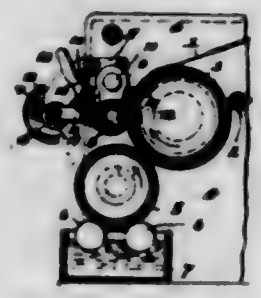
to be engaged at will with the bucket to adjust its position on said rod and to be withdrawn therefrom after adjustment.

1,302,351. SINGLE-TUBE AND DOUBLE-TUBE OPTICAL GLASS. HENRI FOUASSE, Paris, France, assignor to Societe d'Optique et de Mecanique de Haute Precision, Paris, France, a Joint-Stock Company of France. Filed Mar. 22, 1918. Serial No. 224,360. 1 Claim. (Cl. 88—32.)



In a double tube optical glass with wide base, the combination in each tube of an optical train comprising an objective, a doubly reflecting prism of the Crova type on one side of the objective, and a simple total reflecting prism on the other side of the objective, with a simple total reflecting prism and an eye piece, said last-named prisms being so disposed that the reflecting surfaces thereof cause an erection of the image similarly to a Crova prism and reflect the luminous pencil to the eyepiece.

1,302,352. COATING-MACHINE. HARRY M. FRENCH, Norwood, Mass. Filed Feb. 1, 1919. Serial No. 274,464. 9 Claims. (Cl. 91—52.)



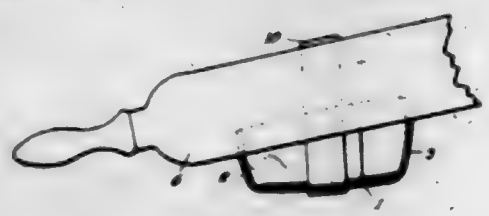
1. In a machine for applying a coating to a web of material, the combination of means for advancing the web; means for applying a coating to one surface thereof; means for smoothing said applied surface; and means for periodically shifting said smoothing means.

1,302,353. LUMINOUS HAIR-LINE. CONRAD FRIEDRICH, Washington, D. C. Filed Sept. 20, 1917. Serial No. 192,365. 10 Claims. (Cl. 88—1.)



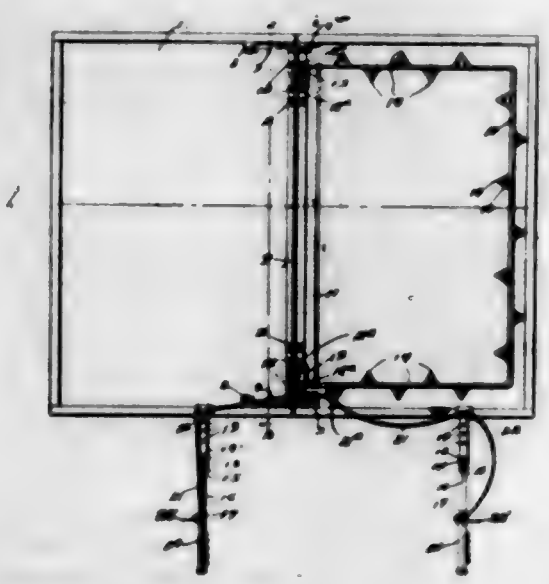
3. A glass plate, having a relatively deep and narrow groove in a surface thereof defining a hair-line and a radium-luminous substance disposed along the edge of the said glass plate.

1,302,354. NURSING-BOTTLE HOLDER. FRANK J. FRIEDMANN and MORRIS J. LIPSHITS, Brooklyn, N. Y. Filed Nov. 6, 1917. Serial No. 200,497. 5 Claims. (Cl. 215—116.)



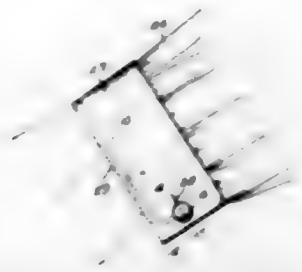
1. A holder for nursing bottles constructed from a single, integral blank of vulcanized fiber and comprising a base and side walls turned up and away from said base and adapted to support the nursing bottle thereon, said side walls having ends or tabs joined together for holding said side walls in upstanding position.

1,302,355. MUSIC-LEAF TURNER. HENRY EDWARD FROMMAG, Crandall, S. D. Filed Aug. 27, 1917. Serial No. 188,510. 3 Claims. (Cl. 84—17.)



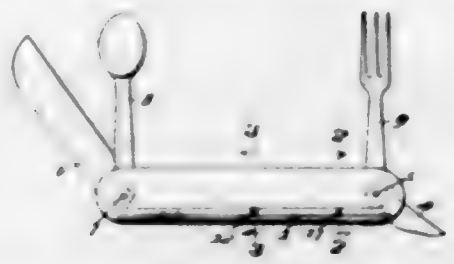
2. A music leaf turner comprising a support, a shaft carried thereby, a pair of frames each formed of a single length of wire bent in substantially U-shape, braces connecting the legs of said wires adjacent their inner ends, the inner ends of the legs of one frame being inwardly offset, journal connections between the inner ends of the legs and the shaft, a coil spring disposed between each offset leg portion of one frame and the adjacent leg portion of the other frame, and having its ends bearing against said frames, to urge them together and means for simultaneously turning said frames on the shaft.

1,302,356. CUFF-HOLDER. MAYNARD A. FROMBY, Racine, Wis. Filed Feb. 5, 1919. Serial No. 275,114. 7 Claims. (Cl. 24—42.)



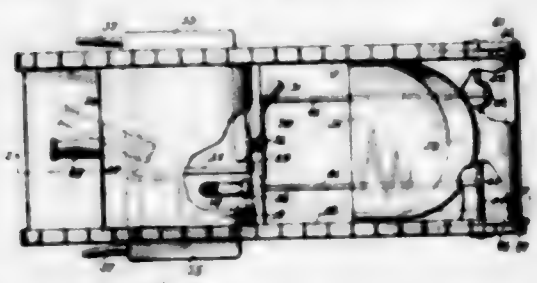
1. The combination with a resilient bow, of separate pieces forming the ends thereof, said pieces being fixed to the bow for adjustment longitudinally thereof, and a cuff holding button mounted on each of said end pieces.

1,302,357. COMPOSITE TOOL. JOSEPH ARTHUR GAGNON, Upton, Quebec, Canada. Filed Aug. 8, 1918. Serial No. 248,965. 2 Claims. (Cl. 7—11.)



1. A tool of the kind described comprising a handle formed in two sections each of which is rabbeted on one face so as to leave a longitudinal rib adjacent one edge, implements pivotally mounted on each of the sections adjacent each end and in the rabbeted portion, and means for detachably connecting the two sections together so that their longitudinal ribs will lie face to face whereby the rabbeted portions of the two sections will provide a pocket in which the implements may be inclosed.

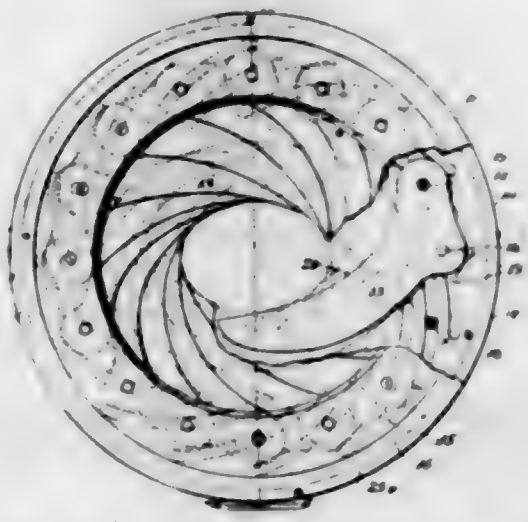
1,302,358. WAR-VEHICLE FOR CHILDREN. JOSEPH GARAMI, Newark, N. J., assignor of one-half to Sara Steiner, New York, N. Y. Filed May 24, 1918, Serial No. 236,365. Renewed Feb. 13, 1919. Serial No. 276,859. 5 Claims. (Cl. 208—113.)



1. A war vehicle for children including, a war tank construction, a front running gear therefor and means for steering the same, a toy cannon element engaged with the front running gear and movable therewith, a rear running gear, and mechanism connected with the rear running gear adapted to be operated by the action of the rider whereby to propel the vehicle.

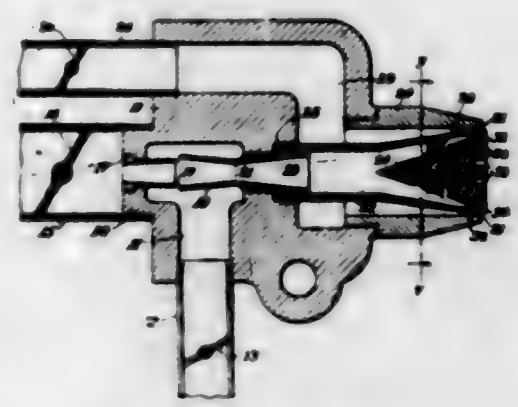
1,302,359. ELLIPTIC IRIS. FRANK E. GARBUTT, Los Angeles, Calif. Filed July 15, 1918. Serial No. 245,111. 3 Claims. (Cl. 95—64.)

1. An elliptic iris diaphragm consisting of a stationary ring, a rotatable ring mounted on said stationary ring, a plurality of pairs of leaves interposed between said rings, a pin on each leaf extending into the rotatable ring to pivotally mount its associated leaf on the rotatable ring, each of said leaves having a curved inner edge, the curvature of the inner edge of the leaves in each pair being substantially identical and different from the curvature of the inner edge of the other leaves, said



rotatable ring having a series of curved slots therein, one for each leaf, the slots for each pair of like leaves being identical and such slots being eccentric to the center of the iris, a stud on each leaf extending into one of the slots, and means for moving the rotatable ring to vary the position of the leaves.

1,302,360. LIQUID-FUEL BURNER. JOHN O. GOODWIN, Harrisburg, Pa. Filed Feb. 11, 1918. Serial No. 216,509. 4 Claims. (Cl. 158—74.)

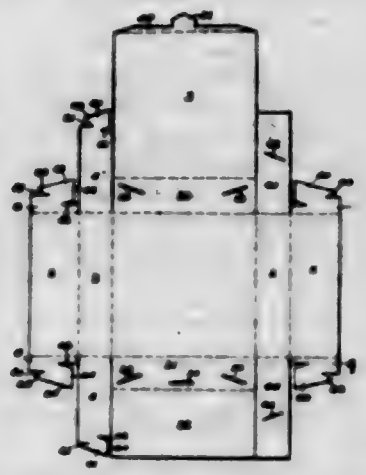


1. A burner of the class described, comprising a body having a liquid fuel receiving chamber and a heating chamber, a steam nozzle, the discharge end of which is located in said liquid fuel receiving chamber, a receiving member for the steam and fuel, the inlet to which is adjacent to and of greater diameter than the discharge end of said nozzle and the central portion of which is reduced to compress the steam and fuel and equalize the temperature thereof, in combination with a member or chamber, located within said heating compartment, adapted to vaporize the fuel from the receiving chamber, and means for effecting a mixture of superheated steam or air from the heating compartment and the vaporized material from the expansion chamber.

1,302,361. FOLDING PAPER BOX. ABBIE GORDON, Belvidere, Ill. Filed Aug. 17, 1918. Serial No. 250,265. 3 Claims. (Cl. 229—34.)

1. A folding paper box having a full top section provided with means for interlocking engagement of its swinging edge with the box side, and flaps extending

from the other two sides of the box and folding over the side portions of said top section, the ends of said



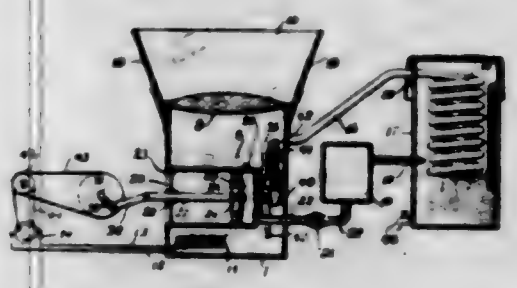
flaps having extensions folding down and having interlocking engagement with the other side sections of the box.

1,302,362. LIFE-BOAT. FRANK ARCHIE GRAHAM, Harbor Springs, Mich. Filed Aug. 12, 1918. Serial No. 249,455. 3 Claims. (Cl. 9—18.)



1. A boat comprising a box-like keel; means for dividing the keel to form alternately upwardly-opening and downwardly-opening pockets; a center-board pivotally mounted in to be retracted within one of the downwardly-opening pockets; and means for propelling said boat, said means embodying a propeller disposed in service in one of the downwardly-opening pockets, and operating means for said propeller disposed in an adjacent and upwardly-opening pocket.

1,302,363. DISTILLING APPARATUS. FRANK ARCHIE GRAHAM, Harbor Springs, Mich. Filed Sept. 14, 1918. Serial No. 254,073. 3 Claims. (Cl. 203—5.)



1. A distilling apparatus comprising a liquid-holding tank; an air compressor disposed within said tank to be immersed within the liquid therein; a reservoir operatively connected with said compressor for holding air delivered thereby under compression; a cooling chamber operatively connected with said compressor by means of a jet tube; means for vaporizing water in said tank; and a cooling system for said vapor, embodying a delivery pipe, and a cooling coil section thereof, said section being disposed in said cooling chamber.

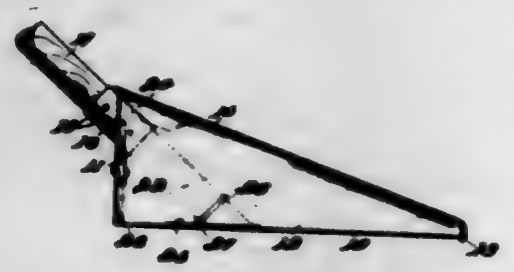
1,302,364. TIRE-CHAIN. BERNARD WILLIAM HARTLEY, Haileybury, Ontario, Canada. Filed Nov. 1, 1918. Serial No. 260,728. 2 Claims. (Cl. 152—14.)

1. A non-skid chain for pneumatic tires comprising a pair of circular side chains; a pair of zig-zaged chains located to lie one at each side of the central tread portion of a tire with which the device is used; short transverse chains connecting the reëntrant angles of said



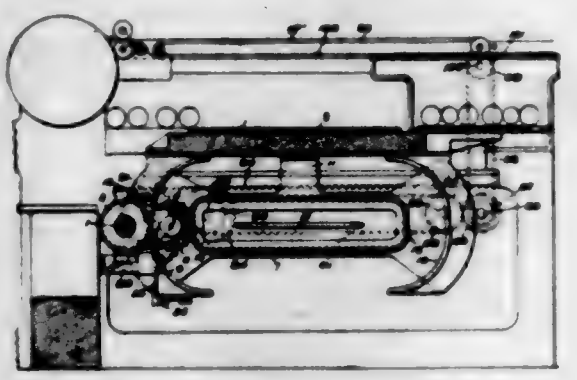
chains and adapted to extend across the central tread portion of a tire; and connections between the salient angles of said chains and the side chains.

1,302,365. RAILING-SCOOP. DONALD S. HAYS, U. S. Army. Filed Jan. 9, 1919. Serial No. 270,337. 10 Claims. (Cl. 55—14.) (Filed under the Act of Mar. 3, 1883, 22 Stat. L., 625.)



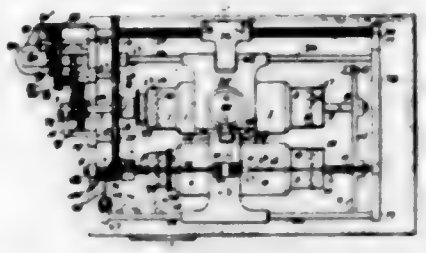
10. A device of the class described including a body having bottom sides and rear end, said end having a handle receiving aperture, a supporting plate attached to said bottom, a loop device swingingly connected to said plate and adapted to receive the lower terminal of a handle, and means adapted to lock said handle to the body.

1,302,366. MECHANICAL MOVEMENT AND PRINTING-PRESS INVOLVING THE SAME. WILLIS K. HODGMAN, Jr., Taunton, Mass. Filed Sept. 8, 1917. Serial No. 190,817. 35 Claims. (Cl. 101—282.)



2. A mechanical movement comprising a reciprocable member, a driving shaft, a driving member fast on said shaft, a rotatory member concentric with but lose with respect to said shaft, a driving member eccentrically mounted on said rotatory member with respect to said driving shaft, and having driving relation with said reciprocable member and with the driving member on said driving shaft, said parts being constructed, coöperating and operatively connected to drive the reciprocable member at a uniform speed during a part of its forward and backward strokes, and to cause it to remain appreciably at rest at the end of each of said strokes.

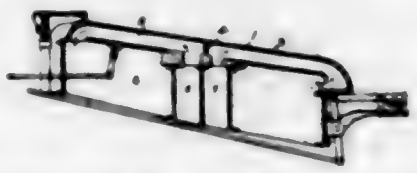
1,302,367. MODIFIED VIVIGRAPHIC RECORD AND PROCESS. EDWIN S. HOPKINS, Jr., New York, N. Y. Filed Mar. 2, 1909, Serial No. 480,952. Renewed July 31, 1918. Serial No. 247,671. 21 Claims. (Cl. 88—16.2.)



1. A modified copy of a phonographic record in which certain of the intervals between sound producing portions have been extended and certain ones contracted as compared with the original from which it was produced, substantially as and for the purpose described.

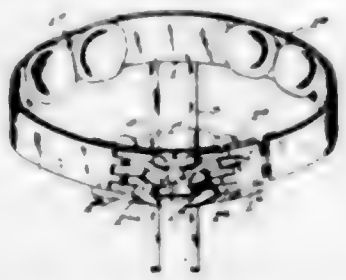
7. The process of making a modified copy of a phonographic record synchronous with a motion picture film which consists in altering, during the operation of copying, the locations of the sound producing portions of its phonic line, so that they bear the same proportionate relation to each other in the length of the line, as are borne to each other by the analogous optical effect producing portions of the motion picture film.

1,302,368. GRATE-BAR. JOHN M. HOPWOOD, Dormont, Pa., assignor to Darwin S. Wolcott, trustee, Sewickley, Pa. Filed Aug. 28, 1917. Serial No. 188,645. 8 Claims. (Cl. 110—37.)



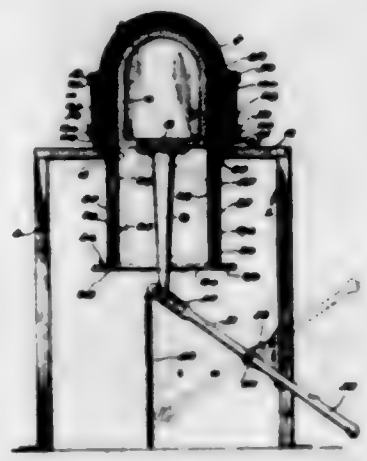
1. The combination in a fuel supporting means of two or more suitably spaced grate bars, means for reciprocating a number of said bars in planes approximately parallel with the longitudinal axes of the bars, means interposed between the walls of adjacent bars to form passages adapted to permit of an uninterrupted flow of air between the bars and a substantial range of longitudinal reciprocation and to prevent the downward passage of coal and ashes.

1,302,369. TRUSS. ACHILLE JOSEPH OISHEI HOSCHEK, Brooklyn, N. Y. Filed Oct. 15, 1918. Serial No. 258,196. 1 Claim. (Cl. 128—101.)



A truss of the type described including a belt comprising a plurality of members, among them a body-member proper and end-members, said body-member including a front-section composed principally of "belting" material having applied to its inner surface, about centrally thereof heavy elastic material and laterally of the latter material pressure-exerting pads of oblong outline with rounded body-engaging surfaces disposed in generally vertical position, with their normally upper ends inclined toward each other, said front-section having secured upon its outer surface rows of knuckles positioned correspondingly with said pads and having applied to its inner surface non-elastic pieces, said end-members being elastic and one fixedly connected to one of said non-elastic pieces, the other end-member and non-elastic piece being provided with said front-section whereby inter-engaging means with its pads and the pad adjusting means is adapted to be moved from said body-member proper without interfering with the adjusted position of said pad-adjusting means and whereby the body-member or belt is adapted, as an entire unit, to readily accommodate itself to the various positions which the body of the wearer may be required to assume.

1,302,370. MACHINE FOR FORMING CONCRETE CONDUITS. LEO H. HOUCK, Wenatchee, Wash. Filed July 2, 1918. Serial No. 243,063. 16 Claims. (Cl. 25—41.)



1. In a machine for forming concrete conduit sections, the combination, of a supporting structure including a table provided with a centrally disposed opening, a mold comprising side and end walls resting upon said table about said opening, a vertically reciprocable plunger adapted for projection through said opening into said mold, said plunger having its upper portion curved and adapted for projection above the upper edges of the mold, the end walls of said mold projecting above the side walls and having their projecting portions shaped to conform to the curvature of the outer surface of said plunger.

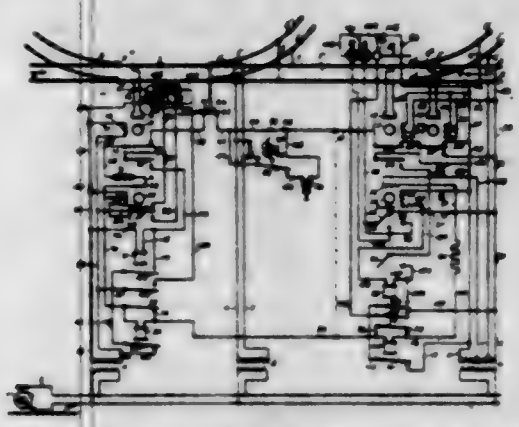
2. In a machine for forming concrete conduit sections, the combination, of a supporting structure, a mold mounted upon said supporting structure and comprising a substantially rectangular base including side rails and cross braces, side plates for the mold, end plates hingedly connected to said side plates, and shoulders formed upon said base and adapted for engagement against the inner surfaces of said end plates and at their lower edges to regulate the position of the sides and ends of the mold with respect to the base.

1,302,371. SIGNALING SYSTEM. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 19, 1912. Serial No. 691,924. 42 Claims. (Cl. 246—29.)

1. In a signaling system, a block, a signal for governing entrance into the block from one end, a signal for governing entrance into the block from the other end, controlling devices for the signals in a series circuit, a constantly acting source of alternating current energy connected in series in the circuit, means to change the phase of the current in the circuit 180° for changing the aspect only of one of the signals.

2. In a signaling system, a block, signals governing entrance into the block from either end, two conductors, signal controlling devices at either end of the block for controlling said signals in series with said conductors, a

constantly acting source of energy in series with said conductors, and means to reverse the phase of the current in said conductors for changing the aspect of one of said signals.

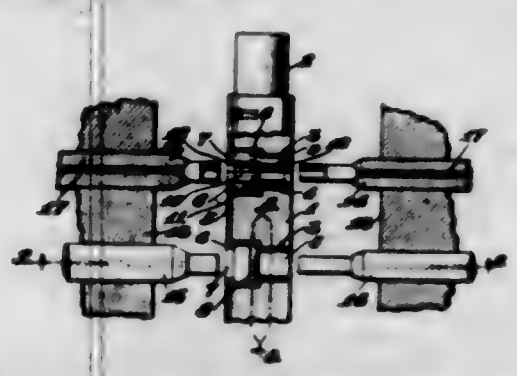


3. In a signaling system for railways, in combination: a block; a signal governing the entrance to each end of said block and having a proceed aspect, a stop aspect and a permissive aspect; a relay and means controlled thereby associated with each signal for causing the permissive aspect thereof behind the train in the block moving in the direction of traffic governed by that signal; a circuit for controlling said relays; and means associated with each of said relays and controlled thereby for rendering said circuit ineffective to operate the other relay.

4. In a signaling system, a block, a switch within the block, signals governing entrance into the block from either end, a single signal control wire from one end of the block to the other, and a switch indicator controlled by said single wire.

5. In a signaling system: a block; a source of alternating current; signals governing entrance into the block from either end; translating devices, one for controlling each of said signals; each of said translating devices having two windings; one of said windings in each of said translating devices being permanently energized from the said source; a series circuit including the other of said windings and the source of energy; means inserted in said circuit for rendering one of said translating devices torqueless when the energy from the source is shunted around the winding of the other translating device in the series circuit.

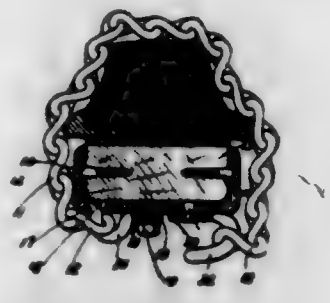
1,302,372. CAPSULE-MACHINE. HENRY J. HUBERT, St. Louis, Mo., assignor to John T. Milliken, St. Louis, Mo.; National Bank of Commerce in St. Louis, John G. Lonsdale, and H. W. Loeb, executors of said John T. Milliken, deceased. Filed Oct. 1, 1917. Serial No. 194,296. 8 Claims. (Cl. 128—1.)



1. In a capsule machine, a joiner device comprising an expansible bushing having concentric bores of different diameters adapted respectively for the reception of the cup and body halves of the capsule in telescopic relation, said bushing comprising radially movable sections and means for yieldingly holding them together.

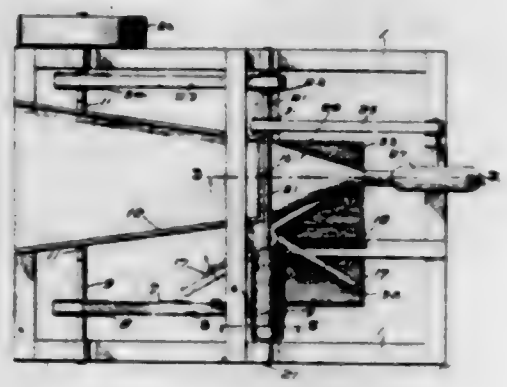
1,302,373. NON-SKID FOR TRUCKS. FRANK HUDA, Perth Amboy, N. J. Filed Feb. 9, 1918. Serial No. 216,261. 2 Claims. (Cl. 24—231.)

2. The herein described attachment means for a non-skid chain, the same comprising a member having formed in the body thereof an undercut socket, a hook having a point which after passing through a link of a chain is introduced into said socket by tilting movement and adapted to project beyond the main orifice of the socket



and abutting against the undercut walls of the same, and a detachable fastener to secure the portion of the hook remote from the point of the hook against the face of the member.

1,302,374. FRUIT-STEMMING MACHINE. CLYDE L. HUNSICKER, San Francisco, Calif. Filed Nov. 27, 1918. Serial No. 264,733. 9 Claims. (Cl. 146—14.)



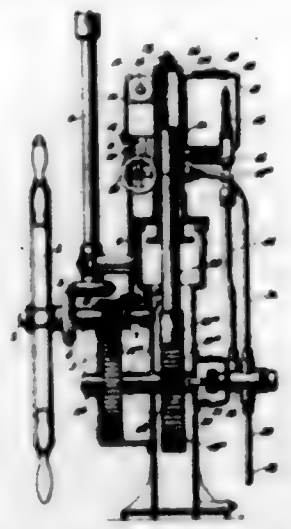
1. A fruit stemming machine comprising rotating combs; means for suspending fruit by the stems from the rotating combs; and a stripping comb arranged within the path of the rotating combs to strip the fruit from the stems.

1,302,375. PITCHFORK. JAMES M. JACK, Winfield, Kans. Filed Mar. 8, 1918. Serial No. 221,197. 1 Claim. (Cl. 55—2.)



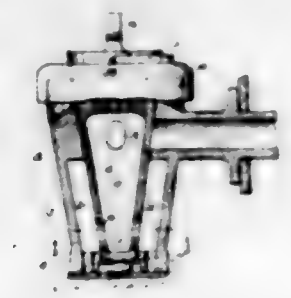
A pitch fork having a pair of short prongs and a long prong on each side of said pair, and a knife having one end connected with one of the long prongs and its other end connected with one of the short prongs with its central part resting against the other short prong.

1,302,376. TELEMOTOR. JOHN F. JOHNSTON, Bethlehem, Pa. Filed May 9, 1917. Serial No. 167,514. 20 Claims. (Cl. 138—2.)



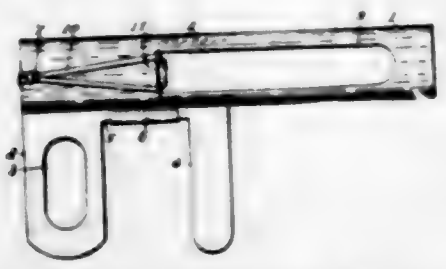
1. A telemotor comprising liquid controlling devices including a cylinder and piston, and devices comprising a valve for restoring a normal quantity of liquid to the cylinder at intervals mechanically operated from said piston.

1,302,377. DISPENSING-FAUCET. JOSEPH F. KALETAY, New York, N. Y. Filed Apr. 8, 1918. Serial No. 227,254. 1 Claim. (Cl. 137—7.)



In a dispensing faucet, the combination of a cylindrical casing tapered toward its lower end and provided with an inlet tube near its upper end and with dispensing orifices through its lower end, a hollow tapered plug of smaller diameter than said casing rotatably and concentrically arranged therein, said plug normally closing the inlet tube and having an inlet opening adapted to register with said inlet tube and having outlet openings to provide communication between its interior and the interior of said casing, a closing plate connected with and operated by the hollow plug for closing said dispensing orifices when the hollow plug is in normal position closing said inlet tube, said closing plate having openings adapted to register with said dispensing orifices when the hollow plug is turned with its inlet opening in register with the inlet tube.

1,302,378. MARBLE-SHOOTER. GEORGE COLVIN KENNEDY, Waterloo, Iowa. Filed Oct. 23, 1916. Serial No. 127,263. Renewed July 26, 1918. Serial No. 246,933. 3 Claims. (Cl. 124—14.)

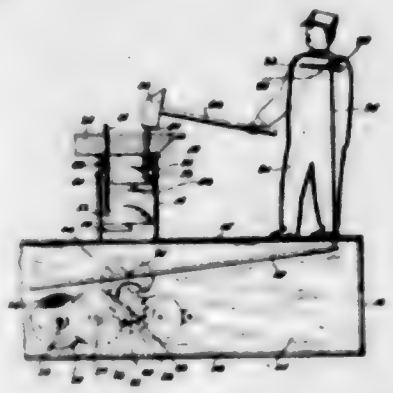


1. In a device of the character described, a tubular barrel having longitudinal slots in opposite sides, a plunger-head movable longitudinally within said barrel, formed of a body having members directed longitudinally, certain of said members serving as guides to prevent rocking of the plunger-head, the other members serving as engaging-means, and yieldable resilient propelling-means connected between said engaging-means and opposite parts of the said barrel.

2. In a device of the character described, a tubular barrel having longitudinal slots on opposite sides, a plunger-head in said barrel adapted to move therein longitudinally and having side-ears opposite said slots, and elastic-bands connected to the forward end of said barrel on opposite sides in advance of said slots, the bands having loops passed about said ears, and the ears serving to spread the loops apart in front of the plunger-head to admit fingers of the user through the loops into the barrel.

3. In a device of the character described, a tubular barrel having longitudinal slots in its opposite sides, a plunger-head movable longitudinally in said barrel, elastic bands connected to the forward end of the barrel on each side, passed through said slots and connected to opposite sides of said plunger-head, the plunger-head being spaced on the sides from the interior wall of the barrel, the forward ends of said slots being spaced away from the forward end of the barrel enough to keep the elastic bands under tension when the plunger-head is in its forward position, and said bands adapted to engage the forward ends of the walls of said slots after being placed under additional tension and then released to act as resilient stops between the plunger-head and the barrel at the discharge of a projectile by the plunger-head.

1,302,379. TOY. MARTIN KOZLOWSKI, Masontown, Pa. Filed Sept. 16, 1918. Serial No. 254,214. 3 Claims. (Cl. 46—40.)



1. In a toy of the class described, the combination with a hollow rectangular casing, and a pair of figures mounted on the upper portion thereof, of arms pivotedly mounted in said figures, hammers carried by said arms, a pair of slidable rods extended vertically upward near the center of said casing, bells carried therein, said rods being adapted to make contact with said bells, and a spring device within said casing adapted to cause said arms to rise and fall whereby said hammers are caused to contact with said rods.

1,302,380. TIRE OR OTHER VALVE. HENRY PHILLIP KRAFT, Ridgewood, N. J. Filed July 16, 1915. Serial No. 40,204. 2 Claims. (Cl. 152—12.)

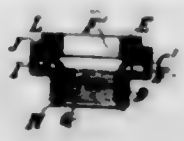
1. In combination, a valve casing, and a cap, said casing having a tubular body portion and a foot or attaching portion below or beyond said body portion, said body portion having a deep bore therein extending inwardly from its outer end, and terminating in advance of the beginning of said foot portion, and valve insides adapted to be received in said bored body portion from its outer end, said insides comprising a screwthreaded plug and said body portion being screwthreaded internally considerably inward from the outer end, with which screwthreads the screwthreaded plug is adapted to engage, said foot portion having an external diameter less than the diameter of said body portion, and having an internal bore in

prolongation of and of less diameter than the bore of said body portion, said cap having a screwthreaded portion adapted to engage the internal threads in said body portion above said plug, and being of no greater diameter than the external diameter of said body portion.



2. In combination, a valve casing, and a cap, said casing having a tubular body portion and a foot or attaching portion below or beyond said body portion, said body portion having a deep bore therein extending inwardly from its outer end, and terminating in advance of the beginning of said foot portion, and valve insides adapted to be received in said bored body portion from its outer end, said insides comprising a screwthreaded plug and said body portion being screwthreaded internally considerably inward from the outer end, with which screwthreads the screwthreaded plug is adapted to engage, said foot portion having an external diameter less than the diameter of said body portion, and having an internal bore in prolongation of and of less diameter than the bore of said body portion, said cap having a screwthreaded portion adapted to engage the internal threads in said body portion above said plug, and being of no greater diameter than the external diameter of said body portion, said valve casing being in one piece and having a substantially smooth threadless exterior surface.

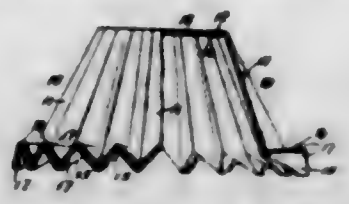
1,302,381. RIM-NUT OR THE LIKE. HENRY P. KRAFT, Ridgewood, N. J. Filed Dec. 16, 1916. Serial No. 137,324. 8 Claims. (Cl. 85—36.)



1. A device of the character described having a body portion and an interior lining member connected to the body portion by means acting under normal conditions to prevent their relative axial movement, the lining member having parts extending to the forward face of the body portion.

4. A device of the character described comprising a sheet metal body portion having a tubular extension, a lining member connected to said body portion and formed with a screw thread, said parts formed with lugs limiting their relative axial movement in both directions.

1,302,382. LAMP-SHADE AND SIMILAR PLAITED ARTICLE. ADALBERT KRAUSE, New York, N. Y., assignor to Louis Levi, New York, N. Y. Filed Mar. 5, 1918. Serial No. 220,614. 1 Claim. (Cl. 240—108.)



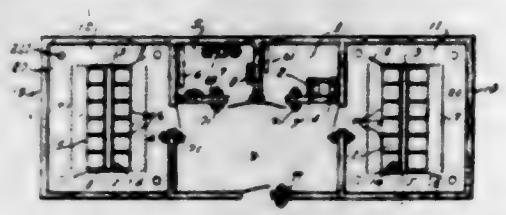
As an article of manufacture, a lamp shade, a doll's hat or similar article having a plaited body provided with marginal return plaits, and a pliable wire having plaits corresponding to the plaits of the body and secured to the margin of the return plaits to reinforce the same, to hold the plaits from distortion and to allow of contracting or expanding the plaits to diminish or increase the size of the article and hold it in the position to which it has been adjusted.

1,302,383. NECKTIE-STRETCHER. MILTON S. KUHNS, Kutztown, Pa. Filed Feb. 8, 1918. Serial No. 216,079. 2 Claims. (Cl. 223—19.)



2. A device of the class described comprising a pair of members pivotally connected together at one end, a stud projecting from one of said members, a latch element pivotally mounted upon the other of said members, and designed to engage the stud to hold said members fixed relatively, when the latch element is arranged to bridge the space between the members, and said element being further designed so that when the element is in a position parallel with one of the members it engages the stud to hold said members fixed relatively in contacting engagement.

1,302,384. LOCKING, SIGNALING, AND RECORDING CONSTRUCTION. CHARLES CALVERT LAMB, Chicago, Ill., assignor of one-half to Willard M. McEwen, Chicago, Ill. Filed Nov. 10, 1915. Serial No. 60,686. 20 Claims. (Cl. 189—8.)

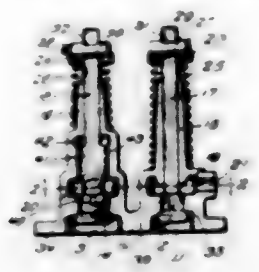


1. A construction of the class described, comprising a plurality of cells, a door for each of said cells, electrically operated locking means for each of said doors, electrically operated means for opening and closing said doors and including an operating shaft common to all of said doors, and electrically operated means for clutching any one of said doors to said shaft, said means being under the control of the respective door locks and remaining clutched with said shaft as long as the door remains open.

1,302,385. VALVE CONSTRUCTION. LINCOLN A. LANG, Chicago, Ill., assignor to The Northern Trust Company, trustee, Chicago, Ill., a Corporation of Illinois. Filed Aug. 31, 1916. Serial No. 117,832. 1 Claim. (Cl. 251—41.)

In a puppet valve construction, the combination of a housing provided with a cavity for receiving pressure fluid, said housing having an annular valve seat at one end of said cavity and a cylindrical bore at the other end of said cavity, a puppet valve coöperating with said seat for sealing said cavity and having a stem extending through said cavity and bore and out of the housing, said stem being concentric with and enlarged to fit said bore; and an expansible metallic packing ring carried by said enlarge-

ment for preventing fluid from passing between said enlargement and the wall of said bore, the diameter of said bore being less than the diameter of said cavity and opening directly into said cavity whereby the enlargement

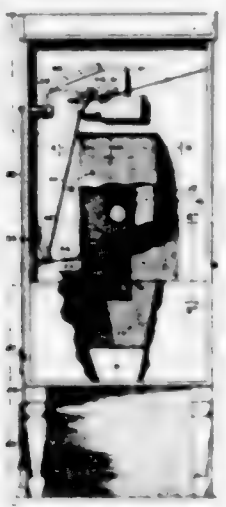


may be inserted into said bore from said cavity, said housing being provided with guiding means in said cavity, for limiting the expansion of said ring while in said cavity during the insertion of said enlargement.

1,302,386. ELECTRODE FOR ELECTRIC-ARC WELDING. EMILE LANGUEPIN, Paris, France. Filed Nov. 13, 1917. Serial No. 201,803. 2 Claims. (Cl. 219—12.)

1. An electrode for electric arc welding, composed of a rod of metal and a sheath covering said rod, said sheath being perfectly homogeneous and compact, not easily fusible, having a boiling temperature sufficiently close to its melting temperature to prevent any formation of slag, the sheath being in operation entirely volatilized and only giving out vapors which condense upon the cool surface of the object to be welded without mixing with the molten metal.

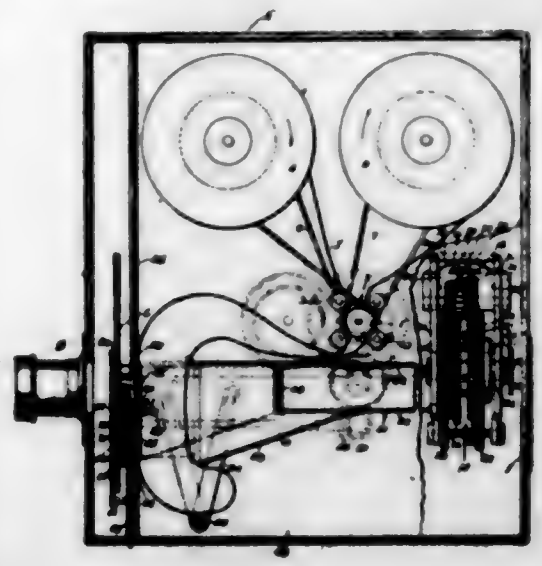
1,302,387. GAME APPARATUS. ARNOLD LARSEN, Cleveland, Ohio, assignor to Briant Manufacturing Company, Indianapolis, Ind., a Corporation. Filed Sept. 14, 1917. Serial No. 191,347. 6 Claims. (Cl. 46—61.)



6. A game apparatus comprising an alley for confining pitched balls within prescribed limits, a ball-course for directing a properly pitched ball away from the surface of the alley, ball actuated levers actuated by the pitched balls passing through the apparatus, a score indicator device comprising a plurality of independent score indicator blades, means for releasing one or more of said blades when the levers are actuated, and means for simultaneously resetting all of the released indicator blades to normal, at the will of the operator.

1,302,388. MOVING-PICTURE CAMERA. SAMUEL M. LAWHUN, Jersey City, N. J., assignor of one-half to Julius L. Perlman, New York, N. Y. Filed May 23, 1918. Serial No. 236,213. 15 Claims. (Cl. 88—17.)

1. A moving picture camera comprising a film chamber having an opening, a door for the opening having an exposure aperture, a lens in line with the door and aperture, means on the door for engaging the film, means for moving the door to carry the film away from its normal



position, and a focusing tube adjustable to the door opening for focusing the camera without exposing the film to light.

1,302,389. TOY. CHARLES R. LEMONS, Pearce, Ariz., assignor, by direct and mesne assignments, to James W. Lemons, Pearce, Ariz. Filed June 6, 1917. Serial No. 173,203. 1 Claim. (Cl. 46—47.)
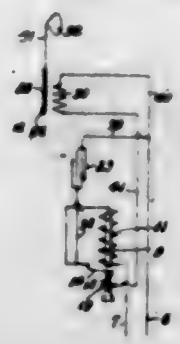


In a toy of the class described, a wheel having tappets, a handle having an axle projecting from one side thereof and on which the wheel is mounted, and a bell arranged on the handle and having a striking arm arranged for operation by the tappets, said striking arm being provided near its outer end with a pivotal joint forming an elbow which is adapted to be folded backwardly by the tappets when the toy is reversed.

1,302,390. SEPARABLE BUTTON. ABRAHAM J. LOBAR, New York, N. Y. Filed Nov. 5, 1918. Serial No. 261,292. 7 Claims. (Cl. 24—108.)



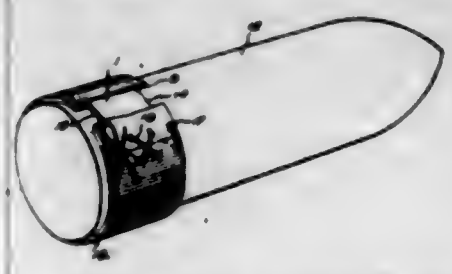
1. A separable button, comprising a head, a plain shank having at one end a base and having the other end pointed, a gripping member carried by the head for gripping the base of the shank to hold it in the head, and a coöperating member made hollow and having an entrance for the pointed end of the said shank, the said coöperating member being provided with interior gripping means gripping the entering end of the shank.

1,302,391. HIGH-FREQUENCY APPARATUS. ANTONIO LONGOBIA, Cleveland, Ohio, assignor to The Sterling Electrical Corporation Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 2, 1916. Serial No. 101,299. 3 Claims. (Cl. 250—36.)



1. In a high frequency device, a primary winding, means for producing electrical impulses therein, a secondary winding, means for connecting an electrode to one end of said secondary winding, the other end of said secondary coil being free of connection to any other part, and means for preventing electrical discharge at the free end of said secondary winding.

1,302,392. SHELL-PACKING. ISRAEL LUDLOW, New York, N. Y. Filed July 29, 1918. Serial No. 247,288. 4 Claims. (Cl. 150—52.)



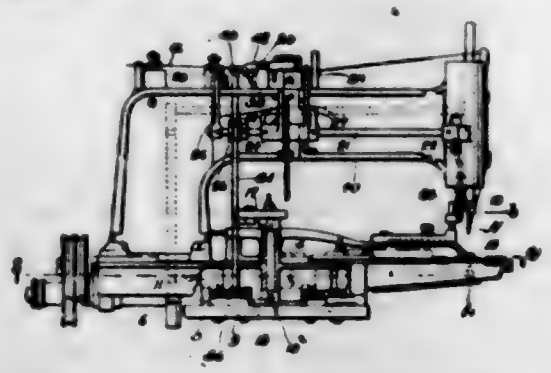
1. A shell packing having a protecting split ring for surrounding the body of said shell adjacent the rifle band thereof, said ring extending in service beyond the exposed surface of said band for protecting said band; and a covering member extending in service over said band between the edges thereof, the edge portion of said member completely infolding said ring, the outer layer of said covering member binding the edge portion thereof between said ring and said outer layer for holding said ring in fixed relation to said covering member.

1,302,393. ACETYLENE-LAMP. JOHN D. LUTTRELL, Benton Harbor, Mich. Filed Feb. 26, 1917. Serial No. 151,085. 2 Claims. (Cl. 48—26.)



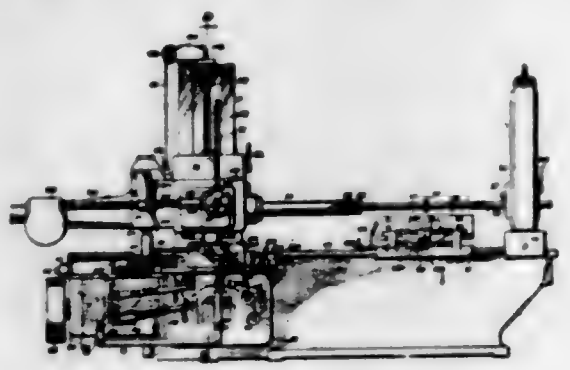
1. A device of the kind described, comprising a carbid chamber provided with a burner near the upper part thereof, and a closure for the chamber, said chamber having formed therein one or more apertures, and absorbent material covering said apertures, in combination with a coöperating fluid chamber adjustably supported near the carbid chamber, and provided with an aperture near the bottom thereof, and suitable permeable material controlling said aperture, whereby upon bringing the feed opening of the fluid chamber in contact with the carbid chamber, fluid will be conducted to the carbid substantially as described.

1,302,394. SEWING-MACHINE. ROBERT L. LYONS, Waltham, Mass., assignor to Frederick Osann Company, New York, N. Y., a Corporation of New York. Filed Jan. 19, 1916. Serial No. 72,922. 5 Claims. (Cl. 112—252.)



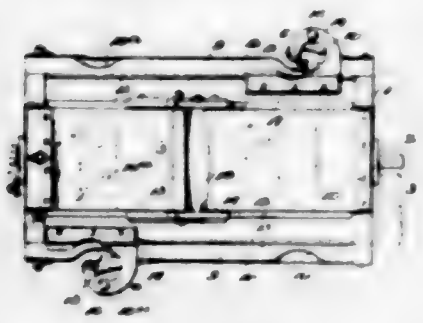
1. A sewing machine comprising stitch forming means, mechanism for actuating said stitch forming means, a pair of complemental thread breaking devices both located above the work, connections between one of said devices and said actuating means to effect relative movement between said device and the stitch forming means during a series of stitch forming operations and to prevent said relative movement during a chain stitch operation, means operated in conjunction with said actuating means to operate the other of said devices after said chain stitch operation, to restrain the thread, and manually operated means to move said first device to break the thread.

1,302,395. HORIZONTAL BORING, DRILLING, MILLING, AND TAPPING MACHINE. WILLIAM F. MCCARTY, Defiance, Ohio, assignor to Defiance Machine Works, Defiance, Ohio, a Corporation of Ohio. Filed June 18, 1918. Serial No. 240,065. 19 Claims. (Cl. 29—26.)



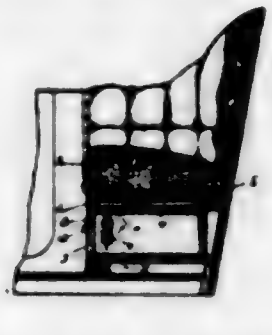
1. In a boring, drilling, milling and tapping machine, a spindle adapted to carry a boring, drilling, milling or tapping tool and mounted to turn and to slide lengthwise, a driven main shaft provided with a manually controlled clutch, a manually controlled variable positive speed changing mechanism adapted to be connected by the said clutch with the said main shaft, a positive power transmission gearing connected with and driven from the said variable positive speed changing mechanism and including two gear wheels mounted to rotate loosely in opposite directions on the said spindle, and a manually controlled clutch mechanism connecting either of the said gear wheels with the said spindle, the said clutch of the main shaft, the said speed changing mechanism and the said clutch mechanism for the two gear wheels being provided with actuating members arranged on the front of the machine under the control of an operator.

1,302,396. CIGAR-BUNCHING MACHINE. JOSEPH J. MCCAULEY, Uhrichsville, Ohio. Filed Feb. 14, 1919. Serial No. 276,988. 3 Claims. (Cl. 131—42.)



1. In a cigar bunching machine, a drum mounted to rotate in either direction at the will of the operator, and a plurality of independently operated bunching devices movable longitudinally of said drum at right angles to its direction of rotation.

1,302,397. TOOL-BOX FOR VEHICLES. FRANK J. MCEWAN, Chicago, Ill. Filed Feb. 16, 1917. Serial No. 149,097. 1 Claim. (Cl. 45—7.)



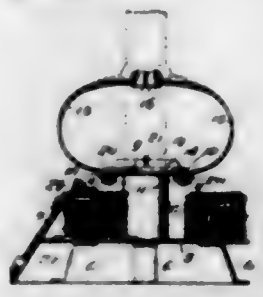
The combination with a compartment, of a drawer slidably mounted in said compartment; a hinged lid for the upper side of said drawer; means for normally holding said lid in open position, comprising a vertically movable plunger arranged in the drawer and adapted to engage at its upper end against the under side of said lid; a guide having two spaced lugs in which said plunger is slidably mounted; a helical compression spring interposed between one of said lugs and a shoulder on said plunger for exerting upward pressure on said plunger; and means for closing said lid against the influence of said plunger upon movement of the drawer to closed position in said compartment, substantially as described.

1,302,398. LETTER-OPENER. ANDREW MANGINI, Warren, Pa., assignor of one-half to Bert V. Barber. Filed May 13, 1918. Serial No. 234,242. 3 Claims. (Cl. 164—66.)



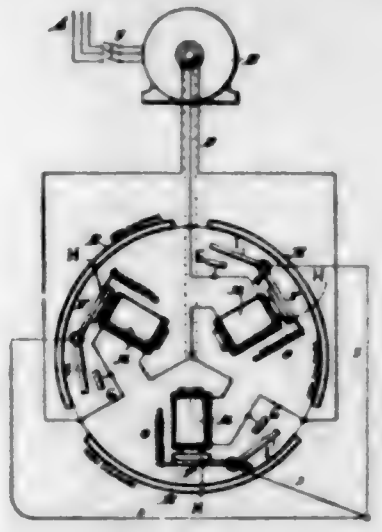
1. A letter opener comprising a casing having at its front side a horizontal portion and a vertical portion rising therefrom, a slot being formed at the angle between the two for insertion of the envelop, a horizontal blade contacting slidably with the lower side of said horizontal portion, means supporting said blade in contact with said horizontal portion of the casing, spring means for forcing said blade inwardly, a roller mounted in the casing and having a trimming knife coacting with said blade, and means for rotating said roller.

1,302,399. CANDLE-HOLDER. JOHN F. MARTIN, Gentry, Ark. Filed Aug. 27, 1918. Serial No. 251,653. 4 Claims. (Cl. 67—23.)



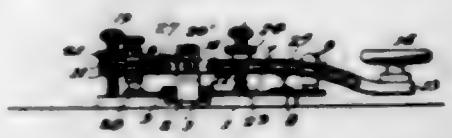
3. A device of the character described comprising a base, a standard rising therefrom, a plate carried by said standard and having side flanges, said plate having its upper surface recessed, a candle holding member formed from a strip of resilient material and including an intermediate base portion disposed within the recess in said plate, and further including resilient curved arms extending toward each other and terminating in clamping jaws spaced above said plate, and a holding plate slidable upon said first named plate and provided with side flanges engageable beneath said first named flanges, and an auxiliary plate disposed upon said last named plate and slidably engageable thereon, and a cup carried by said last named plate.

1,302,400. MOTOR-STARTER. GIOVANNI MASCARINI and ANGELO CONTARDI, Milan, Italy. Original application filed Jan. 3, 1914, Serial No. 810,177. Divided and this application filed May 4, 1915. Serial No. 25,847. 4 Claims. (Cl. 172—289.)



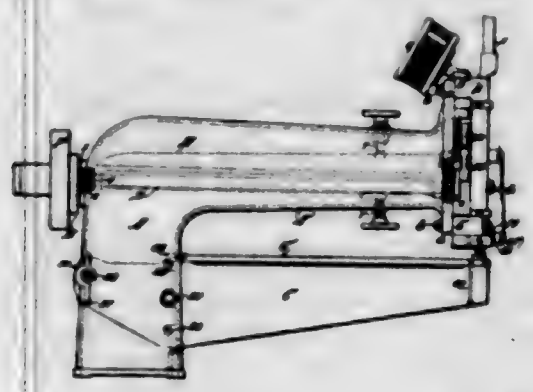
1. In a controlling device for alternating current motors, a self-reducing resistance of iron sulfid connected in the secondary circuit, switching means adapted to short circuit said resistance, and electro-magnetic means connected in shunt to said resistance, arranged to prevent the short circuiting operation of said switching means until the reduction of said resistance to a predetermined minimum.

1,302,401. TELEGRAPH-KEY. JAMES J. MASON, Cisco, Calif. Filed May 23, 1917. Serial No. 170,398. 8 Claims. (Cl. 178—101.)



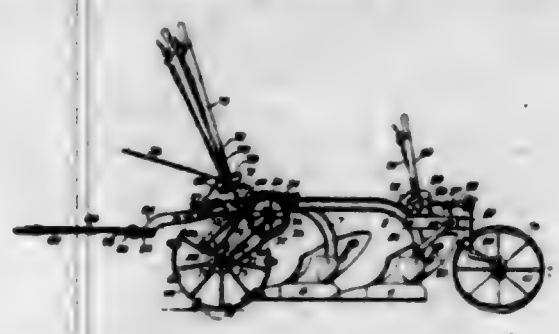
2. A telegraph key including a lever having superposed spring arms formed upon its ends and bearings formed upon the intermediate portion of the lever.

1,302,402. WIRE-STITCHING OR STAPLING MACHINE. ARTHUR H. MAYNARD, Warwick, R. I., assignor to Boston Wire Stitcher Company, Portland, Me., a Corporation of Maine. Filed Dec. 18, 1916. Serial No. 137,521. 23 Claims. (Cl. 1—2.)



7. In a wire-stitching or stapling machine, the combination with the main frame thereof, of stitching-mechanism for forming the staples and inserting them through the work, said stitching-mechanism adapted to be attached to the frame of the machine in different positions of angular relation to the work, a power-operated shaft, and a crank at the end of said shaft for operating the stitching-mechanism, said stitching-mechanism adapted to be connected to the crank in whatever position it is adjusted.

1,302,403. GANG-PLOW. CLEMENT W. MICHAEL, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation of Wisconsin. Filed June 26, 1916. Serial No. 106,046. 13 Claims. (Cl. 97—55.)



1. In a device of the class described, a frame, ground working implements carried by the frame, supporting wheels vertically and independently movable with respect to the frame, means for lowering said wheels with respect to the frame and permitting them to freely rise with respect thereto and independently adjustable stops for limiting the rising movements of the respective wheels.

1,302,404. POLISHING-WHEEL. SAMUEL HOBART MILLS, Montpelier, Vt. Filed Feb. 12, 1917. Serial No. 148,200. 1 Claim. (Cl. 51—11.)



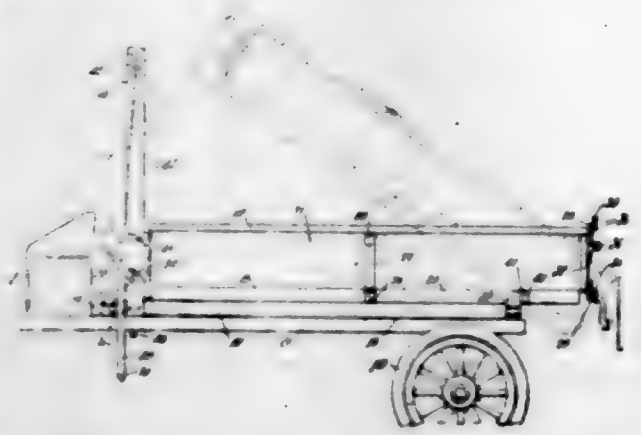
A polishing wheel embodying a disk, opposed eccentrically arranged flanges upon one face of the disk with their advancing ends pointed and nearer the periphery of the disk than their other ends, said flanges being free of angles and being curved gradually from end to end, a series of grinding blades extending toward the center of the disk from points adjacent each of the flanges, each blade of each series being arranged with its inner ends along lines tangent to the middle portion of the disk, certain of the blades of each series being curved from end to end and one of the blades of each series being straight, all of the blades converging toward their inner ends, and the curved blades of each series being differently curved, the outer ends terminating at the margin of an imaginary ellipse between the flanges.

1,302,405. METHOD OF MANUFACTURING TIRES. WORTH L. MITTEN, Davenport, Iowa. Filed Nov. 12, 1917. Serial No. 201,561. 5 Claims. (Cl. 154—14.)



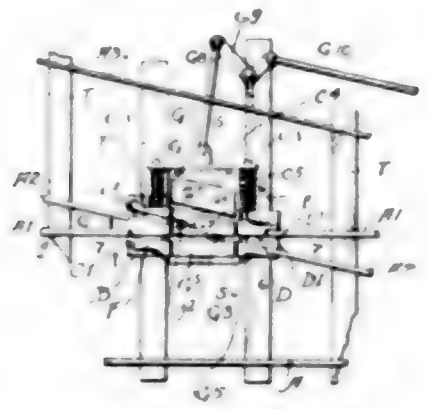
1. The method of constructing a pneumatic tire casing, base or carcass, consisting in forming a fabric of parallel evenly wound cords; forming from said fabric a multiplicity of comparatively short and narrow blanks with the cords extending longitudinally thereof; laying these successively across the periphery of a mandrel with the cords extending from side to side, with the major dimension of the blank extending diagonally with respect to the medial plane of the mandrel; fitting bead elements over the intermediate end portions; mechanically expanding the mandrel; folding in the end portions of the blanks snugly around the bead elements and upon the intermediate parts of the blanks; removing the carcass from the mandrel and turning the under side on top; and applying tread rubber.

1,302,406. DUMPING-TRUCK. THOMAS H. MONAHAN, Providence, R. I., assignor, by mesne assignments, to Providence Body Company, a Corporation of Rhode Island. Filed Oct. 29, 1917. Serial No. 199,018. 1 Claim. (Cl. 21—20.)



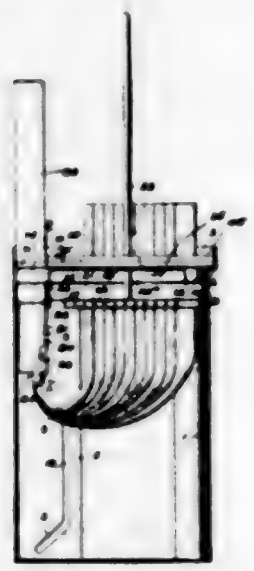
In a dumping truck, the combination with the chassis, of a supporting frame on the chassis, a dumping body pivotally mounted on the frame, standards on the frame in front of the body, sheaves upon the standards, a casting on the frame between the standards, bearings in the casting, a rotary shaft in the bearings, a worm on the shaft between the bearings, a yoke on the frame, a shaft mounted in the yoke and frame, a drum on the last mentioned shaft, a gear fast to the drum engaging the worm, hangers on the body adjacent the standards, and a flexible cable having an intermediate portion wound around the drum and radiating thence over the sheaves and having its ends engaging the hangers.

1,302,407. RAILWAY-SWITCH. MELMUTH LEE ROY MORROW, Knoxville, Tenn. Filed Dec. 29, 1917. Serial No. 209,437. 23 Claims. (Cl. 246—392.)



3. In a railway track structure comprising main track rails and side track rails, the combination with such rails, of a horizontal base and a horizontal slide member confined upon the base for bodily horizontal, transverse reciprocation, the base occupying a gap in said rails and extending beyond each side edge of the slide member and such extended parts having trackage distinct from and in operative relation with the rails extending to said base and said slide member having trackage adapted to be brought into operative relation with the trackage of the base, and means for bodily shifting said slide member into either of two positions, substantially as described.

1,302,408. TANK FOR DEVELOPING PHOTOGRAPHIC FILMS. WILLIAM C. MOTTERAM, Philadelphia, Pa. Filed Aug. 22, 1917. Serial No. 187,636. 18 Claims. (Cl. 95—90.)



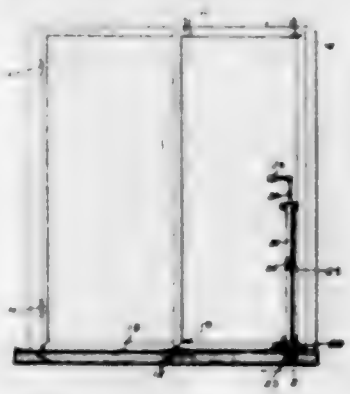
1. In a device of the character described, the combination of the casing of a tank for developing photographic films, a holder for holding the casing of a package of films, said holder being provided with movable means for engaging a part of the said package casing, means within the said tank casing for engaging the said movable means to cause lateral movement thereof for the purpose described.

5. In a device of the character described, the combination of the casing of a tank for developing photographic films, plates situated in opposing relation to each other in adjacent relation to opposing sides of said casing, said plates being provided with slots having top vertical portions, intermediate inwardly inclined portions, intermediate vertical portions and bottom outwardly inclined portions, a rectangular holder for receiving and holding a rectangular film pack casing, one side of said holder being provided at one end with a hinged plate extension, said extension being provided with hook portions upon its outer edge, said hook portions being adapted to engage the adjacent end edge portion of one side of the said film pack casing, and means upon the said extension which are adapted to engage the said slots as the said film pack holder is inserted into the said tank casing, substantially as and for the purpose described.

8. In a device of the character described, the combination of the casing of a tank for developing photographic films, a holder for receiving and holding a film pack casing, one side of said holder being provided at one end with a hinged extension, said extension having at its outer edge means for engaging one end portion of one side of the film pack casing and the said extension being also provided at its outer edge with a rod tapering from its center toward its opposite ends under which the films travel as they are drawn from the film pack casing, cams situated within the casing of said tank and means upon the said extension for engaging the said cams as the said holder is inserted within the said tank casing, substantially as and for the purpose described.

18. The combination of the casing of a tank for developing photographic films, a light proof lid for said tank into which lid is adjustably built duplicate registering sets of holding and spacing bars, the upper set of said spacing bars being a permanent essential part of the light proof lid of the said tank, the lower or internal set of spacing and holding bars being attached to a bail or handle which slides through openings in the said light proof lid, said bail or handle being adapted to be moved downwardly to move the lower or internal set of holding and spacing bars downwardly after the said light proof lid has been placed in position to close the said tank, said bail or handle extending outwardly from the said tank into position to be manually operated for moving the internal set of holding and spacing bars downward between the films to the lower edges of the latter, the said films being by the said two sets of holding and spacing bars securely held and spaced at their opposite ends.

1,302,409. LOCKING AND GUIDING BOLT FOR COMBINED SWINGING AND SLIDING DOORS. EDWARD THOMAS MURPHY, New York, N. Y. Filed Apr. 6, 1918. Serial No. 227,151. 1 Claim. (Cl. 20—16.)



The combination with a door way frame having a straight longitudinal groove in its lower member and a vertical recess opening into said groove near the end thereof and a door mounted to slide in said frame, of a casing secured to the door in line with the groove and with said vertical recess when the door is closed, a bolt freely slidable in said casing and gravitationally engaging in said recess when the door is closed and serving to hold the door against sliding movement, the said casing having a slot therein, a stop pin removably connected with the bolt and extending through said slot, the slot being proportioned with respect to the recess and said groove so that when the bolt is retracted from the recess the engagement of the pin with one of the end walls of the slot will prevent displacement of the bolt from the groove in said door way frame and thereby serve as a guide for the door when sliding the same, and a manipulating handle carried by said bolt.

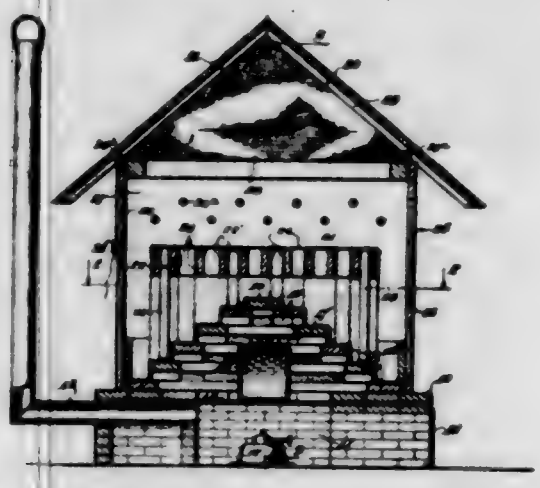
1,302,410. SHOE-TREE. RICHARD MURRAY, New York, N. Y. Filed Jan. 8, 1918. Serial No. 210,828. 10 Claims. (Cl. 12—131.)



1. In a shoe tree, an oblong body casing provided in the bottom thereof with a longitudinal rack, link devices pivoted to said body casing, spring side jaws connected with said link devices, and means operating in connection with said rack to move said body casing longitudinally.

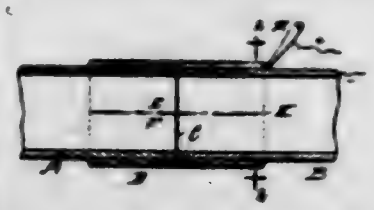
10. A shoe tree the toe portion of which is composed of oppositely arranged spring jaws fashioned from spring material to form a central yoke-shaped portion and at the opposite sides of which are upwardly, forwardly and downwardly directed top portions, backwardly and forwardly directed base portions and backwardly and laterally directed side portions, the ends of which are provided with inwardly directed loop portions.

1,302,411. CHICKEN-BROODER. RICHARD R. MURRAY, Milford, Tex. Filed Aug. 15, 1918. Serial No. 250,042. 3 Claims. (Cl. 119—32.)



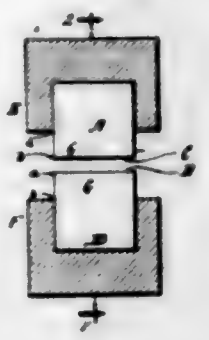
1. The herein described brooder for outdoor use comprising a fireproof base, a source of heat within the base, a flue leading from the heat chamber, said base including a metal plate extending from the flue to the entrance of the heat chamber, a receptacle for water supported upon said plate over the heat chamber, a perching pyramid supported upon the base and surrounding the receptacle, said pyramid comprising spaced frames covered with an open mesh material, a hover supported upon the pyramid and having slitted fabric depending toward the pyramid, and a ventilated vermin proof hut surrounding the hover and pyramid.

1,302,412. PIPE CONNECTION AND METHOD OF MAKING SAME. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 25, 1918. Serial No. 259,620. 3 Claims. (Cl. 285—194.)



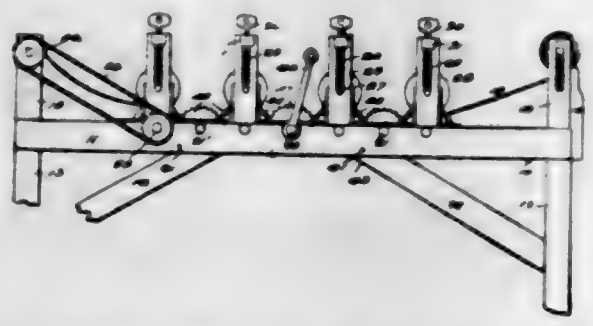
3. In combination with two pipes electrically butt-welded together, a reinforcing sleeve having internally a substantially smooth surface covering the joint between said pipes and consisting of a plurality of longitudinal sections with their straight edges in registering contact and electrically welded together, the said sleeve being electrically welded at its ends to said pipes.

1,302,413. METHOD OF ELECTRIC WELDING. THOMAS E. MURRAY, Jr., Brooklyn, N. Y. Filed Feb. 12, 1919. Serial No. 276,523. 1 Claim. (Cl. 219—10.)



The method of electric welding, which consists in forming take-ups of predetermined dimensions on the objects to be welded, placing said take-ups in registering contact, establishing a welding current to fuse said take-ups, and pressing said objects together until said take-ups are extruded at the joint, the said pressing movement being timed to correspond to the period of current flow required to produce said fusion of said take-ups.

1,302,414. ROOFING-CUTTER. CARL C. NEHNESS, Omaha, Nebr. Filed July 12, 1918. Serial No. 244,569. 3 Claims. (Cl. 164—65.)

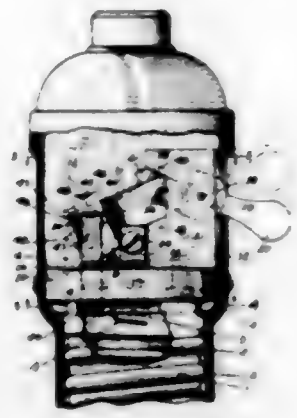


1. A cutting machine of the class described, comprising a frame, a series of rollers journaled in the frame, cutters carried by alternate rollers, the cutters of one roller being spaced apart to cut a fanciful configuration at either side of the center and the other cutter serving to sever the strip at the center, compression means coacting with said rollers, a feeding shaft adapted to receive a roll of strip material to be cut, said strip passing between said rollers, a winding drum for said strip, means on the rollers carrying the cutters to guide the strips uniformly and including rings of elastic material on either side of each cutter, means to prevent endwise displacement of the strip, intergeared drive connections between said rollers, a drive shaft for rotating said rollers and drum, cleaning means for said cutters, said cutters being detachably secured to the rollers and means to permit slippage of the winding drum upon the diameter of the roll increasing thereon.

1,302,415. TOGGLE-SOCKET. WILLIAM J. NEWTON, Bridgeport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 12, 1918. Serial No. 221,896. 3 Claims. (Cl. 173—346.)

1. In a socket, in combination, a swinging contact member, an operating lever, an operating arm pivoted to the operating lever and passing through the free end of the contact member, said operating lever and operating arm

comprising a toggle, an angle piece on the contact member, and a compression spring adapted to bear on either angle

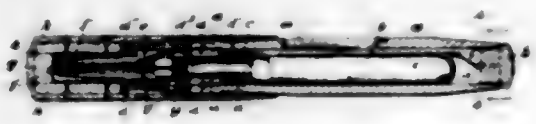


of the angle piece to swing the contact member to either extreme of its movement when the toggle is swung past its dead center.

1,302,416. PUNCTURE-CLOSING SOLUTION. RALPH NOLL and CHRISTOPHER C. SHEPHARD, Chadron, Nebr. Filed Sept. 9, 1916. Serial No. 119,272. 1 Claim. (Cl. 134—17.5.)

A compound of the class described, consisting of equal parts by volume of distilled water and alcohol, there being admixed to each gallon of said liquid three ounces (adv.) of a filler such as paper pulp, and silk fiber, the liquid serving to carry the fiber and pulp to a hole in a tire containing the compound whereby a mat is formed inside the tire so as to bridge said hole, the silk of the mat forming the stringers of said bridge and the pulp the plank of the bridge.

1,302,417. FOUNTAIN-PEN. CHARLES H. NORTH, Cleveland, Ohio. Filed Mar. 29, 1915. Serial No. 17,624. 12 Claims. (Cl. 120—45.)



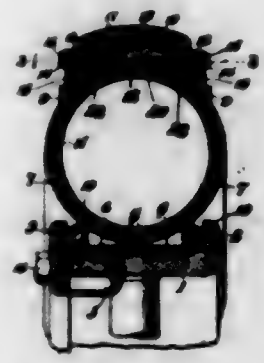
1. In a fountain pen, the combination with an ink-container, of a tip-section having an inner vent extended closely adjacent to the writing point of the pen, an outer vent and an indirect connection between said vents positioned at a distance above the inner vent, substantially as set forth.

3. In a fountain pen, the combination with an ink-container, of a tip-section having an external vent formed therein, a channel into which said vent opens and a second channel separated from the first by a slightly depressed wall, and a screw cap formed to engage the outer wall of said channel, substantially as set forth.

8. In a fountain pen, the combination with an ink-containing barrel of a tip-section therefor; the same having an external vent leading toward the upper portion of the tip section, and an internal vent leading toward the lower portion and opening closely adjacent to the extremity of the tip-section and a connection between said vents positioned at some distance from the outlet of the inner vent whereby the air is caused to travel in opposite directions within the tip-section, substantially as set forth.

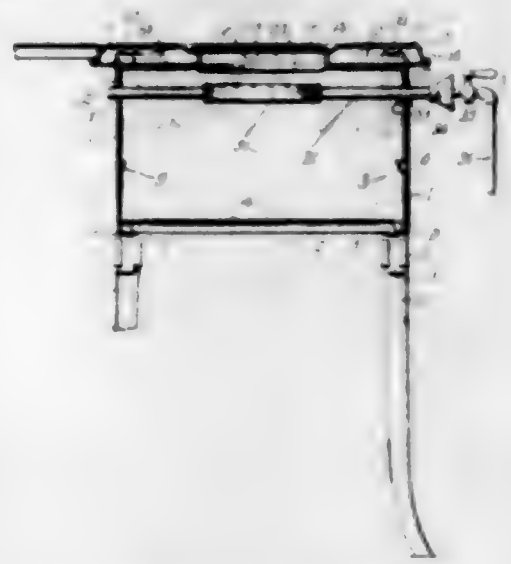
10. In a stylographic pen, the combination with an ink-containing reservoir and its connected tip-section, of a centrally bored tapered jewel forming the writing point thereof, a non-corrosive mounting sleeve therefor and a feed wire extending within the bore of said jewel, substantially as set forth.

1,302,418. AUTOMOBILE-TIRE. WILLIAM HENRY NORTHALL, Evansville, Ind., assignor of one-fourth to Samuel C. James and one-fourth to Herbert Males, Evansville, Ind. Filed Mar. 12, 1918. Serial No. 221,985. 6 Claims. (Cl. 152—34.)



1. A pneumatic tire comprising an outer casing with rigid curved sides and having a peripheral opening at the tread portion, a pneumatic tube lodged in the casing, and a separate tread member entering the casing through the tread portion and engaging the pneumatic tube, said tread member comprising a rigid ring bearing against the tube, filler rings attached to said rigid ring at each side and bearing against the tube between the sides of the rigid ring and the sides of the casing, and wear material carried by the tread ring.

1,302,419. STOVE. CLARENCE A. NOTMAN, Detroit, Mich. Filed Apr. 18, 1917. Serial No. 162,863. 8 Claims. (Cl. 126—39.)



1. A stove comprising an oven shell having a doorway, a door for the doorway of said oven shell, a bottom plate set in said oven shell, corner pieces connecting said bottom plate to said oven shell and provided with auxiliary legs, an intermediate plate set on said oven shell and said corner pieces, a cooking top carried by said intermediate plate, and a burner in said oven shell.

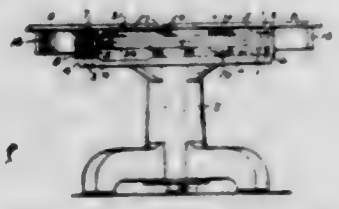
2. A stove comprising an oven shell provided with a doorway, a hinged door for the doorway of said oven shell, a bottom plate set in said oven shell, corner pieces connecting said bottom plate to said oven shell and providing auxiliary legs, main legs adapted to receive said auxiliary legs and support said corner pieces, an intermediate plate set on said oven shell, a cooking top supported by said intermediate plate, and a burner in said oven shell.

3. A stove comprising an oven shell, a door for said oven shell, a bottom plate set in said oven shell, legs adapted for supporting said bottom plate and said oven shell, an intermediate plate set on said oven shell and provided with a central opening, a cooking top carried by said intermediate plate and having a central grid, and

a burner in said oven shell below the opening of the intermediate plate.

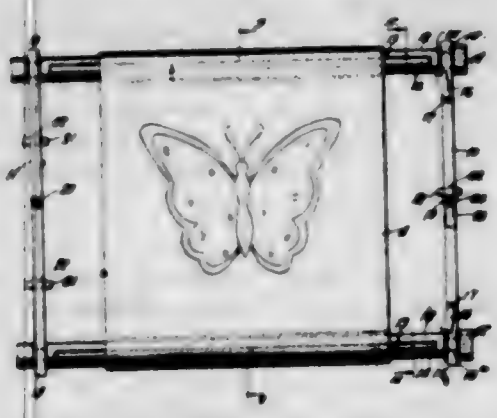
4. A stove comprising an oven shell provided with a doorway, a bottom plate set in said oven shell, a door hinged to said bottom plate and adapted to close the doorway of said oven shell, corner pieces connecting said bottom plate to said oven shell and providing auxiliary legs, main legs for said auxiliary legs, an intermediate plate set on said oven shell over the upper ends of said corner pieces, a cooking top carried by said intermediate plate in spaced relation thereto, and a burner in said oven in proximity to said intermediate plate.

1,302,420. EXTENSION-TABLE. PETER N. NYHOLM, Edgewood, Wash. Filed Feb. 8, 1917. Serial No. 147,360. 1 Claim. (Cl. 45—112.)



In an extension table, the combination with two permanent top sections, of a table leaf supporting bar suspended from the under face of said sections, a leaf divided transversely with its parts hinged together, a strap secured at its ends to and with its intermediate portion spaced from the under face of one of the sections of the said leaf, the said bar being slidably mounted between the underface of the leaf and the said strap, a stop secured at one end of said strap between the strap and the table leaf, a notch in said stop adapted to receive said supporting bar, said supporting bar functioning to support the table leaf in its extended and folded positions.

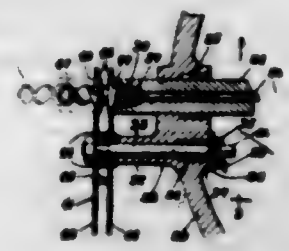
1,302,421. EMBROIDERY-FRAME. TANEMO OKIHARA, Honolulu, Hawaii. Filed May 2, 1918. Serial No. 232,099. 1 Claim. (Cl. 45—24.)



An embroidery frame including side bars having bearings, rollers journaled in said bearings and adapted to receive and carry the fabric to be worked, a ratchet wheel on each roller, and steps located on the frame and movable in a lateral plane at right angles to the plane of rotation of the said ratchets and having an inclined outer edge adapted to enter the interdental spaces of the said ratchet wheels, locking said wheels in position and taking up the frictional wear of the abutting parts.

1,302,422. DIVING-BELL. KARL A. OLSON, Plainfield, N. J. Filed Apr. 23, 1918. Serial No. 230,221. 18 Claims. (Cl. 61—7.)

1. In an apparatus of the class described, a hull, a rotary member mounted therein and movable inwardly and outwardly therethrough, and a carrying member rotatably mounted in the hull adjacent to said rotary member and adapted to support a plurality of tools and attaching devices.



5. An apparatus of the class described, comprising a hull, a rotary member mounted in said hull and movable inwardly and outwardly therethrough, a carrying member mounted in the hull adjacent to said rotary member, means within said hull whereby said carrying member may be rotated, the carrying member being provided with means for supporting tools and attaching devices therein, and means for locking said carrying member in different positions of adjustment.

9. An apparatus of the class described, comprising a hull, a rotary member mounted in said hull and movable inwardly and outwardly therethrough, a carrying member mounted in the hull adjacent to said rotary member, means within the hull whereby said carrying member may be rotated, the carrying member being provided with means for supporting tools and attaching devices therein, means for connecting said tools and attaching devices with said rotary member, means for locking said tools against rotation in said rotary member, and means for locking the carrying member in different positions of adjustment.

12. An apparatus of the class described, comprising a hull, a rotary member mounted in said hull and movable inwardly and outwardly therethrough, a workpiece carrying member mounted in the hull adjacent to said rotary member and comprising inner and outer disks having a plurality of correspondingly spaced apertures, and means within the hull whereby said carrying member may be rotated to bring the apertures therein in line with said rotary member.

13. In an apparatus of the class described, comprising a hull, a rotary member mounted in said hull and movable inwardly and outwardly therethrough, the combination with a carrying member mounted in the hull adjacent to said rotary member and comprising two parallel disks having a plurality of equally spaced apertures, of a plurality of tools and attaching devices the shanks of which are provided with enlarged flanged portions adapted to be passed through the apertures in said disks and serve to retain said tools and attaching devices in connection with said carrying member.

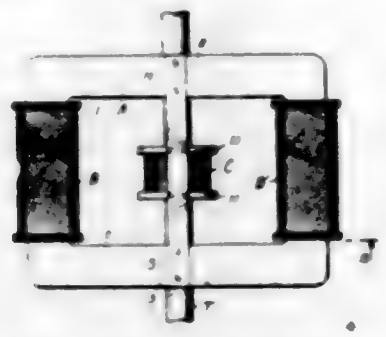
1,302,423. COFFIN-HANDLE. GUSTAV C. PAHLOW, Galesburg, Ill., assignor of one-half to Henry J. Olson, Galesburg, Ill. Filed Feb. 20, 1919. Serial No. 278,189. 2 Claims. (Cl. 16—103.)



2. A handle comprising a base member having an opening and provided with a pivot bar extended across the opening; and a grip insertible into the opening and having a slot receiving the pivot bar, the slot defining a

bendable finger in the grip, the finger having a lug adapted to engage the base member at the lower edge of the opening, the finger and the lug coöperating with the base member, when the grip is raised, to secure a bending of the finger, a partial closing of the slot, and a permanent pivotal mounting of the grip on the bar.

1,302,424. ELECTROMAGNETIC TUBE-TESTING DEVICE. ALONZO PAQUIN, Montreal, Quebec, Canada. Filed Aug. 29, 1918. Serial No. 251,938. 4 Claims. (Cl. 175—183.)



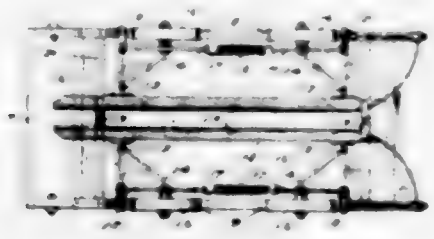
1. A tube testing device of the class described comprising a megnetic circuit, means associated therewith for creating consequent north and south poles, a floating armature disposed between the poles and adapted to float in the tube being tested, and signal means actuated when the said armature moves from its normal position.

1,302,425. WIRE STRAINER OR TURNBUCKLE. SAMUEL ROWLAND PARKES, Willenhall, England. Filed Nov. 4, 1918. Serial No. 261,037. 2 Claims. (Cl. 85—36.5.)



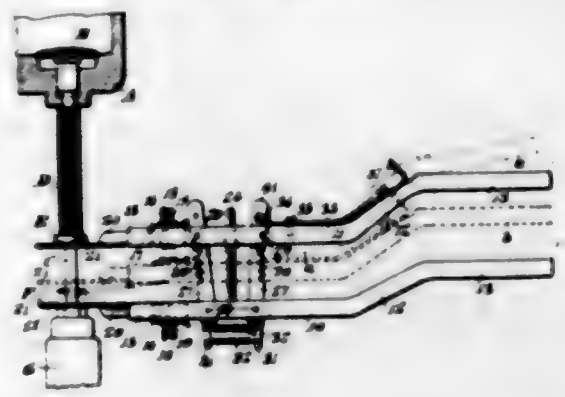
1. In a wire strainer the combination of a main member of U shape; a connecting member swivelly mounted in the bend of said U shaped member; an internally screwed member pivotally secured and connected to the ends of said U shaped member with its axis at right angles to the length of said member; and an externally screwed member engaging with said internally screwed member, for the purpose specified.

1,302,426. CONVERTIBLE BABY-CARRIAGE AND SLEIGH. SWAN PEARSON, Minneapolis, Minn. Filed Mar. 18, 1918. Serial No. 223,201. 3 Claims. (Cl. 21—96.)



1. A convertible baby carriage and sleigh comprising a body, a pair of runners, knees, bearings connecting the knees to the body for swinging movement from vertical positions to horizontal positions and for turning movement on their longitudinal axes, bearings connecting the knees to the runners with freedom for turning movement, and wheels journaled on the knees, said knees being adjustable to alternately carry the runners and wheels from operative positions to inoperative positions.

1,302,427. VALVE-LIFTER. FRANK A. PROUDFOOT, Riverside, Calif. Filed Oct. 31, 1917. Serial No. 199,494. 18 Claims. (Cl. 29—67.1.)



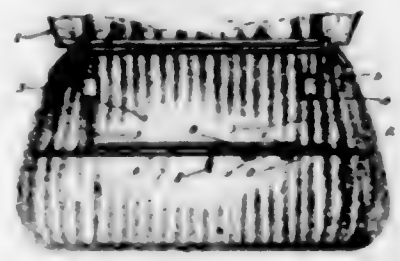
1. A valve lifter comprising a pair of levers, jaws connected with the levers, means carried by one lever and engaged by the other lever for adjusting said levers and holding the jaws in parallel relation to each other in their adjusted position, and means acting upon the second-named means to permit step-by-step movement to be imparted to one of the levers.

1,302,428. MULTIPLE SEED AND FERTILIZER DRILL. CELEDONIO V. PEREDA, Buenos Aires, Argentina. Filed Nov. 23, 1917, Serial No. 203,577. Renewed Nov. 23, 1918. Serial No. 263,938. 7 Claims. (Cl. 193—1.)



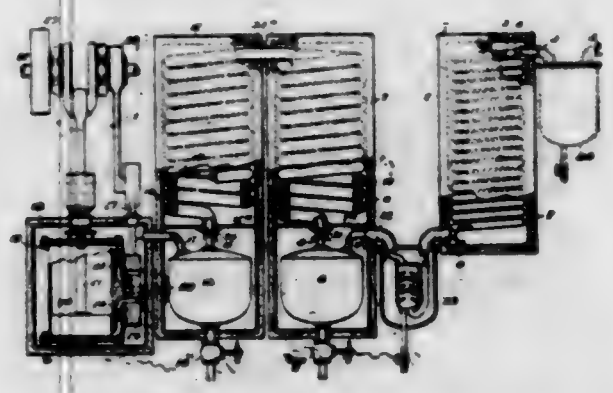
1. A multiple drilling machine having a plurality of drill tubes, a hopper, a distributing chamber in communication with the hopper, a series of conducting passages opening at one end to said distributing chamber and at their other ends to the drill tubes, and in said chamber a centrifugal fan distributer to the blades of which the material from the hopper is delivered and by which said material is discharged to and propelled through said conducting passages to the drill tubes.

1,302,429. FISH-BASKET. ARTHUR C. POWELL, Marysville, Calif. Filed July 22, 1918. Serial No. 246,101. 2 Claims. (Cl. 217—122.)



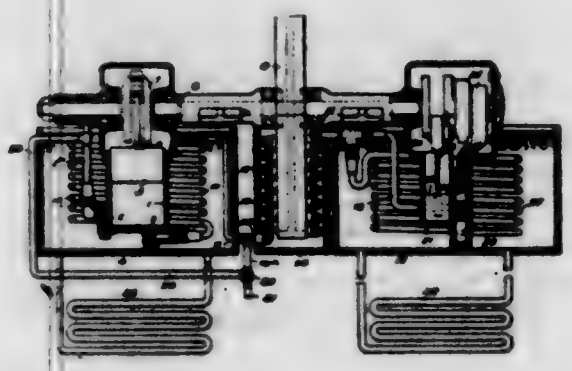
1. A fish basket partition comprising a horizontal, sheet metal frame whose side bars and ends are shaped to fit the basket, hangers connected to said frame for suspending it in the basket, longitudinal flanges integral with the outer edges of the aforementioned side bars, said flanges being bent upwardly and inwardly and disposed over said side bars, slats whose ends rest slidably on said side bars and are confined under said flanges, and flexible connectors tying said slats together.

1,302,430. METHOD OF OBTAINING TEMPERATURE CHANGES IN GASES. ALEXANDER S. RAMAGE, Detroit, Mich. Filed Dec. 3, 1915, Serial No. 64,913. Renewed Mar. 26, 1919. Serial No. 285,385. 4 Claims. (Cl. 62—175.)



1. A method of fractionally liquefying gases, which consists in expanding adiabatically successive charges of a mixture of two or more gases, and surrounding the charge undergoing expansion with the next succeeding unexpanded charge and thereby effecting a heat exchange which produces an accumulative lowering effect on the initial temperature of successive unexpanded charges, whereby the temperature of the mixture is reduced by successive stages so as to separately liquefy and recover said gases.

1,302,431. APPARATUS FOR EXCHANGING HEAT. ALEXANDER S. RAMAGE, Detroit, Mich. Filed Dec. 3, 1915, Serial No. 64,914. Renewed Mar. 26, 1919. Serial No. 285,386. 7 Claims. (Cl. 62—136.)

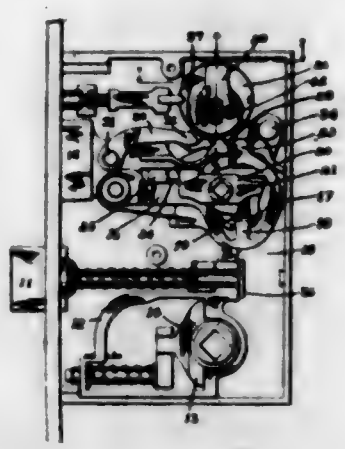


1. An apparatus of the character described, comprising, in operative relation, a gas-compressor, a cooling chamber surrounding the compressor, means for circulating the compressed gas through said cooling chamber, a gas-expander, a tank surrounding the expander, said tank adapted to contain a temperature changing fluid, a connection for directing the compressed gas from the cooling chamber to the expander, and an escape for the cooled compressed gas.

1,302,432. LOCK. CHARLES F. RAYMOND, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 11, 1916, Serial No. 90,477. Renewed Mar. 13, 1918. Serial No. 222,260. 24 Claims. (Cl. 70—93.)

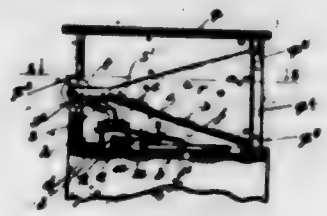
1. The combination with mortise lock mechanism having two movable members, of a cylinder lock, a radially movable rollback on said cylinder lock having an operating projection, a key to operate either of said members by means of said operating projection, and a second key adapted to operate one of said members by means of said operating projection but inoperative on the other member; substantially as described.

2. The combination with mortise lock mechanism having two movable members lying in the same plane, of a cylinder lock, a rollback mounted on said cylinder lock, a key to turn said rollback about a predetermined center in said plane and thereby engage said rollback with either of said members to operate the same, and a second key to turn said rollback about another center in said plane so that it will engage only one of said members to operate the same; substantially as described.



3. The combination with mortise lock mechanism having two movable members, of a cylinder lock having a rollback displaceable radially of the cylinder lock and adapted to engage and operate either of said members; substantially as described.

1,302,433. PHONOGRAPH. CLINTON B. REPP, New York, N. Y., assignor, by mesne assignments, to Guillermo H. Alonso, New York, N. Y. Filed June 2, 1911. Serial No. 630,882. 21 Claims. (Cl. 274—26.)



1. In a phonograph, an amplifier, a vibrator member adapted to receive vibrations from a record and transmit them to said amplifier, means capable of movement relatively to said amplifier connecting said vibrator member with said amplifier, means tensioning said amplifier through said means in a direction opposite to the direction of the vibrations passing thereto, and means varying the direction of the application of the tension by said last named means whereby both vertical and lateral vibrations may be transmitted through said vibrator member to said amplifier.

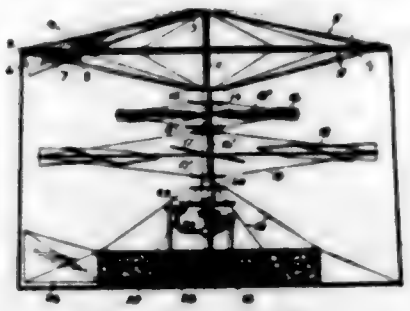
1,302,434. COLLAPSIBLE SPRING COT-BED. JOHN W. RICHARDS, Somerville, Mass. Filed July 29, 1918. Serial No. 247,800. 4 Claims. (Cl. 5—5.)



2. A collapsible spring cot bed comprising rigid cross-bars, a flexible and substantially inextensible fabric, springs resiliently connecting the ends of the fabric with said cross bars, sets of legs connected with said cross bars, a foldable and extensible frame consisting of toggle members pivotally connected with the respective sets of legs, and toggle-connecting joints operable by downward pressure, and coöperating to extend the frame to the extent required to elongate and increase the tension of the

springs and to strain said fabric, the bed being provided with supplemental supports coöperating with said legs when the bed is operatively adjusted.

1,302,435. FLYING-MACHINE. GEORGE ROBERTSON, Durango, Colo. Filed Feb. 11, 1918. Serial No. 216,520. 3 Claims. (Cl. 244—19.)



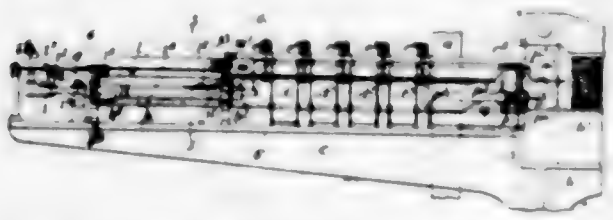
3. In a flying machine, a stationary center tube, an annulus supported thereby, a parachute composed of sector-shaped sections having outer studs slidably mounted in said annulus, said sections foldable from normal position in opposite directions to one side of the machine into compact vertical form, a second tube surrounding the center tube and rotatable thereupon, a vertical-axis screw propeller carried by said second tube, a third tube rotatably mounted upon the second tube, a vertical-axis screw propeller carried by said third tube, a fourth tube carried by said third tube, a cage suspended from said fourth tube, a motor upon said cage having driving connections with the two propellers to rotate the same in opposite directions, and a reel mounted upon the cage and having connections with opposite sides of the parachute to unfold the same.

1,302,436. DRAFT-GEAR. LEVI F. ROGERS, Pittsburgh, Pa. Filed Aug. 10, 1917. Serial No. 185,625. 4 Claims. (Cl. 213—42.)



1. A draft gear comprising a draft beam, a coupling member having its shank slidably mounted in said beam, a key mounted in the shank and slidably mounted in slots in the beam, coil springs acting against the key and a covering hinged to the beam for completely covering said springs.

1,302,437. MAGNETIC SHUTTLE-MOTION. WILLIAM ROUTLEDGE, Middlesex, England. Filed Dec. 28, 1916. Serial No. 139,267. 2 Claims. (Cl. 139—83.)



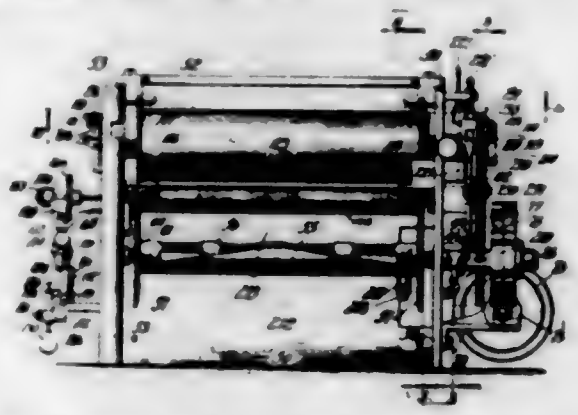
1. In a loom, the combination with an oscillating slay provided with a shuttle race and shuttle, of electrically operated means for throwing said shuttle, a hammer pivotally connected to said slay, a spring for moving said hammer toward the shuttle race for starting said shuttle, a roller provided on said hammer adapted to engage an inclined surface on the loom frame when the slay is moved forward for moving said hammer away from the race, a pin provided on the hammer, an arm pivotally connected to the slay and carrying a latch which engages the hammer pin to normally prevent the hammer from moving toward said race, a link having a slotted end pivotally connected to the free end of the arm, and a pin carried by said link adapted to be engaged by a stop on the loom frame when the slay is moved rearwardly for swinging the arm and link forwardly to release the catch and permit the spring to move the hammer toward the race.

1,302,438. SHIELD FOR BLOW-TORCHES AND THE LIKE. WILLIAM PAUL RUDKIN, Baltimore, Md. Filed Sept. 9, 1918. Serial No. 253,222. 2 Claims. (Cl. 158—27.4.)



2. As a new article of manufacture, a shield of the class described consisting of a body of metallic or similar material, said body comprising spaced walls and spacing members intervening therebetween, the annular periphery of the body being open to admit of free passage of air between said walls, the material at the central portion of the body being formed into an extension sleeve for purposes of attachment to a blow-torch or the like, and a set screw carried by said sleeve for holding the shield in position.

1,302,439. MUSIC-SHEET FEEDER. HENRY K. SANDELL, Chicago, Ill., assignor to Herbert S. Mills, Chicago, Ill. Filed Dec. 18, 1914. Serial No. 877,846. 39 Claims. (Cl. 84—166.)



2. In a machine of the class described, a music-roll having a music-sheet wound thereon, a take up adapted to strip the music-sheet from the music-roll, a reversible driving-motor, means for governing the speed of said motor when the music-sheet is being fed in a playing direction operated by the music-sheet, and driving connections between said motor and said feed-roll and music-roll, said connections being adapted to drive the feed-roll in a playing direction when the motor is operating in one direction to release the feed-roll and engage and drive the music-roll in a re-winding direction when the motor is operated in the opposite direction and to release the music-roll and to drive the feed-roll in a playing direction when the motor is again reversed, the said driving connections being timed to function in the order given above and for the purpose set forth.

12. In a machine of the class described, a music-roll having a music-sheet wound thereon, a feed-roll adapted to strip the music-sheet from the music-roll, note selecting mechanism adapted to be operated by contact with the music-sheet, means for driving the feed-roll in a playing direction, means to maintain the note selecting mechanism in contact with the music-sheet during such playing movement, means to release the feed-roll from its driving connections when the music-sheet has been wholly unwound, means for shifting the note selecting mechanism out of contact with the music-sheet, means for engaging

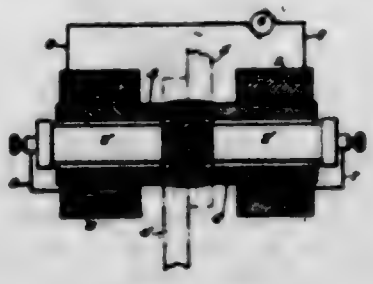
and driving the music-roll in a rewinding direction, means for releasing the music-roll from its driving connections when it is wholly re-wound, means for shifting the note selecting mechanism back into engagement with the music-sheet, and means for again driving the feed-roll in a playing direction, all of the above-named means operating automatically and in the sequence named, and means for controlling the speed of the music-sheet in the playing direction controlled by the lineal speed of the sheet.

27. In a machine of the character described, a music-roll having a music-sheet wound thereon, a feed-roll adapted to strip the music-sheet from the music-roll, a swinging frame, note selecting mechanism carried by said frame and adapted to be swung into or out of engagement with said music-sheet intermediate the two rolls, an actuating foot secured to said frame, a reversible driving-motor, a drive-shaft operable by said motor, a crank mounted on said drive-shaft, an oscillating dog pivoted on said crank, yieldable means for holding said dog in any position of oscillation, driving-lugs carried by opposite faces of said dog, a crank co-axial with said drive-shaft and connected with said feed-roll, a driving-lug carried by said crank and adapted for engagement with a driving-lug on said dog in one oscillated position of the latter, a re-wind gear mounted co-axially with said drive-shaft, a driving-lug carried by said re-wind gear and adapted for engagement by a driving-lug on said dog in another oscillated position of the same, a toe formed on said dog and adapted for engagement with the foot of said frame to shift the latter and bring the note selecting mechanism into operative position, means for locking the note selecting mechanism in operating position and a trip for releasing said locking means, said trip being mounted for engagement by the toe of said dog, substantially as and for the purpose specified.

28. In a machine of the class described, a roll on which a music-sheet may be wound, a reversible driving-motor for said roll and an electrical circuit for controlling the direction of operation of said driving-motor, a lever bearing against the surface of the music-sheet which is wound upon the roll, and means operable by said lever for making and breaking said electrical circuit.

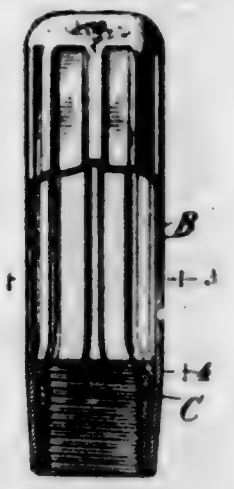
37. In a machine of the class described, a frame, a music-roll journaled in the frame and having a music-sheet wound thereon, a feed-roll journaled in the frame parallel to and spaced away from said music-roll and adapted to strip the music-sheet from the latter and wind same upon itself, a roller journaled in the frame and lying parallel to but with its axis out of the plane of the axes of said music and feed-rolls, whereby the music-sheet partially encircles said roller, means for driving the feed-roll, means for resisting the unwinding movement of said music-roll, whereby the music-sheet is tensioned and held in driving engagement with the said intermediate roller, a governor driven by the said roller, and means operable by the said governor for controlling the speed of said driving means.

1,302,440. **METHOD OF ELECTRIC WELDING.** ROBERT SABABIN, Carrieres sur Seine, France. Filed Jan. 2, 1919. Serial No. 269,315. 4 Claims. (Cl. 219—10.)



1. In the art of electrical welding between oppositely arranged electrodes, the maintenance of the lines of current substantially within the area of direct transmission from one electrode to the other.

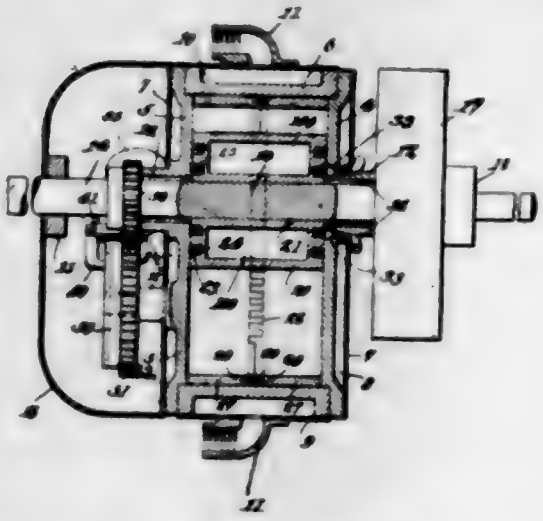
1,302,441. **DUST-CAP.** MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, and JULIUS VOLCKHAUSEN, Weehawken, N. J., assignors to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 21, 1916. Serial No. 85,623. 3 Claims. (Cl. 152—12.)



1. A drawn-metal dust cap for tire valves or the like, having a substantially cylindrical body portion, and a substantially cylindrical bushing inserted within the open end of the cap, the body portion having a recess formed by a flute or corrugation, and the bushing having a co-operating projection adapted to secure non-rotative connection between the body portion and bushing.

2. A dust cap for tire valves or the like, having a body portion which is substantially cylindrical and having a series of flutes adapted to constitute a grasping portion, and means for securing said cap to a threaded valve casing or the like comprising a bushing also substantially cylindrical in form, said bushing being inserted in the open end of the cap, and having projections entering the recesses of said flutes, and said parts having means for preventing relative longitudinal displacement.

1,302,442. **ENGINE.** LESLIE M. SHERIDAN, El Paso, Tex. Filed May 18, 1917. Serial No. 169,551. 2 Claims. (Cl. 123—44.)



1. In a device of the class described, a stator; a rotor journaled in the stator and provided with a chamber having parallel edges; a piston in the chamber of the rotor and guided for right line movement therein by the parallel edges of the chamber, the piston being equipped with an opening having parallel sides; a shaft journaled eccentrically in the stator and including an intermediate portion received in the opening of the piston, the intermediate portion of the shaft having parallel edges coöperating with the parallel sides of the opening in the piston to guide the piston for right line movement transversely of the shaft; an inlet and an outlet carried by the stator and

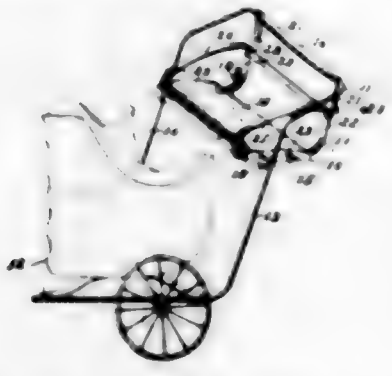
communicating with the chamber of the rotor when the rotor is rotated; valves controlling the inlet and the outlet; and shaft-actuated means coöperating with the valves to open and close the same.

1,302,443. TIRE-GAGE. HUGH MCNEILLY SHWAB, Louisville, Ky. Filed May 11, 1918. Serial No. 233,948. 1 Claim. (Cl. 152—12.)



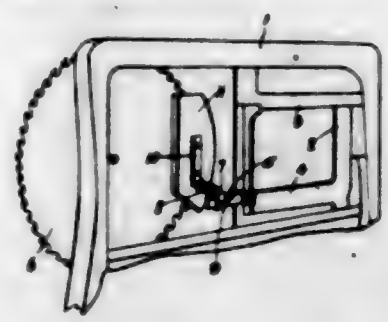
A gage comprising a casing having a bore at one end provided with threads near the upper part of the bore, a valve mechanism in said bore, said casing being provided with a second bore extending from the opposite end of the casing, the end of said second mentioned bore merging into a passageway communicating with the first mentioned bore, said second mentioned bore having compartments of three different sizes, the end bore being threaded for its entire length while the third compartment from the end is threaded for part of its length, a sleeve threaded into the third compartment, said sleeve being formed with guiding means, a pin extending through said guiding means, a spring normally holding said pin in a lower position for engaging the plunger of the valve to which the device is to be applied so as to open the same whereby the connecting member of the valve will be in direct communication with said second mentioned bore, and a pressure operated indicator in free communication with the interior of the casing between said valves.

1,302,444. SEAT FOR BABY-CARRIAGES. PAULINE SILVERMAN, New York, N. Y. Filed June 15, 1918. Serial No. 240,182. 2 Claims. (Cl. 21—12.)



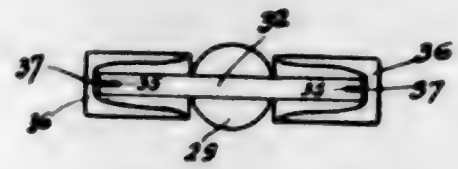
1. A seat for baby carriages, including a substantially rectangular seat adapted to be disposed between the bars of the handle of the carriage, comprising two substantially L-shaped bars having one of their arms fastened on the underside of the seat so that their other arms extend upwardly from the seat, and the ends of the upwardly projecting arms being bent to provide hooks for removable engagement with the handle of the carriage whereby the seat will be suspended therefrom, and rigid hooks extending from opposite parts of the seat for detachable engagement with the side bars of the handle of the carriage.

1,302,445. BLOCK-SIDE GUARD FOR UPRIGHT-SHINGLE-MACHINE SAWS. WILLIAM ISAAC SIMPSON, Vancouver, British Columbia, Canada, assignor to Oliver Lewis Warner, Vancouver, British Columbia, Canada. Filed Jan. 20, 1919. Serial No. 272,110. 1 Claim. (Cl. 143—159.)



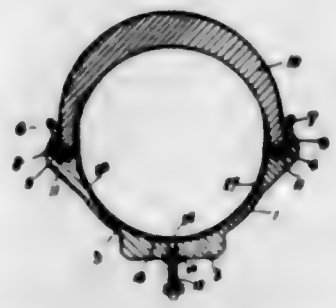
The combination with an upright shingle machine frame and saw, of an L-shaped bracket secured to the machine carriage having its long arm extending parallel to the saw on the block side of the same, a second L-shaped bracket mounted on the said long arm for longitudinal adjustment thereon, a guard plate secured to the free end of the second mentioned bracket having its forward edge extending in advance of the saw teeth, and means for securing said bracket in its adjusted position.

1,302,446. ROTARY ENGINE. SIDNEY SMITH, Vancouver, British Columbia, Canada. Filed July 12, 1918. Serial No. 244,639. 3 Claims. (Cl. 121—77.)



1. A rotary engine comprising a cylinder having its interior of elliptical shape, a cylindrical rotor mounted to rotate in said cylinder, said rotor having openings therein and pistons in said openings, each of said pistons comprising a hollow body, blade extensions on the outer end thereof and double vanes connected with the side of each extension.

1,302,447. RIM FOR PNEUMATIC TIRES. WILLIAM JACOB STARK, Vancouver, and SAMUEL R. RAMSAY, New Westminster, British Columbia, Canada. Filed June 11, 1918. Serial No. 239,461. 2 Claims. (Cl. 152—21.)



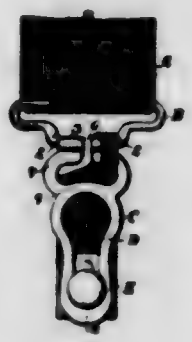
1. A rim comprising a metallic ring having a deep peripheral circumferential channel the opposite margins of which are formed as smaller circumferential channels adapted to inclose the beads of an outer casing mounted on the rim, said smaller channels having gaps formed in their inner walls at opposite points and the wide channel having a transverse groove extending between the gaps, a curved plate adapted to lie in said groove so that its ends extend into said gaps to bear on the said beads, and means for securing said plate in place.

1,302,448. CASTING-MACHINE. FRANCIS WILLIAM STOKES, Mansfield, England. Filed July 9, 1918. Serial No. 244,099. 4 Claims. (Cl. 22—65.)



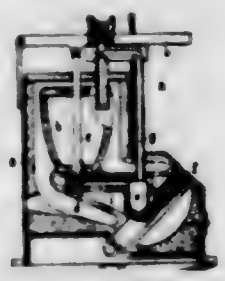
1. In a centrifugal casting machine of the kind herein referred to the combination with a multipart mold normally held separated or open, of means whereby the parts of the mold are closed by centrifugal force generated by the rotation of the mold, substantially as described.

1,302,449. BUTTON-CLASP. HENRY J. STUART, Derby, Conn., assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn., a Corporation of Connecticut. Filed Mar. 29, 1916. Serial No. 87,647. 3 Claims. (Cl. 24—245.)



3. In a button clasp having a button tab, an attaching loop with inwardly projecting pintles and a button loop provided with a sleeve in which said pintles are journaled to form a hinge, the said hinge being slit transversely for the passage of a fold of the button tab into the attaching loop.

1,302,450. APPARATUS FOR CASTING METALS. HEINRICH TALLA, Heilbronn, Germany, assignor to Präcisionsgusswerke System Schmidt-Reichhardt G. m. b. H., Frankfort-on-the-Main, Germany. Filed May 21, 1915. Serial No. 29,664. 2 Claims. (Cl. 22—69.)



1. A device for casting metal and the like under an explosion-like pressure into molds, comprising a crucible, a loading space having a channel leading therefrom adapted to communicate with a mold, and means for opening communication between said loading space and the crucible, said loading space being adapted to be placed under the pressure of the explosion.

1,302,451. FRETTING DEVICE FOR MUSICAL INSTRUMENTS. ELMER S. TANQUARY, Lawrenceville, Ill. Filed Aug. 6, 1917. Serial No. 184,700. 8 Claims. (Cl. 84—83.)

1. A device for fingering or stopping strings of a musical instrument, comprising a support independent of the instrument, a stopping block having flexible connection with the support and engageable with the strings, and articulated means for connecting the said block to the instrument, whereby upon relative movement of the instrument and the support the block engages the strings at desired positions.

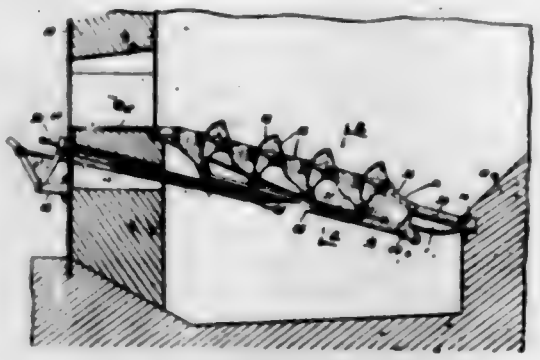


8. A device for fretting or fingering a stringed musical instrument, comprising a fretting block, means on which the block is mounted for universal pivotal movement, and adapted for clamping engagement with the instrument, and means for bodily adjusting the block toward or from the clamping means.

1,302,452. STRUCTURAL COMPOSITION. EDGAR R. TAYLOR and ISIDOR FLEXNER, Boston, Mass., assignors to Flexner-Taylor Company, Boston, Mass., a Corporation of Massachusetts. Filed June 26, 1918. Serial No. 242,010. 4 Claims. (Cl. 106—24.)

1. A structural composition comprising a vehicle of cement and a filler in quantity not greater than sixty or less than twenty-five per cent. of the cement and including incombustible fibers and particles of wood, the former in quantity from three to six times the latter, the whole constituting an auto-solidifying material which when set is of substantial transverse strength, non-friable and penetrable by but not fissile under metallic fastenings and adapted to grip such fastenings to resist withdrawal thereof.

1,302,453. HAND-STOKER. GEORGE HOWELL THACHER, Jr., Albany, N. Y., assignor to Files Engineering Company, Inc., a Corporation of Rhode Island. Filed Sept. 15, 1917. Serial No. 191,578. 13 Claims. (Cl. 110—39.)



1. A hand stoker having inclined bearing bars and a plurality of stoker bars mounted to rock on the bearing bars, each of said stoker bars being provided with a removable grate and a curved shield on the side of the bar toward the upper end of the stoker, the shield being adapted to swing above the upper face of the stoker when the bar is tipped and being provided with apertures through which air may be supplied to the fuel bed when the stoker bar is in tipped position.

7. In stoking bars for furnaces, the combination of a curved shield portion provided with air apertures and recesses and end portions integral with the shield portion, a supporting rod detachably mounted upon the end por-

tions and a grate supported upon the rod and having lugs adapted to enter the recesses in the shield.

11. In combination, a cleaning grate for furnaces comprising a flat slotted grate, an integral curved portion extending above the flat surface and provided with air apertures, a curved shield extending downwardly from the upper edge of the curved portion and a rib extending along the meeting edge of the shield and the curved portion, and a stoker bar having a movable serrated edge adjacent to said curved shield; substantially as described.

1,302,454. GARTER. ANGOSTOPOULO D. THEODORE, (whose full legal name is Theodore D. Anagnostopoulos,) Eunice, La. Filed June 15, 1918. Serial No. 240,267. 2 Claims. (Cl. 241—6.)

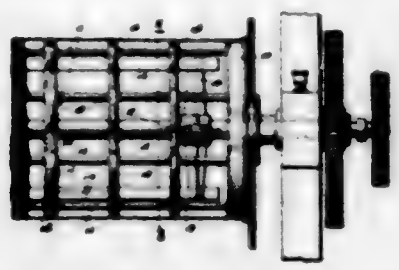


1. A garter comprising a resilient leg engaging band having spaced ends, a fabric sheath entirely inclosing said band a tab depending from said band, said tab formed solely of a flexible fabric, and a stocking clasp carried by said tab.

1,302,455. MANUFACTURE OF NITRATED CELLULOSE PRODUCTS. WARDLAW B. THOMSON, WALTER D. SEVERN, and GEORGE TWYCROSS, Cape Town, South Africa. Filed Apr. 18, 1918. Serial No. 229,431. 1 Claim. (Cl. 52—3.)

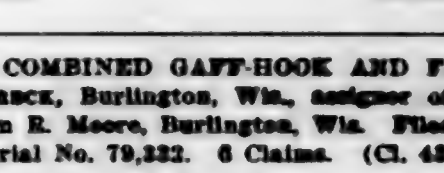
As a new product, nitrated baobab wood or fiber.

1,302,456. BOLTING-REEL. JULIUS J. TREPS, Owensboro, Ky., assignor to The Anglo-American Mill Company, Owensboro, Ky., a Corporation of Kentucky. Filed Nov. 3, 1916. Serial No. 129,288. 2 Claims. (Cl. 83—38.)



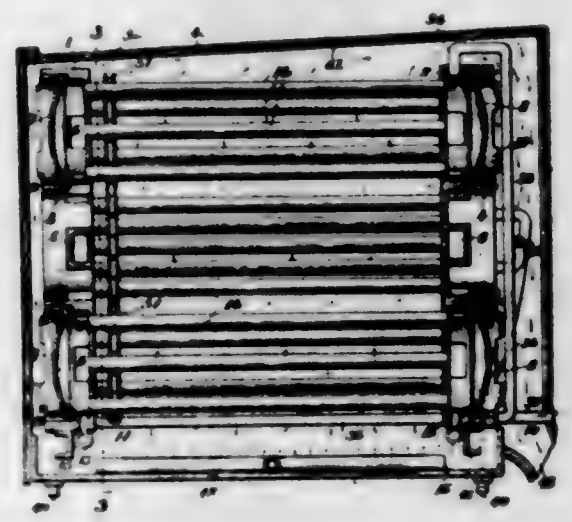
1. A bolting reel comprising reel heads; spaced and axially disposed rods connecting said heads adjacent their edges, said rods being circumferentially arranged relative to the heads; reel windings on said rods; and deflector blades on the windings between each of said rods and extending radially toward the center of the reel, said blades being adapted to cause the stock to progress through the reel when the latter is rotated.

1,302,457. COMBINED GAFF-HOOK AND FISH-ROD. HARRY URECK, Burlington, Wis., assignor of one-half to William R. Moore, Burlington, Wis. Filed Feb. 19, 1916. Serial No. 79,332. 6 Claims. (Cl. 43—6.)



1. The combination with the butt joint of a fish rod of tubular construction substantially throughout the length of the joint, said joint having a handle section, of a gaff hook, the shank portion of which is adapted to be slidably received in the tubular joint of the rod, said shank having an elongated groove near its inner end, a pointed extremity at said end, a hook pivotally mounted within one end of the groove, a shouldered portion formed on said hook for engagement with the end wall of the groove to limit the outward movement of the hook to an acute angular position with respect to the shank and a spring positioned to force the hook into such angular position.

1,302,458. WATER-TUBE BOILER. EARL V. VARCOE, Philadelphia, Pa. Filed May 6, 1918. Serial No. 232,732. 3 Claims. (Cl. 122—264.)



1. A steam generator comprising front and rear headers, each consisting of an integral structure having a plurality of interconnected sections, one header having openings therethrough between the sections and the other header being continuous between the sections, groups of water tubes connecting the corresponding sections of each header, a casing inclosing all of said headers and tubes and spaced from the last-mentioned header to provide a flue, and a burner disposed beneath said tubes.

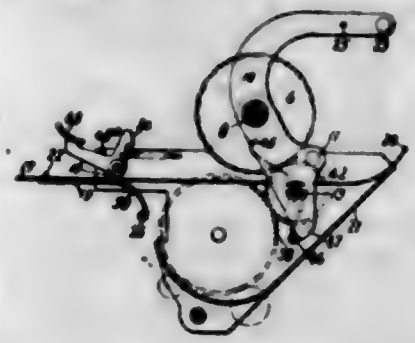
1,302,459. MILK-CAN SAFETY DEVICE. GEORGE HENRY VOGEL, Brooklyn, N. Y. Filed Sept. 25, 1918. Serial No. 255,596. 2 Claims. (Cl. 31—80.)



1. A safety device for milk cans comprising a locking structure mounted on the lid of the can and interlock-

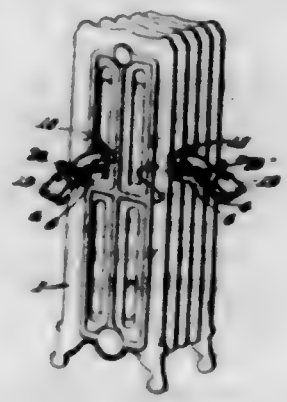
fag with the bead on the top of the can, said locking device comprising a plurality of bolts having hook members interlocking with said bead, a pivotally mounted actuated lever for moving said bolts longitudinally, said lid having a slot formed with a notch, said slot being adapted to receive said locking lever, and a spring acting on said lever for forcing the same into said notch when moved to a locked position.

1,302,460. TYPE-WRITING MACHINE. EARLE H. WEBATON, New Haven, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 16, 1917. Serial No. 196,779. 17 Claims. (Cl. 197—127.



1. In a machine of the class described, the combination with a rotating platen, of a traveling carriage in which said platen is journaled, feed rolls adapted to cooperate with said platen to hold a work-sheet, means for swinging said platen away from said feed rolls to permit the work-sheet to be inserted therebetween, and collating guides adjacent the front of said carriage adapted to serve as guides to enable the typist to adjust the work-sheet and then swing the platen into position against the feed rolls to hold the work-sheet.

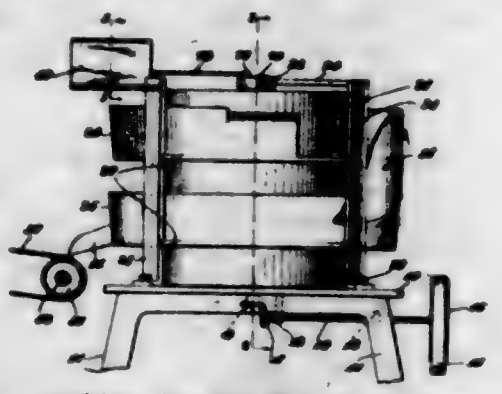
1,302,461. RADIATOR-LIFTING APPLIANCE. EDWIN JAMES ADAMSON, St. Cloud, Minn. Filed Feb. 12, 1919. Serial No. 276,502. 4 Claims. (Cl. 57—9.)



2. A lifting appliance, comprising a shank having a T head and a threaded portion, a slide movable rectilinearly on said threaded portion, a nut engaging the threaded portion and carried in the slide, and a clamping lever fulcrumed at an intermediate point of its length on the slide.

4. A lifting device comprising a shank having a T head at its forward end and also having a rear threaded portion, a slide on said rear portion, a nut carried by the slide to engage the threaded portion, and a clamping lever fulcrumed at an intermediate point of its length on the slide and having a clamping head at its forward end and a bifurcated rear arm forming a handle and also having in said arm at an intermediate point in the length thereof a transversely disposed sleeve that extends at opposite sides of the arm and is opened throughout.

1,302,462. DOUGH-BALLER. WALTER BACHMANN, New York, N. Y., assignor to Henry Rudolph. Filed Nov. 2, 1918. Serial No. 260,784. 4 Claims. (Cl. 107—9.)



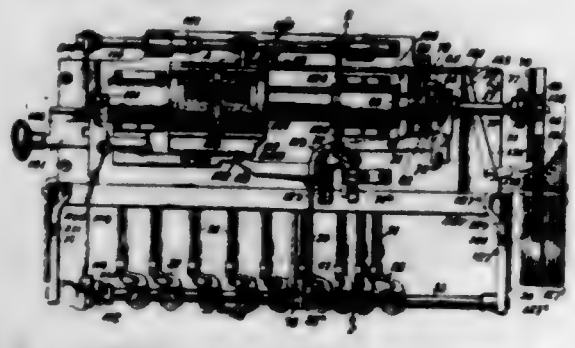
4. In a machine for forming plastic material into spherical shapes, the combination of a support frame, a cylinder revolubly mounted thereon, a plurality of rings having a portion engaging with annular recesses in the periphery of said cylinder, said rings having a concavo-convex inner face adapted to press material entered therein against the revolving periphery of said cylinder, means for delivering material to the uppermost of said rings, a dredging box over said rings, means operated by the upper end of said shaft for agitating said dredging box, a guide arranged contiguous to the uppermost of said rings adapted to deliver a semi-finished product to the lower ring, and a chute fixed in the lowermost of said rings adapted to deliver the complete product outwardly from said machine.

1,302,463. VULCANIZABLE COMPOSITION OF MATTER HAVING COMMINUTED LEATHER AS A BASE AND METHOD OF PREPARING SAME. JOHN STUART CAMPBELL, London, England. Filed Sept. 17, 1917. Serial No. 191,750. 4 Claims. (Cl. 106—39.)

1. A vulcanizable composition having comminuted or disintegrated leather as a base, the essential constituents of which are comminuted or disintegrated leather which has been boiled in water containing sufficient caustic alkali to saponify the fatty matter in the leather, but not sufficient to dissolve the leather, and a resilient vulcanizable binding material, the said constituents being thoroughly mixed and incorporated with each other, under the action of heat to form a homogeneous mass.

3. A method of preparing the composition claimed in claim 1, consisting in grinding scrap leather to powder and boiling same in water containing sufficient caustic alkali to saponify the fatty matter in the leather, but not sufficient to dissolve the leather, then drying and thoroughly mixing and incorporating the powder thus treated with a resilient vulcanizable binding material, under the action of heated mixing rollers.

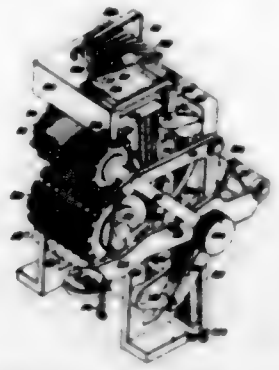
1,302,464. COMPUTING ATTACHMENT FOR TYPE-WRITERS. BENJAMIN M. DAS JARDINS, West Hartford, Conn., assignor, by mesne assignments, to John T. Underwood, Brooklyn, N. Y. Filed Apr. 27, 1904, Serial No. 205,206. Renewed Nov. 12, 1912. Serial No. 731,012. 78 Claims. (Cl. 235—62.)



68. In a calculating machine the combination of a traveling totalizer, a master member for registering on the same, means including keys for operating said master mem-

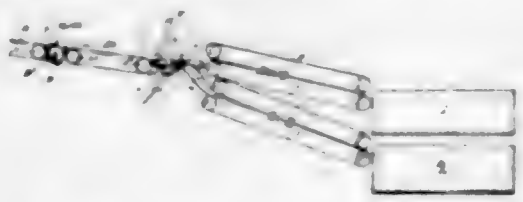
ber, a member operated by said keys and having intermittent movements one subsequent to each forward movement of said master member and a detaining device for preventing travel of the totalizer during the movement of said master member, one part of said detaining device being connected to and operated by said intermittently movable member and another part of said detaining device traveling in unison with the totalizer.

1,302,465. TYPE-WRITER ADDING-MACHINE. BENJAMIN M. DES JARDINS, West Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 5, 1904, Serial No. 231,546. Renewed Oct. 4, 1918. Serial No. 256,782. 134 Claims. (Cl. 235—60.)



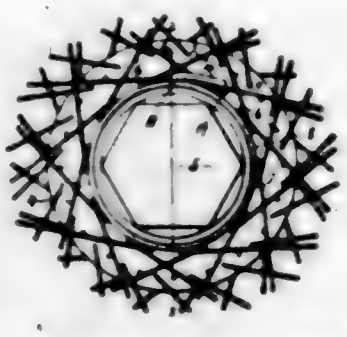
45. In a computing machine, the combination with register wheels, of means for turning them frictionally in one direction, and means for positively turning them in the opposite direction.

1,302,466. PAPER-SORTING MACHINE. ROBERT FINSTER and PERCY WILSON, Erie, Pa., assignors to Hammermill Paper Company, Erie, Pa., a Corporation of Pennsylvania. Filed Nov. 4, 1918. Serial No. 261,110. 5 Claims. (Cl. 271—64.)



1. In a sheet sorting mechanism comprising spaced tapes adapted to carry sheets, two deflectors, one behind the other adjacent to the delivery end of said carrier-tape mechanism, an oscillating lever, arms thereon for engaging and operating said deflectors, and duplicate carrier tape mechanism adjacent to the rear side of said deflectors, one of which is adapted to continue the travel of the sheet in a continuous direction, and the other in a deflected direction, substantially as set forth.

1,302,467. WIRE-SPOKED WHEEL. GEORGE GREENLEE, Geneva, N. Y., assignor to National Wire Wheel Works, Inc., Geneva, N. Y., a Corporation of New York. Filed Oct. 17, 1917. Serial No. 197,087. 5 Claims. (Cl. 21—31.)



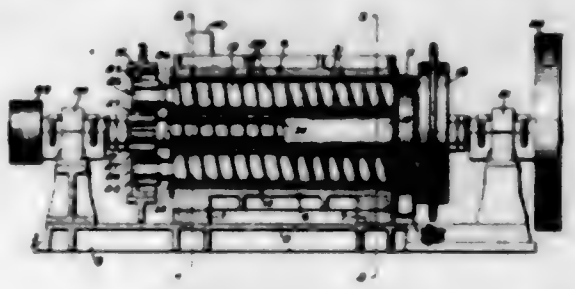
1. A vehicle wheel having a removable hub section and a cap nut for holding said section against axial displacement, in combination with means for locking the cap nut against unscrewing comprising a ratchet on the cap nut and a pawl fulcrumed on the hub section, and having an independent movement transversely of its fulcrum for engaging said section.

1,302,468. FEEDING AND SUBMERGING DEVICE. OTTO GROTH, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed July 16, 1917. Serial No. 180,868. 21 Claims. (Cl. 52—3.)



1. In nitrating apparatus, means for circulating the acid in a defined path, and a separate feeding and immersing member having a moving endless feeding and submerging face, part of which is arranged below the level of the acid, the active submerging portion of said face moving in the same general direction as the circulating acid.

1,302,469. MACHINE FOR AND PROCESS OF WORKING PAPER-STOCK. ANTON J. HAUG, Nashua, N. H., assignor to Improved Paper Machinery Company, Nashua, N. H., a Corporation of Maine. Filed Oct. 6, 1916. Serial No. 124,178. 35 Claims. (Cl. 92—20.)



1. A machine for working paper stock or other material wherein the material is fed continuously to the machine inlet and withdrawn from the outlet thereof, characterized by the employment of separate crushing and feeding devices acting in alternation which subject the material to repeated crushing actions with intervening feeding actions predetermined in amount whereby the material is positively fed through the machine and subjected to a predetermined crushing action.

1,302,470. COUPLING FOR ANTISKID-CHAINS. WILLIAM H. KAUG, Oshkosh, Wis. Filed Mar. 29, 1918. Serial No. 225,418. 10 Claims. (Cl. 24—201.)



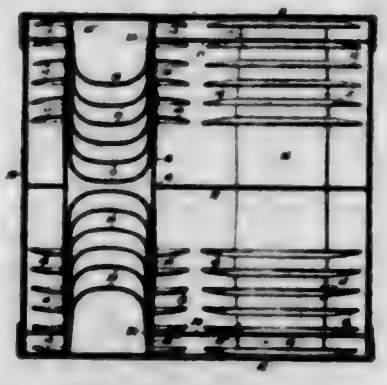
5. A coupling member comprising a shank portion having both ends bent at an angle thereto, and lying in the same plane, one of said ends being provided with an elongated head, the distance from one end of said head to the opposite side of said end being greater than the distance from the other end of said head to the other side of said end.

1,302,471. THREE-CONDUCTOR PLUG. MORTEN BALTHASAR RICHTER, Copenhagen, Denmark. Original application filed Oct. 16, 1915, Serial No. 56,202. Divided and this application filed Oct. 17, 1918. Serial No. 258,655. 3 Claims. (Cl. 173—361.)



1. A plug comprising an outer hollow conductor, an inner rigid concentric hollow conductor having an inner terminal, a central rigid conductor in the said inner conductor also having an inner terminal and a unitary integral body of insulating material occupying the annular spaces between the conductors and between said inner terminals.

1,302,472. SHIPPING-RECEPTACLE. SIMON SARNOFF, New York, N. Y. Filed Oct. 12, 1918. Serial No. 257,869. 3 Claims. (Cl. 206—9.)



3. A shipping receptacle adapted to accommodate a plurality of piles of nested articles having rims or flanges such as hats and the like, comprising a box adapted to contain a plurality of piles of nested articles, the piles being one above the other, spacing rings interposed between the rims or flanges of the articles in each pile, partitions fitting into the box and having openings for the passage of the crown or body of the article, the partitions being engaged by corresponding spacing rings, a tube into the ends of which extend the crowns or bodies of the adjacent articles in a pile, the ends of the tube engaging the rims or flanges of said adjacent articles, the middle portion of the tube being circumferentially contracted, and a central partition fitting into the box and having an opening, the wall of which fits the said contracted middle portion of the tube.

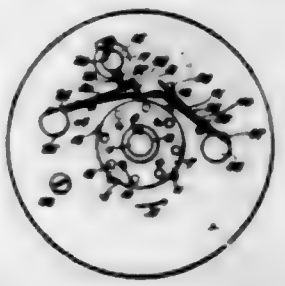
1,302,473. LAMINATED FABRIC. MAURICE SCHEUER, New York, N. Y. Filed Dec. 29, 1915, Serial No. 69,158. Renewed Oct. 1, 1918. Serial No. 256,456. 12 Claims. (Cl. 154—46.)



10. Stretchable laminated leather fabric composed of sheets of leather cemented to either side of a piece of elastic webbing, the leather having a greater capacity for stretching than the webbing, while the webbing is in normal condition, the leather layers being wider than the webbing with their projecting edges secured together.

1,302,474. IGNITION SYSTEM. GUSTAV SCHUMANN, Philadelphia, Pa. Filed Dec. 22, 1916. Serial No. 138,483. 7 Claims. (Cl. 123—166.)

1. In a device of the character described, the combination with a spring actuated contact-making member, of a rotatable cam consisting of a rotatable element and freely movable wings thereon, the latter engaging the contact-making member to move the latter into contact-making position, the wings being then redngaged by the contact-



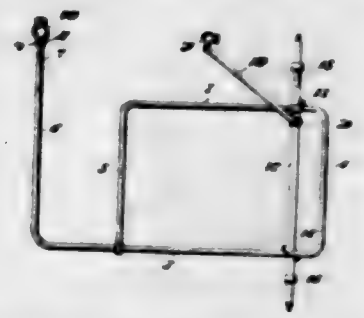
making member so that the spring power of the latter will move the former out of operating position, when the cam is rotating.

1,302,475. RAILROAD-SWITCH. FRANK J. SHEEHAN, Crete, Ill. Filed Jan. 5, 1917. Serial No. 140,792. 4 Claims. (Cl. 246—436.)



4. The combination with switch rails, of a connecting bar extending beyond the switch rails and secured to the same, said connecting bar being provided with rack teeth, a crank shaft provided with a pinion meshing with the teeth of the rack bar, levers fulcrumed intermediate of their ends and connected at one end with the crank shaft and depressible operating devices connected with the other ends of the levers and movable in opposite directions.

1,302,476. BICYCLE SIDE CAR. WILLIAM SIMONS, Baltimore, Md. Filed Feb. 23, 1918. Serial No. 218,866. 2 Claims. (Cl. 208—45.)

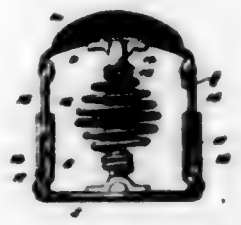


1. A bicycle side car having an oblong rectangular frame comprising front and rear cross bars, an inner reach and an outer reach, said outer reach extending forwardly from the frame and having at its front end an inwardly and upwardly inclined hanger arm arranged in front of the frame and provided with means whereby it may be attached to the front portion of a bicycle frame, a rear axle secured to the first named frame and provided at its outer end with a supporting wheel and also provided at its inner end with means whereby said axle may be attached to the rear axle of the bicycle, and a brace attached to the rear axle and having means at its upper end whereby it may be attached to the rear portion of the bicycle frame.

1,302,477. SPRING-TIRE. EDWARD SCOTT SMITH, Selma, Calif. Filed Oct. 29, 1918. Serial No. 260,115. 2 Claims. (Cl. 152—37.)

1. A resilient tire comprising inner and outer bands, a plurality of brackets secured upon the inner and outer peripheries of said outer and inner bands respectively, L-shaped securing members having one leg engaged within said brackets and non-rotatable with respect thereto, the

other legs of said securing members being arranged in radial alinement and perforated, and springs disposed



between said alining legs, said springs having their terminal convolutions coiled tightly about the associated legs and their ends passed through said perforations.

1,302,478. TONE-ARM FOR TALKING-MACHINES. JAMES F. SMITH, St. Louis, Mo., assignor of one-third to Anthony F. Ittner and one-third to Arthur H. Bradley, St. Louis, Mo. Original application filed June 22, 1916, Serial No. 105,141. Divided and this application filed Aug. 24, 1917. Serial No. 187,921. 6 Claims. (Cl. 274—23.)



1. In a talking machine, a pivot support for the tone arm comprising a ring secured to said tone arm, and oppositely disposed rings surrounding said tone arm, said last mentioned rings being disposed on each side of the ring of said tone arm and being mounted for oscillation upon a horizontal axis.

1,302,479. SOUND-BOX FOR TALKING-MACHINES. JAMES F. SMITH, St. Louis, Mo., assignor of one-third to Anthony F. Ittner and one-third to Arthur H. Bradley, St. Louis, Mo. Filed Aug. 24, 1917. Serial No. 187,922. 7 Claims. (Cl. 274—35.)



1. A sound box for a talking machine comprising a diaphragm and a supporting casing, a lever arm connected at one end to said diaphragm and supporting a stylus at its other end, the stylus end of the lever arm being pivotally supported and having a spring connection with said supporting casing, said connection being capable of vertical adjustment with relation to the supporting casing.

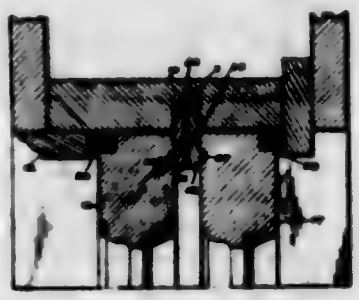
2. A sound box for a talking machine comprising a diaphragm and a supporting casing, a lever arm connected at one end to said diaphragm and supporting a stylus at its other end, the stylus end of the lever arm having a vibratory support connected to said supporting casing, and means movably mounted on the supporting casing engaging said vibratory support whereby the amplitude of the vibrations of the same may be varied.

3. A sound box for a talking machine comprising a diaphragm and a supporting casing, a lever arm connected at one end to said diaphragm and supporting a stylus at its other end, the stylus end of the lever arm having a pivotal connection with a vibratory support connected to said supporting casing, and an adjustable clamp slidably arranged on the supporting casing for securing said vibratory support to said casing intermediate its ends.

4. A sound box for a talking machine comprising a diaphragm and a supporting casing, a lever arm connected at one end to said diaphragm and supporting a stylus at its other end, a vibratory support mounted on said supporting casing and arranged for vertical adjustment thereon, the stylus end of the lever arm being pivotally connected to said support and an adjustable yoke slidably mounted on said supporting casing adapted to engage the vibratory support, whereby the amplitude of the vibrations of said lever arm can be controlled.

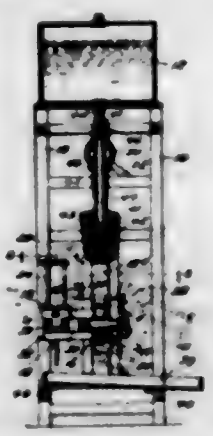
5. A sound box for a talking machine, comprising a diaphragm and a supporting casing, a lever arm connected at one end to the diaphragm of the sound box and supporting a stylus at its other end, a vertically adjustable support secured to the sound box, a vibratory member, one end being adjustably secured to the vertically adjustable support, and the other free end being adapted to pivotally support the lower portion of the stylus arm, and a clamp for securing the vibratory member to the vertically adjustable support, said clamp being arranged to slide along the adjustable support, whereby the amplitude of the vibrations of the lever arm can be controlled.

1,302,480. WINDOW-WEATHERPROOFING. ARTHUR C. SOULE, San Francisco, Calif., assignor of one-half to William B. Thurman, Madera, Calif. Filed Jan. 22, 1916. Serial No. 73,565. 6 Claims. (Cl. 20—12.)



5. In a window, a frame, sashes slidably mounted in said frame, parting beads freely mounted in the sides of said frame between said sashes, engaging means between said beads and sashes permitting movement of the sash longitudinally of the beads and causing the beads to move transversely with the sashes.

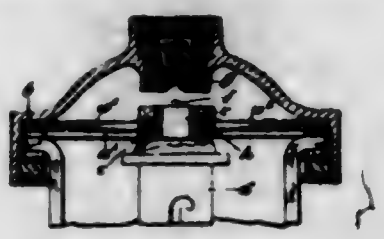
1,302,481. CUSPIDOR-CLEANER. FRANK SPEUCH, Flint, Mich. Filed Apr. 15, 1918. Serial No. 228,695. 4 Claims. (Cl. 141—7.)



1. A machine of the class described embodying a frame, vertically disposed rack bars carried thereby, a carriage positioned between said rack bars, a clamping device mounted upon the carriage, means for guiding said carriage in its vertical movement, a shaft extending transversely of the frame and pivotally supporting the carriage, pinions mounted upon the shaft and engagable

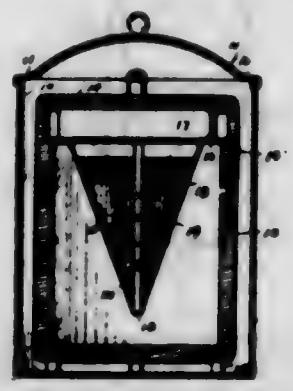
with the rack bars, whereby rotation of said pinions will raise and lower the carriage, a rotatable brush located in the path of movement of said carriage and means for limiting the pivotal movement of the carriage in either direction.

1,302,482. ANTIVIBRATION SUSPENSION DEVICE. FREDERICK ALEXANDER ROSS, Whitley Bay, England. Filed Feb. 5, 1919. Serial No. 275,269. 2 Claims. (Cl. 248—30.)



1. An anti-vibration support consisting of an outer frame member, an inner article supporting frame of channel formation, a plurality of woven shock absorbing strips all having their outer ends anchored in the same plane in the outer frame, and a ring for coöperating with the channeled inner article supporting frame for securing the inner ends of alternate strips in spaced planes whereby adjacent strips are disposed in planes diverging toward the inner frame.

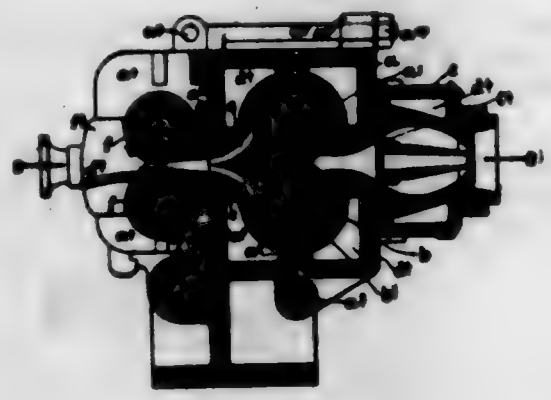
1,302,483. COFFEE-PERCOLATOR. GEORGE E. VIERLING, Des Moines, Iowa. Filed Feb. 8, 1916. Serial No. 76,904. 1 Claim. (Cl. 53—3.)



In a device of the class described, a receptacle having a detachable cover thereon adapted to form a substantially liquid tight joint therewith, an annular horisontal inwardly extending shoulder adjacent to the upper edge of said receptacle, an annular collar adapted to rest upon said shoulder, a reticulated conical receptacle supported from said collar at its larger end and having its smaller end disposed adjacent to the bottom of said first receptacle, an annular upwardly extending collar fixed to said first collar and a funnel having its receiving end detachably supported upon said last described collar and having its discharge end disposed intermediate of the top and bottom and sides of said reticulated receptacle whereby liquid poured into said funnel will be discharged on any granulated material, which may be in reticulated receptacle at the central point of the upper surface of such material.

1,302,484. EXTRUDING RUBBER AND THE LIKE. JOHN STRATTON, Bowden, and ERNEST ALEXANDER CLAREMONT, High Legh, England. Filed Apr. 18, 1918. Serial No. 229,406. 6 Claims. (Cl. 18—13.)

1. A machine for extruding rubber and the like comprising in combination a chamber internally of the form of two parallel cylinders intersecting one another and presenting in cross section approximately the outline of the figure 8, a roller in each cylindrical section extending from one flat side or end to the other (except for the spaces between the projections or teeth hereinafter referred to) and occupying the whole of the chamber and provided with parallel projecting ribs or teeth, the said projections or teeth of one roller engaging those of the other, means for introducing the rubber in a plastic condition through the side of the chamber into the spaces between the projections or teeth, an extruding chamber in the side of the chamber having an opening through which the rubber is extruded, and means for driving the rollers.



6. A machine as claimed in claims 1, 2, 3 and 4 the chamber being divided by a vertical wall at right angles to the axes of the rollers with a passage way therethrough to enable a cable or other article to be passed through the same, a core and means of fixing the core substantially as and for the purposes described.

1,302,485. FLATTENING DEVICE. HARRY E. DE VAUGHN, Morgantown, W. Va., assignor to Walter A. Jones, Morgantown, W. Va. Filed Oct. 6, 1916. Serial No. 124,092. 6 Claims. (Cl. 49—44.)



1. A flattening device of the character described comprising a base, a metallic flattening plate resting upon said base, and connecting means for drawing said base and said plate together in a normally immovable relation, said connecting means being of a nature to permit the base and the plate to separate when separation is desired.

1,302,486. EDIBLE-OIL PREPARATION. HENRY V. DUNHAM, Mount Vernon, N. Y. Filed Nov. 9, 1918. Serial No. 261,800. 4 Claims. (Cl. 99—11.)

4. A process which comprises dissolving casein with a little alkali to produce a substantially neutral solution, emulsifying a fatty edible oil therewith, homogenizing the mixture and drying the product at a temperature low enough to prevent injury of the casein.

1,302,487. MEDICINAL-OIL PREPARATION. HENRY V. DUNHAM, Brattleboro, Vt. Filed Sept. 4, 1918. Serial No. 252,592. 4 Claims. (Cl. 99—11.)

3. A process which comprises emulsifying an ingestible medicinal oil in a viscous casein solution, homogenizing the emulsion and drying the product.

1,302,488. ELECTRIC-ARC LIGHT. ELMER A. SPERRY, Brooklyn, N. Y. Filed Nov. 11, 1914. Serial No. 871,436. 3 Claims. (Cl. 176—66.)

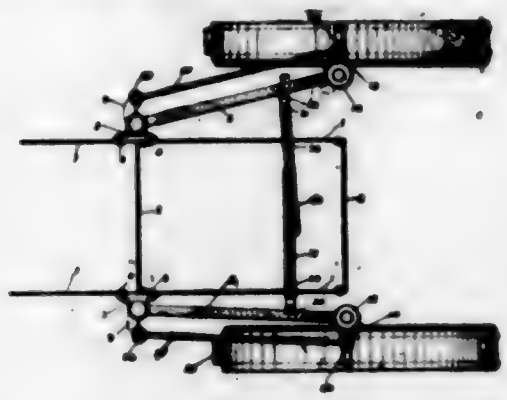
1. In an arc lamp, an electrode holder comprising a base piece revolubly mounted concentrically with the electrode, a feed roller rotatably mounted on said base, means to rotate both the base and the roller on their respective axes, whereby the said roller transmits both a

rotary and a translatory motion to the electrode, and means comprising a spring pressed brush for conveying



electric current to the electrode and for imposing a frictional resistance to movement of the electrode through said holder.

1,302,489. RUNNING-GEAR. OTIS A. HOLLIS, Pittsburgh, Pa. Filed Feb. 19, 1918. Serial No. 218,053. 5 Claims. (Cl. 21—89.)



1. The combination with a carriage body having supporting wheels and means to independently adjust the lateral distance of the wheels from the body, of a mounting for said wheels adapted to permit turning the plane of any of the wheels at any angle to the body, and means to lock the wheels in parallel relation to the body at any distance therefrom.

REISSUES.

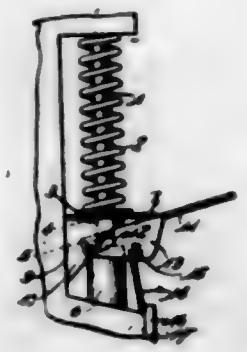
14,639. WAGON-TRAIN. WILLIAM ATKINS, Auburn, N. Y., assignor, by direct and mesne assignments, of three-fourths to Elmore N. Ross and William A. Tice, Auburn, N. Y. Filed May 22, 1916. Serial No. 99,249. Original No. 1,122,241, dated Dec. 29, 1914, Serial No. 582,678, filed Sept. 19, 1910. 9 Claims. (Cl. 21—137.)



1. A wagon train composed of two-wheel cars, each car having its opposite ends provided with separate pairs of opposed plates, hollow draw-heads pivoted to and between their respective pairs of plates, draw-bars extending into their respective draw-heads, and a rocking member journaled on one of the draw-bars and pivotally connected to the corresponding draw-head.

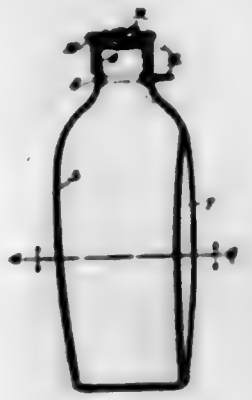
14,640. VALVE-SPRING COMPRESSOR. RALPH A. DURLAND, Washingtonville, N. Y., assignor to James A. Abeles, New York, N. Y. Filed Mar. 21, 1918. Serial No. 223,873. Original No. 1,236,826, dated Aug. 14, 1917, Serial No. 134,421, filed Dec. 1, 1916. 15 Claims. (Cl. 29—87.1.)

1. A valve spring compressor comprising a plate having a guide flange depending substantially at right angles from one edge thereof, and operating means pivotally mounted on the guide flange and including a fulcrum



lever adapted to be locked to maintain said plate in raised position when said operating means is actuated.

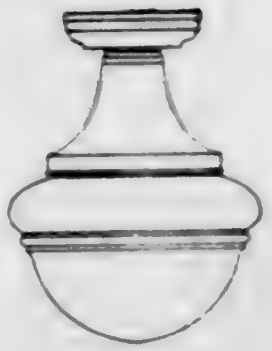
14,641. FLASK FOR LIQUIDS. JOSEPH KOENIG, Two Rivers, Wis. Filed Apr. 4, 1917. Serial No. 159,798. Original No. 1,062,716, dated May 27, 1913, Serial No. 621,809, filed Apr. 18, 1911. 2 Claims. (Cl. 221—92.)



1. An improved article of manufacture, consisting of a one-piece, seamless-body, sheet metal, flask-like canteen, having a flat bottom and a side thereof concave from said bottom to a predetermined height above the same.

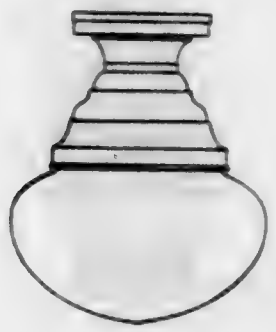
DESIGNS.

53,229. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Jan. 20, 1919. Serial No. 272,206. Term of patent 14 years.



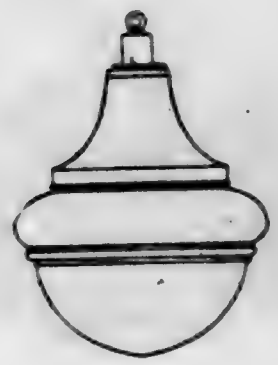
The ornamental design for a lighting fixture, as shown.

53,230. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Jan. 20, 1919. Serial No. 272,206. Term of patent 14 years.



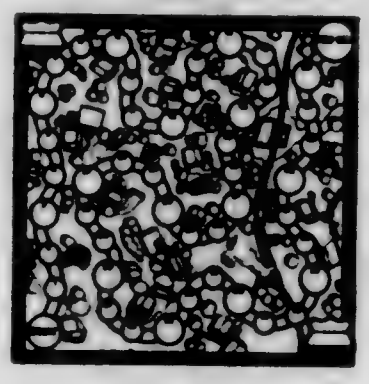
The ornamental design for a lighting fixture, as shown.

53,231. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Jan. 30, 1919. Serial No. 274,149. Term of patent 14 years.



The ornamental design for a lighting fixture, as shown.

53,232. GAME-BOARD. CHARLES L. ARCHBOLD, Cleveland, Ohio, assignor to The National Refining Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 10, 1919. Serial No. 270,602. Term of patent 7 years.



The ornamental design for a game board, as shown.

53,233. SHOE-RETAINER. VINCENZO BENEDETTI, Palisade, N. J. Filed Nov. 11, 1918. Serial No. 262,079. Term of patent 7 years.



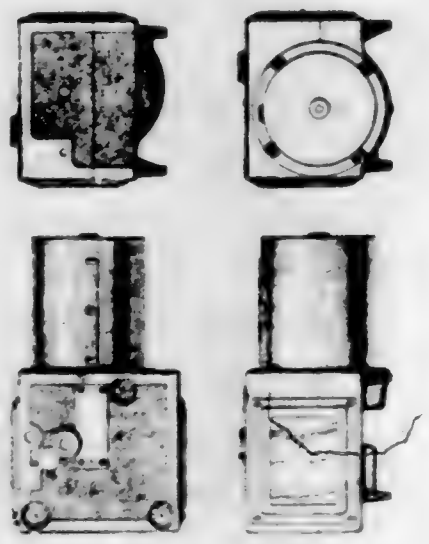
The ornamental design for a shoe retainer as shown.

53,234. WOMAN'S BLOUSE. GRACE T. BOMGARDNER, Los Angeles, Calif. Filed Apr. 1, 1918. Serial No. 226,118. Term of patent 3½ years.



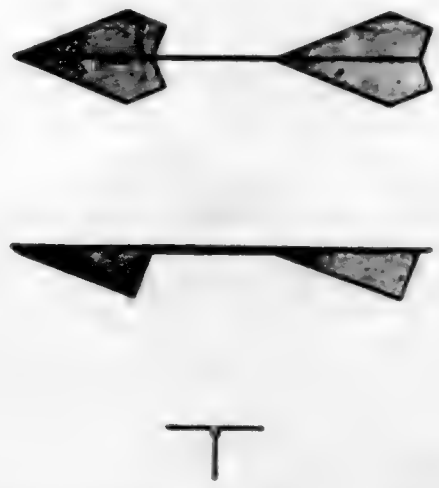
The ornamental design for a woman's blouse, as shown.

53,235. CASING FOR A PHONOGRAPH-MOTOR. PLINY CATUCCI, Newark, N. J., assignor to Otto Heineman Phonograph Supply Co., Inc., a Corporation of New York. Filed June 6, 1918. Serial No. 239,061. Term of patent 14 years.



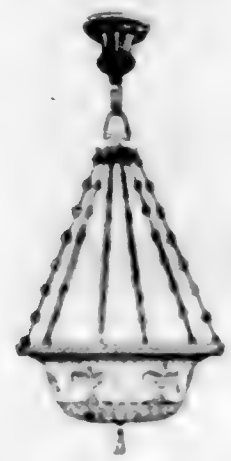
The ornamental design for a casing for a phonograph motor, substantially as shown.

53,236. TOY ARROW-PLANE. WILTON W. COGSWELL, Kansas City, Mo. Filed Oct. 31, 1917. Serial No. 199,592. Term of patent 3½ years.



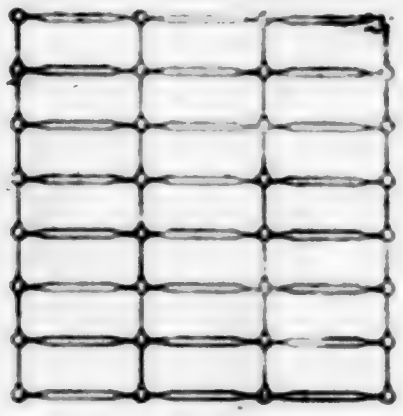
The ornamental design for a toy arrow plane, as shown.

53,237. SEMI-INDIRECT-LIGHTING FIXTURE. HARRY COHN, Brooklyn, N. Y., assignor to Robert Findlay Manufacturing Co., New York, N. Y., a Corporation of New York. Filed Mar. 2, 1918. Serial No. 220,056. Term of patent 7 years.



The ornamental design for a semi indirect lighting fixture, as shown and described.

53,238. METAL FABRIC. FRANK P. DOOLEY, Chicago, Ill. Filed Mar. 4, 1918. Serial No. 220,130. Term of patent 14 years.

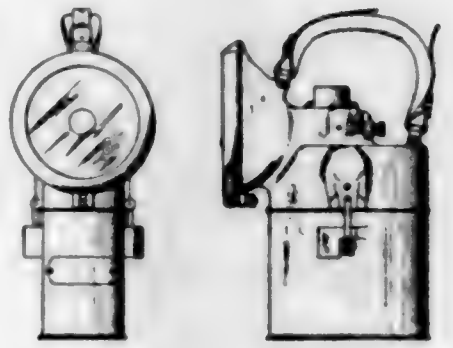


The ornamental design for a metal fabric, as shown.

53,239. SPARK-PLUG. JAMES D. M. GRAY, New York, N. Y., assignor of one-half to Frank P. Avery, New Orleans, La. Filed Feb. 19, 1919. Serial No. 278,074. Term of patent 7 years.

The ornamental design for a spark plug, as shown.

53,240. PORTABLE ELECTRIC LANTERN. WILLIAM GRETHER, Dayton, Ohio. Filed July 5, 1918. Serial No. 243,489. Term of patent 14 years.



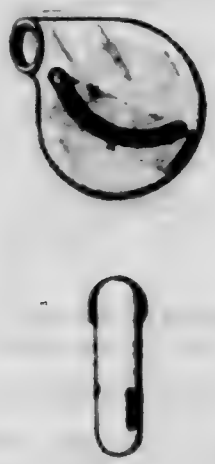
The ornamental design for a portable electric lantern, as shown.

53,241. HANDLE FOR A KNIFE, FORK, OR SPOON. DAVID HADAD, Highland Park, Mich. Filed Feb. 5, 1919. Serial No. 275,257. Term of patent 7 years.



The ornamental design for a handle of a knife, fork, or spoon, as shown.

53,242. SMOKER'S OUTDOOR LIGHTING DEVICE. JOHN RAYMOND HARRIS, Pittsburgh, Pa. Filed Nov. 8, 1918. Serial No. 261,719. Term of patent 3½ years.



The ornamental design for a smoker's outdoor lighting device, as shown.

53,243. ARTICLE OF MANUFACTURE. JULIUS C. HARRIS, New York, N. Y. Filed Nov. 5, 1918. Serial No. 261,805. Term of patent 3½ years.



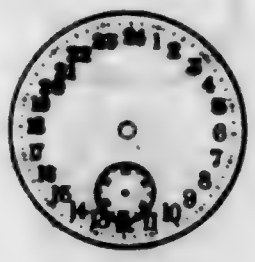
The ornamental design for an article of manufacture as shown and described.

53,244. PLATE, PLAQUE, PLATTER, OR SAUCER. THOMAS H. HAMBATTI, Butler, Pa. Filed July 15, 1918. Serial No. 245,115. Term of patent 7 years.



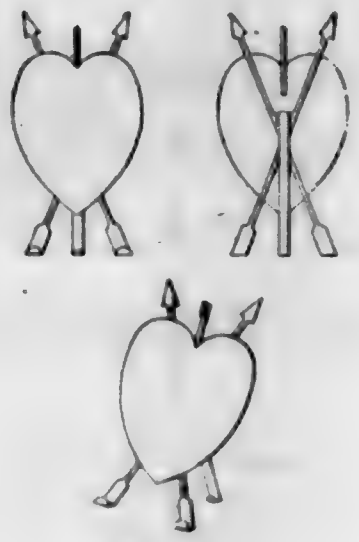
The ornamental design for a plate, plaque, platter, or saucer, substantially as shown.

53,245. TIMEPIECE-DIAL. EDGAR L. HULL, Waltham, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Dec. 9, 1918. Serial No. 266,002. Term of patent 14 years.



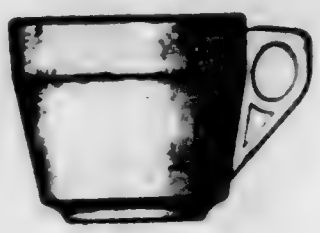
The ornamental design for a timepiece dial, substantially as shown.

53,246. WATCH-HOLDER. CHARLES R. JOHNSON, New Haven, Conn. Filed Feb. 12, 1919. Serial No. 276,660. Term of patent 7 years.



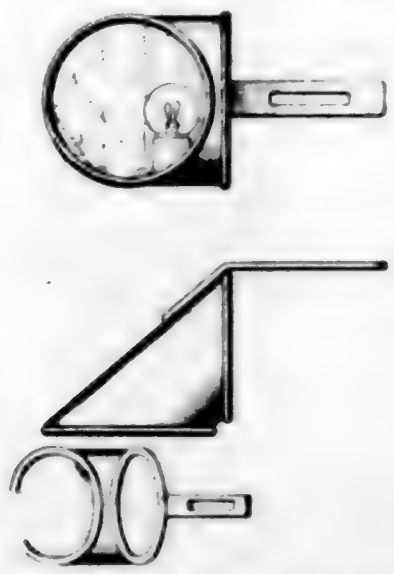
The ornamental design for a watch holder, as shown.

53,247. CUP. EARL S. LEWIS, Chicago, Ill., assignor to Advance Terra Cotta Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 27, 1919. Serial No. 273,500. Term of patent 14 years.



The ornamental design for a cup, as shown.

53,248. TAIL-LIGHT FOR AUTOMOBILES. CHARLES O. MATHEWS, Milford, Conn. Filed Jan. 15, 1919. Serial No. 271,930. Term of patent 7 years.



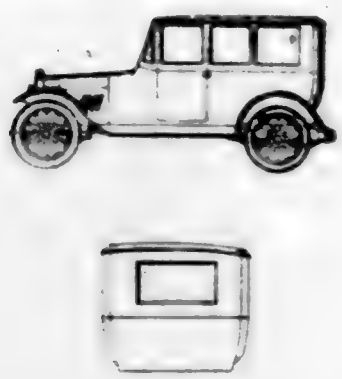
The ornamental design for a tail light for automobiles, as shown.

53,249. LIGHTING-FIXTURE. EARLE C. MCKINNIE, Chicago, Ill., assignor to National X-Ray Reflector Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1918. Serial No. 214,422. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

53,250. VEHICLE-BODY. ADRIAN J. NEERKEN, Detroit, Mich., assignor to Hupp Motor Car Corporation, Richmond, Va., a Corporation of Virginia. Filed Dec. 14, 1917. Serial No. 207,215. Term of patent 3½ years.



The ornamental design for a vehicle body, substantially as shown.

53,251. EMBLEM, BUTTON, RING, PIN, OR ARTICLE OF SIMILAR NATURE. ISAAC CLINTON NICHOLSON, Providence, R. I. Filed Feb. 5, 1919. Serial No. 275,258. Term of patent 7 years.



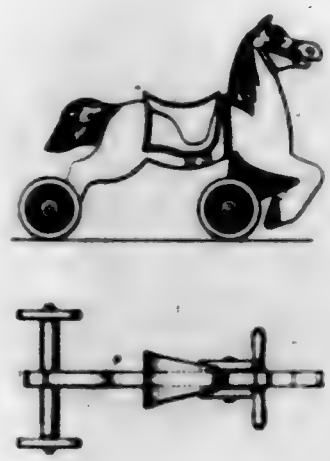
The ornamental design for an emblem, button, ring, pin, or article of similar nature, as shown.

53,252. PLATE OR SIMILAR ARTICLE. CHARLES JOHN NOKE, Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 5, 1919. Serial No. 275,260. Term of patent 8½ years.



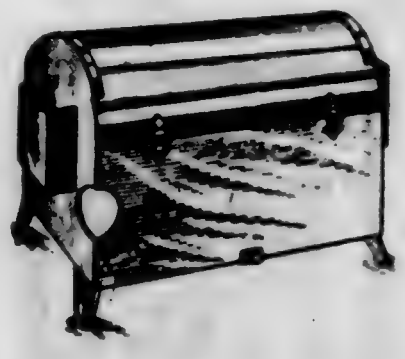
The ornamental design for a plate or similar article as shown.

53,253. WHEELED TOY. JAMES A. RICHARDS, Marietta, Ohio, assignor to The Richards Manufacturing Company, Marietta, Ohio, a Corporation of Ohio. Filed Aug. 17, 1918. Serial No. 250,404. Term of patent 7 years.



The ornamental design for a wheeled toy as shown.

53,254. NAPKIN AND TOOTHPICK HOLDER. CHARLES M. SANDERS, Guthrie, Okla. Filed Feb. 19, 1919. Serial No. 278,080. Term of patent 14 years.



The ornamental design for a napkin and toothpick holder as shown.

53,255. BADGE, BUTTON, OR SIMILAR ARTICLE OF MANUFACTURE. BERTRAM SIMON, New York, N. Y. Filed Feb. 12, 1919. Serial No. 276,665. Term of patent 3½ years.



The ornamental design for a badge, button, or similar article of manufacture as shown.

53,256. BADGE, BUTTON, OR SIMILAR ARTICLE OF MANUFACTURE. BERTRAM SIMON, New York, N. Y. Filed Feb. 12, 1919. Serial No. 276,666. Term of patent 3½ years.



The ornamental design for a badge, button, or similar article of manufacture as shown.

53,257. BADGE, BUTTON, OR SIMILAR ARTICLE OF MANUFACTURE. BERTRAM SIMON, New York, N. Y. Filed Feb. 12, 1919. Serial No. 276,667. Term of patent 3½ years.



The ornamental design for a badge, button, or similar article of manufacture as shown.

53,258. RING, BUTTON, BROOCH, BAR-PIN, HAT PIN, SCARF-PIN, PLAQUE, OR ARTICLE OF SIMILAR NATURE. NORMAN L. STRAUSS, New York, N. Y., and MAURICE HENRIOT, Arlington, N. J., assignors to Strauss & Strauss, Newark, N. J., a Corporation of New Jersey. Filed Nov. 19, 1918. Serial No. 263,228. Term of patent 7 years.



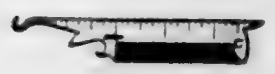
The ornamental design for a ring, button, brooch, bar-pin, hat-pin, scarf-pin, plaque, or article of similar nature as shown.

53,259. FLAG. DANIEL O. TEASLEY, Anderson, Ind. Filed Dec. 12, 1918. Serial No. 266,498. Term of patent 7 years.



The original design for a flag, as shown.

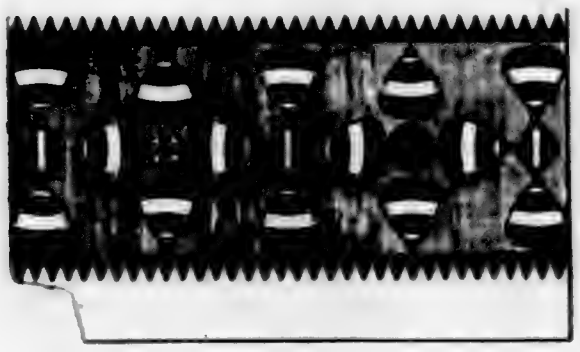
53,260. COMBINATION-TOOL. FRITZ O. VON TOBEL, Omaha, Nebr. Filed Dec. 29, 1915. Serial No. 69,293. Term of patent 14 years.





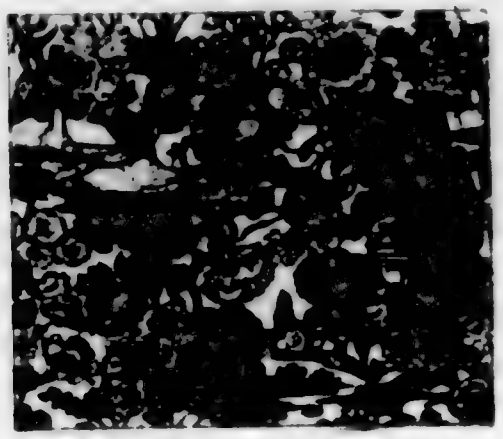
The ornamental design for a combination tool, as shown.

53,261. PARAFFIN-PAPER WRAPPER FOR A LOAF OF BREAD. GEORGE S. WARD, New York, N. Y., assignor to Ward Baking Company, New York, N. Y., a Corporation of New York. Filed Sept. 16, 1914. Serial No. 862,112. Term of patent 14 years.



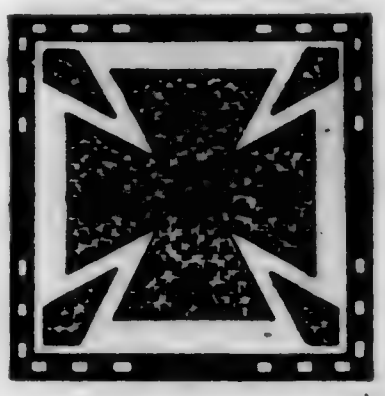
The ornamental design for a paraffin-paper wrapper for a loaf of bread as shown.

53,262. ARTICLE OF MANUFACTURE. HARRY WEARNE, New York, N. Y. Filed Mar. 7, 1919. Serial No. 281,320. Term of patent 7 years.



The ornamental design for an article of manufacture substantially as shown and described.

53,263. PIN, BUTTON, BADGE, EMBLEM, INSIGNIA, MEDAL, WATCH-FOB, OR ARTICLE OF SIMILAR NATURE. MARION FRANK WOOTEN, Charlotte, N. C. Filed Jan. 22, 1919. Serial No. 272,582. Term of patent 7 years.



The ornamental design for a pin, button, badge, emblem, insignia, medal, watch-fob, or article of similar nature.

53,264. CANISTER OR SIMILAR ARTICLE. GEORGE C. WURTHMANN, Jersey City, N. J., assignor to George Borgfeldt & Co., New York, N. Y., a Corporation of New Jersey. Filed Apr. 18, 1918. Serial No. 92,052. Term of patent 7 years.



The ornamental design for a canister or similar article as shown and described.

TRADE-MARKS

OFFICIAL GAZETTE, APRIL 29, 1919.

[PUBLISHED MAY 10, 1919.]

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this publication.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 92,949. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) A. B. NEWMAN CO., New York, N. Y. Filed Feb. 18, 1916.



The picture on the drawing is fanciful. The background of the portions between the circle and square being colored red and no claim being made to the exclusive use as a trade-mark of the representation of the package of the goods.

Particular description of goods.—Cigarette-Papers.

Claims use since May 1, 1902.

Ser. No. 108,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PIONEER FRUIT CO., Sacramento, Calif. Filed May 14, 1917.

LIBERTY



Particular description of goods.—Fresh Grapes and Fresh Peaches, Fresh Apples, Fresh Pears, and Fresh Plums.

Claims use since Apr. 15, 1917.

Ser. No. 108,290. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDING ELECTRICAL APPARATUS.) THE BURDETT OXYGEN COMPANY, Denver, Colo. Filed Jan. 4, 1918.

OXYGEN
PUROX
HYDROGEN

No claim is made to the words "Oxygen" and "Hydrogen" apart from the mark shown in the drawing.

Particular description of goods.—Welding and Cutting Torches.

Claims use since about Nov. 12, 1917.

Ser. No. 108,645. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. W. CARNRICK CO., New York, N. Y. Filed Jan. 26, 1918.



No claim being made to the Chinese characters representing the words "Tablet," "Creator," "Vigor," and "Strengthens the Secretions" apart from the mark as shown in the drawing.

Particular description of goods.—A Pluriglandular Tonic.

Claims use since May 16, 1917.

Ser. No. 109,168. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WEST COAST PACKING CO., Los Angeles, Calif. Filed Feb. 21, 1918.

WESPAC

Particular description of goods.—Canned Fish, Canned Fruit, and Canned Vegetables.

Claims use since Feb. 1, 1918.

Ser. No. 109,258. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRIET HUBBARD AYER, New York, N. Y. Filed Feb. 28, 1918.



The lining shown on the drawing representing merely decorative shading.

Particular description of goods.—Almond-Meal, Antiseptic Washing-Water, Aromatic Ozoniser, Aromatic Vinegar, Astringent for Relaxed Tissues, Bandoline, Bath Essence, Bath-Salts, Bath-Vinegar, Bay-Rum, Benzoin; Brilliantine, (Liquid;) Adeps Lanæ Cream, Cold-Cream, Cuticle-Cream, Face-Cream, Finishing-Cream, Foot-Cream, Freckle-Cream, Massage-Cream, Non-Greasy Cream, Cream for Use After Shaving, Perspiration-Cream, Strawberry Cream, Theatrical Cream, Toilet Cream, Tooth-Cream, Vanishing Cream, Camphor-Ice, Cocoa-Butter, Cologne-Water, Complexion-Balm, Cuticle-Acid, Cuticle-Ice, Cuticle-Softener; Depilatory, (Dry;) Depilatory, (Liquid;) Depilatory, (Paste;) Disinfectant, Eyebrow-Pencil, Face-Bleach, Foot-Ice, Frost-Bite Salve, Grease Paint, Hair-Bleach, Hair-Color, Hair-Dye, Hair Essence, Hair-Oil, Hair-Tonic; Hair-Waver, (Chemical;) Hair-Whitener, Hand-Salve, Hand-Whitener, Headache-Cologne, Incense, Lip-Pencil, a Healing-Lotion for Use After Shaving, Almond Honey Cucumber Lotion, Eye-Lotion, Face-Lotion, Foot-Lotion, Freckle-Lotion, Frost-Bite Lotion, Hand-Lotion, Head-Lotion, Honey Lotion, Moth and Freckle Lotion, Mouth-Lotion, Toilet Lotion, Skin-Lotion, Strawberry Lotion, Menthol Pencils, Milk of Cucumber, Mouth-Tablets, Mouth-Wash; Mutton-Tallow, (Refined and Perfumed;) Nail-Acid; Nail-Bleach, (Liquid;) Nail-Enamel, Nail Polish; Nail-Polish, (Cake;) Nail-Tint, Body-Perfume, Handkerchief-Perfume, Non-Alcoholic Perfume, Room-Perfume, Perfume-Pencils, Perfume-Tablets, Synthetic Perfumes, Perspiration Liquid, Pomade; Pomade Brilliantine; Pomade, (Hair;) Pomade, (Lip;) Pomade, (Nail;) Alkenna Powder, Bath-Powder, Cuticle-Powder, Face-Powder; Face-Powder, (Liquid;) Face-Powder, (Pomade;) Foot-Powder, Glove-Perfume Powder, Hair-Powder, Nail-Bleach Powder, Nail-Powder, Oatmeal Powder, Perspiration-Powder, Rice Powder, Sachet-Powder, Shampoo-Powder; Talcum Powder, (Dry;) Theatrical Powder, Toilet Powder, Tooth-Powder, Powder-Papers, Cheek-Rouge, Lip-Rouge, Nail-Rouge; Rouge, (Dry;) Rouge-Leaves; Rouge, (Liquid;) Rouge, (Paste;) Rouge, (Pomade;) Theatrical Rouge; Talcum, (Liquid;) Theatrical-Make-Up Toilet Vinegar, Tooth-Paste, Tooth-Wash, Borax, (Toilet;) Toilet Cerate, Toilet Glycerin, Toilet Paste, Toilet Water, Troche for the Breath; Shampoo, (Liquid;) Smelling-Salts, Stick-Cosmetic, Skin and Tissue Builder, Skin-Whitener, Strawberry Vinegar, Water-Softener, Wrinkle-Eradicator.

Claims use since the 10th day of January, 1914.

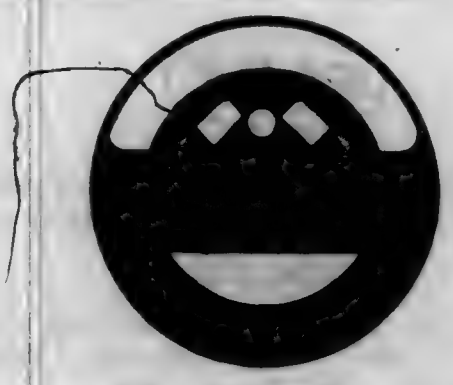
Ser. No. 109,261. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRIET HUBBARD AYER, New York, N. Y. Filed Feb. 28, 1918.

SERVICE

Particular description of goods.—Almond-Meal, Antiseptic Washing-Water, Aromatic Ozoniser, Aromatic Vinegar, Astringent for Relaxed Tissues, Bandoline, Bath Essence, Bath-Salts, Bath-Vinegar, Bay-Rum, Benzoin; Brilliantine, (Liquid;) Adeps Lanæ Cream, Cold-Cream, Cuticle-Cream, Face-Cream, Finishing-Cream, Foot-Cream, Freckle-Cream, Massage-Cream, Non-Greasy Cream, Cream for Use After Shaving, Perspiration-Cream, Strawberry Cream, Theatrical Cream, Toilet Cream, Tooth-Cream, Vanishing Cream, Cocoa-Butter, Camphor-Ice, Cologne-Water, Complexion-Balm, Cuticle-Acid, Cuticle-Ice, Cuticle-Softener; Depilatory, (Dry;) Depilatory, (Liquid;) Depilatory, (Paste;) Disinfectant, Eyebrow-Pencil, Face-Bleach, Foot-Ice, Frost-Bite Salve, Grease Paint, Hair-Bleach, Hair-Color, Hair-Dye, Hair Essence, Hair-Oil, Hair-Tonic; Hair-Waver, (Chemical;) Hair-Whitener, Hand-Salve, Hand-Whitener, Headache-Cologne, Incense, Lip-Pencil, a Healing-Lotion for Use After Shaving, Almond Honey Cucumber Lotion, Eye-Lotion, Face-Lotion, Foot-Lotion, Freckle-Lotion, Frost-Bite Lotion, Hand-Lotion, Head-Lotion, Honey Lotion, Moth and Freckle Lotion, Mouth-Lotion, Toilet Lotion, Skin-Lotion, Strawberry Lotion, Menthol Pencils, Milk of Cucumber, Mouth-Tablets, Mouth-Wash; Mutton-Tallow, (Refined and Perfumed;) Nail-Acid; Nail-Bleach, (Liquid;) Nail-Enamel, Nail-Polish; Nail-Polish, (Cake;) Nail-Tint, Body-Perfume, Handkerchief-Perfume, Non-Alcoholic Perfume, Room-Perfume, Perfume-Pencils, Perfume-Tablets, Synthetic Perfume, Perspiration Liquid, Pomade, Pomade Brilliantine; Pomade, (Hair;) Pomade, (Lip;) Pomade, (Nail;) Alkenna Powder, Bath-Powder, Cuticle-Powder, Face-Powder; Face-Powder, (Liquid;) Face-Powder, (Pomade;) Foot-Powder, Glove-Perfume Powder, Hair-Powder, Nail-Bleach Powder, Nail-Powder, Oatmeal Powder, Perspiration-Powder, Rice Powder, Sachet-Powder, Shampoo-Powder; Talcum Powder, (Dry;) Theatrical Powder, Toilet Powder, Tooth-Powder, Powder-Papers, Cheek-Rouge, Lip-Rouge, Nail-Rouge; Rouge, (Dry;) Rouge-Leaves; Rouge, (Liquid;) Rouge, (Paste;) Rouge, (Pomade;) Theatrical Rouge; Talcum, (Liquid;) Theatrical-Make-Up Toilet Vinegar, Tooth-Paste, Tooth-Wash; Borax, (Toilet;) Toilet Cerate, Toilet Glycerin, Toilet Paste, Toilet Water, Troche for the Breath; Shampoo, (Liquid;) Smelling-Salts, Stick-Cosmetic, Skin and Tissue Builder, Skin-Whitener, Strawberry Vinegar, Water-Softener, Wrinkle-Eradicator.

Claims use since the 5th day of July, 1914.

Ser. No. 110,051. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) I. FLEISCHER & SONS, Cincinnati, Ohio. Filed Apr. 8, 1918.



Particular description of goods.—Shoe-Laces and Narrow Fabrics—Namely, Inside Stay, Webbing-Stay, Dress-Belting, Rick-Rack, Tongue-Lining, Eyelet-Stay, Lining-Web, Buttonhole-Fly Tape, Reinforcement, and Narrow Mercerized Tape.

Claims use since Jan. 1, 1910.

Ser. No. 111,143. (CLASS 37. PAPER AND STATIONERY.) THE CELLULOID COMPANY, Newark, N. J., and New York, N. Y. Filed May 23, 1918.

IVALEUR

Particular description of goods.—Paper-Knives, Penholders, and Memorandum-Tablets. The Said Articles are Made of Compounds of Pyroxylin.

Claims use since Dec. 20, 1917, on paper knives and penholders, and since Jan. 4, 1918, on memorandum-tablets.

Ser. No. 111,198. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EXCELSIOR LEATHER WASHER MANUFACTURING CO., Rockford, Ill. Filed May 25, 1918.



Particular description of goods.—Pump and Valve Leathers, and Washers of Leather and Gaskets of Leather.

Claims use since Nov. 17, 1917.

Ser. No. 111,471. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WEST COAST SOAP CO., Oakland, Calif. Filed June 10, 1918.



No claim is made to the word "Soap" apart from the mark shown in the drawing.

Particular description of goods.—Laundry Soap.

Claims use since Oct. 31, 1916.

Ser. No. 112,895. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRICE-BOOKER MANUFACTURING CO., Houston, Tex. Filed Aug. 27, 1918.



Particular description of goods.—Pickles, Flavoring Extracts for Foods, Mustard, Tomato Catsup, Relishes Made of Chopped and Ground Pickles Packed in Spices and Vinegar, Chow-Chow, Salad-Dressing, and Vinegar.

Claims use since 1908.

Ser. No. 112,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRICE-BOOKER MANUFACTURING CO., Houston, Tex. Filed Aug. 27, 1918.



Particular description of goods.—Pickles, Tomato Catsup, Relishes Made of Chopped and Ground Pickles Packed in Spices and Vinegar, Chow-Chow, Salad-Dressing, Vinegar, Pepper Sauce, and Tabasco Pepper Sauce.

Claims use since June, 1916.

Ser. No. 113,116. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) COATS MACHINE TOOL COMPANY, INC., New York, N. Y. Filed Sept. 11, 1918.

The
Coats Prestometer

No claim being made to the words "The Coats" apart from the mark as shown in the drawing.

Particular description of goods.—Fluid-Gages for Testing and Measuring Thickness or other Linear Dimension, and Parts of Such Gages.

Claims use since July 5, 1918.

Ser. No. 113,827. (CLASS 17. TOBACCO PRODUCTS.) PERCY ERNEST HURST, Croydon, England. Filed Oct. 21, 1918.



No claim being made to the legend "The Popular Cigarettes" apart from the mark shown in the drawing.

Particular description of goods.—Cigarettes.

Claims use since the 16th of February, 1917.

Ser. No. 114,063. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERWA CHEMICAL MANUFACTURING COMPANY, Needham, Mass. Filed Nov. 6, 1918.

Trench

Proof

Particular description of goods.—Waterproof Compound for Cloth.

Claims use since March, 1918.

Ser. No. 114,582. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. L. D. LE GEAR MEDICINE CO., St. Louis, Mo. Filed Dec. 10, 1918.



The trade-mark includes a portrait of Dr. L. D. Le Gear. No claim is made to the words and characters "(in Surgeon's Robe)" except in association with the other features shown.

Particular description of goods.—Preparation for Destroying Stomach and Bowel Worms of Horses, Cattle, Sheep, and Hogs; a Hog Prescription for Expelling Worms from Hogs; Stock Powders for Purposes of Tonic and Appetizer; Poultry Prescription for the Treatment of Roup, Gapes, Bowel Trouble, Leg Weakness, and for the Promotion of the Growth of Poultry; Preparation for Animals for the Treatment of Heaves, Asthma, Thick and Broken Wind, Chronic Coughs, Colds, Distemper, Nasal Gleet, Chronic Catarrh.

Claims use since about Oct. 15, 1918.

Ser. No. 114,610. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WARNER-PATTERSON CO., Chicago, Ill. Filed Dec. 12, 1918.



No claim being made to the exclusive use of the words "Fountain Shaving Brush," "Everything but the Razor," apart from the mark as shown in the drawing.

Particular description of goods.—Shaving-Brushes.

Claims use since Oct. 1, 1918.

Ser. No. 114,780. (CLASS 37. PAPER AND STATIONERY.) ELBE FILE & BINDER COMPANY, New York, N. Y. Filed Dec. 23, 1918.



Particular description of goods.—Loose-Leaf Binders.

Claims use since on or about the 1st day of January, 1911.

Ser. No. 114,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NEWTON TEA & SPICE CO., Cincinnati, Ohio. Filed Dec. 26, 1918.

NEWTO

Particular description of goods.—A Mixture to be Used in Place of Eggs in Baking and Cooking.

Claims use since May 8, 1918.

Ser. No. 114,909. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec and Belfast, Me. Filed Dec. 31, 1918.

SEASHORE

Particular description of goods.—Canned Sardines.

Claims use since Jan. 1, 1904.

Ser. No. 114,991. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LIBERTY CARBON COMPANY, Clarksburg, W. Va., and Langley, Ky. Filed Jan. 4, 1919.

LBERTY

Particular description of goods.—Carbon-Black.

Claims use since June 1, 1918.

Ser. No. 115,108. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Jan. 10, 1919.

Cleo

Particular description of goods.—Pearl Buttons for Wearing-Apparel.

Claims use since Dec. 31, 1918.

Ser. No. 115,210. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM LUDDEN, Boston, Mass. Filed Jan. 15, 1919.

LECZEMO

Particular description of goods.—An Ointment for Use in Treating Diseases of the Skin.

Claims use since May 28, 1908.

Ser. No. 115,231. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) UTILITY MANUFACTURING COMPANY, Baltimore, Md. Filed Jan. 16, 1919.



Particular description of goods.—Wire and Sheet-Metal Wares, Comprising Tea and Coffee Strainers, Soup and Vegetable Strainers, Canning-Trays, Steaming-Trays, Soap-Shakers, Soap-Strainers, Soap-Trays, Salad Washers and Strainers, Fry-Baskets, and Wire Broilers.

Claims use since Sept. 1, 1903.

Ser. No. 115,233. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN CORPORATION, New York, N. Y. Filed Jan. 16, 1919.



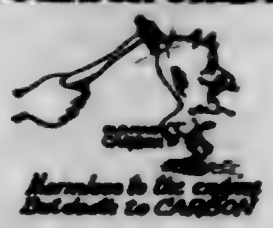
No claim being made to the representation of the outline of applicant's package, the representation of the manicuring appliances, or the representation of a bottle apart from the mark shown in the drawing.

Particular description of goods.—Cuticle-Remover in Liquid Form and Liquid Polish for the Nails.

Claims use since May 1, 1917.

Ser. No. 115,247. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL L. HINES, Madison, N. J. Filed Jan. 17, 1919.

HINES'
Carbon Chaser



The term "Hines" and the legends "Carbon Chaser" and "Harmless to the Engine but Death to Carbon" being disclaimed as essential parts of the trade-mark.

Particular description of goods.—Chemical Carbon-Removers.

Claims use since May 1, 1917.

Ser. No. 115,383. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. WHITMORE, Cleveland, Ohio. Filed Jan. 22, 1919.



No claim being made to the word "Sure-Re-Leaf" apart from the mark shown on the drawing.

Particular description of goods.—An Ointment for All Skin Affections, Eczema, Salt-Rheum, Pimples, Burns, Sunburns, Calloused Feet, Chaps, Corns, Piles, Proud Flesh, Blood-Poison, Sore Lungs, Throat, or Nose, Inflamed Eyelids, and Which Removes Incrustation.

Claims use since Jan. 9, 1919.

Ser. No. 115,417. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COX CONFECTIONERY COMPANY, Boston, Mass. Filed Jan. 25, 1919.



Particular description of goods.—Candies.

Claims use since Mar. 1, 1918.

Ser. No. 115,438. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN RUSSELL CUTLERY COMPANY, Turners Falls, Mass. Filed Jan. 25, 1919.



Particular description of goods.—Pen and Pocket Knives.

Claims use since about Sept. 1, 1878.

Ser. No. 115,563. (CLASS 31. FILTERS AND REFRIGERATORS.) THE ALASKA REFRIGERATOR COMPANY, Muskegon Heights, Mich. Filed Feb. 1, 1919.

SITKA

Particular description of goods.—Refrigerators.

Claims use since Nov. 1, 1890.

Ser. No. 115,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OTTO E. SCHROCK, Cleveland, Ohio. Filed Feb. 3, 1919.

HY-ART

Particular description of goods.—Hair-Tonic, Nail and Cuticle Lotion, Freckle-Lotion, Skin-Ointment, Perfumes, Toilet Water, Cold-Cream, Depilatories, Face-Powder or Dusting-Powder, Rouge, and Finger-Nail Polish.
Claims use since the 1st day of October, 1918.

Ser. No. 115,620. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HUGHES MFG. CO., Rome, N. Y. Filed Feb. 4, 1919.

HU-DOME

Particular description of goods.—Dress-Fasteners—to wit, Snap-Fasteners.
Claims use since March, 1918.

Ser. No. 115,624. (CLASS 38. PRINTS AND PUBLICATIONS). HERN J. MILLER, Fort Wayne, Ind. Filed Feb. 4, 1919.

The Home Town Booster

Particular description of goods.—A Periodical Publication Issued Monthly to Promote Home Patronage.
Claims use since January, 1918.

Ser. No. 115,646. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PENN LEATHER CO., Philadelphia, Pa. Filed Feb. 5, 1919.

WB

Particular description of goods.—Leather.
Claims use since Jan. 13, 1919.

Ser. No. 115,674. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FIVE POINTS DRUG CO., Birmingham, Ala. Filed Feb. 7, 1919.

Myrrh-Lyptol

No claim of right to the exclusive use of the word "Myrrh" being made except as shown in the accompanying.
Particular description of goods.—A Mouth-Wash
Claims use since July of 1916.

Ser. No. 115,789. (CLASS 11. INKS AND INKING MATERIALS.) G. SIEGLE COMPANY, Rosebank, New York, N. Y. Filed Feb. 11, 1919.

Hortensia

Particular description of goods.—Colors Used in Ink for Printing and Lithographing.
Claims use since about 1910.

Ser. No. 115,823. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER CO., Holyoke, Mass. Filed Feb. 13, 1919.

ALLIES

Particular description of goods.—Printing and Writing Paper.
Claims use since on or about Sept. 19, 1918.

Ser. No. 115,824. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER CO., Holyoke, Mass. Filed Feb. 13, 1919.

COMMISSION

Particular description of goods.—Printing and Writing Paper.
Claims use since on or about Sept. 19, 1918.

Ser. No. 115,826. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER CO., Holyoke, Mass. Filed Feb. 13, 1919.

OVERSEAS

Particular description of goods.—Printing and Writing Paper.
Claims use since on or about Sept. 19, 1918.

Ser. No. 115,827. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER CO., Holyoke, Mass. Filed Feb. 13, 1919.

PRIORITY

Particular description of goods.—Printing and Writing Paper.
Claims use since on or about Sept. 19, 1918.

Ser. No. 115,828. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER CO., Holyoke, Mass. Filed Feb. 13, 1919.

FREEDOM

Particular description of goods.—Printing and Writing Paper.
Claims use since on or about Sept. 19, 1918.

Ser. No. 115,857. (CLASS 12. CONSTRUCTION MATERIALS.) INSULATING MATERIALS COMPANY, Detroit, Mich. Filed Feb. 14, 1919.

IMCO

Particular description of goods.—Roofing-Cement for Repair of Roofs.
Claims use since Dec. 10, 1914.

Ser. No. 115,867. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) WIGHTMAN & HOUGH CO., Providence, R. I. Filed Feb. 14, 1919.

YANKEE

The cross-lines in the lettering are for shading purposes only and do not represent color.
Particular description of goods.—Cigarette-Cases Which are Made of or Plated with Precious Metal or of Nickel-Silver.
Claims use since Jan. 23, 1918.

Ser. No. 115,917. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDEPENDENT CANNING CO., Chicago, Ill. Filed Feb. 17, 1919.

PICK OF THE PACK



Particular description of goods.—Canned Corn and Canned Beans and Pork with Tomato Sauce.
Claims use since Jan. 5, 1909.

Ser. No. 116,016. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VANDERPAN BROTHERS, Denver, Colo. Filed Feb. 19, 1919.

V. D. P.

Particular description of goods.—A Furniture-Polish.
Claims use since Feb. 12, 1919.

Ser. No. 116,057. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) J. L. OWENS COMPANY, Minneapolis, Minn. Filed Feb. 21, 1919.

DUAL

Particular description of goods.—Grain-Cleaners and Grain-Separators.
Claims use since the 1st day of January, 1918.

Ser. No. 116,057½. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) J. L. OWENS COMPANY, Minneapolis, Minn. Filed Feb. 21, 1919.

MARQUIS

Particular description of goods.—Grain-Cleaners and Grain-Separators.
Claims use since the 1st of January, 1916.

Ser. No. 116,060. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE POUGHKEEPSIE PAINT CO., Poughkeepsie, N. Y. Filed Feb. 21, 1919.

FILKOTE

Particular description of goods.—Varnishes and Sanding-Fillers.
Claims use since Jan. 1, 1917.

Ser. No. 116,183. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. T. J. KING-CLARENCE W. KING, D. D. S. INC., Boston, Mass. Filed Feb. 27, 1919.



The picture shown in the drawing is a portrait of Dr. T. J. King, deceased.
Particular description of goods.—Mouth-Wash.
Claims use since 1898.

Ser. No. 116,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO F. STIFEL'S UNION BREWING COMPANY, St. Louis, Mo. Filed Mar. 3, 1919.

V-P

Particular description of goods.—Oleomargarin.
Claims use since Feb. 11, 1919.

Ser. No. 116,389. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PNEUMO-PHTHYSINE CHEMICAL COMPANY, Chicago, Ill. Filed Mar. 7, 1919.

Pneumo-Phthysine

Particular description of goods.—A Medicinal Plaster for the Alleviation of Pneumonia, Bronchitis, Pleurisy, Phthisis, and Whooping-Cough.
Claims use since 1904.

Ser. No. 116,404. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHIPPEWA MILLING COMPANY, Montevideo, Minn. Filed Mar. 8, 1919.



Particular description of goods.—Wheat-Flour.
Claims use since Jan. 21, 1919.

Ser. No. 116,416. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVAN W. HOOK & CO., INC., Baltimore, Md. Filed Mar. 8, 1919.



Particular description of goods.—Canned or Preserved Foods, as Follows: Asparagus, Artichokes, Beans, Corn, Peas, Spinach, Tomatoes, Catsup, Maple-Syrup, Olives, Olive-Oil, Peanut-Butter, Peaches, Pineapple, Herring-Roe, Salmon, Shrimp, and Tuna Fish.
Claims use since about September, 1917.

Ser. No. 116,476. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN BUTTERINE CO., Jersey City, N. J. Filed Mar. 12, 1919.

Rein-Deer

Particular description of goods.—Oleomargarin.
Claims use since October, 1918.

Ser. No. 116,510. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. AMBINCK & CO., INC., San Francisco, Calif. Filed Mar. 13, 1919.



Particular description of goods.—Coffee.
Claims use since Dec. 25, 1916.

Ser. No. 116,543. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec, Me. Filed Mar. 13, 1919.

VALLEY

Particular description of goods.—Canned Sardines.
Claims use since Feb. 1, 1919.

Ser. No. 116,544. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec, Me. Filed Mar. 13, 1919.

PORTAGE

Particular description of goods.—Canned Sardines.
Claims use since Feb. 1, 1919.

Ser. No. 116,545. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec, Me. Filed Mar. 13, 1919.

TRENCH

Particular description of goods.—Canned Sardines.
Claims use since Feb. 1, 1919.

Ser. No. 116,548. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec, Me. Filed Mar. 13, 1919.

TELESCOPE

Particular description of goods.—Canned Sardines.
Claims use since Feb. 1, 1919.

Ser. No. 116,547. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUBEC SARDINE CO., Lubec, Me. Filed Mar. 13, 1919.

VACATION

Particular description of goods.—Canned Sardines.
Claims use since Feb. 1, 1919.

Ser. No. 116,657. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RAYMOND A. JENNINGS, Mattoon, Ill. Filed Mar. 17, 1919.



Particular description of goods.—Eggs.
Claims use since February, 1917.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 29, 1919.

125,265. OLEOMARGARIN. David A. Blanton, St. Louis, Mo.
Filed January 9, 1918. Serial No. 108,374. PUBLISHED JANUARY 28, 1919.

125,266. MEN'S AND BOYS' WORK-SHIRTS. Benjamin Bruhn, New York, N. Y.
Filed November 15, 1918. Serial No. 114,177. PUBLISHED JANUARY 7, 1919.

125,267. CHILDREN'S SHOES OF LEATHER. Brown Shoe Company, Inc., St. Louis, Mo.
Filed September 25, 1918. Serial No. 113,245. PUBLISHED DECEMBER 31, 1918.

125,268. UNDERWEAR—NAMELY, SHIRTS AND DRAWERS OF TEXTILE FABRICS. The B. V. D. Company, New York, N. Y.
Filed November 18, 1918. Serial No. 114,216½. PUBLISHED JANUARY 7, 1919.

125,269. CERTAIN NAMED WORKMEN'S GARMENTS. Harry N. Clarke, Alliance, Ohio.
Filed August 17, 1918. Serial No. 112,763. PUBLISHED DECEMBER 31, 1918.

125,270. AN OINTMENT FOR CERTAIN NAMED AFFECTIONS AND INFECTIONS OF THE SKIN. Herbert C. Crawford, Binghamton, N. Y.
Filed December 17, 1917. Serial No. 108,001. PUBLISHED AUGUST 20, 1918.

125,271. FABRIC GLOVES. Crown Glove Company, New York, N. Y.
Filed July 15, 1918. Serial No. 112,129. PUBLISHED JANUARY 21, 1919.

125,272. DOLLS. The Faultless Rubber Co., Ashland, Ohio.
Filed November 12, 1918. Serial No. 114,142. PUBLISHED JANUARY 14, 1919.

125,273. LADIES' AND CHILDREN'S HATS. Hyman, Meyer & Hyman, Baltimore, Md.
Filed August 13, 1918. Serial No. 112,689. PUBLISHED DECEMBER 31, 1918.

125,274. DRESS-SHIRTS. Kent and Rountree Dry Goods Co., Springfield, Mo.
Filed August 8, 1918. Serial No. 112,495. PUBLISHED JANUARY 21, 1919.

125,275. SWEATERS, KNITTED OR WOVEN HEADWEAR, AND UNDERWEAR, KNITTED OR WOVEN. Kent and Rountree Dry Goods Co., Springfield, Mo.
Filed August 8, 1918. Serial No. 112,493. PUBLISHED JANUARY 21, 1919.

125,276. CONFECTION IN THE NATURE OF A CAKE. James R. McCleskey, St. Louis, Mo.
Filed January 28, 1918. Serial No. 108,672. PUBLISHED JANUARY 28, 1919.

125,277. CHILDREN'S DRESSES. Maher & Kessler, New York, N. Y.
Filed November 15, 1918. Serial No. 114,186. PUBLISHED JANUARY 21, 1919.

125,278. KNITTED, NETTED, AND TEXTILE UNDERWEAR FOR MEN, WOMEN, AND CHILDREN. Markovitz Bros., Philadelphia, Pa.
Filed July 9, 1918. Serial No. 112,014. PUBLISHED DECEMBER 31, 1918.

125,279. WORK-SHIRTS, DRESS-SHIRTS, NEGLIGÉE SHIRTS, OVERALLS, JUMPERS, COATS, PANTS, VESTS, AND MACKINAWS. Geo. F. Minto & Co., Inc., Detroit, Mich.
Filed December 2, 1918. Serial No. 114,453. PUBLISHED JANUARY 21, 1919.

125,280. NON-INTOXICATING MALT BEVERAGE CONTAINING LESS THAN ½ OF 1% OF ALCOHOL BY VOLUME AND SOLD AS SOFT DRINKS. D. Hayden Montgomery, Cairo, Ill.
Filed December 15, 1917. Serial No. 107,983. PUBLISHED DECEMBER 10, 1918.

125,281. LEATHER AND LEATHER AND CLOTH BOOTS AND SHOES FOR MEN, WOMEN, AND CHILDREN. The Mutual Shoemakers, Inc., Malden, Mass.
Filed October 7, 1918. Serial No. 113,612. PUBLISHED JANUARY 14, 1919.

125,282. SKATERS' SHOES, MORE PARTICULARLY MADE OF LEATHER AND FOR MEN, WOMEN, AND CHILDREN. Nestor Johnson Manufacturing Company, Chicago, Ill.
Filed November 18, 1918. Serial No. 114,212. PUBLISHED JANUARY 21, 1919.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE FIETSCH, JR.

Decided April 16, 1918.

PATENTABILITY—PATENTABLY NEW RESULT ACHIEVED BY NEW COMBINATION.

Claims for a moisture-proof paper box having foldable end flaps, the paper being formed of layers, one of the layers being a thin pliant layer of waterproof fused cement, *Held* patentable over references neither of which showed a carton with foldable ends made of stock that would not crack at the folds. (*Ex parte McCollum*, 204 O. G., 1346; construed.)

[NOTE.—This application has resulted in Patent No. 1,269,218.]

APPEAL from Examiners-in-Chief.

MOISTURE-PROOF PAPER PACKAGES OR CARTONS.

Messrs. Peirce & Fisher and *Mr. Percy B. Hill* for the applicant.

NEWTON, *Commissioner:*

This is an appeal from a decision of the Board of Examiners-in-Chief sustaining an action of the Primary Examiner finally rejecting claims 1 and 2, of which claim 1 is an example:

1. A collapsible, moisture proof carton comprising side walls and foldable end flaps, said side walls being connected to one another and to said end flaps by corner folds and said walls and flaps being formed of layers of paper stock, and an intermediate, thin, pliant layer of a waterproof fused cement uniting the layers of paper stock and extending without interruption through said corner folds, substantially as described.

The references cited are: Fell, 925,572, June 22, 1909; Harbeck, 1,062,002, May 20, 1913.

The invention covered by the appealed claims is a moisture-proof paper box having foldable end flaps, the paper being formed of layers, one of the layers being a "thin, pliant layer of a waterproof fused cement," whereby when the end flaps are folded the pliant waterproof cement will not be cracked. This is a new result in this art. No one has heretofore produced a paper carton with foldable ends that was crack-proof at the folds.

The Examiners-in-Chief have held, in effect, that there was no invention required to substitute the fused-cement paper of Harbeck for the silicate-of-soda (soft glass) coated paper of Fell.

I would concur in this decision were it not for applicant's new result; but Fell's glass layer would probably crack the first time the end of his carton was folded, and hence the carton would not be moisture-proof. When applicant bends the end flaps of his carton, there is no breakage.

Harbeck shows no end flaps to be bent. Neither Harbeck nor Fell therefore anticipates the result of the crack-proof fold. (See *ex parte McCollum*, 204 O. G., 1346, holding that a "claim should not be rejected by combining references if the function or result is new," meaning, of course, patentably new.)

Applicant's new result seems to be quite a step forward in this art, and I regard it as being patentably new. (See also *Railway Supply Co.* v. *Hart Steel Co.*, 217 O. G., 699, and *Pieper* v. *S. S. White Dental Mfg. Co.*, 220 O. G., 349.)

The decision of the Examiners-in-Chief is accordingly reversed.

EX PARTE THOMPSON PIANO MANUFACTURING CO.

Decided April 19, 1918.

TRADE-MARK—PICTURE OF A WOMAN POLISHING A PIANO—NOT DESCRIPTIVE OF FURNITURE-POLISH.

The representation of a piano and a woman polishing it *Held* not descriptive when used as a trade-mark for furniture-polish, since it is not a picture of the goods at all.

ON APPEAL.

TRADE-MARK FOR FURNITURE-POLISH.

Messrs. Burton & Burton for the applicant.

NEWTON, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register as a trade-mark for furniture-polish the representation of a grand piano and a woman standing by the piano polishing the same on the ground that the picture is not used as a trade-mark indicative of origin, but only as a decorative feature for the labels, and, furthermore, that the picture is descriptive of the quality or characteristic of the goods, citing *ex parte Pratt & Farmer*, (1876, C. D., 244,) showing the picture of a fish, which was refused registration as a trade-mark for fishing-lines, also *ex parte American Paint & Color Co.*, (MS. Dec., Sept. 30, 1913,) refusing the picture of a condenser for use on condensers. The Examiner has also called attention to a number of illustrations in magazines and cartons showing different goods with various kinds and forms of illustrations as to the manner of use of the goods, etc.

Of course goods may be described by picture as well as by written description, and pictures of the goods *per se* should not be registered as trade-marks for the goods. (See *in re Motz Tire and Rubber Co.*, 193 O. G., 513; 40 App. D. C., 487, wherein the representation of a tire was held unregistrable for tires; *Bristol Co.* v. *Graham*, 190 Fed. Rep., 412, wherein the picture of a steel belt-lacing was held an invalid mark for belt-lacings, and *Scholl Mfg. Co.*, 200 O. G., 393, wherein the representation of a foot supported on an arch was held not registrable.)

But applicant's picture is not a picture of his goods at all. It is a conventional picture not useful to any one else in describing polish, and to grant applicant a perpetual monopoly of this particular picture would harm no one. Any manufacturer of polish has a right to display on his goods the picture of the goods, but not applicant's conventional showing of a woman polishing a grand piano, all inclosed in a circle. (See *E. Morgan's Sons* v. *Ward*, 152 Fed. Rep., 690, holding a bright pan reflecting a man's face, a good trade-mark for pan-cleaning compound, and *Bilber Co.*, 3 T. M. R., 111, holding a pile of luggage, a globe, etc., a good mark for traveling-bags.)

Cases of this character should be allowed or refused, depending on whether the showing was only a showing of the goods on which the mark was to be used or whether it included sufficient conventional matter belonging to no one and adopted by the applicant to indicate origin or ownership by him.

It is held in the present case that there is sufficient arbitrary matter to warrant allowance of the case, and the final rejection is accordingly overruled.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BARBARA HAUSS, ADMINISTRATRIX OF THE ESTATE OF DAVID J. HAUSS, DECEASED, v. MERRELL.

Decided March 3, 1919.

REISSUE — NEW MATTER — RIGHT OF INTERFERANT TO MAKE CLAIMS.

Where a patent to H. for a process of producing desiccated milk was allowed over the prior art because he disclosed a desiccating-chamber having heated walls, *Held* that M. was not entitled to make the process claims in an application for the reissue of a patent which did not disclose a chamber having heated walls. "Attempts to enlarge the scope of an application once filed or of a patent once granted should be frowned upon, especially where the result would be the appropriation of an intervening invention."

Mr. C. W. Miles and *Mr. Harry B. Rook* for the appellant.

Mr. H. P. Denison for the appellee.

ROBB, *J.*:

Appeal from a decision of an Assistant Commissioner of Patents in an interference proceeding in which priority was awarded the appellee Merrell.

The invention relates to an improved process of preparing desiccated milk and other similar food products in a finely divided or powdered state. Hauss's application was filed November 16, 1914, and a patent issued on December 7, 1915. The Hauss specification declares that one of the objects of his invention—

is to provide an improved method whereby soluble finely divided or flour desiccated milk may be prepared free from mechanical or foreign material, or hard gritty or insoluble lumps or particles, and in sterilized condition. Another object is to provide an improved method capable of being continuously carried out, and enabling the product to be conveniently isolated and recovered.

In an accompanying drawing is shown—

a desiccating chamber A having a jacket 2 by means of which the side walls of said chamber are heated.

Heating-coils 3, through which steam or other heating medium is circulated through said jacket to be heated by contact with said coil and thereby uniformly heat the walls of the chamber A to the desired degree without liability of overheating said walls at any point, or locality. Later in the specification it is stated that—

the jacket 2 serves to keep the upper portion of the chamber heated and prevents any condensation of moisture on its inner walls to which the milk or particles might adhere.

The claims involved are as follows:

1. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the heated condensed milk in a chamber, introducing sufficient heat to desiccate the milk in a current of heated air introduced through the atomizer, and separating the desiccated milk from the air and water vapor before condensation of the water vapor carried by the air occurs.

2. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the heated condensed milk by means of an excess of heated air in a chamber thereby utilizing the air employed to atomize the condensed milk as a carrier for all the heat necessary to desiccate the condensed milk, and separating the desiccated milk powder from the air while the air is still in a heated condition and free from moisture resulting from condensation of the water vapor carried thereby.

After the issuance of the Hauss patent, containing the above claims, Merrell applied for a reissue of his patent, No. 1,136,356, dated April 20, 1915, the application for which was filed on February 16, 1912, and he finally was permitted to copy claims 1 and 2 of the Hauss patent, this interference following. Hauss moved to dissolve on the ground that Merrell's patent fails to disclose the invention in controversy, and hence that Merrell has no right to make the claims. The Examiner and Assistant Commissioner sustained Merrell's contention, while the Examiners-in-Chief found for Hauss. That tribunal invited attention to the fact that the Hauss process calls for the heating of the desiccating-chamber walls; that there is—

a clear difference between the Merrell and Hauss devices, the only point in the case being whether or not the difference is brought out in the counts.

The Board then stated that the counts originated with Hauss and that the above-mentioned difference between the two devices was the principal argument successfully advanced for the allowance of his claims.

In *Manly* v. *Williams* (37 App. D. C., 194, 201) this court had occasion to state the rule relating to the reissue of patents, in effect that attempts to enlarge the scope of an application once filed or of a patent once granted should be frowned upon, especially where the result would be the appropriation of an intervening invention. So, in this case, it

should clearly appear that Merrell's original specification furnishes a proper basis for these claims, especially as he had taken out other patents relating to this art. Thus, his patent dated July 23, 1907, No. 860,929, discloses a process for desiccating milk which broadly anticipates the present process.

In fact, there is perhaps less difference between that process and the process disclosed in the Merrell specification here in review than there is between the later Merrell process and that of Hauss. Merrell Patent No. 954,451, dated April 12, 1910, discloses another process for desiccating milk very similar to that of the prior patent, except that provision is made in the later patent for a heat-resisting jacket to prevent excessive heating of the milk in its passage through the atomizer. When the application for the Merrell patent here involved was filed, therefore, the art was so well developed that he should have known exactly what improvements he had made. The walls of the desiccating-chamber shown and described by him are not heated, and we agree with the Examiners-in-Chief that, the Patent Office having found this element in the Hauss disclosure to be material and to constitute a patentable improvement over the prior art, it would be inconsistent and unjust now to permit Merrell, who did not disclose this element, to appropriate it. These claims having originated with Hauss they should be given an interpretation, if possible, that will vitalize the disclosure in his specification; in other words, an interpretation consistent with and protecting that disclosure.

We therefore are of opinion that the Merrell patent contains no basis for the words—

> and separating the desiccated milk from the air and water vapor before condensation of the water vapor carried by the air occurs,

as used in the Hauss patent, where they originated and with reference to which they must be interpreted. Hauss's drawing and specification not only fully disclose the heated desiccating-chamber walls but carefully point out the advantages to be derived therefrom. Merrell, on the contrary, shows no such heated walls, nor does his specification indicate that he appreciated that any advantages would result from such a construction. In short, there is nothing to indicate that the idea ever occurred to him. Hauss, on the contrary, did disclose it and, at that time, the Patent Office evidently was satisfied that this step in the process was patentably different from the prior art. At all events, we are convinced that there is no real basis in the Merrell application for the allowance of these claims, if they are to be given an interpretation consistent with the Hauss specification, in which they originated.

The decision is reversed and priority awarded Hauss.

Reversed.

ADJUDICATED PATENTS

(U. S. C. C. A. Cal.) The Lyndon patent, No. 695,220, for an electromechanical water-wheel governor, *Held* not infringed. *Henry* v. *City of Los Angeles*, 255 Fed. Rep., 769.

Changes in Classification.

(ORDER No. 2,479.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 18, 1919.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In Division XXXIV abolish class 239, Railway-Rails and Joints, the patents formerly contained therein having been placed in class 238, Railways, Surface Track, hereinafter established.

In class 238, Railway-Ties and Fasteners, (Division XXXIV,) change the title of the class to read *Class 238, Railways, Surface Track*, abolish the existing subclasses, and establish in lieu thereof the following subclasses and definitions, this class being composed of the patents formerly contained in classes 238, Railway-Ties and Fasteners, and 239, Railway-Rails and Joints, hereinbefore abolished, and class 104, Railways, subclasses 50, Footguards; 178, Track, Highway; 14, Track, Miscellaneous; 45, Track, Portable; 112, Track, Portable, Crossovers, and 110, Track-curves, abolished in Order No. 2,440:

238.—RAILWAYS, SURFACE TRACK.

1. Miscellaneous.
2. Road-bed—
3. Highway-track—
4. Metallic,
5. Concrete,
6. Continuous—
7. Concrete,
8. Street-crossing,
9. Rail-paving.
10. Portable track—
11. Embankment or fill,
12. Crossovers,
13. House-moving,
14. Traction-mats.
15. Track-curves—
16. Rollers.
17. Guard-rails—
18. Spring,
19. Under main rail,
20. Two-rail chair,
21. Two-rail clamps,
22. Spacers—
23. Tapered.
24. Stringers—
25. Concrete,
26. Metallic.
27. Tie arrangement—
28. Diagonal.
29. Ties—
30. Forms—
31. Jointed—
32. Hinged,
33. Pivoted ends,
34. Detachable ends,
35. Multiple section,
36. Vertical sandwich,
37. Horizontal sandwich,
38. Twin,
39. Complementary sliding lock,

238.—RAILWAYS, SURFACE TRACK—Continued.

Ties—
Forms—
Jointed—
40. Truss—
41. Integral,
42. Stringer ends,
43. Loop or hook ends,
44. Spread ends,
45. Special—
46. Rail-joint,
47. Bridge-joint,
48. Spring,
49. Old rail,
50. Rods—
51. Rail-base,
52. Turnbuckle,
53. Screw-rod,
54. Cross-section—
55. Two-part—
56. Channels,
57. I-beam,
58. Angles or T's,
59. Channel-flange down—
60. Sheet metal,
61. Rolled,
62. Channel-flange up—
63. Sheet metal,
64. Rolled,
65. I-beam—
66. Rolled,
67. T—
68. Cast,
69. Inverted,
70. Tubular—
71. Multiple,
72. Rectangular—
73. Vertical telescope,
74. Separate lid and bottom,

238.—RAILWAYS, SURFACE TRACK—Continued.

Ties—
Cross-section—
Tubular—
Rectangular—
75. Separate bottom,
76. Separate lid,
77. Folded sheet,
78. Integral—
79. Cast,
80. Triangular,
81. Circular,
82. Corrugated,
83. Non-metallic—
84. Plastic compound—
85. Internal reinforcements—
86. Truss,
87. Tube,
88. Cast,
89. Rolled section,
90. Closed loop,
91. Rods—
92. Cross-tied,
93. Foraminous sheet,
94. Wire,
95. Armored—
96. Box,
97. Tube,
98. Side and bottom,
99. Side and top,
100. Sides,
101. Top,
102. Top and bottom,
103. Bottom,
104. End closures,
105. Spacers,
106. Anchor lugs and ribs,
107. Insulation—
108. Sectional tie.

235.—RAILWAYS, SURFACE TRACK—Continued.

109. **Pedestals—**
110. Pot—
111. Cast,
112. Wrought plate—
113. Inverted U,
114. Tube or box,
115. Concrete block—
116. Chair-bar,
117. Bar-core,
118. Wood block,
119. Pier,
120. Screw.
121. **Rail arrangement.**
122. **Rails—**
123. Rack,
124. Turnout,
125. Vignoles—
126. T-base insert,
127. Channel—
128. Integral,
129. Trough and filler,
130. T-rail,
131. Webless or flat,
132. Reversible—
133. Triple head,
134. Tubular—
135. Integral,
136. Step-tread,
137. Biped,
138. Base-bar,
139. Side bars,
140. Detachable guard or step,
141. Split base and web,
142. Split tread,
143. Detachable head—
144. Lap-web,
145. Grooved web,
146. Integral grooved base,
147. Web-clamp,
148. Tread-surfaces,
149. Webs,
150. Substance,
151. **Rail-joints—**
152. Insulated—
153. Transverse abutting,
154. Chair—
155. Twin—
156. Base-plate or bolted,
157. Angle—
158. Weber type,
159. Splice-bars—
160. With base-plate,
161. In channel,
162. Cast on,
163. Molten filler,
164. Welded,
165. Switch-rail,
166. Pivoted,
167. Compromise,
168. Truss-rod,
169. Parallel beams,
170. Gravity,
171. Expansion-deflectors,
172. Vertical adjustment,
173. Yielding rail end,
174. Variable levels,
175. Special rails—
176. Channel,
177. T-web U base,
178. Flat,
179. Internal key,
180. Flush web-key,
181. Web-key splice-lock,
182. Joint lug-key,
183. Integral web-key and bars,
184. Web-locks,
185. Z form—
186. Base-connected,
187. Chair—
188. Twin—
189. Base-stiffener,
190. With base-plate,
191. Base-bolted,
192. Lapping base-sections,
193. Interlocked base-sections—
194. Longitudinal keys,
195. Angle—
196. Pivoted,
197. Splice-lug engagement,
198. Sliding splice-lock—
199. Base-plate underlap,

235.—RAILWAYS, SURFACE TRACK—Continued.

Rail-joints—
Chair—
Angle—
200. Weber type,
201. Transverse slide—
202. Screw-operated,
203. Horizontal wedge,
204. Vertical wedge,
205. Integral—
206. Base-filler,
207. One-side filler,
208. Two-side filler,
209. Base-plate—
210. Top flange,
211. Angle-bar underlap,
212. Angle-bar overlap,
213. Base-stiffeners,
214. Distorted,
215. Center seat,
216. Rail-lock,
217. Side clips,
218. Tread-bridge—
219. Rail-head insert,
220. Rail-head cover,
221. Notched head—
222. Twin,
223. Head-section—
224. Saddle,
225. Rail-section—
226. Splice-key,
227. Spacer—
228. Expansible,
229. Web-posts,
230. Scarf—
231. Longitudinally assembled—
232. Twin,
233. With vertical drop,
234. Longitudinal or vertical,
235. Vertical drop,
236. Laterally assembled—
237. Twin,
238. Longitudinal lock—
239. Twin,
240. Angularly assembled—
241. Longitudinal,
242. Lateral,
243. Splice-bars—
244. Multiple part,
245. Toggle,
246. Rail-guide—
247. Attached,
248. Rail-sleeve,
249. Longitudinal bolts,
250. Bar-lugs and splice-keys,
251. Bar-bolts and splice-key,
252. Slotted bolt-locks,
253. Bolt-keys,
254. Rail-groove swing,
255. Cam-tightened,
256. U-bars and loops,
257. Vertical bevel-flange,
258. Tapered,
259. Springs,
260. Fasteners—
261. Double and split keys,
262. Nut and bolt lock,
263. Adjustable joint-clamps,
264. **Rail-seats—**
265. With anchor in concrete,
266. English chair,
267. T-rail,
268. ⊓-rail,
269. Cast—
270. With tie,
271. Plane top,
272. Wrought—
273. With tie,
274. Plane top,
275. Twin jaws—
276. Wrought,
277. Pivoted,
278. Jaw and seat,
279. Gravity,
280. Saddles,
281. Vertical adjustment,
282. Lateral adjustment,
283. Cushions—
284. Metal springs,
285. Wood blocks,
286. Spiking blocks,
287. **Tie-plates—**
288. Gage,

235.—RAILWAYS, SURFACE TRACK—Continued.

Tie-plates—
289. Plural tie,
290. Lap—
291. Interlock,
292. Rail-brace—
293. Integral,
294. Spike-lock—
295. Lug on spike,
296. Pawl,
297. Anchors—
298. Integral,
299. Tie-abutting,
300. Sleeve,
301. Reversible,
302. Spring,
303. Screw-spike,
304. Top surface,
305. Rotary,
306. Rail-base seats,
307. Contour,
308. Spike-hole arrangement,
309. Spike-shank brace,
310. **Fastenings—**
311. Welded,
312. Protective boxes and closures,
313. Universal,
314. Yoke,
315. Rail-anchors—
316. Pawl,
317. Cam,
318. Rail-recess,
319. Rail-lug,
320. Distorted rail,
321. Tie contact—
322. Cam,
323. Swinging clip,
324. Wedge,
325. Bevel-slide—
326. Reversed lap,
327. Twin jaws—
328. With wedge,
329. Diagonal—
330. Integral,
331. Transverse slide—
332. Screw-operated,
333. Horizontal-wedge operated,
334. Vertical-wedge operated,
335. Abutting screw-point,
336. Rail-brace—
337. Vertical slide,
338. Clamps—
339. Gage,
340. Multiple face,
341. Cam adjustment,
342. Nut type,
343. Anchors—
344. Vertical face,
345. Vertical shank,
346. Ratchet,
347. Bevel-guide,
348. Internal arm,
349. Spring,
350. Integral with tie,
351. Clip type—
352. Double,
353. Vertical wedge,
354. Horizontal wedge,
355. Hooks—
356. Pivoted,
357. Twin—
358. Through-bolt,
359. Single pivot,
360. Lever,
361. Wedges—
362. Parallel,
363. Alined,
364. Flange,
365. Locks,
366. Spikes—
367. Interlock,
368. Bent,
369. Split end,
370. Plug,
371. Socket,
372. Screw—
373. Sockets,
374. Socket and wedge,
375. Lock,
376. Ratchet,
377. Bolt anchors and sleeves,
378. U-bolts and clips,
379. **Foot-guards—**
380. Switch-point,
381. Wheel-depressed,
382. **Deadening noise.**

J. T. NEWTON, *Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

APRIL, 1919.

[The decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

APRIL, 1919.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

ABANDONMENT OF APPLICATION.

See Construction of Statutes, 1, 2; Interference, 1.

AGENT.

See Reduction to Practice, 1.

AMENDMENTS.

See Priority of Invention, 4.

APPEAL FROM THE COMMISSIONER OF PATENTS.

See Appeal to the Court of Appeals of the District of Columbia.

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

See Construction of Statutes, 3.

INTERFERENCE—PRIORITY.

Where on an appeal from an award of priority the Commissioner held that the successful party could not make the claims and dissolved the interference, *Held* that appeal from his decision lay to the Court of Appeals of the District of Columbia.

[*Vincent v. Landsiedel, 982.

BURDEN OF PROOF.

See Construction of Statutes, 1; Interference, 1.

CLAIMS.

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CONCEALMENT OF INVENTION.

See Interference, 1; Priority of Invention, 1.

CONCEPTION OF INVENTION.

See Priority of Invention, 1, 2, 4.

CONFUSION OF THE PUBLIC.

See Registration of Trade-Marks, 1.

CONSTRUCTION OF CLAIMS.

1. WATER-JACKET FOR INTERNAL-COMBUSTION ENGINES.

A water-jacket for internal-combustion engines having a coating applied to the inner surface thereof and the process of making the same *Held* unpatentable in view of the prior art.

[* *In re* Birkigt, 203.

2. PATENTABILITY—CLAIMS MUST SPECIFY THE NOVELTY.

Where applicant's combination is new as a whole and performs a new and useful function, but a claim is presented which covers only a part thereof, which is literally met in the prior art, it is not patentable. [*Ex parte* Eager, 709.

3. CHANGE OF LOCATION—NEW FUNCTION PERFORMED.

A claim for a reaming-tool having an air-inlet in a specified location, which adapts it for reaming the bung-hole of a barrel, while permitting the withdrawal of shavings to prevent them from falling into the barrel, is patentable over a reamer of the prior art having an air-inlet in a different location, where it would not perform the same function. [Id.

4. PATENTABLY NEW RESULT ACHIEVED BY NEW COMBINATION.

Claims for a moisture-proof paper box having foldable end flaps, the paper being formed of layers, one of the layers being a thin pliant layer of waterproof fused cement, *Held* patentable over references neither of which showed a carton with foldable ends made of stock that would not crack at the folds. (*Ex parte McCollum*, 204 O. G., 1346, construed.) [*Ex parte* Fletsch, 955.

CONSTRUCTION OF STATUTES.

1. INTERFERENCE—CONTINUING APPLICATION—PRIOR APPLICATION UNDER ACT OF 1893.

Where R. filed an application under the provisions of the act of March 3, 1893, without a fee and subsequently filed a duplicate application with a fee and abandoned the first, *Held* that for the purpose of determining the burden of proof he is entitled to the benefit of his earlier application.

[Snelling v. Rittman v. Brooks, Bacon, and Clark, 412.

2. SAME—SAME—SAME—ABANDONMENT OF APPLICATION.

A dedication by filing an application without fee under the provisions of the act of 1893 is not completed unless the patent issues. [Id.

3. SAME—SAME—SAME—QUESTION OF DEDICATION REVIEWABLE BY THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

Where in an interference it is contended that the filing of an application without fee under the provisions of the act of 1893 is a dedication of the invention to the public and that a subsequent application filed with fee has no standing, *Held* that this is a matter which presumably the court of appeals would review in connection with an appeal upon the question of priority. [Id.

CONTINUATION OF APPLICATION.

See Construction of Statutes, 1.

CONTRACT.

See Priority of Invention, 2.

COPYING CLAIMS.

See Estoppel: Interference, 3.

DEDICATION TO THE PUBLIC.

See Construction of Statutes, 2, 3.

DELAY IN FILING APPLICATION.

See Priority of Invention, 1, 2, 4; Reduction to Practice, 2.

DESCRIPTION.

See Testimony.

DESCRIPTIVE TERMS.

See Registration of Trade-Marks, 2, 4.

DILIGENCE.

See Priority of Invention, 1, 4.

DISCLOSURE OF INVENTION.

See Reduction to Practice, 1; Reissue.

DISSOLUTION OF INTERFERENCE.

See Appeal to the Court of Appeals of the District of Columbia; Interference, 3.

DIVISION OF APPLICATION.

See Double Patenting; Interference, 3.

DOUBLE PATENTING.

DOUBTS RESOLVED IN FAVOR OF APPLICANT.

Where the Primary Examiner required division between claims for an article and a mold for producing the same and the applicant canceled the claims for the article and took out a patent for the mold and shortly after such patent was granted filed an application for the article, any doubt upon the question of the independence of the inventions should be resolved in favor of the applicant. [*Ex parte* McBean, 202.

DOUBTS.

See Double Patenting.

DRAWINGS.

See Priority of Invention, 2.

EARLIER APPLICATION.

See Construction of Statutes, 1, 3; Interference, 3.

ELEMENTS.

See Infringement.

EQUIVALENTS.

See Invention, 1.

ESTOPPEL.

COPYING CLAIMS FROM A PATENT.

An applicant is not estopped from copying the claims of a patent under the doctrine of *Winsmith* v. *Chapman* (248 O. G., 1004; 47 App. D. C., 428) where claims to the same subject-matter were always in the case.

[*Hutchinson Vapor Heating Corporation and George H. Zellers, trading as Zellers & Co., v. Mouat, 208.

EVIDENCE.

See Priority of Invention, 3; Testimony.

FEES.

See Construction of Statutes.

FIRST AND ORIGINAL INVENTOR.

See Interference, 2; Invention.

FORMER DECISIONS CITED.

See Estoppel.

FORMER DECISIONS CONSTRUED.

See Construction of Claims, 4; Interference, 3.

FORMER DECISIONS DISTINGUISHED.

See Interference, 3.

FUNCTION.

See Construction of Claims, 2, 3; Particular Patents.

INDEPENDENT INVENTIONS.

See Double Patenting.

INFRINGEMENT.

See Particular Patents.

NOT AVOIDED BY ADDITION OF IMMATERIAL ELEMENT.

The essential elements of plaintiff's patent having been appropriated, infringement is not avoided by the addition of an element which is not necessary to the operativeness of the combination.

[*Hutchinson Vapor Heating Corporation and George H. Zellers, trading as Zellers & Co., v. Mouat, 208.

INTERFERENCE.

See Appeal to the Court of Appeals of the District of Columbia: Construction of Statutes; Priority of Invention; Reduction to Practice; Reissue.

1. PRIORITY—CONCEALMENT OR ABANDONMENT—BURDEN OF PROOF.

Where it is alleged that the party who first reduced the invention to practice concealed or abandoned the invention, *Held* that the party alleging such concealment or abandonment has the burden of strictly proving it.

[*Hathaway v. Field, Lanning, and Colman, etc., 413.

2. GIST OF THE INVENTION—IMMATERIAL DETAILS.

Where the real invention in issue consisted in placing a thumb-flange on the valve-casing of a tire-valve, the first inventor of this structure was the first inventor of the issue, although one count called for a sealing-washer in a specified location.

[*Sarah C. Hackley, administratrix of George T. Hackley, deceased, v. Hensemier, 630.

3. CLAIMS COPIED FROM PATENT AFTER ADVERSE DECISION ON PRIORITY.

In an interference between H. and C. priority was awarded to H. and a patent was granted to him. Thereafter C. discovered an earlier-filed application which supported some of the claims of H.'s patent and sought an interference, which was denied because the application was in issue and the proposed claims were for a different species. Thereupon a divisional application was filed containing such claims and an interference was declared, which was dissolved on the ground of *res judicata*. Upon appeal from an *ex parte* rejection on this ground *Held* that the question of priority was *res judicata*, since the claims were in H.'s application during the first interference and in accordance with *New Departure Mfg. Co.* v. *Robinson* (188 O. G., 1055; 39 App. D. C., 504) should then have been made by C., even though it had been necessary to declare another interference. (*In re Curtiss*, 208 O. G., 650; 46 App. D. C., 182, distinguished.)

[*In re Cutler, 831.

INTERVENING RIGHTS.

See Reissue.

INVENTION.

See Interference, 2.

1. SUBSTITUTION OF EQUIVALENTS.
In a counterbalanced-window-sash construction the substitution of the flexible connection shown in one patent for the lever connection of another, without producing any material difference in operation or obtaining any materially different result, involves no invention. [*Ex parte* Dutcher, 411.

2. PATENTABILITY—NOVEL COMBINATION.
In order to negative invention in a novel combination "it is necessary to find in the prior art not merely a device which might be modified to make this construction, but somewhere a suggestion, not only that the modification ought to be made but how to make it." [*Ex parte* Gee, 800.

NEW MATTER.

See Priority of Invention, 4; Reissue.

OPPOSITION TO REGISTRATION OF TRADE-MARKS.

See Registration of Trade-Marks, 3.

TRADE-MARK USE BY THE OPPOSER NOT NECESSARY.
In order that an opposition may be sustained, it is not necessary that the opposer establish a trade-mark use of the mark. It is sufficient if he has acquired a right to use the mark, though not an exclusive one, prior to the applicant's adoption of the mark.
[*The Atlas Underwear Company v. B. V. D. Company, 801.

PARTICULAR PATENTS.

MOUAT—No. 937,686—PRESSURE-REGULATOR—INFRINGEMENT.
The Mouat patent, No. 937,686, for a pressure-regulating apparatus, claims 7 and 10, which involve combinations including a steam-boiler and a receptacle connected thereto by a pipe above the water-level in the boiler, which affords an equalization of steam-pressure on the water in the receptacle and in the boiler and keeps the receptacle filled by water of condensation, is infringed by a similar apparatus in which such a connecting-pipe is employed to perform the same functions, although arranged slightly different from that shown in the patent.
[*Hutchinson Vapor Heating Corporation and George H. Zellers, trading as Zellers & Co., v. Mouat, 203.

PATENTABILITY.

See Construction of Claims; Invention.

PRIOR REGISTRATION OF TRADE-MARKS.

See Registration of Trade-Marks, 1.

PRIORITY OF ADOPTION AND USE.

See Opposition to Registration of Trade-Marks; Registration of Trade-Marks, 3.

PRIORITY OF INVENTION.

See Appeal to the Court of Appeals of the District of Columbia; Construction of Statutes, 1; Interference, 1, 3; Reduction to Practice, 1.

1. DELAY IN FILING APPLICATION.
Where H. conceived an invention, made a machine embodying it, but did not file his application until five years thereafter, during which time C. conceived the invention, built a machine, and filed his application, and it appeared that this machine was closely related to another machine which was being manufactured by H.'s assignee and that the development of both machines depended upon the refinement of a part known as the "warp-worm" and it appeared that work was constantly done upon this and that the owners of the invention were advised by mill men that the machine of the issue would not be successful until it was capable of handling fine yarns, which depended upon the development of the "warp-worm," *Held* that there was no suppression of the invention and priority should be awarded to H.
[*Hathaway v. Field, Lanning, and Colman, etc., 413.

2. INTERFERENCE—DILIGENCE.
Where L., who was the first to conceive and the last to reduce to practice, testifies that at the time he was given a contract by the Government for the construction of a submarine, which was prior to G.'s reduction to practice, it was his intention to place the device of the issue upon this submarine, but he is uncorroborated as to this and the testimony does not establish the making of drawings showing this device until after G.'s filing date, *Held* that L. was lacking in diligence and priority was properly awarded to G. [* Lake v. Gunn, 631.

3. REDUCTION TO PRACTICE.
Evidence *Held* to establish that a machine built by C. prior to the earliest date to which F. and W. are entitled embodied the invention and constituted a reduction to practice thereof and that priority was properly awarded to C.
[* Fleux and Wheeler v. Coppus, 631.

4. DILIGENCE.
Where during the prosecution of an application S., who was a resident of Germany, introduced amendments which embodied the invention in issue, but which the Examiner held to be new matter in that application, and two months thereafter he canceled this amendment, stating that it was removed "for probable presentation elsewhere," and then four months thereafter filed the application involved herein, *Held* that S., who was the first to conceive the invention, was not lacking in diligence and that priority was properly awarded to him.
[* Hauschild, by assignee of entire interest, Becker, v. Speidel, 803.

PROCESS AND PRODUCT.

See Double Patenting.

PROSECUTION OF APPLICATION.

See Priority of Invention, 4.

REDUCTION TO PRACTICE.

See Interference, 1; Priority of Invention, 2, 3; Testimony.

1. AGENT—INTERFERENCE.
Where F. and L. made an invention in warp-uniting machines and disclosed it to H., who embodied their generic ideas in a warp-tying machine, which was successfully tested, *Held* that what H. did in reducing the invention to practice inured to the benefit of F. and L.
[* Hathaway v. Field, Lanning, and Colman, etc., 413.

2. DELAY IN FILING APPLICATION.
Held that Henemier reduced the invention to practice about three years prior to the filing of Hackley's application and than he did not forfeit his rights by delay in filing his application.
[* Sarah C. Hackley, administratrix of George T. Hackley, deceased, v. Henemier, 630.

REFERENCES.

See Construction of Claims, 4.

REGISTRATION OF TRADE-MARKS.

1. SIMILARITY.
A mark consisting of the representation of a swimming duck *Held* not registrable in view of the prior registrations for the same class of goods of two marks, one consisting of the representation of a swimming duck and the other showing a standing duck holding in its beak a banner with the word "Tassco" thereon, since the differences between applicant's mark and the registered marks are not such as would probably be noted by purchasers.
[*Ex parte* Oden, 411.

2. "JUST RIGHT," FOR ROOFING—DESCRIPTIVE.
The words "Just Right" refused registration as a trade-mark for roofing, etc., on the ground that these words are descriptive of the goods with which they are used.
[*Ex parte* New England Felt Roofing Works, 630.

3. SIMILARITY.
A mark for underwear consisting of an oval within which is the picture of a young man wearing a union-suit being measured with a tape-line *Held* not registrable where it appeared that the opposer had, prior to the applicant's date of adoption of the word, used upon its catalogues and the boxes containing its goods a picture of a man dressed in underwear only and inclosed in a circle.
[* The Atlas Underwear Company v. B. V. D. Company, 801.

4. PICTURE OF A WOMAN POLISHING A PIANO—NOT DESCRIPTIVE OF FURNITURE-POLISH.
The representation of a piano and a woman polishing it *Held* not descriptive when used as a trade-mark for furniture-polish, since it is not a picture of the goods at all.
[*Ex parte* Thompson Piano Manufacturing Co., 955.

REISSUE.

NEW MATTER—RIGHT OF INTERVERANT TO MAKE CLAIMS.
Where a patent to H. for a process of producing desiccated milk was allowed over the prior art because he disclosed a desiccating-chamber having heated walls, *Held* that M. was not entitled to make the process claims in an application for the reissue of a patent which did not disclose a chamber having heated walls. "Attempts to enlarge the scope of an application once filed or of a patent once granted should be frowned upon, especially where the result would be the appropriation of an intervening invention.
[* Barbara Hauss, administratrix of the estate of David J. Hauss, deceased, v. Merrell, 956.

RES ADJUDICATA.

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RESULTS.

See Invention, 1.

RIGHT TO USE TRADE-MARKS.

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SCOPE OF PATENT.

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SECOND INTERFERENCE.

See Interference, 3.

SIMILARITY OF MARKS.

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See Construction of Claims, 1, 2, 3; Invention, 2; Reissue.

TEST.

See Reduction to Practice, 1.

TESTIMONY.

See Priority of Invention, 2.

REDUCTION TO PRACTICE—EVIDENCE.

Where C. explained in his *prima facie* testimony how he came to make the invention and specified the instructions he gave to his workman, which testimony gives a good description of the machine which he built, and this testimony is corroborated by the workman, *Held* that the fact that when the machine was introduced in evidence during the taking of rebuttal testimony neither the applicant nor his workman was called to identify it is immaterial. [Coppus v. Fleux and Wheeler, 638.

TRADE-MARK USE.

See Opposition to Registration of Trade-Marks.

TRADE-MARKS.

See Opposition to Registration of Trade-Marks; Registration of Trade-Marks.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1919.

A. Hees & Company. (See Ziegler, Oscar G., assignor.)
A. Schrader's Son. (See Henemier, Robert H., assignor.)
A. Schrader's Son. (See Schweinert and Voickhausen, assignors.)
A. B. C. Motors Limited. (See Bradshaw, Granville H., assignor.)
A. G. Brown Boveri & Cie. (See Buchli, Jacob, assignor.)
Abarca, Enrique, San Juan, Porto Rico. Support for expanding metal articles. No. 1,300,091; Apr. 8; v. 261; p. 362.
Abbott, Chauncey W., assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa. Electrical conduit. No. 1,299,290; Apr. 1; v. 261; p. 151.
Abbott Laboratories, The. (See Ranneen and Gerstung, assignors.)
Abbott, Leonard G., assignor to Standard Bottle Stopper Co., Boston, Mass. Bottle-stopper. (Reissue.) No. 14,620; Apr. 8; v. 261; p. 392.
Abel, Charles C., Harriman, Tenn. Blank form. No. 1,299,531; Apr. 8; v. 261; p. 226.
Abeles, James A. (See Arnold, George O., assignor.)
Abeles, James A. (See Durland, Ralph A., assignor.) (Reissue.)
Abernathy, Thomas S., Birmingham, Ala. Razor-blade knife. No. 1,300,802; Apr. 15; v. 261; p. 539.
Able, James, Nashville, Tenn. Brake for motor-vehicles. No. 1,300,209; Apr. 8; v. 261; p. 287.
Abrahamson, Gustaf, Hillevaag, pr. Stavanger, Norway. Fuel-injecting device for combustion-engines. No. 1,301,211; Apr. 22; v. 261; p. 662.
Abrahamson, Jacob, Asbury Park, N. J. Hand-ball. No. 1,299,092; Apr. 1; v. 261; p. 109.
Abrams, Herbert T., Orange, assignor to Ingersoll-Rand Company, Jersey City, N. J. Apparatus for elevating fluids by compressed air. No. 1,302,268; Apr. 29; v. 261; p. 895.
Ackels, Mathias E. (See Ackels, Paul J. and M. E., assignors.)
Ackels, Paul J. and M. E., Sidney, Nebr. Portable combined provision-box and table. No. 1,301,351; Apr. 22; v. 261; p. 691.
Ackerman, John O., and J. Moe, Des Moines, Iowa. Drill-operating mechanism. No. 1,301,531; Apr. 22; v. 261; p. 724.
Acton, Michael J., Framingham, assignor to Lapointe Machine Tool Company, Hudson, Mass. Broaching-machine attachment for broaching the teeth of large internal gears. No. 1,300,082; Apr. 8; v. 261; p. 362.
Adam, Fredrick B., assignor to Frank Adam Electric Company, St. Louis, Mo. Knife-blade switch. No. 1,299,891; Apr. 8; v. 261; p. 318.
Adams-Bagnall Company, The. (See Mould, Edmund F., assignor.)
Adams-Bagnall Electric Company. (See Herton, William M., assignor.)
Adams, Charles W., Jr., Murray, Utah, assignor to American Smelting & Refining Co. Sintering ignition process. No. 1,299,892; Apr. 8; v. 261; p. 318.
Adams, Harry A., assignor to Serviceable Inventions Corporation, New York, N. Y. Razor-stropping device. No. 1,301,801; Apr. 29; v. 261; p. 807.
Adams, Harry W., Minneapolis, Minn. Traction-machine. No. 1,300,063; Apr. 8; v. 261; p. 362.
Adams, Henry R., Wayside, Tex. Reproducing device for graphophones. No. 1,301,631; Apr. 22; v. 261; p. 742.
Adams, Otis, assignor of one-half to F. Cooper, Rio, Ill. Gate operating and latch means. No. 1,299,281; Apr. 1; v. 261; p. 152.
Adamson, Edwin J., St. Cloud, Minn. Radiator-lifting appliance. No. 1,302,461; Apr. 29; v. 261; p. 933.
Adamson, Frank M. (See Miller and Adamson.)
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Adelhofer, Leopold, New York, N. Y. Automatic feeding attachment for printing-presses. No. 1,300,868; Apr. 15; v. 261; p. 540.
Adler, Charles, Jr., Baltimore, Md. Electrically-operated vehicle-brake. No. 1,300,094; Apr. 8; v. 261; p. 363.
Adreon, Robert E., St. Louis, Mo. Automobile-steering-wheel lock. No. 1,300,804; Apr. 15; v. 261; p. 540.
Advance-Rumely Company. (See Higgins, William H. C., Jr., assignor.)
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Aeolian Company, The. (See Tremaine, Henry B., assignor.)
Aerated Water Machinery Company. (See Sheehan, John, assignor.)
Ahlm, Charles E. F., Cleveland, assignor to W. A. Neracher, Warren, and A. Fritzche, Cleveland, Ohio. Demountable rim. No. 1,301,852; Apr. 22; v. 261; p. 691.
Ahméen, Thure, Finspong, assignor, by mesne assignments, to Aktiebolaget Ljungstroms Angturbin, Stockholm, Sweden. Radial turbine of the double rotary type. No. 1,299,893; Apr. 8; v. 261; p. 318.
Aichele, Albert, Baden, Switzerland. Change-speed gearing. No. 1,299,093; Apr. 1; v. 261; p. 110.
Aichele, Albert, Baden, Switzerland. Change-speed gearing. No. 1,299,094; Apr. 1; v. 261; p. 110.
Aichele, Albert, Baden, Switzerland. Differential gear for motor-cars. No. 1,301,800; Apr. 29; v. 261; p. 807.
Aichele, Albert, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Maximum-time relay. No. 1,301,991; Apr. 29; v. 261; p. 843.
Ainsworth, William A., Grand Rapids, Mich. Dyeing yarn and the like. No. 1,299,811; Apr. 8; v. 261; p. 301.
Air Reduction Company. (See Metzger, Floyd J., assignor.)
Air Reduction Company. (See Zouck, George H., assignor.)
Ajax Manufacturing Company, The. (See Blakeslee, John R., assignor.)
Akeley Camera. (See Akeley, Carl E., assignor.)
Akeley, Carl E., New York, N. Y. Camera lens-holder. No. 1,300,806; Apr. 15; v. 261; p. 540.
Akeley, Carl E., assignor to Akeley Camera, Inc., New York, N. Y. Support for motion-picture cameras and the like. No. 1,300,805; Apr. 15; v. 261; p. 540.
Aktiebolaget C. E. Johansson. (See Johansson, Carl E., assignor.)
Aktiebolaget Ingeniörsfirma Fritz Egnell. (See Rodhe, Olof, assignor.)
Aktiebolaget Ljungstroms Angturbin. (See Ahméen, Thure, assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Nyberg, Carl S., assignor.)
Aktiengesellschaft Brown, Boveri & Cie. (See Aichele, Albert, assignor.)
Albert & J. M. Anderson Manufacturing Company. (See Andersen, Johan M., assignor.)
Albert Pick & Company. (See Pick, Hugo, assignor.)
Albertson & Company. (See Albertson, Frans O., assignor.)
Albertson, Frans O., assignor to Albertson & Company, Sioux City, Iowa. Valve-refacing tool. No. 1,301,891; Apr. 29; v. 261; p. 824.
Albright, Andrew, Jr. (See Schuh, Charles F., assignor.)
Albright, George W., Kansas City, Mo. Automobile signaling device. No. 1,301,212; Apr. 22; v. 261; p. 663.
Aldrich, Charles, West Paris, Me. Folding sled. No. 1,300,095; Apr. 8; v. 261; p. 363.
Aldrich, Charles H., and J. K. Bryan, Baltimore, Md., assignors to Electrolytic Zinc Company, Inc., New York, N. Y. Electrolytic refining of metallic zinc-bearing materials. No. 1,299,414; Apr. 8; v. 261; p. 209.
Aleksandrowicz, Michal, New Brighton, Pa. Projectile device. No. 1,296,851; Apr. 1; v. 261; p. 54.
Alert Tool Company. (See Normoyle, Daniel J., assignor.)
Alexander, Jerome, New York, N. Y. Adhesive and the like. No. 1,300,096; Apr. 8; v. 261; p. 363.
Alexander, Jerome, New York, N. Y. Adhesive and making same. No. 1,300,097; Apr. 8; v. 261; p. 363.
Alexander, Schuyler H. (See Williamson and Alexander.)
Alexander, Thomas J., Seattle, Wash. Portable package-elevator. No. 1,296,852; Apr. 1; v. 261; p. 54.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Series-multiple control. No. 1,300,542; Apr. 15; v. 261; p. 485.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. System of phase modification. No. 1,300,543; Apr. 15; v. 261; p. 485.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. System of phase modification. No. 1,300,544; Apr. 15; v. 261; p. 485.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Starting phase-converters. No. 1,300,545; Apr. 15; v. 261; p. 486.

Alexanderson, Ernest F. W., Schenectady, N. Y., and D. C. Prince, Springfield, Ill., assignors to General Electric Company. Speed control of induction-motors. No. 1,301,632; Apr. 22; v. 261; p. 742.

Alexandre, Armand H., Lævallois-Perret, assignor to Societe E. H. Moll & Cie., Paris, France. Soldering aluminum. No. 1,301,633; Apr. 22; v. 261; p. 742.

Alfreds, Torris H., assignor to The P & M Company, Chicago, Ill. Anticreeping device for railway-rails. (Reissue.) No. 14,632; Apr. 15; v. 261; p. 602.

Alfsen, Harald, Porsgrund, Norway, assignor to J. M. Larsen, Chicago, Ill. Apparatus for casting reinforced-concrete vessels. No. 1,301,892; Apr. 29; v. 261; p. 824.

Alien Property Custodian. (See Graul, Hanschke, and Weisel, assignors.)

Alien Property Custodian. (See Mittasch, Alwin, assignor.)

Allan, Allen C., assignor of one-half to W. A. Diffenbaugh, Chicago, Ill. Automobile-steering-wheel lock. No. 1,298,853; Apr. 1; v. 261; p. 55.

Alland, Samuil, Boston, Mass. Shaving set. No. 1,298,033; Apr. 1; v. 261; p. 3.

Allbright-Nell Company, The. (See Jordan, Robert E., assignor.)

Allbridge, Francis B., Des Moines, Iowa. Universal compound worm steering-gear. No. 1,299,532; Apr. 8; v. 261; p. 236.

Allen, Abbott, Dunellen, N. J., assignor to E. H. Mumford Company, Elizabeth, N. J. Counterbalance device for molding-machines. No. 1,299,412; Apr. 8; v. 261; p. 209.

Allen, Ernest C. (See Barnes and Allen.)

Allen, George W. H. (See Collins, William D., assignor.)

Allen, Henry W., Earlysville, Va. Method of and apparatus for separating minerals. No. 1,301,532; Apr. 22; v. 261; p. 724.

Allen, John H., Washington, D. C. Window-curtain hanger. No. 1,298,634; Apr. 1; v. 261; p. 3.

Allen, John E., San Francisco, Calif., assignor of one-half to J. J. Crosby, Jersey City, N. J. Life-boat. No. 1,299,282; Apr. 1; v. 261; p. 252.

Allen S. Davison Company. (See Meyer, Albert P., assignor.)

Allen, Sherman T., Los Angeles, Calif. Tractor-wheel. No. 1,302,269; Apr. 29; v. 261; p. 895.

Allen, William R., assignor to Gereke-Allen Carton Company, St. Louis, Mo. Paper box. No. 1,298,635; Apr. 1; v. 261; p. 3.

Allman, John W., *et al.* (See Ricke, George H., assignor.)

Allsop, Thomas, and W. W. Sibson, assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa. Dyeing-machine. No. 1,300,233; Apr. 15; v. 261; p. 419.

Alma Manufacturing Company of Baltimore City. (See Kerngood, Allen H., assignor.)

Almen, John O., Seattle, Wash. Internal-combustion engine. No. 1,300,098; Apr. 8; v. 261; p. 363.

Alonso, Guillermo A. (See Repp, Clinton B., assignor.)

Altemus, Forrest E., Philadelphia, Pa. Lighting-switch. No. 1,298,854; Apr. 1; v. 261; p. 55.

Altman, Emil, Brooklyn, N. Y. Protector for the eyes. No. 1,298,636; Apr. 1; v. 261; p. 3.

Altmann, Emil, Sheridan, Wyo. Tobacco-pipe. No. 1,302,270; Apr. 29; v. 261; p. 895.

Altorfer, Alpheus W., Peoria, Ill. Driving mechanism. No. 1,302,120; Apr. 29; v. 261; p. 867.

Aluminum Company of America. (See Sherwin, Ralph S., assignor.)

Alvey-Ferguson Company, The. (See Bernheim, Morris U., assignor.)

Alwen, Percy, Vernon, British Columbia, Canada. Lamp-support. No. 1,299,533; Apr. 8; v. 261; p. 237.

Ambler, Joseph A., Norwich, Conn., and H. D. Gibbs, San Francisco, Calif. Manufacture of aromatic sulfonic acids. No. 1,300,227; Apr. 8; v. 261; p. 391.

Ambler, Joseph A., Norwich, Conn., and H. D. Gibbs, San Francisco, Calif. Manufacture of benzene sulfonic acids. No. 1,300,228; Apr. 8; v. 261; p. 391.

American Can Company. (See Cullen, William J., assignor.)

American Can Company. (See Gray, James A., assignor.)

American Can Company. (See Hoffman, Edmund, assignor.)

American Can Company. (See Johnson, Axel, assignor.)

American Can Company. (See Nowack, Charles H., assignor.)

American Can Company. (See Thornburgh, Ivan D., assignor.)

American Cement Products Company. (See Landwehr, Henry A., assignor.)

American Conduit Manufacturing Company, The. (See Abbott, Chauncey W., assignor.)

American Continuous Retort Company, The. (See Beam, Aron M., assignor.)

American Engineering Associates *et al.* (See Lieske, Frank J., assignor.)

American Invisible Stitching Machine Co. (See Mittleberg, Harris, assignor.)

American La France Fire Engine Co. (See Knoblock, James W., assignor.)

American Lacing Hook Co. (See Havener, Arthur E., assignor.)

American Machine & Manufacturing Company. (See Davidson, Joseph, assignor.)

American Mechanical Improvement Company. (See Slate, Thomas B., assignor.)

American Metal Seal Company. (See Paroubek, Anton J., assignor.)

American Meter Company. (See Dickey, Edmund S., assignor.)

American Motors. (See Carrm, Basel E., assignor.)

American Optical Company. (See Carson, Oswald B., assignor.)

American Optical Company. (See Day, George H., assignor.)

American Products Company. (See Hodge and Ruggles, assignors.)

American Saw & Manufacturing Company. (See Ericson, Carl L., assignor.)

American Smelting & Refining Co. (See Adams, Charles W., Jr., assignor.)

American Stainless Steel Company, The. (See Haynes, Elwood, assignor.)

American Steam Conveyor Corporation. (See Griffin, Lorne A., assignor.)

American Steel Foundries. (See Hedgcock, William C., assignor.)

American Steel Foundries. (See Peycke, Armand H., assignor.)

American Steel Window Company. (See Burk, William H., assignor.)

American Steel and Wire Company of New Jersey, The. (See Febrey, Harold H., assignor.)

American Stove Company, The. (See Meacham, Benjamin E., assignor.)

American Telephone and Telegraph Company. (See Flye, William L., assignor.)

American Voting Machine Company. (See Babock, William H., assignor.)

American Vulcanized Fibre Co. (See Pierce, James F., assignor.)

American Vulcanized Fibre Co. (See Pierce and Heinel, assignors.)

Ames, Butler, Lowell, Mass. Magnetic razor. No. 1,299,095; Apr. 1; v. 261; p. 110.

Ames, Butler, Lowell, Mass. Magnetic razor. No. 1,299,096; Apr. 1; v. 261; p. 111.

Ames, Butler, Lowell, Mass. Magnetic razor. No. 1,299,097; Apr. 1; v. 261; p. 111.

Ames, Butler, Lowell, Mass. Safety razor. No. 1,299,098; Apr. 1; v. 261; p. 111.

Ames, Butler, Lowell, Mass. Safety razor. No. 1,299,099; Apr. 1; v. 261; p. 111.

Amherst Waxed Paper Mills. (See Scott, William H., assignor.)

Amos, Abraham L., South Bend, Ind. Swage attachment for anvils. No. 1,300,324; Apr. 15; v. 261; p. 438.

Anable, Clarence E., Sacramento, Calif. Serving apparatus. No. 1,299,413; Apr. 8; v. 261; p. 209.

Anaconda Copper Mining Company. (See Laist, Frick, and Oliver, assignors.)

Anagnostopoulos, Theodore D. (See Theodore, Anostopoulo D.)

Ananian, Hohannis A., Paterson, N. J. Toy. No. 1,299,534; Apr. 8; v. 261; p. 237.

Andersen, Johan M., assignor to Albert & J. M. Anderson Manufacturing Company, Boston, Mass. Time-circuit controller. No. 1,299,812; Apr. 8; v. 261; p. 301.

Anderson, Alexander P., Chicago, Ill. Closure. No. 1,299,651; Apr. 8; v. 261; p. 263.

Anderson, Allan L., Gorton, and R. Anderson, Manchester, England. Clamp for bracing wires or cables of aircraft and other structures. No. 1,301,634; Apr. 22; v. 261; p. 742.

Anderson, Anton J., Hopkins, Minn. Potato-planter. No. 1,299,652; Apr. 8; v. 261; p. 264.

Anderson, Axel, Clifton, N. J. Shears. No. 1,299,100; Apr. 1; v. 261; p. 111.

Anderson, Axel F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Sheet-metal article. No. 1,299,415; Apr. 8; v. 261; p. 209.

Anderson, Carl O., Springfield, Ill. Attachment for milking apparatus. No. 1,301,992; Apr. 29; v. 261; p. 843.

Anderson, Emil C., Denver, Colo. Grease-cup. No. 1,300,099; Apr. 8; v. 261; p. 363.

Anderson, Gideon, assignor to W. West, New York, N. Y. Tilting table. No. 1,299,894; Apr. 8; v. 261; p. 319.

Anderson, Gilbert V., assignor of one-half to W. F. Fischer, Philadelphia, Pa. Internal-combustion engine. No. 1,299,895; Apr. 8; v. 261; p. 319.

Anderson, Hjalmar A., Garfield township, Sioux county, Iowa. Dead-bird decoy-holder. No. 1,299,896; Apr. 8; v. 261; p. 319.

Anderson, James C., Rutherford, N. J., assignor to Varley Duplex Magnet Company. Winding-machine. No. 1,302,121; Apr. 29; v. 261; p. 867.

Anderson, John E., Rockford, Ill. Tool-handle. No. 1,301,802; Apr. 29; v. 261; p. 807.

Anderson, John N., Madison, Wis. Roof-bracket. No. 1,301,533; Apr. 22; v. 261; p. 724.
Anderson, Nels A., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Sheet-register. No. 1,300,235; Apr. 15; v. 261; p. 419.
Anderson, Nils H., Bridgeport, Conn. Tapping-machine. No. 1,302,271; Apr. 29; v. 261; p. 895.
Anderson, Norman, Duluth, Minn. Meter-actuated cut-off device. No. 1,301,781; Apr. 22; v. 261; p. 773.
Anderson, Oscar T., Waterloo, Iowa. Oxyacetylene-blowpipe. No. 1,299,535; Apr. 8; v. 261; p. 237.
Anderson, Robert. (See Anderson, Allan L. and R.)
Anderson, William B., West Brighton, N. Y. Bell-buoy. No. 1,298,101; Apr. 1; v. 261; p. 111.
Anderson, William G., Whitehead, Ireland. Toy building-blocks. No. 1,298,855; Apr. 1; v. 261; p. 55.
Andersson, Gustaf, Stockholm, Sweden. Rock-drilling machine. No. 1,300,100; Apr. 8; v. 261; p. 364.
Andrea, Frank E. (See Jefferson, Daniel H., assignor.)
Andrews, Roger W., assignor to Northern Equipment Company, Erie, Pa. Feeding water to boilers. No. 1,299,283; Apr. 1; v. 261; p. 252.
Angell, Chester M., assignor to Vesta Accumulator Company, Chicago, Ill. Battery-seal. No. 1,298,856; Apr. 1; v. 261; p. 55.
Angell, Chester M., assignor to Vesta Accumulator Company, Chicago, Ill. Battery. No. 1,298,857; Apr. 1; v. 261; p. 55.
Angell, Chester M., assignor to Vesta Accumulator Company, Chicago, Ill. Battery-vent. No. 1,301,993; Apr. 29; v. 261; p. 844.
Angle, Edward H., Pasadena, Calif. Orthodontic implement. No. 1,298,102; Apr. 1; v. 261; p. 111.
Angle, Edward H., Pasadena, Calif. Orthodontic implement. No. 1,298,103; Apr. 1; v. 261; p. 112.
Anglo-American Mill Company, The. (See Trefz, Julius J., assignor.)
Angular Drill and Machine Corporation. (See Hathaway, Charles F., assignor.)
Anthony, Stanley, Boston, Mass. Connector. No. 1,298,858; Apr. 1; v. 261; p. 55.
Anthony, Stanley, Boston, Mass. Index. No. 1,298,859; Apr. 1; v. 261; p. 56.
Aoughsten, Otto L. (See Aoughsten, Richard G. and O. L.)
Aoughsten, Richard G. and O. L., Galveston, Tex. Shell. No. 1,302,272; Apr. 29; v. 261; p. 895.
Appel, Carl, South Pasadena, Calif. Rail-brace. No. 1,300,101; Apr. 8; v. 261; p. 364.
Appelbaum, Alan L., assignor to The Import and By Products Company, Incorporated, Trenton, N. J. Manufacturing benzaldehyde. No. 1,302,273; Apr. 29; v. 261; p. 895.
Appelbaum, Isaac. (See Appelbaum, Joseph, assignor.)
Appelbaum, Joseph, assignor, by mesne assignments, to I. Appelbaum, Philadelphia, Pa. Fabric-cutting machine. No. 1,299,536; Apr. 8; v. 261; p. 237.
Applegate, Harry E., Pasadena, Calif. Folding chair. No. 1,301,635; Apr. 22; v. 261; p. 742.
Archer, Andrew, assignor of one-half to K. J. Whalen, West Rutland, Mass. Loom-shuttle. No. 1,300,102; Apr. 8; v. 261; p. 364.
Archer, Arthur E., Fulwith Grange, near Harrogate, England. Forming and pricking sand-molds for castings. No. 1,300,103; Apr. 8; v. 261; p. 364.
Archer, Charles E., and E. C. Humphreys, Detroit, Mich. Signal-lamp. No. 1,301,994; Apr. 29; v. 261; p. 844.
Arco Company, The. (See Seaton and Harris, assignors.)
Arel, Noah A., Tulsa, Okla. Danger-signal. No. 1,300,104; Apr. 8; v. 261; p. 365.
Arena, John B. (See Falconieri, Biagio, assignor.)
Arkin, Louis, Boston, Mass. Fastener. No. 1,300,105; Apr. 8; v. 261; p. 365.
Armelin, Edouard, South Woodford, England. Connection with dry batteries. No. 1,299,813; Apr. 8; v. 261; p. 301.
Armstrong, George E., Los Angeles, Calif. Ground-detecter. No. 1,300,546; Apr. 15; v. 261; p. 486.
Armstrong, Harry H., assignor to Fidelity Brass Manufacturing Company, Chicago, Ill. Autogenous cutting-torch. No. 1,300,106; Apr. 8; v. 261; p. 365.
Armstrong, Harry Y., assignor to Package Machinery Company, Springfield, Mass. Wrapping-machine. No. 1,299,637; Apr. 1; v. 261; p. 3.
Armstrong, Morgan K., Winnetka, assignor to Beatwall Manufacturing Company, Chicago, Ill. Plaster-board composition. No. 1,301,893; Apr. 29; v. 261; p. 825.
Armstrong, William S., San Antonio, Tex. Submarine telescope. No. 1,301,534; Apr. 22; v. 261; p. 724.
Arnold, Albert C., assignor to The N. N. Hill Brass Co., East Hampton, Conn. Toy. No. 1,301,268; Apr. 22; v. 261; p. 691.
Arnold-Creager Company, The. (See Graham, Henry W. B., assignor.)
Arnold, Elisha J., Rensselaer, N. Y., assignor to Scissors Appliance Co., Inc. Shears and scissors. No. 1,299,104; Apr. 1; v. 261; p. 112.
Arnold, Ernst, Reading, Pa. Hydraulic toy. No. 1,299,897; Apr. 8; v. 261; p. 319.
Arnold, George A., Boston, Mass., assignor to J. A. Abeles. Vacuum-tank for fuel-feed systems. No. 1,299,668; Apr. 8; v. 261; p. 264.
Arnold, Louis P., Norwalk, Conn. Tire-making machine. No. 1,302,122; Apr. 29; v. 261; p. 867.
Arnold, Lyman, Lynn, Mass., assignor to General Electric Company. High-voltage current transformer. No. 1,301,636; Apr. 22; v. 261; p. 743.
Arnspiger, Eugene N., Chicago, Ill. Automobile-wheel hub. No. 1,300,807; Apr. 15; v. 261; p. 541.
Arthur, Albert F., assignor to The Cleveland Hardware Company, Cleveland, Ohio. Composite die for drop-hammers and the like. No. 1,302,274; Apr. 29; v. 261; p. 896.
Arthur, Guy, Ritzville, Wash. Electric water-heater. No. 1,301,995; Apr. 29; v. 261; p. 844.
Arundel, Hubert. (See Higginson and Arundel.)
Asbell, Mellege S., *et al.* (See Scott, Harry R., assignor.)
Ashley, Charles G., assignor to General Engineering and Construction Company, Limited, Toronto, Ontario, Canada. Duplex printing-telegraph system. No. 1,301,213; Apr. 22; v. 261; p. 663.
Ashmore, Walter L., and W. T. Morgan, Jr., deceased, Macon, Ga.; W. T. Morgan, Sr., temporary administrator. Roller for finishing and smoothing cement and concrete pavements. No. 1,302,275; Apr. 29; v. 261; p. 896.
Ashworth, Arthur A., Coffeyville, Kans. Scraping apparatus for stills. No. 1,300,547; Apr. 15; v. 261; p. 486.
Ashworth, Arthur A., Coffeyville, Kans. Still. No. 1,300,548; Apr. 15; v. 261; p. 486.
Ashworth, Fred, Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Thread-waxing device. No. 1,298,638; Apr. 1; v. 261; p. 4.
Askoweta Brothers. (See Gray, Edwin T., assignor.)
Atherton, Carlyle A., Bowdon, England, assignor to Westinghouse Electric & Manufacturing Company. Reduction-gearing for electric motors. No. 1,300,236; Apr. 15; v. 261; p. 419.
Atherton, Luther, and O. Meek, Tallassee, Ala. Carding-machine. No. 1,299,105; Apr. 1; v. 261; p. 112.
Atkins, William, assignor of three-fourths to E. N. Ross and W. A. Tice, Auburn, N. Y. Wagon-train. (Reissue.) No. 14,639; Apr. 29; v. 261; p. 938.
Atlantic Welding Corporation. (See Clark, Jansen, and Gailor, assignors.)
Atlas Powder Company. (See Hill and Strane, assignors.)
Atwood, James T., Rockford, Ill. Automobile-door buffer. No. 1,299,416; Apr. 8; v. 261; p. 210.
Au-To Play Goods Company, The. (See Elsey, Edgar P., assignor.)
Audia, Antonio, Chicago, Ill. Folding top for automobiles. No. 1,301,894; Apr. 29; v. 261; p. 825.
Auerbach, Max, Bremen, Germany, assignor to the Firm Exploitatie Maatschappij voor Textielindustrie Auerbach en Co., Utrecht, Netherlands. Mechanism for automatically changing shuttles in looms. No. 1,298,860; Apr. 1; v. 261; p. 56.
Auld, John, Chicago, Ill. Eraser structure. No. 1,298,639; Apr. 1; v. 261; p. 4.
August, Grover C., Mansfield, Ohio. Candle-holder. No. 1,299,537; Apr. 8; v. 261; p. 237.
Aurele, Frank M. (See Janes, Clyde M., assignor.)
Auster, Aaron, New York, N. Y. Sewing-machine attachment. No. 1,298,914; Apr. 1; v. 261; p. 68.
Austin, Frederick C. (See French, James C., assignor.)
Austin, Frederick C. (See Loken, Truls, assignor.)
Austin, Thomas R., Iconium, Mo. Egg-tester. No. 1,301,086; Apr. 22; v. 261; p. 637.
Automatic Carburetor Company. (See Church, Edmund S., assignor.)
Automatic Electric Company. (See Burfeind, Raymond H., assignor.)
Automatic Electric Company. (See Campbell and Martin, assignors.)
Automatic Electric Company. (See Erickson, Charles J., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Machine Mf'g. Co. (See Meichert and Kohls, assignors.)
Automatic Sprinkler Company of Canada. (See Chandler, Elmo M., assignor.)
Automatic Truck Brake Co. (See Paschke, Otto H., assignor.)
Autopiano Company. (See La Joie, Herbert J., assignor.)
Autosales Corporation. (See Grover and Barber, assignors.)
Avery, Walter J., Cambridge, Mass. Electric lamp. No. 1,299,538; Apr. 8; v. 261; p. 238.
B & B Manufacturing and Drilling Company. (See Mathews, Samuel J., assignor.)
B. F. Goodrich Company, The. (See Butler, James L., assignor.)
B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
Baade, William H. (See Blankenstein, Richard J., assignor.)
Baader, Stephan, Philadelphia, assignor, by mesne assignments, to P. E. Donner, Pittsburgh, Pa. Reversing-gear mechanism. No. 1,299,284; Apr. 1; v. 261; p. 252.
Babbitt, Margaret C., *et al.* (See Babbitt, William A., assignor.)

Babbitt, William A., assignor of one-half to M. C. Babbitt and one-half to M. C. Passage, Lockport, N. Y. Latch for automobile-doors. No. 1,298,861; Apr. 1; v. 261; p. 56.
Babcock & Wilcox Company, The. (See Irish, David J., assignor.)
Babcock & Wilcox Company, The. (See Lewis, Nathan E., assignor.)
Babcock & Wilcox Company, The. (See Parker, Davy, and Meiklereid, assignors.)
Babcock, William H., West Somerville, assignor to American Voting Machine Company, Boston, Mass. Voting mechanism. No. 1,300,686; Apr. 15; v. 261; p. 514.
Babkirk, Albert E. (See Sparrow, Alfred J., assignor.)
Bacharach, Herman, assignor to Bacharach Industrial Instrument Company, Pittsburgh, Pa. Pressure-regulating apparatus. No. 1,299,106; Apr. 1; v. 261; p. 112.
Bacharach Industrial Instrument Company. (See Bacharach, Herman, assignor.)
Bachman, George T., Johnson City, Tenn. Device for maintaining instrument-strings under tension. No. 1,298,862; Apr. 1; v. 261; p. 56.
Bachmann, Walter, New York, N. Y., assignor to H. Rudolph. Dough-baller. No. 1,302,462; Apr. 29; v. 261; p. 933.
Backlund, William O., Stromsburg, Nebr. Rein-buckle. No. 1,299,285; Apr. 1; v. 261; p. 252.
Bacon, Frank W., Los Angeles, Calif. Distance-chart. No. 1,300,808; Apr. 15; v. 261; p. 541.
Bacon, Thomas P., Oakland, Calif. Combination pressure-gage and circuit-breaker. No. 1,300,107; Apr. 8; v. 261; p. 365.
Baer, John W., Danvers, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Form-holding means for sole-pressing machines. No. 1,300,549; Apr. 15; v. 261; p. 486.
Bailey, Charles W. (See Matteson and Bailey.)
Bailey, Effel, Jenkins, Mo. Wireless corn-planter. No. 1,301,214; Apr. 22; v. 261, p. 663.
Bailey, Ervin G., Newton Highlands, assignor to Bailey Meter Company, Boston, Mass. Apparatus for measuring the rate of flow of fluids. No. 1,299,539; Apr. 8; v. 261; p. 238.
Bailey, Ervin G., Newton Highlands, Mass., assignor to Bailey Meter Company. Measuring the rate of flow of aqueous fluids. No. 1,299,540; Apr. 8; v. 261; p. 238.
Bailey, John A., Willows, Calif. Water-grass-seed trap. No. 1,300,913; Apr. 15; v. 261; p. 563.
Bailey Meter Company. (See Bailey, Ervin G., assignor.)
Bailey, William E., Columbus, Ohio. Garden-tool. No. 1,299,417; Apr. 8; v. 261; p. 210.
Bair, James A., Tampa, Fla. Grinding-mill. No. 1,301,637; Apr. 22; v. 261; p. 743.
Baird, Cassius M. C., Chicago, Ill. Hose construction. No. 1,301,354; Apr. 22; v. 261; p. 691.
Baird Motion Picture Machine Co. (See Reney, Jules F., assignor.)
Baird Motion Picture Machine Company. (See Emory, Robert J., assignor.)
Baker, Bertram D., Wylde Green, England. Covering and incasing articles. No. 1,300,550; Apr. 15; v. 261; p. 487.
Baker, Erle K., assignor to Universal Rim Company, Chicago Ill. Demountable clutch-rim. No. 1,299,541; Apr. 8; v. 261; p. 238.
Baker, Frank. (See Nathan, Rintoul, and Baker.)
Baker, George M., Bath, N. Y. Rail-fastener. No. 1,298,863; Apr. 1; v. 261; p. 57.
Baker, Henry, administrator. (See Nathan, Rintoul, and Baker.)
Baldwin, George D., Hoboken, N. J. Power-pipe line. No. 1,300,809; Apr. 15; v. 261; p. 541.
Baldwin Locomotive Works, The. (See Kirk, Benjamin K., assignor.)
Ball, Thomas F., Kansas City, Mo. Scraper. No. 1,300,551; Apr. 15; v. 261; p. 487.
Ballard, Alexander, Miltonvale, Kans. Sanitary measuring-faucet. No. 1,302,276; Apr. 29; v. 261; p. 896.
Ballard, Harrie A., Boston, assignor to The Phonoharp Company, East Boston, Mass. Keyed zither. No. 1,299,654; Apr. 8; v. 261; p. 264.
Ballou, Alonzo, C., Lynchburg, Va. Dumping-body. No. 1,300,810; Apr. 15; v. 261; p. 541.
Balyk, Dmytro, Medicine Hat, Canada. Collapsible bed. No. 1,301,215; Apr. 22; v. 261; p. 663.
Balzhiser, William, San Francisco, Calif. Combined protractor and lettering instrument. No. 1,298,640; Apr. 1; v. 261; p. 4.
Bamberg, Joseph H., Toledo, Ohio, and H. H. Doehler, assignors to Doehler Die-Casting Company, Brooklyn, N. Y. Metal casting and making same. No. 1,299,655; Apr. 8; v. 261; p. 265.
Bamberg, Joseph H., Toledo, Ohio, and H. H. Doehler, assignors to Doehler Die-Casting Company, Brooklyn, N. Y. Casting apparatus. No. 1,301,895; Apr. 29; v. 261; p. 825.
Bancroft, John S., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Measuring mechanism for composing-machines. No. 1,300,237; Apr. 15; v. 261; p. 420.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Type casting and composing machine. No. 1,300,811; Apr. 15; v. 261; p. 541.
Banderob-Chase Company. (See Doman, Herman C., assignor.)
Bangs, Francis M., Deep River, Conn. Mold for ingots. No. 1,302,277; Apr. 29; v. 261; p. 896.
Bannon, Laurence F., Kingston, N. Y. Tobacco-cleaning apparatus. No. 1,301,628; Apr. 22; v. 261; p. 742.
Barber, Benjamin F. (See Zartman, Samuel B., assignor.)
Barber, Bert V. (See Mangini, Andrew, assignor.)
Barber-Colman Company. (See Peterson, Burt A., assignor.)
Barber, Earl E. (See Grover and Barber.)
Barber Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet-delivery mechanism for printing-presses. No. 1,299,656; Apr. 8; v. 261; p. 265.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 1,299,657; Apr. 8; v. 261; p. 265.
Barbour, William, Everett, Mass. Carburetor-adjuster. No. 1,299,894; Apr. 1; v. 261; p. 177.
Barclay, Ivor G. (See Plym and Barclay.)
Barksdull, Calvin H., Seattle, Wash. System of camouflage. No. 1,301,087; Apr. 22; v. 261; p. 637.
Barker, Parrish, San Francisco, Calif. Direct and laterally leaning, rocking, firm-standing, and pivotal chair. No. 1,301,639; Apr. 22; v. 261; p. 743.
Barlow, Augustus C., and M. E. Roberts, Chicago, Ill. Type-writer. No. 1,302,278; Apr. 29; v. 261; p. 896.
Barnes, Frederick W., and E. C. Allen, assignors to Eastman Kodak Company, Rochester, N. Y. Two-color-picture camera. No. 1,298,641; Apr. 1; v. 261; p. 4.
Barnes, James R., Beaver Crossing, Nebr. Swine-feeding receptacle. No. 1,301,027; Apr. 15; v. 261; p. 588.
Barnes, Willard F., assignor to S. V. Barnes, Mill Valley, Calif. Basket-making machine. No. 1,301,355; Apr. 22; v. 261; p. 692.
Barnett, Herbert, Kingston, Ontario, Canada. Bumper. No. 1,302,279; Apr. 29; v. 261; p. 897.
Barney & Berry. (See Stowell, Byron F., assignor.)
Barnhart, Frank H., Bloomdale, Ohio. Safety-harness. No. 1,300,914; Apr. 15; v. 261; p. 563.
Barnhart, Harry J., assignor to The Osgood Company, Marion, Ohio. Excavating-machine. No. 1,301,362; Apr. 29; v. 261; p. 807.
Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,301,666; Apr. 22; v. 261; p. 637.
Barr, John H., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,300,687; Apr. 15; v. 261; p. 514.
Barr, Lester S., Washington, D. C. Airplane-propeller. No. 1,300,552; Apr. 15; v. 261; p. 487.
Barr, Lester S., and B. S. Simmons, Washington, D. C. Advertising device. No. 1,301,216; Apr. 22; v. 261; p. 663.
Barr, Robert H., Kelso, Wash. Square for tools. No. 1,301,996; Apr. 29; v. 261; p. 844.
Barrett Company, The. (See Downs, Charles R., assignor.)
Barrett Company, The. (See Perry, Ray P., assignor.)
Barrett Company, The. (See Weiss, John M., assignor.)
Barrs, Frank A. A., Vancouver, British Columbia, Canada. Pivot-hinge. No. 1,299,658; Apr. 8; v. 261; p. 266.
Barrs, Frank A. A., Vancouver, British Columbia, Canada. Air diffuser and regulator. No. 1,299,659; Apr. 8; v. 261; p. 266.
Barry, Walter H., Chicago, Ill. Fire-door. No. 1,301,782; Apr. 22; v. 261; p. 774.
Barsby, Harry H. (See Stephenson and Barsby.)
Barth, William A. (See Nordwick and Barth.)
Barthel, Oliver E., Detroit, Mich. Motor-vehicle frame. No. 1,299,107; Apr. 1; v. 261; p. 112.
Bartholomew, Ward A., Buffalo, N. Y. Ventilator. No. 1,299,296; Apr. 1; v. 261; p. 153.
Bartholomew, William, assignor to Troy Laundry Machinery Co., Ltd., Chicago, Ill. Bearing for centrifugal extractors. No. 1,301,356; Apr. 22; v. 261; p. 692.
Bartlett, Benjamin N., Tacoma, and M. Du Vall, Bellingham, Wash. Vessel-raising apparatus. No. 1,300,553; Apr. 15; v. 261; p. 487.
Bartlett, Edwin S., Jr., Butte, Mont. Animal-shears. No. 1,301,089; Apr. 22; v. 261; p. 637.
Bartlett, William H. (See Freeman, Harry G., assignor.)
Bartley, Henry W., et al. (See Watkins, Joseph W., assignor.)
Bartmess, Meigs W. (See Garcelon, Bartmess, and Chantemerle.)
Barto, John, Cleveland, Ohio. Flying-machine. No. 1,299,287; Apr. 1; v. 261; p. 153.
Barton, Daniel W., Oshkosh, Wis. Electrically-operated musical instrument. No. 1,298,884; Apr. 1; v. 261; p. 57.
Basch, David, Schenectady, N. Y., assignor to General Electric Company. System for the transformation of electrical energy. No. 1,301,640; Apr. 22; v. 261; p. 744.
Bascpe, John C., assignor of one-half to M. Brennis, Independence, Mo. Chain-coupling. No. 1,299,660; Apr. 8; v. 261; p. 266.
Bassick Co., The. (See Dias, Albert R., assignor.)
Bastian, Earl M., Highmore, S. D. Oil-can attachment. No. 1,298,905; Apr. 1; v. 261; p. 57.

Batcholder, Frank R., Worcester, Mass. Assembling-machine. No. 1,302,280; Apr. 29; v. 261; p. 897.
Bate, George, Flint, Mich. Spoke-lock. No. 1,298,368; Apr. 1; v. 261; p. 153.
Bates, Russell A., assignor to L. D. Taylor, Grand Rapids, Mich. Wheel-bracket. No. 1,301,026; Apr. 15; v. 261; p. 509.
Bates, William H., Vancouver, Wash. Pneumatic sustaining means for vehicles. No. 1,301,804; Apr. 29; v. 261; p. 807.
Bates, William H., Jr., Boston, Mass. Metallurgical smoke-filter. No. 1,302,281; Apr. 29; v. 261; p. 897.
Batrick, Abraham S. (See Hempel, Henry, assignor.)
Battlefore, George E., Marquette, Mich. Nozzle for sand-pumps. No. 1,298,642; Apr. 1; v. 261; p. 5.
Baum, Julia, Brooklyn, N. Y. Doll's dress. No. 1,300,915; Apr. 15; v. 261; p. 564.
Baumann, Frederick, Philadelphia, Pa., assignor of seven thirty-seconds to himself, seven thirty-seconds to N. T. Whitaker, Washington, D. C., seven thirty-seconds to L. Baumann, Sr., Philadelphia, Pa., and eleven thirty-seconds to H. J. Browne, Washington, D. C. Finishing-tool. No. 1,300,225; Apr. 15; v. 261; p. 428.
Baumann, Karl, Urmston, England, assignor to The British Westinghouse Electric & Manufacturing Company, Limited. Steam-turbine. No. 1,302,282; Apr. 29; v. 261; p. 897.
Baumann, Karl, Urmston, England, assignor to The British Westinghouse Electric and Manufacturing Company, Limited. Steam-turbine. No. 1,302,283; Apr. 29; v. 261; p. 897.
Baumann, Leopold, Sr., et al. (See Baumann, Frederick, assignor.)
Baumel, Edward J., Pomona, Calif. Metal clothes-pin. No. 1,298,643; Apr. 1; v. 261; p. 5.
Bauroth, Walter J., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Ball-bearing. No. 1,301,217; Apr. 22; v. 261; p. 664.
Baxter, Oscar L., Columbus, Ohio. Window construction. No. 1,301,506; Apr. 29; v. 261; p. 825.
Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Feeding means for drills. No. 1,298,814; Apr. 8; v. 261; p. 301.
Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Plate-valve. No. 1,298,815; Apr. 8; v. 261; p. 301.
Beach, Bernard M., Lima, Ohio. Internal-combustion engine. No. 1,300,916; Apr. 15; v. 261; p. 564.
Beach, Edward S. (See Bender, Andrew, assignor.)
Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, Motor-control system. No. 1,300,238; Apr. 15; v. 261; p. 420.
Beach, John A., Muskegon, Mich. Lay-out tool. No. 1,298,806; Apr. 1; v. 261; p. 57.
Beadle, Bailey O., Beaconsfield, Iowa. Non-skid device. No. 1,301,535; Apr. 22; v. 261; p. 724.
Beall, Charles E., assignor to The Union Switch & Signal Company, Swissvale, Pa. Electromagnetic device. No. 1,302,284; Apr. 29; v. 261; p. 897.
Beam, Area M., assignor to The American Continuous Retort Company, Denver, Colo. Muffled ore-converting apparatus. No. 1,299,661; Apr. 8; v. 261; p. 266.
Bean, Irving M., deceased, Milwaukee, Wis.; M. W. Bean, executrix, and First Trust Company, executor. Bath-cabinet. No. 1,301,029; Apr. 15; v. 261; p. 588.
Bean, Louis A., Denver, Colo. Signaling device for motor-vehicles. No. 1,301,090; Apr. 22; v. 261; p. 637.
Bean, Mabel W., executrix, et al. (See Bean, Irving M.)
Bean, Samuel I., and R. M. Bissell, Asheville, N. C. Cereal-roaster. No. 1,302,123; Apr. 29; v. 261; p. 868.
Bean, Samuel I., and R. M. Bissell, Asheville, N. C. Cereal-roaster. No. 1,302,124; Apr. 29; v. 261; p. 869.
Beardmore, William. (See Pullinger, Thomas C. W., assignor.)
Beasley, Arthur and L., St. Louis, Mo. Shoe-shining chair. No. 1,301,218; Apr. 22; v. 261; p. 664.
Beasley, Lealon. (See Beasley, Arthur and L.)
Beaver, Charles J., and E. A. Claremont, county of Chester, England. Manufacture of electric cables. No. 1,296,644; Apr. 1; v. 261; p. 5.
Beaver State Motor Co. (See Combs, Perley A., assignor.)
Bechman, Henry F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Inking mechanism for printing-presses. No. 1,301,091; Apr. 22; v. 261; p. 638.
Becheff, Ferdinand N., and M. M. Samuels, New York, N. Y. Self-locking retainer for milk-bottles. No. 1,302,125; Apr. 29; v. 261; p. 868.
Beck, Nels L., Exira, Iowa. Harrow. No. 1,300,554; Apr. 15; v. 261; p. 487.
Becker, Joseph, Washington, D. C., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,301,597; Apr. 29; v. 261; p. 825.
Becker, Mayme. (See Branson, Russel W., assignor.)
Becker, Valentine G., St. Paul, Minn. Apparatus for boiling eggs. No. 1,301,997; Apr. 29; v. 261; p. 844.
Beckett, Ernest G. (See Rintoul and Beckett.)
Beckman, Herbert S., Los Angeles, Calif. Motion-picture-actuating means. No. 1,301,857; Apr. 22; v. 261; p. 692.
Beckman, Herbert S., Los Angeles, Calif. Camera-actuating mechanism. No. 1,301,858; Apr. 22; v. 261; p. 692.
Beckman, Richard, and H. Wollesen, New York, N. Y. Explosive-motor. No. 1,301,859; Apr. 22; v. 261; p. 692.
Beckwith, Arthur C., Chicago, Ill. Hydrostatic lubricator and valve mechanism therefor. No. 1,302,285; Apr. 29; v. 261; p. 898.
Beckwith, Franklin B., Plattsmouth, Nebr. Washing-machine. No. 1,298,645; Apr. 1; v. 261; p. 5.
Beddow, Josiah. (See Clutsam, Frederick, assignor.)
Bednarz, Jacob. (See Talpa and Bednarz.)
Bee, Frank, Velpen, Ind. Churn. No. 1,301,536; Apr. 22; v. 261; p. 724.
Beeselman, John F., East Chicago, Ind. Automobile-tire. No. 1,301,998; Apr. 29; v. 261; p. 844.
Beggs, Harry W. (See Read, Benjamin K., assignor.)
Beggs, Joseph W., Winnipeg, Manitoba, Canada. Internal-combustion engine. No. 1,299,662; Apr. 8; v. 261; p. 267.
Behn, Walter J., Detroit, Mich. Door-check. No. 1,302,286; Apr. 29; v. 261; p. 898.
Behrens, Rudolf, New York, N. Y. Amusement aerial railway. No. 1,300,555; Apr. 15; v. 261; p. 488.
Beiers, William H. (See Bessey and Beiers.)
Beland, Frank, Cairo, Ill. Folding horse or trestle. No. 1,298,867; Apr. 1; v. 261; p. 57.
Bell, John H., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telegraph system. No. 1,298,868; Apr. 1; v. 261; p. 58.
Bell, John H., East Orange, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telegraph system. No. 1,300,326; Apr. 15; v. 261; p. 439.
Bellard, Alfred, Paris, France. Apparatus for actuating the belts of rifles or other weapons. No. 1,300,668; Apr. 15; v. 261; p. 514.
Bellard, Alfred, Paris, France. Periscopic attachment for machine-guns. No. 1,300,669; Apr. 15; v. 261; p. 514.
Belmont, Ralph A. (See Schoenberg, Ralph A.)
Bender, Andrew, Bogota, N. J., assignor of one-third to E. S. Beach, Ridgefield, Conn. Sulfonation of aromatic hydrocarbons. No. 1,301,260; Apr. 22; v. 261; p. 693.
Bendix, Vincent, Chicago, Ill. Engine-starter. No. 1,298,418; Apr. 8; v. 261; p. 210.
Bendix, Vincent, Chicago, Ill. Engine-starter. No. 1,298,419; Apr. 8; v. 261; p. 210.
Bendlage, Theodore J., Marshalltown, Iowa. Sanitary heated stock-fountain. No. 1,301,805; Apr. 29; v. 261; p. 808.
Benedict, Edward. (See Reynolds, Arthur W., assignor.)
Benjamin, Bert R., Oak Park, Ill., assignor, by mesne assignments, to International Harvester Company, Harvester-thresher. No. 1,301,361; Apr. 22; v. 261; p. 691.
Benjamin, Bert R., Oak Park, Ill., assignor, by mesne assignments, to International Harvester Company. Bagging mechanism for harvester threshers or strippers. No. 1,301,362; Apr. 22; v. 261; p. 693.
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin, Henry J., New York, N. Y. Tank-registering device. No. 1,300,327; Apr. 15; v. 261; p. 439.
Benjamin, John M., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for separating lasts and shoes. No. 1,299,816; Apr. 8; v. 261; p. 301.
Benjamin, John M., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Heeling-machine. No. 1,301,898; Apr. 29; v. 261; p. 825.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Attachment-plug. No. 1,300,812; Apr. 15; v. 261; p. 542.
Benner, Edward, Los Angeles, Calif. Irrigating-valve. No. 1,301,030; Apr. 15; v. 261; p. 589.
Bennett, Clark H., Chicago, Ill., assignor to Cornell Wood Products Company, Cornell, Wis. Sizing. No. 1,299,663; Apr. 8; v. 261; p. 267.
Bennett, Marvin D., Sidney, N. Y. Anchoring device for railway rolling-stock bumpers. No. 1,300,106; Apr. 8; v. 261; p. 365.
Bennett, Wilbur V. (See Sharpnack, Matthew C., assignor.)
Bensell, Edmund E. (See Bingham, George C., assignor.)
Benson, Andrew, assignor to Benson Gear Company, Chicago, Ill. Cutting worm-gears. No. 1,302,126; Apr. 29; v. 261; p. 868.
Benson Gear Company. (See Benson, Andrew, assignor.)
Bentley, Raymond B., East San Pedro, Calif. Fish-tray. No. 1,301,031; Apr. 15; v. 261; p. 589.
Bentz, Harry. (See Mangelsdorff, Max F., assignor.)
Benz, Frederick, Jr., Haledon, N. J., assignor to J. Frank, New York, N. Y. Batten structure for narrow-ware looms. No. 1,301,900; Apr. 29; v. 261; p. 826.
Berg, August, Brownsville, Wash. Pole-climbing scaffold. No. 1,298,289; Apr. 1; v. 261; p. 153.
Berg, Gustaf A., Chicago, Ill. Cotter-pin puller. No. 1,302,287; Apr. 29; v. 261; p. 898.
Berg, Jacob, et al. (See Berg, Johannes, assignor.)
Berg, Johannes, assignor of one-third to R. Berg and one-third to J. Berg, Chicago, Ill. Air-brush. No. 1,299,290; Apr. 1; v. 261; p. 153.

Berg, Joseph, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Tachometer drive connection. No. 1,298,646; Apr. 1; v. 261; p. 5.
Berg, Joseph, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Vehicle-lamp-supporting clamp. No. 1,300,328; Apr. 15; v. 261; p. 439.
Berg, Joseph, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Adjustable drive for speedometers. No. 1,300,329; Apr. 15; v. 261; p. 439.
Berg, Reidar, *et al.* (See Berg, Johannes, assignor.)
Bergen, Paul, Richwood, Wis. Non-refillable container. No. 1,300,917; Apr. 15; v. 261; p. 564.
Bergougnoux, Jean B., Chicago, Ill. Auxiliary feeding device for internal-combustion engines. No. 1,299,817; Apr. 8; v. 261; p. 302.
Berkeley, Laurence J., Racine, Wis., assignor to The P & M Company, Chicago, Ill. Rail-anchor. No. 1,301,219; Apr. 22; v. 261; p. 664.
Berkeley, Laurence J., Racine, Wis., assignor to The P & M Company, Chicago, Ill. Rail-anchor. No. 1,301,798; Apr. 22; v. 261; p. 777.
Berliner, Emile. (See Moore, Robert S., assignor.) (Reissue.)
Bernard, David M., Jacksonville, Fla. Drawing and measuring instrument. No. 1,301,092; Apr. 22; v. 261; p. 638.
Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Hand-tool. No. 1,300,330; Apr. 15; v. 261; p. 439.
Bernheim, Morris U., assignor to The Alvey-Ferguson Company, Cincinnati, Ohio. Conveyer. No. 1,300,331; Apr. 15; v. 261; p. 439.
Bernheim, Morris U., assignor to The Alvey-Ferguson Company, Cincinnati, Ohio. Conveyer. No. 1,300,332; Apr. 15; v. 261; p. 440.
Bernia, Louis, Montreal, Quebec, Canada. Stovepipe-coupling. No. 1,298,869; Apr. 1; v. 261; p. 58.
Berry, Bernard, Helena, Mont. Resilient wheel. No. 1,299,898; Apr. 8; v. 261; p. 320.
Berry, Frederick E., Hayes, England. Electric furnace and transformer for use therewith. No. 1,299,664; Apr. 8; v. 261; p. 267.
Berry, Leroy A., Allston, Mass. Explosive shell. No. 1,300,333; Apr. 15; v. 261; p. 440.
Berst, Charles B., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Commutator-brush. No. 1,300,229; Apr. 15; v. 261; p. 420.
Bertrand, Frederic E., Lynn, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Shoe-filling machine. No. 1,299,665; Apr. 8; v. 261; p. 267.
Bessey, Edward F., and W. H. Beiers, assignors to Howe Manufacturing Company, Chicago, Ill. Lamp-bracket. No. 1,299,899; Apr. 8; v. 261; p. 320.
Best Brothers Keene's Cement Company, The. (See Hoskins, William, assignor.)
Best, John A., Augusta, Ga. Visible and expansible card-index. No. 1,300,334; Apr. 15; v. 261; p. 440.
Best, William J., Detroit, Mich. Hydrocarbon-burner. No. 1,299,108; Apr. 1; v. 261; p. 113.
Best, William N., Brooklyn, N. Y. Swivel-joint. No. 1,300,109; Apr. 8; v. 261; p. 365.
Bestwall Manufacturing Company. (See Armstrong, Morgan K., assignor.)
Bethlehem Steel Company. (See Lund, John, assignor.)
Betts, Anson G., Asheville, N. C. Production of alu[illegible]na. No. 1,300,110; Apr. 8; v. 261; p. 366.
Bewley, Claude G., Spokane, Wash., assignor to Spokane Concrete Flower Pot Machine Co., Inc. [illegible]eeding mechanism. No. 1,298,047; Apr. 1; v. 261; p. 6.
Beyer, Walter F. J. (See Brusch and Beyer.)
Beyland, Sidney A., assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,301,363; Apr. 22; v. 261; p. 693.
Biagini, Ray. (See Prati and Biagini.)
Bianchi, Attilio, and J. Occhipinti, New York, N. Y. Machine for affixing fabric coverings. No. 1,302,288; Apr. 29; v. 261; p. 898.
Bibb, George F., Troy, N. Y. Combined fuel and air valve. No. 1,299,900; Apr. 8; v. 261; p. 320.
Bicknell, George M., Detroit, Mich., and H. H. C. Weed, assignors to The Carter Carbureter Company, St. Louis, Mo. Floating bearing. No. 1,300,556; Apr. 15; v. 261; p. 488.
Bicknell, George M., Detroit, Mich., and H. H. C. Weed, assignors to The Carter Carbureter Company, St. Louis, Mo. Floating bearing. No. 1,300,557; Apr. 15; v. 261; p. 488.
Bicknell, George M., Detroit, Mich., and H. H. C. Weed, assignors to The Carter Carbureter Company, St. Louis, Mo. Floating bearing. No. 1,300,558; Apr. 15; v. 261; p. 488.
Bicknell, George M., Detroit, Mich., and H. H. C. Weed, assignors to The Carter Carbureter Company, St. Louis, Mo. Floating bearing. No. 1,300,559; Apr. 15; v. 261; p. 489.
Bicknell, George M., Detroit, Mich., and H. H. C. Weed, assignors to The Carter Carbureter Company, St. Louis, Mo. Floating bearing. No. 1,300,560; Apr. 15; v. 261; p. 489.
Biehler, Joseph G. (See Knopp and Biehler.)
Biggs, Benjamin, Seattle, Wash. Form for concrete silo construction. No. 1,301,364; Apr. 22; v. 261; p. 663.
Billings, Frank, Cleveland, Ohio. Loading and conveying apparatus. No. 1,300,111; Apr. 8; v. 261; p. 366.
Billings, Thomas R., Bieber, Calif. Charge-preheater. No. 1,301,999; Apr. 29; v. 261; p. 845.
Binder, William H., San Luis Obispo, Calif. Spreader. No. 1,299,606; Apr. 8; v. 261; p. 268.
Bindley, Albion, North Charleroi, assignor to Pittsburgh Steel Products Company, Pittsburgh, Pa. Oil-can. No. 1,302,289; Apr. 29; v. 261; p. 898.
Bingham, George C., Heybridge, Maldon, England, assignor of one-half to E. E. Bensall, Maldon, England. Plow. No. 1,301,365; Apr. 22; v. 261; p. 694.
Birault, Camille, Paris, France. Sighting instrument for aviation purposes. No. 1,298,648; Apr. 1; v. 261; p. 6.
Bird, David B., Chicago, Ill. Powder-gun. No. 1,301,366; Apr. 22; v. 261; p. 694.
Birkenbeuel, Edward B. (See Evans and Birkenbeuel.)
Birks, Lawrence, and J. R. Templin, Fendalton, Christchurch, New Zealand. System and means for differentially metering electricity for lighting and heating purposes. No. 1,298,649; Apr. 1; v. 261; p. 6.
Bisconer, Raymond. (See Mathis, William R., assignor.)
Bissell, Carl H., and H. P. Hastings, assignors to Crouse-Hinds Company, Syracuse, N. Y. Meter-testing connection. No. 1,300,690; Apr. 15; v. 261; p. 515.
Bissell Carpet Sweeper Company. (See Mason, Francis C., assignor.)
Bitz, John H., Mount Pleasant township, Westmoreland county, Pa. Shot-hole scraper and tamper. No. 1,302,127; Apr. 29; v. 261; p. 868.
Bizzell, Robert M. (See Bean and Bizzell.)
Bjerkass, Arnold, Long Prairie, Minn. Short-turning gear. No. 1,298,650; Apr. 1; v. 261; p. 6.
Black, Douglas E., Sumner, Wash. Mole-trap. No. 1,299,109; Apr. 1; v. 261; p. 113.
Black, George H., Rochester, N. Y., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Fastening-inserting machine. No. 1,301,032; Apr. 15; v. 261; p. 589.
Black, George H., Rochester, N. Y., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Welt-shoe and making same. No. 1,301,084; Apr. 15; v. 261; p. 602.
Black, Robert C., and I. A. Malden, Dunnellon, Fla. Garden-tool. No. 1,302,290; Apr. 29; v. 261; p. 899.
Blackman, James B. (See Overshiner, Ellsworth B., assignor.)
Blackman, Zachary T., Long Beach, Miss. Rain-coat. No. 1,299,818; Apr. 8; v. 261; p. 302.
Blackstone, George M. (See Carter and Watts, assignors.)
Blaine, Joseph R., Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Sheet-registering mechanism. No. 1,300,561; Apr. 15; v. 261; p. 489.
Blaine, Joseph R., Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Sheet-registering mechanism. No. 1,300,562; Apr. 15; v. 261; p. 490.
Blaine, Joseph R., Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Sheet-registering mechanism. No. 1,300,563; Apr. 15; v. 261; p. 490.
Blair, Benjamin L., Indianapolis, Ind. Air-gun. No. 1,299,901; Apr. 8; v. 261; p. 320.
Blair, Frank R., Glen Ridge, N. J., assignor to F. R. Blair & Co., Inc., New York, N. Y. Flexible coupling. No. 1,302,291; Apr. 29; v. 261; p. 899.
Blake, John H., Harlan, Ky. Shade and curtain holder. No. 1,302,292; Apr. 29; v. 261; p. 899.
Blakeslee, George S., Chicago, Ill. Dish-washing machine. No. 1,299,667; Apr. 8; v. 261; p. 268.
Blakeslee, John R., assignor to The Ajax Manufacturing Company, Cleveland, Ohio. Safety device for forging-machines and the like. No. 1,300,240; Apr. 15; v. 261; p. 420.
Blanchard, Adolphe, Varennes, France. Plow or analogous farm machine for enabling it to be operated by motor. No. 1,298,870; Apr. 1; v. 261; p. 58.
Blanchard, Joseph W., A. J. Schneeman, and L. A. Minea, St. Paul, Minn.; said Schneeman assignor to said Blanchard and said Minea. Toy No. 1,301,537; Apr. 22; v. 261; p. 725.
Blank, Charles A., Miller, Ind. Auto power-scoop. No. 1,301,643; Apr. 22; v. 261; p. 744.
Blanke, Cyrus F., assignor to St. Louis Tin & Sheet Metal Working Co., St. Louis Mo. Suitcase. No. 1,299,281; Apr. 1; v. 261; p. 154.
Blankenstein, Richard J., Cleburne, assignor of one-fourth to W. H. Baade, Waco, Tex. Hoeing and chopping apparatus. No. 1,299,902; Apr. 8; v. 261; p. 320.
Blanton, B. B. (See Quinn, Ernest J., assignor.)
Blazer, Earl H., Kansas City, Mo. Aeroplane-frame construction. No. 1,302,293; Apr. 29; v. 261; p. 899.
Blease, Herbert F. H. (See Mercer and Blease.)
Bleile, Albert, Dayton, Ohio. Device for filling and opening containers. No. 1,300,691; Apr. 15; v. 261; p. 516.
Bliesath, Ernest, assignor of one-half to G. W. De Witt, Portland, Oreg. Toy aeroplane. No. 1,300,564; Apr. 15; v. 261; p. 490.

Bloch, Leon, New York, N. Y. Valve. No. 1,300,918; Apr. 15; v. 261; p. 564.
Blodget, Robert W. (See Warner and Blodget.)
Blomquist, August, Vancouver, British Columbia, Canada. Air lifting-jack. No. 1,298,668; Apr. 8; v. 261; p. 208.
Blomquist, Johan V., Djursholms Ösby, Sweden. Steam plant. No. 1,301,806; Apr. 29; v. 261; p. 808.
Blomstrom, Lowell C., Detroit, Mich. Screw-thread micrometer. No. 1,300,692; Apr. 15; v. 261; p. 516.
Blonger, Louis H. (See Marshall, Charles A., assignor.)
Blood, Charles W. H., Winthrop, Mass. Feed mechanism. No. 1,300,241; Apr. 15; v. 261; p. 420.
Bloom, David M. (See Kaumeyer and Bloom.)
Blum, Carl P. (See Little and Blum.)
Boath, Edward E., Norwood, Ohio. Device for stirring viscous materials. No. 1,298,651; Apr. 1; v. 261; p. 6.
Bobroff, Bornett L., assignor, by mesne assignments, to H. Dillmann and H. J. Turck, trustees, Milwaukee, Wis. Indicating device. No. 1,298,871; Apr. 1; v. 261; p. 58.
Bock, Richard G. (See Bock, William and R. G.)
Bock, William and R. G., Chicago, Ill. Car-door-operating device. No. 1,299,420; Apr. 8; v. 261; p. 211.
Bocker, Hermenia A., Buffalo, N. Y. Car-fender-operating means. No. 1,300,919; Apr. 15; v. 261; p. 564.
Bockshe, Ely, assignor to Modern Grinder Manufacturing Co., Milwaukee, Wis. Gear-casing for tool-grinders. No. 1,298,652; Apr. 1; v. 261; p. 7.
Bockshe, Ely, assignor to Modern Grinder Manufacturing Co., Milwaukee, Wis. Adjustable casing for grinders. No. 1,298,653; Apr. 1; v. 261; p. 7.
Boehnke, Henry, Kramer, N. D. Heat-distributing device. No. 1,302,000; Apr. 29; v. 261; p. 845.
Boguerts, Joseph, Sutton, England. Mixing apparatus. No. 1,302,294; Apr. 29; v. 261; p. 899.
Bogert, Elmer A., Montclair, N. J. Visual signal for automobiles. No. 1,302,001; Apr. 29; v. 261; p. 845.
Bohan, William J., St. Paul, Minn. Draft device for locomotives. No. 1,300,335; Apr. 15; v. 261; p. 440.
Bohan, William J., St. Paul, Minn. Door. No. 1,300,336; Apr. 15; v. 261; p. 441.
Bohleber, William, executor. (See Bundy, Cyrus L.)
Bolger, Robert S., Richmond Hill, assignor of one-half to G. F. Whistler, Brooklyn, N. Y. Paper barrel. No. 1,302,128; Apr. 29; v. 261; p. 869.
Bolling, Edgar R., Hannibal, Mo. Expansible pulley. No. 1,299,669; Apr. 8; v. 261; p. 268.
Boll, Charles W., Harrisburg, Pa. Discount-savings check. No. 1,300,693; Apr. 15; v. 261; p. 516.
Bollier, Charles R. (See Reeves, Samuel H., assignor.)
Bone, Benjamin F., *et al.* (See Kennedy, James W., assignor.)
Booth-Hall Company. (See Booth, William K., assignor.)
Booth, William K., assignor to Booth-Hall Company, Chicago, Ill. Electric furnace. No. 1,299,110; Apr. 1; v. 261; p. 113.
Booth, William N., assignor to Kelsey Wheel Company, Inc., Detroit, Mich. Demountable-rim-securing device for vehicle-wheels. No. 1,299,903; Apr. 8; v. 261; p. 321.
Borkey, Stephen F., Flint, Mich. Axle-stretching machine. No. 1,299,292; Apr. 1; v. 261; p. 154.
Bose, William, St. Paul, Minn. Metal roof-edging. No. 1,299,421; Apr. 8; v. 261; p. 211.
Bossert, Charles P., Milwaukee, Wis. Machine for treating hides and the like. No. 1,300,920; Apr. 15; v. 261; p. 564.
Boston Pencil Pointer Company. (See Wilson, Allen P., assignor.)
Boston Wire Stitcher Company. (See Maynard, Arthur H., assignor.)
Bostwick, Grant W. (See Bostwick, Robert W. and G. W.)
Bostwick, Robert W. and G. W., Detroit, Mich. Disappearing bed. No. 1,300,694; Apr. 15; v. 261; p. 516.
Bostwick, Robert W. and G. W., Detroit, Mich. Disappearing bed. No. 1,300,695; Apr. 15; v. 261; p. 516.
Botsford, Walter C., Eltopia, Wash. Agricultural tractor. No. 1,302,295; Apr. 29; v. 261; p. 900.
Bottin, Georges. (See Durand and Bottin.)
Bouchardon, Victor, Paris, France. Sender for Hertzian waves utilizing polyphase generators. No. 1,302,129; Apr. 29; v. 261; p. 869.
Bouchet, Marie L., Roselle, N. J. Macaroni and the like food product. No. 1,299,819; Apr. 8; v. 261; p. 302.
Bound Brook Oil-Less Bearing Company. (See Smalley, George O., assignor.)
Bourque, David, assignor to G. W. J. Murphy Company, Amesbury, Mass. Stud-and-socket fastener. No. 1,300,337; Apr. 15; v. 261; p. 441.
Bourque, David, assignor to G. W. J. Murphy Company, Amesbury, Mass. Socket for fasteners. No. 1,300,338; Apr. 15; v. 261; p. 441.
Bouteille, Joseph, Paris, France. Internal-combustion engine. No. 1,301,807; Apr. 29; v. 261; p. 808.
Bowe, James H., New York, N. Y. Violin-string. No. 1,300,112; Apr. 8; v. 261; p. 266.
Bower, Lemon D., and S. R. Elder, Warsaw, Ohio. Collapsible core structure. No. 1,299,542; Apr. 8; v. 261; p. 238.
Bowers, Anna E. (See Bowers, John W. and A. E.)
Bowers, John W. and A. E., Quakertown, Pa. Toasting device. No. 1,300,565; Apr. 15; v. 261; p. 490.
Bowers, Marvin O., Success, Saskatchewan, Canada. Automobile-signal. No. 1,302,130; Apr. 29; v. 261; p. 869.
Bowler, Bartholomew, Toronto, Ontario, Canada. Artificial hand. No. 1,299,543; Apr. 8; v. 261; p. 239.
Bowler, Bartholomew, Toronto, Ontario, Canada. Artificial hand. No. 1,301,367; Apr. 22; v. 261; p. 694.
Bowles, Wesley S., Cedarcreek, Mo. Well-bucket. No. 1,299,544; Apr. 8; v. 261; p. 239.
Bowles, William M., Shawnee, assignor to International Crude Oil Storage Company, Inc., Sapulpa, Okla. Safety-vent for oil-storage tanks. No. 1,298,872; Apr. 1; v. 261; p. 58.
Bowman, Levi M., assignor of one-half to W. A. Smith, Tulsa, Okla. Direction-indicator for motor-vehicles. No. 1,302,296; Apr. 29; v. 261; p. 900.
Bowman, Wade W., New York, N. Y. Demountable rim. No. 1,301,033; Apr. 15; v. 261; p. 589.
Bowman, William J., Chico, Calif. Fuel-supply valve for carburetors. No. 1,299,904; Apr. 8; v. 261; p. 321.
Bown, David E., Pittsburgh, Pa. Fuse-plug. No. 1,298,654; Apr. 1; v. 261; p. 7.
Boyd, Freddie J., Gary, Ind. Bed. No. 1,298,873; Apr. 1; v. 261; p. 59.
Boyd, Samuel A., Sasakwa, Okla. Rail-joint. No. 1,299,545; Apr. 8; v. 261; p. 239.
Boye, James H., Chicago, Ill. Curtain-hanger. No. 1,301,368; Apr. 22; v. 261; p. 694.
Boye, James H., assignor to James H. Boye Manufacturing Company, Chicago, Ill. Stair-carpet fastener. No. 1,299,546; Apr. 8; v. 261; p. 239.
Boyes, Ovila W., Barre, Vt. Aeroplane. No. 1,299,111; Apr. 1; v. 261; p. 113.
Boyer, Orin N., Ontario, Oreg. Citrus-fruit-sizing machine. No. 1,302,002; Apr. 29; v. 261; p. 845.
Boyle, Homer L., assignor of one-half to S. H. Davis, Lansing, Mich. Vacuum-cleaner. No. 1,299,547; Apr. 8; v. 261; p. 239.
Boyle, John H., New Haven, Conn. Clock-winding mechanism. No. 1,300,113; Apr. 8; v. 261; p. 366.
Boysen, Albert H., Buffalo, N. Y. Sardine or other can cover. No. 1,302,297; Apr. 29; v. 261; p. 900.
Brackett, Frank A., Manchester, N. H., assignor to W. H. McElwain Company. Sewing-machine. No. 1,301,808; Apr. 29; v. 261; p. 808.
Bradbury, Clifford C., Oak Park, Ill. Vacuum-tank. No. 1,301,369; Apr. 22; v. 261; p. 694.
Bradford, Henry V., Moose Jaw, Saskatchewan, Canada. Magnetic thimble attachment. No. 1,301,093; Apr. 22; v. 261; p. 638.
Bradley, Arthur H., *et al.* (See Smith, James F., assignor.)
Bradley, Arthur J., San Francisco, Calif. Torpedo-net. No. 1,301,641; Apr. 22; v. 261; p. 744.
Bradney, James O., and H. Priester, assignors to Bradney Machine Company, Inc., Middletown, N. Y. Motor-operated adjustable conveyer. No. 1,301,642; Apr. 22; v. 261; p. 744.
Bradney Machine Company. (See Bradney and Priester, assignors.)
Bradshaw, Granville E., Hersham, Walton-on-Thames, England. Petrol-engine bearing. No. 1,301,094; Apr. 22; v. 261; p. 638.
Bradshaw, Granville E., assignor to himself and A. B. C. Motors Limited, Walton-on-Thames, England. Petrol-engine bearing. No. 1,301,370; Apr. 22; v. 261; p. 694.
Bradshaw, Thomas, Oakland, Calif. Resilient tire. No. 1,299,112; Apr. 1; v. 261; p. 114.
Brady, Edward A., Oregon City, Oreg. Embalmer's chin-rest. No. 1,299,670; Apr. 8; v. 261; p. 269.
Brady, James H. (See Cozatt, Walter R., assignor.)
Brainerd, Lura S., Meriden, Conn. Apparatus for making motion-pictures. No. 1,301,538; Apr. 22; v. 261; p. 725.
Braley, Howard D., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Series-type distributing system. No. 1,300,242; Apr. 15; v. 261; p. 421.
Branan, Gilbert, Gravity, Iowa. Wire-stretcher. No. 1,302,003; Apr. 29; v. 261; p. 846.
Brandt, Jackson. (See Dewey, Haywood G., assignor.)
Branson, Russel W., assignor of three-fourths to M. Becker, Kansas City, Mo. Check-protector. No. 1,298,874; Apr. 1; v. 261; p. 59.
Branson, Thomas, assignor to Sibson & Stern, Inc., Philadelphia, Pa. Reinforcing fabric strip for tires. No. 1,300,696; Apr. 15; v. 261; p. 517.
Brantley, James A., Sand Springs, Okla. Mining-machine. No. 1,299,905; Apr. 8; v. 261; p. 321.
Braun, William F. H., assignor to Pennsylvania Lawn Mower Works, Philadelphia, Pa. Gang-mower. No. 1,299,906; Apr. 8; v. 261; p. 321.
Brayton, Grant. (See Young and Cass, assignors.)
Breniser, Orson W., assignor of one-half to A. V. Groupe, Philadelphia, Pa. Paper-fastening device. No. 1,298,875; Apr. 1; v. 261; p. 59.
Brennan, Charles T., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Stock cutting and transferring mechanism for heading-machines. No. 1,299,115; Apr. 1; v. 261; p. 114.

Brennan, John S., Milwaukee, Wis. Garbage and rubbish incinerator. No. 1,301,371; Apr. 22; v. 261; p. 695.

Brennar, Lewis A., Brandonville, Pa. Device for thawing drain-pipes. No. 1,299,671; Apr. 8; v. 261; p. 269.

Bressie, Mary. (See Bascue, John C., assignor.)

Brewer, Edward C., Seattle, Wash. Berry-picker. No. 1,300,566; Apr. 15; v. 261; p. 490.

Brewer, William A., Pittsburgh, and E. F. Hoppel, New Kensington, assignors to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,302,298; Apr. 29; v. 261; p. 900.

Brewer, William A., Pittsburgh, and G. A. Gruendling, New Kensington, assignors to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,302,299; Apr. 29; v. 261; p. 900

Briant Manufacturing Company. (See Larsen, Arnold, assignor.)

Brickman, David, Pasadena, Calif. Portable combination revolving baker's gas-oven. No. 1,298,876; Apr. 1; v. 261; p. 59.

Brigden, George F., Waltham, Mass. Indicator. No. 1,300,339; Apr. 15; v. 261; p. 441.

Briggs, Katharine C., Washington, D. C. Removably tray for traveling-bags. No. 1,300,921; Apr. 15; v. 261; p. 565.

Briggs, Thomas L., Flushing, assignor to General Chemical Company, New York, N. Y. Purifying gases and for producing briqueting material. No. 1,301,372; Apr. 22; v. 261; p. 695.

Briggs, Thomas L., Flushing, assignor to General Chemical Company, New York, N. Y. Apparatus for purifying gases and for producing briqueting material. No. 1,301,373; Apr. 22; v. 261; p. 695.

Bright, Colonel E. (See Freeman, Joseph W., assignor.)

Brill, Henry S., New York, N. Y. Package-tie. No. 1,298,877; Apr. 1; v. 261; p. 60.

Briner, Emil A., East Orange, N. J. System of air-distribution. No. 1,298,655; Apr. 1; v. 261; p. 8.

Brinkman, Louis H., Glen Ridge, N. J. Apparatus for flanging pipes. No. 1,298,656; Apr. 1; v. 261; p. 8.

Brinkman, Louis H., Glen Ridge, N. J. Apparatus for drawing rods and tubes of varying diameters. No. 1,301,220; Apr. 22; v. 261; p. 664.

Brinkman, Louis H., Glen Ridge, N. J. Drawing rods and tubes of varying diameters. No. 1,301,221; Apr. 22; v. 261; p. 665.

Brinkman, Louis H., Glen Ridge, N. J., assignor to Titeflex Metal Hose Corporation. Muffler. No. 1,302,300; Apr. 29; v. 261; p. 900.

Brinnon, Ellis P., Columbus, Ohio. Mechanical starter. No. 1,301,901; Apr. 29; v. 261; p. 826.

Brinton, Willard C., New York, N. Y. Mounting. No. 1,301,902; Apr. 29; v. 261; p. 826.

Brisbin, Charles H., Yuma, Ariz. Dies. No. 1,301,095; Apr. 22; v. 261; p. 638.

British & Colonial Aeroplane Company, The. (See Reid, Wilfrid T., assignor.)

British Westinghouse Electric & Manufacturing Company, The. (See Baumann, Karl, assignor.)

Brock, Arthur, Jr. (See Pedersen, Niels, assignor.)

Brock, Arthur, Jr., Philadelphia, Pa. Film-camera. No. 1,300,114; Apr. 8; v. 261; p. 367.

Brock, Fenelon B., Washington, D. C. Coaster-brake. No. 1,299,422; Apr. 8; v. 261; p. 211.

Brockest, Lorne H., Winnipeg, Manitoba, Canada. Taper pipe. No. 1,301,696; Apr. 22; v. 261; p. 638.

Brodton, Edward R., Washington, D. C., assignor, by mesne assignments, to Sypho-Chemical Sprinkler Corporation, New York, N. Y. Automatic fire-extinguishing apparatus. No. 1,299,548; Apr. 8; v. 261; p. 240.

Brokaio-Eden Manufacturing Co. (See Eden, Harold W., assignor.)

Brooks, Chester K., Mentor, and E. H. Schmidt, assignors to The National Malleable Castings Company, Cleveland, Ohio. Shock-absorbing mechanism for railway-cars. No. 1,301,809; Apr. 29; v. 261; p. 808.

Brooks, Edward J., East Orange, N. J. Strap-tightening tool. No. 1,299,113; Apr. 1; v. 261; p. 114.

Brooks, Frank, Gettysburg, S. D. Automatic gate. No. 1,299,549; Apr. 8; v. 261; p. 240.

Broomall, Aubrey L., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,300,243; Apr. 15; v. 261; p. 421.

Broome, William J., Los Angeles, Calif. Automobile-creeper. No. 1,302,301; Apr. 29; v. 261; p. 901.

Bropson, James, Cleveland, Ohio. Roof-flashing. No. 1,299,423; Apr. 8; v. 261; p. 211.

Brorby, Jacob L., Shenandoah, Iowa. Truck. No. 1,300,567; Apr. 15; v. 261; p. 491.

Brown Bag Filling Machine Company. (See Falwell, Wray, assignor.)

Brown, Charles A. (See Johnson, Philip D., assignor.)

Brown, Charley L., Chandler, Okla. Transmission and automatic clutch-control mechanism. No. 1,299,298; Apr. 1; v. 261; p. 154.

Brown, Harold P., New York, N. Y. Conduit. No. 1,298,878; Apr. 1; v. 261; p. 60.

Brown Instrument Company, The. (See Chapman, Charles F., assignor.)

Brown Instrument Company, The. (See Heitman, Edwin J., assignor.)

Brown, John W., Lakewood, Ohio. Apparatus for recovering metal from scrap material. No. 1,301,374; Apr. 22; v. 261; p. 695.

Brown, Perry, Coraopolis, Pa. Draft-rigging. No. 1,299,114; Apr. 1; v. 261; p. 114.

Brown, Phelps, Springfield, Mass. Igniter. No. 1,300,923; Apr. 15; v. 261; p. 565.

Brown, Philip C., Dover, N. H. Leather-stretching machine. No. 1,299,672; Apr. 8; v. 261; p. 269.

Brown, Thomas E., New York, N. Y. Bascule-bridge. No. 1,302,302; Apr. 29; v. 261; p. 901.

Brown, Thomas W., Chicago, Ill. Mouth-protector. No. 1,302,004; Apr. 29; v. 261; p. 846.

Brown, William H., Philadelphia, assignor to Philips-Brinton Company, Kennett Square, Pa. Electric connection. No. 1,298,879; Apr. 1; v. 261; p. 60.

Browne, Herbert J., *et al.* (See Baumann, Frederick, assignor.)

Browning, John M., Ogden, Utah, assignor to Colt's Patent Fire Arms Manufacturing Company, Hartford, Conn. Cartridge-carrier. No. 1,301,810; Apr. 29; v. 261; p. 800.

Bruchas, Joseph, Chicago, Ill. Curtain-pole hanger. No. 1,299,673; Apr. 8; v. 261; p. 269.

Bruner, Louis N., Zurich, Switzerland. Grinding-machine. No. 1,301,375; Apr. 22; v. 261; p. 695.

Bruner, Louis N., Zurich, Switzerland. Machine for grinding glass bottles and other articles. No. 1,301,376; Apr. 22; v. 261; p. 696.

Bruner, Louis N., Zurich, Switzerland. Machine for grinding or truing bottle-stoppers and other articles. No. 1,301,377; Apr. 22; v. 261; p. 696.

Bruner, Louis N., Zurich, Switzerland, and S. D. Olsen, Hunslet, Leeds, England. Apparatus for manufacturing hollow glassware. No. 1,301,378; Apr. 22; v. 261; p. 696.

Brusch, Friedrich W., and W. F. J. Beyer, Dortmund, assignors to Deutsche-Luxemburgische Bergwerks-und Hütten-Aktiengesellschaft, Bochum, Germany. Subaqueous torch and igniting. No. 1,296,880; Apr. 1; v. 261; p. 60.

Brusewitz, Frank A., Duluth, Minn. Road-grading machine. No. 1,299,907; Apr. 8; v. 261; p. 822.

Brush, Alanson P., Detroit, Mich. Internal-combustion engine. No. 1,299,674; Apr. 8; v. 261; p. 269.

Bruss, Adolf M., Central Butte, Saskatchewan, Canada. Switch-governor. No. 1,301,222; Apr. 22; v. 261; p. 665.

Bruton, William B., *et al.* (See Eubanks, Bayers D., assignor.)

Bryan, John K. (See Aldrich and Bryan.)

Bryant, Hubert C., Hartford, Conn. Brake for talking-machines. No. 1,300,568; Apr. 15; v. 261; p. 491.

Bryant, Richard S., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Rim for vehicle-wheels. No. 1,301,097; Apr. 22; v. 261; p. 639.

Bryant, William L., Springfield, Vt. Grinding-machine. No. 1,300,923; Apr. 15; v. 261; p. 565.

Bryce, James W., Bloomfield, N. J. Clock-winding mechanism. No. 1,299,116; Apr. 1; v. 261; p. 114.

Bryson, Walter S., *et al.* (See Kennedy, James W., assignor.)

Buchanan, Fred, Des Moines, Iowa. Stake-pulling machine. No. 1,299,294; Apr. 1; v. 261; p. 154.

Buchanan, George T., Winnsboro, S. C. Airplane. No. 1,299,117; Apr. 1; v. 261; p. 115.

Buchli, Jacob, assignor to A. G. Brown Boveri & Cie, Baden, Switzerland. Shaft-coupling. No. 1,298,881; Apr. 1; v. 261; p. 61.

Buchtel, Ralph S., *et al.* (See Whitcomb, James, assignor.)

Buck, Frank S., Springfield, Vt., assignor, by mesne assignments, to Fitz-Empire Double Pivot Last Co., Rochester, N. Y. Grading mechanism for pattern-reproducing machines. No. 1,302,303; Apr. 29; v. 261; p. 901.

Buck, George D., assignor of one-third to H. P. Rodgers and one-third to S. D. Rodgers, St. Louis, Mo. Cutting device for copying-machines. No. 1,301,379; Apr. 22; v. 261; p. 696.

Buck, Milton E., Ematon, Kans. Wire-reel. No. 1,299,550; Apr. 8; v. 261; p. 240.

Buck, Samuel M., Cedar Lake, Mich. Sleigh-runner attachment for vehicles. No. 1,300,813. Apr. 15; v. 261; p. 542.

Buckeye Iron and Brass Works. (See Trace, Russell A., assignor.)

Buckham, George T. (See Dawson and Buckham.)

Buckham, George T. (See Dawson, Buckham, and Ellis.)

Buckham, George T., assignor to Vickers Limited, Westminster, London, England. Pedestal gun-mounting. No. 1,299,118; Apr. 1; v. 261; p. 115.

Buckingham, James F., Coventry, England. Incendiary projectile. No. 1,301,380; Apr. 22; v. 261; p. 696.

Buckingham, James F., Coventry, England. Incendiary projectile. No. 1,301,382; Apr. 22; v. 261; p. 697.

Buckingham, James F., county of Warwick, England. Incendiary projectile. No. 1,301,381; Apr. 22; v. 261; p. 697.

Buckley, Henry and J. E., Manchester, England. Wood vat or tank. No. 1,301,903; Apr. 29; v. 261; p. 826.

Buckley, Joseph E. (See Buckley, Henry and J. E.)

Buckley, Oliver E., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Directive sending system. No. 1,301,044; Apr. 22; v. 261; p. 744.

Budd, Edward G., assignor to Budd Wheel Corporation, Philadelphia, Pa. Adjusting wire spokes of wire-spoked wheels. No. 1,298,657; Apr. 1; v. 261; p. 8.
Budd, Edward G., assignor to Budd Wheel Corporation, Philadelphia, Pa. Detachable wire-spoked wheel. No. 1,299,400; Apr. 1; v. 261; p. 178.
Budd Wheel Corporation. (See Budd, Edward G., assignor.)
Budd Wheel Corporation. (See Ibach, Emil, assignor.)
Budd Wheel Corporation. (See Ledwinka, Joseph, assignor.)
Budd Wheel Corporation. (See Schenck, Charles, assignor.)
Budzinski, Steve. (See Kopacki, Albert G., assignor.)
Buechel, Andrew E. (See Pente, William, assignor.)
Bull, Archer A., Dahoga, Pa. Bomb. No. 1,301,098; Apr. 22; v. 261; p. 639.
Bull, Arthur J., Newcastle, New South Wales, Australia. Imitation-graining tool. No. 1,298,882; Apr. 1; v. 261; p. 61.
Bullard, Thomas P., Roseboro, N. C. Green-pea-hulling machine. No. 1,302,005; Apr. 29; v. 261; p. 846.
Buller, Charles M., assignor to L. J. Mueller Furnace Company, Milwaukee, Wis. Double-wall pipe. No. 1,300,115; Apr. 8; v. 261; p. 367.
Bullitt, Louis R., San Jose, Calif. Coat and trousers hanger. No. 1,301,845; Apr. 22; v. 261; p. 745.
Bundy, Cyrus L., deceased, East Orange, N. J., assignor of one-half to W. Bohleber, New York, N. Y.; W. Bohleber, executor. Spark-plug. No. 1,300,569; Apr. 15; v. 261; p. 491.
Burch, Charles R. S., San Jose, Calif., assignor of one-half to H. S. De Puy, San Diego, Calif. Traction device. No. 1,300,814; Apr. 15; v. 261; p. 542.
Burch, Edwin W., et al. (See Nicholson, Alonso L., assignor.)
Burd, Francis J. (See Parkhurst and Burd.)
Burfeind, Raymond H., Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company. Non-grounded or metallic line-circuit system. No. 1,299,119; Apr. 1; v. 261; p. 115.
Burg, Alfred D. (See Miller and Burg.)
Burg, L. J. (See Miller and Burg, assignors.)
Burgess, Ashton, Regina, Saskatchewan, Canada. Holder for sanitary or single-service cups or other receptacles. No. 1,299,120; Apr. 1; v. 261; p. 115.
Burgess Battery Company. (See Burgess, Charles F., assignor.)
Burgess, Charles F., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis. Battery hand-lamp. No. 1,299,908; Apr. 8; v. 261; p. 322.
Burgess, Charles F., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis. Battery hand-lamp. No. 1,299,909; Apr. 8; v. 261; p. 322.
Burgess, Charles F., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis. Battery hand-lamp. No. 1,299,910; Apr. 8; v. 261; p. 322.
Burgess, Charles F., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis. Battery hand-lamp. No. 1,299,911; Apr. 8; v. 261; p. 322.
Burgess, Charles F., assignor, by mesne assignments, to Burgess Battery Company, Madison, Wis. Dry cell. No. 1,302,304; Apr. 29; v. 261; p. 902.
Burgess, Edward W., Chicago, Ill., assignor, by mesne assignments, to International Harvester Company. Power-transmission gearing. No. 1,301,811; Apr. 29; v. 261; p. 809.
Burgess, John A., Toronto, Ontario, Canada, assignor of one-half to G. B. Hutchings, Richmond, Va. Sound-detector. No. 1,301,034; Apr. 15; v. 261; p. 589.
Burgess, John A., Toronto, Ontario, Canada, and G. B. Hutchings, Richmond, Va. Sound-interference device. No. 1,301,035; Apr. 15; v. 261; p. 590.
Burhen, Reinhart J., Kirkwood, assignor to W. Scott, St. Louis, Mo. Corner-fastener for screen-frames. No. 1,301,812; Apr. 29; v. 261; p. 809.
Burk, William H., assignor to American Steel Window Company, Chicago, Ill. Fastening device. No. 1,301,813; Apr. 29; v. 261; p. 809.
Burk, William H., assignor to American Steel Window Company, Chicago, Ill. Latch. No. 1,301,814; Apr. 29; v. 261; p. 809.
Burke & James. (See Tyrrell, Frederick S., assignor.)
Burlingame, Stephen C., Sterling, Conn. Winding mechanism. No. 1,301,223; Apr. 22; v. 261; p. 665.
Burnett-Larsh Manufacturing Company, The. (See Larsh, Everett P., assignor.)
Burnett, Richard W., Montreal, Quebec, Canada. Car-underframe. No. 1,300,340; Apr. 15; v. 261; p. 441.
Burns, Frank, Westfield, N. Y. Catch. No. 1,300,570; Apr. 15; v. 261; p. 491.
Burr, Thomas W., Stoneham, Mass. Lubricating-cup. No. 1,302,066; Apr. 29; v. 261; p. 846.
Burrell, William C., Kankakee, Ill. Animal-feeding device. No. 1,301,253; Apr. 22; v. 261; p. 697.
Burrell, William C., Kankakee, Ill. Animal-operated liquid-distributer. No. 1,301,904; Apr. 29; v. 261; p. 827.
Burrows, Frank R. and J. G., Port Arthur, Ontario, Canada. Explosive compound. No. 1,301,846; Apr. 22; v. 261; p. 745.
Burrows, Joseph G. (See Burrows, Frank R. and J. G.)
Burrows, William J., and H. B. Lawrence, Vernon, Ala. Photographic camera. No. 1,301,815; Apr. 29; v. 261; p. 809.
Burton, Charles S., Oak Park, assignor to Melville Clark Piano Company, Chicago, Ill. Combined piano and phonograph. No. 1,300,244; Apr. 15; v. 261; p. 421.
Burton, Elisha L., Thealka, assignor of one-half to C. C. Henkel, Paintsville, Ky. Non-binding switch. No. 1,301,099; Apr. 22; v. 261; p. 639.
Burton, Elisha L., Thealka, assignor of one-half to C. C. Henkel, Paintsville, Ky. Automatic switch. No. 1,301,100; Apr. 22; v. 261; p. 639.
Burton, John P., Oakville, Ontario, Canada. Lifting-buoy. No. 1,299,121; Apr. 1; v. 261; p. 115.
Busby, Junius E., assignor of one-half to C. H. Keith, Trafford, Ala. Oiling device. No. 1,301,816; Apr. 29; v. 261; p. 810.
Bush, Eppsey E., Galveston, Tex. Winch attachment. No. 1,301,224; Apr. 22; v. 261; p. 665.
Bush, Hardy, Newark, N. J. Safety-pin. No. 1,299,675; Apr. 8; v. 261; p. 270.
Bush, Roy W., Satus, Wash. Tire-tool. No. 1,300,924; Apr. 15; v. 261; p. 565.
Bushnell, Charles S., Sydney, New South Wales, Australia, assignor to General Railway Signal Company, Gates, N. Y. Railway-traffic-controlling system. No. 1,299,295; Apr. 1; v. 261; p. 155.
Bussey, William H., Minneapolis, Minn. Planting-box. No. 1,300,245; Apr. 15; v. 261; p. 421.
Butcher, James M., Chicago, Ill. Alarm mechanism. No. 1,301,783; Apr. 22; v. 261; p. 774.
Butler, Charles B. (See Cornell, Herbert V., assignor.)
Butler, James L., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Tool-mounting for tire-machines. No. 1,300,341; Apr. 15; v. 261; p. 442.
Butterworth, Samuel D., Lansing, Mich. Apparatus and method for loading automobiles. No. 1,299,912; Apr. 8; v. 261; p. 223.
Button, Leonard, Birmingham, Ala. Sanitary dry closet. No. 1,298,658; Apr. 1; v. 261; p. 8.
Bye, Mortimer, Indianapolis, Ind. Rocker-holder for liquid-containers. No. 1,299,296; Apr. 1; v. 261; p. 155.
Byers, Charles E., et al. (See Whitcomb, James, assignor.)
Byers, Julius C., Reno, Nev. Sewing-cabinet. No. 1,302,205; Apr. 29; v. 261; p. 902.
Bynoe, Frederick O., Twickenham, England. Superheater for air, vapor, or gas. No. 1,298,883; Apr. 1; v. 261; p. 61.
Byron Jackson Iron Works. (See Paulsmeier, Albert C., assignor.)
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. G. Conn, Ltd. (See Gulick, Edward J., assignor.)
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)
Cade, Enos B., Seattle, Wash. Measuring device. No. 1,300,116; Apr. 8; v. 261; p. 367.
Cadwallader, Thomas, Salem, Ohio. Hydraulic motor. No. 1,301,225; Apr. 22; v. 261; p. 665.
Cadwell, Charles A., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Method of and apparatus for welding. No. 1,300,117; Apr. 8; v. 261; p. 367.
Cady, Elisha J., Oak Park, Ill. Micrometer-caliper. No. 1,300,210; Apr. 8; v. 261; p. 387.
Cady, Ulysses G., assignor of one-half to E. B. Graves, Durkee, Oreg. Harrow. No. 1,301,226; Apr. 22; v. 261; p. 665.
Cage, John M., Detroit, Mich. Internal-combustion engine and operating the same. No. 1,301,036; Apr. 15; v. 261; p. 590.
Calhoun, John W., Pittsburgh, Pa. Water-meter connection and valve. No. 1,300,925; Apr. 15; v. 261; p. 565.
Calkins, Addison N., assignor to Electric Wheel Company, Quincy, Ill. Auxiliary engine-cooling means. No. 1,301,784; Apr. 22; v. 261; p. 774.
Callison, Amos, Brooklyn, N. Y. Bottle-sealing machine. No. 1,299,551; Apr. 8; v. 261; p. 240.
Calthrop, Everard R., London, England. Balloon. No. 1,302,007; Apr. 29; v. 261; p. 846.
Calthrop, Everard R., assignor to E. R. Calthrop's Aerial Patents Limited, London, England. Parachute. No. 1,299,122; Apr. 1; v. 261; p. 115.
Calthrop, Everard R., assignor to E. R. Calthrop's Aerial Patents Limited, London, England. Parachute. No. 1,299,123; Apr. 1; v. 261; p. 116.
Cameron, Dugald, St. Johns, Quebec, Canada, assignor to The Singer Manufacturing Company. Woodworking-machine. No. 1,300,815; Apr. 15; v. 261; p. 542.
Cameron, Jarrett L., Edgerly, assignor of one-half to Evangeline Iron Works Ltd., Vinton, La. Rotary core-cutting drill for wells. No. 1,301,541; Apr. 22; v. 261; p. 725.
Cameron, William, Oak Grove, Mich. Shell. No. 1,302,008; Apr. 29; v. 261; p. 846.
Cameron, William W., assignor to La Crosse Plow Company, La Crosse, Wis. Plow. No. 1,301,589; Apr. 22; v. 261; p. 725.

Cameron, William W., assignor to La Crosse Plow Company, La Crosse, Wis. Plow. No. 1,301,540; Apr. 22; v. 261; p. 725.
Campbell, Dayton D., Kansas City, Mo. Dental articulator. No. 1,301,817; Apr. 29; v. 261; p. 810.
Campbell, Duncan R., Boston, Mass., assignor, by mesne assignments, to R. A. Linden, Flushing, N. Y. Branding-machine. No. 1,300,342; Apr. 15; v. 261; p. 442.
Campbell, Hardy W., Lincoln, Nebr. Cultivator. No. 1,299,676; Apr. 8; v. 261; p. 270.
Campbell, John S., London, England. Vulcanizable composition of matter having comminuted leather as a base and preparing same. No. 1,302,463; Apr. 29; v. 261; p. 933.
Campbell, Lawrence S., Kansas City, Mo. Gas-generating oil-burner. No. 1,300,246; Apr. 15; v. 261; p. 421.
Campbell, Wilson L., and T. G. Martin, Chicago, Ill., assignors, by mesne assignments, to Automatic Electric Company. Telephone system. No. 1,301,647; Apr. 22; v. 261; p. 745.
Campbell, Wilson L., and T. G. Martin, Chicago, Ill., assignors, by mesne assignments, to Automatic Electric Company. Automatic and manual telephone-exchange system. No. 1,301,648; Apr. 22; v. 261; p. 745.
Campion, Patrick R., San Francisco, Calif. Auxiliary air-inlet device for internal-combustion motors. No. 1,301,649; Apr. 22; v. 261; p. 745.
Canadian Explosives Limited. (See Godfrey, Edward, assignor.)
Canadian Fish Hook Manufacturing Co., The. (See Evans, John S., assignor.)
Cannon, Louis S. (See Patterson and Cannon.)
Capito, Charles E., Los Angeles, Calif. Lamp-socket holder. No. 1,301,542; Apr. 22; v. 261; p. 726.
Capps, Frank L., Brooklyn, assignor to Pathe Freres Phonograph Company, New York, N. Y. Stand for phonograph-record presses. No. 1,298,659; Apr. 1; v. 261; p. 9.
Carbo Hydrogen Company of America. (See Harris, John, assignor.)
Cardoso, Adelino, Milan, Italy. Elastic vehicle-wheel. No. 1,298,660; Apr. 1; v. 261; p. 9.
Carlisle, Alfred C., Lakeside, Ohio. Combined hand-anvil and set-gage. No. 1,299,297; Apr. 1; v. 261; p. 155.
Carlisle, Bert, Santa Ana, Calif. Spacing device for wrapping-paper rolls. No. 1,301,037; Apr. 15; v. 261; p. 590.
Carlisle, Fred B. (See Morton, Frederic C., assignor.)
Carlson, Carl V., Chatcolet, Idaho. Automatic feeding device for cream-separators. No. 1,301,818; Apr. 29; v. 261; p. 810.
Carlson, Theodore. (See Johnson, John, assignor.)
Carlton, Anson E., Paterson, N. J. Hook. No. 1,299,424; Apr. 8; v. 261; p. 211.
Carmichael, James, Chicago, Ill. Pouring-spout for cans. No. 1,299,913; Apr. 8; v. 261; p. 323.
Carpenter, Amos M., Kalamazoo, Mich. Wall structure. No. 1,299,425; Apr. 8; v. 261; p. 211.
Carpenter, Stephen, South Gibson, Pa. Spring-wheel. No. 1,302,306; Apr. 29; v. 261; p. 902.
Carper, Albert A., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Bottle-capping machine. No. 1,299,820; Apr. 8; v. 261; p. 302
Carpmill, John F., and H. G. Hancock, assignors to The North & Judd Manufacturing Company, New Britain, Conn. Hook. No. 1,299,821; Apr. 8; v. 261; p. 303.
Carr Fastener Company. (See Carr, Fred S., assignor.)
Carr Fastener Company. (See Carr, Moses F., assignor.)
Carr Fastener Company, assignee. (See Neider, Fred A.) (Reissue.)
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,571; Apr. 15; v. 261; p. 491.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,572; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Separable fastener. No. 1,300,573; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Separable fastener. No. 1,300,574; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Separable fastener. No. 1,300,575; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,576; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,577; Apr. 15; v. 261; p. 492.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastening mechanism. No. 1,300,578; Apr. 15; v. 261; p. 493.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,579; Apr. 15; v. 261; p. 493.
Carr, Fred S., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,580; Apr. 15; v. 261; p. 493.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,581; Apr. 15; v. 261; p. 493.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,582; Apr. 15; v. 261; p. 493.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,583; Apr. 15; v. 261; p. 493.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,584; Apr. 15; v. 261; p. 493.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,585; Apr. 15; v. 261; p. 494.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,586; Apr. 15; v. 261; p. 494.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,587; Apr. 15; v. 261; p. 494.
Carr, Moses F., Newton, assignor to Carr Fastener Company, Cambridge, Mass. Fastener. No. 1,300,588; Apr. 15; v. 261; p. 494.
Carrier, Albert H., Asheville, N. C., assignor of one-half to E. W. Grove, St. Louis, Mo. Casement-window attachment. No. 1,300,926; Apr. 15; v. 261; p. 566.
Carrm, Bazel E., St. Louis, Mo., assignor to American Motors, Inc., New York, N. Y. Automobile-body. No. 1,299,426; Apr. 8; v. 261; p. 212.
Carroll, Cornelius P., Columbia, La. Display-stand. No. 1,299,677; Apr. 8; v. 261; p. 270.
Carroll, Richard M., Coogee, near Sydney, New South Wales, Australia. Pipe and nut wrench. No. 1,302,099; Apr. 29; v. 261; p. 847.
Carruthers, John E., assignor of one-half to W. A. Paul, Auburn, Me. Building-elevator. No. 1,299,124; Apr. 1; v. 261; p. 116.
Carson Company, The. (See Walker, Sheridan A., assignor.)
Carson, George C., San Francisco, Calif. Construction of the roof of open-hearth and reverberatory furnaces. No. 1,302,307; Apr. 29; v. 261; p. 902.
Carson, Hugh J., Fairfax, Minn., assignor to J. Rocke, Pontiac, Ill. Portable elevator. (Reissue.) No. 14,622; Apr. 1; v. 261; p. 180.
Carson, Oswald R., assignor to American Optical Company, Southbridge, Mass. Ophthalmic mounting. No. 1,301,101; Apr. 22; v. 261; p. 640.
Carson, Victor V., Tacoma, Wash. Aeroplane. No. 1,300,927; Apr. 15; v. 261; p. 566.
Carswell, James A., Augusta, Ga. Bicycle-coupling. No. 1,300,343; Apr. 15; v. 261; p. 442.
Carter, Alfred E., Providence, R. I., assignor to Pratt & Whitney Company, New York, N. Y. Cutting-tool. No. 1,299,125; Apr. 1; v. 261; p. 116.
Carter Carbureter Company, The. (See Bicknell and Weed, assignors.)
Carter, David S., assignor to Larned, Carter & Company, Detroit, Mich. Overall-pocket. No. 1,299,552; Apr. 8; v. 261; p. 241.
Carter, Evershed. (See Carter and Watts.)
Carter, Frank and E., and R. E. Watts, assignors of one-fourth to G. M. Blackstone, Stamford, England. Differential steering-gear for motor-vehicles. No. 1,300,118. Apr. 8; v. 261; p. 368.
Carter, Jesse N., Americus, Ga. Pulverizer. No. 1,301,384; Apr. 22; v. 261; p. 697.
Carter, Ray L., Syracuse, N. Y. Centering-gage. No. 1,302,131; Apr. 29; v. 261; p. 869.
Cartwright, George W., Sacramento, Calif. Compensating steering-gear for road-planers. No. 1,300,697; Apr. 15; v. 261; p. 517.
Cary Manufacturing Company. (See Cary, Spencer C., assignor.)
Cary, Spencer C., assignor to Cary Manufacturing Company, Brooklyn, N. Y. Means for joining metal package-binders. No. 1,301,102; Apr. 22; v. 261; p. 640.
Case, Arthur L., Plainfield, N. J. Tire-casing and manufacture. No. 1,298,661; Apr. 1; v. 261; p. 9.
Case, Edward N., San Diego, Calif. Fuel-regulating means for explosion-engines. No. 1,300,344; Apr. 15; v. 261; p. 442.
Case, Henry M., Cincinnati, Ohio, assignor to D. C. Linnemann, Covington, Ky. Window-ventilator. No. 1,299,126; Apr. 1; v. 261; p. 116.
Case, John L., Sunnyside, Wash. Power-belt. No. 1,300,345; Apr. 15; v. 261; p. 442.
Case, Theodore W., Scipio, N. Y. Variable resistance. No. 1,301,227; Apr. 22; v. 261; p. 666.
Case, William L. (See Young and Case.)
Cassel, Gunnar E., Stockholm, assignor to A. L. O. A. Leffler, Djursholm, Sweden. Controlling device for automobiles. No. 1,299,678; Apr. 8; v. 261; p. 270.
Cassidy, James, Chicago, Ill. Track-sanding device. No. 1,301,103; Apr. 22; v. 261; p. 640.
Catron, John J., Bonham, Tex. Fluid-dispensing control. No. 1,301,385; Apr. 22; v. 261; p. 697.
Cattinari, Ernest, Seattle, Wash. Combined chair and fan. No. 1,302,010; Apr. 29; v. 261; p. 847.
Cavanagh, John F., assignor to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn. Spark-coil for ignition. No. 1,302,308; Apr. 29; v. 261; p. 902.
Central Railway Signal Company. (See Conley, William A., assignor.)
Ceylon Hardware and Furniture Company. (See Harris, Christopher, assignor.)

Chadwick, Lee S., East Cleveland, assignor to The Cleveland Metal Products Company, Cleveland, Ohio. Lifter. No. 1,298,662; Apr. 1; v. 261; p. 9.

Chadwick, Lee S., East Cleveland, assignor to The Cleveland Metal Products Company, Cleveland, Ohio. Dispensing-receptacle. No. 1,299,914; Apr. 8; v. 261; p. 323.

Chalfant, Frank, Fort Wayne, Ind. Milk-can. No. 1,298,884; Apr. 1; v. 261; p. 61.

Challenge Machinery Co., The. (See Lee, James E., assignor.)

Challenger, George H., assignor to Vickers Limited, Westminster, London, England. Mounting for guns carried by aeroplanes and similar aircraft. No. 1,298,885; Apr. 1; v. 261; p. 62.

Challenger, George H., assignor to Vickers Limited, Westminster, London, England. Bullet-deflector for the propellers of aeroplanes and similar aircraft provided with guns. No. 1,298,886; Apr. 1; v. 261; p. 62.

Challenger, George H., Westminster, London, and H. A. Savage, Bexley Heath, assignors to Vickers Limited, Westminster, England. Automatic gun. No. 1,298,887; Apr. 1; v. 261; p. 62.

Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Presser-foot for sewing-machines. No. 1,300,928; Apr. 15; v. 261; p. 566.

Chalmers, Andrew and W. A., Rockport, Tex. Dirigible headlight. No. 1,299,298; Apr. 1; v. 261; p. 155.

Chalmers, Welcome A. (See Chalmers, Andrew and W. A.)

Chamberlain, George A., assignor of one-half to W. B. White, Abington, Mass. Leather welt-strip. No. 1,299,290; Apr. 1; v. 261; p. 155.

Chambers, James C., St. Louis, Mo. Motion-picture-projecting machine. No. 1,300,247; Apr. 15; v. 261; p. 422.

Chamness, Frank, assignor to T. Spatt, Huntington, Ind. Fastening for rails. No. 1,299,401; Apr. 1; v. 261; p. 178.

Champion, Albert J., assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,298,888; Apr. 1; v. 261; p. 62.

Champion Ignition Company. (See Champion, Albert J., assignor.

Champion Ignition Company. (See Schmidt, Albert, assignor.

Chance, Edwin M. (See Chance, Thomas M. and E. M., assignors.)

Chance, Edwin M., Wilkes-Barre, Pa. Method and apparatus for the oxidation of combustible gases. No. 1,298,889; Apr. 1; v. 261; p. 62.

Chance, Thomas M., Wilkes-Barre, and E. M. Chance, Philadelphia, Pa. Method and apparatus for the differential detection of combustible atmospheres. No. 1,298,890; Apr. 1; v. 261; p. 62.

Chandler, Elmo M., South Norfolk, Va., assignor, by mesne assignments, to Automatic Sprinkler Company of Canada, Limited, Toronto, Ontario, Canada. Dry-pipe valve. No. 1,299,679; Apr. 8; v. 261; p. 270.

Chandler, Frank, Cowley, Alberta, Canada. Knife attachment for table-forks. No. 1,300,119; Apr. 8; v. 261; p. 368.

Chandler Motor Car Company. (See Whitbeck, John V., assignor.)

Chaney, Herbert M., Sardinia, Ohio. Belt-support. No. 1,299,680; Apr. 8; v. 261; p. 270.

Chantemerle, Joseph L. (See Garcelon, Bartmess, and Chantemerle.)

Chapman, Charles F., assignor to The Brown Instrument Company, Philadelphia, Pa. Recording instrument. No. 1,299,427; Apr. 8; v. 261; p. 212.

Chapman, Lemuel W., assignor of one-half to W. E. Wachtel, Indianapolis, Ind. Collapsible egg-case. No. 1,301,650; Apr. 22; v. 261; p. 746.

Charles, Clyde C., Salina, Kans. Fuel-feed-valve lock. No. 1,300,120; Apr. 8; v. 261; p. 368.

Charles R. Hadley Company. (See Hadley, Charles R., assignor.)

Chase-Shawmut Company. (See Conant, Franklin N., assignor.)

Chausse Manufacturing Company. (See Chausse, Wilfrid G., assignor.)

Chausse, Wilfrid G., assignor to Chausse Manufacturing Company, Detroit, Mich. Distributer for vapor-burners. No. 1,298,891; Apr. 1; v. 261; p. 63.

Chauvin, Herman. (See Kästniger, Chauvin, and Fontaine.)

Cheeks, John B., assignor of one-half to H. L. Schueck, Pittsburgh, Pa. Valve. No. 1,299,428; Apr. 8; v. 261; p. 212.

Chemical Works, formerly Sandoy. (See Walder, Emil, assignor.)

Chernack, Abel E., Providence, R. I. Loom. No. 1,300,121; Apr. 8; v. 261; p. 368.

Cherney, Joseph B., Milwaukee, Wis., assignor, by mesne assignments, to Columbia Graphophone Manufacturing Company, Bridgeport, Conn. Start and stop mechanism for talking-machines. No. 1,301,905; Apr. 29; v. 261; p. 827.

Chevalier, Fred, Waterloo, Iowa. Closure-holding means for antifriction-wheels. No. 1,301,396; Apr. 22; v. 261; p. 697.

Chevalier, Joseph F., Lakeland, Ky. Pipe-wrench. No. 1,298,668; Apr. 1; v. 261; p. 8.

Chevrolet Motor Company. (See Mason, Arthur C., assignor.)

Chicago Carton Company. (See Richardson, Ralph R., assignor.)

Chicago Carton Company. (See Walker, Paul, assignor.)

Chicago-Cleveland Car Roofing Company. (See Russell, Thomas N., assignor.) (Reissue.)

Chicago Railway Signal and Supply Company. (See Vogel, Eugene W., assignor.)

Chillcott, William E., assignor of three-sixteenths to W. Milligan, three-sixteenths to C. W. Gray, and three-sixteenths to D. Evans, Pittsburgh, Pa. Manufacture of chains. No. 1,299,300; Apr. 1; v. 261; p. 156.

Chiodo, Joseph, Minneapolis, Minn. Trammel. No. 1,300,122; Apr. 8; v. 261; p. 368.

Christian, Arthur R., Huddersfield, England. Machine for trimming molded articles. No. 1,301,651; Apr. 22; v. 261; p. 746.

Christian, Herbert W., Detroit, Mich. Combined water heater and dripper. No. 1,302,309; Apr. 29; v. 261; p. 903.

Christian, Thomas A., assignor of one-third to F. A. Stewart and one-third to L. F. Long, Merced Falls, Calif. Bolt-extractor. No. 1,299,915; Apr. 8; v. 261; p. 323.

Christiansen, Jens A., Copenhagen, Denmark. Producing methyl alcohol from alkyl formates. No. 1,302,011; Apr. 29; v. 261; p. 847.

Christie, Charles G. C., Strathfield, near Sydney, New South Wales, Australia. Sealed container to facilitate the opening thereof. No. 1,302,132; Apr. 29; v. 261; p. 869.

Christophel, Carl E., assignor to Dexter Folder Company, Pearl River, N. Y. Combing pile-feeder. No. 1,301,543; Apr. 22; v. 261; p. 726.

Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vacuum-pump. No. 1,298,664; Apr. 1; v. 261; p. 9.

Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Tertiary coils for transformers. No. 1,298,665; Apr. 1; v. 261; p. 10.

Church, Edmund S., assignor to Automatic Carburetor Co., Chicago, Ill. Curtain-fastener. No. 1,298,666; Apr. 1; v. 261; p. 10.

Church, Edmund S., assignor to Automatic Carburetor Company, Chicago, Ill. Fastener. No. 1,298,892; Apr. 1; v. 261; p. 63.

Church, Frederick A. (See Prior and Church.)

Church, Walter L., Humble, Tex. Sample-taking device. No. 1,300,346; Apr. 15; v. 261; p. 443.

Churchill, James E., Sheffield, England. Vehicle-wheel. No. 1,299,301; Apr. 1; v. 261; p. 156.

Chute, Richard B., Jr., Huntington, N. Y. Clamp. No. 1,299,822; Apr. 8; v. 261; p. 303.

Claremont, Ernest A. (See Beaver and Claremont.)

Claremont, Ernest A. (See Stratton and Claremont.)

Clark, Albert C., Chicago, Ill. Anesthetic apparatus. No. 1,302,133; Apr. 29; v. 261; p. 870.

Clark, Charles H., Cleveland, Ohio, E. W. Jansen, New York, and C. F. Gailor, Brooklyn, assignors to Atlantic Welding Corporation, New York, N. Y. Expansion rail-joint. No. 1,301,104; Apr. 22; v. 261; p. 640.

Clark, Ezra E., Newtonville, Mass. Dry-pipe valve. No. 1,300,698; Apr. 15; v. 261; p. 517.

Clark, Fred P., assignor of one-half to J. P. Coffin, Seattle, Wash. Focusing finder attachment for cameras. No. 1,301,819; Apr. 29; v. 261; p. 810.

Clark, George C., Detroit, Mich., assignor to George C. Clark Metal Last Co., Mishawaka, Ind. Centrifugal casting-box. No. 1,300,123; Apr. 8; v. 261; p. 369.

Clark, George W., Oak Park, Ill. Combined coal and gas range. No. 1,301,906; Apr. 29; v. 261; p. 827.

Clark, Lawrence G. (See Stekelberg, Fred C., assignor.)

Clark Mailing Machine Company. (See Ditmars, Frederick R. S., assignor.)

Clark, Myron H., Hastings-upon-Hudson, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company, Shoe. No. 1,301,228; Apr. 22; v. 261; p. 666.

Clark, Raymond P., Rochester, N. Y. Cover. No. 1,299,127; Apr. 1; v. 261; p. 116.

Clarke, James B., Woodlawn, Pa. Method of and means for heating metal articles. No. 1,300,347; Apr. 15; v. 261; p. 443.

Clarke, Thomas J., and A. Illy, assignors to The William Koehl Company, Jamestown, N. Y. Machine for making round boxes. No. 1,300,211; Apr. 8; v. 261; p. 388.

Clarke, Thomas W. (See Johnson, Lind, and Clarke.)

Claus, Wilbert M., *et al.* (See Spencer, Lewis L., assignor.)

Clausen, William L., Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company. Casting plate-glass. No. 1,298,893; Apr. 1; v. 261; p. 63.

Claussen, Martin J., Seattle, assignor of one-half to H. Pederson, King county, Wash. Vehicle signal device. No. 1,298,894; Apr. 1; v. 261; p. 63.

Claypool, Harry F., East St. Louis, Ill. Bolt or spike puller. No. 1,302,134; Apr. 29; v. 261; p. 870.

Clayton, Henry H., Canton, Mass. Flying-machine. No. 1,299,296; Apr. 1; v. 261; p. 177.

Clayton & Lambert Manufacturing Company. (See Lambert, Charles R., assignor.)

Clayton, Robert H., Manchester, J. Huebner, Cheadle Hulme, and H. E. Williams, assignors to The Manchester Oxide Company Limited, Manchester, England. Treating cellulose. No. 1,301,652; Apr. 22; v. 261; p. 746.
Cleaveland, Andrew C., Spencer, Iowa. Package-tie. No. 1,299,681; Apr. 8; v. 261; p. 271.
Clemens, Hermann. (See Weaber and Clemens.)
Clemens, William, San Fernando, Calif. Lifting-jack. No. 1,298,895; Apr. 1; v. 261; p. 63.
Clement, Frank H. (See McMichael and Clement.)
Clements, Alfred J., and W. Fischer, Des Moines, Iowa. Trolley-pole clamp. No. 1,300,929; Apr. 15; v. 261; p. 566.
Clements, Elbert A., Grand Rapids, Mich. Underwear. No. 1,298,667; Apr. 1; v. 261; p. 10.
Clements, Harry. (See Spinello, Mathew, assignor.)
Clemmer, Joel G. (See Eschinger, Edward A., assignor.)
Cleveland-Akron Bag Company, The. (See Scherf, Theodore, assignor.)
Cleveland Car Specialty Company. (See Costello, Joseph A., assignor.)
Cleveland Hardware Company, The. (See Arthur, Albert F., assignor.)
Cleveland Macaroni Company, The. (See Gammel, Karl, assignor.)
Cleveland Metal Products Company, The. (See Chadwick, Lee S., assignor.)
Cleveland Metal Products Company, The. (See Harrison, George L., assignor.)
Clifford Automatic Train Stop Company. (See Clifford, Patrick J., assignor.)
Clifford, Patrick J., Avoca, assignor to Clifford Automatic Train Stop Company, Scranton, Pa. Track implement for air-brake systems. No. 1,302,135; Apr. 29; v. 261; p. 870.
Clinger, William T., Oil City, Pa. Field-gun. No. 1,301,820; Apr. 29; v. 261; p. 810.
Clink, Walter G., Danville, Ill. Spark-plug tester. No. 1,298,896; Apr. 1; v. 261; p. 64.
Clinton, James S., Chicago, Ill. Apparatus for depositing dough. No. 1,301,038; Apr. 15; v. 261; p. 590.
Cloonan, Edward A., St. Louis, Mo. Scoring attachment for printing-presses. No. 1,302,136; Apr. 29; v. 261; p. 870.
Cloonan, Edward A., St. Louis, Mo. Sheet-retaining attachment for printing-presses. No. 1,302,310; Apr. 29; v. 261; p. 903.
Close, James B., Sittingbourne, England. Projectile. No. 1,301,907; Apr. 29; v. 261; p. 827.
Clutsam, Frederick, London, assignor of one-half to J. Beddow, Upper Norwood, England. Pianoforte-action. No. 1,301,908; Apr. 29; v. 261; p. 828.
Coakley, William E., assignor to The Ohio Blower Company, Cleveland, Ohio. Valve. No. 1,298,668; Apr. 1; v. 261; p. 10.
Coatalen, Louis, assignor of one-half to Sunbeam Motor Car Company Limited, Wolverhampton, England. Fuel-feed system for aerial machines. No. 1,299,128; Apr. 1; v. 261; p. 117.
Coatalen, Louis, assignor of one-half to Sunbeam Motor Car Company Limited, Wolverhampton, England. Cooling internal-combustion engines. No. 1,299,129; Apr. 1; v. 261; p. 117.
Coatney, Stephen J., Fallon, Nev. Baling-press. No. 1,301,039; Apr. 15; v. 261; p. 591.
Cobb, Ernest B., Jersey City, N. J., assignor to Standard Oil Company. Desulfurizing petroleum-oils. No. 1,300,816; Apr. 15; v. 261; p. 543.
Cobelius, Fabricius, Philadelphia, Pa. Manufacture of synthetic carbolic acid. No. 1,301,909; Apr. 29; v. 261; p. 828.
Cochran, Wesley E., Cleveland, Ohio. Lamp-fixture. No. 1,301,653; Apr. 22; v. 261; p. 746.
Cochrane, Alfred W., Kewanee, Ill., assignor to J. P. Adamson, St. Paul, Minn. Wall-radiator bracket. No. 1,300,817; Apr. 15; v. 261; p. 543.
Cockaday, Laurence M., New York, N. Y. Radiotelegraphy. No. 1,299,823; Apr. 8; v. 261; p. 303.
Cockburn, David, and D. MacNicoll, assignors, to Cockburns Limited, Cardonald, near Glasgow, Scotland. Valve. No. 1,299,130; Apr. 1; v. 261; p. 117.
Cockburns Limited. (See Cockburn and MacNicoll, assignors.)
Cocksedge, Herbert E. (See Freeth and Cocksedge.)
Coffin, Curtis W., Holly, Colo. Drink-mixer. No. 1,298,897; Apr. 1; v. 261; p. 64.
Coffin, Jerome P. (See Clark, Fred P., assignor.)
Coe, Charles T., Kearney, N. J. Compound two-stage turbine. No. 1,301,387; Apr. 22; v. 261; p. 698.
Cohen, Henry I., *et al.* (See Kerr, George C., assignor.)
Coker, Clarence A., Cordova, Ala. Sanitary valve for fluid-dispensing apparatus. No. 1,301,229; Apr. 22; v. 261; p. 666.
Colahan, Charles, Stockton, Calif. Traction-engine. No. 1,301,040; Apr. 15; v. 261; p. 591.
Cole, George E., Tiffin, Ohio. Spectacle-case holder. No. 1,300,124; Apr. 8; v. 261; p. 369.
Coleman, Charles S., assignor to The Coleman No-Leak Boiler Tube Company, Los Angeles, Calif. Boiler-tube connection. No. 1,299,396; Apr. 1; v. 261; p. 177.
Coleman, John P. (See Waldron and Coleman.)
Coleman, Maurice B., assignor of one-half to M. J. Vail, Newton, Mass. Soap-holding attachment for faucets. No. 1,300,248; Apr. 15; v. 261; p. 422.
Coleman No-Leak Boiler Tube Company, The. (See Coleman, Charles S., assignor.)
Coleman, Stephen L. C., assignor of forty-nine one hundredths to C. W. Whelpley, Fredericton, New Brunswick, Canada. Vibration-check for vehicles. No. 1,299,131; Apr. 1; v. 261; p. 117.
Collier, Edward M., Petersburg, Va. Check-wire for planters. No. 1,298,898; Apr. 1; v. 261; p. 64.
Collin, Henry, New York, N. Y. Detachable heel. No. 1,301,654; Apr. 22; v. 261; p. 746.
Collins, Benjamin J., Supply, Okla. Combination level and grade-finder. No. 1,300,818; Apr. 15; v. 261; p. 543.
Collins, Earl G., Pembroke, Ky. Harrow. No. 1,299,553; Apr. 8; v. 261; p. 241.
Collins, William D., assignor of one-half to G. W. H. Allen, Canenovia, N. Y. Combined liquid-gage and temperature-indicator. No. 1,301,910; Apr. 29; v. 261; p. 828.
Colt's Patent Fire Arms Manufacturing Company. (See Browning, John M., assignor.)
Columbia Clutch Company, The. (See Ferguson, Fergus F., assignor.)
Columbia Graphophone Manufacturing Company. (See Cherney, Joseph B., assignor.)
Columbia Machine & Stopper Co. (See Kendall, Carl W., assignor.)
Combs, Perley A., Portland, assignor to Beaver State Motor Co., Gresham, Oreg. Clutch. No. 1,300,819; Apr. 15; v. 261; p. 543.
Comerford, John, St. Louis, Mo. Crank-lock for automobiles. No. 1,300,125; Apr. 8; v. 261; p. 369.
Comey, Arthur M., Chester, Del., assignor, by mesne assignments, to E. I. du Pont de Nemours and Company. Explosive and producing the same. No. 1,301,106; Apr. 22; v. 261; p. 640.
Commercial Electrolytic Corporation. (See Levin, David, assignor.)
Compos, James W., Cleveland, Ohio. Scale-holder. No. 1,302,311; Apr. 29; v. 261; p. 903.
Compressed Wood Preserving Company, The. (See Frey, George W., assignor.)
Computing Scale Company, The. (See Schantz, Edwin M., assignor.)
Conant, Franklin N., assignor to Chase-Shawmut Company, Newburyport, Mass. Renewable fuse. No. 1,299,132; Apr. 1; v. 261; p. 117.
Cone, Joseph L., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,301,911; Apr. 29; v. 261; p. 828.
Conerty, Peter F. (See Skidmore, Charles J., assignor.)
Conklin, Oliver E., Boston, H. P. Hollnagel, West Newton, Mass. Light-projection apparatus. No. 1,299,297; Apr. 1; v. 261; p. 177.
Conley, Fred V. (See Matter and Conley.)
Conley, Robert E., *et al.* (See Nicholson, Alonzo L., assignor.)
Conley, William A., Needham Heights, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Bonnet for caps of railway-signal fuses. No. 1,301,655; Apr. 22; v. 261; p. 747.
Conlon, Walter J., Chicago, Ill. Washing-machine. No. 1,298,899; Apr. 1; v. 261; p. 64.
Connecticut Electric Mfg. Co., The. (See Scheenberg, Ralph A., assignor.)
Connecticut Telephone & Electric Company, The. (See Cavanagh, John F., assignor.)
Conover, Courtney, Philadelphia, Pa., and H. D. Gibbs, San Francisco, Calif. Purification of crude phthalic anhydrid. No. 1,301,388; Apr. 22; v. 261; p. 698.
Conrad, Nicholas J. (See Schweitzer and Conrad.)
Conran, Frederick M., Elizabeth, N. J., assignor to The Metals Plating Company, New York, N. Y. Automatic sheet-feeding mechanism. No. 1,301,656; Apr. 22; v. 261; p. 747.
Conran, Frederick M., Elizabeth, N. J., assignor to The Metals Plating Company, New York, N. Y. Automatic sheet-feeding mechanism. No. 1,301,799; Apr. 22; v. 261; p. 777.
Conrow, George W., Brooklyn, N. Y. Roller-bearing. No. 1,301,389; Apr. 22; v. 261; p. 696.
Contardi, Angelo. (See Mascarini and Contardi.)
Cook, Irvin M., Cleveland, Ohio. Electric terminal box. No. 1,302,137; Apr. 29; v. 261; p. 870.
Cook, Jay J., Iron River, Mich. Fish-basket or creel supporting harness. No. 1,302,312; Apr. 29; v. 261; p. 903.
Cook, John W., T. R. Leigh, J. Jowett, and N. Cook, Manchester, England. Apparatus for stripping carding-engines. No. 1,302,012; Apr. 29; v. 261; p. 847.
Cook, Norman. (See Cook, Leigh, and Jowett.)
Cook, William, Seattle, Wash. Fish-scow. No. 1,301,390; Apr. 22; v. 261; p. 698.
Cook, William E., New York, N. Y., assignor to Insulation Development Corporation. Insulating material for electrical conductors. No. 1,302,013; Apr. 29; v. 261; p. 847.
Coontz, John C., Cushing, Okla. Deep-well drill. No. 1,301,912; Apr. 29; v. 261; p. 828.
Cooper, Benson P., Ithaca, N. Y. Coin-controlled delivery apparatus. No. 1,301,391; Apr. 22; v. 261; p. 698.
Cooper, Fred. (See Adams, Otis, assignor.)

Cooper, James H., Snyder, Okla. Tire. No. 1,301,220; Apr. 22; v. 261; p. 666.
Cooper, McKee, assignor of one-half to E. R. Reynolds, New York, N. Y. Rotary engine. No. 1,302,185; Apr. 29; v. 261; p. 871.
Cooper, Thomas C., Chicago, Ill. Steering-wheel lock for automobiles. No. 1,300,820; Apr. 15; v. 261; p. 544.
Cooper, Thomas L. R. (See Todman, Cooper, and Lyon.)
Cooper, Thomas W., Hugo, Okla. Flood-gate. No. 1,302,189; Apr. 29; v. 261; p. 871.
Copeman Development Co. (See Copeman, Lloyd G., assignor.)
Copeman, Lloyd G., assignor to Copeman Development Co., Flint, Mich. Grease-cup. No. 1,300,699; Apr. 15; v. 261; p. 517.
Coppage, Benjamin D., Wilmington, Del. Tightener for paper-making wires, felts, and the like. No. 1,302,313; Apr. 29; v. 261; p. 902.
Corby, George F., Toronto, Ontario, Canada. Crest attachment for cafeteria-chairs and the like. No. 1,301,915; Apr. 29; v. 261; p. 829.
Corley, Benjamin R., Brooklyn, and R. Turner, New York, N. Y. Embossing and printing machine. No. 1,299,123; Apr. 1; v. 261; p. 118.
Cormack, Irwin R. H., Toronto, Ontario, Canada. Reinforcing-bar for concrete work. No. 1,299,407; Apr. 1; v. 261; p. 180.
Corn Products Refining Company. (See Jefferies and Spain, assignors.)
Cornell, Herbert V., assignor of one-half to C. R. Butler, Akron, Ohio. Swivel joint or coupling for pipes. No. 1,302,314; Apr. 29; v. 261; p. 904.
Cornell, Lucella, Toledo, Ohio. Uncoupling device. No. 1,298,669; Apr. 1; v. 261; p. 10.
Cornell Wood Products Company. (See Bennett, Clark H., assignor.)
Corrosion Extraction Company. (See Rankin, Harry D., assignor.)
Corser, Irving, Portland, Oreg. Releasing-hook for lifeboats. No. 1,301,392; Apr. 22; v. 261; p. 606.
Cosgray, Mark C., assignor to The Mathews Engineering Company, Sandusky, Ohio. Engine. No. 1,299,554; Apr. 8; v. 261; p. 241.
Cosgray, Mark C., assignor to The Mathews Engineering Company, Sandusky, Ohio. Engine. No. 1,299,555; Apr. 8; v. 261; p. 241.
Cosgrove, Leora K., Billings, Mont. Recording device. No. 1,302,315; Apr. 29; v. 261; p. 904.
Costanzo, Thomas. (See Evangelist, Dominick, assignor.)
Costello, Joseph A., assignor to Cleveland Car Specialty Company, Cleveland, Ohio. Carline. No. 1,299,916; Apr. 8; v. 261; p. 328.
Cotterell, Frederick, Melbourne, Victoria, Australia. Glass-polishing machine. No. 1,302,316; Apr. 29; v. 261; p. 904.
Cottrell, Henry W., assignor to H. W. Rountree & Brother Trunk and Bag Co., Richmond, Va. Drawer-locking means. No. 1,299,302; Apr. 1; v. 261; p. 156.
Coulombe, Joseph C., Lowell, Mass. Signal-horn. No. 1,301,106; Apr. 22; v. 261; p. 640.
Coulter, Louis C., Portland, Oreg. Bag-turning machine. No. 1,301,393; Apr. 22; v. 261; p. 606.
Counts, Claude A. (See Phillips, Willard G., assignor.)
Courson, John F., Pitcairn, Pa. Draft-gear. No. 1,300,700; Apr. 15; v. 261; p. 518.
Covel, Joseph D., Orin, Wash. Aerial torpedo. No. 1,300,930; Apr. 15; v. 261; p. 567.
Cowan, John A., Kansas City, Mo. Cultivator. No. 1,302,317; Apr. 29; v. 261; p. 904.
Cowan Truck Company, trustees. (See Hennessy, Daniel E., assignor.)
Cowles, William C. W., Sydney, New South Wales, Australia. Cartridge-magazine for automatic pistols. No. 1,299,808; Apr. 1; v. 261; p. 156.
Cozatt, Walter R., Oakland, assignor of one-half to J. H. Brady, San Francisco, Calif. Matrix for strip material faces. No. 1,298,909; Apr. 1; v. 261; p. 65.
Craddick, William F., Salt Lake City, Utah, assignor to Vit-O-Net Manufacturing Company. Electric switch. No. 1,300,126; Apr. 8; v. 261; p. 369.
Cramer, Fred, Forest, Ohio. Base-ball game. No. 1,298,304; Apr. 1; v. 261; p. 156.
Cramer, Stuart W., Charlotte, N. C. Chewing-gum. No. 1,298,670; Apr. 1; v. 261; p. 11.
Cramer, William. (See Jacobs and Cramer.)
Crampton, Frank R., Cleveland, Ohio. Ventilator. No. 1,298,671; Apr. 1; v. 261; p. 11.
Crane Company. (See Stark, Julian R., assignor.)
Crapo, Henry T., Boston, Mass. Reproducer for talking-machines. No. 1,302,140; Apr. 29; v. 261; p. 871.
Crawford, Jesse L., and J. R. Dunlap, Dallas, Tex. Locking device. No. 1,300,248; Apr. 15; v. 261; p. 448.
Crawford, Ralph F., Monticello, N. Y. Power-transmission device for motor-vehicles. No. 1,301,687; Apr. 22; v. 261; p. 767.
Crecelius, Theodore R., assignor to Multiple Display Fixture Company, St. Louis, Mo. Supporting-pole and bracket therefor. No. 1,299,556; Apr. 8; v. 261; p. 241.
Creighton, Elmer R. F., Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,300,127; Apr. 8; v. 261; p. 369.
Cremean, William F., Frankfort, Ind. Brake-beam hanger. No. 1,296,901; Apr. 1; v. 261; p. 65.
Cremean, William F., Frankfort, Ind. Brake-beam hanger. No. 1,296,902; Apr. 1; v. 261; p. 65.
Crese, Ben L. (See West, Harley L., assignor.)
Creveling, John L., Auburn, N. Y. Electric system. No. 1,301,600; Apr. 15; v. 261; p. 601.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,301,231. Apr. 22; v. 261; p. 606.
Crichton, Leslie N., Salt Lake City, Utah, assignor to Westinghouse Electric and Manufacturing Company. Fuse for high-tension electrical circuits. No. 1,300,249; Apr. 15; v. 261; p. 422.
Crist, Firman R., assignor of one-half to K. B. Miller, Pittston, Pa. Vacuum-cover for receptacles. No. 1,299,682; Apr. 8; v. 261; p. 271.
Crombie, Benjamin R., Port Chester, N. Y. Gyroscopic sedimentation apparatus. No. 1,301,544; Apr. 22; v. 261; p. 726.
Crompton, Samuel, assignor of one-half to A. Gregg, Belfast, Ireland. Device for removing and fastening the rivets securing the knives of reaping and like machines. No. 1,299,134; Apr. 1; v. 261; p. 118.
Crompton, Thomas A., Jr., Ilford, England. Ventilating, fire-extinguishing, and steaming apparatus for gasolene or other tanks. No. 1,302,318; Apr. 29; v. 261; p. 904.
Cronin, Timothy P., St. Louis, Mo. Spark-plug. No. 1,302,319; Apr. 29; v. 261; p. 905.
Cronk, Harrison T., assignor to Cronk-Salter Company, New York, N. Y. Siphon-bowl. No. 1,301,821; Apr. 29; v. 261; p. 811.
Cronk-Salter Company. (See Cronk, Harrison T., assignor.)
Crosby, Dell S., Chicago, Ill., and S. E. Cullum, Tower, Minn. Drier. No. 1,300,701; Apr. 15; v. 261; p. 518.
Crosby, John J. (See Allen, John E., assignor.)
Crosby Steam Gage & Valve Company. (See Foster, Ralph W., assignor.)
Crom, Roy, assignor to F. H. Thwing, Kansas City, Mo. Treating alunite. No. 1,301,394; Apr. 22; v. 261; p. 606.
Crouse-Hinds Company. (See Bissell and Hastings, assignors.)
Crowell, Charles H., Brooklyn, N. Y. Corrugated paper box or other container. No. 1,299,683; Apr. 8; v. 261; p. 271.
Crowell, Charles H., Brooklyn, N. Y. Making adhesive material. No. 1,300,250; Apr. 15; v. 261; p. 422.
Crown Cork and Seal Company of Baltimore City, The. (See Carper, Albert A., assignor.)
Cru Patents Corporation. (See Uebelmesser, Charles, assignor.)
Crumb, John H., Lawrence, Kans. Feeding device for threshing-machines. No. 1,299,084; Apr. 8; v. 261; p. 271.
Cruman, Albert, Lawrence, Kans. Vehicle-tire. No. 1,298,915; Apr. 1; v. 261; p. 69.
Cryder, Dewey M., Adelphia, Ohio. Wind-shield cleaner. No. 1,300,249; Apr. 15; v. 261; p. 443.
Cuddigan, Bartholomew O., assignor of one-third to W. H. Gehr, Wadena, Minn. Vegetable-loader. (Reissue.) No. 14,636; Apr. 22; v. 261; p. 777.
Cullen, William J., Joliet, Ill., assignor to American Can Company, New York, N. Y. Container-body. No. 1,299,824; Apr. 8; v. 261; p. 303.
Cullum, Silas E. (See Crosby and Cullum.)
Cummings, Earl H., Bismarck, N. D. Draining vessel. No. 1,299,135; Apr. 1; v. 261; p. 118.
Cummings, Patrick F., Norwood, N. Y. Washing apparatus. No. 1,300,128; Apr. 8; v. 261; p. 369.
Cunningham Piano Company, The. (See Kennedy, Otis M., assignor.)
Currie, Alexander L., Sorel, Quebec, Canada. Portable railway-signal. No. 1,301,914; Apr. 29; v. 261; p. 829.
Curtis, Louis R., Chicago, Ill., assignor to Frank S. Betz Company, Hammond, Ind. Vacuum casting-machine. No. 1,300,821; Apr. 15; v. 261; p. 544.
Curtis, William H., West Baden, Ind. Portable seat structure. No. 1,301,107; Apr. 22; v. 261; p. 640.
Curtiss, George W., Kansas City, Mo. Theater-curtain. No. 1,299,429; Apr. 8; v. 261; p. 213.
Cutler, Clifford A., Buffalo, N. Y. Aeroplane-propeller. No. 1,301,108; Apr. 22; v. 261; p. 641.
Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Parkhurst and Burd, assignors.)
Cutler-Hammer Mfg. Co., The. (See Radley, Guy R., assignor.)
Cutler-Hammer Mfg. Co., The. (See Simon, Arthur, assignor.)
Cutler-Hammer Mfg. Co., The. (See Stevens, William assignor.)
Cutler, Henry H., Brookline, Mass. Gas-engine. No. 1,301,658; Apr. 22; v. 261; p. 748.
Czaran, Otto, Glendale, N. Y. Harvester-reel and actuating mechanism therefor. No. 1,299,685; Apr. 8; v. 261; p. 272.
Czaran, Otto, Glendale, N. Y. Platform-adjusting device for harvesters. No. 1,299,686; Apr. 8; v. 261; p. 272.
Czippan, Gyorgy, Philadelphia, Pa. Auto-turning device. No. 1,301,659; Apr. 22; v. 261; p. 748.

Da Costa, Arthur V., Arlington, assignor to The Insel Company, Newark, N. J. Toy. No. 1,299,430; Apr. 8; v. 261; p. 213.

Dabney, Frank C., Wichita, Kans. Table-slide. No. 1,299,687; Apr. 8; v. 261; p. 272.

Daellenbach, Carl R., assignor of one-half to H. H. Hancher, Ellwood City, Pa. Vacuum system. No. 1,298,903; Apr. 1; v. 261; p. 66.

Dake, Charles W., assignor to The Pyle-National Company, Chicago, Ill. Damper-controller. No. 1,298,904; Apr. 1; v. 261; p. 66.

Dal Poggetto, Charles, Sonoma, Calif. Broom. No. 1,300,770; Apr. 15; v. 261; p. 533.

Dale, Frank M., Sullivan, Ind. Drilling appliance. No. 1,301,395; Apr. 22; v. 261; p. 699.

Dalley, Charles J., Newark, N. J. Auxiliary water-tank. No. 1,300,702; Apr. 15; v. 261; p. 518.

Dallman, Charles F., and F. Schoepke, Antigo, Wis. Unloading-skid. No. 1,298,905; Apr. 1; v. 261; p. 67.

Dalton, William. (See McKenna and Dalton.)

Dalton, William, assignor to Washington Steel & Ordnance Company, Washington, D. C. Armor-piercing projectile. No. 1,301,822; Apr. 29; v. 261; p. 811.

Damon, William H., Los Angeles, Calif. Furniture and automobile polish. No. 1,302,320; Apr. 29; v. 261; p. 905.

Dana, Jesse D. (See Goltra, Maffitt, Dana, and Erwin.)

Daniel, George, and E. G. Lewis, Mabscott, W. Va. Lock. No. 1,300,931; Apr. 15; v. 261; p. 567.

Daniel, Stev, Hazel Green, Wis. Baby walking-chair. No. 1,302,321; Apr. 29; v. 261; p. 905.

Daniel, Wilmer H., assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Gear-shifting mechanism. No. 1,299,557; Apr. 8; v. 261; p. 242.

Darnall, John C., Cincinnati, Ohio. Trolley-wheel. No. 1,300,822; Apr. 15; v. 261; p. 544.

Darst, Fred N., Lovilia, Iowa. Wagon-jack. No. 1,300,129; Apr. 8; v. 261; p. 370.

Dath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake for railway-cars. No. 1,300,350; Apr. 15; v. 261; p. 443.

Dath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,351; Apr. 15; v. 261; p. 444.

Dau, William A., Detroit, Mich. Traffic-signal. No. 1,301,396; Apr. 22; v. 261; p. 699.

Davenport, Ransom W. (See Schall and Davenport.)

David, John J. (See Pride, Christopher W., assignor.)

Davidson, Arthur C., Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company. Buffing mechanism for cars. No. 1,301,397; Apr. 22; v. 261; p. 699.

Davidson, Harry O., Cleveland, Ohio. Machine for making metal plates. No. 1,301,545; Apr. 22; v. 261; p. 726.

Davidson, Joseph, Greenville, S. C., assignor of one-half to American Machine & Manufacturing Company. Automatic valve for hydraulic machinery. No. 1,300,703; Apr. 15; v. 261; p. 518.

Davidson, Samuel C., Belfast, Ireland. Projection of explosive shells, bombs, or grenades. No. 1,299,136; Apr. 1; v. 261; p. 118.

Davis, Alfred J., Minneapolis, Minn. Liquid-tempering device. No. 1,298,906; Apr. 1; v. 261; p. 67.

Davis, Benjamin W., deceased, Evanston, Wyo.; J. J. Davis, administrator. Flag-support. No. 1,300,352; Apr. 15; v. 261; p. 444.

Davis, Bertha B., executrix. (See Davis, Charles H.)

Davis, Charles H., deceased, Worcester, Mass.; B. B. Davis, executrix. Dental tool. No. 1,299,137; Apr. 1; v. 261; p. 118.

Davis, Cloyd, Mineola, N. Y. Potato-handling machine. No. 1,301,109; Apr. 22; v. 261; p. 641.

Davis, Clyde, and C. R. Harding, Sioux Falls, S. D. Bed-tray and dressing-table. No. 1,298,672; Apr. 1; v. 261; p. 11.

Davis, David C., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vapor-converter. No. 1,300,251; Apr. 15; v. 261; p. 422.

Davis, James J., administrator. (See Davis, Benjamin W.)

Davis, John R., Springfield, assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Dispensing apparatus for oils and the like. No. 1,302,014; Apr. 29; v. 261; p. 848.

Davis, Joseph L., deceased; M. S. Davis, administratrix, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 1,300,589; Apr. 15; v. 261; p. 494.

Davis, Myra S., administratrix. (See Davis, Joseph L.)

Davis, Samuel H. (See Boyle, Homer L., assignor.)

Davis, William C., Melbourne, Victoria, Australia. Wall construction. No. 1,302,322; Apr. 29; v. 261; p. 905.

Davy, Christopher S. (See Parker, Davy, and Meiklereid.)

Dawson, Alfred, Kent, England. Photographic camera. No. 1,299,431; Apr. 8; v. 261; p. 213.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Ordnance breech mechanism. No. 1,298,907; Apr. 1; v. 261; p. 67.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Siege-gun mounting. No. 1,299,138; Apr. 1; v. 261; p. 119.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Firing mechanism of breech-loading guns. No. 1,299,139; Apr. 1; v. 261; p. 119.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Ordnance sighting apparatus. No. 1,300,353; Apr. 15; v. 261; p. 444.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Ordnance sighting apparatus. No. 1,300,354; Apr. 15; v. 261; p. 444.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Gun-carriage. No. 1,300,355; v. 261; p. 445.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Ordnance breech mechanism. No. 1,300,356; Apr. 15; v. 261; p. 445.

Dawson, Arthur T., and G. T. Buckham, Westminster, London, and E. F. Ellis, Purley, England. Gun-mounting. No. 1,299,140; Apr. 1; v. 261; p. 119.

Day, Edgar K., assignor of one-half to H. E. Dunlap, Wheeling, W. Va. Screw for attaching metal plates. No. 1,301,398; Apr. 22; v. 261; p. 699.

Day, George H., assignor to American Optical Company, Southbridge, Mass. Eye-protector. No. 1,298,908; Apr. 1; v. 261; p. 67.

Day, Ralph B., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio. Mold-breaking apparatus. No. 1,299,917; Apr. 8; v. 261; p. 324.

Dayton Engineering Laboratories Company, The. (See Kettering, Charles F., assignor.)

Dayton, William L., and J. M. Scott, Fort Worth, Tex. Well-drilling machine. No. 1,301,915; Apr. 29; v. 261; p. 829.

De Bary, Albert, Jr., New York, N. Y. Polish. No. 1,301,823; Apr. 29; v. 261; p. 811.

De Bernys, Bertrand, New York, N. Y. Respiration-indicator. No. 1,299,306; Apr. 1; v. 261; p. 157.

De Bersaques, Romain, Seattle, Wash. Towel-service machine. No. 1,298,909; Apr. 1; v. 261; p. 67.

De Beuckelaere, Ivo C., *et al.* (See Ward, James J., assignor.)

De Bolotoff, Serge V., London, England. Hydrocraft planing-surface. No. 1,301,917; Apr. 29; v. 261; p. 829.

De Cew, Judson A., Montreal, Quebec, Canada. Treating paper-pulp. No. 1,300,357; Apr. 15; v. 261; p. 445.

De Corte, Auguste, Rosebank, N. Y. Pigeon-loft. No. 1,301,660; Apr. 22; v. 261; p. 748.

De Felice, Carlo, New York, N. Y. Dental plate. No. 1,298,673; Apr. 1; v. 261; p. 11.

De Forest, Lee, assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. Apparatus for use in radiocommunication. No. 1,299,356; Apr. 1; v. 261; p. 168.

De Forest Radio Telephone and Telegraph Company. (See De Forest, Lee, assignor.)

De La Barre, Alfred, Minneapolis, Minn. Steering device for automobiles. No. 1,301,137; Apr. 22; v. 261; p. 647.

De la Chevardière de la Grandville, Henri J. L. M., and A. Guéret, Paris, France. Two-stroke internal-combustion engine. No. 1,301,661; Apr. 22; v. 261; p. 748.

De La Vergne Machine Company. (See Neeson, Charles R., assignor.)

De Laitte, Leopold B. (See Leve, Marcus S., assignor.)

De Lavaud, Dimitri S., New York, N. Y. Method of and apparatus for water-cooling centrifugal pipe-casting machines. No. 1,299,918; Apr. 8; v. 261; p. 324.

De Long, Nelson, Chicago, Ill. Washer-cutter. No. 1,299,688; Apr. 8; v. 261; p. 272.

De Luxe Brush Company, The. (See Loeben, Gustave A., assignor.)

De Luxe Brush Company. (See McLaughlin, Frank, assignor.)

De Noon, John A., Buffalo, N. Y. Jointer-guard. No. 1,301,401; Apr. 22; v. 261; p. 700.

De Puy, Hart S. (See Burch, Charles E. S., assignor.)

De Ruiter, Harry W., Toledo, Ohio. Automobile-top. No. 1,301,402; Apr. 22; v. 261; p. 700.

De Vaughn, Harry E., assignor to W. A. Jones, Morgantown, W. Va. Flattening device. No. 1,302,485; Apr. 29; v. 261; p. 937.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Drip-pan for sewing-machines. No. 1,299,143; Apr. 1; v. 261; p. 120.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Looper mechanism for sewing-machines. No. 1,299,402; Apr. 1; v. 261; p. 178.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,300,358; Apr. 15; v. 261; p. 445.

De Witt, Clarence N., Kimberly, Idaho. Fractional dividers. No. 1,299,307; Apr. 1; v. 261; p. 157.

De Witt, George W. (See Bliemath, Ernest, assignor.)

De Witt, George W., Fenton, Mich. Electric switch for fire-alarms. No. 1,300,134; Apr. 8; v. 261; p. 871.

De Witt, La France Co. (See La France and De Witt, assignors.)

De Witt, William P. (See La France and De Witt.)

Deagan, Jefferson C., Chicago, Ill. Sound-producing device. No. 1,301,916; Apr. 29; v. 261; p. 829.

Deakin, Gerald, and L. Polinkowsky, London, England, assignors to Western Electric Company, Incorporated, New York, N. Y. Call-distributing system. No. 1,299,553; Apr. 8; v. 261; p. 242.
Dealy, Hugh R. (See Frank, Emil R., assignor.)
Deane, Sara E. D., Wrentham, Mass. Combination-undergarment. No. 1,301,299; Apr. 22; v. 261; p. 699.
Deane, William G., Niagara Falls, N. Y. Tire-casing construction. No. 1,299,305; Apr. 1; v. 261; p. 157.
Debauge, Henry, Paris, France. Internal-combustion engine. No. 1,301,232; Apr. 22; v. 261; p. 667.
Decatur, Burt W., Springfield, Mass. Tool-handle. No. 1,302,323; Apr. 29; v. 261; p. 905.
Deere & Company. (See Sklovsky, Max, assignor.)
Defiance Check Writer Corporation. (See Plant, Henry J., assignor.)
Defiance Machine Works. (See McCarty, William F., assignor.)
Del Giudice, Arturo, New York, N. Y. Binding attachment for sewing-machines. No. 1,299,569; Apr. 8; v. 261; p. 245.
Deming, William L., Salem, Ohio. Cash-recording device. No. 1,299,689; Apr. 8; v. 261; p. 272.
Demory, Alexander F., assignor to Hagerstown Novelty Company, Inc., Hagerstown, Md. Tool for removing and replacing milk-bottle caps. No. 1,299,690; Apr. 8; v. 261; p. 273.
Denne, Mark T., Rushden, England. Sewing-machine. No. 1,301,400; Apr. 22; v. 261; p. 700.
Denning, Patrick F., Cleveland, Ohio. Individual-towel holder. No. 1,298,910; Apr. 1; v. 261; p. 68.
Dennis, Adam, Findlay, Ohio. Cuspidor-lifter. No. 1,299,141; Apr. 1; v. 261; p. 119.
Dennis, Oliver C., Wilmette, Ill. Electric vulcanizer. No. 1,301,233; Apr. 22; v. 261; p. 667.
Denovan, Robert A., Dalkeith, Ontario, Canada. Excavator. No. 1,301,918; Apr. 29; v. 261; p. 829.
Derbyshire, Alfred E., Lansing, Kans. Box-car door. No. 1,300,150; Apr. 8; v. 261; p. 370.
Dery, Henry J., Detroit, Mich. Nut-lock. No. 1,299,601; Apr. 8; v. 261; p. 273.
Des Jardins, Benjamin M., West Hartford, Conn., assignor, by mesne assignments, to J. T. Underwood, Brooklyn, N. Y. Computing attachment for type-writers. No. 1,302,464; Apr. 29; v. 261; p. 933.
Des Jardins, Benjamin M., West Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writer adding-machine. No. 1,302,465; Apr. 29; v. 261; p. 934.
Des Moineaux, Alfred V., Denver, Colo. Detachable heel. No. 1,301,403; Apr. 22; v. 261; p. 700.
Des Moineaux, Alfred V., Denver, Colo. Removable heel. No. 1,301,404; Apr. 22; v. 261; p. 700.
Des Rocher, Alexander, Detroit, Mich. Condensation-return for vacuum heating systems. No. 1,299,142; Apr. 1; v. 261; p. 119.
Dessauer, Frederick, Pittsburgh, Pa. Nut-lock. No. 1,300,131; Apr. 8; v. 261; p. 370.
Dessauer, Frederick, Pittsburgh, Pa. Nut-lock. No. 1,300,132; Apr. 8; v. 261; p. 370.
Detroit Stove Works. (See Schall and Davenport, assignors.)
Deuring, William, Cleveland, Ohio. Gage. No. 1,301,234; Apr. 22; v. 261; p. 667.
Deutsche-Luxemburgische Bergwerks-und Hutten-Aktiengesellschaft. (See Brusch and Beyer, assignors.)
Devereux, James H. (See Woodworth, Joseph V., assignor.)
Devey, John Lehi, assignor of two-thirds to Utah Idaho Sugar Co., Salt Lake City, Utah. Beet-harvesting machine. No. 1,299,825; Apr. 8; v. 261; p. 304.
Devlin, Thomas F., Philadelphia, Pa. Expansion-bolt. No. 1,302,224; Apr. 29; v. 261; p. 906.
Dewey, Ellsworth A., Washington, D. C. Excavating-machine. No. 1,299,826; Apr. 8; v. 261; p. 304.
Dewey, Haywood G., Westminster, assignor to J. Brandt, Baltimore, Md. Cotton-chopper. No. 1,300,133; Apr. 8; v. 261; p. 370.
Dewey, Haywood G., Rochester, N. Y., assignor to J. Brandt, Baltimore, Md. Rotatable chopper-head. No. 1,302,015; Apr. 29; v. 261; p. 848.
Dewson, Edward H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electrically-controlled pneumatic brake. No. 1,298,144; Apr. 1; v. 261; p. 120.
Dexter Folder Company. (See Christophel, Carl E., assignor.)
Dexter, MacDougald, Columbus, Ga. Auxiliary control for pressure-regulators. No. 1,301,405; Apr. 22; v. 261; p. 700.
Diamond Match Company, The. (See Purdon, Michael, assignor.)
Dibovsky, Victor V., Kingsway, London, England. Machine-gun. No. 1,298,911; Apr. 1; v. 261; p. 68.
Dibovsky, Victor V., Kingsway, London, England. Buffering device for machine-guns. No. 1,298,912; Apr. 1; v. 261; p. 68.
Dibovsky, Victor V., Kingsway, London, England. Machine-gun. No. 1,298,913; Apr. 1; v. 261; p. 68.
Dicarlo, Joseph, Kalamazoo, Mich. Walking drill or planter. No. 1,298,674; Apr. 1; v. 261; p. 11.
Dickens, John W., Fort Wayne, Ind. Fish-bait. No. 1,299,442; Apr. 8; v. 261; p. 213.
Dickey, Arthur V., Seattle, Wash. Spraying apparatus. No. 1,300,823; Apr. 15; v. 261; p. 544.
Dickey, Edmund S., Baltimore county, Md., assignor to American Meter Company, Inc., New York, N. Y. Gas-meter. No. 1,301,041; Apr. 15; v. 261; p. 591.
Dickinson, Harry S., Moline, Ill., assignor to Moline Plow Company. Wheeled plow. No. 1,300,824; Apr. 15; v. 261; p. 544.
Dickinson, Harry S., Moline, Ill., assignor to Moline Plow Company. Caster-wheel lock for agricultural implements. No. 1,302,016; Apr. 29; v. 261; p. 848.
Dickinson, Harry S., assignor to Moline Plow Company, Moline, Ill. Tractor connection for harvesting-machines. No. 1,302,325; Apr. 29; v. 261; p. 906.
Dickinson, Joseph H., Cranford, N. J., assignor to The Aeolian Company. Record-repeating device for phonographs. No. 1,300,135; Apr. 8; v. 261; p. 371.
Dicks, Thomas A., Wilkinsburg, Pa. Guard for machine-tools. No. 1,301,042; Apr. 15; v. 261; p. 591.
Dickson, Alexander, Brooklyn, N. Y. Wall construction. No. 1,301,110; Apr. 22; v. 261; p. 641.
Diem-Beutler, Ida, St. Gallen, Switzerland. Embroidering-machine. No. 1,299,145; Apr. 1; v. 261; p. 120.
Dierks, John, San Francisco, Calif. Student's desk. No. 1,301,406; Apr. 22; v. 261; p. 701.
Dietz, Louis E., Cincinnati, Ohio. Washing-machine pounder. No. 1,302,326; Apr. 29; v. 261; p. 906.
Diffenbaugh, William A. (See Allan, Allen C., assignor.)
Dillmann, Edward, *et al.*, trustees. (See Bobroff, Bornett L., assignor.)
Dillmann, Ernest F., Newark, N. J. Headlight for automobiles. No. 1,302,017; Apr. 29; v. 261; p. 848.
Dingle, Herbert, Minas Geraes, Brazil. Scissors. No. 1,300,932; Apr. 15; v. 261; p. 567.
Diss, Albert E., Newark, N. J., assignor to The Bassick Co., Bridgeport, Conn. Furniture-leg mount. No. 1,300,136; Apr. 8; v. 261; p. 371.
Ditmars, Frederick R. S., Kansas City, Mo., assignor to Clark Mailing Machine Company. Stamp-affixing and envelop-sealing machine. No. 1,302,018; Apr. 29; v. 261; p. 848.
Ditson, Jesse, assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo. Drill-sharpener. No. 1,302,019; Apr. 29; v. 261; p. 849.
Dittbrenner, John C., Indianapolis, Ind. Internal-combustion engine. No. 1,302,020; Apr. 29; v. 261; p. 849.
Divers, William H., Crane, Oreg. Resilient tire. No. 1,300,933; Apr. 15; v. 261; p. 567.
Divine, Robert E., Cincinnati, Ohio. Sulfonated-mineral-oil-sludge product and making. No. 1,301,662; Apr. 22; v. 261; p. 748.
Divine, Robert E., Cincinnati, Ohio. Product and process of producing an alkali-metal sulfonate having the properties of a detergent. No. 1,301,663; Apr. 22; v. 261; p. 748.
Dobrowolski, John, Chicago, Ill. Rail-joint. No. 1,298,675; Apr. 1; v. 261; p. 12.
Dobson, William, Blackburn, England. Warp selecting and separating mechanism. No. 1,302,327; Apr. 29; v. 261; p. 906.
Dodge, Adiel Y., Chicago, Ill. Train-control system. No. 1,298,676; Apr. 1; v. 261; p. 12.
Doe, Thomas B., Lowell, Mass. Fuse for projectiles. No. 1,299,308; Apr. 1; v. 261; p. 157.
Doehler Die-Casting Company. (See Bamberg and Doehler, assignors.)
Doehler Die Casting Company. (See Gutmueller, August G., assignor.)
Doehler Die Casting Company. (See Kralund, John, assignor.)
Doehler Die Casting Company. (See Kralund, Duckworth, and Stern, assignors.)
Doehler Die Casting Company. (See Pack, Charles, assignor.)
Doehler, Herman H. (See Bamberg and Doehler.)
Doerner, Henry A., Denver, Colo. Extracting and recovering molybdenum from its ores and concentrates. No. 1,299,559; Apr. 8; v. 261; p. 242.
Doerner, Henry A., Denver, Colo. Extracting and recovering molybdenum from its ores and concentrates. No. 1,299,560; Apr. 8; v. 261; p. 242.
Dolcater, Frederick C., Washington, D. C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Printing apparatus with adding mechanism. No. 1,301,235; Apr. 22; v. 261; p. 667.
Doldt, John E., assignor to National Metal Seal Corporation, Portland, Me. Closure for containing vessels. No. 1,300,252; Apr. 15; v. 261; p. 423.
Doll, John J., New York, N. Y. Musical instrument. No. 1,299,146; Apr. 1; v. 261; p. 120.
Dollacheck, Charles W., assignor of one-half to M. Rothschild, Philadelphia, Pa. Rim-stretcher. No. 1,298,677; Apr. 1; v. 261; p. 12.
Doman, Herman C., assignor to Banderob-Chase Company, Oshkosh, Wis. Washing-machine lever. No. 1,299,919; Apr. 8; v. 261; p. 324.
Dombrowsky, Carl E., Norwich, Conn. Cultivating-plow. No. 1,302,141; Apr. 29; v. 261; p. 871.
Donald, James, and T. F. Downey, Chicago, Ill. Furnace. No. 1,301,111; Apr. 22; v. 261; p. 641.
Donald, Nannie A., Meridian, Miss. Spark-arrester. No. 1,302,328; Apr. 29; v. 261; p. 906.

Donald, Percy G., London, England. Roller bearing applicable to gravity-runways or other purposes. No. 1,300,590; Apr. 15; v. 261; p. 494.
Donat, Edwin A., Lynnport, Pa. Sash-lock. No. 1,301,407; Apr. 22; v. 261; p. 701.
Doncheff, Demetre, East St. Louis, Ill. Time-controlled camera attachment. No. 1,300,825; Apr. 15; v. 261; p. 545.
Donnell, Samuel F., Seattle, Wash. Convertible bed and table attachment for automobiles. No. 1,300,826; Apr. 15; v. 261; p. 545.
Donnelly, Edward F., Malden, Mass. Flush-valve. No. 1,299,692; Apr. 8; v. 261; p. 273.
Donner, Percy E. (See Baader, Stephen, assignor.)
Donner, Percy E. (See Snyder, Jacob R., assignor.)
Donovan, James J., Brooklyn, N. Y. Label-affixer. No. 1,302,142; Apr. 29; v. 261; p. 871.
Donovan, John J., Oakland, Calif. Desk arrangement. No. 1,300,934; Apr. 15; v. 261; p. 567.
Donovan, Patrick L., Toulon, Ill. Draft-bar for harrows. No. 1,299,561; Apr. 8; v. 261; p. 243.
Dorer, Primus O., assignor to S. Smith & Sons (Motor Accessories) Limited, London, England. Bezel-wound timepiece. No. 1,301,919; Apr. 29; v. 261; p. 890.
Dorkins, Sam P., Saluda, S. C. Plow attachment. No. 1,299,435; Apr. 8; v. 261; p. 214.
Dormandy, Garry J., assignor of one-half to United Shirt and Collar Company, Troy, N. Y. Electric-lighting fixture. No. 1,300,827; Apr. 15; v. 261; p. 545.
Dougan, Kennedy, Minneapolis, Minn. Internal-combustion engine. No. 1,299,433; Apr. 8; v. 261; p. 213.
Dougan, Kennedy, Minneapolis, Minn. Internal-combustion engine. No. 1,299,434; Apr. 8; v. 261; p. 214.
Dougherty, Edward J., St. Louis, Mo. Agricultural implement. No. 1,301,043; Apr. 15; v. 261; p. 591.
Dougherty, John A., Zanesville, Ohio. Fan device. No. 1,300,253; Apr. 15; v. 261; p. 423.
Douglas, Harry A., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich. Circuit-continuing device. No. 1,299,147; Apr. 1; v. 261; p. 120.
Douglas Packing Company. (See Douglas, Robert, assignor.)
Douglas, Robert, assignor to Douglas Packing Company, Inc., Rochester, N. Y. Drier. No. 1,301,112; Apr. 22; v. 261; p. 642.
Douglas & Rudd Mfg. Co. (See Douglas, Harry A., assignor.)
Douglas, Theodore, Scarboro, N. Y. Bearing. No. 1,301,664; Apr. 22; v. 261; p. 749.
Douglass, Samuel E., Beaufort, N. C. Picture-frame holder and hanger. No. 1,300,137; Apr. 8; v. 261; p. 371.
Dounaew, Leonid, New York, N. Y. Water-feed apparatus for steam-boilers or the like. No. 1,302,329; Apr. 29; v. 261; p. 907.
Douty, Fred A. (See Hatch, Edward, assignor.)
Dover, George W., Cranston, assignor to George W. Dover, Incorporated, Providence, R. I. Lathe-tool. No. 1,301,236; Apr. 22; v. 261; p. 667.
Dowden, Samuel E., Chelsea, Okla. Power-transmission belt. No. 1,302,330; Apr. 29; v. 261; p. 907.
Dowling, Francis J., New York, N. Y. Flush-tank valve. No. 1,300,138; Apr. 8; v. 261; p. 372.
Downey, Thomas F. (See Donald and Downey.)
Downing, Elsworth, Collins, Iowa. Hog-ringing crate. No. 1,301,408; Apr. 22; v. 261; p. 701.
Downing, Ira S., and E. S. Pearce, Indianapolis, Ind. Journal-lubricating device. No. 1,302,021; Apr. 29; v. 261; p. 849.
Downs, Charles R., Cliffside, N. J., assignor to The Barrett Company. Sulfonation of hydrocarbons. No. 1,301,785; Apr. 22; v. 261; p. 774.
Downs, John H., Jersey City, N. J. Post-driving head. No. 1,301,666; Apr. 22; v. 261; p. 749.
Doyle, John F., Taunton, Mass. Method of and apparatus for beaming yarn. No. 1,301,665; Apr. 22; v. 261; p. 749.
Doyle, R. M. (See Hicks, William D., assignor.)
Doyle, Wilson L. (See Petersen, William A., assignor.)
Drake, Alden M. (See Heald and Drake.)
Draper Corporation. (See Hebert, Ubald, assignor.)
Draper Corporation. (See Rhoades, Alonzo E., assignor.)
Draper Corporation. (See Walsh, William E., assignor.)
Dreier, Abraham, New York, N. Y. Cover. No. 1,298,678; Apr. 1; v. 261; p. 12.
Dreschsel, George H. (See Stoll and Dreschsel.)
Drewes, Johannes, Gideon, near Groningen, Netherlands. Power-press for bending plates or metal sheets. No. 1,300,074; Apr. 15; v. 261; p. 518.
Drewry, Thomas, Forest Gate, assignor to J. Stone and Company, Limited, Deptford, England. Expansion-joint. No. 1,302,022; Apr. 29; v. 261; p. 849.
Driesslein, Homer S., Fort Dodge, Iowa. Savings device. No. 1,299,562; Apr. 8; v. 261; p. 243.
Droege, Frederick J., Covington, Ky. Apparatus for casting steel ingots. No. 1,299,148; Apr. 1; v. 261; p. 121.
Droitcour, Michael A., Delphos, Ohio. Mechanism for registering sheets. No. 1,299,920; Apr. 8; v. 261; p. 324.
Droll, Joseph W., Oakland, Calif. Mattress-roll-forming machine. No. 1,300,139; Apr. 8; v. 261; p. 372.
Droll, Joseph W., Oakland, Calif. Mattress-roll-forming machine. No. 1,300,140; Apr. 8; v. 261; p. 372.
Du Bois, John J., Detroit, Mich. Eraser-reel. No. 1,299,921; Apr. 8; v. 261; p. 325.
Du Bose, Benjamin J., Lisbon, Ga. Device for chilling and drying air. No. 1,300,705; Apr. 15; v. 261; p. 519.
Du Pont, Antoine B., Cleveland, Ohio. Water-heater. No. 1,299,428; Apr. 8; v. 261; p. 213.
Du Pont, Francis I., Wilmington, Del. Drier for nitrocellulose. No. 1,301,409; Apr. 22; v. 261; p. 701.
Du Pont, Francis V., Wilmington, Del. Toy machine-gun. No. 1,302,332; Apr. 29; v. 261; p. 907.
Du Vall, Mycoreh. (See Bartlett and Du Vall.)
Duaime, Joseph E., West De Pere, Wis. Tractor. No. 1,302,023; Apr. 29; v. 261; p. 849.
Duby, John F., Boston, Mass. Rotary engine. No. 1,300,706; Apr. 15; v. 261; p. 519.
Duckworth, Clarence. (See Kralund, Duckworth, and Stern.)
Dudgeon, Harry A., Coventry, England. Jig device for boring or drilling purposes. No. 1,300,828; Apr. 15; v. 261; p. 545.
Dudley, Howard M., Philadelphia, Pa. Dyeing-machine. No. 1,301,820; Apr. 29; v. 261; p. 890.
Dudley, James M., Bessemer, Ala. Ruling attachment for type-writers. No. 1,299,436; Apr. 8; v. 261; p. 215.
Duer, Charles W., Chicago, Ill. Power-application mechanism for motor-vehicles. No. 1,300,359; Apr. 15; v. 261; p. 445.
Duffy, Charles H., Chevy Chase, Md. Spark-plug. No. 1,301,824; Apr. 29; v. 261; p. 811.
Duffy, Thomas I., Oak Park, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Lamp-mount for projectors. No. 1,300,360; Apr. 15; v. 261; p. 446.
Dugar, Delano H., Elyria, Ohio. Expansible reamer. No. 1,299,563; Apr. 8; v. 261; p. 243.
Dunbar, George B., Detroit, Mich. Plastic composition and making same. No. 1,299,922; Apr. 8; v. 261; p. 325.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing-device separator for addressing-machines. No. 1,299,437; Apr. 8; v. 261; p. 215.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Hand addressing-machine. No. 1,301,237; Apr. 22; v. 261; p. 667.
Duncan, Thomas S., London, assignor to Vickers Limited, Westminster, England. Mounting for guns carried by aeroplanes and similar craft. No. 1,298,916; Apr. 1; v. 261; p. 69.
Dungan, John E., *et al.* (See Kennedy, James W., assignor.)
Dunham, Charles W., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,298,679; Apr. 1; v. 261; p. 13.
Dunham, Henry V., Mount Vernon, N. Y. Edible-oil preparation. No. 1,302,486; Apr. 29; v. 261; p. 937.
Dunham, Henry V., Brattleboro, Vt. Medicinal-oil preparation. No. 1,302,487; Apr. 29; v. 261; p. 937.
Dunham, John R., New Brunswick, N. J. Flexible coupling. No. 1,298,680; Apr. 1; v. 261; p. 13.
Dunham, Melbourne K., Chicago, Ill. Cutting-torch. No. 1,300,707; Apr. 15; v. 261; p. 519.
Dunham, Melbourne K., Jersey City, N. J. Apparatus and method of burning combustible gases. No. 1,301,644; Apr. 15; v. 261; p. 592.
Dunlap, H. E. (See Day, Edgar K., assignor.)
Dunlap, Jack E. (See Crawford and Dunlap.)
Dunn, Henry F., Apperson, Ind., assignor to Toledo Scale Company, Toledo, Ohio. Spring-scale. No. 1,300,141; Apr. 8; v. 261; p. 371.
Dunn, John A., Augusta, Ga. Safety switch-lock. No. 1,302,331; Apr. 29; v. 261; p. 907.
Dunn, Michael J., Philadelphia, Pa. Piano construction. No. 1,301,825; Apr. 29; v. 261; p. 811.
Duplex Machine Co. (See Vogetzer, Otto, assignor.)
Duplex Printing Press Company. (See Beckman, Henry F., assignor.)
Durand, Leon, Paris, and G. Bottin, Romans, France. Apparatus for the production of germicide, insecticide, and like gases. No. 1,299,309; Apr. 1; v. 261; p. 158.
Durland, Ralph A., Washingtonville, assignor to J. A. Abeles, New York, N. Y. Valve-spring compressor. (Reissue). No. 14,640; Apr. 29; v. 261; p. 933.
Durning, Robert E., Avalon, Pa. Boiler-compound holder. No. 1,300,829; Apr. 15; v. 261; p. 545.
Duseabery, Dayton A., Ionia, Kans. Constructing carts. No. 1,301,410; Apr. 22; v. 261; p. 701.
Duvall, Stanley A., Chicago, Ill. Battery-terminal. No. 1,299,149; Apr. 1; v. 261; p. 121.
Dyer, Frank L., Montclair, N. J. Manufacturing spark-plugs. No. 1,299,150; Apr. 1; v. 261; p. 121.
Dyson, Harry. (See Gaunt and Dyson.)
E. H. Mumford Company. (See Allen, Abbott, assignor.)
E. I. du Pont de Nemours and Company. (See Comey, Arthur M., assignor.)
E. I. du Pont de Nemours and Company. (See Spatro, Fin, assignor.)
E. I. du Pont de Nemours & Company. (See Welch, Frank P., assignor.)
E. J. Manville Machine Company, The. (See Brennen, Charles T., assignor.)
E. R. Calthrop's Aerial Patents Limited. (See Calthrop, Everard E., assignee.)

Ende, Harry B., Vicksburg, Miss. Automatic valve and rim. No. 1,300,935; Apr. 15; v. 261; p. 568.
Earl, Charles A., et al. (See Spencer, Lewis L., assignor.)
East, Samuel T., Norwood, La. Auxiliary hood for automobile-engines. No. 1,300,936; Apr. 15; v. 261; p. 568.
Eastman Kodak Company. (See Barnes and Allen, assignors.)
Eastman Kodak Company. (See Becker, Joseph, assignor.)
Eastman Kodak Company. (See Groth, Otto, assignor.)
Eastman Kodak Company. (See Hurlbart, David M., assignor.)
Eastman Kodak Company. (See Riddell, William A., assignor.)
Easton, James B., Washington, D. C. Pencil-holder. No. 1,299,928; Apr. 8; v. 261; p. 825.
Eaton, Brown & Simpson. (See Eaton, Harold L., assignor.)
Eaton, George M., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Locomotive construction. No. 1,300,254; Apr. 15; v. 261; p. 423.
Eaton, Harold L., Atlantic City, assignor to Eaton, Brown & Simpson, Inc., Elizabeth, N. J. Ditching-machine. No. 1,300,142; Apr. 8; v. 261; p. 373.
Eaton, John, Schenectady, N. Y., assignor to General Electric Company. Motor-control system. No. 1,299,924; Apr. 8; v. 261; p. 825.
Ebert, John D., Kinsley, Kans. Combined windmill and air-compressing mechanism. No. 1,299,151; Apr. 1; v. 261; p. 121.
Ebinger, Michael, Oakland, Calif. Artificial stone. No. 1,300,801; Apr. 15; v. 261; p. 495.
Eckhart, Frank E., et al. (See Moore, Henry N., assignor.)
Economic Machinery Company. (See Stake and Ekvall, assignors.)
Edelman, Philip E., St. Paul, Minn. Electrical toy and device. No. 1,300,261; Apr. 15; v. 261; p. 446.
Eden, Harold W., Chicago, Ill., assignor, by mesne assignments, to Brokaw-Eden Manufacturing Co. Clutch-shifting mechanism. No. 1,299,925; Apr. 8; v. 261; p. 825.
Ehrlich, Emil E., Kankakee, Ill. Power-driven meat-saw. No. 1,302,228; Apr. 29; v. 261; p. 907.
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Storage battery. No. 1,299,693; Apr. 8; v. 261; p. 273.
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Projectile. No. 1,300,706; Apr. 15; v. 261; p. 519.
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Projectile. No. 1,300,709; Apr. 15; v. 261; p. 519.
Edmison, Albert L., and J. Rikkelman, Los Angeles, Calif. Combined motion-picture and sound-reproducing device. No. 1,301,045; Apr. 15; v. 261; p. 592.
Edmont, William M., Duluth, Minn. Automatic ignition control. No. 1,301,411; Apr. 22; v. 261; p. 702.
Edward G. Budd Manufacturing Company. (See Ledwinka, Joseph, assignor.)
Edward G. Budd Manufacturing Company. (See White, Ralph, assignor.)
Edwards, Albert, Brooklyn, N. Y., assignor to Solar Metal Products Co., Inc. Self-closing receptacle. No. 1,300,710; Apr. 15; v. 261; p. 520.
Edwards, Albert J., Washington, D. C., assignor of one-half to I. W. Jennings, Crawford, Ga. Trolley-harp. No. 1,299,152; Apr. 1; v. 261; p. 122.
Edwards, Charles H., Saginaw, Mich. Toy. No. 1,299,310; Apr. 1; v. 261; p. 158.
Edwards, David M., London, England. Combined electric ping and switch. No. 1,299,926; Apr. 8; v. 261; p. 825.
Edwards, George, Berkeley, Calif. Torsion-gear for marine propulsion. No. 1,299,564; Apr. 8; v. 261; p. 244.
Edwards, George J., Vancouver, British Columbia, Canada. Folding chair. No. 1,299,827; Apr. 8; v. 261; p. 304.
Edwards, Isaac L., Aurora, Ill. Railway-switch-operating mechanism. No. 1,299,311; Apr. 1; v. 261; p. 158.
Edwards, William H., assignor to The Proudfit Loose Leaf Company, Grand Rapids, Mich. Loose-leaf binder. No. 1,299,604; Apr. 8; v. 261; p. 273.
Edwards, William S., Long Beach, Calif. Tooth-brush. No. 1,300,937; Apr. 15; v. 261; p. 568.
Eggert, Charles J., assignor to Three Men Rail Laying Machine Company, La Crosse, Wis. Track-laying machine. No. 1,300,255; Apr. 15; v. 261; p. 423.
Ehle, Henry D., assignor of one-half to R. E. McFarlane, Duluth, Minn. Car-door. No. 1,299,312; Apr. 1; v. 261; p. 158.
Eichinger, Henry. (See Pauly and Eichinger.)
Eidt, John N., Anaconda, Mont. Kid hair-curler. No. 1,301,067; Apr. 22; v. 261; p. 749.
Einfeldt, Ernest R., assignor to French & Hecht, Davenport, Iowa. Tension-wheel and producing same. No. 1,299,439; Apr. 8; v. 261; p. 215.
Einstein, Samuel M., Proprietor. (See Fisher, George L., assignor.)
Eis, Julius O., and E. J. Knauff, Chicago, Ill. Electric fitting. No. 1,301,546; Apr. 22; v. 261; p. 726.
Ekvall, Arvid F. (See Stake and Ekvall.)
Elder, Samuel E. (See Bower and Elder.)
Electric Railway Improvement Company, The. (See Cadwell, Charles A., assignor.)
Electric Rotary Machine Company. (See Miller, Royal R., assignor.)
Electric Wheel Company. (See Calkins, Addison N., assignor.)
Electrical Conveying Machinery Company. (See Messick, Charles, assignor.)
Electro-Magnetic Tool Company. (See Knowlson, James S., assignor.)
Electrolytic Zinc Company. (See Aldrich and Bryan, assignors.)
Electrolytic Zinc Company. (See Stuart, Heber M., assignor.)
Elevator Supplies Company. (See Johnson, Frank, assignor.)
Eley, Charles V. A., Birmingham, England. Ship. No. 1,301,238; Apr. 22; v. 261; p. 668.
Elgin Gas Motor Company. (See Thompson, Herbert L., assignor.)
Elia, Giovanni E., assignor to Vickers Limited, Westminster, England. Submarine mine. No. 1,299,440; Apr. 8; v. 261; p. 215.
Elliott, Homer H., Rose, Kans. Lamp. No. 1,301,921; Apr. 29; v. 261; p. 830.
Elliott, Joseph S., Eddy, Tex. Overall jacket or waist. No. 1,300,938; Apr. 15; v. 261; p. 568.
Elliott, Percy M., Chicago, Ill. Sheet-metal freight-car door. No. 1,300,143; Apr. 8; v. 261; p. 373.
Ellis, Carl O., Tacoma, Wash. Color medium. No. 1,298,917; Apr. 1; v. 261; p. 69.
Ellis, Carleton, Montclair, N. J. Electrically preparing catalysts for hydrogenation. No. 1,299,565; Apr. 8; v. 261; p. 244.
Ellis, Carleton, Montclair, N. J. Catalysis. No. 1,300,144; Apr. 8; v. 261; p. 373.
Ellis, Ernest F. (See Dawson, Buckham, and Ellis.)
Ellis, Francis M., Oak Park, Ill. Anchor or tie for building constructions. No. 1,301,668; Apr. 22; v. 261; p. 749.
Elmen, Gustaf W., Bogota, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Electromagnetic device. No. 1,301,412; Apr. 22; v. 261; p. 702.
Elsesser, Herbert, San Francisco, Calif. Pocket. No. 1,302,224; Apr. 29; v. 261; p. 907.
Elrod, Herman W., Nashville, Tenn. Truck. No. 1,299,313; Apr. 1; v. 261; p. 159.
Elsey, Edgar P., assignor to The As-To Play Goods Company, Parkersburg, W. Va. Child's car or vehicle. No. 1,302,335; Apr. 29; v. 261; p. 908.
Emerson Phonograph Co. (See Emerson, Victor H., assignor.)
Emerson, Victor H., New York, N. Y., assignor to Emerson Phonograph Co., Inc. Producing sound-records. No. 1,299,153; Apr. 1; v. 261; p. 122.
Emery, Plato G., Chicago, Ill. Shade-holding device. No. 1,300,830; Apr. 15; v. 261; p. 545.
Emory, Robert J., assignor to Baird Motion Picture Machine Company, Newark, N. J. Take-up reel for kinetoscopes. No. 1,299,566; Apr. 8; v. 261; p. 244.
Emory, Robert J., assignor to Baird Motion Picture Machine Company, Newark, N. J. Fire-shutter for kinetoscopes. No. 1,301,081; Apr. 15; v. 261; p. 601.
Enck, Herbert E., assignor to Improved Manufacturing Company, Ashland, Ohio. Toy printing-wheel. No. 1,298,918; Apr. 1; v. 261; p. 69.
Endert Traffic Signal Company. (See Smith, Thomas E., assignor.)
Endorf, Charles, Jr., assignor to The Lindstrom, Smith Company, Chicago, Ill. Variable-speed motor. No. 1,301,922; Apr. 29; v. 261; p. 830.
Engel, Carl, assignor of one-half to H. Johnson, Seattle, Wash. Internal-combustion engine. No. 1,302,143; Apr. 29; v. 261; p. 871.
Engel, Karl, Arlington, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Shoe and making shoes. No. 1,301,113; Apr. 22; v. 261; p. 642.
Engelberg, Arthur, Oakland, Calif. Telephone. No. 1,299,154; Apr. 1; v. 261; p. 122.
English, Fred S., New London, Conn. Inking device for flat-bed printing-presses. No. 1,301,923; Apr. 29; v. 261; p. 830.
Englund, Edwin H. L., Muskegon, Mich. Toy gun. No. 1,301,669; Apr. 22; v. 261; p. 750.
Engstrom, Thor, Pittsburgh, Pa. Eraser and eraser-holder. No. 1,301,413; Apr. 22; v. 261; p. 702.
Ennis, Edward, North Cambridge, Mass. Waste-fitting for fountain-cuspidors. No. 1,299,441; Apr. 8; v. 261; p. 216.
Enochs, C. D. (See Mathias, Berton, M., assignor.)
Enrico, Andrew and J., Chisholm, Minn. Railway-tie and rail-fastener. No. 1,299,442; Apr. 8; v. 261; p. 216.
Enrico, John. (See Enrico, Andrew and J.)
Ensign, Emory S., assignor to R. Ensign, East Orange, N. J. Window-lock. (Reissue.) No. 14,623; Apr. 1; v. 261; p. 181.
Ensign, Rose. (See Ensign, Emory S., assignor.) (Reissue.)
Epp, Ida C., San Francisco, Calif. Brassière for nursing mothers. No. 1,300,212; Apr. 8; v. 261; p. 388.

Eppler, Martha, New York, N. Y. Bath-tub attachment. No. 1,301,114; Apr. 22; v. 261; p. 643.

Epstein, Mosheh, New York, N. Y. Support for presser-irons. No. 1,300,939; Apr. 15; v. 261; p. 568.

Erben, Philip V., Philadelphia, Pa. Puzzle. No. 1,299,695; Apr. 8; v. 261; p. 274.

Erdmann, Frederick C., North Fond du Lac, Wis. Greasing device. No. 1,300,145; Apr. 8; v. 261; p. 374.

Erickson, Charles A., Oswego, N. Y. Quick-action vise. No. 1,298,919; Apr. 1; v. 261; p. 69.

Erickson, Charles J., assignor to Automatic Electric Company, Chicago, Ill. Circuit for pole-changers. No. 1,299,155; Apr. 1; v. 261; p. 123.

Erickson, Edwin T., *et al.* (See Silbernagel, Fred, assignor.)

Erickson, Otto H., Minneapolis, Minn. Artificial leg. No. 1,302,336; Apr. 29; v. 261; p. 908.

Ericson, Carl L., Longmeadow, assignor to American Saw & Manufacturing Company, Springfield, Mass. Machine for hardening hacksaws. No. 1,302,337; Apr. 29; v. 261; p. 908.

Erikson, John A., Polytechnic, Mont. Wire-cutting attachment for rifles. No. 1,300,940; Apr. 15; v. 261; p. 568.

Ermold, George, New York, N. Y. Surgical instrument. No. 1,299,928; Apr. 8; v. 261; p. 326.

Ernst, Emil, London, England. Artificial leg. No. 1,302,338; Apr. 29; v. 261; p. 908.

Erntson, Martin A., College Place, Wash. Lubricator. No. 1,300,941; Apr. 15; v. 261; p. 569.

Erwin, Mercer, Talmo, assignor of one-half to R. N. Major, Gainesville, Ga. Rail-joint. No. 1,300,146; Apr. 8; v. 261; p. 374.

Erwin, Robert W. (See Goltra, Maffitt, Dana, and Erwin.)

Eschinger, Edward A., assignor of one-half to J. G. Clemmer, Philadelphia, Pa. Talking-machine. No. 1,301,786; Apr. 22; v. 261; p. 774.

Eschinger, Edward A., assignor of one-half to J. G. Clemmer, Philadelphia, Pa. Talking-machine. No. 1,301,787; Apr. 22; v. 261; p. 775.

Esping, Conrad, Moline, Ill., assignor to Moline Plow Company. Wheeled plow. No. 1,302,339; Apr. 29; v. 261; p. 908.

Essig, Lester C., Kansas City, Mo. Beauty-mark. No. 1,300,592; Apr. 15; v. 261; p. 495.

Estabrook, William H. (See Verdugo, Thomas, assignor.)

Etchells, Harry. (See Greaves and Etchells.)

Ethridge, Frederick M., Boston, assignor of one-half to B. E. Stewart, Somerville, Mass. Display-rack. No. 1,300,942; Apr. 15; v. 261; p. 569.

Eubanks, Sayers D., assignor to W. B. Bruton and A. R. Howard, Concord, N. C. Lug-stick for looms. No. 1,300,147; Apr. 8; v. 261; p. 374.

Eustis, Robert I. (See Hart and Eustis.)

Evangeline Iron Works. (See Cameron, Jarrett L., assignor.)

Evangelist, Dominick, assignor of one-half to T. Costanzo, New York, N. Y. Safety device for elevators. No. 1,301,924; Apr. 29; v. 261; p. 830.

Evans, Daniel, *et al.* (See Chillcott, William R., assignor.)

Evans, Edwin H., Laytonstone, England. Double-jointed or universal-jointed box-spanner. No. 1,300,148; Apr. 8; v. 261; p. 374.

Evans, Frank R., Zanesville, Ohio. Machine for cutting gauntlet-cuff or other blanks of fabric, paper, or other material. No. 1,302,340; Apr. 29; v. 261; p. 908.

Evans, John H., Bridgeport, Pa. Toy. No. 1,299,696; Apr. 8; v. 261; p. 274.

Evans, John S., assignor to The Canadian Fish Hook Manufacturing Co., Victoria, British Columbia, Canada. Fishing-bait. No. 1,300,149; Apr. 8; v. 261; p. 374.

Evans, Powell, Philadelphia, Pa. Dry-pipe valve. No. 1,302,144; Apr. 29; v. 261; p. 872.

Evans, St. George, and E. B. Birkenbeuel, Portland, Oreg. Automobile theft-preventer. No. 1,300,150; Apr. 8; v. 261; p. 374.

Evensen, William M., assignor to Goss Printing Press Company, Chicago, Ill. Cam. No. 1,302,024; Apr. 29; v. 261; p. 850.

Evenson, Arthur M., Spring Grove, Minn. Standard. No. 1,302,145; Apr. 29; v. 261; p. 872.

Everding, Louis, Arcata, Calif. Aerial transporting system. No. 1,299,314; Apr. 1; v. 261; p. 159.

Everson, Genevieve P., Cincinnati, Ohio. Means for demonstrating stellar positions and influences. No. 1,301,046; Apr. 15; v. 261; p. 592.

Eves, Frank, Devils Lake, N. D. Threshing-machine. No. 1,301,670; Apr. 22; v. 261; p. 750.

Eves, Frank, Devils Lake, N. D. Threshing-machine. No. 1,301,671; Apr. 22; v. 261; p. 750.

Ewoldt, Henry, Grand Island, Nebr. Hauling attachment for automobiles. No. 1,298,681; Apr. 1; v. 261; p. 13.

F. R. Blair & Co. (See Blair, Frank R., assignor.)

F. R. Blair & Co. (See Ungar, Gustav A., assignor.)

Faget, James E., assignor to South Side Buick Sales Company, Chicago, Ill. Automobile-bumper. No. 1,299,315; Apr. 1; v. 261; p. 159.

Fahrney, Callo D., Cambridge, Mass. Stair-jack. No. 1,301,672; Apr. 22; v. 261; p. 750.

Fairchild, Fred J., Denver, Colo. Combined plug and stopper. No. 1,300,593; Apr. 15; v. 261; p. 495.

Faib, Charles, Estherville, Iowa. Strengthener for eyeglass-cases. No. 1,302,341; Apr. 29; v. 261; p. 909.

Falconieri, Biagio, assignor of one-half to J. E. Arena, Oakland, Calif. Orchard-heater. No. 1,302,025; Apr. 29; v. 261; p. 850.

Falwell, Wray, Fitchburg, Mass. Vacuum fuel-feed system for motor-vehicles. No. 1,299,443; Apr. 8; v. 261; p. 216.

Falwell, Wray, assignor to Brown Bag Filling Machine Company, Fitchburg, Mass. Sled. No. 1,299,444; Apr. 8; v. 261; p. 216.

Fanning, Herbert G., and J. B. McAdams, Middletown, Ohio. Lock. No. 1,300,711; Apr. 15; v. 261; p. 520.

Farago, Jozsef, Clarence, Pa. Combination knife and gun. No. 1,298,920; Apr. 1; v. 261; p. 70.

Farb, Pincus, Newark, N. J., assignor to Sonora Phonograph Corporation. Motor. No. 1,302,242; Apr. 29; v. 261; p. 909.

Farmer, Clarence G. (See Persons and Farmer.)

Farmer, Frank H., assignor to The White Motor Company, Cleveland, Ohio. Motor-vehicle. No. 1,300,151; Apr. 8; v. 261; p. 374.

Farnham, Frederick F., Fairoaks, assignor to National Metal Molding Company, Pittsburgh, Pa. Producing blue powder. No. 1,299,445; Apr. 8; v. 261; p. 217.

Farnham, Leonard, New York, N. Y. Ship-raising device. No. 1,300,943; Apr. 15; v. 261; p. 569.

Farr, Frederick G., assignor to Hydraulic Oil Systems Corporation, Detroit, Mich. Hydraulic storage and delivery system. No. 1,299,567; Apr. 8; v. 261; p. 244.

Farrer, Charles M., Seattle, Wash. Baby-buggy. No. 1,302,343; Apr. 29; v. 261; p. 909.

Farrington, Elmer S., Hardwick, Vt. Account-pad. No. 1,299,316; Apr. 1; v. 261; p. 159.

Farthing, George W., Dry Fork, Va. Inclinometer for airplanes. No. 1,301,925; Apr. 29; v. 261; p. 831.

Fast, Gustave, Mount Washington, Md. Power-transmission apparatus. No. 1,299,156; Apr. 1; v. 261; p. 123.

Faucher, George E., Beeville, Tex. Beet-harvester. No. 1,300,362; Apr. 15; v. 261; p. 446.

Fausek, Arthur J. and I. F., St. Louis, Mo. Torch. No. 1,300,256; Apr. 15; v. 261; p. 423.

Fausek, Irwing F. (See Fausek, Arthur J. and I. F.)

Fawell, Joseph E., Pittsburgh, Pa. Rolling-mill. No. 1,301,414; Apr. 22; v. 261; p. 702.

Fay, Frank A., Caldwell, N. J., assignor to W. E. Quimby, Inc., New York, N. Y. Pump. No. 1,299,157; Apr. 1; v. 261; p. 123.

Fay, Thomas J., Brooklyn, N. Y., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Apparatus for shaping and tempering metal. No. 1,298,682; Apr. 1; v. 261; p. 13.

Febrey, Harold H., Newark, assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Rail-bond. No. 1,301,239; Apr. 22; v. 261; p. 668.

Feckley, William A., Delta, Iowa. Bedstead. No. 1,301,240; Apr. 22; v. 261; p. 668.

Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Radiator unit. No. 1,299,158; Apr. 1; v. 261; p. 123.

Fedders Manufacturing Company. (See Fedders, John M., assignor.)

Federal Telegraph Company. (See Fuller, Leonard F., assignor.)

Feig, Curt, assignor to Venango Knitting Mills, Incorporated, Philadelphia, Pa. Electrostatical device for circular-knitting machines. No. 1,301,673; Apr. 22; v. 261; p. 751.

Feist, Charles M., Sioux City, Iowa. Trolley. No. 1,299,317; April 1; v. 261; p. 160.

Feldman, Joseph C., assignor to T. K. Feldman, New York, N. Y. Electrical water-heater. No. 1,299,159; Apr. 1; v. 261; p. 124.

Feldman, Tillie K. (See Feldman, Joseph C., assignor.)

Felland, Melvin J., Great Falls, Mont. Electric signal for motion-picture-projector reels. No. 1,300,257; Apr. 15; v. 261; p. 423.

Fengler, Hermann V., West Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,299,403; Apr. 1; v. 261; p. 179.

Fenlason, Orin C., Raymond, Wash. Collapsible veneer berry-box. No. 1,298,921; Apr. 1; v. 261; p. 70.

Fenlon, Charles E., Grays Lake, Ill. Removing bulges and swells from cans and testing the same for leaks. No. 1,301,241; Apr. 22; v. 261; p. 668.

Fenton, John A., Oakland, Calif. Ornamental article and producing the same. No. 1,302,244; Apr. 29; v. 261; p. 909.

Feraud, Frank H., Granite City, Ill. Phonograph-lamp. No. 1,300,363; Apr. 15; v. 260; p. 447.

Ferdon, Guy W., Creskill, N. J. Collapsible folding stove. No. 1,300,594; Apr. 15; v. 261; p. 495.

Ferdon, Guy W., Creskill, N. J. Marmite. No. 1,300,712; Apr. 15; v. 261; p. 520.

Ferguson, Cash C., Champaign, Ill. Horseshoe. No. 1,300,944; Apr. 15; v. 261; p. 569.

Ferguson, Fergus R., assignor to The Columbia Clutch Company, Cleveland, Ohio. Clutch. No. 1,300,831; Apr. 15; v. 261; p. 846.
Ferguson, Robert R., Los Angeles, Calif., assignor to R. R. Ferguson, trustee. Wrench. No. 1,301,674; Apr. 22; v. 261; p. 751.
Ferke, John, Cleveland, Ohio. Combined shade and curtain hanger. No. 1,298,568; Apr. 8; v. 261; p. 265.
Ferrati, Edgardo, Rome, M. Pecorare, Spezia, and A. Guidoni, Rome, Italy, assignors to Societa Anonima Italiana Gio. Ansaldo & C., Cornigliano Ligure, Italy. Means for the protection of ships, both mercantile and Navy ships, against submarine attacks or mines. No. 1,299,687; Apr. 8; v. 261; p. 274.
Ferris, Ralph E. (See Hellmund and Ferris.)
Ferracca, David, Logan, W. Va. Non-refillable bottle. No. 1,300,713; Apr. 15; v. 261; p. 520.
Fessenden, Reginald A., Brookline, Mass. Method of and apparatus for heat insulation. No. 1,301,675; Apr. 22; v. 261; p. 751.
Fether, George A., El Dorado, Pa. Rail-joint. No. 1,302,026; Apr. 29; v. 261; p. 850.
Fetner, William, Springfield, Ill. Disk drill. No. 1,299,160; Apr. 1; v. 261; p. 124.
Fetner, William, Springfield, Ill. Pulverizer and roller. No. 1,302,146; Apr. 29; v. 261; p. 872.
Fidelity Brass Manufacturing Company. (See Armstrong, Harry H., assignor.)
Field, Herbert E., Wheeling, W. Va. Flexible pipe-joint. No. 1,300,945; Apr. 15; v. 261; p. 570.
Field, Oscar S. (See Kendall and Field.)
Fiene, Jesse T., assignor to Lisenby Mfg. Co., Fresno, Calif. Tire-pump. No. 1,301,242; Apr. 22; v. 261; p. 666.
Files Engineering Company. (See Thacher, George H., Jr., assignor.)
Filippi, Antoine P., Paris, France. Ship. No. 1,299,161; Apr. 1; v. 261; p. 124.
Finch, Clark E., West Palm Beach, Fla. Can-closure. No. 1,298,633; Apr. 1; v. 261; p. 14.
Finley, Frank W. A. (See Leonard, Roy E., assignor.)
Finnegan, Ambrose J., Fayette, Iowa. Wind-shield hood. No. 1,301,115; Apr. 22; v. 261; p. 642.
Finnigan, George P., Wilton-on-James, near Richmond, Va. System of train control. No. 1,302,345; Apr. 29; v. 261; p. 910.
Finnigan, George P., Wilton-on-James, near Richmond, Va. System of automatic speed control. No. 1,302,346; Apr. 29; v. 261; p. 910.
Finnigan, George P., Philadelphia, Pa., assignor to G. A. Holden, New York, N. Y. System of automatic train control. No. 1,299,446; Apr. 8; v. 261; p. 217.
Finster, Robert, and P. Wilson, assignors to Hammermill Paper Company, Erie, Pa. Paper-sorting machine. No. 1,302,406; Apr. 29; v. 261; p. 934.
Finstone, Marx. (See Plancher, Lillian, assignor.)
Fire Protection Insurance Securities Company. (See Teague, Walter O., assignor.)
Firestone Tire & Rubber Company, The. (See Smith, John P., assignor.)
Firma Exploitatie Maatschappij voor Textielindustrie Auerbach en Co. (See Auerbach, Max, assignor.)
Firma Adolphe Saurer. (See Schlatter and Begin.)
First Trust Company, executor, *et al.* (See Bean, Irving M.)
First Trust and Savings Company, The, *et al.*, trustees. (See Sommer, William H., assignor.)
Fischer, Albert C., Kansas City, Mo. Revoluble engine. No. 1,301,547; Apr. 22; v. 261; p. 726.
Fischer, Hermann O., assignor to Package Machinery Company, Springfield, Mass. Paper-feeding mechanism. No. 1,298,684; Apr. 1; v. 261; p. 14.
Fischer, Hermann O., assignor to Package Machinery Company, Springfield, Mass. Paper-feeding mechanism. No. 1,298,685; Apr. 1; v. 261; p. 14.
Fischer, Wenzel. (See Clements and Fischer.)
Fischer, William F. (See Anderson, Gilbert V., assignor.)
Fisher, George L., assignor to Marathon Company, S. M. Binstein, proprietor, Attleboro, Mass. Cigarette-case. No. 1,299,162; Apr. 1; v. 261; p. 124.
Fisher, James B., assignor to Waukesha Motor Company, Waukesha, Wis. Breather-tube and cap therefor. No. 1,298,922; Apr. 1; v. 261; p. 70.
Fisher, William R., Toronto, Ontario, Canada. Egg-crate. No. 1,301,826; Apr. 29; v. 261; p. 811.
Fisk Rim Company, The. (See Jameson, William, assignor.)
Fisk Rubber Company, The. (See Hazeltine, Reginald, assignor.)
Fisk Rubber Company, The. (See Marquette, Melvea A., assignor.)
Fitz-Empire Double Pivot Last Co. (See Buck, Frank S., assignor.)
Fitz Gerald, Walter H., Brooklyn, N. Y. Invalid-bed. No. 1,300,364; Apr. 15; v. 261; p. 447.
Fitzgerald, Fred. (See Jewett and Fitzgerald.)
Fitzgerald, John W., assignor to L. A. Young Industries, Inc., Detroit, Mich. Power-transmission device. No. 1,302,147; Apr. 29; v. 261; p. 872.
Fitzgerald, Thomas W., New York, N. Y. Container-cover. No. 1,301,676; Apr. 22; v. 261; p. 751.
Fitzgerald, William, Memphis, Tenn. Disk-washer. No. 1,299,695; Apr. 8; v. 261; p. 274.
Flanders, William G. E., Burlington, Vt. Head-mirror. No. 1,298,686; Apr. 1; v. 261; p. 14.
Flannery, George, *et al.* (See Higley, John P., assignor.)
Flechter, Leonard V., New York, N. Y., assignor to L. V. Flechter & Company. Carbureter. No. 1,302,347; Apr. 29; v. 261; p. 910.
Fleming, George W., Springfield, Mass. Two-toned automobile-horn control. No. 1,299,163; Apr. 1; v. 261; p. 124.
Fleming, Joseph J., Boone, Iowa. Garden-tool. No. 1,302,348; Apr. 29; v. 261; p. 910.
Fletcher, Harold W., Houston, Tex. Tool-joint. No. 1,300,365; Apr. 15; v. 261; p. 447.
Flewell, Walter H. (See Hinde and Flewell.)
Flexner, Isidor. (See Taylor and Flexner.)
Flexner-Taylor Company. (See Taylor and Flexner, assignors.)
Flint, Justin T. (See Munn, Samson P., assignor.)
Flintkote Company, The. (See Overbury, Frederick C., assignor.)
Flintkote Manufacturing Company. (See Overbury, Frederick C., assignor.)
Flowers, Thomas W., assignor to E. A. Humphrey, trustee, Goldsboro, N. C. Adjustable shade-roller hanger. No. 1,300,366; Apr. 15; v. 261; p. 447.
Frye, William L., Glen Ridge, N. J., assignor to American Telephone and Telegraph Company. Test-connector. No. 1,301,827; Apr. 29; v. 261; p. 812.
Flynn, Thomas A., Jr., Perth Amboy, N. J. Automatic train-stop. No. 1,300,152; Apr. 8; v. 261; p. 275.
Foamite Firefoam Company. (See Walker, William W., assignor.)
Fogleman, Edgar L., Balboa, Canal Zone. Drill. No. 1,299,318; Apr. 1; v. 261; p. 160.
Folger, Harry, and J. C. Julien, assignors to R. D. Swisher Manufacturing Company, Chicago, Ill. Hand-stamp. No. 1,301,926; Apr. 29; v. 261; p. 831.
Folger, Harry S., and T. Ross, Chicago, Ill.; said Ross assignor to said Folger. Holder for pads, stamps, and pens. No. 1,300,153; Apr. 8; v. 261; p. 275.
Fones, John H., Oakland, Calif. Wrench. No. 1,302,027; Apr. 29; v. 261; p. 850.
Fonesbeck, Leon, Logan, Utah. Rotary plow. No. 1,300,595; Apr. 15; v. 261; p. 495.
Fontaine, Félix. (See Küntziger, Chauvin, and Fontaine.)
Fontaine, Robert A., Roanoke, Va. Brick-handling truck. No. 1,299,447; Apr. 8; v. 261; p. 217.
Forbes Lithograph Manufacturing Company, The. (See Macdonald, John D., assignor.)
Ford, Edwin H., assignor to Ford Meter Box Company, Wabash, Ind. Water-meter connection. No. 1,301,243; Apr. 22; v. 261; p. 669.
Ford, Edwin H., assignor to Ford Meter Box Company, Wabash, Ind. Adjustable pipe-coupling. No. 1,301,244; Apr. 22; v. 261; p. 669.
Ford, Frederick H., assignor to The Totalux Company, Milwaukee, Wis. Headlight front or lens. No. 1,302,148; Apr. 29; v. 261; p. 872.
Ford Meter Box Company. (See Ford, Edwin H., assignor.)
Ford, Silas M., St. Paul, Minn. Plaster-board. No. 1,301,828; Apr. 29; v. 261; p. 812.
Fore, Frank W., Belpre, Ohio. Power-transmitting device. No. 1,301,545; Apr. 22; v. 261; p. 727.
Forkner, Robert F., assignor or one-third to J. B. Thomas, Princeton, W. Va. Gasolene-engine system. No. 1,300,714; Apr. 15; v. 261; p. 520.
Forsyth, George H., Chicago, Ill. Window construction. No. 1,299,448; Apr. 8; v. 261; p. 217.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-breaker. No. 1,300,367; Apr. 15; v. 261; p. 447.
Fortuny, Francis, New York, N. Y. Car-fender. No. 1,299,319; Apr. 1; v. 261; p. 160.
Forward, Chauncey B., Urbana, Ohio. Refining oil. No. 1,299,449; Apr. 8; v. 261; p. 218.
Fougate, Alfred, Detroit, Mich. Automatic device for raising submerged vessels and other structures. No. 1,300,715; Apr. 15; v. 261; p. 521.
Fosler, Howard B., Baltimore, Md. Cut-off and drain valve. No. 1,301,549; Apr. 22; v. 261; p. 727.
Foster, Frederick R. (See Mack and Foster.)
Foster, Henry J., assignor to Hydraulic Pressed Steel Company, Cleveland, Ohio. Demountable rim. No. 1,299,450; Apr. 8; v. 261; p. 218.
Foster, Henry J., assignor to Hydraulic Pressed Steel Company, Cleveland, Ohio. Demountable rim. No. 1,299,451; Apr. 8; v. 261; p. 218.
Foster, Mary E., Durango, Colo. Feeding receptacle. No. 1,301,416; Apr. 22; v. 261; p. 702.
Foster, Percy G. (See Foster, Samuel G. and P. G.)
Foster, Ralph W., assignor to Crosby Steam Gage & Valve Company, Boston, Mass. Blow-off valve. No. 1,299,452; Apr. 8; v. 261; p. 218.
Foster, Samuel G. and P. G., Westfield, N. J. Manifold-heater. No. 1,302,349; Apr. 29; v. 261; p. 910.
Foster, Walter L., assignor of one-fourth to R. S. Oller, Whittier, Calif. Automatic control for boiler feed-pumps. No. 1,302,350; Apr. 29; v. 261; p. 910.
Fouasse, Henri, assignor to Societe d'Optique et de Mecanique de Haute Precision, Paris, France. Single-tube and double-tube optical glass. No. 1,302,851; Apr. 29; v. 261; p. 911.

Fouse, Herman, Akron, Ohio. Support for concrete construction. No. 1,300,154; Apr. 8; v. 261; p. 375.
Foutz, Horace S., Modesto, Calif. Bean-cutter. No. 1,301,829; Apr. 29; v. 261; p. 812.
Fowler, Albert M., Los Angeles, Calif. Ice-making apparatus. No. 1,301,550; Apr. 22; v. 261; p. 727.
Fowler, Frank G., Altoona, Pa., assignor to W. P. Murphy, Chicago, Ill. Vestibule-diaphragm buffer-spring. No. 1,299,929; Apr. 8; v. 261; p. 326.
Fowler, Harold, Port Hope, Ontario, Canada. Parlor game. No. 1,300,368; Apr. 15; v. 261; p. 447.
Fownes Brothers & Co. (See Marsden, William H., assignor.)
Fox, Gordon, Evanston, assignor to Mark Manufacturing Company, Chicago, Ill. Pipe-coupling. No. 1,301,245; Apr. 22; v. 261; p. 669.
Foy, Patrick J., Chicago, Ill. Traffic-signaling device. No. 1,300,369; Apr. 15; v. 261; p. 448.
Frame, Bruce, Portland, Oreg. Street-sweeper. No. 1,301,927; Apr. 29; v. 261; p. 831.
Francis, Walter C., Clarksburg, W. Va. Tire-armor. No. 1,300,946; Apr. 15; v. 261; p. 570.
Franck, Val F., Louisville, Ky. Pipe-coupling. No. 1,298,687; Apr. 1; v. 261; p. 14.
Frank Adam Electric Company. (See Adam, Frederick B., assignor.)
Frank, Emil R., assignor of one-half to H. R. Dealy, Sioux City, Iowa. Oil and gasolene measure. No. 1,301,677; Apr. 22; v. 261; p. 752.
Frank, Joseph. (See Benz, Frederick, Jr., assignor.)
Frank S. Betz Company. (See Curtis, Louis R., assignor.)
Franke, Johan F., Santa Ana, Calif. Walnut-picker. No. 1,298,923; Apr. 1; v. 261; p. 70.
Franklin Barn Equipment Company. (See Franklin, Ray W., assignor.)
Franklin, Charles S. (See Marconi and Franklin.)
Franklin, Charles S., London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y. Receiver for wireless signals. No. 1,301,246; Apr. 22; v. 261; p. 669.
Franklin, John E., Udall, Kans., assignor to J. F. Saye, Galena, Mo. Cultivator attachment. No. 1,301,116; Apr. 22; v. 261; p. 642.
Franklin, Ray W., assignor to Franklin Barn Equipment Company, Monticello, Iowa. Connecting device. No. 1,301,417; Apr. 22; v. 261; p. 702.
Frantzen, Arthur. (See Hartwig, William G., assignor.)
Fraser, William C., Milwaukee, Wis. Combination tray and book-rack. No. 1,299,164; Apr. 1; v. 261; p. 125.
Frashier, William H., Athelstan, Ark. Cultivator. No. 1,300,596; Apr. 15; v. 261; p. 495.
Frederick, Louis T., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Mica-building apparatus. No. 1,300,370; Apr. 15; v. 261; p. 448.
Frederick Osann Company. (See Lyons, Robert L., assignor.)
Freeman, Charles C., Broken Hill, New South Wales, Australia. Differential flotation concentration of sulfid ores and raw ore products. No. 1,301,551; Apr. 22; v. 261; p. 727.
Freeman, Everett W., Brooklyn, N. Y. Powder-box. No. 1,300,155; Apr. 8; v. 261; p. 376.
Freeman, Harry G., assignor of one-half to W. H. Bartlett, Atlantic City, N. J. Junction-box for cable-splices. No. 1,300,213; Apr. 8; v. 261; p. 388.
Freeman, James M. (See Walker, Marion L., assignor.)
Freeman, Joseph W., assignor of one-half to C. R. Bright, Columbus, Ohio. Combined casket and grave-vault. No. 1,298,688; Apr. 1; v. 261; p. 15.
Freeman, William J. (See Johnson, Frank A., assignor.)
Freese, Frank G., Aldan, Pa. Internal-combustion motor and valve therefor. No. 1,299,320; Apr. 1; v. 261; p. 160.
Freeth, Francis A., Great Crosby, and H. E. Cocksedge, London, England. Separation and recovery of potassium salts from commercial nitrate of soda containing such salts. No. 1,300,947; Apr. 15; v. 261; p. 570.
Freeth, Francis A., Sandiway, and H. E. Cocksedge, London, England. Manufacture of ammonium nitrate. No. 1,301,047; Apr. 15; v. 261; p. 592.
French, Harry M., Norwood, Mass. Coating-machine. No. 1,302,352; Apr. 29; v. 261; p. 911.
French & Hecht. (See Einfeldt, Ernest E., assignor.)
French & Hecht. (See Hecht, Joseph L., assignor.)
French, James C., assignor to F. C. Austin, Chicago, Ill. Grade-line indicator. No. 1,300,371; Apr. 15; v. 261; p. 448.
French, Laurence E., Sebastopol, Calif. Priming-device attachment. No. 1,300,597; Apr. 15; v. 261; p. 496.
Frey, George W., assignor to The Compressed Wood Preserving Company, Cincinnati, Ohio. Paving-block. No. 1,299,453; Apr. 8; v. 261; p. 219.
Frey, Ivan C., York, Pa. Brickmaking-machine. No. 1,301,048; Apr. 15; v. 261; p. 592.
Freyseng Cork Company. (See Gain, Harry W., assignor.)
Fricano, Gaetano, Buffalo, N. Y. Calendar-clock. No. 1,300,372; Apr. 15; v. 261; p. 449.
Frick, Frederick F. (See Laist, Frick, and Oliver.)
Friedmann, Frank J., and M. J. Lifshitz, Brooklyn, N. Y. Nursing-bottle holder. No. 1,302,354; Apr. 29; v. 261; p. 911.
Friedrich, Conrad, Washington, D. C. Luminous hair-line. No. 1,302,353; Apr. 29; v. 261; p. 911.
Frink, Fred J. (See Frink, Robert L. and F. J.)
Frink, Robert L. and F. J., Lancaster, Ohio; said F. J. Frink assignor to said Robert L. Frink. Drawing-pot for glass. No. 1,302,149; Apr. 29; v. 261; p. 872.
Frisbie, Henry C. (See Smith, Thomas, assignor.)
Fritzche, Alfred, et al (See Ahlm, Charles H. F., assignor.)
Froiek, John, Trapp Lake, British Columbia, Canada. Observation-camera mount. No. 1,300,716; Apr. 15; v. 261; p. 521.
Fromberg, Henry R., Crandall, S. D. Music-leaf turner. No. 1,302,255; Apr. 29; v. 261; p. 911.
Frosey, Maynard A., Racine, Wis. Cuff-holder. No. 1,302,346; Apr. 29; v. 261; p. 912.
Frossard, John A., East Pepperell, Mass. Scraper for paper-calendering rolls or the like. No. 1,300,930; Apr. 8; v. 261; p. 326.
Frost, George A., Newton, Mass. Garter-package. No. 1,301,418; Apr. 22; v. 261; p. 703.
Frost, Robert T., assignor of one-half to O. M. Pierce, Minot, N. D. Rebate-card. No. 1,302,150; Apr. 29; v. 261; p. 873.
Fry, Reuben M., et al. (See Warman, Samuel W., assignor.)
Fuchs, John C., Pittsburgh, and O. W. Cook, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Sheet-handling implement. No. 1,302,028; Apr. 29; v. 261; p. 850.
Fuchs, Philip A., Milwaukee, Wis. Pulley-supporting brace. No. 1,301,830; Apr. 29; v. 261; p. 812.
Fudczko, Hilary, Philadelphia, Pa. Traction-tread. No. 1,298,924; Apr. 1; v. 261; p. 70.
Fugiel, Frank, Hamtramck, Mich. Safety device for flying-machines. No. 1,301,247; Apr. 22; v. 261; p. 669.
Fulkerson, George W., Hagerstown, Ind. Shock-absorber. No. 1,299,165; Apr. 1; v. 261; p. 125.
Fuller, Frederick L., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,301,678; Apr. 22; v. 261; p. 752.
Fuller, Karl E., Detroit, Mich. Chiropodist's cabinet and screen. No. 1,301,248; Apr. 22; v. 261; p. 669.
Fuller, Leonard F., assignor to Federal Telegraph Company, San Francisco, Calif. Radiotelegraphy. No. 1,300,156; Apr. 8; v. 261; p. 376.
Fuller, Leonard F., assignor to Federal Telegraph Company, San Francisco, Calif. Radiotelegraphy. No. 1,300,157; Apr. 8; v. 261; p. 376.
Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton Company, The. (See Giesler, Jean V., assignor.)
Fulton, Edwin W., assignor to Velox Vise Co., Inc., Louisville, N. Y. Vise. No. 1,299,823; Apr. 8; v. 261; p. 306.
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Tank-regulator. No. 1,300,717; Apr. 15; v. 261; p. 521.
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Radiator-casing. No. 1,301,419; Apr. 22; v. 261; p. 703.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J. Pressing member. No. 1,300,598; Apr. 15; v. 261; p. 496.
Furry, Samuel H., Lancaster, Ohio. Bridge-approach. No. 1,300,949; Apr. 15; v. 261; p. 570.
G. Beaton & Son. (See Steuart, James N., assignor.)
G. & J. Weir. (See Lang, Charles R., assignor.)
G. & J. Weir. (See Weir, William, assignor.)
G. L. Time Switch Company. (See Greenstreet and Lemon, assignors.)
G. W. J. Murphy Company. (See Bourque, David, assignor.)
Gabriel, Philip E., Detroit, Mich. Die-casting machine. No. 1,301,768; Apr. 22; v. 261; p. 775.
Gadd, Anna E., executrix. (See Gadd, Charles J.)
Gadd, Charles J., deceased, Lebanon, Pa.; A. E. Gadd, executrix, Atlantic City, N. J. Anticreeper for rails. No. 1,300,599; Apr. 15; v. 261; p. 496.
Gaffney, Thomas J., Albany, N. Y. Automobile-signal. No. 1,299,166; Apr. 1; v. 261; p. 125.
Gagnon, Joseph A., Upton, Quebec, Canada. Composite tool. No. 1,302,357; Apr. 29; v. 261; p. 912.
Gallor, Chester F. (See Clark, James, and Gallor.)
Gain, Harry W., assignor to Freyseng Cork Company, Limited, Toronto, Ontario, Canada. Life-preserver. No. 1,301,831; Apr. 29; v. 261; p. 812.
Gaines, Vincent S., Webster Groves, Mo. Mechanical toy. No. 1,301,552; Apr. 22; v. 261; p. 727.
Galbraith, Orville R., Asquith, Saskatchewan, Canada. Internal-combustion engine. No. 1,301,420; Apr. 22; v. 261; p. 703.
Gallagher, Peter F., New Dorp, N. Y. Flexible stay-bolt connection. No. 1,300,832; Apr. 15; v. 261; p. 546.
Gallagher, Richard D., Jr., New York, N. Y. Railway draft-rigging. No. 1,301,422; Apr. 22; v. 261; p. 703.
Gallagher, Richard D., Jr., New York, N. Y. Railway buffing mechanism. No. 1,301,423; Apr. 22; v. 261; p. 703.
Gallingani, Luigi, Genoa, Italy. Hull for vessels in armed concrete. No. 1,299,699; Apr. 8; v. 261; p. 276.
Galvin, Dan, Paducah, Ky. Work-holder. No. 1,301,424; Apr. 22; v. 261; p. 704.
Gammel, Karl, assignor to The Cleveland Macaroni Company, Cleveland, Ohio. Drying macaroni. No. 1,300,718; Apr. 15; v. 261; p. 521.

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Pneumatic tire. No. 1,300,167; Apr. 1; v. 261; p. 126.
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Rod-turning machine. No. 1,301,679; Apr. 22; v. 261; p. 752.
Gangewere, Earnest P., Chattanooga, Tenn. Lock. No. 1,300,719; Apr. 15; v. 261; p. 521.
Garami, Joseph, Newark, N. J., assignor of one-half to S. Steiner, New York, N. Y. War-vehicle for children. No. 1,302,358; Apr. 29; v. 261; p. 912.
Garbutt, Frank E., Los Angeles, Calif. Elliptic iris. No. 1,302,359; Apr. 29; v. 261; p. 912.
Garceau, George H., Swissvale, M. W. Bartmann, Wilkinsburg, and J. L. Chantemerle, Turtle Creek, Pa., assignors to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,300,873; Apr. 15; v. 261; 449.
Gardner, Benjamin F., assignor of one-half to S. Stodman, Chicago, Ill. Direct-current signaling system. No. 1,301,425; Apr. 22; v. 261; p. 704.
Gardner, Levi S., Detroit, Mich. Carbureter. No. 1,299,454; Apr. 8; v. 261; p. 219.
Garfield, James R., trustee. (See Wright, Joseph L., assignor.)
Garner, Henry, Media, Pa. Bedclothes-retainer. No. 1,301,553; Apr. 22; v. 261; p. 728.
Garner, James R., assignor to Hope Natural Gas Company, Pittsburgh, Pa. Obtaining gasolene from hydrocarbon gases. No. 1,299,455; Apr. 8; v. 261; p. 219.
Garrigues, William R., New Orleans, La., assignor to William Garrigues & Company, Inc., New York, N. Y. Evaporator. No. 1,298,925; Apr. 1; v. 261; p. 71.
Gartner, Alfred, Washington, D. C. Display device. No. 1,301,117; Apr. 22; v. 261; p. 643.
Gartner, Alfred, Washington, D. C. Container for candy, nuts, and the like. No. 1,301,118; Apr. 22; v. 261; p. 643.
Gartner, Alfred, Washington, D. C. Display device. No. 1,301,119; Apr. 22; v. 261; p. 643.
Garvey, Richard, Venice, Calif. Foot-treader. No. 1,301,428; Apr. 22; v. 261; p. 704.
Gasoline Corporation. (See Greenstreet, Charles J., assignor.)
Gates, John W., Montreal, Quebec, Canada. Furnace. No. 1,300,874; Apr. 15; v. 261; p. 449.
Gathmann, Emil, Baltimore, Md. Projectile-fuse time-train ring. No. 1,301,928; Apr. 29; v. 261; p. 831.
Gathmann, Emil, Baltimore, Md. Grenade-projectile. No. 1,301,929; Apr. 29; v. 261; p. 831.
Gaunt, Joseph S., and H. Dyson, Manchester, England. Lapper for spinning and like machines. No. 1,302,029; Apr. 29; v. 261; p. 850.
Gebo, Samuel M., Grantsville, W. Va. Hay and straw stacker. No. 1,302,030; Apr. 29; v. 261; p. 851.
Gehr, W. H. (See Coddigan, Bartholomew C., assignor.) (Reissue.)
Geiger, William A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Operating mechanism for hand-brake. No. 1,300,875; Apr. 15; v. 261; p. 449.
Geiger, William A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake for railway-cars. No. 1,300,876; Apr. 15; v. 261; p. 450.
Geisenhöner, Henry, Schenectady, N. Y., assignor to General Electric Company. Metal-heating device. No. 1,299,931; Apr. 8; v. 261; p. 228.
Geitner, Alexander L., Rochester, N. Y. Adjustable hollow milling-tool. No. 1,300,158; Apr. 8; v. 261; p. 276.
Gemco Manufacturing Company. (See Ollenburg, Arthur A., assignor.)
Gemmell, W. H., et al. (See Kerr, George C., assignor.)
Gendron Manufacturing Company, The. (See White and Vezina, assignors.)
General Briquetting Company. (See Vogel, Felix A., assignor.)
General Chemical Company. (See Briggs, Thomas L., assignor.)
General Electric Company. (See Alexanderson, Ernst F. W., assignor.)
General Electric Company. (See Alexanderson and Prince, assignors.)
General Electric Company. (See Arnold, Lyman, assignor.)
General Electric Company. (See Basch, David, assignor.)
General Electric Company. (See Creighton, Elmer E. F., assignor.)
General Electric Company. (See Eaton, John, assignor.)
General Electric Company. (See Geisenhöner, Henry, assignor.)
General Electric Company. (See Harrison, Ward, assignor.)
General Electric Company. (See Johannesson, Svend E., assignor.)
General Electric Company. (See Junggren, Oscar, assignor.)
General Electric Company. (See Kerthals-Alten, Willem C., assignor.)
General Electric Company. (See Langmuir, Irving, assignor.)
General Electric Company. (See Loewenstein, Louis C., assignor.)
General Electric Company. (See Macleodie, George, assignor.)
General Electric Company. (See Pacz, Aladar, assignor.)
General Electric Company. (See Pearson, Edwin E., assignor.)
General Electric Company. (See Prince, David C., assignor.)
General Electric Company. (See Shorey, John A., assignor.)
General Electric Company. (See Summerhayes, Henry L., assignor.)
General Electric Company. (See Van Keuren, William L., assignor.)
General Electric Company. (See Wallace, Curtis C., assignor.)
General Electric Company. (See Weed, James M., assignor.)
General Electric Company. (See Weintraub, Ezechiel, assignor.)
General Electric Company. (See Whiting, Max A., assignor.)
General Engineering and Construction Company. (See Ashley, Charles G., assignor.)
General Fire Extinguisher Company. (See Meloon, Jonathan C., assignor.)
General Motors Company. (See Randall, Dwight T., assignor.)
General Railway Signal Company. (See Bushnell, Charles S., assignor.)
General Railway Signal Company. (See Howe, Winthrop K., assignor.)
General Railway Signal Company. (See Leake, Richard C., assignor.)
General Railway Signal Company. (See Wight, Sedgwick N., assignor.)
Gean, John E., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Instrument-board. No. 1,300,877; Apr. 15; v. 261; p. 450.
Gentsler, Edwin, York, Pa. Sifter. No. 1,298,926; Apr. 1; v. 261; p. 71.
George C. Clark Metal Last Co. (See Clark, George C., assignor.)
George, Enoch, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft-rigging. No. 1,301,680; Apr. 22; v. 261; p. 752.
George, Enoch, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft-rigging for railway-cars. No. 1,301,681; Apr. 22; v. 261; p. 752.
George W. Dover, Inc. (See Dover, George W., assignor.)
Geraghty, James H. (See Merkiee and Geraghty.)
Gerber, Viktor, Baden, Switzerland. Device for carrying out chemical processes by electrolysis. No. 1,301,822; Apr. 29; v. 261; p. 812.
Gerdts-Allen Cartes Company. (See Allen, William R., assignor.)
Gerrard, Frederick J., assignor of one-half to C. O. Hart, Monroe, Nebr. Device for keeping lids cool. No. 1,299,821; Apr. 1; v. 261; p. 160.
Gerrard, Frederick J., assignor of one-half to C. O. Hart, Monroe, Nebr. Folding chicken-crate. No. 1,299,822; Apr. 1; v. 261; p. 161.
Gerstung, Otto A. (See Ransom and Gerstung.)
Gerwen, Julius A., assignor to Moline Mill Manufacturing Company, Moline, Ill. Idler-Pulley Structure. No. 1,300,815; Apr. 15; v. 261; p. 546.
Geveke, Hendrik L., Hilversum, assignor to Naamlooze Vennootschap Geveke & Co.'s Technisch Bureau, Amsterdam, Netherlands. Trenching-machine. No. 1,301,823; Apr. 29; v. 261; p. 813.
Gibbs, Harry D. (See Ambler and Gibbs.)
Gibbs, Harry D. (See Conover and Gibbs.)
Gibson, Emmett E., Gabbett, Ala. Mail-crane. No. 1,301,682; Apr. 22; v. 261; p. 753.
Giesler, Jean V., assignor to The Fulton Company, Knoxville, Tenn. Fuel-heating system. No. 1,300,600; Apr. 15; v. 261; p. 496.
Gifford, Percival F., New York, N. Y. Transmission-gearing for automobiles, &c. No. 1,299,700; Apr. 8; v. 261; p. 275.
Gilbert & Barker Manufacturing Company. (See Davis, John B., assignor.)
Gilbert, Joseph B., Beverly, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J. Abrading device. No. 1,298,689; Apr. 1; v. 261; p. 15.
Gilchrist, Andrew L. K. (See Leadbetter, Gilchrist, and Tate.)
Gill, John H., J. D. Rea, and L. Sanderson, Dunedin, New Zealand. Motor-tire cover. No. 1,300,601; Apr. 15; v. 261; p. 497.
Gillespie, Edward L., Seattle, Wash. Counterbalancing device for wall-cabinet boards. No. 1,300,950; Apr. 15; v. 261; p. 570.
Gilman, Albert E. (See Gilman, John H. and A. E.)
Gilman, Arthur E., Cleveland, Ohio. Multiple form-sheet. No. 1,301,834; Apr. 29; v. 261; p. 813.
Gilman, John H. and A. E., assignors to King & Hamilton Company, Ottawa, Ill. Belt-tightener for conveyers. No. 1,299,701; Apr. 8; v. 261; p. 275.
Gilpin, Garth G., Riverside, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,300,258; Apr. 15; v. 261; p. 424.
Gilson, Joshua, Nebraska City, Nebr. Brooder. No. 1,300,951; Apr. 15; v. 261; p. 571.
Girtanner Engineering Company. (See Girtanner, Frederick, assignor.)

Girtanner, Frederick, St. Louis, Mo., assignor, by mesne assignments, to Girtanner Engineering Company. Vacuum-unloader for railway-cars and the like. No. 1,301,427; Apr. 22; v. 261; p. 704.
Gitterman, Kurt R., Brooklyn, N. Y. Pasteurizer. No. 1,301,428; Apr. 22; v. 261; p. 704.
Givner, Abraham, Baltimore, Md. Chair. No. 1,301,429; Apr. 22; v. 261; p. 705.
Glashower, John P., assignor to Whitin Machine Works, Whitinsville, Mass. Lap-machine. No. 1,300,159; Apr. 8; v. 261; p. 376.
Glass, Louine R., Passaic Park, N. J., assignor of one-third to H. H. Hull and sixteen one-hundredths to C. D. Young, New York, N. Y. Lock-nut. No. 1,299,702; Apr. 8; v. 261; p. 275.
Glenister, Albert, High Wycombe, England. Chair, couch, or the like. No. 1,301,835; Apr. 29; v. 261; p. 813.
Glenister, Albert, High Wycombe, England. Chair, couch, or the like. No. 1,301,836; Apr. 29; v. 261; p. 813.
Glennon, James, Rochester, Minn. Dirigible headlight. No. 1,300,720; Apr. 15; v. 261; p. 522.
Globe Manufacturing Company. (See Pohl, Charles, assignor.)
Glover, George H., assignor to H. P. Glover, Short Hills, N. J. Poisonous-vapor generator for aeroplanes. No. 1,300,160; Apr. 8; v. 261; p. 376.
Glover, Harriet P. (See Glover, George H., assignor.)
Goddard, Roscoe G., Outlook, Mont. Aero-grademeter. No. 1,300,602; Apr. 15; v. 261; p. 497.
Goddu, George, Winchester, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for inserting fastenings. No. 1,301,120; Apr. 22; v. 261; p. 643.
Goddu, George, Winchester, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J. Method of and apparatus for assorting materials. No. 1,301,683; Apr. 22; v. 261; p. 753.
Godfrey, Edward, assignor to Canadian Explosives Limited, Montreal, Quebec, Canada. Tool for miners' and blasters' use. No. 1,300,834; Apr. 15; v. 261; p. 546.
Goergens, George R., Washington, D. C. Motion-picture camera. No. 1,299,323; Apr. 1; v. 261; p. 161.
Goff, Douglas C., Knoxville, Tenn. Axle-housing construction. No. 1,302,151; Apr. 29; v. 261; p. 873.
Gogay, Harry R., assignor to The Solar Metal Products Company, Columbus, Ohio. Metal door or window frame structure. No. 1,301,930; Apr. 29; v. 261; p. 882.
Goiffon, Paul, Lyon, France. Element for constructional purposes. No. 1,298,927; Apr. 1; v. 261; p. 71.
Goldberg, Solomon H., assignor to The West Coast Roofing and Manufacturing Company, Chicago, Ill. Mechanism for producing roofing material. No. 1,298,690; Apr. 1; v. 261; p. 15.
Goldfoot, George, Cork, Ireland. Artificial tooth. No. 1,302,152; Apr. 29; v. 261; p. 873.
Golding, David H., Virden, Manitoba, Canada. Pulling device. No. 1,300,953; Apr. 15; v. 261; p. 571.
Golemon, Robert B., Hineston, La. Hose-supporter. No. 1,298,691; Apr. 1; v. 261; p. 16.
Goltra, Edward F., T. S. Maffitt, and J. D. Dana, St. Louis, Mo., and R. W. Erwin, Waukon, Iowa, assignors, by mesne assignments, to Mississippi Valley Iron Company, Wilmington, Del. Clearing clayey ores. No. 1,301,684; Apr. 22; v. 261; p. 753.
Gonzales, Miguel, New York, N. Y. Washstand-top. No. 1,300,378; Apr. 15; v. 261; p. 450.
Good, David H., Kansas City, Mo. Self-adjusting traction device. No. 1,301,554; Apr. 22; v. 261; p. 728.
Goodman, Julius. (See Hamilton and Goodman.)
Goodrich, Clarence L., Hartford, Conn., assignor to Pratt & Whitney Company, New York, N. Y. Metal-working machine. No. 1,299,168; Apr. 1; v. 261; p. 125.
Goodwin, John O., Harrisburg, Pa. Liquid-fuel burner. No. 1,302,360; Apr. 29; v. 261; p. 912.
Goodyear, Charles W., Dudley, England. Means for conveying or transporting goods. No. 1,299,829; Apr. 8; v. 261; p. 305.
Goodyear's Metallic Rubber Shoe Company, The. (See Clark, Myron H., assignor.)
Goodyear Tire & Rubber Company, The. (See Day, Ralph B., assignor.)
Goodyear Tire & Rubber Company. (See Hartong, Robert C., assignor.)
Goodykoontz, Frank A., Miami, Ariz. Scraper for belts. No. 1,299,324; Apr. 1; v. 261; p. 161.
Gordon, Abbie, Belvidere, Ill. Folding paper box. No. 1,302,361; Apr. 29; v. 261; p. 912.
Gordon, Thomas, and H. W. Simpson, Parson's Bridge, Vancouver Island, British Columbia, Canada. Rock-drill. No. 1,301,121; Apr. 22; v. 261; p. 643.
Gorton, Paul, Remus, Mich. Cultivator attachment. No. 1,301,555; Apr. 22; v. 261; p. 728.
Goss Printing Press Company. (See Evensen, William M., assignor.)
Goss Printing Press Company, The. (See Goss, Samuel G., assignor.)
Goss Printing Press Company, The. (See Goss and Smith, assignors.)
Goss, Samuel G., Glencoe, assignor to The Goss Printing Press Company, Chicago, Ill. Change web-roll mechanism. No. 1,301,122; Apr. 22; v. 261; p. 644.
Goss, Samuel G., Glencoe, assignor to The Goss Printing Press Company, Chicago, Ill. Change web-roll mechanism for printing-presses. No. 1,301,123; Apr. 22; v. 261; p. 644.
Goss, Samuel G., Glencoe, and E. J. Smith, assignors to The Goss Printing Press Company, Chicago, Ill. Roll-controlling mechanism for printing-presses. No. 1,301,124; Apr. 22; v. 261; p. 644.
Goss, Samuel G., Glencoe, and E. J. Smith, assignors to The Goss Printing Press Company, Chicago, Ill. Web-roll mechanism for printing-presses. No. 1,301,125; Apr. 22; v. 261; p. 644.
Gottschalk, Felix, Hilton, N. J. Interchangeable transmitter-casing. No. 1,300,721; Apr. 15; v. 261; p. 522.
Goubert, Floris, Paris, France. Snap-fastener. No. 1,299,325; Apr. 1; v. 261; p. 161.
Gough, John J., and H. H. Strow, Benton, Ky. Cuspidor. No. 1,301,249; Apr. 22; v. 261; p. 670.
Gould Coupler Company. (See Hartman, Carl, assignor.)
Government of the United States. (See Rockwell, Lea W., assignor.)
Government of the United States. (See Stone and Rockwell, assignors.)
Grabs, Virgil T., King, N. C. Hillside and roadside ditcher. No. 1,299,932; Apr. 8; v. 261; p. 327.
Grace, Bertram B. (See Nash and Grace.)
Gragory, Vengard E., Adolphus, Ky. Automobile construction. No. 1,298,928; Apr. 1; v. 261; p. 72.
Graham, Frank A., Harbor Springs, Mich. Life-boat. No. 1,302,362; Apr. 29; v. 261; p. 913.
Graham, Frank A., Harbor Springs, Mich. Distilling apparatus. No. 1,302,363; Apr. 29; v. 261; p. 913.
Graham, Henry W. B., assignor to The Arnold-Creager Company, New London, Ohio. Apparatus for making bricks. No. 1,301,685; Apr. 22; v. 261; p. 754.
Grain, Jacob J., Grand Rapids, Wis. Grinding-wheel clamp. No. 1,300,161; Apr. 8; v. 261; p. 377.
Granberg, Charles H., Dover, N. J. License-number display device. No. 1,301,250; Apr. 22; v. 261; p. 670.
Granberg, John G., Beckemeyer, Ill. Zinc-kettle. No. 1,298,692; Apr. 1; v. 261; p. 16.
Granville, Bernard, New York, N. Y. Apparatus for forming tire-molds. No. 1,299,456; Apr. 8; v. 261; p. 219.
Grasselli Chemical Company, The. (See Libme, Iena P., assignor.)
Grater, Katie, Sterling, Ill. Carpet-beating rack. No. 1,301,430; Apr. 22; v. 261; p. 705.
Graton & Knight Manufacturing Company, The. (See Knoblock, Frederick E., assignor.)
Graul, Otto, G. Hanschke, Ludwigshafen-on-the-Rhine, and F. Webel, Mannheim, Germany, assignors, by mesne assignments, to Alien Property Custodian. Producing isoprene. No. 1,298,929; Apr. 1; v. 261; p. 72.
Gravell, James H., Brooklyn, N. Y., assignor to Thomson Electric Welding Company, Lynn, Mass. Electric welding apparatus. No. 1,300,603; Apr. 15; v. 261; p. 497.
Graver, Philip S., Chicago, Ill. Punching-machine. No. 1,301,931; Apr. 29; v. 261; p. 882.
Graves, Clarence L., Eland, Wis. Sawmill. No. 1,301,251; Apr. 22; v. 261; p. 670.
Graves, Edwin B. (See Cady, Ulysses G., assignor.)
Gravis, James C., Laredo, Tex. Derailer. No. 1,301,556; Apr. 22; v. 261; p. 728.
Gray, Charles B., Knoxville, Tenn. Machine for cutting sheet metal. No. 1,298,930; Apr. 1; v. 261; p. 72.
Gray, Charles W., et al. (See Chillcott, William R., assignor.)
Gray, Clarice E., Hamilton, New South Wales, Australia. Railway-switch oiling and cleaning means. No. 1,298,931; Apr. 1; v. 261; p. 72.
Gray, Cornelius, Walsall, England. Stair-carpet fastener. No. 1,300,214; Apr. 8; v. 261; p. 388.
Gray, David E., assignor to Railway Utility Company, Chicago, Ill. Contractor. No. 1,299,457; Apr. 8; v. 261; p. 220.
Gray, Edwin T., assignor of one-half to Askowetz Brothers, New York, N. Y. Hospital-screen. No. 1,300,722; Apr. 15; v. 261; p. 522.
Gray, Emmet P., Detroit, Mich. Muffler-valve. No. 1,299,326; Apr. 1; v. 261; p. 161.
Gray, Howard A., Godfrey, Ill. Pontoon dry-dock. No. 1,300,954; Apr. 15; v. 261; p. 571.
Gray, James A., assignor to American Can Company, San Francisco, Calif. Apparatus for re-forming can-bodies and uniting can ends to the same. No. 1,299,169; Apr. 1; v. 261; p. 126.
Gray, James A., assignor to American Can Company, San Francisco, Calif. Can-end-liner cutting and assembling machine. No. 1,299,170; Apr. 1; v. 261; p. 126.
Gray, Mathias K., Odessa Oreg. Artificial fish-bait. No. 1,299,703; Apr. 8; v. 261; p. 275.
Greathouse, Fleming E., Terryton, Kans. Cultivator. No. 1,301,557; Apr. 22; v. 261; p. 728.
Greaves, Henry A., and H. Etchells, Sheffield, England. Electric furnace. No. 1,301,932; Apr. 29; v. 261; p. 882.
Green, Arthur G., Leeds, England. Manufacture of picric acid. No. 1,299,171; Apr. 1; v. 261; p. 127.
Green Engineering Company. (See Strong, Arthur P., assignor.)

Green, Joseph R., Wakefield, assignor to The Phonoharp Company, East Boston, Mass. Keyed zither. No. 1,299,704; Apr. 8; v. 261; p. 276.
Green, Morgan A., Rupert, Idaho. Beet-harvester. No. 1,300,955; Apr. 15; v. 261; p. 372.
Green, Oscar D. (See Grotjohann and Green.)
Green, Walter T., Galesburg, Ill. Cigar-bunch-making machine. No. 1,302,153; Apr. 29; v. 261; p. 873.
Greene, Benjamin F., Pittsburgh, Pa. Drop-molding attachment for machines. No. 1,299,827; Apr. 1; v. 261; p. 161.
Greene, Charles A., Wilmington, Calif. Invalid-lifter. No. 1,299,933; Apr. 8; v. 261; p. 327.
Greene, Charles E., Hastings, Fla. Lock-nut washer. No. 1,301,049; Apr. 15; v. 261; p. 393.
Greenfield, Simon, New York, N. Y. Fountain-pen. No. 1,300,379; Apr. 15; v. 261; p. 450.
Greenleaf, George E. (See Keefer and Greenleaf.)
Greenlee, George, assignor to National Wire Wheel Works, Geneva, N. Y. Wire-spoked wheel. No. 1,302,467; Apr. 29; v. 261; p. 934.
Greenstreet, Charles J., Webster Groves, Mo., assignor to Gasoline Corporation, New York, N. Y. Treating mineral oils. No. 1,299,172; Apr. 1; v. 261; p. 127.
Greenstreet, Milfred L., and S. F. Lumm, assignors to G. L. Time Switch Company, Lebanon, Me. Intermittent train mechanism. No. 1,299,828; Apr. 1; v. 261; p. 162.
Greenwood, Guyon F., Georgeville, Quebec, Canada. Method of and apparatus for extracting sugar from cane, &c. No. 1,299,458; Apr. 8; v. 261; p. 220.
Greer, Erwin. (See Langdon, Jesse D. and M. V. B., assignors.)
Gregg, Arthur. (See Crompton, Samuel, assignor.)
Gregg, Arthur. (See Tyrie and Gregg.)
Gregg, Norris B. *et al.* (See Sabin, William W., assignor.) (Reissue.)
Gregor, Jerry, Garfield, N. J. Smoker's utensil. No. 1,301,923; Apr. 29; v. 261; p. 832.
Grether, William, Dayton, Ohio. Portable electric lantern. No. 1,301,253; Apr. 22; v. 261; p. 670.
Greve, Edgar E., Bellevue, assignor to Oil Well Supply Company, Pittsburgh, Pa. Hose-coupling, nozzle and clamp. No. 1,300,956; Apr. 15; v. 261; p. 372.
Greville, Henry, Birkenhead, England. Treating flour. No. 1,300,604; Apr. 15; v. 261; p. 497.
Grey, Charles E., Thermopolis, Wyo. Knife. No. 1,299,173; Apr. 1; v. 261; p. 127.
Greer, Luke, Chicago, Ill. Bolt. No. 1,301,558; Apr. 22; v. 261; p. 728.
Griffin, Gordon, *et al.* (See Watkins, Joseph W., assignor.)
Griffin, Henry W., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,298,693; Apr. 1; v. 261; p. 16.
Griffin, Lorne A., Evanston, assignor to American Steam Conveyor Corporation, Chicago, Ill. Fitting for pipe conveyer systems. No. 1,300,280; Apr. 15; v. 261; p. 450.
Griffin, Lorne A., Evanston, assignor to American Steam Conveyor Corporation, Chicago, Ill. Tank for ash-conveyer systems. No. 1,300,605; Apr. 15; v. 261; p. 497.
Griffith, Graves, San Francisco, Calif. Panoramic range-finder. No. 1,299,459; Apr. 8; v. 261; p. 220.
Griffith, Jacob K., Pittston, Pa. Wearing-apparel. No. 1,299,829; Apr. 1; v. 261; p. 162.
Griffiths, William U., Philadelphia, Pa. Valve-controlling means for flush-tanks. No. 1,302,154; Apr. 29; v. 261; p. 873.
Grimes, Thaddeus S., assignor to Lummus Cotton Gin Company, Columbus, Ga. Ginning-rib. No. 1,300,162; Apr. 8; v. 261; p. 377.
Grimm, Cliel L., Detroit, Mich. Pen and pencil holder. No. 1,299,174; Apr. 1; v. 261; p. 127.
Griscom-Russell Company, The. (See Jones, Russell C., assignor.)
Groene, William F., assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Means for attaching tools to spindles. No. 1,300,163; Apr. 8; v. 261; p. 377.
Grolle, Joseph V., Sunnyvale, Calif. Combined back-rest and table. No. 1,302,155; Apr. 29; v. 261; p. 873.
Groschopp, William F., assignor to Kampfe Bros., Brooklyn, N. Y. Safety-razor frame. No. 1,299,570; Apr. 8; v. 261; p. 245.
Grosjean, James E., Lima, assignor of one-half to L. F. Montgomery, Fort Recovery, Ohio. Brake-lining. No. 1,301,686; Apr. 22; v. 261; p. 754.
Grosner, Gerald D., assignor to Sharples Specialty Company, West Chester, Pa. Centrifugal machine. No. 1,302,061; Apr. 29; v. 261; p. 851.
Gross, Bluma, Jersey City, N. J. Shirt. No. 1,301,252; Apr. 22; v. 261; p. 670.
Gross, Ernest A., Lamoille, Minn. Door-operating mechanism. No. 1,299,836; Apr. 8; v. 261; p. 305.
Grossman, Louis A., and R. Schimek, New York, N. Y. Wrapping-paper-dispensing apparatus. No. 1,301,837; Apr. 29; v. 261; p. 814.
Grosvenor, William M., New York, N. Y., assignor to Perkins Glue Company. Gluing wood. No. 1,299,705; Apr. 8; v. 261; p. 276.
Grosvold, Fred E., Eau Claire, Wis. Floor-drain. No. 1,301,687; Apr. 22; v. 261; p. 754.
Groth, Otto, assignor to Eastman Kodak Company, Rochester, N. Y. Feeding and submerging device. No. 1,302,468; Apr. 29; v. 261; p. 934.
Grotjohann, Walter R., and O. D. Green, Baltimore, Md. Grip-latch. No. 1,299,460; Apr. 8; v. 261; p. 220.
Grounds, George H., Chicago, Ill. Air-valve for gas-engines. No. 1,299,571; Apr. 8; v. 261; p. 243.
Groupe, Andrew V. (See Breniser, Orson W., assignor.)
Grove, Edwin W. (See Carrier, Albert H., assignor.)
Grover, Albert D., Malden, and E. E. Barber, Boston, Mass., assignors, by mesne assignments, to Autosales Corporation. Vending-machine. No. 1,300,259; Apr. 15; v. 261; p. 424.
Groves, Frank L., Butte, Mont. Internal-combustion turbine. No. 1,299,330; Apr. 1; v. 261; p. 162.
Grubbe, Frank T. (See Morris and Grubbe.)
Gruendler, Gustav J., St. Louis, Mo. Refrigerator. No. 1,299,175; Apr. 1; v. 261; p. 128.
Gruendling, Gustave A. (See Brewer and Gruendling.)
Gruenfeld, Julius J., Jr., and P. Kircher, assignors to Massey Concrete Products Corporation, Chicago, Ill. Mold-form. No. 1,300,381; Apr. 15; v. 261; p. 451.
Grunwald, Bertrand B., assignor, by mesne assignments, to A. J. Merle, Alameda, Calif. Producing magnesium carbonate. No. 1,298,932; Apr. 1; v. 261; p. 73.
Gryniwicz, Anna J., Chicago, Ill. Garment provided with a neckband. No. 1,299,572; Apr. 8; v. 261; p. 245.
Guardino, Diego, Brooklyn, N. Y. Container. No. 1,300,164; Apr. 8; v. 261; p. 377.
Gudge, Benjamin J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Preparing resinous compositions. No. 1,299,706; Apr. 8; v. 261; p. 276.
Gudger, Fred, Cary, Ky. Non-refillable bottle. No. 1,300,165; Apr. 8; v. 261; p. 377.
Guéret, André. (See de la Chevardière de la Grandville and Guéret.)
Guerrero, Jesus S., Tlajomulco, Mexico. Riding-saddle. No. 1,301,838; Apr. 29; v. 261; p. 814.
Guidoni, Alessandro. (See Ferrari, Pecoraro, and Guidoni.)
Guiles, Charles H., Addison, N. Y. Rim-tool. No. 1,301,839; Apr. 29; v. 261; p. 814.
Guion, Chester P., assignor to John C. Moninger Company, Chicago, Ill. Greenhouse construction. No. 1,301,934; Apr. 29; v. 261; p. 832.
Gulick, Edward J., Elkhart, Ind., assignor to C. G. Conn, Ltd. Wind-musical-instrument valve. No. 1,300,382; Apr. 15; v. 261; p. 451.
Gulick, Edward J., Elkhart, Ind., assignor to C. G. Conn, Ltd. Making valve-casings for wind musical instruments. No. 1,301,935; Apr. 29; v. 261; p. 833.
Gumprecht, William L., Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,302,032; Apr. 29; v. 261; p. 851.
Gunn, Charles H., Lincoln, Calif. Flexible auxiliary tread for pneumatic tires. No. 1,299,707; Apr. 8; v. 261; p. 276.
Gunn, Earl G., and A. L. Nelson, assignors to Premier Motor Corporation, Indianapolis, Ind. Internal-combustion engine. No. 1,301,254; Apr. 22; v. 261; p. 670.
Gurevich, Louis J., and R. W. Woodward, Washington, D. C. Soldering-alloy. No. 1,301,688; Apr. 22; v. 261; p. 754.
Gustafson, Ernst V., *et al.* (See Holmes, Henry H., assignor.)
Guth, Jacob, Salem, Ill. Agricultural tractor. No. 1,300,260; Apr. 15; v. 261; p. 424.
Guthat, Albert W., Chicago, Ill. Dusting apparatus. No. 1,298,933; Apr. 1; v. 261; p. 73.
Gutmueller, August G., Richmond Hill, assignor to Doehler Die Casting Company, Brooklyn, N. Y. Casting apparatus. No. 1,300,723; Apr. 15; v. 261; p. 522.
Gydesen, Hans C., Brooklyn, N. Y. Combination furniture. No. 1,299,331; Apr. 1; v. 261; p. 162.
H. Ward Leonard Incorporated. (See Leonard, Harry W., assignor.)
H. A. H. Tractors. (See Hatfield, Hubert A., assignor.)
H. G. Davis Manufacturing Company. (See Henry, George W., Jr., assignor.
H. H. Franklin Manufacturing Company. (See Wilkinson, John, assignor.)
H. P. Patents and Processes Company. (See Hochstetter, Frederick W., assignor.)
H. P. Townsend Manufacturing Company, The. (See Townsend, Harry P., assignor.)
H. W. Rountree & Brother Trunk and Bag Co. (See Cottrell, Henry W., assignor.)
H. W. Rountree & Brother Trunk and Bag Co. (See Mull, Arthur L., assignor.)
Haas, John H. (See Richards, Simon, and Haas.)
Haas, Philip, Dayton, Ohio. Valve mechanism. No. 1,300,261; Apr. 15; v. 261; p. 424.
Habiareitinger, Max, Oakland, Calif. Water-closet high-pressure ball-cock. No. 1,299,708; Apr. 8; v. 261; p. 276.
Hadler, Christian, Washington, D. C. Scaffold-bracket. No. 1,299,176; Apr. 1; v. 261; p. 128.
Hadley, Bert E., Los Angeles, Calif. Gas-maker and combustion apparatus. No. 1,300,230; Apr. 8; v. 261; p. 392.

Hadley, Charles R., assignor to Charles R. Hadley Company, Los Angeles, Calif. Loose-leaf binder. No. 1,301,085; Apr. 15; v. 261; p. 602.
Häfell, Oscar. (See Miller, Theodor, assignor.)
Hafer, Edward C., Chambersburg, Pa. Fire-tube-boiler blower. No. 1,301,255; Apr. 22; v. 261; p. 671.
Haffner, Jacob P., Howardsville, Va. Valve for domestic and farm water-tanks. No. 1,302,033; Apr. 29; v. 261; p. 851.
Hagel, John, Goldfield, Nev. Rotary engine. No. 1,301,689; Apr. 22; v. 261; p. 754.
Hagenbuch, Walter, Martinez, Calif., assignor to Shell Company of California. Wharf. No. 1,300,606; Apr. 15; v. 261; p. 497.
Hagerstown Novelty Company. (See Demory, Alexander F., assignor.)
Hägg, Carl J. J., Stockholm, Sweden. Teat-working mechanism of milking-machines. No. 1,298,694; Apr. 1; v. 261; p. 17.
Hagman, Edwin V., assignor to A. A. Ziegler, trustee, Boston, Mass. Electric motor. No. 1,301,050; Apr. 15; v. 261; p. 593.
Hague, Floyd T., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Damping device for dynamo-electric machines. No. 1,298,695; Apr. 1; v. 261; p. 17.
Hahl, Augustus L., Chicago, Ill. Transmission mechanism for clocks. No. 1,300,262; Apr. 15; v. 261; p. 425.
Haines, Lewis B. and M. E., Tar River, Okla. Quilting-frame. No. 1,300,724; Apr. 15; v. 261; p. 523.
Haines, Mary E. (See Haines, Lewis B. and M. E.)
Hakanson, John, and A. Weber, Seattle, Wash. Manually-operated circular saw. No. 1,299,831; Apr. 8; v. 261; p. 305.
Hale, Clyde C., Pontiac, Mich. Spring-lifter. No. 1,298,934; Apr. 1; v. 261; p. 73.
Hale, Frederick M., Bromley, England. Explosive shell or similar body. No. 1,301,126; Apr. 22; v. 261; p. 645.
Hale, William T., Dodge City, Kans. Vulcanized composition. No. 1,300,263; Apr. 15; v. 261; p. 425.
Halemar, Frank, Clayville, N. Y. Printing-machine. No. 1,302,304; Apr. 29; v. 261; p. 851.
[illegible], George, Detroit, Mich. Lock. No. 1,299,177; Apr. 1; v. 261; p. 128.
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,298,696; Apr. 1; v. 261; p. 17.
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control apparatus. No. 1,300,383; Apr. 15; v. 261; p. 451.
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Relay device. No. 1,302,035; Apr. 29; v. 261; p. 852.
Hall, Elbert J., Berkeley, Calif. Internal-combustion engine. No. 1,299,709; Apr. 8; v. 261; p. 276.
Hall, Mabel H., et al. (See Pons, Eugene, assignor.)
Hall Switch & Signal Co. (See Kendall and Field, assignors.)
Halstead, Frederick H., Worcester, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Lathe-tool. No. 1,299,710; Apr. 8; v. 261; p. 277.
Halstead, Frederick H., Worcester, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Oscillating grinder. No. 1,299,711; Apr. 8; v. 261; p. 277.
Halstead, Frederick H., Worcester, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Lathe-tool. No. 1,299,712; Apr. 8; v. 261; p. 277.
Halstead, Frederick H., Worcester, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Grinder. No. 1,299,713; Apr. 8; v. 261; p. 278.
Halstead, Frederick H., Boston, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Grinder. No. 1,299,714; Apr. 8; v. 261; p. 278.
Halstead, Frederick H., Boston, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Grinder. No. 1,299,715; Apr. 8; v. 261; p. 278.
Halstead, Frederick H., Boston, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Feed mechanism. No. 1,299,716; Apr. 8; v. 261; p. 278.
Halstead, Frederick H., Boston, assignor to Rivett Lathe and Grinder Company, Faneuil, Mass. Feed mechanism. No. 1,299,717; Apr. 8; v. 261; p. 278.
Hamachek, Frank, Kewaunee, Wis. Bearing. No. 1,298,697; Apr. 1; v. 261; p. 18.
Hamann, Henry, Chicago, Ill. Ear-trumpet. No. 1,302,036; Apr. 29; v. 261; p. 852.
Hambay, James T., New York, N. Y. Railway-signal. No. 1,299,718; Apr. 8; v. 261; p. 279.
Hamel, Matilda, Waterloo, Ontario, Canada. Cream-bottle. No. 1,300,607; Apr. 15; v. 261; p. 498.
Hamill, Patrick J., Boswell, Pa. Wheel. No. 1,298,682; Apr. 1; v. 261; p. 163.
Hamill, Patrick J., Boswell, Pa. Tire. No. 1,299,233; Apr. 1; v. 261; p. 163.
Hamilton, Belton T., London, England. Gun-mounting. No. 1,300,264; Apr. 15; v. 261; p. 425.
Hamilton, Harry D., Kenosha, and J. Goodman, Racine, Wis. Demountable rim. No. 1,302,156; Apr. 29; v. 261; p. 874.
Hammermill Paper Company. (See Finster and Wilson, assignors.)
Hammond, John H., Jr., Gloucester, Mass. System of teledynamic control. No. 1,301,690; Apr. 22; v. 261; p. 754.
Hampden Cloncurry Copper Mines, The. (See Huntley, Earle S., assignor.)
Hampton, Armsta P., et al. (See Love, Sandy H., assignor.)
Hampton, Homer J. P., Jersey City, N. J. Register. No. 1,301,691; Apr. 22; v. 261; p. 755.
Hanahan, James L., Columbia, S. C. Starting-crank for motor-vehicles. No. 1,300,384; Apr. 15; v. 261; p. 451.
Hancher, Harry H. (See Daellenbach, Carl R., assignor.)
Hancock, Horace G. (See Carpmill and Hancock.)
Handley, William, Providence, assignor to Tubular Woven Fabric Company, Pawtucket, R. I. Tubular electrical conductor. No. 1,300,265; Apr. 15; v. 261; p. 425.
Haning, Ernst, Union, assignor to A. T. Huser, North Bergen, N. J. Double-lift jacquard-machine. No. 1,299,461; Apr. 8; v. 261; p. 221.
Hanman, John, Bayswater, assignor to Price Service & Company, London, England. Auxiliary air-valve for internal-combustion engines. No. 1,298,985; Apr. 1; v. 261; p. 73.
Hanschke, Gottfried. (See Graul, Hanschke, and Webel.)
Hansen, Victor, Wallace, Idaho. Boiler safety-tube. No. 1,301,692; Apr. 22; v. 261; p. 755.
Hansen, William A., et al. (See Silbernagel, Fred, assignor.)
Hansmann, Paul, Long Prairie, Minn. Automatic coupling. No. 1,298,698; Apr. 1; v. 261; p. 18.
Hansmann, Paul, Long Prairie, Minn. Coupling mechanism. No. 1,298,699; Apr. 1; v. 261; p. 18.
Hanson, Samuel L., Albert Lea, Minn. Rope-carried trip device. No. 1,299,324; Apr. 1; v. 261; p. 163.
Hanson, Victor R., Minneapolis, Minn. Tractor. No. 1,299,178; Apr. 1; v. 261; p. 128.
Harcos, Aladar S., San Francisco, Calif. Drawing instrument. No. 1,299,179; Apr. 1; v. 261; p. 129.
Harding, Charles E. (See Davis and Harding.)
Hardoncourt, Arthur, Jr., Brooklyn, N. Y. Wall construction. No. 1,299,180; Apr. 1; v. 261; p. 129.
Harlan, Wilson P., Yuma, Ariz. Flume-gate. No. 1,298,936; Apr. 1; v. 261; p. 73.
Harlé & Co. (See Harlé, Frédéric A. H., assignor.)
Harlé, Frédéric A. H., assignor to Harlé & Co., Paris, France. Submarine mine. No. 1,298,937; Apr. 1; v. 261; p. 74.
Harley-Davidson Motor Co. (See Harley, William S., assignor.)
Harley-Davidson Motor Company. (See Lewis, Henry J., assignor.)
Harley, William S., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Compression-relieving mechanism. No. 1,301,256; Apr. 22; v. 261; p. 671.
Harley, William S., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Side-car body and packing the same. No. 1,301,257; Apr. 22; v. 261; p. 671.
Harley, William S., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Motor-cycle-lubrication system. No. 1,301,258; Apr. 22; v. 261; p. 671.
Harnett, John T., Philadelphia, Pa. Cast-iron pipe and coupling therefor. No. 1,299,934; Apr. 8; v. 261; p. 327.
Harralson, J. C., et al. (See Sabin, William W., assignor.) (Reissue.)
Harrington, Clinton O., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Remote-control means. No. 1,298,700; Apr. 1; v. 261; p. 18.
Harrington, Clinton O., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Magnetic device. No. 1,298,701; Apr. 1; v. 261; p. 19.
Harrington, Clinton O., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,298,938; Apr. 1; v. 261; p. 74.
Harris, Alfred W., Peoria, assignor to Hill-Harris Company Galesburg, Ill. Reflector for headlights or search-lights. No. 1,300,725; Apr. 15; v. 261; p. 523.
Harris Automatic Press Company, The. (See Anderson, Nels A., assignor.)
Harris Automatic Press Company, The. (See Pritchard, Carl G., assignor.)
Harris, Charles C., and N. L. McLeod, Seattle, Wash. Automatic stop device. No. 1,298,939; Apr. 1; v. 261; p. 74.
Harris, Christopher, assignor to Ceylon Hardware and Furniture Company, Ceylon, Minn. Poultry feeder and exerciser. No. 1,299,719; Apr. 8; v. 261; p. 279.
Harris, Edward, Los Angeles, Calif. Retread vulcanizer. No. 1,301,431; Apr. 22; v. 261; p. 705.
Harris, Fred F., Los Angeles, Calif. Gas-generator. No. 1,299,935; Apr. 8; v. 261; p. 327.
Harris, Henry H., Peru, Ind. Dispensing-refrigerator. No. 1,300,606; Apr. 15; v. 261; p. 498.
Harris, John, Cleveland, Ohio, assignor to Carbo Hydrogen Company of America, Pittsburgh, Pa. Cutting-torch. No. 1,302,157; Apr. 29; v. 261; p. 874.
Harris, John R., Chartiers township, Allegheny county, Pa. Insulator. No. 1,302,158; Apr. 29; v. 261; p. 874.
Harris, John S. (See Seaton and Harris.)

Harris, Morris C., San Jose, Calif. Interlocking reinforcing-bar for concrete construction. No. 1,301,250; Apr. 22; v. 261; p. 671.
Harrison, Crockett J., administrator. (See Harrison, John F., Jr.)
Harrison, George L., East Cleveland, assignor to The Cleveland Metal Products Company, Cleveland, Ohio. Culinary vessel. No. 1,298,940; Apr. 1; v. 261; p. 74.
Harrison, John F., Jr., deceased, Laddonia, Mo.; C. J. Harrison, administrator. Incubator-tray. No. 1,300,957; Apr. 15; v. 261; p. 572.
Harrison, Ward, East Cleveland, Ohio, assignor to General Electric Company. Lighting unit. No. 1,299,926; Apr. 8; v. 261; p. 227.
Harrison, William H., New York, N. Y. Device for use in playing pool or billiards. No. 1,299,720; Apr. 8; v. 261; p. 279.
Harrop, James T., Jr., Chicago, Ill. Fire-extinguisher. No. 1,299,721; Apr. 8; v. 261; p. 279.
Harry, Elmer H., assignor of one-half to G. Whitehead, Gibson City, Ill. Cleaning device. No. 1,299,181; Apr. 1; v. 261; p. 129.
Harry, Samuel J., and W. R. Kelly, Connellsville, Pa. Form for concrete structures. No. 1,298,941; Apr. 1; v. 261; p. 75.
Harshaw, John H., Atkins, Ark. Grapple. No. 1,296,702; Apr. 1; v. 261; p. 19.
Hart, Carl O. (See Gerrard, Frederick J., assignor.)
Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,302,160; Apr. 29; v. 261; p. 874.
Hart, Harry S., Chicago, Ill. Hopper-dump-car construction. No. 1,300,959; Apr. 15; v. 261; p. 573.
Hart, Harry S., Chicago, Ill. Dump-car construction. No. 1,300,960; Apr. 15; v. 261; p. 573.
Hart, Harry S., Chicago, Ill. Hopper dump-car. No. 1,300,961; Apr. 15; v. 261; p. 573.
Hart, Harry S., Chicago, Ill. Dump-car. No. 1,300,962; Apr. 15; v. 261; p. 573.
Hart, Harry S., assignor to National Dump Car Company, Chicago, Ill. General-service railway-car. No. 1,300,958; Apr. 15; v. 261; p. 572.
Hart, Loren D., Dickens, Iowa. Silo. No. 1,301,051; Apr. 15; v. 261; p. 593.
Hart, Orlando W., Fall River, Mass. Roller-bearing. No. 1,300,285; Apr. 15; v. 261; p. 451.
Hart, Orlando W., Fall River, Mass. Roller-bearing. No. 1,300,286; Apr. 15; v. 261; p. 452.
Hart, Seth, and R. I. Bostic, Los Angeles, Calif. Adjustable propeller. No. 1,301,052; Apr. 15; v. 261; p. 593.
Hartford-Fairmont Company. (See Lorenz, William A., assignor.)
Hartley, Bernard W., Haileybury, Ontario, Canada. Tire-chain. No. 1,302,304; Apr. 29; v. 261; p. 913.
Hartman, Alfred C. (See Hockman, Ashby J., assignor.)
Hartmann, Carl, Lancaster, N. Y., assignor to Gould Coupler Company. Dynamo suspension. No. 1,302,087; Apr. 29; v. 261; p. 852.
Hartong, Robert C., assignor to Goodyear Tire & Rubber Company, Akron, Ohio. Producing rubber compositions and vulcanization product thereof. No. 1,301,693; Apr. 22; v. 261; p. 755.
Hartung, Henry, Baltimore, Md. Sofa-bed. No. 1,301,936; Apr. 29; v. 261; p. 833.
Hartwig, William G., assignor to A. Frantzen, Chicago, Ill. Thermo-electric regulator. No. 1,300,215; Apr. 8; v. 261; p. 289.
Harvey Hubbell, Incorporated. (See Newton, William J., assignor.)
Hasbrouck, Charles H., Binghamton, N. Y. Machine for protecting checks and the like. No. 1,301,127; Apr. 22; v. 261; p. 645.
Haseltine, Alfred E., Greene county, Mo. Automatic train-stop. No. 1,300,963; Apr. 15; v. 261; p. 573.
Hastings, Donald T. (See Holley and Hastings.)
Hastings, Harold P. (See Bissell and Hastings.)
Hatch, Edward, assignor to F. A. Douty, Portland, Oreg. Bundling-machine. No. 1,300,166; Apr. 8; v. 261; p. 378.
Hatch, Harry W. (See Welt and Whitehouse, assignors.)
Hately, Charles F., assignor to National Surface Guard Company, Chicago, Ill. Cattle-guard. No. 1,299,462; Apr. 8; v. 261; p. 221.
Hatfield, Hubert A., London, assignor to H. A. H. Tractors Limited, Birmingham, England. Motor-driven vehicle having endless tracks. No. 1,299,987; Apr. 8; v. 261; p. 328.
Hathaway, Charles F., Fairport, assignor to Angular Drill and Machine Corporation, New York, N. Y. Square-hole drill-chuck. No. 1,299,989; Apr. 8; v. 261; p. 328.
Haug, Anton J., assignor to Improved Paper Machinery Company, Nashua, N. H. Machine for and process of working paper-stock. No. 1,302,469; Apr. 29; v. 261; p. 934.
Haulter, Meri I., Shippensburg, Pa. Cushion wheel and tire. No. 1,299,722; Apr. 8; v. 261; p. 280.
Havener, Arthur R., Wayland, Mass., assignor to American Lacing Hook Co. Lacing-stud-setting machine. No. 1,301,432; Apr. 22; v. 261; p. 706.
Havens, Ira C., Kalamazoo, Mich. Auxiliary propeller for motor-vehicles. No. 1,296,703; Apr. 1; v. 261; p. 19.
Hawkins, Edwin C., Noblesville, Ind. Waterproofed paper container. No. 1,301,840; Apr. 29; v. 261; p. 814.
Hawkins, Edwin C., Noblesville, Ind. Coating paper containers. No. 1,301,841; Apr. 29; v. 261; p. 814.
Hawksworth, David W., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,299,939; Apr. 8; v. 261; p. 328.
Hawley, Amos H. (See Mann and Hawley.)
Hawley Pulp and Paper Company. (See Swick, Clyde E., assignor.)
Hawthorne, Ellsworth A., Bridgeport, Conn. Mounting for framed elements. No. 1,299,723; Apr. 8; v. 261; p. 280.
Hay, William, Holyoke, Mass. Automobile-signal. No. 1,301,842; Apr. 29; v. 261; p. 814.
Hayden, David H., New York, N. Y. Reinforcement for the composition covering of structural shapes. No. 1,300,535; Apr. 15; v. 261; p. 546.
Hayes, James, Cleveland, Ohio. Toilet accessory. No. 1,302,038; Apr. 29; v. 261; p. 852.
Haynes, Elwood, Kokomo, Ind., assignor to The American Stainless Steel Company, Pittsburgh, Pa. Wrought-metal article. No. 1,299,404; Apr. 1; v. 261; p. 179.
Hays, Donald S., U. S. Army. Bailing-scoop. No. 1,302,365; Apr. 29; v. 261; p. 913.
Hays, Patrick H. (See Vincent, Bee E., assignor.)
Haseltine, Reginald, assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Trimming-machine. No. 1,299,235; Apr. 1; v. 261; p. 163.
Heald, James N., and A. M. Drake, Worcester, Mass., assignors to Heald Machine Company. Belt-tightener. No. 1,301,937; Apr. 29; v. 261; p. 833.
Heald Machine Company. (See Heald and Drake, assignor.)
Healy, Joseph A., Saugus, Mass. Garbage-receptacle attachment. No. 1,301,694; Apr. 22; v. 261; p. 755.
Heasy, John A., Jersey City, N. J., assignor to Lindsay Auto Parts Company, Indianapolis, Ind. Ignition device for motor-vehicles. No. 1,301,053; Apr. 15; v. 261; p. 594.
Heath, William E. (See Tallmadge, Charles H., assignor.)
Hebern, William. (See Rial and Hebern.)
Hebert, Ubald, Manchester, N. H., assignor to Draper Corporation, Hopedale, Mass. Feeler mechanism for automatic looms. No. 1,302,039; Apr. 29; v. 261; p. 852.
Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Electric-furnace apparatus for ores or minerals. No. 1,299,336; Apr. 1; v. 261; p. 163.
Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Treating gases. No. 1,299,337; Apr. 1; v. 261; p. 164.
Hechkovech, Paul, Burnham, Pa. Brake for sleds. No. 1,299,338; Apr. 1; v. 261; p. 164.
Hecht, Joseph L., assignor to French & Hecht, Davenport, Iowa. Demountable rim for wheels. No. 1,299,463; Apr. 8; v. 261; p. 221.
Hecht, Joseph L., assignor to French & Hecht, Davenport, Iowa. Metal wheel. No. 1,299,464; Apr. 8; v. 261; p. 221.
Hedgcock, William C., assignor to American Steel Foundries, Chicago, Ill. Brake-beam. No. 1,301,433; Apr. 22; v. 261; p. 706.
Hedrich, William, and W. Stock, Trochu, Alberta, Canada. Poison-containing trap. No. 1,302,160; Apr. 29; v. 261; p. 874.
Heffner, Benjamin F., et al. (See Whitcomb, James, assignor.)
Hegelman, Theodore, Oak Park, Ill. Ball-bearing. No. 1,301,843; Apr. 29; v. 261; p. 815.
Hegner, Lawrence G., Man, W. Va. Clinical thermometer. No. 1,299,339; Apr. 1; v. 261; p. 164.
Heinel, Harry A. (See Pierce and Heinel.)
Heinemann, Ernest, Alma, Wis. Automatic latch for doors. No. 1,301,269; Apr. 22; v. 261; p. 672.
Heinkel, Christian F., Cleveland, Ohio. Cotter-pin. No. 1,300,609; Apr. 15; v. 261; p. 498.
Heinrich, Walter A., assignor to W. N. Matthews and Brother, Inc., St. Louis, Mo. Time-controlled mechanism. No. 1,299,340; Apr. 1; v. 261; p. 164.
Heinselman, Reginald, assignor to Koupet Auto Top Company, Belleville, Ill. Closed top for vehicles. No. 1,298,942; Apr. 1; v. 261; p. 75.
Heitman, Edwin J., assignor to The Brown Instrument Company, Philadelphia, Pa. Electric meter. No. 1,301,434; Apr. 22; v. 261; p. 706.
Helgerson, Thomas O., Minneapolis, Minn. Grain-separator. No. 1,299,341; Apr. 1; v. 261; p. 165.
Heller, Eugene H., and E. Reich, assignors to The Hill Pump Valve Company, Chicago, Ill. Heater. No. 1,301,261; Apr. 22; v. 261; p. 672.
Heller, Lydia C., Chambersburg, Pa. Button-fastener. No. 1,301,435; Apr. 22; v. 261; p. 706.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,298,704; Apr. 1; v. 261; p. 19.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Armature-winding. No. 1,298,705; Apr. 1; v. 261; p. 19.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,298,706; Apr. 1; v. 261; p. 20.

Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical apparatus. No. 1,298,707; Apr. 1; v. 261; p. 20.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,300,387; Apr. 15; v. 261; p. 452.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical system. No. 1,300,388; Apr. 15; v. 261; p. 452.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,301,845; Apr. 29; v. 261; p. 815.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,302,040; Apr. 29; v. 261; p. 853.
Hellmund, Rudolf E., Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company. Locomotive. No. 1,300,389; Apr. 15; v. 261; p. 452.
Hellmund, Rudolf E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,302,041; Apr. 29; v. 261; p. 853.
Hellmund, Rudolf E., Pittsburgh, and R. E. Ferris, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company. System of control. No. 1,298,943; Apr. 1; v. 261; p. 75.
Hellmund, Rudolf E., Pittsburgh, and R. E. Ferris, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,301,844; Apr. 29; v. 261; p. 815.
Helman, John A. (See Houston and Helman.)
Helmond, William F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,302,161; Apr. 29; v. 261; p. 875.
Hemmer, Albert. (See Hemmer, Frederick L., assignor.)
Hemmer, Frederick L., assignor of one-third to A. Hemmer, Lincoln, N. J. Folding table. No. 1,302,042; Apr. 29; v. 261; p. 853.
Hemming, Otto L., New Haven, Conn. Pocket-cutlery. No. 1,298,944; Apr. 1; v. 261; p. 75.
Hempel, Henry, Gage, Okla., assignor to two-thirds to A. S. Batrick, Kansas City, Mo. Cone-waffle machine. No. 1,300,390; Apr. 15; v. 261; p. 452.
Henderson, Carl, Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Gripper device. No. 1,300,610; Apr. 15; v. 261; p. 498.
Henderson, John M. (See Martyn and Henderson.)
Henderson, William T., Oklahoma, Okla. Ophthalmic mounting. No. 1,302,043; Apr. 29; v. 261; p. 853.
Henemier, Robert H., New York, assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Pillow valve. No. 1,300,611; Apr. 15; v. 261; p. 498.
Henggi, Lewis O., Oakmont, Pa. Anticreeper. No. 1,300,612; Apr. 15; v. 261; p. 498.
Henkel, Christian C. (See Burton, Elisha L., assignor.)
Henley, Harry F., Richmond, Ind. Toy aeroplane. No. 1,299,465; Apr. 8; v. 261; p. 222.
Hennessy, Daniel E., Holyoke, Mass., assignor to Cowan Truck Company, trustees. Steering-column. No. 1,302,044; Apr. 29; v. 261; p. 853.
Henning, Henry M., Hinkley, Calif. Inner tire. No. 1,298,945; Apr. 1; v. 261; p. 76.
Henry, Charles S. B., assignor of one-half to O. J. Lovering, Raymond, Wash. Saw-handle. No. 1,301,436; Apr. 22; v. 261; p. 706.
Henry, Ernest J., Cedar Rapids, Iowa. Window-bed. No. 1,300,266; Apr. 15; v. 261; p. 425.
Henry, George W., Jr., assignor to H. G. Davis Manufacturing Company, Philadelphia, Pa. Pin-ticketing machine. No. 1,300,726; Apr. 15; v. 261; p. 523.
Henry R. Worthington. (See Worden, Euclid P., assignor.)
Henson, Alford B., Franklin, Ky. Demountable rim. No. 1,301,695; Apr. 22; v. 261; p. 755.
Henstridge, William, Sorrento, British Columbia, Canada. Tread device for shoes. No. 1,299,182; Apr. 1; v. 261; p. 129.
Hering, Louie. (See Wardlow, Hays, assignor.)
Herle, Chester A., Rochester, assignor to D. H. Wright, Webster, N. Y. Dust-cap for tire-valves. No. 1,301,938; Apr. 29; v. 261; p. 853.
Hermann, Olof, Burlington, Wash. Beet-puller. No. 1,298,708; Apr. 1; v. 261; p. 20.
Hermsdorf, Walter H., assignor, by mesne assignments, to The Hump Hairpin Manufacturing Company, Chicago, Ill. Machine for making coated articles. No. 1,301,559; Apr. 22; v. 261; p. 729
Herrmann, Joseph C., Milwaukee, Wis. Gate-operating mechanism. No. 1,298,709; Apr. 1; v. 261; p. 20.
Hess, Edward B., New York, and L. C. Myers, Brooklyn, assignors to Royal Typewriter Company, Inc., New York, N. Y. Ribbon-spool. No. 1,301,696; Apr. 22; v. 261; p. 756.
Hess, Henry, assignor to Hess-Ives Corporation, Philadelphia, Pa. Photographic-camera-exposing mechanism. No. 1,300,613; Apr. 15; v. 261; p. 499.
Hess-Ives Corporation. (See Hess, Henry, assignor.)
Hess, Simon B., New York, N. Y. Burglar-alarm system. No. 1,298,710; Apr. 1; v. 261; p. 21.
Hess, Simon B., New York, N. Y. Electric distribution system. No. 1,298,711; Apr. 1; v. 261; p. 21.
Hesse, Gustaf E., Brooklyn, assignor of one-half to G. H. Robinson, New York, N. Y. Torpedo. No. 1,302,162; Apr. 29; v. 261; p. 875.
Hetts, Charles V., Detroit, Mich. Sash-center. No. 1,299,183; Apr. 1; v. 261; p. 230.
Heumann, Henry F., Marissa, Ill. Adjustable clamp for slide-rails in mines. No. 1,298,946; Apr. 1; v. 261; p. 76.
Heuser, Leonard, New York, N. Y. Combination stropping device and safety-razor. No. 1,301,437; Apr. 22; v. 261; p. 706.
Heusser, Wilfrid, Salt Lake City, Utah. Precision-level. No. 1,299,940; Apr. 8; v. 261; p. 828.
Hewes, Walter H., assignor to one-half to C. H. Imes, Saco, Me. Grate for ovens. No. 1,300,964; Apr. 15; v. 261; p. 573.
Heyser, George E., Manchester, Ga. Locomotive-tank hose connection and strainer. No. 1,299,466; Apr. 8; v. 261; p. 222.
Hibbard, Lloyd J., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system. No. 1,298,712; Apr. 1; v. 261; p. 21.
Hibbs, Cassell D., Fort Worth, Tex. Core for tire-casings. No. 1,300,391; Apr. 15; v. 261; p. 453.
Hibner, Frank, North Platte, Nebr. Can-opener. No. 1,301,128; Apr. 22; v. 261; p. 645.
Hick, Harry J. (See Pollock and Hick.)
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,573; Apr. 8; v. 261; p. 245.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,724; Apr. 8; v. 261; p. 280.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,725; Apr. 8; v. 261; p. 281.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Combination-lock. No. 1,301,846; Apr. 29; v. 261; p. 815.
Hickok Construction Co. (See Hull, George E., assignor.)
Hicks, William D., assignor of one-fourth to R. M. Doyle, Los Angeles, Calif. Automobile-engine starter. No. 1,298,947; Apr. 1; v. 261; p. 76.
Higginbotham, Robert D., San Francisco, Calif. Clutch. No. 1,300,965; Apr. 15; v. 261; p. 574.
Higgins, Edward A. (See Hodapp, Henry, assignor.)
Higgins, James F., assignor, by mesne assignments, to The Rogers-Higgins Co., Inc., New Orleans, La. Oil-heater. No. 1,301,262; Apr. 22; v. 261; p. 672.
Higgins, William H. C., Jr., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind. Plow-lift. No. 1,300,392; Apr. 15; v. 261; p. 455.
Higginson, Joseph and H., Arundel, Stockport, England. Liquid fuel supply system of internal-combustion engines. No. 1,299,941; Apr. 8; v. 261; p. 329.
High, Luther W. (See Perryclear, William E., assignor.)
High Speed Hammer Company, The. (See Leckinger, Philip H., assignor.)
Higley, John P., assignor of one-fourth to J. Ruggaber and one-fourth to G. Flannery, St. Louis, Mo. Piston-ring. No. 1,301,438; Apr. 22; v. 261; p. 706.
Higley, Lyman O., Williston, N. D. Automatic door-actuating hinge. No. 1,300,267; Apr. 15; v. 261; p. 426.
Hill, Daniel L., et al. (See Scott, Harry R., assignor.)
Hill-Harris Company. (See Harris, Alfred W., assignor.)
Hill, Howard H., Montclair, N. J. Detachable handle. No. 1,300,836; Apr. 15; v. 261; p. 547.
Hill, Joseph B., Evans Mills, N. Y. Clothes-line support. No. 1,301,263; Apr. 22; v. 261; p. 672.
Hill, Norman N., assignor to The N. N. Hill Brass Co., East Hampton, Conn. Toy. No. 1,301,439; Apr. 22; v. 261; p. 706.
Hill Pump Valve Company, The. (See Heller and Reich, assignors.)
Hill, Roy L., and A. J. Strane, Tamaqua, Pa., assignors to Atlas Powder Company, Wilmington, Del. Explosive mixture. No. 1,299,942; Apr. 8; v. 261; p. 329.
Hill, Walter H., Columbus, Ohio. Finger-exercising device. No. 1,301,560; Apr. 22; v. 261; p. 729.
Himmel, Solomon, Baltimore, Md. Display-rack. No. 1,300,167; Apr. 8; v. 261; p. 378.
Hinchman, Charles C., Pottstown, Pa. Floor-joint for water-closet bowls. No. 1,302,163; Apr. 29; v. 261; p. 875.
Hinde, Frank, and W. H. Flewell, assignors of one-third to S. Rutledge, Early, Iowa. Auxiliary cooling system for internal-combustion engines. No. 1,299,467; Apr. 8; v. 261; p. 222.
Hines, Martin, Brooklyn, N. Y. Emergency-tire. No. 1,299,342; Apr. 1; v. 261; p. 165.
Hinsdale, Winfield E., Trenton, N. J. Lavatory. No. 1,300,268; Apr. 15; v. 261; p. 426.
Hinton, U. S. G. (See Wagniere, August L., assignor.)
Hipwood, George, Boston, Mass. Crutch. No. 1,298,713; Apr. 1; v. 261; p. 22.
Hipwood, George, Boston, Mass. Arm-rest attachment for crutches. No. 1,298,714; Apr. 1; v. 261; p. 22.
Hirschthal, Meyer, assignor of one-third to F. D. Hyde, New York, N. Y. Method and apparatus for providing concrete structures. No. 1,301,561; Apr. 22; v. 261; p. 729.

Hitchings, Samuel, South Pasadena, Calif. Polishing apparatus for tin or sheet mills. No. 1,301,440; Apr. 22; v. 261; p. 707.
Hoag, Willis M., Kirwin, Kans. Mail-box support. No. 1,299,343; Apr. 1; v. 261; p. 165.
Hoben, Edward F., Muskogee, Okla. Spike-puller. No. 1,300,962; Apr. 15; v. 261; p. 571.
Hobson, Charles R., and J. Vannoy, Fremont, Iowa. Lock for doors and the like. No. 1,299,726; Apr. 8; v. 261; p. 281.
Hobson & Motzer Co., The. (See Sattler, Henry W., assignor.)
Hobson, Thomas J., Birmingham, England. Divisible wheel-rim for pneumatic tires. No. 1,299,943; Apr. 8; v. 261; p. 329.
Hoch, Otto M. (See Seymour and Hoch.)
Hochstetter, Frederick W., New York, N. Y., assignor to H. P. Patents and Processes Company, Inc. Light-regulator for projecting moving-pictures. No. 1,301,264; Apr. 22; v. 261; p. 672.
Hochstetter, Frederick W., New York, N. Y., assignor to H. P. Patents and Processes Company, Inc. Color-filter for moving-picture machines. No. 1,301,265; Apr. 22; v. 261; p. 673.
Hockman, Ashby J., assignor of fifty one-hundredths to A. C. Hartman, Las Animas, Colo. Automatic gage-glass valve. No. 1,302,045; Apr. 29; v. 261; p. 853.
Hodapp, Henry, Seymour, assignor of one-half to E. A. Higgins, North Vernon, Ind. Cutter-head. No. 1,301,129; Apr. 22; v. 261; p. 646.
Hodge, Arthur J., and H. B. Ruggles, Pasadena, Calif., assignors to American Products Company, St. Louis, Mo. Machine for producing either solid or hollow fibrous pulp articles of various forms. No. 1,300,966; Apr. 15; v. 261; p. 574.
Hodges, Allan E., assignor of one-half to C. A. McAllister, Memphis, Tenn. Boiler stay-sheet. No. 1,299,344; Apr. 1; v. 261; p. 165.
Hodges, Edward G., Marshalltown, Iowa. Automatic auxiliary air-supply device for internal-combustion engines. No. 1,301,054; Apr. 15; v. 261; p. 594.
Hodges, Jesse E., Covington, Ky. Adjustable shore. No. 1,299,345; Apr. 1; v. 261; p. 166.
Hodges, Jesse E., Covington, Ky. Column-form. No. 1,300,393; Apr. 15; v. 261; p. 453.
Hodgman, Willis K., Jr., Taunton, Mass. Mechanical movement and printing-press involving the same. No. 1,302,366; Apr. 29; v. 261; p. 913.
Hoeber, Pietje, Seattle, Wash. Fruit-picker. No. 1,300,168; Apr. 8; v. 261; p. 378.
Hoecker, Albert, Collinsville, Ill. Tire-rim. No. 1,299,727; Apr. 8; v. 261; p. 281.
Hoehn, John, *et al.* (See Reese, David W., assignor.)
Hoehn, Martha, *et al.* (See Reese, David W., assignor.)
Hoffman, Edmund, Brooklyn, assignor to American Can Company, New York, N. Y. Sifter-top for talcum-powder cans and the like. No. 1,301,847; Apr. 29; v. 261; p. 815.
Hoffman, John H., assignor to Theo. Tiedemann & Sons, Inc., New York, N. Y. Gumming the edges of ribbons. No. 1,300,304; Apr. 15; v. 261; p. 453.
Hofmann, Josef, Baumaroche, Switzerland. Pneumatic spring. No. 1,300,727; Apr. 15; v. 261; p. 523.
Hofto, Theone K., Grand Forks, N. D. Leg-protector. No. 1,299,574; Apr. 8; v. 261; p. 246.
Hohmann, Richard K., Sioux City, Iowa. Rotary-hook sewing mechanism. No. 1,299,468; Apr. 8; v. 261; p. 222.
Holland, John, *et al.* (See Newbauer, Faltine, assignor.)
Holberg, Frank C., Jr., assignor to Jenkins Interlock Manufacturing Company, Inc., Philadelphia, Pa. Elevator interlocking device. No. 1,298,948; Apr. 1; v. 261; p. 76.
Holcomb & Hoke Manufacturing Company. (See Tripp, Charles A., assignor.)
Holcomb, Noble R., Keystone, Okla. Antiskidding device. No. 1,301,206; Apr. 22; v. 261; p. 673.
Holden, George A. (See Finnigan, George P., assignor.)
Holdsworth, Arthur J., assignor of one-half to C. Schneider, Detroit, Mich. Cover-holder. No. 1,299,832; Apr. 8; v. 261; p. 306.
Holland, James M., Temple, Tex. Combined water gage and recorder. No. 1,300,967; Apr. 15; v. 261; p. 574.
Hollenbeck, George A., Sault Ste. Marie, Mich. Grate for heating apparatus. No. 1,302,164; Apr. 29; v. 261; p. 875.
Holley Brothers Company. (See Holley, George M., assignor.)
Holley, George M., assignor to Holley Brothers Company, Detroit, Mich. Manifold construction for explosion-engines. No. 1,300,395; Apr. 15; v. 261; p. 454.
Holley, George M., and D. T. Hastings, Detroit, Mich.; said Hastings assignor to said Holley. Primer. No. 1,300,396; Apr. 15; v. 261; p. 454.
Hollis, Harry, Lebanon, Pa., assignor to Westinghouse Electric & Manufacturing Company. Arc-regulating system. No. 1,298,715; Apr. 1; v. 261; p. 22.
Hollis, Otis A., Pittsburgh, Pa. Running-gear. No. 1,302,489; Apr. 29; v. 261; p. 938.
Hollister, Harry R., Irvington, assignor to Kalbperry Corporation, Elizabeth, N. J. Method of and apparatus for drying materials. No. 1,301,190; Apr. 22; v. 261; p. 648.
Hollnagel, Herbert P. (See Conklin and Hollnagel.)
Holmberg, William M., Millbury, Mass. Switch-operating mechanism. No. 1,300,968; Apr. 15; v. 261; p. 574.
Holmes, Henry H., assignor of one-third to C. F. Nelson and one-third to E. V. Gustafson, Council Bluffs, Iowa. Broom-holder. No. 1,299,575; Apr. 8; v. 261; p. 246.
Holmes, Oscar J., Chicago, Ill. Film and film-sprocket. No. 1,299,469; Apr. 8; v. 261; p. 222.
Holmström, Gustaf E., Gefle, Sweden. Producing prints with colors on papers, leather, or similar material. No. 1,300,397; Apr. 15; v. 261; p. 454.
Hooven Radiator Co. (See Spery, Charles F., assignor.)
Hoover, George A., Sallisaw, Okla. Spring-mounting. No. 1,298,716; Apr. 1; v. 261; p. 22.
Hope, Herbert J., Sanford, Me. Pile-fabric loom. No. 1,298,949; Apr. 1; v. 261; p. 77.
Hope, John F. (See Hope, John T., assignor.)
Hope, John T., assignor to J. F. Hope, Kansas City, Mo. Drying apparatus. No. 1,299,470; Apr. 8; v. 261; p. 223.
Hope-Jones, Cecil, administratrix. (See Hope-Jones, Robert.)
Hope-Jones, Robert, deceased; C. Hope-Jones, temporary administratrix, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonowanda, N. Y. Piano-key mechanism. No. 1,301,267; Apr. 22; v. 261; p. 673.
Hope Natural Gas Company. (See Garner, James B., assignor.)
Hopedale Manufacturing Company. (See Roper, Walter F., assignor.)
Hopkins, Edwin S., Jr., New York, N. Y. Modified vivigraphic record and process. No. 1,302,367; Apr. 29; v. 261; p. 914.
Hoppel, Edward F. (See Brewer and Hoppel.)
Hopwood, John M., Dormont, assignor to D. S. Wolcott, trustee, Sewickley, Pa. Grate-bar. No. 1,302,366; Apr. 29; v. 261; p. 914.
Horgan, James P., Littleton, N. H. Gas-generating oil-burner. No. 1,300,728; Apr. 15; v. 261; p. 523.
Hornbostel, Frederick, Brooklyn, N. Y. Pool-ball triangle. No. 1,299,471; Apr. 8; v. 261; p. 223.
Horne, James A., Denver, Colo. Aeroplane. No. 1,300,969. Apr. 15; v. 261; p. 574.
Horni, Edward C., Dayton, Ohio. Demountable tire-rim. No. 1,299,472; Apr. 8; v. 261; p. 223.
Horstmann, Frederick W., Kearney, N. J. Indicating-caliper. No. 1,300,837; Apr. 15; v. 261; p. 547.
Horton, William M., assignor to Adams-Bagnall Electric Company, Cleveland, Ohio. Making cups or casings for electric-light fixtures. No. 1,298,717; Apr. 1; v. 261; p. 22.
Hoscbek, Achille J. O., Brooklyn, N. Y. Truss. No. 1,302,369; Apr. 29; v. 261; p. 914.
Hosford, William F., Oak Park, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y. Machine for metal-working. No. 1,298,718; Apr. 1; v. 261; p. 23.
Hoshide, Seijiro, Seattle, Wash. Ice-cream-cone machine. No. 1,301,697; Apr. 22; v. 261; p. 756.
Hostinger, George N., Jersey City, N. J. Stylographic pen. No. 1,299,576; Apr. 8; v. 261; p. 246.
Hoskins, William, Chicago, Ill., assignor to The Best Brothers Keene's Cement Company, Medicine Lodge, Kans. Manufacture of quick-setting Keene's cement. No. 1,300,269; Apr. 15; v. 261; p. 426.
Hosman, Arley L., Carterville, Mo. Combined hoeing and cotton-chopping machine. No. 1,299,346; Apr. 1; v. 261; p. 166.
Hottmann, Charles W., Philadelphia, Pa. Drying apparatus. No. 1,302,165; Apr. 29; v. 261; p. 875.
Hotz, John P., Watertown, Mass. Electric fan and casing. No. 1,301,939; Apr. 29; v. 261; p. 834.
Houck, Leo H., Wenatchee, Wash. Machine for forming concrete conduits. No. 1,302,370; Apr. 29; v. 261; p. 914.
Hough, Herbert D., Cranston, assignor to Wightman & Hough Company, Providence, R. I. Cigarette-case. No. 1,301,698; Apr. 22; v. 261; p. 756.
Hough, Samuel, Atco, N. J. Adjustable cutting-head for lathes. No. 1,301,699; Apr. 22; v. 261; p. 756.
Housman, Wilson, Elkhart, Ind. Spark-plug. No. 1,301,562; Apr. 22; v. 261; p. 729.
Houston, George B., and J. A. Helman, Bridgeport, Conn., assignors to The Locomobile Company of America, New York, N. Y. Bonnet for motor-cars. No. 1,299,944; Apr. 8; v. 261; p. 329.
Hover, Charles F., Conrad, Mont. Mechanical movement and device. No. 1,299,184; Apr. 1; v. 261; p. 130.
Hovey, Edward P., East Quogue, N. Y. Wind-shield. No. 1,298,719; Apr. 1; v. 261; p. 23.
Howard, Alexander R., *et al.* (See Eubanks, Sayers D., assignor.)
Howard, Charles P. (See Howard, Frank E. and C. P.)
Howard, Frank E., assignor to James L. Howard & Company, Hartford, Conn. Manufacture of hollow metallic doors. No. 1,301,790; Apr. 22; v. 261; p. 775.
Howard, Frank E. and C. P., assignors to James L. Howard & Company, Hartford, Conn. Lock mechanism for sliding doors. No. 1,301,789; Apr. 22; v. 261; p. 775.
Howard, Frank M., *et al.* (See Keanedy, James W., assignor.)
Howe, Frederick J., Aurora, Ill. Beading-tool. No. 1,301,940; Apr. 29; v. 261; p. 834.

Howe, Lyman H., *et al.* (See Jones, Robert W., assignor.)
Howe Manufacturing Company. (See Bessey and Baiers, assignors.)
Howe, Samuel P., Merchantville, N. J., and W. D. Kerlin, Camden, N. J. Internal-combustion engine. No. 1,301,441; Apr. 22; v. 261; p. 704.
Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Automatic train control. No. 1,299,945; Apr. 8; v. 261; p. 329.
Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Signaling system. No. 1,302,371; Apr. 29; v. 261; p. 914.
Howell, Arthur E., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,300,216; Apr. 8; v. 261; p. 289.
Howell, Samuel D., Oklahoma, Okla. Signal device. No. 1,299,473; Apr. 8; v. 261; p. 223.
Howell, William C. (See Smith, Newton H., assignor.)
Howes, Albert A., Christchurch, New Zealand. Apparatus for making clothes-pegs. No. 1,300,614; Apr. 15; v. 261; p. 499.
Howorth, Thomas E., Nashua, N. H. Picker-waste-separating machine. No. 1,299,185; Apr. 1; v. 261; p. 130.
Hoy, Walter G., Chicago, Ill. Radius-rod. No. 1,302,166; Apr. 29; v. 261; p. 875.
Hoyt, Richard F., Philadelphia, Pa., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,298,720; Apr. 1; v. 261; p. 23.
Hubbard, Alexander, London, England. Projectile. No. 1,302,167; Apr. 29; v. 261; p. 876.
Hubbell, Clarence Z., assignor to Hull Construction Company, Spokane, Wash. Form for concrete hull construction. No. 1,299,728; Apr. 8; v. 261; p. 282.
Hubbell, Clarence Z., assignor to Hull Construction Company, Spokane, Wash. Concrete ship. No. 1,299,729; Apr. 8; v. 261; p. 282.
Huber, George, Philadelphia, Pa. Playing-disk. No. 1,299,833; Apr. 8; v. 261; p. 306.
Hubert, Conrad. (See Sokolow and Polinsky, assignors.)
Hubert, Henry J., assignor to J. T. Milliken, St. Louis, Mo.; National Bank of Commerce in St. Louis, Mo., J. G. Lonsdale, and H. W. Loeb, executors. Capsule-machine. No. 1,302,372; Apr. 29; v. 261; p. 915.
Hubler, John, Brandon, Wis. Pneumatic attachment for scutching machines. No. 1,299,946; Apr. 8; v. 261; p. 330.
Huda, Frank, Perth Amboy, N. J. Non-skid for trucks. No. 1,302,373; Apr. 29; v. 261; p. 915.
Hudson, Charles N., Seattle, Wash. Power-transmission device. No. 1,300,169; Apr. 8; v. 261; p. 378.
Huebner-Bleistein Patents Co. (See Huebner, William C., assignor.)
Huebner, Julius. (See Clayton, Huebner, and Williams.)
Huebner, William C., assignor to Huebner-Bleistein Patents Co., Buffalo, N. Y. Preparing grained tone photographic negatives and positives and producing printing plates therefrom. No. 1,300,729; Apr. 15; v. 261; p. 524.
Hueller, Walter, Weehawken, and M. Krapp, Union Hill, N. J. Embroidery-machine. No. 1,300,838; Apr. 15; v. 261; p. 547.
Huff, Edward S., Detroit, Mich., assignor, by mesne assignments, to The Simms Magneto Company, Engine-starter. No. 1,300,970; Apr. 15; v. 261; p. 575.
Huff, Slaughter W., Brooklyn, N. Y. Indicator for cartridge-fuses. No. 1,301,848; Apr. 29; v. 261; p. 810.
Huff, Spencer E. (See Taylor, George R., assignor.)
Hug, Alexander G. (See Scott and Hug.)
Hughes, Frederick G., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing and separator therefor. No. 1,299,474; Apr. 8; v. 261; p. 224.
Hughes, Garfield J., Toronto, Ontario, Canada. Crutch, walking-stick, and the like. No. 1,298,721; Apr. 1; v. 261; p. 23.
Hughes, Stanley R., Hereford, Tex. Door-catch. No. 1,302,168; Apr. 29; v. 261; p. 876.
Huldt, Sven, Stockholm, Sweden. Refining volatile metals. No. 1,298,722; Apr. 1; v. 261; p. 23.
Hull Construction Company. (See Hubbell, Clarence Z., assignor.)
Hull, George E., assignor to Hickok Construction Co., Minneapolis, Minn. Circuit-closer. No. 1,298,930; Apr. 1; v. 261; p. 77.
Hull, Henry H., *et al.* (See Glass, Louine R., assignor.)
Hulscher, Frank H., Atlanta, Ga. Manufacture of sheet-metal blanks. No. 1,301,700; Apr. 22; v. 261; p. 757.
Hulscher, Frank H., Atlanta, Ga. Picker-stick. No. 1,301,701; Apr. 22; v. 261; p. 757.
Humberger, Alonso, Chicago, Ill., Washing-machine. No. 1,301,055; Apr. 15; v. 261; p. 595.
Hump Hairpin Manufacturing Company, The. (See Hermsdorf, Walter H., assignor.)
Humphrey, E. A., trustee. (See Flowers, Thomas W., assignor.)
Humphreys, Edward C. (See Archer and Humphreys.)
Hunsicker, Clyde L., San Francisco, Calif. Fruit-stemming machine. No. 1,302,374; Apr. 29; v. 261; p. 915.
Hunt, Dorothy Z. (See Loomis and Hunt.)
Hunt, Sylvester H., Bessemer, Mich. Ore-loader. No. 1,302,046; Apr. 29; v. 261; p. 854.
Hunter, Ross, Milwaukee, Wis. Tray-lifting device. No. 1,298,475; Apr. 8; v. 261; p. 224.
Huntley, Erle S., Frieland, Queensland, assignor to The Hampden Cloncurry Copper Mines Limited, Melbourne, Australia. Gas-producer. No. 1,300,839; Apr. 15; v. 261; p. 547.
Huntting, Henry E. (See Ralek, John J., assignor.)
Hurlburt, David M., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic exposure mechanism. No. 1,298,723; Apr. 1; v. 261; p. 24.
Hurst, Clyde, Tupelo, Ark. Tobacco-pipe. No. 1,302,047; Apr. 29; v. 261; p. 854.
Hurtt, Frank L., and A. S. Wright, Cleveland, Ohio. Water-motor fan. No. 1,301,056; Apr. 15; v. 261; p. 595.
Huser, Adolf T. (See Haning, Ernst, assignor.)
Hutchings, Albin H., Buffalo, N. Y. Sash-fastener. No. 1,299,834; Apr. 8; v. 261; p. 306.
Hutchings, George B. (See Burgess, John A., assignor.)
Hutchins Car Roofing Company. (See Hawksworth, David W., assignor.)
Hutchins Car Roofing Company. (See Whyte, Frederick M., assignor.)
Hutchins, Edward, Montclair, N. J., assignor to International Paper Company. Barking-drum. No. 1,300,739; Apr. 15; v. 261; p. 524.
Hutchinson, George, Chicago, Ill. Cutting or pressing tool. No. 1,298,951; Apr. 1; v. 261; p. 77.
Huxford, Jere O., Wainwright, Ala. Ascending, descending, and driving means for dirigible airships. No. 1,302,048; Apr. 29; v. 261; p. 854.
Hyatt, Nelson L. and H. Lloyd, Dresden, Ontario, Canada. Aeroplane-propelling device. No. 1,298,724; Apr. 1; v. 261; p. 24.
Hyde, Frank D. (See Hirschthal, Meyer, assignor.)
Hydesaburo, Ohashi & Co. (See Ohashi, Hydesaburo, assignor.)
Hydraulic Oil Systems Corporation. (See Farr, Frederick G., assignor.)
Hydraulic Pressed Steel Company. (See Foster, Henry J., assignor.)
Hydrogenation Company, The. (See Morrison, Harley J., assignor.)
I. D. Wolfson, Inc. (See Wolfson, Isadore D., assignor.)
Ibach, Emil, assignor to Budd Wheel Corporation, Philadelphia, Pa. Hub structure. No. 1,302,049; Apr. 29; v. 261; p. 854.
Ide, Peter, McCook, Nebr. Automobile-lifter. No. 1,299,730; Apr. 8; v. 261; p. 282.
Ike, Hiyakumatsu, Buena Park, Calif. Garden implement. No. 1,301,442; Apr. 22; v. 261; p. 707.
Ike, Hiyakumatsu, Buena Park, Calif. Combined harrow and pulverizer. No. 1,301,443; Apr. 22; v. 261; p. 707.
Ilczuk, Dmytro. (See Wytrwal, Stanley, assignor.)
Ile, William, Toronto, Ontario, Canada. Electric-plug receptacle. No. 1,300,270; Apr. 15; v. 261; p. 426.
Illy, Armand. (See Clarke and Illy.)
Imaizumi, Tatsujiro, Seattle, Wash. Ship-stabilizer. No. 1,299,186; Apr. 1; v. 261; p. 130.
Imes, Charles H. (See Hewes, Walter H., assignor.)
Import and By Products Company, The. (See Appelbaum, Alan L., assignor.)
Improved Manufacturing Company. (See Enck, Herbert E., assignor.)
Improved Paper Machinery Company. (See Hang, Anton J., assignor.)
Indahl, Maurits C. (See Bancroft and Indahl.)
Indahl, Maurits C., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Typographic casting-machine. No. 1,300,271; Apr. 15; v. 261; p. 426.
Ingeberg, Henry C. M., Sandviken, near Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electrolysis of fused electrolytes. No. 1,299,947; Apr. 8; v. 261; p. 330.
Ingersoll-Rand Company. (See Abrams, Herbert T., assignor.)
Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)
Ingersoll-Rand Company. (See Peters, Arthur E., assignor.)
Ingram, Oscar L., Walla Walla, Wash., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,302,050; Apr. 29; v. 261; p. 854.
Insel Company, The. (See Da Costa, Arthur V., assignor.)
Insinger, Alfred H., deceased; C. L. M. Insinger, executrix, assignor to The Insinger Company, Philadelphia, Pa. Dish-holding basket. No. 1,298,725; Apr. 1; v. 261; p. 24.
Insinger, Catharine L. M., executrix. (See Insinger, Alfred H.)
Insinger Company, The. (See Insinger, Alfred H., assignor.)
Insulation Development Corporation. (See Cook, William E., assignor.)
International Conveyor Corporation. (See Stuart, Francis L., assignor.)
International Cork Company. (See Marsa, Melchor, assignor.)

International Crude Oil Storage Company. (See Bowles, William M., assignor.)
International Harvester Company. (See Benjamin, Bert R., assignor.)
International Harvester Company. (See Burgess, Edward W., assignor.)
International Harvester Company. (See Johnston and Kane, assignors.)
International Money Machine Company. (See Mann and Hawley, assignors.)
International Paper Company. (See Hutchins, Edward, assignor.)
International Paper Company. (See Lombard, Nathaniel, assignor.)
International Paper Company. (See White, Ambrose H., assignor.)
International Time Recording Company of New York. (See Larrabee, Clinton E., assignor.)
Interstate Elastic Braid Company. (See Schaffer, Theodore A., assignor.)
Ireland, Robert H., Brooklyn, N. Y. Game. No. 1,299,731; Apr. 8; v. 261; p. 282.
Irina, Ieremie, Dayton, Ohio. Smoke-dispenser. No. 1,301,563; Apr. 22; v. 261; p. 729.
Irish, David J., New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Liquid atomizer. No. 1,300,615; Apr. 15; v. 261; p. 499.
Irving-Pitt Manufacturing Company. (See Pitt, William P., assignor.)
Irwin Auger Bit Company, The. (See McPherson, Elmer T., assignor.)
Irwin, Charles, Jeannette, Pa. Clamp. No. 1,301,702; Apr. 22; v. 261; p. 757.
Isaman, Herbert W., Olean, N. Y. Lime-spreader. No. 1,299,948; Apr. 8; v. 261; p. 331.
Ittner, Anthony F., et al. (See Smith, James F., assignor.)
Ives, Frederic E., Philadelphia, Pa. Colored photographic image and producing same. No. 1,300,616; Apr. 15; v. 261; p. 500.
Izzo, Francesco, Toronto, Ontario, Canada. Nut-lock. No. 1,300,617; Apr. 15; v. 261; p. 500.
J. Geo. Leyner Engineering Works Company, The. (See Ditson, Jesse, assignor.)
J. Stone and Company. (See Drewry, Thomas, assignor.)
J. I. Case Plow Works. (See Michael, Clement W., assignor.)
Jack, James M., Winfield, Kans. Pitchfork. No. 1,302,375; Apr. 29; v. 261; p. 915.
Jackman, Chester C., and E. S. Squire assignors to Massachusetts Saw Works, Springfield, Mass. Hardening-machine. No. 1,299,949; Apr. 8; v. 261; p. 331.
Jackson, Edgar A., Cupertino, Calif. Nursery-tree digger. No. 1,302,051; Apr. 29; v. 261; p. 855.
Jackson, Philip T., Toronto, Ontario, Canada. Fluid-control apparatus. No. 1,301,131; Apr. 22; v. 261; p. 646.
Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rectifier. No. 1,298,726; Apr. 1; v. 261; p. 24.
Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vibrating rectifier. No. 1,298,727; Apr. 1; v. 261; p. 25.
Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical system. No. 1,298,728; Apr. 1; v. 261; p. 25.
Jackson, Robert E., and B. O. Yearwood, Princeton, W. Va. Fuel-distributing apparatus. No. 1,300,272; Apr. 15; v. 261; p. 426.
Jackson, Simeon S., Boston, assignor to The Stafford Company, Readville, Mass. Weft-feeler mechanism for looms. No. 1,300,971; Apr. 15; v. 261; p. 575.
Jackson, Simeon S., Boston, assignor to The Stafford Company, Readville, Mass. Weft-feeler mechanism for looms. No. 1,301,062; Apr. 15; v. 261; p. 601.
Jackson, William H., Lockport, N. Y. Water-box for calendering-machines. No. 1,301,703; Apr. 22; v. 261; p. 757.
Jacobs, Bert, Waterloo, Iowa. Robe-holder clamp. No. 1,300,273; Apr. 15; v. 261; p. 427.
Jacobs, Isidor M., Kansas City, and W. Cramer, St. Louis, assignors, by mesne assignments, to Truck, Tractor and Manufacturing Company, St. Louis, Mo. Means for converting steering means for motor vehicles into right or left hand drives. No. 1,299,348; Apr. 1; v. 261; p. 106.
Jacobs, Isidor M., Kansas City, and W. Cramer, assignors, by mesne assignments, to Truck Tractor and Manufacturing Company, St. Louis, Mo. Support for crankshafts. No. 1,299,950; Apr. 8; v. 261; p. 331.
Jacobs, Joseph H., Denver, Colo. Joint and locking means for stovepipes. No. 1,301,565; Apr. 22; v. 261; p. 730.
Jacobs, Joseph H., Denver, Colo., assignor to The Jacobs Specialties Manufacturing Company. Adjustable handle for brooms. No. 1,301,564; Apr. 22; v. 261; p. 729.
Jacobs, Julian S., assignor to John T. Slack Corporation, Springfield, Vt. Device for feeding rags and the like. No. 1,300,540; Apr. 15; v. 261; p. 548.
Jacobs Specialties Manufacturing Company, The. (See Jacobs, Joseph H., assignor.)
Jacobsen, James P. H. (See Weber, Leibing, and Jacobsen.)
Jaeger, Friedeman R., Oak Park, Ill. Clutch. No. 1,300,326; Apr. 15; v. 261; p. 454.
Jaeger, Otto, Elkins Park, Pa., assignor to H. S. Kelsey, Boston, Mass. Dispensing device. No. 1,302,052; Apr. 29; v. 261; p. 855.
James, Albert, Eureka, Calif. Submarine tractor. No. 1,301,560; Apr. 22; v. 261; p. 730.
James H. Boye Manufacturing Company. (See Boye, James H., assignor.)
James L. Howard & Company. (See Howard, Frank E., assignor.)
James L. Howard & Company. (See Howard, Frank E. and C. P., assignors.)
James, Samuel C., et al. (See Northall, William H., assignor.)
James, William H., Philadelphia, Pa. Wheel attachment. No. 1,298,952; Apr. 1; v. 261; p. 77.
Jameson, William, assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Feeding mechanism for mixing-mills. No. 1,302,052; Apr. 29; v. 261; p. 855.
Jandron, Wilfred J., St. Paul, Minn. Coin-operated vending-machine. No. 1,299,835; Apr. 8; v. 261; p. 306.
Janes, Clyde M., assignor of one-half to F. M. Aurele, Pawtucket, R. I. Conductor for combers. No. 1,299,349; Apr. 1; v. 261; p. 166.
Janes, Joseph, Cambridge, Mass., assignor to Janes Wood Carving Corporation, New York, N. Y. Wood-carving machine. No. 1,299,350; Apr. 1; v. 261; p. 167.
Janes Wood Carving Corporation. (See Janes, Joseph, assignor.)
Jankower, David, New York, N. Y. Single-compound-key type-writer. No. 1,301,444; Apr. 22; v. 261; p. 707.
Jansen, Edward W. (See Clark, Jansen, and Gallor.)
Jansen, Harry N., Newark, N. J. Releasing and loss-preventing means for cradle-packings. No. 1,299,981; Apr. 8; v. 261; p. 331.
Janssen, Otto C., Delmar, Iowa. Tennis-net reel. No. 1,300,972; Apr. 15; v. 261; p. 575.
Japanese Tissue Mills. (See Winter, Courtney P., assignor.)
Jaquemot, Eugene. (See Pattay and Jaquemot.)
Jarriel, Nathan B., Oboopee, Ga. Cultivator attachment for harrows. No. 1,301,268; Apr. 22; v. 261; p. 673.
Jaynes, William F., Evansville, Ind. Channel-cutter for sole-stitching machines. No. 1,301,269; Apr. 22; v. 261; p. 674.
Jefferies, Fredrick L., and W. Spain, Riverside, Ill., assignors to Corn Products Refining Company. Filling apparatus. No. 1,300,274; Apr. 15; v. 261; p. 427.
Jefferson, Daniel H., Los Angeles, assignor of one-half to F. E. Andres, Alhambra, Calif. Gasifying apparatus. No. 1,300,170; Apr. 8; v. 261; p. 278.
Jeffersonville Manufacturing Company. (See Myers, Perin J., assignor.)
Jeffrey Manufacturing Company, The. (See Bauroth, Walter J., assignor.)
Jelsema, John M., Grand Rapids, Mich. Punch-press guard. No. 1,301,567; Apr. 22; v. 261; p. 730.
Jenkins Interlock Manufacturing Company. (See Holberg, Frank C., Jr., assignor.)
Jenkins, Weston, Rome, assignor to Rome Iron Mills, Inc., New York, N. Y. Stay-bolt. No. 1,300,399; Apr. 15; v. 261; p. 454.
Jenning, David J., Cleveland, Ohio. Making paper receptacles. No. 1,300,973; Apr. 15; v. 261; p. 575.
Jennings, Ines W. (See Edwards, Albert J., assignor.)
Jennings, John T., Birmingham, England. Carbureter for internal-combustion engines. No. 1,299,952; Apr. 8; v. 261; p. 331.
Jennings, Meredith H., Roanoke, Va. Dump-body for trucks and the like. No. 1,301,132; Apr. 22; v. 261; p. 646.
Jennings, Robert G., Elmira, N. Y. Yarn-cleaner. No. 1,301,133; Apr. 22; v. 261; p. 646.
Jensen, Albert O., Omaha, Nebr. Combined wheel-coaster and sleigh. No. 1,298,729; Apr. 1; v. 261; p. 25.
Jensen, Ole, Copenhagen, Denmark. Intestine-cleaner. No. 1,302,054; Apr. 29; v. 261; p. 855.
Jenson, Ole E., Rosebeg, Alberta, Canada. Walking attachment for motor-vehicles. No. 1,298,953; Apr. 1; v. 261; p. 77.
Jerolaman, Henry F., Chicago, Ill. Mechanism for operating box-car doors. No. 1,301,445; Apr. 22; v. 261; p. 708.
Jerrems, Thomas W., St. Paul, Minn., assignor of one-half to E. H. Steiger, Oshkosh, Wis. Grass-feeding mechanism for grass-twine machines. No. 1,298,730; Apr. 1; v. 261; p. 26.
Jarvis, George S., Copiague, N. Y. Seeder. No. 1,300,400. Apr. 15; v. 261; p. 454.
Jewell, Ira H., Chicago, Ill. Apparatus for furnishing drinking-water on ocean-ships. No. 1,299,002; Apr. 1; v. 261; p. 89.
Jewett, Charles E., North Andover, and F. Fitzgerald, Lawrence, Mass. Stop-motion for combs. No. 1,299,187; Apr. 1; v. 261; p. 130.
Johannesen, Svend E., Pittsfield, Mass., assignor to General Electric Company. Stationary induction apparatus. No. 1,299,953; Apr. 8; v. 261; p. 332.
Johannsen, William A., Paullina, Iowa. Attachment for ribbon-rolls. No. 1,300,974; Apr. 15; v. 261; p. 576.
Johansson, Carl E., assignor to Aktiebolaget C. E. Johansson, Eskilstuna, Sweden. Internal gage. No. 1,300,841; Apr. 15; v. 261; p. 548.

Johantgen, Oliver D., Chicago, Ill. Register mechanism for computing-machines. No. 1,301,943; Apr. 29; v. 261; p. 834.
Johantgen, Oliver D., assignor, by mesne assignments, to Victor Adding Machine Co., Chicago, Ill. Ten-key adding and listing machine. No. 1,301,941; Apr. 29; v. 261; p. 834.
Johantgen, Oliver D., assignor, by mesne assignments, to Victor Adding Machine Co., Chicago, Ill. Carriage mechanism for computing-machines. No. 1,301,942; Apr. 29; v. 261; p. 834.
John C. Moninger Company. (See Guion, Chester P., assignor.)
John C. Turner Co., The. (See Turner, John C., assignor.)
John Douglas Company, The. (See McNeil, Daniel W., assignor.)
John, Griffith, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety device for conveyers. No. 1,300,401; Apr. 15; v. 261; p. 454.
John T. Slack Corporation. (See Jacobs, Julian S., assignor.)
Johnsen, Gustav A., Emerson, Nebr. Horse-collar. No. 1,298,732; Apr. 1; v. 261; p. 26.
Johnshoy, Joseph W., Tracy, Minn. Clothes-hanging-device. No. 1,298,954; Apr. 1; v. 261; p. 78.
Johnson, Adolph, Battle Creek, Mich. Rotary oven and drier. No. 1,298,955; Apr. 1; v. 261; p. 78.
Johnson, Albert S., Washington, D. C. Luminous jewelry. No. 1,301,568; Apr. 22; v. 261; p. 730.
Johnson, Alfred C., Winters, assignor to Yuba Manufacturing Company, San Francisco, Calif. Tractor. No. 1,299,351; Apr. 1; v. 261; p. 167.
Johnson, Arthur A., Lyndhurst, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,302,169; Apr. 29; v. 261; p. 876.
Johnson Automobile Lock Co. (See Johnson, Colvin L., assignor.)
Johnson, Axel, Oakland, Calif. Cooker. No. 1,302,170; Apr. 29; v. 261; p. 876.
Johnson, Axel, Oakland, Calif. Cooker. No. 1,302,171; Apr. 29; v. 261; p. 876.
Johnson, Axel, Oakland, assignor to American Can Company, San Francisco, Calif. Apparatus for applying ring-liners to can ends. No. 1,299,188; Apr. 1; v. 261; p. 131.
Johnson, Bradley S., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,055; Apr. 29; v. 261; p. 855.
Johnson, Carl F., assignor to Johnson Service Company, Milwaukee, Wis. Screw-threaded fastening. No. 1,300,275; Apr. 15; v. 261; p. 428.
Johnson, Charles S., Galesburg, Ill. Means for operating and controlling brakes, clutches, &c. No. 1,298,956; Apr. 1; v. 261; p. 78.
Johnson, Colvin L., assignor to Johnson Automobile Lock Co., Chicago, Ill. Gear-shift lever-lock. No. 1,299,954; Apr. 8; v. 261; p. 332.
Johnson, Eric. (See Engel, Carl, assignor.)
Johnson, Frank, New York, N. Y., assignor to Elevator Supplies Company, Inc. Dumb-waiter car. No. 1,301,569; Apr. 22; v. 261; p. 730.
Johnson, Frank A., assignor of one-half to W. J. Freeman, Danville, Ill. Attachment for corn-planters. No. 1,301,134; Apr. 22; v. 261; p. 647.
Johnson, Frank E., Dallas, Tex. Cotton-picker. No. 1,300,276; Apr. 15; v. 261; p. 428.
Johnson, Frederic I. (See Paton and Koenig, assignors.)
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear for draft-rigging. No. 1,300,402; Apr. 15; v. 261; p. 455.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,300,403; Apr. 15; v. 261; p. 455.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear for railway draft-rigging. No. 1,300,404; Apr. 15; v. 261; p. 455.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Rocker side bearing. No. 1,300,405; Apr. 15; v. 261; p. 455.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear for railway-cars. No. 1,301,944; Apr. 29; v. 261; p. 834.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,301,945; Apr. 29; v. 261; p. 835.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-draft-rigging friction-gear. No. 1,301,946; Apr. 29; v. 261; p. 835.
Johnson, George W., Three Forks, Mont. Automobile-tire. No. 1,298,731; Apr. 1; v. 261; p. 26.
Johnson, Homer B., Sheridan, Ind. Rein-operative control means for motor-cars. No. 1,300,618; Apr. 15; v. 261; p. 500.
Johnson, Homer B., Sheridan, Ind. Rein-operated means for motor-cars. No. 1,300,619; Apr. 15; v. 261; p. 500.
Johnson, John, Tukwila, assignor of one-half to T. Carlson, Stillwater, Wash. Excavating and hoisting apparatus. No. 1,300,842; Apr. 15; v. 261; p. 548.
Johnson, John E., and C. H. Oslund, assignors to The O. and J. Machine Company, Worcester, Mass. Conveying device. No. 1,300,406; Apr. 15; v. 261; p. 455.
Johnson, John E., and C. H. Oslund, assignors to The O. and J. Machine Company, Worcester, Mass. Label-advancing mechanism. No. 1,300,407; Apr. 15; v. 261; p. 455.
Johnson, John E., and C. H. Oslund, assignors to The O. & J. Machine Company, Worcester, Mass. Bottle-seal-labeling machine. No. 1,300,408; Apr. 15; v. 261; p. 456.
Johnson, John E., and C. H. Oslund, assignors, by mesne assignments, to The O. and J. Machine Company, Worcester, Mass. Advancing means for label-holders. No. 1,300,409; Apr. 15; v. 261; p. 456.
Johnson, Jokum. (See Ovren, John E., assignor.)
Johnson, Joseph O., Menomonie, Wis. Pumping attachment for motor-vehicles. No. 1,298,857; Apr. 1; v. 261; p. 78.
Johnson, Olive J., assignor of one-half to G. W. Wortham, Paris, Tex. Agricultural machine. No. 1,300,411; Apr. 15; v. 261; p. 456.
Johnson, Philip D., Chicago, assignor of one-half to C. A. Brown, Hinsdale, Ill. Burner. No. 1,300,171; Apr. 8; v. 261; p. 879.
Johnson Service Company. (See Johnson, Carl F., assignor.)
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Locking mechanism for firearms. No. 1,299,189; Apr. 1; v. 261; p. 131.
Johnson, William, and G. E. Schoffstall, Pilot Mound, Iowa. Automobile radiator-tank. No. 1,301,446; Apr. 22; v. 261; p. 708.
Johnson, William H. B., T. E. Lind, and T. W. Clarke, Seattle, Wash. Automobile. No. 1,301,447; Apr. 22; v. 261; p. 708.
Johnson, Woolsey M., Hartford, Conn. Treating nickel scrap and sludge. No. 1,299,577; Apr. 8; v. 261; p. 247.
Johnson, Woolsey M., Hartford, Conn. Steel-making process. No. 1,300,410; Apr. 15; v. 261; p. 456.
Johnston, Edward A., and E. J. Kane, Chicago, Ill., assignors, by mesne assignments, to International Harvester Company. Tractor. No. 1,299,190; Apr. 1; v. 261; p. 131.
Johnston, Fred, assignor of one-half to A. Orr, Calgary, Alberta, Canada. Treating matches in order to render them immune to the action of moisture. No. 1,301,448; Apr. 22; v. 261; p. 708.
Johnston, Greenbow, Richmond, Va. Electric reciprocating device. No. 1,300,277; Apr. 15; v. 261; p. 428.
Johnston, John F., Bethlehem, Pa. Telemotor. No. 1,302,376; Apr. 29; v. 261; p. 916.
Johnston, William, Belfast, Ireland. Bicycle-frame. No. 1,298,958; Apr. 1; v. 261; p. 78.
Jolitz, Charles R., Denver, Colo. Grinder. No. 1,301,449; Apr. 22; v. 261; p. 708.
Jolly, Benjamin R., Raleigh, N. C. Fountain-pen. No. 1,299,836; Apr. 8; v. 261; p. 306.
Jones, Charles M., North Yakima, Wash. Lifting-jack. No. 1,298,959; Apr. 1; v. 261; p. 79.
Jones, George W. (See Strawn, Jesse C., assignor.)
Jones, Howard B., assignor to Klix Manufacturing Company, Chicago, Ill. Tripod. No. 1,300,412; Apr. 15; v. 261; p. 456.
Jones, Jennie, Winchester, Ky. Toaster. No. 1,300,975; Apr. 15; v. 261; p. 576.
Jones, John A., Dallas, Tex. Garbage-can. No. 1,300,976; Apr. 15; v. 261; p. 576.
Jones, Robert W., assignor of one-fourth to L. H. Howe and one-fourth to B. M. Walkinshaw, Wilkes-Barre, Pa. Apparatus for winding motion-picture films. No. 1,301,849; Apr. 29; v. 261; p. 816.
Jones, Russell C., Garden City, N. Y., assignor to The Griscom-Russell Company. Evaporator. No. 1,299,955; Apr. 8; v. 261; p. 332.
Jones, Thomas W., Bicknell, Ind. Safety-elevator. No. 1,301,791; Apr. 22; v. 261; p. 776.
Jones, Walter A. (See De Vaughn, Harry E., assignor.)
Jones, William R., Summitville, Ind. Radiator. No. 1,300,172; Apr. 8; v. 261; p. 879.
Jordan, Coulter, Wichita, Kans. Automobile-chain regulator. No. 1,299,837; Apr. 8; v. 261; p. 307.
Jordan, Linwood F., Portland, Me. Removable wheel-rim. No. 1,299,252; Apr. 1; v. 261; p. 167.
Jordan, Robert E., assignor to The Allbright-Nell Company, Chicago, Ill. Hog scalding, dehairing, and cleaning machine. No. 1,301,450; Apr. 22; v. 261; p. 709.
Jorgensen, Cleah and J. J., assignors of one-third to W. R. Little, Portland, Oreg. Roller-skate. No. 1,299,578; Apr. 8; v. 261; p. 247.
Jorgensen, John J. (See Jorgensen, Cleah and J. J.)
Jowett, John. (See Cook, Leigh, and Jowett.)
Joy, Joseph F., Belle Vernon, Pa. Gathering mechanism for coal-loading machines. No. 1,300,620; Apr. 15; v. 261; p. 500.
Joyce, Michael J., Chicago, assignor of one-half to G. Thompson, Oak Park, Ill. Door for grain-cars. No. 1,301,704; Apr. 22; v. 261; p. 757.
Judelshon, Oscar I., Brooklyn, N. Y. Protector for mechanism. No. 1,301,947; Apr. 29; v. 261; p. 835.
Julien, Joseph C. (See Folger and Julien.)
Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Elastic-fluid turbine. No. 1,301,705; Apr. 22; v. 261; p. 757.

Jurgensen, August P., New York, N. Y. Shutter for motion-picture machines. No. 1,299,958; Apr. 8; v. 261; p. 332.
Jutila, Artturi, Duluth, Minn. Resilient wheel. No. 1,301,570; Apr. 22; v. 261; p. 730.
Kaber, Daniel, Cleveland, Ohio. Transfer-sign. No. 1,299,853; Apr. 1; v. 261; p. 167.
Kadish, Halbert L. (See Kadish, Victor H. and H. L.)
Kadish, Victor H. and H. L., Milwaukee, Wis. Continuous process of forming fertiliser material. No. 1,298,960; Apr. 1; v. 261; p. 79.
Kahn, Samuel, Newark, N. J. Combined blow-off and hose connection for tires. No. 1,299,396; Apr. 1; v. 261; p. 177.
Kalbfleisch Corporation. (See Hollister, Harry E., assignor.)
Kaletay, Joseph F., New York, N. Y. Dispensing-faucet. No. 1,302,377; Apr. 29; v. 261; p. 916.
Kane, Anna G. (See Kane, Patrick, assignor.)
Kane, Edmund J. (See Johnston and Kane.)
Kane, Patrick, assignor to A. G. Kane, Bruno, Minn. Loader. No. 1,301,706; Apr. 22; v. 261; p. 757.
Kampfe Bros. (See Groschopp, William F., assignor.)
Kaplan, Barnett L., New York, N. Y. Corset-cover. No. 1,299,957; Apr. 8; v. 261; p. 332.
Kaplan, Hyman, New York, N. Y. Tire. No. 1,300,731; Apr. 15; v. 261; p. 524.
Kaplan, Jacob, and L. Lack, Brooklyn, N. Y. Valve. No. 1,301,943; Apr. 29; v. 261; p. 835.
Kar Engineering Company, The. (See Karasick, Samuel, assignor.)
Karasick, Samuel, assignor to The Kar Engineering Company, New York, N. Y. Fixture for use with magnetic chucks. No. 1,301,185; Apr. 22; v. 261; p. 647.
Karlson, Henry C. (See Mack, Carl, assignor.)
Karmen, Bernard H., New York, N. Y. Powder-puff. No. 1,299,191; Apr. 1; v. 261; p. 131.
Kastengren, Gustavus E., Seattle, Wash. Marine-vessel construction. No. 1,301,270; Apr. 22; v. 261; p. 674.
Katko, Stephen, South Brownville, Pa. Life-boat. No. 1,299,476; Apr. 8; v. 261; p. 224.
Kauffman, Charles A., Pittsburgh, Pa. Calendar. No. 1,299,354; Apr. 1; v. 261; p. 167.
Kaufman, Joseph, assignor of one-half to W. Klenert, New York, N. Y. Lock. No. 1,301,451; Apr. 22; v. 261; p. 709.
Kaufmann, John W., Baltimore, Md. Bag-fastener. No. 1,301,452; Apr. 22; v. 261; p. 709.
Kaumeyer, Edward A., and D. M. Bloom, Chicago, Ill.; said Kaumeyer assignor to said Bloom. Sewing-machine. No. 1,300,843; Apr. 15; v. 261; p. 548.
Kavanagh, George L., Montreal, Quebec, Canada. Vehicle-tire. No. 1,300,732; Apr. 15; v. 261; p. 524.
Kawneer Manufacturing Company. (See Plym and Barclay, assignors.)
Kee, Charles L., Portsmouth, Va. Aircraft-planted mine and anchor. No. 1,300,413; Apr. 15; v. 261; p. 457.
Kee, John P. (See Wilkin and Kee.)
Keefer, Mae A., administratrix. (See Keefer and Greenleaf.)
Keefer, Samuel H., deceased, (M. A. Keefer, administratrix,) and G. E. Greenleaf, Plainfield, assignors to Niles-Bement-Pond Company, Jersey City, N. J. Machine-tool. No. 1,299,192; Apr. 1; v. 261; p. 131.
Keeran, Charles R., assignor to Keeran Products Company, Chicago, Ill. Fountain-pen. No. 1,301,057; Apr. 15; v. 261; p. 596.
Keeran Products Company. (See Keeran, Charles R., assignor.)
Keesey, John A., Brooklyn, N. Y., and A. Shedlock, Cannondale, Conn.; said Shedlock assignor to said Keesey. Signaling apparatus. No. 1,301,271; Apr. 22; v. 261; p. 674.
Kehoe, Thomas J., assignor to The Willys-Overland Company, Toledo, Ohio. Vehicle-body. No. 1,301,058; Apr. 15; v. 261; p. 595.
Kehr, Jesse S., Wakarusa, Ind. Animal-muzzle. No. 1,300,977; Apr. 15; v. 261; p. 576.
Keiper, Frank. (See Knopp and Biehler, assignors.)
Keitel, Henry A., St. Louis, Mo. Fuel-vaporizing means for vehicle-motors. No. 1,301,707; Apr. 22; v. 261; p. 758.
Keith, Charles H. (See Busby, Junius E., assignor.)
Keith, George, assignor of one-half to J. Keith, London, England. Delivering a mixture of gas and air. No. 1,301,272; Apr. 22; v. 261; p. 674.
Keith, James. (See Keith, George, assignor.)
Kellam, Charles E. (See Sturdivant, Frank K., assignor.)
Keller, Albert T., Baltimore, Md. Universal coupling. No. 1,300,732; Apr. 15; v. 261; p. 524.
Keller, Clarence J., Columbus, Ohio. Indicator. No. 1,299,828; Apr. 8; v. 261; p. 307.
Kelly, Arthur T., Oklahoma, Okla. Collapsible ice-pick. No. 1,298,961; Apr. 1; v. 261; p. 79.
Kelly, James L., Nowata, Okla. Automobile-axle truss. No. 1,299,732; Apr. 8; v. 261; p. 282.
Kelly, William E. (See Harry and Kelly.)
Kelsey, Harry S. (See Jaeger, Otto, assignor.)
Kelsey Wheel Company. (See Booth, William N., assignor.)
Kelso, William, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,302,056; Apr. 29; v. 261; p. 865.
Kemp, Charles, New York, N. Y. Lock. No. 1,300,844; Apr. 15; v. 261; p. 548.
Kemp, Charles, New York, N. Y. Lock. No. 1,300,845; Apr. 15; v. 261; p. 548.
Kendall, Allen B., and O. S. Field, Elizabeth, N. J., assignors to Hall Switch & Signal Co. Signal. No. 1,301,949; Apr. 29; v. 261; p. 885.
Kendall, Carl W., Edgewater Heights, N. J., assignor to Columbia Machine & Stopper Co. Inc., New York, N. Y. Bottle-capping machine. No. 1,299,355; Apr. 1; v. 261; p. 167.
Kendall, Ira H., Potsdam, N. Y. Sanitary fitting or coupling for pipes. No. 1,301,453; Apr. 22; v. 261; p. 709.
Kendall, James B., assignor to Newstarter Manufacturing Company, Chicago, Ill. Fluid-motor. No. 1,299,477; Apr. 8; v. 261; p. 224.
Kendall, James B., assignor to Newstarter Manufacturing Company, Chicago, Ill. Air-compressor. No. 1,299,478; Apr. 8; v. 261; p. 224.
Kendall, William G., Newark, N. J. Vanity-case. No. 1,299,783; Apr. 8; v. 261; p. 283.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Apparatus for preparing type-bars or slugs for use in printing-forms. No. 1,300,846; Apr. 15; v. 261; p. 549.
Kennedy, George C., Waterloo, Iowa. Crypt for mausoleums. No. 1,300,173; Apr. 8; v. 261; p. 379.
Kennedy, George C., Waterloo, Iowa. Marble-shooter. No. 1,302,378; Apr. 29; v. 261; p. 916.
Kennedy, James W., assignor of one-fourth to J. E. Dungan, Canton, Ohio, one-fourth to W. S. Bryson, one-sixteenth to B. F. Bone, one-sixteenth to F. M. Howard, one-sixteenth to J. A. Schaub, one-sixteenth to A. C. Scroggins, Jr., Moundsville, and one-fourth to G. W. Way, Wheeling, W. Va. Apparatus for storing and dispensing ice-cream. No. 1,298,962; Apr. 1; v. 261; p. 80.
Kennedy, Otis M., Philadelphia, Pa., assignor to The Cunningham Piano Company. Expression-controlling device for mechanical musical instruments. No. 1,302,172; Apr. 29; v. 261; p. 877.
Kent, Frank W., Clapham, and T. P. Middleton, Farnham, assignors to Kerotype, Limited, London, England. Transfer process. No. 1,299,479; Apr. 8; v. 261; p. 225.
Kent, William J., Brooklyn, N. Y., assignor to Revere Rubber Company. Rubber or elastic vehicle-tire. No. 1,302,178; Apr. 29; v. 261; p. 877.
Kenyon, James, Bolton, England. Lifting-bar of molding-boxes. No. 1,301,850; Apr. 29; v. 261; p. 816.
Kerlin, Ward D. (See Howe and Kerlin.)
Kermack, Robert R., Portsmouth, and E. G. O'Donnell, Newington, N. H. Sprayer attachment for hose-nozzles. No. 1,299,958; Apr. 8; v. 261; p. 332.
Kern, Carl A., Mill Valley, Calif. Preserving fruit-juices and other organic food and vegetable products. (Reissue.) No. 14,633; Apr. 15; v. 261; p. 602.
Kern, George, Peru, assignor to Western Clock Co., La Salle, Ill. Alarm-clock. No. 1,300,278; Apr. 15; v. 261; p. 428.
Kern, Joseph M., Oswego, N. Y. Steam-engine. No. 1,301,571; Apr. 22; v. 261; p. 731.
Kerngood, Allen H., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md. Buckle. No. 1,299,734; Apr. 8; v. 261; p. 283.
Kerotype, Limited. (See Kent and Middleton, assignors.)
Kerr, George C., assignor of one-third to H. I. Cohen and one-third to W. H. Gemmell, Brainerd, Minn. Clear-vision window. No. 1,301,454; Apr. 22; v. 261; p. 709.
Kershaw, Harry, Manchester, England. Internal grinder or mill for use in lathes, boring, drilling, and other machine tools. No. 1,298,963; Apr. 1; v. 261; p. 80.
Kesler, Charles G., Lima, Ohio. Coaster-brake. No. 1,299,735; Apr. 8; v. 261; p. 283.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Ignition system. No. 1,301,851; Apr. 29; v. 261; p. 816.
Kettlie, Edith F., Medford, Mass. Toy for cats. No. 1,302,174; Apr. 29; v. 261; p. 877.
Key Boiler Equipment Co. (See Key, Frederick E., assignor.)
Key, Emmett M., assignor of five thirty-seconds to I. W. Patterson, one thirty-second to C. H. Veale, one thirty-second to C. Z. Wiley, and one thirty-second to E. B. Velten, Tulsa, Okla. Collapsible cot. No. 1,300,621; Apr. 15; v. 261; p. 500.
Key, Frederick E., assignor to Key Boiler Equipment Co., St. Louis, Mo. Securing hollow tapering boiler-plugs. No. 1,302,175; Apr. 29; v. 261; p. 877.
Keyes Fibre Company. (See Waterman, Frank N., assignor.)
Keyser, Charles C., Pensacola, Fla. Fishing-reel attachment. No. 1,299,959; Apr. 8; v. 261; p. 333.
Kiefer, Jean E., Lausanne, Switzerland. Machine for molding perforated bricks or building-blocks. No. 1,300,734; Apr. 15; v. 261; p. 525.
Kier Letter Company. (See Ludwig, Willard M., assignor.)
Kiessig, Oscar, Dallas, Tex. Air-regulating attachment. No. 1,301,455; Apr. 22; v. 261; p. 709.

Kilgore, Frederick O., Somerville, Mass. Self-starting apparatus. No. 1,300,217; Apr. 8; v. 261; p. 389.
Kim, George M., Pittsburgh, Pa. Chair. No. 1,300,622; Apr. 15; v. 261; p. 501.
Kimble, Frank, assignor of one-half to N. H. Ransom, Fort Wayne, Ind. Locking device for automobiles. No. 1,300,735; Apr. 15; v. 261; p. 525.
King & Hamilton Company. (See Gilman, John H. and A. E., assignors.)
King, Harry O., Chicago, Ill. Shaft extension for automobile transmission-gearing. No. 1,300,174; Apr. 8; v. 261; p. 379.
King, Percival F., Vancouver, British Columbia, Canada. Extensible cover for automobiles. No. 1,298,733; Apr. 1; v. 261; p. 26.
Kingan, James B., and H. F. Ripken, Minneapolis, Minn. Device for valve-gear. (Reissue.) No. 14,624; Apr. 1; v. 261; p. 181.
Kingswood, Thomas, Brantford, Ontario, Canada. Incubator. No. 1,301,136; Apr. 22; v. 261; p. 647.
Kineman, Charles C., assignor to Universal Draft Gear Attachment Co., Chicago, Ill. Draft-arm for railway-cars. No. 1,300,847; Apr. 15; v. 261; p. 549.
Kippenberg, Albert H., Pittsburgh, Pa. Jar-closure. No. 1,300,736; Apr. 15; v. 261; p. 525.
Kirby, James B., Cleveland, Ohio. Drain-cock. No. 1,299,480; Apr. 8; v. 261; p. 225.
Kirby, James S., Denver, Colo. Padlock. No. 1,301,572; Apr. 22; v. 261; p. 573.
Kirby, John, Jr., Dayton, Ohio, assignor to The United States Head-Light Company, Buffalo, N. Y. Focusing device. No. 1,298,964; Apr. 1; v. 261; p. 80.
Kircher, Paul. (See Gruenfeld and Kircher.)
Kirk, Benjamin K., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Bell-actuating means. No. 1,300,737; Apr. 15; v. 261; p. 525.
Kirk, Denis W. (See Rich, Francis A., assignor.)
Kirk, George E., Toledo, Ohio, assignor, by mesne assignments, to The Willys-Morrow Company, Inc. Bearing. No. 1,299,579; Apr. 8; v. 261; p. 247.
Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Mandolin-tailpiece. No. 1,301,059; Apr. 15; v. 261; p. 595.
Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Support for musical instruments. No. 1,301,060; Apr. 15; v. 261; p. 596.
Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Harp. No. 1,301,061; Apr. 15; v. 261; p. 596.
Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Musical instrument. No. 1,301,062; Apr. 15; v. 261; p. 596.
Kirkman, Thomas W., New York, N. Y. Journal-bearing. No. 1,298,734; Apr. 1; v. 261; p. 27.
Kissock, Alan, Tucson, Ariz. Making alloy steel. No. 1,300,279; Apr. 15; v. 261; p. 429.
Kister, Thomas J., Bethlehem, Pa. Crease-preserver. No. 1,299,960; Apr. 8; v. 261; p. 333.
Klatner, Herman, Elizabeth, N. J. Packing-ring. No. 1,300,623; Apr. 15; v. 261; p. 501.
Klittinger, Otis A., assignor to San Francisco Coffee Urn Company, San Francisco, Calif. Beverage-urn. No. 1,300,175; Apr. 8; v. 261; p. 380.
Kluru, John, Fairburn, S. D. Animal-releasing device. No. 1,299,193; Apr. 1; v. 261; p. 132.
Klages, George W., Pittsburgh, Pa. Sheet-glass-cutter holder. No. 1,301,950; Apr. 29; v. 261; p. 835.
Klein, Henry S., Milwaukee, Wis. Background-carrier. No. 1,299,481; Apr. 8; v. 261; p. 225.
Kleil, Albert, West Park, Ohio. Hose-coupling. No. 1,300,414; Apr. 15; v. 261; p. 457.
Klenert, William. (See Kaufman, Joseph, assignor.)
Klett Manufacturing Co. (See Klett, Robert E., assignor.)
Klett, Robert E., New York, N. Y., assignor to Klett Manufacturing Co., Inc. Bone-clamp. No. 1,302,176; Apr. 29; v. 261; p. 877.
Klix Manufacturing Company. (See Jones, Howard B., assignor.)
Klopf, Frederick M., deceased, Newark, N. J., assignor of one-half to J. H. Lehman, East Orange, N. J.; J. L. Klopf, administratrix. Separable fastener. No. 1,301,573; Apr. 22; v. 261; p. 731.
Klopf, Jessie L., administratrix. (See Klopf, Frederick M.)
Knapp, David R., Pottsville, Pa. Safety limit-switch. No. 1,299,839; Apr. 8; v. 261; p. 307.
Knauff, Edward J. (See Ela and Knauff.)
Kneass, Strickland L., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Starting-valve mechanism. No. 1,300,280; Apr. 15; v. 261; p. 429.
Knickerbocker, William B., Jackson, Mich. Woodworking-machine. No. 1,300,415; Apr. 15; v. 261; p. 457.
Knight, Amos L., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Fluid-pressure apparatus. No. 1,300,281; Apr. 15; v. 261; p. 429.
Knight, Cecil Y., and W. N. Wilson, assignors to The Morgan Crucible Company, Limited, Battersea, London, England. Applying insulated pieces to carbon brushes. No. 1,298,965; Apr. 1; v. 261; p. 80.
Knight, Charles D., et al. (See Pohs, Eugene, assignor.)
Knight, John A., Hamilton, Ontario, Canada, assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,299,798; Apr. 8; v. 261; p. 333.
Knight, Julian G., New York, N. Y. Outlet-box. No. 1,302,057; Apr. 29; v. 261; p. 856.
Knoblock, Frederik E., assignor to The Grant & Knight Manufacturing Company, Worcester, Mass. Work-support for sewing-machines. No. 1,300,848; Apr. 15; v. 261; p. 549.
Knoblock, James W., New York, assignor to American La France Fire Engine Co., Inc., Elmira, N. Y. Combined hook and handle for lanterns. No. 1,301,744; Apr. 22; v. 261; p. 731.
Knopp, Otto A., Oakland, Calif. Electric watt-hour meter. No. 1,300,176; Apr. 8; v. 261; p. 380.
Knopp, Rudolph, and J. G. Biehler, Rochester, N. Y., assignors of one-fifth to F. Keiper. Labeling-machine. No. 1,299,194; Apr. 1; v. 261; p. 132.
Knowlson, James S., Oak Park, assignor to Electro-Magnetic Tool Company, Chicago, Ill. Electrically-operated tool. No. 1,298,966; Apr. 1; v. 261; p. 80.
Knudtson, Ole A. (See Gorlien and Knudtson.)
Knutson, Alfred H., McVille, N. D. Bandage. No. 1,301,706; Apr. 22; v. 261; p. 758.
Koehring Machine Company. (See Lichtenberg, Erich H., assignor.)
Koenig, Henry L. (See Paton and Koenig.)
Koenig, Joseph, Two Rivers, Wis. Heating apparatus. No. 1,300,416; Apr. 15; v. 261; p. 457.
Koenig, Joseph, Two Rivers, Wis. Flask for liquids. (Reissue.) No. 14,641; Apr. 29; v. 261; p. 933.
Koepp, H. J., et al. (See Lieske, Frank J., assignor.)
Kohls, Henry A. (See Melchert and Kohls.)
Kohn, Jacob, New York, N. Y. Lock. No. 1,299,195; Apr. 1; v. 261; p. 132.
Kohn, Julius, New York, N. Y. Toy boat. No. 1,300,177; Apr. 8; v. 261; p. 380.
Kolber, Benjamin, Chicago, Ill. Garment-hanger. No. 1,301,709; Apr. 22; v. 261; p. 758.
Kolby, James A., L. P. Larson, and C. P. Nielsen, Ephraim, assignors to Kolby Wheel Company, Salt Lake City, Utah. Beetleat wheel. No. 1,302,177; Apr. 29; v. 261; p. 877.
Kolby Wheel Company. (See Kolby, Larson, and Nielsen, assignors.)
Koleta, William F., East Akron, Ohio. Mail-box. No. 1,299,787; Apr. 8; v. 261; p. 283.
Kolloster, Herman H., Palatka, Fla. Zone-indicator. No. 1,301,273; Apr. 22; v. 261; p. 674.
Kopacki, Albert G., assignor of one-half to S. Bodzinski, Bay City, Mich. Bedstead. No. 1,301,274; Apr. 22; v. 261; p. 675.
Kopcay, Joseph, South Bend, Ind. Propeller. No. 1,300,738; Apr. 15; v. 261; p. 525.
Kopplin, Otto R., Marion, Tex. Plow. No. 1,301,063; Apr. 15; v. 261; p. 596.
Kork, Fred J., Chicago, Ill. Invisible hinge. No. 1,302,178; Apr. 29; v. 261; p. 878.
Korthals-Altes, Willem C., Schenectady, N. Y., assignor to General Electric Company. Induction-motor control. No. 1,301,719; Apr. 22; v. 261; p. 758.
Koupet Auto Top Company. (See Heinselman, Reginald, assignor.)
Kovar, Joseph J., Owatonna, Minn. Spring-toothed harrow. No. 1,298,735; Apr. 1; v. 261; p. 27.
Kozlowski, Martin, Masontown, Pa. Toy. No. 1,302,279; Apr. 29; v. 261; p. 916.
Kraehmer, Oscar C., Galena, Ill. Holder for use in repairing eyeglasses. No. 1,301,275; Apr. 22; v. 261; p. 675.
Kraft, Henry P., Ridgewood, N. J. Stopper for water-bottles or the like. No. 1,301,711; Apr. 22; v. 261; p. 758.
Kraft, Henry P., Ridgewood, N. J. Tire or other valve. No. 1,302,280; Apr. 29; v. 261; p. 916.
Kraft, Henry P., Ridgewood, N. J. Rim-nut or the like. No. 1,302,281; Apr. 29; v. 261; p. 917.
Kralund, John, assignor to Doehler Die Casting Company, Brooklyn, N. Y. Die-casting apparatus. No. 1,299,738; Apr. 8; v. 261; p. 283.
Kralund, John, and C. Duckworth, Brooklyn, N. Y., and M. Stern, Toledo, Ohio, assignors to Doehler Die Casting Company, Brooklyn, N. Y. Casting apparatus. No. 1,300,739; Apr. 15; v. 261; p. 525.
Kramer, Anders, (now by judicial change of name Ivan M. Prokofeff,) assignor of one-half to A. N. Van Deman, New York, N. Y. Manufacturer's lathe. No. 1,298,967; Apr. 1; v. 261; p. 81.
Kramer, John J., and H. Smerling, assignors to La Crosse Rubber Mills Company, La Crosse, Wis. Boot-stripping device. No. 1,299,280; Apr. 1; v. 261; p. 178.
Krantz, Hubert F., Brooklyn, N. Y., assignor, by mesne assignments, to Krantz Manufacturing Company, Inc. Switchboard. (Reissue.) No. 14,631; Apr. 8; v. 261; p. 393.
Krantz Manufacturing Company. (See Krantz, Hubert F., assignor.) (Reissue.)
Krapp, Max. (See Hueller and Krapp.)
Kratzer, Herbert J., St. Louis, Mo. Road-bed. No. 1,301,084; Apr. 15; v. 261; p. 596.
Krause, Frederick W., North Bend, Oreg. Hair-clipper. No. 1,301,712; Apr. 22; v. 261; p. 759.
Krauss, Adalbert, assignor to L. Levi, New York, N. Y. Lamp-shade and similar plaited article. No. 1,302,363; Apr. 29; v. 261; p. 917.

Knawczynski, Joseph, assignor of one-half to J. H. Mathews, Worcester, Mass. Artificial arm. No. 1,301,575; Apr. 22; v. 261; p. 781.
Krieger, Horace F., Baltimore, Md. Convertible chair, swing, stool, and cradle. No. 1,301,718; Apr. 22; v. 261; p. 759.
Krieger, Walter F., Milwaukee, Wis. Refrigerating apparatus. No. 1,299,961; Apr. 8; v. 261; p. 333.
Kroets, Mary M., San Francisco, Calif. Support for the correction of malpositions of the cervical vertebræ and the occiput. No. 1,301,276; Apr. 22; v. 261; p. 675.
Kronenberg, Christian, Madison, Wis. Revolving seed-selector. No. 1,301,277; Apr. 22; v. 261; p. 675.
Kronfeld, Gustav L. S. (See Starker and Kronfeld.)
Kretzer, Melvin E., Pemberville, Ohio. Boot-robe. No. 1,302,179; Apr. 29; v. 261; p. 878.
Krug, William H., Oshkosh, Wis. Coupling for antiskid-chains. No. 1,302,470; Apr. 29; v. 261; p. 934.
Krum, Maxwell, Brooklyn, N. Y. Curtain-stretcher. No. 1,302,180; Apr. 29; v. 261; p. 878.
Krumlaw, George D., Ashland, Ohio. Insect-destroyer. No. 1,299,580; Apr. 8; v. 261; p. 247.
Kueppers, Karl, Aachen, Germany. Method of and apparatus for forming glass tubes. No. 1,301,714; Apr. 22; v. 261; p. 759.
Kuettner, Edwin J., Raleigh, N. C. Bearing. No. 1,299,357; Apr. 1; v. 261; p. 168.
Kuhn, Chas. F., et al. (See Lieske, Frank J., assignor.)
Kuhn, Emil, Basel, Switzerland. Manufacture of mercury oxid. No. 1,299,581; Apr. 8; v. 261; p. 247.
Kuhns, Milton S., Kutztown, Pa. Necktie-stretcher. No. 1,302,283; Apr. 29; v. 261; p. 917.
Kunst, John, New York, N. Y. Noodle-making device. No. 1,301,085; Apr. 15; v. 261; p. 597.
Küntziger, Jean, H. Chauvin, and F. Fontaine, Liege, Belgium. Circuit-breaker. No. 1,298,786; Apr. 1; v. 261; p. 27.
Kupferman, Oscar, Brooklyn, N. Y. Socket for incandescent lamps. No. 1,301,456; Apr. 22; v. 261; p. 710.
Kupferman, Oscar, Brooklyn, N. Y. Lamp-socket. No. 1,301,457; Apr. 22; v. 261; p. 710.
Kurz, Carl A., Columbus, Ohio. Automobile-lock. No. 1,301,676; Apr. 22; v. 261; p. 731.
Kusnierez, Tony, Easthampton, Mass. Antisubmarine device. No. 1,299,962; Apr. 8; v. 261; p. 333.
Kuss, Frank, Philadelphia, Pa. Hammer. No. 1,301,715; Apr. 22; v. 261; p. 759.
Kvistad, Paul E., Matlock, Wash. Necktie-vest. No. 1,299,582; Apr. 8; v. 261; p. 248.
L. Wolff Manufacturing Company. (See Wolff, Franklyn J., assignor.)
L. A. Young Industries. (See Fitz Gerald, John W., assignor.)
L. J. Mueller Furnace Company. (See Buller, Charles M., assignor.)
L. V. Flechter & Company. (See Flechter, Leonard V., assignor.)
La Crosse Plow Company. (See Cameron, William W., assignor.)
La Crosse Rubber Mills Company. (See Kramer and Sperling, assignors.)
La France, David J., and W. P. De Witt, Somerville, assignors to De Witt La France Co., Cambridge, Mass. Fountain-pen. No. 1,300,849; Apr. 15; v. 261; p. 549.
La France, Richard, assignor to The Owens Bottle Machine Company, Toledo, Ohio. Glass-forming machine. No. 1,299,482; Apr. 8; v. 261; p. 225.
La Joie, Herbert J., Orange, N. J., assignor to Autopiano Company. Reroll-controlling mechanism for musical instruments. No. 1,300,978; Apr. 15; v. 261; p. 577.
La May, Arthur C., et al. (See Todd, Tiefel, and La May.)
La Montaine, S. J., and C. A. Money, Chicago, Ill. Take-up mechanism. No. 1,298,969; Apr. 1; v. 261; p. 82.
La Valley, Lloyd, Schofield Barracks, Hawaii. Faucet. No. 1,301,577; Apr. 22; v. 261; p. 732.
Lebrely, Emile, Paris, France, assignor to Pathe Freres Phonograph Company, New York, N. Y. Speed-starting device for motors. No. 1,300,624; Apr. 15; v. 261; p. 501.
Labus, Otto A., Grand Rapids, Wis. Globe-valve. No. 1,301,278; Apr. 22; v. 261; p. 676.
Lachman, Laurence S., assignor to Universal Electric Welding Company, New York, N. Y. Metallic structure. No. 1,300,740; Apr. 15; v. 261; p. 526.
Lack, Israel. (See Kaplan and Lack.)
Lackey, James T., Dallas, Iowa. Turbine-pump for irrigation. No. 1,299,640; Apr. 8; v. 261; p. 306.
Lacourse, Joseph A., Muskegon Heights, Mich. Core-wire-bending machine. No. 1,299,583; Apr. 8; v. 261; p. 248.
Lafferty, Robert C. (See Ryan, Walter S., assignor.)
Lafitte, Charles J., et al. (See Menge, Anton C., assignor.)
Laforest, Aubin A., Washington, D. C. Coin-deliverer. No. 1,299,196; Apr. 1; v. 261; p. 132.
Laist, Frederick, F. F. Frick, and R. S. Oliver, assignors to Anaconda Copper Mining Company, Anaconda, Mont. Preparing alumina. No. 1,300,417; Apr. 15; v. 261; p. 488.
Laist, Frederick, F. F. Frick, and R. S. Oliver, assignors to Anaconda Copper Mining Company, Anaconda, Mont. Preparing iron-free alum. No. 1,300,418; Apr. 15; v. 261; p. 488.
Laisure, Arthur B. and C. E., Fairbury, Nebr. Buckle. No. 1,299,841; Apr. 8; v. 261; p. 308.
Laisure, Clarence E. (See Laisure, Arthur B. and C. E.)
Lakin, William T., Long, Md. Sound-box mounting. No. 1,301,458; Apr. 22; v. 261; p. 710.
Lamar, William P., Washington, D. C. Type-writing machine. No. 1,302,181; Apr. 29; v. 261; p. 878.
Lamb, Charles C., assignor of one-half to W. M. McEwen, Chicago, Ill. Locking, signaling, and recording construction. No. 1,302,284; Apr. 29; v. 261; p. 917.
Lamb, Claude T., Terre Haute, Ind. Demountable-rim-expanding tool. No. 1,300,741; Apr. 15; v. 261; p. 526.
Lambert, Charles R., assignor to Clayton & Lambert Manufacturing Company, Detroit, Mich. Protecting-lining for fluid-holding tanks. No. 1,298,968; Apr. 1; v. 261; p. 81.
Lambert, John W., Anderson, Ind. Chain tread for tractors. No. 1,300,282; Apr. 15; v. 261; p. 429.
Lamme, Benjamin G., Pittsburgh, Pa. Assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,300,742; Apr. 15; v. 261; p. 526.
Lampert, Henry H., Chicago, Ill. Shoring device. No. 1,298,970; Apr. 1; v. 261; p. 82.
Lamson Company, The. (See Marcy, Willard A., assignor.)
Lanchester, Frederick W., London, England. Construction of tents for field-hospitals, depots, and like purposes. No. 1,302,182; Apr. 29; v. 261; p. 878.
Lanchick, Peter S., Victoria, British Columbia, Canada. Domestic air-heater. No. 1,300,625; Apr. 15; v. 261; p. 501.
Landrigan, John M. (See Nelson, Landrigan, and Zesbaugh.)
Landry, Joseph V., Killona, La. Oil-burner. No. 1,300,626; Apr. 15; v. 261; p. 502.
Landwehr, Henry A., assignor to American Cement Products Company, Los Angeles, Calif. Mold for reinforced-concrete posts and the like. No. 1,299,739; Apr. 8; v. 261; p. 284.
Landwehr, Henry A., assignor to American Cement Products Company, Los Angeles, Calif. Forming reinforced-concrete posts or the like. No. 1,299,842; Apr. 8; v. 261; p. 308.
Lane, Alfred, Rawdon, and T. More, Leeds, England. Milling-lathe. No. 1,301,951; Apr. 29; v. 261; p. 836.
Lane, Elmer E., South Berwick, Me., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for operating on irregularly-shaped blanks. No. 1,300,627; Apr. 15; v. 261; p. 502.
Lane, Elmer E., South Berwick, Me., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Skiving-machine. No. 1,300,628; Apr. 15; v. 261; p. 502.
Lane, Franklin L., and F. R. Weaver, assignors to P. B. Yates Machine Company, Beloit, Wis. Cutter-head. No. 1,298,787; Apr. 1; v. 261; p. 28.
Lane, George, Fort Lee, N. J. Producing legends in black on motion-picture negatives. No. 1,300,178; Apr. 8; v. 261; p. 280.
Lang, Charles R., assignor to G. & J. Weir, Limited, Cathcart, Glasgow, Scotland. Duplex pump. No. 1,301,459; Apr. 22; v. 261; p. 710.
Lang, Lincoln A., assignor to The Northern Trust Company, trustee, Chicago, Ill. Valve construction. No. 1,302,285; Apr. 29; v. 261; p. 917.
Langdon, Jesse D., Waterville, Wash. Steam-condenser, air-cleaner, and humidifier for internal-combustion engines. No. 1,301,128; Apr. 22; v. 261; p. 647.
Langdon, Jesse D. and M. V. B., Waterville, Wash., assignors of one-half to E. Greer, Chicago, Ill. Separable wheel. No. 1,301,716; Apr. 22; v. 261; p. 759.
Langdon, Marie V. B. (See Langdon, Jesse D. and M. V. B.)
Lange, John, Chippewa Falls, Wis. Seeder. No. 1,298,788; Apr. 1; v. 261; p. 28.
Langford, Atlas T., Jackson, Tenn. Auto-shade. No. 1,298,739; Apr. 1; v. 261; p. 28.
Langford, Joseph O., El Paso, Tex. Lacing-eyelet. No. 1,299,584; Apr. 8; v. 261; p. 248.
Langmuir, Irving, Schenectady, N. Y., assignor to General Electric Company. Method of and means for controlling electrical energy. No. 1,301,279; Apr. 22; v. 261; p. 676.
Langnes, Bernhart M., Kenosha, Wis. Convertible planter. No. 1,300,419; Apr. 15; v. 261; p. 458.
Languepin, Emile, Paris, France. Electrode for electric-arc welding. No. 1,302,386; Apr. 29; v. 261; p. 918.
Lanham, Colonel W., Chicago, Ill. Traction-wheel connection for power-driven vehicles. No. 1,302,183; Apr. 29; v. 261; p. 879.
Lanning, Charles D., Boston, Mass. Weft-thread-controlled electrically-actuated auxiliary mechanism for looms. No. 1,301,280; Apr. 22; v. 261; p. 676.
Lanston Monotype Machine Company. (See Bancroft, John S., assignor.)
Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)
Lanston Monotype Machine Company. (See Indahl, Maurits C., assignor.)
Lanston Monotype Machine Company. (See Knight, Amos L., assignor.)

Lapinskas, Kazimeras, Union City, Conn. Undersea destroyer. No. 1,299,483; Apr. 8; v. 261; p. 225.
Lapointe Machine Tool Company. (See Acton, Michael J., assignor.)
Lapp, Frederick W., *et al.* (See Lieske, Ernst, assignor.)
Laqua, Herman, Jumbro Falls, Minn. Grain-binder attachment. No. 1,301,717; Apr. 22; v. 261; p. 760.
Laquai, George, Zurich, Switzerland. Cooking apparatus with water-bath. No. 1,299,963; Apr. 8; v. 261; p. 334.
Larkins, Michael, South Bethlehem, Pa. Car-coupling. No. 1,301,281; Apr. 22; v. 261; p. 677.
Larned, Carter & Company. (See Carter, David S., assignor.)
Larrabee, Clinton E., Binghamton, assignor to International Time Recording Company of New York, Endicott, N. Y. Counter. No. 1,299,197; Apr. 1; v. 261; p. 182.
Larrowe Construction Company, The. (See Wertenbruch, Antony, assignor.)
Larsen, A. M. (See Stevenson, John J., assignor.)
Larsen, Arnold, Cleveland, Ohio, assignor to Briant Manufacturing Company, Indianapolis, Ind. Game apparatus. No. 1,302,387; Apr. 29; v. 261; p. 918.
Larsen, John M. (See Alfsen, Harald, assignor.)
Larsen, Niels H., Detroit, Mich. Scale. No. 1,301,460; Apr. 22; v. 261; p. 710.
Larsh, Everett P., assignor to The Burnett-Larsh Manufacturing Company, Dayton, Ohio. Pump. No. 1,301,282; Apr. 22; v. 261; p. 677.
Larson, Albert W. (See Stenman, Bror F., assignor.)
Larson, Julius, assignor of one-half to B. Swanson, New Haven, Conn. Drafting instrument. No. 1,299,964; Apr. 8; v. 261; p. 334.
Larson, Lauri W., Canterbury, Conn. Letter-box. No. 1,299,740; Apr. 8; v. 261; p. 284.
Larson, Louis P. (See Kolby, Larson, and Nielsen.)
Lasker, William W., Brooklyn, assignor to Powers Accounting Machine Company, New York, N. Y. Rotary card-sorter. No. 1,298,971; Apr. 1; v. 261; p. 82.
Laskowski, Stanley, Indiana Harbor, Ind. Furniture-caster. No. 1,301,139; Apr. 22; v. 261; p. 648.
Latchaw, Charles F. (See Latchaw, Isaac N., and C. F.)
Latchaw, Isaac N., and C. F., Findlay, Ohio. Disinfecting device. No. 1,298,972; Apr. 1; v. 261; p. 83.
Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Corporation, Paterson, N. J. Skiving-machine. No. 1,301,283; Apr. 22; v. 261; p. 677.
Latshaw, Charles E., Minneapolis, Minn. Decimal-dial. No. 1,301,140; Apr. 22; v. 261; p. 648.
Laurel Motors Corporation. (See Roof, Robert M., assignor.)
Lautenschlager, William F., Cincinnati, Ohio, assignor to L. Muther, Newton, Mass. Folding-machine. No. 1,301,718; Apr. 22; v. 261; p. 760.
Lawhun, Samuel M., Jersey City, N. J., assignor of one-half to J. L. Perlman, New York, N. Y. Moving picture camera. No. 1,302,388; Apr. 29; v. 261; p. 918.
Lawler, James A., Rushville, Ill. Number-holder for automobiles. No. 1,300,743; Apr. 15; v. 261; p. 526.
Lawrence, Horace B. (See Burrows and Lawrence.)
Lay, William P., Gadsden, Ala. Marine vessel. No. 1,300,979; Apr. 15; v. 261; p. 577.
Layne, Mahlon E., Memphis, Tenn. Well apparatus. No. 1,299,741; Apr. 8; v. 261; p. 284.
Layne, Mahlon E., Houston, Tex. Drilling apparatus. No. 1,302,058; Apr. 29; v. 261; p. 856.
Le Clair, Eugene M. (See Wilkinson, Charles W., assignor.)
Le Doux, George A., San Francisco, Calif. Automobile inside tire. No. 1,300,980; Apr. 15; v. 261; p. 577.
Le Munyon, Ethan C., *et al.* (See Moore, Henry N., assignor.)
Le Sueur, Ernest A., Ottawa, Ontario, Canada. Conducting electrolysis. No. 1,300,420; Apr. 15; v. 261; p. 458.
Leadbetter, Thomas A. N., Hale, A. L. K. Gilchrist, Lytham, and W. H. Tate, Brooklands, Eng. International-combustion engine. No. 1,301,141; Apr. 22; v. 261; p. 648.
Leahy, Patrick T., Brooklyn, Ohio. Milk-can cleaning and spraying device. No. 1,298,973; Apr. 1; v. 261; p. 83.
Leake, Richard C., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Electromagnetic device. No. 1,299,965; Apr. 8; v. 261; p. 334.
Leaton, Thomas H., Nashville, Ark. Cuspidor-tongs. No. 1,301,852; Apr. 29; v. 261; p. 816.
Leavitt, James Q., Ogden, Utah. Universal sealing-machine for knockdown boxes and the like. No. 1,299,158; Apr. 1; v. 261; p. 168.
Leckey, Alexander, Camden, N. J. Water-top for gas-stoves. No. 1,298,740; Apr. 1; v. 261; p. 28.
Leckinger, Philip H., assignor to The High Speed Hammer Company, Inc., Rochester, N. Y. Riveting-machine or hammer. No. 1,298,741; Apr. 1; v. 261; p. 28.
Ledan, Josiah, Hannibal, Mo. Lifting device. No. 1,301,284; Apr. 22; v. 261; p. 677.
Ledward, Frederick A., Detroit, Mich. Detachable hinge. No. 1,301,461; Apr. 22; v. 261; p. 711.
Ledwinka, Joseph, assignor, by mesne assignments, to Budd Wheel Corporation, Philadelphia, Pa. Retaining device for wheel-hub caps. No. 1,299,359; Apr. 1; v. 261; p. 168.
Ledwinka, Joseph, assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa. Pressed-steel wheel. No. 1,299,360; Apr. 1; v. 261; p. 169.
Lee, Charles J., *et al.* (See Newbauer, Faltine, assignor.)
Lee, Charles L., Bridgeport, Conn., assignor to The National Cash Register Company, Dayton, Ohio. Ticket-issuing mechanism. No. 1,299,742; Apr. 8; v. 261; p. 284.
Lee, Datus S., Los Angeles, Calif. Direction-indicator for motor-vehicles. No. 1,299,966; Apr. 8; v. 261; p. 334.
Lee, Earle P. and T. L., assignors to North East Electric Company, Rochester, N. Y. Ignition-coil. No. 1,299,585; Apr. 8; v. 261; p. 248.
Lee, Homer, New York, N. Y. Intaglio print. No. 1,299,484; Apr. 8; v. 261; p. 226.
Lee, James E., assignor to The Challenge Machinery Co., Grand Haven, Mich. Non-removable printer's galley-lock. No. 1,301,952; Apr. 29; v. 261; p. 836.
Lee, Thomas L. (See Lee, Earle P. and T. L.)
Lefeber, John J., Calvary, Wis. Hammer. No. 1,302,184; Apr. 29; v. 261; p. 879.
Lefingwell, Frank D., Montclair, N. J. Subaqueous tunneling. No. 1,298,742; Apr. 1; v. 261; p. 29.
Leffler, Artur L. O. A. (See Cassel, Gunnar E., assignor.)
Lefler, Charles M., Winston, Mont. Grain-elevator. No. 1,301,142; Apr. 22; v. 261; p. 648.
Lehman, Joseph H. (See Klopf, Frederick M., assignor.)
Leibing, William E. (See Weber, Leibing, and Jacobsen.)
Leibing, William E., assignor of one-half to A. Weber, Oakland, Calif. Dispensing-valve. No. 1,299,586; Apr. 8; v. 261; p. 249.
Leigh, Thomas E. (See Cook, Leigh and Jowett.)
Leist, Jacob H., Portland, Oreg. Gasifier for gas-engines. No. 1,301,066; Apr. 15; v. 261; p. 597.
Leland Lock Company. (See Stanley, Theodore D., assignor.)
Leming, Frank, Hingham, Mass. Press for assembling shells. No. 1,302,185; Apr. 29; v. 261; p. 879.
Lemoine, Louis R., Philadelphia, Pa., assignor to United States Cast Iron Pipe and Foundry Company, Burlington, N. J. Molding apparatus. No. 1,299,967; Apr. 8; v. 261; p. 334.
Lemons, Charles R., assignor to J. W. Lemons, Pearce, Ariz. Toy. No. 1,302,289; Apr. 29; v. 261; p. 918.
Lemons, James W. (See Lemons, Charles R., assignor.)
Leon, William, Seattle, Wash. Burglar-trap. No. 1,300,981; Apr. 15; v. 261; p. 577.
Leonard, Carolyn G., administratrix. (See Leonard, Harry W.)
Leonard, Harry W., deceased, Bronxville, N. Y.; C. G. Leonard, administratrix, assignor to H. Ward Leonard Incorporated. Method and means for controlling electric energy. No. 1,298,974; Apr. 1; v. 261; p. 83.
Leonard, Roy E., Los Angeles, Calif., assignor of one-half to F. W. A. Finley, Pittsburgh, Pa. Expansible well-casing. No. 1,301,285; Apr. 22; v. 261; p. 677.
Lethern, Albert A., London, England, assignor, by mesne assignments, to Mills Woven Cartridge Belt Company, Worcester, Mass. Military equipment. No. 1,301,421; Apr. 22; v. 261; p. 703.
Leve, Marcus S., Oakland, assignor to L. B. De Laitte, San Francisco, Calif. Device for measuring liquids. No. 1,299,743; Apr. 8; v. 261; p. 285.
Levering, Wilson K., Ruxton, Md. Core-box. No. 1,301,578; Apr. 22; v. 261; p. 732.
Levi, Louis. (See Kraus, Adalbert, assignor.)
Levin, David, Buffalo, N. Y., assignor to Commercial Electrolytic Corporation, New York, N. Y. Making hydrogen peroxid. No. 1,299,485; Apr. 8; v. 261; p. 226.
Lewis, Edward D., Elmira, N. Y. Hydrocarbon-burner. No. 1,299,968; Apr. 8; v. 261; p. 335.
Lewis, Edward G. (See Daniel and Lewis.)
Lewis, Francis J., Cheltenham, England. Bed-table. No. 1,301,953; Apr. 29; v. 261; p. 836.
Lewis, Frank S., Denver, Colo. Arch-support. No. 1,301,579; Apr. 22; v. 261; p. 732.
Lewis, Goodrich Q., Wheaton, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car draft-rigging. No. 1,300,421; Apr. 15; v. 261; p. 458.
Lewis, Goodrich Q., Wheaton, and J. R. Mitchell, Evanston, Ill., assignors to W. H. Miner, Chazy, N. Y. Friction draft-gear. No. 1,300,422; Apr. 15; v. 261; p. 459.
Lewis, Henry J., assignor to Harley-Davidson Motor Company, Milwaukee, Wis. Welding-machine. No. 1,301,462; Apr. 22; v. 261; p. 711.
Lewis, Louis, London, England. Stencil production. No. 1,299,969; Apr. 8; v. 261; p. 335.
Lewis, Nathan E., Plainfield, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Baffle for steam-boilers. No. 1,299,486; Apr. 8; v. 261; p. 226.
Lichtenberg, Erich H., assignor to Koebring Machine Company, Milwaukee, Wis. Rotary concrete-mixer. No. 1,298,743; Apr. 1; v. 261; p. 29.
Lickley, Ralph M., East Cleveland, Ohio. Drifting-valve device for locomotives. No. 1,301,853; Apr. 29; v. 261; p. 817.
Liebenberg, Christian E., Erith, England. Automatic liquid-injector for internal-combustion engines. No. 1,301,463; Apr. 22; v. 261; p. 711.
Liebenberg, Christian E., Chester, Pa. Belt-shifter. No. 1,301,464; Apr. 22; v. 261; p. 711.

Lieberman, Hyman, Marinette, Wis. Direction-signal. No. 1,299,961; Apr. 1; v. 261; p. 169.
Lieske, Ernst, North Arlington, N. J., assignor of one-half to F. W. Lapp and one-half to O. C. Reith, New York, N. Y. Radiator attachment. No. 1,299,970; Apr. 8; v. 261; p. 225.
Lieske, Frank J., Detroit, assignor of one-sixteenth to C. F. Kuhn and one-sixteenth to H. J. Koepp, Marquette, Mich., and three-eighths to American Engineering Associates. Submarine. No. 1,300,744; Apr. 15; v. 261; p. 526.
Lieske, Frank J., Detroit, Mich., assignor, by mesne assignments, of one-half to American Engineering Associates. Submarine. No. 1,300,745; Apr. 15; v. 261; p. 527.
Lifshitz, Morris J. (See Friedmann and Lifshitz.)
Ligon, William D., Montclair, N. J. Safety inclosed fuse. No. 1,301,465; Apr. 22; v. 261; p. 711.
Lihme, Tens P., Lakewood, assignor to The Grasselli Chemical Company, Cleveland, Ohio. Making lead arsenate. No. 1,302,186; Apr. 29; v. 261; p. 879.
Limousine Top Company. (See Miner, Charles A., assignor.)
Limpp, Rufus H., King City, Mo. Oil-cock control and illuminator. No. 1,300,423; Apr. 15; v. 261; p. 459.
Lincoln, Anna C., Savannah, Ga. Thread-cutter and hem-creaser. No. 1,299,971; Apr. 8; v. 261; p. 225.
Lincoln, Paul M., Pittsburgh, and B. H. Smith, Turtle Creek, Pa.; said Smith assignor to Westinghouse Electric and Manufacturing Company. Measuring instrument. No. 1,300,288; Apr. 15; v. 261; p. 429.
Lind, Theodore, Taylorville, Ill. Foot-controlled accelerator. No. 1,301,580; Apr. 22; v. 261; p. 732.
Lind, Theodore E. (See Johnson, Lind, and Clarke.)
Linden, Robert A. (See Campbell, Duncan R., assignor.)
Lindgren, Alexus C., Moline, Ill., assignor to Moline Plow Company. Mechanical movement. No. 1,301,354; Apr. 29; v. 261; p. 817.
Lindgren, Oscar. (See Pearson, Nels, assignor.)
Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety device. No. 1,300,494; Apr. 15; v. 261; p. 459.
Lindsay Auto Parts Company. (See Heany, John A., assignor.)
Lindsay, William H., Johnstone, Scotland. Clutch. No. 1,298,975; Apr. 1; v. 261; p. 83.
Lindsey, James E., assignor of one-half to W. B. O'Neil, Louisville, Ky. Fastening device. No. 1,298,976; Apr. 1; v. 261; p. 84.
Lindstrom, Smith Company, The. (See Endorf, Charles, Jr., assignor.)
Linhart, Joseph, Elmhurst, N. Y. Garment-fastener. No. 1,301,855; Apr. 29; v. 261; p. 817.
Link-Belt Company. (See MacLennan, Joseph A., assignor.)
Linkowski, Wallie, Detroit, Mich. Necktie-holder. No. 1,301,792; Apr. 22; v. 261; p. 778.
Linlaud, Guillermo, Buenos Aires, Argentina. Lock. No. 1,301,466; Apr. 22; v. 261; p. 712.
Linn, Albert W., Memphis, Tenn. Advertising apparatus. No. 1,298,977; Apr. 1; v. 261; p. 84.
Linn, James F., assignor to Minneapolis Bedding Company, Minneapolis, Minn. Bed-spring hanger. No. 1,299,362; Apr. 1; v. 261; p. 169.
Linn, John A., Denver, Colo. Elevator. No. 1,302,080; Apr. 29; v. 261; p. 856.
Linnemann, Dilla C. (See Case, Henry M., assignor.)
Linscott, Charles W., Jackson, Mich. Rifle-barrel. No. 1,299,972; Apr. 8; v. 261; p. 225.
Lipp, Julius H. M., Buffalo, N. Y. Neckwear. No. 1,300,179; Apr. 8; v. 261; p. 350.
Lippe, Emory J., Fountain Hill borough, Pa. Uniting textile strands. No. 1,302,187; Apr. 29; v. 261; p. 879.
Lipson, Abraham. (See Sills, Berton H., assignor.)
Liseuby Mfg. Co. (See Piese, Jesse T., assignor.)
Little, James A., and C. P. Blum, Bismarck, N. D. Canning and drying apparatus. No. 1,301,286; Apr. 22; v. 261; p. 678.
Little, Willard R. (See Jorgensen, Cleah and J. J., assignors.)
Lively, William, Quanah, Tex. Pump-jack. No. 1,301,856; Apr. 29; v. 261; p. 817.
Liversedge, Alfred J., London, England. Dirigible airship. No. 1,300,746; Apr. 15; v. 261; p. 527.
Ljungdell, Karl, W., Malmö, Sweden. Apparatus for launching ships. No. 1,299,363; Apr. 1; v. 261; p. 169.
Lloyd, Charles E. H., Los Angeles, Calif. Spraying-nozzle for internal-combustion engines. No. 1,301,719; Apr. 22; v. 261; p. 760.
Lloyd, Harvey. (See Hyatt and Lloyd.)
Lloyd, Herbert D., Kent, Conn., assignor to Trailer Transportation Company, New York, N. Y. Trailer-vehicle. No. 1,299,973; Apr. 8; v. 261; p. 225.
Lloyd, John U., Cincinnati, Ohio. Extracting, purifying, or excluding alkaloids and alkaloidal salts. No. 1,300,747; Apr. 15; v. 261; p. 527.
Lobar, Abraham J., New York, N. Y. Separable button. No. 1,302,200; Apr. 29; v. 261; p. 918.
Locomobile Company of America, The. (See Hemsten and Helman, assignors.)
Locomobile Company of America, The. (See Schuls, Albert C., assignor.)
Locomotive Superheater Company. (See McKee, Neal T., assignor.)
Lodge, Edmund G., Philadelphia, Pa. Gas-regulator. No. 1,300,982; Apr. 15; v. 261; p. 577.
Loeb, H. W., et al., executors. (See Hubert, Henry J., assignor.)
Loeben, Gustave A., Philadelphia, Pa., assignor to The De Luxe Brush Company, Wilmington, Del. Device for dispensing liquid or plastic materials. No. 1,299,487; Apr. 8; v. 261; p. 226.
Loewenstein, Louis C., Lynn, Mass., assignor to General Electric Company. Turbine-driven electric-generator set. No. 1,302,060; Apr. 29; v. 261; p. 856.
Loken, Trula, Kenosha, Wis., assignor to F. C. Austin, Chicago, Ill. Excavator-bucket cleaner. No. 1,298,978; Apr. 1; v. 261; p. 84.
Lokey, Charles W., Birmingham, Ala. Fastening for removable dental bridges and bridge-plates. No. 1,299,364; Apr. 1; v. 261; p. 170.
Lombard Governor Company, The. (See Warren, Henry E., assignor.)
Lombard, Nathaniel, Worcester, Mass., assignor to International Paper Company. Machine for barking wood. No. 1,300,748; Apr. 15; v. 261; p. 527.
Long, Charles R. A., Indianapolis, Ind. Window-ventilator. No. 1,300,850; Apr. 15; v. 261; p. 549.
Long, Dewey F. (See Long, Emanuel B. and D. F.)
Long, Eli M., assignor to The Standard Optical Company, Geneva, N. Y. Edge-grinding machine for lenses. No. 1,298,979; Apr. 1; v. 261; p. 84.
Long, Emanuel B. and D. F., Crane Valley, Saskatchewan, Canada. Farm-gate. No. 1,300,284; Apr. 15; v. 261; p. 429.
Long, George F., assignor to G. Piel, New York, N. Y. Automobile-horn. No. 1,300,425; Apr. 15; v. 261; p. 459.
Long, John R., East Akron, Ohio. Automatic machine-vise. No. 1,299,488; Apr. 8; v. 261; p. 226.
Long, Lemuel F., et al. (See Christian, Thomas A., assignor.)
Long, William C., Gordon, Kans. Oil-burner. No. 1,299,843; Apr. 8; v. 261; p. 308.
Long, William J., Black Hills, Yukon Territory, Canada. Soap-holder. No. 1,301,720; Apr. 22; v. 261; p. 760.
Longest, William B., Louisville, Ky. Priming device for internal-combustion engines. No. 1,300,749; Apr. 15; v. 261; p. 527.
Longoria, Antonio, assignor to The Sterling Electrical Corporation Company, Cleveland, Ohio. High-frequency apparatus. No. 1,302,291; Apr. 29; v. 261; p. 919.
Lonsdale, John G., et al., executors. (See Hubert, Henry J., assignor.)
Lontz, John M., Richmond, Ind. Bearing for lawn-mowers. No. 1,298,980; Apr. 1; v. 261; p. 85.
Loomis, Harry T., and D. Z. Hunt, Brooklyn, N. Y. Puttee. No. 1,300,851; Apr. 15; v. 261; p. 550.
Loranger, Walter L., Highland Park, Mich. Dirigible headlight. No. 1,300,426; Apr. 15; v. 261; p. 459.
Lorenz, John, Milwaukee, Wis. Vehicle-tire. No. 1,301,467; Apr. 22; v. 261; p. 712.
Lorenz, William A., Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y. Apparatus for feeding molten glass. No. 1,300,180; Apr. 8; v. 261; p. 350.
Lorenz, William A., Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y. Apparatus for feeding molten glass. No. 1,300,181; Apr. 8; v. 261; p. 351.
Lorenz, William A., and S. H. Rood, Hartford, Conn. Hermetic closure for receptacles. No. 1,299,974; Apr. 8; v. 261; p. 336.
Lotsch, John L., Brooklyn, N. Y. Storage battery. No. 1,301,780; Apr. 22; v. 261; p. 773.
Lotysiewicz, George, Brooking, Saskatchewan, Canada. War balloon. No. 1,299,744; Apr. 1; v. 261; p. 285.
Loughridge, Matthew H., Bogota, N. J. Tubular tag. No. 1,298,981; Apr. 1; v. 261; p. 85.
Loughridge, Matthew H., Bogota, N. J. Cab-signal and train-control system. No. 1,299,595; Apr. 8; v. 261; p. 251.
Love, Sandy H., assignor of one-fourth to A. L. Nunn and one-fourth to A. P. Hampton, Colt, Ark. Gun. No. 1,301,143; Apr. 22; v. 261; p. 648.
Lovering, Orville J. (See Henry, Charles S. B., assignor.)
Low, David, and A. R. Thompson, San Jose, Calif.; said Thompson assignor to said Low. Feeder especially adapted for asparagus-handling machines. No. 1,299,198; Apr. 1; v. 261; p. 135.
Lowell-McConnell Manufacturing Company. (See McMurtry, Alden L., assignor.)
Lowell, William H., and M. T. Wintsch, Lancaster, Pa. Train-stop. No. 1,301,466; Apr. 22; v. 261; p. 712.
Lowenstein, Louis, Detroit, Mich. Adjustable square. No. 1,300,427; Apr. 15; v. 261; p. 460.
Lowenstein, Louis, Detroit, Mich. Wiggler. No. 1,300,428; Apr. 15; v. 261; p. 460.
Lowes Manufacturing Co. (See Sherman, Charles W., assignor.)
Lowman, Adonis G. E., Winnipeg, Manitoba, Canada. Card-scorer. No. 1,299,489; Apr. 8; v. 261; p. 227.
Lox, Oscar, Chicago, Ill. Smoke-consuming furnace. No. 1,302,061; Apr. 29; v. 261; p. 887.

Luban, Alexander, Newark, N. J. Heating or steaming apparatus. No. 1,301,469; Apr. 22; v. 261; p. 712.
Lucas, William B., Oak Park, assignor of one-half to E. L. Markey, Evanston, Ill. Rectifier. No. 1,301,561; Apr. 22; v. 261; p. 732.
Luckey, Forrest D., Logan, Utah. Padlock. No. 1,300,983; Apr. 15; v. 261; p. 578.
Ludeke, Emil, Rochester, N. Y. Fastening device. No. 1,300,429; Apr. 15; v. 261; p. 460.
Ludlow, Israel, New York, N. Y. Shell-packing. No. 1,302,392; Apr. 29; v. 261; p. 919.
Ludlow, William E., Cleveland, Ohio. Device for suspending and securing telephone-directories. No. 1,299,745; Apr. 8; v. 261; p. 285.
Ludwig, Willard M., assignor to Kier Letter Company, Chicago, Ill. Printing-press. No. 1,301,470; Apr. 22; v. 261; p. 712.
Luikart, Roy E., Sioux Falls, S. D. Rotary engine. No. 1,299,588; Apr. 8; v. 261; p. 249.
Lukasiewski, Stanislaw J., Detroit, Mich. Engine. No. 1,298,744; Apr. 1; v. 261; p. 29.
Lum, Walter O., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,298,745; Apr. 1; v. 261; p. 29.
Lum, Walter O., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrically-operated switch. No. 1,298,746; Apr. 1; v. 261; p. 29.
Lumm, Silvanus F. (See Greenstreet and Lumm.)
Lummus Cotton Gin Company. (See Grimes, Thaddeus S., assignor.)
Lund, John, Bethlehem, assignor to Bethlehem Steel Company, South Bethlehem, Pa. Elevating and sighting mechanism for guns. No. 1,298,982; Apr. 1; v. 261; p. 85.
Lund, John, Bethlehem, assignor to Bethlehem Steel Company, South Bethlehem, Pa. Gun-carriage. No. 1,298,983; Apr. 1; v. 261; p. 85.
Lund, John, Bethlehem, assignor to Bethlehem Steel Company, South Bethlehem, Pa. Gun-carriage. No. 1,298,984; Apr. 1; v. 261; p. 85.
Lunser, Alexander J., Long Prairie, Minn. Ladder-foot. No. 1,300,430; Apr. 15; v. 261; p. 460.
Luthy, Joseph O., San Antonio, Tex. Battery-terminal. No. 1,300,431; Apr. 15; v. 261; p. 460.
Luttrell, John D., Benton Harbor, Mich. Acetylene-lamp. No. 1,302,393; Apr. 29; v. 261; p. 919.
Luyties, Otto G., Sharon Springs, N. Y. Automobile. No. 1,299,844; Apr. 8; v. 261; p. 308.
Lyckland, Arthur M., and H. Wachenheimer, assignors to Wachenheimer Bros., Providence, R. I. Garment-holder. No. 1,300,852; Apr. 15; v. 261; p. 556.
Lynch, Leslie J., Lorena, Okla. Animal-poke. No. 1,298,985; Apr. 1; v. 261; p. 86.
Lynes, William W., Kamloops, British Columbia, Canada. Potato-digging machine. No. 1,301,857; Apr. 29; v. 261; p. 817.
Lyon, Arthur A. (See Todman, Cooper, and Lyon.)
Lyon & Healy. (See Kirk, Walter L., assignor.)
Lyons, Edgar S., Toronto, Ontario, Canada, assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,746; Apr. 8; v. 261; p. 285.
Lyons, Robert L., Waltham, Mass., assignor to Frederick Osann Company, New York, N. Y. Sewing-machine. No. 1,302,394; Apr. 29; v. 261; p. 919.
Lypka, Stephen, Langenburg, Saskatchewan, Canada. Lock. No. 1,299,199; Apr. 1; v. 261; p. 133.
Lzarnopyski, Piotr. (See Roy, George, assignor.)
M. D. Knowlton Company. (See Seymour and Hoch, assignors.)
M-L Magneto Syndicate, The. (See Watson, Ernest A., assignor.)
MacDonald, James M., East Orange, N. J. Molding and ornamenting plastic substances. No. 1,301,969; Apr. 15; v. 261; p. 598.
MacDowney, Silas C., Chicago, Ill. Measuring instrument. No. 1,299,978; Apr. 8; v. 261; p. 336.
MacIndoe, John F., Philadelphia, Pa. Lubricator. No. 1,300,751; Apr. 15; v. 261; p. 528.
MacLachlan, Hugh W., Petaluma, Calif. Separable telescope or opera-glass. No. 1,299,750; Apr. 8; v. 261; p. 286.
MacLachlan, John C., St. Paul, Minn. Apparatus for granulating heavy semifluid materials. No. 1,301,283; Apr. 22; v. 261; p. 678.
MacLennan, Joseph A., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Conveyer. No. 1,300,438; Apr. 15; v. 261; p. 462.
MacNichol, George P., assignor, by mesne assignments, to J. N. Willys, Toledo, Ohio. Glass-cutting mechanism. No. 1,298,987; Apr. 1; v. 261; p. 86.
MacNicoll, Donald. (See Cockburn and MacNicoll.)
Macaw, Duncan, Norwood, Pa. Flower-pot support or hanger. No. 1,300,629; Apr. 15; v. 261; p. 502.
Macbeth, Jeremont J., Dayton, Ohio. Gasolene-dispensing pump. No. 1,301,861; Apr. 29; v. 261; p. 818.
Macbeth, Jeremont J., Dayton, Ohio. Spark-plug. No. 1,301,862; Apr. 29; v. 261; p. 818.
Macdonald, John D., assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass. Carton. No. 1,299,849; Apr. 8; v. 261; p. 309.
Macdonald, John W. F., Brighton, Mass., assignor to The Merrill Process Company. Automatic valve control. No. 1,299,850; Apr. 8; v. 261; p. 309.
Macdonald, John W. F., Brighton, Mass., assignor to The Merrill Process Company. Heater. No. 1,301,963; Apr. 29; v. 261; p. 819.
Macecevic, Joseph, Pittsburgh, Pa. Wrench. No. 1,301,472; Apr. 22; v. 261; p. 713.
Mack, Carl, New York, N. Y., assignor to H. C. Karlson, Hasbrouck Heights, N. J. Eyeleting-machine. No. 1,300,219; Apr. 8; v. 261; p. 390.
Mack, Floyd E., Lockport, N. Y., and F. R. Foster, Jonesboro, Tenn., assignors to Mack-Foster Co., Norristown, Pa. Oil-burner. No. 1,299,491; Apr. 8; v. 261; p. 227.
Mack-Foster Co. (See Mack and Foster, assignors.)
Mack, Patrick H., Bradford, assignor to Oil Well Supply Company, Pittsburgh, Pa. Packing structure. No. 1,299,365; Apr. 1; v. 261; p. 171.
Mackiewicz, Stanislaw, Wortman, Colo. Toilet article. No. 1,298,750; Apr. 1; v. 261; p. 31.
Macloskie, George, Erie, Pa., assignor to General Electric Company. Automatic decelerating air-brake equipment. No. 1,301,723; Apr. 22; v. 261; p. 761.
Macomic, Chester A., Chicago, Ill. Type-setting machine. No. 1,301,146; Apr. 22; v. 261; p. 649.
Maddox, Robert D., U. S. Army. Mixing and grinding apparatus. No. 1,301,070; Apr. 15; v. 261; p. 598.
Madison, John O., Brooklyn, N. Y. Trussed sheet structure. No. 1,300,439; Apr. 15; v. 261; p. 462.
Mafitt, Thomas S. (See Goltra, Mafitt, Dana, and Erwin.)
Magee, Chauncey L. C., Chicago, Ill. Radiator-heater. No. 1,300,440; Apr. 15; v. 261; p. 462.
Magie, William E., Evansville, Ind. Control-gear for hydraulic transmission. No. 1,299,731; Apr. 8; v. 261; p. 287.
Magin, Carl J., assignor of one-half to I. Mayer, Belleville, Ill. Attachment for cornets and other brass instruments. No. 1,301,147; Apr. 22; v. 261; p. 649.
Mahoney, Thomas. (See McCullough and Mahoney.)
Maiden, Leamon A. (See Black and Maiden.)
Major, R. N. (See Erwin, Mercer, assignor.)
Malburg, Raymond S., Los Angeles, Calif. Door-open signal for all vehicles. No. 1,299,979; Apr. 8; v. 261; p. 337.
Malchow, Albert, Phoenix, Ariz. Wrench. No. 1,299,801; Apr. 8; v. 261; p. 250.
Malcom, John, Elrod, S. D. Grain-harvester. No. 1,301,220; Apr. 22; v. 261; p. 678.
Malcomb, Clyde C., Riverville, W. Va. Lath-mill belter. No. 1,299,752; Apr. 8; v. 261; p. 287.
Males, Herbert, et al. (See Northall, William H., assignor.)
Malone, John J., New Haven, Conn. Door-latch. No. 1,302,063; Apr. 29; v. 261; p. 857.
Manchester Oxide Company, The. (See Clayton, Huebner, and Williams, assignors.)
Mandelbaum, Henry, Brooklyn, N. Y. Feed-bag. No. 1,300,985; Apr. 15; v. 261; p. 578.
Mandleberg, Joseph H., Pendleton, Manchester, England. Impregnation of fabrics for balloons and the like. No. 1,302,064; Apr. 29; v. 261; p. 857.
Mandleberg, Joseph H., Pendleton, Manchester, England. Composition for impregnating and coating balloon and like fabrics. No. 1,302,065; Apr. 29; v. 261; p. 857.
Mangeisdorff, Max F., Union Hill, assignor to H. Benta, Montclair, N. J. Apparatus for dehydrating. No. 1,299,492; Apr. 8; v. 261; p. 228.
Mangeisdorff, Max F., Union Hill, assignor to H. Benta, Montclair, N. J. Process of and apparatus for preparing potatoes for dehydration. No. 1,299,493; Apr. 8; v. 261; p. 228.
Mangini, Andrew, Warren, Pa., assignor of one-half to E. V. Barber. Letter-opener. No. 1,302,296; Apr. 29; v. 261; p. 920.
Manley, James P., Anderson, Ind. Railway-tie. No. 1,299,202; Apr. 1; v. 261; p. 133.
Mann, Miles H., and A. H. Hawley, assignors, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Calculating and money-paying machine. No. 1,298,781; Apr. 1; v. 261; p. 31.
Manning, Ferdinand, Genesco, Kans. Plow. No. 1,301,734; Apr. 22; v. 261; p. 761.
Manning, Frank, Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,298,782; Apr. 1; v. 261; p. 31.
Mansfield, Harry R., Racine, Wis., assignor to Racine Handy Manufacturing Company. Robe-lock. No. 1,300,986; Apr. 15; v. 261; p. 578.
Mansfield, James F., Long Island City, N. Y. Watch-carrier. No. 1,302,066; Apr. 29; v. 261; p. 857.
Manufacturers Iron & Steel Company. (See Whitaker, Richard, Jr., assignor.)
Marathon Company. (See Fisher, George L., assignor.)
Marcinko, Andrew, Joliet, Ill. Artificial limb. No. 1,299,980; Apr. 8; v. 261; p. 337.
Marconi, Guglielmo, and C. S. Franklin, London, England, assignors to Marconi Wireless Telegraph Company of America, New York, N. Y. Reflector for use in wireless telegraphy and telephony. No. 1,301,473; Apr. 22; v. 261; p. 713.
Marconi Wireless Telegraph Company of America. (See Franklin, Charles S., assignor.)
Marconi Wireless Telegraph Company of America. (See Marconi and Franklin, assignors.)
Marcy, Richard. (See Nevens and Marcy.)

Marcy, Willard A., Newton Upper Falls, assignor to The Lamson Company, Boston, Mass. Tray-conveying apparatus. No. 1,300,987; Apr. 15; v. 261; p. 570.
Marinsky, Davis, New York, N. Y. Garment-fastening device. No. 1,301,726; Apr. 22; v. 261; p. 761.
Mark, James M., Oregon City, Oreg. Babbitting-mandrel. No. 1,299,981; Apr. 8; v. 261; p. 337.
Mark Manufacturing Company. (See Fox, Gordon, assignor.)
Markey, Eugene L. (See Lucas, William B., assignor.)
Marquette, Melvon A., Springfield, assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Vulcanizing device. No. 1,301,143; Apr. 22; v. 261; p. 649.
Marsa, Melchor, New York, assignor to International Cork Company, Brooklyn, N. Y. Cork-feeding mechanism. No. 1,300,441; Apr. 15; v. 261; p. 463.
Marsden, William N., Amsterdam, N. Y., assignor to Fownes Brothers & Co., London, England. Cam-follower mechanism. No. 1,299,754; Apr. 8; v. 261; p. 788.
Marseilles Company. (See Vanderbilt, Farley D., assignor.)
Marshall, Charles A., Denver, assignor of one-half to L. H. Blonger, Edgewater, Colo. Tractor. No. 1,301,583; Apr. 22; v. 261; p. 733.
Marshall, Lillard T., Winchester, Ky. Chiropractic table. No. 1,301,071; Apr. 15; v. 261; p. 599.
Marshall, Milton F., Parsons, Kans. Spray-gun. No. 1,301,149; Apr. 22; v. 261; p. 650.
Martens, Charles, Springfield, Ill. Shock-absorber. No. 1,301,474; Apr. 22; v. 261; p. 713.
Martin, George W., San Antonio, Tex. Condensing apparatus. No. 1,299,982; Apr. 8; v. 261; p. 337.
Martin, John C., Faulkton, S. D. Visual tail-light reflector. No. 1,301,160; Apr. 22; v. 261; p. 650.
Martin, John F., Gentry, Ark. Candle-holder. No. 1,302,200; Apr. 29; v. 261; p. 920.
Martin, Talbot G. (See Campbell and Martin.)
Martin, Talbot G., Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company. Combined automatic and manual telephone system. No. 1,301,864; Apr. 22; v. 261; p. 732.
Martus, Augustus A., Brown City, Mich. Bean-assorting machine. No. 1,298,988; Apr. 1; v. 261; p. 86.
Martyn, David L., and J. M. Henderson, Walla Walla, Wash. Heel-support. No. 1,299,963; Apr. 8; v. 261; p. 337.
Mascarini, Giovanni, and A. Centarelli, Milan, Italy. Motor-starter. No. 1,302,400; Apr. 29; v. 261; p. 920.
Mascord, George W., Barnes, London, England. Fudge or late-news device for newspaper-printing presses. No. 1,301,072; Apr. 15; v. 261; p. 599.
Masillan, William, Raymond, Wash. Flooring-block. No. 1,299,494; Apr. 8; v. 261; p. 228.
Mason, Arthur C., Flint, Mich., assignor, by mesne assignments, to Chevrolet Motor Company. Automobile wheel-brake. No. 1,301,966; Apr. 29; v. 261; p. 887.
Mason, Charles R., and R. W. Trigg, Youngstown, Ohio. Grocery-cabinet. No. 1,301,304; Apr. 29; v. 261; p. 819.
Mason, Charles T., Sumter, S. C., assignor to Spitdorf Electrical Company, Newark, N. J. Method and apparatus for igniting the charge in internal-combustion engines. No. 1,299,582; Apr. 8; v. 261; p. 250.
Mason, Francis C., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Vacuum-cleaner. No. 1,302,192; Apr. 29; v. 261; p. 880.
Mason, James J., Cisco, Calif. Telegraph-key. No. 1,302,681; Apr. 29; v. 261; p. 920.
Mason, Jason B., assignor to Reed Foundry & Machine Co., Kalamazoo, Mich. Tractor-plow. No. 1,298,989; Apr. 1; v. 261; p. 86.
Mason, William H., South Orange, N. J. Gearless power transmission. No. 1,298,990; Apr. 1; v. 261; p. 87.
Massachusetts Saw Works. (See Jackman and Squire, assignors.)
Massey Concrete Products Corporation. (See Greenfield and Kircher, assignors.)
Mather, Charles F., Erie, Pa. Sand-box ventilator. No. 1,299,495; Apr. 8; v. 261; p. 228.
Mathews, Charles O., Milford, Conn. Hearse-table. No. 1,299,994; Apr. 8; v. 261; p. 337.
Mathews Engineering Company, The. (See Cosgray, Mark C., assignor.)
Mathews, John H. (See Krawczynski, Joseph, assignor.)
Mathews, Samuel J., Kansas City, Mo., assignor to B & B Manufacturing and Drilling Company. Drilling-gear. No. 1,300,988; Apr. 15; v. 261; p. 579.
Mathews, Samuel J., Kansas City, Mo., assignor to B & B Manufacturing and Drilling Company. Well-drilling apparatus. No. 1,300,989; Apr. 15; v. 261; p. 579.
Mathias, Berton M., Minneapolis, assignor of one-half to C. D. Enochs, East Shore Park, Minn. Worm-gearing. No. 1,299,593; Apr. 8; v. 261; p. 250.
Mathis, William R., assignor of one-half to R. Bleecker, Visalia, Calif. Vaporizer. No. 1,300,620; Apr. 15, v. 261; p. 502.
Mathy, Maurice, Flemalle Grande, Belgium. Machine for drawing colored lines on crystal or glass objects. No. 1,298,753; Apr. 1; v. 261; p. 31.
Matlock, Leonard, Ralph, Ark. Airship. No. 1,298,754; Apr. 1; v. 261; p. 32.
Matoushek, Frank, Colome, S. D. Cultivator. No. 1,300,442; Apr. 15; v. 261; p. 463.
Matson, Carl W., Prairie City, Oreg. Self-propelled sled. No. 1,302,186; Apr. 29; v. 261; p. 880.
Matson, Henry L., Astoria, Oreg. Automatic train control. No. 1,299,985; Apr. 8; v. 261; p. 338.
Matter, Albert J., and F. V. Conley, Portland, Oreg. Silent camera-shutter. No. 1,298,755; Apr. 1; v. 261; p. 32.
Mattern, Jacob A., Des Moines, Iowa, Fire-escape. No. 1,300,752; Apr. 15; v. 261; p. 528.
Matteson, Charles E., and C. W. Bailey, Maud, Okla. Dirigible headlight. No. 1,300,753; Apr. 15; v. 261; p. 528.
Matthews, Walter G., et al. (See Ward, James J., assignor.)
Mattison, Eugene G., Pasadena, Calif. Wind-shield shade. No. 1,299,986; Apr. 8; v. 261; p. 338.
Matulaitis, Matiasaas, Brooklyn, N. Y. Damper-regulator. No. 1,299,755; Apr. 8; v. 261; p. 288.
Maublanc, Léon, Nantes, France. Artificial hand. No. 1,299,756; Apr. 8; v. 261; p. 288.
Mauger, Louis C. (See Planche, Léon, assignor.)
Mauney, James P., Prosser, Wash. Receptacle. No. 1,299,369; Apr. 1; v. 261; p. 171.
Maxson, Charles P., West Mystic, Conn. Ship's log. No. 1,301,585; Apr. 22; v. 261; p. 733.
Mayer, Fred W., Chicago, Ill. Garment-rack. No. 1,301,957; Apr. 29; v. 261; p. 837.
Mayer, Ignatz. (See Magin, Carl J., assignor.)
Mayer, Oscar G., Chicago, Ill. Machine for the treatment of sausage-casings. No. 1,302,194; Apr. 29; v. 261; p. 881.
Mayers, Elton F., New York, N. Y. Engine-starter. No. 1,299,370; Apr. 1; v. 261; p. 171.
Maynard, Arthur H., Warwick, R. I., assignor to Boston Wire Stitcher Company, Portland, Me. Wire stitching or stapling machine. No. 1,302,402; Apr. 29; v. 261; p. 921.
Mayo, Benjamin F., Salem, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Heeling-machine. No. 1,301,899; Apr. 29; v. 261; p. 826.
Mays Accounting Machine Company. (See Mays, James F., assignor.)
Mays, James F., Birmingham, Ala., assignor to Mays Accounting Machine Company, Lexington, N. C. Calculating-machine. No. 1,301,073; Apr. 15; v. 261; p. 599.
McAdams, John B. (See Fanning and McAdams.)
McAllister, Cyrus A. (See Hodges, Allan B., assignor.)
McBride, Edward L., St. Louis, Mo. Cook-stove. No. 1,301,582; Apr. 22; v. 261; p. 733.
McCabe, Frank A., Blackfoot, Mont. Puzzle. No. 1,302,188; Apr. 29; v. 261; p. 879.
McCarty, William F., assignor to Defiance Machine Works, Defiance, Ohio. Horizontal boring, drilling, milling, and tapping machine. No. 1,302,396; Apr. 29; v. 261; p. 919.
McCaskell, Jasper A., Salt Lake City, Utah. Shock-absorber. No. 1,301,067; Apr. 15; v. 261; p. 597.
McCaskey Register Company, The. (See Hick, Harry J., assignor.)
McCaskey Register Company, The. (See Lyons, Edgar S., assignor.)
McCaskey Register Company, The. (See Pollock and Hick, assignors.)
McCaskey Register Company, The. (See Silvius, Ellis T., assignor.)
McCauley, Joseph J., Uhrichsville, Ohio. Cigar-bunching machine. No. 1,302,396; Apr. 29; v. 261; p. 920.
McClain, John R., Edgewood, Pa., assignor to Westinghouse Electric & Manufacturing Company. Wood veneer. No. 1,299,747; Apr. 8; v. 261; p. 286.
McClellan, Benjamin S., Chicago, Ill. Expansion-valve. No. 1,300,182; Apr. 8; v. 261; p. 381.
McClelland, John, Kansas City, Mo. Ventilator. No. 1,301,553; Apr. 29; v. 261; p. 818.
McClosky, George J., Washington, D. C. Control mechanism for motor-vehicles. No. 1,299,748; Apr. 8; v. 261; p. 286.
McColl, Francis P., Ridgewood, N. J., and W. W. Willison, assignors to Thermokept Products Corporation, New York, N. Y. Canning and can. No. 1,302,189; Apr. 29; v. 261; p. 880.
McConway & Torley Company, The. (See George, Enoch, Jr., assignor.)
McConway & Torley Company, The. (See Kelso, William, assignor.)
McCord, Alvin C., assignor to McCord and Company, Chicago, Ill. Journal-box. No. 1,299,845; Apr. 8; v. 261; p. 309.
McCord and Company. (See McCord, Alvin C., assignor.)
McCormack, Orliff L., Norwood, Ohio. Flagstaff. No. 1,302,190; Apr. 29; v. 261; p. 880.
McCoy, James P. A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Molded electric conductor and making the same. No. 1,299,846; Apr. 8; v. 261; p. 309.
McCoy, James P. A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Molded composition and making the same. No. 1,299,847; Apr. 8; v. 261; p. 309.
McCoy, James P. A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Molding composition. No. 1,300,218; Apr. 8; v. 261; p. 329.

McCullough, William D., and T. Mahoney, assignors to Premier Cushion Spring Company, Detroit, Mich. Upholstery spring construction. No. 1,298,747; Apr. 1; v. 261; p. 30.
McCutcheon, Joe A., Austin, Tex. Incinerator. No. 1,299,975; Apr. 8; v. 261; p. 336.
McDonald, Alexander, Duluth, Minn. Liquid-vending device. No. 1,300,285; Apr. 15; v. 261; p. 430.
McDonald, Alexander, Duluth, Minn. Liquid-receptacle. No. 1,300,432; Apr. 15; v. 261; p. 460.
McDonald, Charles P., Detroit, Mich. Cushion and forming the same. No. 1,300,853; Apr. 15; v. 261; p. 550.
McDonnell, Ralph R., Chicago, Ill. Automobile direction-indicator. No. 1,299,976; Apr. 8; v. 261; p. 336.
McElroy, Isaac E., and L. Risk, Minneapolis, Minn.; said McElroy assignor to C. H. Rogers, St. Paul, Minn. Vulcanizer. No. 1,301,721; Apr. 22; v. 261; p. 760.
McElroy, Robert L. (See Penney, Harold D., assignor.)
McElwain, George, El Paso, Tex. Ore-separating apparatus. No. 1,299,848; Apr. 8; v. 261; p. 309.
McEwan, Frank J., Chicago, Ill. Tool-box for vehicles. No 1,302,397; Apr. 29; v. 261; p. 920.
McEwen, William M. (See Lamb, Charles C., assignor.)
McEwen, Willard M. (See Olson, Gustaf, assignor.)
McFarland, John C., La Grande, Oreg. Matrix-machine. No. 1,299,749; Apr. 8; v. 261; p. 286.
McFarlane, Robert E. (See Ehle, Henry D., assignor.)
McFarlane, Robert E., Duluth, Minn. Tourniquet. No. 1,302,062; Apr. 29; v. 261; p. 857.
McFeaters, George H., Johnstown, Pa. Engine-stop. No. 1,301,471; Apr. 22; v. 261; p. 713.
McGary, Eugene L., Chicago, Ill. Press. No. 1,301,954; Apr. 29; v. 261; p. 836.
McGregor, Allan L., Chicago, Ill. Automobile-bumper. No. 1,300,433; Apr. 15; v. 261; p. 461.
McGregor, Allan L., Chicago, Ill. Automobile-bumper. No. 1,300,434; Apr. 15; v. 261; p. 461.
McGregor, William A., assignor to McGregor Working Barrel Company, Inc., Bradford, Pa. Working barrel for oil-well pumps. No. 1,301,068; Apr. 15; v. 261; p. 598.
McGregor Working Barrel Company. (See McGregor, William A., assignor.)
McGuire, Frank A., Iola, Kans. Wick-holder. No. 1,299,977; Apr. 8; v. 261; p. 336.
McGurk, Daniel J., Akron, Ohio. Guide-light. No. 1,301,722; Apr. 22; v. 261; p. 761.
McIntyre, Michael M., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Vehicle-spring. No. 1,298,745; Apr. 1; v. 261; p. 90.
McIntyre, Verne E., Hinsdale, Mont. Attachment for grain-binders. No. 1,299,965; Apr. 1; v. 261; p. 170.
McKay Concrete Form Company. (See McKay, Stewart R., assignor.)
McKay, John A., Toronto, Ontario, Canada. Electrical-fitting connection. No. 1,300,286; Apr. 15; v. 261; p. 430.
McKay, Stewart R., East Cleveland, Ohio, assignor to McKay Concrete Form Company, Bewaren, N. J. Concrete-form. No. 1,299,200; Apr. 1; v. 261; p. 133.
McKay, Stewart R., Cleveland, Ohio, assignor to McKay Concrete Form Company, Bewaren, N. J. Concrete-form. No. 1,300,435; Apr. 15; v. 261; p. 461.
McKay, Stewart R., East Cleveland, Ohio, assignor to McKay Concrete Form Company, Bewaren, N. J. Concrete-form. No. 1,300,436; Apr. 15; v. 261; p. 462.
McKechnie, James, Barrow-in-Furness, assignor to Vickers Limited, Westminster, England. Fabric for gas-bags of aircraft and manufacturing the same. No. 1,301,955; Apr. 29; v. 261; p. 837.
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Connecting means for superheater elements. No. 1,300,750; Apr. 15; v. 261; p. 528.
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Front-end closure. No. 1,301,144; Apr. 22; v. 261; p. 649.
McKenna, Alexander G., and W. Dalton, assignors to Washington Steel & Ordinance Company, Washington, D. C. Armor-piercing projectile. No. 1,301,859; Apr. 29; v. 261; p. 818.
McKenna, Alexander G., and W. Dalton, assignors to Washington Steel & Ordinance Company, Washington, D. C. Armor-piercing projectile. No. 1,301,860; Apr. 29; v. 261; p. 818.
McKibben, Charles W., Houston, Tex. Separating associated liquids. No. 1,299,589; Apr. 8; v. 261; p. 249.
McKibben, Charles W., Houston, Tex. Method and means for separating water from heavy-oil emulsions. No. 1,299,590; Apr. 8; v. 261; p. 250.
McKirahan, Virginia, New Rochelle, N. Y. Curtain-protecting attachment for screens. No. 1,300,984; Apr. 15; v. 261; p. 578.
McLanahan, Austin. (See Potts, Louis M., assignor.)
McLaren, William E., Chicago, Ill. Convertible high chair. No. 1,299,366; Apr. 1; v. 261; p. 170.
McLaughlin, E. J., *et al.* (See Rial and Hebern, assignors.)
McLaughlin, Frank, assignor to De Luxe Brush Company, Philadelphia, Pa. Liquid-dispensing device. No. 1,300,183; Apr. 8; v. 261; p. 382.
McLaughlin, James A., Jesup, Ga. Hay-curing rack. No. 1,301,145; Apr. 22; v. 261; p. 649.
McLellan, William, *et al.* (See Michie and Weeks, assignors.)
McLeod, Norman L. (See Harris and McLeod.)
McMahon, Elmer C., Brothers, Oreg. Tool-handle. No. 1,301,287; Apr. 22; v. 261; p. 678.
McManus, Charles E., New York, N. Y. Compressing and packing machine. No. 1,296,749; Apr. 1; v. 261; p. 30.
McMichael, James D., and F. H. Clement, Rochester, N. Y. Segment-jointing attachment for saw-benches. No. 1,299,367; Apr. 1; v. 261; p. 170.
McMurtry, Alden L., Sound Beach, Conn., assignor to Lovell-McConnell Manufacturing Company, Newark, N. J. Diaphragm-horn. No. 1,299,201; Apr. 1; v. 261; p. 133.
McNeil, Chester, assignor to Union Special Machine Company, Chicago, Ill. Presser-foot for sewing-machines. No. 1,300,854; Apr. 15; v. 261; p. 550.
McNeil, Daniel W., assignor to The John Douglas Company, Cincinnati, Ohio. Machine for molding ceramics. No. 1,302,191; Apr. 29; v. 261; p. 880.
McNeill, Aaron, *et al.* (See Ricks, George H., assignor.)
McNicol, Roy, Lanark, Ontario, Canada. Belt-fastener. No. 1,300,427; Apr. 15; v. 261; p. 462.
McPherson, Elmer T., assignor to The Irwin Auger Bit Company, Wilmington, Ohio. Bit. No. 1,299,490; Apr. 8; v. 261; p. 227.
McTaggart, Angus L., Pittsburgh, Pa. Tractor. No. 1,298,986; Apr. 1; v. 261; p. 88.
Meacham, Benjamin E., Lorain, Ohio, assignor to The American Stove Company, St. Louis, Mo. Heat and damper regulator for gas-ovens. No. 1,300,800; Apr. 15; v. 261; p. 579.
Mead, Ezra B., assignor to Ottumwa Iron Works, Ottumwa, Iowa. Brake-operating mechanism. No. 1,301,290; Apr. 22; v. 261; p. 678.
Medanich, Daniel E., Buechel, Ky. Oiling system for internal-combustion motors. No. 1,299,757; Apr. 8; v. 261; p. 288.
Meek, Oscar. (See Atherton and Meek.)
Meek, Walter W., Lynnville, Tenn. Rail-tie and coupling. No. 1,298,901; Apr. 1; v. 261; p. 87.
Meiklereid, Duncan G. (See Parker, Davy, and Meiklereid.)
Meimsolt, Carl C., Paddington, New South Wales, Australia. Piano sounding-board. No. 1,299,203; Apr. 1; v. 261; p. 134.
Meichert, Charles A., and H. A. Kohls, assignors to Automatic Machine Mfg. Co., Kansas City, Mo. Package-vending machine. No. 1,301,074; Apr. 15; v. 261; p. 599.
Mellin, Gustaf A. E., Los Angeles, Calif. Adjustable gear-shift lever for automobiles and the like. No. 1,301,475; Apr. 22; v. 261; p. 713.
Meloon, Jonathan C., assignor to General Fire Extinguisher Company, Providence, R. I. Pipe-coupling. No. 1,299,371; Apr. 1; v. 261; p. 171.
Melrose, Murdock W., North Bellingham, Mass. Valve-spring lifter. No. 1,299,496; Apr. 8; v. 261; p. 228.
Melville Clark Piano Company. (See Burton, Charles S., assignor.)
Mendelsohn, Willis H., Gardena, Calif. Key-ring holder. No. 1,302,067; Apr. 29; v. 261; p. 858.
Mendenhall, Clarence M., New Rochelle, N. Y. Nut and bolt lock. No. 1,301,958; Apr. 29; v. 261; p. 837.
Mendenhall, Frank E., Kilgore, Nebr. Potato-planter. No. 1,298,756; Apr. 1; v. 261; p. 82.
Menge, Anton C., assignor of one-fourth to C. J. Lafitte and one-fourth to A. W. Short, Myrtlegrove, La. Insect-destroying device. No. 1,299,872; Apr. 1; v. 261; p. 171.
Mercer, Frank H., and H. F. H. Bleam, Melksham, England. Machine for the manufacture of tire-covers. No. 1,299,497; Apr. 8; v. 261; p. 229.
Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)
Merklee, William H., Union Hill, and J. H. Geraghty, Bogota, N. J. Container label and guard. No. 1,298,992; Apr. 1; v. 261; p. 87.
Merle, Alfred J. (See Granwald, Bertrand B., assignor.)
Merrick, Ernest, Elizabeth, N. J., assignor to Merrick Fireproof Construction Co. Mold or form for concrete structures. No. 1,301,959; Apr. 29; v. 261; p. 837.
Merrick Fireproof Construction Co. (See Merrick, Ernest, assignor.)
Merrick, Frank W., assignor to Union Lock Stitch Company, Boston, Mass. Lasting-machine. No. 1,301,726; Apr. 22; v. 261; p. 761.
Merrill, Carle J., Portland, Me. Insulated-building construction. No. 1,300,443; Apr. 15; v. 261; p. 463.
Merrill Process Company, The. (See Macdonald, John W. F., assignor.)
Merz, Charles H., *et al.* (See Michie and Weeks, assignors.)
Messenger, Robert P., Copenhagen, Denmark. Pencil-sharpening instrument. No. 1,301,727; Apr. 22; v. 261; p. 762.
Messick, Charles, Hackensack, N. J., assignor to Electrical Conveying Machinery Company. Method and machine for making treads. No. 1,299,967; Apr. 8; v. 261; p. 338.
Metals Plating Company, The. (See Conran, Frederick M., assignor.)

Metals Plating Company, The. (See Watkins, William E., assignor.)
Metropolitan Sewing Machine Corporation. (See Weis, John P., assignor.)
Metten, John F., Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company. Marine steam-turbine. No. 1,300,287; Apr. 15; v. 261; p. 430.
Metz, Samuel T., Brooklyn, N. Y., assignor to Victory Corset and Girdle Co., Inc. Fabric. No. 1,301,865; Apr. 29; v. 261; p. 819.
Metz, Samuel T., Brooklyn, N. Y., assignor to Victory Corset and Girdle Co., Inc. Making fabrics. No. 1,302,195; Apr. 29; v. 261; p. 881.
Metzger, Floyd J., assignor to Air Reduction Company, Inc., New York, N. Y. Coating with metals. No. 1,299,868; Apr. 8; v. 261; p. 338.
Meyer, Albert C., San Diego, Calif. Hand-stamp rack. No. 1,298,993; Apr. 1; v. 261; p. 87.
Meyer, Albert P., assignor to Allen S. Davison Company, Pittsburgh, Pa. Making furnace-lining materials. No. 1,300,631; Apr. 15; v. 261; p. 503.
Meyer, Friedrich W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,298,757; Apr. 1; v. 261; p. 33.
Meyer, Henry C. (See Proctor, Barton A., assignor.)
Meyer, William C., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Driving and stopping mechanism. No. 1,298,758; Apr. 1; v. 261; p. 33.
Meyer, William C., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Feed mechanism for shoe-sewing machines. No. 1,298,759; Apr. 1; v. 261; p. 33.
Meyer, William C., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Presser-foot mechanism for shoe-sewing machines. No. 1,299,405; Apr. 1; v. 261; p. 179.
Meyer, William K., New York, N. Y. Necktie. No. 1,299,498; Apr. 8; v. 261; p. 229.
Meyers, Louis, Brooklyn, N. Y. Garment-hanger support. No. 1,300,444; Apr. 15; v. 261; p. 463.
Michael, Clement W., assignor to J. I. Case Plow Works, Racine, Wis. Listed cultivator. No. 1,298,760; Apr. 1; v. 261; p. 33.
Michael, Clement W., assignor to J. I. Case Plow Works, Racine, Wis. Gang-plow. No. 1,302,403; Apr. 29; v. 261; p. 921.
Michael, Joseph W., Woodburn, Iowa. Amusement riding device. No. 1,301,476; Apr. 22; v. 261; p. 718.
Michael, Robert F., Mainville, Pa. Nut-lock. No. 1,298,804; Apr. 1; v. 261; p. 87.
Michalovitz, Jacob, Los Angeles, Calif. Glazier's T-square gage. No. 1,298,995; Apr. 1; v. 261; p. 88.
Michaud, Onesime E., St. Louis, Mo., assignor of one-half to F. A. Muller, McGehee, Ark. Valve for explosion-engines. No. 1,301,477; Apr. 22; v. 261; p. 714.
Michie, Arthur C., Newcastle-upon-Tyne, and E. G. Weeks, Northumberland, assignors to C. H. Merz and W. McLellan, Westminster, London, England. Use of solid fuel for power production. No. 1,301,960; Apr. 29; v. 261; p. 838.
Middleton, Thomas F. (See Kent and Middleton.)
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Starter for internal-combustion engines. No. 1,301,478; Apr. 22; v. 261; p. 714.
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Time-fuse for shells. No. 1,301,479; Apr. 22; v. 261; p. 714.
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Time-fuse for shells. No. 1,301,480; Apr. 22; v. 261; p. 714.
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Percussion-fuse for explosive projectiles. No. 1,301,481; Apr. 22; v. 261; p. 714.
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Percussion-fuse for explosive projectiles. No. 1,301,482; Apr. 22; v. 261; p. 715.
Miehle Printing Press & Manufacturing Company. (See Blaine, Joseph R., assignor.)
Miehle Printing Press & Manufacturing Company. (See Henderson, Carl, assignor.)
Miehle, Robert, Chicago, Ill. Tripping mechanism for printing-presses. No. 1,300,288; Apr. 15; v. 261; p. 430.
Miehle, Robert, Chicago, Ill. Tripping mechanism for rotary printing-presses. No. 1,300,289; Apr. 15; v. 261; p. 431.
Miehle, Robert, Chicago, Ill. Mechanism for adjusting lifts of paper upon feed-boards. No. 1,300,445; Apr. 15; v. 261; p. 464.
Migliore, Louis S., Philadelphia, Pa. Machine-guard. No. 1,302,196; Apr. 29; v. 261; p. 881.
Mikkelsen, Peder, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Door-closer. No. 1,299,878; Apr. 1; v. 261; p. 172.
Milan, Frederick, Chicago, Ill. Vehicle-fender. No. 1,298,996; Apr. 1; v. 261; p. 88.
Millar, John, Cincinnati, Ohio. Belt-hinge fastener and pin. No. 1,300,632; Apr. 15; v. 261; p. 503.
Miller, Benjamin G., and F. H., Crete, Nebr. Music-holder. No. 1,299,874; Apr. 1; v. 261; p. 172.
Miller, Earl M., Elizabethtown, Pa. Electric sign. No. 1,301,586; Apr. 22; v. 261; p. 733.
Miller, Florence B., South Bend, Ind. Suspender-waist. No. 1,299,204; Apr. 1; v. 261; p. 134.
Miller, Florence H. (See Miller, Benjamin G. and F. H.)
Miller, Frank L., assignor to Perfection Wood Steaming Retort Co., Parkersburg, W. Va. Fastener for retort-doors. No. 1,300,633; Apr. 15; v. 261; p. 503.
Miller, Frank O., Portsmouth, Ohio. Blast-furnace. No. 1,298,761; Apr. 1; v. 261; p. 34.
Miller, Harry A., and F. M. Adamson, Los Angeles, Calif. Carbureter. No. 1,301,483; Apr. 22; v. 261; p. 715.
Miller, Henry C., Waterford, N. Y. Loader for button-hole-machines. No. 1,300,446; Apr. 15; v. 261; p. 464.
Miller, John, Amesbury, Mass., assignor to J. Miller, Jr., Washington, D. C. Automobile-door lock. No. 1,300,991; Apr. 15; v. 261; p. 579.
Miller, John, Jr. (See Miller, John, assignor.)
Miller, John C., Covington, Ky., assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio. Bottle-capping apparatus. No. 1,300,754; Apr. 15; v. 261; p. 529.
Miller, Kenard S. (See Crist, Firman B., assignor.)
Miller Lock Company. (See Soley, Frank, assignor.)
Miller, Melchior, and A. D. Burg, Le Mars, Iowa; said A. D. Burg assignor to L. J. Burg, St. Paul, Minn. Wrench. No. 1,302,197; Apr. 29; v. 261; p. 881.
Miller Pasteurizing Machine Company, The. (See Miller, John C., assignor.)
Miller Pasteurizing Machine Company, The. (See Pitts, George B., assignor.)
Miller, Royal R., assignor to Electric Rotary Machine Co., Chicago, Ill. Surface-working machine. No. 1,299,989; Apr. 8; v. 261; p. 338.
Miller, Royal R., assignor to Electric Rotary Machine Co., Chicago, Ill. Surface-working machine. No. 1,299,990; Apr. 8; v. 261; p. 339.
Miller, Simon M., Bridgewater, Va. Cereal-sprouting oven. No. 1,300,992; Apr. 15; v. 261; p. 580.
Miller, Stuart G., Crockett, Va. Attachment for planters. No. 1,301,291; Apr. 22; v. 261; p. 679.
Miller, Thomas E., Tacoma, Wash. Wrench. No. 1,298,997; Apr. 1; v. 261; p. 88.
Miller Train Control Corporation, The. (See Murray, William B., assignor.)
Miller, William E., Gobleville, Mich. Sealing-machine. No. 1,299,499; Apr. 8; v. 261; p. 229.
Miller, William N., Oakland, Calif. Folding ironing-board. No. 1,300,993; Apr. 15; v. 261; p. 580.
Miller, William S., Providence, R. I., assignor to A. W. Pusey, Fernwood, Pa. Load-compensator. No. 1,300,755; Apr. 15; v. 261; p. 529.
Milligan, James R., Detroit, Mich. Camp-stove. No. 1,298,762; Apr. 1; v. 261; p. 34.
Milligan, William, *et al.* (See Chillcott, William R., assignor.)
Milliken, John T., *et al*, executors. (See Hubert, Henry J., assignor.)
Mills, Herbert S. (See Sandell, Henry K., assignor.)
Mills, Samuel H., Montpelier, Vt. Polishing-wheel. No. 1,302,404; Apr. 29; v. 261; p. 921.
Mills Woven Cartridge Belt Company. (See Lethern, Albert A., assignor.)
Milne, Frank, Calgary, Alberta, Canada. Grapple. No. 1,301,728; Apr. 22; v. 261; p. 762.
Minard, Ernest E., Detroit, Mich. Four-way valve. No. 1,300,220; Apr. 8; v. 261; p. 390.
Mines, Louis A. (See Blanchard, Schneeman, and Mines.)
Miner, Charles A., assignor to Limousine Top Company, Kalamazoo, Mich. Door and window for vehicle-bodies. No. 1,298,763; Apr. 1; v. 261; p. 34.
Miner, William H. (See Loth, Charles E., assignor.)
Miner, William H. (See Geiger, William A., assignor.)
Miner, William H. (See Johnson, Bradley S., assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See Lewis, Goodrich Q., assignor.)
Miner, William H. (See Mitchell, John R., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H. (See Patch, Calvin B., assignor.)
Miner, William H. (See Williams, Keith, assignor.)
Miner, William H., Chazy, N. Y. Draft-rigging. No. 1,300,447; Apr. 15; v. 261; p. 464.
Miner, William H., Chazy, N. Y. Railway draft-rigging. No. 1,301,961; Apr. 29; v. 261; p. 838.
Mineralac Electric Company. (See Sines, Harold S., assignor.)
Minerals Separation North American Corporation. (See Williams, Rowland T. D., assignor.)
Minger, John A., Bern, Kans. Washing-machine. No. 1,301,292; Apr. 22; v. 261; p. 679.
Minges, Clarence J., Rochester, N. Y. Poultry-feeder. No. 1,301,587; Apr. 22; v. 261; p. 733.
Mining Safety Device Company, The. (See Nolan, James A., assignor.)
Minneapolis Bedding Company. (See Linn, James F., assignor.)
Minnesota Stove Company, The. See Nye, Charles W., assignor.)
Mississippi Valley Iron Company. (See Goltra, Moffitt, Dana, and Erwin, assignors.)

Mitchell, John R., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Spring friction draft-gear. No. 1,300,448; Apr. 15; v. 261; p. 464.
Mitchell, John R. (See Lewis and Mitchell.)
Mittasch, Alwin, assignor to Alien Property Custodian. Producing hydrogen. No. 1,301,151; Apr. 22; v. 261; p. 650.
Mitten, Worth L., Davenport, Iowa. Manufacturing tires. No. 1,302,405; Apr. 29; v. 261; p. 921.
Mittinger, George E., Youngstown, Ohio. Outlet-valve and operating mechanism for tank-cars. No. 1,301,729; Apr. 22; v. 261; p. 762.
Mittleberg, Harris, New York, N. Y., assignor to American Invisible Stitching Machine Co., Inc. Sewing-machine attachment. No. 1,300,184; Apr. 8; v. 261; p. 382.
Mochulsky, Anthony M., New York, N. Y. Creeper attachment. No. 1,302,198; Apr. 29; v. 261; p. 881.
Modern Grinder Manufacturing Co. (See Bockshe, Ely, assignor.)
Moe, John. (See Ackerman and Moe.)
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Overseaming-machine. No. 1,300,449; Apr. 15; v. 261; p. 464.
Mohler, Charles M., Hagerstown, Ind. Engine-cylinder and crank-case construction. No. 1,299,594; Apr. 8; v. 261; p. 251.
Mohr, Joseph M., Eldora, Iowa. Door-operating mechanism. No. 1,301,484; Apr. 22; v. 261; p. 715.
Moise, Bolton C., Pittsburgh, Pa. Wire-rope clamp. No. 1,300,994; Apr. 15; v. 261; p. 580.
Moline Mill Manufacturing Company. (See Gerwen, Julius A., assignor.)
Moline Plow Company. (See Dickinson, Harry S., assignor.)
Moline Plow Company. (See Esping, Conrad, assignor.)
Moline Plow Company. (See Lindgren, Alexus C., assignor.)
Moltrup, James T., Beaver Falls, Pa. Feed-table for rods, bars, pipes, &c. No. 1,298,998; Apr. 1; v. 261; p. 88.
Moltrup, James T., Beaver Falls, Pa. Apparatus for drawing rods. No. 1,298,999; Apr. 1; v. 261; p. 88.
Molvig, Jens, Buxton, N. D. Protective shield for small firearms. No. 1,301,293; Apr. 22; v. 261; p. 679.
Monahan, Thomas H., Providence, R. I., assignor, by mesne assignments, to Providence Body Company. Dumping-truck. No. 1,302,406; Apr. 29; v. 261; p. 921.
Money, Clarence A. (See La Montaine and Money.)
Monk, Raymond W., Pittston, Pa. Car-door. No. 1,298,764; Apr. 1; v. 261; p. 35.
Montgomery, Hiram W., Topanga, Calif. Vehicle. No. 1,300,185; Apr. 8; v. 261; p. 382.
Montgomery, Hiram W., Topanga, Calif. Wheelbarrow. No. 1,300,186; Apr. 8; v. 261; p. 382.
Montgomery, Leon F. (See Grosjean, James E., assignor.)
Montgomery Ward & Co. (See Weaver, Ira A., assignor.)
Moody, Joseph F., St. Francisville, Ill. Well-drilling appliance. No. 1,300,995; Apr. 15; v. 261; p. 580.
Moon-Hopkins Billing Machine Company. (See Thieme, Otto, assignor.)
Mooney, Joseph W., St. Louis, Mo. Calculating-dividers. No. 1,300,221; Apr. 8; v. 261; p. 390.
Moore, Alonzo A., Winthrop, Mass. Swimming-machine. No. 1,299,000; Apr. 1; v. 261; p. 89.
Moore, Benton, and G. O. Stansbury, Kansas City, Mo. Screen-door fastening. No. 1,299,596; Apr. 8; v. 261; p. 251.
Moore, Clifton E., Spokane, Wash. Measuring and dispensing device. No. 1,299,001; Apr. 1; v. 261; p. 89.
Moore, Edward J., Cleveland, Ohio. Convertible core-oven. No. 1,301,075; Apr. 15; v. 261; p. 600.
Moore Electric Corporation. (See Moore, George W., assignor.)
Moore, George W., assignor to Moore Electric Corporation, Chicago, Ill. Massage-vibrator. No. 1,301,866; Apr. 29; v. 261; p. 819.
Moore, Harlan, New York, N. Y. Bottle or jar closure device. No. 1,300,222; Apr. 8; v. 261; p. 390.
Moore, Henry N., assignor of one-third to E. C. Le Munyon and one-third to F. E. Eckhart, Los Angeles, Calif. Brake. No. 1,300,634; Apr. 15; v. 261; p. 503.
Moore, J. C. (See Moore, Rucker, assignor.)
Moore, John B. (See Reynolds, Frank C., assignor.)
Moore, John J., South Charleston, Ohio. Tire-liner. No. 1,298,765; Apr. 1; v. 261; p. 35.
Moore, Philip E., McHenry, Miss. Combined tie and joint. No. 1,300,290; Apr. 15; v. 261; p. 431.
Moore, Robert S., assignor, by mesne assignments, to E. Berliner, Washington, D. C. Rotary-cylinder gas-engine. (Reissue.) No. 14,625; Apr. 1; v. 261; p. 181.
Moore, Rucker, Atlanta, Ga., assignor of one-half to J. C. Moore, Birmingham, Ala. Sanitary sputum can or bucket. No. 1,299,375; Apr. 1; v. 261; p. 172.
Moore, William R. (See Creek, Harry, assignor.)
More, Thomas. (See Lane and More.)
Morgan Crucible Company, The. (See Knight and Wilson, assignors.)
Morgan, Ralph L., Worcester, Mass. Body for trucks. No. 1,298,766; Apr. 1; v. 261; p. 35.
Morgan, Ralph L., Worcester, Mass. Demountable rim for vehicle-tires. No. 1,299,205; Apr. 1; v. 261; p. 134.
Morgan, W. T., Sr., administrator. (See Ashmore and Morgan.)
Morgan, William T., Jr. (See Ashmore and Morgan.)
Morgan & Wright. (See Steiale, William J., assignor.)
Mori, Placido, New York, N. Y. Float and making the same. No. 1,299,831; Apr. 8; v. 261; p. 310.
Morrill, Dana, deceased, South Omaha, E. J. Morrill, administratrix, Omaha, assignor to Morrill Target Company, Omaha, Nebr. Target-making machine. No. 1,300,996; Apr. 15; v. 261; p. 580.
Morrill, Emma J., administratrix. (See Morrill, Dana.)
Morrill Target Company. (See Morrill, Dana, assignor.)
Morris, Charles R., Leavenworth, Kans. Automobile-operated mechanism. No. 1,301,294; Apr. 22; v. 261; p. 679.
Morris, George W., Racine, Wis. Indicator for oil-pumps. No. 1,300,291; Apr. 15; v. 261; p. 431.
Morris, Hurd T., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,302,068; Apr. 29; v. 261; p. 858.
Morris, John M., Mayfair, assignor of two-thirds to Tredegars Limited, London, England. Construction of gas-generating apparatus. No. 1,302,199; Apr. 29; v. 261; p. 882.
Morris, Theodore H., and F. T. Grubbe, Gary, Ind. Shade-holder. No. 1,299,008; Apr. 1; v. 261; p. 89.
Morrison, Harley J., assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio. Production of catalytic material and the saturation of fatty acids or their glycerids with hydrogen. No. 1,299,004; Apr. 1; v. 261; p. 89.
Morrow, Melmuth L., Knoxville, Tenn. Railway-switch. No. 1,302,407; Apr. 29; v. 261; p. 922.
Morse, Milton W., Mount Vernon, N. Y. Lamp-socket. No. 1,301,152; Apr. 22; v. 261; p. 650.
Morsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Ingeberg, Henry C. M., assignor.)
Morterud, Einar, Torderöd, near Moss, Norway. Manufacture of cellulose. No. 1,299,597; Apr. 8; v. 261; p. 251.
Morton, Fred S., Worcester, Mass. Ball-bearing. No. 1,300,450; Apr. 15; v. 261; p. 465.
Morton, Frederic C., New Haven, Conn., assignor of one-half to F. B. Carlisle, Cranston, R. I. Tire-building machine. No. 1,298,767; Apr. 1; v. 261; p. 35.
Morton, Frederic C., New Haven, Conn., assignor of one-half to F. B. Carlisle, Cranston, R. I. Tire-building machine. No. 1,298,768; Apr. 1; v. 261; p. 36.
Morton, Frederic C., New Haven, Conn., assignor of one-half to F. B. Carlisle, Cranston, R. I. Tension device for tire-building machines. No. 1,298,769; Apr. 1; v. 261; p. 36.
Morton, Harold A., and Ben H. Nicolet, Pittsburgh, Pa., assignors to Union Carbide Company, New York, N. Y. Preparing paracetaldehyde. No. 1,300,451; Apr. 15; v. 261; p. 465.
Moscherosch, Harry G., and P. G. Schwartz, Appleton, Wis. Attachment for shovels. No. 1,300,452; Apr. 15; v. 261; p. 465.
Moscini, John, New York, N. Y. Comb-decorating machine. No. 1,299,852; Apr. 8; v. 261; p. 310.
Mossig, Max, Berlin, Germany. Grooved and recessed ball-bearing. No. 1,301,295; Apr. 22; v. 261; p. 679.
Motion Picture Chair Co. (See Toole, Lucius C. and M. R., assignors.)
Motl, Henry R., Houston, Tex. Tire-shoe. No. 1,298,666; Apr. 1; v. 261; p. 89.
Mott, Samuel D., Passaic, assignor of one-half to A. R. Sullivan, Allendale, N. J. Sound reproducing and recording apparatus. No. 1,299,863; Apr. 8; v. 261; p. 310.
Mott Sand Blast Mfg. Co. (See Schroeder, Paul, assignor.)
Motteram, William C., Philadelphia, Pa. Tank for developing photographic films. No. 1,302,408; Apr. 29; v. 261; p. 922.
Mould, Edmund F., assignor to The Adams-Bagnall Company, Cleveland, Ohio. Electric fixture. No. 1,298,770; Apr. 1; v. 261; p. 36.
Moxham, Arthur J., New York, N. Y. Machine for treating explosive material. No. 1,299,500; Apr. 8; v. 261; p. 229.
Moyer, Jonas J., Oakland, Calif. Speculum. No. 1,300,756; Apr. 15; v. 261; p. 529.
Moyer, Malcolm B., assignor to Moyer Manufacturing Company, Montevideo, Minn. Gate-latch. No. 1,301,183; Apr. 22; v. 261; p. 650.
Moyer Manufacturing Company. (See Moyer, Malcolm B., assignor.)
Moyers, George F., Osceola, Iowa. Vermin-exterminating device. No. 1,300,997; Apr. 15; v. 261; p. 580.
Muehleisen, Thomas, San Diego, Calif. Oil-burner. No. 1,299,296; Apr. 1; v. 261; p. 134.
Mueller, Hilmar, Trenton, N. J. Pump. No. 1,301,655; Apr. 22; v. 261; p. 715.
Mueller, Robert H., Decatur, Ill. Tapping-machine. No. 1,301,730; Apr. 22; v. 261; p. 762.
Mueser, William, New York, N. Y. Reinforced-concrete reservoir. No. 1,301,154; Apr. 22; v. 261; p. 651.

Mueser, William, New York, N. Y. Tank or reservoir of reinforced concrete. No. 1,301,155; Apr. 22; v. 261; p. 651.
Muessel, Rudolph, Toledo, Ohio. Thumb-hold for book-leaf turning. No. 1,301,486; Apr. 22; v. 261; p. 715.
Muhlfeld, John E., Scarsdale, N. Y. Feed-water apparatus. No. 1,301,156; Apr. 22; v. 261; p. 651.
Mull, Arthur L., assignor to H. W. Rountree & Brother Trunk and Bag Co. Incorporated, Richmond, Va. Clothes follower or presser. No. 1,302,069; Apr. 29; v. 261; p. 858.
Mullaly, Joseph H., Winnipeg, Manitoba, Canada. Paste stand and feeder. No. 1,299,758; Apr. 8; v. 261; p. 289.
Mullen, Daniel J., *et al.* (See Richetson, William E., assignor.)
Müller, Friederich, assignor to Pratt & Whitney Company, Hartford, Conn. Relieving-lathe. No. 1,299,207; Apr. 1; v. 261; p. 134.
Müller, Friederich, assignor to Pratt & Whitney Company, Hartford, Conn. Relieving-lathe. No. 1,299,208; Apr. 1; v. 261; p. 134.
Muller, Fritz A. (See Michaud, Onesime E., assignor.)
Müller, Theodor, assignor of one-half to O. Hilfeli, Zurich, Switzerland. Curved-line scriber. No. 1,299,006; Apr. 1; v. 261; p. 90.
Multiple Display Fixture Company. (See Crecelius, Theodore E., assignor.)
Mulvaney, William J., Lisle, Ill. Automatic stove-lighter. No. 1,299,376; Apr. 1; v. 261; p. 172.
Munger, Don A., Detroit, Mich. Electric switch. No. 1,300,855; Apr. 15; v. 261; p. 550.
Munn, Samson P., assignor of fifty-five one-hundredths to J. T. Flint, St. Louis, Mo. Smoke-consumer. No. 1,301,588; Apr. 22; v. 261; p. 734.
Murnane, Daniel J., assignor to Zouri Drawn Metals Company, Chicago Heights, Ill. Framing construction. No. 1,300,757; Apr. 15; v. 261; p. 539.
Murphy, Edward T., New York, N. Y. Locking and guiding bolt for combined swinging and sliding doors. No. 1,302,409; Apr. 29; v. 261; p. 922.
Murphy, Frederick W., *et al.* (See Ricketson, William E., assignor.)
Murphy, Henry A., *et al.* (See Nicholson, Alonzo L., assignor.)
Murphy, Thomas F., Utica, N. Y. Safety-catch for jewelry. No. 1,300,856; Apr. 15; v. 261; p. 550.
Murphy, Walter P. (See Fowler, Frank G., assignor.)
Murphy, Walter P. (See Sisson, Vinton E., assignor.)
Murphy, Walter P., Chicago, Ill. End structure for gondola cars. No. 1,299,991; Apr. 8; v. 261; p. 339.
Murphy, Walter P., Chicago, Ill. Vertically-corrugated sheet-metal car end. No. 1,301,487; Apr. 22; v. 261; p. 716.
Murray, Richard, New York, N. Y. Shoe-tree. No. 1,302,410; Apr. 29; v. 261; p. 923.
Murray, Richard R., Milford, Tex. Chicken-brooder. No. 1,302,411; Apr. 29; v. 261; p. 923.
Murray, Thomas E., New York, N. Y. Crude-oil still. No. 1,302,200; Apr. 29; v. 261; p. 882.
Murray, Thomas E., New York, N. Y. Sheet-metal radiator. No. 1,302,201; Apr. 29; v. 261; p. 882.
Murray, Thomas E., New York, N. Y. Pipe connection and making same. No. 1,302,412; Apr. 29; v. 261; p. 923.
Murray, Thomas E., Jr., Brooklyn, N. Y. Electric welding. No. 1,302,413; Apr. 29; v. 261; p. 923.
Murray, William B., Danville, Ill., assignor to The Miller Train Control Corporation, Staunton, Va. Ramp and adjustable ramp-support. No. 1,301,298; Apr. 22; v. 261; p. 679.
Muse, James A., Cleburne, Tex. Acetylene-gas generator. No. 1,299,209; Apr. 1; v. 261; p. 135.
Muslin, Natan, New York, N. Y. Hand-bag. No. 1,301,157; Apr. 22; v. 261; p. 651.
Mutch, Phillip J., Hoboken, Pa. Jardinière-stand. No. 1,300,635; Apr. 15; v. 261; p. 503.
Muther, Lorenz. (See Lautenschlager, William F., assignor.)
Muzzy, John, Warba, Minn. Fluid-elevating means. No. 1,301,731; Apr. 22; v. 261; p. 762.
Myers, Ambert M., Dayton, Ohio. Vapor-generating device. No. 1,299,506; Apr. 8; v. 261; p. 251.
Myers, John W., Des Moines, Iowa. Reclining-seat. No. 1,301,488; Apr. 22; v. 261; p. 716.
Myers, Lewis C. (See Hess and Meyers.)
Myers, Parke G. (See Wertz and Myers.)
Myers, Perin J., assignor to Jeffersonville Manufacturing Company, Jeffersonville, Ind. Gromet-punch. No. 1,299,210; Apr. 1; v. 261; p. 135.
Myers, William, Philadelphia, Pa. Toy. No. 1,299,377; Apr. 1; v. 261; p. 172.
Myrup, Alfred E., Racine, Wis. Camera. No. 1,299,992; Apr. 8; v. 261; p. 339.
N. N. Hill Brass Co., The. (See Arnold, Albert C., assignor.)
N. N. Hill Brass Co., The. (See Hill, Norman, N., assignor.)
Naamloose Vennootschap Geveke & Co.'s Technisch Bureau. (See Geveke, Hendrik L., assignor.)
Nagy, Paul. (See Papp and Nagy.)
Nahas, Massoud, Akron, Ohio. Shade-holder and curtain-pole support. No. 1,299,963; Apr. 8; v. 261; p. 339.
Nakamino, Hiretsune T., Los Angeles, Calif. Disappearing bow-rest and shackle. No. 1,300,187; Apr. 8; v. 261; p. 382.
Nalewaja, Albin T., Los Angeles, Calif. Neck-form device. No. 1,301,489; Apr. 22; v. 261; p. 716.
Narusewicz, Wladyslaw, North Andover, Mass. Swimming-glove. No. 1,299,007; Apr. 1; v. 261; p. 90.
Nash, George H., Sidcup, and B. B. Grace, Upminster, England, assignors to Western Electric Company, Incorporated, New York, N. Y. Telephone-handset. No. 1,298,771; Apr. 1; v. 261; p. 36.
Nathan, Frederic L., W. Rintoul, and F. Baker, deceased, Stevenston, Scotland; H. Baker, administrator, Eton, Windsor, England; assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Preparing gelatinized propellant explosives. No. 1,302,202; Apr. 29; v. 261; p. 882.
National Aluminum Works. (See Serio, Philip H., assignor.)
National Bank of Commerce in St. Louis, Mo., *et al.*, executors. (See Hubert, Henry J., assignor.)
National Cash Register Company, The. (See Fuller, Frederick L., assignor.)
National Cash Register Company, The. (See Lee, Charles L., assignor.)
National Clutch Company. (See Sundh, August, assignor.)
National Dump Car Company. (See Hart, Harry S., assignor.)
National Equipment Company. (See Pagliuca, Antonio, assignor.)
National Hat Lining Company. (See Rybeck and Wolf, assignors.)
National Malleable Castings Company, The. (See Brooks and Schmidt, assignors.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Manufacturing and Specialty Company. (See Scott and Hug, assignors.)
National Metal Molding Company. (See Farnham, Frederick F., assignor.)
National Metal Seal Corporation. (See Doldt, John E., assignor.)
National Pneumatic Company. (See Rowntree, Harold, assignor.)
National Store Specialty Company, The. (See Pritchard, William C., assignor.)
National Surface Guard Company. (See Hately, Charles F., assignor.)
National Wire Wheel Works. (See Greenlee, George, assignor.)
Nawrath, Robert, Newark, N. J. Press. No. 1,299,501; Apr. 8; v. 261; p. 229.
Nehr, Jacob E., New York, N. Y. Match-igniting device. No. 1,301,158; Apr. 22; v. 261; p. 651.
Neal, Alton V., Hurlock, Md. Filling-machine. No. 1,300,758; Apr. 15; v. 261; p. 530.
Needham, Guy E., Tracy, Calif. Retaining means for plowshares. No. 1,300,453; Apr. 15; v. 261; p. 465.
Neely, Samuel L., Longton, Kans. Grade-crossing signal. No. 1,299,854; Apr. 8; v. 261; p. 310.
Ness, Milton L., New Ross, Ind. Vehicle-track for public highways. No. 1,301,490; Apr. 22; v. 261; p. 716.
Neeson, Charles R., New Rochelle, assignor to De La Vergne Machine Company, New York, N. Y. Gas-compressor. No. 1,299,211; Apr. 1; v. 261; p. 135.
Neff, Abner E., assignor to Paschall Tool Company, Long Beach, Calif. Milling attachment for lathes. No. 1,299,759; Apr. 8; v. 261; p. 289.
Negus, James D., Douglas, Wyo. Railway-track construction. No. 1,299,760; Apr. 8; v. 261; p. 289.
Neider, Fred A., deceased, Augusta, Ky.; Carr Fastener Company, Cambridge, Mass., assignee. Vehicle-curtain fastener. (Reissue.) No. 14,626; Apr. 1; v. 261; p. 181.
Neikirk, John O., Lombard, Ill., assignor to Rodger Ballast Car Company. Center and side dump car. No. 1,299,212; Apr. 1; v. 261; p. 135.
Nell, Robert P., Calumet, Mich. Safety-razor. No. 1,298,772; Apr. 1; v. 261; p. 87.
Nelson, Adolph L. (See Gunn and Nelson.)
Nelson, Benjamin H., St. Thomas, N. D., J. M. Landrigan, Virginia, and L. G. Zesbaugh, assignors to Traveling Shock Gatherer Company, Minneapolis, Minn. Shock-gatherer. No. 1,300,188; Apr. 8; v. 261; p. 383.
Nelson, Carl F., *et al.* (See Holmes, Henry H., assignor.)
Nelson, De Witt, assignor to Tom Thumb Tractor Company, Minneapolis, Minn. Traction-engine. No. 1,299,855; Apr. 8; v. 261; p. 310.
Nelson, Frank J., Hallock, Minn. Fastener attachment for rubbers. No. 1,300,996; Apr. 15; v. 261; p. 581.
Nelson, Gustave A., Galloway, Wis. Device for straightening deformed or club feet. No. 1,301,491; Apr. 22; v. 261; p. 716.
Nelson, Steve C., Finley, N. D. Wheel-rim. No. 1,299,378; Apr. 1; v. 261; p. 172.
Nelson, Sven T., Oak Park, Ill., assignor to Sullivan Machinery Company, Boston, Mass. Valve. No. 1,299,761; Apr. 8; v. 261; p. 290.
Nelson, Sven T., Chicago, Ill., assignor to Sullivan Machinery Company, Boston, Mass. Valve. No. 1,299,762; Apr. 8; v. 261; p. 290.
Nelson, Victor, Dubois, Wyo. Rail-joint. No. 1,302,070; Apr. 29; v. 261; p. 856.

Nelson, Willie W., Monticello, Miss. Automatic railway stock-gate. No. 1,301,492; Apr. 22; v. 261; p. 716.
Neracher, William A., *et al.* (See Ahlm, Charles E. F., assignor.)
Nerness, Carl C., Omaha, Nebr. Roofing-cutter. No. 1,302,414; Apr. 29; v. 261; p. 923.
Nesbit, Joseph N. G., Atlanta, Ga. Aeroplane. No. 1,298,773; Apr. 1; v. 261; p. 37.
Nethercutt, Charles D., Burnetts Creek, Ind. Counterbore. No. 1,299,856; Apr. 8; v. 261; p. 311.
Neuberth, Franklin G., assignor to The S. O. & C. Co., Ansonia, Conn. Button-making machine. No. 1,299,763; Apr. 8; v. 261; p. 290.
Neuswanger, William, Greeley, Colo. Machine for marking various articles. No. 1,301,076; Apr. 15; v. 261; p. 600.
Nevens, Herbert B., Dorchester, and R. Marcy, Allston, Mass., assignors to Nevens-Wallace Train Control Company. Train-control apparatus. No. 1,299,753; Apr. 8; v. 261; p. 287.
Nevens-Wallace Train Control Company. (See Nevens and Marcy, assignors.)
New Departure Manufacturing Company, The. (See Anderson, Axel F., assignor.)
New Departure Manufacturing Company, The. (See Hughes, Frederick G., assignor.)
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Jersey Patent Company. (See Ott, John F., assignor.)
Newbauer, Faltine, assignor of one-eighth to C. J. Lee, three-eighths to E. B. Stull, and one-eighth to J. Holland, Valley City, N. D. Grain-shocker. No. 1,299,599; Apr. 8; v. 261; p. 252.
Newman, Joseph S., Cleveland, Ohio. Telegraph instrument. No. 1,299,994; Apr. 8; v. 261; p. 339.
Newman, Rutledge H., Chicago, Ill. Fruit-knife. No. 1,301,297; Apr. 22; v. 261; p. 680.
Newstarter Manufacturing Company. (See Kendall, James B., assignor.)
Newton-Smith, Arthur, Westminster, England. Picking mechanism of looms. No. 1,301,298; Apr. 22; v. 261; p. 680.
Newton, William J., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn. Toggle-socket. No. 1,302,415; Apr. 29; v. 261; p. 923.
Ney, Andrew F., East Kew, Victoria, Australia. Machine for leveling and stacking match-splints. No. 1,299,995; Apr. 8; v. 261; p. 340.
Neyer, August, San Francisco, Calif. Hair-waving device. No. 1,299,008; Apr. 1; v. 261; p. 90.
Nicholl, Robert A., Detroit, Mich. Tractor. No. 1,299,600; Apr. 8; v. 261; p. 252.
Nicholson, Alonzo L., assignor of one-half to E. W. Burch, one-fourth to R. E. Conley, and one-fourth to H. A. Murphy, Rockwell City, Iowa. End-gate. No. 1,301,299; Apr. 22; v. 261; p. 680.
Nicholson, Alonzo L., Rockwell City, Iowa. Wagon end-gate. No. 1,301,300; Apr. 22; v. 261; p. 680.
Nicholson, Daniel T., Visalia, Calif. Means for indicating the thickness of cake formation in filter-presses. No. 1,299,996; Apr. 8; v. 261; p. 340.
Nick, William, Minneapolis, Minn. Automatic cable-hanger distributer. No. 1,299,213; Apr. 1; v. 261; p. 136.
Nicolet, Ben H. (See Morton and Nicolet.)
Nicoll, William R., Owatonna, Minn. Milking-machine. No. 1,300,857; Apr. 15; v. 261; p. 551.
Nielander, Joseph, Kokomo, Ind. Wrench. No. 1,301,159; Apr. 22; v. 261; p. 652.
Nielsen, Christian P. (See Kolby, Larson, and Nielsen.)
Nielsen, Elin, Chicago, Ill. Table. No. 1,300,759. Apr. 15; v. 261; p. 530.
Niemeyer, William H., Los Angeles, Calif. Theft-alarm for automobiles. No. 1,301,493; Apr. 22; v. 261; p. 717.
Nikonow, John P., New York, N. Y. Electric spot-light. No. 1,300,454. Apr. 15; v. 261; p. 465.
Nikonow, John P., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Coil-retaining device and assembling the same. No. 1,300,869; Apr. 15; v. 261; p. 551.
Niles-Bement-Pond Company. (See Keefer and Greenleaf, assignors.)
Niles-Bement-Pond Company. (See Sears, Willard T., assignor.)
Nipper, Henry, New York, N. Y. Game. No. 1,302,208; Apr. 29; v. 261; p. 882.
Nishioka, Thomas K., Portland, Oreg. Dispensing apparatus. No. 1,301,301; Apr. 22; v. 261; p. 680.
Noah, Joseph O., Lingleville, Tex. Peanut-digger. No. 1,300,636; Apr. 15; v. 261; p. 503.
Nobel's Explosives Company. (See Nathan, Rintoul, and Baker, assignors.)
Nobel's Explosives Company. (See Rintoul and Beckett, assignors.)
Noble, Andrew J., St. Paul, Minn. Resilient tire. No. 1,299,009; Apr. 1; v. 261; p. 90.
Noble, Charles O. (See Young and Noble.)
Noble, William J., Kearney, Nebr. Demountable driving-wheel for motor-cycles. No. 1,301,160; Apr. 22; v. 261; p. 652.
Noel, John C., Bellevue, Idaho. Sickle-grinder. No. 1,300,760; Apr. 15; v. 261; p. 530.
Noethlich, Ferdinand, Ute, Iowa. Dumping-carriage. No. 1,301,962; Apr. 29; v. 261; p. 838.
Nolan, Francis A., St. Paul, Minn. Washer. No. 1,301,202; Apr. 22; v. 261; p. 681.
Nolan, James A., assignor to The Mining Safety Device Company, Bowerston, Ohio. Safety device for mines. No. 1,301,782; Apr. 22; v. 261; p. 768.
Noll, Ralph, and C. C. Shephard, Chadron, Nebr. Puncture-closing solution. No. 1,302,416; Apr. 29; v. 261; p. 924.
Nordwick, Henry A., and W. A. Barth, Stockton, Calif. Endless track for tractors. No. 1,300,455; Apr. 15; v. 261; p. 466.
Normoyle, Daniel J., assignor to Alert Tool Company, Philadelphia, Pa. Wrench. No. 1,299,764; Apr. 8; v. 261; p. 291.
Norris, Almon E., Cambridge, Mass. Conveying structure. No. 1,299,010; Apr. 1; v. 261; p. 90.
Norris, Charles D., Chicago, Ill. Convertible truck. No. 1,302,204; Apr. 29; v. 261; p. 883.
North, Charles H., Cleveland, Ohio. Fountain-pen. No. 1,302,417; Apr. 29; v. 261; p. 924.
North East Electric Company. (See Lee, Earle P. and T. L., assignors.)
North & Judd Manufacturing Company, The. (See Carpmill and Hancock, assignors.)
North, Thomas K., assignor to Vickers Limited, Westminster, London, England. Submarine mine. No. 1,299,011; Apr. 1; v. 261; p. 91.
North, Thomas K., assignor to Vickers Limited, Westminster, London, England. Submarine mine. No. 1,299,012; Apr. 1; v. 261; p. 91.
North, Thomas K., assignor to Vickers Limited, Westminster, London, England. Driving-band of projectiles. No. 1,299,013; Apr. 1; v. 261; p. 91.
North, Thomas K., Westminster, London, assignor to Vickers Limited, Westminster, England. Submarine mine. No. 1,299,691; Apr. 8; v. 261; p. 252.
Northall, William H., assignor of one-fourth to S. C. James and one-fourth to H. Males, Evansville, Ind. Automobile-tire. No. 1,302,418; Apr. 29; v. 261; p. 924.
Northern Equipment Company. (See Andrews, Roger W., assignor.)
Northern Trust Company, The, trustee. (See Lang, Lincoln A., assignor.)
Northrup, King & Co. (See Williams, Herman H., assignor.)
Norton, Charles H., and A. Turner, Worcester, Mass., assignors to Norton Grinding Company. Multiple-speed device. No. 1,299,765; Apr. 8; v. 261; p. 291.
Norton Grinding Company. (See Norton and Turner, assignors.)
Norton, Thomas J., *et al.* (See Upton, Roy M., assignor.)
Notman, Clarence A., Detroit, Mich. Stove. No. 1,302,419; Apr. 29; v. 261; p. 924.
Nottage, Stanley G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of starting phase-converters. No. 1,298,774; Apr. 1; v. 261; p. 37.
Novak, Edward S., Glassport, Pa. Game-board. No. 1,301,867; Apr. 29; v. 261; p. 819.
Novick, Abraham, New York, N. Y., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Folding-machine. No. 1,298,775; Apr. 1; v. 261; p. 37.
Novick, Abraham, New York, N. Y., assignor to United States Envelope Company, Springfield, Mass. Envelope-machine. No. 1,298,776; Apr. 1; v. 261; p. 38.
Nowack, Charles H., Oak Park, Ill., assignor to American Can Company, New York, N. Y. Pouring-spout. No. 1,301,868; Apr. 29; v. 261; p. 820.
Nuckols, Claude C., Menands, N. Y. Base-board-concealed radiator. No. 1,301,580; Apr. 22; v. 261; p. 734.
Nunn, Archie L., *et al.* (See Love, Sandy H., assignor.)
Nyberg, Carl S., Mellösa, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Vertical turning and boring mill. No. 1,301,203; Apr. 22; v. 261; p. 681.
Nye, Charles W., assignor to The Minnesota Stove Company, Minneapolis, Minn. Reservoir for ranges. No. 1,300,456; Apr. 15; v. 261; p. 466.
Nyholm, Peter N., Edgewood, Wash. Extension-table. No. 1,302,420; Apr. 29; v. 261; p. 925.
O. and J. Machine Company, The. (See Johnson and Oslund, assignors.)
O'Brien, Joseph F., West New York, N. J. Engaging and disengaging gear for ships' boats. No. 1,296,777; Apr. 1; v. 261; p. 38.
O'Connell, Edward, West Philadelphia, Pa. Spark-plug. No. 1,299,997; Apr. 8; v. 261; p. 340.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,296,778; Apr. 1; v. 261; p. 38.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,300,457; Apr. 15; v. 261; p. 466.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Brake for railway-cars. No. 1,300,458; Apr. 15; v. 261; p. 466.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,300,459; Apr. 15; v. 261; p. 466.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,300,460; Apr. 15; v. 261; p. 467.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,300,461; Apr. 15; v. 261; p. 467.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. High-capacity friction-gear; No. 1,300,462; Apr. 15; v. 261; p. 467.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-plate draft-gear with antifriction wedging members. No. 1,300,463; Apr. 15; v. 261; p. 467.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,464; Apr. 15; v. 261; p. 467.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake for railway-cars. No. 1,300,465; Apr. 15; v. 261; p. 468.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Brake-operating mechanism. No. 1,300,466; Apr. 15; v. 261; p. 468.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake for cars. No. 1,300,467; Apr. 15; v. 261; p. 468.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,468; Apr. 15; v. 261; p. 468.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-gear for railway-cars. No. 1,300,469; Apr. 15; v. 261; p. 469.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Spring-gear. No. 1,300,470; Apr. 15; v. 261; p. 469.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake for flat-cars. No. 1,300,471; Apr. 15; v. 261; p. 469.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Combined compensating link and shock-absorber. No. 1,300,472; Apr. 15; v. 261; p. 469.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Winding mechanism. No. 1,300,473; Apr. 15; v. 261; p. 469.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,474; Apr. 15; v. 261; p. 470.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Refrigerator-door mechanism. No. 1,300,475; Apr. 15; v. 261; p. 470.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,476; Apr. 15; v. 261; p. 470.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Winding mechanism. No. 1,300,477; Apr. 15; v. 261; p. 471.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,478; Apr. 15; v. 261; p. 471.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing for railway-cars. No. 1,300,479; Apr. 15; v. 261; p. 471.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway draft-rigging. No. 1,302,071; Apr. 29; v. 261; p. 858.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-gear for passenger equipment. No. 1,302,072; Apr. 29; v. 261; p. 858.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,302,073; Apr. 29; v. 261; p. 859.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,074; Apr. 29; v. 261; p. 859.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,075; Apr. 29; v. 261; p. 859.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,076; Apr. 29; v. 261; p. 859.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,077; Apr. 29; v. 261; p. 859.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,302,078; Apr. 29; v. 261; p. 860.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Shock-absorber. No. 1,302,079; Apr. 29; v. 261; p. 860.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction shock-absorbing mechanism. No. 1,302,080; Apr. 29; v. 261; p. 860.
O'Donnell, Edward G. (See Kermack and O'Donnell.)
O'Donnell, John M., New York, N. Y. Top-locking means for receptacles. No. 1,299,706; Apr. 8; v. 261; p. 291.
O'Donnell, John P., Providence, R. I. Galvanizing apparatus. No. 1,301,500; Apr. 22; v. 261; p. 734.
O'Gorman, William J., New York, N. Y. Spark-plug. No. 1,301,870; Apr. 29; v. 261; p. 830.
O'Hara, Peter, Ohara township, Allegheny county, Pa. Golf-club. No. 1,299,014; Apr. 1; v. 261; p. 91.
O'Neil, William B. (See Lindsey, James B., assignor.)
O'Neill, John R., Ridgewood, N. J. Label-applying machine. No. 1,300,638; Apr. 15; v. 260; p. 891.
Oberreich, Louis H., Indianapolis, Ind. Primer. No. 1,301,589; Apr. 29; v. 261; p. 820.
Occhipinti, John. (See Bianchi and Occhipinti.)
Oechelis, Karl J., Paris, France. Aliphatic acids containing an arsenoarylamin group. No. 1,299,214; Apr. 1; v. 261; p. 136.
Oechelis, Karl J., Paris, France. Aliphatic acids containing an arsenoarylamin group. No. 1,299,215; Apr. 1; v. 261; p. 136.
Oellrich, Harry W., Ellsworth, Wis. Wire-stretcher. No. 1,299,908; Apr. 8; v. 261; p. 340.
Oglesby, Richard A., assignor to Quick Action Ignition Company, South Bend, Ind. Magneto for internal-combustion engines. No. 1,300,637; Apr. 15; v. 261; p. 504.
Ohara, Kenji, Awa Gun, Chiba Ken, Japan. Device for packing eggs. No. 1,301,161; Apr. 22; v. 261; p. 652.
Ohashi, Hydesaburo, assignor to Hydesaburo Ohashi & Co., Inc., New York, N. Y. Inking attachment for typewriters. No. 1,300,999; Apr. 15; v. 261; p. 581.
Ohio Blower Company, The. (See Coakley, William E., assignor.)
Oil Well Supply Company. (See Greve, Edgar E., assignor.)
Oil Well Supply Company. (See Mack, Patrick H., assignor.)
Oiler, Robin S. (See Foster, Walter L., assignor.)
Okihara, Tanese, Honolulu, Hawaii. Embroidery-frame. No. 1,302,421; Apr. 29; v. 261; p. 925.
Oliver, Luther B., Mebane, N. C. Soda-fountain. No. 1,299,767; Apr. 8; v. 261; p. 291.
Oliver, Robert B. (See Laist, Frick, and Oliver.)
Ollenburg, Arthur A., assignor to Gemco Manufacturing Company, Milwaukee, Wis. Bumper-bracket for automobiles. No. 1,300,858; Apr. 15; v. 261; p. 551.
Olsen, Oluf W., Woodhaven, N. Y. Clutch mechanism. No. 1,299,502; Apr. 8; v. 261; p. 229.
Olsen, Simon D. (See Bruner and Olsen.)
Olson, Gustaf, assignor of one-half to W. M. McEwen, Chicago, Ill. Electric-fan control. No. 1,300,638; Apr. 15; v. 261; p. 504.
Olson, Henry E., Chicago, Ill. Oil-burner. No. 1,301,804; Apr. 22; v. 261; p. 681.
Olson, Henry J. (See Pahlow, Gustav C., assignor.)
Olson, Karl A., Plainfield, N. J. Diving-bell. No. 1,302,061; Apr. 29; v. 261; p. 860.
Olson, Karl A., Plainfield, N. J. Diving-bell. No. 1,302,422; Apr. 29; v. 261; p. 925.
Olsson, John W., Portsmouth, Va. Toy vehicle. No. 1,299,015; Apr. 1; v. 261; p. 92.
Onstott, Jacob T., Yuba City, assignor to E. R. Sowell, Sacramento, Calif. Tractor cut-out plow. No. 1,301,305; Apr. 22; v. 261; p. 681.
Opitz, Herman M., Norwich, Conn. Adjustable window-screen. No. 1,299,016; Apr. 1; v. 261; p. 92.
Oppermann, Charles, et al. (See Warman, Samuel W., assignor.)
Orloff, Nick, Sparrows Point, Md. Laundry-hanger. No. 1,301,494; Apr. 22; v. 261; p. 717.
Orr, Andrew. (See Johnston, Fred, assignor.)
Orr, Louis H., New York, N. Y. Partially simulating hand-made paper. No. 1,299,216; Apr. 1; v. 261; p. 136.
Orton, Myron, Vineland, N. J. Theatrical appliance. No. 1,301,963; Apr. 29; v. 261; p. 838.
Osborne, Wesley M., Carthage, N. Y. Removing ink and coloring matter from printed paper. No. 1,298,779 Apr. 1; v. 261; p. 39.
Osgood Company, The. (See Barnhart, Harry J., assignor.)
Oshana, Aghasie, Mason City, Iowa. Baby-walking device. No. 1,300,292; Apr. 15; v. 261; p. 481.
Osland, Charles H. (See Johnson and Osland.)
Östergaard, Alfred J. P. (See Sörensen and Östergaard.)
Otis Elevator Company. (See John, Griffith, assignor.)
Otis Elevator Company. (See Lindquist, David L., assignor.)
Ott, John F., Glen Ridge, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph or talking-machine. No. 1,299,768; Apr. 8; v. 261; p. 292.
Otte, Otho M., Jamestown, N. Y. Headlight-adjuster. No. 1,300,860; Apr. 15; v. 261; p. 551.
Otte, Otho M., Jamestown, N. Y. Folding table. No. 1,300,861; Apr. 15; v. 261; p. 551.
Otte, Otho M., Jamestown, N. Y. Folding table. No. 1,300,862; Apr. 15; v. 261; p. 552.
Otte, Otho M., Jamestown, N. Y. Spot-light mounting. No. 1,300,863; Apr. 15; v. 261; p. 553.
Otte, Otho M., Jamestown, N. Y. Automobile-lamp. No. 1,301,162; Apr. 22; v. 261; p. 652.
Otte, Otho M., Jamestown, N. Y. Automobile-lamp. No. 1,301,163; Apr. 22; v. 261; p. 652.
Otte, Otho M., assignor to Steelwhite Company, Jamestown, N. Y. Suspension for drawers and similar receptacles. No. 1,301,495; Apr. 22; v. 261; p. 717.
Ottumwa Iron Works. (See Mead, Ezra B., assignor.)
Overbury, Frederick C., Rutherford, N. J., assignor to Flintkote Manufacturing Company, Boston, Mass. Machine for making fabric shingles. No. 1,301,501; Apr. 22; v. 261; p. 734.
Overbury, Frederick C., Hillsdale, N. J., assignor, by mesne assignments, to The Flintkote Company, Boston, Mass. Shingle-strip machine. No. 1,301,964; Apr. 29; v. 261; p. 853.

Overshiner, Ellsworth, B., assignor of one-half to J. B. Blackman, Chicago, Ill. Fuel-economiser. No. 1,301,000; Apr. 15; v. 261; p. 581.
Overstrom, Gustave A., Pasadena, Calif. Method of and apparatus for pulverizing frangible substances. No. 1,300,192; Apr. 8; v. 261; p. 384.
Ovren, John E., assignor of one-half to J. Johnson, Stoughton, Wis. Transmission mechanism. No. 1,301,592; Apr. 22; v. 261; p. 735.
Owens, Charles, Chattanooga, Tenn., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Printing apparatus. No. 1,301,306; Apr. 22; v. 261; p. 681.
Owens Bottle Machine Company, The. (See La France, Richard, assignor.)
Owens, Louis C., New York, N. Y. Coupling device for vehicles. No. 1,301,307; Apr. 22; v. 261; p. 682.
Owens, Robert J., Minneapolis Minn. Wild-oat and barley separator. No. 1,299,379; Apr. 1; v. 261; p. 178.
P. B. Yates Machine Company. (See Lane and Weaver, assignors.)
P. H. Murphy Company. (See Brewer and Groendling, assignors.)
P. H. Murphy Company. (See Brewer and Hoppel, assignors.)
P. H. Murphy Company. (See Gilpin, Garth G., assignor.)
P & M Company, The. (See Alfreds, Torris H., assignor.) (Reissue.)
P & M Company, The. (See Berkeley, Laurence J., assignor.)
P & M Company, The. (See Warr, Harold G., assignor.)
P. T. Wheel Company, The. (See Pavesi and Tolotti, assignors.)
Pacific Evaporator Company. (See Shepard, Henry L., assignor.)
Pack, Charles, assignor to Doehler Die Casting Company, Brooklyn, N. Y. Forming die-castings. No. 1,299,709; Apr. 8; v. 261; p. 292.
Pack, Charles, assignor to Doehler Die Casting Company, Brooklyn, N. Y. Mold. No. 1,301,965; Apr. 29; v. 261; p. 838.
Package Machinery Company. (See Armstrong, Harry Y., assignor.)
Package Machinery Company. (See Fischer, Hermann O., assignor.)
Package Machinery Company. (See Smith, Elmer L., assignor.)
Pacz, Aladar, Cleveland, Ohio, assignor to General Electric Company. Metal and its manufacture. No. 1,299,017; Apr. 1; v. 261; p. 92.
Paffenbarger, Alfred G., Los Angeles, Calif. Waterproof seam for composition-board. No. 1,299,999; Apr. 8; v. 261; p. 340.
Pagliuca, Antonio, Boston, assignor, by mesne assignments, to National Equipment Company, Springfield, Mass. Chocolate-coating machine and the like. No. 1,302,205; Apr. 29; v. 261; p. 883.
Pahlow, Gustav C., assignor of one-half to H. J. Olson, Galesburg, Ill. Coffin-handle. No. 1,302,423; Apr. 29; v. 261; p. 925.
Pain, Henry J., New York, N. Y. Rocket. No. 1,299,217; Apr. 1; v. 261; p. 136.
Paldani, George F., Waukegan, assignor to Pfanstiehl Company, Inc., North Chicago, Ill. Ignition mechanism for internal-combustion engines. No. 1,299,770; Apr. 8; v. 261; p. 292.
Palmer, Charles W., Sandpoint, Idaho. Valve-spring lifter. No. 1,301,733; Apr. 22; v. 261; p. 763.
Palmer, George E., Brooklyn, assignor of one-half to M. C. Rusk, Baltimore, Md. Cement-catching receptacle. No. 1,300,000; Apr. 8; v. 261; p. 341.
Palmer, Granville E., Brookline, Mass. Service-switch. No. 1,299,602; Apr. 8; v. 261; p. 252.
Palmer, Irom G. (See Winesburg and Palmer.)
Palmer, John V., Pittsburgh, Pa. Chair. No. 1,301,001; Apr. 15; v. 261; p. 581.
Palmer-Jones, Daniel, Stockwell, London, assignor of one-half to The Patent Rapid Scaffold Tie Company Limited, Stockwell, England. Device for connecting together members such as scaffold-poles and the like. No. 1,300,864; Apr. 15; v. 261; p. 552.
Panzner, John, Cuyahoga Falls, and J. Pekar, Akron, Ohio. Attachment for baby-carriages. No. 1,301,502; Apr. 22; v. 261; p. 735.
Papp, Endre, and P. Nagy, New York, N. Y. Auto windshield. No. 1,301,308; Apr. 22; v. 261; p. 682.
Paquin, Joseph A., Manchester, N. H., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Welt-beating machine. No. 1,298,780; Apr. 1; v. 261; p. 39.
Paquin, Alonzo, Montreal, Quebec, Canada. Electromagnetic tube-testing device. No. 1,302,424; Apr. 29; v. 261; p. 926.
Parent, Rufus A., South Tacoma, Wash. Jar-holder. No. 1,301,309; Apr. 22; v. 261; p. 682.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Apparatus for assembling boxes in rows. No. 1,300,761; Apr. 15; v. 261; p. 530.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for filling boxes. No. 1,300,762; Apr. 15; v. 261; p. 531.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for filling boxes. No. 1,300,763; Apr. 15; v. 261; p. 531.
Paris, Nicholas U., Lancaster, Pa. Water-heater and radiator. No. 1,301,312; Apr. 22; v. 261; p. 683.
Parker, Alfred E., C. S. Davy, London, and D. G. Mellie-reid, Lee, England, assignors to The Babcock & Wilcox Company, Bayonne, N. J. Ash-door. No. 1,299,587; Apr. 8; v. 261; p. 249.
Parker, Bertrand A., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa. Drying-machine. No. 1,301,504; Apr. 22; v. 261; p. 736.
Parker, Samuel R., Willenhall, England. Wire-strainer or turnbuckle. No. 1,302,425; Apr. 29; v. 261; p. 926.
Parkhurst, Charles W., Johnstown, and F. J. Burd, Wilkinsburg, Pa., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller for motor-driven machines. No. 1,301,966; Apr. 29; v. 261; p. 839.
Parks, Samuel, Las Cruces, N. Mex. Aerial photography. No. 1,301,967; Apr. 29; v. 261; p. 839.
Parmenter, Frank D., Toronto, Ontario, Canada. Attaching means for electric fixtures. No. 1,299,857; Apr. 8; v. 261; p. 311.
Paroubek, Antea J., assignor to American Metal Seal Company, Beacon, N. Y. Metal seal and fastener. No. 1,301,310; Apr. 22; v. 261; p. 682.
Parsons, Herman C., Monument, Oreg. Thermometer-case. No. 1,302,082; Apr. 29; v. 261; p. 840.
Paschall Tool Company. (See Neff, Abner R., assignor.)
Paschke, Otto H., Yakima, Wash., assignor to Automatic Truck Brake Co. Safety truck-brake. No. 1,301,311; Apr. 22; v. 261; p. 682.
Pasman, Abram N., Waterbury, Conn. Flush-valve. No. 1,300,001; Apr. 8; v. 261; p. 341.
Pasman, Abram N., Waterbury, Conn. Flush-valve. No. 1,300,865; Apr. 15; v. 261; p. 552.
Passage, Mary C., *et al.* (See Babbitt, William A., assignor.)
Pasternak, John, New York, N. Y. Toy balloon. No. 1,300,640; Apr. 15; v. 261; p. 504.
Patave, Frank, Gardenville, N. Y. Snow-gatherer. No. 1,300,764; Apr. 15; v. 261; p. 531.
Patch, Calvin B., Glenellyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear having removable friction-shells. No. 1,300,490; Apr. 15; v. 261; p. 471.
Patent Rapid Scaffold Tie Company, The. (See Palmer-Jones, Daniel, assignor.)
Pathe Freres Phonograph Company. (See Cappa, Frank L., assignor.)
Pathe Freres Phonograph Company. (See Labrely, Emile, assignor.)
Paton, Francis A., and H. L. Koenig, assignors of nine-tenths to F. I. Johnson, Fitchburg, Mass. Machine for making steel-wool. No. 1,300,002; Apr. 8; v. 261; p. 341.
Pattay, Marc Antoine, and E. Jaquemot, Geneva, Switzerland. Magneto-electric pocket-lamp. No. 1,301,595; Apr. 22; v. 261; p. 735.
Patterson, Helen A. (See Patterson, John B., assignor.)
Patterson, I. W., *et al.* (See Key, Emmett M., assignor.)
Patterson, John B., assignor of one-half to H. A. Patterson, Primghar, Iowa. Fire-escape. No. 1,301,734; Apr. 22; v. 261; p. 763.
Patterson, John L., Roanoke Rapids, and L. S. Cannon, Rosemary, N. C. Jacquard. No. 1,299,771; Apr. 8; v. 261; p. 292.
Patton, John G., Philadelphia, Pa. Advertising device for finger-bowls. No. 1,301,596; Apr. 22; v. 261; p. 736.
Patz, Wasyl. (See Pazaychuk and Patz.)
Paul, Andrew G., Boston, Mass. Heating system. No. 1,299,608; Apr. 8; v. 261; p. 252.
Paul, William A. (See Carruthers, John R., assignor.)
Paulmeier, Albert C., Alameda, Calif., assignor to Byron Jackson Iron Works, West Berkeley, Calif. Deep-well-pump column. No. 1,301,597; Apr. 22; v. 261; p. 735.
Paulson, Ernest W., Otoe, Iowa. Corn-planter. No. 1,300,641; Apr. 15; v. 261; p. 505.
Paulson, John B., Ridgefield Park, N. J. Building-block for hollow-wall constructions. No. 1,300,765; Apr. 15; v. 261; p. 532.
Pauly, John and H. Eichtager, Appleton, Wis. Rotary internal-combustion engine. No. 1,301,871; Apr. 29; v. 261; p. 820.
Pavesi, Ugo, and G. Tolotti, Milan, Italy, assignors, by mesne assignments, to The P. T. Wheel Company, Dayton Ohio. Tractor. No. 1,298,781; Apr. 1; v. 261; p. 39.
Pawling and Harnischfeger Company. (See Wehner, Lewis, assignor.)
Paxson, Calvin D., assignor to The Paxson Rim Co., Cleveland, Ohio. Detachable wheel-rim. (Reissue.) No. 14,634; Apr. 15; v. 261; p. 603.
Paxson Rim Co., The. (See Paxson, Calvin D., assignor.) (Reissue.)
Pazaychuk, Wasil, and W. Patz, New Castle, Del. Anti-submarine device. No. 1,302,208; Apr. 29; v. 261; p. 883.
Pearce, Edwin S. (See Downing and Pearce.)
Pearson, Edwin R., Pittsfield, Mass., assignor to General Electric Company. Air-blast transformer. No. 1,301,735; Apr. 22; v. 261; p. 763.
Pearson, Nels, assignor to O. Lindgren, Vancouver, British Columbia, Canada. Clevis. No. 1,299,018; Apr. 1; v. 261; p. 92.
Pearson, Swan, Minneapolis, Minn. Convertible baby carriage and sleigh. No. 1,302,426; Apr. 29; v. 261; p. 926.

Pearson, William R., Portland, Oreg. Drafting instrument. No. 1,302,297; Apr. 29; v. 261; p. 853.
Pease, George W., Pittsfield, Mass. Garment. No. 1,301,164; Apr. 22; v. 261; p. 652.
Pease, George W., Pittsfield, Mass. Union-garment. No. 1,301,872; Apr. 29; v. 261; p. 820.
Pease, Roger S., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Apparatus and process for drawing glass. No. 1,299,619; Apr. 1; v. 261; p. 92.
Peck, Lottie M., Braintree, Mass. Edge-trimming machine. No. 1,300,642; Apr. 15; v. 261; p. 505.
Peck, William W., Duncan, Mex. Ball-cock. No. 1,299,218; Apr. 1; v. 261; p. 134.
Pecoraro, Nino. (See Furnati, Pecoraro, and Guidoni.)
Pedersen, Niels, assignor to A. Brock, Jr., Philadelphia, Pa. Spring-motor control. No. 1,301,873; Apr. 29; v. 261; p. 821.
Pedersen, Niels, assignor to A. Brock, Jr., Philadelphia, Pa. Spring-motor control. No. 1,301,968; Apr. 29; v. 261; p. 839.
Pederson, Hans. (See Clausen, Martin J., assignor.)
Peele, Hereward J., St. Louis, Mo. Cable suspension. No. 1,301,496; Apr. 22; v. 261; p. 717.
Peelle Company, The. (See Wexler, Benjamin, assignor.)
Peets, Clifford S., Great Neck Station, N. Y., and O. D. Shoonard, Montclair, N. J., assignors of two-thirds to said O. D. Shoonard and one-third to H. W. Shoonard, Upper Montclair, N. J. Brake. No. 1,300,008; Apr. 8; v. 261; p. 341.
Pekar, Joseph. (See Panzner and Pekar.)
Pelletier, Joseph C., and D. Rondeau, Winnipeg, Manitoba, Canada. Index cutter and printer. No. 1,302,063; Apr. 29; v. 261; p. 860.
Pelton, Clyde S., Cleveland Heights, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Heater for motor-driven vehicles. No. 1,302,206; Apr. 29; v. 261; p. 883.
Penney, Harold D., Pelham, assignor to R. L. McElroy, New York, N. Y. Diaphragm-mounting. No. 1,300,664; Apr. 8; v. 261; p. 285.
Pennington, John R. (See Pennington, William D. and J. R.)
Pennington, Joseph L., Tonopah, Nev. Irrigating apparatus. No. 1,300,866; Apr. 15; v. 261; p. 562.
Pennington, William D., French Lick, Ind., and J. R. Pennington, Chicago, Ill. Electrical generator. No. 1,301,077; Apr. 15; v. 261; p. 600.
Pennsylvania Lawn Mower Works. (See Braun, William F. H., assignor.)
Penta, William, assignor of one-half to A. E. Buechel, Chicago, Ill. Paper box. No. 1,299,503; Apr. 8; v. 261; p. 220.
Pequegnat, Frank A., Riverside, Calif. Valve-lifter. No. 1,302,427; Apr. 29; v. 261; p. 926.
Pereda, Celedonio V., Buenos Aires, Argentina. Multiple seed and fertilizer drill. No. 1,302,426; Apr. 29; v. 261; p. 926.
Perfection Casting and Ventilating Company. (See Sutton, Chester R., assignor.)
Perfection Wood Steaming Retort Co. (See Miller, Frank L., assignor.)
Perkins Glue Company. (See Greenough, William M., assignor.)
Perkins Glue Company. (See Stryker, Julius R. R., assignor.)
Perkins, Laurence M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,300,293; Apr. 15; v. 261; p. 431.
Perlman, Julius L. (See Lawhun, Samuel M., assignor.)
Perrin, Fernand, Velvic, France. Concentration of sulfuric acid. No. 1,301,866; Apr. 22; v. 261; p. 726.
Perry, Albert H., Hartshorn, Alberta, Canada. Registering instrument. No. 1,301,818; Apr. 22; v. 261; p. 683.
Perry, Melvin W., Algoma, Wis. Aeroplane-fuselage. No. 1,299,856; Apr. 8; v. 261; p. 311.
Perry, Ray P., Upper Montclair, N. J., assignor to The Barrett Company. Roofing-felt. No. 1,302,209; Apr. 29; v. 261; p. 884.
Perry, William L., San Francisco, Calif. Oil-burner. No. 1,300,643; Apr. 15; v. 261; p. 506.
Perrycleor, William E., Savannah, Ga., assignor of one-half to L. W. High, Wilson, N. C. Stove. No. 1,299,620; Apr. 1; v. 261; p. 93.
Persons, Marshall A., and C. G. Farmer, Newport, N. H. Valve-grinder. No. 1,301,165; Apr. 22; v. 261; p. 653.
Pester, Maxwell E., Milford, Conn. Lathe-dog. No. 1,299,772; Apr. 8; v. 261; p. 292.
Pet-Sea Pump Company, The. (See Peters, Theodore, assignor.)
Peters, Arthur E., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Governing mechanism for steam-engines. No. 1,299,773; Apr. 8; v. 261; p. 293.
Peters, Arthur E., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Plate-valve. No. 1,302,064; Apr. 29; v. 261; p. 860.
Peters, Herman L., Buffalo, N. Y. Spring-lock. No. 1,299,899; Apr. 8; v. 261; p. 311.
Peters, Theodore, assignor to The Pet-Sea Pump Company, Ferdinand, Ind. Double-acting well-pump. No. 1,302,210; Apr. 29; v. 261; p. 884.
Petersen, William A., Excelsior Springs, Mo., assignor of one-half to W. L. Doyle, Whitehall, Ill. Electric scale. No. 1,302,065; Apr. 29; v. 261; p. 861.
Peterson, Burt A., assignor to Barber-Colman Company, Rockford, Ill. Bobbin-stripper. No. 1,300,004; Apr. 8; v. 261; p. 342.
Peterson, Charles C., Tompkins, Saskatchewan, Canada. Door-fastener. No. 1,300,481; Apr. 15; v. 261; p. 471.
Peterson, Charles C., Muskegon, Mich. Lock-nut construction. No. 1,301,314; Apr. 22; v. 261; p. 683.
Peterson, Herman J., Philomath, Oreg. Detachable saw-handle. No. 1,301,315; Apr. 22; v. 261; p. 683.
Petranich, Frank, St. Louis, Mo. Clamp. No. 1,300,482; Apr. 15; v. 261; p. 471.
Petron, Anthony K., Amsterdam, N. Y. Artificial limb. No. 1,299,504; Apr. 8; v. 261; p. 220.
Petron, Anthony K., Amsterdam, N. Y. Artificial arm. No. 1,299,505; Apr. 8; v. 261; p. 220.
Petterson, Clarence A., assignor to N. Schiller, San Francisco, Calif. Wrapping-machine. No. 1,300,189; Apr. 8; v. 261; p. 383.
Pettigrew, Cynthia, Plantersville, Miss. Mail-catcher. No. 1,300,005; Apr. 8; v. 261; p. 342.
Peyche, Armand H., assignor to American Steel Foundries, Chicago, Ill. Brake-head adjustment. No. 1,299,605; Apr. 8; v. 261; p. 253.
Pfanstiehl Company. (See Paldani, George F., assignor.)
Pfeifer, Adolph X., St. Louis, Mo. Tire-armor. No. 1,300,766; Apr. 15; v. 261; p. 532.
Pfeil, Frank, Livingston, Ill. Fire-escape. No. 1,301,487; Apr. 22; v. 261; p. 717.
Pfanze, Charles F., St. Louis, Mo. Cutting-machine. No. 1,302,211; Apr. 29; v. 261; p. 884.
Pfund, August H., Baltimore, Md. Headlight. No. 1,299,219; Apr. 1; v. 261; p. 137.
Philadelphia Drying Machinery Company, The. (See Allsop and Stinson, assignors.)
Philadelphia Drying Machinery Company, The. (See Parkes, Bertrand A., assignor.)
Phillips, Andrew J., Washington, D. C. Reclining-chair. No. 1,302,212; Apr. 29; v. 261; p. 884.
Phillips-Brinton Company. (See Brown, William H., assignor.)
Phillips, Howard, Detroit, Mich. Elevator-gate shoe. No. 1,299,220; Apr. 1; v. 261; p. 137.
Phillips, Marie A., New York, N. Y. Hat. No. 1,300,644; Apr. 15; v. 261; p. 505.
Phillips, Willard G., assignor to C. A. Counts, Los Angeles, Calif. Adjustable rope-tie. No. 1,300,008; Apr. 8; v. 261; p. 342.
Phillips, William H., Albany, Ala. Cultivator. No. 1,300,767; Apr. 15; v. 261; p. 532.
Phillips, William J., assignor to A. L. Scofield, Brooklyn, N. Y. Telephone-cabinet. No. 1,299,506; Apr. 8; v. 261; p. 220.
Phonocharp Company, The. (See Ballard, Harrie A., assignor.)
Phonocharp Company, The. (See Green, Joseph R., assignor.)
Piatt, Richard F., Louisville, Ky. Internal-combustion engine. No. 1,299,774; Apr. 8; v. 261; p. 293.
Pick, Hugo, assignor to Albert Pick & Company, Chicago, Ill. Beverage-shaker. No. 1,300,867; Apr. 15; v. 261; p. 562.
Pickford, Edward F., et al. (See Penn, Eugene, assignor.)
Piel, Gottfried. (See Lang, George F., assignor.)
Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)
Pieper, Oscar H. and A. F., Rochester, N. Y. Dental cuspidor-fixture. No. 1,300,868; Apr. 15; v. 261; p. 562.
Pierce, Anton, Cleveland, Ohio. Door opening and closing device. No. 1,301,736; Apr. 22; v. 261; p. 763.
Pierce, Frederick K., Jersey City, N. J. Coupling. No. 1,301,737; Apr. 22; v. 261; p. 764.
Pierce, James F., Glynrich, assignor to American Vulcanized Fibre Co., Wilmington, Del. Calendering-machine. No. 1,301,899; Apr. 22; v. 261; p. 736.
Pierce, James F., Glynrich, and H. A. Heinel, White Clay Creek Hundred, assignors to American Vulcanized Fibre Co., Wilmington, Del. Riveting-machine. No. 1,301,900; Apr. 22; v. 261; p. 736.
Pierce, Orrin M. (See Frost, Robert T., assignor.)
Pierce, Ralph H., Eugene, Oreg. Magneto-coupling. No. 1,301,002; Apr. 15; v. 261; p. 582.
Pierog, Marek, New Aberdeen, Nova Scotia, Canada. Antisubmarine device. No. 1,299,775; Apr. 8; v. 261; p. 293.
Pieseens, Henry, Philadelphia, Pa. Arch-support for shoes and making the same. No. 1,299,221; Apr. 1; v. 261; p. 137.
Pifer, John H., Larimore, N. D. Brake-pedal. No. 1,300,768; Apr. 15; v. 261; p. 532.
Pilley, Frank, Kansas City, Mo. Valve mechanism. No. 1,299,507; Apr. 8; v. 261; p. 231.
Pilley, Frank, Kansas City, Mo. Can cleaning and turning device. No. 1,299,927; Apr. 8; v. 261; p. 326.
Pipe, Edward H., St. Louis, Mo. Machine for molding composition blocks. No. 1,300,645; Apr. 15; v. 261; p. 505.
Pirtle, Homer P., Walters, Okla. Patch for tire-casings. No. 1,300,769; Apr. 15; v. 261; p. 532.
Pitch-Lined Cement Casket Co. (See Stamm, Charles H., assignor.)
Pitlick, Paul T., Okobojo, S. D. Holder for straining-funnels. No. 1,302,086; Apr. 29; v. 261; p. 861.

Pitt, William P., assignor to Irving-Pitt Manufacturing Company, Kansas City, Mo. Bookbinding. No. 1,299,776; Apr. 8; v. 261; p. 293.
Pitts, George B., Cleveland, assignor, by mesne assignments, to The Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizing apparatus. No. 1,300,360; Apr. 15; v. 261; p. 553.
Pittsburgh Plate Glass Company. (See Clause, William L., assignor.)
Pittsburgh Plate Glass Company. (See Pease, Roger S., assignor.)
Pittsburgh Steel Products Company. (See Bindley, Albion, assignor.)
Plaisted, Harold M., Granite City, Ill. Rotary hammer. No. 1,301,316; Apr. 22; v. 261; p. 683.
Planche, Léon, Paris, assignor to L. C. Mauger, Rouen, France. Letter-card and the like having an opening device. No. 1,299,021; Apr. 1; v. 261; p. 93.
Plancher, Lillian, New York, assignor to M. Finstone, Brooklyn, N. Y. Fountain-pen. No. 1,301,317; Apr. 22; v. 261; p. 684.
Plant, Henry J., assignor to Defiance Check Writer Corporation, Rochester, N. Y. Printing-machine. No. 1,300,007; Apr. 8; v. 261; p. 342.
Plasclascovitle, Sidney, Denver, Colo. Spoon attachment. No. 1,300,008; Apr. 8; v. 261; p. 343.
Plass, Robert H., Upper Montclair, N. J., assignor to The Riegel Sack Company, New York, N. Y. Web-printing device. No. 1,301,969; Apr. 29; v. 261; p. 838.
Plumer, James T., Pontiac, Mich. Sprayer. No. 1,298,880; Apr. 1; v. 261; p. 173.
Plummer, Henry W., Augusta, Me. Tourniquet. No. 1,299,860; Apr. 8; v. 261; p. 312.
Plunkett, William H., Richmond Hill, N. Y. Shock-absorber. No. 1,301,008; Apr. 15; v. 261; p. 582.
Plush, Abram L., Philadelphia, Pa. Receptacle for fire-escapes. No. 1,300,870; Apr. 15; v. 261; p. 553.
Plym, Francis J., and I. G. Barclay, assignors to Kawneer Manufacturing Company, Niles, Mich. Store-front construction. No. 1,299,508; Apr. 8; v. 261; p. 231.
Podsenick, Edward, Brooklyn, N. Y. Rheostat. No. 1,300,483; Apr. 15; v. 261; p. 478.
Popielski, Nicolas, Washington, D. C. Means for preventing the disastrous consequences of the accidental ignition of the gasolene of aircrafts' tanks. No. 1,300,190; Apr. 8; v. 261; p. 383.
Pogue, George D., St. Louis, Mo. Recording apparatus. No. 1,300,191; Apr. 8; v. 261; p. 383.
Pogue, George D., St. Louis, Mo. Multiple-feed lubricating system. No. 1,301,004; Apr. 15; v. 261; p. 582.
Pohl, Charles, Los Angeles, Calif. Automobile-lock. No. 1,301,498; Apr. 22; v. 261; p. 718.
Pohl, Charles, assignor to Globe Manufacturing Company, Los Angeles, Calif. Engine-starter. No. 1,302,213; Apr. 29; v. 261; p. 884.
Poland, Edward F., Boston, Mass. Ironing-board. No. 1,301,874; Apr. 29; v. 261; p. 821.
Polinkowsky, Lipa. (See Deakin and Polinkowsky.)
Polinkowsky, Lipa, London, England, assignor to Western Electric Company, Incorporated, New York, N. Y. Call-distributing system. No. 1,299,606; Apr. 8; v. 261; p. 253.
Polinsky, Samuel. (See Sokolow and Polinsky.)
Pollock, Henry F., and H. J. Hick, Alliance, Ohio, assignors to The McCaskey Register Company, Alliance, Ohio. Filing-appliance case. No. 1,299,607; Apr. 8; v. 261; p. 255.
Pomeroy, Percy W., assignor to The Willys-Overland Company, Toledo, Ohio. Vehicle-body. No. 1,301,005; Apr. 15; v. 261; p. 583.
Pond, Alanson M., Dubuque, Iowa. Grease-cup. No. 1,300,009; Apr. 8; v. 261; p. 343.
Pons, Eugene, assignor of fifteen thirty-seconds to F. J. Seabolt, one-fourth to M. H. Hall, one thirty-second to C. D. Knight, Schenectady, N. Y., and one-fourth to E. F. Pickford, Washington, D. C. Electric winding mechanism for clocks and the like. No. 1,301,499; Apr. 22; v. 261; p. 718.
Poole, Arthur F., Chicago, Ill., assignor to The Wahl Company, Wilmington, Del. Calculating-machine. No. 1,301,318; Apr. 22; v. 261; p. 684.
Porro, Emilio, Albany, Calif. Cell-door-locking device. No. 1,299,222; Apr. 1; v. 261; p. 137.
Porteous, James, Fresno, Calif. Aeroplane. No. 1,302,214; Apr. 29; v. 261; p. 884.
Porter, Claude G., Seaford, Del. Dividing-stairs. No. 1,300,010; Apr. 8; v. 261; p. 343.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Chime-clock. No. 1,300,771; Apr. 15; v. 261; p. 533.
Potter, Joseph H., Seaside Heights, N. J. Attachment for joiners' squares. No. 1,301,166; Apr. 22; v. 261; p. 653.
Potter, William W., Philadelphia, Pa. Submergible and towable supply-base. No. 1,301,738; Apr. 22; v. 261; p. 764.
Potts, Louis M., assignor to A. McLanahan, Baltimore, Md. Selective signaling apparatus. No. 1,299,608; Apr. 8; v. 261; p. 254.
Poulton, Frank E., Boston, Mass., assignor, by mesne assignments, to S. Sternau & Co., Brooklyn, N. Y. Infusible solidified liquid fuel and making same. No. 1,299,408; Apr. 1; v. 261; p. 180.
Powell, Arthur C., Marysville, Calif. Fish-basket. No. 1,302,429; Apr. 29; v. 261; p. 926.
Powers Accounting Machine Company. (See Lasker, William W., assignor.)
Powers Accounting Machine Company. (See Powers, James, assignor.)
Powers, James, assignor to Powers Accounting Machine Company, New York, N. Y. Perforating-machine. No. 1,299,022; Apr. 1; v. 261; p. 93.
Powers, Patrick J., Red Lodge, Mont. Grain-measuring machine. No. 1,299,861; Apr. 8; v. 261; p. 312.
Powles, John B., Seattle, Wash. Valve for bung-vents. No. 1,300,011; Apr. 8; v. 261; p. 343.
Präcisionsgusswerke System Schmidt-Reichhardt G. m. b. H. (See Talla, Heinrich, assignor.)
Prager, Clarence H., Muskogee, Okla. Chart for teaching. No. 1,300,871; Apr. 15; v. 261; p. 554.
Pranker, Bert P., Marblehead, Mass. Automatic train-stop. No. 1,298,782; Apr. 1; v. 261; p. 39.
Prather, Frank M., Detroit, Mich. Explosive-engine. No. 1,299,777; Apr. 8; v. 261; p. 294.
Pratt, Thomas L., and E. Biagini, Charleroi, Pa. Ice-breaker. No. 1,299,023; Apr. 1; v. 261; p. 94.
Pratt & Cady Company. (See Woodcock, John, assignor.)
Pratt & Whitney Company. (See Carter, Alfred E., assignor.)
Pratt & Whitney Company. (See Goodrich, Clarence L., assignor.)
Pratt & Whitney Company. (See Müller, Friederich, assignor.)
Premier Cushion Spring Company. (See McCullough and Mahoney, assignors.)
Premier Motor Corporation. (See Gunn and Nelson, assignors.)
Prevet, Jules, Paris, France. Tube for inclosing liquids or viscous substances. No. 1,300,646; Apr. 15; v. 261; p. 506.
Pribil, Alexis R., Cleveland, Ohio, assignor to Westinghouse Electric & Manufacturing Company. Guard for rotatably-mounted members. No. 1,300,294; Apr. 15; v. 261; p. 482.
Price, Orville J., Chico, Calif. Combination carbon-cleaner. No. 1,299,609; Apr. 8; v. 261; p. 254.
Price, Thomas, Nanaimo, British Columbia, Canada. Mine-cage hoist. No. 1,300,647; Apr. 15; v. 261; p. 506.
Price Service & Company. (See Hanman, John, assignor.)
Pride, Christopher W., Canton, Cardiff, assignor to himself and J. J. David, Cardiff, England. Demountable rim for wheels of vehicles. No. 1,300,223; Apr. 8; v. 261; p. 391.
Priebe, Herman C., Blue Island, Ill. Car-underframing. No. 1,302,087; Apr. 29; v. 261; p. 861.
Priester, Henry. (See Bradney and Priester.)
Primm, Carlon M., Long Beach, Calif. Curtain-supporting bracket. No. 1,299,223; Apr. 1; v. 261; p. 138.
Prince, David C. (See Alexanderson and Prince.)
Prince, David C., Springfield, Ill., assignor to General Electric Company. Speed control of induction-motors. No. 1,301,739; Apr. 22; v. 261; p. 764.
Prior, Fred, Des Moines, Iowa. Beet-harvester. No. 1,301,006; Apr. 15; v. 261; p. 582.
Prior, Jed W., Burlington, Vt. Jar-lifter. No. 1,300,648; Apr. 15; v. 261; p. 506.
Prior, Thomas W., and F. A. Church, Venice, Calif. Amusement device. No. 1,302,088; Apr. 29; v. 261; p. 861.
Pritchard, Carl G., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Collating-feeder. No. 1,300,295; Apr. 15; v. 261; p. 482.
Pritchard, Carl G., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Printing-press. No. 1,301,970; Apr. 29; v. 261; p. 839.
Pritchard, William C., assignor to The National Store Specialty Company, Lancaster, Pa. Weighing-scale. No. 1,299,224; Apr. 1; v. 261; p. 138.
Pritchett, L. H. (See Strader, Julius G., assignor.)
Procter, Joseph H., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Producing iron sheets by electrical deposition. No. 1,300,296; Apr. 15; v. 261; p. 482.
Proctor, Barton A., New York, assignor to H. C. Meyer, Brooklyn, N. Y. Stock-quotation projector. No. 1,299,024; Apr. 1; v. 261; p. 94.
Prokofieff, Ivan M. (See Kramer, Anders.)
Prometheus Electric Company, The. (See Ripley, William H., assignor.)
Prosser, George, Portland, Oreg. Cutting device. No. 1,301,875; Apr. 29; v. 261; p. 821.
Proudfit Loose Leaf Company, The. (See Edwards, William H., assignor.)
Providence Body Company. (See Monahan, Thomas H., assignor.)
Praybyss, Felix, Joliet, Ill. Fire-extinguisher. No. 1,299,610; Apr. 8; v. 261; p. 254.
Praybyss, Felix, Joliet, Ill. Soldier's headwear. No. 1,299,611; Apr. 8; v. 261; p. 254.
Pulk, Martin, Chicago, Ill. Automobile steering mechanism. No. 1,299,025; Apr. 1; v. 261; p. 94.
Pugliese, Umberto, Rome, Italy. Protecting structure for ships. No. 1,299,626; Apr. 1; v. 261; p. 95.

Pukerud, Thomas S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Controller mechanism. No. 1,299,778; Apr. 8; v. 261; p. 294.

Pukerud, Thomas S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Operating mechanism for controllers. No. 1,299,779; Apr. 8; v. 261; p. 294.

Pullinger, Thomas C. W., Dumfries, assignor of one-half to W. Beardmore, Parkhead, Glasgow, Scotland. Construction of water-jacketed engine-cylinders. No. 1,301,740; Apr. 22; v. 261; p. 784.

Purcell, Isaac S., assignor to Tentobed Company, Chicago, Ill. Collapsible cot. No. 1,300,872; Apr. 15; v. 261; p. 884.

Purdy, Andrew J., San Francisco, Calif. Motor-cycle. No. 1,300,772; Apr. 15; v. 261; p. 522.

Purdy, Simeon D., assignor of one-half to T. S. Simms and Company, Ltd., Fairville, New Brunswick, Canada. Brush. No. 1,300,012; Apr. 8; v. 261; p. 342.

Purnhagen, William, St. Louis, Mo. Detachable shoe element. No. 1,301,801; Apr. 22; v. 261; p. 736.

Purvis, Robert C., Seaford, Del. Protective armor for pneumatic tires. No. 1,299,226; Apr. 1; v. 261; p. 128.

Pusey, Arthur W. (See Miller, William S., assignor.)

Pyle-National Company, The. (See Duke, Charles W., assignor.)

Quam, James P., Milwaukee, Wis. Vacuum cleaning-brush. No. 1,301,319; Apr. 22; v. 261; p. 684.

Quick Action Ignition Company. (See Oglesby, Richard A., assignor.)

Quick, Howard L., Brooklyn, N. Y. Focusing device for motion-picture cameras. No. 1,300,778; Apr. 15; v. 261; p. 523.

Quigley Furnace Specialties Co. (See Rankin, William O., assignor.)

Quinn, Charles H., Roanoke, Va. Electric locomotive. No. 1,300,013; Apr. 8; v. 261; p. 344.

Quinn, Ernest J., Richmond, Va., assignor of one-half to R. B. Blanton, Charlotte, N. C. Insulated boiler. No. 1,300,573; Apr. 15; v. 261; p. 554.

Quinn, Thomas M. (See Schwaller and Quinn.)

R. D. Swisher Manufacturing Company. (See Folger and Julien, assignors.)

R. K. Le Blond Machine Tool Company, The. (See Groene, William F., assignor.)

Racer, Roscoe C., Salt Lake City, Utah. Resilient wheel. No. 1,302,215; Apr. 29; v. 261; p. 885.

Rachals, Walter, Bordman, Ohio. Shearing-machine. No. 1,298,783; Apr. 1; v. 261; p. 39.

Racine Handy Manufacturing Company. (See Mansfield, Harry R., assignor.)

Radke, Micheal W., San Bernardino, Calif. Water-gage. No. 1,299,027; Apr. 1; v. 261; p. 95.

Radley, Guy R., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Circuit-controller. No. 1,300,484; Apr. 15; v. 261; p. 472.

Raff, Charles D., Portland, Oreg. Finger-positioning chart for stringed instruments. No. 1,300,193; Apr. 8; v. 261; p. 384.

Ragsdale, William A., Harrisburg, Pa. Rib for linters and gins. No. 1,302,216; Apr. 29; v. 261; p. 885.

Rail Joint Company, The. (See Thomson, William P., assignor.)

Railway Utility Company. (See Gray, David E., assignor.)

Rainbow Pictures Corporation. (See Shaw, Joseph, assignor.)

Rainey, Harriet R., Wausau, Wis. Griddle. No. 1,301,602; Apr. 22; v. 261; p. 737.

Raick, John J., New York, N. Y., assignor to H. R. Hunting, Springfield, Mass. Bookbinder. No. 1,301,320; Apr. 22; v. 261; p. 684.

Ramage, Alexander S., Detroit, Mich. Obtaining temperature changes in gases. No. 1,302,430; Apr. 29; v. 261; p. 927.

Ramage, Alexander S., Detroit, Mich. Apparatus for exchanging heat. No. 1,302,431; Apr. 29; v. 261; p. 927.

Ramsay, Samuel R. (See Stark and Ramsay.)

Randall, Dwight T., assignor to General Motors Company, Detroit, Mich. Hydrocarbon-motor. No. 1,298,784; Apr. 1; v. 261; p. 40.

Randall, Francis L., Nanaimo, British Columbia, Canada. Transmission mechanism. No. 1,298,785; Apr. 1; v. 261; p. 40.

Randall, Glen, Mitchell, Nebr. Stock-oiler. No. 1,300,297; Apr. 15; v. 261; p. 482.

Randel, Glenn T., Marmaduke, Ark. Mechanical gear-shift. No. 1,300,874; Apr. 15; v. 261; p. 554.

Raney, Clemma R., Chicago, Ill. Phonograph. No. 1,302,317; Apr. 29; v. 261; p. 885.

Rankin, Harry D., San Francisco, Calif., assignor to Corrosion Extraction Company. Digesting apparatus. No. 1,300,875; Apr. 15; v. 261; p. 555.

Rankin, Leonard S., Cambridge, Mass. Vehicle having a convertible body. No. 1,299,881; Apr. 1; v. 261; p. 174.

Ransom, Newell H. (See Kimble, Frank, assignor.)

Ransom, James W., and O. A. Gerstung, assignors to The Abbott Laboratories, Chicago, Ill. Spraying device. No. 1,300,014; Apr. 8; v. 261; p. 344.

Rathbun, Henry E., Worcester, Mass. Porch shade or blind. No. 1,301,606; Apr. 22; v. 261; p. 737.

Rathbun, Henry E., Worcester, Mass. Porch shade or blind. No. 1,302,218; Apr. 29; v. 261; p. 885.

Raul, Aloysius N., and P. S. Springer, Chicago, Ill. Automobile-signal. No. 1,301,741; Apr. 22; v. 261; p. 765.

Ravn, Hans P. (See Welty and Ravn.)

Ray, Eugene J., Beverly, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Thread severing and holding mechanism. No. 1,298,786; Apr. 1; v. 261; p. 40.

Raybestos Company. (See Simpson, Sumner, assignor.)

Raymond, Charles F., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,302,432; Apr. 29; v. 261; p. 927.

Raymond, Freddie A., Spokane, Wash. Automobile wrecking-truck. No. 1,300,649; Apr. 15; v. 261; p. 506.

Raymond, Henry, Ottawa, Ontario, Canada. Razor attachment. No. 1,299,382; Apr. 1; v. 261; p. 174.

Rea, James D. (See Gill, Rea, and Sanderson.)

Read, Benjamin K., Detroit, Mich., assignor to H. W. Beggs, Vincennes, Ind. Switch. No. 1,302,089; Apr. 29; v. 261; p. 861.

Reagan, John B., Bancroft, Iowa. Poultry-roost. No. 1,301,321; Apr. 22; v. 261; p. 684.

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Weatherproof plural lamp-socket. No. 1,300,774; Apr. 15; v. 261; p. 523.

Records, Paul A., Ochiltree, Tex. Power-transmitting attachment for windmills. No. 1,299,028; Apr. 1; v. 261; p. 95.

Recter, Labon F., Columbus, Nebr. Device for grading and washing sand and gravel. No. 1,299,226; Apr. 1; v. 261; p. 128.

Redden, Eugene E., Springfield, Mass. Cushioned wheel. No. 1,301,604; Apr. 22; v. 261; p. 737.

Redfield, Josiah B., Omaha, Nebr. Tally-sheet. No. 1,301,742; Apr. 22; v. 261; p. 765.

Reece Button Hole Machine Company, The. (See Reece, Franklin A., assignor.)

Reece, Franklin A., Hopkinton, assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine. No. 1,302,219; Apr. 29; v. 261; p. 885.

Reed, Andrew H., Kansas City, Mo. Adjustable axle for tractors. No. 1,301,971; Apr. 29; v. 261; p. 839.

Reed, Bennie J. (See Reed, Charles W., assignor.)

Reed, Charles L., Rochester, N. Y. Mixer. No. 1,300,015; Apr. 8; v. 261; p. 344.

Reed, Charles W., assignor to B. J. Reed, Modesto, Calif. Belt stretcher and clamp. No. 1,299,227; Apr. 1; v. 261; p. 128.

Reed Foundry & Machine Co. (See Mason, Jason B., assignor.)

Reed, George B., Philadelphia, Pa. Method of and apparatus for engine-braking. No. 1,300,016; Apr. 8; v. 261; p. 344.

Reed, Hugh T., Chicago, Ill. Calendar. No. 1,299,029; Apr. 1; v. 261; p. 95.

Reed, William N., Hackensack, N. J. Flower-stand. No. 1,300,775; Apr. 15; v. 261; p. 524.

Reese, David W., assignor to J. and M. Hoehn, East Cleveland, Ohio. Vise. No. 1,302,220; Apr. 29; v. 261; p. 886.

Reeve, Sidney A., Tompkinsville, N. Y. Railway-car. No. 1,300,776; Apr. 15; v. 261; p. 524.

Reeves, Samuel H., assignor of one-half to C. R. Bollier, Alamosa, Colo. Treating preservatives. No. 1,302,090; Apr. 29; v. 261; p. 862.

Reich, Ernest. (See Heller and Reich.)

Reich, Fred A., Oshkosh, Wis. Heating device for motor-vehicles. No. 1,300,017; Apr. 8; v. 261; p. 344.

Reid, Caleb C., New Burnside, Ill. Railway-crossing signal. No. 1,299,383; Apr. 1; v. 261; p. 174.

Reid, Eldro M., Pocatello, Idaho. Tire. No. 1,302,091; Apr. 29; v. 261; p. 862.

Reid-Geisler Manufacturing Co. (See Reid, Willard M., assignor.)

Reid, John, New York, N. Y. Furnace-front and adapter-ring therefor. No. 1,300,876; Apr. 15; v. 261; p. 555.

Reid, Wilfrid T., assignor of one-half to The British & Colonial Aeroplane Company, Limited, Bristol, England. Aircraft-fuselage. No. 1,300,777; Apr. 15; v. 261; p. 524.

Reid, Willard M., Evanston, assignor to Reid-Geisler Manufacturing Co., Chicago, Ill. Water-supplied dish-mop. No. 1,298,787; Apr. 1; v. 261; p. 40.

Reid, Willard M., Evanston, assignor to Reid-Geisler Manufacturing Co., Chicago, Ill. Sanitary ventilated dish-mop. No. 1,298,788; Apr. 1; v. 261; p. 41.

Reierson, Benhart, Portland, Oreg. Drag-saw machine. No. 1,300,650; Apr. 15; v. 261; p. 506.

Reinlager, Winifred B., Battle Creek, Mich. Lamp-stove. No. 1,298,789; Apr. 1; v. 261; p. 41.

Reiter, Otis F., Relay, Md. Stone-gatherer. No. 1,300,018; Apr. 8; v. 261; p. 344.

Reith, Otto C., et al. (See Lieske, Ernst, assignor.)

Remington Typewriter Company. (See Barr, John H., assignor.)

Remington Typewriter Company. (See Cone, Joseph L., assignor.)

Remmlein, Frank J., Philadelphia, Pa. Stoker-grate. No. 1,302,221; Apr. 29; v. 261; p. 886.

Reney, Jules F., Brandon, Manitoba, Canada, assignor to Baird Motion Picture Machine Co. Attachment for moving picture machines. No. 1,299,612; Apr. 8; v. 261; p. 255.

Renkin, William O., Oradell, N. J., assignor to Quigley Furnace Specialties Co., Inc. Semi-automatic compressed-air transport system. No. 1,301,167; Apr. 22; v. 261; p. 653.

Renkin, William O., Oradell, N. J., assignor to Quigley Furnace Specialties Co., Inc. Automatic apparatus for distributing pulverized fuel. No. 1,301,168; Apr. 22; v. 261; p. 654.

Replansky, Solomon, New York, N. Y. Waistband. No. 1,300,877; Apr. 15; v. 261; p. 555.

Repp, Clinton B., assignor, by mesne assignments, to G. A. Alonso, New York, N. Y. Phonograph. No. 1,302,433; Apr. 29; v. 261; p. 927.

Reutimann, Jacob, Lowell, Ariz. Pencil-sharpener. No. 1,299,780; Apr. 8; v. 261; p. 294.

Revere Rubber Company. (See Kent, William J., assignor.)

Revier, Robert H., Dallas, Tex. Window-shade roller. No. 1,300,778; Apr. 15; v. 261; p. 534.

Rexford, Benjamin A., Alton, Ill. Automobile-puller. No. 1,301,743; Apr. 22; v. 261; p. 765.

Rey, Henri D., Avarua, Island of Rarotonga, Cook Islands. Jack. No. 1,299,781; Apr. 8; v. 261; p. 294.

Rey, Jean A., Paris, France. Mechanism for controlling movement. No. 1,299,509; Apr. 8; v. 261; p. 231.

Reynolds, Arthur W., assignor of one-half to E. Benedict, Newtown, Conn. Tractor-plow. No. 1,301,744; Apr. 22; v. 261; p. 765.

Reynolds, Frank C., assignor to J. B. Moore, Columbus, Ohio. Distance-finder for cameras. No. 1,299,030; Apr. 1; v. 261; p. 96.

Reynolds, George L., East Boston, Mass. Chord-playing attachment for keyboard instruments. No. 1,300,878; Apr. 15; v. 261; p. 555.

Reynolds, Ralph V., Chicago, Ill. Clothes-hanger. No. 1,301,500; Apr. 22; v. 261; p. 718.

Reynolds, Richard S., Louisville, Ky. Fiber container. No. 1,299,031; Apr. 1; v. 261; p. 96.

Reynolds, Robert R. (See Cooper, McKee, assignor.)

Reynolds, William H., De Soto, Mo. Oil-can. No. 1,300,019; Apr. 8; v. 261; p. 345.

Reynolds, William H., De Soto, Mo. Collar-fastener. No. 1,301,745; Apr. 22; v. 261; p. 765.

Rhoades, Alonzo E., assignor to Draper Corporation, Hopedale, Mass. Bobbin-box stand. No. 1,299,613; Apr. 8; v. 261; p. 255.

Rhoads, William M., Detroit, Mich. Blotter-holder. No. 1,299,614; Apr. 8; v. 261; p. 255.

Rial, Lee, and W. Hebern; said Hebern assignor to E. J. McLaughlin and J. F. Sullivan, San Francisco, Calif. Steering-wheel lock. No. 1,300,020; Apr. 8; v. 261; p. 345.

Ricardo, Harry R., London, England. Apparatus for regulating the speed and power of internal-combustion engines. No. 1,301,972; Apr. 29; v. 261; p. 840.

Rice, John N., *et al.* (See Rice, Robert C., assignor.)

Rice, Joseph S., *et al.* (See Rice, Robert C., assignor.)

Rice, Robert C., assignor to J. S. and J. N. Rice, New Castle, Pa. Mail-bag lock. No. 1,301,876; Apr. 29; v. 261; p. 821.

Rich, Francis A., Sydney, New South Wales, Australia, assignor of one-half to D. W. Kirk, Whakatane, New Zealand. Apparatus for drying copra and treating other substances. No. 1,298,790; Apr. 1; v. 261; p. 41.

Rich, Willard G., Rochester, N. Y. Shaving-stick holder. No. 1,299,032; Apr. 1; v. 261; p. 96.

Richards, Charles A., Paullina, Iowa. Automobile camp-trailer. No. 1,300,021; Apr. 8; v. 261; p. 345.

Richards, John H., A. J. Simon, and J. H. Haas, Overbrook, Kans. Timer-brush. No. 1,300,779; Apr. 15; v. 261; p. 534.

Richards, John W., Somerville, Mass. Collapsible spring cot-bed. No. 1,302,434; Apr. 29; v. 261; p. 927.

Richardson, Alfonso A., New York, N. Y. Bed. No. 1,301,973; Apr. 29; v. 261; p. 840.

Richardson, Edward J. and J. R., assignors to G. R. Warner, Chamberlain, S. D. Self-adjusting belt. (Reissue.) No. 14,627; Apr. 1; v. 261; p. 181.

Richardson, James R. (See Richardson, Edward J. and J. R.) (Reissue.)

Richardson, Ralph R., assignor to Chicago Carton Company, Chicago, Ill. Display-carton. No. 1,301,169; Apr. 22; v. 261; p. 654.

Richardson, Ralph R., assignor to Chicago Carton Company, Chicago, Ill. Display-carton. No. 1,301,170; Apr. 22; v. 261; p. 654.

Richardson, Ralph R., assignor to Chicago Carton Company, Chicago, Ill. Folding paper box. No. 1,301,171; Apr. 22; v. 261; p. 654.

Richter, Morten B., Copenhagen, Denmark. Relay for telephone-centrals, &c. No. 1,300,022; Apr. 8; v. 261; p. 346.

Richter, Morten B., Copenhagen, Denmark. Three-conductor plug. No. 1,302,471; Apr. 29; v. 261; p. 935.

Richter, Paul C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Door-closer. No. 1,299,384; Apr. 1; v. 261; p. 174.

Ricke, George H., Cincinnati, assignor to J. W. Allman and A. McNeill, Hamilton county, Ohio. Arch-support. No. 1,299,615; Apr. 8; v. 261; p. 255.

Ricketson, William E., New York, N. Y., assignor of one-fourth to F. W. Murphy, one-fourth to R. W. Ritterer, and one-fourth to D. J. Mullen, Indianapolis, Ind. Hinge for boiler-fronts. No. 1,299,228; Apr. 1; v. 261; p. 139.

Riddell, William A., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,298,791; Apr. 1; v. 261; p. 42.

Ridgely, Charles T., Springfield, Ohio. Demountable wheel. No. 1,298,792; Apr. 1; v. 261; p. 42.

Rieber, Frank, assignor to Rieber Laboratories, San Francisco, Calif. Apparatus for determining the direction of a source of sound. No. 1,299,616; Apr. 8; v. 261; p. 256.

Rieber Laboratories. (See Rieber, Frank, assignor.)

Riegel Sack Company, The. (See Plass, Robert H., assignor.)

Riegel, Samuel S., Scranton, Pa. Locomotive side rod. No. 1,300,023; Apr. 8; v. 261; p. 346.

Riehle Bros. Testing Machine Co. (See Tretch, William J., assignor.)

Riemenschneider, Louis J., Hoboken, N. J. Adjustable folding chair. No. 1,301,877; Apr. 29; v. 261; p. 821.

Rietz, William, assignor to White Wagon Works, Sheboygan Falls, Wis. Pin-bearing. No. 1,300,485; Apr. 15; v. 261; p. 472.

Rightmire, Franklin, Paterson, N. J. Traction attachment for vehicle driving-wheels. No. 1,301,078; Apr. 15; v. 261; p. 601.

Riise, John, Akron, Ohio. Wheel-hub. No. 1,301,505; Apr. 22; v. 261; p. 719.

Riise, John, Chicago, Ill. Wheel-hub. No. 1,301,506; Apr. 22; v. 261; p. 719.

Rikkelman, John. (See Edmison and Rikkelman.)

Ringel, Herman, Newark, N. J. Reinforced corrugated paper. No. 1,301,605; Apr. 22; v. 261; p. 737.

Rintoul, William. (See Nathan, Rintoul, and Baker.)

Rintoul, William, and E. G. Beckett, assignors to Nobel's Explosives Company, Limited, Stevenston, Scotland. Explosive. No. 1,298,793; Apr. 1; v. 261; p. 42.

Ripken, Hugh F. (See Kingan and Ripken.) (Reissue.)

Ripley, Charles T., Chicago, Ill. Packing material for journal-boxes and the like. No. 1,298,794; Apr. 1; v. 261; p. 42.

Ripley, William H., Orange, N. J., assignor to The Prometheus Electric Company. Electric switch. No. 1,299,617; Apr. 8; v. 261; p. 256.

Risk, Loren. (See McElroy and Risk.)

Risser, George P., and A. P. Williams, Seattle, Wash. Metal-cutting machine. No. 1,300,879; Apr. 15; v. 261; p. 555.

Ritterer, Raymond W. (See Ricketson, William E., assignor.)

Rivett, Edward, Hull, Mass. Power transmission for grinding and similar machines. No. 1,302,222; Apr. 29; v. 261; p. 886.

Rivett Lathe and Grinder Company. (See Halstead, Frederick H., assignor.)

Robards, Otho N., Henderson, Ky. Seat-rail attachment for top-carriages. No. 1,302,223; Apr. 29; v. 261; p. 886.

Robbins, Ray N., East Orange, N. J. Fountain shaving-brush. No. 1,300,651; Apr. 15; v. 261; p. 506.

Robens, Frederick A., Toledo, Ohio. Spark-tester. No. 1,298,795; Apr. 1; v. 261; p. 42.

Robert N. Bassett Company. (See Stuart, Henry J., assignor.)

Roberts, Charles H., Salt Lake City, Utah. Wave and current motor. No. 1,300,194; Apr. 8; v. 261; p. 884.

Roberts, Eugene, assignor to Sugar Centrifugal Discharger Co., Salt Lake City, Utah. Screen for centrifugal baskets. No. 1,300,486; Apr. 15; v. 261; p. 472.

Roberts, Merritt E. (See Barlow and Roberts.)

Robertshaw, Charles, S., Natchitoches, La. Watch-protecting device. No. 1,300,024; Apr. 8; v. 261; p. 346.

Robertson, Alexander E., Vancouver, British Columbia, Canada. Cork. No. 1,301,501; Apr. 22; v. 261; p. 718.

Robertson, Edwin L., New York, N. Y. Oil-burner. No. 1,300,487; Apr. 15; v. 261; p. 473.

Robertson, Edwin L., New York, N. Y. Rubber heel. No. 1,301,974; Apr. 29; v. 261; p. 840.

Robertson, George, Durango, Colo. Flying-machine. No. 1,302,435; Apr. 29; v. 261; p. 929.

Robertson, John H., London, England. Sighting device. No. 1,301,502; Apr. 22; v. 261; p. 718.

Robeson, William B. (See Treadgold, George H., assignor.)

Robichon, Georges H., Three Rivers, Quebec, Canada. Diary. No. 1,299,782; Apr. 8; v. 261; p. 295.

Robinson, Charles J. (See Robinson, Edward W. and C. J.)

Robinson, Edward W. and C. J., Savannah, Ga. Barrel-making machine. No. 1,300,025; Apr. 8; v. 261; p. 346.

Robinson, Frank T., Louisville, Ky. Sash-lock. No. 1,300,298; Apr. 15; v. 261; p. 422.

Robinson, George H. (See Hesse, Gustaf E., assignor.)

Robinson, Herschel, Pocahontas, Miss. Artificial minnow. No. 1,300,488; Apr. 15; v. 261; p. 473.

Robinson, John G., Manchester, England. Steam-superheater. No. 1,299,033; Apr. 1; v. 261; p. 96.

Robinson, John G., Manchester, assignor to Superheater Corporation, Limited, London, England. Steam-superheater. No. 1,301,666; Apr. 22; v. 261; p. 787.
Robinson, Joseph V., Chevy Chase, Md. Automatic train-pipe connecter. No. 1,300,652; Apr. 15; v. 261; p. 507.
Robison, George R., Mount Vernon, Ohio. Refrigerator. No. 1,299,618; Apr. 8; v. 261; p. 256.
Robson, James H., Columbus, Miss. Tire-tool. No. 1,301,746; Apr. 22; v. 261; p. 765.
Roche, John. (See Carson, Hugh J., assignor.) (Reissue.)
Rockwell, Lea W. (See Stone and Rockwell.)
Rockwell, Lea W., Washington, D. C., assignor to the Government of the United States. Incendiary bullet. No. 1,300,195; Apr. 8; v. 261; p. 284.
Rodger Ballast Car Company. (See Neikirk, John O., assignor.)
Rodgers, Hickman P., et al. (See Buck, George D., assignor.)
Rodgers, Stephens D., et al. (See Buck, George D., assignor.)
Roelke, Olof, assignor to Aktiebolaget Ingeniörsfirma Fritz Egnell, Stockholm, Sweden. Gas-analyzing apparatus. No. 1,302,224; Apr. 29; v. 261; p. 886.
Roe, Alliott V., Hamble, England. Light-framed structure such as aircraft-wings and the like. No. 1,301,747; Apr. 22; v. 261; p. 766.
Roe, Alliott V., Hamble, England. Strut connection. No. 1,301,748; Apr. 22; v. 261; p. 766.
Roe, Alliott V., Hamble, England. Fastener for covers. No. 1,301,749; Apr. 22; v. 261; p. 766.
Roecker, William J., Wittenberg, Wis. Motor-sleigh. No. 1,299,862; Apr. 8; v. 261; p. 312.
Rogers, Charles H. (See McElroy and Risk, assignors.)
Rogers, Francis M., assignor to Standard Oil Company, Whiting, Ind. Treatment of emulsion-oils. No. 1,299,335; Apr. 1; v. 261; p. 174.
Rogers-Higgins Co., The. (See Higgins, James F., assignor.)
Rogers, Levi F., Pittsburgh, Pa. Draft-gear. No. 1,302,436; Apr. 29; v. 261; p. 929.
Romaro Machine and Tool Company. (See Rosander, Robert A., assignor.)
Rome Iron Mills. (See Jenkins, Weston, assignor.)
Romer, Gleason W., Lake Helen, Fla. Developing appliance for photographic prints. No. 1,299,220; Apr. 1; v. 261; p. 139.
Rommelaere, Albert, South Vancouver, British Columbia, Canada. Bessemer converter. No. 1,299,034; Apr. 1; v. 261; p. 96.
Rondeau, David. (See Pelletier and Rondeau.)
Rood, Stanley H. (See Lorenz and Rood.)
Rood, Stanley H., Hartford, Conn. Hermetic closure. No. 1,300,224; Apr. 8; v. 261; p. 291.
Roof, Robert M., Anderson, Ind., assignor to Laurel Motors Corporation, Phoenix, Ariz. Control means for intakes and exhausts of internal-combustion engines. No. 1,301,007; Apr. 15; v. 261; p. 583.
Roos, Gunnar, Stockholm, Sweden. Governing device for internal-combustion engines. No. 1,299,230; Apr. 1; v. 261; p. 139.
Root, Ralph C., Indianapolis, Ind. Ventilating apparatus. No. 1,301,975; Apr. 29; v. 261; p. 840.
Roper, Walter F., Hopedale, assignor to Hopedale Manufacturing Company, Milford, Mass. Check-valve. No. 1,300,653; Apr. 15; v. 261; p. 507.
Rosander, Robert A., Brooklyn, N. Y., assignor to Romaro Machine and Tool Company. Wrench. No. 1,299,510; Apr. 8; v. 261; p. 231.
Rose, James A., St. Louis, Mo. Non-grounded spark-plug. No. 1,299,035; Apr. 1; v. 261; p. 96.
Rose, Joseph S., Port Chester, N. Y. Diamond-tool. No. 1,299,619; Apr. 8; v. 261; p. 256.
Rose, William H., Jersey City, N. J. Dry-spraying machine. No. 1,300,654; Apr. 15; v. 261; p. 507.
Rosecrans, Charles D., Honolulu, Hawaii. Valve-grinder. No. 1,299,231; Apr. 1; v. 261; p. 139.
Rosenberg, Heyman, New York, N. Y. Fastening sheets together. No. 1,299,232; Apr. 1; v. 261; p. 140.
Rosenfeld, William W., New York, N. Y. Suction-cleaner. No. 1,300,196; Apr. 8; v. 261; p. 284.
Rosenzweig, Siegfried, New York, N. Y. Valve-gear. No. 1,298,796; Apr. 1; v. 261; p. 42.
Ross, Elmore N., et al. (See Atkins, William, assignor.) (Reissue.)
Ross, Frederick A., Whitley Bay, England. Antivibration suspension device. No. 1,302,482; Apr. 29; v. 261; p. 937.
Ross, Torry. (See Folger and Ross.)
Rosser, Horace S., Norfolk, Va. Piston-packing. No. 1,300,197; Apr. 8; v. 261; p. 285.
Rothery, Albert, Bridgeport, Conn. Clothes-hanger for doors. No. 1,301,607; Apr. 22; v. 261; p. 737.
Rothschild, Marcus. (See Dollscheck, Charles W., assignor.)
Rotnagle, Hyman, New York, N. Y. Pressing apparatus. No. 1,299,036; Apr. 1; v. 261; p. 97.
Rountree, Joseph G., Breville, Tex. Farm-tractor. No. 1,301,976; Apr. 29; v. 261; p. 840.
Roussau, Stanislas, Alton, Ill. Gas-turbine. No. 1,300,026; Apr. 8; v. 261; p. 247.
Routledge, William, Middlesex, England. Magnetic shuttle-motion. No. 1,302,437; Apr. 29; v. 261; p. 928.
Rowan, Walter R. C., Pittsburgh, Pa. Type-writer cabinet. No. 1,300,780; Apr. 15; v. 261; p. 535.
Rowe, Alvin V., assignor to Rowe Manufacturing Company, Galesburg, Ill. Cattle-eliming device. No. 1,301,503; Apr. 22; v. 261; p. 719.
Rowe, Alvin V., and G. W. Ericson, assignors to Rowe Manufacturing Co., Galesburg, Ill. Sack-baler. No. 1,301,504; Apr. 22; v. 261; p. 719.
Rowe Manufacturing Company. (See Rowe, Alvin V., assignor.)
Rowell, Dudley G., Appleton, Wis. Founder's ladle. No. 1,301,172; Apr. 22; v. 261; p. 654.
Rowntree, Harold, Kenilworth, assignor to National Pneumatic Company, Chicago, Ill. Electric control of fluid-pressure-actuated motors. No. 1,300,781; Apr. 15; v. 261; p. 535.
Roy, George, assignor of one-half to P. Lazarnopyski, Chicago, Ill. Infantry-fort. No. 1,299,620; Apr. 8; v. 261; p. 256.
Royal Typewriter Company. (See Hess and Myers, assignors.)
Royer, David H., Hartville, Ohio. Onion-topping machine. No. 1,299,233; Apr. 1; v. 261; p. 140.
Rubenstein, Nathan, New York, N. Y. Machine for facilitating the unrolling of cloth from cloth bolts. No. 1,300,655; Apr. 15; v. 261; p. 507.
Rubin, Victor, Winnipeg, Manitoba, Canada. Hot-air furnace. No. 1,300,880; Apr. 15; v. 261; p. 555.
Rudkin, William P., Baltimore, Md. Shield for blow-torches and the like. No. 1,302,438; Apr. 29; v. 261; p. 928.
Rudolph, Henry. (See Bachmann, Walter, assignor.)
Rudolph Wurlitzer Manufacturing Company, The. (See Hope-Jones, Robert, assignor.)
Ruggaber, Joseph, et al. (See Higley, John P., assignor.)
Ruggles, Henry B. (See Hodge and Ruggles.)
Rummerfield, Joseph R., Plattsmouth, Nebr. Direction-indicator. No. 1,299,863; Apr. 8; v. 261; p. 312.
Runk, Margaret C. (See Palmer, George E., assignor.)
Runyan, Arthur L., Omaha, Nebr. Resilient heel for footwear. No. 1,299,037; Apr. 1; v. 261; p. 97.
Rush, Chris C., Greenville, S. C. Display-rack. No. 1,299,783; Apr. 8; v. 261; p. 295.
Russell, Charles D., St. Paul, Minn. Spike. No. 1,301,173; Apr. 22; v. 261; p. 655.
Russell, Cornealius W., Burlington, Iowa. Sewage-disposal system. No. 1,301,977; Apr. 29; v. 261; p. 840.
Russell, Mitchell W., Springfield, Mass. Bracket. No. 1,299,234; Apr. 1; v. 261; p. 140.
Russell, Thomas N., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Railway-car. (Reissue.) No. 14,635; Apr. 15; v. 261; p. 603.
Ruth, James A., Marion, N. C., assignor to Scott and Williams, Inc., New York, N. Y. Attachment for knitting-machines. No. 1,299,621; Apr. 8; v. 261; p. 256.
Rutledge, Scott. (See Hinde and Flewell, assignors.)
Ruud, Edwin, assignor to Ruud Manufacturing Company, Pittsburgh, Pa. Incinerator. No. 1,301,822; Apr. 22; v. 261; p. 635.
Ruud Manufacturing Company. (See Ruud, Edwin, assignor.)
Ryan, Walter S., New York, N. Y. Electrically-operated time mechanism. No. 1,301,008; Apr. 15; v. 261; p. 583.
Ryan, Walter S., assignor of one-half to R. C. Lafferty, New York, N. Y. Door operating and locking device. No. 1,300,782; Apr. 15; v. 261; p. 535.
Ryback, Isidor. (See Wolf and Ryback.)
Ryback, Isidor, Brooklyn, and L. Wolf, assignor to National Hat Lining Company, New York, N. Y. Inserting hat-linings. No. 1,299,038; Apr. 1; v. 261; p. 97.
Rychoff, Abraham, New York, N. Y. Ship-bed. No. 1,301,174; Apr. 22; v. 261; p. 655.
S. Karpen & Bros. (See Westphal, Louis C., assignor.)
S. Smith & Sons (Motor Accessories) Limited. (See Dorer, Primus O., assignor.)
S. Sternau & Co. (See Poulton, Frank E., assignor.)
S. O. & Co., The. (See Neuberth, Franklin G., assignor.)
S. V. Barnes. (See Barnes, Willard F., assignor.)
Sabin, William, San Francisco, Calif. Key-fastener. No. 1,300,489; Apr. 15; v. 261; p. 473.
Sabin, William W., assignor to N. B. Gregg and J. C. Harralson, Portland, Oreg. Locking device for motor-vehicles. (Reissue.) No. 14,628; Apr. 1; v. 261; p. 182.
Sabo, Alex, Jersey City, N. J. Combination-ladder. No. 1,299,784; Apr. 8; v. 261; p. 295.
Sachs, Joseph, Hartford, Conn. Electric service and meter-testing system. No. 1,301,175; Apr. 22; v. 261; p. 655.
Saenger, Rudolf, New York, N. Y. Making lace hair-nets. No. 1,300,881; Apr. 15; v. 261; p. 556.
Safegard Tag Company. (See Tewksbury, Charles B., assignor.)
Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)
Safety Car Heating & Lighting Company, The. (See Schepmoes, Lindsley, assignor.)
Sager, George A., Albany, N. Y. Machine for turning, beading, and pressing cuffs, collars, and the like. No. 1,299,039; Apr. 1; v. 261; p. 97.
Salisbury, Charles K., assignor to Standard Separator Company, Milwaukee, Wis. Belt-driving connection. No. 1,301,507; Apr. 22; v. 261; p. 719.

Samaia, Dino, Milan, Italy. Apparatus for the delivery of several liquids simultaneously or successively. No. 1,300,490; Apr. 15; v. 261; p. 473.
Samson Electric Company. (See Wilson, Daniel S., assignor.)
Samuels, Maurice M. (See Bechoff and Samuels.)
San Francisco Coffee Urn Company. (See Kittinger, Otis A., assignor.)
Sandell, Henry K., assignor to H. S. Mills, Chicago, Ill. Music-sheet feeder. No. 1,302,439; Apr. 29; v. 261; p. 928.
Sanders, Charles M., Guthrie, Okla. Necktie-adjuster. No. 1,302,225; Apr. 29; v. 261; p. 887.
Sanderson, Leonard. (See Gill, Rea, and Sanderson.)
Sanderson, William G., Chicago, Ill. Fire-extinguisher. No. 1,299,235; Apr. 1; v. 261; p. 140.
Sarazin, Robert, Carrieres sur Seine, France. Electric welding. No. 1,302,440; Apr. 29; v. 261; p. 929.
Sargent & Company. (See Raymond, Charles F., assignor.)
Sargent & Company. (See Sargent, Edward R., assignor.)
Sargent, Edward R., assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,301,176; Apr. 22; v. 261; p. 655.
Sargent, Frederick G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Conveying device for wool-driers. No. 1,301,177; Apr. 22; v. 261; p. 655.
Sarnoff, Simon, New York, N. Y. Shipping-receptacle. No. 1,302,472; Apr. 29; v. 261; p. 935.
Sartor, Gregory, Perkins township, Erie county, Ohio. Device for cleaning windows and other finished surfaces. No. 1,299,785; Apr. 8; v. 261; p. 295.
Sather, Edmund O., Berkeley, Calif. Spark-plug. No. 1,299,040; Apr. 1; v. 261; p. 97.
Sattler, Henry W., assignor to The Hobson & Motzer Co., Meriden, Conn. Cover-support. No. 1,300,027; Apr. 8; v. 261; p. 347.
Satz, Frank, Reading, Pa. Radiator. No. 1,301,608; Apr. 22; v. 261; p. 738.
Saunders, Clifton F., Ancon, Canal Zone. Mechanical photograph and blue-print drier. No. 1,301,750; Apr. 22; v. 261; p. 766.
Savage, Harold A. (See Challenger and Savage.)
Savorgnan, Detalmo di B., S. Margherita, Italy. Recording-evaporometer. No. 1,299,041; Apr. 1; v. 261; p. 98.
Saye, John F. (See Franklin, John E., assignor.)
Saylor, Ernest F., Ilwaco, Wash. Carbureter. No. 1,299,622; Apr. 8; v. 261; p. 257.
Scanlan, Patrick M., Brooklyn, N. Y. Air-pump. No. 1,301,751; Apr. 22; v. 261; p. 766.
Scapicchio, Anthony, Arlington, N. J. Adjustable quadrat for printing-presses. No. 1,300,028; Apr. 8; v. 261; p. 447.
Scarritt Car Seat and Manufacturing Company. (See Taylor, Calvin C., assignor.)
Schaaff, John T., Washington, D. C. Paper-perforating machine. No. 1,300,491; Apr. 15; v. 261; p. 473.
Schaffer, John C., Tiffin, Ohio. Supply mechanism. No. 1,301,978; Apr. 29; v. 261; p. 841.
Schaffer, Theodore A., assignor to Interstate Elastic Braid Company, Brooklyn, N. Y. Clasp for armbands and the like. No. 1,300,198; Apr. 8; v. 261; p. 385.
Schall, Henry D., and R. W. Davenport, assignors to Detroit Stove Works, Detroit, Mich. Gas-range. No. 1,299,623; Apr. 8; v. 261; p. 257.
Schantz, Edwin M., Chicago, Ill. Service-time checker. No. 1,299,236; Apr. 1; v. 261; p. 141.
Schantz, Edwin M., Chicago, Ill., assignor to The Computing Scale Company, Dayton, Ohio. Computing recording-scale. No. 1,299,786; Apr. 8; v. 261; p. 295.
Scharnberg, Nanning M., Michigan City, Ind. Fruit-jar wrench and holder. No. 1,299,511; Apr. 8; v. 261; p. 231.
Schatz, Grover H., *et al.* (See Schatz, John W., assignor.)
Schatz, Herman A., *et al.* (See Schatz, John W., assignor.)
Schatz, John W., assignor of one-third to H. A. Schatz and one-third to G. H. Schatz, Poughkeepsie, N. Y. Manufacturing antifriction-bearings. No. 1,301,328; Apr. 22; v. 261; p. 685.
Schatz, John W., assignor of one-third to H. A. Schatz and one-third to G. H. Schatz, Poughkeepsie, N. Y. Antifriction-bearing. No. 1,301,752; Apr. 22; v. 261; p. 767.
Schaub, James A. (See Kennedy, James W., assignor.)
Schecher, John L. (See Young and Schecher.)
Schechter, Bernard, St. Louis, Mo. Seat. No. 1,302,226; Apr. 29; v. 261; p. 887.
Scheiblein, Rupert S., Merchantville, N. J. Machine for cleaning and waxing photographic films. No. 1,300,656; Apr. 15; v. 261; p. 508.
Schething, George, Columbus, Nebr. Hay-stacker. No. 1,301,178; Apr. 22; v. 261; p. 656.
Schenck, Charles, assignor to Budd Wheel Corporation, Philadelphia, Pa. Locking hub structure. No. 1,298,797; Apr. 1; v. 261; p. 43.
Schenck, Charles, assignor to Budd Wheel Corporation, Philadelphia, Pa. Hub structure for wheels. No. 1,298,798; Apr. 1; v. 261; p. 43.
Schepmoes, Lindsley, Hasbrouck Heights, N. J., assignor to The Safety Car Heating & Lighting Company. Fixture. No. 1,299,042; Apr. 1; v. 261; p. 98.
Schert, Theodore, assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio. Machine for making multiply paper. No. 1,299,237; Apr. 1; v. 261; p. 141.
Scheuer, Maurice, New York, N. Y. Laminated fabric. No. 1,302,473; Apr. 29; v. 261; p. 935.
Schiller, Nathan. (See Petterson, Clarence A., assignor.)
Schimek, Richard. (See Grossman and Schimek.)
Schlatter Fronath & Co. (See Schlatter, Jacob, assignor.)
Schlatter, Gustav, Steinach, and G. Segin, Arbon, assignors to Firma Adolphe Saurer, Arbon, Switzerland. Regulating device for watering-carts and the like. No. 1,302,227; Apr. 29; v. 261; p. 887.
Schlatter, Jacob, assignor to Schlatter Fronath & Co., Zurich, Switzerland. Device for producing hot air. No. 1,301,324; Apr. 22; v. 261; p. 685.
Schlueter, Fridrich O., assignor of one-half to H. Schlueter, Scribner, Nebr. Ditcher and grader. No. 1,300,290; Apr. 15; v. 261; p. 433.
Schlueter, Henry. (See Schlueter, Fridrich O., assignor.)
Schluter, Hugo, Los Angeles, Calif. Post of concrete or other material. No. 1,299,787; Apr. 8; v. 261; p. 296.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Waterproof connection for spark-plugs. No. 1,298,709; Apr. 1; v. 261; p. 43.
Schmidt, Ernest H. (See Brooks and Schmidt.)
Schmidt, Ernest H., Lakewood, assignor to The National Malleable Castings Company, Cleveland, Ohio. Shock-absorbing mechanism. No. 1,301,878; Apr. 29; v. 261; p. 822.
Schmidt, Hugo F., Chicago, Ill. Tractor-linked track. No. 1,300,029; Apr. 8; v. 261; p. 348.
Schmidt, Lawrence S., assignor to Schmidt-McCormick Company, Pittsburgh, Pa. Water-cooled wall-support for furnaces. No. 1,300,882; Apr. 15; v. 261; p. 556.
Schmidt-McCormick Company. (See Schmidt, Lawrence S., assignor.)
Schmitt, Edmund, Bridgeport, Conn. Transmission. No. 1,300,225; Apr. 8; v. 261; p. 391.
Schneeman, Alfred J. (See Blanchard, Schneeman, and Minea.)
Schneider, Christian. (See Holdsworth, Arthur J., assignor.)
Schneider & Cie. (See Schneider, Eugene, assignor.)
Schneider, Conrad, New York, N. Y. Parcel-handle. No. 1,300,030; Apr. 8; v. 261; p. 348.
Schneider, Eugene, Le Creuzot, assignor to Schneider & Cie, Paris, France. Brake or recuperator for guns. No. 1,299,409; Apr. 1; v. 261; p. 180.
Schneider, Laura M., New York, N. Y. Apparatus for washing and cleansing. No. 1,300,031; Apr. 8; v. 261; p. 348.
Schoeffstall, Gurney E. (See Johnson and Schoeffstall.)
Schoellkopf, Jacob F., Dallas, Tex. Drilling and riveting machine. No. 1,299,788; Apr. 8; v. 261; p. 296.
Schoenberg, Ralph A., (now by change of name Ralph A. Belmont,) New York, N. Y., assignor to The Connecticut Electric Mfg. Co., Bridgeport, Conn. Fuse-plug. No. 1,301,009; Apr. 15; v. 261; p. 584.
Schoepke, Frank. (See Dallman and Schoepke.)
Schofield, Frederick C. (See Shelor and Schofield.)
Schonwald, Leopold, New York, N. Y. Lock. No. 1,301,979; Apr. 29; v. 261; p. 841.
Schrade, John C., Rockaway Beach, N. Y. Pipe-seal. No. 1,301,010; Apr. 15; v. 261; p. 584.
Schrader, John R., New York, N. Y. Running-board for box-cars. No. 1,300,199; Apr. 8; v. 261; p. 385.
Schreck, Harry F., Davenport, Iowa. Guide for job-folding machines. No. 1,299,386; Apr. 1; v. 261; p. 175.
Schreibeis, Charles D., Yellowstone Park, Wyo. Drag attachment for harrows. No. 1,299,043; Apr. 1; v. 261; p. 98.
Schroder, Carl, San Diego, Calif. Pump connection for pneumatic tires. No. 1,301,508; Apr. 22; v. 261; p. 719.
Schroeder, France A., Seibert, Colo. Animal-poke. No. 1,300,657; Apr. 15; v. 261; p. 508.
Schroeder, Paul, assignor to Mott Sand Blast Mfg. Co., Chicago, Ill. Sand-blast apparatus. No. 1,301,960; Apr. 29; v. 261; p. 841.
Schueck, Henry L. (See Cheeks, John B., assignor.)
Schuessler, Harry O., Peru, Ill. Apparatus for electroplating. No. 1,299,624; Apr. 8; v. 261; p. 257.
Schuh, Charles F., Newark, N. J., assignor to A. Albright, Jr., New York, N. Y. Hot-water bottle. No. 1,301,509; Apr. 22; v. 261; p. 720.
Schuh, Frank, Trenton, N. J. Flushing apparatus. No. 1,299,789; Apr. 8; v. 261; p. 296.
Schultis, Charles F., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Machine for forming metal bodies. No. 1,302,228; Apr. 29; v. 261; p. 888.
Schultz, Carl, Richmond, Va. Washing-machine. No. 1,301,179; Apr. 22; v. 261; p. 656.
Schultze, Gustav F. W., Oakland, Calif. Combined vending-machine and game apparatus. No. 1,298,800; Apr. 1; v. 261; p. 43.
Schulz, Albert C., Bridgeport, Conn., assignor to The Locomobile Company of America, New York, N. Y. Hood or bonnet. No. 1,300,032; Apr. 8; v. 261; p. 348.
Schumann, Gustav, Philadelphia, Pa. Ignition system. No. 1,302,474; Apr. 29; v. 261; p. 935.
Schuster, Edward L., Jr., Cleveland, Ohio. Display-frame. No. 1,300,492; Apr. 15; v. 261; p. 474.

Schutte, August E., Northboro, Mass. Wooden paving-block. No. 1,299,238; Apr. 1; v. 261; p. 141.
Schwaller, Frank F., St. Louis, and T. M. Quinn, Overland, Mo. Arm-rest-holding means. No. 1,300,883; Apr. 15; v. 261; p. 556.
Schwartz, Peter G. (See Moscherroach and Schwartz.)
Schweinert, Maximilian C., West Hoboken, and J. Volckhausen, Weehawken, N. J., assignors to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Dust-cap. No. 1,302,441; Apr. 29; v. 261; p. 929.
Schweitzer & Conrad. (See Schweitzer and Conrad, assignors.)
Schweitzer, Edmund O., and N. J. Conrad, Chicago, Ill. Fuse device. No. 1,299,387; Apr. 1; v. 261; p. 175.
Schweitzer, Edmund O., and N. J. Conrad, assignors to Schweitzer & Conrad, Chicago, Ill. Lightning-arrester. No. 1,302,229; Apr. 29; v. 261; p. 887.
Schwertz, Bernard E. J., New Orleans, La. Collapsible shaving-brush. No. 1,300,884; Apr. 15; v. 261; p. 556.
Schwier, Fred G. (See Tannehill, Harley, assignor.)
Scissors Appliance Co. (See Arnold, Elisha J., assignor.)
Scofield, Arthur L. (See Phillips, William J., assignor.)
Scorey, Alfred T., London, England. Hand-propelled folding carriage or chair. No. 1,300,033; Apr. 8; v. 261; p. 348.
Scott, Clinton A., and A. G. Hug, assignors to National Manufacturing and Specialty Company, Chicago, Ill. Razor-blade sharpener. No. 1,299,239; Apr. 1; v. 261; p. 141.
Scott, Donald C., Seattle, Wash. Street-car-window cleaner. No. 1,301,609; Apr. 22; v. 261; p. 738.
Scott, Floma, Sugar Grove, Va. Guard for poison-bottles. No. 1,301,510; Apr. 22; v. 261; p. 720.
Scott, Harry R., assignor of one-third to D. L. Hill and one-third to M. S. Asbell, Lordsburg, N. Mex. Gas and oil saving device. No. 1,299,790; Apr. 8; v. 261; p. 297.
Scott, John M. (See Dayton and Scott.)
Scott, Lewis L., St. Louis, Mo. Worm-gear-locking device. No. 1,301,180; Apr. 22; v. 261; p. 656.
Scott, Oliver L., San Francisco, Calif. Carbureter. No. 1,301,610; Apr. 22; v. 261; p. 738.
Scott, Walter. (See Burbea, Reinhart J., assignor.)
Scott, William F., Johnstown, Pa. Molding-machine. No. 1,299,240; Apr. 1; v. 261; p. 141.
Scott, William H., assignor to Amherst Waxed Paper Mills, Holyoke, Mass. Coating-machine. No. 1,299,358; Apr. 1; v. 261; p. 175.
Scott and Williams. (See Ruth, James A., assignor.)
Scoutten, Floyd L., East Cleveland, Ohio. Thermostatic alarm. No. 1,301,611; Apr. 15; v. 261; p. 584.
Scroggins, Allen C., Jr., et al. (See Kennedy, James W., assignor.)
Seabolt, Frank J., et al. (See Pons, Eugene, assignor.)
Seaman, Stewart E., Brooklyn, assignor to Seaman Waste Wood Chemical Company, New York, N. Y. Drying process. No. 1,299,791; Apr. 8; v. 261; p. 297.
Seaman Waste Wood Chemical Company. (See Seaman, Stewart E., assignor.)
Sears, Willard T., Brooklyn, assignor to Niles-Bement-Pond Company, New York, N. Y. Tapping mechanism for drilling-machines. No. 1,299,241; Apr. 1; v. 261; p. 142.
Seaton, Max Y., and J. S. Harris, assignors to The Arco Company, Cleveland, Ohio. Plastered concrete ceiling and making same. No. 1,300,493; Apr. 15; v. 261; p. 474.
Sebastian, Alphonse A., Chicago, Ill. Auxiliary spring for motor-vehicles. No. 1,300,658; Apr. 15; v. 261; p. 508.
Sebastian, Alphonse A., Chicago, Ill. Auxiliary spring attachment for motor-vehicles. No. 1,300,783; Apr. 15; v. 261; p. 535.
Seeds, William A., Cripple Creek, Colo. Automatic train-stop. No. 1,301,879; Apr. 29; v. 261; p. 822.
Seelye, Nelson H. (See Sneeston, William H., assignor.)
Seem, Warren P., Altoona, Pa. Cohesion-machine. No. 1,300,494; Apr. 15; v. 261; p. 474.
Segin, Gustav. (See Schlatter and Segin.)
Seidel, George E., Richmond, Ind. Anchor-strap. No. 1,299,312; Apr. 8; v. 261; p. 232.
Selnsky, Charles J., Pittsburgh, Pa. Window-locking device. No. 1,301,511; Apr. 22; v. 261; p. 720.
Sellers, Edward C., Green Mountain, Iowa. Harvester-reel. No. 1,301,512; Apr. 22; v. 261; p. 720.
Semiw, Stephen, Chicago, Ill. Bayonet. No. 1,301,753; Apr. 22; v. 261; p. 767.
Serio, Philip H., assignor to National Aluminum Works, Elmira, N. Y. Forming spouted containers. No. 1,298,801; Apr. 1; v. 261; p. 44.
Serrurier, Iwan, Altadena, Calif. Picture-projecting apparatus. No. 1,299,792; Apr. 8; v. 261; p. 297.
Serviceable Inventions Corporation. (See Adams, Harry A., assignor.)
Severn, Walter D. (See Thomson, Severn, and Twycross.)
Severs, George F., Centerville, Iowa. Clasp for antiskid-chains. No. 1,299,864; Apr. 8; v. 261; p. 313.
Sexton, James P., Los Angeles, Calif. Making plaster lath or the like. No. 1,301,513; Apr. 22; v. 261; p. 720.
Seymour, Charles R., and O. M. Hoch, assignor to M. D. Knowlton Company, Rochester, N. Y. Machine for operating upon webs of material. No. 1,299,513; Apr. 8; v. 261; p. 282.
Seymour, Dudley S., assignor to Union Special Machine Company, Chicago, Ill. Needle-clamp for sewing-machines. No. 1,299,242; Apr. 1; v. 261; p. 142.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,299,625; Apr. 8; v. 261; p. 258.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Illinois. Presser-foot mechanism for sewing-machines. No. 1,300,885; Apr. 15; v. 261; p. 557.
Shaffer, Joseph S., Independence, Mo. Seed-planter. No. 1,299,626; Apr. 8; v. 261; p. 258.
Shambaugh, Raymond L., La Fayette, Ind. Emergency-hub. No. 1,300,034; Apr. 8; v. 261; p. 348.
Shambow, John C., assignor to Shambow Shuttle Company, Woonsocket, R. I. Threading-eye for shuttles. No. 1,301,611; Apr. 22; v. 261; p. 738.
Shambow Shuttle Company. (See Shambow, John C., assignor.)
Shank, Joseph H., Blanchester, Ohio. Dental tool. No. 1,300,495; Apr. 15; v. 261; p. 475.
Sharp, Herbert M., Buffalo, N. Y. Apparatus for analyzing flue-gases. No. 1,299,865; Apr. 8; v. 261; p. 313.
Sharp, Lee C., Plattsmouth, Nebr. Motor-vehicle steering mechanism. No. 1,300,886; Apr. 15; v. 261; p. 557.
Sharples Specialty Company. (See Grosner, Gerald D., assignor.)
Sharpnack, Matthew C., Jamison, assignor of two-thirds to W. V. Bennett, Omaha, Nebr. Safety-razor. No. 1,298,802; Apr. 1; v. 261; p. 44.
Shaw, Edward, Toronto, Ontario, Canada. Apparatus for evaporating or concentrating liquids. No. 1,299,793; Apr. 8; v. 261; p. 297.
Shaw, George S., Vancouver, British Columbia, Canada. Baby-carriage. No. 1,301,514; Apr. 22; v. 261; p. 721.
Shaw, Joseph, New York, N. Y., assignor to Rainbow Pictures Corporation. Producing moving pictures in colors. No. 1,300,887; Apr. 15; v. 261; p. 557.
Shaw, Juan D., Buenos Aires, Argentina. Sewing-machine. No. 1,300,496; Apr. 15; v. 261; p. 475.
Shaw, William F., Pueblo, Colo. Artificial-tooth attachment. No. 1,301,181; Apr. 22; v. 261; p. 656.
Shea, Thomas J., Portland, Oreg. Magnetic rivet-heater and spot-welder. No. 1,302,250; Apr. 29; v. 261; p. 888.
Shedlock, Alfred. (See Keeney and Shedlock.)
Sheehan, Frank J., Crete, Ill. Railway-switch. No. 1,302,475; Apr. 29; v. 261; p. 935.
Sheehan, John, assignor to The Aerated Water Machinery Company, Melbourne, Victoria, Australia. Apparatus for delivering aerated waters and other effervescing beverages. No. 1,302,092; Apr. 29; v. 261; p. 862.
Shehady, David S., San Francisco, Calif. Oil-saver. No. 1,302,231; Apr. 29; v. 261; p. 888.
Shelton, Fred E., Springfield, Ohio. Nut-lock. No. 1,299,794; Apr. 8; v. 261; p. 297.
Shelor, Frederick L. and F. C. Schofield, Salem, Va. Engine-priming device. No. 1,300,659; Apr. 15; v. 261; p. 508.
Shell Company of California. (See Hagenbuch, Walter, assignor.)
Shelton, Harry J., St. Louis, Mo. Pulverizer. No. 1,302,282; Apr. 29; v. 261; p. 888.
Shepard, Henry L., assignor to Pacific Evaporator Company, Portland, Oreg. Drier for evaporating fruits, vegetables, and the like. No. 1,300,497; Apr. 15; v. 261; p. 475.
Shephard, Christopher C. (See Noll and Shephard.)
Shepler, Harry L., assignor to The Willys-Overland Company, Toledo, Ohio. Upholstery-mounting. No. 1,298,803; Apr. 1; v. 261; p. 44.
Sheppard, Franklin L., assignor to W. L. Sheppard, Philadelphia, Pa. Range. No. 1,300,660; Apr. 15; v. 261; p. 509.
Sheppard, Walter L. (See Sheppard, Franklin L., assignor.)
Sheranasky, Harry S., Atlantic City, N. J. Torpedo and mine defense for vessels. No. 1,299,243; Apr. 1; v. 261; p. 142.
Sheridan, Leslie M., El Paso, Tex. Rotary engine. No. 1,302,223; Apr. 29; v. 261; p. 888.
Sheridan, Leslie M., El Paso, Tex. Engine. No. 1,302,442; Apr. 29; v. 261; p. 929.
Sherman, Charles W., assignor, by mesne assignments, to Lowes Manufacturing Co., Peoria, Ill. Rubbing device for animals. No. 1,298,804; Apr. 1; v. 261; p. 44.
Sherwin, Aaron H., New York, N. Y. Detachable fur collar for coats. No. 1,299,244; Apr. 1; v. 261; p. 142.
Sherwin, Ralph S., East St. Louis, Ill., assignor to Aluminum Company of America, Pittsburgh, Pa. Production of hydrofluoric acid and salts thereof. No. 1,301,325; Apr. 22; v. 261; p. 685.
Shibley, Alice P. (See Shibley, George H., assignor.)
Shibley, George H., assignor to A. P. Shibley, Washington, D. C. Making puttees. No. 1,300,661; Apr. 15; v. 261; p. 509.
Shields, George W. (See Shields, Guy A., assignor.)
Shields, Guy A., assignor of one-half to G. W. Shields, Spokane, Wash. Changeable exhibitor. No. 1,299,795; Apr. 8; v. 261; p. 298.
Shinn, Chester C. (See Sloter, Selden S., assignor.)
Shipman, Edward F., Woodhaven, N. Y. Fusible link or strut. No. 1,302,234; Apr. 29; v. 261; p. 888.

Shomaker, Wesley P., Richmond, Va. Safety-shutter. No. 1,302,093; Apr. 29; v. 261; p. 862.
Shonnard, Harold W., *et al.* (See Peets and Shonnard, assignors.)
Shonnard, Orlando D. (See Peets and Shonnard.)
Shorey, John A., New York, N. Y., assignor to General Electric Company. Flow-meter. No. 1,301,182; Apr. 22; v. 261; p. 656.
Short, Albert W., *et al.* (See Menge, Anton C., assignor.)
Shortt, Everett T., Dallas, Tex. Coffee-roaster. No. 1,299,245; Apr. 1; v. 261; p. 143.
Showalter, Henry, Hurley, Okla. Broom-holder. No. 1,299,796; Apr. 8; v. 261; p. 298.
Showalter, Jay B. F., Pekin, Ill. Cross-referencing tabs used in systems of indexing. No. 1,300,662; Apr. 15; v. 261; p. 500.
Shute, Edmund H., Chicago, Ill. Electric-light-switch operator. No. 1,301,183; Apr. 22; v. 261; p. 657.
Shwab, Hugh M., Louisville, Ky. Tire-gage. No. 1,302,443; Apr. 29; v. 261; p. 930.
Sibson & Stern. (See Branson, Thomas, assignor.)
Sibson, Walter W. (See Allsop and Sibson.)
Siebert, Herman C., South Bethlehem, Pa. Gas-burner. No. 1,298,805; Apr. 1; v. 261; p. 44.
Sikora, Frank, Philadelphia, Pa. Machine for dyeing stockings or the like. No. 1,301,184; Apr. 22; v. 261; p. 657.
Silbernagel, Fred, assignor of one-third to E. T. Erickson, Oak Park, and one-third to W. A. Hansen, Chicago, Ill. Boring-machine. No. 1,300,663; Apr. 15; v. 261; p. 509.
Sills, Berton H., assignor of one-fourth to A. Lipson, Toronto, Ontario, Canada. Fender for motor-cars. No. 1,301,880; Apr. 29; v. 261; p. 822.
Silva, John P., Rockport, Mass. Door-latch. No. 1,301,326; Apr. 22; v. 261; p. 685.
Silvarman, Paulane, New York, N. Y. Seat for baby-carriages. No. 1,302,444; Apr. 29; v. 261; p. 930.
Silvius, Ellis T., Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,246; Apr. 1; v. 261; p. 143.
Silvius, Ellis T., Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,299,247; Apr. 1; v. 261; p. 143.
Simmon, Karl A., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,300,309; Apr. 15; v. 261; p. 433.
Simmons, Benjamin S. (See Barr and Simmons.)
Simms Magneto Company, The. (See Huff, Edward S., assignor.)
Simon, Arthur, assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,299,248; Apr. 1; v. 261; p. 144.
Simon, August J. (See Richards, Simon, and Haas.)
Simon, Henry, Laguna Beach, Calif. Rule. No. 1,299,627; Apr. 8; v. 261; p. 258.
Simons, William, Baltimore, Md. Bicycle side car. No. 1,302,476; Apr. 29; v. 261; p. 935.
Simonson, Penwick W., assignor of one-half to W. W. Snell, Sherman, Calif. One-piece live-wire self-holder. No. 1,301,012; Apr. 15; v. 261; p. 584.
Simpson, Hugh W. (See Gordon and Simpson.)
Simpson, Richard M., Wellington, New Zealand. Post-marking-machine. No. 1,299,249; Apr. 1; v. 261; p. 144.
Simpson, Sumner, Bridgeport, Conn., assignor to Raybestos Company. Making friction-facings. No. 1,301,612; Apr. 22; v. 261; p. 738.
Simpson, William J., assignor to O. L. Warner, Vancouver, British Columbia, Canada. Block-side guard for upright-shingle-machine saws. No. 1,302,445; Apr. 29; v. 261; p. 930.
Sims Automatic Conveyer Company. (See Sims, Mirabeau, assignor.)
Sims, Mirabeau, Llanerch, Pa., assignor to Sims Automatic Conveyer Company Incorporated. Translating and cooling material. No. 1,300,784; Apr. 15; v. 261; p. 535.
Sinclair, Herbert A., Renton, Wash. Safety rigging-hook. No. 1,300,231; Apr. 8; v. 261; p. 392.
Sines, Harold S., assignor to Mineralac Electric Company, Chicago, Ill. Time-switch. No. 1,300,498; Apr. 15; v. 261; p. 475.
Singer Manufacturing Company, The. (See Cameron, Dugald, assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singletary, Emerson W., Morganza, La. Pencil-vending machine. No. 1,300,888; Apr. 15; v. 261; p. 557.
Singleton, Stephen G., Burke, Idaho. Plate-lifter. No. 1,299,797; Apr. 8; v. 261; p. 298.
Sipes, Turman L., Freeport, Pa. Gate. No. 1,299,250; Apr. 1; v. 261; p. 144.
Sipperly, John E., assignor to United Shirt & Collar Company, Troy, N. Y. Stock for neckwear. No. 1,299,514; Apr. 8; v. 261; p. 232.
Sisson, Vinton E., assignor to W. P. Murphy, Chicago, Ill. Sheet-metal end-wall construction for railway-cars. No. 1,299,251; Apr. 1; v. 261; p. 145.
Skandora, Jakob, Racine, Wis. Stop means. No. 1,300,232; Apr. 8; v. 261; p. 392.
Skidmore, Charles J., and P. F. Conerty, Brooklyn, N. Y. Separating oil. No. 1,302,094; Apr. 29; v. 261; p. 862.
Skinner, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Plastic composition and making the same. No. 1,299,798; Apr. 8; v. 261; p. 297.
Sklovsky, Max, Moline, Ill., assignor to Deere & Company. Engine gang plow. No. 1,299,944; Apr. 1; v. 261; p. 98.
Skolnik, Max, Minneapolis, Minn. Child's vehicle. No. 1,299,515; Apr. 8; v. 261; p. 282.
Skowyra, Josef. (See Tomasiak, Antoni, assignor.)
Skrzynecki, Wawrzyniec, Chicago, Ill. Blanking-press. No. 1,298,806; Apr. 1; v. 261; p. 44.
Slagel, Harry E., Scott City, Kans. Wind-wheel or wind-driven prime mover. No. 1,300,490; Apr. 15; v. 261; p. 476.
Slate, Thomas B., assignor to American Mechanical Improvement Company, (Incorporated,) Washington, D. C. Pneumatic electromagnetic gun. No. 1,301,127; Apr. 22; v. 261; p. 686.
Slepian, Joseph, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Measuring device. No. 1,299,252; Apr. 1; v. 261; p. 145.
Sleter, Selden S., assignor of one-half to C. C. Shian, Fairmont, W. Va. Aeroplane. No. 1,302,235; Apr. 29; v. 261; p. 888.
Smalley, George O., assignor to Bound Brook Oil-Less Bearing Company, Boundbrook, N. J. Self-lubricating bearing. No. 1,299,799; Apr. 8; v. 261; p. 298.
Smerling, Herman. (See Kramer and Smerling.)
Smith, Benjamin H. (See Lincoln and Smith.)
Smith, Daniel D., Valdosta, Ga. Insect-destroyer. No. 1,302,095; Apr. 29; v. 261; p. 862.
Smith, David J., London, England. Inflatable marine life-saving appliance. No. 1,301,515; Apr. 22; v. 261; p. 721.
Smith, Edward A., New York, N. Y. Snow-melting machine. No. 1,300,035; Apr. 8; v. 261; p. 349.
Smith, Edward S., Selma, Calif. Spring-tire. No. 1,302,477; Apr. 29; v. 261; p. 935.
Smith, Elmer L., assignor to Package Machinery Company, Springfield, Mass. Wrapping and banding machine. No. 1,298,807; Apr. 1; v. 261; p. 45.
Smith, Ernest J. (See Goss and Smith.)
Smith, Frank W., Westfield, N. J. Timing device. No. 1,301,613; Apr. 22; v. 261; p. 738.
Smith, Franklin G., Circleville, N. Y. Indicator. No. 1,301,516; Apr. 22; v. 261; p. 721.
Smith, Gary B., Chicago, Ill. Bed-spring fabric. No. 1,300,664; Apr. 15; v. 261; p. 500.
Smith, George H., Columbus, Ohio. Beet-topper. No. 1,301,328; Apr. 22; v. 261; p. 686.
Smith, George H., Columbus, Ohio. Beet-topping machine. No. 1,301,329; Apr. 22; v. 261; p. 686.
Smith, George H., Columbus, Ohio. Beet-topping machine. No. 1,301,330; Apr. 22; v. 261; p. 686.
Smith, Harry A., Jr., Buffalo, N. Y. Rotary internal-combustion engine. No. 1,300,036; Apr. 8; v. 261; p. 349.
Smith, Harry B., Brooklyn, N. Y. Covered box. No. 1,302,236; Apr. 29; v. 261; p. 889.
Smith, Harry J., New York, N. Y. Apparatus for making ice. No. 1,299,800; Apr. 8; v. 261; p. 299.
Smith, Herbert L., Westerly, R. I., assignor to Universal Electric Welding Company, New York, N. Y. Metal sash or frame joint. No. 1,301,981; Apr. 29; v. 261; p. 841.
Smith, J Amory, Ellsworth, Kans. Combined necktie and collar fastener. No. 1,299,801; Apr. 8; v. 261; p. 299.
Smith, James, Pittsburg, Calif. Sandpaper-cutting machine. No. 1,301,754; Apr. 22; v. 261; p. 767.
Smith, James F., assignor of one-third to A. F. Ittner and one-third to A. H. Bradley, St. Louis, Mo. Tone-arm for talking-machines. No. 1,302,478; Apr. 29; v. 261; p. 936.
Smith, James F., assignor of one-third to A. F. Ittner and one-third to A. H. Bradley, St. Louis, Mo. Sound-box for talking-machines. No. 1,302,479; Apr. 29; v. 261; p. 936.
Smith, John C., Sullivan, W. Va. Biscuit-cutter. No. 1,299,802; Apr. 8; v. 261; p. 299.
Smith, John O., Moberly, Mo. Vehicle-wheel. No. 1,299,628; Apr. 8; v. 261; p. 259.
Smith, John P., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Expansible core for vulcanizing tires. No. 1,299,045; Apr. 1; v. 261; p. 99.
Smith, Mabel P. and P. D., Santa Cruz, Calif. Doll's eyes. No. 1,298,808; Apr. 1; v. 261; p. 45.
Smith, Newton H., Hamilton, Ill., assignor of one-half to W. C. Howell, Keokuk, Iowa. Mechanism for operating earth-boring tools. No. 1,299,803; Apr. 8; v. 261; p. 299.
Smith, Putnam D. (See Smith, Mabel P. and P. D.)
Smith, Reuben S., Milwaukee, Wis. Electrode for arc-welding. No. 1,301,331; Apr. 22; v. 261; p. 687.
Smith, Robert M., San Francisco, Calif. Detachable cover for centrifugal extractors. No. 1,299,805; Apr. 8; v. 261; p. 313.
Smith, Robert W. J., Houston, Tex. Power-transmitting mechanism. No. 1,301,982; Apr. 29; v. 261; p. 841.
Smith, Roscoe L., Berwick, Pa. Emergency shut-off valve. No. 1,300,301; Apr. 15; v. 261; p. 422.

Smith, Sidney, Vancouver, British Columbia, Canada. Rotary engine. No. 1,302,446; Apr. 29; v. 261; p. 930.

Smith, Thomas, assignor of one-half to H. C. Friede, Cornell, Wis. Pasting and machine therefor. No. 1,299,804; Apr. 8; v. 261; p. 289.

Smith, Thomas E., Los Angeles, assignor to Endert Traffic Signal Company, Bakersfield, Calif. Switch. No. 1,300,665; Apr. 15; v. 261; p. 510.

Smith, William A. (See Bowman, Levi M., assignor.)

Snavely, Clarence S., Pittsburgh, assignor to The Union Switch & Signal Company, Swissvale, Pa. Light-signal. No. 1,298,809; Apr. 1; v. 261; p. 45.

Sneddon, William T., Kansas City, Mo. Gearless differential. No. 1,300,500; Apr. 15; v. 261; p. 476.

Sneeston, William H., Somerville, assignor to N. H. Seelye, Winchester, Mass. Die-press. No. 1,299,046; Apr. 1; v. 261; p. 99.

Snell, Wallace W. (See Simonson, Fenwick W., assignor.)

Snelling, John C., Chiswick, London, England. Construction of reinforced-concrete ships. No. 1,301,013; Apr. 15; v. 261; p. 584.

Snider, Warren L., Hot Springs, Ark. Power-transmission device. No. 1,299,629; Apr. 8; v. 261; p. 259.

Snow, Frank P., Los Angeles, Calif. Cut-off gate-valve. No. 1,300,209; Apr. 8; v. 261; p. 285.

Snyder, Charles W., Altoona, Pa. Pipe-coupling. No. 1,299,047; Apr. 1; v. 261; p. 99.

Snyder, Frank A., Pittsburgh, Pa. Motor for vehicles. No. 1,301,614; Apr. 22; v. 261; p. 738.

Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Steam-engine reversing-gear. No. 1,302,096; Apr. 29; v. 261; p. 863.

Snyder, O. K., Onaway, Mich. Steering-wheel. No. 1,299,048; Apr. 1; v. 261; p. 99.

Società Anonima Italiana Gio. Ansaldo & C. (See Ferrati, Pecoraro, and Guidoni, assignors.)

Societe d'Optique et de Mecanique de Haute Precision. (See Fauvaue, Henri, assignor.)

Societe E. H. Moll & Cie. (See Alexandre, Armand H., assignor.)

Sokolow, Samuel, and S. Polinsky, New York, assignors to C. Hubert, White Plains, N. Y. Means for forming battery elements, &c. No. 1,302,237; Apr. 29; v. 261; p. 889.

Solar Metal Products Co. (See Edwards, Albert, assignor.)

Solar Metal Products Company, The. (See Gegay, Harry R., assignor.)

Soley, Frank, assignor to Miller Lock Company, Philadelphia, Pa. Padlock. No. 1,300,037; Apr. 8; v. 261; p. 349.

Solomon, Harry, St. Joseph, Mo. Towel-cabinet. No. 1,299,630; Apr. 8; v. 261; p. 259.

Sommer, William H., Peoria, assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, and W. E. Stone, trustees, Peoria, Ill. Securing wire fillings to frames. No. 1,301,517; Apr. 22; v. 261; p. 721.

Sommer, William H., Peoria, assignor, by mesne assignments, to The First Trust & Savings Company, Cleveland, Ohio, and W. E. Stone, trustees, Peoria, Ill. Securing wire fillings to frames. No. 1,301,518; Apr. 22; v. 261; p. 721.

Sonora Phonograph Corporation. (See Farb, Pincus, assignor.)

Sopwith Aviation Company, The. (See Sopwith, Thomas, assignor.)

Sopwith, Thomas, assignor to The Sopwith Aviation Company Limited, Kingston-on-Thames, England. Device for the attachment of cables, wires, and the like upon aircraft. No. 1,299,049; Apr. 1; v. 261; p. 100.

Sorel, Emile E. A., Paris, France. Bush or bearing. No. 1,300,501; Apr. 15; v. 261; p. 476.

Sorensen, Niels C., Chicago, Ill. Tongs. No. 1,301,185; Apr. 22; v. 261; p. 657.

Sörensen, Otto K., and A. J. P. Östergaard, Copenhagen, Denmark. Package-tie. No. 1,300,502; Apr. 15; v. 261; p. 476.

Sorlien, Theodore H., and O. A. Knudtson, Minneapolis, Minn. Friction counterpoised windlass-drum. No. 1,301,186; Apr. 22; v. 261; p. 657.

Sorrell, Charles J., New York, N. Y. Hair-curling apparatus. No. 1,301,755; Apr. 22; v. 261; p. 767.

Soule, Arthur C., San Francisco, assignor of one-half to W. B. Thurman, Madera, Calif. Window-weatherproofing. No. 1,302,480; Apr. 29; v. 261; p. 936.

South Side Buick Sales Company. (See Paget, James E., assignor.)

Southern Electro-Chemical Company. (See Hechenbleikner, Ingenuin, assignor.)

Southmayd, Charles G., Aurora, Ontario, Canada. Cigarette-maker. No. 1,299,050; Apr. 1; v. 261; p. 100.

Sovereign, George E., Plainfield, N. J. Grinding-mill. No. 1,300,503; Apr. 15; v. 261; p. 476.

Sovereign, Harry E. (See Stitzer and Sovereign.)

Sovick, John, Clairton, Pa. Rail-joint. No. 1,301,615; Apr. 22; v. 261; p. 729.

Sowden, Charles N., Caracas, Cuba. Density-meter. No. 1,298,810; Apr. 1; v. 261; p. 45.

Sowell, Ernest E. (See Onstott, Jacob T., assignor.)

Sowell, Ernest E. (See Sowell, John A. and E. E.)

Sowell, John A. and E. E., Sacramento, Calif. Retaining screw-clamp. No. 1,299,253; Apr. 1; v. 261; p. 145.

Spain, William. (See Jefferies and Spain.)

Spangler, John E., Bismarck, N. D. Socket-wrench and bolt-holder device. No. 1,299,631; Apr. 8; v. 261; p. 259.

Spängler, Ludwig, Vienna, Austria. Double-decked vehicle. No. 1,300,201; Apr. 8; v. 261; p. 285.

Sparre, Fin, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Pyroxylin composition. No. 1,301,187; Apr. 22; v. 261; p. 637.

Sparrow, Alfred J., assignor of one-half to A. E. Babkirk, Woodstock, New Brunswick, Canada. Reversible turbine. No. 1,300,889; Apr. 15; v. 261; p. 558.

Spatt, Tony. (See Chamness, Frank, assignor.)

Spaulding, Clarence W., Muskegon Heights, Mich. Miter-box. No. 1,301,519; Apr. 22; v. 261; p. 721.

Speaks, Perry E., Harrisburg, Pa. Combined cooker and service device. No. 1,300,504; Apr. 15; v. 261; p. 476.

Spencer, Ira H., West Hartford, Conn., assignor, by mesne assignments, to The Spencer Turbine Company. Pressure-cage. No. 1,301,983; Apr. 29; v. 261; p. 842.

Spencer, John N., Truro, Nova Scotia, Canada. Rotary engine. No. 1,300,666; Apr. 15; v. 261; p. 510.

Spencer, Lewis L., assignor of one-third to C. A. Earl and one-third to W. M. Claus, Plankinton, S. D. Vehicle-dumping mechanism. No. 1,299,516; Apr. 8; v. 261; p. 232.

Spencer Turbine Company, The. (See Spencer, Ira H., assignor.)

Sperry, Elmer A., Brooklyn, N. Y. Electric-arc light. No. 1,302,488; Apr. 29; v. 261; p. 937.

Sperry, Elmer A., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y. Navigational instrument. No. 1,300,890; Apr. 15; v. 261; p. 558.

Sperry, Elmer A., assignor to The Sperry Gyroscope Company, Brooklyn, N. Y. Electric drive for gyroscopes. No. 1,301,014; Apr. 15; v. 261; p. 585.

Sperry Gyroscope Company, The. (See Sperry, Elmer A., assignor.)

Spery, Charles F., assignor to Hooven Radiator Co., Chicago, Ill. Clamping-frame for radiator-cores. No. 1,301,793; Apr. 22; v. 261; p. 776.

Spery, Charles F. and P. F., Chicago, Ill. Radiator for automobiles, motor-trucks, and similar vehicles. No. 1,301,984; Apr. 29; v. 261; p. 842.

Spery, Philmore F. (See Spery, Charles F. and P. F.)

Spiegel, Alexander S., Chicago, Ill. Means for holding rolls of material. No. 1,298,811; Apr. 1; v. 261; p. 46.

Spiegel, Alexander S., Chicago, Ill. Apparatus for making prepared roofing. No. 1,301,332; Apr. 22; v. 261; p. 687.

Spinello, Mathew, assignor to H. Clements, Kansas City, Mo. Permutation-lock. No. 1,299,517; Apr. 8; v. 261; p. 232.

Splitdorf Electrical Company. (See Mason, Charles T., assignor.)

Spokane Concrete Flower Pot Machine Co. (See Bewley, Claude G., assignor.)

Sprague Canning Machinery Company. (See Steere, Clarence E., assignor.)

Sprague, Theodore A., Pittsburgh, Pa. Cushion-tire. No. 1,299,051; Apr. 1; v. 261; p. 100.

Springborn, Richard, Cleveland, Ohio. Valve-operating mechanism. No. 1,300,785; Apr. 15; v. 261; p. 536.

Springer, Philip S. (See Raul and Springer.)

Spruch, Frank, Flint, Mich. Cuspidor-cleaner. No. 1,302,481; Apr. 29; v. 261; p. 936.

Squire, Raymond S. (See Jackman and Squire.)

St. Louis Tin & Sheet Metal Working Co. (See Blanke, Cyrus F., assignor.)

Stackpole, Everett B., Seattle, Wash. Cuff. No. 1,300,088; Apr. 8; v. 261; p. 350.

Stafford Company, The. (See Jackson, Simeon S., assignor.)

Stake, Herman, and A. P. Ekvall, assignors to Economic Machinery Company, Worcester, Mass. Labeling-machine. No. 1,301,015; Apr. 15; v. 261; p. 585.

Staley, Russell U., Spokane, Wash. Railway-tie. No. 1,298,812; Apr. 1; v. 261; p. 46.

Stamm, Charles H., assignor to Pitch-Lined Cement Casket Co., Indianapolis, Ind. Burial-casket. No. 1,300,667; Apr. 15; v. 261; p. 510.

Stamp, John W., Melbourne, Victoria, Australia. Desiccating-machine. No. 1,299,254; Apr. 1; v. 261; p. 145.

Stampen, Jacob, Chicago, Ill. Gearing for cream-separators. No. 1,301,756; Apr. 22; v. 261; p. 767.

Standard Bottle Stopper Co. (See Abbott, Leonard G., assignor.) (Reissue.)

Standard Oil Company. (See Cobb, Ernest B., assignor.)

Standard Oil Company. (See Rogers, Francis M., assignor.)

Standard Optical Company, The. (See Long, Eli M., assignor.)

Standard Optical Company, The. (See Van Tassel, John R., assignor.)

Standard Parts Company, The. (See Bryant, Richard S., assignor.)

Standard Parts Company, The. (See Fay, Thomas J., assignor.)

Standard Parts Company, The. (See McIntyre, Michael M., assignor.)

Standard Parts Company, The. (See Pelton, Clyde S., assignor.)

Standard Parts Company, The. (See Schultis, Charles F., assignor.)

Standard Separator Company. (See Salisbury, Charles K., assignor.)
Stanford, Arthur L., Chicago, Ill. Nut-cutting tool. No. 1,300,039; Apr. 8; v. 261; p. 350.
Stanley, James, Washington, D. C. Mail-deliverer. No. 1,299,867; Apr. 8; v. 261; p. 313.
Stanley, Shirley Q., Chicago, Ill. Garment presser and creaser. No. 1,300,668; Apr. 15; v. 261; p. 510.
Stanley, Theodore D., assignor to Leland Lock Company, Detroit, Mich. Steering-wheel lock. No. 1,300,505; Apr. 15; v. 261; p. 477.
Stansbury, Garrett O. (See Moore and Stansbury.)
Stark, Julian E., assignor to Crane Company, Chicago, Ill. Flushing device for water-closets. No. 1,301,188; Apr. 22; v. 261; p. 657.
Stark, William J., Vancouver, and S. R. Ramsay, New Westminster, British Columbia, Canada. Rim for pneumatic tires. No. 1,302,447; Apr. 29; v. 261; p. 930.
Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Furnace. No. 1,298,813; Apr. 1; v. 261; p. 46.
Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,300,302; Apr. 15; v. 261; p. 433.
Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,300,506; Apr. 15; v. 261; p. 477.
Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Axle-bearing. No. 1,300,507; Apr. 15; v. 261; p. 477.
Starker, Charles W., Pittsburgh, and G. L. S. Kronfeld, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Armature for dynamo-electric machines. No. 1,300,508; Apr. 15; v. 261; p. 477.
Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Axle-cap for dynamo-electric machines. No. 1,300,509; Apr. 15; v. 261; p. 477.
Staton, Wesley B., Gray, Saskatchewan, Canada. Picture-puzzle. No. 1,300,891; Apr. 15; v. 261; p. 558.
Staude, Edwin G., Minneapolis, Minn. Driving-pinion. No. 1,300,786; Apr. 15; v. 261; p. 536.
Ste. Marie, Wilbrod G. (See Warren, James A., assignor.)
Stedman, Seymour. (See Gardner, Benjamin F., assignor.)
Stedman, William E., Haywards Heath, England. Air and germ proof cover for sealing bottles. No. 1,299,389; Apr. 1; v. 261; p. 176.
Steele, Eva, Chicago, Ill. Catamenial appliance. No. 1,300,510; Apr. 15; v. 261; p. 478.
Steelwhite Company. (See Otte, Otho M., assignor.)
Steen, Louis M., Bisbee, Ariz. Reel. No. 1,301,189; Apr. 22; v. 261; p. 658.
Steere, Clarence E., assignor to Sprague Canning Machinery Company, Chicago, Ill. Liquid-measuring device. No. 1,298,814; Apr. 1; v. 261; p. 46.
Steffen, Robert O., Elroy, Wis. Woodworking-machine. No. 1,300,892; Apr. 15; v. 261; p. 558.
Steffes, Peter, Winona, Minn. Door-operating mechanism. No. 1,301,757; Apr. 22; v. 261; p. 768.
Steiger, Andrew W., Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,299,052; Apr. 1; v. 261; p. 100.
Steiger, Emil H. (See Jerrems, Thomas W., assignor.)
Steinbaugh, John T., Kansas City, Kans. Collar-holder. No. 1,299,255; Apr. 1; v. 261; p. 146.
Steiner, Sara. (See Garama, Joseph, assignor.)
Steinheiser, Clarence G. A., Oil City, Pa. Combined I-beam and rail-clamp. No. 1,299,868; Apr. 8; v. 261; p. 314.
Steinle, William J., Elmhurst Heights, N. Y., assignor to Morgan & Wright. Tire-building machine. No. 1,299,410; Apr. 1; v. 261; p. 180.
Steinmetz, Joseph A., Philadelphia, Pa. Making torpedo after-bodies. No. 1,298,815; Apr. 1; v. 261; p. 46.
Steinmetz, Joseph A., Philadelphia, Pa. Gun-destroying means. No. 1,299,869; Apr. 8; v. 261; p. 314.
Stekelberg, Fred C., assignor of forty one-hundredths to L. G. Clark, Middleton, Wis. Decarbonizer for engines. No. 1,299,805; Apr. 8; v. 261; p. 300.
Stenger, Willebald C., Chicago, Ill. Micrometer. No. 1,299,256; Apr. 1; v. 261; p. 146.
Stenman, Bror F., assignor of one-half to A. W. Larson, Worcester, Mass. Portable valve-grinder. No. 1,300,669; Apr. 15; v. 261; p. 510.
Stephenson, Axel G., and H. H. Barsby, Denver, Colo. Vertically-adjustable platform-truck. No. 1,301,616; Apr. 22; v. 261; p. 739.
Sterling Electrical Corporation Company, The. (See Longoria, Antonio, assignor.)
Stern, Arnold, Hollis, N. Y. Embroidery-mount. No. 1,301,758; Apr. 22; v. 261; p. 768.
Stern, Marcus. (See Kralund, Duckworth, and Stern.)
Sterzing, Albert A. E., New York, N. Y. Dynamo-electric machine. No. 1,299,053; Apr. 1; v. 261; p. 100.
Stetson, Franklin F. (See Wilson and Sumner, assignors.)
Steuart, James N., Bayswater, London, assignor to G. Beaton & Son Limited, Holland Park, London, England. Percussion-fuse. No. 1,299,054; Apr. 1; v. 261; p. 101.
Stevens, Esther, La Harpe, Ill. Evaporator. No. 1,300,670; Apr. 15; v. 261; p. 511.
Stevens, William C., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Gear-shift controller. No. 1,299,257; Apr. 1; v. 261; p. 146.
Stevenson, Benjamin H., Alliance, Ohio. Toy rocker. No. 1,302,238; Apr. 29; v. 261; p. 889.
Stevenson, John J., assignor of one-half to A. M. Larsen, Muskegon Mich. Plant-protector. No. 1,299,870; Apr. 8; v. 261; p. 314.
Stevenson, Wilbur W., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Burner for gas-furnaces. No. 1,298,817; Apr. 1; v. 261; p. 47.
Stevenson, William D., Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Rotatable machine element. No. 1,298,816; Apr. 1; v. 261; p. 47.
Stewart, B. E. (See Ethridge, Frederick M., assignor.)
Stewart, Earl, Des Moines, Iowa. Cultivator attachment. No. 1,301,520; Apr. 22; v. 261; p. 722.
Stewart, Fred A., et al. (See Christian, Thomas A., assignor.)
Stewart, Robert P., Burwood, Sydney, New South Wales, Australia. Apparatus for cutting iron pipes in situ. No. 1,301,759; Apr. 22; v. 261; p. 768.
Stewart, Sylvester N., Marietta, Ohio. Wicket or arch for playing croquet and the like. No. 1,299,055; Apr. 1; v. 261; p. 101.
Stewart, Sylvester N., Marietta, Ohio. Cadre or juggler's frame. No. 1,299,056; Apr. 1; v. 261; p. 101.
Stewart-Warner Speedometer Corporation. (See Berg, Joseph, assignor.)
Stewart-Warner Speedometer Corporation. (See Duffy, Thomas L., assignor.)
Stewart-Warner Speedometer Corporation. (See Genn, John E., assignor.)
Stickney, Charles A., Chattanooga, Tenn., assignor to Addressograph Company, Chicago, Ill. Embossing-die. No. 1,299,513; Apr. 8; v. 261; p. 223.
Stickney, Charles A., Chattanooga, Tenn., assignor to Addressograph Company, Chicago, Ill. Punch and die for embossing characters and raising bosses therefor previous to the embossing actions. No. 1,301,233; Apr. 22; v. 261; p. 687.
Stickney, Clement R., Detroit, Mich. Upholstery spring construction. No. 1,299,871; Apr. 8; v. 261; p. 314.
Stiers, Harry, Seattle, Wash. Spring-mounting for vehicles. No. 1,301,016; Apr. 15; v. 261; p. 585.
Stiff, Henry C., Johnstown, Pa. Switch construction. No. 1,299,806; Apr. 8; v. 261; p. 300.
Still, Howard W., Fargo, N. D. Box. No. 1,300,671; Apr. 15; v. 261; p. 511.
Stitzer, Ralph B., and H. E., Sovereign, Brooklyn, N. Y. Metering system. No. 1,299,632; Apr. 8; v. 261; p. 259.
Stock, Walter. (See Hedrich and Stock.)
Stokes, Francis W., Mansfield, England. Casting-machine. No. 1,302,448; Apr. 29; v. 261; p. 931.
Stoll, George W., and G. H. Drechsel, Indianapolis, Ind. Device for securing table-legs. No. 1,301,617; Apr. 22; v. 261; p. 739.
Stolpe, John, McPherson, Kans. Motor-wheel. No. 1,301,881; Apr. 29; v. 261; p. 822.
Stolper, Carl H., Kansas City, Mo. Stencil-cutting. No. 1,302,097; Apr. 29; v. 261; p. 863.
Stone, Andrew J., and L. W. Rockwell, Washington, D. C., assignors to the Government of the United States. Fuse for shells. No. 1,301,760; Apr. 22; v. 261; p. 768.
Stone, William E., et al., trustees. (See Sommer, William H., assignor.)
Stoner, Harvey E., assignor of one-half to W. D. Stoner, Springfield, Ohio. Tire-chain clamp. No. 1,301,521; Apr. 22; v. 261; p. 722.
Stoner, Willis D. (See Stoner, Harvey H., assignor.)
Storer, Edwin L., Tulsa, Okla. Signal. No. 1,299,057; Apr. 1; v. 261; p. 101.
Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,298,818; Apr. 1; v. 261; p. 47.
Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Locomotive. No. 1,302,098; Apr. 29; v. 261; p. 863.
Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Locomotive. No. 1,302,099; Apr. 29; v. 261; p. 863.
Stovall, John T., Shamrock, Tex. Antispreading device for railway-tracks. No. 1,299,807; Apr. 8; v. 261; p. 300.
Stover, Paul A., Cleveland, Ohio. Automobile-signal. No. 1,300,893; Apr. 15; v. 261; p. 559.
Stowell, Byron F., assignor to Barney & Berry, Inc., Springfield, Mass. Finishing-machine. No. 1,301,190; Apr. 22; v. 261; p. 658.
Strader, Julius G., assignor, by mesne assignments, to I. H. Pritchett, Petersburg, Va. Clothes-pin. No. 1,301,191; Apr. 22; v. 261; p. 658.
Stradling, Bertha M., and E. E. Washburn, Blair, Nebr. Adjustable abdominal supporting-corset. No. 1,301,618; Apr. 22; v. 261; p. 739.
Straight, Halver R., Adel, Iowa. Clay cutting and mixing machine. No. 1,301,017; Apr. 15; v. 261; p. 585.
Strane, Archibald J. (See Hill and Strane.)

Stratton, Henry A., Moose Jaw, Saskatchewan, Canada. Sheaf-loader. No. 1,301,192; Apr. 22; v. 261; p. 658.
Stratton, Henry B., Warrensburg, Mo. Car-step. No. 1,301,761; Apr. 22; v. 261; p. 769.
Stratton, John, Bowden, and E. A. Claremont, High Legh, England. Extruding lead and the like. No. 1,301,882; Apr. 29; v. 261; p. 822.
Stratton, John, Bowden, and E. A. Claremont, High Legh, England. Extruding rubber and the like. No. 1,302,484; Apr. 29; v. 261; p. 937.
Strauss, Joseph B., Chicago, Ill. Concrete car. No. 1,299,411; Apr. 1; v. 261; p. 180.
Strawn, Jesse C., assignor of one-half to G. W. Jones, Buffalo Springs, Tex. Violin-piano. No. 1,300,894; Apr. 15; v. 261; p. 559.
Strickland, Archie O., Winfield, Kans. Fuel-magazine. No. 1,298,819; Apr. 1; v. 261; p. 47.
Strickland, Charles V., Brooklyn, N. Y. Tobacco-stemming machine. No. 1,301,193; Apr. 22; v. 261; p. 659.
Strite, George T., Minneapolis, Minn. Clutch. No. 1,299,258; Apr. 1; v. 261; p. 146.
Strobeck, George A., Red Lion, Pa. Tire-tool. No. 1,298,820; Apr. 1; v. 261; p. 47.
Stroke, Charles J., Buffalo, N. Y. Burglar-alarm and lock. No. 1,299,806; Apr. 8; v. 261; p. 300.
Strom, Christopher, Alliance, Ohio. Joint. No. 1,301,888; Apr. 29; v. 261; p. 823.
Stromberg-Carlson Telephone Mfg. Co. (See Beyland, Sidney A., assignor.)
Strong, Arthur P., Chicago, Ill., assignor to Green Engineering Company, East Chicago, Ind. Ash-conveying system. No. 1,301,104; Apr. 22; v. 261; p. 659.
Strow, Hudson H. (See Gough and Strow.)
Stryker, Julius B. B., Lanedale, Pa., assignor to Perkins Glue Company. Adhesive and making the same. No. 1,299,809; Apr. 8; v. 261; p. 300.
Stuart, Francis L., Washington, D. C., assignor to International Conveyor Corporation, New York, N. Y. System and apparatus for reclaiming materials. No. 1,300,872; Apr. 15; v. 261; p. 511.
Stuart, George S., Tampa, Fla. Window-cleaner's safety appliance. No. 1,300,040; Apr. 8; v. 261; p. 350.
Stuart, Heber M., Baltimore, Md., assignor to Electrolytic Zinc Company, Inc., New York, N. Y. Handling anodes in electrolytic baths. No. 1,299,519; Apr. 8; v. 261; p. 232.
Stuart, Henry J., Derby, assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn. Button-clasp. No. 1,302,449; Apr. 29; v. 261; p. 931.
Stubblefield, Garfield, Portland, Oreg. Indirect-lighting apparatus. No. 1,300,202; Apr. 8; v. 261; p. 386.
Stull, Eugene B., et al. (See Newhauer, Faltine, assignor.)
Sturdivant, Frank K., assignor of one-half to C. R. Kellam, Bacon, N. C. Radius-rod brace for autos. No. 1,300,041; Apr. 8; v. 261; p. 350.
Sturgeon, Harold M., Erie, Pa. Hammer. No. 1,300,511; Apr. 15; v. 261; p. 478.
Suess, John B., Seattle, Wash. Automobile-headlight lens. No. 1,302,239; Apr. 29; v. 261; p. 889.
Suffolk, Thomas E., Elizabeth, Pa. Bottle. No. 1,301,762; Apr. 22; v. 261; p. 769.
Sugar Centrifugal Discharger Co. (See Roberts, Eugene, assignor.)
Sullivan, Arthur B. (See Mott, Samuel D., assignor.)
Sullivan, J. F., et al. (See Rial and Hebera, assignors.)
Sullivan, John J., Springfield, Mass. Trousers creaser and stretcher. No. 1,300,226; Apr. 8; v. 261; p. 391.
Sullivan Machinery Company. (See Nelson, Sven T., assignor.)
Sullivan, William B., St. Louis, Mo. Removable saw-handle. No. 1,301,522; Apr. 22; v. 261; p. 722.
Summerhayes, Henry R., Schenectady, N. Y., assignor to General Electric Company. Electricity transforming and converting apparatus. No. 1,301,334; Apr. 22; v. 261; p. 687.
Sumner, Arthur D. (See Wilson and Sumner.)
Sunbeam Motor Car Company. (See Coatalen, Louis, assignor.)
Sundh, August, Hastings-upon-Hudson, assignor to National Clutch Company, New York, N. Y. Flexible tubing. No. 1,300,512; Apr. 15; v. 261; p. 478.
Sundt, Carlos A., Santiago, Chile. Determining relative speed of moving bodies. No. 1,299,058; Apr. 1; v. 261; p. 102.
Superheater Corporation. (See Robinson, John G., assignor.)
Sutton, Chester R., assignor to Perfection Cooling and Ventilating Company, Tucson, Ariz. Cooling system. No. 1,301,794; Apr. 22; v. 261; p. 776.
Sutton, Reymer, Uniontown, Pa. Spark-plug. No. 1,298,821; Apr. 1; v. 261; p. 48.
Swanson, Victor. (See Larson, Julius, assignor.)
Swanson, Carl W., Chicago, Ill. Power-driven washing-machine. No. 1,300,203; Apr. 8; v. 261; p. 386.
Swanson, Hilma S., New Rochelle, N. Y. Garment-hanger. No. 1,299,390; Apr. 1; v. 261; p. 176.
Swanson, Ludwig, Detroit, Mich. Tool-holder. No. 1,300,042; Apr. 8; v. 261; p. 351.
Swanson, Olof. (See Tobiason and Swanson.)
Swick, Clyde R., San Francisco, Calif., assignor, by mesne assignments, to Hawley Pulp and Paper Company. Paper-interfolding machine. No. 1,302,240; Apr. 29; v. 261; p. 889.
Swick, Clyde E., San Francisco, Calif., assignor to Hawley Pulp and Paper Company. Interfolding paper. No. 1,302,241; Apr. 29; v. 261; p. 890.
Swift and Company. (See Wilson, Howard M., assignor.)
Swift, Edwin M., Seattle, Wash. Single-truck car. No. 1,300,787; Apr. 15; v. 261; p. 536.
Swift, Willard E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Transparent paper and making the same. No. 1,302,100; Apr. 29; v. 261; p. 868.
Sylvan, Joseph, Chicago, Ill. Ventilator. No. 1,301,195; Apr. 22; v. 261; p. 659.
Sylvester, Thomas J., Philadelphia, Pa. War-game apparatus. No. 1,299,391; Apr. 1; v. 261; p. 176.
Sypho-Chemical Sprinkler Corporation. (See Brodton, Edward R., assignor.)
Szemanski, Stefan, San Francisco, Calif. Automobile-top. No. 1,301,610; Apr. 22; v. 261; p. 739.
Szold, Louis, Valparaiso, Ind. Revolving show-case. No. 1,298,822; Apr. 1; v. 261; p. 48.
Szynalewski, Frank, Cobalt, Ontario, Canada. Rail-joint. No. 1,300,895; Apr. 15; v. 261; p. 559.
T. S. Simms and Company. (See Purdy, Simeon D., assignor.)
Taggart, George M., assignor of one-half to S. H. Yerkes, Philadelphia, Pa. Regulator for furnaces. No. 1,300,788; Apr. 15; v. 261; p. 536.
Talbert, Thomas B., Huntington Beach, Calif. Oil-cloth. No. 1,300,043; Apr. 8; v. 261; p. 351.
Talbot, Adjutor L. P., Montreal, Quebec, Canada. Boat. No. 1,301,523; Apr. 22; v. 261; p. 722.
Taliaferro, Thomas L., Chicago, Ill. Forming sealing-rings for covers. No. 1,299,259; Apr. 1; v. 261; p. 146.
Taliaferro, Thomas L., La Grange, Ill. Jar-closure. No. 1,300,896; Apr. 15; v. 261; p. 559.
Talla, Heinrich, Heilbronn, Germany, assignor to Präzisionsgusswerke System Schmidt-Reichhardt G. m. b. H., Frankfort-on-the-Main, Germany. Apparatus for casting metals. No. 1,302,450; Apr. 29; v. 261; p. 931.
Tallmadge, Charles H., assignor to W. R. Heath, Buffalo, N. Y. Accounting mechanism. No. 1,301,795; Apr. 22; v. 261; p. 776.
Talpa, John, and J. Bednarz, Detroit, Mich. Weapon. No. 1,299,260; Apr. 1; v. 261; p. 147.
Tannehill, Harley, assignor to himself and F. G. Schwier, Fort Wayne, Ind. Rim breaker and extender. No. 1,301,884; Apr. 29; v. 261; p. 823.
Tanquary, Elmer S., Lawrenceville, Ill. Fretting device for musical instruments. No. 1,302,451; Apr. 29; v. 261; p. 931.
Tappan, Harry D. (See Walton and Tappan.)
Tarbox, Reuben L., Shell Lake, Wis. Fastener for shutters, storm-windows, and screens. No. 1,300,044; Apr. 8; v. 261; p. 351.
Tate, William H. (See Leadbetter, Gilchrist, and Tate.)
Tatosian, Charles M., Newark, N. J. Advertising or signaling apparatus. No. 1,301,620; Apr. 22; v. 261; p. 740.
Tavi, Uno A., Milwaukee, Wis. Universal adjustable support. No. 1,300,045; Apr. 8; v. 261; p. 351.
Taylor, Calvin C., assignor to Scarritt Car Seat and Manufacturing Company, St. Louis, Mo. Car-seat. No. 1,298,823; Apr. 1; v. 261; p. 48.
Taylor, Charles, Nogales, Ariz. Device for aeration and emulsifying of pulp for flotation. No. 1,299,059; Apr. 1; v. 261; p. 102.
Taylor, Charles M., Jr., Maple Shade, N. J. Type-writer ribbon. No. 1,298,824; Apr. 1; v. 261; p. 48.
Taylor, Edgar R., and I. Flexner, assignors to Flexner-Taylor Company, Boston, Mass. Structural composition. No. 1,302,452; Apr. 29; v. 261; p. 931.
Taylor, George R., assignor of one-half to S. E. Huff, Urbana, Ill. Construction of towers. No. 1,299,261; Apr. 1; v. 261; p. 147.
Taylor, Horace V. S., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Measuring instrument. No. 1,300,513; Apr. 15; v. 261; p. 478.
Taylor, James A., New York, N. Y. Combined braking, drive-clutch, and motor-starting mechanism. No. 1,301,018; Apr. 15; v. 261; p. 585.
Taylor, James S., Eureka, Kans. Well-tool. No. 1,299,392; Apr. 1; v. 261; p. 176.
Taylor, L. D. (See Bates, Russell A., assignor.)
Taylor, Lawrence H., Red Cloud, Nebr. Tie-holding attachment for collars. No. 1,302,242; Apr. 29; v. 261; p. 890.
Taylor, William W., Kansas City, Mo. Safety appliance. No. 1,302,101; Apr. 29; v. 261; p. 863.
Teague, Raleigh E., Hanford, Calif. Fruit-gatherer. No. 1,302,243; Apr. 29; v. 261; p. 890.
Teague, Walter O., Brookline, assignor, by mesne assignments, to Fire Protection Insurance Securities Company, Boston, Mass. Fusible link. No. 1,300,046; Apr. 8; v. 261; p. 351.
Teal, Frank, Troy, N. Y. Flying-machine level. No. 1,299,633; Apr. 8; v. 261; p. 260.
Tebbetts, Lewis R., 2d, St. Louis, Mo. Making metal ingots. No. 1,298,825; Apr. 1; v. 261; p. 49.
Telber, Edward, St Louis, Mo. Demountable-rim lock. No. 1,300,514; Apr. 15; v. 261; p. 479.
Templeton, William M., Peoria, Ill. Lubricating mechanism. No. 1,299,060; Apr. 1; v. 261; p. 102.

Templin, John R. (See Birks and Templin.)
Tentobed Company. (See Purcell, Isaac S., assignor.)
Tessmer, Frederick P., Detroit, Mich. Power-riddle. No. 1,299,262; Apr. 1; v. 261; p. 147.
Tester, Louis E., Sacramento, Calif. Hydrocarbon-burner. No. 1,299,263; Apr. 1; v. 261; p. 147.
Tetera, William V., San Jose, Calif. Safety device for railway-cars. No. 1,300,673; Apr. 15; v. 261; p. 511.
Tewksbury, Charles B., West Roxbury, assignor to Safeguard Tag Company, Boston, Mass. Self-reinforcing fabric. No. 1,300,515; Apr. 15; v. 261; p. 479.
Thacher, George H., Jr., Albany, N. Y., assignor to Files Engineering Company, Inc. Hand-stoker. No. 1,302,453; Apr. 29; v. 261; p. 931.
Thalinger, Ernest O., St. Louis, Mo. Game. No. 1,299,520; Apr. 8; v. 261; p. 233.
Thayer, Henry W., New York, N. Y. Explosion-engine. No. 1,299,264; Apr. 1; v. 261; p. 147.
Theo. Tiedemann & Sons. (See Hoffman, John H., assignor.)
Theodore, Anostopoulo D., (whose full legal name is Theodore D. Anagnostopoulos,) Eunice, La. Garter. No. 1,302,454; Apr. 29; v. 261; p. 932.
Thermokept Products Corporation. (See McColl and Willison, assignors.)
Thieme, Otto, assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo. Type-writing machine. No. 1,301,835; Apr. 22; v. 261; p. 687.
Thimgan, Matthew, Murdock, Nebr. Railway spike-retainer. No. 1,299,061; Apr. 1; v. 261; p. 102.
Thomas, Charles W., Madison, Wis. Adjusting mechanism. No. 1,300,047; Apr. 8; v. 261; p. 351.
Thomas Foreign Patents Limited. (See Thomas, John G. P., assignor.)
Thomas, John B. (See Forkner, Robert F., assignor.)
Thomas, John G. P., assignor to Thomas Foreign Patents Limited, Kensington, London, England. Power-transmission on rail and road trains and the like. No. 1,301,763; Apr. 22; v. 261; p. 769.
Thomas, John G. P., assignor to Thomas Foreign Patents Limited, Kensington, London, England. Ignition of internal-combustion engines. No. 1,301,985; Apr. 29; v. 261; p. 842.
Thomas, Reinhold, Chicago, Ill. Stop mechanism for phonographs. No. 1,298,826; Apr. 1; v. 261; p. 49.
Thomas Spark Plug Company. (See Thomas, William S., assignor.)
Thomas, William S., Lock Haven, Pa., assignor to Thomas Spark Plug Company, New York, N. Y. Spark-plug. No. 1,300,048; Apr. 8; v. 261; p. 352.
Thompson, Albert E. (See Low and Thompson.)
Thompson, Arthur W., Ottawa, Ontario, Canada. Operating mechanism for fuel-pumps of internal-combustion engines. No. 1,299,062; Apr. 1; v. 261; p. 103.
Thompson, Fredrick B., Chicago, Ill. Film-wiping apparatus. No. 1,299,266; Apr. 1; v. 261; p. 148.
Thompson, George. (See Joyce, Michael J., assignor.)
Thompson, Herbert L., assignor to Elgin Gas Motor Company, Elgin, Ill. Gas-engine starter. No. 1,300,049; Apr. 8; v. 261; p. 352.
Thompson, William P., Liverpool, England. Aeroplane. No. 1,301,196; Apr. 22; v. 261; p. 659.
Thomson Electric Welding Company. (See Gravell, James H., assignor.)
Thomson, John, New York, N. Y. Zigzag carbon electric resister. No. 1,299,265; Apr. 1; v. 261; p. 148.
Thomson, Wardlaw B., W. D. Severn, and G. Twycross, Cape Town, South Africa. Manufacture of nitrated cellulose products. No. 1,302,455; Apr. 29; v. 261; p. 932.
Thomson, William P., New York, N. Y. Thrust-equalising rail-plate. No. 1,298,827; Apr. 1; v. 261; p. 49.
Thomson, William P., assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 1,299,634; Apr. 8; v. 261; p. 260.
Thornburgh, Ivan D., Oakland, assignor to American Can Company, San Francisco, Calif. Sanitary-can end. No. 1,299,063; Apr. 1; v. 261; p. 103.
Three Men Rail Laying Machine Company. (See Eggert, Charles J., assignor.)
Thurman, William B. (See Soule, Arthur C., assignor.)
Thwing, F. H. (See Cross, Roy, assignor.)
Tice, Percival S., Detroit, Mich. Carbureter. No. 1,300,517; Apr. 15; v. 261; p. 479.
Tice, William A., *et al.* (See Atkins, William, assignor.) (Reissue.)
Tiefel, Charles G. (See Todd, Tiefel, and La May.)
Tiefel, Charles G., assignor to Todd Protectograph Company, Rochester, N. Y. Check-writing machine. No. 1,302,244; Apr. 29; v. 261; p. 890.
Tiers, Clarence V., Oakmont, Pa. Cooking utensil. No. 1,299,267; Apr. 1; v. 261; p. 148.
Tillman, Ferdinand J., St. Louis, Mo. Cipher-printing mechanism. No. 1,301,986; Apr. 29; v. 261; p. 842.
Timmons, Sanford L., Des Moines, Iowa. Cultivator. No. 1,299,064; Apr. 1; v. 261; p. 103.
Tintanné, Emile, Camaguey, Cuba. Scriber. No. 1,301,621; Apr. 22; v. 261; p. 740.
Titeflex Metal Hose Corporation. (See Brinkman, Louis H., assignor.)
Tobiason, Carl T., and O. Swanson, Sycamore, Ill.; said Tobiason assignor to said Swanson. Supporting-clamp. No. 1,301,885; Apr. 29; v. 261; p. 828.
Tobin, Nathan L., Chicago, Ill. Pneumatic automobile-tire. No. 1,300,050; Apr. 8; v. 261; p. 352.
Tocknell, Charles W., Kenilworth, N. J. Bottle-holder. No. 1,301,886; Apr. 29; v. 261; p. 823.
Todd, Libannus M., C. G. Tiefel, and A. C. La May, assignors, by mesne assignments, to Todd Protectograph Company. Check-writer. No. 1,299,521; Apr. 8; v. 261; p. 232.
Todd Protectograph Company. (See Tiefel, Charles G., assignor.)
Todd Protectograph Company. (See Todd, Tiefel, and La May, assignors.)
Todhunter, William J., Chicago, Ill. Cooling and conveying mechanism. No. 1,298,828; Apr. 1; v. 261; p. 49.
Todman, James C., Acton, T. L. B. Cooper, Ealing, and A. A. Lyon, Harrow, London, England. Brush-gear for dynamo-electric machines. No. 1,298,829; Apr. 1; v. 261; p. 49.
Tognacci, Nazzereno, Kincaid, Ill. Ship-raising device. No. 1,302,245; Apr. 29; v. 261; p. 890.
Toledo Scale Company. (See Dunn, Henry F., assignor.)
Tolman, Arthur G., Milwaukee, Wis. Means of applying sheathing to corrugated roofing. No. 1,298,830; Apr. 1; v. 261; p. 49.
Tolotti, Giulio. (See Pavesi and Tolotti.)
Tom Thumb Tractor Company. (See Nelson, De Witt, assignor.)
Tomassak, Antoni, assignor of forty one-hundredths to J. Skowyra, Cohoes, N. Y. Trolley-wheel. No. 1,300,303; Apr. 15; v. 261; p. 432.
Tomlinson, Charles H., Mansfield, Ohio. Car and electric coupling device. No. 1,300,789; Apr. 15; v. 261; p. 537.
Tone, Fred I., Indianapolis, Ind. Brake-equalising device. No. 1,298,831; Apr. 1; v. 261; p. 50.
Tone, Fred I., Indianapolis, Ind. Cam-shaft-operating means for internal-combustion engines. No. 1,300,518; Apr. 15; v. 261; p. 480.
Toole, Lucius C. and M. R., Jersey City, N. J., assignors to Motion Picture Chair Co., Inc., New York, N. Y. Theater-chair. No. 1,299,810; Apr. 8; v. 261; p. 300.
Toole, Marguerite R. (See Toole, Lucius C., and M. R.)
Topham, Laurence E., Swampscott, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Machine for operating upon leather. No. 1,301,336; Apr. 22; v. 261; p. 688.
Totalux Company, The. (See Ford, Frederick H., assignor.)
Townsend, Charles H., Yonkers, N. Y. Valve for fire-extinguishing systems. No. 1,299,065; Apr. 1; v. 261; p. 103.
Townsend, Harry P., assignor to The H. P. Townsend Manufacturing Company, Hartford, Conn. Metal-working machine. No. 1,300,061; Apr. 8; v. 261; p. 352.
Trace, Russell A., assignor to Buckeye Iron and Brass Works, Dayton, Ohio. Machine for forming oil-cakes. No. 1,302,246; Apr. 29; v. 261; p. 891.
Tracy, James J., Cleveland, Ohio. Apparatus for dyeing and the like. No. 1,298,832; Apr. 1; v. 261; p. 50.
Trailer Transportation Company. (See Lloyd, Herbert D., assignor.)
Traveling Shock Gatherer Company. (See Nelson, Landrigan, and Zeshaugh, assignors.)
Travis, William, Sheffield, England. Supply of electrical energy to furnaces or other appliances. No. 1,301,887; Apr. 29; v. 261; p. 823.
Traylor, John A., Salt Lake City, Utah. Apparatus for thickening and separating solids from liquids. No. 1,299,872; Apr. 8; v. 261; p. 314.
Treadgold, George H., assignor of one-half to W. B. Robeson, Port Huron, Mich. Safety device for railways. No. 1,298,833; Apr. 1; v. 261; p. 50.
Tredegars Limited. (See Morris, John M., assignor.)
Trefz, Julius J., assignor to The Anglo-American Mill Company, Owensboro, Ky. Bolting-reel. No. 1,302,456; Apr. 29; v. 261; p. 932.
Tremaine, Henry B., Westfield, N. J., assignor to The Aeolian Company. Automatic musical instrument. No. 1,300,519; Apr. 15; v. 261; p. 480.
Tremblay, Louis N., Paris, France. Cutting-off machine for trunk timber. No. 1,301,337; Apr. 22; v. 261; p. 688.
Tretch, William J., assignor to Riehle Bros. Testing Machine Co., Philadelphia, Pa. Extensometer. No. 1,300,790; Apr. 15; v. 261; p. 537.
Trigg, Edward W. (See Mason and Trigg.)
Tripp, Charles A., assignor to Holcomb & Hoke Manufacturing Company, Indianapolis, Ind. Gasolene-generator. No. 1,300,304; Apr. 15; v. 261; p. 434.
Tripp, Clarence A., Mojave, Calif. Demountable collapsible rim. No. 1,300,052; Apr. 8; v. 261; p. 353.
Tripplehorn, David R., Wichita, Kans. Jarring-tool for drilling wells. No. 1,301,764; Apr. 22; v. 261; p. 769.
Tritsch, Mike, Plattsmouth, Nebr. Spectacle-rim-stretching device. No. 1,300,520; Apr. 15; v. 261; p. 480.
Trotter, Joseph W., Birmingham, Ala. Rail-joint. No. 1,299,393; Apr. 1; v. 261; p. 176.
Troy, John H., New York, N. Y. Comb. No. 1,302,247; Apr. 29; v. 261; p. 891.
Troy Laundry Machinery Co. (See Bartholomew, William, assignor.)
Truck Tractor and Manufacturing Company. (See Jacobs and Cramer, assignors.)

Trush, Rudolph O., Murray Hill Park, N. J. Frame for the manufacture of embroidery. No. 1,299,878; Apr. 8; v. 261; p. 315.
Tubular Woven Fabric Company. (See Handley, William, assignor.)
Tucker, Ralph H., Los Angeles, Calif. Air-lift pump. No. 1,300,053; Apr. 8; v. 261; p. 253.
Tucker, William H., Healdsburg, Calif. Amalgamating-machine. No. 1,300,054; Apr. 8; v. 261; p. 253.
Tully, Francis W., Brookline, Mass. Culinary utensil. No. 1,301,197; Apr. 22; v. 261; p. 659.
Turbayne, William A., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. System of electrical regulation. No. 1,301,632; Apr. 22; v. 261; p. 740.
Turck, Henry J., et al., trustees. (See Bobroff, Bornett L., assignor.)
Turnbull Cone Machine Co. (See Turnbull, Werd W., assignor.)
Turnbull, Werd W., assignor to Turnbull Cone Machine Co., Asheville, N. C. Machine for making ice-cream cones. No. 1,299,635; Apr. 8; v. 261; p. 260.
Turner, Albert. (See Norton and Turner.)
Turner, Bertram J., New Southgate, London, England. Magneto-electric machine. No. 1,301,524; Apr. 22; v. 261; p. 722.
Turner, John C., assignor to The John C. Turner Novelty Co., Dayton, Ohio. Merry-go-round. No. 1,300,674; Apr. 15; v. 261; p. 511.
Turner, Robert. (See Corley and Turner.)
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Locomotive-brake equipment. No. 1,299,268; Apr. 1; v. 261; p. 149.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electropneumatic brake. No. 1,299,269; Apr. 1; v. 261; p. 149.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure-brake device. No. 1,299,270; Apr. 1; v. 261; p. 149.
Tuttle, Alpha D., West Barrington, N. H. Shingling-bracket. No. 1,299,874; Apr. 8; v. 261; p. 315.
Tuttle, Orley C., Old Forge, N. Y. Fish-bait. No. 1,302,102; Apr. 29; v. 261; p. 863.
Twycross, George. (See Thomson, Severn, and Twycross.)
Typpl, John N., Iron Belt, Wis. Vehicle construction. No. 1,300,055; Apr. 8; v. 261; p. 253.
Tyrie, James, and A. Gregg, Belfast, Ireland. Cork-cutting machine. No. 1,300,305; Apr. 15; v. 261; p. 454.
Tyrrell, Frederick S., Winnetka, assignor to Burke & James, Inc., Chicago, Ill. Paper backing for film-cartridges. No. 1,300,056; Apr. 8; v. 261; p. 253.
Tyson, Alfred, Sappington, Mo. Weed-destroyer. No. 1,299,406; Apr. 1; v. 261; p. 179.
U. S. Light & Heat Corporation. (See Turbayne, William A., assignor.)
Uebelmesser, Charles, New York, N. Y., assignor to Cru Patents Corporation. Film-guide control. No. 1,300,057; Apr. 8; v. 261; p. 254.
Uhlrig, Herman, Wamego, Kans. Dumping mechanism for automobile-trucks. No. 1,301,338; Apr. 22; v. 261; p. 688.
Ulevog, Torval N., Earl Grey, Saskatchewan, Canada. Automobile-door latch. No. 1,299,066; Apr. 1; v. 261; p. 104.
Underhill, Victor, Reston, Manitoba, Canada. Tractor-wheel attachment for automobiles. No. 1,302,103; Apr. 29; v. 261; p. 864.
Underwood, Chester J., Elgin, Ill. Dental bridgework. No. 1,299,067; Apr. 1; v. 261; p. 104.
Underwood Computing Machine Company. (See Gumprecht, William L., assignor.)
Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)
Underwood Computing Machine Company. (See Hoyt, Richard F., assignor.)
Underwood Computing Machine Company. (See Ingram, Oscar L., assignor.)
Underwood Computing Machine Company. (See Steiger, Andrew W., assignor.)
Underwood Computing Machine Company. (See Wood, Alfred J., assignor.)
Underwood, Henry A., Grand Forks, N. D. Shock and sheaf carrier. No. 1,299,875; Apr. 8; v. 261; p. 315.
Underwood, John T. (See Des Jardins, Benjamin M., assignor.)
Underwood Typewriter Company. (See Des Jardins, Benjamin M., assignor.)
Underwood Typewriter Company. (See Fengler, Hermann V., assignor.)
Underwood Typewriter Company. (See Helmund, William F., assignor.)
Underwood Typewriter Company. (See Howell, Arthur E., assignor.)
Underwood Typewriter Company. (See Johnson, Arthur A., assignor.)
Underwood Typewriter Company. (See Manning, Frank, assignor.)
Underwood Typewriter Company. (See Van Hook, Collins, assignor.)
Underwood Typewriter Company. (See Van Note, Eugene, assignor.)
Underwood Typewriter Company. (See Wayrich, Alexander, assignor.)
Underwood Typewriter Company. (See Wernery, Lester A., assignor.)
Underwood Typewriter Company. (See Wheaton, Earle H., assignor.)
Underwood Typewriter Company. (See Wherry, John A., assignor.)
Ungar, Gustav A., Cleveland, Ohio, assignor to F. R. Blair & Co., Inc., New York, N. Y. Flexible coupling. No. 1,302,248; Apr. 29; v. 261; p. 891.
Union Carbide Company. (See Morton and Nicolet, assignors.)
Union Lock Stitch Company. (See Merrick, Frank W., assignor.)
Union Special Machine Company. (See Chalman, John E., assignor.)
Union Special Machine Company. (See McNeil, Chester, assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Special Machine Company. (See Seymour, Dudley S., assignor.)
Union Switch & Signal Company, The. (See Beall, Charles R., assignor.)
Union Switch & Signal Company, The. (See Dunham, Charles W., assignor.)
Union Switch & Signal Company, The. (See Griffin, Henry W., assignor.)
Union Switch & Signal Company, The. (See Harrington, Clinton O., assignor.)
Union Switch & Signal Company, The. (See Snavely, Clarence S., assignor.)
United Shirt and Collar Company. (See Dormandy, Garry J., assignor.)
United Shirt & Collar Company. (See Sipperly, John E., assignor.)
United Shoe Machinery Corporation. (See Ashworth, Fred, assignor.)
United Shoe Machinery Corporation. (See Baer, John W., assignor.)
United Shoe Machinery Corporation. (See Benjamin, John M., assignor.)
United Shoe Machinery Corporation. (See Bertrand, Frederic E., assignor.)
United Shoe Machinery Corporation. (See Black, George H., assignor.)
United Shoe Machinery Corporation. (See Engel, Karl, assignor.)
United Shoe Machinery Corporation. (See Furber, Frederick M., assignor.)
United Shoe Machinery Corporation. (See Gilbert, Joseph B., assignor.)
United Shoe Machinery Corporation. (See Goddu, George, assignor.)
United Shoe Machinery Corporation. (See Lane, Elmer E., assignor.)
United Shoe Machinery Corporation. (See Latham, Albert, assignor.)
United Shoe Machinery Corporation. (See Mayo, Benjamin F., assignor.)
United Shoe Machinery Corporation. (See Meyer, William C., assignor.)
United Shoe Machinery Corporation. (See Paquin, Joseph A., assignor.)
United Shoe Machinery Corporation. (See Ray, Eugene J., assignor.)
United Shoe Machinery Corporation. (See Topham, Laurence E., assignor.)
United Shoe Machinery Corporation. (See Winter, Henry W., assignor.)
United States Auto Gear Shift Company. (See Weber, Leibing, and Jacobsen, assignors.)
United States Cast Iron Pipe and Foundry Company. (See Lemoine, Louis R., assignor.)
United States Envelope Company. (See Novick, Abraham, assignor.)
United States Envelope Company. (See Swift, Willard E., assignor.)
United States Head-Light Company, The. (See Kirby, John, Jr., assignor.)
Universal Draft Gear Attachment Co. (See Kinsman, Charles C., assignor.)
Universal Electric Welding Company. (See Lachman Laurence S., assignor.)
Universal Electric Welding Company. (See Smith, Herbert L., assignor.)
Universal Rim Company. (See Baker, Erle K., assignor.)
Upton Carbureter Company et al. (See Upton, Roy M., assignor.)
Upton, Roy M., assignor of one-half to T. J. Norton, Rutherford, N. J., and one-half to Upton Carburetor Company, Inc. Carbureter. No. 1,301,623; Apr. 22; v. 261; p. 740.
Ureck, Harry, assignor of one-half to W. R. Moore, Burlington, Wis. Combined gaff-hook and fish-rod. No. 1,302,457; Apr. 29; v. 261; p. 932.
Utah Idaho Sugar Co. (See Dewey, John, assignor.)
Vail, Michael J. (See Coleman, Maurice B., assignor.)
Van Amburgh, Charles, Tacoma, Wash. Alloy. No. 1,300,058; Apr. 8; v. 261; p. 354.

Van Brunt, Willard A., Los Angeles, Calif. Bearing for ground-working disks. No. 1,301,339; Apr. 22; v. 261; p. 688.
Van Cott, Frank J., Unadilla, N. Y. Silo. No. 1,301,624; Apr. 22; v. 261; p. 741.
Van Deman, A. N. (See Kramer, Anders, assignor.)
Van der Bijl, Hendrik J., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Radio transmission. No. 1,301,525; Apr. 22; v. 261; p. 723.
Van Guelpen, Louis J., Cincinnati, Ohio. Burnishing-machine. No. 1,300,059; Apr. 8; v. 261; p. 354.
Van Hook, Collins, Knoxville, Tenn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,299,636; Apr. 8; v. 261; p. 260.
Van Keuren, William L., North Bergen, N. J., assignor to General Electric Company. Incandescent lamp. No. 1,301,079; Apr. 15; v. 261; p. 601.
Van Noort, Cornelius, and F. Visser, Paterson, N. J. Resilient wheel. No. 1,299,876; Apr. 8; v. 261; p. 315.
Van Note, Eugene, Trenton, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Paper-feed attachment for type-writers. No. 1,298,834; Apr. 1; v. 261; p. 51.
Van Tassel, John R., assignor to The Standard Optical Company, Geneva, N. Y. Lens-mounting for eyeglasses. No. 1,299,068; Apr. 1; v. 261; p. 104.
Vanderbilt, Farley D., Seneca Falls, N. Y., assignor to Marseilles Company, Moline, Ill. Fertilizer-distributer. No. 1,300,791; Apr. 15; v. 261; p. 537.
Vandervell, Charles A. (See Midgley, Albert H., assignor.)
Vandervoort, Milford T., assignor of one-half to J. M. Wright, Grand Rapids, Mich. Automatic vacuum closing-valve. No. 1,302,104; Apr. 29; v. 261; p. 864.
Vannoy, Jackson. (See Hobson and Vannoy.)
Varcoe, Earl V., Philadelphia, Pa. Water-tube boiler. No. 1,302,458; Apr. 29; v. 261; p. 932.
Varley Duplex Magnet Company. (See Anderson, James C., assignor.)
Vaughan, Edgar A., San Antonio, Tex. Fuel-heater for internal-combustion engines. No. 1,298,835; Apr. 1; v. 261; p. 51.
Vaughan, Walter D., Clarendon, Vt. Brush-puller. No. 1,300,897; Apr. 15; v. 261; p. 560.
Veale, C. H., *et al.* (See Key, Emmett M., assignor.)
Velox Vise Co. (See Fulton, Edwin W., assignor.)
Velton, E. B., *et al.* (See Key, Emmett M., assignor.)
Veluard, Andre, Philadelphia, Pa. Loom for weaving and cutting pile fabrics. No. 1,300,306; Apr. 15; v. 261; p. 434.
Venango Knitting Mills. (See Feig, Curt, assignor.)
Verdugo, Thomas, assignor of one-fourth to W. H. Estabrook, Monterey, Calif. Umbrella. No. 1,299,877; Apr. 8; v. 261; p. 315.
Vesta Accumulator Company. (See Angell, Chester M., assignor.)
Vetter, Albert, Toledo, Ohio. Automobile-top. No. 1,299,637; Apr. 8; v. 261; p. 260.
Vetter, Clarence A., Pittsburgh, Pa. Attachment-plug. No. 1,299,271; Apr. 1; v. 261; p. 149.
Vetter, Joseph, Toledo, Ohio. Automobile-top. No. 1,298,836; Apr. 1; v. 261; p. 51.
Vezina George. (See White and Vezina.)
Vickers Limited. (See Buckham, George T., assignor.)
Vickers Limited. (See Challenger, George H., assignor.)
Vickers Limited. (See Challenger and Savage, assignors.)
Vickers Limited. (See Dawson and Buckham, assignors.)
Vickers Limited. (See Duncan, Thomas S., assignor.)
Vickers Limited. (See Ella, Giovanni E., assignor.)
Vickers Limited. (See McKechnie, James, assignor.)
Vickers Limited. (See North, Thomas K., assignor.)
Victor Adding Machine Co. (See Johantgen, Oliver D., assignor.)
Victory Corset and Girdle Co. (See Metz, Samuel T., assignor.)
Vierling, George E., Des Moines, Iowa. Coffee-percolator. No. 1,302,483; Apr. 29; v. 261; p. 937.
Villiger, Alois, San Francisco, Calif. Twine-cutter. No. 1,300,521; Apr. 15; v. 261; p. 480.
Vincent, Bee E., assignor of one-half to P. H. Hays, Swifts, Ohio. Fluid-pressure clutch. No. 1,300,898; Apr. 15; v. 261; p. 560.
Visser, Frank. (See Van Noort and Visser.)
Vit-O-Net Manufacturing Company. (See Craddick, William F., assignor.)
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Electrically-operated controlling apparatus. No. 1,299,638; Apr. 8; v. 261; p. 261
Vogel, Felix A., assignor to General Briquetting Company, New York, N. Y. Metal briquet. No. 1,299,878; Apr. 8; v. 261; p. 316.
Vogel, George H., Brooklyn, N. Y. Milk-can safety device. No. 1,302,459; Apr. 29; v. 261; p. 932.
Vogetzer, Otto, Brooklyn, N. Y., assignor to Duplex Machine Co. Punch for perforating films. No. 1,302,249; Apr. 29; v. 261; p. 891.
Voland, Emil L. (See Voland, George G. and E. L.)
Voland, George G. and E. L., New Rochelle, N. Y. Weight placing and proving attachment. No. 1,301,765; Apr. 22; v. 261; p. 769.
Volckhausen, Julius. (See Schweinert and Volckhausen.)
Volkommer, Theodore J., Pittsburgh, Pa. Making metallic oxids. No. 1,300,522; Apr. 15; v. 261; p. 480.
Vollmann, Carl W., Montreal, Quebec, Canada. Gas-compressor. No. 1,301,987; Apr. 29; v. 261; p. 842.
Volpert, Joseph, Milwaukee, Wis. Ash-sifter. No. 1,300,675; Apr. 15; v. 261; p. 512.
Von Boden, George B., San Francisco, Calif. Oil-burner feed and heater. No. 1,299,069; Apr. 1; v. 261; p. 104.
Von Reppert, Richard, St. Louis, Mo. Calculating-machine. No. 1,302,250; Apr. 29; v. 261; p. 891.
Voorhees, Wilson R., Perth Amboy, N. J. Maximum-speed governor for automobiles. No. 1,302,251; Apr. 29; v. 261; p. 891.
Voss, William E., Oklahoma, Okla. Low-pressure alarm. No. 1,300,523; Apr. 15; v. 261; p. 481.
Vrudny, Andrew, Arnold, Pa. Ball-joint. No. 1,300,060; Apr. 8; v 261; p. 254
Vuillermet, Albin and C., Philadelphia, Pa. Making mother-of-pearl tiling. No. 1,302,252; Apr. 29; v. 261; p. 892.
Vuillermet, Ceasar. (See Vuillermet, Albin and C.)
W. H. McElwain Company. (See Brackett, Frank A., assignor.)
W. N. Matthews and Brother. (See Heinrich, Walter A., assignor.)
Wachenheimer Bros. (See Lyckland and Wachenheimer, assignors.)
Wachenheimer, Harry. (See Lyckland and Wachenheimer.)
Wachtel, William E. (See Chapman, Lemuel W., assignor.)
Wacsula, John, New York, N. Y. Combination lathe-tool. No. 1,300,204; Apr. 8; v. 261; p. 336.
Waddington, James F., Beverly, N. J. Submarine vessel. No. 1,300,524; Apr. 15; v. 261; p. 481.
Waern, William, Stockholm, Sweden. Bark-stripping machine. No. 1,301,198; Apr. 22; v. 261; p. 660.
Waern, William, Stockholm, Sweden. Speed-changing device for bark-stripping machines. No. 1,301,199; Apr. 22; v. 261; p. 660.
Waern, William, Stockholm, Sweden. Feeding device for bark-stripping machines. No. 1,301,200; Apr. 22; v. 261; p. 660.
Wagner, Edwin, Cove Orchard, Oreg. Lock-lid container. No. 1,300,899; Apr. 15; v. 261; p. 560.
Wagniere, August L., Los Angeles, Calif., assignor, by mesne assignments, to U. S. G. Hinton, Providence, R. I. Automatic air-valve for internal-combustion engines. No. 1,301,340; Apr. 22; v. 261; p. 689.
Wahl Company, The. (See Poole, Arthur F., assignor.)
Wahl Company, The. (See Wahl, John C., assignor.)
Wahl, John C., Chicago, Ill., assignor to The Wahl Company, Wilmington, Del. Self-feeding pencil. No. 1,301,341; Apr. 22; v. 261; p. 689.
Waigand, Edward, Nampa, Idaho. Wrapping-paper support. No. 1,300,061; Apr. 8; v. 261; p. 254.
Walder, Emil, assignor to Chemical Works formerly Sandoz, Basel, Switzerland. Manufacture of blue to greenish-blue coloring-matters of the gallocyanin series. No. 1,299,070; Apr. 1; v. 261; p. 104.
Waldron, James M., Englewood, N. J., and J. P. Coleman, Edgewood borough, Pa. Railway-switch-operating apparatus. No. 1,300,307; Apr. 15; v. 261; p. 434.
Walker, George H., Willow Grove, Pa. Submarine signaling device. No. 1,300,062; Apr. 8; v. 261; p. 254.
Walker, George L., Pueblo, Colo. Gear-shifting device. No. 1,300,676; Apr. 15; v. 261; p. 512.
Walker, Joah H., Old Charlton, England. Pad or pot sleeper for railway-tracks. No. 1,299,879; Apr. 8; v. 261; p. 316.
Walker, John B., Birmingham, Ala. Drying sand molds. No. 1,299,522; Apr. 8; v. 261; p. 234.
Walker, Marion L., assignor of one-half to J. M. Freeman, Gordo, Ala. Wagon-brake. No. 1,299,071; Apr. 1; v. 261; p. 104.
Walker, Miles, Manchester, England. Electrical converter. No. 1,300,308; Apr. 15; v. 261; p. 435.
Walker, Paul, assignor to Chicago Carton Company, Chicago, Ill. Display-box. No. 1,301,201; Apr. 22; v. 261; p. 660.
Walker, Sheridan A., New York, N. Y., assignor to The Carson Company, Chicago, Ill. Car-seat construction. No. 1,301,019; Apr. 15; v. 261; p. 586.
Walker, Sheridan A., New York, N. Y., assignor, by mesne assignments, to The Carson Company, Chicago, Ill. Rocker mechanism for car-seats. No. 1,301,020; Apr 15; v. 261; p. 586.
Walker, Sheridan A., New York, N. Y., assignor, by mesne assignments, to The Carson Company, Chicago, Ill. Car-seat back. No. 1,301,021; Apr. 15; v. 261; p. 587.
Walker, William J., Lacrosse, Wash. Hand oil-cup and chain pipe wrench combined. No. 1,301,202; Apr. 22; v. 261; p. 660.
Walker, William R., New York, N. Y. Producing steel and high-phosphorus slag. No. 1,299,072; Apr. 1; v. 261; p. 105.
Walker, William W., Camden, N. J., assignor, by mesne assignments, to Foamite Firefoam Company, New York, N. Y. Process of and apparatus for extinguishing fire. No. 1,299,272; Apr. 1; v. 261; p. 150.

Walkinshaw, Stewart M., et al. (See Jones, Robert W., assignor.)
Wallace, Curtis C., Schenectady, N. Y., assignor to General Electric Company. Preparation of anhydrous magnesium chlorid. No. 1,301,766; Apr. 22; v. 261; p. 770.
Wallace, Venemon L., Murray, Utah. Canning-bucket. No. 1,302,253; Apr. 29; v. 261; p. 892.
Walsh, George C., Sawtelle, Calif. Torpedo alarm-signal. No. 1,301,767; Apr. 22; v. 261; p. 770.
Walsh, William E., Lowell, assignor to Draper Corporation, Hopedale, Mass. Builder mechanism for spinning or winding machines. No. 1,299,639; Apr. 8; v. 261; p. 261.
Walsh, William E., Lowell, assignor to Draper Corporation, Hopedale, Mass. Spinning or winding machine. No. 1,301,022; Apr. 15; v. 261; p. 587.
Walten, Max, Washington, D. C. Skylight construction. No. 1,299,880; Apr. 8; v. 261; p. 316.
Walter, Maud E., Hayward, Wis. Buttonhole-gage. No. 1,300,900; Apr. 15; v. 261; p. 560.
Walter, Maurice, New York, N. Y. Motor-vehicle. No. 1,301,342; Apr. 22; v. 261; p. 689.
Walter, Rudolph, Cleveland, Ohio. Convertible chair. No. 1,299,881; Apr. 8; v. 261; p. 316.
Walters, Roger L., Fort Dodge, Iowa. Toy submarine. No. 1,301,768; Apr. 22; v. 261; p. 770.
Walton, Joseph S., Burley, Idaho. Puncture-proof automobile-tire. No. 1,300,063; Apr. 8; v. 261; p. 255.
Walton, Walter H., and H. D. Tappan, Philadelphia, Pa. Matrix-drying press. No. 1,301,888; Apr. 29; v. 261; p. 824.
Wanner, Albert, Jr., New York, N. Y. Fitting-stool. No. 1,301,203; Apr. 22; v. 261; p. 661.
Ward, Alexander L., New York, N. Y. Band-securing device. No. 1,299,862; Apr. 8; v. 261; p. 316.
Ward, James J., Greene, assignor of thirty-five one-hundredths to I. C. De Beuckelaere and twenty one-hundredths to W. G. Matthews, Dayton, Ohio. Sound-amplifier. No. 1,301,526; Apr. 22; v. 261; p. 723.
Wardell, Edward T., St. Paul, Minn. Transparent vacuum-jacket for liquid-dispensing bottles. (Reissue.) No. 14,629; Apr. 1; v. 261; p. 152.
Wardlow, Hays, assignor of one-half to L. Hering, Naylor, Mo. Wheel-cultivator. No. 1,299,073; Apr. 1; v. 261; p. 105.
Ware, Simeon A., Tignal, Ga. Plow. No. 1,298,887; Apr. 1; v. 261; p. 51.
Warman, Samuel W., Brownsville, assignor of one-third to R. M. Fry, Uniontown, and one-third to C. Oppermann, Orient, Pa. Automatically-operated mine-gate. No. 1,299,974; Apr. 1; v. 261; p. 105.
Warnecke, Harry W., New York, N. Y. Observation device. No. 1,302,254; Apr. 29; v. 261; p. 892.
Warner, George R. (See Richardson, Edward J. and J. R., assignors.) (Reissue.)
Warner, Oliver L. (See Simpson, William L., assignor.)
Warner, Paul C., New Rochelle, and R. W. Blodget, New York, N. Y. Ship's patch. No. 1,301,204; Apr. 22; v. 261; p. 661.
Warner, Thomas D., Jonesboro, Ark. Periscope. No. 1,300,901; Apr. 15; v. 261; p. 561.
Warr, Harold G., assignor to The P & M Company, Chicago, Ill. Rail-anchor. No. 1,301,625; Apr. 22; v. 261; p. 741.
Warren, Henry E., assignor to The Lombard Governor Company, Ashland, Mass. Fluid-operated lathe. No. 1,299,883; Apr. 8; v. 261; p. 317.
Warren, J. William, Kansas City, Mo. Adzing-machine for railway cross-ties. No. 1,300,064; Apr. 8; v. 261; p. 255.
Warren, James A., Council, Idaho, assignor of forty-nine one-hundredths to W. G. Ste. Marie, Shaniko, Oreg. Nut-lock. No. 1,302,105; Apr. 29; v. 261; p. 864.
Warren, James C., Fredericksburg, Va. Recording mechanism. No. 1,300,525; Apr. 15; v. 261; p. 481.
Washburn, Emma E. (See Stradling and Washburn.)
Washburne, James V., Fulton, N. Y. Rotary cutter for envelop-openers. No. 1,300,792; Apr. 15; v. 261; p. 537.
Washington Steel & Ordnance Company. (See Dalton, William, assignor.)
Washington Steel & Ordnance Company. (See McKenna and Dalton, assignors.)
Wasylowich, Pankracy, Chelsea, Mass. Gas-mask. No. 1,299,075; Apr. 1; v. 261; p. 105.
Waterbury Clock Co. (See Wehinger, Frederick, assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterfield, George, Syracuse, N. Y. Combination lock. No. 1,300,793; Apr. 15; v. 261; p. 537.
Waterloo Gasoline Engine Company. (See Daniel, Wilmer H., assignor.)
Waterman, Frank W., Baltimore, Md., assignor to Keyer Fibre Company, Waterville, Me. Machine for molding articles from pulp. No. 1,300,677; Apr. 15; v. 261; p. 512.
Waterman, Herbert R., San Francisco, Calif. Non-skid tire. No. 1,301,343; Apr. 22; v. 261; p. 689.
Watkins, Joseph W., assignor of one-half to G. Griffin and H. W. Bartley, Ridgely, Tenn. Cotton-picking sack. No. 1,300,065; Apr. 8; v. 261; p. 255.
Watkins, William E., assignor to The Metals Plating Company, New York, N. Y. Apparatus for plating metals. No. 1,302,106; Apr. 29; v. 261; p. 864.
Watson, Ernest A., assignor to The M-L Magneto Syndicate Limited, West Orchard, Coventry, England. Ignition apparatus for internal-combustion engines. No. 1,302,107; Apr. 29; v. 261; p. 864.
Watson, James, Marinetta, Wis. Field-stove. No. 1,300,527; Apr. 15; v. 261; p. 481.
Watson, James H., Riverton, Wyo. Casing-jack. No. 1,301,769; Apr. 22; v. 261; p. 770.
Watson, Orrin W., Newman Lake, Wash. Game apparatus. No. 1,300,526; Apr. 15; v. 261; p. 481.
Watters, William E., Melrose Park, Ill. Grab-bucket. No. 1,301,626; Apr. 22; v. 261; p. 741.
Watts, Richard E. (See Carter and Watts.)
Waugh Draft Gear Company. (See Davidson, Arthur C., assignor.)
Waukesha Motor Company. (See Fisher, James B., assignor.)
Way, G. W., et al. (See Kennedy, James W., assignor.)
Wayrich, Alexander, Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Exhibition device. No. 1,299,523; Apr. 8; v. 261; p. 234.
Waysiowich, Pankracy, Chelsea, Mass. Liquid-discharging gun. No. 1,299,076; Apr. 1; v. 261; p. 105.
Weaber, Marie R., and H. Clemens, assignors of one-half to Otto Weydemeyer, El Paso, Texas. Puncture-healing composition. No. 1,299,273; Apr. 1; v. 261; p. 150.
Weaver Company. (See Weaver, Victor M., assignor.)
Weaver, Frank R. (See Lane and Weaver.)
Weaver, Ira A., Springfield, assignor, by mesne assignments, to Montgomery Ward & Co., Incorporated, Chicago, Ill. Gang-plow. No. 1,301,627; Apr. 22; v. 261; p. 741.
Weaver, Ira A., Springfield, assignor, by mesne assignments, to Montgomery Ward & Co., Incorporated, Chicago, Ill. Plow. No. 1,301,628; Apr. 22; v. 261; p. 741.
Weaver, Victor M., Harrisburg, Pa., assignor to Weaver Company. Producing and separating certain substances. No. 1,300,205; Apr. 8; v. 261; p. 256.
Webber, Herbert R., Red Wing, Minn. Sewer. No. 1,299,884; Apr. 8; v. 261; p. 317.
Webel, Franz. (See Graul, Hanschke, and Webel.)
Weber, Albert. (See Hakanson and Weber.)
Weber, Anton. (See Leibing, William E., assignor.)
Weber, Anton, W. E. Leibing, Oakland, Calif., and J. P. H. Jacobsen, Chicago, Ill., assignors to United States Auto Gear Shift Company, Oakland, Calif. Gear-shifting device. No. 1,300,902; Apr. 15; v. 261; p. 561.
Weber, Florian W., Chicago, Ill. Antiskid device for vehicle-wheels. No. 1,301,988; Apr. 29; v. 261; p. 843.
Webster, Edgar E., Chicago, Ill. Focusing device for cameras. No. 1,302,255; Apr. 29; v. 261; p. 892.
Wecht, Peter, Bellaire, Ohio. Glass-working apparatus. No. 1,300,066; Apr. 8; v. 261; p. 255.
Wee, Oscar G., Tomahawk, Wis. Lifting-jack. No. 1,300,067; Apr. 8; v. 261; p. 255.
Weed, Howard L., Detroit, Mich. Rotary explosive-engine. No. 1,298,838; Apr. 1; v. 261; p. 51.
Weed, Howard L., Detroit, Mich. Rotary engine. No. 1,298,839; Apr. 1; v. 261; p. 52.
Weed, Hugh H. C. (See Bicknell and Weed.)
Weed, James M., Schenectady, N. Y., assignor to General Electric Company. Welding-electrode. No. 1,300,068; Apr. 8; v. 261; p. 256.
Weeks, Edmund G. (See Michie and Weeks.)
Weeks, Frank A., Plainfield, N. J. Inkstand. No. 1,300,528; Apr. 15; v. 261; p. 482.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Clock for controlling mechanical devices. No. 1,299,077; Apr. 1; v. 261; p. 106.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Chime-clock. No. 1,300,209; Apr. 15; v. 261; p. 482.
Wehling, Andrew H., Wichita, Kans. Toy. No. 1,299,274; Apr. 1; v. 261; p. 150.
Wehner, Lewis, Milwaukee, assignor to Pawling and Harnischfeger Company, West Milwaukee, Wis. Trench-digging machine. No. 1,301,344; Apr. 22; v. 261; p. 689.
Weibull, Ernst H. W., Gottenborg, Sweden. Ball-bearing. No. 1,301,527; Apr. 22; v. 261; p. 723.
Weidenbach, Andrew N., Mitchell, S. D. Box-holding clamp. No. 1,299,640; Apr. 8; v. 261; p. 261.
Weidenbach, Herman A., Buffalo, N. Y. Rotary steam-engine. No. 1,301,989; Apr. 29; v. 261; p. 841.
Weikly, James N., Jersey City, N. J. Fluid-pressure system. No. 1,300,529; Apr. 15; v. 261; p. 482.
Weiland, Edward W., Fresno, Calif. Door latch and bumper. No. 1,300,530; Apr. 15; v. 261; p. 482.
Weiner, David, Pittsburgh, Pa. Folding stool. No. 1,300,678; Apr. 15; v. 261; p. 512.
Weintraub, Ezechiel, New York, N. Y., assignor to General Electric Company. Catalyzing material. No. 1,299,641; Apr. 8; v. 261; p. 261.
Weir, William, assignor to G. & J. Weir, Limited, Glasgow, Scotland. Feed-water-treatment arrangement in steamships. No. 1,302,256; Apr. 29; v. 261; p. 892.
Weir, William, assignor to G. & J. Weir, Limited, Glasgow, Scotland. Feed-water-heating apparatus. No. 1,302,257; Apr. 29; v. 261; p. 893.
Weis, Andrew J., Dayton, Ohio. Beating-machine for paper-pulp. No. 1,301,629; Apr. 22; v. 261; p. 742.

Weis, John P., Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Corporation, Dover, Del. Sewing-machine driving-shaft. No. 1,300,531; Apr. 15; v. 261; p. 482.
Weis, John P., Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Corporation, Dover, Del. Overstitch sewing-machine. No. 1,300,532; Apr. 15; v. 261; p. 482.
Weiss, Benjamin, New York, N. Y. Folding couch-bed. No. 1,300,069; Apr. 8; v. 261; p. 356.
Weiss, Cornelius, Brooklyn, N. Y. Sewing-machine attachment. No. 1,301,528; Apr. 22; v. 261; p. 723.
Weiss, Henry, New York, N. Y. Condiment-dispenser. No. 1,299,078; Apr. 1; v. 261; p. 106.
Weiss, John M., New York, N. Y., assignor to The Barrett Company. Purifying carbazol. No. 1,301,796; Apr. 22; v. 261; p. 777.
Weiss, Simon, Allenton, Wis. Milk-can closure. No. 1,301,205; Apr. 22; v. 261; p. 661.
Weissenburger, Charles O., Youngstown, Ohio. Straightening-press and operating same. No. 1,300,679; Apr. 15; v. 261; p. 512.
Welch, Frank P., Poughkeepsie, N. Y., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Collar and making the same. No. 1,302,258; Apr. 29; v. 261; p. 893.
Welch Grape Juice Company, The. (See Welch, Paul R., assignor.) (Reissue.)
Welch, Paul R., assignor to The Welch Grape Juice Company, Westfield, N. Y. Treating grapes. (Reissue.) No. 14,636; Apr. 15; v. 261; p. 603.
Wells, Hewitt L., Washington, D. C. Form for concrete joists. No. 1,301,770; Apr. 22; v. 261; p. 771.
Wells, James B., Tacoma, Wash. Automatic dump-body for vehicles. No. 1,301,023; Apr. 15; v. 261; p. 587.
Wells, Otis A., Arnold, assignor to Window Glass Machine Company, Pittsburgh, Pa. Drawing hollow glass articles. No. 1,301,771; Apr. 22; v. 261; p. 771.
Welt, Frank L., and W. A. Whitehouse, deceased; J. E. Whitehouse, executrix, assignor of one-half to H. W. Hatch, Somerville, Mass. Adjustable support for desks, tables, seats, or the like. No. 1,300,229; Apr. 8; v. 261; p. 392.
Welty, William A., and H. P. Ravn, Waterloo, Iowa. Fountain-pen. No. 1,299,642; Apr. 8; v. 261; p. 261.
Wendelken, Frederick S., Denver, Colo. Interlocking culvert-block. No. 1,301,024; Apr. 15; v. 261; p. 587.
Wendt-Wriedt, Adolf J. T., Alexandria, Va. Splicing and seizing clamp. No. 1,300,794; Apr. 15; v. 261; p. 537.
Wernery, Lester A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Set of manifolding sheets. No. 1,299,643; Apr. 8; v. 261; p. 261.
Wertenbruch, Antony, assignor to The Larrowe Construction Company, Detroit, Mich. Pulp-press. No. 1,299,524; Apr. 8; v. 261; p. 235.
Wertz, John A., and P. G. Myers, Canton, Ohio. Signaling device. No. 1,298,840; Apr. 1; v. 261; p. 52.
Wescott, Dana E., South Bend, Ind. Electric lighting system. No. 1,301,206; Apr. 22; v. 261; p. 661.
Wessinger, Lon W., San Antonio, Tex. Adjustable trunk-rack. No. 1,300,533; Apr. 15; v. 261; p. 483.
West Coast Roofing and Manufacturing Company, The. (See Goudberg, Solomon H., assignor.)
West, Harley L., Crested Butte, assignor of one-third to B. L. Cress, Redcliff, Colo. Pressure-gage for vehicle-tires. No. 1,300,534; Apr. 15; v. 261; p. 483.
West, John B., Syracuse, N. Y. Duplicating-machine. No. 1,300,310; Apr. 15; v. 261; p. 435.
West, Thomas E., Oak Park, Ill. Cultivator. No. 1,298,841; Apr. 1; v. 261; p. 52.
West, William. (See Anderson, Gideon, assignor.)
Western Clock Co. (See Kern, George, assignor.)
Western Electric Company. (See Bell, John H., assignor.)
Western Electric Company. (See Buckley, Oliver E., assignor.)
Western Electric Company. (See Deakin and Polinkowsky, assignors.)
Western Electric Company. (See Elmen, Gustaf W., assignor.)
Western Electric Company. (See Hosford, William F., assignor.)
Western Electric Company. (See Nash and Grace, assignors.)
Western Electric Company. (See Polinkowsky, Lipa, assignor.)
Western Electric Company. (See van der Bijl, Hendrik J., assignor.)
Westinghouse Air Brake Company, The. (See Dewson, Edward H., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric & Manufacturing Company. (See Atherton, Carleyle A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Beach, Howard L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Berst, Charles B., assignor.)
Westinghouse Electric & Manufacturing Company. (See Braley, Howard D., assignor.)
Westinghouse Electric and Manufacturing Company. (See Broomall, Aubrey L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Chubb, Lewis W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Crichton, Leslie N., assignor.)
Westinghouse Electric and Manufacturing Company. (See Davis, David C., assignor.)
Westinghouse Electric & Manufacturing Company. (See Davis, Joseph L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Eaton, George M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Frederick, Louis T., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fuchs and Cook, assignors.)
Westinghouse Electric and Manufacturing Company. (See Garceion, Bartmess, and Chantemerle, assignors.)
Westinghouse Electric and Manufacturing Company. (See Gudge, Benjamin J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hague, Floyd T., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hall, Arthur J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hellmund, Rudolf E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hellmund and Ferris, assignors.)
Westinghouse Electric & Manufacturing Company. (See Hibbard, Lloyd J., assignor.)
Westinghouse Electric & Manufacturing Company. (See Hollis, Harry, assignor.)
Westinghouse Electric and Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Knight, John A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lamme, Benjamin G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lincoln and Smith, assignors.)
Westinghouse Electric and Manufacturing Company. (See Lum, Walter O., assignor.)
Westinghouse Electric & Manufacturing Company. (See McClain, John R., assignor.)
Westinghouse Electric and Manufacturing Company. (See McCoy, James P. A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Meyer, Friedrich W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Morris, Hurd T., assignor.)
Westinghouse Electric and Manufacturing Company. (See Nikonow, John P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Nottage, Stanley G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Perkins, Laurence M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Pribil, Alexis E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Proctor, Joseph H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Pukerud, Thomas S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric & Manufacturing Company. (See Skinner, Charles E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Slepian, Joseph, assignor.)
Westinghouse Electric & Manufacturing Company. (See Starker, Charles W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Starker and Kronfeld, assignors.)
Westinghouse Electric & Manufacturing Company. (See Stevenson, William D., assignor.)
Westinghouse Electric and Manufacturing Company. (See Storer, Norman W., assignor.)
Westinghouse Electric & Manufacturing Company. (See Taylor, Horace V. S., assignor.)
Weston, Frank J., Cheyenne, Wyo. Beet-harvester. No. 1,302,259; Apr. 29; v. 261; p. 893.
Westphal, Louis C., assignor to S. Karpen & Bros., Chicago, Ill. Sofa-bed. No. 1,299,885; Apr. 8; v. 261; p. 317.
Wetmore, Cyril H., Seneca, Kans. Overall-suspender fastener. No. 1,298,842; Apr. 1; v. 261; p. 53.
Wetzel, Max A., Merrill, Wis. Wearing-apparel. No. 1,302,108; Apr. 29; v. 261; p. 865.
Wever, Orval A., Forest, Ontario, Canada. Automobile-signal. No. 1,299,079; Apr. 1; v. 261; p. 106.
Wexler, Benjamin, assignor to The Peelle Company, Brooklyn, N. Y. Vertically-sliding door for elevator-shafts. No. 1,299,886; Apr. 8; v. 261; p. 317.
Wexler, Benjamin, assignor to The Peelle Company, Brooklyn, N. Y. Elevator-shaft door. (Reissue.) No. 14,637; Apr. 15; v. 261; p. 603.
Weydemeyer, Otto (See Weaber and Clemens, assignors.)
Whalen, Kearns J. (See Archer, Andrew, assignor.)
Wharton, Frank, Elyria, Ohio. Shoe-heel. No. 1,300,070; Apr. 8; v. 261; p. 356.
Wharton, Frank, Elyria, Ohio. Shoe-heel. No. 1,300,071; Apr. 8; v. 261; p. 356.
Wharton, Frank, Elyria, Ohio. Shoe-heel. No. 1,300,072; Apr. 8; v. 261; p. 356.

Wheaton, Earle H., New Haven, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,302,460; Apr. 29; v. 261; p. 933.

Wheeler, Edward T., Akron, Ohio. Air-cooling system for auto-engine cylinders. No. 1,299,073; Apr. 8; v. 261; p. 256.

Wheeler, John L., St. Louis, Mo. Tire-protector. No. 1,301,207; Apr. 22; v. 261; p. 661.

Wheless, Thomas H., Newark, N. J. Internal-combustion-engine turbine. No. 1,300,903; Apr. 15; v. 261; p. 561.

Whelpley, Charles W. (See Coleman, Stephen L. C., assignor.)

Wherry, John A., New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y. Sheet-holder for type-writing machines. No. 1,299,525; Apr. 8; v. 261; p. 235.

Wherry, John A., New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,300,904; Apr. 15; v. 261; p. 561.

Wherry, John A., New Orleans, La., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,300,905; Apr. 15; v. 261; p. 561.

Whist, Axel, Haggedal, Norway. Material composed of skin and paper. No. 1,300,535; Apr. 15; v. 261; p. 482.

Whistler, George F. (See Reiger, Robert S., assignor.)

Whitaker, James S., San Francisco, Calif. Life-boat. No. 1,300,906; Apr. 15; v. 261; p. 562.

Whitaker, Norman T., *et al.* (See Baumann, Frederick, assignor.)

Whitaker, Richard, Jr., assignor to Manufacturers Iron & Steel Company, New Brunswick, N. J. Horseshoe-calk. No. 1,301,345; Apr. 22; v. 261; p. 690.

Whitbeck, John V., assignor to Chandler Motor Car Company, Cleveland, Ohio. Mounting for control-buttons. No. 1,299,044; Apr. 8; v. 261; p. 262.

Whitcomb, James, Golden, Colo., assignor of one-fourth to C. R. Byers, Hastings, Nebr., one-half to R. S. Buchtel, and one-fourth to B. F. Heffner. Starting attachment for engines. No. 1,298,843; Apr. 1; v. 261; p. 53.

White, Ambrose H., Brooklyn, N. Y., assignor to International Paper Company. Barking-drum. No. 1,300,536; Apr. 15; v. 261; p. 483.

White, Ambrose H., New York, N. Y., assignor to International Paper Company. Barking-drum. No. 1,300,795; Apr. 15; v. 261; p. 538.

White, Charles H., and G. Vezina, Toronto, Ontario, Canada, assignors to The Gendron Manufacturing Company, Limited, Toronto, Ontario, Canada. Velocipede. No. 1,301,920; Apr. 29; v. 261; p. 843.

White, Everett H., St. Paul, Minn. Damper-operating motor. No. 1,299,526; Apr. 8; v. 261; p. 235.

White, Frank E., New Haven, Conn. Cigarette-maker and tobacco-container. No. 1,300,311; Apr. 15; v. 261; p. 435.

White, Gustine S., Scranton, Pa. Index. No. 1,299,887; Apr. 8; v. 261; p. 317.

White, Herbert E., Youngstown, Ohio. Coating process for building material. No. 1,302,260; Apr. 29; v. 261; p. 893.

White, John F., assignor, by mesne assignments, to White Products Company, Chicago, Ill. Hood-fastener. No. 1,300,796; Apr. 15; v. 261; p. 538.

White, John F., assignor, by mesne assignments, to White Products Company, Chicago, Ill. Hood-latch. No. 1,300,797; Apr. 15; v. 261; p. 538.

White Motor Company, The. (See Farmer, Frank H., assignor.)

White Products Company. (See White, John F., assignor.)

White, Ralph, assignor to Edward G. Budd Manufacturing Company, Philadelphia, Pa. Riveted joint. No. 1,299,275; Apr. 1; v. 261; p. 150.

White, Samuel T., Davenport, Iowa. Mechanical movement. No. 1,300,312; Apr. 15; v. 261; p. 426.

White Wagon Works. (See Rietz, William, assignor.)

White, Warren B. (See Chamberlain, George A., assignor.)

Whitehead, Gale. (See Harry, Elmer H., assignor.)

Whitehouse, Jennie E., executrix. (See Welt and Whitehouse.)

Whitehouse, William A. (See Welt and Whitehouse.)

Whitin, George M., assignor to The Whitin Machine Works, Whitinsville, Mass. Carding-machine. No. 1,302,109; Apr. 29; v. 261; p. 865.

Whitin Machine Works. (See Glashower, John P., assignor.)

Whitin Machine Works, The. (See Whitin, George M., assignor.)

Whiting, Max A., Schenectady, N. Y., assignor to General Electric Company. System of electrical distribution. No. 1,300,074; Apr. 8; v. 261; p. 357.

Whitlock, Ralph G., Los Angeles, Calif. Loose-leaf book. No. 1,299,276; Apr. 1; v. 261; p. 150.

Whitlock, Ralph G., Los Angeles, Calif. Loose-leaf book. No. 1,300,268; Apr. 8; v. 261; p. 357.

Whitmore, Chester L., Omaha, Nebr. Box-front. No. 1,299,645; Apr. 8; v. 261; p. 262.

Whyte, Frederick M., Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,300,076; Apr. 8; v. 261; p. 357.

Whyte, Frederick M., Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,300,076; Apr. 8; v. 261; p. 357.

Whyte, Frederick M., Tarrytown, N. Y., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,300,077; Apr. 8; v. 261; p. 357.

Wicherties, Arend, Chicago, Ill. Level. No. 1,298,844; Apr. 1; v. 261; p. 53.

Wickham, Charles E., Oakland, Calif. Automobile-signal. No. 1,299,080; Apr. 1; v. 261; p. 106.

Widstrand, Carl H., Chicago, Ill. Cross-link fastener for non-skid chains. No. 1,300,078; Apr. 8; v. 261; p. 358.

Wiedinger, Edwuard, Peoria, Ill. Weigher. No. 1,300,313; Apr. 15; v. 261; p. 436.

Wiedinger, Edwuard, Peoria, Ill. Grain-weigher. No. 1,300,314; Apr. 15; v. 261; p. 436.

Wiese, William, Cleveland, Ohio. Transfer. No. 1,300,079; Apr. 8; v. 261; p. 358.

Wight, Sedgwick N., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Signaling system for single-track railways. No. 1,300,060; Apr. 8; v. 261; p. 358.

Wight, Sedgwick N., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Signaling system for single-track railways. No. 1,300,061; Apr. 8; v. 261; p. 359.

Wight, Sedgwick N., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Signaling system for single-track railways. No. 1,300,062; Apr. 8; v. 261; p. 359.

Wightman & Hough Company. (See Hough, Herbert D., assignor.)

Wilder, Allen B., assignor to Wilder Patents Company, St. Louis, Mo. Game-board and spinner device. No. 1,300,315; Apr. 15; v. 261; p. 436.

Wilder, Clinton E., Erie, Pa. Shaft-finishing tool. No. 1,302,110; Apr. 29; v. 261; p. 865.

Wilder Patents Company. (See Wilder, Allen B., assignor.)

Wilder, Thomas M., Highland Park, Ill. Automobile-radiator and construction. No. 1,302,111; Apr. 29; v. 261; p. 865.

Wiley, C. Z., *et al.* (See Key, Emmett L., assignor.)

Wilkin, George W., and J. P. Kee, Grangeville, Idaho. Power-transmission means. No. 1,300,316; Apr. 15; v. 261; p. 436.

Wilkins, Shell I. (See Wilkins, Wendell W. and S. I.)

Wilkins, Wendell W. and S. I., Canisteo, N. Y. Auto attachment. No. 1,302,112; Apr. 29; v. 261; p. 865.

Wilkinson, Charles W., assignor of one-half to E. M. Le Clair, Plant City, Fla. Brake for brick-presses. No. 1,302,113; Apr. 29; v. 261; p. 865.

Wilkinson, John, assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Force-feed lubricator. No. 1,300,798; Apr. 15; v. 261; p. 538.

Willette, Joseph F., Seattle, Wash. Aspirator for surgical use. No. 1,299,081; Apr. 1; v. 261; p. 107.

William Cramp & Sons Ship & Engine Building Company, The. (See Metten, John F., assignor.)

William E. Quimby, Inc. (See Fay, Frank A., assignor.)

William Garrigue & Company. (See Garrigues, William E., assignor.)

William Koehl Company. (See Clarke and Illy, assignors.)

William Schollhorn Company, The. (See Bernard, William A., assignor.)

William Sellers & Company. (See Kneass, Strickland L., assignor.)

Williams, Albert P. (See Risser and Williams.)

Williams, Aras J., Utica, N. Y. Lined garment and making the same. No. 1,298,845; Apr. 1; v. 261; p. 53.

Williams, Delvin D., Greenwood, Wis. Mower. No. 1,300,807; Apr. 15; v. 261; p. 562.

Williams, George T., Oakland, Calif. Combustion-engine of the rotary type. No. 1,298,846; Apr. 1; v. 261; p. 53.

Williams, Griffith E., Cambria, Wis. Bomb. No. 1,300,537; Apr. 15; v. 261; p. 483.

Williams, Herbert E. (See Clayton, Huebner, and Williams.)

Williams, Herbert E., Red Bank, N. J. Garment-hanger. No. 1,300,908; Apr. 15; v. 261; p. 562.

Williams, Herman H., assignor to Northrup, King & Co., Minneapolis, Minn. Attachment for seed-package-filling machines. No. 1,301,346; Apr. 22; v. 261; p. 690.

Williams, James A., Bisbee, Ariz. Tire-clamp. No. 1,300,538; Apr. 15; v. 261; p. 484.

Williams, Keith, Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,300,317; Apr. 15; v. 261; p. 437.

Williams, Milton F., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Metal-catcher for reducing-mills. No. 1,300,799; Apr. 15; v. 261; p. 539.

Williams Patent Crusher and Pulverizer Company. (See Williams, Milton F., assignor.)

Williams, Ralph E., Santa Ana, Calif. Electric lamp. No. 1,299,868; Apr. 8; v. 261; p. 317.

Williams, Rowland T. D., Broken Hill, New South Wales, Australia, assignor, by mesne assignments, to Minerals Separation North American Corporation. Separation of mixed sulfid ores. No. 1,300,516; Apr. 15; v. 261; p. 479.

Williams, Roy O., Columbus, Ohio. Welder's tool. No. 1,301,347; Apr. 22; v. 261; p. 690.
Williams, Tom, Marysville, Kans. Rotary spader. No. 1,300,083; Apr. 8; v. 261; p. 360.
Williams, William E., Chicago, Ill. Tool for locking nuts. No. 1,300,207; Apr. 8; v. 261; p. 387.
Williams, William H., Birmingham, England. Means for casting metal. No. 1,302,114; Apr. 29; v. 261; p. 866.
Williams, William H. A., Bennettsville, S. C. Apparatus for tufting mattresses. No. 1,298,847; Apr. 1; v. 261; p. 53.
Williamson, Charles S., Chicago, Ill. Coal receiving and storing plant. No. 1,301,630; Apr. 22; v. 261; p. 742.
Williamson, Harry M., and S. H. Alexander, Denver, Colo. Radiumizer. No. 1,302,115; Apr. 29; v. 261; p. 866.
Williamson, James A., Portadown, Ireland. Scutching of flax and like fibers. No. 1,302,261; Apr. 29; v. 261; p. 893.
Willison, Walter W. (See McColl and Willison.)
Willits, Guy L., Minneapolis, Minn. Cooling device for internal-combustion engines. No. 1,299,889; Apr. 8; v. 261; p. 318.
Willson, Freeman R., Worthington, Ohio. Antiskid device. No. 1,299,082; Apr. 1; v. 261; p. 107.
Willys, John N. (See MacNichol, George P., assignor.)
Willys-Morrow Company, The. (See Kirk, George E., assignor.)
Willys-Overland Company, The. (See Kehoe, Thomas J., assignor.)
Willys-Overland Company, The. (See Pomeroy, Percy W., assignor.)
Willys-Overland Company, The. (See Shepler, Harry L., assignor.)
Wilmore, John T., Seattle, Wash. Blank-feeding device. No. 1,300,084; Apr. 8; v. 261; p. 360.
Wilson, Allen P., Weston, assignor to Boston Pencil Pointer Company, Waltham, Mass. Cutter for pencil-sharpeners. No. 1,301,772; Apr. 22; v. 261; p. 771.
Wilson, Allen P., Weston, assignor to Boston Pencil Pointer Company, Waltham, Mass. Cutter for pencil-sharpeners. No. 1,301,773; Apr. 22; v. 261; p. 772.
Wilson, Allen P., Weston, assignor to Boston Pencil Pointer Company, Waltham, Mass. Producing cutters for pencil-sharpeners. No. 1,301,774; Apr. 22; v. 261; p. 772.
Wilson, Daniel S., West Somerville, assignor to Samson Electric Company, Canton, Mass. Polarized signaling mechanism. No. 1,300,539; Apr. 15; v. 261; p. 484.
Wilson, Elihu C., assignor to W. W. Wilson, Los Angeles, Calif. Pump. No. 1,299,083; Apr. 1; v. 261; p. 107
Wilson, George A., Louisville, N. Y. Milk strainer and cooler. No. 1,301,775; Apr. 22; v. 261; p. 772.
Wilson, Grace E., executrix. (See Wilson, John C.)
Wilson, Howard M., South St. Paul, Minn., assignor to Swift and Company, Chicago, Ill. Gutter's knife. No. 1,299,084; Apr. 1; v. 261; p. 107.
Wilson, James C., Dalton, Ga. Swing. No. 1,300,680; Apr. 15; v. 261; p. 513.
Wilson, John, Alameda, Calif. Packing for pistons and piston-valves. No. 1,299,085; Apr. 1; v. 261; p. 108.
Wilson, John C., deceased, Boston, Mass.; G. E. Wilson, executrix. Time-stamp. No. 1,300,909; Apr. 15; v. 261; p. 562.
Wilson, Michael, Brooklyn, N. Y. Window-guard. No. 1,301,889; Apr. 29; v. 261; p. 824.
Wilson, Percy. (See Finster and Wilson.)
Wilson, Ray O., and A. D. Sumner, assignors of forty one-hundredths to F. P. Stetson, Los Angeles, Calif. Can feeding device. No. 1,301,348; Apr. 22; v. 261; p. 690.
Wilson, Thomas R., Alta, Wyo. Trace-carrier. No. 1,300,085; Apr. 8; v. 261; p. 360.
Wilson, William N. (See Knight and Wilson, assignors.)
Wilson, William R., Terre Haute, Ind. Bearing structure. No. 1,299,277; Apr. 1; v. 261; p. 151.
Wilson, William W. (See Wilson, Elihu C., assignor.)
Winchester Repeating Arms Co. (See Johnson, Thomas G., assignor.)
Window Glass Machine Company. (See Wells, Otis A., assignor.)
Wineberg, William J. P., Vancouver, Wash. Ice-chest. No. 1,298,848; Apr. 1; v. 261; p. 54.
Winesburg, Oscar S., and I. G. Palmer, Elkhart, Ind. Automatic stick feeding machine. No. 1,300,540; Apr. 15; v. 261; p. 484.
Wing, Wun, Santa Barbara, Calif. Trap. No. 1,299,086; Apr. 1; v. 261; p. 108.
Winkley, Erastus E., Lynn, Mass. Carbureter. No. 1,300,208; Apr. 8; v. 261; p. 387.
Winter, Anna K., Brooklyn, N. Y. Car-door safety device. No 1,300,318; Apr. 15; v. 261; p. 437.
Winter, Anna K., New York, N. Y. Car-door safety device. No. 1,300,319; Apr. 15; v. 261; p. 437.
Winter, Anna K., New York, N. Y. Car-door-switch control. No. 1,300,320; Apr. 15; v. 261; p. 437.
Winter, Courtney P., assignor, by mesne assignments, to Japanese Tissue Mills, Holyoke, Mass. Package. No. 1,302,116; Apr. 29; v. 261; p. 866.
Winter, Courtney P., New Brunswick, N. J., assignor to Japanese Tissue Mills, Holyoke, Mass. Dispensing-fixture. No. 1,302,117; Apr. 29; v. 261; p. 867.
Winter, Henry W., Methuen, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Stamping or embossing machine. No. 1,301,890; Apr. 29; v. 261; p. 824.
Winterhalter, Fredrick and F. T. Bayonne, N. J. Paper-roll rack. No. 1,299,087; Apr. 1; v. 261; p. 108.
Winterhalter, Fredrick T. (See Winterhalter, Fredrick and F. T.)
Wintsch, Max T. (See Lowell and Wintsch.)
Wirt, Reuben D., Philadelphia, Pa. Wire-reel. No. 1,302,262; Apr. 29; v. 261; p. 894.
Wissman, Arthur X., West Haven, Conn. Side car for bicycles. No. 1,300,681; Apr. 15; v. 261; p. 513.
Witt, Edward, Newport, N. H. Power transmission. No. 1,300,910; Apr. 15; v. 261; p. 563.
Wittkowski, Friedrich W., Des Moines, Iowa. Turning-signal for automobiles. No. 1,299,088; Apr. 1; v. 261; p. 109.
Wofford, Bushrod W. J., Italy, Tex. Necktie-tying form. No. 1,300,321; Apr. 15; v. 261; p. 438.
Wolcott, Darwin S., trustee. (See Hopwood, John M., assignor.)
Wolf, Leon. (See Ryback and Wolf.)
Wolf, Leon, New York, and I. Ryback, Brooklyn, N. Y.; said Wolf assignor to W. Wolf. Apparatus for inserting hat-linings. No. 1,299,089; Apr. 1; v. 261; p. 109.
Wolf, William. (See Wolf and Ryback, assignors.)
Wolfard, Merl R., Cambridge, Mass. Self-stabilizing aeroplane structure. No. 1,301,083; Apr. 15; v. 261; p. 602.
Wolff, Franklyn J., assignor to L. Wolff Manufacturing Company, Chicago, Ill. Flushing device. No. 1,298,849. Apr. 1; v. 261; p. 54.
Wolfgram, Ludwig, Erie, Pa. Coupling. No. 1,300,541; Apr. 15; v. 261; p. 485.
Wolfson, Isadore D., New York, N. Y., assignor to I. D. Wolfson, Inc. Necktie. No. 1,300,682; Apr. 15; v. 261; p. 513.
Wolfson, Isadore D., New York, N. Y. Necktie and making same. No. 1,300,683; Apr. 15; v. 261; p. 513.
Wolfson, Isadore D., New York, N. Y. Making neckties. No. 1,300,684; Apr. 15; v. 261; p. 513.
Wollesen, Hermann. (See Beckman and Wollesen.)
Wollin, Victor E., Minneapolis, Minn. Fire-escape. No. 1,300,086; Apr. 8; v. 261; p. 360.
Wood, Alexander H., Kildav, Ky., assignor to Wood Equipment Company, Chicago, Ill. Car-tipple. No. 1,299,527; Apr. 8; v. 261; p. 285.
Wood, Alexander H., Kildav, Ky., assignor to Wood Equipment Company, Chicago, Ill. System for storing bulky materials. No. 1,300,800; Apr. 15; v. 261; p. 539.
Wood, Alexander H., Petros, Tenn., assignor to Wood Equipment Company. Car hoisting and dumping apparatus. No. 1,301,208; Apr. 22; v. 261; p. 662.
Wood, Alfred J., Brooklyn, assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,299,646; Apr. 8; v. 261; p. 262.
Wood, Andrew J., Bakersfield, Calif. Train-order deliverer. No. 1,300,911; Apr. 15; v. 261; p. 563.
Wood Equipment Company. (See Wood, Alexander H., assignor.)
Wood, Leander W., Fontanelle, Iowa. Combination acceptance, order, and plural check blank with index-keys. No. 1,299,647; Apr. 8; v. 261; p. 263.
Wood, Wilfred R., London, England. Water-tube boiler. No. 1,300,087; Apr. 8; v. 261; p. 361.
Woodcock, John, assignor to Pratt & Cady Company, Incorporated, Hartford, Conn. Valve-operating device. No. 1,300,685; Apr. 15; v. 261; p. 514.
Woodeson, William A., Gateshead, England. Means for distributing actuating-fluid in engines. No. 1,301,025; Apr. 15; v. 261; p. 587.
Woodyard, Guy L., San Diego, Calif. Spring-oiler. No. 1,301,529; Apr. 22; v. 261; p. 723.
Woods, Edward D., Cleveland, Ohio, assignor, by mesne assignments, to Woods Steel & Process Corporation, Boston, Mass. Clutch. No. 1,301,530; Apr. 22; v. 261; p. 723.
Woods, Patrick F., Buffalo, N. Y. Shoe holder and stretcher. No. 1,301,776; Apr. 22; v. 261; p. 772.
Woods Steel & Process Corporation. (See Woods, Edward D., assignor.)
Woodward, Irving C., Chicago, Ill. Self-locking screw-thread. No. 1,300,801; Apr. 15; v. 261; p. 539.
Woodward, Raymond W. (See Gurevich and Woodward.)
Woolworth, Joseph V., Brooklyn, assignor of one-half to J. H. Devereux, Sagaponack, N. Y. Fastener. No. 1,302,263; Apr. 29; v. 261; p. 894.
Woolner, Harry E., Los Angeles, Calif. Bean-cleaning device. No. 1,299,278; Apr. 1; v. 261; p. 151.
Worden, Euclid P., Montclair, N. J., assignor to Henry R. Worthington. Drainage device for vacuum-pumps and the like. No. 1,301,209; Apr. 22; v. 261; p. 662.
Wortham, G. W. (See Johnson, Olive J., assignor.)
Wright, Albert S. (See Hurtt and Wright.)
Wright, D. H. (See Herle, Chester A., assignor.)
Wright, John E., New York, N. Y. Punched-card-controlled mechanism. No. 1,299,090; Apr. 1; v. 261; p. 109.
Wright, John M. (See Vandervoort, Milford T., assignor.)

Wright, John S., Owensboro, Ky. Vaporizer device for explosive-engines. No. 1,299,648; Apr. 8; v. 261; p. 262.
Wright, Joseph F., Cincinnati, Ohio. Muff. No. 1,300,088; Apr. 8; v. 261; p. 361.
Wright, Joseph L., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Telephone-exchange system. No. 1,298,850; Apr. 1; v. 261; p. 54.
Wright, Walter, New York, N. Y. Type-setting machine. No. 1,300,089; Apr. 8; v. 261; p. 361.
Wulfhoop, Henry C., Newark, Ohio. Beet-harvester. No. 1,302,118; Apr. 29; v. 261; p. 867.
Wygal, William D., El Segundo, Calif. Poultry drinking-fountain. No. 1,299,091; Apr. 1; v. 261; p. 109.
Wyka, Martin, Buffalo, N. Y. Ink-well. No. 1,300,322; Apr. 15; v. 261; p. 438.
Wylie, Lewis D., Turlock, Calif. Animal-hopple. No. 1,301,349; Apr. 22; v. 261; p. 691.
Wytrwal, Stanley, assignor of one-half to D. Ilcsuk, Scranton, Pa. No. 1,299,279; Apr. 1; v. 261; p. 151.
Yale & Towne Manufacturing Company, The. (See Mikkelsen, Peder, assignor.)
Yale & Towne Manufacturing Company, The. (See Richter, Paul C., assignor.)
Yarberry, Roland L., San Antonio, Tex. Door-bolt. No. 1,300,912; Apr. 15; v. 261; p. 562.
Yarrow, Harold E., Glasgow, Scotland. Submarine vessel. No. 1,302,264; Apr. 29; v. 261; p. 894.
Yatzuk, Peter A., Waterbury, Conn. Potato-digger. No. 1,300,090; Apr. 8; v. 261; p. 362.
Yeager, Hayden, Cincinnati, Iowa. Car-wheel journal. No. 1,299,528; Apr. 8; v. 261; p. 235.
Yearwood, Byrd O. (See Jackson and Yearwood.)
Yeaton, George A., Portland, Oreg. Belt-tightener. No. 1,301,026; Apr. 15; v. 261; p. 588.
Yerkes, Silas H. (See Taggart, George M., assignor.)
Young, Coulter D., *et al.* (See Glass, Louine R., assignor.)
Young, Daniel H., and W. L. Cass, assignors of one-third to G. Brayton, Manchester, Iowa. Humidifying device for ovens. No. 1,299,649; Apr. 8; v. 261; p. 263.
Young, Daniel H., and C. O. Noble, Manchester, Iowa. Composition for shoe-soles and heels. No. 1,299,650; Apr. 8; v. 261; p. 263.
Young, Edward W. (See Young and Schecher.)
Young, Harry W., Whitehall, Mich. Deck-cleat. No. 1,299,529; Apr. 8; v. 261; p. 236.
Young, John S. and E. W., and J. L. Schecher, Los Angeles, Calif. Caster. No. 1,301,777; Apr. 22; v. 261; p. 773.
Young, Leonard A., Detroit, Mich. Upholstery spring construction. No. 1,299,890; Apr. 8; v. 261; p. 318.
Young, Leonard A., Detroit, Mich. Upholstery back-spring construction. No. 1,301,778; Apr. 22; v. 261; p. 773.
Young, Leonard A., Highland Park, Mich. Upholstery spring construction. No. 1,302,119; Apr. 29; v. 261; p. 867.
Young, William S., London, England. Closet-seat guard. No. 1,301,779; Apr. 22; v. 261; p. 773.
Yuba Manufacturing Company. (See Johnson, Alfred C., assignor.)
Zartman, Samuel B., assignor of one-half to B. F. Barber, Niles, Mich. Pneumatic wheel. No. 1,302,265; Apr. 29; v. 261; p. 894.
Zdancewicz, Alexander, Lansford, Pa. Carpet-cleaner. No. 1,300,323; Apr. 15; v. 261; p. 438.
Zeidler, Arthur, Springfield, Mass. Radius and contour cutting attachment for grinding-machines. No. 1,301,350; Apr. 22; v. 261; p. 691.
Zertuche, Ruben, Torreon, Mexico. Treating rubber and the product produced thereby. No. 1,302,266; Apr. 29; v. 261; p. 894.
Zeebaugh, Lawrence G. (See Nelson, Landrigan, and Zeebaugh.)
Ziegler, Alfred A., trustee. (See Hagman, Edwin V., assignor.)
Ziegler, Oscar G., Halethorpe, Md., assignor to A. Hoen & Company, Baltimore, Md. Knockdown display-rack. No. 1,301,797; Apr. 22; v. 261; p. 777.
Zink, John F., Allegany, N. Y. Gun-rack. No. 1,302,267; Apr. 29; v. 261; p. 894.
Zouck, George H., Orange, N. J., assignor to Air Reduction Company, Inc. Blowpipe. No. 1,299,530; Apr. 8; v. 261; p. 236.
Zouri Drawn Metals Company. (See Murnane, Daniel J., assignor.)
Zueblin, Ernest, Baltimore, Md. Preparing medicinal articles and products thereof. No. 1,301,210; Apr. 22; v. 261; p. 662.

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Adam, Harry C., St. Louis, Mo. Lighting-fixture. Nos. 53,229–31; Apr. 29; v. 261; pp. 938–9.
Advance Terra Cotta Company. (See Lewis, Earl S., assignor.)
American Can Company. (See Hoffman, Edmund, assignor.)
Amsler-Laffon, Elizabeth, New City, N. Y. Surface ornamentation of fabric. No. 53,173; Apr. 8; v. 261; p. 393.
Archbold, Charles L., assignor to The National Refining Company, Cleveland, Ohio. Game-board. No. 53,222; Apr. 29; v. 261; p. 939.
Arden Manufacturing Corporation. (See Bennett, Clarence W., assignor.)
Avery, Frank P. (See Gray, James D. M., assignor.)
Baker, Stephen D., New York, N. Y. Towel-bar. No. 53,191; Apr. 15; v. 261; p. 603.
Benedetti, Vincenzo, Palisade, N. J. Shoe-retainer. No. 53,233; Apr. 29; v. 261; p. 939.
Bennett, Clarence W., assignor to Arden Manufacturing Corporation, New York, N. Y. Toy aeroplane. No. 53,214; Apr. 22; v. 261; p. 778.
Bennett, Clarence W., assignor to Arden Manufacturing Corporation, New York, N. Y. Toy automobile. No. 53,215; Apr. 22; v. 261; p. 778.
Berge, Joseph, assignor to Champion Ignition Company, Flint, Mich. Speedometer face-plate. No. 53,216; Apr. 22; v. 261; p. 778.
Berge, Joseph, assignor to Champion Ignition Company, Flint, Mich. Speedometer face-plate. No. 53,217; Apr. 22; v. 261; p. 778.
Blum, Edith C., assignor to H. R. Mallinson & Co., Inc., New York, N. Y. Article of manufacture. No. 53,192; Apr. 15; v. 261; p. 604.
Blyth, John W., Great Falls, Mont. Cane, umbrella, whip, or swagger-stick handle. No. 53,193; Apr. 15; v. 261; p. 604.
Boehringer, Albert, assignor to Edward Miller & Co., Meriden, Conn. Lamp. No. 53,218; Apr. 22; v. 261; p. 778.
Bohnen, Carl, St. Paul, Minn. Fob, pendant, or similar article. No. 53,144; Apr. 1; v. 261; p. 183.
Bomgardner, Grace T., Los Angeles, Calif. Woman's blouse. No. 53,234; Apr. 29; v. 261; p. 939.
Both, Tonjes A., Stratford, assignor to The Connecticut Electric Manufacturing Company, Bridgeport, Conn. Two-pole entrance-switch base. No. 53,162; Apr. 1; v. 261; p. 186.
Both, Tonjes A., Stratford, assignor to The Connecticut Electric Manufacturing Company, Bridgeport, Conn. Two-wire single-branch panel-switch base. No. 53,163; Apr. 1; v. 261; p. 186.
Brauer, Otto M., Gothenburg, Nebr. Toy car. No. 53,219; Apr. 22; v. 261; p. 779.
Brendza, Frank C., Cleveland, Ohio. Badge, button, pin, or article or similar nature. No. 53,194; Apr. 15; v. 261; p. 604.
C. H. Eden Company. (See Heath, Thomas, assignor.)
Carlin, Simon, Philadelphia, Pa. Ring, bracelet, breast-pin, buckle, or similar article of jewelry. No. 53,195; Apr. 15; v. 261; p. 604.
Catucci, Pliny, Newark, N. J., assignor to Otto Heineman Phonograph Supply Co., Inc. Casing for phonograph-motors. No. 53,235; Apr. 29; v. 261; p. 939.
Champion Ignition Company. (See Berge, Joseph, assignor.)
Cogswell, Wilton W., Kansas City, Mo. Toy arrow-plane. No. 53,236; Apr. 29; v. 261; p. 940.
Cohn, Harry, Brooklyn, assignor to Robert Findlay Manufacturing Co., New York, N. Y. Semi-indirect-lighting fixture. No. 53,237; Apr. 29; v. 261; p. 940.
Columbia Ice Cream Horn Company, The. (See Snyder, Jacob L., assignor.)
Connecticut Electric Manufacturing Company, The. (See T. A. Both, assignor.)
Crowder, Raymond, Edgewood, Pa., assignor to Guarantee Liquid Measure Company, Rochester, N. Y. Globe for lighting-fixtures. No. 53,145; Apr. 1; v. 261; p. 183.
Dooley, Frank P., Chicago, Ill. Metal fabric. No. 53,238; Apr. 29; v. 261; p. 940.
Downes, Elmer N., assignor to J. & D. Tire Company, Charlotte, N. C. Non-skid tire. No. 53,146; Apr. 1; v. 261; p. 183.
E. H. Freeman Electric Company. (See Freeman, Edgar H., assignor.)
Edward Miller & Co. (See Boehringer, Albert, assignor.)
Ferris, Otho L., *et al.* (See Michael, Moina, assignor.)
Free, William C., Rockford, Ill. Sewing-machine cabinet. Nos. 53,196–7; Apr. 15; v. 261; p. 604.
Freeman, Edgar H., assignor to E. H. Freeman Electric Company, Trenton, N. J. Porcelain pull-socket body. Nos. 53,147–8; Apr. 1; v. 261; p. 183.
Gailey, Florence L., Detroit, Mich. Emblem, pin, or badge. No. 53,174; Apr. 8; v. 261; p. 393.
Gean, John E., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Signal-horn. No. 53,220; Apr. 22; v. 261; p. 779.
George Borgfeldt & Co. (See Wurthmann, George C., assignor.)
Gerrich, Frederick A., Oakland, Calif. Stove-foot. No. 53,221; Apr. 22; v. 261; p. 779.
Goldberger, Melvin E., Milwaukee, Wis. Brooch, badge, button, insignia, emblem, pin, or similar article of manufacture. No. 53,198; Apr. 15; v. 261; p. 605.

Gray, James D. M., New York, N. Y., assignor of one-half to F. P. Avery, New Orleans, La. Spark-plug. No. 53,239; Apr. 29; v. 261; p. 940.
Grether, William, Dayton, Ohio. Portable electric lantern. No. 53,240; Apr. 29; v. 261; p. 940.
Guarantee Liquid Measure Company. (See Crowder, Raymond, assignor.)
H. R. Mallinson & Co. (See Blum, Edith C., assignor.)
Hadad, David, Highland Park, Mich. Handle for a knife, fork, or spoon. No. 53,241; Apr. 29; v. 261; p. 940.
Hankee, Harry J., Minneapolis, Minn. Electric automobile-signal. No. 53,164; Apr. 1; v. 261; p. 186.
Hanratty, Thomas H., Butler, Pa. Plate, plaque, platter, or saucer. No. 53,244; Apr. 29; v. 261; p. 941.
Harley-Davidson Motor Co. (See Harley, William S., assignor.)
Harley, William S., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Motor-cycle frame. No. 53,150; Apr. 1; v. 261; p. 184.
Harris, John R., Pittsburgh, Pa. Smoker's outdoor lighting device. No. 53,242; Apr. 29; v. 261; p. 941.
Harris, Julius C., New York, N. Y. Article of manufacture. No. 53,243; Apr. 29; v. 261; p. 941.
Hasenpflug, Nelson T., Geneva, Ohio. Toy bank. No. 53,149; Apr. 1; v. 261; p. 184.
Heath, Thomas, assignor to C. H. Eden Company, Attleboro, Mass. Badge. No. 53,175; Apr. 8; v. 261; p. 393.
Henriot, Maurice. (See Strauss and Henriot.)
Heyl, Erik, Buffalo, N. Y. Flag, pennant, emblem, sign, or article of similar nature. No. 53,176; Apr. 8; v. 261; p. 393.
Hoffman, Edmund, Brooklyn, assignor to American Can Company, New York, N. Y. Box. No. 53,199; Apr. 15; v. 261; p. 605.
Hoffman, Edmund, Brooklyn, assignor to American Can Company, New York, N. Y. Powder-can. No. 53,200; Apr. 15; v. 261; p. 605.
Hoover, Howard E., Chicago, Ill., assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio. Bag for suction-sweepers. No. 53,222; Apr. 22; v. 261; p. 779.
Hoover Suction Sweeper Company, The. (See Hoover, Howard E., assignor.)
Hopkinson, Ernest, New York, N. Y. Tire. No. 53,223; Apr. 22; v. 261; p. 779.
Hull, Edgar L., assignor to Waltham Watch Company, Waltham, Mass. Timepiece-dial. No. 53,245; Apr. 29; v. 261; p. 941.
Hupp Motor Car Corporation. (See Neerken, Adrian J., assignor.)
Huston, Charles P. L., Plainfield, N. J. Tire-casing. No. 53,151; Apr. 1; v. 261; p. 184.
Hyatt, Frank S., Brooklyn, N. Y. Can-top. No. 53,201; Apr. 15; v. 261; p. 605.
Irwin, Beatrice, New York, N. Y. Light-filter. No. 53,152; Apr. 1; v. 261; p. 184.
J. & D. Tire Company. (See Downes, Elmer N., assignor.)
J. H. Peckham & Sons. (See Charles J. Tonry, assignor.)
Janosik, Wendel, Maynard, Ohio. Combined spoon, fork, and knife. No. 53,165; Apr. 1; v. 261; p. 186.
Johnson, Charles R., New Haven, Conn. Watch-holder. No. 53,246; Apr. 29; v. 261; p. 941.
Josephson, Adalbert D., New York, N. Y. Button-display card. No. 53,202; Apr. 15; v. 261; p. 605.
Kaufmann, Carl H. (See Kaufmann, Charles F. L., C. H., and W. L.)
Kaufmann, Charles F. L., C. H., and W. L., Santa Ana, Calif. Vehicle-lamp bracket. No. 53,177; Apr. 8; v. 261; p. 393.
Kaufmann, Charles F. L. and W. L., Santa Ana, Calif. Vehicle-lamp casing and handle-stem. No. 53,178; Apr. 8; v. 261; p. 394.
Kaufmann, Walter L., Santa Ana, Calif. Vehicle-lamp bracket. No. 53,179; Apr. 8; v. 261; p. 394.
Kaufmann, Walter L. (See Kaufmann, Charles F. L. and W. L.)
Kaufmann, Walter L. (See Kaufmann, Charles F. L., C. H., and W. L.)
Keedick, Lee, *et al.* (See Michael, Moina, assignor.)
Kurtz, Philip, Philadelphia, Pa. Switchboard. No. 53,180; Apr. 8; v. 261; p. 394.
Langley, Ralph S., Detroit, Mich., assignor to The Straus Brothers Company, Ligonier, Ind. Paper-weight or similar article. No. 53,203; Apr. 15; v. 261; p. 605.
Lewis, Earl S., assignor to Advance Terra Cotta Company, Chicago, Ill. Cup. No. 53,247; Apr. 29; v. 261; p. 941.
Macdonald, Angus S., Great Neck Station, N. Y., assignor to The Snead & Co. Iron Works, Jersey City, N. J. Lamp. No. 53,224; Apr. 22; v. 261; p. 779.
Macdonald, Angus S., Great Neck Station, and A. W. Pressey, New York, N. Y., assignors to The Snead & Co., Iron Works, Jersey City, N. J. Lamp. No. 53,225; Apr. 22; v. 261; p. 780.
Mathews, Charles O., Milford, Conn. Tail-light for automobiles. No. 53,248; Apr. 29; v. 261; p. 942.
McKinnie, Earle C., assignor to National X-Ray Reflector Co., Chicago, Ill. Lighting-fixture. No. 53,249; Apr. 29; v. 261; p. 942.
Meyers, Hudson R., New Haven, Conn. Miniature honor-board. No. 53,204; Apr. 15; v. 261; p. 605.
Michael, Moina, assignor of one-half to L. Keedick, New York, N. Y., and one-half to O. L. Ferris, Portland, Oreg. Badge. No. 53,181; Apr. 8; v. 261; p. 394.
Morse, Leo, New York, N. Y. Carriage-rattle. No. 53,205; Apr. 15; v. 261; p. 606.
National Refining Company, The. (See Archbold, Charles L., assignor.)
National X-Ray Reflector Co. (See McKinnie, Earle C., assignor.)
Neerken, Adrian J., Detroit, Mich., assignor to Hupp Motor Car Corporation, Richmond, Va. Vehicle-body. No. 53,250; Apr. 29; v. 261; p. 942.
Nicholson, Isaac C., Providence, R. I. Emblem, button, ring, pin, or article of similar nature. No. 53,251; Apr. 29; v. 261; p. 942.
Noke, Charles J., Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y. Plate or similar article. No. 53,252; Apr. 29; v. 261; p. 942.
O'Neill, Henry G. (See Pearson and O'Neill.)
Otto Heineman Phonograph Supply Co. (See Catucci, Pliny, assignor.)
Patrick, Frank H., Gandy, La. Article of manufacture. No. 53,206; Apr. 15; v. 261; p. 606.
Pearson, Ward E., and H. G. O'Neill, New York, N. Y. Portable electric lamp. Nos. 53,207–8; Apr. 15; v. 261; p. 606.
Pfeffer, Genevieve, San Jose, Calif. Doll. Nos. 53,153–4; Apr. 1; v. 261; p. 185.
Pierce-Arrow Motor Car Company, The. (See Way, James R., assignor.)
Popper, Isaac C., New York, N. Y. Cooking kit. No. 53,155; Apr. 1; v. 261; p. 185.
Powell, Myra F., Motley, Minn. Pin. No. 53,209; Apr. 15; v. 261; p. 606.
Pressey, Alfred W. (See Macdonald and Pressey.)
Richards, James A., assignor to The Richards Manufacturing Company, Marietta, Ohio. Wheeled toy. No. 53,253; Apr. 29; v. 261; p. 942.
Richards Manufacturing Company, The. (See Richards, James A., assignor.)
Riefsnyder, Charles C., deceased, Des Moines, Iowa; R. A. Reifsnyder, administratrix. Tag. No. 53,156; Apr. 1; v. 261; p. 185.
Riefsnyder, Rose A., administratrix. (See Riefsnyder, Charles C.)
Robert Findlay Manufacturing Co. (See Cohn, Harry, assignor.)
Roberts, Guy, Whitefield, N. H. Milk-bottle protector. No. 53,182; Apr. 8; v. 261; p. 394.
Samuels, Benjamin S., New York, N. Y. Paper-weight or other ornament of similar nature. No. 53,183; Apr. 8; v. 261; p. 394.
Sanders, Charles M., Guthrie, Okla. Napkin and toothpick holder. No. 53,254; Apr. 29; v. 261; p. 943.
Scott, Ernest A., Pasadena, Calif. Incense-burner. No. 53,226; Apr. 22; v. 261; p. 780.
Shatt, Maurice D., New York, N. Y. Peace-flag. No. 53,210; Apr. 15; v. 261; p. 607.
Silver Hyman, Brooklyn, N. Y. Buffet or similar article. Nos. 53,211–12; Apr. 15; v. 261; p. 607.
Simon, Bertram, New York, N. Y. Badge, button, or similar article of manufacture. Nos. 53,255–7; Apr. 29; v. 261; p. 943.
Simonson, Walter H., New York, N. Y. Flag, banner, sign, poster, pennant, badge, emblem, pin, button, ring-top, or similar article of manufacture. Nos. 53,166–7; Apr. 1; v. 261; p. 187.
Snead & Co. Iron Works, The. (See Macdonald and Pressey, assignors.)
Snead & Co., Iron Works, The. (See MacDonald, Angus S., assignor.)
Snyder, Jacob L., Boston, Mass., assignor to The Columbia Ice Cream Horn Company. Ice-cream cone. No. 53,168; Apr. 1; v. 261; p. 187.
Stewart-Warner Speedometer Corporation. (See Genn, John E., assignor.)
Straus Brothers Company, The. (See Langley, Ralph S., assignor.)
Strauss & Strauss. (See Strauss and Henriot, assignors.)
Strauss, Norman L., New York, N. Y., and M. Henriot, Arlington, assignors to Strauss & Strauss, Newark, N. J. Ring, button, brooch, hat-pin, hat-pin, scarf-pin, plaque, or article of similar nature. No. 53,258; Apr. 29; v. 261; p. 943.
Suttle, Luella K., Cleveland, Ohio. Casing of a table-crumb sweeper. No. 53,184; Apr. 8; v. 261; p. 395.
Syrocki, Andrew, Detroit, Mich. Combined bird-cage and aquarium. No. 53,157; Apr. 1; v. 261; p. 185.
Taylor, Halsey W., Warren, Ohio. Drinking-fountain bowl. No. 53,227; Apr. 22; v. 261; p. 780.
Teasley, Daniel O., Anderson, Ind. Flag. No. 53,259; Apr. 29; v. 261; p. 943.
Theurer, Lawrence G., Milwaukee, Wis. Game-table. Nos. 53,158–60; Apr. 1; v. 261; pp. 185–6.
Tonry, Charles J., New York, N. Y., assignor to J. H. Peckham & Sons, North Attleboro, Mass. Article of manufacture. No. 53,185; Apr. 8; v. 261; p. 395.
Vicarie, Joseph, New York, N. Y. Combination-tool. No. 53,161; Apr. 1; v. 261; p. 186.
Von Lossberg, Victor F., New York, N. Y. Chandelier. No. 53,186; Apr. 8; v. 261; p. 395.
Von Lossberg, Victor F., New York, N. Y. Standard. Nos. 53,187–8; Apr. 8; v. 261; pp. 395–6.
Von Tobel, Fritz O., Omaha, Nebr. Combination-tool. No. 53,260; Apr. 29; v. 261; p. 943.

Waltham Watch Company. (See Hull, Edgar L., assignor.)

Ward Baking Company. (See Ward, George S., assignor.)

Ward, George S., assignor to Ward Baking Company, New York, N. Y. Paraffin-paper wrapper for a loaf of bread. No. 53,261; Apr. 29; v. 261; p. 944.

Way, James R., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Radiator-frame for automobiles and other vehicles. No. 53,228; Apr. 22; v. 261; p. 780.

Wearne, Harry, New York, N. Y. Article of manufacture. No. 53,262; Apr. 29; v. 261; p. 944.

Webb, Zero W., Mound City, Ill. Printing device for photographers. No. 53,213; Apr. 15; v. 261; p. 607.

Whittelsey, Henry N., Greenwich, Conn. Carbureter adjuster-dial. No. 53,169; Apr. 1; v. 261; p. 187.

Wicks, Raider S., assignor to Wicks' Tire & Rubber Products Co., Seattle, Wash. Automobile-tire. No. 53,190; Apr. 8; v. 261; p. 396.

Wicks' Tire & Rubber Products Co. (See Wicks, Raider S., assignor.)

William S. Pitcairn Corporation. (See Noke, Charles J., assignor.)

Wolsten, Jacob, Newark, N. J. Combined spoon and fork. Nos. 53,170–1; Apr. 1; v. 261; p. 187.

Woodbury, Carl, Los Angeles, Calif. Dust-cap. No. 53,172; Apr. 1; v. 261; p. 187.

Wooten, Marion F., Charlotte, N. C. Pin, button, badge, emblem, insignia, medal, watch-fob, or article of similar nature. No. 53,263; Apr. 29; v. 261; p. 944.

Wurthmann, George C., Jersey City, N. J., assignor to George Borgfeldt & Co., New York, N. Y. Canister or similar article. No. 53,264; Apr. 29; v. 261; p. 944.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. C. Lawrence Leather Co., Boston, Mass. Leather. Nos. 125,232–3; Apr. 22; v. 261; p. 796.

A-Z Co., The, New York, N. Y. Radiators for automobiles. No. 125,017; Apr. 8; v. 261; p. 405.

Abbott Chemical Co., Boston, Mass. Indigestion-tablets. No. 125,012; Apr. 8; v. 261; p. 405.

Aetna Life Insurance Company, Hartford, Conn. Printed books, booklets, pamphlets, and manuals. No. 125,013; Apr. 8; v. 261; p. 405.

Ahrens, Max J., New York, N. Y. Chocolate candies. No. 124,946; Apr. 1; v. 261; p. 197.

Air Reduction Company, Incorporated, New York, N. Y. Compressed gases. No. 125,118; Apr. 15; v. 261; p. 625.

Alaska-Pacific Herring Co., Seattle, Wash. Canned salmon. No. 124,947; Apr. 1; v. 261; p. 197.

Alexr. Young Distilling Compy, Philadelphia, Pa. Whisky. No. 125,264; Apr. 22; v. 261; p. 797.

Alfred Beer Co., New York, N. Y. Dress and shirt waists. No. 125,018; Apr. 8; v. 261; p. 405.

Alphonsus, Joshua S., New York, N. Y. Preparation for the treatment of asthma and bronchial and catarrhal affections. No. 125,014; Apr. 8; v. 261; p. 405.

Alvoren Chemical Company, Chicago, Ill. A dentifrice and a combination of alkaloids in solution for pyorrhea, &c. No. 125,185; Apr. 22; v. 261; p. 795.

American Auto Lamp Co., Inc., New York, N. Y. Acetylene and oil automobile-lamps. No. 124,948; Apr. 1; v. 261; p. 197.

American Snap Fastener Co., Inc., New York, N. Y. Snap-fasteners. No. 125,015; Apr. 8; v. 261; p. 405.

Anderson, George, Chicago, Ill. Window-shade support. No. 125,186; Apr. 22; v. 261; p. 795.

Apex Appliance Company, Chicago, Ill. Ironing-machines. No. 125,119; Apr. 15; v. 261; p. 625.

Armand Company, The, Des Moines, Iowa. Toilet soaps. No. 125,120; Apr. 15; v. 261; p. 625.

Ashland Fire Brick Company, Ashland, Ky. Fire-brick. Nos. 125,121–2; Apr. 15; v. 261; p. 265.

Atlantic Insulated Wire & Cable Company, Jersey City, N. J., and New York, N. Y. Insulated wire. No. 125,016; Apr. 8; v. 261; p. 405.

B. Kronthal & Company, Michigan City, Ind. Shirts, shirt-waists, jumpers, &c. No. 125,062; Apr. 8; v. 261; p. 406.

B. V. D. Company, The, New York, N. Y. Textile underwear. No. 125,268; Apr. 29; v. 261; p. 953.

Backstay Machine and Leather Co., The, Union City, Ind. Finishing welts or binding used in upholstering vehicle-bodies, furniture, &c. No. 124,949; Apr. 1; v. 261; p. 197.

Barclay & Co., Wilmington, Del., and New York, N. Y. Dentifrice. No. 125,187; Apr. 22; v. 261; p. 795.

Barlow Chemical Company, Shawnee, Okla. Preparation for scalp-tonic, menthol cream, hair-tonic, mange remedy. No. 125,123; Apr. 15; v. 261; p. 265.

Barton Salt Co., Hutchinson, Kans. Table-salt. No. 125,188; Apr. 22; v. 261; p. 795.

Bell 2 in 1 Tyre Co., Inc., Richmond, Va. Retreaded rubber and fabric tires. No. 125,019; Apr. 8; v. 261; p. 405.

Beugel, Albert, Harvey, Ill. Pill for pulmonary tuberculosis. No. 125,020; Apr. 8; v. 261; p. 405.

Berkley, Susie A., Clarksdale, Miss. Preparation for the hair for use as a tonic and pomade. No. 124,950; Apr. 1; v. 261; p. 197.

Big Four Canning Company, Stanley and Eau Claire, Wis. Canned peas and sauer-kraut. No. 125,021; Apr. 8; v. 261; p. 405.

Bitrose Company, Milwaukee, Wis. Candies, nuts, nut-candies. No. 125,189; Apr. 22; v. 261; p. 795.

Blanton, David A., St. Louis, Mo. Oleomargarin. No. 125,265; Apr. 29; v. 261; p. 953.

Blatchford Calf Meal Company, Waukegan, Ill. Compounded ground feed. No. 124,951; Apr. 1; v. 261; p. 197.

Blount Plow Works, Evansville, Ind. Plows, cultivators, disk harrows, &c. No. 125,190; Apr. 22; v. 261; p. 795.

Board of Control of the Colorado Industrial Workshop for the Blind, The, Denver, Colo. Brooms. No. 125,191; Apr. 22; v. 261; p. 795.

Borden's Condensed Milk Company, New York, N. Y. Dried or desiccated milk. No. 125,022; Apr. 8; v. 261; p. 405.

Borden's Farm Products Company, Inc., Wassaic and New York, N. Y. Butter. No. 124,952; Apr. 1; v. 261; p. 197.

Bratton, Alvin A., Columbus, Ohio. Booklets or lessons issued from time to time. No. 125,124; Apr. 15; v. 261; p. 265.

Breier, Benjamin, New York, N. Y. Men's and boys' work-shirts. No. 125,266; Apr. 29; v. 261; p. 953.

Bridler, A., Pratt City, Ala. Preparation for rheumatism No. 125,192; Apr. 22; v. 261; p. 795.

Briggs Bituminous Composition Company, New York, N. Y. Enamel. No. 125,193; Apr. 22; v. 261; p. 795.

British Mannesmann Tube Company Ltd., The, London, England. Certain named hardware and plumbing and steam-fitting supplies. No. 124,954; Apr. 1; v. 261; p. 197.

British Mannesmann Tube Company Ltd., The, London, England. Certain named tubes, posts, and poles. No. 125,023; Apr. 8; v. 261; p. 405.

Brown, Charles W., Cleveland, Ohio. Medicinal salve for burns, wounds, piles, &c. No. 125,024; Apr. 8; v. 261; p. 405.

Brown Shoe Company, Inc., St. Louis, Mo. Children's shoes of leather. No. 125,267; Apr. 29; v. 261; p. 953.

Brunswick-Balke-Collender Company, The, Wilmington, Del., and Chicago, Ill. Rubber or rubber and fabric tires and tubes for vehicles. No. 125,025; Apr. 8; v. 261; p. 405.

Buedingen, William J., New York, N. Y. Printed adhesive seals for sealing letters. No. 125,026; Apr. 8; v. 261; p. 405.

Bunting Brass & Bronze Co., Toledo, Ohio. Bronze bushings. No. 125,194; Apr. 22; v. 261; p. 795.

Byington, Karl, Chicago, Ill. Hog medicines to be administered for worms, scours, and as tonics. No. 125,195; Apr. 22; v. 261; p. 795.

C. E. De Puy Company, The, Pontiac, Mich. Timothy seed. No. 125,030; Apr. 8; v. 261; p. 405.

C. & E. Marshall Company, The, Columbus, Ohio. Eyeglass mountings and frames. No. 125,238; Apr. 22; v. 261; p. 796.

California Packing Corporation, San Francisco, Calif. Motion-picture films. No. 124,955; Apr. 1; v. 261; p. 197.

Caradonna, Philip, Philadelphia, Pa. Preparation for the treatment of certain named ailments. No. 125,125; Apr. 15; v. 261; p. 265.

Cellbeam Manufacturing Company, Brooklyn, N. Y. Electric search-light, spot-light, and trouble lamps. No. 125,027; Apr. 8; v. 261; p. 405.

Celluloid Company, Newark, N. J., and New York, N. Y. Certain named articles made of compounds of pyroxylin. No. 125,028–9; Apr. 8; v. 261; p. 405.

Central Electric Company, Chicago, Ill. Electric insulated weatherproof wires and friction-tape. No. 125,196; Apr. 22; v. 261; p. 795.

Chapin-Sacks Manufacturing Company, Washington, D. C. Ice-cream. No. 125,126; Apr. 15; v. 261; p. 265.

Chapman Milling Co., The, Sherman, Tex. Wheat-flour. No. 124,956; Apr. 1; v. 261; p. 197.

Clark Thread Co., The, Newark, N. J. Thread. No. 125,031; Apr. 8; v. 261; p. 405.

Clarke, Harry N., Alliance, Ohio. Certain named workmen's garments. No. 125,269; Apr. 29; v. 261; p. 953.

Classic Motor Car Corporation, Chicago, Ill. Automobiles, pleasure and commercial. No. 125,032; Apr. 8; v. 261; p. 405.

Clear Lake Lumber Company, Clear Lake, Wash. Lumber. No. 125,128; Apr. 15; v. 261; p. 265.

Cleary, Robert E., Spokane, Wash. Chilli-con-carne and tamales. No. 125,197; Apr. 22; v. 261; p. 795.

Cleveland Osborn Manufacturing Company, The, Cleveland, Ohio. Factory, foundry, platers' brushes. No. 125,198; Apr. 22; v. 261; p. 795.

Cleveland Osborn Manufacturing Company, The, Cleveland, Ohio. Molders' bellows. No. 125,199; Apr. 22; v. 261; p. 795.

Clysmic Spring Co., New York, N. Y. Certain named table-water and soft drinks. No. 125,200; Apr. 22; v. 261; p. 795.

Colonial Phonograph Co., Sheboygan, Wis. Phonographs and phonograph-records. No. 125,129; Apr. 15; v. 261; p. 265.

Columbian Enameling & Stamping Company, Terre Haute, Ind. Certain named enameled ware for household use. Nos. 125,033–4; Apr. 8; v. 261; p. 405.

Columbian Rope Company, Auburn, N. Y. Twine. Nos. 125,201–2; Apr. 22; v. 261; p. 795.

Columbus-Union Oil Cloth Co., The, Columbus, Ohio. Oil-cloth. No. 125,035; Apr. 8; v. 261; p. 405.

Contadina Canning Co., The, San Jose, Calif., and Chicago, Ill. Canned tomato sauce. No. 124,957; Apr. 1; v. 261; p. 197.

Converse & Company, New York, N. Y. Cotton piece goods. No. 124,958; Apr. 1; v. 261; p. 197.

Cornish, Jesse B., Chicago, Ill. Varnishes. No. 125,203; Apr. 22; v. 261; p. 795.

Crawford, Herbert C., Binghamton, N. Y. Ointment for certain named skin affections. No. 125,270; Apr. 29; v. 261; p. 953.

Crown Glove Company, New York, N. Y. Fabric gloves. No. 125,271; Apr. 29; v. 261; p. 953.

Crutchfield, Frank, Richmond, Va. Fertilizers. No. 125,036; Apr. 8; v. 261; p. 405.

Cullen, Thomas C., Bradford, England. Wool and wool and cotton piece goods. No. 124,959; Apr. 1; v. 261; p. 197.

David McMeekan M'f'g. Co., Brooklyn, N. Y. Certain named chemicals, medicines, and pharmaceutical preparations. No. 125,073; Apr. 8; v. 261; p. 407.

De Long, Enos D., Bay City, Mich. Scalp-cleanser. No. 125,038; Apr. 8; v. 261; p. 405.

Deane Plaster Co., The, Yonkers, N. Y. Corn-plasters. No. 125,037; Apr. 8; v. 261; p. 405.

Deitchman, Hyman, Chicago, Ill. Insect-exterminator and disinfectant. No. 125,204; Apr. 22; v. 261; p. 795.

Detroit Alaska Knitting Mills, Detroit, Mich. Knitted hosiery, gloves, and mittens. No. 125,040; Apr. 8; v. 261; p. 406.

Dewart Milk Products Co. Inc., Dewart borough, Pa. Condensed skimmed milk. No. 124,960; Apr. 1; v. 261; p. 197.

Diamond Expansion Bolt Co., New York, N. Y. Expansion bolts and shields and screw-anchors. No. 124,961; Apr. 1; v. 261; p. 197.

Diamond Expansion Bolt Co., New York, N. Y. Drills, drill-handles, and drill-points. No. 125,041; Apr. 8; v. 261; p. 406.

Diamond Expansion Bolt Co., New York, N. Y. Expansion bolts and shields. No. 125,205; Apr. 22; v. 261; p. 795.

Diamond Expansion Bolt Co., New York, N. Y. Expansion bolts and shields, screw-anchors. No. 125,206; Apr. 22; v. 261; p. 795.

Dinovo, Agostino, South Chicago, Ill. Preparation for the treatment of certain named ailments. No. 125,207; Apr. 22; v. 261; p. 795.

Dothan Syrup Co., Dothan, Ala. Cane and corn syrup combined. No. 125,042; Apr. 8; v. 261; p. 406.

Downie, James H., San Antonio, Tex. Impression-wax for dental use. No. 125,208; Apr. 22; v. 261; p. 795.

Druggists Sundries Company Limited., Vancouver, British Columbia, Canada. Beverages, non-alcoholic maltless. No. 125,130; Apr. 15; v. 261; p. 265.

Duerdin & Sainsbury, Melbourne, Victoria, Australia. Medicines for the relief of hay-asthma. Nos. 125,209–10; Apr. 22; v. 261; p. 795

E. P. Mesthene & Co., Inc., New York, N. Y. Cigarettes. No. 125,158; Apr. 15; v. 261; p. 626.

Eagle Garter Company, New York, N. Y. Armbands. No. 125,131; Apr. 15; v. 261; p. 265.

Edgar T. Ward's Sons Company, Boston, Mass. Iron and steel bars. No. 125,006; Apr. 1; v. 261; p. 199.

Elberfeld Chemical & Mfg. Co., Sandwich, Mass. Cleansing compound for bath-tubs, tinware, &c. No. 125,132; Apr. 15; v. 261; p. 265.

Elliott, Clinton, New York, N. Y. Candies. No. 125,133; Apr. 15; v. 261; p. 265.

Ely & Walker D. G. Co., St. Louis, Mo. Certain named knitted, netted, and textile fabrics. No. 124,962; Apr. 1; v. 261; p. 197.

Elzinga, William T., Mill Valley, Calif. Dental-floss holders. No. 125,212; Apr. 22; v. 261; p. 795.

Emmolo Bros., Cloverdale, Calif. Tomato paste. No. 125,134; Apr. 15; v. 261; p. 265

Empire Cream Separator Company, Bloomfield, N. J. Milking-machines and milking-machine systems and parts thereof. No. 125,213; Apr. 22; v. 261; p. 795.

Ercole Marelli & Co., Milan, Italy. Electric oscillating fans. Nos. 125,075–6; Apr. 8; v. 261; p. 407.

Fabritex Co. Inc., New York, N. Y. Cotton piece goods. No. 124,963; Apr. 1; v. 261; p. 197.

Falls City Mills Co., Louisville, Ky. Hosiery. No. 125,043; Apr. 8; v. 261; p. 406.

Farquhar, Harry D., New York, N. Y. Paste and powder used in ice-cream. No. 125,044; Apr. 8; v. 261; p. 406.

Faultless Rubber Co., The, Ashland, Ohio. Dolls. No. 125,272; Apr. 29; v. 261; p. 953.

Fine, David L., Boston, Mass. Bloomers, drawers, underskirts, petticoats. No. 125,045; Apr. 8; v. 261; p. 406.

Fitz-Water and Moore, Texarkana, Ark. Hair-restorer. No. 125,046; Apr. 8; v. 261; p. 406.

Fleischer, Silas M., Baltimore, Md. Metal comb used for straightening human hair. No. 125,048; Apr. 8; v 261; p. 406.

Fleming and Company Limited, Gore, New Zealand. Flaked oats. No. 125,214; Apr. 22; v. 261; p. 795.

Forgione, Nicolino, New York, N. Y. Massage cream. No. 125,215; Apr. 22; v. 261; p. 796.

Fox River Paper Co., Appleton, Wis. Writing-paper. No. 125,135; Apr. 15; v. 261; p. 265.

Frank H. Fleer Corporation, Philadelphia, Pa. Chewing gum and a chewing-gum body covered with candy. No. 125,047; Apr. 8; v. 261; p. 406.

Franklin County Creamery & Condensed Milk Company, North Bangor, N. Y. Condensed milk. No. 125,216; Apr. 22; v. 261; p. 796.

Gatewood, James E., St. Louis, Mo. Monthly publication. No. 125,136; Apr. 15; v. 261; p. 265.

Geo. F. Minto & Co., Inc., Detroit, Mich. Work, dress, and negligée shirts, overalls, coats, &c. No. 125,279; Apr. 29; v. 261; p. 953.

Gillard & Co., Limited., Walthamstow, London, England. Thick fruity sauce containing a seasoning. No. 125,137; Apr. 15; v. 261; p. 265.

Golden Grain Milling Co., East St. Louis, Ill. Feeds for horses, mules, and other animals. No. 124,964; Apr. 1; v. 261; p. 197.

Golden Grain Milling Company, East St. Louis, Ill. Stock feed. No. 125,049; Apr. 8; v. 261; p. 406.

Goldenwest Citrus Ass'n., Tustin, Calif. Fresh lemons. Nos. 124,965–6; Apr. 1; v. 261; p. 197.

Goldenwest Citrus Ass'n., Tustin, Calif. Lemons. Nos. 125,050–1; Apr. 8; v. 261; p. 406.

Goldstein, Joseph A., New York, N. Y. Ladies' outer suits. No. 125,052; Apr. 8; v. 261; p. 406.

Granstrand, John A., Walla Walla, Wash. Compound or liquid for treating the eyes. No. 125,217; Apr. 22; v. 261; p. 796.

Griffith-Durney Co., San Francisco, Calif. Canned sardines, pilchards, tuna fish, and salmon. No. 124,967; Apr. 1; v. 261; p. 197.

Guidi, Giuseppe W., New York, N. Y. Ammonium sulfoichthyolicum. No. 125,218; Apr. 22; v. 261; p. 796.

Gulbransen-Dickinson Co., Chicago, Ill. Pianos, player-pianos, and player-actions. No. 125,053; Apr. 8; v. 261; p. 406.

H. A. Metz Laboratories, Inc., New York, N. Y. Medicinal preparations. No. 125,240; Apr. 22; v. 261; p. 796.

H. C. Tack Company, The, Cleveland, Ohio. All-metal furniture and upholstery nails. No. 125,000; Apr. 1; v. 261; p. 198.

H. W. Johns-Manville Co., New York, N. Y. Boiler and pipe covering. No. 124,973; Apr. 1; v. 261; p. 197.

Haarmann Vinegar & Pickle Co., Omaha, Nebr. Vinegar. No. 124,968; Apr. 1; v. 261; p. 197.

Hadert, Albert J., New Rochelle, N. Y. Alimentary paste—viz., macaroni, spaghetti, noodles. No. 125,138; Apr. 15; v. 261; p. 265.

Halladay, William S., Jr., Waukesha, Wis. Limestone prepared for agricultural purposes. No. 125,139; Apr. 15; v. 261; p. 265.

Harland and Little, Inc., New York, N. Y. Mixed paints. Nos. 125,219–20; Apr. 22; v. 261; p. 796.

Harriman Spring Company, Gorham, N. H. Non-alcoholic maltless beverage. No. 125,221; Apr. 22; v. 261; p. 796.

Hathaway, George H., Chicago, Ill. Coffee, tea, spices, cocoa. No. 124,969; Apr. 1; v. 261; p. 197.

Hewitt Bros. Soap Co., The, Dayton, Ohio. Flaked laundry soap. No. 125,140; Apr. 15; v. 261; p. 265.

Heyden Chemical Works, New York, N. Y. Medicinal preparations for certain named diseases. Nos. 125,222–3; Apr. 22; v. 261; p. 796.

Hill, Oren, Lawrence, Mass. Powder for cleaning metals and glass. No. 125,141; Apr. 15; v. 261; p. 265.

Hiram Ricker & Sons, South Poland, Me. Spring-water. No. 125,093; Apr. 8; v. 261; p. 407.

Hocoteen Mfg. Co., Tucson, Ariz. Canteens. No. 125,142; Apr. 15; v. 261; p. 265.

Holland Rusk Co., Holland, Mich. Dessert in form of a powder made from starch products. No. 125,054; Apr. 8; v. 261; p. 406.

Holt & Company, New York, N. Y. Wheat-flour. No. 125,055; Apr. 8; v. 261; p. 406.

Hoshaw & Hopkins, Hot Springs, Ark. Blood-purifiers. No. 125,143; Apr. 15; v. 261; p. 265.

Hudson Belting Company, Worcester, Mass. Leather belting. No. 125,056; Apr. 8; v. 261; p. 406.

Hull, Arthur M., Chicago, Ill. Face-cream. No. 125,144; Apr. 15; v. 261; p. 265.

Hunsaker, Oscar, St. Louis, Mo. Preparation for certain named ailments, and liniment. No. 125,225; Apr. 22; v. 261; p. 796.

Hygeia Respirator Co., The, Passaic, N. J. Masks and respirators. No. 124,970; Apr. 1; v. 261; p. 197.

Hyman, Meyer & Hyman, Baltimore, Md. Ladies' and children's hats. No. 125,273; Apr. 29; v. 261; p. 953.
I. E. Palmer Co., The, Middletown, Conn. Woven hammock fabrics. No. 124,986; Apr. 1; v. 261; p. 198.
Indiana Condensed Milk Co., Indianapolis, Ind. Canned evaporated milk. Nos. 125,145–6; Apr. 15; v. 261; p. 265.
International Milling Company, New Prague, Minn. Wheat, &c., flours, cornmeal, rolled oats. No. 125,057; Apr. 8; v. 261; p. 406.
International Trade Developer, Chicago, Ill. Publication. No. 125,147; Apr. 15; v. 261; p. 626.
Interstate Iron & Steel Co., Chicago, Ill. Certain named hardware, &c. No. 124,971; Apr. 1; v. 261; p. 197.
Italian Food Products Co., Los Angeles, Calif. Concentrated tomato paste. No. 125,058; Apr. 8; v. 261; p. 406.
J. A. Migel, Inc., New York, N. Y. Broad silk in the piece and cotton piece goods. No. 124,978; Apr. 1; v. 261; p. 198.
J. A. Migel, Inc., New York, N. Y. Certain named ladies' and misses' outer garments. No. 125,078; Apr. 8; v. 261; p. 407.
J. S. Turner Manufacturing Co., Lowell, Mass. Leather belting. No. 125,106; Apr. 8; v. 261; p. 406.
J. T. Polk Company, Greenwood, Ind. Certain named canned vegetables and meat. No. 125,166; Apr. 15; v. 261; p. 626.
J. W. Eichenbusch Co., Inc., Chicago, Ill. Suitcases, grips, and hand-bags. No. 125,211; Apr. 22; v. 261; p. 796.
Jackson & Veney, New York, N. Y. Cakes, cookies, doughnuts, crullers, pastry. No. 124,972; Apr. 1; v. 261; p. 197.
James C. Kellogg, New York, N. Y. Laundry bluing. No. 125,228; Apr. 22; v. 261; p. 796.
James H. Boye Manufacturing Company, Chicago, Ill. Curtain-fixtures, stair-carpet fasteners, sash-holders. No. 124,953; Apr. 1; v. 261; p. 197.
John Chmiel Co., Boston, Mass. Liniment for certain named ailments. No. 125,127; Apr. 15; v. 261; p. 265.
John H. Meyer & Co. Inc., New York, N. Y. Cotton piece goods. No. 124,977; Apr. 1; v. 261; p. 198.
John H. Wilkins Company, Washington, D. C. Coffee. No 125,009; Apr. 1; v. 261; p. 199.
John Hoberg Company, Green Bay, Wis. Toilet-paper, paper towels and napkins. No. 125,224; Apr. 22; v. 261; p. 796.
John J. White, Inc., Newark, N. J., and New York, N. Y. Saccharin. No. 125,262; Apr. 22; v. 261; p. 797.
John Morrell & Company, Ottumwa, Iowa. Nut-margarin. No. 124,979; Apr. 1; v. 261; p. 198.
Joseph-Louis & Co., New York, N. Y. Certain named clothing. No. 125,071; Apr. 8; v. 261; p. 406.
Justi, Henry D., Philadelphia, Pa. Artificial teeth and dental articulators. No. 125,226; Apr. 22; v. 261; p. 796.
Kee Lox Manufacturing Company, Rochester, N. Y. Carbon-paper. No. 125,148; Apr. 15; v. 261; p. 626.
Keen Drink Mfg. Co., Altus, Okla. Maltless non-alcoholic beverage. No. 125,059; Apr. 8; v. 261; p. 406.
Keeran, Charles R., assignor to Keeran Products Company, Chicago, Ill. Refillable pencils and leads therefor. No. 125,149; Apr. 15; v. 261; p. 626.
Keeran Products Company. (See Keeran, Charles R., assignor.)
Keet and Rountree Dry Goods Co., Springfield, Mo. Dress-shirts. No. 125,274; Apr. 29; v. 261; p. 953.
Keet and Rountree Dry Goods Co., Springfield, Mo. Sweaters, knitted or woven headwear and underwear. No. 125,275; Apr. 29; v. 261; p. 953.
Keever Starch Co., The, Columbus, Ohio. Starch. No. 125,227; Apr. 22; v. 261; p. 796.
Kirsten, Ernest, Oakland, Calif. Canned herring, sardines, and dried figs. No. 125,060; Apr. 8; v. 261; p. 406.
Kivett, Luman V., Meeker, Colo. Preparation for the treatment of hog-cholera. No. 125,061; Apr. 8; v. 261; p. 406.
Koch, William A., Seattle, Wash. Vegetable extract which stabilizes, stimulates, and gives zest to beverages. No. 125,229; Apr. 22; v. 261; p. 796.
Lagerloef Trading Company, Inc., New York, N. Y. Wood-pulps. No. 125,063; Apr. 8; v. 261; p. 406.
Landers Brothers Company, The, Toledo, Ohio. Waterproof cotton fabrics. No. 125,064; Apr. 8; v. 261; p. 406.
Lee & Edwards, Thonotosassa, Fla. Fresh citrus fruits. No. 124,975; Apr. 1; v. 261; p. 198.
Lee & Edwards, Thonotosassa, Fla. Fresh citrus fruits. No. 125,065; Apr. 8; v. 261; p. 406.
Lefkovitz, Morris, Chicago, Ill. Medicinal compound for certain named ailments. No. 125,066; Apr. 8; v. 261; p. 406.
Lesser & Co., A., New York, N. Y. Hats and caps. No 125,067; Apr. 8; v. 261; p. 406.
Levi, Holmes W., Washington, D. C. Liniment for sore joints, muscles, cuts, &c. No. 125,068; Apr. 8; v. 261; p. 406.
Liberty Salad Oil Company, New York, N. Y. Salad-oils. No. 125,150; Apr. 15; v. 261; p. 626.
Lieberman Mfg. Co., Philadelphia, Pa. Men's suits, overcoats, and pants. No. 125,069; Apr. 8; v. 261; p. 406.
Lofton, Andrew J., Glendale, Ariz. Preparation for use in the treatment of bloat in cattle. No. 125,070; Apr. 8; v. 261; p. 406.
Lowe Brothers Company, The, Dayton, Ohio. Varnish. No. 125,234; Apr. 22; v. 261; p. 796.
M-B Tool Company, Danielson, Conn. Hand screw-drivers. No. 125,104; Apr. 8; v. 261; p. 407.
M. G. Scoville Sons Company, Ogden, Utah. Clamp for brooms. No. 125,177; Apr. 15; v. 261; p. 626.
MacDonald & Co., San Francisco, Calif. Cocoa. No. 125,155; Apr. 15; v. 261; p. 626.
Mag-Rhu Company, Dover, Del., and Pittsburgh, Pa. Preparation for treatment of stomach troubles. No. 125,074; Apr. 8; v. 261; p. 407.
Maher & Kessler, New York, N. Y. Children's dresses. No. 125,277; Apr. 29; v. 261; p. 953.
Markovitz Bros., Philadelphia, Pa. Knitted, netted, and textile underwear. No. 125,278; Apr. 29; v. 261; p. 953.
Marshall Canning Co., Marshalltown, Iowa. Canned corn-kernels. No. 125,077; Apr. 8; v. 261; p. 407.
Martorelli, Raffaele, New York, N. Y. Olive-oil. No. 125,156; Apr. 15; v. 261; p. 626.
McAboy, Mary A., Denver, Colo. Dolls. No. 125,072; Apr. 8; v. 261; p. 406.
McCarty Aniline & Extract Company, Inc., New York, N. Y. Liquid preparation for scouring various fabrics. No. 125,151; Apr. 15; v. 261; p. 626.
McCleskey, James R., St. Louis, Mo. Confection in the nature of a cake. No. 125,276; Apr. 29; v. 261; p. 953.
McCormick & Co., Baltimore, Md. Salve for colds, coughs, pneumonia, burns, &c. No. 125,152; Apr. 15; v. 261; p. 626.
McCormick & Co., Baltimore, Md. Glycerinized asafetida. No. 125,153; Apr. 15; v. 261; p. 626.
McCormick & Co., Baltimore, Md. Certain named flavoring extracts for soft drinks, &c. No. 125,154; Apr. 15; v. 261; p. 626.
McDaniel Milling Co., Carthage, Mo. Wheat-flour. No. 125,235; Apr. 22; v. 261; p. 796.
McDonagh & Sons, New York, N. Y. Linseed-oil, turpentine, paints, and varnishes. No. 125,236; Apr. 22; v. 261; p. 796.
McLoughlin Bros. Inc., New York, N. Y. Printed books. No. 125,237; Apr. 22; v. 261; p. 796.
Medomak Canning Company, Rockland and Winslows Mills, Me. Mince-meat. No. 125,157; Apr. 15; v. 261; p. 626.
Merchant's Biscuit Co., The, Denver, Colo. Biscuits, cakes, crackers, cookies, wafers. No. 124,976; Apr. 1; v. 261; p. 198.
Mikesell Brothers Company, Chicago, Ill. Brattice-cloth No. 125,079; Apr. 8; v. 261; p. 407.
Miller Bros. Lumber Co., Bellingham, Wash. Shingles. No. 125,159; Apr. 15; v. 261; p. 626.
Monarch Manufacturing Company, Council Bluffs, Iowa, and Toledo, Ohio. Lubricating oils and greases. No. 125,241; Apr. 22; v. 261; p. 796.
Montgomery, D. Hayden, Cairo, Ill. Non-intoxicating malt beverage. No. 125,280; Apr. 29; v. 261; p. 953.
Moos, Isidor, New York, N. Y. Herring, either kippered or packed in tomato sauce. No. 125,242; Apr. 22; v. 261; p. 796.
Moss, Charles H., Malden, Mass. Marmalade. No. 125,243; Apr. 22; v. 261; p. 796.
Mutual Shoemakers, Inc., The, Malden, Mass. Leather and leather and cloth boots and shoes. No. 125,281; Apr. 29; v. 261; p. 953.
Muzzy-Lyon Co., Ltd., Detroit, Mich. Bronze castings and Babbitt alloys. No. 125,244; Apr. 22; v. 261; p. 796.
Narragansett Brewing Co., Cranston, R. I. Malt beverage. No. 125,245; Apr. 22; v. 261; p. 796.
National Candy Company, St. Louis, Mo. Candies. No. 125,160; Apr. 15; v. 261; p. 626.
National Malleable Castings Company, The, Cleveland, Ohio. Journal-box and coiled-spring journal-box for railway-vehicles. No. 124,981; Apr. 1; v. 261; p. 198.
National Paint & Varnish Company, The, Cleveland, Ohio. Certain named construction materials. No. 125,080; Apr. 8; v. 261; p. 407.
Nestor Johnson Manufacturing Company, Chicago, Ill. Skaters' shoes. No. 125,282; Apr. 29; v. 261; p. 953.
New Standard Adding Machine Company, St. Louis, Mo Liquid-level indicators. No. 124,982; Apr. 1; v. 261; p. 198.
New York Shield Company, The, New York, N. Y. Toilet-powder. No. 124,983; Apr. 1; v. 261; p. 198.
Northern Chemical Works, Chicago, Ill. Powder for dissolving soot from the walls of furnaces, boilers, and the like. No. 125,081; Apr. 8; v. 261; p. 407.
Northern Insulating Company, St. Paul, Minn. Fibrous insulating material. No. 125,161; Apr. 15; v. 261; p. 626.
Norton Company, Worcester, Mass. Certain named heat-refractory products. Nos. 125,082–3; Apr. 8; v. 261; p. 407.
Norwalk Tire and Rubber Company, The, Norwalk, Conn. Certain named belting, non-metallic tires, &c. No. 125,085; Apr. 8; v. 261; p. 407.
Nu-Way Manufacturing Co., Kewanee, Ill. Hog-sprayer, oscillating seeder, staple-puller. No. 124,984; Apr. 1; v. 261; p. 198.

Nunnally Co., Atlanta, Ga. Candy. No. 125,086; Apr. 8; v. 261; p. 407.
O. K. Dorn Shoe Company, The, Cleveland, Ohio. Leather shoes. No. 125,088; Apr. 8; v. 261; p. 407.
O'Bannon Company, The, Claremore, Okla. Field-seeds. No. 125,087; Apr. 8; v. 261; p. 407.
Ozark Medicine Company, The, Springfield, Mo. Tablets for la grippe and colds. No. 125,162; Apr. 15; v. 261; p. 626.
P. Centemeri & Company, New York, N. Y. Knit and leather gloves for men and women. No. 125,030; Apr. 8; v. 261; p. 405.
Pabst, Friedolin, Chicago, Ill. Chemical preparation for exterminating rats and mice. No. 125,163; Apr. 15; v. 261; p. 626.
Paige-Detroit Motor Car Company, Detroit, Mich. Automobiles. No. 124,985; Apr. 1; v. 261; p. 198.
Park & Tilford, New York, N. Y. Tea. No. 124,987; Apr. 1; v. 261; p. 198.
Parker, George H., Stamford, Conn. Game-boards and pieces therefor. No. 125,246; Apr. 22; v. 261; p. 796.
Parsons Trading Company, New York, N. Y. Monthly trade publications. No. 125,164; Apr. 15; v. 261; p. 626.
Paszkiewicz, Alexander, Shenandoah, Pa. Non-alcoholic liquid invigorant. No. 125,089; Apr. 8; v. 261; p. 407.
Paszkiewicz, Alexander, Shenandoah, Pa. Shoe-polish. No. 125,165; Apr. 15; v. 261; p. 626.
Pearsall, Samuel, New York, N. Y. Woolen, cotton, silk, and mixed piece goods. No. 124,988; Apr. 1; v. 261; p. 198.
Primo Products Company, San Francisco, Calif. Face-powder. No. 125,247; Apr. 22; v. 261; p. 796.
Quinn, Wm. J., Jr., Wheeling, W. Va. Preparation for the treatment of certain named diseases. No. 125,248; Apr. 22; v. 261; p. 797.
Red River Woolen Mills Co., Fergus Falls, Minn. Knit sweaters, mackinaws, knit underwear. No. 125,090; Apr. 8; v. 261; p. 407.
Refractories Company, New York, N. Y. Fire-brick cement. No. 124,989; Apr. 1; v. 261; p. 198.
Reliance Manufacturing Company, Chicago, Ill. Work-shirts. No. 125,092; Apr. 8; v. 261; p. 407.
Remmers Soap Company, The, Cincinnati, Ohio. Toilet soap. No. 125,167; Apr. 15; v. 261; p. 626.
Rhynsburger, Harvey S., Oskaloosa, Iowa. Dressed poultry. No. 124,990; Apr. 1; v. 261; p. 198.
Rice-Stix Dry Goods Company, St. Louis, Mo. Cotton, linen, wool, &c., piece goods. No. 124,991; Apr. 1; v. 261; p. 198.
Robert Reis & Co., New York, N. Y. Certain named clothing. No. 125,091; Apr. 8; v. 261; p. 407.
Rogers Fibre Company, Kennebunk, Me. Fiber-board. No. 125,168; Apr. 15; v. 261; p. 626.
Rogers & Son, J. J., Tupelo, Miss. Coffee, rice, wheat-flour, flavoring extracts. No. 125,094; Apr. 8; v. 261; p. 407.
Rogers & Son, J. J., Tupelo, Miss. Rubber fruit-jar rings. No. 125,095; Apr. 8; v. 261; p. 407.
Rosenbaum & Mogal, Brooklyn, N. Y. Certain named cutlery and machinery. No. 125,249; Apr. 22; v. 261; p. 797.
Rosenblatt, Samson, New York, N. Y. Medicinal sulfonic acids and their salts. No. 125,096; Apr. 8; v. 261; p. 407.
Ross-Gould List & Letter Company, St. Louis, Mo. Mailing-lists, facsimile letters, &c. No. 125,097; Apr. 8; v. 261; p. 407.
Rossia, George N., New York, N. Y. Medicine compound for the treatment of certain named ailments. No. 125,098; Apr. 8; v. 261; p. 407.
Rotary Scraper Company, Inc., New York, N. Y. Rotary scrapers for ships' hulls, drills, and parts thereof. No. 124,992; Apr. 1; v. 261; p. 198.
S. S. Kresge Company, Detroit, Mich. Vanishing, cold, menthol, and peroxid creams. No. 125,230; Apr. 22; v. 261; p. 796.
S. S. Kresge Co., Detroit, Mich. Certain named paper and stationery. No. 125,231; Apr. 22; v. 261; p. 796.
San Fernando Canning Co., San Fernando, Calif. Canned tomatoes, peaches, and apricots. No. 125,169; Apr. 15; v. 261; p. 626.
San Fernando Canning Co., San Fernando, Calif. Canned apricots and peaches. Nos. 125,170–1; Apr. 15; v. 261; p. 626.
San Fernando Canning Co., San Fernando, Calif. Canned peaches, apricots, and tomatoes. No. 125,172; Apr. 15; v. 261; p. 626.
San Fernando Canning Co., San Fernando, Calif. Canned tomato paste. No. 125,173; Apr. 15; v. 261; p. 626.
San Fernando Canning Co., San Fernando, Calif. Canned tomatoes with purée from trimmings, canned peaches and apricots. No. 125,174; Apr. 15; v. 261; p. 626.
Sainberg Louis, New York, N. Y. Card-index, receipt, law-blank, and letter cabinets, card-index trays. No. 125,175; Apr. 15; v. 261; p. 626.
Savings Check Company, Incorporated, The, Pittsburgh, Pa. Metal savings-checks. No. 124,993; Apr. 1; v. 261; p. 198.
Schein Brothers, New York, N. Y. Snap-fasteners. No. 125,176; Apr. 15; v. 261; p. 626.
Sears, Roebuck and Co., Chicago, Ill. Men's ready-to-wear clothes. No. 125,099; Apr. 8; v. 261; p. 407.
Shapleigh Hardware Company, St. Louis, Mo. Ice-skates. No. 124,994; Apr. 1; v. 261; p. 198.
Shapleigh Hardware Company, St. Louis, Mo. Certain named measuring and scientific appliances. No. 124,995; Apr. 1; v. 261; p. 198.
Shurnuff Manufacturing Company, St. Louis, Mo. Manifolds for gas-engines. No. 125,250; Apr. 22; v. 261; p. 797.
Skinner, Paul F., Omaha, Nebr. Bacon and hams. No. 125,251; Apr. 22; v. 261; p. 797.
Slavin, Cathrine M., Calgary, Alberta, Canada. Hair-grower. No. 125,252; Apr. 22; v. 261; p. 797.
Snows, Ltd., New York, N. Y. Textiles. No. 124,996; Apr. 1; v. 261; p. 198.
Solar Textile Co., New York, N. Y. Cotton, wool, and cotton and wool mixed piece goods. No. 124,997; Apr. 1; v. 261; p. 198.
Son Brothers & Co., San Francisco, Calif. Razors. No. 124,998; Apr. 1; v. 261; p. 198.
Spot Inc., The, Norfolk, Va. Certain named clothing for ladies and men. No. 125,100; Apr. 8; v. 261; p. 407.
Star Lubricating Oil Co., The, Cleveland, Ohio. Certain named paints, &c. No. 125,253; Apr. 22; v. 261; p. 797.
Sté. Anme. Des Huileries Maurel & H. Prom & Maurel Frères, Bordeaux, France. Certain edible oils. No. 125,239; Apr. 22; v. 261; p. 796.
Sterling Remedy Company, Jersey City, N. J. Remedies for the tobacco habit. No. 125,254; Apr. 22; v. 261; p. 797.
Suffern, Robert A., New York, N. Y. Cotton piece goods. No. 124,999; Apr. 1; v. 261; p. 198.
Sutton, Le Roy M., Du Bois, Pa. Liquid preparation for closing holes in pneumatic tires. No. 125,101; Apr. 8; v. 261; p. 407.
Swat Sweat Remedy Co., Kansas City, Mo. Preparations for offensive feet. No. 125,102; Apr. 8; v. 261; p. 407.
Syracuse Smelting Works, Brooklyn, N. Y. Babbitt alloy. No. 125,255; Apr. 22; v. 261; p. 797.
Success Cone Company, Inc., New York, N. Y. Ice-cream cones. No. 125,256; Apr. 22; v. 261; p. 797.
Tamal Packing Co., San Francisco, Calif. Canned vegetables. No. 125,001; Apr. 1; v. 261; p. 198.
Taylor-Wharton Iron and Steel Co., High Bridge, N. J. Manganese steel and manganese steel in cast, forged, and rolled form. No. 125,257; Apr. 22; v. 261; p. 797.
Technical Publishing Company, Chicago, Ill. Semimonthly publications. No. 125,103; Apr. 8; v. 261; p. 407.
Texas Company, The, Houston and Port Arthur, Tex., and New York, N. Y. Gasolene, naphtha, benzin. No. 125,258; v. 261; p. 797.
Thompson, George P., New Orleans, La. Certain named foods. No. 125,002; Apr. 1; v. 261; p. 198.
Tondevold & Lewis, Lewiston, Idaho. Fresh apples and cherries. No. 125,178; Apr. 15; v. 261; p. 626.
Tringali, Santi, New York, N. Y. Medicinal preparation for internal use in the treatment of stomachache and nervous debility. No. 125,259; Apr. 22; v. 261; p. 797.
Troy Wagon Works Co., The, Troy, Ohio. Wagons and trailers. No. 125,105; Apr. 8; v. 261; p. 408.
Turner, John Z., Philadelphia, Pa. Butter, eggs, poultry. No. 125,107; Apr. 8; v. 261; p. 408.
Tustin Hills Citrus Association, Tustin, Calif. Oranges. No. 125,003; Apr. 1; v. 261; p. 198.
U-Need-It Dry Storage Battery Co. Inc., New York, N. Y. Storage batteries. No. 125,108; Apr. 8; v. 261; p. 408.
U. S. Industrial Alcohol Co., New York, N. Y. Ethyl alcohol, &c. No. 125,180; Apr. 15; v. 261; p. 626.
Ulmer Leather Company, The, Norwich, Conn. Belt-dressing. No. 125,179; Apr. 15; v. 261; p. 627.
United Battery Corporation, New York, N. Y. Electric batteries. No. 125,260; Apr. 22; v. 261; p. 797.
United Kingdom Tobacco Company, Limited, London, England. Cigarettes. No. 125,004; Apr. 1; v. 261; p. 198.
Viking Rennet Company, Hoboken, N. J. Rennet, used in making cheese. No. 125,005; Apr. 1; v. 261; p. 198.
W. S. Nott Company, Minneapolis, Minn. Stitched canvas belting. No. 125,084; Apr. 8; v. 261; p. 407.
Walsh, William C., Philadelphia, Pa. Shoe-soles of rubber or rubber and fiber composition. No. 125,109; Apr. 8; v. 261; p. 408.
Ward Baking Company, New York, N. Y. Cakes. No. 125,110; Apr. 8; v. 261; p. 408.
Ward, Lee, Kingfisher, Okla. Preparation for destroying pests that are injurious to cotton, &c. No. 125,181; Apr. 15; v. 261; p. 627.
Wardlaw, Leonard A., Dallas, Tex. Potato chips. No. 125,261; Apr. 22; v. 261; p. 797.
Warrensburg Mills, Warrensburg, Mo. Wheat-flour. No. 125,007; Apr. 1; v. 261; p. 199.
Weingarten Bros., Inc., New York, N. Y. Corsets and brassières. No. 125,111; Apr. 8; v. 261; p. 408.
Welch Grape Juice Company, The, Westfield, N. Y. Grape-juice. No. 125,112; Apr. 8; v. 261; p. 408.
Wheat Meal Co., Lemars, Iowa. Breakfast food made from rye-wheat. No. 125,006; Apr. 1; v. 261; p. 198.
Wheatena Company, The, New York, N. Y., and Rahway, N. J. Cereal breakfast food. No. 125,182; Apr. 15; v. 261; p. 627.

William C. Johnson Candy Company, The, Cincinnati, Ohio. Chocolate candies. No. 124,974; Apr. 1; v. 261; p. 198.
William T. Mullikin Co., Inc., Philadelphia, Pa. Peanut-butter. No. 124,980; Apr. 1; v. 261; p. 198.
Willis Jason Kendricks Inc., Saratoga Springs, N. Y. Corks. No. 125,113; Apr. 8; v. 261; p. 408.
Witwer Tate Grocery Co., Centralia, Ill. Canned tomatoes, peas, and corn. No. 125,114; Apr. 8; v. 261; p. 408.
Woman's National Magazine Co., Phoenix, Ariz., and Washington, D. C. Monthly magazine. No. 125,183; Apr. 15; v. 261; p. 627.
Wortendyke Manufacturing Co., Richmond, Va. Toilet-paper and paper towels. No. 125,184; Apr. 15; v. 261; p. 627.
Wyckoff, James L. R., North Woodbury, Conn. Shears and scissors. No. 125,263; Apr. 22; v. 261; p. 797.
Wyckoff Knitting Company, The, Perry, N. Y. Men's and boys' balbriggan underwear. No. 125,115; Apr. 8; v. 261; p. 408.
York Mfg. Co., Saco, Me., and Boston, Mass. Gingham in the piece. No. 125,010; Apr. 1; v. 261; p. 199.
Youth Craft Company, Chicago, Ill. Certain named pharmaceutical preparations for toilet uses. No. 125,116; Apr. 8; v. 261; p. 408.
Zelenko & Moskowitz, New York, N. Y. Cloaks, suits, dresses, skirts, outer waists. No. 125,117; Apr. 8; v. 261; p. 408.
Zimetbaum, Samuel, New York, N. Y. Chewing-gum. No. 125,011; Apr. 1; v. 261; p. 199.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Alex Sheppard & Sons, Inc., Philadelphia, Pa. "Happy Thought." (For Pure Blended Coffee.) No. 21,202; Apr. 8; v. 261; p. 409.
American Pop Corn Company, Sioux City, Leeds, and Schaller, Iowa. "Jolly Time Pop Corn." (For Popcorn.) No. 21,222; Apr. 22; v. 261; p. 798.
American Pop Corn Company, Sioux City, Leeds, and Schaller, Iowa. "Big Chief Pop Corn." (For Popcorn.) No. 21,223; Apr. 22; v. 261; p. 798.
American Standard Food Association, Milwaukee, Wis. "Waukesha." (For Oleomargarin.) No. 21,179; Apr. 8; v. 261; p. 409.
Armstrong, Julian, Chicago, Ill. "Valu Gage Field Fencing, Number 11 Series." (For Woven-Wire Field-Fencing.) No. 21,180; Apr. 8; v. 261; p. 409.
Auto Components Inc., Chicago, Ill. "Red Star Timer for Fords." (For Timers.) No. 21,181; Apr. 8; v. 261; p. 409.
Beamon, Jeffords & Beamon Co., Los Angeles, Calif. "Stay There." (For Hair-Tonic.) No. 21,224; Apr. 22; v. 261; p. 798.
Bencoe Exporting & Importing Co., Inc., New York, N. Y. "Bencoe Brand Sweetened Condensed Milk." (For Canned Condensed Milk.) No. 21,209; Apr. 15; v. 261; p. 628.
Conover, Harvey, Chicago, Ill. "Mother Goose Bread." (For Bread.) No. 21,211; Apr. 15; v. 261; p. 628.
De Jesús, José, New York, N. Y. "De Preven." (For a Medicinal Preparation for Treatment of Malaria.) No. 21,186; Apr. 8; v. 261; p. 409.
Easton, Gilbert J., Newark, N. J. "Easton's Mayonnaise." (For Mayonnaise.) No. 21,182; Apr. 8; v. 261; p. 409.
Fitzpatrick Bros., Chicago, Ill. "Cecho Slovak Family Soap." (For Soap.) No. 21,183; Apr. 8; v. 261; p. 409.
Franklin Clothing M'f'g Co., St. Louis, Mo. "Franklin Fashions." (For Men's and Boys' Outer Garments.) No. 21,184; Apr. 8; v. 261; p. 409.
Freirich & Mansell, New York, N. Y. "All-(efanem)-Wool." (For Sponges for Automobile-Washing.) No. 21,212; Apr. 15; v. 261; p. 628.
Hoye, Stephen M., New York, N. Y. "Hoye's Liberty Tea and Sugar Tablet." (For "Mate" Tea and Sugar Tablets.) No. 21,213; Apr. 15; v. 261; p. 628.
Iroquois Brewing Company, Buffalo, N. Y. "Iroquois Indian Head." (For Non-Intoxicating Beverage.) No. 21,185; Apr. 8; v. 261; p. 409.
Lefas, Stephen D., Washington, D. C. "Lefas Private Stock Ginger Ale." (For Ginger-Ale.) No. 21,187; Apr. 8; v. 261; p. 409.
Magic Mfg. Co., Chicago, Ill. "Majic." (For Dye Soap Flakes.) No. 21,188; Apr. 8; v. 261; p. 409.
McCabe, Frank A., Blackfoot, Mont. "League of Nations Puzzle." (For Mechanical Puzzles.) No. 21,189; Apr. 8; v. 261; p. 409.
Miller, Solomon S., Reading, Pa. "The Miller Sock." (For Men's Socks.) No. 21,190; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Butter Creams." (For Candy.) No. 21,191; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Extra Chocolates." (For Candy.) No. 21,192; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Chocolates Supreme." (For Candy.) No. 21,193; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Tri-Eats." (For Candy.) No. 21,194; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Assorted Chocolates." (For Candy.) No. 21,195; Apr. 8; v. 261; p. 409.
Milwaukee Paper Box Company, Milwaukee, Wis. "Belmont Package." (For Candy.) No. 21,196; Apr. 8; v. 261; p. 409.
Nut House Incorporated, The, Seattle, Wash. "Bar of Bars." (For Chocolate Candy.) No. 21,197; Apr. 8; v. 261; p. 409.
Penick & Ford, Ltd., New Orleans, La. "Penick & Ford's Brown Label Brer Rabbit Brand." (For Sugar-Cane Products and Corn-Syrup.) No. 21,198; Apr. 8; v. 261; p. 409.
Penick & Ford, Ltd., New Orleans, La. "Penick & Ford's Gold Label Brer Rabbit Brand." (For Pure New Orleans Molasses.) No. 21,199; Apr. 8; v. 261; p. 409.
Penick & Ford, Ltd., New Orleans, La. "Penick & Ford's Red Label Brer Rabbit Brand." (For Pure Country Sorghum.) No. 21,200; Apr. 8; v. 261; p. 409.
Penick & Ford, Ltd., New Orleans, La. "Penick & Ford's Green Label Brer Rabbit Brand." (For Pure New Orleans Molasses.) No. 21,201; Apr. 8; v. 261; p. 409.
Pillsbury Flour Mills Company, Minneapolis, Minn. "Pillsbury's Pancake Flour." (For Pancake-Flour.) No. 21,215; Apr. 15; v. 261; p. 628.
R. B. Biscuit Co., The, Cleveland, Ohio. "Xtragood." (For Bread.) No. 21,210; Apr. 15; v. 261; p. 628.
Ross Manufacturing Company, Kansas City, Mo. "Ross Quality is Economy." (For Tank-Bulbs.) No. 21,216; Apr. 15; v. 261; p. 628.
See, Joseph E., New York, N. Y. "Pom-Ora." (For A Grade A Marmalade.) No. 21,217; Apr. 15; v. 261; p. 628.
Smith-Faus Drug Co., Salt Lake City, Utah. "Pine-Oil-Rub." (For Natural Oil of Pine for Coughs and Colds.) No. 21,203; Apr. 8; v. 261; p. 409.
Standard Chemical Co., Emeryville, Calif. "Olene." (For Spraying Compounds for Citrus Trees.) No. 21,204; Apr. 8; v. 261; p. 409.
Standard Chemical Co., Emeryville, Calif. "A No. 1 Antiseptic Cutting Compound." (For Chemical Compounds Prepared for Cooling Metal-Cutting Tools.) No. 21,218; Apr. 15; v. 261; p. 628.
Sulphozin Co., Newark, N. J. "Sulphozin." (For a Face and Skin Lotion.) No. 21,214; Apr. 15; v. 261; p. 628.
Thames Drug Company, Beaumont, Tex. "Lavisan." (For a Preparation for the Scalp.) No. 21,219; Apr. 15; v. 261; p. 628.
Thames Drug Company, Beaumont, Tex. "Pawnee Ant Exterminator." (For an Insecticide.) No. 21,220; Apr. 15; v. 261; p. 628.
Valley View Ranch, Ontario, Calif. "Opitma." (For Fresh Citrus Fruits.) No. 21,205; Apr. 8; v. 261; p. 409.
Walters, Henry V., Oceanport, N. J. "Some." (For Bread.) No. 21,206; Apr. 8; v. 261; p. 409.
Welch Grape Juice Company, The, Westfield, N. Y. "Welch's Grapelade The National Spread." (For a Spread.) No. 21,221; Apr. 15; v. 261; p. 628.
Western Grocer Company, Oskaloosa, Iowa. "Jack Sprat Brand." (For Coffee.) No. 21,207; Apr. 8; v. 261; p. 409.
Western Grocer Company, Oskaloosa, Iowa. "Jack Sprat Brand." (For Canned Corn.) No. 21,208; Apr. 8; v. 261; p. 409.
Williams, Tempia, Ford City, Pa. "Madam Tempia William's T. W. Hair Beautifier." (For a Preparation Which Beautifies and Improves the Hair and Aids its Growth.) No. 21,178; Apr. 1; v. 261; p. 200.

ALPHABETICAL LIST OF REGISTRANTS OF PRINTS.

Blankinship, John S., Lynchburg, Va. "History." (For Furniture.) No. 5,080; Apr. 8; v. 261; p. 409.

Braender Rubber & Tire Co., Rutherford, N. J. "All Champions." (For Tires and Tubes.) No. 5,081; Apr. 8; v. 261; p. 409.

Detmer Woolen Co., New York, N. Y. "Come in, let us show you Detmer University Novelties Latest Suitings." (For Detmer Woolens.) Nos. 5,082–3; Apr. 15; v. 261; p. 628.

Otto Eisenlohr & Bros., Incorporated, Philadelphia, Pa. "Stick to Cinco, It's Safe." (For Cinco Cigars.) No. 5,084; Apr. 15; v. 261; p. 628.

Tasty Baking Company, Philadelphia, Pa. "Tastykake." (For Cake.) No. 5,085; Apr. 15; v. 261; p. 628.

Williams Patent Crusher & Pulverizer Co., St. Louis, Mo. "The Williams World Beater." (For Crushers and Pulverizers.) No. 5,086; Apr. 15; v. 261; p. 628.

Williams Patent Crusher & Pulverizer Co., St. Louis, Mo. "Fire Proof and Fool Proof Metal, Gravel and Sand Katcher." (For Catchers of Metal and Like Foreign Substances that May Enter with the Feed in Reducing-Mills.) No. 5,087; Apr. 15; v. 261; p. 628.

Wolf Advertising Co., New York, N. Y. "Ice Cream." (For Ice-Cream.) No. 5,088; Apr. 22; v. 261; p. 798.

DISCLAIMERS.

Juengst, Charles A., Croton Falls, N. Y.; disclaimer filed by assignee, American Assembling Machine Company. Pamphlet-coverer. No. 1,244,861; disclaimer filed Apr. 8, 1919; v. 261; p. 633.

Kennedy, David S., Brooklyn, N. Y.; disclaimer filed by patentee. Quad-block for slug-casting machines. No. 1,193,269; disclaimer filed Apr. 17, 1919; v. 261; p. 635.

Patterson, Samuel F., Baltimore, Md.; disclaimer filed by assignee, Rosemary Manufacturing Co. Power-loom. (Reissue.) No. 12,159; disclaimer filed Mar. 31, 1919; v. 261; p. 1.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1919.

Abrading device. J. B. Gilbert. No. 1,298,680; Apr. 1; v. 261; p. 15.
Accelerator, Foot-controlled. T. Lind. No. 1,301,580; Apr. 22; v. 261; p. 732.
Account-pad. E. S. Farrington. No. 1,299,316; Apr. 1; v. 261; p. 159.
Accounting mechanism. C. H. Tallmadge. No. 1,301,795; Apr. 22; v. 261; p. 776.
Acid and salts thereof. Production of hydrofluoric. R. S. Sherwin. No. 1,301,325; Apr. 22; v. 261; p. 685.
Acid, Concentration of sulfuric. F. Perrin. No. 1,301,598; Apr. 22; v. 261; p. 736.
Acid, Manufacture of synthetic carbolic. F. Cobelli. No. 1,301,909; Apr. 29; v. 261; p. 828.
Acids containing an arsenoarylamin group, Aliphatic. K. J. Oechslin. No. 1,299,214; Apr. 1; v. 261; p. 136.
Acids containing an arsenoarylamin group, Aliphatic. K. J. Oechslin. No. 1,299,215; Apr. 1; v. 261; p. 136.
Acids, Manufacture of aromatic sulfonic. J. A. Ambler and H. D. Gibbs. No. 1,300,227; Apr. 8; v. 261; p. 391.
Acids, Manufacture of benzene sulfonic. J. A. Ambler and H. D. Gibbs. No. 1,300,228; Apr. 8; v. 261; p. 391.
Adding and listing machine, Ten-key. O. D. Johantgen. No. 1,301,941; Apr. 29; v. 261; p. 834.
Addressing machine, Hand-. J. S. Duncan. No. 1,301,237; Apr. 22; v. 261; p. 667.
Addressing-machines. Printing-device separator for. J. S. Duncan. No. 1,299,437; Apr. 8; v. 261; p. 215.
Adhesive and making same. J. Alexander. No. 1,300,097; Apr. 8; v. 261; p. 363.
Adhesive and making same. J. B. B. Stryker. No. 1,299,809; Apr. 8; v. 261; p. 300.
Adhesive and the like. J. Alexander. No. 1,300,096; Apr. 8; v. 261; p. 363.
Adhesive material, Making. C. H. Crowell. No. 1,300,250; Apr. 15; v. 261; p. 422.
Adjusting mechanism. C. W. Thomas. No. 1,300,047; Apr. 8; v. 261; p. 351.
Advertising apparatus. A. W. Linn. No. 1,298,977; Apr. 1; v. 261; p. 84.
Advertising device. L. S. Barr and B. S. Simmons. No. 1,301,216; Apr. 22; v. 261; p. 663.
Advertising or signaling apparatus. C. M. Tatosian. No. 1,301,620; Apr. 22; v. 261; p. 740.
Aeration and emulsifying pulp for flotation, Device for. C. Taylor. No. 1,299,059; Apr. 1; v. 261; p. 102.
Aerial-machine fuel-feed system. L. Coatalen. No. 1,299,128; Apr. 1; v. 261; p. 117.
Aerial transporting system. L. Everding. No. 1,299,314; Apr. 1; v. 261; p. 159.
Aero-gradometer. R. Goddard. No. 1,300,602; Apr. 15; v. 261; p. 497.
Aeroplane. O. W. Boyes. No. 1,299,111; Apr. 1; v. 261; p. 113.
Aeroplane. V. V. Carson. No. 1,300,927; Apr. 15; v. 261; p. 506.
Aeroplane. J. A. Horne. No. 1,300,969; Apr. 15; v. 261; p. 574.
Aeroplane. J. N. G. Nesbit. No. 1,298,773; Apr. 1; v. 261; p. 37.
Aeroplane. J. Porteous. No. 1,302,214; Apr. 29 v. 261; p. 884.
Aeroplane. S. S. Sloter. No. 1,302,235; Apr. 29; v. 261; p. 888.
Aeroplane. W. P. Thompson. No. 1,301,196; Apr. 22; v. 261; p. 659.
Aeroplane-frame construction. E. H. Blazer. No. 1,302,293; Apr. 29; v. 261; p. 899.
Aeroplane-fuselage. M. W. Perry. No. 1,299,858; Apr. 8; v. 261; p. 311.
Aeroplane-propeller. C. A. Cutler. No. 1,301,108; Apr. 22; v. 261; p. 641.
Aeroplane-propelling device. N. L. Hyatt and H. Lloyd. No. 1,298,724; Apr. 1; v. 261; p. 24.
Aeroplane structure, Self-stabilizing. M. R. Wolfard. No. 1,301,083; Apr. 15; v. 261; p. 602.
Aeroplanes and similar aircraft, Mounting for guns carried by. G. H. Challenger. No. 1,298,885; Apr. 1; v. 261; p. 62.
Aeroplanes and similar aircraft, Mounting for guns carried by. T. S. Duncan. No. 1,298,916; Apr. 1; v. 261; p. 69.
Aeroplanes and similar aircraft provided with guns, Bullet-deflector for the propellers of. G. H. Challenger. No. 1,298,886; Apr. 1; v. 261; p. 62.
Aeroplanes, Poisonous-vapor generator for. G. H. Glover. No. 1,300,160; Apr. 8; v. 261; p. 376.
Agricultural implement. E. J. Dougherty. No. 1,301,043; Apr. 15; v. 261; p. 591.
Agricultural machine. O. J. Johnson. No. 1,300,411; Apr. 15; v. 261; p. 456.
Air-brake equipment, Automatic decelerating. G. Macloskie. No. 1,301,723; Apr. 22; v. 261; p. 761.
Air-brake systems, Track implement for. P. J. Clifford. No. 1,302,185; Apr. 29; v. 261; p. 870.
Air-compressor. J. B. Kendall. No. 1,299,478; Apr. 8; v. 261; p. 224.
Air, Device for chilling and drying. B. J. Du Bose. No. 1,300,705; Apr. 15; v. 261; p. 519.
Air, Device for producing hot. J. Schlatter. No. 1,301,324; Apr. 22; v. 261; p. 685.
Air diffuser and regulator. F. A. A. Barrs. No. 1,299,659; Apr. 8; v. 261; p. 266.
Air-distribution system. E. A. Briner. No. 1,298,655; Apr. 1; v. 261; p. 8.
Air-heater, Domestic. P. S. Lanchick. No. 1,300,625; Apr. 15; v. 261; p. 501.
Air lifting-jack. A. Blomquist. No. 1,299,068; Apr. 8; v. 261; p. 268.
Air-regulating attachment. O. Kiesig. No. 1,301,455; Apr. 22; v. 261; p. 709.
Air transport system, Semi-automatic compressed-. W. O. Renkin. No. 1,301,167; Apr. 22; v. 261; p. 653.
Air, vapor, or gas superheater. F. O. Bynoe. No. 1,298,883; Apr. 1; v. 261; p. 61.
Aircraft and other structures, Clamp for bracing wires or cables of. A. R. and R. Anderson. No. 1,301,634; Apr. 22; v. 261; p. 742.
Aircraft-fuselage. W. T. Reid. No. 1,300,777; Apr. 15; v. 261; p. 534.
Aircraft gas-bag fabric and manufacturing same. J. McKechnie. No. 1,301,955; Apr. 29; v. 261; p. 837.
Aircraft-wings and the like, Light framed structure as. A. V. Roe. No. 1,301,747; Apr. 22; v. 261; p. 766.
Aircrafts' tanks, Means for preventing the disastrous consequences of accidental ignition of gasolene of. N. Pogolski. No. 1,300,190; Apr. 8; v. 261; p. 383.
Airplane. G. T. Buchanan. No. 1,299,117; Apr. 1; v. 261; p. 115.
Airplane-inclinometer. G. W. Farthing. No. 1,301,925; Apr. 29; v. 261; p. 831.
Airplane-propeller. L. S. Barr. No. 1,300,552; Apr. 15; v. 261; p. 487.
Airship. L. Matlock. No. 1,298,754; Apr. 1; v. 261; p. 32.
Airship, Dirigible. A. J. Liversedge. No. 1,300,746; Apr. 15; v. 261; p. 527.
Airships, Ascending, descending, and driving means for dirigible. J. O. Huxford. No. 1,302,048; Apr. 29; v. 261; p. 854.
Alarm: *See*—
Automobile-theft alarm. Thermostatic alarm.
Low-pressure alarm.
Alarm mechanism. J. M. Butcher. No. 1,301,783; Apr. 22; v. 261; p. 774.
Alcohol from alkyl formates, Producing methyl. J. A. Christiansen. No. 1,302,011; Apr. 29; v. 261; p. 847.
Alkali metal sulfonate having properties of detergent, Product and process of producing. R. E. Divine. No. 1,301,668; Apr. 22; v. 261; p. 748.
Alkaloids and alkaloidal salts, Extracting, purifying, or excluding. J. U. Lloyd. No. 1,300,747; Apr. 15; v. 261; p. 527.
Alloy. C. Van Amburgh. No. 1,300,058; Apr. 8; v. 261; p. 354.
Alloy, Soldering. L. J. Gurevich and R. W. Woodward. No. 1,301,688; Apr. 22; v. 261; p. 754.
Alloy steel, Making. A. Kissock. No. 1,300,279; Apr. 15; v. 261; p. 429.
Alumina, Preparing. F. Laist, F. F. Frick and R. S. Oliver. No. 1,300,417; Apr. 15; v. 261; p. 458.
Alumina production. A. G. Betts. No. 1,300,110; Apr. 8; v. 261; p. 366.
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Alunite, Treating. R. Cross. No. 1,301,394; Apr. 22; v. 261; p. 699.
Amalgamating-machine. W. B. Tucker. No. 1,300,054; Apr. 8; v. 261; p. 353.
Ammonium nitrate, Manufacture of. F. A. Freeth and H. E. Cocksedge. No. 1,301,047; Apr. 15; v. 261; p. 502.

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Amusement riding device. J. W. Michael. No. 1,301,476; Apr. 22; v. 261; p. 713.
Anchor-strap. G. E. Seidel. No. 1,299,512; Apr. 8; v. 261; p. 232.
Anesthetic apparatus. A. C. Clark. No. 1,302,183; Apr. 29; v. 261; p. 870.
Animal-releasing device. J. Kiuru. No. 1,299,193; Apr. 1; v. 261; p. 132.
Animal-rubbing device. C. W. Sherman. No. 1,298,804; Apr. 1; v. 261; p. 44.
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Anticreeper. L. O. Henggi. No. 1,300,612; Apr. 15; v. 261; p. 498.
Antiskid-chain clasp. G. F. Severs. No. 1,299,864; Apr. 8; v. 261; p. 313.
Antiskid-chain coupling. W. H. Krug. No. 1,302,470; Apr. 29; v. 261; p. 934.
Antiskid device. P. R. Willson. No. 1,299,082; Apr. 1; v. 261; p. 107.
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Antisubmarine device. W. Paxaychuck and W. Patz. No. 1,302,206; Apr. 29; v. 261; p. 883.
Antisubmarine device. M. Pierog. No. 1,299,775; Apr. 8; v. 261; p. 293.
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Anvil and set-gage, Combined hand-. A. C. Carlisle. No. 1,299,297; Apr. 1; v. 261; p. 155.
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Arch-support. F. S. Lewis. No. 1,301,579; Apr. 22; v. 261; p. 732.
Arch-support. G. H. Ricke. No. 1,299,615; Apr. 8; v. 261; p. 255.
Arm, Artificial. J. Krawczynski. No. 1,301,575; Apr. 22; v. 261; p. 731.
Arm, Artificial. A. K. Petron. No. 1,299,505; Apr. 8; v. 261; p. 230.
Arm-resting-holding means. F. F. Schwaller and T. M. Quinn. No. 1,300,883; Apr. 15; v. 261; p. 556.
Armbands and the like, Clasp for. T. A. Schaffer. No. 1,300,198; Apr. 8; v. 261; p. 385.
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Ash-conveying system. A. P. Strong. No. 1,301,194; Apr. 22; v. 261; p. 659.
Asparagus-handling machines, Feeder adapted for. D. Low and A. R. Thompson. No. 1,299,198; Apr. 1; v. 261; p. 133.
Assembling-machine. F. R. Batchelder. No. 1,302,280; Apr. 29; v. 261; p. 897.
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Atomizer, Liquid-. D. J. Irish. No. 1,300,615; Apr. 15; v. 261; p. 499.
Auto attachment. W. W. and S. I. Wendell. No. 1,302,112; Apr. 29; v. 261; p. 865.
Auto-engine-cylinder air cooling system. E. T. Wheeler. No. 1,300,073; Apr. 8; v. 261; p. 356.
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Auto wind-shield. E. Papp and P. Nagy. No. 1,301,308; Apr. 22; v. 261; p. 682.
Autos, Radius-rod brace for. F. K. Sturdivant. No. 1,300,041; Apr. 8; v. 261; p. 350.
Automatic coupling. P. Hansmann. No. 1,298,698; Apr. 1; v. 261; p. 18.
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Automobile. W. H. B. Johnson, T. E. Lind, and T. W. Clarke. No. 1,301,447; Apr. 22; v. 261; p. 708.
Automobile. O. G. Luyties. No. 1,299,844; Apr. 8; v. 261; p. 308.
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Automobile-axle truss. J. L. Kelly. No. 1,299,732; Apr. 8; v. 261; p. 282.
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Automobile camp-trailer. C. A. Richards. No. 1,300,021; Apr. 8; v. 261; p. 345.
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Automobile construction. V. E. Gragory. No. 1,298,928; Apr. 1; v. 261; p. 72.
Automobile-controlling device. G. E. Cassel. No. 1,299,678; Apr. 8; v. 261; p. 270.
Automobile convertible bed and table attachment. S. F. Donnell. No. 1,300,826; Apr. 15; v. 261; p. 545.
Automobile crank-lock. J. Comerford. No. 1,300,125; Apr. 8; v. 261; p. 369.
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Automobile-door latch. W. A. Babbitt. No. 1,298,861; Apr. 1; v. 261; p. 56.
Automobile-door latch. T. N. Ulevog. No. 1,299,066; Apr. 1; v. 261; p. 104.
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Automobile-engine auxiliary hood. S. T. East. No. 1,300,936; Apr. 15; v. 261; p. 568.
Automobile-engine starter. W. D. Hicks. No. 1,298,947; Apr. 1; v. 261; p. 76.
Automobile extensible cover. P. F. King. No. 1,298,733; Apr. 1; v. 261; p. 26.
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Automobile-horn. G. F. Long. No. 1,300,425; Apr. 15; v. 261; p. 459.
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Automobile-lock. C. Pohl. No. 1,301,498; Apr. 22; v. 261; p. 718.
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Automobile, motor-truck, and similar vehicle radiator. C. F. and F. Spery. No. 1,301,984; Apr. 29; v. 261; p. 842.
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Automobile radiator-tank. W. Johnson and G. E. Schoffstall. No. 1,301,446; Apr. 22; v. 261; p. 708.
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Automobile transmission-gearing, Shaft extension for. H. O. King. No. 1,300,174; Apr. 8; v. 261; p. 379.
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Balloon and the like fabrics, Impregnation of. J. H. Mandleberg. No. 1,302,064; Apr. 29; v. 261; p. 857.
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Belt-driving connection. C. K. Salisbury. No. 1,301,507; Apr. 22; v. 261; p. 719.
Belt-fastener. R. McNicol. No. 1,300,437; Apr. 15; v. 261; p. 462.
Belt-hinge fastener and pin. J. Millar. No. 1,300,632; Apr. 15; v. 261; p. 503.
Belt, Power-. J. L. Case. No. 1,300,345; Apr. 15; v. 261; p. 442.
Belt, Self-adjusting. E. J. and J. R. Richardson. (Reissue.) No. 14,627; Apr. 1; v. 261; p. 181.
Belt-shifter. C. E. Liebenberg. No. 1,301,464; Apr. 22; v. 261; p. 711.
Belt stretcher and clamp. C. W. Reed. No. 1,299,227; Apr. 1; v. 261; p. 138.
Belt-support. H. M. Chaney. No. 1,299,680; Apr. 8; v. 261; p. 270.
Belt-tightener. J. N. Heald and A. M. Drake. No. 1,301,937; Apr. 29; v. 261; p. 833.
Belt-tightener. G. A. Yeaton. No. 1,301,026; Apr. 15; v. 261; p. 588.
Benzaldehyde, Manufacture of. A. I. Appelbaum. No. 1,302,273; Apr. 29; v. 261; p. 895.
Berry-picker. E. C. Brewer. No. 1,300,566; Apr. 15; v. 261; p. 490.
Beverage-shaker. H. Pick. No. 1,300,867; Apr. 15; v. 261; p. 553.
Bicycle-coupling. J. A. Carswell. No. 1,300,343; Apr. 15; v. 261; p. 442.
Bicycle-frame. W. Johnston. No. 1,298,958; Apr. 1; v. 261; p. 78.
Bicycle side car. W. Simons. No. 1,302,476; Apr. 29; v. 261; p. 935.
Binder attachment, Grain-. H. Laqua. No. 1,301,717; Apr. 22; v. 261; p. 760.
Binder, Loose-leaf. W. H. Edwards. No. 1,299,694; Apr. 8; v. 261; p. 273.
Binder, Loose-leaf. C. R. Hadley. No. 1,301,085; Apr. 15; v. 261; p. 602.
Binders, Means for joining metal package-. S. C. Cary. No. 1,301,102; Apr. 22; v. 261; p. 640.
Bird decoy-holder, Dead-. H. A. Anderson. No. 1,299,896; Apr. 8; v. 261; p. 319.
Biscuit-cutter. J. C. Smith. No. 1,299,802; Apr. 8; v. 261; p. 299.
Bit. E. T. McPherson. No. 1,299,490; Apr. 8; v. 261; p. 227.
Blank form. C. C. Abel. No. 1,299,531; Apr. 8; v. 261; p. 236.
Blank with index-keys, Combination acceptance, order, and plural check. L. W. Wood. No. 1,299,647; Apr. 8; v. 261; p. 263.
Blanks, Machine for operating on irregularly-shaped. E. E. Lane. No. 1,300,627; Apr. 15; v. 261; p. 502.
Blanking-press. W. Skrzynecki. No. 1,298,806; Apr. 1; v. 261; p. 44.
Blast-furnace. F. O. Miller. No. 1,298,761; Apr. 1; v. 261; p. 34.
Block: *See*—
Culvert-block. Paving-block.
Flooring-block. Wooden paving-block.
Blocks, Machine for molding composition. E. H. Pipe. No. 1,300,645; Apr. 15; v. 261; p. 505.
Blotter-holder. W. M. Rhoads. No. 1,299,614; Apr. 8; v. 261; p. 255.
Blow-torches and the like, Shield for. W. P. Rudkin. No. 1,302,438; Apr. 29; v. 261; p. 928.
Blower, Fire-tube-boiler. E. C. Hafer. No. 1,301,255; Apr. 22; v. 261; p. 671.
Blowpipe. G. H. Zouck. No. 1,299,530; Apr. 8; v. 261; p. 236.
Blowpipe, Oxyacetylene-. O. T. Anderson. No. 1,299,535; Apr. 8; v. 261; p. 237.
Board: *See*—
Game-board. Piano sounding-board.
Instrument-board. Plaster-board.
Ironing-board.
Boat. A. L. P. Talbot. No. 1,301,523; Apr. 22; v. 261; p. 722.
Boat, Life-. J. E. Allen. No. 1,299,282; Apr. 1; v. 261; p. 152.
Boat, Life-. F. A. Graham. No. 1,302,362; Apr. 29; v. 261; p. 913.
Boat, Life-. S. Katko. No. 1,299,476; Apr. 8; v. 261; p. 224.
Boat, Life-. J. S. Whitaker. No. 1,300,906; Apr. 15; v. 261; p. 562.
Boat-releasing hook, Life-. I. Corser. No. 1,301,392; Apr. 22; v. 261; p. 698.
Boats, Engaging and disengaging gear for ships'. J. F. O'Brien. No. 1,298,777; Apr. 1; v. 261; p. 28.
Bobbin-box stand. A. E. Rhoades. No. 1,299,618; Apr. 8; v. 261; p. 255.
Bobbin-stripper. B. A. Peterson. No. 1,300,004; Apr. 8; v. 261; p. 342.
Boiler: *See*—
Insulated boiler. Water-tube boiler.
Boiler-compound holder. R. E. Durning. No. 1,300,829; Apr. 15; v. 261; p. 545.
Boiler-feed-pump automatic control. W. L. Foster. No. 1,302,350; Apr. 29; v. 261; p. 910.
Boiler-plugs, Securing hollow tapering. F. E. Key. No. 1,302,175; Apr. 29; v. 261; p. 877.
Boiler safety-tube. V. Hansen. No. 1,301,692; Apr. 22; v. 261; p. 755.
Boiler stay-sheet. A. R. Hodges. No. 1,299,344; Apr. 1; v. 261; p. 165.
Boiler-tube connection. C. S. Coleman. No. 1,299,396; Apr. 1; v. 261; p. 177.
Boilers, Feeding water to. R. W. Andrews. No. 1,299,283; Apr. 1; v. 261; p. 152.
Bolt: *See*—
Door-bolt. Stay-bolt.
Expansion-bolt.
Bolt. L. Grgec. No. 1,301,558; Apr. 22; v. 261; p. 728.
Bolt-extractor. T. A. Christian. No. 1,299,915; Apr. 8; v. 261; p. 323.
Bolting-reel. J. J. Trefz. No. 1,302,456; Apr. 29; v. 261; p. 932.
Bomb. A. A. Bull. No. 1,301,098; Apr. 22; v. 261; p. 639.
Bomb. G. E. Williams. No. 1,300,537; Apr. 15; v. 261; p. 483.
Bone-clamp. R. E. Klett. No. 1,302,176; Apr. 29; v. 261; p. 877.
Book-leaf-turning thumb-hold. R. Muessel. No. 1,301,486; Apr. 22; v. 261; p. 715.
Book, Loose-leaf. R. G. Whitlock. No. 1,299,276; Apr. 1; v. 261; p. 150.
Book, Loose-leaf. R. G. Whitlock. No. 1,300,206; Apr. 8; v. 261; p. 387.
Bookbinder. J. J. Balek. No. 1,301,320; Apr. 22; v. 261; p. 684.
Bookbinding. W. P. Pitt. No. 1,299,776; Apr. 8; v. 261; p. 293.
Boot-robe. M. E. Krotzer. No. 1,302,179; Apr. 29; v. 261; p. 878.
Boot-stripping device. J. J. Kramer and H. Smerling. No. 1,299,399; Apr. 1; v. 261; p. 178.
Boring, drilling, milling, and tapping machine, Horizontal. W. F. McCarty. No. 1,302,395; Apr. 29; v. 261; p. 919.
Boring-machine. F. Silbernagel. No. 1,300,663; Apr. 15; v. 261; p. 509.
Boring or drilling purposes, Jig device for. H. A. Dudgeon. No. 1,300,828; Apr. 15; v. 261; p. 545.
Boring tools, Mechanism for operating earth-. N. H. Smith. No. 1,299,803; Apr. 8; v. 261; p. 299.
Bottle. T. E. Suffolk. No. 1,301,762; Apr. 22; v. 261; p. 769.
Bottle-capping apparatus. J. C. Miller. No. 1,300,754; Apr. 15; v. 261; p. 529.
Bottle-capping machine. A. A. Carper. No. 1,299,820; Apr. 8; v. 261; p. 302.
Bottle-capping machine. C. W. Kendall. No. 1,299,355; Apr. 1; v. 261; p. 167.
Bottle caps, Tool for removing and replacing milk-. A. F. Demory. No. 1,299,690; Apr. 8; v. 261; p. 273.
Bottle, Cream-. M. Hamel. No. 1,300,607; Apr. 15; v. 261; p. 498.
Bottle guard, Poison-. F. Scott. No. 1,301,510; Apr. 22; v. 261; p. 720.
Bottle-holder. C. W. Tocknell. No. 1,301,886; Apr. 29; v. 261; p. 823.
Bottle holder, Nursing-. F. J. Friedmann and M. J. Lifshitz. No. 1,302,354; Apr. 29; v. 261; p. 911.
Bottle, Hot-water. C. F. Schuh. No. 1,301,509; Apr. 22; v. 261; p. 720.
Bottle, Non-refillable. D. Persacca. No. 1,300,713; Apr. 15; v. 261; p. 520.
Bottle, Non-refillable. F. Gudger. No. 1,300,165; Apr. 8; v. 261; p. 377.
Bottle or jar closure device. H. Moore. No. 1,300,222; Apr. 8; v. 261; p. 390.
Bottle-sealing machine. A. Callesen. No. 1,299,551; Apr. 8; v. 261; p. 240.
Bottle-stopper. L. G. Abbott. (Reissue.) No. 14,630; Apr. 8; v. 261; p. 393.
Bottle-stoppers and other articles, Machine for grinding or truing. L. N. Bruner. No. 1,301,377; Apr. 22; v. 261; p. 696.
Bottles, Air and germ proof cover for sealing. W. R. Stedman. No. 1,299,389; Apr. 1; v. 261; p. 176.
Bottles and other articles, Machine for grinding glass. L. N. Bruner. No. 1,301,376; Apr. 22; v. 261; p. 696.
Bottles or the like, Stopper for water-. H. P. Kraft. No. 1,301,711; Apr. 22; v. 261; p. 758.
Bottles, Self-locking retainer for milk-. F. N. Bechoff and M. M. Samuels. No. 1,302,125; Apr. 29; v. 261; p. 868.
Bottles, Transparent vacuum jacket for liquid dispensing. E. T. Wardell. (Reissue.) No. 14,629; Apr. 1; v. 261; p. 182.

Bow-rest and shackle, Disappearing. H. T. Nakamiso. No. 1,300,187; Apr. 8; v. 261; p. 382.
Bowls, Advertising device for finger-. J. G. Patton. No. 1,301,596; Apr. 22; v. 261; p. 735.
Box: *See*—
Annealing-box.
Casting-box.
Core-box.
Covered box.
Display-box.
Electric terminal box.
Journal-box.
Letter-box.
Mail-box.
Miter-box.
Molding-box.
Outlet-box.
Paper box.
Planting-box.
Powder-box.
Veneer berry-box.
Box. H. W. Still. No. 1,300,671; Apr. 15; v. 261; p. 511.
Box and table, Portable combined provision-. P. J. and M. E. Ackels. No. 1,301,351; Apr. 22; v. 261; p. 691.
Box-filling machine. M. Paridon. No. 1,300,762; Apr. 15; v. 261; p. 531.
Box-filling machine. M. Paridon. No. 1,300,763; Apr. 15; v. 261; p. 531.
Box-front. C. L. Whitmore. No. 1,299,645; Apr. 8; v. 261; p. 262.
Box-holding clamp. A. N. Weidenbach. No. 1,299,640; Apr. 8; v. 261; p. 261.
Box-spanner, Double-jointed or universal-jointed. E. H. Evans. No. 1,300,148; Apr. 8; v. 261; p. 374.
Boxes in rows, Apparatus for assembling. M. Paridon. No. 1,300,761; Apr. 15; v. 261; p. 530.
Boxes, Machine for making round. T. J. Clarke and A. Illy. No. 1,300,211; Apr. 8; v. 261; p. 388.
Brace: *See*—
Rail-brace.
Pulley-supporting brace.
Bracket: *See*—
Automobile-bumper bracket.
Curtain-supporting bracket.
Lamp-bracket.
Roof-bracket.
Scaffold-bracket.
Shingling-bracket.
Wall-radiator bracket.
Wheel-bracket.
Bracket. W. W. Russell. No. 1,299,234; Apr. 1; v. 261; p. 140.
Brake: *See*—
Automobile wheel-brake.
Brick-press brake.
Car-brake.
Car hand-brake.
Coaster-brake.
Electropneumatic brake.
Hand-brake.
Pneumatic brake.
Sled-brake.
Talking-machine brake.
Truck-brake.
Vehicle-brake.
Wagon-brake.
Brake. H. N. Moore. No. 1,300,634; Apr. 15; v. 261; p. 503.
Brake. C. B. Peets, O. D. and H. W. Shonnard. No. 1,300,003; Apr. 8; v. 261; p. 241.
Brake-beam. W. C. Hedgcock. No. 1,301,433; Apr. 22; v. 261; p. 705.
Brake-beam hanger. W. F. Cremean. No. 1,298,901; Apr. 1; v. 261; p. 65.
Brake-beam hanger. W. F. Cremean. No. 1,298,902; Apr. 1; v. 261; p. 65.
Brake-equalizing device. F. I. Tone. No. 1,298,831; Apr. 1; v. 261; p. 50.
Brake-head adjustment. A. H. Peycke. No. 1,299,605; Apr. 8; v. 261; p. 253.
Brake-lining. J. E. Grosjean. No. 1,301,686; Apr. 22; v. 261; p. 754.
Brake-operating mechanism. E. B. Mead. No. 1,301,290; Apr. 22; v. 261; p. 678.
Brake-operating mechanism. J. F. O'Connor. No. 1,300,466; Apr. 15; v. 261; p. 468.
Brake-pedal. J. H. Pifer. No. 1,300,768; Apr. 15; v. 261; p. 532.
Brakes, clutches, &c., Means for operating and controlling. C. S. Johnson. No. 1,298,956; Apr. 1; v. 261; p. 78.
Braking, drive-clutch, and motor-starting mechanism, Combined. J. A. Taylor. No. 1,301,018; Apr. 15; v. 261; p. 585.
Branding-machine. D. R. Campbell. No. 1,300,342; Apr. 15; v. 261; p. 442.
Brassière for nursing mothers. I. C. Epp. No. 1,300,212; Apr. 8; v. 261; p. 388.
Breather-tube and cap therefor. J. B. Fisher. No. 1,298,922; Apr. 1; v. 261; p. 70.
Brick-press brake. C. W. Wilkinson. No. 1,302,113; Apr. 29; v. 261; p. 865.
Bricks, Apparatus for making. H. W. B. Graham. No. 1,301,685; Apr. 22; v. 261; p. 754.
Bricks or building-blocks, Machine for molding perforated. J. E. Kiefer. No. 1,300,734; Apr. 15; v. 261; p. 525.
Brickmaking-machine. I. C. Frey. No. 1,301,048; Apr. 15; v. 261; p. 592.
Bridge-approach. S. H. Furry. No. 1,300,949; Apr. 15; v. 261; p. 570.
Bridge, Bascule-. T. E. Brown. No. 1,302,302; Apr. 29; v. 261; p. 901.
Broeder. J. Gilson. No. 1,300,951; Apr. 15; v. 261; p. 571.
Broeder, Chicken-. R. R. Murray. No. 1,302,411; Apr. 29; v. 261; p. 923.
Broom. C. Dal Poggetto. No. 1,300,770; Apr. 15; v. 261; p. 532.
Broom-holder. H. H. Holmes. No. 1,299,575; Apr. 8; v. 261; p. 248.
Broom-holder. H. Showalter. No. 1,299,796; Apr. 8; v. 261; p. 288.
Brooms, Adjustable handle for. J. H. Jacobs. No. 1,301,564; Apr. 22; v. 261; p. 729.
Brush. S. D. Purdy. No. 1,300,012; Apr. 8; v. 261; p. 343.
Brush, Air-. J. Berg. No. 1,299,290; Apr. 1; v. 261; p. 153.
Brush, Collapsible shaving-. B. E. J. Schwerta. No. 1,300,884; Apr. 15; v. 261; p. 556.
Brush, Commutator-. C. B. Berst. No. 1,300,239; Apr. 15; v. 261; p. 420.
Brush, Fountain shaving-. R. N. Robbins. No. 1,300,651; Apr. 15; v. 261; p. 506.
Brush-puller. W. D. Vaughan. No. 1,300,897; Apr. 15; v. 261; p. 560.
Brush, Timer-. J. H. Richards, A. J. Simon, and J. H. Haas. No. 1,300,779; Apr. 15; v. 261; p. 534.
Brush, Tooth-. W. S. Edwards. No. 1,300,937; Apr. 15; v. 261; p. 568.
Brush, Vacuum cleaning-. J. P. Quam. No. 1,301,319; Apr. 22; v. 261; p. 684.
Brushes, Applying insulated pieces to carbon. C. Y. Knight and W. N. Wilson. No. 1,298,965; Apr. 1; v. 261; p. 80.
Bucket, Canning-. V. L. Wallace. No. 1,302,253; Apr. 29; v. 261; p. 892.
Bucket, Grab-. W. E. Watters. No. 1,301,626; Apr. 22; v. 261; p. 741.
Bucket, Well-. W. S. Bowles. No. 1,299,544; Apr. 8; v. 261; p. 239.
Buckle. A. H. Kerugood. No. 1,299,734; Apr. 8; v. 261; p. 283.
Buckle. A. B. and C. E. Laisure. No. 1,299,841; Apr. 8; v. 261; p. 308.
Buckle, Rein-. W. O. Backlund. No. 1,299,285; Apr. 1; v. 261; p. 152.
Building apparatus, Mica-. L. T. Frederick. No. 1,300,370; Apr. 15; v. 261; p. 448.
Building-block for hollow-wall constructions. J. B. Paulson. No. 1,300,765; Apr. 15; v. 261; p. 532.
Building-construction anchor or tie. F. M. Ellis. No. 1,301,668; Apr. 22; v. 261; p. 749.
Building construction, Insulated-. C. J. Merrill. No. 1,300,443; Apr. 15; v. 261; p. 463.
Building-elevator. J. E. Carruthers. No. 1,299,124; Apr. 1; v. 261; p. 116.
Building material, Coating process for. H. E. White. No. 1,302,260; Apr. 29; v. 261; p. 893.
Bullet, Incendiary. L. W. Rockwell. No. 1,300,195; Apr. 8; v. 261; p. 384.
Bumper. H. Barnett. No. 1,302,279; Apr. 29; v. 261; p. 897.
Bundling-machine. E. Hatch. No. 1,300,166; Apr. 8; v. 261; p. 378.
Buoy, Bell-. W. B. Anderson. No. 1,299,101; Apr. 1; v. 261; p. 111.
Buoy, Lifting-. J. P. Burton. No. 1,299,121; Apr. 1; v. 261; p. 115.
Burglar-alarm and lock. C. J. Stroke. No. 1,299,808; Apr. 8; v. 261; p. 300.
Burglar-alarm system. S. B. Hess. No. 1,298,710; Apr. 1; v. 261; p. 21.
Burglar-trap. W. Leon. No. 1,300,981; Apr. 15; v. 261; p. 577.
Burner: *See*—
Fuel-burner.
Gas-burner.
Gas-furnace burner.
Hydrocarbon-burner.
Oil-burner.
Burner. P. D. Johnson. No. 1,300,171; Apr. 8; v. 261; p. 379.
Burnishing-machine. L. J. Van Guelpen. No. 1,300,059; Apr. 8; v. 261; p. 354.
Bush or bearing. E. E. A. Sorel. No. 1,300,501; Apr. 15; v. 261; p. 476.
Button-clasp. H. J. Stuart. No. 1,302,449; Apr. 29; v. 261; p. 931.
Button-fastener. L. C. Heller. No. 1,301,435; Apr. 22; v. 261; p. 706.
Button-making machine. F. G. Neuberth. No. 1,299,763; Apr. 8; v. 261; p. 290.
Button, Separable. A. J. Lobar. No. 1,302,390; Apr. 29; v. 261; p. 918.
Buttons, Moulting for control-. J. V. Whitbeck. No. 1,299,644; Apr. 8; v. 261; p. 262.
Buttonhole-gage. M. E. Walter. No. 1,300,900; Apr. 15; v. 261; p. 560.
Buttonhole-machine loader. H. C. Miller. No. 1,300,446; Apr. 15; v. 261; p. 464.
Cab-signal and train-control system. M. H. Loughridge. No. 1,299,595; Apr. 8; v. 261; p. 251.
Cabinet and screen, Chiropodist's. K. E. Fuller. No. 1,301,248; Apr. 22; v. 261; p. 669.
Cabinet, Bath-. I. M. Bean. No. 1,301,029; Apr. 15; v. 261; p. 588.
Cabinet boards, Counterbalancing device for wall-. E. L. Gillespie. No. 1,300,950; Apr. 15; v. 261; p. 570.
Cabinet, Grocery-. C. R. Mason and E. W. Trigg. No. 1,301,864; Apr. 29; v. 261; p. 819.
Cabinet, Sewing-. J. C. Byers. No. 1,302,805; Apr. 29; v. 261; p. 902.
Cabinet, Telephone-. W. J. Phillips. No. 1,299,506; Apr. 8; v. 261; p. 230.
Cabinet, Towel-. H. Solomon. No. 1,299,630; Apr. 8; v. 261; p. 259.

Cabinet, Type-writer. W. R. C. Rowan. No. 1,300,780; Apr. 15; v. 261; p. 535.
Cable-hanger distributer, Automatic. W. Nick. No. 1,299,213; Apr. 1; v. 261; p. 136.
Cable-splices, Junction-box for. H. G. Freeman. No. 1,300,213; Apr. 8; v. 261; p. 388.
Cable suspension. H. J. Peele. No. 1,301,496; Apr. 22; v. 261; p. 717.
Cables, Manufacture of electric. C. J. Beaver and E. A. Claremont. No. 1,298,644; Apr. 1; v. 261; p. 5.
Cables, wires, and the like upon aircraft, Device for attachment of. T. Sopwith. No. 1,299,049; Apr. 1; v. 261; p. 100.
Cadre or juggler's frame. S. N. Stewart. No. 1,299,056; Apr. 1; v. 261; p. 101.
Cafeteria-chairs, Cruet attachment for. G. F. Corby. No. 1,301,913; Apr. 29; v. 261; p. 829.
Calculating and money-paying machine. M. H. Mann and A. H. Hawley. No. 1,298,751; Apr. 1; v. 261; p. 31.
Calculating-machine. J. F. Mays. No. 1,301,073; Apr. 15; v. 261; p. 599.
Calculating-machine. A. F. Poole. No. 1,301,318; Apr. 22; v. 261; p. 684.
Calculating-machine. R. von Reppert. No. 1,302,250; Apr. 29; v. 261; p. 891.
Calendar. C. A. Kauffman. No. 1,299,354; Apr. 1, v. 261; p. 167.
Calendar. H. T. Reed. No. 1,299,029; Apr. 1; v. 261; p. 95.
Calendering-machine. J. F. Pierce. No. 1,301,599; Apr. 22; v. 261; p. 736.
Caliper, Indicating-. F. W. Horstmann. No. 1,300,837; Apr. 15; v. 261; p. 547.
Caliper, Micrometer-. E. J. Cady. No. 1,300,210; Apr. 8; v. 261; p. 387.
Call-distributing system. G. Deakin and L. Polinkowsky. No. 1,299,558; Apr. 8; v. 261; p. 242.
Call-distributing system. L. Polinkowsky. No. 1,299,606; Apr. 8; v. 261; p. 253.
Cam. W. M. Evensen. No. 1,302,024; Apr. 29; v. 261; p. 850.
Cam-follower mechanism. W. N. Marsden. No. 1,299,754; Apr. 8; v. 261; p. 288.
Camera. A. Z. Myrup. No. 1,299,992; Apr. 8; v. 261; p. 339.
Camera-actuating mechanism. H. S. Beckman. No. 1,301,358; Apr. 22; v. 261; p. 692.
Camera attachment, Time-controlled. D. Doncheff. No. 1,300,825; Apr. 15; v. 261; p. 545.
Camera distance-finder. F. C. Reynolds. No. 1,299,030; Apr. 1; v. 261; p. 96.
Camera exposing mechanism, Photographic-. H. Hess. No. 1,300,613; Apr. 15; v. 261; p. 499.
Camera, Film-. A. Brock, Jr. No. 1,300,114; Apr. 8; v. 261; p. 367.
Camera-focusing device. E. E. Webster. No. 1,302,255; Apr. 29; v. 261; p. 892.
Camera lens-holder. C. E. Akeley. No. 1,300,806; Apr. 15; v. 261; p. 540.
Camera, Motion-picture. G. R. Goergens. No. 1,299,323; Apr. 1; v. 261; p. 161.
Camera mount, Observation-. J. Frolek. No. 1,300,716; Apr. 15; v. 261; p. 521.
Camera, Moving-picture. S. M. Lawhun. No. 1,302,388; Apr. 29; v. 261; p. 918.
Camera, Photographic. J. Backer. No. 1,301,897; Apr. 29; v. 261; p. 825.
Camera, Photographic. W. J. Burrows and H. B. Lawrence. No. 1,301,815; Apr. 29; v. 261; p. 809.
Camera, Photographic. A. Dawson. No. 1,299,431; Apr. 8; v. 261; p. 213.
Camera, Photographic. W. A. Riddell. No. 1,298,791; Apr. 1; v. 261; p. 42.
Camera-shutter, Silent. A. J. Matter and F. V. Conley. No. 1,298,755; Apr. 1; v. 261; p. 32.
Camera, Two-color picture. F. W. Barnes and E. C. Allen. No. 1,298,641; Apr. 1; v. 261; p. 4.
Cameras and the like, Support for motion-picture. C. E. Akeley. No. 1,300,805; Apr. 15; v. 261; p. 540.
Cameras, Focusing device for motion-picture. H. L. Quick. No. 1,300,773; Apr. 15; v. 261; p. 533.
Cameras, Focusing-finder attachment for. F. P. Clark. No. 1,301,819; Apr. 29; v. 261; p. 810.
Camouflage system. C. H. Barkdull. No. 1,301,087; Apr. 22; v. 261; p. 637.
Can: *See*—
Garbage-can. Oil-can.
Milk-can.
Can-bodies and uniting can ends to same, Apparatus for re-forming. J. A. Gray. No. 1,299,169; Apr. 1; v. 261; p. 126.
Can cleaning and turning device. F. Pilley. No. 1,299,927; Apr. 8; v. 261; p. 326.
Can-closure. C. E. Finch. No. 1,298,683; Apr. 1; v. 261; p. 14.
Can closure, Milk-. S. Weiss. No. 1,301,205; Apr. 22; v. 261; p. 661.
Can cover, Sardine or other. A. H. Boysen. No. 1,302,297; Apr. 29; v. 261; p. 900.
Can-end-liner cutting and assembling machine. J. A. Gray. No. 1,299,170; Apr. 1; v. 261; p. 126.
Can ends, Apparatus for applying ring-liners to. A. Johnson. No. 1,299,188; Apr. 1; v. 261; p. 131.
Can-feeding device. R. O. Wilson and A. D. Sumner. No. 1,301,348; Apr. 22; v. 261; p. 690.
Can-opener. F. Hibner. No. 1,301,128; Apr. 22; v. 261; p. 645.
Can-pouring spout. J. Carmichael. No. 1,299,918; Apr. 8; v. 261; p. 323.
Cans and testing same for leaks, Removing bulges and swells from. C. E. Fenion. No. 1,301,241; Apr. 22; v. 261; p. 668.
Canning and can. F. P. McColl and W. W. Willison. No. 1,302,189; Apr. 29; v. 261; p. 880.
Canning and drying apparatus. J. A. Little and C. P. Blum. No. 1,301,280; Apr. 22; v. 261; p. 678.
Candle-holder. G. C. Aungst. No. 1,299,537; Apr. 8; v. 261; p. 237.
Candy, nuts, and the like container. A. Gartner. No. 1,301,118; Apr. 22; v. 261; p. 643.
Capsule-machine. H. J. Hubert. No. 1,302,372; Apr. 29; v. 261; p. 915.
Car and electric coupling device. C. H. Tomlinson. No. 1,300,789; Apr. 15; v. 261; p. 537.
Car body and packing same. Side-. W. S. Harley. No. 1,301,257; Apr. 22; v. 261; p. 671.
Car brake, Railway-. J. F. O'Connor. No. 1,300,458; Apr. 15; v. 261; p. 466.
Car buffing mechanism. A. C. Davidson. No. 1,301,897; Apr. 22; v. 261; p. 699.
Car, Center and side dump. J. O. Neikirk. No. 1,299,212; Apr. 1; v. 261; p. 135.
Car, Concrete. J. B. Strauss. No. 1,299,411; Apr. 1; v. 261; p. 180.
Car construction, Dump-. H. S. Hart. No. 1,300,960; Apr. 15; v. 261; p. 573.
Car construction, Hopper-dump-. H. S. Hart. No. 1,300,959; Apr. 15; v. 261; p. 573.
Car-coupling. W. Kelso. No. 1,302,056; Apr. 29; v. 261; p. 855.
Car-coupling. M. Larkins. No. 1,301,281; Apr. 22; v. 261; p. 677.
Car-door. H. D. Ehle. No. 1,299,312; Apr. 1; v. 261; p. 158.
Car-door. R. W. Monk. No. 1,298,764; Apr. 1; v. 261; p. 35.
Car door, Box-. A. E. Derbyshire. No. 1,300,130; Apr. 8; v. 261; p. 370.
Car door, Grain-. M. J. Joyce. No. 1,301,704; Apr. 22; v. 261; p. 757.
Car-door-operating device. W. and R. G. Bock. No. 1,299,420; Apr. 8; v. 261; p. 211.
Car-door safety device. A. K. Winter. No. 1,300,318; Apr. 15; v. 261; p. 437.
Car-door safety device. A. K. Winter. No. 1,300,319; Apr. 15; v. 261; p. 437.
Car door, Sheet-metal freight-. P. M. Elliott. No. 1,300,143; Apr. 8; v. 261; p. 373.
Car-door switch control. A. K. Winter. No. 1,300,320; Apr. 15; v. 261; p. 437.
Car doors, Mechanism for operating box-. H. F. Jerolaman. No. 1,301,445; Apr. 22; v. 261; p. 708.
Car draft-gear, Railway-. J. F. O'Connor. No. 1,300,469; Apr. 15; v. 261; p. 469.
Car draft-rigging, Railway-. J. F. O'Connor. No. 1,300,457; Apr. 15; v. 261; p. 466.
Car draft-rigging, Railway-. J. F. O'Connor. No. 1,302,073; Apr. 29; v. 261; p. 859.
Car, Dumb-waiter. F. Johnson. No. 1,301,569; Apr. 22; v. 261; p. 730.
Car, Dump-. H. S. Hart. No. 1,300,962; Apr. 15; v. 261; p. 573.
Car end, Vertically-corrugated sheet-metal. W. P. Murphy. No. 1,301,487; Apr. 22; v. 261; p. 716.
Car-fender. F. Fortuny. No. 1,299,319; Apr. 1; v. 261; p. 160.
Car fender, Motor-. B. H. Sills. No. 1,301,880; Apr. 29; v. 261; p. 822.
Car-fender-operating means. H. A. Bocker. No. 1,300,919; Apr. 15; v. 261; p. 564.
Car for bicycles, Side. A. X. Wiseman. No. 1,300,681; Apr. 15; v. 261; p. 513.
Car, General-service railway-. H. S. Hart. No. 1,300,958. Apr. 15; v. 261; p. 572.
Car hand-brake. J. F. O'Connor. No. 1,300,467; Apr. 15; v. 261; p. 468.
Car hand-brake, Flat-. J. F. O'Connor. No. 1,300,471; Apr. 15; v. 261; p. 469.
Car hand-brake, Railway-. C. E. Dath. No. 1,300,350; Apr. 15; v. 261; p. 443.
Car hand-brake, Railway-. W. A. Geiger. No. 1,300,376; Apr. 15; v. 261; p. 450.
Car hand-brake, Railway-. J. F. O'Connor. No. 1,300,465; Apr. 15; v. 261; p. 468.
Car hoisting and dumping apparatus. A. H. Wood. No. 1,301,208; Apr. 22; v. 261; p. 662.
Car, Hopper dump-. H. S. Hart. No. 1,300,961; Apr. 15; v. 261; p. 573.
Car or vehicle, Child's. E. P. Elsey. No. 1,302,335; Apr. 29; v. 261; p. 908.
Car, Railway-. S. A. Reeve. No. 1,300,776; Apr. 15; v. 261; p. 534.
Car, Railway-. T. N. Russell. (Reissue.) No. 14,635; Apr. 15; v. 261; p. 603.
Car-roof. W. A. Brewer and E. F. Hoppel. No. 1,302,298; Apr. 29; v. 261; p. 900.

Car-roof. W. A. Brewer and G. A. Gruendling. No. 1,302,299; Apr. 29; v. 261; p. 900.
Car-roof. G. G. Gilpin. No. 1,300,258; Apr. 15; v. 261; p. 424.
Car-roof. D. W. Hawksworth. No. 1,299,930; Apr. 8; v. 261; p. 328.
Car-roof. F. M. Whyte. No. 1,300,075; Apr. 8; v. 261; p. 357.
Car-roof. F. M. Whyte. No. 1,300,076; Apr. 8; v. 261; p. 357.
Car-roof. F. M. Whyte. No. 1,300,077; Apr. 8; v. 261; p. 357.
Car safety device, Railway-. W. V. Teters. No. 1,300,673; Apr. 15; v. 261; p. 511.
Car-seat. C. C. Taylor. No. 1,298,823; Apr. 1; v. 261; p. 48.
Car-seat back. S. A. Walker. No. 1,301,021; Apr. 15; v. 261; p. 587.
Car-seat construction. S. A. Walker. No. 1,301,019; Apr. 15; v. 261; p. 586.
Car-seat rocker mechanism. S. A. Walker. No. 1,301,020; Apr. 15; v. 261; p. 586.
Car side bearing, Railway-. J. F. O'Connor. No. 1,300,479; Apr. 15; v. 261; p. 471.
Car-step. H. B. Stratton. No. 1,301,761; Apr. 22; v. 261; p. 769.
Car-tipple. A. H. Wood. No. 1,299,527; Apr. 8; v. 261; p. 235.
Car-underframe. R. W. Burnett. No. 1,300,340; Apr. 15; v. 261; p. 441.
Car-underframing. H. C. Priebe. No. 1,302,087; Apr. 29; v. 261; p. 861.
Car-wheel journal. H. Yeager. No. 1,299,526; Apr. 8; v. 261; p. 235.
Car-window cleaner, Street-. D. C. Scott. No. 1,301,609; Apr. 22; v. 261; p. 738.
Cars and the like, Vacuum unloader for railway-. F. Girtanner. No. 1,301,427; Apr. 22; v. 261; p. 704.
Cars, Bonnet for motor-. G. B. Houston and J. A. Helman. No. 1,299,944; Apr. 8; v. 261; p. 329.
Cars, Draft-arm for railway-. C. C. Kinsman. No. 1,300,847; Apr. 15; v. 261; p. 549.
Cars, Draft-rigging for railway-. E. Gerge, Jr. No. 1,301,681; Apr. 22; v. 261; p. 752.
Cars, End structure for gondola. W. P. Murphy. No. 1,299,991; Apr. 8; v. 261; p. 339.
Cars, Friction-gear for railway-. G. A. Johnson. No. 1,301,944; Apr. 29; v. 261; p. 834.
Cars, Rein-operated means for motor-. H. B. Johnson. No. 1,300,619; Apr. 15; v. 261; p. 500.
Cars, Rein-operative control means for motor-. H. B. Johnson. No. 1,300,618; Apr. 15; v. 261; p. 500.
Cars, Running-board for box-. J. R. Schrader. No. 1,300,199; Apr. 8; v. 261; p. 285.
Cars, Sheet-metal end-wall construction for railway-. V. E. Sisson. No. 1,299,251; Apr. 1; v. 261; p. 145.
Carbazol, Purifying. J. M. Weiss. No. 1,301,796; Apr. 22; v. 261; p. 777.
Carbon-cleaner, Combination. O. J. Price. No. 1,299,609; Apr. 8; v. 261; p. 254.
Carbureter. L. V. Flechter. No. 1,302,347; Apr. 29; v. 261; p. 910.
Carbureter. L. S. Gardner. No. 1,299,454; Apr. 8; v. 261; p. 219.
Carbureter. H. A. Miller and F. M. Adamson. No. 1,301,483; Apr. 22; v. 261; p. 715.
Carbureter. E. F. Saylor. No. 1,299,622; Apr. 8; v. 261; p. 257.
Carbureter. O. L. Scott. No. 1,301,610; Apr. 22; v. 261; p. 738.
Carbureter. P. S. Tice. No. 1,300,517; Apr. 15; v. 261; p. 479.
Carbureter. R. M. Upton. No. 1,301,623; Apr. 22; v. 261; p. 740.
Carbureter. E. E. Winkley. No. 1,300,206; Apr. 8; v. 261; p. 387.
Carbureter-adjuster. W. Barbour. No. 1,299,394; Apr. 1; v. 261; p. 177.
Carbureter for internal-combustion engines. J. T. Jennings. No. 1,299,952; Apr. 8; v. 261; p. 331.
Card-controlled mechanism, Punched-. J. E. Wright. No. 1,299,090; Apr. 1; v. 261; p. 109.
Card, Rebate-. R. T. Frost. No. 1,302,150; Apr. 29; v. 261; p. 873.
Card-scorer. A. G. E. Lowman. No. 1,299,489; Apr. 8; v. 261; p. 227.
Card-sorter, Rotary. W. W. Lasker. No. 1,298,971; Apr. 1; v. 261; p. 82.
Carding-engines, Stripping apparatus for. J. W. Cook, T. E. Leigh, J. Jowett, and N. Cook. No. 1,302,012; Apr. 29; v. 261; p. 847.
Carding-machine. L. Atherton and O. Meek. No. 1,299,165; Apr. 1; v. 261; p. 112.
Carding-machine. G. M. Whitin. No. 1,302,109; Apr. 29; v. 261; p. 865.
Carline. J. A. Costello. No. 1,299,916; Apr. 8; v. 261; p. 323.
Carpet-beating rack. K. Grater. No. 1,301,430; Apr. 22; v. 261; p. 705.
Carpet-cleaner. A. Zdancewicz. No. 1,300,823; Apr. 15; v. 261; p. 438.
Carpet fastener, Stair-. J. H. Boye. No. 1,299,546; Apr. 8; v. 261; p. 220.
Carpet fastener, Stair-. C. Gray. No. 1,300,214; Apr. 8; v. 261; p. 388.
Carriage, Baby-. G. S. Shaw. No. 1,301,514; Apr. 22; v. 261; p. 721.
Carriage, Dumping-. F. Noethlich. No. 1,301,902; Apr. 29; v. 261; p. 838.
Carriage seat, Baby-. P. Silvarman. No. 1,302,444; Apr. 29; v. 261; p. 930.
Carriages, Attachment for baby-. J. Panzner and J. Pekar. No. 1,301,593; Apr. 22; v. 261; p. 735.
Carriages, Seat-rail attachment for top-. O. N. Robards. No. 1,302,223; Apr. 29; v. 261; p. 886.
Carrier: *See*—
Background-carrier. Trace-carrier.
Cartridge-carrier. Watch-carrier.
Shock and sheaf carrier.
Carton. J. D. Macdonald. No. 1,299,849; Apr. 8; v. 261; p. 309.
Cartridge-carrier. J. M. Browning. No. 1,301,810; Apr. 29; v. 261; p. 809.
Cartridges, Paper backing for film-. F. S. Tyrrell. No. 1,300,056; Apr. 8; v. 261; p. 353.
Carts, Constructing. D. A. Dusenbery. No. 1,301,410; Apr. 22; v. 261; p. 701.
Case: *See*—
Cigarette-case. Show-case.
Egg-case. Vanity-case.
Filing-appliance case.
Casing, Interchangeable transmitter-. F. Gottschalk. No. 1,300,721; Apr. 15; v. 261; p. 522.
Casing-jack. J. H. Watson. No. 1,301,769; Apr. 22; v. 261; p. 770.
Cash-recording device. W. L. Deming. No. 1,299,689; Apr. 8; v. 261; p. 272.
Cash-register. F. L. Fuller. No. 1,301,678; Apr. 22; v. 261; p. 752.
Casket and grave-vault, Combined. J. W. Freeman. No. 1,298,688; Apr. 1; v. 261; p. 15.
Casket, Burial-. C. H. Stamm. No. 1,300,667; Apr. 15; v. 261; p. 510.
Casket-handle. E. R. Sargent. No. 1,301,176; Apr. 22; v. 261; p. 655.
Caster. J. S. and E. W. Young and J. L. Schecher. No. 1,301,777; Apr. 22; v. 261; p. 773.
Caster, Furniture-. S. Laskowski. No. 1,301,139; Apr. 22; v. 261; p. 648.
Casting apparatus. J. H. Bamberg and H. H. Doehler. No. 1,301,895; Apr. 29; v. 261; p. 825.
Casting apparatus. A. G. Gutmueller. No. 1,300,723; Apr. 15; v. 261; p. 522.
Casting apparatus. J. Kralund, C. Duckworth and M. Stern. No. 1,300,739; Apr. 15; v. 261; p. 525.
Casting apparatus, Metal-. H. Talla. No. 1,302,450; Apr. 29; v. 261; p. 931.
Casting-box, Centrifugal. G. C. Clark. No. 1,300,123; Apr. 8; v. 261; p. 369.
Casting-machine. F. W. Stokes. No. 1,302,448; Apr. 29; v. 261; p. 931.
Casting reinforced-concrete vessels, Apparatus for. H. Alfsen. No. 1,301,892; Apr. 29; v. 261; p. 824.
Casting steel ingots, Apparatus for. F. J. Droege. No. 1,299,148; Apr. 1; v. 261; p. 121.
Castings, Forming and pricking sand molds for. A. E. Archer. No. 1,300,103; Apr. 8; v. 261; p. 364.
Catalysis. C. Ellis. No. 1,300,144; Apr. 8; v. 261; p. 373.
Catalysts for hydrogenation, Electrically preparing. C. Ellis. No. 1,299,565; Apr. 8; v. 261; p. 244.
Catalytic material and the saturation of fatty acids or their glycerids with hydrogen, Production of. H. J. Morrison. No. 1,299,004; Apr. 1; v. 261; p. 89.
Catalyzing material. E. Weintraub. No. 1,299,641; Apr. 8; v. 261; p. 261.
Catamenial appliance. E. Steele. No. 1,300,510; Apr. 15; v. 261; p. 478.
Catch. F. Burns. No. 1,300,570; Apr. 15; v. 261; p. 491.
Catch for jewelry, Safety-. T. F. Murphy. No. 1,300,856; Apr. 15; v. 261; p. 550.
Cattle-alining device. A. V. Rowe. No. 1,301,503; Apr. 22; v. 261; p. 719.
Cattle-guard. C. F. Hately. No. 1,299,462; Apr. 8; v. 261; p. 221.
Cellulose, Manufacture of. E. Morterud. No. 1,299,507; Apr. 8; v. 261; p. 251.
Cellulose, Treating. R. H. Clayton, J. Huebner, and H. E. Williams. No. 1,301,652; Apr. 22; v. 261; p. 746.
Cement-catching receptacle. G. E. Palmer. No. 1,300,000; Apr. 8; v. 261; p. 341.
Cement, Manufacture of quick-setting Keene's. W. Hoskins. No. 1,300,269; Apr. 15; v. 261; p. 426.
Centering-gage. R. L. Carter. No. 1,302,131; Apr. 29; v. 261; p. 869.
Centrifugal-extractor detachable cover. R. M. Smith. No. 1,299,866; Apr. 8; v. 261; p. 313.
Centrifugal machine. G. D. Grosner. No. 1,302,031; Apr. 29; v. 261; p. 851.
Ceramic-molding machine. D. W. McNeil. No. 1,302,191; Apr. 29; v. 261; p. 890.
Cereal-roaster. S. I. Bean and R. M. Bizzell. No. 1,302,123; Apr. 29; v. 261; p. 868.
Cereal-roaster. S. I. Bean and R. M. Bizzell. No. 1,302,124; Apr. 29; v. 261; p. 868.

Cervical vertebræ and the occiput, Support for correction of malpositions of. M. M. Kroetz. No. 1,301,276; Apr. 22; v. 261; p. 675.
Chain-coupling. J. C. Bascue. No. 1,299,660; Apr. 8; v. 261; p. 266.
Chain manufacture. W. R. Chillcott. No. 1,299,300; Apr. 1; v. 261; p. 156.
Chains, Cross-link fastener for non-skid. C. H. Widstrand. No. 1,300,078; Apr. 8; v. 261; p. 358.
Chair: *See*—
Baby walking-chair.
Convertible chair.
Folding chair.
High chair.
Reclining-chair.
Shoe-shining chair.
Theater-chair.
Chair. A. Givner. No. 1,301,429; Apr. 22; v. 261; p. 705.
Chair. G. M. Kim. No. 1,300,622; Apr. 15; v. 261; p. 501.
Chair. J. V. Palmer. No. 1,301,001; Apr. 15; v. 261; p. 581.
Chair and fan, Combined. E. Cattinari. No. 1,302,610; Apr. 29; v. 261; p. 847.
Chair, swing, stool, and cradle, Convertible. H. F. Krieger. No. 1,301,713; Apr. 22; v. 261; p. 759.
Chairs, couches, or the like. A. Glenister. No. 1,301,836; Apr. 29; v. 261; p. 813.
Change web-roll mechanism. S. G. Goss. No. 1,301,122; Apr. 22; v. 261; p. 644.
Charge-preheater. T. R. Billings. No. 1,301,999; Apr. 29; v. 261; p. 840.
Chart, Distance-. F. W. Bacon. No. 1,300,808; Apr. 15; v. 261; p. 541.
Chart for stringed instruments, Finger-positioning. C. D. Raff. No. 1,300,193; Apr. 8; v. 261; p. 384.
Chart for teaching. C. H. Prager. No. 1,300,871; Apr. 15; v. 261; p. 554.
Check, Discount-savings. C. W. Boll. No. 1,300,693; Apr. 15; v. 261; p. 516.
Check for vehicles, Vibration-. S. L. C. Coleman. No. 1,299,131; Apr. 1; v. 261; p. 117.
Check-protector. R. W. Branson. No. 1,298,874; Apr. 1; v. 261; p. 59.
Checkwriter. L. M. Todd, C. G. Tiefel, and A. C. La May. No. 1,299,521; Apr. 8; v. 261; p. 233.
Check-writing machine. C. G. Tiefel. No. 1,302,244; Apr. 29; v. 261; p. 890.
Checks and the like, Machine for protecting. C. H. Hasbrouck. No. 1,301,127; Apr. 22; v. 261; p. 645.
Chemical processes by electrolysis, Device for carrying out. V. Gerber. No. 1,301,832; Apr. 29; v. 261; p. 812.
Chest: *See*—
Ice-chest.
Chiropractic table. L. T. Marshall. No. 1,301,071; Apr. 15; v. 261; p. 599.
Chocolate-coating machine and the like. A. Pagliuca. No. 1,302,205; Apr. 29; v. 261; p. 883.
Chopper: *See*—
Cotton-chopper.
Chopper-head, Rotatable. H. G. Dewey. No. 1,302,015; Apr. 29; v. 261; p. 848.
Chuck, Square-hole drill-. C. F. Hathaway. No. 1,299,938; Apr. 8; v. 261; p. 328.
Chucks, Fixture for use with magnetic. S. Karasick. No. 1,301,135; Apr. 22; v. 261; p. 647.
Churn. F. Bee. No. 1,301,536; Apr. 22; v. 261; p. 724.
Cigar-bunch making machine. W. T. Green. No. 1,302,153; Apr. 29; v. 261; p. 873.
Cigar-bunching machine. J. J. McCauley. No. 1,302,396; Apr. 29; v. 261; p. 920.
Cigarette-case. G. L. Fischer. No. 1,299,162; Apr. 1; v. 261; p. 124.
Cigarette-case. H. D. Hough. No. 1,301,698; Apr. 22; v. 261; p. 756.
Cigarette-maker. C. G. Southmayd. No. 1,299,050; Apr. 1; v. 261; p. 100.
Cigarette-maker and tobacco-container. F. E. White. No. 1,300,311; Apr. 15; v. 261; p. 435.
Circuit-breaker. C. L. G. Fortescue. No. 1,300,367; Apr. 15; v. 261; p. 447.
Circuit-breaker. J. Küntziger, H. Chauvin, and F. Fontaine. No. 1,298,736; Apr. 1; v. 261; p. 27.
Circuit-closer. G. E. Hull. No. 1,298,950; Apr. 1; v. 261; p. 77.
Circuit-continuing device. H. A. Douglas. No. 1,299,147; Apr. 1; v. 261; p. 120.
Circuit-controller. G. R. Radley. No. 1,300,484; Apr. 15; v. 261; p. 472.
Circuit for pole-changers. C. J. Erickson. No. 1,299,155; Apr. 1; v. 261; p. 123.
Circuit system, Non-grounded or metallic line. R. H. Burfeind. No. 1,299,119; Apr. 1; v. 261; p. 115.
Clamp: *See*—
Bone-clamp.
Box-holding clamp.
Button-clamp.
Grinding-wheel clamp.
Lamp-supporting clamp.
Robe-holder clamp.
Screw-clamp.
Sewing-machine needle-clamp.
Splicing and seizing clamp.
Supporting-clamp.
Tire-clamp.
Tire-chain clamp.
Trolley-pole clamp.
Wire-rope clamp.
Clamp. R. B. Chute, Jr. No. 1,299,822; Apr. 8; v. 261; p. 303.
Clamp. C. Irwin. No. 1,301,702; Apr. 22; v. 261; p. 757.
Clamp. F. Petranich. No. 1,300,482; Apr. 15; v. 261; p. 471.
Clasp: *See*—
Antiskid-chain clasp.
Button-clasp.
Clay cutting and mixing machine. H. R. Straight. No. 1,301,017; Apr. 15; v. 261; p. 585.
Cleaner: *See*—
Car-window cleaner.
Carbon-cleaner.
Carpet-cleaner.
Cuspidor-cleaner.
Excavator-bucket cleaner.
Intestine-cleaner.
Suction-cleaner.
Vacuum-cleaner.
Wind-shield cleaner.
Yarn-cleaner.
Cleaning device. E. H. Harry. No. 1,299,181; Apr. 1; v. 261; p. 129.
Cleat, Deck-. H. W. Young. No. 1,299,529; Apr. 8; v. 261; p. 236.
Clevis. N. Pearson. No. 1,299,018; Apr. 1; v. 261; p. 92.
Clipper, Hair-. F. W. Krause. No. 1,301,712; Apr. 22; v. 261; p. 759.
Clock, Alarm-. G. Kern. No. 1,300,278; Apr. 15; v. 261; p. 428.
Clock and the like electric winding mechanism. E. Pons. No. 1,301,499; Apr. 22; v. 261; p. 718.
Clock, Calendar-. G. Fricano. No. 1,300,372; Apr. 15; v. 261; p. 449.
Clock, Chime-. W. E. Porter. No. 1,300,771; Apr. 15; v. 261; p. 533.
Clock, Chime-. F. Wehinger. No. 1,300,309; Apr. 15; v. 261; p. 435.
Clock for controlling mechanical devices. F. Wehinger. No. 1,299,077; Apr. 1; v. 261; p. 106.
Clock transmission mechanism. A. L. Hahl. No. 1,300,262; Apr. 15; v. 261; p. 425.
Clock winding mechanism. J. H. Boyle. No. 1,300,113; Apr. 8; v. 261; p. 366.
Clock winding mechanism. J. W. Bryce. No. 1,299,116; Apr. 1; v. 261; p. 114.
Closet: *See*—
Dry closet.
Closet-seat guard. W. S. Young. No. 1,301,779; Apr. 22; v. 261; p. 773.
Closure. A. P. Anderson. No. 1,299,651; Apr. 8; v. 261; p. 263.
Cloth from cloth-bolts, Machine for facilitating the unrolling of. N. Rubenstein. No. 1,300,655; Apr. 15; v. 261; p. 507.
Clothes follower or presser. A. L. Mull. No. 1,302,069; Apr. 29; v. 261; p. 858.
Clothes-hanger. R. V. Reynolds. No. 1,301,500; Apr. 22; v. 261; p. 718.
Clothes-hanger for doors. A. Rothery. No. 1,301,607; Apr. 22; v. 261; p. 737.
Clothes-hanging device. J. W. Johnshoy. No. 1,298,954; Apr. 1; v. 261; p. 78.
Clothes-line support. J. B. Hill. No. 1,301,263; Apr. 22; v. 261; p. 672.
Clothes-pegs, Apparatus for making. A. A. Howes. No. 1,300,614; Apr. 15; v. 261; p. 499.
Clothes-pin. J. G. Strader. No. 1,301,191; Apr. 22; v. 261; p. 658.
Clothes-pin, Metal. E. J. Baumel. No. 1,298,643; Apr. 1; v. 261; p. 5.
Clutch. P. A. Combs. No. 1,300,819; Apr. 15; v. 261; p. 543.
Clutch. F. R. Ferguson. No. 1,300,831; Apr. 15; v. 261; p. 546.
Clutch. R. D. Higginbotham. No. 1,300,965; Apr. 15; v. 261; p. 574.
Clutch. F. R. Jaeger. No. 1,300,398; Apr. 15; v. 261; p. 454.
Clutch. W. H. Lindsay. No. 1,298,975; Apr. 1; v. 261; p. 83.
Clutch. G. T. Strite. No. 1,299,258; Apr. 1; v. 261; p. 146.
Clutch. E. D. Woods. No. 1,301,530; Apr. 22; v. 261; p. 723.
Clutch-control mechanism, Transmission and automatic. C. L. Brown. No. 1,299,293; Apr. 1; v. 261; p. 154.
Clutch, Fluid-pressure. B. E. Vincent. No. 1,300,898; Apr. 15; v. 261; p. 560.
Clutch mechanism. O. W. Olsen. No. 1,299,502; Apr. 8; v. 261; p. 229.
Clutch-rim, Demountable. E. K. Baker. No. 1,299,541; Apr. 8; v. 261; p. 238.
Clutch-shifting mechanism. H. W. Eden. No. 1,299,925; Apr. 8; v. 261; p. 325.
Coal-loading machines, Gathering mechanism for. J. F. Joy. No. 1,300,620; Apr. 15; v. 261; p. 500.
Coal receiving and storing plant. C. S. Williamson. No. 1,301,630; Apr. 22; v. 261; p. 742.
Coaster-brake. F. B. Brock. No. 1,299,422; Apr. 8; v. 261; p. 211.
Coaster-brake. C. G. Kesler. No. 1,299,785; Apr. 8; v. 261; p. 283.
Coat and trousers hanger. L. R. Bullitt. No. 1,301,645; Apr. 22; v. 261; p. 745.
Coat, Rain-. Z. T. Blackman. No. 1,299,818; Apr. 8; v. 261; p. 302.
Coated articles, Machine for making. W. H. Hermsdorf. No. 1,301,559; Apr. 22; v. 261; p. 729.
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Coating-machine. W. H. Scott. No. 1,299,388; Apr. 1; v. 261; p. 175.
Cock, Drain-. J. B. Kirby. No. 1,299,490; Apr. 8; v. 261; p. 225.
Coffee-roaster. E. T. Shortt. No. 1,299,245; Apr. 1; v. 261; p. 142.
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Cohesion-machine. W. P. Seem. No. 1,300,494; Apr. 15; v. 261; p. 474.
Coil-retaining device and assembling same. J. P. Nikonow. No. 1,300,850; Apr. 15; v. 261; p. 551.
Coin-controlled delivery apparatus. B. P. Cooper. No. 1,301,391; Apr. 22; v. 261; p. 698.
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Collar and making the same. F. P. Welch. No. 1,302,258; Apr. 29; v. 261; p. 893.
Collar-fastener. W. H. Reynolds. No. 1,301,745; Apr. 22; v. 261; p. 765.
Collar for coats, Detachable fur. A. H. Sherwin. No. 1,299,244; Apr. 1; v. 261; p. 142.
Collar-holder. J. T. Steinhaugh. No. 1,299,255; Apr. 1; v. 261; p. 146.
Collar, Horse-. G. A. Johnsen. No. 1,298,732; Apr. 1; v. 261; p. 26.
Collars, Tie-holding attachment for. L. H. Taylor. No. 1,302,242; Apr. 29; v. 261; p. 890.
Color medium. C. O. Ellis. No. 1,298,917; Apr. 1; v. 261; p. 69.
Column-form. J. E. Hodges. No. 1,300,393; Apr. 15; v. 261; p. 453.
Comb. J. H. Troy. No. 1,302,247; Apr. 29; v. 261; p. 891.
Comb-decorating machine. J. Moscini. No. 1,299,852; Apr. 8; v. 261; p. 310.
Comb stop-motion. C. E. Jewett and F. Fitzgerald. No. 1,299,187; Apr. 1; v. 261; p. 130.
Combination-lock. H. J. Hick. No. 1,301,846; Apr. 29; v. 261; p. 815.
Combination-lock. G. Waterfield. No. 1,300,793; Apr. 15; v. 261; p. 537.
Composing-machine measuring mechanism. J. S. Bancroft. No. 1,300,237; Apr. 15; v. 261; p. 420.
Composite tool. J. A. Gagnon. No. 1,302,357; Apr. 29; v. 261; p. 912.
Composition and making same, Molded. J. P. A. McCoy. No. 1,299,847; Apr. 8; v. 261; p. 309.
Composition covering of structural shapes, Reinforcement for. D. H. Hayden. No. 1,300,835; Apr. 15; v. 261; p. 546.
Compressing and packing machine. C. E. McManus. No. 1,298,749; Apr. 1; v. 261; p. 30.
Compression-relieving mechanism. W. S. Harley. No. 1,301,256; Apr. 22; v. 261; p. 671.
Computing-machines, Carriage mechanism for. O. D. Johantgen. No. 1,301,942; Apr. 29; v. 261; p. 834.
Computing-machines, Register mechanism for. O. D. Johantgen. No. 1,301,943; Apr. 29; v. 261; p. 834.
Concrete ceiling and making same, Plastered. M. Y. Seaton and J. S. Harris. No. 1,300,493; Apr. 15; v. 261; p. 474.
Concrete conduits, Machine for forming. L. H. Houck. No. 1,302,370; Apr. 29; v. 261; p. 914.
Concrete construction, Interlocking reinforcing-bar for. M. C. Harris. No. 1,301,259; Apr. 22; v. 261; p. 671.
Concrete-construction support. H. Fouse. No. 1,300,154; Apr. 8; v. 261; p. 375.
Concrete-form. S. R. McKay. No. 1,299,200; Apr. 1; v. 261; p. 133.
Concrete-form. S. R. McKay. No. 1,300,435; Apr. 15; v. 261; p. 461.
Concrete-form. S. R. McKay. No. 1,300,436; Apr. 15; v. 261; p. 462.
Concrete-holl-construction form. C. E. Hubbell. No. 1,299,728; Apr. 8; v. 261; p. 282.
Concrete-joist form. H. L. Wells. No. 1,301,770; Apr. 22; v. 261; p. 771.
Concrete-mixer, Rotary. E. H. Lichtenberg. No. 1,298,748; Apr. 1; v. 261; p. 29.
Concrete posts and the like, Mold for reinforced-. H. A. Landwehr. No. 1,299,739; Apr. 8; v. 261; p. 284.
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Concrete reservoir, Reinforced-. W. Mueser. No. 1,301,154; Apr. 22; v. 261; p. 651.
Concrete silo construction form. B. Biggs. No. 1,301,264; Apr. 22; v. 261; p. 693.
Concrete-structure mold or form. E. Merrick. No. 1,301,959; Apr. 29; v. 261; p. 837.
Concrete structures, Form for. S. J. Harry and W. E. Kelly. No. 1,298,941; Apr. 1; v. 261; p. 75.
Concrete structures, Method and apparatus for providing. M. Hirschthal. No. 1,301,561; Apr. 22; v. 261; p. 729.
Concrete tank or reservoir, Reinforced-. W. Mueser. No. 1,301,155; Apr. 22; v. 261; p. 651.
Concrete work, Reinforcing-bar for. I. R. H. Cormack. No. 1,299,407; Apr. 1; v. 261; p. 180.
Condensing apparatus. G. W. Martin. No. 1,299,982; Apr. 8; v. 261; p. 337.
Condiment-dispenser. H. Weiss. No. 1,299,078; Apr. 1; v. 261; p. 106.
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Conduit, Electrical. C. W. Abbott. No. 1,299,280; Apr. 1; v. 261; p. 151.
Cone-waffle machine. H. Hempel. No. 1,300,390; Apr. 15; v. 261; p. 452.
Connecting device. R. W. Franklin. No. 1,301,417; Apr. 22; v. 261; p. 702.
Connector. S. Anthony. No. 1,298,858; Apr. 1; v. 261; p. 55.
Contactor. D. E. Gray. No. 1,299,457; Apr. 8; v. 261; p. 220.
Container. D. Guardino. No. 1,300,164; Apr. 8; v. 261; p. 377.
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Container-cover. T. W. Fitzgerald. No. 1,301,676; Apr. 22; v. 261; p. 751.
Container, Fiber. R. S. Reynolds. No. 1,299,031; Apr. 1; v. 261; p. 96.
Container label and guard. W. H. Merklee and J. H. Geraghty. No. 1,298,992; Apr. 1; v. 261; p. 87.
Container, Lock-lid. E. Wagner. No. 1,300,899; Apr. 15; v. 261; p. 560.
Container, Non-refillable. P. Bergen. No. 1,300,917; Apr. 15; v. 261; p. 564.
Container rocker-holder, Liquid-. M. Bye. No. 1,299,296; Apr. 1; v. 261; p. 155.
Containers, Device for filling end-opening. A. Bielle. No. 1,300,691; Apr. 15; v. 261; p. 516.
Containers, Forming spouted. P. H. Serio. No. 1,298,801; Apr. 1; v. 261; p. 44.
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Control system. R. E. Hellmund. No. 1,298,704; Apr. 1; v. 261; p. 19.
Control system. R. E. Hellmund. No. 1,298,706; Apr 1; v. 261; p. 20.
Control system. R. E. Hellmund. No. 1,300,387; Apr. 15; v. 261; p. 452.
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Control system. K. A. Simmon. No. 1,300,300; Apr. 15; v. 261; p. 433.
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Controller mechanism. T. S. Pekerud. No. 1,299,778; Apr. 8; v. 261; p. 294.
Controller-operating mechanism. T. S. Pekerud. No. 1,299,779; Apr. 8; v. 261; p. 294.
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Conveyer. M. U. Bernheim. No. 1,300,331; Apr. 15; v. 261; p. 439.
Conveyer. M. U. Bernheim. No. 1,300,332; Apr. 15; v. 261; p. 440.
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Conveyer-belt tightener. J. H. and A. E. Gilman. No. 1,299,701; Apr. 8; v. 261; p. 275.
Conveyer, Motor-operated adjustable. J. O. Bradney and H. Priester. No. 1,301,642; Apr. 22; v. 261; p. 744.
Conveyer safety device. G. John. No. 1,300,401; Apr. 15; v. 261; p. 454.
Conveying device. J. E. Johnson and C. H. Oslund. No. 1,300,406; Apr. 15; v. 261; p. 455.
Conveying or transporting goods, Means for. C. W. Goodyear. No. 1,299,829; Apr. 8; v. 261; p. 305.
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Cooker. A. Johnson. No. 1,302,171; Apr. 29; v. 261; p. 876.
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Cooling and conveying mechanism. W. J. Todhunter. No. 1,298,828; Apr. 1; v. 261; p. 49.
Cooling system. C. R. Sutton. No. 1,301,794; Apr. 22; v. 261; p. 776.
Copying-machine cutting device. G. D. Buck. No. 1,301,379; Apr. 22; v. 261; p. 696.
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Cork. A. R. Robertson. No. 1,301,501; Apr. 22; v. 261; p. 718.
Cork-cutting machine. J. Tyrie and A. Gregg. No. 1,300,305; Apr. 15; v. 261; p. 434.
Cork-feeding mechanism. M. Marsa. No. 1,300,441; Apr. 15; v. 261; p. 463.
Cornet and other brass instrument attachment. C. J. Magin. No. 1,301,147; Apr. 22; v. 261; p. 649.
Corset, Adjustable abdominal supporting-. B. M. Stradling and E. E. Washburn. No. 1,301,618; Apr. 22; v. 261; p. 739.
Corset-cover. B. L. Kaplan. No. 1,299,957; Apr. 8; v. 261; p. 332.
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Cot, Collapsible. I. S. Purcell. No. 1,300,872; Apr. 15; v. 261; p. 554.
Cotter-pin. C. F. Heinkel. No. 1,300,609; Apr. 15; v. 261; p. 498.
Cotter-pin puller. G. A. Berg. No. 1,302,287; Apr. 29; v. 261; p. 898.
Cotton-chopper. H. G. Dewey. No. 1,300,133; Apr. 8; v. 261; p. 370.
Cotton-picker. F. E. Johnson. No. 1,300,276; Apr. 15; v. 261; p. 428.
Cotton-picking sack. J. W. Watkins. No. 1,300,065; Apr. 8; v. 261; p. 355.
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Bicycle-coupling.
Car-coupling.
Chain-coupling.
Flexible coupling.
Hose-coupling.
Magneto-coupling.
Pipe-coupling.
Shaft-coupling.
Stovepipe-coupling.
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Coupling. F. K. Pierce. No. 1,301,737; Apr. 22; v. 261; p. 764.
Coupling. L. Wolffgram. No. 1,300,541; Apr. 15; v. 261; p. 485.
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Covering and incasing articles. B. D. Baker. No. 1,300,550; Apr. 15; v. 261; p. 487.
Crank-shaft support. I. M. Jacobs and W. Cramer. No. 1,299,950; Apr. 8; v. 261; p. 331.
Crate, Egg-. W. E. Fisher. No. 1,301,826; Apr. 29; v. 261; p. 811.
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Cream-separators, Automatic feeding device for. C. V. Carlson. No. 1,301,818; Apr. 29; v. 261; p. 810.
Crease preserver. T. J. Kister. No. 1,299,960; Apr. 8; v. 261; p. 333.
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Cultivator. J. A. Cowan. No. 1,302,317; Apr. 29; v. 261; p. 904.
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Lubricating-cup.
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Cutting device. G. Prosser. No. 1,301,875; Apr. 29; v. 261; p. 821.
Cutting-machine. C. F. Pflanze. No. 1,302,211; Apr. 29; v. 261; p. 884.
Cutting or pressing tool. G. Hutchinson. No. 1,298,951; Apr. 1; v. 261; p. 77.
Cutting-tool. A. E. Carter. No. 1,299,125; Apr. 1; v. 261; p. 116.
Cycle lubrication system, Motor-. W. S. Harley. No. 1,301,258; Apr. 22; v. 261; p. 671.
Cycle, Motor-. A. J. Purdy. No. 1,300,772; Apr. 15; v. 261; p. 533.
Cycles, Demountable driving-wheel for motor-. W. J. Noble. No. 1,301,160; Apr. 22; v. 261; p. 652.
Cylinders, Construction of water-jacketed engine-. T. C. W. Pullinger. No. 1,301,740; Apr. 22; v. 261; p. 764.
Damper-controller. C. W. Dake. No. 1,298,904; Apr. 1; v. 261; p. 66.
Damper-operating motor. E. H. White. No. 1,299,526; Apr. 8; v. 261; p. 235.
Damper-regulator. M. Matulaities. No. 1,299,755; Apr. 8; v. 261; p. 288.
Danger-signal. N. A. Arel. No. 1,300,104; Apr. 8; v. 261; p. 365.
Dehydrating apparatus. M. F. Mangelsdorff. No. 1,299,492; Apr. 8; v. 261; p. 228.
Demountable wheel. C. T. Ridgely. No. 1,298,792; Apr. 1; v. 261; p. 42.
Density-meter. C. N. Sowden. No. 1,298,810; Apr. 1; v. 261; p. 45.
Dental articulator. D. D. Campbell. No. 1,301,817; Apr. 29; v. 261; p. 810.
Dental bridges and bridge-plates, Fastening for removable. C. W. Lokey. No. 1,299,364; Apr. 1; v. 261; p. 170.
Dental bridgework. C. J. Underwood. No. 1,299,067; Apr. 1; v. 261; p. 104.
Dental cuspidor-fixture. O. H. and A. F. Pieper. No. 1,300,868; Apr. 15; v. 261; p. 553.

Dental plate. C. De-Felice. No. 1,298,673; Apr. 1; v. 261; p. 11.
Dental tool. C. H. Davis. No. 1,299,187; Apr. 1; v. 261; p. 118.
Dental tool. J. H. Shank. No. 1,300,495; Apr. 15; v. 261; p. 475.
Derailer. J. C. Gravis. No. 1,301,536; Apr. 22; v. 261; p. 728.
Desiccating-machine. J. W. Stamp. No. 1,299,254; Apr. 1; v. 261; p. 145.
Desk arrangement. J. J. Donovan. No. 1,300,934; Apr. 15; v. 261; p. 567.
Desk, Student's. J. Dierks. No. 1,301,406; Apr. 22; v. 261; p. 701.
Desks, tables, seats, or the like, Adjustable support for. F. L. Welt and W. A. Whitehouse. No. 1,300,229; Apr. 8; v. 261; p. 292.
Detachable handle. H. H. Hill. No. 1,300,836; Apr. 15; v. 261; p. 547.
Dial, Decimal. C. E. Latshaw. No. 1,301,140; Apr. 22; v. 261; p. 648.
Diamond-tool. J. S. Rose. No. 1,299,619; Apr. 8; v. 261; p. 256.
Diaphragm buffer-spring, Vestibule-. F. G. Fowler. No. 1,299,929; Apr. 8; v. 261; p. 326.
Diaphragm-mounting. H. D. Penney. No. 1,299,604; Apr 8; v. 261; p. 268.
Diary. G. H. Robichon. No. 1,299,782; Apr. 8; v. 261; p. 295.
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Die-casting apparatus. J. Kralund. No. 1,299,738; Apr. 8; v. 261; p. 283.
Die-casting machine. P. E. Gabriel. No. 1,301,788; Apr. 22; v. 261; p. 775.
Die-castings, Forming. C. Pack. No. 1,299,769; Apr. 8; v. 261; p. 292
Die-press. W. H. Sneeston. No. 1,299,046; Apr. 1; v. 261; p. 99.
Dies. C. H. Brisbin. No. 1,301,095; Apr. 22; v. 261; p. 634.
Digesting apparatus. H. D. Rankin. No. 1,300,875; Apr. 15; v. 261; p. 553.
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Peanut-digger. Tree-digger.
Potato-digger.
Direction-indicator. J. R. Rummerfield. No. 1,299,863; Apr. 8; v. 261; p. 312.
Direction-signal. H. Lieberman. No. 1,299,361; Apr. 1; v. 261; p. 169.
Directive seeding system. O. E. Buckley. No. 1,301,644; Apr. 22; v. 261; p. 744.
Dish-washer. W. Fitzgerald. No. 1,299,698; Apr. 8; v. 261; p. 274.
Dish-washing machine. G. S. Blakeslee. No. 1,299,667; Apr. 8; v. 261; p. 268.
Disinfecting device. I. N. and C. F. Latchaw. No. 1,298,972; Apr. 1; v. 261; p. 83.
Disk drill. W. Fetzer. No. 1,299,160; Apr. 1; v. 261; p. 124.
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Dispensing apparatus. T. K. Nishioka. No. 1,301,301; Apr. 22; v. 261; p. 680.
Dispensing device. O. Jaeger. No. 1,302,052; Apr. 29; v. 261; p. 855.
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Display-carton. R. R. Richardson. No. 1,301,170; Apr. 22; v. 261; p. 654.
Display device. A. Gartner. No. 1,301,117; Apr. 22; v. 261; p. 643.
Display device. A. Gartner. No. 1,301,119; Apr. 22; v. 261; p. 643.
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Ditcher, Hillside and roadside. V. T. Grabs. No. 1,299,982; Apr. 8; v. 261; p. 327.
Ditching-machine. H. I. Eaton. No. 1,300,142; Apr. 8; v. 261; p. 278.
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Dividers, Fractional. C. N. De Witt. No. 1,299,807; Apr. 1; v. 261; p. 157.
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Diving-bell. K. A. Olson. No. 1,302,422; Apr. 29; v. 261; p. 925.
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Door for elevator-shafts, Vertically-sliding. B. Wexler. No. 1,299,880; Apr. 8; v. 261; p. 317.
Door lock mechanism, Sliding-. F. E. and C. P. Howard. No. 1,301,789; Apr. 22; v. 261; p. 775.
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Door opening and closing device. A. Pierce. No. 1,301,736; Apr. 22; v. 261; p. 763.
Door operating and locking device. W. S. Ryan. No. 1,300,782; Apr. 15; v. 261; p. 535.
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Draft-gear, Spring-friction. J. R. Mitchell. No. 1,300,448; Apr. 15; v. 261; p. 464.
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Draft-rigging friction-gear. G. A. Johnson. No. 1,300,402; Apr. 15; v. 261; p. 455.
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Drain-pipe-thawing device. L. A. Brennar. No. 1,299,671; Apr. 8; v. 261; p. 269.
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Photograph and blueprint drier.
Drier. D. S. Crosby and S. E. Cullum. No. 1,300,701; Apr. 15; v. 261; p. 518.
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Rock-drill. Well-drill.
Seed and fertilizer drill.
Drill. E. L. Fogleman. No. 1,299,318; Apr. 1; v. 261; p. 160.
Drill feeding means. L. C. Bayles. No. 1,299,814; Apr. 8; v. 261; p. 301.
Drill-operating mechanism. J. O. Ackerman and J. Moe. No. 1,301,531; Apr. 22; v. 261; p. 724.
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Dusting apparatus. A. W. Guthat. No. 1,298,933; Apr. 1; v. 261; p. 73.
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Dyeing yarn and the like. W. A. Ainsworth. No. 1,299,811; Apr. 8; v. 261; p. 301.
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Dynamo-electric machine. R. E. Hellmund. No. 1,301,845; Apr. 29; v. 261; p. 815.
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Egg-tester. T. R. Austin. No. 1,301,086; Apr. 22; v. 261; p. 637.
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Electric energy, Method and means for controlling. H. W. Leonard. No. 1,298,974; Apr. 1; v. 261; p. 83.
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Electric-generator set, Turbine-driven. L. C. Loewenstein. No. 1,302,060; Apr. 29; v. 261; p. 856.
Electric-light fixtures, Making cups or casings for. W. M. Horton. No. 1,298,717; Apr. 1; v. 261; p. 22.
Electric-lighting fixture. G. J. Dormandy. No. 1,300,827; Apr. 15; v. 261; p. 545.
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Electric service and meter-testing system. J. Sachs. No. 1,301,175; Apr. 22; v. 261; p. 655.
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Electric terminal box. I. M. Cook. No. 1,302,137; Apr. 29; v. 261; p. 870.
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Electrical apparatus. R. E. Hellmund. No. 1,299,707; Apr. 1; v. 261; p. 20.
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Electrical conductors, Insulating material for. W. E. Cook. No. 1,302,013; Apr. 29; v. 261; p. 847.
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Electrical energy, Method of and means for controlling. I. Langmuir. No. 1,301,279; Apr. 22; v. 261; p. 676.
Electrical energy, System for the transformation of. D. Basch. No. 1,301,640; Apr. 22; v. 261; p. 744.
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Electrical regulation system. W. A. Turbayne. No. 1,301,622; Apr. 22; v. 261; p. 740.
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Electrically-operated time mechanism. W. S. Ryan. No. 1,301,008; Apr. 15; v. 261; p. 582.
Electrically-operated tool. J. S. Knowlson. No. 1,298,936; Apr. 1; v. 261; p. 80.
Electricity transforming and converting apparatus. H. R. Summerhayes. No. 1,301,334; Apr. 22; v. 261; p. 637.
Electrode for electric-arc welding. E. Languepin. No. 1,302,286; Apr. 29; v. 261; p. 918.
Electrolysis, Conducting. E. A. Le Sueur. No. 1,300,420; Apr. 15; v. 261; p. 458.
Electrolysis of fused electrolytes. H. C. M. Ingeberg. No. 1,299,947; Apr. 8; v. 261; p. 330.
Electrolytic baths, Handling anodes in. H. M. Stuart. No. 1,299,519; Apr. 8; v. 261; p. 233.
Electromagnetic device. C. R. Beall. No. 1,302,284; Apr. 29; v. 261; p. 897.
Electromagnetic device. G. W. Elmen. No. 1,301,412; Apr. 22; v. 261; p. 702.
Electromagnetic device. R. C. Leake. No. 1,299,965; Apr. 8; v. 261; p. 334.
Electroplating apparatus. H. O. Schuessler. No. 1,299,624; Apr. 8; v. 261; p. 257.
Electropneumatic brake. W. V. Turner. No. 1,299,269; Apr. 1; v. 261; p. 149.
Element for constructional purposes. P. Golfon. No. 1,298,927; Apr. 1; v. 261; p. 71.
Elevating fluids by compressed air. H. T. Abrams. No. 1,302,268; Apr. 29; v. 261; p. 895.
Elevator: *See*—
Building-elevator.
Grain-elevator.
Package-elevator.
Portable elevator.
Safety-elevator.
Elevator. J. A. Linn. No. 1,302,069; Apr. 29; v. 261; p. 856.
Elevator interlocking device. F. C. Holberg, Jr. No. 1,298,948; Apr. 1; v. 261; p. 76.
Elevator safety device. D. Evangelist. No. 1,301,924; Apr. 29; v. 261; p. 831.
Elevator-shaft door. B. Wexler. (Reissue.) No. 14,637; Apr. 15; v. 261; p. 602.
Embalmer's chin-rest. E. A. Brady. No. 1,299,670; Apr. 8; v. 261; p. 269.
Embossing and printing machine. R. R. Corley and R. Turner. No. 1,299,133; Apr. 1; v. 261; p. 118.
Embossing-die. C. A. Stickney. No. 1,299,518; Apr. 8; v. 261; p. 232.
Embroidering-machine. I. Diem-Beutler. No. 1,299,145; Apr. 1; v. 261; p. 120.
Embroidery-frame. T. Okihara. No. 1,302,421; Apr. 29; v. 261; p. 925.
Embroidery, Frame for the manufacture of. E. O. Trueb. No. 1,299,873; Apr. 8; v. 261; p. 315.
Embroidery-machine. W. Hueller and M. Krapp. No. 1,300,838; Apr. 15; v. 261; p. 547.
Embroidery-mount. A. Stern. No. 1,301,758; Apr. 22; v. 261; p. 768.
End closure, Front-. N. T. McKee. No. 1,301,144; Apr. 22; v. 261; p. 649.
End-gate. A. L. Nicholson. No. 1,301,299; Apr. 22; v. 261; p. 680.
Engine: *See*—
Carding-engine.
Explosive-engine.
Gas-engine.
Internal-combustion engine.
Revoluble engine.
Rotary engine.
Rotary explosive-engine.
Rotary internal-combustion engine.
Rotary steam-engine.
Steam-engine.
Traction-engine.
Engine. M. C. Cosgray. No. 1,299,554; Apr. 8; v. 261; p. 241.
Engine. M. C. Cosgray. No. 1,299,555; Apr. 8; v. 261; p. 241.
Engine. S. J. Lukasiewski. No. 1,298,744; Apr. 1; v. 261; p. 29.
Engine. L. M. Sheridan. No. 1,302,442; Apr. 29; v. 261; p. 929.
Engine-braking, Method of and apparatus for. G. B. Reed. No. 1,300,016; Apr. 8; v. 261; p. 344.
Engine-cooling means, Auxiliary. A. N. Calkins. No. 1,301,784; Apr. 22; v. 261; p. 774.
Engine cylinder and crank-case construction. C. M. Mohler. No. 1,299,804; Apr. 8; v. 261; p. 251.
Engine-decarbonizer. F. C. Stahlberg. No. 1,299,805; Apr. 8; v. 261; p. 300.
Engine governing mechanism, Steam-. A. E. Peters. No. 1,299,778; Apr. 8; v. 261; p. 293.
Engine of the rotary type, Combustion-. G. T. Williams. No. 1,298,846; Apr. 1; v. 261; p. 58.
Engine-priming device. F. L. Sheier and F. C. Schofield. No. 1,300,660; Apr. 15; v. 261; p. 506.
Engine reversing-gear, Steam-. J. R. Snyder. No. 1,302,096; Apr. 29; v. 261; p. 863.
Engine-starter. V. Bendix. No. 1,299,418; Apr. 8; v. 261; p. 210.
Engine-starter. V. Bendix. No. 1,299,419; Apr. 8; v. 261; p. 210.
Engine-starter. E. B. Huff. No. 1,300,970; Apr. 15; v. 261; p. 575.
Engine-starter. E. F. Mayers. No. 1,299,370; Apr. 1; v. 261; p. 171.
Engine-starter. C. Pohl. No. 1,302,213; Apr. 29; v. 261; p. 884.
Engine starter, Gas-. H. L. Thompson. No. 1,300,049; Apr. 8; v. 261; p. 352.
Engine-starting attachment. J. Whitcomb. No. 1,298,843; Apr. 1; v. 261; p. 53.
Engine-stop. G. H. McFeaters. No. 1,301,471; Apr. 22; v. 261; p. 713.
Engines, Apparatus for regulating the speed and power of internal-combustion. H. R. Ricardo. No. 1,301,972; Apr. 29; v. 261; p. 840.
Engines, Automatic auxiliary air-supply device for internal-combustion. E. G. Hodges. No. 1,301,054; Apr. 15; v. 261; p. 594.
Engines, Automatic liquid-injection for internal-combustion. C. E. Liebenberg. No. 1,301,463; Apr. 22; v. 261; p. 711.
Engines, Auxiliary cooling system for internal-combustion. F. Hinde and W. H. Flewell. No. 1,299,467; Apr. 8; v. 261; p. 222.
Engines, Auxiliary feeding device for internal-combustion. J. B. Bergougnoux. No. 1,299,817; Apr. 8; v. 261; p. 302.
Engines, Cam-shaft-operating means for internal-combustion. F. I. Tone. No. 1,300,518; Apr. 15; v. 261; p. 480.
Engines, Control means for intakes and exhausts of internal-combustion. R. M. Roof. No. 1,301,[illegible]97; Apr. 15; v. 261; p. 583.
Engines, Cooling device for internal-combustion. G. L. Willits. No. 1,299,889; Apr. 8; v. 261; p. 318.
Engines, Cooling internal-combustion. L. Contalen. No. 1,299,129; Apr. 1; v. 261; p. 117.
Engines, Fuel-heater for internal-combustion. E. A. Vaughan. No. 1,298,835; Apr. 1; v. 261; p. 51.
Engines, Fuel-injecting device for combustion-. G. Abrahamson. No. 1,301,211; Apr. 22; v. 261; p. 662.
Engines, Fuel-regulating means for explosion-. E. N. Case. No. 1,300,844; Apr. 15; v. 261; p. 442.
Engines, Governing device for internal-combustion. G. Roos. No. 1,299,230; Apr. 1; v. 261; p. 139.
Engines, Ignition mechanism for internal-combustion. G. F. Paldani. No. 1,299,770; Apr. 8; v. 261; p. 292.
Engines, Ignition of internal-combustion. J. G. P. Thomas. No. 1,301,985; Apr. 29; v. 261; p. 842.
Engines, Ignition apparatus for internal-combustion. R. A. Watson. No. 1,302,107; Apr. 29; v. 261; p. 864.
Engines, Liquid-fuel-supply system of internal-combustion. J. Higginson and H. Arundel. No. 1,299,941; Apr. 8; v. 261; p. 329.
Engines, Magneto for internal-combustion. R. A. Oglesby. No. 1,300,637; Apr. 15; v. 261; p. 504.
Engines, Manifold construction for explosion-. G. M. Holley. No. 1,300,395; Apr. 15; v. 261; p. 454.
Engines, Means for distributing actuating-fluid in. W. A. Woodeson. No. 1,301,025; Apr. 15; v. 261; p. 587.
Engines, Method and apparatus for igniting charge in internal-combustion. C. T. Mason. No. 1,299,592; Apr. 8; v. 261; p. 250.
Engines, Priming device for internal-combustion. W. B. Longest. No. 1,300,749; Apr. 15; v. 261; p. 527.
Engines, Spraying-nozzle for internal-combustion. C. E. H. Lloyd. No. 1,301,719; Apr. 22; v. 261; p. 760.
Engines, Starter for internal-combustion. A. H. Midgley. No. 1,301,478; Apr. 22; v. 261; p. 714.
Engines, Steam-condenser, air-cleaner, and humidifier for internal-combustion. J. D. Langdon. No. 1,301,138; Apr. 22; v. 261; p. 647.
Engines, Vaporizer device for explosive-. J. S. Wright. No. 1,299,648; Apr. 8; v. 261; p. 263.
Envelop-machine. A. Novick. No. 1,298,776; Apr. 1; v. 261; p. 38.
Envelop-openers, Rotary cutter for. J. V. Washburne. No. 1,300,792; Apr. 15; v. 261; p. 537.
Eraser and eraser-holder. T. Engstrom. No. 1,301,413; Apr. 22; v. 261; p. 702.
Eraser-reel. J. J. Du Bois. No. 1,299,921; Apr. 8; v. 261; p. 326.
Eraser structure. J. Auld. No. 1,298,639; Apr. 1; v. 261; p. 4.
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Excavating-machine. H. J. Barnhart. No. 1,301,803; Apr. 29; v. 261; p. 807.
Excavating-machine. E. A. Dewey. No. 1,299,826; Apr. 8; v. 261; p. 304.
Excavator. E. A. Denovan. No. 1,301,918; Apr. 29; v. 261; p. 829.
Excavator-bucket cleaner. T. Loken. No. 1,298,978; Apr. 1; v. 261; p. 84.

Exercising device, Finger-. W. H. Hill. No. 1,301,509; Apr. 22; v. 261; p. 729.
Exhibition device. A. Wayrich. No. 1,299,523; Apr. 8; v. 261; p. 234.
Exhibitor, Changeable. G. A. Shields. No. 1,299,795; Apr. 8; v. 261; p. 298.
Expansion-bolt. T. F. Devlin. No. 1,302,324; Apr. 29; v. 261; p. 906.
Expansion-joint. T. Drewry. No. 1,302,022; Apr. 29; v. 261; p. 849.
Explosion-engine. H. W. Thayer. No. 1,299,264; Apr. 1; v. 261; p. 147.
Explosive. W. Rintoul and E. G. Beckett. No. 1,298,793; Apr. 1; v. 261; p. 42.
Explosive and producing same. A. M. Comey. No. 1,301,105; Apr. 22; v. 261; p. 640.
Explosive compound. F. R. and J. G. Burrows. No. 1,301,646; Apr. 22; v. 261; p. 745.
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Explosive mixture. B. L. Hill and A. J. Strane. No. 1,299,942; Apr. 8; v. 261; p. 329.
Explosive-motor. R. Beckman and H. Wollesen. No. 1,301,359; Apr. 22; v. 261; p. 692.
Explosives, Preparing gelatinized propellent. F. L. Nathan, W. Rintoul, and F. Baker. No. 1,302,202; Apr. 29; v. 261; p. 882.
Extension-table. P. N. Nyhalm. No. 1,302,420; Apr. 29; v. 261; p. 925.
Extensometer. W. J. Tretch. No. 1,300,790; Apr. 15; v. 261; p. 537.
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Bolt-extractor.
Eye-protector. E. Altman. No. 1,298,636; Apr. 1; v. 261; p. 3.
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Eyeglass lens-mounting. J. R. Van Tassel. No. 1,299,068; Apr. 1; v. 261; p. 104.
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Bed-spring fabric. Self-reinforcing fabric.
Fabric. S. T. Metz. No. 1,301,865; Apr. 29; v. 261; p. 819.
Fabric covering, Machine for affixing. A Bianchi and J. Occhipinti. No. 1,302,288; Apr. 29; v. 261; p. 898.
Fabric-cutting machine. J. Appelbaum. No. 1,299,536; Apr. 8; v. 261; p. 237.
Fabrics, Making. S. T. Metz. No. 1,302,195; Apr. 29; v. 261; p. 881.
Facings, Making friction-. S. Simpson. No. 1,301,612; Apr. 22; v. 261; p. 738.
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Fan control, Electric-. G. Olson. No. 1,300,638; Apr. 15; v. 261; p. 504.
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Fastener. M. F. Carr. No. 1,300,582; Apr. 15; v. 261; p. 493.
Fastener. M. F. Carr. No. 1,300,583; Apr. 15; v. 261; p. 493.
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Fastener. M. F. Carr. No. 1,300,588; Apr. 15; v. 261; p. 494.
Fastener. E. S. Church. No. 1,298,892; Apr. 1; v. 261; p. 63.
Fastener. J. V. Woodworth. No. 1,302,263; Apr. 29; v. 261; p. 894.
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Fastening-inserting machine. G. H. Black. No. 1,301,632; Apr. 15; v. 261; p. 589.
Fastening mechanism. F. S. Carr. No. 1,300,578; Apr. 15; v. 261; p. 493.
Faucet. L. La Valley. No. 1,301,577; Apr. 22; v. 261; p. 732.
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Faucet soap-holding attachment. M. B. Coleman. No. 1,300,245; Apr. 15; v. 261; p. 422.
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Feed lubricating system, Multiple-. G. D. Pogue. No. 1,301,004; Apr. 15; v. 261; p. 582.
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Feed mechanism. F. H. Halstead. No. 1,299,716; Apr. 8; v. 261; p. 278.
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Feed-water apparatus. J. E. Muhlfeld. No. 1,301,156; Apr. 22; v. 261; p. 651.
Feed-water-heating apparatus. W. Weir. No. 1,302,257; Apr. 29; v. 261; p. 893.
Feed-water-treatment arrangement in steamships. W. Weir. No. 1,302,256; Apr. 29; v. 261; p. 892.
Feeder and exerciser, Poultry. C. Harris. No. 1,299,719; Apr. 8; v. 261; p. 279.
Feeder, Collating-. C. G. Pritchard. No. 1,300,295; Apr. 15; v. 261; p. 432.
Feeder, Combing pile-. C. E. Christophel. No. 1,301,543; Apr. 22; v. 261; p. 726.
Feeder, Poultry-. C. J. Minges. No. 1,301,587; Apr. 22; v. 261; p. 733.
Feeding and submerging device. O. Groth. No. 1,302,468; Apr. 29; v. 261; p. 934.
Feeding device, Animal-. W. C. Burrell. No. 1,301,382; Apr. 22; v. 261; p. 697.
Feeding device, Blank-. J. T. Wilmore. No. 1,300,084; Apr. 8; v. 261; p. 300.
Feeding machine, Automatic stick-. O. S. Winesburg and I. G. Palmer. No. 1,300,540; Apr. 15; v. 261; p. 484.
Feeding mechanism. C. G. Bewley. No. 1,298,647; Apr. 1; v. 261; p. 6.
Feeding rags and the like, Device for. J. S. Jacobs. No. 1,300,840; Apr. 15; v. 261; p. 548.
Feeding-receptacle. M. R. Foster. No. 1,301,416; Apr. 22; v. 261; p. 702.
Feeding receptacle, Swine-. J. R. Barnes. No. 1,301,027; Apr. 15; v. 261; p. 588.
Fender: *See*—
Foot-fender. Vehicle-fender.
Motor-car fender.
Fertilizer-distributer. F. D. Vanderbilt. No. 1,300,791; Apr. 15; v. 261; p. 537.
Fertilizer material, Continuous process of forming. V. H. and H. L. Kadish. No. 1,298,960; Apr. 1; v. 261; p. 79.
Filing appliance. H. J. Hick. No. 1,299,573; Apr. 8; v. 261; p. 245.
Filing appliance. H. J. Hick. No. 1,299,724; Apr. 8; v. 261; p. 280.
Filing appliance. H. J. Hick. No. 1,299,725; Apr. 8; v. 261; p. 281.
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Filling apparatus. F. L. Jefferies and W. Spain. No. 1,300,274; Apr. 15; v. 261; p. 427.
Filling machine. A. V. Neal. No. 1,300,758; Apr. 15; v. 261; p. 530.
Film and film-sprocket. O. J. Holmes. No. 1,299,409; Apr. 8; v. 261; p. 222.
Film-guide control. C. Uebelmesser. No. 1,300,057; Apr. 8; v. 261; p. 354.
Film-wiping apparatus. F. B. Thompson. No. 1,299,206; Apr. 1; v. 261; p. 148.
Filter-presses, Means for indicating the thickness of cake formation in. D. T. Nicholson. No. 1,299,906; Apr. 8; v. 261; p. 340.
Finishing-machine. B. F. Stowell. No. 1,301,190; Apr. 22; v. 261; p. 658.

Finishing-tool. F. Baumann. No. 1,300,825; Apr. 15; v. 261; p. 438.
Fire-alarm electric switch. G. W. De Witt. No. 1,300,134; Apr. 8; v. 261; p. 371.
Fire-door. W. H. Barry. No. 1,301,782; Apr. 22; v. 261; p. 774.
Fire-escape. J. A. Mattern. No. 1,300,752; Apr. 15; v. 261; p. 528.
Fire-escape. J. B. Patterson. No. 1,301,734; Apr. 22; v. 261; p. 763.
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Fire-escape. V. E. Wellin. No. 1,300,086; Apr. 8; v. 261; p. 360.
Fire-escape receptacle. A. L. Plush. No. 1,300,870; Apr. 15; v. 261; p. 553.
Fire-extinguisher. J. T. Harrop, Jr. No. 1,299,721; Apr. 8; v. 261; p. 279.
Fire-extinguisher. F. Praybyss. No. 1,299,610; Apr. 8; v. 261; p. 254.
Fire-extinguisher. W. G. Sanderson. No. 1,299,235; Apr. 1; v. 261; p. 140.
Fire-extinguishing apparatus, Automatic. E. R. Bredton. No. 1,299,548; Apr. 8; v. 261; p. 240.
Fire, Process of and apparatus for extinguishing. W. W. Walker. No. 1,299,272; Apr. 1; v. 261; p. 150.
Firearm-locking mechanism. T. C. Johnson. No. 1,299,189; Apr. 1; v. 261; p. 131.
Firearm protective shield, Small. J. Molvig. No. 1,301,293; Apr. 22; v. 261; p. 679.
Fish-basket or creel supporting harness. J. J. Cook. No. 1,302,312; Apr. 29; v. 261; p. 903.
Fishing-reel attachment. C. C. Keyser. No. 1,299,959; Apr. 8; v. 261; p. 333.
Fixture. L. Schepmoes. No. 1,299,042; Apr. 1; v. 261; p. 98.
Fixture, Dispensing. C. P. Winter. No. 1,302,117; Apr. 29; v. 261; p. 807.
Flag-support. B. W. Davis. No. 1,300,352; Apr. 15; v. 261; p. 444.
Flagstaff. O. L. McCormack. No. 1,302,100; Apr. 29; v. 261; p. 880.
Flask for liquids. J. Koenig. (Reissue.) No. 14,641; Apr. 29; v. 261; p. 938.
Flattening device. H. E. De Vaughn. No. 1,302,485; Apr. 29; v. 261; p. 937.
Flax and like fiber scutching. J. Williamson. No. 1,302,261; Apr. 29; v. 261; p. 893.
Flexible coupling. F. R. Blair. No. 1,302,291; Apr. 29; v. 261; p. 899.
Flexible coupling. J. R. Dunham. No. 1,298,680; Apr. 1; v. 261; p. 13.
Flexible coupling. G. A. Ungar. No. 1,302,248; Apr. 29; v. 261; p. 981.
Flexible pipe-joint. H. E. Field. No. 1,300,945; Apr. 15; v. 261; p. 570.
Float and making same. P. Mori. No. 1,299,851; Apr. 8; v. 261; p. 310.
Flood-gate. T. W. Cooper. No. 1,302,139; Apr. 29; v. 261; p. 871.
Floor-drain. F. E. Grosvold. No. 1,301,687; Apr. 22; v. 261; p. 754.
Flooring-block. W. Mastilan. No. 1,299,494; Apr. 8; v. 261; p. 228.
Flour, Treating. H. Greville. No. 1,300,604; Apr. 15; v. 261; p. 497.
Flow-meter. J. A. Shorey. No. 1,301,182; Apr. 22; v. 261; p. 656.
Flower-pot support or hanger. D. Macaw. No. 1,300,629; Apr. 15; v. 261; p. 502.
Flower-stand. W. N. Reed. No. 1,300,775; Apr. 15; v. 261; p. 534.
Fluid-control apparatus. P. T. Jackson. No. 1,301,131; Apr. 22; v. 261; p. 646.
Fluid-dispensing control. J. J. Catron. No. 1,301,385; Apr. 22; v. 261; p. 697.
Fluid-elevating means. J. Muzzy. No. 1,301,731; Apr. 22; v. 261; p. 762.
Fluid-holding tanks, Protecting-base for. C. R. Lambert. No. 1,298,968; Apr. 1; v. 261; p. 81.
Fluid-motor. J. B. Kendall. No. 1,299,477; Apr. 8; v. 261; p. 224.
Fluid-pressure apparatus. A. L. Knight. No. 1,300,281; Apr. 15; v. 261; p. 429.
Fluid-pressure brake device. W. V. Turner. No. 1,299,270; Apr. 1; v. 261; p. 149.
Fluid-pressure system. J. N. Weikly. No. 1,300,520; Apr. 15; v. 261; p. 482.
Flume-gate. W. P. Harlan. No. 1,298,930; Apr. 1; v. 261; p. 73.
Flushing apparatus. F. Schuh. No. 1,299,789; Apr. 8; v. 261; p. 296.
Flushing device. F. J. Wolff. No. 1,298,840; Apr. 1; v. 261; p. 54.
Flying-machine. J. Barto. No. 1,299,287; Apr. 1; v. 261; p. 158.
Flying-machine. H. H. Clayton. No. 1,299,895; Apr. 1; v. 261; p. 177.
Flying-machine. G. Robertson. No. 1,302,425; Apr. 29; v. 261; p. 928.
Flying-machine level. F. Teal. No. 1,299,038; Apr. 8; v. 261; p. 260.
Flying-machine safety device. F. Fugiel. No. 1,301,247; Apr. 22; v. 261; p. 669.
Focusing device. J. Kirby, Jr. No. 1,298,964; Apr. 1; v. 261; p. 80.
Folding carriage or chair, Hand-propelled. A. T. Scorey. No. 1,300,033; Apr. 8; v. 261; p. 348.
Folding chair. H. S. Applegate. No. 1,301,635; Apr. 22; v. 261; p. 742.
Folding chair. G. J. Edwards. No. 1,299,827; Apr. 8; v. 261; p. 304.
Folding chair, Adjustable. L. J. Riemenschneider. No. 1,301,877; Apr. 29; v. 216; p. 821.
Folding-machine. W. F. Lautenschlager. No. 1,301,716; Apr. 22; v. 261; p. 760.
Folding-machine. A. Novick. No. 1,298,775; Apr. 1; v. 261; p. 37.
Folding-machine guide, Job-. H. F. Schreck. No. 1,299,386; Apr. 1; v. 261; p. 175.
Folding table. F. L. Hemmer. No. 1,302,042; Apr. 29; v. 261; p. 853.
Folding table. O. M. Otte. No. 1,300,861; Apr. 15; v. 261; p. 551.
Folding table. O. M. Otte. No. 1,300,862; Apr. 15; v. 261; p. 552.
Foot-fender. R. Garvey. No. 1,301,426; Apr. 22; v. 261; p. 704.
Force-feed lubricator. J. Wilkinson. No. 1,300,796; Apr. 15; v. 261; p. 538.
Forging-machine and the like safe device. J. R. Blakeslee. No. 1,300,240; Apr. 15; v. 261; p. 420.
Fork: *See*—
Pitchfork.
Fountain: *See*—
Drinking-fountain. Soda-fountain.
Frame: *See*—
Aeroplane-frame. Quilting-frame.
Bicycle-frame. Razor-frame.
Display-frame. Screen-frame.
Embroidery-frame. Vehicle-frame.
Framed-elements mounting. E. A. Hawthorne. No. 1,299,723; Apr. 8; v. 261; p. 280.
Framing construction. D. J. Murnane. No. 1,300,757; Apr. 15; v. 261; p. 529.
Friction-gear. G. A. Johnson. No. 1,301,945; Apr. 29; v. 261; p. 835.
Friction-gear. J. F. O'Connor. No. 1,302,078; Apr. 29; v. 261; p. 859.
Fruit gatherer. R. E. Teague. No. 1,302,243; Apr. 29; v. 261; p. 890.
Fruit-jar wrench and holder. N. M. Scharnberg. No. 1,299,511; Apr. 8; v. 261; p. 231.
Fruit juices and other organic food and vegetable products, Preserving. C. A. Kern. (Reissue.) No. 14,633; Apr. 15; v. 261; p. 602.
Fruit-knife. R. H. Newman. No. 1,301,297; Apr. 22; v. 261; p. 680.
Fruit-picker. S. Heeber. No. 1,300,168; Apr. 8; v. 261; p. 378.
Fruit-sizing machine, Citrus-. O. N. Boyer. No. 1,302,002; Apr. 29; v. 261; p. 845.
Fruit-stemming machine. C. L. Hunsicker. No. 1,302,374; Apr. 29; v. 261; p. 915.
Fruits, vegetables and the like, Drier for evaporating. H. L. Shepard. No. 1,300,497; Apr. 15; v. 261; p. 475.
Fuel and making same, Infusible solidified liquid. F. E. Poulton. No. 1,299,408; Apr. 1; v. 261; p. 180.
Fuel, Automatic apparatus for distributing pulverized. W. O. Reakin. No. 1,301,168; Apr. 22; v. 261; p. 654.
Fuel burner, Liquid-. J. O. Goodwin. No. 1,302,360; Apr. 29; v. 261; p. 912.
Fuel-distributing apparatus. R. E. Jackson and B. O. Yearwood. No. 1,300,272; Apr. 15; v. 261; p. 426.
Fuel-economizer. E. B. Overshiner. No. 1,301,000; Apr. 15; v. 261; p. 581.
Fuel-feed systems, Vacuum-tank for. G. A. Arnold. No. 1,299,653; Apr. 8; v. 261; p. 264.
Fuel for power production, Use of solid. A. C. Michie and E. G. Weeks. No. 1,301,900; Apr. 29; v. 261; p. 838.
Fuel-heating system. J. V. Giesler. No. 1,300,600; Apr. 15; v. 261; p. 496.
Fuel-magazine. A. O. Strickland. No. 1,298,819; Apr. 1; v. 261; p. 47.
Funnels, Holder for straining-. P. T. Pitlick. No. 1,302,066; Apr. 29; v. 261; p. 861.
Furnace: *See*—
Blast-furnace. Hot-air furnace.
Electric furnace. Smoke-consuming furnace.
Furnace. J. Donald and T. F. Downey. No. 1,301,111; Apr. 22; v. 261; p. 641.
Furnace. J. W. Gates. No. 1,300,374; Apr. 15; v. 261; p. 449.
Furnace. C. W. Starker. No. 1,298,813; Apr. 1; v. 261; p. 46.
Furnace and transformer for use therewith, Electric. F. E. Berry. No. 1,299,664; Apr. 8; v. 261; p. 267.
Furnace-front and adapter-ring therefor. J. Reid. No. 1,300,876; Apr. 15; v. 261; p. 555.
Furnace-lining materials, Making. A. P. Meyer. No. 1,300,631; Apr. 15; v. 261; p. 503.
Furnace-regulator. G. M. Taggart. No. 1,300,788; Apr. 15; v. 261; p. 536.
Furnace water-cooled wall-support. L. S. Schmidt. No. 1,300,882; Apr. 15; v. 261; p. 556.
Furniture and automobile polish. W. H. Damon. No. 1,302,320; Apr. 29; v. 261; p. 905.

Furniture, Combination. H. C. Gydesen. No. 1,299,331; Apr. 1; v. 261; p. 162.
Furniture-leg mount. A. B. Diss. No. 1,300,136; Apr. 8; v. 261; p. 371.
Fuse device. E. O. Schweitzer and N. J. Conrad. No. 1,299,387; Apr. 1; v. 261; p. 175.
Fuse for explosive projectiles, Percussion-. A. H. Midgley. No. 1,301,481; Apr. 22; v. 261; p. 714.
Fuse for explosive projectiles, Percussion-. A. H. Midgley. No. 1,301,482; Apr. 22; v. 261; p. 715.
Fuse for high-tension electrical circuits. L. N. Crichton. No. 1,300,249; Apr. 15; v. 261; p. 422.
Fuse for projectiles. T. B. Doe. No. 1,299,308; Apr. 1; v. 261; p. 157.
Fuse for shells. A. J. Stone and L. W. Rockwell. No. 1,301,760; Apr. 22; v. 261; p. 768.
Fuse for shells, Time-. A. H. Midgley. No. 1,301,479; Apr. 22; v. 261; p. 714.
Fuse for shells, Time-. A. H. Midgley. No. 1,301,480; Apr. 22; v. 261; p. 714.
Fuse, Percussion-. J. N. Steuart. No. 1,299,054; Apr. 1; v. 261; p. 101.
Fuse-plug. D. E. Bown. No. 1,298,654; Apr. 1; v. 261; p. 7.
Fuse-plug. R. A. Schoenberg. No. 1,301,009; Apr. 15; v. 261; p. 584.
Fuse, Renewable. F. N. Conant. No. 1,299,132; Apr. 1; v. 261; p. 117.
Fuse, Safety inclosed. W. D. Ligon. No. 1,301,465; Apr. 22; v. 261; p. 711.
Fuse time-train ring, Projectile-. E. Gathmann. No. 1,301,928; Apr. 29; v. 261; p. 831.
Fuses, Indicator for cartridge-. S. W. Huff. No. 1,301,848; Apr. 29; v. 261; p. 816.
Fuses, Bonnet for cap- of railway signal-. W. A. Conley. No. 1,301,655; Apr. 22; v. 261; p. 747.
Fusible link or strut. E. F. Shipman. No. 1,302,234; Apr. 29; v. 261; p. 888.
Gaff hook and fish-rod, Combined. H. Ureck. No. 1,302,457; Apr. 29; v. 261; p. 932.
Gage: *See*—
Buttonhole-gage.
Centering-gage.
Glazier's T-square gage.
Internal gage.
Liquid-gage.
Tire-gage.
Water-gage.
Gage. W. Deuring. No. 1,301,234; Apr. 22; v. 261; p. 667.
Gallocyanin series, Manufacture of blue to greenish-blue coloring-matters of. E. Walder. No. 1,299,070; Apr. 1; v. 261; p. 104.
Galvanizing apparatus. J. P. O'Donnell. No. 1,301,590; Apr. 22; v. 261; p. 734.
Game. R. H. Ireland. No. 1,299,731; Apr. 8; v. 261; p. 282.
Game. H. Nipper. No. 1,302,203; Apr. 29; v. 261; p. 882.
Game. E. O. Thallinger. No. 1,299,520; Apr. 8; v. 261; p. 233.
Game apparatus. A. Larsen. No. 1,302,387; Apr. 29; v. 261; p. 918.
Game apparatus. O. W. Watson. No. 1,300,526; Apr. 15; v. 261; p. 481.
Game apparatus, War-. T. J. Sylvester. No. 1,299,391; Apr. 1; v. 261; p. 176.
Game, Base-ball. F. Cramer. No. 1,299,304; Apr. 1; v. 261; p. 156.
Game-board. E. S. Novak. No. 1,301,867; Apr. 29; v. 261; p. 819.
Game-board and spinner device. A. B. Wilder. No. 1,300,315; Apr. 15; v. 261; p. 436.
Game, Parlor. H. Fowler. No. 1,300,368; Apr. 15; v. 261; p. 447.
Garbage and rubbish incinerator. J. S. Brennan. No. 1,301,371; Apr. 22; v. 261; p. 695.
Garbage-can. J. A. Jones. No. 1,300,976; Apr. 15; v. 261; p. 576.
Garbage-receptacle attachment. J. A. Healy. No. 1,301,694; Apr. 22; v. 261; p. 755.
Garden implement. H. Ike. No. 1,301,442; Apr. 22; v. 261; p. 707.
Garden-tool. W. E. Bailey. No. 1,299,417; Apr. 8; v. 261; p. 210.
Garden-tool. R. C. Black and L. A. Malden. No. 1,302,290; Apr. 29; v. 261; p. 899.
Garden-tool. J. J. Fleming. No. 1,302,348; Apr. 29; v. 261; p. 910.
Garment. G. W. Pease. No. 1,301,164; Apr. 22; v. 261; p. 652.
Garment and making same, Lined. A. J. Williams. No. 1,298,845; Apr. 1; v. 261; p. 53.
Garment-fastener. J. Linhart. No. 1,301,855; Apr. 29; v. 261; p. 817.
Garment-fastening device. D. Marinsky. No. 1,301,725; Apr. 22; v. 261; p. 761.
Garment-hanger. B. Kolber. No. 1,301,709; Apr. 22; v. 261; p. 758.
Garment-hanger. H. S. Swanson. No. 1,299,390; Apr. 1; v. 261; p. 176.
Garment-hanger. H. E. Williams. No. 1,300,908; Apr. 15; v. 261; p. 562.
Garment-hanger support. L. Meyers. No. 1,300,444; Apr. 15; v. 261; p. 463.
Garment-holder. A. M. Lyckland and H. Wachenheimer. No. 1,300,852; Apr. 15; v. 261; p. 550.
Garment presser and creaser. S. Q. Stanley. No. 1,300,668; Apr. 15; v. 261; p. 510.
Garment provided with a neckband. A. J. Grynkwicz. No. 1,299,572; Apr. 8; v. 261; p. 245.
Garment-rack. F. W. Mayer. No. 1,301,957; Apr. 29; v. 261; p. 837.
Garment, Union-. G. W. Pease. No. 1,301,872; Apr. 29; v. 261; p. 820.
Garter. T. Anostopoulo. No. 1,302,454; Apr. 29; v. 261; p. 932.
Garter-package. G. A. Frost. No. 1,301,416; Apr. 22; v. 261; p. 702.
Gas-analyzing apparatus. O. Rodhe. No. 1,302,224; Apr. 29; v. 261; p. 886.
Gas and air, Delivering mixture of. G. Keith. No. 1,301,272; Apr. 22; v. 261; p. 674.
Gas and oil saving device. H. R. Scott. No. 1,299,790; Apr. 8; v. 261; p. 297.
Gas-burner. H. C. Siebert. No. 1,298,805; Apr. 1; v. 261; p. 44.
Gas-compressor. C. R. Neeson. No. 1,299,211; Apr. 1; v. 261; p. 135.
Gas-compressor. C. W. Vollmann. No. 1,301,987; Apr. 29; v. 261; p. 842.
Gas-engine. H. H. Cutler. No. 1,301,058; Apr. 22; v. 261; p. 747.
Gas-engine gasifier. J. H. Leist. No. 1,301,066; Apr. 15; v. 261; p. 597.
Gas-engine, Rotary-cylinder. R. S. Moore. (Reissue.) No. 14,625; Apr. 1; v. 261; p. 181.
Gas-furnace burner. W. W. Stevenson. No. 1,298,817; Apr. 1; v. 261; p. 47.
Gas-generating apparatus, Construction of. J. M. Morris. No. 1,302,199; Apr. 29; v. 261; p. 882.
Gas-generator. F. F. Harris. No. 1,299,935; Apr. 8; v. 261; p. 327.
Gas generator, Acetylene-. J. A. Muse. No. 1,299,209; Apr. 1; v. 261; p. 135.
Gas maker and combustion apparatus. B. E. Hadley. No. 1,300,230; Apr. 8; v. 261; p. 392.
Gas-mask. P. Wasylowick. No. 1,299,075; Apr. 1; v. 261; p. 106.
Gas-meter. E. S. Dickey. No. 1,301,041; Apr. 15; v. 261; p. 591.
Gas-producer. E. S. Huntley. No. 1,300,839; Apr. 15; v. 261; p. 547.
Gas-regulator. E. G. Lodge. No. 1,300,982; Apr. 15; v. 261; p. 577.
Gases and producing briqueting material, Apparatus for purifying. T. L. Briggs. No. 1,301,373; Apr. 22; v. 261; p. 695.
Gases and producing briqueting material, Purifying. T. L. Briggs. No. 1,301,372; Apr. 22; v. 261; p. 695.
Gases, Apparatus and method of burning combustible. M. K. Dunham. No. 1,301,044; Apr. 15; v. 261; p. 592.
Gases, Apparatus for analyzing flue-. H. M. Sharp. No. 1,299,865; Apr. 8; v. 261; p. 313.
Gases, Method and apparatus for the oxidation of combustible. E. M. Chance. No. 1,298,889; Apr. 1; v. 261; p. 62.
Gases, Treating. I. Hechenbleikner. No. 1,299,337; Apr. 1; v. 261; p. 164.
Gasifying apparatus. D. H. Jefferson. No. 1,300,170; Apr. 8; v. 261; p. 378.
Gasolene from hydrocarbon-gases, Obtaining. J. B. Garner. No. 1,299,455; Apr. 8; v. 261; p. 219.
Gasolene-engine system. R. F. Forkner. No. 1,300,714; Apr. 15; v. 261; p. 520.
Gasolene-generator. C. A. Tripp. No. 1,300,304; Apr. 15; v. 261; p. 434.
Gasolene or other tanks, Ventilating, fire-extinguishing, and steaming apparatus for. T. A. Crompton, Jr. No. 1,302,318; Apr. 29; v. 261; p. 904.
Gate: *See*—
Automatic gate.
End-gate.
Farm-gate.
Flume-gate.
Mine-gate.
Railway stock-gate.
Wagon end-gate.
Gate. T. L. Sipes. No. 1,299,250; Apr. 1; v. 261; p. 144.
Gate operating and latch means. O. Adams. No. 1,299,281; Apr. 1; v. 261; p. 152.
Gate-operating mechanism. J. C. Herrmann. No. 1,298,709; Apr. 1; v. 261; p. 20.
Gauntlet-cuff or other blanks of fabric, paper, &c., Machine for cutting. F. R. Evans. No. 1,302,340; Apr. 29; v. 261; p. 906.
Gear, Drilling-. S. J. Mathews. No. 1,300,988; Apr. 15; v. 261; p. 579.
Gear for dynamo-electric machines, Brush-. J. C. Tadman, T. L. R. Cooper, and A. A. Lyon. No. 1,298,839; Apr. 1; v. 261; p. 49.
Gear for hydraulic transmission, Control-. W. E. Magie. No. 1,299,751; Apr. 8; v. 261; p. 287.
Gear for marine propulsion, Torsion-. G. Edwards. No. 1,299,564; Apr. 8; v. 261; p. 244.
Gear for motor-cars, Differential. A. Aichele. No. 1,301,800; Apr. 29; v. 261; p. 807.
Gear having removable friction-shells, Friction-. C. B. Patch. No. 1,300,480; Apr. 15; v. 261; p. 471.
Gear, High-capacity friction-. J. F. O'Connor. No. 1,300,462; Apr. 15; v. 261; p. 467.

Gear-locking device, Worm-. L. L. Scott. No. 1,301,150; Apr. 22; v. 261; p. 656.
Gear mechanism, Reversing-. S. Bauder. No. 1,299,284; Apr. 1; v. 261; p. 152.
Gear-shift controller. W. C. Stevens. No. 1,299,257; Apr. 1; v. 261; p. 146.
Gear-shift lever-lock. C. L. Johnson. No. 1,299,954; Apr. 8; v. 261; p. 332.
Gear-shift, Mechanical. G. T. Randol. No. 1,300,874; Apr. 15; v. 261; p. 554.
Gear-shifting device. G. L. Walker. No. 1,300,676; Apr. 15; v. 261; p. 512.
Gear-shifting device. A. Weber, W. E. Leibing, and J. P. H. Jacobsen. No. 1,300,902; Apr. 15; v. 261; p. 501.
Gear-shifting mechanism. W. H. Daniel. No. 1,299,557; Apr. 8; v. 261; p. 242.
Gear, Short-turning. A. Bjerkaas. No. 1,296,650; Apr. 1; v. 261; p. 6.
Gear, Spring-. J. F. O'Connor. No. 1,300,470; Apr. 15; v. 261; p. 469.
Gears, Broaching-machine attachment for broaching teeth of large internal. M. J. Acton. No. 1,300,092; Apr. 8; v. 261; p. 362.
Gears, Cutting worm-. A. Benson. No. 1,302,126; Apr. 29; v. 261; p. 868.
Gearing, Change-speed. A. Aichele. No. 1,299,093; Apr. 1; v. 261; p. 110.
Gearing, Change-speed. A. Aichele. No. 1,299,094; Apr. 1; v. 261; p. 110.
Gearing for electric motors, Reduction-. C. A. Atherton. No. 1,300,236; Apr. 15; v. 261; p. 419.
Gearing, Power-transmission. E. W. Burgess. No. 1,301,811; Apr. 29; v. 261; p. 809.
Gearing, Worm-. B. M. Mathias. No. 1,299,593; Apr. 8; v. 261; p. 250.
Gearless differential. W. T. Snedden. No. 1,300,500; Apr. 15; v. 261; p. 476.
Generator: *See*—
Electrical generator. Gasolene-generator.
Gas-generator.
Germicide, insecticide and like gases, Apparatus for the production of. L. Durand and G. Bottin. No. 1,299,309; Apr. 1; v. 261; p. 158.
Ginning-rib. T. S. Grimes. No. 1,300,162; Apr. 8; v. 261; p. 377.
Glass, Apparatus and process for drawing. R. S. Pease. No. 1,299,019; Apr. 1; v. 261; p. 92.
Glass, Apparatus for feeding molten. W. A. Lorenz. No. 1,300,180; Apr. 8; v. 261; p. 380.
Glass, Apparatus for feeding molten. W. A. Lorenz. No. 1,300,181; Apr. 8; v. 261; p. 381.
Glass articles, Drawing hollow. O. A. Wells. No. 1,301,771; Apr. 22; v. 261; p. 771.
Glass, Casting plate-. W. L. Clause. No. 1,298,892; Apr. 1; v. 261; p. 63.
Glass-cutter holder, Sheet-. G. W. Klages. No. 1,301,950; Apr. 29; v. 261; p. 835.
Glass-cutting mechanism. G. P. MacNichol. No. 1,298,987; Apr. 1; v. 261; p. 86.
Glass, Drawing-pot for. R. L. and F. J. Frink. No. 1,302,149; Apr. 29; v. 261; p. 872.
Glass-forming machine. R. La France. No. 1,299,482; Apr. 8; v. 261; p. 225.
Glass-polishing machine. F. Cotterell. No. 1,302,316; Apr. 29; v. 261; p. 904.
Glass tubes, Method of and apparatus for forming. K. Kueppers. No. 1,301,714; Apr. 22; v. 261; p. 759.
Glass-working apparatus. P. Wecht. No. 1,300,068; Apr. 8; v. 261; p. 355.
Glassware, Apparatus for manufacturing hollow. L. N. Bruner and S. D. Olsen. No. 1,301,378; Apr. 22; v. 261; p. 696.
Glazier's T-square gage. J. Michalovitz. No. 1,298,995; Apr. 1; v. 261; p. 88.
Glove, Swimming-. W. Naruszewicz. No. 1,299,007; Apr. 1; v. 261; p. 90.
Golf-club. P. O'Hara. No. 1,299,014; Apr. 1; v. 261; p. 91.
Governor for automobiles, Maximum-speed. W. R. Voorhees. No. 1,302,251; Apr. 29; v. 261; p. 891.
Governor, Switch-. A. M. Bruss. No. 1,301,222; Apr. 22; v. 261; p. 665.
Grade-crossing signal. S. L. Neely. No. 1,299,854; Apr. 8; v. 261; p. 310.
Grade-line indicator. J. C. French. No. 1,300,371; Apr. 15; v. 261; p. 448.
Grading machine, Road-. F. A. Brusewitz. No. 1,299,907; Apr. 8; v. 261; p. 322.
Grain-binder attachment. V. E. McIntyre. No. 1,299,365; Apr. 1; v. 261; p. 170.
Grain-elevator. C. M. Lefler. No. 1,301,142; Apr. 22; v. 261; p. 648.
Grain-separator. T. O. Helgerson. No. 1,299,341; Apr. 1; v. 261; p. 165.
Grain-shocker. F. Newbauer. No. 1,299,599; Apr. 8; v. 261; p. 252.
Grain-weigher. E. Wiedinger. No. 1,300,314; Apr. 15; v. 261; p. 436.
Graining tool, Imitation-. A. J. Bull. No. 1,298,882; Apr. 1; v. 261; p. 61.
Granulating heavy semi-fluid materials, Apparatus for. J. C. MacLachlan. No. 1,301,268; Apr. 22; v. 261; p. 678.
Grapes, Treating. P. R. Welch. (Reissue.) No. 14,636; Apr. 15; v. 261; p. 603.
Graphophone reproducing device. H. R. Adams. No. 1,301,631; Apr. 22; v. 261; p. 742.
Grapple. J. H. Harshaw. No. 1,298,702; Apr. 1; v. 261; p. 19.
Grapple. F. Milne. No. 1,301,728; Apr. 22; v. 261; p. 762.
Grass-twine machines, Grass-feeding mechanism for. T. W. Jerrems. No. 1,298,730; Apr. 1; v. 261; p. 20.
Grate-bar. J. M. Hopwood. No. 1,302,368; Apr. 29; v. 261; p. 914.
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Coffin-handle.
Detachable handle.
Parcel-handle.
Saw-handle.
Tool handle.
Hanger: *See*—
Bed-spring hanger.
Brake-beam hanger.
Clothes-hanger.
Coat and trousers hanger.
Curtain hanger.
Curtain-pole hanger.
Garment-hanger.
Garment-hanger.
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Electrical water-heater.
Manifold-heater.
Oil-heater.
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Horseshoe. C. C. Ferguson. No. 1,300,944; Apr. 15; v. 261; p. 569.
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Hydrocarbons, Sulfonation of aromatic. A. Bender. No. 1,301,900; Apr. 22; v. 261; p. 693.
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Hydrostatic lubricator and valve mechanism therefor. A. C. Beckwith. No. 1,302,285; Apr. 29; v. 261; p. 898.
I-beam and rail-clamp, Combined. C. G. A. Steinheiser. No. 1,299,868; Apr. 8; v. 261; p. 314.
Ice-breaker. T. L. Prati and R. Biagini. No. 1,299,023; Apr. 1; v. 261; p. 94.
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Ice-cream, Apparatus for storing and dispensing. J. W. Kennedy. No. 1,298,962; Apr. 1; v. 261; p. 80.
Ice-cream-cone machine. S. Hoshide. No. 1,301,697; Apr. 22; v. 261; p. 756.
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Igniter. P. Brown. No. 1,300,922; Apr. 15; v. 261; p. 565.
Ignition-coil. E. P. and T. L. Lee. No. 1,299,585; Apr. 8; v. 261; p. 248.
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Ignition process, Sintering. C. W. Adams, Jr. No. 1,299,892; Apr. 8; v. 261; p. 318.
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Index cutter and printer. J. C. Pelletier and D. Rondeau. No. 1,302,083; Apr. 29; v. 261; p. 860.
Index, Visible and expansible card-. J. A. Best. No. 1,300,334; Apr. 15; v. 261; p. 440.
Indexing, Cross-referencing tab used in systems of. J. B F. Showalter. No. 1,300,662; Apr. 15; v. 261; p. 500
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Direction-indicator. Respiration-indicator.
Grade-line indicator. Zone-indicator.
Indicator. G. F. Brigden. No. 1,300,339; Apr. 15; v. 261; p. 441.
Indicator. C. J. Keller. No. 1,299,638; Apr. 8; v. 261; p. 307.
Indicator. F. G. Smith. No. 1,301,516; Apr. 22; v. 261; p. 721.
Induction apparatus, Stationary. S. E. Johannesen. No. 1,299,953; Apr. 8; v. 261; p. 332.
Induction-motor control. W. C. Korthals-Altes. No. 1,301,710; Apr. 22; v. 261; p. 758.
Induction-motor-speed control. D. C. Prince. No. 1,301,739; Apr. 22; v. 261; p. 764.
Infantry-fort. G. Roy. No. 1,299,620; Apr. 8; v. 261; p. 256.
Ingot-mold. F. M. Bangs. No. 1,302,277; Apr. 29; v. 261; p. 896.
Ink-well. M. Wyka. No. 1,300,322; Apr. 15; v. 261; p. 438.
Inkstand. F. A. Weeks. No. 1,300,528; Apr. 15; v. 261; p. 482.
Insect-destroyer. G. D. Krumlaw. No. 1,299,580; Apr. 8; v. 261; p. 247.
Insect-destroyer. D. D. Smith. No. 1,302,095; Apr. 29; v. 261; p. 862.
Insect-destroying device. A. C. Menge. No. 1,299,372; Apr. 1; v. 261; p. 171.
Inserting fastenings, Machinery for. G. Goddu. No. 1,301,120; Apr. 22; v. 261; p. 643.
Instrument-board. J. E. Genn. No. 1,300,377; Apr. 15; v. 261; p. 450.
Instrument-strings under tension, Device for maintaining. G. T. Bachman. No. 1,298,862; Apr. 1; v. 261; p. 56.
Insulated boiler. E. J. Quinn. No. 1,300,873; Apr. 15; v. 261; p. 554.
Internal-combustion engine. J. O. Almen. No. 1,300,098; Apr. 8; v. 261; p. 363.
Internal-combustion engine. G. V. Anderson. No. 1,299,895; Apr. 8; v. 261; p. 319.
Internal-combustion engine. B. M. Beach. No. 1,300,916; Apr. 15; v. 261; p. 564.
Internal-combustion engine. J. W. Beggs. No. 1,299,662; Apr. 8; v. 261; p. 267.
Internal-combustion engine. J. Bouteille. No. 1,301,807; Apr. 29; v. 261; p. 808.
Internal-combustion engine. A. P. Brush. No. 1,299,674; Apr. 8; v. 261; p. 269.
Internal-combustion engine. H. Debauge. No. 1,301,232; Apr. 22; v. 261; p. 667.
Internal-combustion engine. J. C. Dittbrenner. No. 1,302,020; Apr. 29; v. 261; p. 849.
Internal-combustion engine. K. Dougan. No. 1,299,433; Apr. 8; v. 261; p. 213.

Internal-combustion engine. K. Dougan. No. 1,299,434; Apr. 8; v. 261; p. 214.
Internal-combustion engine. C. Engel. No. 1,302,143; Apr. 29; v. 261; p. 871.
Internal-combustion engine. O. R. Galbraith. No. 1,301,420; Apr. 22; v. 261; p. 703.
Internal-combustion engine. E. J. Hall. No. 1,299,709; Apr. 8; v. 261; p. 276.
Internal-combustion engine. R. F. Platt. No. 1,299,774; Apr. 8; v. 261; p. 293.
Internal-combustion engine. E. G. Gunn and A. L. Nelson. No. 1,301,254; Apr. 22; v. 261; p. 670.
Internal-combustion engine. S. P. Howe and W. D. Kerlin. No. 1,301,441; Apr. 22; v. 261; p. 707.
Internal-combustion engine. T. A. N. Leadbetter, A. L. K. Gildchrist and W. H. Tate. No. 1,301,141; Apr. 22; v. 261; p. 648.
Internal-combustion engine and operating same. J. M. Cage. No. 1,301,036; Apr. 15; v. 261; p. 590.
Internal-combustion engine, Rotary. J. Pauly and H. Elchinger. No. 1,301,871; Apr. 29; v. 261; p. 820.
Internal-combustion engine, Two-stroke. H. J. L. M. de la Chevardière de la Grandville and A. Guéret. No. 1,301,661; Apr. 22; v. 261; p. 748.
Internal gage. C. E. Johansson. No. 1,300,841; Apr. 15; v. 261; p. 548.
Intestine-cleaner. O. Jensen. No. 1,302,054; Apr. 29; v. 261; p. 855.
Insulator. J. R. Harris. No. 1,302,158; Apr. 29; v. 261; p. 874.
Invalid-lifter. C. A. Greene. No. 1,299,933; Apr. 8; v. 261; p. 327.
Iris, Elliptic. F. E. Garbutt. No. 1,302,359; Apr. 29; v. 261; p. 912.
Iron-free alum, Preparing. F. Laist, F. F. Frick, and R. S. Oliver. No. 1,300,418; Apr. 15; v. 261; p. 458.
Iron pipe and coupling therefor, Cast-. J. T. Harnett. No. 1,299,934; Apr. 8; v. 261; p. 327.
Iron pipes *in situ*, Apparatus for cutting. R. P. Stewart. No. 1,301,759; Apr. 22; v. 261; p. 768.
Iron sheets by electrical deposition, Producing. J. H. Procter. No. 1,300,296; Apr. 15; v. 261; p. 432.
Ironing-board. E. F. Poland. No. 1,301,874; Apr. 29; v. 261; p. 821.
Ironing-board, Folding. W. N. Miller. No. 1,300,993; Apr. 15; v. 261; p. 580.
Irrigating apparatus. J. L. Pennington. No. 1,300,866; Apr. 15; v. 261; p. 552.
Isoprene, Producing. O. Graul, G. Hanschke, and F. Webel. No. 1,298,929; Apr. 1; v. 261; p. 72.
Jack: *See*—
Air lifting-jack.
Casing-jack.
Lifting-jack.
Pump-jack.
Stair-jack.
Wagon-jack.
Jack. H. D. Rey. No. 1,299,781; Apr. 8; v. 261; p. 294.
Jacquard-machine, Double-lift. E. Haning. No. 1,299,461; Apr. 8; v. 261; p. 221.
Jacquard. J. L. Patterson and L. S. Cannon. No. 1,299,771; Apr. 8; v. 261; p. 292.
Jar-closure. A. H. Kippenberg. No. 1,300,736; Apr. 15; v. 261; p. 525.
Jar-closure. T. L. Taliaferro. No. 1,300,896; Apr. 15; v. 261; p. 559.
Jar-holder. R. A. Parent. No. 1,301,309; Apr. 22; v. 261; p. 682.
Jar-lifter. J. W. Prior. No. 1,300,648; Apr. 15; v. 261; p. 506.
Jardinière-stand. P. J. Mutch. No. 1,300,635; Apr. 15; v. 261; p. 503.
Jewelry, Luminous. A. S. Johnson. No. 1,301,568; Apr. 22; v. 261; p. 730.
Joint: *See*—
Expansion-joint.
Flexible pipe-joint.
Rail-joint.
Riveted joint.
Swivel-joint.
Tool-joint.
Joint. C. Strom. No. 1,301,883; Apr. 29; v. 261; p. 823.
Journal-bearing. T. W. Kirkman. No. 1,298,734; Apr. 1; v. 261; p. 27.
Journal-box. A. C. McCord. No. 1,299,845; Apr. 8; v. 261; p. 309.
Journal-lubricating device. I. S. Downing and E. S. Pearce. No. 1,302,021; Apr. 29; v. 261; p. 849.
Keeping lids cool, Device for. F. J. Gerrard. No. 1,299,321; Apr. 1; v. 261; p. 160.
Kettle, Zinc-. J. G. Granberg. No. 1,298,692; Apr. 1; v. 261; p. 16.
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Telegraph-key.
Key-fastener. W. Sabin. No. 1,300,489; Apr. 15; v. 261; p. 473.
Key-ring holder. W. H. Mendelsohn. No. 1,302,067; Apr. 29; v. 261; p. 858.
Keyboard instrument chord-playing attachment. G. L. Reynolds. No. 1,300,878; Apr. 15; v. 261; p. 555.
Kinetoscope fire-shutter. R. J. Emory. No. 1,301,081; Apr. 15; v. 261; p. 601.
Kinetoscopes, Take-up reel for. R. J. Emory. No. 1,299,506; Apr. 8; v. 261; p. 244.
Knife: *See*—
Fruit-knife.
Gutter's-knife.
Razor-blade knife.
Knife. C. R. Grey. No. 1,299,173; Apr. 1; v. 261; p. 127.
Knife and gun, Combination. J. Farago. No. 1,298,820; Apr. 1; v. 261; p. 70.
Knife-blade switch. F. B. Adam. No. 1,299,891; Apr. 8; v. 261; p. 318.
Knitting-machine attachment. J. A. Ruth. No. 1,299,621; Apr. 8; v. 261; p. 256.
Knitting machines, Electrostatical device for circular-. C. Feig. No. 1,301,673; Apr. 22; v. 261; p. 751.
Label-advancing machine. J. E. Johnson and C. H. Oslund. No. 1,300,407; Apr. 15; v. 261; p. 455.
Label-affixer. J. J. Donovan. No. 1,302,142; Apr. 29; v. 261; p. 871.
Label-applying machine. J. R. O'Neill. No. 1,300,639; Apr. 15; v. 261; p. 504.
Label-holder advancing means. J. E. Johnson and C. H. Oslund. No. 1,300,409; Apr. 15; v. 261; p. 456.
Labeling machine. R. Knopp and J. G. Biehler. No. 1,299,194; Apr. 1; v. 261; p. 182.
Labeling-machine. H. Stake and A. P. Ekvall. No. 1,301,015; Apr. 15; v. 261; p. 585.
Lacing-stud-setting machine. A. R. Havener. No. 1,301,432; Apr. 22; v. 261; p. 705.
Ladder, Combination-. A. Sabo. No. 1,299,784; Apr. 8; v. 261; p. 295.
Ladder-foot. A. J. Lunser. No. 1,300,430; Apr. 15; v. 261; p. 460.
Ladle, Founder's. D. G. Rowell. No. 1,301,172; Apr. 22; v. 261; p. 654.
Laminated fabric. M. Scheuer. No. 1,302,473; Apr. 29; v. 261; p. 935.
Lamp. H. H. Elliott. No. 1,301,921; Apr. 29; v. 261; p. 830.
Lamp, Acetylene-. J. D. Luttrell. No. 1,302,393; Apr. 29; v. 261; p. 919.
Lamp, Automobile-. O. M. Otte. No. 1,301,162; Apr. 22; v. 261; p. 652.
Lamp, Automobile-. O. M. Otte. No. 1,301,163; Apr. 22; v. 261; p. 652.
Lamp, Battery hand-. C. F. Burgess. No. 1,299,908; Apr. 8; v. 261; p. 322.
Lamp, Battery hand-. C. F. Burgess. No. 1,299,909; Apr. 8; v. 261; p. 322.
Lamp, Battery hand-. C. F. Burgess. No. 1,299,910; Apr. 8; v. 261; p. 322.
Lamp, Battery hand-. C. F. Burgess. No. 1,299,911; Apr. 8; v. 261; p. 322.
Lamp-bracket. E. F. Bessey and W. H. Beiers. No. 1,299,899; Apr. 8; v. 261; p. 320.
Lamp, Electric. W. J. Avery. No. 1,299,538; Apr. 8; v. 261; p. 238.
Lamp, Electric. R. E. Williams. No. 1,299,888; Apr. 8; v. 261; p. 317.
Lamp-fixture. W. E. Cochran. No. 1,301,653; Apr. 22; v. 261; p. 746.
Lamp, Incandescent. W. L. Van Keuren. No. 1,301,079; Apr. 15; v. 261; p. 601.
Lamp, Magneto-electric pocket-. M. A. Pattay and E. Jaquemot. No. 1,301,595; Apr. 22; v. 261; p. 735.
Lamp-mount for projectors. T. I. Duffy. No. 1,300,360; Apr. 15; v. 261; p. 446.
Lamp, Phonograph-. F. H. Ferand. No. 1,300,363; Apr. 15; v. 261; p. 447.
Lamp-shade and similar plaited article. A. Krauss. No. 1,302,382; Apr. 29; v. 261; p. 917.
Lamp, Signal-. C. E. Archer. No. 1,301,994; Apr. 29; v. 261; p. 844.
Lamp-socket. O. Kupferman. No. 1,301,457; Apr. 22; v. 261; p. 710.
Lamp-socket. M. W. Morse. No. 1,301,152; Apr. 22; v. 261; p. 650.
Lamp-socket holder. C. E. Capito. No. 1,301,542; Apr. 22; v. 261; p. 726.
Lamp-socket, Weatherproof plural. A. C. Recker. No. 1,300,774; Apr. 15; v. 261; p. 533.
Lamp-support. P. Alwen. No. 1,299,533; Apr. 8; v. 261; p. 237.
Lamp-supporting clamp, Vehicle-. J. Berg. No. 1,300,328; Apr. 15; v. 261; p. 439.
Lamps, Socket for incandescent. O. Kupferman. No. 1,301,456; Apr. 22; v. 261; p. 710.
Lantern hook and handle, Combined. J. W. Knoblock. No. 1,301,574; Apr. 22; v. 261; p. 731.
Lantern, Portable electric. W. Grether. No. 1,301,253; Apr. 22; v. 261; p. 670.
Lap-machine. J. P. Glashower. No. 1,300,159; Apr. 8; v. 261; p. 376.
Lasting-machine. F. W. Merrick. No. 1,301,726; Apr. 22; v. 261; p. 761.
Lasts and shoes, Machine for separating. J. M. Benjamin. No. 1,299,816; Apr. 8; v. 261; p. 301.
Latch. W. H. Burk. No. 1,301,814; Apr. 29; v. 261; p. 809.
Latch and bumper, Door. E. W. Weiland. No. 1,300,530; Apr. 15; v. 261; p. 482.
Latch, Automatic door-. R. Heinemann. No. 1,301,200; Apr. 22; v. 261; p. 672.
Latch, Door-. J. J. Malone. No. 1,302,063; Apr. 29; v. 261; p. 857.
Latch, Door-. J. P. Silva. No. 1,301,326; Apr. 22; v. 261; p. 685.
Latch, Gate-. M. B. Moyer. No. 1,301,153; Apr. 22; v. 261; p. 650.
Latch, Grip-. W. R. Grotjohann and O. D. Green. No. 1,299,460; Apr. 8; v. 261; p. 220.

Latch, Hood-. J. F. White. No. 1,300,797; Apr. 15; v. 261; p. 588.
Lath-mill belter. C. C. Malcomb. No. 1,299,752; Apr. 8; v. 261; p. 287.
Lath or the like, Making plaster. J. P. Sexton. No. 1,301,513; Apr. 22; v. 261; p. 720.
Lathe-dog. M. H. Pester. No. 1,299,772; Apr. 8; v. 261; p. 293.
Lathe, Fluid-operated. H. E. Warren. No. 1,299,883; Apr. 8; v. 261; p. 317.
Lathe, Manufacturer's. A. Kramer. No. 1,298,967; Apr. 1; v. 261; p. 81.
Lathe, Milling-. A. Lane and T. More. No. 1,301,951; Apr. 29; v. 261; p. 836.
Lathe milling attachment. A. R. Neff. No. 1,299,750; Apr. 8; v. 261; p. 289.
Lathe, Relieving-. F. Müller. No. 1,299,207; Apr. 1; v. 261; p. 134.
Lathe, Relieving-. F. Müller. No. 1,299,208; Apr. 1; v. 261; p. 134.
Lathe-tool. G. W. Dover. No. 1,301,236; Apr. 22; v. 261; p. 667.
Lathe-tool. F. H. Halstead. No. 1,299,710; Apr. 8; v. 261; p. 277.
Lathe-tool. F. H. Halstead. No. 1,299,712; Apr. 8; v. 261; p. 277.
Lathe-tool, Combination. J. Waczula. No. 1,300,204; Apr. 8; v. 261; p. 386.
Lathes, Adjustable cutting-head for. S. Hough. No. 1,301,699; Apr. 22; v. 261; p. 756.
Laundry-hanger. N. Orloff. No. 1,301,494; Apr. 22; v. 261; p. 717.
Lavatory. W. E. Hinsdale. No. 1,300,268; Apr. 15; v. 261; p. 426.
Lead and the like, Extruding. J. Stratten and E. A. Claremont. No. 1,301,882; Apr. 29; v. 261; p. 822.
Lead arsenate, Making. I. P. Lihme. No. 1,302,186; Apr. 29; v. 261; p. 879.
Leather, Machine for operating upon., L. E. Topham. No. 1,301,336; Apr. 22; v. 261; p. 688.
Leather-stretching machine. J. C. Brown. No. 1,299,672; Apr. 8; v. 261; p. 269.
Leather welt-strip. G. A. Chamberlain. No. 1,299,299; Apr. 1; v. 261; p. 155.
Leg, Artificial. O. H. Erickson. No. 1,302,836; Apr. 29; v. 261; p. 908.
Leg, Artificial. E. Ernst. No. 1,302,338; Apr. 29; v. 261; p. 908.
Leg-protector. T. K. Hofto. No. 1,299,574; Apr. 8; v. 261; p. 246.
Lens-edge-grinding machine. E. M. Long. No. 1,298,979; Apr. 1; v. 261; p. 84.
Letter-box. L. W. Larson. No. 1,299,740; Apr. 8; v. 261; p. 284.
Letter-card and the like having an opening device. L. Planche. No. 1,299,021; Apr. 1; v. 261; p. 98.
Letter-opener. A Mangini. No. 1,302,398; Apr. 29; v. 261; p. 920.
Level. A. Wichertjes. No. 1,298,844; Apr. 1; v. 261; p. 53.
Level and grade-finder, Combination. B. J. Collins. No. 1,300,818; Apr. 15; v. 261; p. 543.
Level, Precision-. W. Heusser. No. 1,299,940; Apr. 8; v. 261; p. 328.
Leveling and stacking match-splints, Machine for. A. F. Ney. No. 1,299,995; Apr. 8; v. 261; p. 340.
License-number-display device. C. H. Granberg. No. 1,301,200; Apr. 22; v. 261; p. 670.
Life-preserver. H. W. Gain. No. 1,301,831; Apr. 29; v. 261; p. 812.
Life-saving appliance, Inflatable marine. D. J. Smith. No. 1,301,515; Apr. 22; v. 261; p. 721.
Lifter: *See*—
Automatic lifter.
Cuspidor-lifter.
Invalid-lifter.
Jar-lifter.
Plate-lifter.
Spring-lifter.
Valve-lifter.
Valve-spring lifter.
Lifter. L. B. Chawdick. No. 1,298,662; Apr. 1; v. 261; p. 9.
Lifting device. J. Ledan. No. 1,301,284; Apr. 22; v. 261; p. 677.
Lifting-jack. W. Clemens. No. 1,298,895; Apr. 1; v. 261; p. 62.
Lifting-jack. C. M. Jones. No. 1,298,959; Apr. 1; v. 261; p. 79.
Lifting-jack. O. G. Wee. No. 1,300,067; Apr. 8; v. 261; p. 355.
Light: *See*—
Electric-arc light.
Electric spot-light.
Guide-light.
Light-projection apparatus. O. E. Conklin and H. P. Hollnagel. No. 1,298,897; Apr. 1; v. 261; p. 177.
Light-signal. C. S. Snavely. No. 1,298,809; Apr. 1; v. 261; p. 45.
Lighting apparatus, Indirect-. G. Stubblefield. No. 1,300,202; Apr. 8; v. 261; p. 396.
Lighting-switch. F. E. Altemus. No. 1,298,854; Apr. 1; v. 261; p. 55.
Lighting unit. W. Harrison. No. 1,299,936; Apr. 8; v. 261; p. 327.
Lightning-arrester. E. O. Schweitzer and N. J. Conrad. No. 1,302,229; Apr. 29; v. 261; p. 887.
Limb, Artificial. A. Marciuko. No. 1,299,980; Apr. 8; v. 261; p. 337.
Limb, Artificial. A. K. Petron. No. 1,299,504; Apr. 8; v. 261; p. 230.
Lime-spreader. H. W. Isaman. No. 1,299,948; Apr. 8; v. 261; p. 331.
Link and shock-absorber, Combined compensating. J. F. O'Connor. No. 1,300,472; Apr. 15; v. 261; p. 469.
Link, Fusible. W. O. Teague. No. 1,300,046; Apr. 8; v. 261; p. 351.
Linter and gin rib. W. A. Ragsdale. No. 1,302,216; Apr. 29; v. 261; p. 885.
Liquid-dispensing device. F. McLaughlin. No. 1,300,183; Apr. 8; v. 261; p. 382.
Liquid-distributer, Animal-operated. W. C. Burrell. No. 1,301,904; Apr. 29; v. 261; p. 827.
Liquid-gage and temperature-indicator, Combined. W. D. Collins and G. W. H. Allen. No. 1,301,910; Apr. 29; v. 261; p. 828.
Liquid-measuring device. M. S. Levé. No. 1,299,743; Apr. 8; v. 261; p. 285.
Liquid or plastic materials, Device for dispensing. G. A. Loeben. No. 1,299,487; Apr. 8; v. 261; p. 226.
Liquid-receptacle. A. McDonald. No. 1,300,432; Apr. 15; v. 261; p. 460.
Liquid-tempering device. A. J. Davis. No. 1,298,906; Apr. 1; v. 261; p. 67.
Liquid-vending device. A. McDonald. No. 1,300,285; Apr. 15; v. 261; p. 430.
Liquids, Apparatus for evaporating or concentrating. E. Shaw. No. 1,299,793; Apr. 8; v. 261; p. 297.
Liquids or viscous substances, Tube for inclosing. J. Prevet. No. 1,300,646; Apr. 15; v. 261; p. 505.
Liquids, Separating associated. C. W. McKibben. No. 1,299,589; Apr. 8; v. 261; p. 249.
Liquids simultaneously or successively, Apparatus for the delivery of several. D. Samaia. No. 1,300,490; Apr. 15; v. 261; p. 473.
Load-compensator. W. S. Miller. No. 1,300,755; Apr. 15; v. 261; p. 529.
Loader. P. Kane. No. 1,301,706; Apr. 22; v. 261; p. 757.
Loader, Vegetable-. B. O. Cuddigan. (Reissue.) No. 14,638; Apr. 22; v. 261; p. 777.
Loading and conveying apparatus. F. Billings. No. 1,300,111; Apr. 8; v. 261; p. 366.
Lock: *See*—
Automobile-lock.
Automobile-crank lock.
Automobile-door lock.
Automobile-steering-wheel lock.
Combination-lock.
Gear-shift-lever lock.
Mail-bag lock.
Nut-lock.
Permutation-lock.
Rim-lock.
Robe-lock.
Safety switch-lock.
Sash-lock.
Spoke-lock.
Spring-lock.
Steering-wheel lock.
Valve-lock.
Window-lock.
Lock. G. Daniel and E. G. Lewis. No. 1,300,931; Apr. 15; v. 261; p. 567.
Lock. H. G. Fanning and J. B. McAdams. No. 1,300,711; Apr. 15; v. 261; p. 520.
Lock. E. P. Gangewere. No. 1,300,719; Apr. 15; v. 261; p. 521.
Lock. G. Halinka. No. 1,299,177; Apr. 1; v. 261; p. 123.
Lock. J. Kaufman. No. 1,301,451; Apr. 22; v. 261; p. 709.
Lock. C. Kemp. No. 1,300,844; Apr. 15; v. 261; p. 548.
Lock. C. Kemp. No. 1,300,845; Apr. 15; v. 261; p. 548.
Lock. J. Kohn. No. 1,299,195; Apr. 1; v. 261; p. 132.
Lock. G. Liniaud. No. 1,301,466; Apr. 22; v. 261; p. 712.
Lock. S. Lypka. No. 1,299,199; Apr. 1; v. 261; p. 133.
Lock. C. F. Raymond. No. 1,302,432; Apr. 29; v. 261; p. 927.
Lock. L. Schonwald. No. 1,301,979; Apr. 29; v. 261; p. 841.
Lock, Nut and bolt. C. M. Mendenhall. No. 1,301,958; Apr. 29; v. 261; p. 837.
Lock-nut construction. C. C. Peterson. No. 1,301,314; v. 261; p. 683.
Locking device. J. L. Crawford and J. R. Dunlap. No. 1,300,348; Apr. 15; v. 261; p. 443.
Locking nuts, Tool for. W. E. Williams. No. 1,300,207; Apr. 8; v. 261; p. 387.
Locking, signaling, and recording construction. C. C. Lamb. No. 1,302,384; Apr. 29; v. 261; p. 917.
Locomotive. R. E. Hellmund. No. 1,300,389; Apr. 15; v. 261; p. 452.
Locomotive. N. W. Storer. No. 1,302,098; Apr. 29; v. 261; p. 863.
Locomotive. N. W. Storer. No. 1,302,099; Apr. 29; v. 261; p. 863.
Locomotive brake-equipment. W. V. Turner. No. 1,299,268; Apr. 1; v. 261; p. 149.
Locomotive construction. G. M. Eaton. No. 1,300,254; Apr. 15; v. 261; p. 423.
Locomotive draft device. W. J. Bohan. No. 1,300,335; Apr. 15; v. 261; p. 440.
Locomotive, Electric. C. H. Quinn. No. 1,300,013; Apr. 8; v. 261; p. 344.
Locomotive side rod. S. S. Riegel. No. 1,300,023; Apr. 8; v. 261; p. 346.
Locomotive-tank hose connection and strainer. G. E. Heyser. No. 1,299,466; Apr. 8; v. 261; p. 222.

Loom. A. E. Chernack. No. 1,300,121; Apr. 8; v. 261; p. 368.
Loom for weaving and cutting pile fabrics. A. Veluard. No. 1,300,306; Apr. 15; v. 261; p. 434.
Loom lug-stick. S. D. Eubanks. No. 1,300,147; Apr. 8; v. 261; p. 374.
Loom picking mechanism. A. Newton-Smith. No. 1,301,298; Apr. 22; v. 261; p. 680.
Loom, Pile-fabric. H. J. Hope. No. 1,298,949; Apr. 1; v. 261; p. 77.
Loom-shuttle. A. Archer. No. 1,300,102; Apr. 8; v. 261; p. 364.
Loom weft-feeler mechanism. S. S. Jackson. No. 1,300,971; Apr. 15; v. 261; p. 575.
Loom weft-feeler mechanism. S. S. Jackson. No. 1,301,082; Apr. 15; v. 261; p. 601.
Looms, Batten structure for narrow-ware. F. Benz, Jr. No. 1,301,900; Apr. 29; v. 261; p. 826.
Looms, Feeler mechanism for automatic. U. Hebert. No. 1,302,039; Apr. 29; v. 261; p. 852.
Looms, Mechanism for automatically changing shuttles in. M. Auerbach. No. 1,298,860; Apr. 1; v. 261; p. 56.
Looms, Weft-thread-controlled electrically-actuated auxiliary mechanism for. C. D. Lanning. No. 1,301,280; Apr. 22; v. 261; p. 676.
Low-pressure alarm. W. E. Voss. No. 1,300,523; Apr. 15; v. 261; p. 481.
Lubricating-cup. T. W. Burr. No. 1,302,006; Apr. 29; v. 261; p. 846.
Lubricating mechanism. W. M. Templeton. No. 1,299,060; Apr. 1; v. 261; p. 102.
Lubricator: *See*—
Force-feed lubricator.
Lubricator. M. A. Erutson. No. 1,300,941; Apr. 15; v. 261; p. 569.
Lubricator. J. F. MacIndoe. No. 1,300,751; Apr. 15; v. 261; p. 528.
Luminous hair-line. C. Friedrich. No. 1,302,353; Apr. 29; v. 261; p. 911.
Macaroni and like food product. M. L. Bouchet. No. 1,299,819; Apr. 8; v. 261; p. 302.
Macaroni, Drying. K. Gammel. No. 1,300,718; Apr. 15; v. 261; p. 521.
Machine-tool. S. H. Keefer. No. 1,299,192; Apr. 1; v. 261; p. 131.
Magnesium carbonate, Producing. B. B. Grunwald. No. 1,298,932; Apr. 1; v. 261; p. 73.
Magnesium chlorid, Preparation of anhydrous. C. C. Wallace. No. 1,301,766; Apr. 22; v. 261; p. 770.
Magnetic device. C. O. Harrington. No. 1,298,701; Apr. 1; v. 261; p. 19.
Magneto-coupling. R. H. Pierce. No. 1,301,002; Apr. 15; v. 261; p. 582.
Mail-bag lock. R. C. Rice. No. 1,301,876; Apr. 29; v. 261; p. 821.
Mail-box. W. F. Koleta. No. 1,299,737; Apr. 8; v. 261; p. 283.
Mail-box support. W. M. Hoag. No. 1,299,343; Apr. 1; v. 261; p. 105.
Mail-catcher. C. Pettigrew. No. 1,300,005; Apr. 8; v. 261; p. 342.
Mail-crane. E. E. Gibson. No. 1,301,682; Apr. 22; v. 261; p. 753.
Mail-deliverer. J. Stanley. No. 1,299,867; Apr. 8; v. 261; p. 313.
Mandolin-tailpiece. W. I. Kirk. No 1,301,050; Apr. 15; v. 261; p. 595.
Manifold heater. S. G. and P. G. Foster. No. 1,302,349; Apr. 29; v. 261; p. 910
Marble-shooter. G. C. Kennedy. No. 1,302,378; Apr. 29; v. 261; p. 916
Marking various articles, Machine for. W. Neuswanger. No. 1,301,676; Apr. 15; v. 261; p. 609.
Marmite. G. W. Ferdon. No. 1,300,712; Apr. 15; v. 261; p. 520.
Massage-vibrator. G. W. Moore. No. 1,301,866; Apr. 29; v. 261; p. 819
Match-igniting device. J. E. Neahr. No. 1,301,158; Apr. 22; v. 261; p. 651.
Matches in order to render them immune to the action of moisture, Treating. F. Johnston. No. 1,301,448; Apr. 22; v. 261; p. 708.
Matrix-drying press. W. H. Walton and H. D. Tappan. No. 1,301,888; Apr. 29; v. 261; p. 824.
Matrix for strip material. W. R. Cozatt. No. 1,298,900; Apr. 1; v. 261; p. 65.
Matrix-machine. J. C. McFarland. No. 1,299,749; Apr. 8; v. 261; p. 286.
Mattress-roll-forming machine. J. W. Droll. No. 1,300,139; Apr. 8; v. 261; p. 372.
Mattress-roll-forming machine. J. W. Droll. No. 1,300,140; Apr. 8; v. 261; p. 372.
Mattress-tufting apparatus. W. H. A. Williams. No. 1,298,847; Apr. 1; v. 261; p. 53.
Mausoleum-crypt. G. C. Kennedy. No. 1,300,173; Apr. 8; v. 261; p. 379.
Measure, Oil and gasolene. E. R. Frank. No. 1,301,677; Apr. 22; v. 261; p. 752.
Measuring and dispensing device. C. E. Moore. No. 1,299,001; Apr. 1; v. 261; p. 89.
Measuring device. E. B. Cade. No. 1,300,116; Apr. 8; v. 261; p. 367.
Measuring device. J. Slepian. No. 1,299,252; Apr. 1; v. 261; p. 143.
Measuring device, Liquid-. C. E. Steere. No. 1,298,814; Apr. 1; v. 261; p. 46.
Measuring-faucet, Sanitary. A. Ballard. No. 1,302,276; Apr. 29; v. 261; p. 896.
Measuring instrument. P. M. Lincoln and B. H. Smith. No. 1,300,283; Apr. 15; v. 261; p. 429.
Measuring instrument. S. C. MacDowney. No. 1,299,978; Apr. 8; v. 261; p. 336.
Measuring instrument. H. V. S. Taylor. No. 1,300,513; Apr. 15; v. 261; p. 478.
Measuring instrument, Electrical. J. R. Knight. No. 1,299,736; Apr. 8; v. 261; p. 283.
Measuring machine, Grain-. P. J. Powers. No. 1,299,861; Apr. 8; v. 261; p. 312.
Measuring the rate of flow of aqueous fluids. E. G. Bailey. No. 1,299,540; Apr. 8; v. 261; p. 238.
Measuring the rate of flow of fluids, Apparatus for. E. G. Bailey. No. 1,299,539; Apr. 8; v. 261; p. 238.
Meat-saw, Power-driven. E. E. Ehrlich. No. 1,302,333; Apr. 29; v. 261; p. 907.
Mechanical movement. A. C. Lindgren. No. 1,301,854; Apr. 29; v. 261; p. 817.
Mechanical movement. S. T. White. No. 1,300,312; Apr. 15; v. 261; p. 436.
Mechanical movement and device. C. F. Hover. No. 1,299,184; Apr. 1; v. 261; p. 130.
Mechanical movement and printing-press involving same. W. K. Hodgman, Jr. No. 1,302,366; Apr. 29; v. 261; p. 913.
Medicinal articles and products thereof, Preparing. E. Zueblin. No. 1,301,210; Apr. 22; v. 261; p. 662.
Mercury oxid, Manufacture of. E. Kuhn. No. 1,299,581; Apr. 8; v. 261; p. 247.
Merry-go-round. J. C. Turner. No. 1,300,674; Apr. 15; v. 261; p. 511.
Metal and its manufacture. A. Pacz. No. 1,299,017; Apr. 1; v. 261; p. 92.
Metal article, Wrought-. E. Haynes. No. 1,299,404; Apr. 1; v. 261; p. 179.
Metal articles, Method of and means for heating. J. B. Clarke. No. 1,300,347; Apr. 15; v. 216; p. 443.
Metal articles, Support for expanding. E. Abarca. No. 1,300,091; Apr. 8; v. 261; p. 362.
Metal-body-forming machine. C. F. Schultis. No. 1,302,228; Apr. 29; v. 261; p. 887.
Metal briquet. F. A. Vogel. No. 1,299,878; Apr. 8; v. 261; p. 316.
Metal casting and making same. J. H. Bamberg and H. H. Doehler. No. 1,299,655; Apr. 8; v. 261; p. 285.
Metal-catcher for reducing-mills. M. F. Williams. No. 1,300,799; Apr. 15; v. 261; p. 539.
Metal-cutting machine. G. P. Risser and A. P. Williams. No. 1,300,879; Apr. 15; v. 261; p. 555.
Metal from scrap material, Apparatus for recovering. J. W. Brown. No. 1,301,374; Apr. 22; v. 261; p. 695
Metal-heating device. H. Geisenhöner. No. 1,299,931; Apr. 8; v. 261; p. 326.
Metal ingots, Making. L. B. Tebbetts, 2d. No. 1,298,825; Apr. 1; v. 261; p. 49.
Metal, Means for casting. W. H. Williams. No. 1,302,114; Apr. 29; v. 261; p. 866.
Metal plates, Machine for making. H. O. Davidson. No. 1,301,545; Apr. 22; v. 261; p. 726.
Metal plates, Screw for attaching. E. K. Day. No. 1,301,398; Apr. 22; v. 261; p. 699.
Metal shaping and tempering apparatus. T. J. Fay. No. 1,298,682; Apr. 1; v. 261; p. 13.
Metal wheel. J. L. Hecht. No. 1,299,464; Apr. 8; v. 261; p. 221.
Metal-working machine. C. L. Goodrich. No. 1,299,168; Apr. 1; v. 261; p. 125.
Metal-working machine. W. F. Hosford. No. 1,298,718; Apr. 1; v. 261; p. 23.
Metal-working machine. H. P. Townsend. No. 1,300,051; Apr. 8; v. 261; p. 352.
Metals, Apparatus for plating. W. E. Watkins. No. 1,302,106; Apr. 29; v. 261; p. 864.
Metals, Coating with. F. J. Metzger. No. 1,299,988; Apr. 8; v. 261; p. 338.
Metals, Refining volatile. S. Huldt. No. 1,298,722; Apr. 1; v. 261; p. 23.
Metallic structure. L. S. Lachman. No. 1,300,740; Apr. 15; v. 261; p. 526.
Meter: *See*—
Density-meter.
Electric meter.
Electric watt-hour meter.
Flow-meter.
Gas-meter.
Meter-actuated cut-off device. N. Anderson. No. 1,301,781; Apr. 22; v. 261; p. 773.
Meter-testing connection. C. H. Bissell and H. P. Hastings. No. 1,300,690; Apr. 15; v. 261; p. 515.
Metering electricity for lighting and heating purposes, System and means for differentially. L. Birks and J. R. Templin. No. 1,298,649; Apr. 1; v. 261; p. 6.
Metering system. R. B. Stitzer and H. E. Sovereign. No. 1,299,632; Apr. 8; v. 261; p. 259.
Micrometer. W. C. Stenger. No. 1,299,256; Apr. 1; v. 261; p. 146.
Micrometer, Screw-thread. L. C. Biomstrom. No. 1,300,692; Apr. 15; v. 261; p. 516.
Military equipment. A. A. Lethern. No. 1,301,421; Apr. 22; v. 261; p. 703.

Milk-can. F. Chalfant. No. 1,298,864; Apr. 1; v. 261; p. 61.
Milk-can cleaning and spraying device. P. T. Leahy. No. 1,298,973; Apr. 1; v. 261; p. 83.
Milk-can safety device. G. H. Vogel. No. 1,302,459; Apr. 29; v. 261; p. 932.
Milk strainer and cooler. G. A. Wilson. No. 1,301,775; Apr. 22; v. 261; p. 772.
Milking-apparatus attachment. C. O. Anderson. No. 1,301,992; Apr. 29; v. 261; p. 843.
Milking-machine. W. R. Nicoll. No. 1,300,857; Apr. 15; v. 261; p. 551.
Milking-machine teat-working mechanism. C. J. J. Hägg. No. 1,298,694; Apr. 1; v. 261; p. 17.
Mill: See—
Grinding-mill. Turning and boring mill.
Rolling-mill.
Milling-tool, Adjustable hollow. A. L. Geitner. No. 1,300,158; Apr. 8; v. 261; p. 376.
Mine and anchor, Aircraft-planted. C. L. Kee. No. 1,300,413; Apr. 15; v. 261; p. 457.
Mine-cage hoist. T. Price. No. 1,300,647; Apr. 15; v. 261; p. 506.
Mine-gate, Automatically-operated. S. W. Warman. No. 1,299,074; Apr. 1; v. 261; p. 105.
Mine safety device. J. A. Nolan. No. 1,301,782; Apr. 22; v. 261; p. 763.
Mine, Submarine. G. E. Ellis. No. 1,299,440; Apr. 8; v. 261; p. 215.
Mine, Submarine. F. A. H. Harié. No. 1,298,937; Apr. 1; v. 261; p. 74.
Mine, Submarine. T. K. North. No. 1,299,011; Apr. 1; v. 261; p. 91.
Mine, Submarine. T. K. North. No. 1,299,012; Apr. 1; v. 261; p. 91.
Mine, Submarine. T. K. North. No. 1,299,601; Apr. 8; v. 261; p. 252.
Mines, Adjustable clamp for slide-rails in. H. F. Heumann. No. 1,298,946; Apr. 1; v. 261; p. 76.
Miner's and blaster's tool. E. Godfrey. No. 1,300,834; Apr. 15; v. 261; p. 546.
Minerals, Method of and apparatus for separating. H. W. Allen. No. 1,301,532; Apr. 22; v. 261; p. 724.
Mining-machine. J. A. Brantley. No. 1,299,905; Apr. 8; v. 261; p. 321.
Minnow, Artificial. H. Robinson. No. 1,300,488; Apr. 15; v. 261; p. 473.
Mirror, Head-. W. G. E. Flanders. No. 1,298,686; Apr. 1; v. 261; p. 14.
Miter-box. C. W. Spaulding. No. 1,301,519; Apr. 22; v. 261; p. 721.
Mixer: See—
Concrete-mixer. Drink-mixer.
Mixer. C. L. Reed. No. 1,300,015; Apr. 8; v. 261; p. 344.
Mixing and grinding apparatus. R. D. Maddox. No. 1,301,070; Apr. 15; v. 261; p. 508.
Mixing apparatus. J. Bognerts. No. 1,302,294; Apr. 29; v. 261; p. 899.
Mixing-mill feeding mechanism. W. Jameson. No. 1,302,053; Apr. 29; v. 261; p. 855.
Mold: See—
Ingot-mold.
Mold. C. Pack. No. 1,301,965; Apr. 29; v. 261; p. 833.
Mold-breaking apparatus. R. B. Day. No. 1,299,917; Apr. 8; v. 261; p. 324.
Mold-form. J. J. Gruenfeld, Jr., and P. Kircher. No. 1,300,381; Apr. 15; v. 261; p. 451.
Molded articles, Machine for trimming. A. R. Christian. No. 1,301,661; Apr. 22; v. 261; p. 746.
Molding apparatus. L. R. Lemoine. No. 1,299,967; Apr. 8; v. 261; p. 334.
Molding attachment for machines, Drop-. B. F. Greene. No. 1,298,327; Apr. 1; v. 261; p. 161.
Molding-box lifting-bar. J. Kenyon. No. 1,301,850; Apr. 29; v. 261; p. 816.
Molding composition. J. P. A. McCoy. No. 1,300,218; Apr. 8; v. 261; p. 289.
Molding-machine. W. F. Scott. No. 1,299,240; Apr. 1; v. 261; p. 141.
Molding-machine counterbalance device. A. Allen. No. 1,299,412; Apr. 8; v. 261; p. 209.
Mole-trap. D. E. Black. No. 1,299,100; Apr. 1; v. 261; p. 113.
Molybdenum from its ores and concentrates, Extracting and recovering. H. A. Doerner. No. 1,299,559; Apr. 8; v. 261; p. 242.
Molybdenum from its ores and concentrates, Extracting and recovering. H. A. Doerner. No. 1,299,560; Apr. 8; v. 261; p. 242.
Mop, Sanitary ventilated dish-. W. M. Reid. No. 1,298,788; Apr. 1; v. 261; p. 41.
Mop, Water-supplied dish-. W. M. Reid. No. 1,298,787; Apr. 1; v. 261; p. 40.
Mother-of-pearl tiling, Making. A. and C. Vuillermet. No. 1,302,252; Apr. 29; v. 261; p. 892.
Motor: See—
Damper-operating motor. Hydraulic motor.
Electric motor. Hydrocarbon-motor.
Explosive-motor. Variable-speed motor.
Fluid-motor. Wave and current motor.
Motor. P. Farb. No. 1,302,842; Apr. 29; v. 261; p. 909.
Motor and valve therefor, Internal-combustion. F. G. Freese. No. 1,299,320; Apr. 1; v. 261; p. 100.
Motor control, Spring-. N. Pedersen. No. 1,301,873; Apr. 29; v. 261; p. 821.
Motor-control system. H. L. Beach. No. 1,300,238; Apr. 15; v. 261; p. 420.
Motor-control system. J. Eaton. No. 1,299,924; Apr. 8; v. 261; p. 325.
Motor-controller. T. R. Barnum. No. 1,301,068; Apr. 22; v. 261; p. 637.
Motor-controller. A. Simon. No. 1,299,248; Apr. 1; v. 261; p. 144.
Motor-driven-machine controller. C. W. Parkhurst and F. J. Burd. No. 1,301,966; Apr. 29; v. 261; p. 839.
Motor-starter. G. Mascarini and A. Contardi. No. 1,302,400; Apr. 29; v. 261; p. 920.
Motor-wheel. J. Stolpe. No. 1,301,881; Apr. 29; v. 261; p. 822.
Motors, Auxiliary air-inlet device for internal-combustion. P. R. Campion. No. 1,301,649; Apr. 22; v. 261; p. 745.
Motors, Electric control of fluid-pressure-actuated. H. Rowntree. No. 1,300,781; Apr. 15; v. 261; p. 535.
Motors, Oiling system for internal-combustion. D. B. Medanich. No. 1,299,757; Apr. 8; v. 261; p. 288.
Motors, Speed control of induction-. R. F. W. Alexanderson and D. C. Prince. No. 1,301,632; Apr. 22; v. 261; p. 742.
Mounting. W. C. Brinton. No. 1,301,902; Apr. 29; v. 261; p. 826.
Mouth-protector. T. W. Brown. No. 1,302,004; Apr. 29; v. 261; p. 846.
Mower. D. D. Williams. No. 1,300,907; Apr. 15; v. 261; p. 562.
Mower, Gang-. W. F. H. Braun. No. 1,299,906; Apr. 8; v. 261; p. 321.
Mowers, Bearing for lawn-. J. M. Lontz. No. 1,298,980; Apr. 1; v. 261; p. 85.
Muff. J. F. Wright. No. 1,300,088; Apr. 8; v. 261; p. 261.
Muffler. L. H. Brinkman. No. 1,302,300; Apr. 29; v. 261; p. 900.
Music-holder. R. G. and F. H. Miller. No. 1,298,374; Apr. 1; v. 261; p. 172.
Music-leaf turner. H. E. Fromberg. No. 1,302,355; Apr. 29; v. 261; p. 911.
Music-sheet feeder. H. K. Sandell. No. 1,302,439; Apr. 29; v. 261; p. 928.
Musical instrument. J. J. Doll. No. 1,299,146; Apr. 1; v. 261; p. 120.
Musical instrument. W. I. Kirk. No. 1,301,062; Apr. 15; v. 261; p. 596.
Musical instrument, Automatic. H. B. Tremaine. No. 1,300,519; Apr. 15; v. 261; p. 480.
Musical instrument, Electrically-operated. D. W. Barton. No. 1,298,864; Apr. 1; v. 261; p. 57.
Musical-instrument fretting device. E. S. Tanquary. No. 1,302,451; Apr. 29; v. 261; p. 931.
Musical instrument, Reroll-controlling mechanism for. H. J. La Joie. No. 1,300,978; Apr. 15; v. 261; p. 577.
Musical-instrument support. W. I. Kirk. No. 1,301,060; Apr. 15; v. 261; p. 596.
Musical instruments, Expression-controlling device for mechanical. O. M. Kennedy. No. 1,302,172; Apr. 29; v. 261; p. 877.
Muzzle, Animal-. J. S. Kehr. No. 1,300,977; Apr. 15; v. 261; p. 576.
Navigational instrument. E. A. Sperry. No. 1,300,890; Apr. 15; v. 261; p. 558.
Neck-form device. A. T. Nalewaja. No. 1,301,469; Apr. 22; v. 261; p. 716.
Necktie. W. K. Meyer. No. 1,299,498; Apr. 8; v. 261; p. 229.
Necktie. I. D. Wolfson. No. 1,300,682; Apr. 15; v. 261; p. 513.
Necktie-adjuster. C. M. Sanders. No. 1,302,225; Apr. 29; v. 261; p. 887.
Necktie and collar fastener, Combined. J. A. Smith. No. 1,299,801; Apr. 8; v. 261; p. 299.
Necktie and making same. I. D. Wolfson. No. 1,300,683; Apr. 15; v. 261; p. 513.
Necktie-holder. W. Linkowski. No. 1,301,792; Apr. 22; v. 261; p. 776.
Necktie-stretcher. M. S. Kuhns. No. 1,302,383; Apr. 29; v. 261; p. 917.
Necktie-tying form. B. W. J. Wofford. No. 1,300,321; Apr. 15; v. 261; p. 438.
Neckties, Making. I. D. Wolfson. No. 1,300,684; Apr. 15; v. 261; p. 513.
Neckwear. J. H. M. Lipp. No. 1,300,179; Apr. 8; v. 261; p. 390.
Neckwear-stock. J. E. Sipperly. No. 1,299,514; Apr. 8; v. 261; p. 282.
Nets, Making lace hair-. R. Baenger. No. 1,300,881; Apr. 15; v. 261; p. 556.
Nickel scrap and sludge, Treating. W. M. Johnson. No. 1,299,577; Apr. 8; v. 261; p. 247.
Nitrated cellulose products, Manufacturing. W. R. Thomson, W. D. Severn, and G. Twycross. No. 1,302,455; Apr. 29; v. 261; p. 932.
Nitrocellulose-drier. F. I. du Pont. No. 1,301,409; Apr. 22; v. 261; p. 701.
Non-binding switch. R. L. Burton. No. 1,301,099; Apr. 22; v. 261; p. 689.
Non-skid device. B. O. Beadle. No. 1,301,535; Apr. 22; v. 261; p. 724.
Non-skid for trucks. F. Huda. No. 1,302,373; Apr. 29; v. 261; p. 915.
Noodle-making device. J. Kunst. No. 1,301,065; Apr. 15; v. 261; p. 594.

Nozzle and clamp, Hose-coupling. E. E. Greve. No. 1,300,956; Apr. 15; v. 261; p. 572.
Nut-cutting tool. A. L. Stanford. No. 1,300,039; Apr. 8; v. 261; p. 350.
Nut-lock. H. J. Dery. No. 1,299,691; Apr. 8; v. 261; p. 273.
Nut-lock. F. Dessauer. No. 1,300,131; Apr. 8; v. 261; p. 370.
Nut-lock. F. Dessauer. No. 1,300,132; Apr. 8; v. 261; p. 370.
Nut-lock. F. Izzo. No. 1,300,617; Apr. 15; v. 261; p. 500.
Nut-lock. R. F. Michael. No. 1,298,994; Apr. 1; v. 261; p. 87.
Nut-lock. F. E. Sheldon. No. 1,299,794; Apr. 8; v. 261; p. 297.
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Oat and barley separator, Wild-. R. J. Owens. No. 1,299,379; Apr. 1; v. 261; p. 173.
Observation device. H. W. Warnecke. No. 1,302,254; Apr. 29; v. 261; p. 892.
Oil and the like dispensing apparatus. J. B. Davis. No. 1,302,014; Apr. 29; v. 261; p. 848.
Oil-burner. J. V. Landry. No. 1,300,626; Apr. 15; v. 261; p. 502.
Oil-burner. W. C. Long. No. 1,299,843; Apr. 8; v. 261; p. 308.
Oil-burner. F. E. Mack and F. R. Foster. No. 1,299,491; Apr. 8; v. 261; p. 227.
Oil-burner. T. Muehleisen. No. 1,299,206; Apr. 1; v. 261; p. 134.
Oil-burner. H. E. Olson. No. 1,301,304; Apr. 22; v. 261; p. 681.
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Oil-burner. E. L. Robertson. No. 1,300,487; Apr. 15; v. 261; p. 473.
Oil-burner feed and heater. G. B. Von Boden. No. 1,299,069; Apr. 1; v. 261; p. 104.
Oil-burner, Gas-generating. L. S. Campbell. No. 1,300,246; Apr. 15; v. 261; p. 421.
Oil-burner, Gas-generating. J. P. Horgan. No. 1,300,728; Apr. 15; v. 261; p. 523.
Oil-cakes, Machine for forming. R. A. Trace. No. 1,302,246; Apr. 29; v. 261; p. 891.
Oil-can. A. Bindley. No. 1,302,289; Apr. 29; v. 261; p. 898.
Oil-can. W. H. Reynolds. No. 1,300,019; Apr. 8; v. 261; p. 345.
Oil-can attachment. E. M. Gastian. No. 1,298,865; Apr. 1; v. 261; p. 57.
Oil-cloth. T. B. Talbert. No. 1,300,043; Apr. 8; v. 261; p. 351.
Oil-cock control and illuminator. R. H. Limpp. No. 1,300,423; Apr. 15; v. 261; p. 459.
Oil-cup and chain pipe wrench combined, Hand. W. J. Walker. No. 1,301,202; Apr. 22; v. 261; p. 660.
Oil emulsions, Method and means for separating water from heavy-. C. W. McKibben. No. 1,299,590; Apr. 8; v. 261; p. 250.
Oil-heater. J. F. Higgins. No. 1,301,262; Apr. 22; v. 261; p. 672.
Oil preparation, Edible-. H. V. Dunham. No. 1,302,486; Apr. 29; v. 261; p. 937.
Oil preparation, Medicinal-. H. V. Dunham. No. 1,302,487; Apr. 29; v. 261; p. 937.
Oil, Refining. C. B. Forward. No. 1,299,449; Apr. 8; v. 261; p. 218.
Oil-saver. D. S. Shehady. No. 1,302,231; Apr. 29; v. 261; p. 888.
Oil, Separating. C. J. Skidmore. No. 1,302,094; Apr. 29; v. 261; p. 862.
Oil still, Crude-. T. E. Murray. No. 1,302,200; Apr. 29; v. 261; p. 882.
Oil-storage-tank safety-vent. W. M. Bowles. No. 1,298,872; Apr. 1; v. 261; p. 58.
Oils, Desulfurizing petroleum-. E. B. Cobb. No. 1,300,816; Apr. 15; v. 261; p. 543.
Oils, Treating mineral. C. J. Greenstreet. No. 1,299,172; Apr. 1; v. 261; p. 127.
Oils, Treatment of emulsion-. F. M. Rogers. No. 1,299,385; Apr. 1; v. 261; p. 174.
Oiler, Spring-. G. L. Woodjard. No. 1,301,529; Apr. 22; v. 261; p. 723.
Oiling device. J. E. Busby. No. 1,301,816; Apr. 29; v. 261; p. 810.
Onion-topping machine. D. H. Royer. No. 1,299,283; Apr. 1; v. 261; p. 140.
Open-hearth and reverberatory furnaces, Construction of the roof of. G. C. Carson. No. 1,302,307; Apr. 29; v. 261; p. 902.
Ophthalmic mounting. O. B. Carson. No. 1,301,101; Apr. 22; v. 261; p. 640.
Ophthalmic mounting. W. T. Henderson. No. 1,302,043; Apr. 29; v. 261; p. 853.
Optical glass, Single and double tube. H. Fouasse. No. 1,302,351; Apr. 29; v. 261; p. 911.
Orchard-heater. R. Falconieri. No. 1,302,025; Apr. 29; v. 261; p. 850.
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Ordnance breech mechanism. A. T. Dawson and G. T. Buckham. No. 1,300,356; Apr. 15; v. 261; p. 445.
Ordnance sighting apparatus. A. T. Dawson and G. T. Buckham. No. 1,300,353; Apr. 15; v. 261; p. 444.
Ordnance sighting apparatus. A. T. Dawson and G. T. Buckham. No. 1,300,354; Apr. 15; v. 261; p. 444.
Ore-converting apparatus, Muffled. A. M. Beam. No. 1,299,661; Apr. 8; v. 261; p. 266.
Ore-loader. S. H. Hunt. No. 1,302,046; Apr. 29; v. 261; p. 854.
Ore or mineral electric furnace apparatus. I. Hechenbleikner. No. 1,299,336; Apr. 1; v. 261; p. 163.
Ore-separating apparatus. G. McElwain. No. 1,299,848; Apr. 8; v. 261; p. 309.
Ores and raw-ore products, Differential flotation concentration of sulfid. C. C. Freeman. No. 1,301,551; Apr. 22; v. 261; p. 727.
Ores, Clearing clayey. R. F. Goltra, T. S. Maffitt, J. D. Dann, and R. W. Erwin. No. 1,301,684; Apr. 22; v. 261; p. 753.
Ores, Separation of mixed sulfid. R. T. D. Williams. No. 1,300,516; Apr. 15; v. 261; p. 479.
Ornamental article and producing same. J. A. Fenton. No. 1,302,344; Apr. 29; v. 261; p. 909.
Orthodontic implement. E. H. Angle. No. 1,299,102; Apr. 1; v. 261; p. 111.
Orthodontic implement. E. H. Angle. No. 1,299,103; Apr. 1; v. 261; p. 112.
Outlet-box. J. G. Knight. No. 1,302,057; Apr. 29; v. 261; p. 856.
Oven and drier, Rotary. A. Johnson. No. 1,298,955; Apr. 1; v. 261; p. 78.
Oven, Cereal-sprouting. S. M. Miller. No. 1,300,992; Apr. 15; v. 261; p. 580.
Oven, Convertible core-. E. J. Moore. No. 1,301,075; Apr. 15; v. 261; p. 600.
Oven-grate. W. H. Hewes. No. 1,300,964; Apr. 15; v. 261; p. 573.
Oven-humidifying device. D. H. Young and W. L. Cass. No. 1,299,649; Apr. 8; v. 261; p. 263.
Oven, Portable combination revolving baker's gas-. D. Brickman. No. 1,298,876; Apr. 1; v. 261; p. 59.
Ovens, Heat and damper regulator for gas-. B. E. Meacham. No. 1,300,990; Apr. 15; v. 261; p. 579.
Overall jacket or waist. J. S. Elliott. No. 1,300,938; Apr. 15; v. 261; p. 568.
Overall-suspender fastener. C. H. Wetmore. No. 1,298,842; Apr. 1; v. 261; p. 53.
Overseaming-machine. J. R. Moffatt. No. 1,300,449; Apr. 15; v. 261; p. 464.
Oxids, Making metallic. T. J. Vollkommer. No. 1,300,522; Apr. 15; v. 261; p. 480.
Package. C. P. Winter. No. 1,302,116; Apr. 29; v. 261; p. 866.
Package-elevator, Portable. T. J. Alexander. No. 1,298,852; Apr. 1; v. 261; p. 54.
Package-tie. H. S. Brill. No. 1,298,877; Apr. 1; v. 261; p. 60.
Package-tie. A. C. Cleaveland. No. 1,299,681; Apr. 8; v. 261; p. 271.
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Packing for pistons and piston-valves. J. T. Wilson. No. 1,299,085; Apr. 1; v. 261; p. 108.
Packing material for journal-boxes and the like. C. T. Ripley. No. 1,298,794; Apr. 1; v. 261; p. 42.
Packing, Piston-. H. S. Rosser. No. 1,300,197; Apr. 8; v. 261; p. 385.
Packing-ring. H. Klatner. No. 1,300,623; Apr. 15; v. 261; p. 501.
Packing, Shell-. I. Ludlow. No. 1,302,392; Apr. 29; v. 261; p. 919.
Packing structure. P. H. Mack. No. 1,299,368; Apr. 1; v. 261; p. 171.
Packings, Releasing and loss-preventing means for cradle-. H. N. Jansen. No. 1,299,951; Apr. 8; v. 261; p. 331.
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Account-pad.
Pad, stamp, and penholder. H. S. Folger and T. Ross. No. 1,300,153; Apr. 8; v. 261; p. 375.
Padlock. J. S. Kirby. No. 1,301,572; Apr. 22; v. 261; p. 731.
Padlock. F. D. Luckey. No. 1,300,983; Apr. 15; v. 261; p. 578.
Padlock. F. Soley. No. 1,300,037; Apr. 8; v. 261; p. 349.
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Sewing-machine drip-pan.
Paper and making the same, Transparent. W. E. Swift. No. 1,302,100; Apr. 29; v. 261; p. 863.
Paper barrel. R. S. Bolger. No. 1,302,128; Apr. 29; v. 261; p. 869.
Paper box. W. R. Allen. No. 1,298,625; Apr. 1; v. 261; p. 2.
Paper box. W. Pente. No. 1,299,566; Apr. 8; v. 261; p. 290.
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Paper box, Folding. E. R. Richardson. No. 1,301,171; Apr. 22; v. 261; p. 684.

Paper box or other container, Corrugated-. C. H. Crowell. No. 1,299,683; Apr. 8; v. 261; p. 271.
Paper-calendering rolls or the like, Scraper for. J. A. Frossard. No. 1,299,930; Apr. 8; v. 261; p. 328.
Paper container, Waterproofed. E. C. Hawkins. No. 1,301,840; Apr. 29; v. 261; p. 814.
Paper containers, Coating. E. C. Hawkins. No. 1,301,841; Apr. 29; v. 261; p. 814.
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Paper-fastening device. O. W. Breniner. No. 1,298,875; Apr. 1; v. 261; p. 59.
Paper-feeding mechanism. H. O. Fischer. No. 1,298,684; Apr. 1; v. 261; p. 14.
Paper-feeding mechanism. H. O. Fischer. No. 1,298,685; Apr. 1; v. 261; p. 14.
Paper, Interfolding. C. E. Swick. No. 1,302,241; Apr. 29; v. 261; p. 890.
Paper-interfolding machine. C. E. Swick. No. 1,302,240; Apr. 29; v. 261; p. 889.
Paper, Machine for making multiply. T. Scherf. No. 1,299,237; Apr. 1; v. 261; p. 141.
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Paper, Partially simulating hand-made. L. H. Orr. No. 1,299,216; Apr. 1; v. 261; p. 136.
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Paper-pulp, Treating. J. A. De Cew. No. 1,300,357; Apr. 15; v. 261; p. 445.
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Paper, Reinforced corrugated. H. Ringel. No. 1,301,605; Apr. 22; v. 261; p. 737.
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Paper-roll rack. F. and F. T. Winterhalter. No. 1,299,087; Apr. 1; v. 261; p. 108.
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Paper-sorting machine. R. Finster and P. Wilson. No. 1,302,406; Apr. 29; v. 261; p. 934.
Paper-stock, Machine for and process of working. A. J. Haug. No. 1,302,469; Apr. 29; v. 261; p. 934.
Paper support, Wrapping-. E. Waigand. No. 1,300,061; Apr. 8; v. 261; p. 254.
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Papers, leather, or similar material, Producing prints with colors on. G. E. Holmström. No. 1,300,397; Apr. 15; v. 261; p. 454.
Paracetaldehyde, Preparing. H. A. Morton and B. H. Nicolet. No. 1,300,451; Apr. 15; v. 261; p. 465.
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Parachute. E. R. Calthrop. No. 1,299,123; Apr. 1; v. 261; p. 116.
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Paving-block. G. W. Frey. No. 1,299,453; Apr. 8; v. 261; p. 219.
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Pen and pencil holder. C. L. Grimm. No. 1,299,174; Apr. 1; v. 261; p. 127.
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Phase-modification system. E. F. W. Alexanderson. No. 1,300,544; Apr. 15; v. 261; p. 485.
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Phonograph-record-repeating device. J. H. Dickinson. No. 1,300,135; Apr. 8; v. 261; p. 371.
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Photographic exposure mechanism. D. M. Hurlburt. No. 1,298,723; Apr. 1; v. 261; p. 24.
Photographic films, Machine for cleaning and waxing. R. S. Schelblein. No. 1,300,656; Apr. 15; v. 261; p. 508.
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Photographic image and producing same, Colored. F. E. Ives. No. 1,300,616; Apr. 15; v. 261; p. 500.
Photographic negatives and positives and producing printing-plates therefrom, Preparing grained-tone. W. C. Huebner. No. 1,300,729; Apr. 15; v. 261; p. 524.
Photographic prints, Developing appliance for. G. W. Romer. No. 1,299,229; Apr. 1; v. 261; p. 139.
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Piano and phonograph, Combined. C. S. Burton. No. 1,300,244; Apr. 15; v. 261; p. 421.
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Cotton-picker. Walnut-picker.
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Picture and sound-reproducing device, Combined motion-. A. L. Edmison and J. Rikkelman. No. 1,301,045; Apr. 15; v. 261; p. 592.
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Plates or metal sheets, Power-press for bending. J. Drewes. No. 1,300,704; Apr. 15; v. 261; p. 518.
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Plow, Engine gang-. M. Sklovski. No. 1,299,044; Apr. 1; v. 261; p. 98.
Plow, Gang-. C. W. Michael. No. 1,302,403; Apr. 29; v. 261; p. 921.
Plow, Gang-. I. A. Weaver. No. 1,301,627; Apr. 22; v. 261; p. 741.
Plow-lift. W. H. C. Higgins, Jr. No. 1,300,392; Apr. 15; v. 261; p. 453.
Plow or analogous farm-machine for enabling it to be operated by motor. A. Blanchard. No. 1,298,870; Apr. 1; v. 261; p. 58.
Plow, Rotary. L. Fonnesbeck. No. 1,300,595; Apr. 15; v. 261; p. 495.
Plow, Tractor-. J. B. Mason. No. 1,298,989; Apr. 1; v. 261; p. 86.
Plow, Tractor-. A. W. Reynolds. No. 1,301,744; Apr. 22; v. 261; p. 765.
Plow, Tractor cut-out. J. T. Onstott. No. 1,301,305; Apr. 22; v. 261; p. 681.
Plow, Wheeled. H. S. Dickinson. No. 1,300,824; Apr. 15; v. 261; p. 544.
Plow, Wheeled. C. Esping. No. 1,302,339; Apr. 29; v. 261; p. 908.
Plowshare-retaining means. G. E. Needham. No. 1,300,453; Apr. 15; v. 261; p. 465.
Plug and stopper, Combined. F. J. Fairchild. No. 1,300,593; Apr. 15; v. 261; p. 495.
Plug and switch, Combined electric. D. M. Edwards. No. 1,299,926; Apr. 8; v. 261; p. 328.
Plug, Attachment-. R. B. Benjamin. No. 1,300,812; Apr. 15; v. 261; p. 542.
Plug, Attachment-. C. A. Vetter. No. 1,299,271; Apr. 1; v. 261; p. 149.
Plug receptacle, Electric-. W. Ile. No. 1,300,290; Apr. 15; v. 261; p. 426.
Pneumatic brake, Electrically-controlled. E. H. Dewson. No. 1,299,144; Apr. 1; v. 261; p. 120.
Pneumatic spring. J. Hofmann. No. 1,300,727; Apr. 15; v. 261; p. 523.
Pocket. H. Eloesser. No. 1,302,334; Apr. 29; v. 261; p. 907.
Pocket-cutlery. O. L. Hemming. No. 1,298,044; Apr. 1; v. 261; p. 75.
Pocket, Overall-. D. S. Carter. No. 1,299,552; Apr. 8; v. 261; p. 241.
Poison-containing trap. W. Hedrich and W. Stock. No. 1,302,160; Apr. 29; v. 261; p. 874.
Poke, Animal-. L. J. Lynch. No. 1,298,985; Apr. 1; v. 261; p. 86.
Poke, Animal-. F. A. Schroeder. No. 1,300,657; Apr. 15; v. 261; p. 508.
Polarized signaling mechanism. D. S. Wilson. No. 1,300,539; Apr. 15; v. 261; p. 484.
Pole and bracket therefor, Supporting-. T. E. Crecelius. No. 1,299,556; Apr. 8; v. 261; p. 241.
Polish. A. De Bary, Jr. No. 1,301,823; Apr. 29; v. 261; p. 811.
Polishing-wheel. S. H. Mills. No. 1,302,404; Apr. 29; v. 261; p. 921.
Polyphase generators, Sender for Hertzian waves utilizing. V. Bouchardon. No. 1,302,129; Apr. 29; v. 261; p. 869.
Pool-ball triangle. F. Hornbostel. No. 1,299,471; Apr. 8; v. 261; p. 223.
Pool or billiards, Device for use in playing. W. H. Harrison. No. 1,299,720; Apr. 8; v. 261; p. 279.
Portable elevator. H. J. Carson. (Reissue.) No. 14,622; Apr. 1; v. 261; p. 180.
Post-driving head. J. H. Downs. No. 1,301,666; Apr. 22; v. 261; p. 749.
Post of concrete or other material. H. Schluter. No. 1,299,787; Apr. 8; v. 261; p. 296.
Postmarking-machine. R. M. Simpson. No. 1,299,249; Apr. 1; v. 261; p. 144.
Potassium salts from commercial nitrate of soda containing such salts, Separation and recovery of. F. A. Freeth and H. E. Cocksedge. No. 1,300,947; Apr. 15; v. 261; p. 570.
Potato-digger. P. A. Yatzuk. No. 1,300,090; Apr. 8; v. 261; p. 362.
Potato-digging machine. W. W. Lynes. No. 1,301,857; Apr. 29; v. 261; p. 817.
Potato-handling machine. C. Davis. No. 1,301,109; Apr. 22; v. 261; p. 641.
Potatoes for dehydration, Process of and apparatus for preparing. M. F. Mangelsdorff. No. 1,299,493; Apr. 8; v. 261; p. 223.
Powder-box. E. W. Freeman. No. 1,300,155; Apr. 8; v. 261; p. 376.
Powder cans and the like, Sifter-top for talcum-. E. Hoffman. No. 1,301,847; Apr. 29; v. 261; p. 815.
Powder, Producing blue. F. F. Farnham. No. 1,299,445; Apr. 18; v. 261; p. 217.
Powder-puff. B. H. Karmen. No. 1,299,191; Apr. 1; v. 261; p. 131.
Power pipe-line. G. D. Baldwin. No. 1,300,809; Apr. 15; v. 261; p. 541.
Power-riddle. F. P. Tessmer. No. 1,299,262; Apr. 1; v. 261; p. 147.
Power transmission. E. Witt. No. 1,300,910; Apr. 15; v. 261; p. 563.
Power-transmission apparatus. G. Fast. No. 1,299,150; Apr. 1; v. 261; p. 123.
Power-transmission belt. S. E. Dowden. No. 1,302,330; Apr. 29; v. 261; p. 907.
Power-transmission device. J. W. Fitzgerald. No. 1,302,147; Apr. 29; v. 261; p. 872.
Power-transmission device. C. N. Hudson. No. 1,300,169; Apr. 8; v. 261; p. 378.
Power-transmission device. W. L. Snider. No. 1,299,629; Apr. 8; v. 261; p. 259.
Power transmission for grinding and similar machines. E. Rivett. No. 1,302,222; Apr. 29; v. 261; p. 886.
Power transmission, Gearless. W. H. Mason. No. 1,298,990; Apr. 1; v. 261; p. 87.
Power-transmission means. G. W. Wilkin and J. P. Kee. No. 1,300,316; Apr. 15; v. 261; p. 436.
Power-transmitting device. F. W. Fore. No. 1,301,548; Apr. 22; v. 261; p. 727.
Power-transmitting mechanism. R. W. J. Smith. No. 1,301,982; Apr. 29; v. 261; p. 841.

Preservatives, Treating. S. H. Reeves. No. 1,302,090; Apr. 29; v. 261; p. 862.
Press: See—
Baling-press.
Blanking-press.
Die-press.
Matrix-drying press.
Printing-press.
Pulp-press.
Press, E. L. McGary. No. 1,301,954; Apr. 29; v. 261; p. 836.
Press, R. Newraith. No. 1,299,501; Apr. 8; v. 261; p. 229.
Pressed-steel wheel. J. Ledwinka. No. 1,298,280; Apr. 1; v. 261; p. 169.
Presser-iron support. M. Epstein. No. 1,300,939; Apr. 15; v. 261; p. 542.
Pressing apparatus. H. Rotnagle. No. 1,299,036; Apr. 1; v. 261; p. 97.
Pressing member. F. M. Furber. No. 1,300,598; Apr. 15; v. 261; p. 496.
Pressure-gage. I. H. Spencer. No. 1,301,983; Apr. 29; v. 261; p. 842.
Pressure-gage and circuit-breaker, Combination. T. P. Bacon. No. 1,300,107; Apr. 8; v. 261; p. 265.
Pressure-regulating apparatus. H. Bacharach. No. 1,299,106; Apr. 1; v. 261; p. 112.
Pressure-regulator, Auxiliary control. M. Dexter. No. 1,301,405; Apr. 22; v. 261; p. 700.
Primer. G. M. Holley and D. T. Hastings. No. 1,300,396; Apr. 15; v. 261; p. 454.
Primer. L. H. Oberreich. No. 1,301,869; Apr. 29; v. 261; p. 820.
Priming-device attachment. L. R. French. No. 1,300,597; Apr. 15; v. 261; p. 496.
Print, Intaglio-. H. Lee. No. 1,299,484; Apr. 8; v. 261; p. 226.
Printer's galley-lock, Non-removable. J. E. Lee. No. 1,301,952; Apr. 29; v. 261; p. 836.
Printing apparatus. C. Owens. No. 1,301,306; Apr. 22; v. 261; p. 681.
Printing apparatus with adding mechanism. F. C. Dolcater. No. 1,301,235; Apr. 22; v. 261; p. 667.
Printing device, Web-. R. H. Plass. No. 1,301,969; Apr. 29; v. 261; p. 839.
Printing-forms, Apparatus for preparing type bars or slugs for use in. D. S. Kennedy. No. 1,300,846; Apr. 15; v. 261; p. 549.
Printing-machine. F. Halenar. No. 1,302,034; Apr. 29; v. 261; p. 851.
Printing-machine. H. J. Plant. No. 1,300,007; Apr. 8; v. 261; p. 242.
Printing mechanism, Cipher-. F. J. Tillman. No. 1,301,885; Apr. 29; v. 261; p. 842.
Printing-press. W. M. Ludwig. No. 1,301,470; Apr. 22; v. 261; p. 712.
Printing-press. C. R. Pritchard. No. 1,301,970; Apr. 29; v. 261; p. 839.
Printing-press change web-roll mechanism. S. G. Goss. No. 1,301,123; Apr. 22; v. 261; p. 644.
Printing-press inking mechanism. H. F. Dechman. No. 1,301,091; Apr. 22; v. 261; p. 638.
Printing-press roll-controlling mechanism. S. G. Goss and E. J. Smith. No. 1,301,124; Apr. 22; v. 261; p. 644.
Printing-press securing attachment. E. A. Cloonan. No. 1,302,136; Apr. 29; v. 261; p. 870.
Printing-press sheet-delivery mechanism. H. M. Barber. No. 1,299,686; Apr. 8; v. 261; p. 266.
Printing-press tripping mechanism. R. Miehle. No. 1,300,288; Apr. 15; v. 261; p. 430.
Printing-press web-roll mechanism. S. G. Goss and E. J. Smith. No. 1,301,125; Apr. 22; v. 261; p. 644.
Printing-presses, Adjustable quadrant for. A. Scapicchio. No. 1,300,028; Apr. 8; v. 261; p. 247.
Printing-presses, Automatic feeding attachment for. L. Adelhofer. No. 1,300,803; Apr. 15; v. 261; p. 540.
Printing-presses, Fudge or late-news device for newspaper-. G. W. Mascord. No. 1,301,972; Apr. 15; v. 261; p. 599.
Printing-presses, Inking device for flat-bed. F. S. English. No. 1,301,923; Apr. 29; v. 261; p. 830.
Printing-presses, Sheet-retaining attachment for. E. A. Cloonan. No. 1,302,310; Apr. 29; v. 261; p. 903.
Printing-presses, Tripping mechanism for rotary. R. Miehle. No. 1,300,289; Apr. 15; v. 261; p. 431.
Producing and separating certain substances. V. M. Weaver. No. 1,300,205; Apr. 8; v. 261; p. 286.
Projectile. J. R. Close. No. 1,301,907; Apr. 29; v. 261; p. 827.
Projectile. T. A. Edison. No. 1,300,708; Apr. 15; v. 261; p. 519.
Projectile. T. A. Edison. No. 1,300,709; Apr. 15; v. 261; p. 519.
Projectile. A. Hubbard. No. 1,302,167; Apr. 29; v. 261; p. 876.
Projectile, Armor-piercing. W. Dalton. No. 1,301,823; Apr. 29; v. 261; p. 811.
Projectile, Armor-piercing. A. G. McKenna and W. Dalton. No. 1,301,859; Apr. 29; v. 261; p. 818.
Projectile, Armor-piercing. A. G. McKenna and W. Dalton. No. 1,301,860; Apr. 29; v. 261; p. 818.
Projectile device. M. Aleksandrowicz. No. 1,298,851; Apr. 1; v. 261; p. 51.
Projectile, Grenade-. E. Gathmann. No. 1,301,929; Apr. 29; v. 261; p. 831.
Projectile, Incendiary. J. F. Buckingham. No. 1,301,380; Apr. 22; v. 261; p. 696.
Projectile, Incendiary. J. F. Buckingham. No. 1,301,381; Apr. 22; v. 261; p. 692.
Projectile, Incendiary. J. F. Buckingham. No. 1,301,382; Apr. 22; v. 261; p. 697.
Projectiles, Driving-band of. T. K. North. No. 1,299,013; Apr. 1; v. 261; p. 91.
Propeller. J. Kopcsay. No. 1,300,726; Apr. 15; v. 261; p. 525.
Propeller, Adjustable. S. Hart and E. I. Eustis. No. 1,301,052; Apr. 15; v. 261; p. 594.
Protective device. E. E. F. Creighton. No. 1,300,127; Apr. 8; v. 261; p. 269.
Protector for mechanism. O. I. Judelshon. No. 1,301,947; Apr. 29; v. 261; p. 835.
Protractor and lettering instrument, Combined. W. Balzhiser. No. 1,298,640; Apr. 1; v. 261; p. 4.
Puller: See—
Automobile-puller.
Beet-puller.
Brush-puller.
Cotter-pin puller.
Spike-puller.
Puller, Bolt or spike. H. F. Claypool. No. 1,302,134; Apr. 29; v. 261; p. 870.
Pulling device. D. H. Golding. No. 1,300,053; Apr. 15; v. 261; p. 571.
Pulley, Expansible. E. E. Boling. No. 1,299,669; Apr. 8; v. 261; p. 263.
Pulley structure, Idler-. J. A. Gerwen. No. 1,300,833; Apr. 15; v. 261; p. 546.
Pulley-supporting brace. P. A. Fuchs. No. 1,301,830; Apr. 29; v. 261; p. 812.
Pulp articles of various forms, Machine for producing either solid or hollow fibrous. A. J. Hodge and H. B. Ruggles. No. 1,300,966; Apr. 15; v. 261; p. 574.
Pulp, Machine for molding articles from. F. W. Waterman. No. 1,300,677; Apr. 15; v. 261; p. 512.
Pulp-press. A. Wertenbruch. No. 1,299,524; Apr. 8; v. 261; p. 235.
Pulverizer. J. N. Carter. No. 1,301,384; Apr. 22; v. 261; p. 697.
Pulverizer. H. J. Shelton. No. 1,302,232; Apr. 29; v. 261; p. 888.
Pulverizer and roller. W. Fetzer. No. 1,302,146; Apr. 29; v. 261; p. 872.
Pulverizing frangible substances, Method of and apparatus for. G. A. Overstrom. No. 1,300,192; Apr. 8; v. 261; p. 284.
Pump. F. A. Fay. No. 1,299,157; Apr. 1; v. 261; p. 123.
Pump. E. P. Larsh. No. 1,301,282; Apr. 22; v. 261; p. 677.
Pump. H. Mueller. No. 1,301,485; Apr. 22; v. 261; p. 715.
Pump. E. C. Wilson. No. 1,299,083; Apr. 1; v. 261; p. 107.
Pump, Air-. P. M. Scanlan. No. 1,301,751; Apr. 22; v. 261; p. 766.
Pump, Air-lift. R. H. Tucker. No. 1,300,053; Apr. 8; v. 261; p. 253.
Pump column, Deep-well-. A. C. Paulsmeier. No. 1,301,597; Apr. 22; v. 261; p. 735.
Pump connection for pneumatic tires. C. Schroder. No. 1,301,508; Apr. 22; v. 261; p. 719.
Pump, Double-acting well-. T. Peters. No. 1,302,210; Apr. 29; v. 261; p. 884.
Pump, Duplex. C. R. Lang. No. 1,301,459; Apr. 22; v. 261; p. 710.
Pump for irrigation, Turbine-. J. T. Lackey. No. 1,299,840; Apr. 8; v. 261; p. 308.
Pump, Gasolene-dispensing. J. J. Macbeth. No. 1,301,861; Apr. 29; v. 261; p. 818.
Pump indicator, Oil-. G. W. Morris. No. 1,300,291; Apr. 15; v. 261; p. 431.
Pump-jack. W. Lively. No. 1,301,856; Apr. 29; v. 261; p. 817.
Pump, Tire-. J. T. Fiese. No. 1,301,242; Apr. 22; v. 261; p. 668.
Pump, Vacuum-. L. W. Chubb. No. 1,298,664; Apr. 1; v. 261; p. 9.
Pumps and the like, Drainage device for vacuum-. E. P. Worden. No. 1,301,209; Apr. 22; v. 261; p. 662.
Pumps for internal-combustion engines, Operating mechanism for fuel-. A. W. Thompson. No. 1,299,062; Apr. 1; v. 261; p. 103.
Pumps, Nozzle for sand-. G. E. Battisfore. No. 1,298,642; Apr. 1; v. 261; p. 5.
Pumps, Working barrel for oil-well. W. A. McGregor. No. 1,301,666; Apr. 15; v. 261; p. 508.
Pumping attachment for motor-vehicles. J. O. Johnson. No. 1,298,967; Apr. 1; v. 261; p. 78.
Punch and die for embossing characters and raising bosses therefor previous to the embossing actions. C. A. Stickney. No. 1,301,333; Apr. 22; v. 261; p. 687.
Punch for perforating films. O. Vogetzer. No. 1,302,249; Apr. 29; v. 261; p. 891.
Punch, Grommet-. P. J. Myers. No. 1,299,210; Apr. 1; v. 261; p. 126.
Punch-press guard. J. M. Johnson. No. 1,301,567; Apr. 22; v. 261; p. 730.
Punching-machine. P. S. Graver. No. 1,301,931; Apr. 29; v. 261; p. 832.
Puncture-closing solution. E. Noll and C. C. Shephard. No. 1,302,416; Apr. 29; v. 261; p. 924.

Puncture-healing composition. M. R. Weaber and H. Clemens. No. 1,299,273; Apr. 1; v. 261; p. 150.
Puttee. H. T. Loomis and D. Z. Hunt. No. 1,300,351; Apr. 15; v. 261; p. 550.
Puttees, Making. G. H. Shibley. No. 1,300,661; Apr. 15; v. 261; p. 509.
Puzzle. P. V. R. Erben. No. 1,299,695; Apr. 8; v. 261; p. 274.
Puzzle. F. A. McCabe. No. 1,302,188; Apr. 29; v. 261; p. 879.
Pyroxylin composition. F. Sparre. No. 1,301,187; Apr. 22; v. 261; p. 657.
Quilting-frame. L. B. and M. E. Haines. No. 1,300,724; Apr. 15; v. 261; p. 523.
Rack: See—
Ball-rack.
Carpet-beating rack.
Display-rack.
Garment-rack.
Gun-rack.
Hay-curing rack.
Paper-roll rack.
Stamp-rack.
Trunk-rack.
Radiator. W. R. Jones. No. 1,300,172; Apr. 8; v. 261; p. 379.
Radiator. F. Satz. No. 1,301,608; Apr. 22; v. 261; p. 738.
Radiator attachment. E. Lieske. No. 1,299,970; Apr. 8; v. 261; p. 335.
Radiator, Base-board concealed. C. C. Nuckols. No. 1,301,589; Apr. 22; v. 261; p. 734.
Radiator-casing. W. M. Fulton. No. 1,301,419; Apr. 22; v. 261; p. 703.
Radiator-cores, Clamping-frame for. C. F. Spery. No. 1,301,793; Apr. 22; v. 261; p. 776.
Radiator-heater. C. L. C. Magee. No. 1,300,440; Apr. 15; v. 261; p. 462.
Radiator-lifting appliance. E. J. Adamson. No. 1,302,461; Apr. 29; v. 261; p. 933.
Radiator, Sheet-metal. T. E. Murray. No. 1,302,201; Apr. 29; v. 261; p. 882.
Radiator unit. J. M. Feddera. No. 1,299,158; Apr. 1; v. 261; p. 123.
Radio transmission. H. J. van der Bijl. No. 1,301,525; Apr. 22; v. 261; p. 728.
Radiocommunication, Apparatus for use in. L. de Forest. No. 1,299,356; Apr. 1; v. 261; p. 168.
Radiotelegraphy. L. M. Cockaday. No. 1,299,828; Apr. 8; v. 261; p. 303.
Radiotelegraphy. L. F. Fuller. No. 1,300,156; Apr. 8; v. 261; p. 876.
Radiotelegraphy. L. F. Fuller. No. 1,300,157; Apr. 8; v. 261; p. 876.
Radiumizer. H. M. Williamson and S. H. Alexander. No. 1,302,115; Apr. 29; v. 261; p. 866.
Radius-rod. W. G. Hoy. No. 1,302,166; Apr. 29; v. 261; p. 875.
Rail anchor. L. J. Berkeley. No. 1,301,219; Apr. 22; v. 261; p. 664.
Rail-anchor. L. J. Berkeley. No. 1,301,798; Apr. 22; v. 261; p. 777.
Rail-anchor. H. G. Warr. No. 1,301,625; Apr. 22; v. 261; p. 741.
Rail and road trains and the like, Power transmission on. J. G. P. Thomas. No. 1,301,763; Apr. 22; v. 261; p. 769
Rail-anticreeper. C. J. Gadd. No. 1,300,599; Apr. 15; v. 261; p. 496.
Rail-bond. H. H. Febrey. No. 1,301,239; Apr. 22; v. 261; p. 668.
Rail-brace. C. Appel. No. 1,300,101; Apr. 8; v. 261; p. 364.
Rail-fastener. G. M. Baker. No. 1,298,863; Apr. 1; v. 261; p. 57.
Rail-fastener. F. Chamness. No. 1,299,401; Apr. 1; v. 261; p. 178.
Rail-joint. S. A. Boyd. No. 1,299,545; Apr. 8; v. 261; p. 239.
Rail-joint. J. Dobrowolski. No. 1,298,675; Apr. 1; v. 261; p. 11.
Rail-joint. M. Erwin. No. 1,300,146; Apr. 8; v. 261; p. 374.
Rail-joint. G. A. Fether. No. 1,302,020; Apr. 29; v. 261; p. 850.
Rail-joint. V. Nelson. No. 1,302,070; Apr. 29; v. 261; p. 858.
Rail-joint. J. Sovick. No. 1,301,615; Apr. 22; v. 261; p. 739.
Rail-joint. F. Szynalawski. No. 1,300,895; Apr. 15; v. 261; p. 559.
Rail-joint. W. P. Thomson. No. 1,299,634; Apr. 8; v. 261; p. 260.
Rail-joint. J. W. Trotter. No. 1,299,893; Apr. 1; v. 261; p. 176.
Rail-joint. A. Vrudny. No. 1,300,060; Apr. 8; v. 261; p. 354.
Rail-joint, Expansion. C. H. Clark, E. W. Jansen, and C. F. Gailor. No. 1,301,104; Apr. 22; v. 261; p. 640.
Rail-plate, Thrust-equalizing. W. P. Thomson. No. 1,298,827; Apr. 1; v. 261; p. 49.
Rail-tie and coupling. W. W. Meek. No. 1,298,991; Apr. 1; v. 261; p. 87.
Railway, Amusement aerial. R. Behrens. No. 1,300,555; Apr. 15; v. 261; p. 488.
Railway buffing mechanism. R. D. Gallagher, Jr. No. 1,301,423; Apr. 22; v. 261; p. 703.
Railway-car draft-rigging. G. Q. Lewis. No. 1,300,421; Apr. 15; v. 261; p. 458.
Railway cross-ties, Adzing-machine for. J. W. Warren. No. 1,300,064; Apr. 8; v. 261; p. 355.
Railway-crossing signal. C. C. Reid. No. 1,299,383; Apr. 1; v. 261; p. 174.
Railway draft-rigging. R. D. Gallagher, Jr. No. 1,301,422; Apr. 22; v. 261; p. 703.
Railway draft-rigging. W. H. Miner. No. 1,301,961; Apr. 29; v. 261; p. 838.
Railway draft-rigging. J. F. O'Connor. No. 1,302,071; Apr. 29; v. 261; p. 858.
Railway-draft-rigging friction-gear. G. A. Johnson. No. 1,300,404; Apr. 15; v. 261; p. 455.
Railway-draft-rigging friction-gear. G. A. Johnson. No. 1,301,946; Apr. 29; v. 261; p. 835.
Railway-rail anticreeping device. T. H. Alfreds. (Reissue.) No. 14,632; Apr. 15; v. 261; p. 602.
Railway-rolling-stock bumpers, Anchoring device for. M. D. Bennett. No. 1,300,108; Apr. 8; v. 261; p. 365.
Railway safety device. G. H. Treadgold. No. 1,298,833; Apr. 1; v. 261; p. 50.
Railway-signal. C. W. Dunham. No. 1,298,679; Apr. 1; v. 261; p. 13.
Railway-signal. J. T. Hambay. No. 1,299,718; Apr. 8; v. 261; p. 279.
Railway-signal. C. O. Harrington. No. 1,298,938; Apr. 1; v. 261; p. 74.
Railway-signal, Portable. A. L. Currie. No. 1,301,914; Apr. 29; v. 261; p. 829.
Railway signaling. H. W. Griffin. No. 1,298,693; Apr. 1; v. 261; p. 16.
Railway-spike retainer. M. Thimgan. No. 1,299,061; Apr. 1; v. 261; p. 102.
Railway stock-gate, Automatic. W. W. Nelson. No. 1,301,492; Apr. 22; v. 261; p. 716.
Railway-switch. M. L. Morrow. No. 1,302,407; Apr. 29; v. 261; p. 922.
Railway-switch. F. J. Sheehan. No. 1,302,475; Apr. 29; v. 261; p. 935.
Railway-switch oiling and cleaning means. C. E. Gray. No. 1,298,931; Apr. 1; v. 261; p. 72.
Railway-switch-operating apparatus. J. M. Waldron and J. P. Coleman. No. 1,300,307; Apr. 15; v. 261; p. 434.
Railway-switch-operating mechanism. I. L. Edwards. No. 1,299,311; Apr. 1; v. 261; p. 158.
Railway-tie. J. P. Manley. No. 1,299,202; Apr. 1; v. 261; p. 133.
Railway-tie. R. U. Staley. No. 1,298,812; Apr. 1; v. 261; p. 46.
Railway-tie and rail-fastener. A. and J. Enrico. No. 1,299,442; Apr. 8; v. 261; p. 216.
Railway-track antispreading device. J. T. Stovall. No. 1,299,807; Apr. 8; v. 261; p. 300.
Railway-track construction. J. D. Negus. No. 1,299,760; Apr. 8; v. 261; p. 289.
Railway-tracks, Pad or pot sleeper for. J. H. Walker. No. 1,299,879; Apr. 8; v. 261; p. 316.
Railway-traffic-controlling system. C. S. Bushnell. No. 1,299,295; Apr. 1; v. 261; p. 155.
Railways, Signaling system for single-track. S. N. Wight. No. 1,300,080; Apr. 8; v. 261; p. 358.
Railways, Signaling system for single-track. S. N. Wight. No. 1,300,081; Apr. 8; v. 261; p. 359.
Railways, Signaling system for single-track. S. N. Wight. No. 1,300,082; Apr. 8; v. 261; p. 359.
Ramp and adjustable ramp-support. W. B. Murray. No. 1,301,296; Apr. 22; v. 261; p. 679.
Range. F. L. Sheppard. No. 1,300,660; Apr. 15; v. 261; p. 509.
Range, Combined coal and gas. G. W. Clark. No. 1,301,906; Apr. 29; v. 261; p. 827.
Range-finder, Panoramic. G. Griffith. No. 1,299,459; Apr. 8; v. 261; p. 220.
Range, Gas-. H. D. Schall and R. W. Davenport. No. 1,299,623; Apr. 8; v. 261; p. 257.
Range-reservoir. C. W. Nye. No. 1,300,456; Apr. 15; v. 261; p. 466.
Razor attachment. H. Raymond. No. 1,299,382; Apr. 1; v. 261; p. 174.
Razor-blade knife. T. S. Abernathy. No. 1,300,802; Apr. 15; v. 261; p. 539.
Razor frame, Safety-. W. F. Groschopp. No. 1,299,570; Apr. 8; v. 261; p. 245.
Razor, Magnetic. B. Ames. No. 1,299,095; Apr. 1; v. 261; p. 110.
Razor, Magnetic. B. Ames. No. 1,299,096; Apr. 1; v. 261; p. 111.
Razor, Magnetic. B. Ames. No. 1,299,097; Apr. 1; v. 261; p. 111.
Razor, Safety-. B. Ames. No. 1,299,098; Apr. 1; v. 261; p. 110.
Razor, Safety-. B. Ames. No. 1,299,099; Apr. 1; v. 261; p. 111.
Razor, Safety-. R. P. Nell. No. 1,298,772; Apr. 1; v. 261; p. 37.
Razor, Safety-. M. C. Sharpnack. No. 1,298,802; Apr. 1; v. 261; p. 44.
Razor-stropping device. H. A. Adams. No. 1,301,801; Apr. 29; v. 261; p. 807.
Reamer, Expansible. D. H. Dugar. No. 1,299,563; Apr. 8; v. 261; p. 243.

Reaping and like machines, Device for removing and fastening the rivets securing the knives of. S. Crompton. No. 1,299,134; Apr. 1; v. 261; p. 118.
Receptacle. J. P. Mausey. No. 1,299,369; Apr. 1; v. 261; p. 171.
Receptacle hermetic closure. W. A. Lorens and S. H. Rood. No. 1,299,974; Apr. 8; v. 261; p. 336.
Receptacle, Self-closing. A. Edwards. No. 1,300,710; Apr. 15; v. 261; p. 520.
Receptacle-top-locking means. J. M. O'Donnell. No. 1,299,766; Apr. 8; v. 261; p. 291.
Receptacle vacuum-cover. F. R. Crist. No. 1,299,682; Apr. 8; v. 261; p. 271.
Reclaiming materials, System and apparatus for. F. L. Stuart. No. 1,300,672; Apr. 15; v. 261; p. 511.
Reclining-chair. A. J. Phillips. No. 1,302,212; Apr. 29; v. 261; p. 884.
Reclining-seat. J. W. Myers. No. 1,301,485; Apr. 22; v. 261; p. 716.
Recording apparatus. G. D. Pogue. No. 1,300,191; Apr. 8; v. 261; p. 233.
Recording device. L. K. Cosgrove. No. 1,302,315; Apr. 29; v. 261; p. 904.
Recording instrument. C. F. Chapman. No. 1,299,427; Apr. 8; v. 261; p. 212.
Recording mechanism. J. C. Warren. No. 1,300,525; Apr. 15; v. 261; p. 481.
Rectifier. R. P. Jackson. No. 1,298,726; Apr. 1; v. 261; p. 24.
Rectifier. W. B. Lucas. No. 1,301,581; Apr. 22; v. 261; p. 782.
Rectifier, Vibrating. R. P. Jackson. No. 1,298,727; Apr. 1; v. 261; p. 25.
Reel: *See*—
Bolting-reel. Tennis-net reel.
Eraser-reel. Wire-reel.
Harvester-reel.
Reel. L. M. Steen. No. 1,301,189; Apr. 22; v. 261; p. 658.
Reflector, Visual tail-light. J. C. Martin. No. 1,301,150; Apr. 22; v. 261; p. 650.
Refrigerating apparatus. W. F. Krieger. No. 1,299,961; Apr. 8; v. 261; p. 333.
Refrigerator. G. J. Gruendler. No. 1,299,175; Apr. 1; v. 261; p. 128.
Refrigerator. G. B. Robison. No. 1,299,618; Apr. 8; v. 261; p. 256.
Refrigerator, Dispensing. H. H. Harris. No. 1,300,606; Apr. 15; v. 261; p. 496.
Refrigerator-door mechanism. J. F. O'Connor. No. 1,300,475; Apr. 15; v. 261; p. 470.
Register: *See*—
Cash-register. Sheet-register.
Register. H. J. P. Hampton. No. 1,301,691; Apr. 22; v. 261; p. 755.
Registering instrument. A. H. Perry. No. 1,301,313; Apr. 22; v. 261; p. 683.
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Automobile-chain regulator. Gas-regulator.
Damper-regulator. Tank-regulator.
Furnace-regulator. Thermo-electric regulator.
Relay device. A. J. Hall. No. 1,302,035; Apr. 29; v. 261; p. 852.
Resilient wheel. B. H. Berry. No. 1,299,898; Apr. 8; v. 261; p. 320.
Resilient wheel. A. Jutila. No. 1,301,570; Apr. 22; v. 261; p. 730.
Resilient wheel. J. A. Kolby, L. P. Larson, and C. P. Nielsen. No. 1,302,177; Apr. 29; v. 261; p. 877.
Resilient wheel. R. C. Racer. No. 1,302,215; Apr. 29; v. 261; p. 885.
Resilient wheel. C. Van Noort and F. Visser. No. 1,299,876; Apr. 8; v. 261; p. 315.
Resinous compositions, Preparing. B. J. Gudge. No. 1,299,706; Apr. 8; v. 261; p. 276.
Resistance, Variable. T. W. Case. No. 1,301,227; Apr. 22; v. 261; p. 686.
Respiration-indicator. B. de Bernys. No. 1,299,306; Apr. 1; v. 261; p. 157.
Revoluble engine. A. C. Fischer. No. 1,301,547; Apr. 22; v. 261; p. 726.
Rheostat. E. Podesnick. No. 1,300,483; Apr. 15; v. 261; p. 472.
Ribbon-roll attachment. W. A. Johannsen. No. 1,300,974; Apr. 15; v. 261; p. 576.
Ribbons, Gumming edges of. J. H. Hoffman. No. 1,300,394; Apr. 15; v. 261; p. 453.
Rifle-barrel. C. W. Linscott. No. 1,299,972; Apr. 8; v. 261; p. 335.
Rifle wire-cutting attachment. J. A. Erikson. No. 1,300,940; Apr. 15; v. 261; p. 568.
Rifles or other weapons, Apparatus for actuating the bolts of. A. Bellard. No. 1,300,688; Apr. 15; v. 261; p. 514.
Rigging-hook, Safety. H. A. Sinclair. No. 1,300,221; Apr. 8; v. 261; p. 392.
Rim breaker and extender. H. Tannehill. No. 1,301,884; Apr. 29; v. 261; p. 823.
Rim, Demountable. C. E. F. Ahlin. No. 1,301,352; Apr. 22; v. 261; p. 691.
Rim, Demountable. W. W. Bowman. No. 1,301,622; Apr. 15; v. 261; p. 589.
Rim, Demountable. H. J. Foster. No. 1,299,450; Apr. 8; v. 261; p. 218.
Rim, Demountable. H. J. Foster. No. 1,299,451; Apr. 8; v. 261; p. 218.
Rim, Demountable. H. D. Hamilton and J. Goodman. No. 1,302,156; Apr. 29; v. 261; p. 874.
Rim, Demountable. A. B. Henson. No. 1,301,695; Apr. 22; v. 261; p. 755.
Rim, Demountable collapsible. C. A. Tripp. No. 1,300,052; Apr. 8; v. 261; p. 353.
Rim-expanding tool, Demountable-. C. T. Lamb. No. 1,300,741; Apr. 15; v. 261; p. 526.
Rim lock, Demountable-. E. Telber. No. 1,300,514; Apr. 15; v. 261; p. 479.
Rim-nut or the like. H. P. Kraft. No. 1,302,381; Apr. 29; v. 261; p. 917.
Rim-stretcher. C. W. Dollscheck. No. 1,298,677; Apr. 1; v. 261; p. 12.
Rim-tool. C. H. Guiles. No. 1,301,839; Apr. 29; v. 261; p. 814.
Ring: *See*—
Packing-ring. Piston-ring.
Rivet-heater and spot-welder, Magnetic. T. J. Shea. No. 1,302,230; Apr. 29; v. 261; p. 888.
Riveted joint. R. White. No. 1,299,275; Apr. 1; v. 261; p. 150.
Riveting-machine. J. F. Pierce and H. A. Heinel. No. 1,301,600; Apr. 22; v. 261; p. 736.
Riveting machine or hammer. P. H. Leckinger. No. 1,298,741; Apr. 1; v. 261; p. 28.
Road-bed. H. J. Kratzer. No. 1,301,064; Apr. 15; v. 261; p. 596.
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Cereal-roaster. Coffee-roaster.
Robe-holder clamp. B. Jacobs. No. 1,300,273; Apr. 15; v. 261; p. 427.
Robe-lock. H. R. Mansfield. No. 1,300,986; Apr. 15; v. 261; p. 578.
Rock-drill. T. Gordon and H. W. Simpson. No. 1,301,121; Apr. 22; v. 261; p. 643.
Rock-drilling machine. G. Andersson. No. 1,300,100; Apr. 8; v. 261; p. 364.
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Rocking, firm-standing, and pivotal chair, Direct and laterally leaning. P. Barker. No. 1,301,639; Apr. 22; v. 261; p. 743.
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Locomotive side rod. Radius-rod.
Rods and tubes of varying diameters, Apparatus for drawing. L. H. Brinkman. No. 1,301,220; Apr. 22; v. 261; p. 664.
Rods and tubes of varying diameters, Drawing. L. H. Brinkman. No. 1,301,221; Apr. 22; v. 261; p. 665.
Rods, bars, pipes, &c., Feed-table for. J. T. Moltrup. No. 1,298,998; Apr. 1; v. 261; p. 88.
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Shade-roller.
Roller for finishing and smoothing cement and concrete pavements. W. L. Ashmore and T. Morgan, Jr. No. 1,302,275; Apr. 29; v. 261; p. 896.
Rolling-mill. J. E. Fawell. No. 1,301,414; Apr. 22; v. 261; p. 702.
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Roof-bracket. J. N. Anderson. No. 1,301,533; Apr. 22; v. 261; p. 724.
Roof-edging, Metal. W. Boss. No. 1,299,421; Apr. 8; v. 261; p. 211.
Roof-flashing. J. Bropson. No. 1,299,423; Apr. 8; v. 261; p. 211.
Roofing, Apparatus for making prepared. A. S. Spiegel. No. 1,301,332; Apr. 22; v. 261; p. 687.
Roofing-cutter. C. C. Nernese. No. 1,302,414; Apr. 29; v. 261; p. 923.
Roofing-felt. R. P. Perry. No. 1,302,209; Apr. 29; v. 261; p. 884.
Roofing material, Mechanism for producing. S. H. Goldberg. No. 1,298,690; Apr. 1; v. 261; p. 15.
Roofing, Means of applying sheathing to corrugated. A. G. Tolman. No. 1,298,830; Apr. 1; v. 261; p. 49.
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Rope-carried trip device. S. L. Hanson. No. 1,299,334; Apr. 1; v. 261; p. 163.
Rope-tie, Adjustable. W. G. Phillips. No. 1,300,006; Apr. 8; v. 261; p. 342.
Rotary engine. M. Cooper. No. 1,302,138; Apr. 29; v. 261; p. 871.
Rotary engine. J. F. Duby. No. 1,300,706; Apr. 15; v. 261; p. 519.
Rotary engine. J. Hagel. No. 1,301,689; Apr. 22; v. 261; p. 754.
Rotary engine. R. E. Luikart. No. 1,299,583; Apr. 8; v. 261; p. 249.
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Rotary engine. S. Smith. No. 1,302,446; Apr. 29; v. 261; p. 930.
Rotary engine. J. N. Spencer. No. 1,300,666; Apr. 15; v. 261; p. 510.
Rotary engine. H. L. Weed. No. 1,298,838; Apr. 1; v. 261; p. 52.
Rotary explosive-engine. H. L. Weed. No. 1,298,836; Apr. 1; v. 261; p. 51.

Rotary internal-combustion engine. H. A. Smith, Jr. No. 1,300,036; Apr. 8; v. 261; p. 349.
Rotary spader. T. Williams. No. 1,300,083; Apr. 8; v. 261; p. 360.
Rotary steam-engine. H. A. Weidenbach. No. 1,301,989; Apr. 29; v. 261; p. 843.
Rotatable machine element. W. D. Stevenson. No. 1,298,816; Apr. 1; v. 261; p. 47.
Rubber and the like, Extruding. J. B. Stratton and E. A. Claremont. No. 1,302,484; Apr. 29; v. 261; p. 937.
Rubber and the product produced thereby, Treating. R. Zertuche. No. 1,302,266; Apr. 29; v. 261; p. 894.
Rubber composition and vulcanization product thereof, Producing. R. C. Hartong. No. 1,301,693; Apr. 22; v. 261; p. 755.
Rubber fastener attachment. F. J. Nelson. No. 1,300,998; Apr. 15; v. 261; p. 581.
Rubber heel. E. L. Robertson. No. 1,301,974; Apr. 29; v. 261; p. 840.
Rule. H. Simon. No. 1,299,627; Apr. 8; v. 261; p. 256.
Running-gear. O. T. Hollis. No. 1,302,489; Apr. 29; v. 261; p. 938.
Saddle, Riding-. J. S. Guerrero. No. 1,301,838; Apr 29; v. 261; p. 814.
Safety appliance. W. W. Taylor. No. 1,302,101; Apr. 29; v. 261; p. 863.
Safety device. D. L. Lindquist. No. 1,300,424; Apr. 15; v. 261; p. 459.
Safety elevator. T. W. Jones. No. 1,301,791; Apr. 22; v. 261; p. 776.
Safety limit-switch. D. R. Knapp. No. 1,299,839; Apr. 8; v. 261; p. 307.
Safety-pin. H. Bush. No. 1,299,675; Apr. 8; v. 261; p. 270.
Safety switch-lock. J. A. Dunn. No. 1,302,331; Apr. 29; v. 261; p. 907.
Sample-taking device. W. L. Church. No. 1,300,346; Apr. 15; v. 261; p. 443.
Sand and gravel, Device for grading and washing. L. F. Rector. No. 1,299,226; Apr. 1; v. 261; p. 138.
Sand-blast apparatus. P. Schroeder. No. 1,301,980; Apr. 29; v. 261; p. 841.
Sand-box ventilator. C. F. Mather. No. 1,299,495; Apr. 8; v. 261; p. 228.
Sand molds, Drying. J. B. Walker. No. 1,299,522; Apr. 8; v. 261; p. 234.
Sandpaper-cutting machine. J. Smith. No. 1,301,754; Apr. 22; v. 261; p. 767.
Sanitary-can end. I. D. Thornburgh. No. 1,299,063; Apr. 1; v. 261; p. 103.
Sanitary or single-service cup or other receptacle holder. A. Burgess. No. 1,299,120; Apr. 1; v. 261; p. 115.
Sanitary sputum can or bucket. R. Moore. No. 1,299,375; Apr. 1; v. 261; p. 172.
Sash-center. C. V. Hetta. No. 1,299,183; Apr. 1; v. 261; p. 130.
Sash-fastener. A. H. Hutchings. No. 1,299,834; Apr. 8; v. 261; p. 306.
Sash-lock. E. A. Donat. No. 1,301,407; Apr. 22; v. 261; p. 701.
Sash-lock. F. T. Robinson. No. 1,300,298; Apr. 15; v. 261; p. 432.
Sash or frame joint, Metal. H. L. Smith. No. 1,301,981; Apr. 29; v. 261; p. 841.
Sausage-casings, Machine for the treatment of. O. G. Mayer. No. 1,302,194; Apr. 29; v. 261; p. 881.
Savings device. H. S. Driesslein. No. 1,299,562; Apr. 8; v. 261; p. 242.
Saw-bench segment-jointing attachment. J. D. McMichael and F. H. Clement. No. 1,299,367; Apr. 1; v. 261; p. 170.
Saw-handle. C. S. B. Henry. No. 1,301,436; Apr. 22; v. 261; p. 706.
Saw-handle, Detachable. H. J. Peterson. No. 1,301,315; Apr. 22; v. 261; p. 683.
Saw-handle, Removable. W. B. Sullivan. No. 1,301,522; Apr. 22; v. 261; p. 722.
Saw machine, Drag-. R. Reierson. No. 1,300,650; Apr. 15; v. 261; p. 506.
Saw, Manually-operated circular. J. Hakanson and A. Weber. No. 1,299,831; Apr. 8; v. 261; p. 305.
Sawmill. C. L. Graves. No. 1,301,251; Apr. 22; v. 261; p. 670.
Scaffold-bracket. C. Hadler. No. 1,299,176; Apr. 1; v. 261; p. 128.
Scaffold, Pole-climbing. A. Berg. No. 1,299,289; Apr. 1; v. 261; p. 153.
Scaffold-poles and the like, Device for connecting members as. D. Palmer-Jones. No. 1,300,864; Apr. 15; v. 261; p. 552.
Scale. N. H. Larsen. No. 1,301,460; Apr. 22; v. 261; p. 710.
Scale, Computing recording-. E. M. Schantz. No. 1,299,786; Apr. 8; v. 261; p. 295.
Scale-holder. J. W. Compos. No. 1,302,311; Apr. 29; v. 261; p. 903.
Scale, Spring-. H. F. Dunn. No. 1,300,141; Apr. 8; v. 261; p. 872.
Scale, Weighing-. W. C. Pritchard. No. 1,299,224; Apr. 1; v. 261; p. 133.
Scissors. H. Dingle. No. 1,300,932; Apr. 15; v. 261; p. 567.
Scoop, Auto power-. C. A. Blank. No. 1,301,643; Apr. 22; v. 261; p. 744.
Scoop, Bailing-. D. S. Hays. No. 1,302,865; Apr. 29; v. 261; p. 913.
Scow, Fish-. W. Cook. No. 1,301,290; Apr. 22; v. 261; p. 694.
Scraper. T. F. Ball. No. 1,300,551; Apr. 15; v. 261; p. 487.
Scraper and tamper, Shot-hole. J. H. Bits. No. 1,302,127; Apr. 29; v. 261; p. 868.
Scraper for belts. F. A. Goodykoontz. No. 1,298,824; Apr. 1; v. 261; p. 161.
Screen: *See*—
Hospital-screen. Window-screen.
Screen-curtain-protecting attachment. V. McKirahan. No. 1,300,984; Apr. 15; v. 261; p. 578.
Screen-frame corner-fastener. E. J. Burhen. No. 1,301,812; Apr. 29; v. 261; p. 809.
Screw-clamp, Retaining. J. A. and E. E. Sowell. No. 1,298,253; Apr. 1; v. 261; p. 145.
Screw-thread, Self-locking. I. C. Woodward. No. 1,300,801; Apr. 15; v. 261; p. 539.
Screw-threaded fastening. C. F. Johnson. No. 1,300,275; Apr. 15; v. 261; p. 428.
Scriber. E. Tintanné. No. 1,301,621; Apr. 22; v. 261; p. 740.
Scriber, Curved-line. T. Müller. No. 1,299,006; Apr. 1; v. 261; p. 90.
Scutching machine pneumatic attachment. J. Hubler. No. 1,299,946; Apr. 8; v. 261; p. 330.
Seal and fastener, Metal. A. J. Paroubek. No. 1,301,310; Apr. 22; v. 261; p. 682.
Seal, Battery-. C. M. Angell. No. 1,298,856; Apr. 1; v. 261; p. 55.
Seal-labeling machine, Bottle-. J. E. Johnson and C. H. Oslund. No. 1,300,408; Apr. 15; v. 261; p. 456.
Seal, Pipe-. J. C. Schrade. No. 1,301,010; Apr. 15; v. 261; p. 584.
Sealed container to facilitate the opening thereof. C. G. C. Christie. No. 1,302,132; Apr. 29; v. 261; p. 869.
Sealing-machine. W. E. Miller. No. 1,299,499; Apr. 8; v. 261; p. 229.
Sealing machine for knockdown boxes and the like, Universal. J. Q. Leavitt. No. 1,299,358; Apr. 1; v. 261; p. 168.
Sealing-rings for covers, Forming. T. L. Taliaferro. No. 1,299,259; Apr. 1; v. 261; p. 146.
Seat: *See*—
Car-seat. Reclining-seat.
Carriage-seat.
Seat. R. Schechter. No. 1,302,226; Apr. 29; v. 261; p. 887.
Seat structure, Portable. W. H. Curtis. No. 1,301,107; Apr. 22; v. 261; p. 640.
Seed and fertilizer drill, Multiple. C. V. Pereda. No. 1,302,428; Apr. 29; v. 261; p. 926.
Seed-package-filling-machine attachment. H. H. Williams. No. 1,301,346; Apr. 22; v. 261; p. 690.
Seed-selector, Revolving. C. Kronenberg. No. 1,301,277; Apr. 22; v. 261; p. 675.
Seeder. G. S. Jervis. No. 1,300,400; Apr. 15; v. 261; p. 454.
Seeder. J. Lange. No. 1,298,738; Apr. 1; v. 261; p. 28.
Self-reinforcing fabric. C. B. Tewksbury. No. 1,300,515; Apr. 15; v. 261; p. 479.
Self-starting apparatus. F. O. Kilgore. No. 1,300,217; Apr. 8; v. 261; p. 389.
Separable wheel. J. D. and M. V. B. Langdon. No. 1,301,716; Apr. 22; v. 261; p. 759.
Separator: *See*—
Grain-separator. Oat and barley separator.
Series-multiple control. E. F. W. Alexanderson. No. 1,300,542; Apr. 15; v. 261; p. 485.
Service-switch. G. E. Palmer. No. 1,299,602; Apr. 8; v. 261; p. 252.
Serving apparatus. C. E. Anable. No. 1,299,413; Apr. 8; v. 261; p. 209.
Sewage-disposal system. C. W. Russell. No. 1,301,977; Apr. 29; v. 261; p. 840.
Sewer. H. E. Webber. No. 1,299,884; Apr. 8; v. 261; p. 317.
Sewing-machine. F. A. Brackett. No. 1,301,806; Apr. 29; v. 261; p. 808.
Sewing-machine. M. T. Deane. No. 1,301,400; Apr. 22; v. 261; p. 700.
Sewing-machine. E. A. Kaumeyer and D. M. Bloom. No. 1,300,843; Apr. 15; v. 261; p. 548.
Sewing-machine. R. L. Lyons. No. 1,302,394; Apr. 29; v. 261; p. 919.
Sewing-machine. F. A. Reece. No. 1,302,219; Apr. 29; v. 261; p. 885.
Sewing-machine. D. S. Seymour. No. 1,299,625; Apr. 8; v. 261; p. 258.
Sewing-machine. J. D. Shaw. No. 1,300,496; Apr. 15; v. 261; p. 475.
Sewing-machine attachment. A. Auster. No. 1,298,914; Apr. 1; v. 261; p. 68.
Sewing-machine attachment. H. Mittleberg. No. 1,300,194; Apr. 8; v. 261; p. 382.
Sewing-machine attachment. C. Weiss. No. 1,301,528; Apr. 22; v. 261; p. 723.
Sewing-machine binding attachment. A. Del Giudice. No. 1,299,569; Apr. 8; v. 261; p. 245.
Sewing-machine drip-pan. A. H. De Vos. No. 1,299,148; Apr. 1; v. 261; p. 120.

Sewing-machine driving-shaft. J. P. Weis. No. 1,300,581; Apr. 15; v. 261; p. 482.
Sewing-machine feed mechanism, Shoe-. W. C. Meyer. No. 1,296,780; Apr. 1; v. 261; p. 32.
Sewing-machine feeding mechanism. A. H. De Vos. No. 1,300,356; Apr. 15; v. 261; p. 446.
Sewing-machine looper mechanism. A. H. De Vos. No. 1,300,468; Apr. 1; v. 261; p. 178.
Sewing-machine needle-clamp. D. S. Seymour. No. 1,300,362; Apr. 1; v. 261; p. 142.
Sewing-machine, Overstitch. J. P. Weis. No. 1,300,582; Apr. 15; v. 261; p. 482.
Sewing-machine presser-foot. J. E. Chalman. No. 1,300,926; Apr. 15; v. 261; p. 566.
Sewing-machine presser-foot. C. McNeil. No. 1,300,854; Apr. 15; v. 261; p. 550.
Sewing-machine presser-foot mechanism. D. S. Seymour. No. 1,300,885; Apr. 15; v. 261; p. 567.
Sewing-machine work-support. F. E. Knoblock. No. 1,300,848; Apr. 15; v. 261; p. 549.
Sewing machines, Pressure-foot mechanism for shoe-. W. C. Meyer. No. 1,296,496; Apr. 1; v. 261; p. 179.
Sewing mechanism, Rotary-hook. R. K. Hehmann. No. 1,299,468; Apr. 8; v. 261; p. 222.
Shade and curtain hanger, Combined. J. Ferko. No. 1,299,568; Apr. 8; v. 261; p. 245.
Shade and curtain holder. J. H. Blake. No. 1,302,292; Apr. 29; v. 261; p. 899.
Shade-holder. T. H. Morris and F. T. Grubbs. No. 1,299,003; Apr. 1; v. 261; p. 89.
Shade-holder and curtain-pole support. M. Nahas. No. 1,299,993; Apr. 8; v. 261; p. 339.
Shade-holding device. P. G. Emery. No. 1,300,886; Apr. 15; v. 261; p. 545.
Shade or blind, Porch. H. E. Rathbun. No. 1,301,908; Apr. 22; v. 261; p. 737.
Shade or blind, Porch. H. E. Rathbun. No. 1,302,218; Apr. 29; v. 261; p. 885.
Shade-roller hanger, Adjustable. T. W. Flowers. No. 1,300,366; Apr. 15; v. 261; p. 447.
Shade roller, Window-. R. H. Revier. No. 1,300,778; Apr. 15; v. 261; p. 534.
Shade, Wind-shield. R. G. Mattison. No. 1,299,966; Apr. 8; v. 261; p. 328.
Shaft-coupling. J. Buchli. No. 1,296,881; Apr. 1; v. 261; p. 61.
Shaft-finishing tool. C. E. Wilder. No. 1,302,110; Apr. 29; v. 261; p. 865.
Sharpener, Drill-. J. Ditsen. No. 1,302,019; Apr. 29; v. 261; p. 849.
Sharpener, Pencil-. J. Bentzmann. No. 1,299,789; Apr. 8; v. 261; p. 294.
Sharpener, Razor-blade. C. A. Scott and A. G. Hug. No. 1,296,239; Apr. 1; v. 261; p. 141.
Sharpeners, Cutter for pencil-. A. P. Wilson. No. 1,301,772; Apr. 22; v. 261; p. 771.
Sharpeners, Cutter for pencil-. A. P. Wilson. No. 1,301,773; Apr. 22; v. 261; p. 772.
Sharpeners, Producing cutters for pencil-. A. P. Wilson. No. 1,301,774; Apr. 22; v. 261; p. 772.
Sharpening instrument, Pencil-. R. P. Messenger. No. 1,301,727; Apr. 22; v. 261; p. 762.
Shaving set. E. Alland. No. 1,296,823; Apr. 1; v. 261; p. 3.
Shaving-stick holder. W. G. Rich. No. 1,299,032; Apr. 1; v. 261; p. 96.
Sheaf-loader. H. A. Stratton. No. 1,301,182; Apr. 22; v. 261; p. 658.
Shearing-machine. W. Rachals. No. 1,296,783; Apr. 1; v. 261; p. 89.
Shears: *See*—
Animal-shears.
Shears. A. Anderson. No. 1,299,109; Apr. 1; v. 261; p. 111.
Shears and scissors. E. J. Arnold. No. 1,299,104; Apr. 1; v. 261; p. 112.
Sheet-feeding mechanism, Automatic. F. M. Conran. No. 1,301,666; Apr. 22; v. 261; p. 747.
Sheet-feeding mechanism, Automatic. F. M. Conran. No. 1,301,799; Apr. 22; v. 261; p. 777.
Sheet-handling implement. J. C. Fuchs and O. W. Cook. No. 1,302,028; Apr. 29; v. 261; p. 850.
Sheet-metal article. A. F. Anderson. No. 1,299,415; Apr. 8; v. 261; p. 209.
Sheet-metal blanks, Manufacture of. F. H. Hulscher. No. 1,301,700; Apr. 22; v. 261; p. 757.
Sheet-metal-cutting machine. C. B. Gray. No. 1,296,980; Apr. 1; v. 261; p. 72.
Sheet, Multiple form-. A. S. Gilman. No. 1,301,834; Apr. 29; v. 261; p. 818.
Sheet-register. N. A. Anderson. No. 1,300,225; Apr. 15; v. 261; p. 419.
Sheet-registering mechanism. J. R. Blaine. No. 1,300,561; Apr. 15; v. 261; p. 489.
Sheet-registering mechanism. J. R. Blaine. No. 1,300,562; Apr. 15; v. 261; p. 490.
Sheet-registering mechanism. J. R. Blaine. No. 1,300,563; Apr. 15; v. 261; p. 490.
Sheet-registering mechanism. M. A. Droiteour. No. 1,299,920; Apr. 8; v. 261; p. 324.
Sheet structure, Trussed. J. O. Madison. No. 1,300,429; Apr. 15; v. 261; p. 462.
Sheets, Set of manifolding-. L. A. Wernery. No. 1,299,643; Apr. 8; v. 261; p. 261.
Sheets together, Fastening. H. Rosenberg. No. 1,296,282; Apr. 1; v. 261; p. 140.
Shell. R. G. and O. L. Aoughsten. No. 1,302,272; Apr. 29; v. 261; p. 895.
Shell. W. Cameron. No. 1,302,006; Apr. 29; v. 261; p. 846.
Shell, Explosive. R. A. Berry. No. 1,300,233; Apr. 15; v. 261; p. 440.
Shell or similar body, Explosive-. F. M. Hale. No. 1,301,126; Apr. 22; v. 261; p. 645.
Shells, bombs, or grenades, Projection of explosive. S. C. Davidson. No. 1,296,136; Apr. 1; v. 261; p. 118.
Shells, Press for assembling. F. Leming. No. 1,302,185; Apr. 29; v. 261; p. 879.
Shingle-machine saws, Block-side guard for upright-. W. I. Simpson. No. 1,302,445; Apr. 29; v. 261; p. 930.
Shingle-strip machine. F. C. Overbury. No. 1,301,964; Apr. 29; v. 261; p. 828.
Shingles, Machine for making fabric. F. C. Overbury. No. 1,301,501; Apr. 22; v. 261; p. 734.
Shingling-bracket. A. D. Tuttle. No. 1,299,874; Apr. 8; v. 261; p. 315.
Ship. C. V. A. Eley. No. 1,301,238; Apr. 22; v. 261; p. 668.
Ship. A. P. Filippi. No. 1,296,161; Apr. 1; v. 261; p. 124.
Ship, Concrete. C. Z. Hubbell. No. 1,299,729; Apr. 8; v. 261; p. 282.
Ship-launching apparatus. K. W. Ljungdell. No. 1,299,363; Apr. 1; v. 261; p. 169.
Ship-protecting structure. N. Pugliese. No. 1,299,026; Apr. 1; v. 261; p. 95.
Ship-raising device. L. Farnham. No. 1,300,943; Apr. 15; v. 261; p. 569.
Ship-raising device. N. Tognacci. No. 1,302,245; Apr. 29; v. 261; p. 886.
Ship-stabiliser. T. Imaizumi. No. 1,299,186; Apr. 1; v. 261; p. 130.
Ship's log. C. P. Maxson. No. 1,301,585; Apr. 22; v. 261; p. 738.
Ship's patch. P. C. Warner and R. W. Blodget. No. 1,301,204; Apr. 22; v. 261; p. 661.
Ships, Apparatus for furnishing drinking-water on ocean-. I. H. Jewell. No. 1,296,002; Apr. 1; v. 261; p. 89.
Ships, Construction of reinforced-concrete. J. C. Snelling. No. 1,301,013; Apr. 15; v. 261; p. 584.
Ships, mercantile and navy, against submarine attacks or mines, Protection of. E. Ferrati, N. Pecoraro, and A. Guidoni. No. 1,299,697; Apr. 8; v. 261; p. 274.
Shipping-receptacle. S. Sarnoff. No. 1,302,472; Apr. 29; v. 261; p. 935.
Shirt. B. Gross. No. 1,301,252; Apr. 22; v. 261; p. 670.
Shock-absorber. G. W. Fulkerson. No. 1,299,165; Apr. 1; v. 261; p. 125.
Shock-absorber. C. Martens. No. 1,301,474; Apr. 22; v. 261; p. 718.
Shock-absorber. J. A. McCaskell. No. 1,301,067; Apr. 15; v. 261; p. 597.
Shock-absorber. J. F. O'Connor. No. 1,302,079; Apr. 29; v. 261; p. 860.
Shock-absorber. W. H. Plunkett. No. 1,301,603; Apr. 15; v. 261; p. 582.
Shock-absorbing mechanism. E. H. Schmidt. No. 1,301,878; Apr. 29; v. 261; p. 822.
Shock-absorbing mechanism for railway-cars. C. K. Brooks and E. H. Schmidt. No. 1,301,809; Apr. 29; v. 261; p. 808.
Shock-absorbing mechanism, Friction. B. S. Johnson. No. 1,302,055; Apr. 29; v. 261; p. 855.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,296,776; Apr. 1; v. 261; p. 88.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,302,074; Apr. 29; v. 261; p. 859.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,302,075; Apr. 29; v. 261; p. 859.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,302,076; Apr. 29; v. 261; p. 859.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,302,077; Apr. 29; v. 261; p. 859.
Shock-absorbing mechanism, Friction. J. F. O'Connor. No. 1,302,080; Apr. 29; v. 261; p. 860.
Shock and sheaf carrier. H. A. Underwood. No. 1,299,875; Apr. 8; v. 261; p. 315.
Shock-gatherer. B. H. Nelson, J. M. Landrigan, and L. G. Zeebaugh. No. 1,300,188; Apr. 8; v. 261; p. 383.
Shoe. M. H. Clark. No. 1,301,228; Apr. 22; v. 261; p. 666.
Shoe and making. K. Engel. No. 1,301,113; Apr. 22; v. 261; p. 642.
Shoe and making same, Welt. G. H. Black. No. 1,301,084; Apr. 15; v. 261; p. 602.
Shoe element, Detachable. W. Purnhagen. No. 1,301,601; Apr. 22; v. 261; p. 736.
Shoe, Elevator-gate. H. Phillips. No. 1,299,220; Apr. 1; v. 261; p. 137.
Shoe-filling machine. F. E. Bertrand. No. 1,299,665; Apr. 8; v. 261; p. 267.
Shoe holder and stretcher. P. F. Woods. No. 1,301,776; Apr. 22; v. 261; p. 772.
Shoe-shining chair. A. and L. Beasley. No. 1,301,218; Apr. 22; v. 261; p. 664.

Shoe-tread device. W. Henstridge. No. 1,299,182; Apr. 1; v. 261; p. 129.
Shoe-tree. R. Murray. No. 1,302,410; Apr. 29; v. 261; p. 923.
Shoes and making same, Arch-support for. H. Piessens. No. 1,299,221; Apr. 1; v. 261; p. 137.
Shore, Adjustable. J. E. Hodges. No. 1,299,345; Apr. 1; v. 261; p. 166.
Shoring device. H. H. Lampert. No. 1,298,970; Apr. 1; v. 261; p. 82.
Shovel attachment. H. G. Moscherrosch and P. G. Schwartz. No. 1,300,452; Apr. 15; v. 261; p. 465.
Show-case, Revolving. L. Szold. No. 1,298,822; Apr. 1; v. 261; p. 48.
Shutter, Safety-. W. P. Shomaker. No. 1,302,093; Apr. 29; v. 261; p. 862.
Shutter, storm-window, and screen-fastener. R. L. Tarbox. No. 1,300,044; Apr. 8; v. 261; p. 351.
Shuttle-motion, Magnetic. W. Routledge. No. 1,302,437; Apr. 29; v. 261; p. 928.
Shuttles, Threading-eye for. J. C. Shambow. No. 1,301,611; Apr. 22; v. 261; p. 738.
Sifter. E. Gentzler. No. 1,298,926; Apr. 1; v. 261; p. 71.
Sifter, Ash-. J. B. Adduci. No. 1,300,234; Apr. 15; v. 261; p. 419.
Sifter, Ash-. J. Volpert. No. 1,300,675; Apr. 15; v. 261; p. 512.
Sighting device. J. H. Robertson. No. 1,301,502; Apr. 22; v. 261; p. 718.
Sign, Transfer-. D. Kaber. No. 1,299,853; Apr. 1; v. 261; p. 167.
Signal: *See*—
Automobile-signal.
Automobile turning-signal.
Danger-signal.
Direction-signal.
Grade-crossing signal.
Light-signal.
Railway-signal.
Railway-crossing signal.
Torpedo alarm-signal.
Traffic-signal.
Signal. A. B. Kendall and O. S. Field. No. 1,301,949; Apr. 29; v. 261; p. 835.
Signal. E. L. Storer. No. 1,299,057; Apr. 1; v. 261; p. 101.
Signal device. S. D. Howell. No. 1,299,473; Apr. 8; v. 261; p. 223.
Signaling apparatus. J. A. Keesey and A. Shedlock. No. 1,301,271; Apr. 22; v. 261; p. 674.
Signaling apparatus, Selective. L. M. Potts. No. 1,299,608; Apr. 8; v. 261; p. 254.
Signaling device. J. A. Werts and P. G. Myers. No. 1,298,840; Apr. 1; v. 261; p. 52.
Signaling system. W. K. Howe. No. 1,302,371; Apr. 29; v. 261; p. 914.
Signaling system, Direct-current. B. F. Gardner. No. 1,301,425; Apr. 22; v. 261; p. 704.
Silo. L. D. Hart. No. 1,301,051; Apr. 15; v. 261; p. 593.
Silo. F. J. Van Cott. No. 1,301,624; Apr. 22; v. 261; p. 741.
Siphon-bowl. H. T. Cronk. No. 1,301,821; Apr. 29; v. 261; p. 811.
Sizing. C. H. Bennett. No. 1,299,663; Apr. 8; v. 261; p. 267.
Skate, Roller-. C. & J. J. Jorgensen. No. 1,299,578; Apr. 8; v. 261; p. 247.
Skin and paper material. A. Whist. No. 1,300,535; Apr. 15; v. 261; p. 483.
Skiving-machine. E. E. Lane. No. 1,300,628; Apr. 15; v. 261; p. 502.
Skiving-machine. A. Latham. No. 1,301,283; Apr. 22; v. 261; p. 677.
Skylight construction. M. Walten. No. 1,299,880; Apr. 8; v. 261; p. 316.
Sled. W. Falwell. No. 1,299,444; Apr. 8; v. 261; p. 216
Sled-brake. P. Hechkovech. No. 1,299,338; Apr. 1; v. 261; p. 164.
Sled, Folding. C. Aldrich. No. 1,300,095; Apr. 8; v. 261; p. 363.
Sled, Self-propelled. C. W. Matson. No. 1,302,193; Apr. 29; v. 261; p. 880.
Sleigh, Motor-. W. J. Roecker. No. 1,299,862; Apr. 8; v. 261; p. 312.
Smoke-consumer. S. P. Munn. No. 1,301,588; Apr. 22; v. 261; p. 734.
Smoke-consuming furnace. O. Lox. No. 1,302,061; Apr. 29; v. 261; p. 857.
Smoke-dispenser. I. Irina. No. 1,301,563; Apr. 22; v. 261; p. 729.
Smoke-filter, Metallurgical. W. H. Bates, Jr. No. 1,302,281; Apr. 29; v. 261; p. 897.
Smoker's utensil. J. Gregor. No. 1,301,933; Apr. 29; v. 261; p. 832.
Snap-fastener. F. Goubert. No. 1,299,325; Apr. 1; v. 261; p. 161.
Snow-gatherer. F. Pataye. No. 1,300,764; Apr. 15; v. 261; p. 531.
Snow-melting machine. E. A. Smith. No. 1,300,085; Apr. 8; v. 261; p. 349.
Soap-holder. W. J. Long. No. 1,301,720; Apr. 22; v. 261; p. 760.
Socket for fasteners. D. Bourque. No. 1,300,338; Apr. 15; v. 261; p. 441.
Socket, Toggle-. W. J. Newton. No. 1,302,415; Apr. 29; v. 261; p. 923.
Socket-wrench and bolt-holder device. J. B. Spangler. No. 1,299,631; Apr. 8; v. 261; p. 259.
Soda-fountain. L. B. Oliver. No. 1,299,767; Apr. 8; v. 261; p. 291.
Sole-pressing machines, Form-holding means for. J. W. Baer. No. 1,300,549; Apr. 15; v. 261; p. 486.
Sole-stitching machines, Channel-cutter for. W. F. Jaynes. No. 1,301,269; Apr. 22; v. 261; p. 674.
Soles and heels, Composition for shoe. D. H. Young and C. O. Noble. No. 1,299,650; Apr. 8; v. 261; p. 263.
Solids from liquids, Apparatus for thickening and separating. J. A. Traylor. No. 1,299,872; Apr. 8; v. 261; p. 314.
Sound-amplifier. J. J. Ward. No. 1,301,526; Apr. 22; v. 261; p. 723.
Sound, Apparatus for determining the direction of a source of. F. Rieber. No. 1,299,616; Apr. 8; v. 261; p. 256.
Sound-box mounting. W. T. Lakin. No. 1,301,458; Apr. 22; v. 261; p. 710.
Sound-detector. J. A. Burgess. No. 1,301,034; Apr. 15; v. 261; p. 589.
Sound-interference device. J. A. Burgess and G. B. Hutchings. No. 1,301,035; Apr. 15; v. 261; p. 590.
Sound-producing device. J. C. Deagan. No. 1,301,916; Apr. 29; v. 261; p. 829.
Sound-records, Producing. V. H. Emerson. No. 1,299,153; Apr. 1; v. 261; p. 122.
Sound reproducing and recording apparatus. S. D. Mott. No. 1,299,853; Apr. 8; v. 261; p. 310.
Spark-arrester. N. A. Donald. No. 1,302,328; Apr. 29; v. 261; p. 906.
Spark-coil for ignition. J. F. Cavanagh. No. 1,302,308; Apr. 29; v. 261; p. 902.
Spark-plug. C. L. Bundy. No. 1,300,569; Apr. 15; v. 261; p. 491.
Spark-plug. A. J. Champion. No. 1,298,883; Apr. 1; v. 261; p. 62.
Spark-plug. T. P. Cronin. No. 1,302,319; Apr. 29; v. 261; p. 905.
Spark-plug. C. H. Duffy. No. 1,301,824; Apr. 29; v. 261; p. 811.
Spark-plug. W. Housman. No. 1,301,562; Apr. 22; v. 261; p. 729.
Spark-plug. J. J. Macbeth. No. 1,301,862; Apr. 29; v. 261; p. 818.
Spark-plug. E. O'Connell. No. 1,299,997; Apr. 8; v. 261; p. 340.
Spark-plug. W. J. O'Gorman. No. 1,301,870; Apr. 29; v. 261; p. 820.
Spark-plug. E. O. Sather. No. 1,299,040; Apr. 1; v. 261; p. 97.
Spark-plug. R. Sutton. No. 1,298,821; Apr. 1; v. 261; p. 48.
Spark-plug. W. S. Thomas. No. 1,300,048; Apr. 8; v. 261; p. 352.
Spark-plug, Non-grounded. J. A. Rose. No. 1,299,035; Apr. 1; v. 261; p. 96.
Spark-plug tester. W. G. Clink. No. 1,298,896; Apr. 1; v. 261; p. 64.
Spark-plug waterproof connection. A. Schmidt. No. 1,298,799; Apr. 1; v. 261; p. 43.
Spark-plugs, Manufacturing. F. L. Dyer. No. 1,299,150; Apr. 1; v. 261; p. 121.
Spark-tester. F. A. Robens. No. 1,298,795; Apr. 1; v. 261; p. 42.
Spectacle-case holder. G. E. Cole. No. 1,300,124; Apr. 8; v. 261; p. 369.
Spectacle-rim-stretching device. M. Tritsch. No. 1,300,520; Apr. 15; v. 261; p. 480.
Speculum. J. J. Moyer. No. 1,300,756; Apr. 15; v. 261; p. 529.
Speed device, Multiple-. C. H. Norton and A. Turner. No. 1,299,765; Apr. 8; v. 261; p. 291.
Speed of moving bodies, Determining relative. C. A. Sundt. No. 1,299,058; Apr. 1; v. 261; p. 102.
Speed-starting device for motors. E. Labrely. No. 1,300,624; Apr. 15; v. 261; p. 501.
Speedometer adjustable drive. J. Berg. No. 1,300,829; Apr. 15; v. 261; p. 439.
Spike. C. D. Russell. No. 1,301,173; Apr. 22; v. 261; p. 655.
Spike-puller. E. F. Hoben. No. 1,300,952; Apr. 15; v. 261; p. 571.
Spinning and like machines, Lappet for. J. S. Gaunt and H. Dyson. No. 1,302,029; Apr. 29; v. 261; p. 850.
Spinning or winding machine. W. E. Walsh. No. 1,301,022; Apr. 15; v. 261; p. 587.
Spinning or winding machine builder mechanism. W. E. Walsh. No. 1,299,639; Apr. 8; v. 261; p. 261.
Splicing and seizing clamp. A. J. T. Wendt-Wriedt. No. 1,300,794; Apr. 15; v. 261; p. 537.
Spoke-lock. G. Bate. No. 1,299,288; Apr. 1; v. 261; p. 153.
Spool, Ribbon-. E. B. Hess and L. C. Myers. No. 1,301,696; Apr. 22; v. 261; p. 756.
Spoon attachment. S. Plasclascovitis. No. 1,300,096; Apr. 8; v. 261; p. 342.
Spot-light mounting. O. M. Otte. No. 1,300,863; Apr. 15; v. 261; p. 552.
Spout, Pouring-. C. H. Nowack. No. 1,301,868; Apr. 29; v. 261; p. 820.
Sprayer. J. T. Plumer. No. 1,299,380; Apr. 1; v. 261; p. 173.
Spraying apparatus. A. V. Dickey. No. 1,300,823; Apr. 15; v. 261; p. 544.

Spraying device. J. W. Ranson and O. A. Gerstung. No. 1,300,014; Apr. 8; v. 261; p. 344.
Spraying machine, Dry-. W. H. Rose. No. 1,300,654; Apr. 15; v. 261; p. 507.
Spreader. W. H. Binder. No. 1,299,606; Apr. 8; v. 261; p. 268.
Spring: *See*—
Diaphragm buffer-spring. Vehicle-spring.
Pneumatic spring. Vehicle auxiliary spring.
Spring-lifter. C. C. Hale. No. 1,298,934; Apr. 1; v. 261; p. 73.
Spring-lock. H. L. Peters. No. 1,299,859; Apr. 8; v. 261; p. 311.
Spring-motor control. N. Pedersen. No. 1,301,968; Apr. 29; v. 261; p. 839.
Spring-mounting. G. A. Hoover. No. 1,298,716; Apr. 1; v. 261; p. 22.
Spring-wheel. S. Carpenter. No. 1,302,306; Apr. 29; v. 261; p. 902.
Square, Adjustable. L. Lowenstein. No. 1,300,427; Apr. 15; v. 261; p. 460.
Square attachment, Joiner's-. J. H. Potter. No. 1,301,166; Apr. 22; v. 261; p. 653.
Square for tools. R. H. Barr. No. 1,301,996; Apr. 29; v. 261; p. 844.
Stacker, Hay-. G. Scheibing. No. 1,301,178; Apr. 22; v. 261; p. 656.
Stacker, Hay and straw. S. M. Gebo. No. 1,302,030; Apr. 29; v. 261; p. 851.
Stair-jack. C. D. Fahrney. No. 1,301,672; Apr. 22; v. 261; p. 750.
Stairs, Dividing-. C. G. Porter. No. 1,300,010; Apr. 8; v. 261; p. 343.
Stake-pulling machine. F. Buchanan. No. 1,299,294; Apr. 1; v. 261; p. 154.
Stamp-affixing and envelop-sealing machine. F. R. S. Ditmars. No. 1,302,018; Apr. 29; v. 261; p. 848.
Stamp, Hand-. H. Folger and J. C. Julien. No. 1,301,926; Apr. 29; v. 261; p. 821.
Stamp rack, Hand-. A. C. Meyer. No. 1,298,993; Apr. 1; v. 261; p. 87.
Stamp, Time-. J. C. Wilson. No. 1,300,900; Apr. 15; v. 261; p. 562.
Stamping or embossing machine. H. W. Winter. No. 1,301,890; Apr. 29; v. 261; p. 824.
Stand: *See*—
Bobbin-box stand. Flower-stand.
Display-stand. Jardinière-stand.
Stand and feeder, Paste. J. H. Mullaly. No. 1,299,758; Apr. 8; v. 261; p. 289.
Standard. A. M. Evenson. No. 1,302,145; Apr. 29; v. 261; p. 872.
Starter, Mechanical. E. P. Brinnon. No. 1,301,901; Apr. 29; v. 261; p. 826.
Stay-bolt. W. Jenkins. No. 1,300,899; Apr. 15; v. 261; p. 454.
Stay-bolt connection, Flexible. P. F. Gallagher. No. 1,300,832; Apr. 15; v. 261; p. 546.
Steam-boiler baffle. N. E. Lewis. No. 1,299,486; Apr. 8; v. 261; p. 226.
Steam-boiler or the like water-feed apparatus. L. Dounaew. No. 1,302,329; Apr. 29; v. 261; p. 907.
Steam-engine. J. M. Kern. No. 1,301,571; Apr. 22; v. 261; p. 731.
Steam plant. J. V. Blomquist. No. 1,301,806; Apr. 29; v. 261; p. 808.
Steam-superheater. J. G. Robinson. No. 1,299,083; Apr. 1; v. 261; p. 96.
Steam-superheater. J. G. Robinson. No. 1,301,606; Apr. 22; v. 261; p. 737.
Steel and high-phosphorus slag, Producing. W. R. Walker. No. 1,299,072; Apr. 1; v. 261; p. 105.
Steel-making process. W. M. Johnson. No. 1,300,410; Apr. 15; v. 261; p. 456.
Steel-wool, Machine for making. F. A. Paton and H. L. Koenig. No. 1,300,002; Apr. 8; v. 261; p. 241.
Steering-column. D. E. Hennessy. No. 1,302,044; Apr. 29; v. 261; p. 853.
Steering-gear for road-planers, Compensating. G. W. Cartwright. No. 1,300,697; Apr. 15; v. 261; p. 517.
Steering-gear, Universal compound worm. F. B. Alldredge. No. 1,299,532; Apr. 8; v. 261; p. 236.
Steering means for motor-vehicles into right or left hand drives, Means for converting. I. M. Jacobs and W. Cramer. No. 1,299,848; Apr. 1; v. 261; p. 166.
Steering-wheel. O. K. Snyder. No. 1,299,648; Apr. 1; v. 261; p. 98.
Steering-wheel lock. L. Rial and W. Hebern. No. 1,300,020; Apr. 8; v. 261; p. 345.
Steering-wheel lock. T. D. Stanley. No. 1,300,505; Apr. 15; v. 261; p. 477.
Stellar positions and influences, Means for demonstrating. G. P. Everson. No. 1,301,048; Apr. 15; v. 261; p. 592.
Stencil-cutting. C. B. Stolper. No. 1,302,097; Apr. 29; v. 261; p. 863.
Stencil production. L. Lewis. No. 1,299,969; Apr. 8; v. 261; p. 325.
Still. A. A. Ashworth. No. 1,300,548; Apr. 15; v. 261; p. 486.
Still-scraping apparatus. A. A. Ashworth. No. 1,300,547; Apr. 15; v. 261; p. 486.
Stock-fountain, Sanitary heated. T. J. Bendlage. No. 1,301,805; Apr. 29; v. 261; p. 808.
Stock-oiler. G. Randall. No. 1,300,297; Apr. 15; v. 261; p. 432.
Stock-quotation projector. B. A. Proctor. No. 1,299,024; Apr. 1; v. 261; p. 94.
Stoker, Hand-. G. H. Thacher, Jr. No. 1,302,453; Apr. 29; v. 261; p. 931.
Stone, Artificial. M. Ebinger. No. 1,300,591; Apr. 15; v. 261; p. 495.
Stone-gatherer. O. F. Reiter. No. 1,300,018; Apr. 8; v. 261; p. 344.
Stool, Fitting-. A. Wanner, Jr. No. 1,301,203; Apr. 22; v. 261; p. 661.
Stool, Folding. D. Weiner. No. 1,300,678; Apr. 15; v. 261; p. 512.
Stop device, Automatic. C. C. Harris and N. L. McLeod. No. 1,298,939; Apr. 1; v. 261; p. 74.
Stop means. J. Skandora. No. 1,300,232; Apr. 8; v. 261; p. 392.
Stopper: *See*—
Bottle-stopper.
Storage and delivery system, Hydraulic. F. G. Farr. No. 1,299,567; Apr. 8; v. 261; p. 244.
Storage battery. T. A. Edison. No. 1,299,693; Apr. 8; v. 261; p. 273.
Storage battery. J. L. Lotsch. No. 1,301,780; Apr. 22; v. 261; p. 773.
Store-front construction. F. J. Plym and I. G. Barclay. No. 1,299,508; Apr. 8; v. 261; p. 231.
Storing bulky materials, System for. A. H. Wood. No. 1,300,800; Apr. 15; v. 261; p. 539.
Stove. C. A. Notman. No. 1,302,419; Apr. 29; v. 261; p. 924.
Stove. W. E. Perryclear. No. 1,299,020; Apr. 1; v. 261; p. 93.
Stove, Camp-. J. S. Milligan. No. 1,298,762; Apr. 1; v. 261; p. 84.
Stove, Collapsible folding. G. W. Ferdon. No. 1,300,594; Apr. 15; v. 261; p. 495.
Stove, Cook-. E. L. McBride. No. 1,301,582; Apr. 22; v. 261; p. 733.
Stove, Field-. J. Watson. No. 1,300,527; Apr. 15; v. 261; p. 481.
Stove, Lamp-. W. B. Reininger. No. 1,298,789; Apr. 1; v. 261; p. 41.
Stove-lighter, Automatic. W. J. Mulvaney. No. 1,299,876; Apr. 1; v. 261; p. 172.
Stove water-top, Gas-. A. Leckey. No. 1,298,740; Apr. 1; v. 261; p. 28.
Stovepipe-coupling. L. Bernia. No. 1,298,809; Apr. 1; v. 261; p. 58.
Stovepipes, Joint and locking means for. J. H. Jacobs. No. 1,301,565; Apr. 22; v. 261; p. 730.
Straightening deformed or club feet, Device for. G. A. Nelson. No. 1,301,491; Apr. 22; v. 261; p. 716.
Straightening-press and operating same. C. O. Weissenburger. No. 1,300,679; Apr. 15; v. 261; p. 512.
Strainer or turnbuckle, Wire. S. R. Parkes. No. 1,302,425; Apr. 29; v. 261; p. 926.
Strap: *See*—
Anchor-strap.
Strap-tightening tool. E. J. Brooks. No. 1,299,113; Apr. 1; v. 261; p. 114.
Stropping device and safety-razor, Combination. L. Heuser. No. 1,301,437; Apr. 22; v. 261; p. 706.
Structural composition. E. R. Taylor and I. Flexner. No. 1,302,452; Apr. 29; v. 261; p. 931.
Strut connection. A. V. Roe. No. 1,301,748; Apr. 22; v. 261; p. 766.
Stud-and-socket fastener. D. Bourque. No. 1,300,337; Apr. 15; v. 261; p. 441.
Submarine. F. J. Lieske. No. 1,300,744; Apr. 15; v. 261; p. 526.
Submarine. F. J. Lieske. No. 1,300,745; Apr. 15; v. 261; p. 527.
Submarine signaling device. G. H. Walker. No. 1,300,062; Apr. 8; v. 261; p. 854.
Suction-cleaner. W. W. Rosenfeld. No. 1,300,196; Apr. 8; v. 261; p. 384.
Sugar from cane, &c., Method of and apparatus for extracting. G. F. Greenwood. No. 1,299,458; Apr. 8; v. 261; p. 220.
Suitcase. C. F. Blanke. No. 1,299,291; Apr. 1; v. 261; p. 154.
Sulfonated-mineral-oil-sludge product and making. R. E. Divine. No. 1,301,662; Apr. 22; v. 261; p. 748.
Superheater-element connecting means. N. T. McKee. No. 1,300,750; Apr. 15; v. 261; p. 528.
Supply-base, Submergible and towable. W. W. Potter. No. 1,301,733; Apr. 22; v. 261; p. 764.
Supply mechanism. J. C. Schaffer. No. 1,301,978; Apr. 29; v. 261; p. 841.
Supporting-clamp. C. T. Tobiason and O. Swanson. No. 1,301,885; Apr. 29; v. 261; p. 823.
Surface-working machine. R. E. Miller. No. 1,299,989; Apr. 8; v. 261; p. 338.
Surface-working machine. R. E. Miller. No. 1,299,990; Apr. 8; v. 261; p. 339.
Surgical aspirator. J. F. Willette. No. 1,299,081; Apr. 1; v. 261; p. 106.
Surgical instrument. G. Ermold. No. 1,299,928; Apr. 8; v. 261; p. 326.
Sweeper, Street-. B. Frame. No. 1,301,927; Apr. 29; v. 261; p. 831.

Swimming-machine. A. A. Moore. No. 1,299,000; Apr. 1; v. 261; p. 89.
Swing. J. C. Wilson. No. 1,300,660; Apr. 15; v. 261; p. 513.
Switch: *See*—
Automatic switch.
Electric switch.
Electrically-operated switch.
Fire-alarm electric switch.
Knife-blade switch.
Lighting-switch.
Non-binding switch.
Railway-switch.
Safety-switch.
Safety limit-switch.
Service-switch.
Time-switch.
Switch. B. K. Read. No. 1,302,089; Apr. 29; v. 261; p. 861.
Switch. T. E. Smith. No. 1,300,665; Apr. 15; v. 261; p. 510.
Switch construction. H. C. Stiff. No. 1,299,806; Apr. 8; v. 261; p. 300.
Switch-operating mechanism. W. M. Holmberg. No. 1,300,968; Apr. 15; v. 261; p. 574.
Switch operator, Electric-light-. E. H. Shute. No. 1,301,183; Apr. 22; v. 261; p. 657.
Switchboard. H. F. Krantz. (Reissue.) No. 14,631; Apr. 8; v. 261; p. 393.
Swivel-joint. W. N. Best. No. 1,300,109; Apr. 8; v. 261; p. 365.
Swivel joint or coupling for pipes. H. V. Cornell. No. 1,302,314; Apr. 29; v. 261; p. 904.
Table: *See*—
Bed-table.
Chiropractic table.
Extension-table.
Folding table.
Hearse-table.
Tilting table.
Table. E. Nielsen. No. 1,300,759; Apr. 15; v. 261; p. 530.
Table-fork knife attachment. F. Chandler. No. 1,300,119; Apr. 8; v. 261; p. 368.
Table-leg-securing device. G. W. Stoll and G. H. Drechsel. No. 1,301,617; Apr. 22; v. 261; p. 739.
Table-slide. F. C. Dabney. No. 1,299,687; Apr. 8; v. 261; p. 272.
Tachometer drive connection. J. Berg. No. 1,298,646; Apr. 1; v. 261; p. 5.
Tag, Tubular. M. H. Loughridge. No. 1,298,961; Apr. 1; v. 261; p. 85.
Take-up mechanism. S. J. La Montaine and C. A. Money. No. 1,298,969; Apr. 1; v. 261; p. 82.
Talking-machine. E. A. Eschinger. No. 1,301,786; Apr. 22; v. 261; p. 774.
Talking-machine. E. A. Eschinger. No. 1,301,787; Apr. 22; v. 261; p. 775.
Talking-machine brake. H. C. Bryant. No. 1,300,568; Apr. 15; v. 261; p. 491.
Talking-machine reproducer. H. T. Crapo. No. 1,302,140; Apr. 29; v. 261; p. 871.
Talking-machine sound-box. J. F. Smith. No. 1,302,479; Apr. 29; v. 261; p. 936.
Talking-machine start and stop mechanism. J. B. Cherney. No. 1,301,905; Apr. 29; v. 261; p. 827.
Talking-machine tone-arm. J. F. Smith. No. 1,302,478; Apr. 29; v. 261; p. 936.
Tally-sheet. J. B. Redfield. No. 1,301,742; Apr. 22; v. 261; p. 765.
Tank: *See*—
Automobile radiator-tank.
Vacuum-tank.
Water-tank.
Tank for ash-conveyer systems. L. A. Griffin. No. 1,300,605; Apr. 15; v. 261; p. 497.
Tank-registering device. H. J. Benjamin. No. 1,300,327; Apr. 15; v. 261; p. 439.
Tank-regulator. W. M. Fulton. No. 1,300,717; Apr. 15; v. 261; p. 521.
Taper pipe. L. H. Brockett. No. 1,301,096; Apr. 22; v. 261; p. 638.
Tapping-machine. N. H. Andersen. No. 1,302,271; Apr. 29; v. 261; p. 895.
Tapping-machine. R. H. Mueller. No. 1,301,730; Apr. 22; v. 261; p. 762.
Target-making machine. D. Morrill. No. 1,300,996; Apr. 15; v. 261; p. 580.
Teledynamic control system. J. H. Hammond, Jr. No. 1,301,690; Apr. 22; v. 261; p. 754.
Telegraph instrument. J. S. Newman. No. 1,299,964; Apr. 8; v. 261; p. 339.
Telegraph-key. J. J. Mason. No. 1,302,401; Apr. 29; v. 261; p. 920.
Telegraph system. J. H. Bell. No. 1,298,868; Apr. 1; v. 261; p. 58.
Telegraph system. J. H. Bell. No. 1,300,326; Apr. 15; v. 261; p. 439.
Telegraph system, Duplex printing-. C. G. Ashley. No. 1,301,213; Apr. 22; v. 261; p. 663.
Telegraphy and telephony, Reflector for use in wireless. G. Marconi and C. S. Franklin. No. 1,301,473; Apr. 22; v. 261; p. 713.
Telemotor. J. F. Johnston. No. 1,302,376; Apr. 29; v. 261; p. 916.
Telephone. A. Engelberg. No. 1,299,154; Apr. 1; v. 261; p. 122.
Telephone central, &c., relay. M. B. Richter. No. 1,300,022; Apr. 8; v. 261; p. 346.
Telephone-directories, Device for suspending and securing. W. E. Ludlow. No. 1,299,745; Apr. 8; v. 261; p. 285.
Telephone-exchange system. J. L. Wright. No. 1,298,889; Apr. 1; v. 261; p. 54.
Telephone-exchange system, Automatic and manual. W. L. Campbell and T. G. Martin. No. 1,301,648; Apr. 22; v. 261; p. 745.
Telephone-handset. G. H. Nash and B. B. Grace. No. 1,298,771; Apr. 1; v. 261; p. 36.
Telephone system. S. A. Beyland. No. 1,301,268; Apr. 22; v. 261; p. 693.
Telephone system. W. L. Campbell and T. G. Martin. No. 1,301,647; Apr. 22; v. 261; p. 745.
Telephone system, Combined automatic and manual. T. G. Martin. No. 1,301,584; Apr. 22; v. 261; p. 733.
Telescope or opera-glass, Separable. H. W. MacLachlan. No. 1,299,750; Apr. 8; v. 261; p. 286.
Telescope, Submarine. W. S. Armstrong. No. 1,301,534; Apr. 22; v. 261; p. 724.
Temperature changes in gases, Obtaining. A. S. Ramage. No. 1,302,430; Apr. 29; v. 261; p. 927.
Tennis-net reel. O. C. Janssen. No. 1,300,972; Apr. 15; v. 261; p. 575.
Tension-wheel and producing same. E. E. Einfeldt. No. 1,299,439; Apr. 8; v. 261; p. 215.
Tents for field-hospitals, depots, and like purposes, Construction of. F. W. Lanchester. No. 1,302,182; Apr. 29; v. 261; p. 878.
Test-connector. W. L. Flye. No. 1,301,827; Apr. 29; v. 261; p. 812.
Textile strands, Uniting. E. J. Lipps. No. 1,302,187; Apr. 29; v. 261; p. 879.
Theater-chair. L. C. and M. B. Toole. No. 1,299,810; Apr. 8; v. 261; p. 300.
Theatrical appliance. M. Orton. No. 1,301,969; Apr. 29; v. 261; p. 838.
Thermo-electric regulator. W. G. Hartwig. No. 1,300,218; Apr. 8; v. 261; p. 389.
Thermometer-case. H. C. Parsons. No. 1,302,062; Apr. 29; v. 261; p. 860.
Thermometer, Clinical. L. G. Hegner. No. 1,299,339; Apr. 1; v. 261; p. 164.
Thermostatic alarm. F. L. Scoutten. No. 1,301,011; Apr. 15; v. 261; p. 584.
Thimble attachment, Magnetic. H. V. Bradford. No. 1,301,093; Apr. 22; v. 261; p. 638.
Thread-cutter and hem-creaser. A. C. Lincoln. No. 1,299,971; Apr. 8; v. 261; p. 326.
Thread severing and holding mechanism. E. J. Ray. No. 1,298,786; Apr. 1; v. 261; p. 40.
Thread-waxing device. F. Ashworth. No. 1,298,638; Apr. 1; v. 261; p. 4.
Threshing-machine. F. Eves. No. 1,301,670; Apr. 22; v. 261; p. 750.
Threshing-machine. F. Eves. No. 1,301,671; Apr. 22; v. 261; p. 750.
Threshing-machine feeding device. J. H. Crumb. No. 1,299,684; Apr. 8; v. 261; p. 271.
Ticket-issuing mechanism. C. L. Lee. No. 1,299,742; Apr. 8; v. 261; p. 284.
Ticketing machine, Pin-. G. W. Henry, Jr. No. 1,300,726; Apr. 15; v. 261; p. 523.
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Package-tie.
Railway-tie.
Rope-tie.
Tie and joint, Combined. P. E. Moore. No. 1,300,290; Apr. 15; v. 261; p. 431.
Tilting table. G. Anderson. No. 1,299,894; Apr. 8; v. 261; p. 319.
Time-checker, Service. E. M. Schantz. No. 1,299,286; Apr. 1; v. 261; p. 141.
Time circuit-controller. J. M. Andersen. No. 1,299,812; Apr. 8; v. 261; p. 301.
Time-controlled mechanism. W. A. Heinrich. No. 1,299,340; Apr. 1; v. 261; p. 164.
Time relay, Maximum-. A. Alchele. No. 1,301,991; Apr. 29; v. 261; p. 843.
Time-switch. H. S. Sines. No. 1,300,496; Apr. 15; v. 261; p. 475.
Timing device. F. W. Smith. No. 1,301,618; Apr. 22; v. 261; p. 738.
Timepiece, Bezel-wound. P. O. Dorer. No. 1,301,919; Apr. 29; v. 261; p. 830.
Tin or sheet mill polishing apparatus. S. Hitchings. No. 1,301,440; Apr. 22; v. 261; p. 707.
Tire. J. H. Cooper. No. 1,301,230; Apr. 22; v. 261; p. 666.
Tire. P. J. Hamill. No. 1,299,383; Apr. 1; v. 261; p. 163.
Tire. H. Kaplan. No. 1,300,731; Apr. 15; v. 261; p. 524.
Tire. F. M. Reid. No. 1,302,091; Apr. 29; v. 261; p. 862.
Tire-armor. W. C. Francis. No. 1,300,946; Apr. 15; v. 261; p. 570.
Tire-armor. A. X. Pfeiffer. No. 1,300,766; Apr. 15; v. 261; p. 532.
Tire, Automobile-. J. F. Beeselman. No. 1,301,996; Apr. 29; v. 261; p. 844.
Tire, Automobile-. G. W. Johnson. No. 1,298,731; Apr. 1; v. 261; p. 26.
Tire, Automobile-. W. H. Northall. No. 1,302,418; Apr. 29; v. 261; p. 924.

Tire, Automobile inside. G. A. Le Doux. No. 1,300,980; Apr. 15; v. 261; p. 577.
Tire-building machine. F. C. Merton. No. 1,298,787; Apr. 1; v. 261; p. 35.
Tire-building machine. F. C. Merton. No. 1,298,788; Apr. 1; v. 261; p. 36.
Tire-building machine. W. J. Steiale. No. 1,299,410; Apr. 1; v. 261; p. 100.
Tire-building machines. Tension device for. F. C. Merton. No. 1,298,789; Apr. 1; v. 261; p. 36.
Tire-casing and manufacture. A. L. Cass. No. 1,298,661; Apr. 1; v. 261; p. 9.
Tire-casing construction. W. G. Deans. No. 1,299,205; Apr. 1; v. 261; p. 157.
Tire-casing core. C. D. Hibbs. No. 1,300,291; Apr. 15; v. 261; p. 453.
Tire-casing patch. H. P. Pirtle. No. 1,300,769; Apr. 15; v. 261; p. 532.
Tire-chain. B. W. Hartley. No. 1,302,364; Apr. 29; v. 261; p. 913.
Tire-chain clamp. H. H. Stoner. No. 1,301,521; Apr. 22; v. 261; p. 722.
Tire-clamp. J. A. Williams. No. 1,300,538; Apr. 15; v. 261; p. 484.
Tire cover, Motor-. J. H. Gill, J. D. Rea, and L. Sanderson. No. 1,300,601; Apr. 15; v. 261; p. 497.
Tire-covers, Machine for the manufacture of. F. H. Mercer and H. F. H. Blease. No. 1,299,497; Apr. 8; v. 261; p. 229.
Tire, Cushion-. T. A. Sprague. No. 1,299,051; Apr. 1; v. 261; p. 100.
Tire, Emergency-. M. Hines. No. 1,299,842; Apr. 1; v. 261; p. 165.
Tire-gage. H. M. Shwab. No. 1,302,443; Apr. 29; v. 261; p. 930.
Tire, Inner. H. M. Henning. No. 1,298,945; Apr. 1; v. 261; p. 76.
Tire-liner. J. J. Moore. No. 1,298,765; Apr. 1; v. 261; p. 35.
Tire-machine tool-mounting. J. L. Butler. No. 1,300,341. Apr. 15; v. 261; p. 442.
Tire-making machine. L. P. Arnold. No. 1,302,122; Apr. 29; v. 261; p. 867.
Tire-molds, Apparatus for forming. B. Granville. No. 1,299,456; Apr. 8; v. 261; p. 219.
Tire, Non-skid. H. R. Waterman. No. 1,301,243; Apr. 22; v. 261; p. 689.
Tire or other valve. H. P. Kraft. No. 1,302,320; Apr. 29; v. 261; p. 916.
Tire, Pneumatic. J. R. Gammeter. No. 1,299,167; Apr. 1; v. 261; p. 125.
Tire, Pneumatic automobile-. N. L. Tobin. No. 1,300,050; Apr. 8; v. 261; p. 352.
Tire-protector. J. L. Wheeler. No. 1,301,207; Apr. 22; v. 261; p. 661.
Tire, Puncture-proof automobile-. J. S. Walton. No. 1,300,063; Apr. 8; v. 261; p. 355.
Tire, Resilient. T. Bradshaw. No. 1,299,112; Apr. 1; v. 261; p. 114.
Tire, Resilient. W. H. Divers. No. 1,300,938; Apr. 15; v. 261; p. 567.
Tire, Resilient. A. J. Noble. No. 1,299,009; Apr. 1; v. 261; p. 90.
Tire-rim. A. Hoecker. No. 1,299,727; Apr. 8; v. 261; p. 281.
Tire-rim, Demountable. E. C. Horni. No. 1,299,472; Apr. 8; v. 261; p. 223.
Tire rim, Pneumatic-. W. J. Stark and S. R. Ramsay. No. 1,302,447; Apr. 29; v. 261; p. 930.
Tire, Rubber or elastic vehicle-. W. J. Kent. No. 1,302,178; Apr. 29; v. 261; p. 877.
Tire-shoe. H. E. Motl. No. 1,299,005; Apr. 1; v. 261; p. 89.
Tire, Spring-. E. S. Smith. No. 1,302,477; Apr. 29; v. 261; p. 935.
Tire-tool. E. W. Bush. No. 1,300,924; Apr. 15; v. 261; p. 565.
Tire-tool. J. H. Robson. No. 1,301,746; Apr. 22; v. 261; p. 765.
Tire-tool. G. A. Strobech. No. 1,298,820; Apr. 1; v. 261; p. 47.
Tire-valves, Dust-cap for. C. A. Herle. No. 1,301,933; Apr. 29; v. 261; p. 832.
Tire, Vehicle-. A. Crusan. No. 1,298,915; Apr. 1; v. 261; p. 69.
Tire, Vehicle-. G. L. Kavanagh. No. 1,300,732; Apr. 15; v. 261; p. 524.
Tire, Vehicle-. J. Lorens. No. 1,301,467; Apr. 22; v. 261; p. 712.
Tires, Combined blow-off and hose connection for. S. Kahn. No. 1,298,896; Apr. 1; v. 261; p. 177.
Tires, Demountable rim for vehicle-. E. L. Morgan. No. 1,299,206; Apr. 1; v. 261; p. 134.
Tires, Divisible wheel-rim for pneumatic. T. J. Hobson. No. 1,299,942; Apr. 8; v. 261; p. 329.
Tires, Expansible core for vulcanizing. J. P. Smith. No. 1,299,045; Apr. 1; v. 261; p. 99.
Tires, Flexible auxiliary tread for pneumatic. C. H. Gunn. No. 1,299,797; Apr. 8; v. 261; p. 273.
Tires, Manufacturing. W. L. Mitten. No. 1,302,466; Apr. 29; v. 261; p. 921.
Tires, Pressure-gage for vehicle-. H. L. West. No. 1,300,534; Apr. 15; v. 261; p. 483.
Tires, Protective armor for pneumatic. R. C. Purris. No. 1,299,225; Apr. 1; v. 261; p. 138.
Tires, Reinforcing fabric strip for. T. Branson. No. 1,300,696; Apr. 15; v. 261; p. 517.
Toaster. J. Jones. No. 1,300,975; Apr. 15; v. 261; p. 576.
Toasting device. J. W. and A. E. Bowers. No. 1,300,565; Apr. 15; v. 261; p. 490.
Tobacco-cleaning apparatus. L. F. Bannon. No. 1,301,038; Apr. 22; v. 261; p. 743.
Tobacco-pipe. E. Altmann. No. 1,302,270; Apr. 29; v. 261; p. 895.
Tobacco-pipe. C. Hurst. No. 1,302,047; Apr. 29; v. 261; p. 854.
Tobacco-stemming machine. C. V. Strickland. No. 1,301,193; Apr. 22; v. 261; p. 659.
Toilet accessory. J. Hayes. No. 1,302,035; Apr. 29; v. 261; p. 852.
Toilet article. S. Macklewicz. No. 1,298,750; Apr. 1; v. 261; p. 31.
Tongs. N. C. Sorensen. No. 1,301,185; Apr. 22; v. 261; p. 657.
Tongs, Cuspidor-. T. H. Leaton. No. 1,301,852; Apr. 29; v. 261; p. 816.
Tool-handle. J. E. Anderson. No. 1,301,802; Apr. 29; v. 261; p. 807.
Tool-handle. B. W. Decatur. No. 1,302,823; Apr. 29; v. 261; p. 905.
Tool-handle. E. C. McMahon. No. 1,301,287; Apr. 22; v. 261; p. 678.
Tool-holder. L. Swanson. No. 1,300,042; Apr. 8; v. 261; p. 351.
Tool-joint. H. W. Fletcher. No. 1,300,365; Apr. 15; v. 261; p. 447.
Tool, Lay-out. J. A. Beach. No. 1,298,866; Apr. 1; v. 261; p. 57.
Tools to spindles, Means for attaching. W. F. Groene. No. 1,300,163; Apr. 8; v. 261; p. 377.
Tooth, Artificial. G. Goldfoot. No. 1,302,152; Apr. 29; v. 261; p. 873.
Tooth attachment, Artificial-. W. F. Shaw. No. 1,301,181; Apr. 22; v. 261; p. 656.
Torch. A. J. and I. F. Fanesk. No. 1,300,250; Apr. 15; v. 261; p. 423.
Torch and igniting, Subaqueous. F. W. Brusch and W. F. J. Beyer. No. 1,298,880; Apr. 1; v. 261; p. 60.
Torch, Autogenous cutting-. H. H. Armstrong. No. 1,300,106; Apr. 8; v. 261; p. 365.
Torch, Cutting-. M. K. Dunham. No. 1,300,707; Apr. 15; v. 261; p. 519.
Torch, Cutting-. J. Harris. No. 1,302,157; Apr. 29; v. 261; p. 874.
Torpedo. G. E. Hesse. No. 1,302,162; Apr. 29; v. 261; p. 875.
Torpedo, Aerial. J. D. Covel. No. 1,300,930; Apr. 15; v. 261; p. 567.
Torpedo after-bodies, Making. J. A. Steinmetz. No. 1,298,815; Apr. 1; v. 261; p. 46.
Torpedo alarm-signal. G. C. Walsh. No. 1,301,767; Apr. 22; v. 261; p. 770.
Torpedo and mine defense for vessels. H. S. Sheransky. No. 1,299,243; Apr. 1; v. 261; p. 142.
Torpedo-net. A. J. Bradley. No. 1,301,641; Apr. 22; v. 261; p. 744.
Tourniquet. R. E. McFarlane. No. 1,302,062; Apr. 29; v. 261; p. 857.
Tourniquet. H. W. Plummer. No. 1,299,860; Apr. 8; v. 261; p. 312.
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Towel-service machine. R. De Berasques. No. 1,298,909; Apr. 1; v. 261; p. 67.
Tower construction. G. R. Taylor. No. 1,299,261; Apr. 1; v. 261; p. 147.
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Toy. J. W. Blanchard, A. J. Schneeman, and L. A. Mines. No. 1,301,537; Apr. 22; v. 261; p. 725.
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Toy. W. Myers. No. 1,299,377; Apr. 1; v. 261; p. 172.
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Toy and device, Electrical. P. E. Edelman. No. 1,300,261; Apr. 15; v. 261; p. 446.
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Toy for cats. E. F. Kettlie. No. 1,302,174; Apr. 29; v. 261; p. 874.
Toy gun. E. H. L. Englund. No. 1,301,669; Apr. 22; v. 261; p. 750.
Toy, Hydraulic. E. Arnold. No. 1,299,897; Apr. 8; v. 261; p. 319.
Toy machine-gun. F. V. du Pont. No. 1,302,332; Apr. 29; v. 261; p. 907.
Toy, Mechanical. V. S. Gaines. No. 1,301,552; Apr. 22; v. 261; p. 727.
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Toy rocker. B. H. Stevenson. No. 1,302,238; Apr. 29; v. 261; p. 889.
Toy submarine. R. L. Walters. No. 1,301,768; Apr. 22; v. 261; p. 770.
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Traction device, Self-adjusting. D. H. Good. No. 1,301,554; Apr. 22; v. 261; p. 728.
Traction-engine. C. Colahan. No. 1,301,040; Apr. 15; v. 261; p. 591.
Traction-engine. D. W. Nelson. No. 1,299,855; Apr. 8; v. 261; p. 310.
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Train-stop, Automatic. T. A. Flynn, Jr. No. 1,300,152; Apr. 8; v. 261; p. 275.
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Upholstery spring construction. C. R. Stickney. No. 1,299,871; Apr. 8; v. 261; p. 314.
Upholstery spring construction. L. A. Young. No. 1,299,890; Apr. 8; v. 261; p. 318.
Upholstery spring construction. L. A. Young. No. 1,302,119; Apr. 29; v. 261; p. 867.
Urn, Beverage-. O. A. Kittinger. No. 1,300,175; Apr. 8; v. 261; p. 330.
Vacuum casting-machine. L. R. Curtis. No. 1,300,821; Apr. 15; v. 261; p. 544.
Vacuum-cleaner. H. L. Boyle. No. 1,299,547; Apr. 8; v. 261; p. 239.
Vacuum-cleaner. F. C. Mason. No. 1,302,192; Apr. 29; v. 261; p. 880.
Vacuum heating systems, Condensation-return for. A. Des Rocher. No. 1,299,142; Apr. 1; v. 261; p. 119.
Vacuum system. C. R. Daellenbach. No. 1,298,903; Apr. 1; v. 261; p. 66.
Vacuum-tank. C. C. Bradbury. No. 1,301,369; Apr. 22; v. 261; p. 694.
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Valve. J. B. Cheeks. No. 1,299,428; Apr. 8; v. 261; p. 212.
Valve. W. E. Coakley. No. 1,298,668; Apr. 1; v. 261; p. 10.
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Valve. S. T. Nelson. No. 1,299,762; Apr. 8; v. 261; p. 290.
Valve and operating mechanism for tank-cars, Outlet-. G. E. Mittinger. No. 1,301,729; Apr. 22; v. 261; p. 762.
Valve and rim, Automatic. H. B. Eads. No. 1,300,985; Apr. 15; v. 261; p. 568.
Valve, Automatic gage-glass. A. J. Hockman. No. 1,302,045; Apr. 29; v. 261; p. 853.
Valve, Automatic vacuum closing-. M. T. Vandervoort. No. 1,302,104; Apr. 29; v. 261; p. 864.
Valve, Blow-off. E. W. Foster. No. 1,299,452; Apr. 8; v. 261; p. 218.
Valve-casings for wind musical instruments, Making. E. J. Gulick. No. 1,301,935; Apr. 29; v. 261; p. 833.
Valve, Check-. W. F. Roper. No. 1,300,653; Apr. 15; v. 261; p. 507.
Valve, Combined fuel and air. G. F. Bibb. No. 1,299,900; Apr. 8; v. 261; p. 320.
Valve construction. L. A. Lang. No. 1,302,385; Apr. 29; v. 261; p. 917.
Valve control, Automatic. J. W. F. Macdonald. No. 1,299,850; Apr. 8; v. 261; p. 309.
Valve-controlling means for flush-tanks. W. H. Griffiths. No. 1,302,154; Apr. 29; v. 261; p. 873.
Valve, Cut-off and drain. H. B. Fosler. No. 1,301,549; Apr. 22; v. 261; p. 727.
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Valve, Dry-pipe. E. M. Chandler. No. 1,299,679; Apr. 8; v. 261; p. 270.
Valve, Dry-pipe. E. E. Clark. No. 1,300,698; Apr. 15; v. 261; p. 517.
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Valve, Emergency shut-off. E. L. Smith. No. 1,300,301; Apr. 15; v. 261; p. 433.
Valve, Expansion-. B. S. McClellan. No. 1,300,182; Apr. 8; v. 261; p. 381.
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Valve, Flush-tank. F. J. Dowling. No. 1,300,138; Apr. 8; v. 261; p. 372.
Valve for bung-vents. J. B. Powles. No. 1,300,011; Apr. 8; v. 261; p. 343.
Valve for carbureters, Fuel-supply. W. J. Bowman. No. 1,299,904; Apr. 8; v. 261; p. 321.
Valve for domestic and farm water-tanks. J. P. Haffner. No. 1,302,033; Apr. 29; v. 261; p. 851.

Valve for explosion-engines. O. E. Michaud. No. 1,301,477; Apr. 22; v. 261; p. 714.
Valve for fire-extinguishing systems. C. H. Townsend. No. 1,299,065; Apr. 1; v. 261; p. 108.
Valve for fluid-dispensing apparatus, Sanitary. C. A. Coker. No. 1,301,229; Apr. 22; v. 261; p. 666.
Valve for gas-engines, Air-. G. H. Grounds. No. 1,299,571; Apr. 8; v. 261; p. 245.
Valve for hydraulic machinery, Automatic. J. Davidson. No. 1,300,703; Apr. 15; v. 261; p. 518.
Valve for internal-combustion engines, Automatic air-. A. L. Wagniere. No. 1,301,340; Apr. 22; v. 261; p. 689.
Valve for internal-combustion engines, Auxiliary air-. J. Hanman. No. 1,298,935; Apr. 1; v. 261; p. 73.
Valve, Four-way. E. E. Minard. No. 1,300,220; Apr. 8; v. 261; p. 290.
Valve-gear. S. Rosensweig. No. 1,298,796; Apr. 1; v. 261; p. 42.
Valve-gear device. J. B. Kingan and H. F. Ripken. (Reissue.) No. 14,624; Apr. 1; v. 261; p. 181.
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Valve-grinder. M. A. Persons and C. G. Farmer. No. 1,301,165; Apr. 22; v. 261; p. 653.
Valve-grinder. C. D. Rosecrans. No. 1,299,231; Apr. 1; v. 261; p. 139.
Valve-grinder, Portable. B. F. Stenman. No. 1,300,669; Apr. 15; v. 261; p. 510.
Valve, Irrigating-. E. Benner. No. 1,301,030; Apr. 15; v. 261; p. 589.
Valve-lifter. F. A. Pequegnat. No. 1,302,427; Apr. 29; v. 261; p. 926.
Valve-lock, Fuel-feed. C. C. Charles. No. 1,300,120; Apr. 8; v. 261; p. 368.
Valve mechanism. P. Haas. No. 1,300,261; Apr. 15; v. 261; p. 424.
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Valve, Muffler-. E. P. Gray. No. 1,299,826; Apr. 1; v. 261; p. 161.
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Valve-operating mechanism. R. Springborn. No. 1,300,785; Apr. 15; v. 261; p. 536.
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Valve-refacing tool. F. O. Albertsen. No. 1,301,891; Apr. 29; v. 261; p. 824.
Valve-spring compressor. R. A. Durland. (Reissue.) No. 14,640; Apr. 29; v. 261; p. 935.
Valve-spring lifter. M. W. Melrose. No. 1,299,496; Apr. 8; v. 261; p. 228.
Valve-spring lifter. C. W. Palmer. No. 1,301,733; Apr. 22; v. 261; p. 763.
Valve, Wind-musical-instrument. E. J. Gulick. No. 1,300,382; Apr. 15; v. 261; p. 451.
Vanity-case. W. G. Kendall. No. 1,299,733; Apr. 8; v. 261; p. 283.
Vapor-burner distributer. W. G. Chause. No. 1,298,891; Apr. 1; v. 261; p. 63.
Vapor-converter. D. C. Davis. No. 1,300,251; Apr. 15; v. 261; p. 422.
Vapor-generating device. A. M. Myers. No. 1,299,598; Apr. 8; v. 261; p. 251.
Vaporizer. W. R. Mathis. No. 1,300,630; Apr. 15; v. 261; p. 502.
Variable-speed motor. C. Endorf, Jr. No. 1,301,922; Apr. 29; v. 261; p. 830.
Vat or tank, Wood. H. and J. E. Buckley. No. 1,301,903; Apr. 29; v. 261; p. 826.
Vehicle. H. W. Montgomery. No. 1,300,185; Apr. 8; v. 261; p. 382.
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Vehicle auxiliary propeller, Motor-. I. C. Havens. No. 1,298,703; Apr. 1; v. 261; p. 19.
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Vehicle-body. T. J. Kehoe. No. 1,301,058; Apr. 15; v. 261; p. 595.
Vehicle-body. P. W. Pomeroy. No. 1,301,005; Apr. 15; v. 261; p. 583.
Vehicle-body door and window. C. A. Miner. No. 1,298,763; Apr. 1; v. 261; p. 34.
Vehicle-brake, Electrically-operated. C. Adler, Jr. No. 1,300,094; Apr. 8; v. 261; p. 363.
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Vehicle construction. J. N. Typpi. No. 1,300,055; Apr. 8; v. 261; p. 353.
Vehicle-control mechanism, Motor-. G. J. McClosky. No. 1,299,748; Apr. 8; v. 261; p. 286.
Vehicle coupling device. L. C. Owens. No. 1,301,307; Apr. 22; v. 261; p. 682.
Vehicle-curtain fastener. F. A. Neider. (Reissue.) No. 14,626; Apr. 1; v. 261; p. 181.
Vehicle, Double-decked. L. Spangler. No. 1,300,201; Apr. 8; v. 261; p. 385.
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Vehicle-fender. F. Millan. No. 1,298,996; Apr. 1; v. 261; p. 88.
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Vehicle frame, Motor-. O. E. Barthel. No. 1,299,107; Apr. 1; v. 261; p. 112.
Vehicle having a convertible body. L. S. Rankin. No. 1,299,381; Apr. 1; v. 261; p. 174.
Vehicle having endless tracks, Motor-driven. H. A. Hatfield. No. 1,299,937; Apr. 8; v. 261; p. 328.
Vehicle-locking device, Motor-. W. W. Sabin. (Reissue.) No. 14,628; Apr. 1; v. 261; p. 182.
Vehicle, Motor-. F. H. Farmer. No. 1,300,151; Apr. 8; v. 261; p. 374.
Vehicle, Motor-. M. Walter. No. 1,301,242; Apr. 22; v. 261; p. 639.
Vehicle-motor fuel-vaporizing means. H. A. Keitel. No. 1,301,707; Apr. 22; v. 261; p. 758.
Vehicle signal device. M. J. Clausen. No. 1,298,894; Apr. 1; v. 261; p. 63.
Vehicle-spring. M. M. McIntyre. No. 1,298,748; Apr. 1; v. 261; p. 50.
Vehicle-spring mounting. H. Stiers. No. 1,301,016; Apr. 15; v. 261; p. 585.
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Vehicle tool-box. F. J. McEwan. No. 1,302,397; Apr. 29; v. 261; p. 920.
Vehicle-track for public highways. M. L. Ness. No. 1,301,490; Apr. 22; v. 261; p. 716.
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Vehicle-wheel. J. R. Churchill. No. 1,299,301; Apr. 1; v. 261; p. 156.
Vehicle-wheel. J. O. Smith. No. 1,299,626; Apr. 8; v. 261; p. 259.
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Vehicles, Demountable rim for wheels of. C. W. Pride. No. 1,300,223; Apr. 8; v. 261; p. 391.
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Vehicles, Pneumatic sustaining means for. W. H. Bates. No. 1,301,804; Apr. 29; v. 261; p. 807.
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Vehicles, Power-transmission device for motor-. R. F. Crawford. No. 1,301,657; Apr. 22; v. 261; p. 747.
Vehicles, Signaling device for motor-. L. A. Bean. No. 1,301,090; Apr. 22; v. 261; p. 637.
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Vehicles, Vacuum-fuel-feed system for motor-. W. Falwell. No. 1,299,443; Apr. 8; v. 261; p. 216.
Vehicles, Walking attachment for motor-. O. E. Jenson. No. 1,298,953; Apr. 1; v. 261; p. 77.
Velocipede. C. White and G. Vezina. No. 1,301,990; Apr. 29; v. 261; p. 842.
Vending-machine. A. D. Grover and E. E. Barber. No. 1,300,259; Apr. 15; v. 261; p. 424.
Vending-machine and game apparatus, Combined. G. F. W. Schultze. No. 1,298,800; Apr. 1; v. 261; p. 43.
Vending-machine, Coin-operated. W. J. Jandrew. No. 1,299,835; Apr. 8; v. 261; p. 308.
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Veneer berry-box, Collapsible. O. C. Fenlason. No. 1,298,921; Apr. 1; v. 261; p. 70.
Veneer, Wood. J. R. McClain. No. 1,299,747; Apr. 8; v. 261; p. 286.
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Ventilator. W. A. Bartholomew. No. 1,298,286; Apr. 1; v. 261; p. 153.
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Vessel, Submarine. H. E. Yarrow. No. 1,302,264; Apr. 29; v. 261; p. 894.
Vessels and other structures. Automatic device for raising submerged. A. Fougate. No. 1,300,715; Apr. 15; v. 261; p. 521.
Vessels. Closure for containing. J. E. Doldt. No. 1,300,252; Apr. 15; v. 261; p. 423.
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Vulcanizable composition of matter having comminuted leather as a base and preparing same. J. S. Campbell. No. 1,302,463; Apr. 29; v. 261; p. 923.
Vulcanizer. I. R. McElroy and L. Eick. No. 1,301,721; Apr. 22; v. 261; p. 760.
Vulcanizer, Electric. O. C. Dennis. No. 1,301,283; Apr. 22; v. 261; p. 667.
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Wagon-jack. F. N. Darst. No. 1,300,129; Apr. 8; v. 261; p. 370.
Wagon-train. W. Atkins. (Reissue.) No. 14,639; Apr. 29; v. 261; p. 938.
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Dish-washer.
Nut-washer.
Washer. F. A. Nolan. No. 1,301,302; Apr. 22; v. 261; p. 631.
Washer-cutter. M. De Long. No. 1,299,686; Apr. 8; v. 261; p. 272.
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Watch-carrier. J. F. Mansfield. No. 1,302,066; Apr. 29; v. 261; p. 857.
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Water-bath cooking apparatus. G. Laquai. No. 1,299,963; Apr. 8; v. 261; p. 334.
Water-box for calendering-machines. W. H. Jackson. No. 1,301,703; Apr. 22; v. 261; p. 757.
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Water-closet-flushing device. J. E. Stark. No. 1,301,188; Apr. 22; v. 261; p. 657.
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Water-gage. M. W. Radke. No. 1,299,027; Apr. 1; v. 261; p. 95.
Water gage and recorder, Combined. J. M. Holland. No. 1,300,967; Apr. 15; v. 261; p. 574.
Water-grass-seed trap. J. A. Bailey. No. 1,300,918; Apr. 15; v. 261; p. 563.
Water-heater. A. B. du Pont. No. 1,299,488; Apr. 8; v. 261; p. 215.
Water heater and dripper, Combined. H. W. Christian. No. 1,302,309; Apr. 29; v. 261; p. 903.
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Water-meter connection and valve. J. W. Calhoun. No. 1,300,925; Apr. 15; v. 261; p. 565.
Water-tank, Auxiliary. C. J. Dailey. No. 1,300,702; Apr. 15; v. 261; p. 518.
Water-tube boiler. E. V. Varcoe. No. 1,302,458; Apr. 29; v. 261; p. 932.
Water-tube boiler. W. R. Wood. No. 1,300,087; Apr. 8; v. 261; p. 361.
Waters and other effervescing beverages, Apparatus for delivering aerated. J. Sheehan. No. 1,302,092; Apr. 29; v. 261; p. 862.
Watering-carts and the like, Regulating device for. G. S. Schlatter and G. Segin. No. 1,302,227; Apr. 29; v. 261; p. 887.
Waterproof seam for composition-board. A. G. Paffenbarger. No. 1,299,999; Apr. 8; v. 261; p. 340.
Wave and current motor. C. H. Roberts. No. 1,300,104; Apr. 8; v. 261; p. 284.
Weapon. J. Taipa and J. Bednars. No. 1,299,260; Apr. 1; v. 261; p. 147.
Webs of material, Machine for operating upon. C. R. Seymour and O. M. Hoch. No. 1,299,513; Apr. 8; v. 261; p. 232.
Weed-destroyer. A. Tyson. No. 1,299,406; Apr. 1; v. 261; p. 179.
Weigher. E. Wiedinger. No. 1,300,313; Apr. 15; v. 261; p. 496.
Weight placing and proving attachment. G. G. and E. L. Voland. No. 1,301,765; Apr. 22; v. 261; p. 709.
Welder's tool. R. O. Williams. No. 1,301,847; Apr. 22; v. 261; p. 690.
Welding apparatus, Electric. J. H. Gravell. No. 1,300,603; Apr. 15; v. 261; p. 497.
Well-drilling appliance. J. F. Moody. No. 1,300,995; Apr. 15; v. 261; p. 580.
Well-drilling apparatus. R. J. Mathews. No. 1,300,969; Apr. 15; v. 261; p. 579.
Welding, Electric. T. E. Murray, Jr. No. 1,302,412; Apr. 29; v. 261; p. 923.
Welding, Electric. R. Sarazin. No. 1,302,440; Apr. 29; v. 261; p. 929.
Welding-electrode. J. M. Weed. No. 1,300,068; Apr. 8; v. 261; p. 356.
Welding electrode, Arc-. R. S. Smith. No. 1,301,331; Apr. 22; v. 261; p. 687.
Welding-machine. H. J. Lewis. No. 1,301,462; Apr. 22; v. 261; p. 711.
Welding, Method of and apparatus for. C. A. Cadwell. No. 1,300,117; Apr. 8; v. 261; p. 367.
Well apparatus. M. B. Layne. No. 1,299,741; Apr. 8; v. 261; p. 284.
Well-casing, Expansible. R. E. Leonard. No. 1,301,285; Apr. 22; v. 261; p. 677.
Well drill, Deep-. J. C. Coontz. No. 1,301,912; Apr. 29; v. 261; p. 828.
Well-drilling machine. W. L. Dayton and J. M. Scott. No. 1,301,915; Apr. 29; v. 261; p. 829.

Well-tool. J. S. Taylor. No. 1,299,392; Apr. 1; v. 261; p. 176.
Wells, Jarring-tool for drilling. D. R. Tripplehorn. No. 1,301,764; Apr. 22; v. 261; p. 769.
Wells, Rotary core-cutting drill for. J. L. Cameron. No. 1,301,541; Apr. 22; v. 261; p. 725.
Welt-beating machine. J. A. Paquin. No. 1,298,780; Apr. 1; v. 261; p. 39.
Wharf. W. Hagenbuch. No. 1,300,606; Apr. 15; v. 261; p. 497.
Wheel: *See*—
Antiskid vehicle-wheel.
Cushioned wheel.
Demountable wheel.
Metal wheel.
Motor-wheel.
Polishing-wheel.
Pressed-steel wheel.
Resilient wheel.
Separable wheel.
Spring-wheel.
Steering-wheel.
Toy printing-wheel.
Tractor-wheel.
Trolley-wheel.
Vehicle-wheel.
Wire-spoked wheel.
Wheel. P. J. Hamill. No. 1,299,332; Apr. 1; v. 261; p. 163.
Wheel and tire, Cushion. M. I. Haulter. No. 1,299,722; Apr. 8; v. 261; p. 280.
Wheel attachment. W. H. James. No. 1,298,952; Apr. 1; v. 261; p. 77.
Wheelbarrow. H. W. Montgomery. No. 1,300,186; Apr. 8; v. 261; p. 382.
Wheel-bracket. R. A. Bates. No. 1,301,028; Apr. 15; v. 261; p. 588.
Wheel-coaster and sleigh, Combined. A. O. Jensen. No. 1,298,729; Apr. 1; v. 261; p. 25.
Wheel demountable rim. J. L. Hecht. No. 1,299,463; Apr. 8; v. 261; p. 221.
Wheel lock for agricultural implements, Caster-. H. S. Dickinson. No. 1,302,016; Apr. 29; v. 261; p. 848.
Wheel, Pneumatic. S. B. Zartman. No. 1,302,265; Apr. 29; v. 261; p. 894.
Wheel-rim. S. C. Nelson. No. 1,299,378; Apr. 1; v. 261; p. 173.
Wheel-rim, Detachable. C. D. Paxson. (Reissue.) No. 14,634; Apr. 15; v. 261; p. 603.
Wheel-rim, Removable. L. F. Jordan. No. 1,299,352; Apr. 1; v. 261; p. 167.
Wheel rim, Vehicle-. R. S. Bryant. No. 1,301,097; Apr. 22; v. 261; p. 639.
Wheels, Antiskid device for vehicle-. F. W. Weber. No. 1,301,988; Apr. 29; v. 261; p. 843.
Wheels, Closure-holding means for antifriction-. F. Chevalier. No. 1,301,386; Apr. 22; v. 261; p. 697.
Wheels, Demountable-rim-securing device for vehicle-. W. N. Booth. No. 1,299,903; Apr. 8; v. 261; p. 321.
Wheels, Traction attachment for vehicle driving-. F. Rightmire. No. 1,301,078; Apr. 15; v. 261; p. 601.
Wick-holder. F. A. McGuire. No. 1,299,977; Apr. 8; v. 261; p. 336.
Wiggler. L. Lowenstein. No. 1,300,428; Apr. 15; v. 261; p. 460.
Winch attachment. E. E. Bush. No. 1,301,224; Apr. 22; v. 261; p. 665.
Windmill and air-compressing mechanism, Combined. J. D. Ebert. No. 1,299,151; Apr. 1; v. 261; p. 121.
Windmill-power-transmitting attachment. P. A. Records. No. 1,299,028; Apr. 1; v. 261; p. 95.
Wind-shield. E. P. Hovey. No. 1,298,719; Apr. 1; v. 261; p. 23.
Wind-shield cleaner. D. M. Cryder. No. 1,300,349; Apr. 15; v. 261; p. 443.
Wind-shield hood. A. J. Finnegan. No. 1,301,115; Apr. 22; v. 261; p. 642.
Wind-wheel or wind-driven prime mover. H. E. Siegel. No. 1,300,499; Apr. 15; v. 261; p. 476.
Winding-machine. J. C. Anderson. No. 1,302,121; Apr. 29; v. 261; p. 867.
Winding mechanism. S. C. Burlingame. No. 1,301,223; Apr. 22; v. 261; p. 665.
Winding mechanism. J. F. O'Connor. No. 1,300,473; Apr. 15; v. 261; p. 469.
Winding mechanism. J. F. O'Connor. No. 1,300,477; Apr. 15; v. 261; p. 471.
Window attachment, Casement-. A. H. Carrier. No. 1,300,926; Apr. 15; v. 261; p. 566.
Window, Clear-vision. G. C. Kerr. No. 1,301,454; Apr. 22; v. 261; p. 709.
Window-cleaner's safety appliance. G. S. Stuart. No. 1,300,040; Apr. 8; v. 261; p. 350.
Window construction. O. L. Baxter. No. 1,301,896; Apr. 29; v. 261; p. 825.
Window construction. G. H. Forsyth. No. 1,299,448; Apr. 8; v. 261; p. 217.
Window-guard. M. Wilson. No. 1,301,889; Apr. 29; v. 261; p. 824.
Window-lock. E. S. Ensign. (Reissue.) No. 14,623; Apr. 1; v. 261; p. 181.
Window-locking device. C. J. Selasky. No. 1,301,511; Apr. 22; v. 261; p. 720.
Window-screen, Adjustable. H. M. Opits. No. 1,299,016; Apr. 1; v. 261; p. 92.
Window-ventilator. H. M. Case. No. 1,299,126; Apr. 1; v. 261; p. 116.
Window-ventilator. C. R. A. Long. No. 1,300,850; Apr. 15; v. 261; p. 549.
Window-weatherproofing. A. C. Boule. No. 1,302,480; Apr. 29; v. 261; p. 936.
Windows and other finished surfaces, Device for cleaning. G. Sartor. No. 1,299,785; Apr. 8; v. 261; p. 295.
Wire-bending machine, Core-. J. A. Lacourse. No. 1,299,583; Apr. 8; v. 261; p. 248.
Wire-cutter. S. Wytrwal. No. 1,299,279; Apr. 1; v. 261; p. 151.
Wire fillings to frames, Securing. W. H. Sommer. No. 1,301,517; Apr. 22; v. 261; p. 721.
Wire fillings to frames, Securing. W. H. Sommer. No. 1,301,518; Apr. 22; v. 261; p. 721.
Wire-reel. M. E. Buck. No. 1,299,550; Apr. 8; v. 261; p. 240.
Wire-reel. R. D. Wirt. No. 1,302,262; Apr. 29; v. 261; p. 894.
Wire-rope clamp. B. C. Moise. No. 1,300,994; Apr. 15; v. 261; p. 580.
Wire self-holder, One-piece live-. F. W. Simonson. No. 1,301,012; Apr. 15; v. 261; p. 584.
Wire-spoked wheel. G. Greenlee. No. 1,302,467; Apr. 29; v. 261; p. 934.
Wire-spoked wheel, Detachable. E. G. Budd. No. 1,299,400; Apr. 1; v. 261; p. 178.
Wire spokes of wire-spoked wheels, Adjusting. E. G. Budd. No. 1,298,657; Apr. 1; v. 261; p. 8.
Wire stitching or stapling machine. A. H. Maynard. No. 1,302,402; Apr. 29; v. 261; p. 921.
Wire-stretcher. G. Branan. No. 1,302,003; Apr. 29; v. 261; p. 846.
Wire-stretcher. H. W. Oellrich. No. 1,299,998; Apr. 8; v. 261; p. 340.
Wireless-signal receiver. C. S. Franklin. No. 1,301,246; Apr. 22; v. 261; p. 669.
Wood-barking machine. N. Lombard. No. 1,300,748; Apr. 15; v. 261; p. 527.
Wood-carving machine. J. Janes. No. 1,299,350; Apr. 1; v. 261; p. 167.
Wood, Gluing. W. M. Grosvenor. No. 1,299,705; Apr. 8; v. 261; p. 276.
Wooden paving-block. A. E. Schutte. No. 1,299,238; Apr. 1; v. 261; p. 141.
Woodworking-machine. D. Cameron. No. 1,300,815; Apr. 15; v. 261; p. 542.
Woodworking-machine. W. B. Knickerbocker. No. 1,300,415; Apr. 15; v. 261; p. 457.
Woodworking-machine. R. O. Steffen. No. 1,300,892; Apr. 15; v. 261; p. 558.
Wool-drier conveying device. F. G. Sargent. No. 1,301,177; Apr. 22; v. 261; p. 655.
Work-holder. D. Galvin. No. 1,301,424; Apr. 22; v. 261; p. 704.
Wrapping and banding machine. E. L. Smith. No. 1,298,807; Apr. 1; v. 261; p. 45.
Wrapping-machine. H. Y. Armstrong. No. 1,298,637; Apr. 1; v. 261; p. 3.
Wrapping-machine. C. A. Petterson. No. 1,300,189; Apr. 8; v. 261; p. 383.
Wrench: *See*—
Pipe-wrench.
Pipe and nut wrench.
Wrench. R. B. Ferguson. No. 1,301,674; Apr. 22; v. 261; p. 751.
Wrench. J. H. Fones. No. 1,302,027; Apr. 29; v. 261; p. 850.
Wrench. J. Macecevic. No. 1,301,472; Apr. 22; v. 261; p. 713.
Wrench. A. Malchow. No. 1,299,591; Apr. 8; v. 261; p. 250.
Wrench. T. E. Miller. No. 1,298,997; Apr. 1; v. 261; p. 88.
Wrench. M. Miller and A. D. Burg. No. 1,302,197; Apr. 29; v. 261; p. 881.
Wrench. J. Nielander. No. 1,301,159; Apr. 22; v. 261; p. 652.
Wrench. D. J. Normoyle. No. 1,299,764; Apr. 8; v. 261; p. 291.
Wrench. R. A. Rosander. No. 1,299,510; Apr. 8; v. 261; p. 231.
Yarn-cleaner. R. G. Jennings. No. 1,301,133; Apr. 22; v. 261; p. 646.
Yarn, Method of and apparatus for beaming. J. F. Doyle. No. 1,301,665; Apr. 22; v. 261; p. 749.
Zinc-bearing materials, Electrolytic refining of metallic. C. H. Aldrich and J. K. Bryan. No. 1,299,414; Apr. 8; v. 261; p. 209.
Zither, Keyed. H. A. Ballard. No. 1,299,654; Apr. 8; v. 261; p. 264.
Zither, Keyed. J. R. Green. No. 1,299,704; Apr. 8; v. 261; p. 276.
Zone-indicator. H. H. Kolloster. No. 1,301,278; Apr. 22; v. 261; p. 674.

ALPHABETICAL LIST OF DESIGNS.

Article of manufacture. E. C. Blum. No. 53,192; Apr. 15; v. 261; p. 604.
Article of manufacture. J. C. Harris. No. 53,243; Apr. 29; v. 261; p. 941.
Article of manufacture. F. H. Patrick. No. 53,206; Apr. 15; v. 261; p. 606.
Article of manufacture. C. J. Tonry. No. 53,185; Apr. 8; v. 261; p. 395.
Article of manufacture. H. Wearne. No. 53,262; Apr. 29; v. 261; p. 944.
Automobile and other vehicles, Radiator-frame for. J. R. Way. No. 53,228; Apr. 22; v. 261; p. 780.
Automobile-signal, Electric. H. J. Hankee. No. 53,164; Apr. 1; v. 261; p. 186.
Badge. T. Heath. No. 53,175; Apr. 8; v. 261; p. 393.
Badge. M. Michael. No. 53,181; Apr. 8; v. 261; p. 394.
Badge, button, pin, or article of similar nature. F. C. Brendan. No. 53,194; Apr. 15; v. 261; p. 604.
Badge, button, or similar article of manufacture. B. Simon. Nos. 53,255–7; Apr. 29; v. 261; p. 943.
Bird-cage and aquarium, Combined. A. Syrocki. No. 53,157; Apr. 1; v. 261; p. 185.
Blouse, Woman's. G. T. Bomgardner. No. 53,234; Apr. 29; v. 261; p. 939.
Bottle protector, Milk-. G. Roberts. No. 53,182; Apr. 8; v. 261; p. 394.
Bowl, Drinking-fountain. H. W. Taylor. No. 53,227; Apr. 22; v. 261; p. 780.
Box. E. Hoffman. No. 53,199; Apr. 15; v. 261; p. 605.
Brooch, badge, button, insignia, emblem, pin, or similar article of manufacture. M. E. Goldberger. No. 53,198; Apr. 15; v. 261; p. 605.
Buffet or similar article. H. Silver. Nos. 53,211–12; Apr. 15; v. 261; p. 607.
Button-display card. A. D. Josephson. No. 53,202; Apr. 15; v. 261; p. 606.
Cabinet, Sewing-machine. W. C. Free. Nos. 53,196–7; Apr. 15; v. 261; p. 604.
Can-top. F. S. Hyatt. No. 53,201; Apr. 15; v. 261; p. 605.
Cane, umbrella, whip, or swagger-stick handle. J. W. Blyth. No. 53,193; Apr. 15; v. 261; p. 604.
Canister or similar article. G. C. Wurthmann. No. 53,264; Apr. 29; v. 261; p. 944.
Carbureter adjuster-dial. H. N. Whittelsey. No. 53,169; Apr. 1; v. 261; p. 187.
Carriage-rattle. L. Morse. No. 53,205; Apr. 15; v. 261; p. 606.
Chandelier. V. F. von Lossberg. No. 53,186; Apr. 8; v. 261; p. 395.
Cooking kit. I. C. Popper. No. 53,155; Apr. 1; v. 261; p. 185.
Cup. E. S. Lewis. No. 53,247; Apr. 29; v. 261; p. 941.
Cycle frame, Motor-. W. S. Harley. No. 53,150; Apr. 1; v. 261; p. 184.
Doll. G. Pfeffer. Nos. 53,153–4; Apr. 1; v. 261; p. 185.
Dust-cap. C. Woodbury. No. 53,172; Apr. 1; v. 261; p. 187.
Emblem, button, ring, pin, or article of similar nature. I. C. Nicholson. No. 53,251; Apr. 29; v. 261; p. 942.
Emblem, pin, or badge. F. L. Gailey. No. 53,174; Apr. 8; v. 261; p. 393.
Fabric-surface ornamentation. E. Amsler-Laffon. No. 53,173; Apr. 8; v. 261; p. 393.
Flag. D. O. Teasley. No. 53,259; Apr. 29; v. 261; p. 943.
Flag, banner, sign, poster, pennant, badge, emblem, pin, button, &c. W. H. Simonson. Nos. 53,166–7; Apr. 1; v. 261; p. 187.
Flag, Peace-. M. D. Shatt. No. 53,210; Apr. 15; v. 261; p. 607.
Flag, pennant, emblem, sign, or article of similar nature. E. Heyl. No. 53,176; Apr. 8; v. 261; p. 393.
Fob, pendant, or similar article. C. Bohnen. No. 53,144; Apr. 1; v. 261; p. 183.
Game-board. C. L. Archbold. No. 53,232; Apr. 29; v. 261; p. 939.
Game-table. L. G. Theurer. Nos. 53,158–60; Apr. 1; v. 261; pp. 185–6.
Honor-board, Miniature. H. R. Meyers. No. 53,204; Apr. 15; v. 261; p. 605.
Ice-cream cone. J. L. Snyder. No. 53,168; Apr. 1; v. 261; p. 187.
Incense-burner. E. A. Scott. No. 53,226; Apr. 22; v. 261; p. 780.
Knife, fork, or spoon handle. D. Hadad. No. 53,241; Apr. 29; v. 261; p. 940.
Lamp. A. Boehringer. No. 53,218; Apr. 22; v. 261; p. 778.
Lamp. A. S. Macdonald. No. 53,224; Apr. 22; v. 261; p. 779.
Lamp. A. S. Macdonald and A. W. Pressey. No. 53,225; Apr. 22; v. 261; p. 780.
Lamp bracket, Vehicle-. C. F. L., C. H., and W. L. Kaufmann. No. 53,177; Apr. 8; v. 261; p. 393.
Lamp bracket, Vehicle-. W. L. Kaufmann. No. 53,179; Apr. 8; v. 261; p. 394.
Lamp casing and handle-stem, Vehicle-. C. F. L. and W. L. Kaufmann. No. 53,178; Apr. 8; v. 261; p. 394.
Lantern, Portable electric. W. Grether. No. 53,240; Apr. 29; v. 261; p. 940.
Lamp, Portable electric. W. E. Pearson and H. G. O'Neill. Nos. 53,207–8; Apr. 15; v. 261; p. 606.
Light-filter. B. Irwin. No. 53,152; Apr. 1; v. 261; p. 184.
Lighting device, Smoker's outdoor. J. R. Harris. No. 53,242; Apr. 29; v. 261; p. 942.
Lighting-fixture. H. C. Adam. Nos. 53,229–31; Apr. 29; v. 261; pp. 938–9.
Lighting-fixture. E. C. McKinnie. No. 53,249; Apr. 29; v. 261; p. 942.
Lighting-fixture globe. B. Crowder. No. 53,145; Apr. 1; v. 261; p. 183.
Lighting fixture, Semi-indirect-. H. Cohn. No. 53,237; Apr. 29; v. 261; p. 940.
Metal fabric. F. P. Dooley. No. 53,238; Apr. 29; v. 261; p. 940.
Napkin and toothpick holder. C. M. Sanders. No. 53,254; Apr. 29; v. 261; p. 943.
Paper-weight or other ornament of similar nature. B. S. Samuels. No. 53,183; Apr. 8; v. 261; p. 394.
Paper-weight or similar article. R. S. Langley. No. 53,203; Apr. 15; v. 261; p. 605.
Paper wrapper for loaf of bread, Paraffin-. G. S. Ward. No. 53,261; Apr. 29; v. 261; p. 944.
Phonograph-motor casing. P. Catucci. No. 53,235; Apr. 29; v. 261; p. 939.
Photographer's printing device. Z. W. Webb. No. 53,213; Apr. 15; v. 261; p. 607.
Pin. M. F. Powell. No. 53,209; Apr. 15; v. 261; p. 606.
Pin, button, badge, emblem, insignia, medal, watch-fob, or article of similar nature. M. F. Wooten. No. 53,268; Apr. 29; v. 261; p. 944.
Plate or similar article. C. J. Noke. No. 53,252; Apr. 29; v. 261; p. 942.
Plate, plaque, platter, or saucer. T. H. Hanratty. No. 53,244; Apr. 29; v. 261; p. 941.
Powder-can. E. Hoffman. No. 53,200; Apr. 15; v. 261; p. 605.
Pull-socket body, Porcelain. E. H. Freeman. Nos. 53,147–8; Apr. 1; v. 261; pp. 183–4.
Ring, button, brooch, bar-pin, scarf-pin, plaque, or article of similar nature. N. L. Strauss and M. Henriot. No. 53,258; Apr. 29; v. 261; p. 943.
Ring, bracelet, breastpin, buckle, or similar article of jewelry. S. Carlin. No. 53,195; Apr. 15. v. 261; p. 604.
Shoe-retainer. V. Benedetti. No. 53,233; Apr. 29; v. 261; p. 939.
Signal-horn. J. E. Genn. No. 53,220; Apr. 22; v. 261; p. 779.
Spark-plug. J. D. M. Gray. No. 53,239; Apr. 29; v. 261; p. 940.
Speedometer face-plate. J. Berge. Nos. 53,216–17; Apr. 22; v. 261; p. 778.
Spoon and fork, Combined. J. Wolsten. Nos. 53,170–1; Apr. 1; v. 261; p. 187.
Spoon, fork, and knife, Combined. W. Janosik. No. 53,165; Apr. 1; v. 261; p. 186.
Standard. V. F. von Lossberg. No. 53,187; Apr. 8; v. 261; p. 395.
Standard. V. F. von Lossberg. No. 53,188; Apr. 8; v. 261; p 395.
Standard. V. F. von Lossberg. No. 53,189; Apr. 8; v. 261; p. 396.
Stove-foot. F. A. Gercich. No. 53,221; Apr. 22; v. 261; p. 779.
Sweepers, Bag for suction-. H. E. Hoover. No. 53,222; Apr. 22; v. 261; p. 779.
Switch base, Two-pole entrance-. T. A. Both. No. 53,162; Apr. 1; v. 261; p. 186.
Switch base, Two-wire single-branch panel-. T. A. Both. No. 53,163; Apr. 1; v. 261; p. 186.
Switchboard. P. Kurtz. No. 53,180; Apr. 8; v. 261; p. 394.
Table-crumb-sweeper casing. L. K. Suttle. No. 53,184; Apr. 8; v. 261; p. 395.
Tag. C. C. Riefsnyder. No. 53,156; Apr. 1; v. 261; p. 185.
Tail-light for automobiles. C. O. Mathews. No. 53,248; Apr. 29; v. 261; p. 942.
Timepiece-dial. E. L. Hull. No. 53,245; Apr. 29; v. 261; p. 941.
Tire. E. Hopkinson. No. 53,223; Apr. 22; v. 261; p. 779.
Tire, Automobile-. R. S. Wicks. No. 53,190; Apr. 8; v. 261; p. 396.
Tire-casing. C. P. L. Huston. No. 53,151; Apr. 1; v. 261; p. 184.

Tire, Non-skid. E. N. Downes. No. 53,146; Apr. 1; v. 261; p. 183.
Tool, Combination-. J. Vicario. No. 53,161; Apr. 1; v. 261; p. 186.
Tool, Combination-. F. O. von Tobel. No. 53,260; Apr. 29; v. 261; p. 942.
Towel-bar. S. D. Baker. No. 53,191; Apr. 15; v. 261; p. 603.
Toy aeroplane. C. W. Bennett. No. 53,214; Apr. 22; v. 261; p. 778.
Toy arrow-plane. W. W. Cogswell. No. 53,236; Apr. 29; v. 261; p. 940.
Toy automobile. C. W. Bennett. No. 53,215; Apr. 22; v. 261; p. 778.
Toy bank. N. T. Hasenpflug. No. 53,149; Apr. 1; v. 261; p. 184.
Toy car. O. M. Brauer. No. 53,219; Apr. 22; v. 261; p. 779.
Toy, Wheeled. J. A. Richards. No. 53,253; Apr. 29; v. 261; p. 942.
Vehicle-body. A. J. Meerken. No. 53,250; Apr. 29; v. 261; p. 942.
Watch-holder. C. R. Johnson. No. 53,246; Apr. 29; v. 261; p. 941.

ALPHABETICAL LIST OF TRADE-MARKS.

Alcohol, Ethyl, &c. U. S. Industrial Alcohol Co. No. 125,180; Apr. 15; v. 261; p. 627.
Alimentary paste—viz., macaroni, spaghetti, noodles. A. J. Hadert. No. 125,138; Apr. 15; v. 261; p. 625.
Alloy, Babbitt. Syracuse Smelting Works. No. 125,255; Apr. 22; v. 261; p. 797.
Apples and cherries, Fresh. Tondevold & Lewis. No. 125,178; Apr. 15; v. 261; p. 626.
Ammonium sulfoichthyolicum. G. W. Guidi. No. 125,218; Apr. 22; v. 261; p. 796.
Armbands. Eagle Garter Company. No. 125,131; Apr. 15; v. 261; p. 625
Articles made of compounds of pyroxylin, Certain named. Celluloid Company. Nos. 125,028–9; Apr. 8; v. 261; p. 405.
Asafetida, Glycerinized. McCormick & Co. No. 125,153; Apr. 15; v. 261; p. 626.
Automobile-radiators. The A-Z Co. No. 125,017; Apr. 8; v. 261; p. 405.
Automobiles. Classic Motor Car Corporation. No. 125,032; Apr. 8; v. 261; p. 406.
Automobiles. Paige-Detroit Motor Car Company. No. 124,985; Apr. 1; v. 261; p. 198.
Bacon and hams. P. F. Skinner. No. 125,251; Apr. 22; v. 261; p. 797.
Batteries, Electric. United Battery Corporation. No. 125,260; Apr. 22; v. 261; p. 797.
Batteries, Storage. U-Need-It Dry Storage Battery Co. No. 125,108; Apr. 8; v. 261; p. 401.
Bellows, Molders'. The Cleveland Osborn Manufacturing Company. No. 125,199; Apr. 22; v. 261; p. 795.
Belt-dressing. Ulmer Leather Company. No. 125,179; Apr. 15; v. 261; p. 627.
Belting, Leather. Hudson Belting Company. No. 125,056; Apr. 8; v. 261; p. 406.
Belting, Leather. J. S. Turner Manufacturing Co. No. 125,106; Apr. 8; v. 261; p. 408.
Belting, non-metallic tires, &c., Certain named. The Norwalk Tire and Rubber Company. No. 125,085; Apr. 8; v. 261; p. 407.
Belting, Stitched canvas. W. S. Nott Company. No. 125,084; Apr. 8; v. 261; p. 407.
Beverage, Malt. Narragansett Brewing Co. No. 125,245; Apr. 22; v. 261; p. 796.
Beverage, Maltless non-alcoholic. Keen Drink Mfg. Co. No. 125,059; Apr. 8; v. 261; p. 406.
Beverage, Non-alcoholic maltless. Harriman Spring Company. No. 125,221; Apr. 22; v. 261; p. 796.
Beverages, Non-alcoholic. Druggists Sundries Company. No. 125,130; Apr. 15; v. 261; p. 625.
Beverage, Non-intoxicating malt. D. H. Montgomery. No. 125,280; Apr. 29; v. 261; p. 953.
Biscuits, cakes, crackers, cookies, wafers. The Merchant's Biscuit Co. No. 124,976; Apr. 1; v. 261; p. 198.
Blood-purifiers. Hoshaw & Hopkins. No. 125,143; Apr. 15; v. 261; p. 625.
Bloomers, drawers, underskirts, petticoats. D. L. Fine. No. 125,045; Apr. 8; v. 261; p. 406
Bluing, Laundry. James C. Kellogg. No. 125,228; Apr. 22; v. 261; p. 796.
Boiler and pipe covering. H. W. Johns-Manville Co. No. 124,973; Apr. 1; v. 261; p. 197.
Boiler, locomotive, marine-boiler, and steam tubes, &c. The British Mannesmann Tube Company. No. 125,023; Apr. 8; v. 261; p. 405.
Bolts and shields, and screw-anchors, Expansion. Diamond Expansion Bolt Co. No. 124,961; Apr. 1; v. 261; p. 197.
Bolts and shields, Expansion. Diamond Expansion Bolt Co. No. 125,205; Apr. 22; v. 261; p. 795.
Bolts and shields, screw-anchors, Expansion. Diamond Expansion Bolt Co. No. 125,206; Apr. 22; v. 261; p. 795.
Booklets or lessons issued periodically. A. A. Bratton. No. 125,124; Apr. 15; v. 261; p. 625.
Books, booklets, pamphlets, manuals. Aetna Life Insurance Company. No. 125,018; Apr. 8; v. 261; p. 405.
Books, Printed-. McLaughlin Bros. No. 125,237; Apr. 22; v. 261; p. 796.
Boots and shoes. The Mutual Shoemakers. No. 125,281; Apr. 29; v. 261; p. 953.
Brick, Fire-. Ashland Fire Brick Company. Nos. 125,121–2; Apr. 15; v. 261; p. 625.
Broom-clamp. M. G. Scoville Sons Company. No. 125,177; Apr. 15; v. 261; p. 626.
Brooms. The Board of Control of the Colorado Industrial Workshop for the Blind. No. 125,191; Apr. 22; v. 261; p. 795.
Brushes, Factory, foundry, platers'. The Cleveland Osborn Manufacturing Company. No. 125,198; Apr. 22; v. 261; p. 795.
Bushings, Bronze. The Bunting Brass & Bronze Co. No. 125,194; Apr. 22; v. 261; p. 795.
Butter. Borden's Farm Products Company. No. 124,942; Apr. 1; v. 261; p. 197.
Butter, eggs, poultry. J. Z. Turner. No. 125,107; Apr. 8; v. 261; p. 407.
Cabinets, Card-index, receipt, &c., and card-index trays. L. Sainberg. No. 125,175; Apr. 15; v. 261; p. 626.
Cakes, cookies, doughnuts, crullers, pastry. Jackson & Veney. No. 124,972; Apr. 1; v. 261; p. 197.
Cakes. Ward Baking Company. No. 125,092; Apr. 8; v. 261; p. 407.
Cakes. Ward Baking Company. No. 125,110; Apr. 8; v. 261; p. 408.
Candies. C. Elliott. No. 125,133; Apr. 15; v. 261; p. 625.
Candies, Chocolate. M. J. Ahrens. No. 124,946; Apr. 1; v. 261; p. 197.
Candies, Chocolate. The William C. Johnson Candy Company. No. 124,974; Apr. 1; v. 261; p. 198.
Candies. National Candy Company. No. 125,160; Apr. 15; v. 261; p. 626.
Candies, nuts, nut-candies. Bitress Company. No. 125,189; Apr. 22; v. 261; p. 795.
Candy. The Nunnally Co. No. 125,066; Apr. 8; v. 261; p. 407.
Canned apricots and peaches. San Fernando Canning Co. Nos. 125,170–1; Apr. 15; v. 261; p. 626.
Canned corn-kernels. Marshall Canning Co. No. 125,077; Apr. 8; v. 261; p. 407.
Canned foods, Certain named. G. P. Thompson. No. 125,002; Apr. 1; v. 261; p. 198.
Canned herring and sardines, dried &c. E. Kirsten. No. 125,060; Apr. 8; v. 261; p. 406.
Canned peaches, apricots, and tomatoes. San Fernando Canning Co. No. 125,172; Apr. 15; v. 261; p. 626.
Canned peas and sauer-kraut. Big Four Canning Company. No. 125,021; Apr. 8; v. 261; p. 405.
Canned salmon. Alaska-Pacific Herring Co. No. 124,947; Apr. 1; v. 261; p. 197.
Canned sardines, pilchards, tuna fish, and salmon. Griffith-Durney Co. No. 124,967; Apr. 1; v. 261; p. 197.
Canned tomato paste. San Fernando Canning Co. No. 125,173; Apr. 15; v. 261; p. 626.
Canned tomato sauce. The Contadina Canning Co. No. 124,957; Apr. 1; v. 261; p. 197.
Canned tomatoes, peaches, and apricots. San Fernando Canning Co. No. 125,169; Apr. 15; v. 261; p. 626.
Canned tomatoes, peaches, and apricots. San Fernando Canning Co. No. 125,174; Apr. 15; v. 261; p. 626.
Canned tomatoes, peas, and corn. Witwer Tate Grocery Co. No. 125,114; Apr. 8; v. 261; p. 408.
Canned vegetables. Tamal Packing Co. No. 125,001; Apr. 1; v. 261; p. 198.
Canned vegetables and meat, Certain named. J. T. Polk Company. No. 125,168; Apr. 15; v. 261; p. 626.
Canteens. Hocoteen Mfg. Co. No. 125,142; Apr. 15; v. 261; p. 625.
Castings and babbitt alloys, Bronze. The Muxy-Lyon Co. No. 125,244; Apr. 22; v. 261; p. 796.
Cement, Fire-brick. Refractories Company. No. 124,980; Apr. 1; v. 261; p. 198.
Checks, Metal savings-. The Savings Check Company. No. 124,993; Apr. 1; v. 261; p. 198.
Chemicals, &c., Certain named. David McMeekan Mfg. Co. No. 125,073; Apr. 8; v. 261; p. 407.
Chilli-con-carne and tamales. E. E. Cleary. No. 125,197; Apr. 22; v. 261; p. 795.
Cigarettes. E. P. Mesthene & Co. No. 125,158; Apr. 15; v. 261; p. 626.
Cigarettes. The United Kingdom Tobacco Company. No. 125,004; Apr. 1; v. 261; p. 198.
Cleaning-powder for metals and glass. O. Hill. No. 125,141; Apr. 15; v. 261; p. 626.
Cleansing compound for bath-tubs, tinware, &c. Elberfeld Chemical & Mfg. Co. No. 125,122; Apr. 15; v. 261; p. 625.
Cloaks, suits, dresses, skirts, outer waists. Zelenko & Moskowitz. No. 125,117; Apr. 8; v. 261; p. 408.

Cloth, Brattice. Mitchell Brothers Company. No. 125,079; Apr. 8; v. 261; p. 407.
Clothing, Certain named. Joseph-Louis & Co. No. 125,071; Apr. 8; v. 261; p. 406.
Clothing, Certain named. Robert Reis & Co. No. 125,091; Apr. 8; v. 261; p. 407.
Clothing for ladies and men, Certain named. The Spot Inc. No. 125,160; Apr. 8; v. 261; p. 407.
Coats, vests, trousers, Men's. Sears, Roebuck and Co. No. 125,000; Apr. 8; v. 261; p. 407.
Cocoa. MacDonald & Co. No. 125,155; Apr. 15; v. 261; p. 626.
Coffee. John H. Wilkins Company. No. 125,009; Apr. 1; v. 261; p. 200.
Coffee, rice, flour, flavoring extracts. J. J. Rogers & Son. No. 125,094; Apr. 8; v. 261; p. 407.
Coffee, tea, spices, cocoa. G. H. Mathewson. No. 124,989; Apr. 1; v. 261; p. 197.
Comb used for straightening human hair. S. M. Fleischer. No. 125,046; Apr. 8; v. 261; p. 406.
Compound or liquid for treating the eyes. J. A. Granstrand. No. 125,217; Apr. 22; v. 261; p. 796.
Confection in the nature of a cake. J. R. McCluskey. No. 125,276; Apr. 29; v. 261; p. 953.
Construction materials, Certain named. The National Paint & Varnish Company. No. 125,080; Apr. 8; v. 261; p. 407.
Corks. Willis Jason Kendricks Inc. No. 125,113; Apr. 8; v. 261; p. 406.
Corsets and brassières. Weingarten Bros. No. 125,111; Apr. 8; v. 261; p. 406.
Cotton, linen, wool, &c., piece goods. Rice-Stix Dry Goods Company. No. 124,991; Apr. 1; v. 261; p. 196.
Cotton piece goods. Converse & Company. No. 124,958; Apr. 1; v. 261; p. 197.
Cotton piece goods. Fabritex Co. No. 124,963; Apr. 1; v. 261; p. 197.
Cotton piece goods. John H. Meyer & Co. No. 124,977; Apr. 1; v. 261; p. 198.
Cotton piece goods. R. A. Suffern. No. 124,999; Apr. 1; v. 261; p. 198.
Cotton, wool, and cotton and wool mixed piece goods. Solar Textile Co. No. 124,997; Apr. 1; v. 261; p. 198.
Cream, Face-. A. M. Hull. No. 125,144; Apr. 15; v. 261; p. 625.
Cream, Massage-. N. Forgione. No. 125,215; Apr. 22; v. 261; p. 796.
Creams, Vanishing, cold, &c. S. S. Kresge Company. No. 125,220; Apr. 22; v. 261; p. 796.
Curtain-fixtures, stair-carpet fasteners, sash-holders. James H. Boye Manufacturing Company. No. 124,953; Apr. 1; v. 261; p. 197.
Cutlery and machinery, Certain named. Rosenbaum & Mogal. No. 125,249; Apr. 22; v. 261; p. 797.
Dental-floss holders. W. T. Elsinga. No. 125,212; Apr. 22; v. 261; p. 795.
Dentifrice. Barclay & Co. No. 125,187; Apr. 22; v. 261; p. 795.
Dentifrice and alkaloids in solution for pyorrhea, &c. Alveres Chemical Company. No. 125,155; Apr. 22; v. 261; p. 795.
Dessert-powder. Holland Rusk Co. No. 125,054; Apr. 8; v. 261; p. 406.
Dolls. M. A. McAbey. No. 125,072; Apr. 8; v. 261; p. 406.
Dolls. The Faultless Rubber Co. No. 125,272; Apr. 29; v. 261; p. 953.
Dresses, Children's. Maher & Kessler. No. 125,277; Apr. 29; v. 261; p. 953.
Drills, drill handles and points. Diamond Expansion Bolt Co. No. 125,041; Apr. 8; v. 261; p. 406.
Enamel. Briggs Bituminous Composition Company. No. 125,198; Apr. 22; v. 261; p. 795.
Enameled ware for household use, Certain named. Columbian Enameling & Stamping Company. Nos. 125,032–4; Apr. 8; v. 261; p. 405.
Extract which stabilizes, stimulates, and gives zest to beverages. W. A. Koch. No. 125,220; Apr. 22; v. 261; p. 796.
Eyeglass mountings and frames. The C. & E. Marshall Company. No. 125,223; Apr. 22; v. 261; p. 796.
Fans, Electric oscillating. Brecks Marelli & Co. Nos. 125,075–6; Apr. 8; v. 261; p. 407.
Farm implements, Certain named. Blount Plow Works. No. 125,190; Apr. 22; v. 261; p. 795.
Feed, Compounded ground. Blatchford Calf Meal Company. No. 124,951; Apr. 1; v. 261; p. 197.
Feed, Stock. Golden Grain Milling Company. No. 125,049; Apr. 8; v. 261; p. 406.
Feeds for horses, mules, &c. Golden Grain Milling Co. No. 124,964; Apr. 1; v. 261; p. 197.
Fertilizers. F. Crutchfield. No. 125,066; Apr. 8; v. 261; p. 406.
Fiber-board. Rogers Fibre Company. No. 125,166; Apr. 15; v. 261; p. 626.
Flavoring extracts for soft drinks, &c. McCormick & Co. No. 125,154; Apr. 15; v. 261; p. 626.
Flour, Wheat-. The Chapman Milling Co. No. 124,956; Apr. 1; v. 261; p. 197.
Flour, Wheat-. Holt & Company. No. 125,055; Apr. 8; v. 261; p. 406.
Flour, Wheat-. McDaniel Milling Co. No. 125,235; Apr. 22; v. 261; p. 796.
Flour, Wheat-. The Warrensburg Mills. No. 125,007; Apr. 1; v. 261; p. 199.
Flours, cornmeal, rolled oats, Wheat, &c. International Milling Company. No. 125,057; Apr. 8; v. 261; p. 406.
Food, Breakfast. Wheat Meal Co. No. 125,008; Apr. 1; v. 261; p. 199.
Food, Cereal breakfast. The Wheatena Company. No. 125,152; Apr. 15; v. 261; p. 627.
Fruits, Fresh citrus. Lee & Edwards. No. 125,035; Apr. 8; v. 261; p. 405.
Game-boards and pieces therefor. G. H. Parker. No. 125,246; Apr. 22; v. 261; p. 796.
Garments, Ladies' and misses' outer. J. A. Migel, Inc. No. 125,078; Apr. 8; v. 261; p. 407.
Garments, Workmen's. H. N. Clarke. No. 125,260; Apr. 29; v. 261; p. 953.
Gases, Compressed. Air Reduction Company. No. 125,118; Apr. 15; v. 261; p. 626.
Gasolene, naphtha, benzin. The Texas Company. No. 125,258; Apr. 22; v. 261; p. 797.
Gingham in the piece. York Mfg. Co. No. 125,010; Apr. 1; v. 261; p. 199.
Gloves, Fabric. Crown Glove Company. No. 125,271; Apr. 29; v. 261; p. 953.
Gloves, Knit and leather. P. Centemeri & Company. No. 125,030; Apr. 8; v. 261; p. 405.
Grape-juice. The Welch Grape Juice Company. No. 125,112; Apr. 8; v. 261; p. 406.
Gum and chewing-gum covered with candy, Chewing-. Frank H. Fleer Corporation. No. 125,047; Apr. 8; v. 261; p. 406.
Gum, Chewing-. S. Zimmerman. No. 125,011; Apr. 1; v. 261; p. 199.
Hair-grower. C. M. Slavin. No. 125,252; Apr. 22; v. 261; p. 797.
Hair-restorer. Fitz-Water and Moore. No. 125,046; Apr. 8; v. 261; p. 406.
Hammock fabrics, Woven. The I. E. Palmer Co. No. 124,966; Apr. 1; v. 261; p. 196.
Hardware, &c., Certain named. Interstate Iron & Steel Co. No. 124,971; Apr. 1; v. 261; p. 197.
Hardware and plumbing and steam-fitting supplies. The British Mannesmann Tube Company. No. 124,954; Apr. 1; v. 261; p. 197.
Hats and caps. A. Lesser & Co. No. 125,067; Apr. 8; v. 261; p. 406.
Hats, Ladies' and children's. Hyman, Meyer & Hyman. No. 125,273; Apr. 29; v. 261; p. 953.
Heat-refractory products, Certain named. Norton Company. No. 125,062–3; Apr. 8; v. 261; p. 407.
Herring. I. Meos. No. 125,242; Apr. 22; v. 261; p. 796.
Hog-cholera preparation. L. V. Kivett. No. 125,061; Apr. 8; v. 261; p. 406.
Hog medicine. K. Byington. No. 125,195; Apr. 22; v. 261; p. 795.
Hosiery. Falls City Mills Co. No. 125,043; Apr. 8; v. 261; p. 406.
Ice-cream. Chapin-Sacks Manufacturing Company. No. 125,126; Apr. 15; v. 261; p. 625.
Ice-cream cones. Success Cone Company. No. 125,256; Apr. 22; v. 261; p. 797.
Ice-cream, Paste and powder used in. H. D. Farquhar. No. 125,044; Apr. 8; v. 261; p. 406.
Insect exterminator and disinfectant. H. Deitchman. No. 125,204; Apr. 22; v. 261; p. 795.
Insulating material, Fibrous. Northern Insulating Company. No. 125,161; Apr. 15; v. 261; p. 626.
Invigorant, Non-alcholic liquid. A. Paszkiewicz. No. 125,069; Apr. 8; v. 261; p. 407.
Iron and steel bars. Edgar T. Ward's Sons Company. No. 125,006; Apr. 1; v. 261; p. 199.
Ironing-machines. Apex Appliance Company. No. 125,119; Apr. 15; v. 261; p. 625.
Journal-box and coiled-spring journal-box for railway-vehicles. The National Malleable Castings Company. No. 124,981; Apr. 1; v. 261; p. 198.
Knit sweaters and underwear, mackinaws. Red River Woolen Mills. No. 125,090; Apr. 8; v. 261; p. 407.
Knitted hosiery, gloves, and mittens. Detroit Alaska Knitting Mills. No. 125,040; Apr. 8; v. 261; p. 406.
Knitted, netted, and textile fabrics, Certain named. Ely & Walker D. G. Co. No. 124,962; Apr. 1; v. 261; p. 197.
Knitted, netted, and textile underwear. Markovits Bros. No. 125,278; Apr. 29; v. 261; p. 953.
Lamps, Automobile-. American Auto Lamp Co. No. 124,948; Apr. 1; v. 261; p. 197.
Lamps, Electric search and spot light trouble-. Cell-beam Manufacturing Company. No. 125,027; Apr. 8; v. 261; p. 405.
Leather. A. C. Lawrence Leather Co. Nos. 125,232–3; Apr. 22; v. 261; p. 796.
Lemons. Goldenwest Citrus Ass'n. Nos. 125,050–1; Apr. 8; v. 261; p. 406.
Lemons, Fresh. Goldenwest Citrus Ass'n. Nos. 124,985–6; Apr. 1; v. 261; p. 197.
Level indicators, Liquid-. New Standard Adding Machine Company. No. 124,982; Apr. 1; v. 261; p. 198.
Limestone prepared for agricultural purposes. W. S. Halladay, Jr. No. 125,139; Apr. 15; v. 261; p. 625.
Liniment for certain named ailments. John Chantell Co. No. 125,127; Apr. 15; v. 261; p. 625.
Liniment for sore joints, cuts, &c. H. W. Levi. No. 125,068; Apr. 8; v. 261; p. 406.

Lumber, Certain named. Clear Lake Lumber Company. No. 125,128; Apr. 15; v. 261; p. 625.
Macaroni and olive-oil. R. Martorelli. No. 125,156; Apr. 15; v. 261; p. 626.
Magazine, Monthly. Woman's National Magazine Co. No. 125,183; Apr. 15; v. 261; p. 627.
Mailing-lists, facsimile letters, &c. Ross-Gould List & Letter Company. No. 125,097; Apr. 8; v. 261; p. 407.
Manifolds for gas-engines. Shurnuff Manufacturing Company. No. 125,250; Apr. 22; v. 261; p. 797.
Margarin, Nut-. John Morrell & Company. No. 124,979; Apr. 1; v. 261; p. 198.
Marmalade. C. H. Moss. No. 125,243; Apr. 22; v. 261; p. 796.
Masks and respirators. The Hygeia Respirator Co. No. 124,970; Apr. 1; v. 261; p. 197.
Measuring and scientific appliances, Certain named. Shapleigh Hardware Company. No. 124,995; Apr. 1; v. 261; p. 198.
Medicinal compound for certain named ailments. M. Lefkovitz. No. 125,066; Apr. 8; v. 261; p. 406.
Medicinal compound for the treatment of certain named ailments. G. N. Rossia. No. 125,098; Apr. 8; v. 261; p. 407.
Medicinal preparation. S. Tringali. No. 125,259; Apr. 22; v. 261; p. 797.
Medicinal preparations. H. A. Metz Laboratories. No. 125,240; Apr. 22; v. 261; p. 796.
Medicinal preparations. The Hayden Chemical Works. Nos. 125,222-3; Apr. 22; v. 261; p. 796.
Medicines for the relief of hay-asthma. Duerdin & Sainsbury. Nos. 125,209-10; Apr. 22; v. 261; p. 795.
Milk, Canned evaporated. Indiana Condensed Milk Co. Nos. 125,145-6; Apr. 15; v. 261; p. 625.
Milk, Condensed. Franklin County Creamery & Condensed Milk Company. No. 125,216; Apr. 22; v. 261; p. 796.
Milk, Condensed skimmed. Dewart Milk Products Co. No. 124,960; Apr. 1; v. 261; p. 197.
Milk, Dried or desiccated. Borden's Condensed Milk Company. No. 125,022; Apr. 8; v. 261; p. 405.
Milking-machines and milking-machine systems and parts thereof. Empire Cream Separator Company. No. 125,213; Apr. 22; v. 258; p. 795.
Mince-meat. Medomak Canning Company. No. 125,157; Apr. 15; v. 261; p. 626.
Nails, Furniture and upholstery. The H. C. Tack Company. No. 125,000; Apr. 1; v. 261; p. 198.
Oats, Flaked. Fleming and Company. No. 125,214; Apr. 22; v. 261; p. 795.
Oil-cloth. The Columbus-Union Oil Cloth Co. No. 125,035; Apr. 8; v. 261; p. 405.
Oil, turpentine, &c., Linseed-. Wm. McDonagh & Sons. No. 125,236; Apr. 22; v. 261; p. 796.
Oils and greases, Lubricating. Monarch Manufacturing Company. No. 125,241; Apr. 22; v. 261; p. 796.
Oils, Certain edible. Ste. Anne. Des Huileries Maurel & H. Prom & Maurel Frères. No. 125,239; Apr. 22; v. 261; p. 796.
Oils, Salad-. Liberty Salad Oil Company. No. 125,150; Apr. 15; v. 261; p 626.
Ointment for burns, scalds, wounds, &c. H. C. Crawford. No. 125,270; Apr. 29; v. 261; p. 953.
Oleomargarin. D. A. Blanton. No. 125,265; Apr. 29; v. 261; p. 953.
Oranges. Tustin Hills Citrus Association. No. 125,003; Apr. 1; v. 261; p. 198.
Oranges, grape-fruit, tangerines. Lee & Edwards. No. 124,975; Apr. 1; v. 261; p. 198.
Paints, &c., Certain named. The Star Lubricating Oil Co. No. 125,253; Apr. 22; v. 261; p. 797.
Paints, Marine. American Marine Paint Company. No. 125,219; Apr. 22; v. 261; p. 796.
Paints, Mixed. Harland and Little. No. 125,220; Apr. 22; v. 261; p. 796.
Paper and paper towels, Toilet-. Wortendyke Manufacturing Company. No. 125,184; Apr. 15; v. 261; p. 627.
Paper and stationery. S. S. Kresge Co. No. 125,231; Apr. 22; v. 261; p. 796.
Paper, Carbon-. Kee Lox Manufacturing Company. No. 125,148; Apr. 15; v. 261; p. 626.
Paper, paper towels and napkins, Toilet-. The John Hoberg Company. No. 125,224; Apr. 22; v. 261; p. 796.
Paper, Writing-. Fox River Paper Co. No. 125,135; Apr. 15; v. 261; p. 625.
Peanut-butter. William T. Mullikin Company. No. 124,980; Apr. 1; v 261; p. 198.
Pencils and leads therefor, Refillable. C. R. Keeran. No. 125,149; Apr. 15; v. 261; p. 626.
Phonographs and phonograph-records. Colonial Phonograph Co. No. 125,129; Apr. 15; v. 261; p. 625.
Pianos, player-pianos, player-actions. Gulbransen-Dickinson Co. No. 125,053; Apr. 8; v. 261; p. 406.
Picture films, Motion-. California Packing Corporation. No. 124,955; Apr. 1; v. 261; p. 197.
Pill for pulmonary tuberculosis. A. Beugel. No. 125,020; Apr. 8; v. 261; p. 405.
Plasters, Corn-. The Deane Plaster Co. No. 125,087; Apr. 8; v. 261; p. 406.
Potato chips. L. A. Wardlaw. No. 125,261; Apr. 22; v. 261; p. 797.
Poultry, Dressed. H. S. Rhynsburger. No. 124,990; Apr. 1; v. 261; p. 198.
Powder, Face-. Primo Products Company. No. 125,247; Apr. 22; v. 261; p. 796.
Powder, Toilet. The New York Shield Company. No. 124,983; Apr. 1; v. 261; p. 198.
Preparation for certain named ailments, and Liniment. O. Hunsaker. No. 125,225; Apr. 22; v. 261; p. 796.
Preparation for destroying pests that are injurious to cotton and other growing crops. L. Ward. No. 125,131; Apr. 15; v. 261; p. 627.
Preparation for rheumatism. A. Bridier. No. 125,192; Apr. 22; v. 261; p. 795.
Preparation for scalp-tonic, menthol cream, hair-tonic, mange remedy. Barlow Chemical Company. No. 125,123; Apr. 15; v. 261; p. 626.
Preparation for the treatment of certain named ailments. P. Caradonna. No. 125,126; Apr. 15; v. 261; p. 625.
Preparation for the treatment of certain named ailments. A. Dinovo. No. 125,207; Apr. 22; v. 261; p. 796.
Preparation for the treatment of certain named diseases. W. J. Quinn, Jr. No. 125,248; Apr. 22; v. 261; p. 797.
Preparation for treatment of asthma, &c. J. S. Alphonsus. No. 125,014; Apr. 8; v. 261; p. 405.
Preparation for treatment of stomach troubles. Mag-Rhu Company. No. 125,074; Apr. 8; v. 261; p. 407.
Preparation for treatment of the hair. S. A. Berkley. No. 124,950; Apr. 1; v. 261; p. 197.
Preparation for use in treatment of bloat in cattle. A. J. Lofton. No. 125,070; Apr. 8; v. 261; p. 406.
Preparations for offensive feet. Swat Sweat Remedy Co. No. 125,102; Apr. 8; v. 261; p. 407.
Preparations for toilet uses, Pharmaceutical. Youth Craft Company. No. 125,116; Apr. 8; v. 261; p. 406.
Publication. International Trade Developer. No. 125,147; Apr. 15; v. 261; p. 626.
Publication, Monthly. J. R. Gatewood. No. 125,136; Apr. 15; v. 261; p. 625.
Publication, Semimonthly. Technical Publishing Company. No. 125,103; Apr. 8; v. 261; p. 407.
Publications, Trade. Parsons Trading Company. No. 125,164; Apr. 15; v. 261; p. 626.
Pulps, Wood-. Lagerloef Trading Company. No. 125,063; Apr. 8; v. 261; p. 406.
Rat and mouse exterminator. F. Pabst. No. 125,163; Apr. 15; v. 261; p. 626.
Razors. Son Brothers & Co. No. 124,998; Apr. 1; v. 261; p. 198.
Remedies for the tobacco habit. The Sterling Remedy Company. No. 125,254; Apr. 22; v. 261; p. 797.
Rennet. Viking Rennet Company. No. 125,005; Apr. 1; v. 261; p. 198.
Rubber fruit-jar rings. J. J. Rogers & Son. No. 125,095; Apr. 8; v. 261; p. 407.
Rubber or composition shoe-soles. W. C. Walsh. No. 125,109; Apr. 8; v. 261; p. 401.
Saccharin. John J. White, Inc. No. 125,262; Apr. 22; v. 261; p. 797.
Salt, Table-. The Barton Salt Co. No. 125,188; Apr. 22; v. 261; p. 795.
Salve for burns, wounds, piles, &c. C. W. Brown. No. 125,024; Apr. 8; v. 261; p. 405.
Salve for colds, coughs, pneumonia, &c. McCormick & Co. No. 125,152; Apr. 15; v. 261; p. 626.
Sauce containing a seasoning, Thick fruity. Gillard & Co. No. 125,137; Apr. 15; v. 261; p. 625.
Scalp-cleanser. E. D. De Long. No. 125,033; Apr. 8; v. 261; p. 405.
Scouring preparation for various fabrics. McCarty Aniline & Extract Company. No. 125,151; Apr. 15; v. 261; p. 626.
Scrapers for ships' hulls, drills, and parts thereof, Rotary. Rotary Scraper Company. No. 124,992; Apr. 1; v. 261; p. 198.
Screw-drivers, Hand. M-B Tool Company. No. 125,104; Apr. 8; v. 261; p. 407.
Seals for sealing letters. W. J. Buedingen. No. 125,026; Apr. 8; v. 261; p. 405.
Seed, Timothy-. The C. E. De Puy Company. No. 125,039; Apr. 8; v. 261; p. 405.
Seeds, Field-. The O'Bannon Company. No. 125,067; Apr. 8; v. 261; p. 407.
Shade support, Window-. G. Andersen. No. 125,186; Apr. 22; v. 261; p. 795.
Shears and scissors. J. L. B. Wyckoff. No. 125,268; Apr. 22; v. 261; p. 797.
Shingles. Miller Bros. Lumber Co. No. 125,159; Apr. 15; v. 261; p. 626.
Shirts, Dress-. Keet and Rountree Dry Goods Co. No. 125,274; Apr. 29; v. 261; p. 953.
Shirts, Men's and boys' work-. B. Breier. No. 125,266; Apr. 29; v. 261; p. 953.
Shirts, overalls, coats, &c. Geo. F. Minto & Co. No. 125,279; Apr. 29; v. 261; p. 953.
Shirts, shirt-waists, coats, jumpers, overalls. B. Kreuthal & Company. No. 125,062; Apr. 8; v. 261; p. 406.
Shoe-polish. A. Pasnkiewicz. No. 125,165; Apr. 15; v. 261; p. 626.
Shoes, Children's leather. Brown Shoe Company. No. 125,267; Apr. 29; v. 261; p. 953.
Shoes, Leather. The O. K. Dorn Shoe Company. No. 125,068; Apr. 8; v. 261; p. 407.

Shoes, Skaters'. Nestor Johnson Manufacturing Company. No. 125,282; Apr. 29; v. 261; p. 953.
Silk in the piece, cotton piece goods, Broad. J. A. Migel, Inc. No. 124,978; Apr. 1; v. 261; p. 196.
Skates, Ice-. Shapleigh Hardware Company. No. 124,994; Apr. 1; v. 261; p. 198.
Snap-fasteners. American Snap Fastener Co. No. 125,015; Apr. 8; v. 261; p. 405.
Snap-fasteners. Scheia Brothers. No. 125,176; Apr. 15; v. 261; p. 626.
Soap, Flaked laundry. The Hewitt Bros. Soap Co. No. 125,140; Apr. 15; v. 261; p. 625.
Soap, Toilet. Rommers Soap Company. No. 125,167; Apr. 15; v. 261; p. 626.
Soaps, Toilet. The Armand Company. No. 125,120; Apr. 15; v. 261; p. 625.
Soot from the walls of furnaces, boilers, &c., Powder for dissolving. Northern Chemical Works. No. 125,061; Apr. 8; v. 261; p. 407.
Sprayer, oscillating seeder, staple-puller, Hog-. Nu-Way Manufacturing Co. No. 124,984; Apr. 1; v. 261; p. 198.
Starch. The Keever Starch Co. No. 125,227; Apr. 22; v. 261; p. 796.
Steel, Manganese. Taylor-Wharton Iron and Steel Co. No. 125,257; Apr. 22; v. 261; p. 797.
Suitcases, grips, and hand-bags. J. W. Eichenbusch Co. No. 125,211; Apr. 22; v. 261; p. 795.
Suits, Ladies' outer. J. A. Goldstein. No. 125,063; Apr. 8; v. 261; p. 406.
Suits, overcoats, pants, Men's. Lieberman Mfg. Co. No. 125,060; Apr. 8; v. 261; p. 406.
Sulfonic acids and their salts. S. Rosenblatt. No. 125,096; Apr. 8; v. 261; p. 407.
Sweaters, headwear, underwear. Kent and Rountree Dry Goods Co. No. 125,275; Apr. 29; v. 261; p. 953.
Syrup, Cane and corn combined. Dothan Syrup Co. No. 125,042; Apr. 8; v. 261; p. 406.
Tablets for treatment of la grippe and colds. Ozark Medicine Company. No. 125,162; Apr. 15; v. 261; p. 626.
Tablets, Indigestion-. Abbott Chemical Co. No. 125,012; Apr. 8; v. 261; p. 405.
Tea. Park & Tilford. No. 124,987; Apr. 1; v. 261; p. 196.
Teeth and dental articulators, Artificial. H. D. Justi & Son. No. 125,226; Apr. 22; v. 261; p. 796.
Textiles. Snows, Ltd. No. 124,996; Apr. 1; v. 261; p. 198.
Thread. The Clark Thread Co. No. 125,031; Apr. 8; v. 261; p. 405.
Tires and tubes for vehicles. The Brunswick-Balke-Collender Company. No. 125,025; Apr. 8; v. 261; p. 405.
Tires, Liquid preparation for closing holes in pneumatic. L. M. Sutton. No. 125,101; Apr. 8; v. 261; p. 407.
Tires, Retreaded rubber and fabric. Bell 2 in 1 Tyre Co. No. 125,019; Apr. 8; v. 261; p. 405.
Tomato paste. Emmelo Bros. No. 125,184; Apr. 15; v. 261; p. 625.
Tomato paste, Concentrated. Italian Food Products Co. No. 125,058; Apr. 8; v. 261; p. 406.
Twine. Columbian Rope Company. Nos. 125,201-2; Apr. 22; v. 261; p. 795.
Underwear, Men's and boys' balbriggan. Wyckoff Knitting Company. No. 125,115; Apr. 8; v. 261; p. 408.
Underwear—namely, shirts and drawers. Textile. The B. V. D. Company. No. 125,268; Apr. 29; v. 261; p. 953.
Upholstering vehicle-bodies, furniture, &c, Welts or binding used in. The Backstay Machine and Leather Co. No. 124,949; Apr. 1; v. 261; p. 197.
Varnish. The Lowe Brothers Company. No. 125,234; Apr. 22; v. 261; p. 796.
Varnishes. J. B. Cornish. No. 125,203; Apr. 22; v. 261; p. 795.
Vinegar. Haarmann Vinegar & Pickle Co. No. 124,968; Apr. 1; v. 261; p. 197.
Wagons and trailers. The Troy Wagon Works Co. No. 125,105; Apr. 8; v. 261; p. 408.
Waists, Dress and shirt. Alfred Beer Co. No. 125,018; Apr. 8; v. 261; p. 405.
Water and soft drinks, Table-. Clysmic Spring Co. No. 125,200; Apr. 22; v. 261; p. 795.
Water, Spring-. Hiram Ricker & Sons. No. 125,098; Apr. 8; v. 261; p. 407.
Waterproof cotton fabrics. The Landers Brothers Company. No. 125,064; Apr. 8; v. 261; p. 406.
Wax for dental use, Impression-. J. H. Downie. No. 125,208; Apr. 22; v. 261; p. 795.
Whisky. Alexr. Young Distilling Compy. No. 125,264; Apr. 22; v. 261; p. 797.
Wire, Insulated. Atlantic Insulated Wire & Cable Company. No. 125,016; Apr. 8; v. 261; p. 405.
Wires and friction-tape, Electric insulated weatherproof. Central Electric Company. No. 125,196; Apr. 22; v. 261; p. 795.
Wool and wool and cotton piece goods. T. C. Cullen. No. 124,959; Apr. 1; v. 261; p. 197.
Woolen, cotton, &c., piece goods. S. Pearsall. No. 124,988; Apr. 1; v. 261; p. 198.

ALPHABETICAL LIST OF LABELS.

"A No. 1 Antiseptic Cutting Compound." (For Chemical Compounds Prepared for Cooling Metal-Cutting Tools.) Standard Chemical Co. No. 21,218; Apr. 15; v. 261; p. 628.
"All-(efanem)-Wool." (For Sponges for Automobile-Washing.) Freirich & Mansell. No. 21,212; Apr. 15; v. 261; p. 628.
"Assorted Chocolates." (For Candy.) Milwaukee Paper Box Company. No. 21,196; Apr. 8; v. 261; p. 408.
"Bar of Bars." (For Chocolate Candy.) The Nut House Incorporated. No. 21,197; Apr. 8; v. 261; p. 409.
"Belmont Package." (For Candy.) Milwaukee Paper Box Company. No. 21,194; Apr. 8; v. 261; p. 409.
"Bencoe Brand Sweetened Condensed Milk." (For Canned Condensed Milk.) Bencoe Exporting & Importing Co., Inc. No. 21,209; Apr. 15; v. 261; p. 628.
"Big Chief Pop Corn." (For Popcorn.) American Pop Corn Company. No. 21,223; Apr. 22; v. 261; p. 795.
"Butter Creams." (For Candy.) Milwaukee Paper Box Company. No. 21,191; Apr. 8; v. 261; p. 409.
"Ceche Slovak Family Soap." (For Soap.) Fitzpatrick Bros. No. 21,183; Apr. 8; v. 261; p. 409.
"Chocolate Supreme." (For Candy.) Milwaukee Paper Box Company. No. 21,193; Apr. 8; v. 261; p. 409.
"De Prevm." (For Medicinal Preparation for Treatment of Malaria.) J. de Jesus. No. 21,186; Apr. 8; v. 261; p. 409.
"Easton's Mayonnaise." (For Mayonnaise.) G. J. Easton. No. 121,182; Apr. 8; v. 261; p. 409.
"Extra Chocolates." (For Candy.) Milwaukee Paper Box Company. No. 21,192; Apr. 8; v. 261; p. 409.
"Franklin Fashions." (For Men's and Boys' Outer Garments.) Franklin Clothing M'f'g Co. No. 21,184; Apr. 8; v. 261; p. 409.
"Happy Thought." (For Pure Blended Coffee.) Alex Sheppard & Sons, Inc.) No. 21,202; Apr. 8; v. 261; p. 409.
"Hoye's Liberty Tea and Sugar Tablet." (For "Mate" Tea and Sugar Tablets.) S. M. Hoye. No. 21,213; Apr. 15; v. 261; p. 628.
"Iroquois Indian Head." (For Non-Intoxicating Beverage.) Iroquois Brewing Company. No. 21,185; Apr. 8; v. 261; p. 409.
"Jack Sprat Brand." (For Coffee.) Western Grocer Company. No. 21,207; Apr. 8; v. 261; p. 409.
"Jack Sprat Brand." (For Canned Corn.) Western Grocer Company. No. 21,208; Apr. 8; v. 261; p. 409.
"Jolly Time Pop Corn." (For Popcorn.) American Pop Corn Company. No. 21,222; Apr. 22; v. 261; p. 795.
"Lavisan." (For a Preparation for the Scalp.) Thames Drug Company. No. 21,219; Apr. 15; v. 261; p. 628.
"League of Nations Puzzle." (For Mechanical Puzzles.) F. A. McCabe. No. 21,189; Apr. 8; v. 261; p. 409.
"Lefas Private Stock Ginger Ale." (For Ginger-Ale.) S. D. Lefas. No. 21,187; Apr. 8; v. 261; p. 409.
"Madam Tempia William's T. W. Hair Beautifier." (For a Preparation Which Beautifies and Improves the Hair and Aids its Growth.) T. Williams. No. 21,178; Apr. 1; v. 261; p. 200.
"Majic." (For Dye Soap Flakes.) Magic M'f'g Co. No. 21,188; Apr. 8; v. 261; p. 409.
"Mother Goose Bread." (For Bread.) H. Conover. No. 21,211; Apr. 15; v. 261; p. 628.
"Olene." (For Spraying Compounds for Citrus Trees.) Standard Chemical Co. No. 21,204; Apr. 8; v. 261; p. 409.
"Opitma." (For Fresh Citrus Fruits.) Valley View Ranch. No. 21,205; Apr. 8; v. 261; p. 409.
"Pawnee Ant Exterminator." (For an Insecticide.) Thames Drug Company. No. 21,220; Apr. 15; v. 261; p. 628.
"Penick & Ford's Brown Label Brer Rabbit Brand." (For Sugar-Cane Products and Corn-Syrup.) Penick & Ford, Lt'd. No. 21,198; Apr. 8; v. 261; p. 409.
"Penick & Ford's Gold Label Brer Rabbit Brand." (For Pure New Orleans Molasses.) Penick & Ford, Lt'd. No. 21,199; Apr. 8; v. 261; p. 409
"Penick & Ford's Red Label Brer Rabbit Brand." (For Pure Country Sorghum.) Penick & Ford, Lt'd. No. 21,200; Apr. 8; v. 261; p. 409.
"Penick & Ford's Green Label Brer Rabbit Brand." (For Pure New Orleans Molasses.) Penick & Ford, Lt'd. No. 21,201; Apr. 8; v. 261; p. 409.
"Pillsbury's Pancake Flour." (For Pancake-Flour.) Pillsbury Flour Mills Company. No. 21,215; Apr. 15; v. 262; p. 628.

"Pine-Oil-Rub." (For Natural Oil of Pine for Coughs and Colds.) Smith-Faus Drug Co. No. 21,203; Apr. 8; v. 261; p. 409.

"Pom-Ora." (For A Grade A Marmalade.) J. E. See. No. 21,217; Apr. 15; v. 261; p. 628.

"Red Star Timer for Fords." (For Timers.) Auto Components, Inc. No. 21,161; Apr. 8; v. 261; p. 409.

"Rosa Quality Is Economy." (For Tank-Bulbs.) Rosa Manufacturing Company. No. 21,216; Apr. 15; v. 262; p. 628.

"Some." (For Bread.) H. V. Walters. No. 21,206; Apr. 8; v. 261; p. 409.

"Stay There." (For Hair-Tonic.) Beamon, Jefferds & Beamon Co. No. 21,224; Apr. 22; v. 261; p. 798.

"Sulphozin." (For a Face and Skin Lotion.) Sulphozin Co. No. 21,214; Apr. 15; v. 261; p. 628.

"The Miller Sock." (For Men's Socks.) S. S. Miller. No. 21,190; Apr. 8; v. 261; p. 409.

"Tri-Eats." (For Candy.) Milwaukee Paper Box Company. No. 21,194; Apr. 8; v. 261; p. 409.

"Valu Gage Field Fencing, Number 11 Series." (For Woven-Wire Field-Fencing.) J. Armstrong. No. 21,180; Apr. 8; v. 261; p. 409.

"Waukesha." (For Oleomargarin.) American Standard Food Association. No. 21,179; Apr. 8; v. 261; p. 409.

"Welch's Grapelade The National Spread." (For a Spread.) The Welch Grape Juice Company. No. 21,221; Apr. 15; v. 261; p. 628.

"Xtragood." (For Bread.) The E. B. Biscuit Co. No. 21,210; Apr. 15; v. 261; p. 628.

ALPHABETICAL LIST OF PRINTS.

"All Champions." (For Tires and Tubes.) Braender Rubber & Tire Co. No. 5,061; Apr. 8; v. 261; p. 409.

"Come in, let us show you Detmer University Novelties Latest Suitings." (For Detmer Woolens.) Detmer Woolen Co. Nos. 5,082–3; Apr. 15; v. 261; p. 628.

"Fire Proof and Foul Proof Metal, Gravel and Sand Katcher." (For Catchers of Metal and Like Foreign Substances that May Enter with the Feed in Reducing Mills.) Williams Patent Crusher & Pulverizer Co. No. 5,087; Apr. 15; v. 261; p. 628.

"History." (For Furniture.) J. S. Blankenship. No. 5,080; Apr. 8; v. 261; p. 409.

"Ice Cream." (For Ice-Cream.) Wolf Advertising Co. No. 5,083; Apr. 22; v. 261; p. 798.

"Stick to Cinco, It's Safe." (For Cinco Cigars.) Otto Eisenlohr & Bros., Incorporated. No. 5,084; Apr. 15; v. 261; p. 628.

"Tastykake." (For Cake.) Tasty Baking Company. No. 5,085; Apr. 15; v. 261; p. 628.

"The Williams World Beater." (For Crushers and Pulverizers.) Williams Patent Crusher & Pulverizer Co. No. 5,086; Apr. 15; v. 261; p. 628.

DISCLAIMERS.

Loom, Power. S. F. Patterson. (Reissue.) No. 12,159; date of patent Sept. 29, 1903; disclaimer filed Mar. 31, 1919; v. 261; p. 1.

Pamphlet-coverer. C. A. Juengst. No. 1,244,861; date of patent Oct. 30, 1917; disclaimer filed Apr. 8, 1919; v. 261; p. 633.

Slug-casting machines, Quad-block for. D. S. Kennedy. No. 1,193,269; date of patent Aug. 1, 1916; disclaimer filed Apr. 17, 1919; v. 261; p. 635.

CLASSIFICATION OF PATENTS

APRIL, 1919.

NOTE.—First number—class, second number—subclass, third number—patent number.

1— 2: 1,300,622
10: 1,301,120
32: 1,301,508
41: 1,301,599
46: 1,302,184
2— 11: 1,299,498
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18: 1,299,552
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20: 1,299,574
41: 1,301,352
48: 1,300,779
61: 1,299,844
62: 1,299,244
67: 1,299,514
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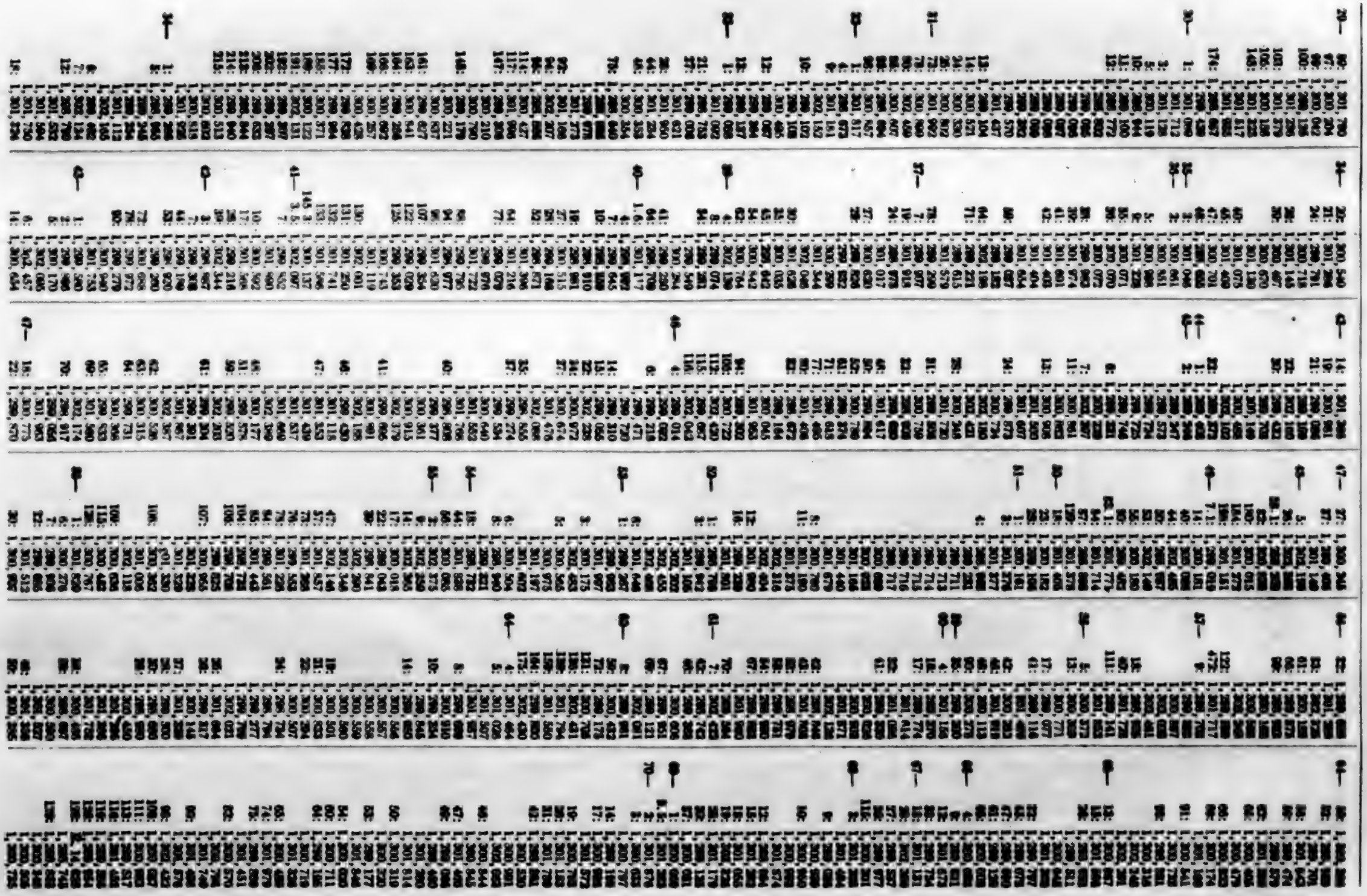
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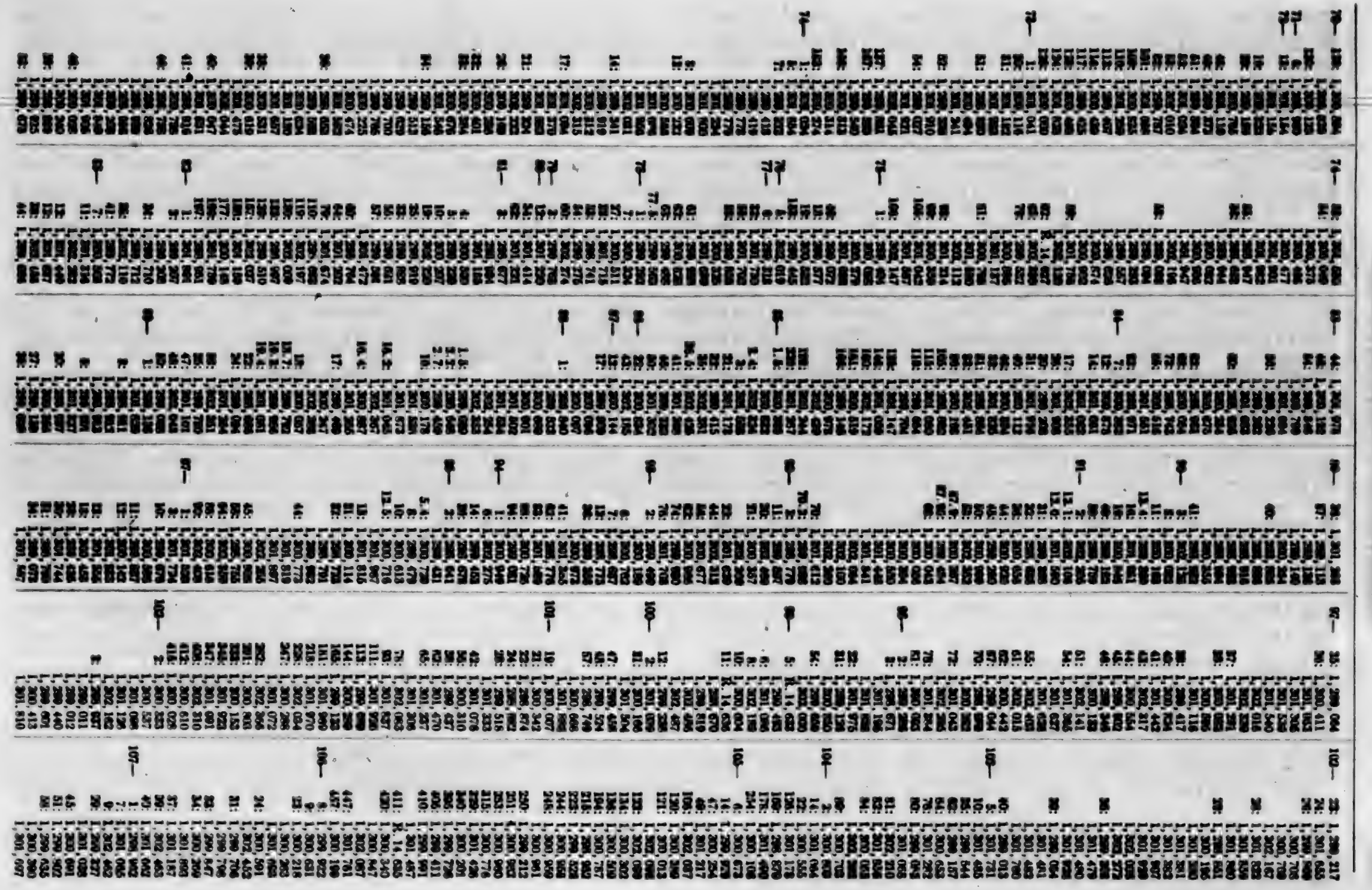
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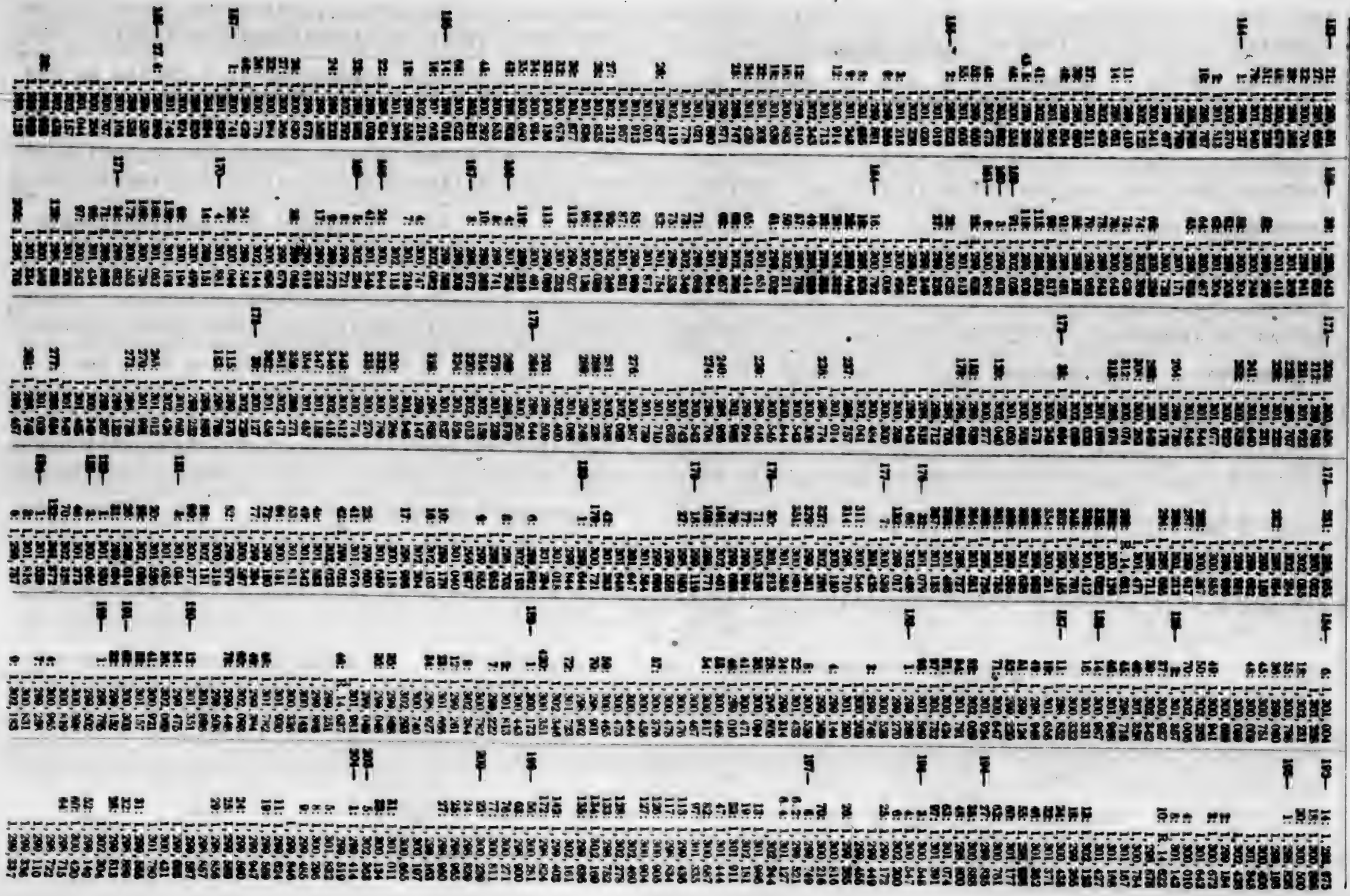
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